Geac SMARTStream

Eliminating
Boundaries
Through
Workflow

SMARTStream®

WORKFLOW

A WHITE PAPER BY GEAC SMARTSTREAM

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This paper discusses how workflow provides an essential functional component for application software used to manage a Distributed Enterprise. The paper is divided into three sections.

The first section defines the nature of a Distributed Enterprise and outlines the importance of workflow technology in this context.

The second section describes two models for the delivery of workflow functionality in applications software.

The third section examines the delivery of workflow functionality in a Distributed Enterprise application, using the SmartStream® product suite as the basis for the solution.

I. Executive Summary

Workflow and the Distributed Enterprise

The Distributed Enterprise is the term used to describe the organizational reality of many businesses in operation today and probably most businesses in the future. A Distributed Enterprise is an organizational form that is characterized by distributed resources including people, places and partners. This mode of operation is critical in order to compete in a business environment pressured by global competition, accelerating technology change and the need for continuous qualitative improvement.

The essential problems of any distributed operating environment are those of cooperation, coherence and communication. Physically and geographically dispersed corporate assets function on two levels: as local components and as global wholes. This is why workflow is an important technology in a Distributed Enterprise context.

Workflow is the management of transaction-based processes through technology. Because workflow is process-centric, it forces software applications to cross many different business and application boundaries, acting as a form of technology "glue" for an organization. Without workflow, a Distributed Enterprise may operate only as a collection of loosely connected businesses. With workflow, the Distributed Enterprise can eliminate organizational boundaries, better utilize its distributed assets and fully leverage its collective strength.

The Two Models of Workflow

Workflow, as a technology component of application software, is a comparatively recent development. It could be argued that the rise of workflow has paralleled the rise of client/server computing architectures. After all, client/server is fundamentally a distributed computing technology that mirrors the business operations it serves more closely than the traditional centralized host model.

Because workflow is new, there are few standards and many different ways of implementing workflow functionality in applications software. The result is that workflow has become subject to a great deal of marketing hype, causing confusion among prospective users of the technology. To clarify the technology, it helps to divide workflow implementations into two models: workflow-enabled and workflow-architected.

SmartStream: Workflow-Architected Software

Application software is either workflow-enabled or workflow-architected. Workflow-architected business management software is designed not around ledgers or modules but around processes and tasks. This design vision simply reflects the reality of the business world more effectively. Workflow-architected solutions recognize that workflow is more than an enabling technology. Workflow is nothing less than a fundamental architectural service layer that must be present in software designed for the effective management of the complexities of Distributed Enterprises.

Workflow-architected software is designed from the ground up to deliver the benefits of workflow in a flexible and sophisticated manner through the combination of process activities and business events. This is exactly the design philosophy behind the SmartStream product suite.

II. Workflow and the Distributed Enterprise

Defining the Distributed Enterprise

Sophisticated business organizations with vertically integrated operations, multiple lines of business or multinational subsidiaries are subject to broader and deeper management problems than less complex businesses. These types of businesses are often labeled Distributed Enterprises. The purpose of this section is to discuss some of the key characteristics of the Distributed Enterprise in order to clarify the range of operating problems faced by the business management.

Distributed Resources

The fundamental concept of the Distributed Enterprise is that its resources are distributed rather than being centralized in one place. Efficient management of these distributed resources is essential to make the value of the whole greater than the sum of its parts. These resources can include the following general business assets:

Asset	Examples
Human	Clerical, production, supervisory, managerial and executive
Physical	Property, plant and machinery, fixtures and fittings
Monetary	Cash, investments and other financial instruments
Technology	Hardware, software and communications
Brands	Goodwill, trademarks, market and mind share
Expertise	Patents, designs, local and global intelligence

A primary problem of the Distributed Enterprise dynamic is facilitating communication about and between these assets as well as maximizing the potential for cooperation across geographic, organizational and technology boundaries. Workflow is a powerful technology for solving this problem.

Ten Characteristics of the Distributed Enterprise

1. An Evolving Business Model

The Distributed Enterprise is an evolving business model that is regularly influenced by a variety of new operational methods and management philosophies. This model depends on the support of increasingly sophisticated information technology and the efficient application of this technology to business processes. Business management software for controlling the financial, human, physical, logistic and manufacturing assets of a business is a key technology component in all Distributed Enterprises. The design of this software should reflect a model-based approach that can be flexed to accommodate different implementations of operational methods.

2. Build to Order

Distributed Enterprises are increasingly expected to operate in a "build to order" mode. This impacts both manufacturing- and service-driven organizations. From a manufacturing perspective, build to order means using "Just In Time" or "Kanban" techniques which demand low inventories, close integration with suppliers and rapid retooling or redesign of manufacturing lines. From a service perspective, build to order means being able to rapidly adapt locations, people and processes to the changing demands of service consumers and new niche competitors.

3. Shorter Product Life Cycles

Competitive pressure and more sophisticated consumers have made product life cycles shorter by forcing businesses to react faster to changes in market conditions or consumer needs. The Distributed Enterprise must focus more than ever on gathering competitive intelligence and collecting and validating consumer research data in order to reflect this information in product rollout and enhancement plans.

4. Focus on Quality

The focus on quality does not just apply to the external face of a business — its products and image, for example. Quality is increasingly being demanded from within an enterprise. This demands that internal business processes and job responsibilities are regularly reviewed and reengineered to accommodate a total quality management (TQM) approach through initiatives such as focus groups and standards such as ISO 9000 certification.

5. Customer-Centric

The Distributed Enterprise is essentially customer-centric. A fundamental rationale for distributing business resources is to allow the business to get closer to its customer, whoever and wherever that customer might be. By being closer to the customer the business is more likely to retain the customers it has and to know how to reach the customers it needs to fuel future growth. Distributing resources to where your customers are located is a key benefit of the Distributed Enterprise.

6. Open to Partnership

Distributed Enterprises recognize the value of partnering as a means to assist in reaching new markets or expanding existing markets. Partnerships open up new channels for products and services that may otherwise be closed. However, partnerships also increase the range of influences surrounding a business and demand more cooperative ways of working in order to leverage those partnerships more successfully.

7. Global Outlook—Local Focus

Distributed Enterprises have to clearly separate global strategy from local tactics: to think global but act local. This may mean that different lines of business are pursued in different countries in order to support the global strategy. It may mean that different operational business models are implemented in order to succeed in specific local markets. In either case, even a relatively homogenous business may be forced to assume a more dynamic outlook in order to operate as a Distributed Enterprise.

8. Continuous Improvement

Change is one constant in modern business life, creating the need for continuous improvement in all but the most simplistic or focused of businesses. Continuous improvement implies a commitment to regular reengineering of business processes and job functions. In turn, this commitment requires that the essential processes and roles of the business are logically modeled and accessible for reengineering to be possible.

9. Technology-Smart

Distributed Enterprises must be technology-smart in order to overcome the potential disadvantage of having physically distributed resources. Distributed Enterprises can disseminate information more effectively throughout the organization through visionary use of technology, such as creating "virtual" systems from separate physical systems or integrating internal systems with external systems by exploiting electronic commerce options such as EDI and the Internet.

10. Leverage the Organizational Geography

Distributed Enterprises must be sensitive to opportunities to leverage their operating environment in order to reduce costs or improve productivity. Manufacturing may be located offshore to benefit from lower labor or production costs. Distribution may be centered on logical "hubs" to benefit from efficient transportation infrastructures. Financial accounting and cash management may be channeled through shared service centers to take advantage of favorable tax or interest rates.

Why Workflow Is Important

Workflow adds significant value to transaction-based applications such as client/server accounting software encompassing financial, procurement, human resource, distribution and manufacturing applications. These are the types of applications that are mission-critical to the day-to-day management of a Distributed Enterprise. The purpose of this section is to highlight some of the generic benefits of using software that incorporates workflow technology in a Distributed Enterprise context.

Workflow as an Agent of Change

Many document-driven businesses such as banking or insurance, once highly centralized and paper-driven, are quickly transforming into Distributed Enterprises by embracing workflow technology. It is a fact that workflow has been a primary driving force for change in these and other financial service businesses.

Traditionally, workflow was associated with document-centric processes that are prolific in forms-driven businesses. This is the scenario that is often referred to when the workflow process is characterized as a combination of rules, routes and roles. In this scenario, a key workflow step is imaging the source document to create a digital version. This digital document can then be routed electronically around the organization. Rules are applied to add intelligence to the document routing in order to force the document to comply with business policies and procedures. Users are empowered to participate in the workflow according to their defined roles in the document process and the organization hierarchy.

Some of the primary benefits of converting from a paper to an electronic document routing scenario are those often associated with the concept of the paperless office, including:

Benefit	**Resulting From**
Cost Savings	Reducing the need to print and file paper documents
	Reducing the physical space required to store paper documents
	Reducing the amount of human interaction with the document flow
Quality Improvements	Allowing a more rapid and exception-driven document processing cycle
	Providing an improved electronic audit trail of the document life cycle
	Enabling faster response to inquiries on the document status and content

Rule-, route- and role-driven workflow is undoubtedly an important contributor to business efficiency in document-driven businesses. But the benefits of workflow are not just the franchise of this business sector or operating paradigm. Workflow can act as an agent of change in any business that makes use of the cross-functional or cross-application processes characteristic of the Distributed Enterprise.

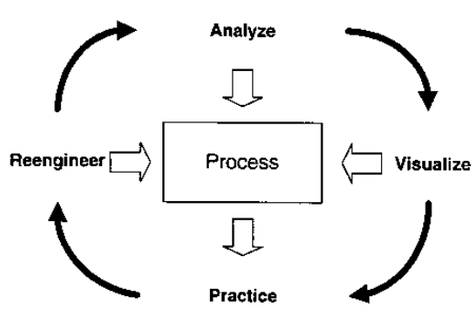
Workflow Models the Distributed Enterprise

Distributed Enterprises are, by their very nature, process-intensive and process-diverse. Often, business domain experts know a great deal about their local processes but little about processes enterprise-wide. Workflow is a technology that promotes modeling, not just of processes but of Distributed Enterprise processes. Because workflow is process-centric and must be visualized before it can be enabled, workflow forces practitioners to model their business. This in itself is a very important exercise.

Modeling workflow processes encourages businesses to identify their high- and low-added value processes, an essential step in corporate reengineering. In high-growth businesses, modeling helps to keep track of how the mission-critical, value-added processes are being refined and changed. In slow-growth businesses, modeling helps to combat the "we have always done it this way" attitude by forcing a reexamination of the process itself rather than the implementation of the process. Process models allow businesses to take a "big picture" view of the process and to experiment in the creation of "best practices." For most businesses, process models are as important as the data model used to define database structures.

Workflow can help an enterprise deploy varying business models by allowing users to assemble process maps to suit the particular task, country or line of business requirements. Workflow can enable organizations to operate in different modes within an enterprise; for example, to facilitate centralized purchasing but distributed requisitioning. A key factor here is that this is done through the use of different process models, not by customizing the software look and feel or making changes at the source code level.

Because workflow models the business processes, it enables the refinement and reengineering of those processes on an ongoing basis. The implementation of workflow can be crucial to identifying process flaws, bottlenecks and opportunities for improvement. To define workflows, process modelers are forced to think in terms of business activities, events and exceptions — a level of detail otherwise often avoided or ignored. A process-centric culture provides the foundation for continuous improvement by facilitating iterative changes to existing process models and encouraging the transition to best practice models.



Analyzing and visualizing workflow processes are the primary steps in enabling a reengineering effort, whether at the process, business or enterprise level. The resulting workflow process models provide an accessible, meaningful and practical view of the complexity of a Distributed Enterprise. Workflow visualization is a fundamental capability required for enterprise-level deployment of the technology.

Workflow Creates Virtual Applications

Distributed Enterprises encompass a wide range of software and hardware technologies, sometimes poorly integrated and often not exploited to their full value. But because workflow often involves messaging or transaction routing in an enterprise context, it can further leverage existing technology infrastructures.

These infrastructures may include local and wide area networks, E-mail and fax gateways, groupware products such as Lotus Notes or connections to services used for electronic commerce such as EDI or the Internet. Workflow can also take advantage of advanced database functionality such as distributed update and query or data replication for the purposes of synchronizing data enterprise-wide.

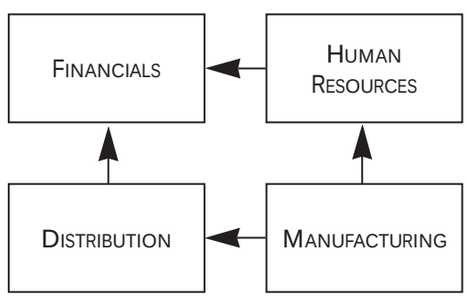
Workflow can act as a systems integration tool for heterogeneous software applications by involving multiple systems in a single workflow process. A good example of this is an engineering change order. When that is entered into a manufacturing system, this change order could trigger a workflow process "ripple" that affects multiple complementary systems, for example:

- To check inventory for availability of the new "replacement" part
- To search the procurement system for suitable vendors for new part
- To create purchase orders for new part and cancel orders for old part
- To send technical specification of new part for documentation in manuals
- To bulletin sales force on specification advantages of new part
- To update bill of material of assembly of which part is a component

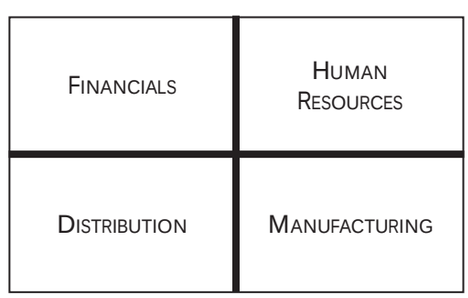
In this role, workflow succeeds in diffusing the boundaries between software modules and creates a “virtual” application. The virtual application is the logical successor of the move first to interface, then integrate, these application “silos” or “islands” by making them interactive within an information domain.

This applies whether these applications are located locally or geographically distributed across different sites, because workflow can take advantage of communication backbones to act as an integrator of different functional systems spanning many separate physical locations.

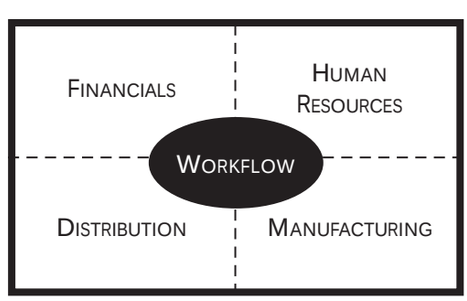
First Generation: Interfaced



Second Generation: Integrated



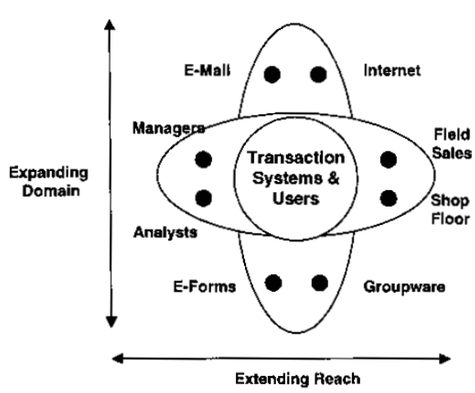
Third Generation: Interactive



Workflow Expands and Extends the Information Domain

Distributed Enterprises comprise a myriad of information domains and a mass of participants in the organization's activities. Furthermore, an enterprise is subject to an equally wide range of external liaisons, partnerships and influences. Traditional information systems seldom reflect these operational realities and operate as information "islands" or "silos," limiting their overall value to the organization. Introducing workflow can have the effect of both expanding the information domain and extending the reach of application software.

Expanding the information domain means that workflow can utilize both internal and external applications. It does this by linking these applications together into logical processes. Essentially, workflow "taps" multiple discrete applications and combines them into new functional units. This can involve crossing internal application boundaries by combining financial reporting with E-mail or procurement approvals with groupware. It can also involve integrating with external applications such as EDI or the Internet to cross organizational boundaries.



Extending the reach of the software means that information from an application can be made available to a much wider internal and external audience, in a variety of formats, by using workflow to package and route the data according to a rule-driven knowledge base. These audiences do not need access to or knowledge of the source application from which the data originated.

An event-driven workflow paradigm also ensures that this interaction takes place on an exception-driven basis. Many decision makers in Distributed Enterprises are already suffering from information overload. Workflow events such as messages and alerts generated on the basis of exception conditions not only inform decision makers faster than traditional methods, they also ensure that they are informed on a “need to know” basis.

Eliminating Boundaries Through Workflow

Workflow deployed in a Distributed Enterprise context has a much wider and more influential role to play than just a rule, role and routing technology. Distributed Enterprise workflow becomes an empowering technology to assist in:

- ***Connecting*** functional domains across lines of business
- ***Integrating*** internal and external business resources
- ***Communicating*** between complementary but physically separate software systems

In this context, workflow acts as a mechanism that helps to eliminate or diffuse the artificial boundaries and distances introduced into businesses through use of a distributed operational model. Intelligently implemented, workflow does more than just codify organizational rules, routes and roles. In a Distributed Enterprise environment, workflow acts as a primary catalyst to create connections between distributed assets for greater productivity, not just in specific document-oriented processes but across all enterprise processes.

Workflow eliminates boundaries in at least four ways:

1. As an agent of change, workflow truly eliminates the physical boundaries of paper, in-boxes, desks, office doors and cabinets by converting documents into digital transactions. It also helps eliminate the human boundaries associated with paper-driven processes. Transactions require less human interaction and intervention and consequently can be managed more efficiently and loosened from the vagaries of organizational politics.

2. As a model for the Distributed Enterprise, workflow opens up the enterprise knowledgebase by capturing the essential processes of the business. This overcomes the boundaries of jealously guarded expertise and information domains that can hinder quality and reengineering initiatives. It also ensures that business practice knowledge is institutionalized rather than remaining the preserve of individual employees.

3. By creating virtual applications, workflow crosses software application boundaries, not only within homogenous application suites but also across heterogeneous software suites. These interactive applications help ensure that software does not become an information "silo" or "island" and help leverage more value from your software investment.

4. In expanding and extending the information domain, workflow removes the boundaries between applications and user communities. It also acts as an integration technology for removing the boundaries between business partners by working across electronic commerce options such as EDI and the Internet.

III. The Two Models of Workflow

If you examine how workflow technology has been incorporated into business management software, it becomes clear that there are essentially two models:

- Workflow-enabled
- Workflow-architected

The workflow model chosen by the vendor demonstrates their workflow vision and how important they think workflow will be to their customers in the management of rapidly changing business scenarios.

This section discusses the essential differences between these two models and what functionality to expect from workflow-architected software. To do this, each model is examined against the background of three design concepts:

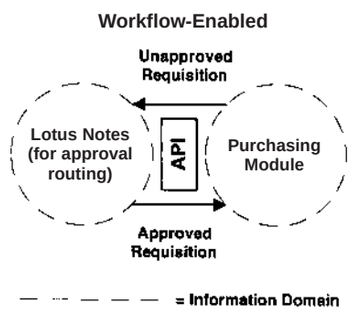
- Granularity: The operational granularity of the software application
- Extensibility: The capability of the software to extend its workflow functionality
- Deployment: The flexibility of the workflow deployment options offered

Workflow-Enabled Software

Workflow-enabled describes applications that were not originally designed with any concept of workflow in mind but have been "enabled" with workflow functionality. The developers are delivering workflow functionality by layering

workflow onto their applications after the fact. The workflow-enabled model provides some basic workflow functionality. But it does so by creating more application boundaries than an architected solution because:

- It forces the workflow to take place via an external application
- It necessitates additional coding to communicate with the external application's API
- It complicates the information domain by requiring the integration of third-party applications



The essential problem with this approach is that it depends on a programmatic interface between the source transaction package and the workflow-enabling package. Either or both of these packages may change over time and this may impact the interface API, creating an ongoing maintenance cost over time. In addition, the interface itself may be simplistic, meaning that the sophistication of the workflow functionality will always be limited — typically to simple routing tasks.

Granularity

The workflow-enabled model is based on providing workflow at a modular level. Typically, a specific module such as purchasing or general ledger reporting is workflow-enabled by combining it with a workflow-enabling external package through its API. This approach works well for simple processes such as routing a report or obtaining an approval. For the less complex enterprise, this level of granularity may provide all the workflow functionality required. If the enabling package is in place, then this approach leverages the enabling package further. If the enabling package is not in place, then it forces the business to purchase and learn a whole new software environment.

Extensibility

The workflow-enabled model is definitely extensible. By programming to many different APIs, an enterprise may use as many external applications as it likes to provide various workflow services to its core transaction processing systems. The problem with this approach is simply that maintaining and enhancing all these interfaces may outweigh the integration benefits offered by the additional workflow functionality.

Deployment

Workflow-enabling is achieved through links to external software applications. In many cases these external applications were also not designed with workflow in mind but nevertheless provide a subset of workflow functionality. The external applications provide functions such as:

- Document imaging so that source documents can be "tagged" to electronic transactions
- Annotation so that documents can be marked up or linked to other related documents
- Routing so that documents can be intelligently transmitted around an organization
- Actioning so that documents can be flagged as approved or rejected
- Alerting so that specific users may be warned of exception conditions by E-mail

Summary

Workflow-enabled applications have had their workflow functionality layered onto the software almost as an afterthought. Often, the workflow offered is merely a form of routing that itself depends on connectivity to a third-party application. The transaction application and the workflow-enabling application must be connected through a programmed API layer which may require maintenance each time either application is upgraded. Workflow-enabling can complicate the information domain by surrounding the transaction application

with multiple workflow-enabling applications and forcing accounting transactions to be routed through other non-accounting applications. While a workflow-enabled application may eliminate some boundaries, it inevitably creates new obstacles, so the net effect in a Distributed Enterprise context is negligible.

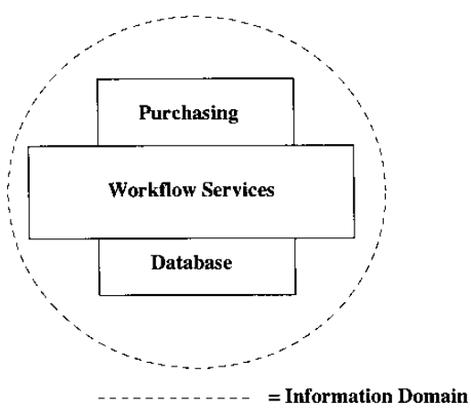
Workflow-Architected Software

Workflow-architected describes a business management package that was architected to contain its own internal workflow services layer that can be utilized by all modules in the suite. By building workflow into the software from the ground up, the developers have recognized the importance of workflow and based their solution on a process-driven design.

Workflow-architected software is the exception rather than the rule, even among the latest client/server business management software. This is because delivering a sophisticated workflow engine suitable for use in a Distributed Enterprise is not a trivial undertaking and something that only vendors who understand the full potential of workflow can deliver.

For many vendors, workflow-enabling is the only model they can deliver because to provide the true architected model would require a complete redesign of their software and a reorientation of their development philosophy.

Workflow-Architected Solution



Granularity

The workflow-architected model is based on providing activity-based, event-driven workflows. This requires a much finer level of application granularity than the modular approach taken by workflow-enabled applications. The workflow-architected solution uses this granularity to adapt the application functionality more closely to the types of complex processes typical of a Distributed Enterprise.

Think of these activities as software components that break applications down into pieces for reassembly by process modelers, the people whose role it is to model the business in software. Clearly this component-based software design is much more flexible than the traditional "monolithic" software architecture of the past.

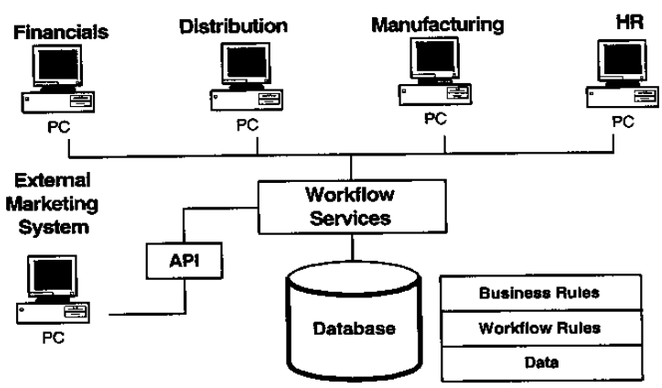
This granularity requires more thought and effort on the part of the vendor simply to identify and isolate the activities and business events themselves and to break out of the modular mode of application design. But the benefit for the user is a much more flexible set of process building blocks that cannot be matched by workflow-enabled applications.

Extensibility

Workflow-architected applications are extensible simply because of their granularity. By allowing processes to be assembled from different combinations of activity components and driven by different combinations of business events, an application is extensible without the use of add-on packages or code customization. Because workflow-architected applications provide workflow as another cross-module services layer, they usually provide a means for external applications to access this layer also using an API. Integrated application development tools may also access this workflow functionality so that new extensions and enhancements automatically inherit workflow capability.

Deployment

In a workflow-architected solution, the workflow engine is fully integrated within the application software kernel and is also accessible to other external applications through a callable API. The availability of a true workflow services layer means that every module within the application can inherit a rich set of workflow functions and leverage that functionality in all aspects of its internal business process management.



The workflow-architected solution can operate in a form- and message-centric mode but has the added sophistication for environments where complex, cross-application workflows are required. Workflows that may need to integrate other external or legacy applications in order to complete a process flow involving an accounting transaction include:

- Purchase or sales orders
- Invoices or payment requests
- Check or monetary transfers
- Travel and expense reimbursement forms
- Inventory receipts, issues or transfers
- Human resource recruiting and hiring

The workflow-architected model is based on the concept of "trusted transactions." This demands that the transaction origination application manages the trusted transaction through all aspects of its life cycle in order to maintain the required levels of transaction security and audit controls. In essence, the trusted transaction never leaves the transaction management application because it never needs to. The workflow services layer avoids the need to make use of third-party enabling tools.

Summary

The workflow-architected model is really the only true workflow solution for the Distributed Enterprise that wants to leverage the full benefits of workflow technology. In workflow-architected software, the workflow functionality is fully integrated into the transaction management applications but can also reach out to third-party applications if required. The application granularity ensures that the software can be assembled around the business process, rather than the other way around. Transactions remain under the control of the accounting applications and their internal audit and security controls. The workflow functionality is available to all modules in a suite to the same level of sophistication and does not depend on complicated coding of APIs.

Comparing the Two Models of Workflow

The Distributed Enterprise demands a sophisticated workflow model in order to derive full benefit from the technology. The chart below compares and contrasts the workflow-enabled and workflow-architected models:

Design Concept	Workflow-Enabled	Workflow-Architected
GRANULARITY	Handles basic rules, routes and roles. Typically restricts workflow to take place within discrete application boundaries because workflow granularity is at the module or application level. Workflows can only be assembled around the specific combination of applications offered by the workflow-enabled suite. Workflows are relatively static because they depend on a "program" defining the interaction between the source and enabling application.	Built and designed using a process-centric model to handle basic and sophisticated workflow scenarios. Workflow granularity at the activity and event level allows workflow engine to trigger multistep workflows and extend workflow outside typical application boundaries. Using activities and events, workflows can be assembled around the business process and user tasks, not around software applications Workflows are dynamic because changes can be implemented and their effect reviewed immediately, facilitating "what if" process reengineering.
EXTENSIBILITY	Enabled applications are extensible through additional coding in the API connectivity layer. Can connect to many workflow-enabling applications but this integration requires setup and maintenance through API code. New tables and forms added to source application need to be separately workflow-enabled as the intelligence is not built into core system.	All workflow functionality is fully integrated and table driven, requiring no programming to effect workflow extensions. Can connect to many workflow-enabling applications through a user-friendly table-driven interface. Full workflow functionality is inherited by all new application objects created through the standard application development toolkit.
DEPLOYMENT	Requires workflow-enabling products to be in place or purchased. Requires knowledge of multiple third-party applications and the intricacies of multiple APIs. Likely to mean additional cost and time requirements whenever either source or enabling application is upgraded. Multiple vendors are involved which may mean strategic conflict can occur at any time, leaving users stranded. Overhead of external application agents and procedures polling for database changes required to initiate routings. Accounting transactions traverse multiple non-accounting applications with potential for security, audit and control violations.	Workflow functionality is fully integrated and transparent to user. Requires knowledge of one application and one API only. Upgrades simply enhance workflow functionality available across the suite and require no recoding. Single vendor workflow provider and core commitment to workflow technology in design vision. No external overhead from asynchronous agents; commitment of transactions immediately triggers workflow engine to action next steps. Transactions can be trusted as they never leave the initiating application. One integrated solution manages the transaction through all aspects of its life cycle.

IV. The SmartStream Workflow-Architected Solution

SmartStream's Workflow Architecture

Geac SmartStream's SmartStream Financial, Procurement, and Human Resource, client/server suite is an example of workflow-architected applications. The purpose of this section is to provide a basic understanding of the workflow architecture underlying the SmartStream applications.

The SmartStream suite includes a sophisticated and fully integrated workflow engine and services layer as part of the standard application. In addition to this engine, the SmartStream products also support the connectivity to third-party applications associated with the workflow-enabled model, namely:

- Document-to-transaction linking that allows a transaction document to be scanned into the system, tagged to an accounting transaction and viewed along with the transaction data.
- E-mail integration for sending messages and data packages such as reports across E-mail backbones such as Microsoft Mail and Lotus cc:Mail.
- Groupware integration for routing data between the SmartStream modules and external groupware packages such as Lotus Notes and Novell Groupwise for approvals or annotations.
- OLE 2.0 support to allow SmartStream applications to interact with other OLE-compliant applications such as desktop word processors and worksheets.

Functional Granularity

A key design feature of the SmartStream applications is that they have been built to a very fine degree of functional granularity. This allows users of SmartStream to implement the workflow feature set at a number of different levels, including:

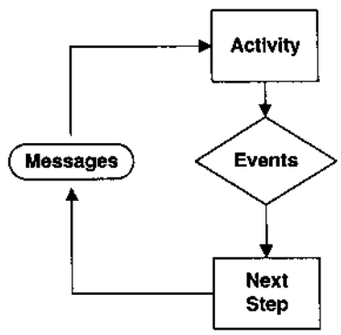
- No workflow
- Workflow within a SmartStream application
- Workflow across multiple SmartStream applications
- Workflow across SmartStream combined with external applications
- Restructuring the entire SmartStream system around a workflow paradigm

This functional granularity is key to the flexibility of the workflow engine in the SmartStream products. Essentially, the application functions have been broken down into a finer level of granularity called an Activity. An Activity could be entering data into a screen form, running a batch process or requesting a report, for example. These Activities can then be reassembled into processes that correspond to actual business tasks within a specific business domain.

One benefit is immediately clear: the software can be customized at the task level to cope with differing implementations of the same task within a Distributed Environment. Different departments, locations, companies or countries may manage the same task with a greater or lesser degree of complexity. A workflow-architected solution provides an assembly kit for handling the varying complexities of scaleable workflows. Workflows can be built and refined without needing to use customizing toolkits or going to the application source code.

Activity-Based and Event-Driven Workflows

The SmartStream workflow engine is based on a very clear conceptual model consisting of Activities, Events, Next Steps and Messages, as shown below:



- An Activity is a discrete software function or process, such as a data entry screen, a report request screen or a self-contained batch process. The SmartStream products include hundreds of discrete Activities. These Activities can be assembled into any number of user-defined Tasks, and they all inherit the same rich set of workflow capabilities.

- An Event is the system event resulting from the Activity, such as the insertion of a new order, the deletion of an order or the identification of an out-of-stock inventory condition. Users may define any number of Events which, in turn, may utilize many conditional data possibilities. SmartStream extends the basic database insert, update and delete Events to a much greater level of depth.

- A Next Step defines the routing of Activity data or Messages and the Activity that is to be initiated as a consequence of the completion of the success or failure of the previous Activity. This where the conditional rules for handling Event exceptions and assigning workflow routings take place.

- Messages are the mechanisms for informing and integrating participants into a workflow by sending messages to individuals or groups of users. Messages may be simple informational or alert "pop-ups" sent to managers not involved with the transaction management. In addition, messages may be much more powerful information packages that are inserted as action items into a user to-do list.

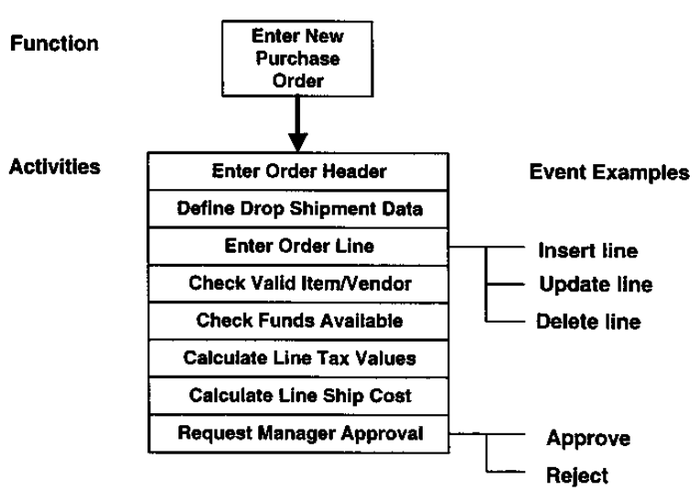
The sophistication of the implementation of this model depends largely on these three factors:

- The range and granularity of the Activities available: this determines how flexibly the application functionality can be reassembled around the business process.

- The range of Events that can be associated with an Activity: this ensures that a wide range of possible outcomes can be allowed for each Activity.

- The sophistication of the rules that can be associated with a Next Step: this ensures that a wide range of exception conditions can be associated with each Activity.

This is an example of how a function can be viewed in terms of Activities and Events:



This is an example of an Activity- and Event-driven process in a SmartStream application:

PROCESS	TYPE	DESCRIPTION	APPLICATION
Step 1:	Activity	Enter new PO	SmartStream Procurement
Step 2:	Event	Send PO	EDI to Supplier
Step 3:	Event	Receive PO Confirmation	SmartStream Database
Step 3.1:	Exception	Confirmed price > ordered price	Workflow Rule
Step 4:	Message	Generate To Do Item	o To Do o To Do
Step 4.1:	Conditions	If Vendor = IBM Then Route to <Hardware Buyer>	Workflow Role

Single and Multidomain Workflows

Through the activity-based and event-driven model, a workflow-architected solution like SmartStream can be used to manage both single and multidomain workflows.

A single domain workflow means a workflow that takes place within a single application domain such as a purchasing or an invoicing system. This is almost always the type of workflow that the workflow-enabled model delivers.

A multidomain workflow means a workflow that crosses application domains and involves a wide cross-section of users. Multidomain workflows are typical of workflow-architected solutions and are key to the concept of eliminating the boundaries in a Distributed Enterprise.

Using a simplified invoice processing example, it's easy to see how the workflow model of SmartStream applies to a real life task in a single application domain and how much of the workflow is managed automatically by the system:

Model	Participant	Description
Activity	AP clerk	Data keyed into vendor invoice entry form
Event	System	Insert of invoice data into database table
Next Step	System	Route invoice data to invoice approval form
Message	System	Insert approval item in supervisor to-do list
Activity	Supervisor	Invoice data in approval form reviewed and approved
Event	System	Invoice status marker updated to "approved"
Next Step	System	Place approved invoice in "ready to pay" queue
Message	System	Remove approval item from supervisor to-do list

Using a human resource example of an employee hire demonstrates the flexibility of SmartStream in handling a multiapplication domain workflow:

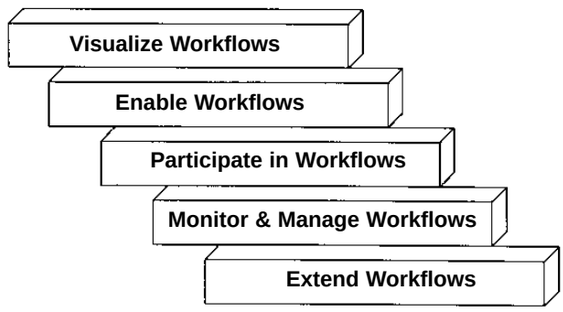
Inside HR Application Domain	
Tasks/Activities	**Participants**
Scan or key in applicant resume	Interviewing staff
Approve applicant for hire	HR manager
Establish benefit package	Benefits administrator
Initiate payroll setup	Payroll administrator
Enroll new hire in training courses	Training coordinator

Outside HR Application Domain	
Tasks/Activities	**Participants**
Secure office space	Office manager
Connect telephone	Telecoms manager
Connect PC to LAN	IT staff
Check inventory for PC	Inventory application
Generate requisition for new PC	Purchasing application
Send PO to computer supplier	Purchasing application

This type of multidomain workflow is what eliminating boundaries within the Distributed Enterprise is all about from a practical perspective.

The Workflow Functionality of SmartStream

The activity-based and event-driven workflow model helps with conceptualizing the mechanics of the workflow process and is essential to a workflow-architected solution. In order to implement workflow functionality in business software, it can be helpful to view this implementation taking place at five levels of sophistication:



The purpose of this section is to illustrate the depth of a workflow-architected solution. Using the five levels of workflow as a framework, we can examine the sophistication of the workflow provided as part of the SmartStream application suite. The five levels of workflow can be summarized as follows:

- ***Visualizing a workflow*** essentially means being able to assemble Activities, Events, Next Steps and Messages into business processes and diagram the process flow graphically on-screen.

- ***Enabling workflows*** means being able to define the detailed behavior of each combination of Activities, Events, Next Steps and Messages, using table-driven maintenance screens.

- ***Participation in workflows*** means being able to classify the user roles and the structural hierarchies used to route workflow items around the enterprise.

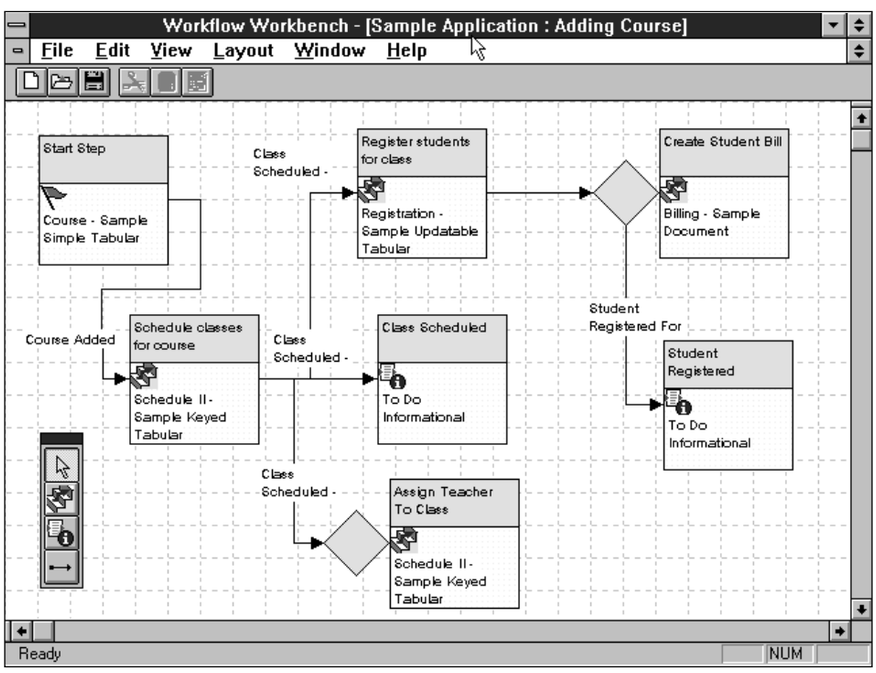
- ***Monitor and manage workflows*** means being able to inquire on the status of individual workflows and audit the participation in workflows by users.

- ***Extending workflows*** means the ability to iteratively revise workflow processes or to extend and enhance an application's functionality while retaining its workflow capabilities.

Access to all these levels of workflow functionality is indicative of a true workflow-architected solution that does not require third-party applications to enable the functionality at any specific level.

Visualizing Workflows

The SmartStream suite includes a graphical workflow modeling tool called SmartStream Workflow Workbench for visualizing workflows. The SmartStream Workflow Workbench provides a canvas with a workflow component toolbox for modeling workflow tasks visually on-screen.



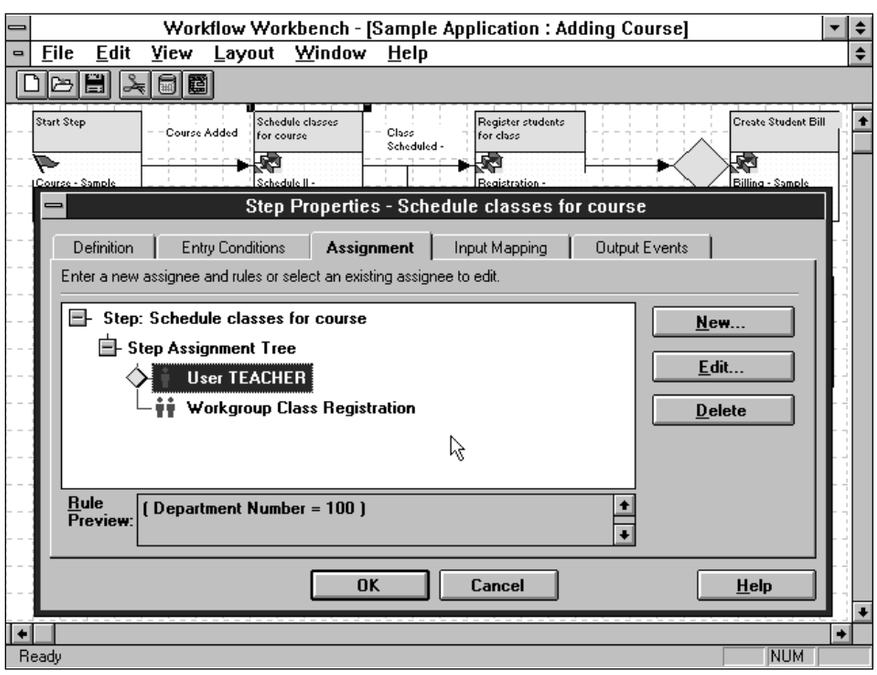
The SmartStream Workflow is created with the Workflow Workbench, which allows you to define, connect and annotate Next Steps and Messages for the purpose of configuring the workflow process model. Once the model is built, it can be saved in a repository. This allows workflows to be retrieved later and iteratively improved if the business model changes in order to facilitate the establishing of "best practice" workflows.

A graphical process map is the workflow equivalent of an architect's plan. Just as no architect would erect a building without a plan, so no process engineer should build workflows without a process map. Visualizing the workflow process is an essential first step for implementing workflows in any system. It provides a key tool for iterative process redesign and for enabling workflow participants to understand the process they are participating in.

Process maps literally represent a library of your business processes, defining your business in the same way as a data model or organization chart. Each process map is "live." Changing components in the process map changes the behavior of the process, allowing you to "what if" a process and test it as part of your reengineering efforts.

Enabling Workflows

The SmartStream Workflow Workbench is also the basis for enabling the workflow within the application. For each Next Step defined in the SmartStream Workflow, you can define a series of rules to be applied on a conditional basis to add intelligence to the workflow process. This definition is carried out using a pop-up tab folder called the SmartStream Router.



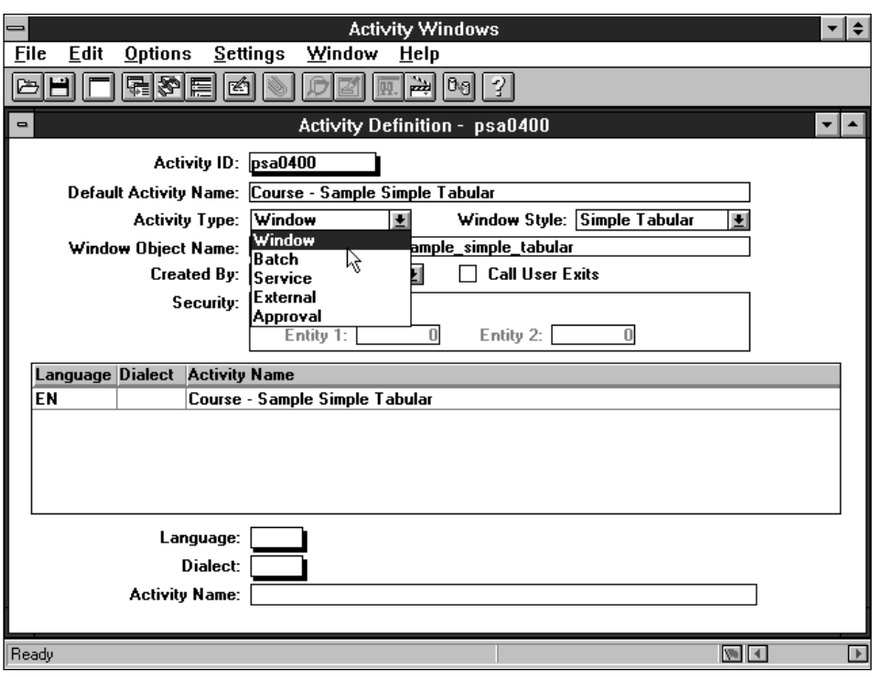
The SmartStream Router allows a rich set of rule-driven parameters to be associated with each Next Step, including:

Tab	Description
Definition	The name, selected activity, priority and other properties of the step
Entry Conditions	The conditional rules applied to define how the step is carried out
Assignment	The rules for routing the result of the step to the workflow participants
Input Mapping	The mapping and ordering of data columns from the previous step
Output Events	The rules for transferring data to the next Activity in the workflow

These rules and their parameters are all table-driven and maintained through an easy-to-use on-screen form. As there is no coding involved in defining these rules sets, they can be defined and understood by business users, not just specialist workflow programmers.

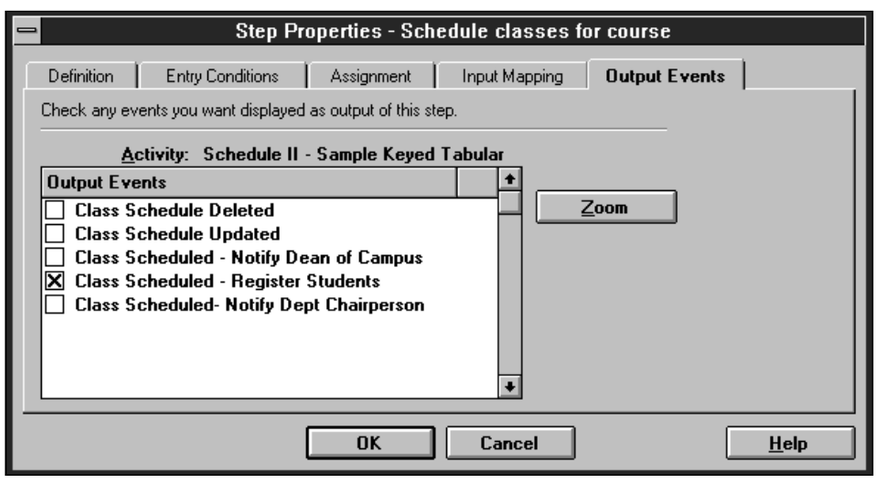
There are hundreds of discrete application Activities defined in the SmartStream Enterprise Model, due to the granularity of the software design. The Activities themselves and their associated Events are defined outside of the SmartStream Workflow Workbench. There are five types of Activities that can be included in a workflow:

Activity Type	Description
Approval	An approval Activity that can be directly initiated from a to-do list
Batch	An external process that is initiated by a workflow
External	An external application that can be started by an internal Activity
Service	A Next Step that utilizes the workflow API to carry out a task
Window	A standard application maintenance window in the SmartStream suite



Each Activity can be associated with its own set of Events that are conditionally executed based on the table-driven SmartStream workflow rules. Events that would apply to most Activities include:

Event Type	Description
Insert Row	The event fired when a new row is inserted into the database
Update Row	The event fired when an existing row is updated in the database
Delete Row	The event fired when an existing row is deleted from the database



Many Activities would require a much richer set of Events than these, including specialized Events such as Insert Header or Insert Detail that might be used in an invoice processing Activity, for example.

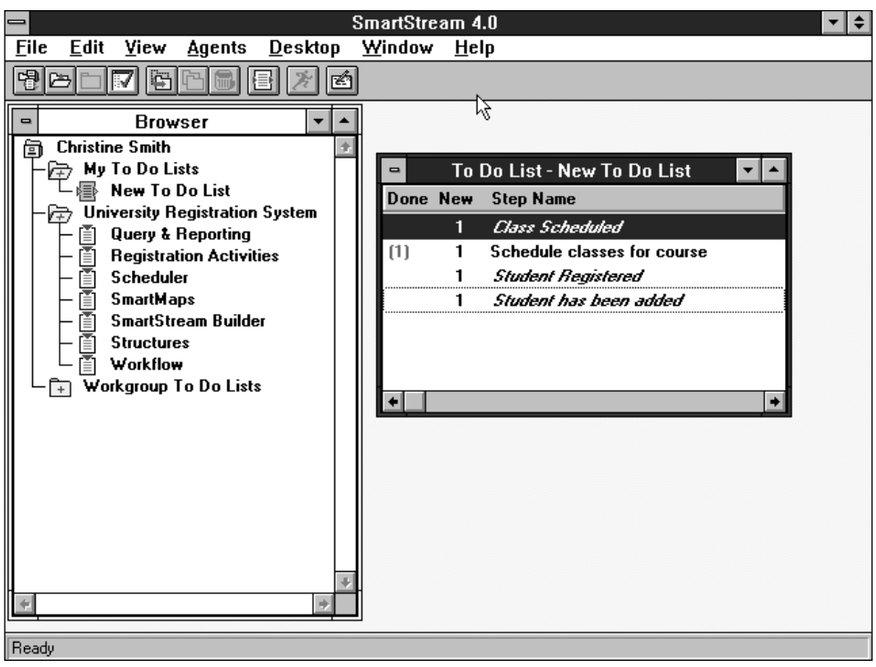
Participating in Workflows

SmartStream users can participate in workflows in one of two ways:

- As active participants with defined roles in the workflow routing
- As passive participants who receive messages about workflows via E-mail

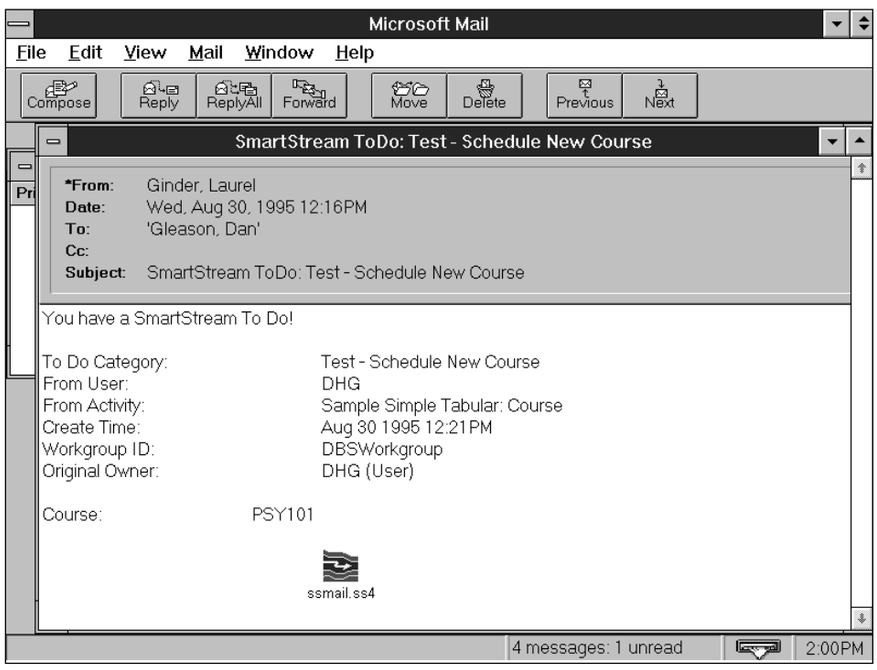
Active participants are the data entry clerks, supervisors and managers with direct involvement in the transaction management systems; for example, the purchasing department or the HR department staff. Active participants are defined as such through the user and workgroup maintenance functions that associate workflow roles either with individual users or their workgroups. Users then physically participate in workflows through the SmartStream to-do list.

The SmartStream to-do list, which operates at a workgroup and user level, is the logical manager for actioning workflows that have been “pushed” as messages to the user or workgroup by the workflow engine. Selecting the to-do item from the list allows the user to action the workflow Activity item in order to move it forward in the business process.



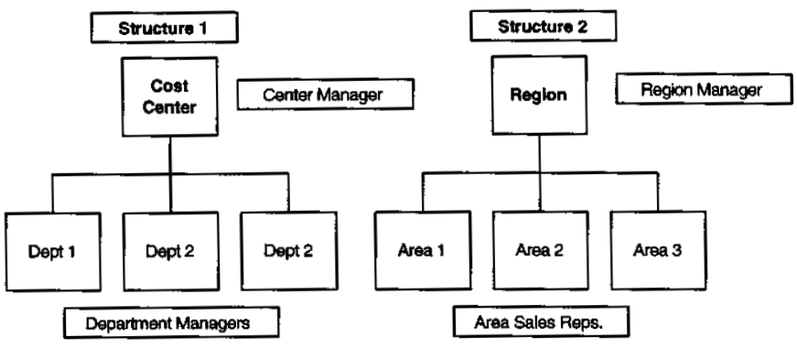
Passive participants are the analysts, managers and executives who may not be involved intimately or at all with the transaction systems but need to be kept abreast of important events and exceptions that occur in these systems. A passive participant simply receives messages generated by the workflow engine that may have an informational or alerting function. Passive participants may be anybody serviced by the E-mail infrastructure in place, not just SmartStream users. This extends the reach of the workflow to users outside the SmartStream information domain.

A passive user of SmartStream would receive E-mail messages similar to the message below.

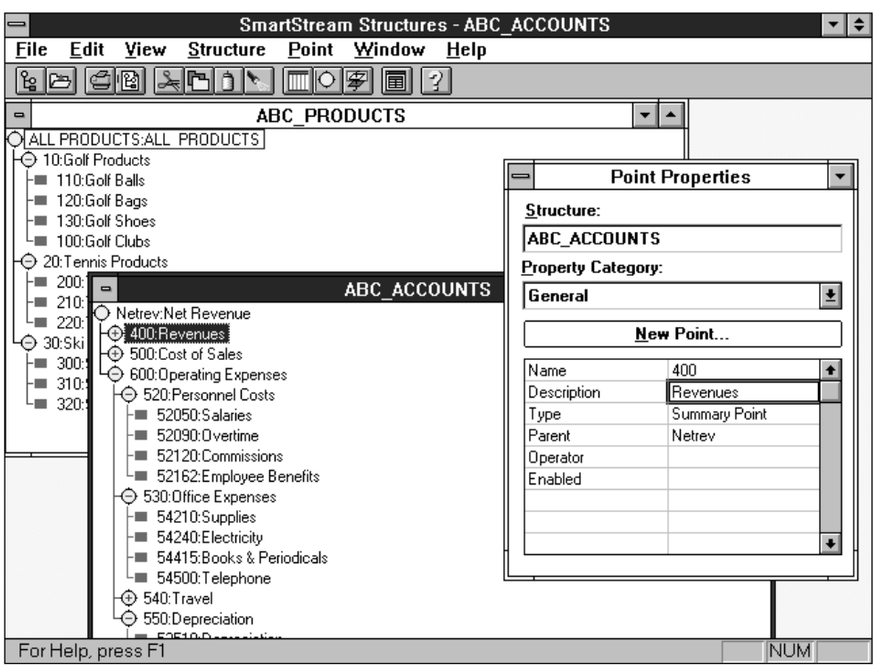


Participation in SmartStream workflows is made easier through leveraging the existing application Structures. These Structures are organizational hierarchies that are defined for the purpose of mapping an organization to the application. Structures are often used to represent multilevel reporting hierarchies such as employees within departments within cost centers, sales reps within territories within regions, or inventory items

within product groups within lines of business. By associating SmartStream users to roles at the various levels within these existing structures, the participant routing of workflow items can be defined based on an existing, valid hierarchy. This avoids the need to assign routings separately through the workflow engine because the assignment of routings has been made through the Structure.



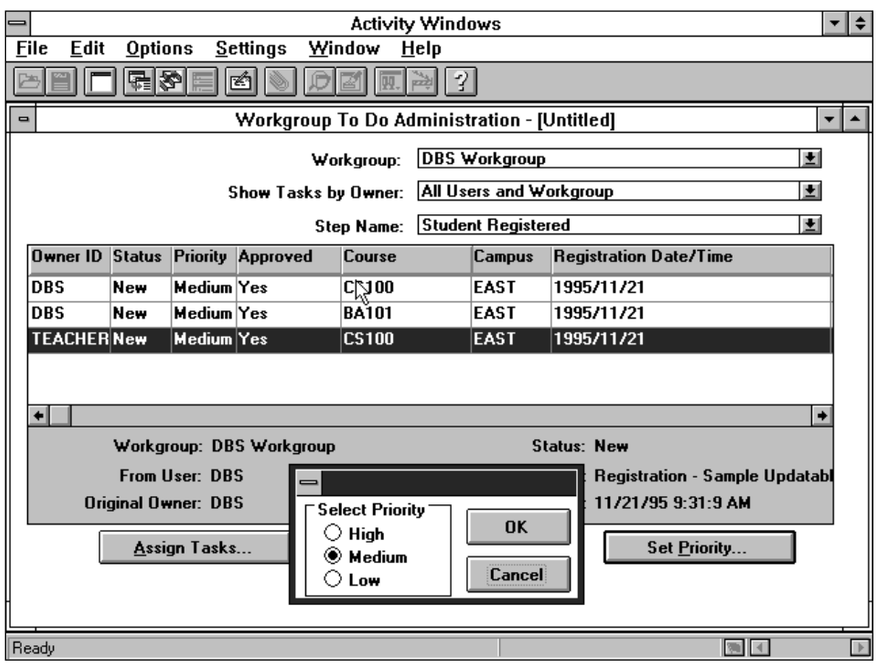
An example of SmartStream Structures is shown below:



Monitoring and Managing Workflows

Workflows are system-managed processes that require human intervention only at specific points in the process. Therefore, it is essential that the workflow can be monitored in order to track the status of the workflow or to handle suspensions and bottlenecks in impacting the workflow momentum.

A Workgroup Administration function allows managers to review the status of a workflow from a group or user perspective. This function provides an audit trail of the workflow itself and allows the manager to reassign workflows to other groups or users to handle bottlenecks caused by transaction volume, staff shortages or the unavailability of a participant due to sickness or schedule changes.

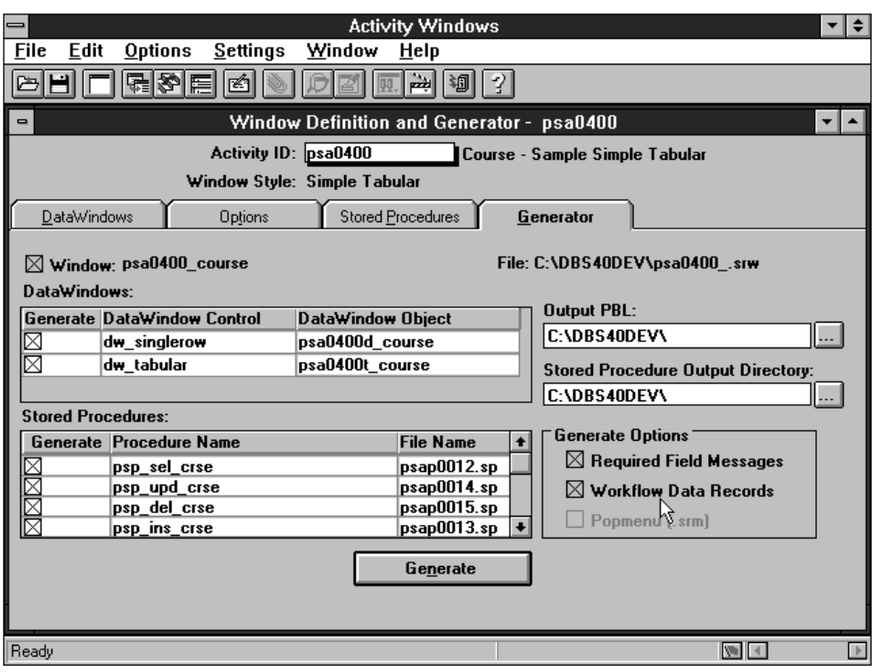


Extending Workflows

In order to extend the workflow functionality to other external applications that may need to interact or cooperate with the SmartStream products, a workflow applications programming interface (API) has been provided. This API exposes the workflow engine functionality for use by external applications by providing dozens of API function calls. As a result, the internal workflow capabilities can be fully exploited by non-Dun & Bradstreet Software applications.

The API would enable a custom-built order entry system to collaborate with a SmartStream Accounts Receivable module through the workflow engine. The order entry application could be passed customer and credit control data from the AR module; the AR module could be passed outstanding invoice data from the order entry system. If these systems are managed by different departments or even locations, then the connectivity of the two systems through the workflow API facilitates a new level of cooperation between the departments themselves.

Another component of the SmartStream suite is SmartStream Builder™, a tool for enhancing, extending and customizing the functionality of SmartStream applications. Many business management systems include toolkits for customizing their applications. A key differentiator of SmartStream Builder is that it inherits the same workflow capabilities as the pre-built SmartStream applications. Access to the same rich workflow functionality is automatically available to the SmartStream Builder developer. In fact, the core of SmartStream Builder, the Developer's Workbench, integrates workflow process flows into the basic development paradigm of the toolkit. SmartStream Builder provides a "no code" approach to building workflow functionality into enhancements and extensions of the SmartStream applications.



V. Conclusion

The Distributed Enterprise is a complex and evolving business organization criss-crossed with boundaries. These boundaries introduce the potential for operational inefficiencies that reduce the effectiveness of the distributed business model.

In order to overcome these boundaries, the Distributed Enterprise needs to leverage the maximum value from its information technology investment which is often diverse and under-utilized. Workflow provides the essential technology mechanism to harness the full potential of this investment by eliminating or diffusing boundaries within and between business management systems.

Workflow can be deployed in a number of ways to increase the efficiency of business systems. But for workflow to have the maximum impact and deliver the greatest benefit, the workflow functionality must be architected into the application design. This is because workflow is much more than just an add-on functionality enabler; it is a fundamental tool for reengineering business processes and assembling application software around those processes.

An architected software solution requires a level of granularity far finer than the traditional modular design approach. To qualify, applications must be broken down into discrete process activities and business events. These activities and events can then be reassembled to fit the needs of real-world business processes and iteratively refined into “best practice” models. The reassembly possibilities of hundreds of activities and unlimited events indicates how flexible the software will be in adapting to change, surely one of the biggest problems of traditional business management software.

Workflow can only deliver isolated benefits at a departmental or functional level when delivered through connectivity to a third-party package. For workflow to deliver benefits across the Distributed Enterprise, it must offer the sophistication required for users to visualize, enable, participate in, monitor, manage and extend workflows. This demands a fully integrated and table-driven workflow engine functioning as a transparent services layer within a truly workflow-architected solution.

SmartStream is an example of an application suite that is fully workflow-architected. SmartStream anticipates the need to build business management applications around process models, not functional "silos." By breaking its applications down into activities and events, rather than modules and button-driven choices, Geac SmartStream has demonstrated a forward-looking design vision that anticipates the component software of the future. And although the workflow of SmartStream is fully self-contained and does not need third-party enabling packages to function, it also provides the openness to ensure that it can cooperate with other applications if required.

As demonstrated by SmartStream, the practical delivery of this workflow-architected solution allows business users to assemble their software around their business processes, not their business processes around their software. In doing so, SmartStream is instrumental in delivering the application and workflow functionality that helps to eliminate the boundaries in the Distributed Enterprise and empower system managers with a valuable tool to fully leverage their enterprise-wide technology investment.

Notes

Notes

Notes

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Czech Republic
Denmark
Finland
France
Germany
Greece
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Indonesia
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Geac
SMARTStream

66 Perimeter Center East
Atlanta, GA 30346-1805
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1-800/290-7374
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198-WP-005 1/98

SMARTStream®

Financials Bulk Load

Version 6.5

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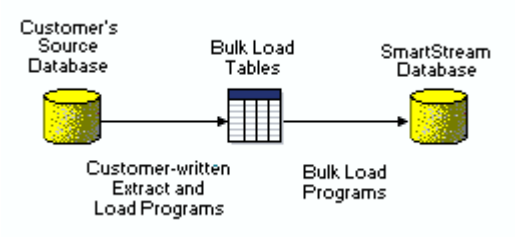
1 Overview of Bulk Load

Chapter Contents

1-2 Overview of Bulk Load Processing
1-6 How Bulk Load Transactions Relate to Online Transactions

Overview of Bulk Load Processing

Bulk Load enables you to load data from your current non-SmartStream inventory management system into SmartStream. For example, you might bulk load data from an AMAPS database into the SmartStream database during implementation of SmartStream Supplies Management.

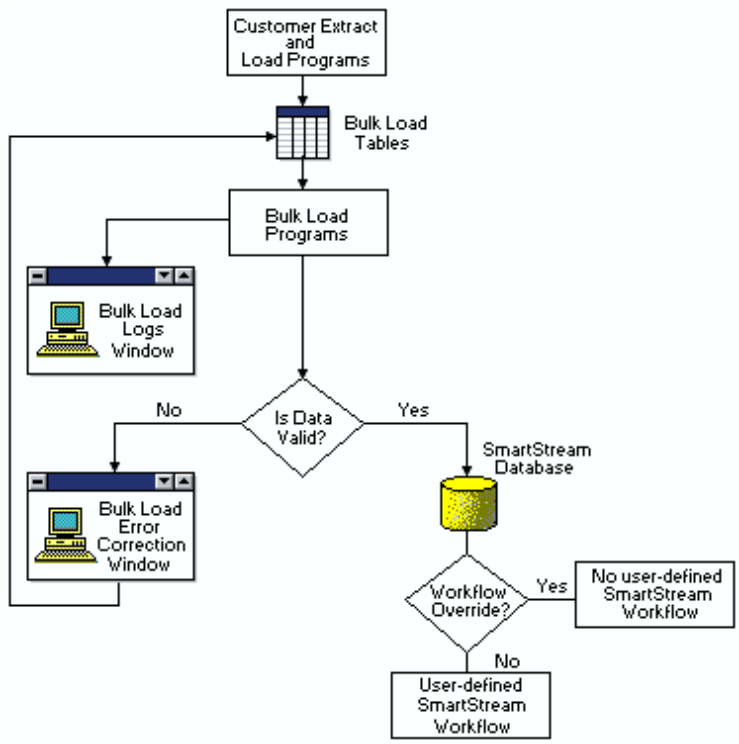


As the customer, you have the option of either writing extract and load programs that move data from your source database to one of several Bulk Load tables or using the Bulk Copy program to write data you have extracted into the corresponding Bulk Load table.

Each of the Bulk Load tables is processed by one of the six Bulk Load programs, which validates the data before passing it into the appropriate SmartStream database tables.

Each Bulk Load program is a time-saving alternative to using one or more SmartStream online windows to enter the same data. For example, the Bulk Load Item program loads the same data that is entered on the Item and Site Item window. However, the Bulk Load program can perform hundreds or thousands of item entry transactions during a single run, the equivalent of using the Item and Site Item windows hundreds or thousands of times to enter data.

The following diagram shows the functions and activities associated with Bulk Load.



As the customer are responsible for writing the programs that extract data from your source database, and loading the extracted data into the Bulk Load tables. You can use either the Bulk Copy program or your own procedure to load the extracted data into the Bulk Load tables. The remainder of the functions and activities are provided by Bulk Load.

The following table further explains the diagram, providing information about the functions and activities in the order they are generally performed the first time you use Bulk Load.

Bulk Load Activity	Description
Load Programs	You are responsible for writing the programs that extract data from your source database load the extracted data into the Bulk Load tables. See Overview of Bulk Load Table Layouts for the table layouts you need to write these programs
Bulk Load Tables	The tables are staging areas for rows of data from the source database or system. See Bulk Load Table Layouts for the layout of the tables and information about valid values and default values for the tables

Bulk Load Activity	Description
Bulk Load Programs	There are six Bulk Load programs. Each program is associated with a Bulk Load table. Use the Job Scheduler in SmartStream to run the programs. When a program runs, it processes a Bulk Load table row by row, column by column, performing data validation and loading, error processing, and logging as described in the remainder of this table.
Data Validation and Loading the SmartStream Database	Each Bulk Load program validates each row of data in its associated Bulk Load table to make sure the data conforms to SmartStream database requirements. See Bulk Load Table Layouts for information about the valid values for table columns. If all the columns in a row have valid data, the program loads the row of data to the appropriate SmartStream database tables and deletes the row from the Bulk Load table. The processing to enter the data into the SmartStream database is the same processing as occurs when you enter transactions online using SmartStream windows.
Error Correction	When a Bulk Load program encounters a column with invalid data, the program rejects the entire row of data and leaves the row in the Bulk Load table. The program logs error information to an error table, which you can view on the Bulk Load Error Correction window. You can use the window to correct the invalid data directly in the Bulk Load table. Rerun the Bulk Load program to load the corrected rows of data to the SmartStream database.
Bulk Load Logs	Bulk Load programs log information (number of transactions, start and end times, and so on) that you can view and maintain on the Bulk Load Logs window.

Prerequisites

Bulk Load tables include data for several basic entities. Bulk Load programs validate this data by checking against the SmartStream database to find a match with predefined SmartStream data. For this reason, you must define certain elements before using the Bulk Load programs including:

- Sites
- Stockrooms
- Bin Location
- Items
- Units of Measure
- Commodities
- Buyers
- Replenishment Group

See Overview of Bulk Load Table Layouts for information about additional predefined data requirements for specific Bulk Load programs.

How Bulk Load Transactions Relate to Online Transactions

Bulk Load programs perform data entry transactions that correspond to those done online using SmartStream activities. The following table lists these relationships.

Bulk Load Program Name	SmartStream Activity Name
Bulk Load Item Master (mblc0010)	Item and Site Item
Bulk Load Stockroom Item (mblc3030)	Stockroom Item
Bulk Load On Hand Quantity (mblc0060)	Inventory Adjustment
Bulk Load Average Cost (mblc3040)	Item Average Cost
Bulk Load RIC (mblc3010)	Direct Issue
Bulk Load Receipt (mdsc3000)	Receipt

2 Setting Up and Using Bulk Load

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2-1 Overview of the Bulk Load Process
2-2 Writing Programs to Load the Bulk Load Tables
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2-11 Windows To Use

Overview of the Bulk Load Process

The following table lists the major steps you perform when using Bulk Load. The remaining sections in the chapter provide additional information about these activities.

Step	Action
1	Write programs that will extract data from your source database to load the Bulk Load tables from the extracted data.
2	Run your extract and load programs to load the Bulk Load tables with source data or use Bulk Copy program.
3	Predefine SmartStream data that is required by the Bulk Load programs.
4	Establish security for Bulk Load windows and programs.
5	Set up Bulk Load default values.
6	Use Job Scheduler to organize and run the Bulk Load programs.
7	Correct invalid source data found by the Bulk Load programs.
8	View and maintain Bulk Load program activity logs.

Writing Programs to Load the Bulk Load Tables

The first step in using Bulk Load is to load the Bulk Load tables with data from your source database. You are responsible for writing the programs that extract data from your source database and load it into the Bulk Load tables. See Overview of Bulk Load Table Layouts for information that will help you write these programs correctly.

When your programs are complete, run them to load the Bulk Load tables with the source data that you want to import to the SmartStream database.

Establishing Bulk Load Security

Bulk Load requires two categories of security:

- Job Scheduler security
- Activity security

Job Scheduler Security

This section assumes you have SmartStream administrator rights and are familiar with SmartStream security activities. For an overview of SmartStream security activities, see Security Overview.

Use the Job Scheduler to organize and initiate Bulk Copy and Bulk Load programs. Because the Bulk Load programs manipulate server data, you must provide the Job Scheduler with server user IDs and passwords by setting up one or more security profiles.

A security profile is a collection of the server and host IDs and passwords the Job Scheduler needs to execute a job. Use the Security Profile window to create, delete, and maintain security profiles.

Activity Security

Use the Activity Security window to give users and groups the security they need to run

- Bulk Load programs
- Bulk Load windows.

Bulk Load Program Security

All Bulk Load programs are secured by site, so a group or user must be given security to run the program at each site where they will run the program.

The following table lists the six Bulk load programs and their activity IDs:

Program Name	Activity ID
Bulk Load Item	Mblc0010
Bulk Load Stockroom Item	Mblc3030
Bulk Load On-Hand Quantity	Mblc0060
Bulk Load Average Cost	Mblc3040
Bulk Load Remote Inventory Control (RIC)	Mblc3010
Bulk Load Receipts	Mdsc3000

The following table shows how your SmartStream administrator might establish security for the security group TEST to run the Bulk Load Item program at your site:

Security Group ID	Activity (Program) ID	Activity Description	Security Entity 1 (Site)	Security Entity 2 (N/A)
TEST	Mblc0010	Bulk Load Item	*	

Bulk Load Window Security

Each Bulk Load window allows you to configure or use some feature of the Bulk Load programs: default values, error correction, and so on.

The following table lists the three Bulk Load windows and their corresponding Activity ID:

Window (Activity) Name	Activity ID
Bulk Load Transaction Default Values	Mbl0300
Bulk Load Error Correction	Mbl0400
Bulk Load Log	Mbl0600

Bulk Load windows are secured by one or both of the following security entities:

- Transaction ID
- Site

Transaction ID

Each Bulk Load program is associated with a *Transaction ID*. The Bulk Load Transaction ID field appears on each Bulk Load window. To use a window for a given program, you must have security for the Bulk Load Transaction ID that you enter on the window.

The browse list for the Transaction ID field is filtered to include only those Bulk Load programs (Transaction IDs) to which security has been assigned.

The following table lists the Transaction ID for each Bulk Load Program:

Program Name	Transaction ID
Bulk Load Item	Mbl10010
Bulk Load Stockroom Item	Mbl13030
Bulk Load On-Hand Quantity	Mbl10060
Bulk Load Average Cost	Mbl13040
Bulk Load Remote Inventory Control (RIC)	Mbl13010
Bulk Load Receipts	Mds13000

Site

To display and maintain data for some Bulk Load programs, the Bulk Load windows require both Transaction ID and Site security. The site security requirement is enforced when you attempt to access windows for the following Bulk Load programs:

- Bulk Load On-Hand Quantity (mbl10060)
- Bulk Load Average Cost (mbl13040)

Example The following table shows how your SmartStream administrator might establish security for the security group TEST:

Security Group ID	Activity ID (Window)	Activity Description	Security Entity 1 (Transaction ID)	Security Entity 2 (Site)
TEST	mblc0400	Bulk Load Error Correction window	mbl10010	*
TEST	mblc0400	Bulk Load Error Correction window	mbl13040	MINN

Members of TEST will be able to run the Bulk Load Error Correction window (Activity ID mbl0400) to correct errors found by the Bulk Load Item program (Transaction ID mbl10010). They will also be able to run the Bulk Load Average Cost program (Transaction ID mbl13040) at site MINN.

Note: The Bulk Load Item program does not require site security (*). The Bulk Load Average Cost program does require site security (for example, MINN).

Setting Up Bulk Load Defaults

Bulk Load programs process the source data that is contained in the Bulk Load tables. For some table columns, however, the programs can use a user-defined default *if* the column is found empty (it does not contain source data).

User-Defined Defaults

There are two categories of user-defined defaults:

- Defaults entered on the Bulk Load Transaction Default Values window
- Predefined SmartStream defaults

Bulk Load Transaction Default Values

Bulk Load allows you to enter default values for certain Bulk Load table columns. Use the Bulk Load Transaction Default Values window to define default values that can be used by the following Bulk Load programs:

- Bulk Load Item Master
- Bulk Load On Hand Quantity
- Bulk Load Average Cost

Example

You can specify a default value of **EA** for the unit of measure column for the Bulk Load Item Master program. If the Bulk Load Item program runs and finds that column empty, the program loads the unit of measure value of **EA** into the SmartStream database.

If you want to use user-defined defaults for the Item, On Hand Quantity or Average Cost Bulk Load programs, you must specify the defaults before running the programs.

For more information, refer to the Bulk Load online help.

Predefined SmartStream Defaults

For some Bulk Load table columns, the Bulk Load programs can refer to the SmartStream database to obtain default values when the columns contain no source data. For example, the Bulk Load Item Master program can refer to the Commodity entered or defaulted to derive the default purchase site.

Default Priority

Bulk Load programs use source data and default values, if available, in the following priority:

1. Source data
2. Defaults defined on Bulk Load Transaction Defaults window
3. Defaults predefined in the SmartStream database

Configuring Bulk Load Transaction Workflow

SmartStream Workflow Workbench allows your organization to configure workflow that is triggered when users perform certain online activities. Use the Job Scheduler window to control whether or not Bulk Load transactions generate the same user-defined SmartStream workflow that may be configured for the comparable online activities.

For example, your organization may have configured a workflow that notifies a buyer whenever a new item is added to a particular site. If the item is added using the Item window, workflow is generated. However, you can specify whether the Bulk Load program generates the same workflow using the workflow parameter. By default, the Bulk Load Item program generates workflow when it bulk loads new items.

The default workflow parameter is for Bulk Load transactions to generate user-defined workflow. Use the Job Scheduler window to override this default for each program.

Generate Workflow Parameters

- 0 - Do not generate workflow
- 1 - Generate workflow (default)

Running Bulk Load Programs

Use the Job Scheduler window to organize and run the Bulk Load programs.

See Understanding the Job Scheduler to learn about using and administering the Job Scheduler.

Note: Remember to define any prerequisite data before running any of the Bulk Load programs.

Program Run Order

When using Bulk Load for the first time to load data into the SmartStream database, run the Bulk Load programs in the following order:

1. Bulk Load Item
2. Bulk Load Stockroom Item
3. Bulk Load On Hand Quantity
4. Bulk Load Average Cost (running Average Cost first prevents the creation of journal entries).

Correcting Invalid Data

When a Bulk Load program processes its Bulk Load table, it validates the data in each table column. If the program encounters invalid data, it logs an error message and leaves the entire row in the Bulk Load table. A workflow task is sent to the user who ran the Bulk Load program. This task opens the Bulk Load Error Correction window, where you can display and correct data in rows that failed validation during the last program run.

Changing data on the window updates the Bulk Load table, not the SmartStream database table. After correcting the invalid data and saving your changes, run the Bulk Load program again to validate the corrected rows and load them to the appropriate SmartStream database table.

Viewing and Deleting Bulk Load Logs

Bulk Load programs create output logs during processing that indicate the number of rows processed and the number of rows in error. You can display output logs using the Bulk Load Logs window. This window allows you to display logs by Bulk Load Transaction ID and Site, and to delete them when they are no longer needed.

Windows To Use

Use the following windows to implement the concepts in this chapter. For more information, refer to the online help for each window.

To perform this task...	Use this window...
Define Bulk Load activity and window security	Security Profile and Activity Security
Define Bulk Load default values	Bulk Load Transaction Default Values
Run Bulk Load programs	Job Scheduler
View and maintain records of Bulk Load processing	Bulk Load Logs
Correct data errors	Bulk Load Error Correction

3 Bulk Load Table Layouts

Chapter Contents

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Overview of Bulk Load Table Layouts

This chapter provides layouts for each Bulk Load table. The table layouts describe the order of the columns that make up the Bulk Load tables, and provide additional information about valid values, associations with the SmartStream database, and default values for each column. Use the information in this chapter

- To help you successfully write the extract and load programs that populate the Bulk Load tables with data from your source database. This task is a prerequisite to using Bulk Load.
- For help when you are entering user-defined Bulk Load default values.
- For help when you are performing error correction after running a Bulk Load program.

How to Read This Chapter's Tables

Each table in this chapter provides the layout (structure) and other information for one of the Bulk Load tables. Each layout table in the chapter has the following columns of information:

Bulk Load Table Column

This column provides information about the columns in the order they appear in the Bulk Load table.

If the column is a required (key) column, it is *italicized*. The required Bulk Load table columns correspond to the key fields on the associated SmartStream window.

<SmartStream window> Field

This column is the SmartStream window field that corresponds to the Bulk Load table column. Use this information in the SmartStream window to access online Help for the field, which provides information about how the field works in SmartStream and its valid SmartStream values for it.

Data Type

This column provides information on the required data type and length of the table column.

Note: Column data types may vary between Microsoft SQL and Sybase environments.

Valid Values

This column represents the valid values for the table column. When the Bulk Load program processes this column and finds invalid data, the program writes an error to its error table.

If the Valid Values column contains the text *Cannot be null*, then the program generates an error if the table column is empty (null) and either no default value is allowed or one is allowed but is not defined.

Default Value

For those table columns for which defaults can be used, this column describes how the program obtains the default value.

For example, *User-defined or Item* tells you that you can define a default on the Bulk Load Transaction Default Values window. If you do not, the program gets a value from the SmartStream Item table, which you must define before running the program.

Bulk Load Default Values

The Default Value column describes how the Bulk Load program obtains a default value for the table column, if one is available. See Setting Up Bulk Load Defaults for information about the types of default values that are used by Bulk Load.

The following table describes the various sources of the default information that you see in the Default Value column.

Default Value Column Contents	Meaning
blank	Defaults do not apply to this column. If the column name is italicized, it is a required column for which there must be source data. If the column name is not italicized, the column is not a required column and the program accepts a null value for the column.
<Derivation>	If a default is derived by the Bulk Load program, the derivation is given. For example, - Reqd_qty ÷ order_line-qty
<SmartStream database value >	If the table column is empty, the Bulk Load program refers to the SmartStream database for a default value, which must be defined before the program is run. For example, if you see *From the Item Table*, it means that the program will refer to the SmartStream Item table, which you must populate before you run the program.
User-defined.	You can define defaults for these table columns on the Bulk Load Transaction Default Values window. The default value is used when the data column is empty (no source data). **Note:** If you choose not to define a default, then the Bulk Load program may be able to use a SmartStream data value, which you must define before you run the Bulk Load program. For example, the column may contain the text: - User-defined or from the Item table.

Default Priority

The Bulk Load programs use the following priority when using Bulk Load defaults:

1. Source data
2. Defaults defined on Bulk Load Transaction Defaults window
3. Defaults predefined in the SmartStream database

System-Generated Column

Each Bulk Load table contains a Row ID column that is used to uniquely identify each row in the table during internal Bulk Load processing. This column may or may not be loaded to the SmartStream database, depending on the database vendor.

Using With Bulk Copy

In a Microsoft SQL server environment, the Row ID column must be included in the total number of columns defined to the Bulk Copy program. In Sybase, this column is not included in the number of columns. See the online help for the Bulk Copy Parameters window for more information.

Bulk Load Item Master

The Bulk Load Item program (mblc0010) validates and loads data from the load_item_master table into the SmartStream database.

You may define some data columns on the Bulk Load Transaction Default Values window (see **User-defined** in the Default Value column in the following table).

Data in this table corresponds to data entered online via the Item and Site Item windows. The program writes data that fails validation to the load_item_master_err table.

Additional Considerations

Before running this program, define the prerequisite data entities using the appropriate windows.

If more than five sites need to be associated with an item, you must add a second row containing the item, other required fields and any additional sites. The program does not attempt to re-add the item because it will already exist, but it will add additional site item records.

Table Layout for load_item_master

The following table lists the table layout requirements for the Bulk Load Item Master program. For additional field information, see the online help for the Item window.

Note: Required (key) columns are italicized. These columns must contain source data.

Bulk LoadTable Column	Item Window Field	Data Type	Valid Values	Default Value
item_id	Item	varchar(26)	Cannot be null. Must not already exist on the item_plan table for the sites referenced in Site_id_1 thru Site_id_5.	
item_descp	Description	varchar(35)	Cannot be null.	
unit_of_measure	Unit of Measure	char(4)	Cannot be null. Must be predefined on the Unit of Measure window.	User-defined
commodity_code	Commodity	char(4)	Must be predefined on the Commodity window.	User-defined
usage_code	Usage Code	char(2)	Must be "IM", "EX" or "SE"	User-defined or "EX"

Bulk LoadTable Column	Item Window Field	Data Type	Valid Values	Default Value
fixed_asset_ind	Fixed Asset	char(1)	"Y" or "N". If usage_code is "SE", cannot be "Y".	User-defined or "N" (no)
consignment_ind	(none)	char(1)	"Y" or "N".	User-defined or "N" (no)
cross_reference	Cross Reference	char(26)		
special_handling_ind	Special Handling	char(1)	"Y"(yes) or "N" (no)	User-defined or "N" (no)
active_ind	Active	char(1)	"Y" or "N"	"Y" (yes)
buyer_ID	Buyer Id	char (30)	Default hierarchy from Commodity, if present. Otherwise, must be valid and active for all purchase sites.	
purchase_site_id	Purchase Site	char(4)	Use the following hierarchy to default purchase sites: 1. Purchase site entered 2. If commodity entered, use purchase site for commodity. 3. Purchase site for site entered.	
over_rcpt_tolerance	Over Receipt Tolerance	char (6)	Can be blank. Defaults to spaces (no tolerance checking). Must be numeric and no more than 2 decimals.	User-defined
under_rcpt_tolerance	Under Receipt Tolerance	char (6)	Can be blank. Defaults to spaces (no tolerance checking). Must be numeric and no more than 2 decimals.	User-defined
service_ind	Service Indicator	char (1)	"Y" or "N" If "Y", cannot have a Usage Code of "IM" or "SE"	User-defined or "N"
unit_cost	Unit Cost	varchar (18)	Conditional. If usage code = "IM" or "SE", field must be zero or blank. If usage code = "EX", and a value is entered, the value must be numeric and greater than zero but less than 10,000,000. Value not greater than 5 decimals.	User-defined or 0

Bulk LoadTable Column	Item Window Field	Data Type	Valid Values	Default Value
issue_site_id	Issue Site	char (4)	Must be valid site. If usage code = "EX", this field must be spaces. If Supplies is not installed, defaults to spaces.	User-defined
issue_stockroom_id	Issue Stockroom	char(10)	Must be a valid stockroom. If usage code = "EX", this field must be spaces. If issue site entered, cannot be null. If issue site not entered, must be null. If Supplies not installed, defaults to spaces	User-defined
site_id_1	Site ID 1	char(4)	Cannot be null. Must be predefined on the Site window.	
site_id_2	Site ID 2	char(4)	Must be predefined on the Site Window, if entered.	
site_id_3	Site ID 3	char(4)	Must be predefined on the Site Window, if entered.	
site_id_4	Site ID 4	char(4)	Must be predefined on the Site Window, if entered.	
site_id_5	Site ID 5	char(4)	Must be predefined on the Site Window, if entered.	
row_id		numeric(10)		

Bulk Load Stockroom Item

The Bulk Load Stockroom Item program (mblc3030) validates and loads data from the load_item_stockroom table into the SmartStream database.

Data in this table corresponds to data entered online on the Stockroom Item window.

The program writes data that fails validation to the load_item_stockroom_err table.

Additional Considerations

Before running this program, be sure you have defined the prerequisite data entities using the appropriate windows.

Table Layout for load_item_stockroom

The following table lists the table layout requirements for the Bulk Load Stockroom Item program. For additional field information, see the online help for the Stockroom Item window.

Note: Required (key) columns are italicized. These columns must contain source data.

Bulk Load Table Column	Stockroom Item Window Field	Data Type	Valid Values	Default Value
site_id	Site	char(4)	Cannot be null. Must be predefined on the Site window.	
stockroom_id	Stockroom	char(10)	Cannot be null. Must be predefined on the Stockroom window.	
item_id	Item	varchar(26)	Cannot be null. Must be a valid item for the site. Usage code must be "IM" or "SE".	
unit_of_measure	UOM	char(4)	Cannot be null. Must be predefined on the Unit of Measure window.	Defaults from item.
active_ind	Active	char(1)	"Y" or "N"	"Y"
replenishment_lead_tm	Replenishment Lead Time	char(3)	Must be numeric; cannot have decimals. Must be between 0 - 1000.	
replenishment_grp_id	Replenishment Group	char(10)	Must be valid replenishment group for site/stockroom.	

Bulk Load Table Column	Stockroom Item Window Field	Data Type	Valid Values	Default Value
replenishment_site_id	Replenishment Site	char(4)	Conditional. Required if Replenish From Vendor = "N". Otherwise must be blank. Site must be a valid site. If item is a consignment item, site must be equal to replenishment site.	
replenishment_stockroom_id	Replenishment Stockroom	char(10)	Must be valid stockroom. Conditional. Required if Replenish From Vendor = "N". Otherwise, must be blank. If replenishment site is entered, this field is required. If item is not a kit, replenishment site and stockroom cannot be the same as stocked site/stockroom.	
minimum_qty	Minimum Quantity	varchar(18)	Must be numeric and not greater than 5 decimals. Value must be between 0 and 999,999,999.99999; If UOM is discrete, value must be between 0-1,000,000,000, Must be less than maximum quantity.	0
maximum_qty	Maximum Quantity	varchar(18)	See mimimum qty valid values above.	
over_rcpt_tolerance	Over Receipt Tolerance %	char(6)	Must be numeric. Cannot be more than 2 decimals. Value must be between 0.00 and 999.99	
under_rcpt_tolerance	Under Receipt Tolerance %	char(6)	See over_rcpt_tolerance above	
obsolete_date	Stop Replenishment Date	varchar(26)	Must be valid date and greater than or equal to today's date.	19000101
replenis_from_vendor_ind	Replenished From Vendor	char(1)	"Y" or "N". If repl_ind = "Y",f kit_ind cannot be "Y".	If blank and Kit Assembly is blank or defined as N, defaults to Y, otherwise it defaults to N.

Bulk Load Table Column	Stockroom Item Window Field	Data Type	Valid Values	Default Value
kit_ind	Kit Assembly	char(1)	"Y" or "N". If "Y", must not be a component of another kit.	
max_issue_qty	Maximum Issue Quantity	varchar(18)	Must be numeric and not greater than 5 decimals. Value must be between 0 - 000,000,000.99999. If UOM discrete, no decimals and be between 0 and 1,000,000,000.	If UOM is discrete, 999999999. If non discrete, 999999999.99999
row_id		numeric(10)	System-generated	

Bulk Load On Hand Quantity

The Bulk Load On Hand Quantity program (mblc0060) validates and loads data from the load_adj_inv table into the SmartStream database.

You may define a default reason code on the Bulk Load Transaction Default Values window (see **User-defined** in the Default Value column in the following table).

Data in this table corresponds to data entered online on the Inventory Adjustment window. The program writes data that fails validation to the load_adj_inv _err table.

Additional Considerations

Before running this program, be sure you have defined the prerequisite data entities using the appropriate windows.

See Batch Loading On Hand Quantities for more about using the Bulk Load On Hand Quantity program.

Table Layout for load_adj_inv

The following table lists the table layout requirements for the Bulk Load On Hand Quantity program. For additional information, see the online help for the Inventory Adjustment window.

Note: Required (key) columns are italicized. These columns must contain source data.

Bulk Load Table Column	Inventory Adjustment Window Field	Data Type	Valid Values	Default Value
site_id	Site Id	char(4)	Cannot be null. Must be predefined on the Site window.	
stockroom_id	Stockroom Id	char(10)	Cannot be null. Must be predefined on the Stockroom window.	
bin_id	Bin location	char(10)	Cannot be null. Must be on bin table for site/stockroom. Cannot be the disposition bin	

Bulk Load Table Column	Inventory Adjustment Window Field	Data Type	Valid Values	Default Value
item_id	Item Id	varchar(26)	Cannot be null. Must be predefined on the Stockroom Item window. Cannot be a consignment item. UOM for item must exist.	
material_status_code	Material Status Code	char(4)	STCK(Stocked) and HOLD(On Hold).	STCK
on_hand_quantity	On Hand Quantity	varchar(18)	Cannot be null. Must be numeric. Cannot have greater than 5 decimals Values must be between 0 and 999,999,999,99999. If UOM discrete, must have no decimals and be between 0 and 1,000,000,000.	
reason_code	Reason Code	char(4)	Cannot be null. Must be a valid and active reason code.	User-Defined
row_id		numeric(10)	System generated	

Bulk Load Average Cost

The Bulk Load Average Cost program (mblc3040) validates and loads data from the load_cost_inv_hist table into the SmartStream database.

You may define some data columns on the Bulk Load Transaction Default Values window (see **User-defined** in the Default Value column in the following table).

Data in this table corresponds to data entered online on the Item Average Cost window. The program writes data that fails validation to the load_cost_inv_hist_err table.

Additional Considerations

Before running this program, be sure you have defined the prerequisite data entities using the appropriate windows.

See Establishing Initial Average Cost For Items for more about using the Bulk Load Average Cost program.

Table Layout for load_cost_inv_hist

The following table lists the table layout requirements for the Bulk Load Average Cost program. For additional field information, see the online help for the Item Average Cost window.

Note: Required (key) columns are italicized. These columns must contain source data.

Bulk Load Table Column	Item Average Cost Window Field	Data Type	Valid Values	Default Value
site_id	Site	char(4)	Cannot be null. Must be predefined on the Site window.	
stockroom_id	Stockroom	char(10)	Conditional. If average cost is kept at the stockroom level, stockroom is required. Must be predefined on the Stockroom window.	
item_id	Item	varchar(26)	Cannot be null. Must be predefined on the Item window. If cost kept at stockroom level, must be predefined on cost_item_stkc) table.	

Bulk Load Table Column	Item Average Cost Window Field	Data Type	Valid Values	Default Value
reason_code	Reason Code	char(4)	Cannot be null. Must be predefined on the Reason Code window. Must be active.	User Defined
status_code	Valid Zero Cost	char(1)	Y or N; If average cost is 0 (zero), must be Y.	User Defined or N
trans_amt	Average Cost	char(20)	Cannot be null. Must be a valid number.	
row_id		numeric(10)	System generated	

Bulk Load Remote Inventory Control (RIC)

The Bulk Load RIC program (mblc3010) validates and loads data from the load_ric table into the SmartStream database.

Data in this table corresponds to data entered online on the Direct Issue window. A negative issue quantity represents a return, while a positive issue quantity represents an issue.

The program writes data that fails validation to the load_ric_err table.

Additional Considerations

Before running this program, be sure you have defined the prerequisite data entities using the appropriate windows.

See Bulk Load RIC Process for more about the Bulk Load RIC program.

Table Layout - load_ric

The following table lists the table layout requirements for the Bulk Load RIC program. For additional field information, see the online help for the Direct Issue window.

Note: Required (key) columns are italicized. These columns must contain source data.

Bulk Load Table Column	Direct Issue Window Field	Data Type	Valid Values	Default Value
site_id	Site	char(4)	Cannot be null. Must be predefined on the Site window.	
stockroom_id	Stockroom	char(10)	Cannot be null. Must be predefined on the Stockroom window.	
item_id	Item	varchar(26)	Cannot be null. Must be predefined on the Item or Stockroom item window. Must be active for the stockroom.	
bin_id	Bin	char(10)	Cannot be null. Must be predefined on the Bin Location window.	
issue_qty	Issue Quantity	varchar(18)	Cannot be null.	

Bulk Load Table Column	Direct Issue Window Field	Data Type	Valid Values	Default Value
ldr_entity_id	Ledger Entity Identifier	char(5)	Cannot be null. Must be valid SmartStream UDAK.	
dbs_division	Division	char(6)	Must be valid SmartStream UDAK	
dbs_account	Account	char(5)	Must be valid SmartStream UDAK	
dbs_department	Department	char(6)	Must be valid SmartStream UDAK	
dbs_product	Product	char(4)	Must be valid SmartStream UDAK	
dbs_project	Project	char(5)	Must be valid SmartStream UDAK	
row_id		num(10)		

Bulk Load Receipt

The Bulk Load Receipt program (mdsc3000) validates and loads data from the load_receipt table into the SmartStream database.

Data in this table corresponds to data entered online on the Receipt window. The program writes data that fails validation to the load_rcpt_err table.

Additional Considerations

Before running this program, be sure you have defined the prerequisite data entities using the appropriate windows.

See Processing Receipts Received By ASNs for more about using the Bulk Load Receipt program.

Table Layout for load_receipt

The following table lists the table layout requirements for the Bulk Load Receipt program. For additional field information, see the online help for the Receipt window.

Note: Required (key) columns are italicized. These columns must contain source data.

Bulk Load Table Column	Receipt Window Field	Data Type	Valid Values	Default Value
site_id	Site	char(4)	Cannot be null. Must be predefined on the Site window.	
due_do_dock_date	Due to Dock Date	varchar(26)	Cannot be null. Must be a valid date.	
order_id	Order	char(12)	Cannot be null.	
order_line_nbr	Order Line	char(5)	Cannot be null. Must be numeric and between 1 and 32767.	
purchase_site_id	Purchase Site	char(4)	Cannot be null. Must be predefined on the Site window.	
ship_to_code	Ship To	char(8)	Cannot be null.	

Bulk Load Table Column	Receipt Window Field	Data Type	Valid Values	Default Value
recv_qty	Received Quantity	varchar(18)	Cannot be null. If base UOM is discrete for a stocked item, this value must convert to the base UOM with discrete value. If purchase UOM is discrete for nonstocked item, this quantity must convert to purchase UOM with discrete value.	
unit_of_receipt	UOM	char(4)	Cannot be null. Must be a valid UOM. UOM conversion must be predefined if purchase or base UOM is different than unit of receipt.	
receipt_date	Receipt Date	varchar(26)	Cannot be null. Must be a valid date.	Today's date
asn_id	ASN	char(30)	Cannot be null if receiving a nonstocked item as complete.	
shipment_ref_nbr	Shipment Reference	char(22)	If blank, Next Available Number generates number	
carrier_id	Carrier	char(17)	Conditional. Required if Matching Control Code = 2 (ERS) and bill of lading_read ind = "Y".	
packing_slip_nbr	Packing Slip	char(15)	Conditional. Required if Matching Control Code = 2 (ERS) and bill of lading_read ind = "Y".	
bill_of_lading	Bill of Lading	char(15)	Conditional. Required if Matching Control Code = 2 (ERS) and bill of lading_read ind = "Y".	
source_id	Source ID	varchar(17)		
vendor_loc_code	Vendor Location	varchar(3)		
source_item_id	Source Item	varchar(35)		
item_id	Item ID	varchar(26)	Must be a valid item	
row_id		num(10)	System generated	

SMARTStream®

Technical Reference
Financials

Version 6.5

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1 Workflows, Databases, and Security

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1-1 Workflows
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Workflows

Some activities and events delivered with SmartStream Financials and SmartStream Procurement have predefined tasks and workflows. You can add, change, and redirect tasks and workflows after SmartStream is installed. For more information, see Overview of Workflows in the Workflow chapter of the *SmartStream Administration* guide.

To view actual workflows by activity and by workbook, including assignment conditions and assignees, use the SmartStream Reference Tool.

Databases

The following table lists the databases for the SmartStream Financials and SmartStream Procurement products:

Product	Database
Allocations	DBSallc
Asset Management	DBSfast DBSfwrk
Billing	DBSbill
Budget	DBSbdgt
Consolidations	DBScons
Credit Management	DBScred
Funds Control	DBSfund
Ledger	DBSglep (Ledger) DBSjepc (Posting History)
Payables	DBSpymt (Payment) DBSprqt (Payment Request)
Projects	DBSproj (Projects) DBSpjcm (Projects Common) DBSpjal (Projects Allocation) DBSpwrk (Projects Work)
Procurement Common	DBScntl (Purchasing Common) DBSdclm (Day Calendar) DBShist (History Options) DBSotpm (Order Type Codes) DBSplmm (Site) DBSpmam (Item) DBSpplm (Item Planning) DBSrsmm (Reason Code) DBSudef (Account Key Definition) DBSuomm (UOM) DBSvend (Vendor Payables) DBSvmst (Vendor) DBSvpur (Vendor)
Purchasing	DBSreqm (Requisition) DBSpcde (Purchasing Policy) DBSpuen (Purchase Order) DBSpoan (Purchase Order History) DBSropm (Receiving)
Receivables	DBSrrcv

Product	Database
SmartStream Common	DBSpscb (Job Scheduler) DBSpurg (archive) DBSarpc (Asynchronous RPC) DBScfrm (Formulas) DBScommon (Common) DBSctlg (Distribution Catalog) DBSdemo DBSosst (Structures) DBSosxp (Structures) DBSpiqd (Connect) DBSwact (Workflow and Security) DBSwsam (Samples) DBSbank (Bank) DBScand (Archive) DBScmre (Currency) DBSdbis (Dun and Bradstreet info) DBSentp (Enterprise) DBSeuro (Euro) DBSpclh (Periodic Calendars)
Supplies Management	DBScost (Cost) DBSmabl (Background Load) DBSrcth (Transaction History) DBSiplm (Stockroom Inventory) DBSstrm (Stockroom)

To view complete database information such as table names, column names, stored procedures, and triggers, use the SmartStream Reference Tool.

Security

SmartStream Financials and SmartStream Procurement products use three types of security:

- Activity security
- Data security
- Action security (Consolidations only).

  For information about Consolidations security requirements, see Consolidations Security in the Consolidations chapter of this guide.

Activity Security

Activity (window) security restricts access to the windows that appear in the Activity Lists on the SmartStream desktop. For more information, see Securing Activities in the Users and Security chapter of the *SmartStream Administration* guide.

Activities Secured by Site

You can secure some Purchasing and Supplies Management activities for your users by site.

Purchasing

If Purchasing is installed, you can secure the following Purchasing and Purchasing-related activities for your users on a site-by-site basis:

Activity ID	Activity Name
cvn0070	Site Catalog
cvn0150	Vendor Purchasing Information
cvn0800	Vendor Classification Codes
cvn1000	Vendor Item Definition
cvn1010	Vendor Item Price
cvn1020	Assign Participating Sites
cvn1040	Vendor Item Manufacturer
cvn1050	Assign Classification to Vendor Item
mbm0060	Site Item
mbm0400	Replenishment Group
mcd0010	Day Calendar
mcd0020	Item and Commodity History Options
mcd0021	Cost Management History Options
mcd0022	Procurement Common History Options
mcd0024	Receiving History Options

Activity ID	Activity Name
mcd0038	Stockroom History Options
mcd0060	Reason Code
mcd0070	Site Accounting Distributions
mcd0080	Reason Code Accounting Distributions
mcd0260	Stockroom Accounting Distributions
mds0800	Receipt
mds0810	Receipt Maintenance
mds0820	Receipt Exception
mds0840	Unidentified Receipt
mds0850	Receipt Inquiry
mds3000	Return
mpc0010	FOB Code Definition
mpc0020	Ship-Via Code Definition
mpc0040	Buyer
mpc0050	Classifications
mpc0060	Ship-To Address
mpc0070	Deliver-To Address
mpc0080	Freight Terms Code
mpc0090	Standard Phrase Code
mpc0100	Site Commodity
mpc0110	Site Commodity Acctg Distributions
mpc0120	Assign Commodities to Buyer
mpc0130	Assign Commodities to Site
mpc0140	Country Commodity
mpc0150	Site Commodity Tree
mpc0300	Requisition Entity
mpc0320	Assign Catalogs to Requisition Entity
mpc0350	Requisition Entity Acctg Distributions
mpc0400	Requester
mpc0450	Requester Acctg Distributions
mpo0050	Purchase Entity
mpo0080	Blanket Order
mpo0090	Blanket Order Line
mpo0100	Purchase Order

Activity ID	Activity Name
mpo0110	Purchase Order Approval
mpo0120	Purchase Order Approval Status
mpo0130	Assign Blanket Order Standard Phrases
mpo0140	Assign Blanket Order Line Std Phrases
mpo0160	Assign Purchase Order Standard Phrases
mpo0170	Assign PO Line Standard Phrases
mpo0200	Select Purchase Orders to Send
mpo0300	Purchase Order Inquiry
mpo0600	Scheduled Purchase Order Load Process
mpo0650	Scheduled Purchase Order Load - Unproc
mpo0670	Scheduled Purchase Order Load - Key Err
mpo0690	Scheduled Purchase Order Load - Reset
mpob0020	Requisition to Purchase Order
mpoc0030	Purchase Order Update
mrq0100	Requisition
mrq0101	Replenishment Requisition
mrq0130	Requisition Line Exceptions
mrq0140	Requisition Approval Status
mrq0150	Requisition Approval
mrq0200	Scheduled Requisition Load Process
mrq0201	Scheduled Requisition Key Error
mrq0202	Scheduled Requisition Transaction Error
mrq0300	Reset Logical Lock for Requisition Load

Supplies Management

If SmartStream Supplies Management is installed, you can secure the following Supplies Management activities for your users on a site-by-site basis:

Activity ID	Activity Name
mbm0070	Stockroom Item
mim0850	Stockroom
mim0880	Transaction History Inquiry
mcm0120	Cost Currency Rates
mcm0260	Transaction Valuation Run Options

Activity ID	Activity Name
mcm0450	Journal Creation Run Options
mcm0921	Inventory Valued Transactions Detail
mcm0930	Cost Reports Launch
mcm0960	Inventory Costs Transactions Outstanding
mcmc0010	Cost Item Setup
mcmc0040	Transaction Valuation
mcmc0050	Journal Creation
mim0850	Stockroom
mim0880	Transaction History Inquiry

Activities Secured by Site and Stockroom

If SmartStream Supplies Management is installed, you can elect to secure the following Supplies Management activities for your users on a stockroom-by-stockroom basis:

Activity ID	Activity Name
mbl0300	Bulk Load Transaction Defaults
mbl0400	Bulk Load Error Correction
mbl0600	Bulk Load Logs
mbm0070	Stockroom Item
mbm0080	Kit Definition
mbm0400	Replenishment Group
mcm0900	Item Average Cost
mcm0910	Kit Order Cost Inquiry
mcm0920	Inventory Values Transactions Inquiry
mcm0940	Inventory Cost Inquiry
mcm0950	Kits in Process Cost Inquiry
mcm0990	Item Average Cost Change History
mim0800	Print Picklist
mim0805	Reprint Picklist
mim0810	Confirm Picklist Quantities
mim0820	Direct Issue
mim0830	Inventory Move
mim0840	Inventory Adjustment
mim0860	Stockroom Bin Location

Activity ID	Activity Name
mim0870	Item Bin Location
mim0900	Bin Location Inquiry
mim0910	Inventory Inquiry
mimc3000	Reservation
mimc3010	Replenishment
mrq0500	Kit Order

Data Security

Data security restricts access to data for an activity. Some SmartStream activities have control types which allow data to be secured depending on specific data values. For example, the Ledger Date Policy activity is secured by the Ledger Entity control type.

Use the SmartStream Reference Tool for a complete list of activities and their data control types.

For more information on implementing data security, see Securing Data.

Related Activities

Some SmartStream products have activities that automatically secure other closely related activities. For example, if you are secured for the Asset activity you are automatically secured for the Asset Offline Processing activity, Asset Retirement activity, Asset Transfer activity, and Asset Category Tables activity.

Asset Management Control Types

The following table lists the control types, activities, and corresponding related activities for Asset Management:

Asset Management Control Type	Activity	Related Activity
Asset Entity Identifier	Asset Entity Policy	Asset Additional Depreciation Tables Asset Annual Limit Tables Asset Category Account Distn Asset Depreciation Percent Tables Asset Entity Account Distn Asset Location Tables Asset Online Correction Facility Asset Tax Credit Tables Asset Units of Production Tables
	Asset Depreciation Projection Controllers	
	Asset New Year Process Controllers	

Asset Management Control Type	Activity	Related Activity
	Asset Period Depreciation Controllers	
	Asset Retirement Request	
	Asset Transfer Request	
	Asset	Asset Offline Processing Asset Retirement Asset Transfer Asset Category Tables

Budget Control Types

The following table lists the control types, activities, and corresponding related activities for Budget:

Budget Control Type	Activity	Related Activity
Budget Account and Balance Control Secured by - Budget Entity - Security Element 1 - Security Element 2 - Processing Year - Amount Class Type	Budget Balance	Budget Chart of Accounts Budget Balance List Budget Balance
Budget Entity ID	Budget Entity Policy	Budget Entity Policy Budget Entity Amount Class Type Budget Validation Policy Budget Valid Element Combinations Budget Checkout List
	Budget Maintenance Request	Budget Maintenance Request Budget Workbench Import Budget Load Request
	Funds Control Budget Import Request	

Currency Control Types

The following table lists the control types, activities, and corresponding related activities for Currency:

Currency Control Type	Activity	Related Activity
Currency Code	Currency Code	None
Rate Entity ID	Rate Entity	Average Rate Calculation Conversion Simulation Currency Block Currency Pair Generate Currency Pairs Rate Delete Request Rate Download Request Currency to Rate Entity Association Rate Entry By Date Rate Entry By Transaction Currency Rate Entry By Template Rate Entry Single Rate Explosion Request Rate Template Rate Type

Ledger Control Types

The following table lists the control types, activities, and corresponding related activities for Ledger:

Ledger Control Type	Activity	Related Activity
Ledger Account Secured by - Ledger entity - 2 accounting key elements	Chart of Accounts HiVolume Maintenance Program (fglc0910) Unposted Journal Entries Batch Upload Program (fglc0920) Funds Control Distribution Maintenance Funds Control Balance Funds Control Adjustment Subledger Documents	
Ledger Account Balance Secured by - Ledger Entity - Year - Amount Class - 2 accounting key elements	Account Balance List HiVolume Maintenance Program (fglc0910) Batch Upload Program (fglc0920)	Account Balance
Ledger Entity ID	Ledger Policy	Multiple Entity Period Close Ledger Balancing Accounts

Ledger Control Type	Activity	Related Activity
	Ledger Maintenance Request	Ledger Batch Error Correction
	Revaluation/Restatement Request	
	Year End Request	
	Funds Control Policy	
	Funds Control Excluded Entities	
	Funds Control Account Maintenance	
	Funds Control Distribution Maintenance	
	Funds Control Budget Maintenance	
	Funds Control Budget Import Request	
	Funds Control Budget Release Request	
	Funds Control Transfer and Amendment	
	Funds Control Balance	
	Funds Control Exception Handling	
	Funds Control Adjustment	
	Funds Control Workbench	
	Funds Control Structures Explosion	
	Funds Control Journal Creation	
	Funds Control Transaction Upload	
	Funds Control Account Relationship	
	Funds Control Year End Process	
	Funds Control Year End Request	
Posted Journal Entity	Posted Journal Entries	

Note: To view a Ledger entity, you must establish data security for the Periodic Calendar ID control type.

Projects Control Types

The following table lists the control types, activities, and corresponding related activities for Projects:

Projects Control Type	Activity	Related Activity
Project Security Code	Projects Balance Maintenance window	Projects Balance Load scheduled process
	Capitalization Component Policy window	Capitalization Request window Capitalization Summary window Project and Component Load scheduled process (for transaction code C5)
	Capitalization Transaction window	Project and Component Load scheduled process (for transaction code C4)
	Component window	Component Accounting Distribution window Component Cost Element window Project and Component Load scheduled process (for transaction codes C1-C3)
	Projects Status Maintenance window (for changes to component status)	
	Unposted Project Journal window	Project Journal Load scheduled process
	Project window	Project Accounting Distribution window Project Amount Class window Project and Component Load scheduled process (for transaction codes P1-P4) Project Cost Element window
	Projects Status Maintenance window (for changes to project status)	
	Project Funds Checking window	

2 Financials Reporting

Chapter Contents

2-1 About Financials Reporting
2-2 Reporting Databases Installed with SmartStream
2-4 Setting Up for Reporting
2-6 Scheduling Reports

About Financials Reporting

You can use Microsoft Access to extract data from the Financials database management system (DBMS) tables to produce

- Reports
- Documents
- User-defined queries.

Reporting Databases Installed with SmartStream

The cepfrmt.mda and prperror.mda library databases are delivered with all SmartStream products that use Microsoft Access to produce reports.

Library Database	Description
cepfrmt.mda	A common repository for routines such as address, date, telephone number, and currency format. Automates the Microsoft Access attach table process and logs error messages when the Job Scheduler runs Microsoft Access. Can reside on the server.
prperror.mda	A common repository for SmartStream messages used by Microsoft Access and the code used to issue the messages. Must reside on the client.

The following table lists the Microsoft Access databases delivered with the Financials and Procurement products:

Product	Microsoft Access Database
Allocations	fal32.mdb
Asset Management	ffarpt32.mdb
Bank	fbkact32.mdb
Billing	fbl32.mdb fblrev32.mdb
Budget	bbd32.mdb
Consolidations	fco32.mdb
Credit Management	fcrdun32.mdb fcrsta32.mdb
Currency	fgl32.mdb
Euro Currency	feubk32.mdb
Funds Control	ffc32.mdb
Ledger	fgl32.mdb fglab32.mdb
Payables	fapbal32.mdb fapdrf32.mdb fpypmt32.mdb fpyregs32.mdb
Projects	fpj32.mdb
Purchasing	mpoact32.mdb

Product	Microsoft Access Database
Receivables	farasr32.mdb faratb32.mdb farbal32.mdb fardrp32.mdb farfcp32.mdb farpur32.mdb farstm32.mdb fartot32.mdb fcrdun32.mdb fcrsta32.mdb
Vendor	cvnrpt32.mdb cvnvit32.mdb

Setting Up for Reporting

Before using the supplied reports, you must perform some preliminary setup tasks. The following table identifies the order of these tasks and provides a brief description of each task:

Stage	Description
1	Ensure that Microsoft Access is installed on your client workstation.
2	Check the server connectivity.
3	Set up ODBC. This process updates the odbc.ini file.
4	Customize reports for your accounting key.

Note: For Asset Management reporting, you also must modify the online Help.

Checking the Server Connectivity

To make sure that you have the proper connections to the database servers

- Check the [DBSERVER] section of the dbserver.ini to make sure that Microsoft Access is looking to the correct server for information.
- If you are using Sybase, make sure your servers are listed in the sql.ini.
- If you are using Microsoft SQL Server and your net library configuration is **not** set to Named Pipes, make sure your servers are listed in the [SQLSERVER] section of the win.ini.

Setting Up ODBC

SmartStream Reporting requires ODBC. The following ODBC drivers are required:

- Sybase ASE (for Sybase Adaptive Server Enterprise)
- SQL Server (for Microsoft SQL Server).

After the ODBC drivers are installed, use the ODBC Data Source Administrator dialog box to define a data source for the SmartStream database. A data source includes the location of the database.

Running Reports the First Time

The first time you run a report, you must run it from the SmartStream Browser so that SQL tables are attached as needed.

To run reports from the SmartStream Browser, select the appropriate activity from the Activity List. Some reports may then display the Attach SQL Tables dialog box. If this

dialog box is displayed, enter the required information and select the Save Password Locally option.

Standard Logon

SmartStream may then display the standard logon prompt. If so, enter valid credentials (user ID and password).

Additional Logons

Some reports show an additional logon prompt that requires report parameters. You must then enter all required report parameters except the user ID and password, which SmartStream automatically supplies as needed.

Running Reports After the First Time

After running a report at least once from the SmartStream Browser, you can run the report again using

- The SmartStream Browser
- Microsoft Access
- The Job Scheduler.

Using the SmartStream Browser

You can run **all** reports from the SmartStream Browser. To run reports from the SmartStream Browser, select the appropriate activity from the Activity List.

Using Microsoft Access

You can run **some** reports directly from Microsoft Access. Before you can run a report from Access, you must run it at least once from the SmartStream Browser.

SmartStream may display the standard logon prompt when you run reports directly from Microsoft Access. If so, enter valid credentials (user ID and password).

Using the Job Scheduler

All reports can be scheduled to run using the Job Scheduler. Before scheduling a report to run, you must run it at least once from the SmartStream Browser. For more information, see Scheduling Reports.

Scheduling Reports

Using the Job Scheduler window, you can schedule a report to run standalone or as a part of other scheduled jobs.

Prerequisite

You can successfully schedule a report to run using the Job Scheduler **only** after you run the report at least once from the SmartStream Browser so that the SQL tables are attached as needed.

Product-Specific Information

For information about scheduling reports for specific products, see the following sections:

- Allocations
- Asset Management
- Bank
- Budget
- Consolidations
- Credit Management
- Currency
- Euro Currency
- Funds Control
- Ledger
- Payables
- Projects
- Purchasing
- Receivables
- Vendor

3 Allocations

Chapter Contents

3-1 About Allocations Processing
3-3 Scheduling Allocations
3-4 Allocations Reporting
3-8 Reviewing the Status of Allocations Processing
3-10 Allocations Troubleshooting

About Allocations Processing

The Allocations scheduled process calculates amounts that are distributed from one Ledger or Budget balance row to one or more new Ledger or Budget balance rows. The type of calculation performed and the balance rows affected are determined by the user-defined allocations rules. An Allocation produces a tab-delimited ASCII text file that is uploaded to the Ledger balance, Budget balance, or unposted journal tables using the Ledger Load program.

Network Connections

To run Allocations scheduled transactions, the client workstation that performs the processing must make a minimum of 16 connections to the server. This allows 11 connections to the server for the allocations program and 5 connections for the Poll program.

If enough connections are not available, the following error is displayed in the local error log:

```
Unable to connect:  SQL Server is unavailable or does not exist.
SQL_Command Buffer:
exec psp_sel_tsdx_1 'glep', '*'
```

Most network software packages set the default number of connections to a value far lower than 16. Consult your network documentation for information about establishing an adequate number of network connections.

Scheduling Allocations

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window to submit a scheduled job for processing.

Program Name	Program Parameters	Associated Request
Windows: falc0900.exe **UNIX:** falc0900	Request ID	Allocations Request

For more information about Job Scheduler, see

Topic	Description
Designating a Job Scheduler Administrator	Discusses setting up Job Scheduler.
Using the Job Scheduler	Discusses scheduling jobs and reviewing their status
Defining Jobs and Steps	Discusses Job Scheduler windows.

Note: Check security to run Allocations using Job Scheduler.

Allocations Reporting

Before running the SmartStream-supplied reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Importing Tab Order Specifications for Allocations Reports

Before you generate Allocations reports that use tab order specifications, you must import those specifications using the following procedure:

Step	Action
1	Open the fal32.mdb by accessing the Allocations Reporting window.
2	Attach tables.
3	Customize the accounting key of the .mdb.
4	Press **F11** to access the Microsoft Access window.
5	Verify the proper database connection in one of the following ways: ▪ Open the fal_alloc_distn_bal_import table and ensure that columns at the end of the table reflect the customized accounting key. ▪ Click the Tools menu, click Options, and then click the Advanced tab. Ensure that the Command-Line Arguments setting has the correct server.
6	On the Microsoft Access window, click the File menu, go to Get External Data, and then click Import. **Result:** The Import dialog box appears.
7	Select Text Files in the Files of Type field, enter *.ojb in the File Name field, and press **Enter**.
8	Select a text file created in Allocations, and click Import. **Result:** The Import Text Wizard is displayed.
9	Ensure that the Delimited option is selected, and click Next. **Result:** The next set of Wizard options is displayed.
10	Click the First Row Contains Field Names option and click Advanced. **Result:** The Import Specification dialog box is displayed.
11	Find your accounting key elements in the list and ensure that they are assigned Text as the data type. Also, ensure that all entity fields are assigned Text as the data type. **Note:** The fields that require changing are data dependent. Field types for the .ojb file must match those found in the fal_alloc_distn_jrnls_import table. See the columns and data types for that table following this procedure.
12	Change the label of the posting_pd column to _posting_pd.
13	Click Save As. **Result:** The Save Import/Export Specification dialog box is displayed.

Step	Action
14	Type FAL_Tab_Spec_Ojb (case sensitive), and click OK.
15	Click Cancel. Then click Cancel again to return to the main Access window.
16	Repeat steps 7 through 15, this time selecting a *.olb file name and type. Save the new specification as FAL_Tab_Spec_Olb (case sensitive). For the .olb file, ensure that all ldr_amt fields are assigned Currency as the data type. **Note:** The fields that require changing are data dependent. Field types for the .olb file must match those found in the fal_alloc_distn_bal_import table. See the columns and data types for that table following this procedure.

Fal_alloc_distn_jrnls_import Table

Column	Data Type
_rqst_id	Text
_rqst_seq_number	Number
_cycle_id	Text
_seq_nbr	Number
_alloc_entity_id	Text
_variable_pool_id	Text
_source_pool_id	Text
_distn_id	Text
_run_date	datetime
ldr_entity_id	Text
jrnl_id	Text
eff_date	datetime
jrnl_seq_nbr	Number
suspense_seq_nbr	Number
accrl_rvsl_ind	Text
jrnl_line_nbr	Number
jrnl_line_status	Text
line_ldr_entity_id	Text
date_created	datetime
amt_class_1	Text
_posting_pd	Number
jrnl_origin_code	Text
descp	Text

Column	Data Type
prim_dr_cr_code	Text
trans_curr_code	Text
curr_rate_type	Text
prim_curr_code	Text
trans_to_prim_exchange_rate	Number
curr_converted_ind	Text
trans_amt	Currency
curr_rate_date	datetime
user_id	Text
All accounting key fields	Text

FAL_alloc_distn_bal_import Table

Column	Data Type
_rqst_id	Text
_rqst_seq_number	Number
_cycle_id	Text
_seq_nbr	Number
_tbl_format_code	Text
_alloc_entity_id	Text
_variable_pool_id	Text
_source_pool_id	Text
_distn_id	Text
_run_date	datetime
ldr_entity_id	Text
curr_type	Text
curr_code	Text
equiv_curr_code	Text
processing_yr	Number
amt_class_type	Text
dr_cr_code	Text
_update_bal_code	Text
_origin	Text
_posting_pd	Number
cur_pd_amt	Currency

Column	Data Type
ldr_amt_1 through ldr_amt_14	Currency
All accounting key fields	Text

Preliminary Testing

If you do preliminary testing of your import specifications files, be sure to delete any test rows from your Access table.

Scheduling Allocations Reports

SmartStream reports must be run directly from the SmartStream Browser at least once before they can be successfully scheduled to run using the Job Scheduler.

You can schedule and run reports using the Job Scheduler window by entering the reporting parameters in the Program Name field.

Schedule the job using the parameter set that was established in the reporting module. The following table shows how to use the report parameter set.

Type	Program Name Field
Report Parameter Set	[Path of Microsoft Access executable] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, Parameter Set, Most Recent] If you enter a Y as the value for the Most Recent parameter, reports that are date sensitive will be run for the most recent date.
- Example	c:\access\msaccess.exe c:\access\fal32.mdb /XFAL_Sched_parm /CMD Allocation Cycles Processed, Rpt_Parm, Y

Report Status

Before running a job, check the DBS checkbox on the Job Scheduler window to get a return code of 0 if the job runs successfully. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

Maintaining Reporting Tables

Each time you run the Allocations program, Allocations stores messages on a table. When the items on the message table are not needed, delete them. You can access all message table utilities by choosing the Utility button on the Allocations Reporting window. To delete messages, access the appropriate message table, enter the parameters, and delete the messages.

Reviewing the Status of Allocations Processing

You can determine the status of a job using reports and messages generated during processing. The following section includes

- An overview of the types of reports that you can review
- The types of messages that you can review.

Reports

You can use the following reports to verify the results of the process. For specific information about these reports and how to run them, see Allocations Reporting online Help.

Use this report...	To...
Allocation Cycles Processed	Determine which cycles were processed during allocations.
Allocation Error	Determine which cycles had errors.
Allocation Pre-Load Balance Results	Review the effect of the allocated amounts on the account or budget balance table after the amounts are posted.

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps, as well as the job's final result (ended successfully, ended with errors, ended before completion). You can display messages using the Scheduler Log activity.

For more information, see

- Return Codes
- Job Scheduler Troubleshooting.

Program Processing Messages

Messages written as a result of Allocations processing are sent to a message table (psc_messages). After processing is complete, these messages are automatically sent to the user or users identified on the Mail dialog box of the Job Scheduler window. The messages are automatically deleted from the psc_messages table.

Extract Log

If the program cannot extract a source pool because of an error, it generates a text file containing the SQL statements that were used to extract data. The name of this file is extract.log. It is stored in the working directory or the directory where the Poll program is running.

Server Messages

When processing begins, a file is generated. The program writes messages to this file that it cannot write to psc_messages because of problems with the server. The unique file name for Allocations is all*xxxxx*.err, where *xxxxx* is the first five positions of the request identifier.

If the program runs to completion, this file is deleted. If the program does not run to completion, this .err file is stored in the working directory or in the directory where the Poll program is running.

Sample Error Log

```
falc0900

Log Date: Fri Apr 16 12:22:46 2002.  Status Message:
Start Allocations Processing RequestID: ALLOC1. Batch StepID: 222.

Log Date: Fri Apr 16 12:22:51 2002.  Status Message:
Request ALLOC1 is not a valid request on alloc_rqst_ctrl.

Log Date: Fri Apr 16 12:22:52 2002.  Status Message:
Failed Get_Request_Control

Log Date: Fri Apr 16 12:22:53 2002.  Status Message:
Completed StepId: 222. Result Code: 4

Log Date: Fri Apr 16 12:22:54 2002.  Status Message:
Job Completed with Errors
```

Messages

Allocations messages are generated from data that fails the program's edits. These messages are written to a specific table (alloc_err_report) defined in the program. View these messages by running the reports associated with Allocations.

Allocations Troubleshooting

The following table provides general information about correcting problems that occur during processing:

When Allocations was interrupted...	Then you...
The cycles and associated sequences that were processed stay processed. Any updates performed for the allocation cycle at the time of the interruption are backed out.	Identify the cause of the interruption. Correct the problem. Restart the process using the same request information.

Note: Because an allocation does not directly update the balance or unposted journal tables, it is not necessary to back up the DBSglep database. An allocation updates only the work tables in the DBSallc database.

4 Asset Management

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Asset Management Processing

Most of Asset Management's asset business functions can be performed on Asset Management windows. See About Asset Management in the *Asset Management* guide for an online-oriented presentation of Asset Management and the business needs it serves. See the Asset Management online Help for detailed

- Information about each window and its fields
- Procedures for performing all window tasks.

Scheduled Processing

Scheduled transaction maintenance processing involves processing Asset Management transactions created by activities such as adding or updating assets. These transactions are usually the result of some high-volume maintenance that has occurred either in Asset Management or in an external process that feeds Asset Management. The volume of the transactions to process makes updating using the Assets windows impractical. An example of such high-volume maintenance is using the information of an organization migrating from an external application to generate transactions in a new format to use to update Asset Management.

Asset Management uses scheduled processing for the following transaction maintenance activities:

- Performing asset maintenance processing, such as adding, updating, adjusting, and deleting asset transactions
- Maintaining unit-of-production tables
- Transferring assets
- Retiring assets
- Period depreciation
- New year processing
- Depreciation projection
- Archiving and purging activity records
- Reporting
- Creating mass transactions.

Period depreciation, new year processing, purging, and depreciation projection are scheduled (batch) processes only. Asset maintenance, reporting, and mass transactions can also be performed online. See Processing Assets in the *Asset Management Calculations* guide for more information about all Asset Management calculations for depreciation, transfer, retirement, and other processes, both online and in scheduled jobs.

Scheduling Asset Management Processes

You can schedule the following Asset Management processes:

- Asset maintenance
- Period depreciation
- New year processing
- Depreciation projection
- Mass transactions
- Archiving and Purging activity records
- Reporting extracts

The directory for these jobs is where Asset Management is installed and the subdirectory is where the scheduled processing program resides.

The program names for each Asset Management job are the same regardless of the platform. Jobs run on a supported Windows platform have an .exe file extension. Jobs run on a UNIX platform do not have the .exe extension.

Program Parameters

You must enter specific program parameters to process scheduled asset maintenance transactions.

Asset Maintenance

Available for supported Windows and UNIX platforms. Enter the following program parameter for the job **ffacamnt** to perform scheduled asset maintenance processing:

Program Parameter	Description
Date format	The format for all dates in the transaction. Enter one of the following date formats: MMDDYYYY DDMMYYYY YYYYMMDD

Period Depreciation

Available for supported Windows and UNIX platforms. Period depreciation calculates the amount of depreciation to accumulate for assets and property accounts. This job also determines when assets and property accounts become fully depreciated. You specify entities and books to be processed in a process controller set (see About Asset Management in the *Asset Management* guide for more information).

Enter the following program parameter for the job **ffacttxn** to perform period depreciation:

Program Parameter	Description
Process controller set identifier	The process control set identifier for period depreciation

New Year Processing

Available for supported Windows and UNIX platforms. New year processing rolls the year-to-date (YTD) depreciation amounts for assets and property accounts into the previous YTD depreciation amounts and clears YTD totals. You specify entities and books to be processed in a process controller set (see About Asset Management in the *Asset Management* guide for more information).

Enter the Process controller set identifier for the job **ffacutxn** to perform new year processing.

Depreciation Projection

Available for supported Windows and UNIX platforms. Depreciation projection projects asset depreciation amounts in the future so that users can compare depreciations using different depreciation methods and codes. This job does not affect the asset database. You specify entities and books to be processed in a process controller set. You can specify additional criteria in the report process controller identifier. If you do this, the report process controller identifier must be the same as the depreciation projection controller identifier.

Enter the following program parameters for the job **ffacvtxn** to perform depreciation projection:

Program Parameter	Description
Process controller set identifier	The process controller set identifier for depreciation projection
User ID	The identifier of the user that entered the report process controller

Archiving and Purging Activity Records

Archive/Purge processing removes the outdated activity records and journals you specify from activity tables for most types of Asset Management transactions and frees disk space.

Enter the following program parameters for the job **ccfc0800** to purge activity records:

Program Parameters	Description
Type of run	The type of processing you want to perform. ▪ Blank - Standard purge processing. Purges the data that meets selection criteria and eligibility requirements. ▪ P - Preview. Displays the data to be purged before removing the data. ▪ R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged data. ▪ C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing.
Request ID	The identifier for the request entered on the Archive/Purge Request window.
Validation option	Determines whether to perform validation. ▪ Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. ▪ V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview.
Job ID	The identifier for the job automatically supplied by Job Scheduler if requested.

Note: You must use the security profile of DBS when you run the Purge process.

For more information about this process, see Archiving and Purging Assets.

Mass Transactions

Available for supported Windows and UNIX platforms. Using Mass transactions scheduled processing, you can create transfer, retirement, and change transactions from existing assets. After you create selection criteria and mass transaction controllers in Microsoft Access, Asset Management saves the transactions on tables.

The following table shows the tables on which Asset Management saves the transactions and explains what each table contains:

Table	Contains
work_generated_sql	Selection criteria for the assets or property accounts for which you want to create mass transactions
work_mass_transfer_base_info	Controlling information for the transfer base transactions you want to create
work_mass_transfer_book_info	Controlling information for the transfer book transactions you want to create
work_mass_retire_base_info	Controlling information for the retirement base transactions you want to create
work_mass_retire_book_info	Controlling information for the retirement book transactions you want to create
work_mass_change_base_info	Controlling information for the change base transactions you want to create
work_mass_change_book_info	Controlling information for the change book transactions you want to create

Enter the following program parameters for the job **ffacmtxn** to create mass transactions:

Program Parameter	Description
Process controller set identifier	The process controller set identifier for the mass transactions
Transaction type code	MT - Mass transfers
	MR - Mass retirements
	MC - Mass changes
Column delimiter	COMMA, TAB, or #
User ID	A valid user identifier for the server where the database resides. This must be the same user identifier that was used to save the mass transaction process contoller.

After you run the mass transactions job in the Job Scheduler, you must retrieve the UNIX file containing the transactions to be bulk copied and run through the asset maintenance job (ffacamnt).

Reporting Extracts

For information about running reporting extracts, see Asset Management Reporting.

Correcting Asset Management Errors

If errors occur during scheduled processing, you can correct them using the Online Correction Facility. For more information on using the Online Correction Facility, see About Asset Management in the *Asset Management* guide.

Processing Messages

Asset Management generates messages in scheduled processing based on whether the transaction was successfully processed. The following table explains the messages generated:

When the transaction is…	Asset Management…
Successfully processed	Deletes the transaction from the transaction table and does not send a message.
Successfully processed but with warnings	Deletes the transaction from the transaction table and sends an informational message to the message table.
Unsuccessfully processed	Keeps the transaction on the transaction table and sends an error message to the To Do List of the person who bulk copied the transactions. The message is tied to the transaction through the message ID. When you select the task on the To Do List, the transaction in error appears on the Online Correction Facility window. You can correct the errors on the window before processing it again.

Processing Summary

Asset Management sends a processing summary to the person who sets up the asset maintenance job. The processing summary contains the following information:

- Date and time the transactions were processed
- Number of transaction processed
- Net transactions generated (number generated minus the number not processed individually)
- Number of asset additions, changes, and deletions processed successfully
- Number of asset transfers processed successfully

- Number of asset retirements processed successfully
- Number of property account additions, changes, and deletions processed successfully
- Number of property account transfers processed successfully
- Number of property account retirements processed successfully
- Number of unit-of-production table additions, deletions, and changes processed successfully
- Number of assets or property accounts with warning and informational messages
- Number of assets or property accounts with error messages

Calculating Processing Summary Totals

There are two types of transaction counts: physical and logical.

The *physical* count is the number of transactions entered in the transaction table. For example, you can enter one asset with two sequences (one for base 1 and one for base 2). The physical count is two because two sequences were entered on the transaction table.

The *logical* count is the number of assets actually entered in Asset Management. In the previous example for physical count, the logical count is one because only one asset was entered in Asset Management.

All counts in the processing summary are physical.

Net Transactions Generated

For information about how Asset Management derives the number of net transactions generated, see Asset Additions, Asset Changes, and Asset Transfers and Retirements.

Restarting Asset Management Jobs

Sometimes jobs terminate before completion. A job must be completed before you can do any Asset Maintenance online processing or run other scheduled jobs.

Restart jobs through the Job Scheduler. The Job Scheduler restarts jobs from the point at which they terminated. The jobs do not have to be rerun from the beginning.

The Asset Management jobs that can be restarted are

- Asset Maintenance
- Period Depreciation
- New Year Processing

Notification

The Job Scheduler mails you notice of job termination. When you set up the Job Scheduler, you indicate who is to receive messages for each job.

Restart Point

Processing takes place in groups of transactions. A group is processed, the changes to that group are committed to the database, and a record is written to the commit table.

When restarting, the Job Scheduler reads the commit table to restart a job from the beginning of the group of transactions where the termination took place.

The commit point marks the beginning of each transaction group. The number for transactions between commit points is 1000.

For the Asset Maintenance scheduled process, all valid transactions are removed from the ast_maint_trans table during processing, and the transactions in error remain on the table. When the Job Scheduler restarts the Asset Maintenance job, only the transactions remaining on the table are processed.

Determining How Much of the Job Is Left

Look at the ast_commit_trans table to determine which transaction group the job terminated in. This enables you to gauge the percentage of the job left to be run when restarting and, therefore, to determine approximately how long before other work can be started.

Processing All Books with Book 0 Transactions

In scheduled processing you can enter one transaction to process all books for addition, transfers, retirements, and deletions.

To have Asset Management process all books for

- Additions, transfers, and retirements, add both an Asset Base Transaction (ASTM) and an Asset Book Transaction (ABKM). Enter a book number of 0 (Field 6) in the Asset Book Transaction.
- Deletions, add only an Asset Base Transaction. Enter a book number of 0 (Field 6) in the Asset Base Deletion Transaction (ASTM).

Asset Additions

You can use all information for books from the category table as defaults in scheduled processing as you can in online processing. Asset Management handles this using book 0 in the ABKM transaction. This adds all books from a category table for an asset without having to enter a transaction for each book.

When you add a transaction for book 0, Asset Management generates a transaction to add each book from the category table. All data on book 0 other than cost is copied into each transaction for all books identified from the category table. Asset Management copies the cost for book 0 into the first book transaction only. Based on whether policy is set up to copy or convert cost between books, Asset Management copies or converts the cost to the other books. Asset Management sends an error for the book 0 transaction if the base or category table has not been added.

Processing Sets

Asset Management processes base and book transactions in the same set if the set identifier for those transactions is the same. If you receive an error for a base or book transaction in the same set, Asset Management processes none of the transactions.

Book 0 Transactions With Errors

If there is a problem with a category table, you can simply correct the category table and submit the transaction again.

Net Transactions Generated for Book 0 Transactions

The net transactions generated count is in the processing summary. As mentioned earlier, all counts in the processing summary are physical. For book 0 transaction additions, the number of books to add comes from the category table. When entering a book 0 transaction, the count for net transactions generated is increased by the physical count. For example, if you add an asset with 3 books from the category table and enter a sequence 1 transaction, the physical count is one, but the logical count is 3. The net transactions generated count is 2 as shown in the following calculation:

3 books - 1 sequence transaction = 2 net transactions generated

Asset Changes

Asset Management allows the use of book 0 in the ABKM transaction for asset changes. The count for net transactions generated depends on whether you redefault information from the category or location table. If you redefault information, the calculation to derive the number of net transactions generated for a change is the same as it is for additions. If you do not redefault information, Asset Management does not generate any transactions for you.

Asset Adjustments

Asset Management allows the use of book 0 in the ABKM transaction for asset adjustments.

Asset Transfers and Retirements

If you enter book 0 in the ABKM transaction for an asset transfer or retirement, Asset Management transfers and retires all books for the asset.

Any information you enter in the book 0 transaction is applied to all books. If no book transactions are entered and only the base transaction is entered for the asset, Asset Management generates all the transfer and retirement book transactions for the asset just as if you had entered a book 0 transaction. If you receive an error for a book, Asset Management does not process any of the books or the base transaction.

For asset retirements, the proceeds, selling expense, and cost of removal is also distributed among the generated book transactions based on whether policy is set up to copy or convert books.

Net Transactions Generated for Book 0 Transactions

For book 0 transaction transfers and retirements, the number of books to transfer or retire comes from the asset or property account. Otherwise, the calculation to derive the net transactions generated count for book 0 transactions for transfers and retirements is the same as it is for additions.

Asset Deletions

If you enter book 0 in the ASTM transaction for an asset deletion, Asset Management deletes all books and the base for the asset. The activity records are left on the tables to allow for reporting. The journal lines are left on the tables to allow for posting and posting historical detail. If you want to remove those as well, that can be handled by the archive/purge process. For information about the archive/purge process, see Archiving and Purging Assets later in this chapter.

Using Table Information as Defaults

You can use category and location table information as defaults each time you add or change an asset.

Asset Additions

In scheduled processing, category table information takes precedence over location table information. This means that the category table information is used as the default in any blank fields first. Any remaining blank fields are then filled with defaults from the location table.

Asset Management does not keep any of the default information on the transaction table if the addition transaction is in error.

Asset Changes

You must enter a redefault option if you change the category or location table identifiers for an asset in scheduled processing. The following table shows how Asset Management processes changes to the category or location based on the redefault option:

When you…	Asset Management…
Do not enter a redefault option	Generates an error for the transaction.
Space out the table identifiers and enter Y to use the redefault information	Generates an error for the transaction.
Enter Y to use the redefault information	Updates the base with the fields on the transaction and with any fields not on the transaction but on the category or location table. All fields for the books are changed to the fields that are on the category and location tables.
Enter N to not use the redefault information	Changes the category and location table identifiers on the base transaction only.

Processing Errors

The following table shows how Asset Management handles processing errors:

When the…	Asset Management…
Category or location table you enter does not exist	Generates an error for the base transaction and does not generate any book transactions. You must process the base transaction again.
Base transaction is successfully processed	Generates the book transactions.
Books are in error	Generates the errors for the base transaction. The redefault option and the table identifiers for the category and location tables from which you default information is displayed in the Online Correction Facility for the base transaction.

User Identifiers

Asset Management uses several different user identifiers in scheduled processing. The following table explains where each user identifier is used:

User Identifier	Purpose
User identifier on the Bulk Copy Parameters window	Receives error messages in the Online Correction Facility.
Distribution user identifier on the Job Scheduler window	Receives mail from SmartStream Mail.

Security

When checking security, Asset Management uses the user identifier on the transaction. If any of the transactions are in error, Asset Management sends the message to the Online Correction Facility for the user on the transaction.

Security for Asset Management scheduled processing is the same as for Asset Management online processing.

Asset Management Bulk Copy

Use the bulk copy facility to copy transactions from a text file into a DBMS table for processing by the Job Scheduler. You can create the transactions using the Asset Management Mass Transactions activity, or by using a spreadsheet if you are adding assets from another application.

Bulk Copy Job

The Bulk Copy facility job converts the text file to the DBMS table. You must set the program name, including the complete path, as follows:

c:\sstrm*xx*\dbsbulk.exe

Bulk Copy Values

Enter the following values for the Asset Management bulk copy job:

Field	Value
Family Name	fast
Destination Table	ast_maint_trans
Before Stored Procedure	astmnt_bulkcopy$before_process
After Stored Procedure	astmnt_bulkcopy$after_process
Number of Columns	78
SmartStream User Identifier	User who will receive tasks for the Online Correction Facility in the To Do List

Writing Transactions Directly to the DBMS

If you create transactions from another application, such as from an in-house application, you can send the transactions directly to the DBMS by performing the contents of the stored procedures rather than executing them.

Follow this procedure to update the Asset Management transaction table (ast_maint_trans) directly in the DBMS:

Step	Action
1	Execute **astmnt_bulkcopy$before_process**, or perform the contents of the stored procedure.
2	Update the Asset Management transaction table in the DBMS using your own method.
3	Execute **astmnt_bulkcopy$after_process**, or perform the contents of the stored procedure.
4	When executing astmnt_bulkcopy$after_process, pass as a parameter the user identifier who receives tasks for the Online Correction Facility in the To Do List. The parameter is @USER_ID.

astmnt_bulkcopy$before_process

This text shows the contents of the astmnt_bulkcopy$before_process stored procedure:

```
astmntbulkcopybeforeprocess
create procedure astmnt_bulkcopy$before_process

as

if exists (select * from sysindexes where name = "ast_maint_trans_indx")
   begin
   drop index ast_maint_trans.ast_maint_trans_indx
   end
```

astmnt_bulkcopy$after_process

This text shows the contents of the astmnt_bulkcopy$after_process stored procedure:

```
astmntbulkcopyafterprocess
create procedure astmnt_bulkcopy$after_process

(@USER_ID      char(30))

as

declare @wrk_error      int,
        @wrk_rowcount   int,
        @wrk_rows_exist char(1),
        @wrk_error_ind  char(1)

select @wrk_error_ind  = "N"
select @wrk_rows_exist = "Y"

begin transaction

set rowcount 1000

while @wrk_rows_exist = "Y" and @wrk_error_ind = "N"
   begin
   update ast_maint_trans
    set   trans_sender_user_id = @USER_ID,
          trans_message_id     = 0,
          chgstamp             = 0
    where trans_sender_user_id is null

   select @wrk_error =    @@error,
          @wrk_rowcount = @@rowcount

   if @wrk_rowcount = 0
      begin
      select @wrk_rows_exist = "N"
      end

   if @wrk_error <> 0
      begin
      select @wrk_error_ind = "Y"
      end

   if @wrk_error_ind = "N" and @wrk_rowcount <> 0
      begin
      commit transaction
      begin transaction
      end
   end

commit transaction
```

Archiving and Purging Assets

Asset Management writes activity records to activity tables for most types of Asset Management transactions. The activity table contains either a before image, an after image, or both, along with information unique to the type of transactions. Because of the volume and size of the activity tables, they can take up extensive disk space. You can purge, and in some cases archive and purge, activity records and journals to remove unnecessary records and reduce the amount of disk space used.

For more information about this process, see About Archive/Purge.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	Create a archive/purge request, including which activity records or journals to purge, or archive and purge. Use the Archive/Purge Request window.
2	Run offline scheduled process to purge, and in some cases archive and purge, activity records or journals.

Types of Archive/Purge Processes

You can purge, and in some cases archive and purge, rows from Asset Management tables using the following processes, many of which process multiple tables.

Asset Book Activity and Property Account Book Activity Records

Archiving and purging asset book activity and property account book activity records first archives all base, book, and out-of-service information related to asset and property account additions, changes, deletions, retirements, reversals, and transfers to archive tables or to files that you can store on disk or tape and then deletes them.

Asset and Property Account Base Activity Records

Archiving and purging asset and property account base activity records first archives all asset and property account base records that were added without any books to archive tables or to files that you can store on disk or tape and then deletes them. This type of archiving and purging occurs after the Asset Book Activity and Property Account Book Activity archiving and purging to clean up any remaining base records that were not purged because they did not have a book. It also archives and purges base information related to asset and property account additions, changes, deletions, retirements, retirement reversals, and transfers.

Policy Activity and Table Activity Records

Purging the policy activity and table activity records deletes all activity information related to policy and table additions, changes, and deletions.

Journal Controls and Journal Lines

Purging journal controls deletes all posted journal controls and associated journal lines.

Selection Criteria

You have the ability to specify inclusion criteria for what to purge, and in some cases archive and purge. Asset Management applies the selection criteria to an activity table for each archive/purge process. All records that meet the selection criteria are purged, or archived and purged.

Related Activity Tables

Asset Management applies selection criteria to related activity tables based on the type of archive/purge process.

- For the asset and property account base and book archive/purge processes, when Asset Management finds records that meet the selection criteria on the activity table for each archive/purge process, it purges, or archives and purges, all records on related tables that are linked by the same asset entity ID, asset or property account ID, book number (if applicable), and activity date and time.
- For the policy and tables purges, Asset Management applies selection criteria to each table.
- For the journal control and journal lines purge, when Asset Management finds records that meet the selection criteria on the control table, it purges all lines that are linked by the journal ID and sequence number.

Note: For certain archive/purge processes, you may enter the date for running the archive/purge process, but Asset Management purges, or archives and purges, tables according to the date and time. The time starts at 12:00:01 AM, so if you enter a date of 8/15/98, the date time used is 8/15/98 12:00:01.

The following table shows the related records purged, or archived and purged and the selection criteria for each type of archive/purge process. The record names that appear in bold are the records to which Asset Management applies the selection criteria for that type of archive/purge process.

Type of Archive/Purge Process	Selection Criteria	Records Purged
Asset Book Account Activity	Asset entity ID	ast_activity
	Book number	**ast_book_activity**
	Fiscal year applied	ast_out_of_service_pd_activity
	Fiscal period applied	ast_retmt
	Activity type code	ast_book_retmt
		ast_retmt_rvsl_info
		ast_book_retmt_rvsl_info
		ast_xfer
		ast_book_xfer
Property Account Book Activity	Asset entity ID	property_acct_activity
	Book number	**property_acct_book_activity**
	Fiscal year applied	ppty_acct_out_of_svc_pd_acty
	Fiscal period applied	property_acct_retmt
	Activity type code	property_acct_book_retmt
		property_acct_retmt_rvsl_info
		ppty_acct_book_retmt_rvsl_info
		property_acct_xfer
		property_acct_book_xfer
Asset Base Activity	Asset entity ID	**ast_activity**
	Date of activity	ast_retmt
	Activity type code	ast_retmt_rvsl_info
		ast_xfer
Property Account Base Activity	Asset entity ID	**property_acct_activity**
	Date of activity	property_acct_retmt
	Activity type code	property_acct_retmt_revsl_info
		property_acct_xfer
Policy Activity	Asset entity ID	**ast_entity_policy_activity**
	Date of activity	**ast_entity_book_activity**
	Activity type code	
Additional Depreciation Table Activity	Asset entity ID	**addl_depr_tbl_acty**
	Date of activity	
	Activity type code	

Type of Archive/Purge Process	Selection Criteria	Records Purged
Annual Limit Table Activity	Asset entity ID	**annual_limit_tbl_activity**
	Date of activity	**annual_limit_tbl_pd_acty**
	Activity type code	**annual_limit_tbl_yr_activity**
Category Table Activity	Asset entity ID	**ast_cat_activity**
	Date of activity	**ast_cat_book_activity**
	Activity type code	
Location Table Activity	Asset entity ID	**ast_loc_activity**
	Date of activity	**ast_loc_book_activity**
	Activity type code	
Depreciation Percentage Table Activity	Asset entity ID	**depr_pct_tbl_acty**
	Date of activity	**depr_pct_tbl_pd_activity**
	Activity type code	**depr_pct_tbl_yr_activity**
Tax Credit Table Activity	Asset entity ID	**tax_cr_activity**
	Date of activity	
	Activity type code	
UOP Table Activity	Asset entity ID	**uop_tbl_acty**
	Date of activity	**uop_tbl_pd_unit_acty**
	Activity type code	**uop_tbl_yr_unit_acty**
Journal Controls and Journal Lines	Ledger entity ID	**ast_jrnl_ctrl**
	Ledger effective date	ast_jrnl_line

Asset Management Transaction Layouts

Asset Management scheduled processing uses text files to hold the information for scheduled transactions. These text files must be formatted to meet the required Asset Management format. Use the transaction layout tables included in this section to determine the required format.

The text files can have many transactions, each containing a series of values (fields), separated by a delimiter such as a comma, pound sign, or tab. Asset Management counts the delimiters in each transaction to know what field it is on; if you leave a field blank, enter a delimiter immediately after the previous field's delimiter to hold a place for the blank field.

Example

To delete an asset, use the Asset Base Delete Transaction. Transaction Code, Asset Entity Identifier, Asset Identifier, and Batch Action Code are required fields (Asset Management needs this information to delete an asset); all other fields are for informational purposes only.

Following the Asset Base Delete Transaction table, the Acme Corporation (whose asset entity identifier is ACME) uses the following transaction to delete one of its office furniture assets, asset FURN25, from its records:

```
ASTM,ACME,FURN25,,,D,,,,,
```

Entering Values

If you want to enter spaces for a field, you must enter an asterisk (*) for the field value. The format of a field determines how you enter the value. The scheduled processing transaction layouts contain fields with five different formats:

- Alphanumeric
- Numeric
- Dates
- Amounts
- Percentages

This section contains rules for entering amounts, dates, life for an asset, and percentages.

Note: Sybase has a limitation on dates; the oldest acceptable date is 1/1/1753.

Alphanumeric

Alphanumeric fields contain alphabetic letters, numbers, or a combination of both.

Numeric

Numeric fields contain only numbers.

Amounts of Money

Follow these rules when you enter amounts of money:

- Enter the amount with or without a thousand separator.
- Enter the amount with or without a decimal separator. If you do not enter a decimal separator, SmartStream Financials treats the amount as a whole number. If you enter a decimal separator, it must be a period (.).
- Enter up to four numerals to the right of the decimal separator.
- Indicate a negative amount by placing a minus sign (-) before it.

Defining Thousand and Decimal Separators

Use the International option on the Windows Control Panel to define thousand and decimal separators you use with amounts of money.

How SmartStream Financials Displays Amounts of Money

When SmartStream Financials displays amounts of money, the format can be different from the format you use when entering them:

- The currency of the amount determines how many numerals SmartStream Financials displays to the right of the decimal separator.
- You use the International option on the Windows Control Panel to define the negative currency indicator used when displaying negative amounts of money.

Limits on Money Fields

You can enter the following high and low amounts in money fields:

- High amount: 922,337,203,685,477.5807
- Low amount: -922,337,203,685,477.5808

Dates

Follow these rules when you enter dates:

- Use a separator of a slash (/) or a hyphen (-) between month, day, and year.
- Optionally use leading zeros for month and day.
- Enter four digits for the year.
- Enter all four digits of the year to enter a specific year.

Defining the Order of Day, Month, and Year

Use the International option on the Windows Control Panel to define the order for month, day, and year: MDY, DMY, or YMD.

How SmartStream Financials Displays Dates

When SmartStream Financials displays dates, the format can differ from the format you use when entering dates. Use the International option on the Windows Control Panel to define the separator and century that SmartStream Financials displays.

Defaults for Century

SmartStream Financials uses the following defaults for century if you enter only the last two digits of the year:

When you enter…	SmartStream Financials uses this default century…
01 - 49	Twenty-first (2000s).
50 - 99	Twentieth (1900s).

Note: To override these defaults, enter all four digits for the year.

Percentages

Follow this rule when you enter percentages: Enter a number between 1 and 100 with or without a decimal separator. SmartStream Financials treats the number as a percentage.

Examples

- If you type 25 or 25.0, SmartStream Financials treats the number as 25% (or .25).
- If you type 2.5, SmartStream Financials treats the number as 2.5% (or .025).

Defining the Decimal Separator

Use the International option on the Windows Control Panel to define the decimal separator you use with percentages.

How SmartStream Financials Displays Percentages

When SmartStream Financials displays percentages, the format can be different from the format you use when entering percentages:

SmartStream Financials determines how many numerals it displays to the right of the decimal separator; it can be fewer or more than you enter.

You use the International option on the Windows Control Panel to indicate whether to display leading zeros.

Limits on Percentages

Percentages are defined as float in SmartStream Financials. You can enter the following high and low limits for float values:

- High limit: ±10307
- Low limit: ±10308

Units

Units are defined as float in SmartStream Financials. You can enter the following high and low limits for float values:

- High limit: ±10307
- Low limit: ±10308

Life

Scheduled processing separates the years and periods into two fields. Follow these rules when you enter life for an asset:

- Enter life as two numerals for years and two numerals for periods: yypp.
- Enter leading zeros if the years or the periods are less than 10.
- Enter two zeros for years and two zeros for periods if the asset's life has no years or periods.

Examples

- For life of three years and six periods, type 0306.
- For life of 11 years, type 1100.

Types of Transactions

You can process four types of transactions using the Job Scheduler. Choose one of the following links to access the transaction layouts:

- Asset Maintenance Transactions
- UOP Table Maintenance Transactions
- Transfer Transactions
- Retirement Transactions

Asset Maintenance Transaction Layouts

For more information on the limits you can enter in amount, percentage, and unit fields, see Entering Values.

For additional information on book processing, see Processing All Books with Book 0 Transactions.

Use the following transaction layouts to perform asset maintenance:

Asset Maintenance Transaction Layout...	Does this...
Asset Base Transaction 1	Add, change, or delete an asset record.
Asset Base Transaction 2	Add, change, or delete an asset record.
Asset Base Delete Transaction	Delete an asset.
Asset Book Transaction 1	Add, change, or delete a book for an asset.
Asset Book Transaction 2	Add, change, or delete a book for an asset.
Asset Book Delete Transaction	Delete a book for an asset.
Property Account Base Transaction 1	Add, change, or delete a property account record.
Property Account Base Transaction 2	Add, change, or delete a property account record.
Property Account Base Delete Transaction	Delete a property account record.
Property Account Book Transaction 1	Add, change, or delete a book for a property account.
Property Account Book Transaction 2	Add, change, or delete a book for a property account.
Property Account Book Delete Transaction	Delete a book for a property account.

Asset Base Transaction 1

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ASTM	Required Identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required Unique identifier for the asset entity to which the asset belongs.

Field	Name	Length, Type, Values	Description
4	Asset Identifier	12 alphanumeric	Required Unique identifier for an asset within an asset entity. For asset entities that have Asset ID Generation selected, you can leave this field blank by entering at least one blank space. If you enter an identifier, it must conform to the asset edit format entered in asset policy.
5, 6	Blank	blank	Required to enter at least one blank space.
7	Transaction Sequence Number	Enter 1 for Asset Base Transaction 1	Required Sequence number of the transaction within the type of transaction.
8	Batch Action Code	1 alphanumeric A = Add C = Change J = Adjust P = Percentage	Required Identifies the action to perform on the asset base information.
9	Asset Description	70 alphanumeric	User-defined information about the asset. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
10	Acquisition Date	date	Required when adding an asset. Date the asset entity acquired the asset. Used as the default for the in-service date when depreciation begins.
11	Category Table Identifier	7 alphanumeric	Unique identifier for a category table that provides default descriptive, depreciation, and tax information for the asset. The category table must be set up before you can enter the category table identifier for an asset. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
12	Redefault Category Information	1 alphanumeric Y = Use redefault N = Do not use redefault	Indicates whether to update location and descriptive and book information with the default information from the new category table you entered.
13	Location Table Identifier	7 alphanumeric	Unique identifier for a location table that provides default location information for the asset. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
14	Redefault Location Information	1 alphanumeric Y = Use redefault N = Do not use redefault	An indicator you select to update location and descriptive and book information with the default information from the new category table you entered.

Field	Name	Length, Type, Values	Description
15	Property Type	1 alphanumeric P = Personal property R = Real property	Required if the asset will be depreciated in a U.S. tax book. Indicates if the asset is personal property or real property. Can default from a category table. Enter (*) to indicate spaces.
16	Condition	1 alphanumeric N = New U = Used	Required if the asset will be depreciated in a U.S. tax book Indicates whether the asset is new or used when acquired. The condition code can determine the proper classification of assets for investment tax creditCan default from a category table. Enter an asterisk (*) to indicate spaces.
17	Serial Number	18 alphanumeric	The manufacturer's serial number for the asset. For information only. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
18	Quantity	numeric	The number of similar assets associated with a single asset identifier. You can depreciate assets as a group if you want to match the invoice when the assets are acquired or if you do not want to keep specific identifiers for assets. If you enter a quantity in this field, you can transfer or retire a partial quantity of the asset. If you enter batch action codes **J** or **P**, you can enter an adjustment quantity or percentage in this field.
19	Unit of Measure	4 alphanumeric	Indicates the unit of measurement associated with the quantity of the asset. For information only. Can default from a category table. Enter an asterisk (*) to enter spaces in the field.
20	Manufacturer	16 alphanumeric	The name of the manufacturer of the asset. For information only. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
21	Model or Part	16 alphanumeric	The model name or part number of the asset. For information only. On a change transaction, enter an asterisk (*) to reset the field to its initial value
22	Vendor	10 alphanumeric	The name or identifier of the vendor you purchased the asset from. On a change transaction, enter an asterisk (*) to reset the field to its initial value.

Field	Name	Length, Type, Values	Description
23	User Field 1	20 alphanumeric	Required if set up as required in asset policy. Can default from category and location tables. Enter an asterisk (*) to enter spaces in the field.
24, 25	User Fields 2 and 3	15 alphanumeric	
26, 27	User Fields 4 and 5	10 alphanumeric	
28 - 36	User Fields 6 - 14	5 alphanumeric	
37, 38	User Fields 15 and 16	2 alphanumeric	
39 - 42	User Fields 17 - 20	1 alphanumeric	
43 - 44	User Amount 1 and 2	amount	User amount fields 1 and 2 are required if set up as required in asset policy User-defined amounts used on asset windows and reports. You can enter two user amounts for the base information for an asset. These fields are for information only. If you enter batch action codes J or P, you can enter adjustment amounts or quantities in these fields
45 - 46	User Date 1 and 2	date	User date fields 1 and 2 are required if set up as required in asset policy. User-defined dates used on asset windows and reports. You can enter two user dates for the base information for an asset. These fields are for information only. If you do not want to use these dates but they default in from a category or location table, enter an asterisk (*) on an add or change transaction to reset the fields to their initial value of 1/1/1753. You can also leave this field blank on an add transaction.
47	Reason Code	3 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring an asset.
48 - 51	Activity Reference 1-4	10 alphanumeric	User-defined fields for information you can use to attach a reference for adding, updating, transferring, or retiring an asset.
52 - 56	User Fields 21 - 25	15 alphanumeric	Required if set up as required in asset policy. Can default from category and location tables. Enter an asterisk (*) to enter spaces in the field.
57 - 61	User Fields 26 - 30	10 alphanumeric	
62 - 64	Blank	blank	
65	Source System Code	2 alphanumeric	Indicates if the source information comes from SmartStream Projects (PJ) or SmartStream Payables (IN).

Field	Name	Length, Type, Values	Description
66	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the asset.
67	Project	20 alphanumeric	A unique identifier for the project associated with the asset.
68	Component	20 alphanumeric	A unique identifier for the component associated with the asset.

Assigning a Set Identifier

Note the following conditions when assigning a set ID:

- You can process transactions for only one asset per set ID, but an asset can have multiple set IDs.
- All the transactions assigned to a set ID must be of the same transaction type.

For example, you cannot assign base additions and base changes to the same set ID. However, you can assign a set ID to process all base and book additions for an asset and another set ID to process all base and book changes for the same asset.

Asset Base Transaction 2

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ASTM	Required Identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required Unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required Unique identifier for an asset within an asset entity. For asset entities that have Asset ID Generation selected, you can leave this field blank by entering at least one blank space. If you enter an identifier, it must conform to the asset edit format entered in asset policy.

Field	Name	Length, Type, Values	Description
5, 6	Blank	blank	
7	Transaction Sequence Number	Enter 2 for Asset Base Transaction 2	Required Sequence number of the transaction within the type of transaction.
8	Batch Action Code	1 alphanumeric A = Add C = Change J = Adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts P = Adjust numeric values by a specific percentage. You can enter up to two decimal positions. For example, 50.25 would be 50.25%.	Required Identifies the action to perform on the asset base information.
9	Additional Descriptive Text	255 alphanumeric	User-defined information about the asset. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
10	Source Document	80 alphanumeric	Information from another system used for the asset information. For reference only. Asset Management does not use the source document in processing. On a change transaction, enter an asterisk (*) to reset the field to its initial value.

Asset Base Delete Transaction

Field	Name	Length, Type, Values	Description
1	Transaction Code	Enter ASTM	Required Identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required Unique identifier for the asset entity to which the asset belongs.

Field	Name	Length, Type, Values	Description
4	Asset Identifier	12 alphanumeric	Required Unique identifier for an asset within an asset entity. Must conform to the asset edit format entered in asset policy.
5	Blank	leave blank	
6	Book Number	leave blank	Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added. To delete an asset and all of its books, enter **0** in this field.
7	Transaction Sequence Number	Enter 1 for Asset Base Delete transaction	Sequence number of the transaction within the type of transaction.
8	Batch Action Code	Enter D for Delete	Required Identifies the action to perform on the asset base information.
9	Reason Code	3 alphanumeric	User-defined field used to attach a reason for adding, changing, transferring, or retiring an asset.
10 - 13	Activity Reference 1- 4	10 alphanumeric	User-defined fields used to attach a reference for adding, changing, transferring, or retiring an asset.
14	Effective Date	date	The accounting processing date of the journal.

Asset Book Transaction 1

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ABKM	Required Identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required Unique identifier for the asset entity to which the asset belongs.

Field	Name	Length, Type, Values	Description
4	Asset Identifier	12 alphanumeric	Required Unique identifier for an asset within an asset entity. For asset entities that have Asset ID Generation selected, you can leave this field blank by entering at least one blank space. If you enter an identifier, it must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies one book within a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added. Can default from a category table. To add, transfer, or retire all books for an asset, enter **0** in this field.
7	Transaction Sequence Number	Enter 1 for Asset Book Transaction 1	Required Sequence number of the transaction within the type of transaction.
8	Batch Action Code	1 alphanumeric A = Add C = Change J = Adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts P = Adjust numeric values by a specific percentage. You can enter up to two decimal positions. For example, 50.25 would be 50.25%.	Required Identifies the action to perform on the asset base information.
9	Cost	amount	Required for depreciable assets and reference assets. The cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalization low limit set up in asset policy. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
10	Year-to-Date Depreciation	amount	The depreciation for this asset's book that has been calculated so far this fiscal year at the current location. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field
11	Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the asset. Asset Management updates this field each time you book depreciation. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
12	Recalculate Life-to-Date	1 alphanumeric Y = Recalculate N = Do not recalculate	Indicates whether you want Asset Management to recalculate life-to-date depreciation for an asset. If you select this option, Asset Management recalculates the depreciation up to the beginning of the current year. If you want to recalculate depreciation up to the booked-through date, you must choose to adjust depreciation in the current period in asset policy.
13	Salvage Percentage	numeric	The percentage of original cost that the asset retains in value when you remove it from service at the end of its useful life. This field can default from a category table.
14	Salvage Amount	amount	The estimated value of an asset when you remove it from service at the end of its useful life. This is also known as residual value. The salvage amount reduces the depreciable basis of the asset. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
15	Basis Adjustment Amount	amount	The amount by which to reduce the depreciable basis of the asset. When Asset Management calculates depreciation, it subtracts the basis adjustment amount from the depreciable basis of the asset. If you do not enter the basis adjustment amount and a basis adjustment percentage is associated with a tax credit on the asset's book, Asset Management calculates the basis adjustment amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
16	Annual Depreciation	amount You can enter the following values in this field: The new annual depreciation value A space, which leaves the previously set value unchanged Nothing, which leaves the previously set value unchanged An asterisk (*) on a change transaction, which causes Asset Management to recalculate the annual depreciation based on the current settings for cost and asset depreciation information An adjustment amount on an adjustment transaction.	The total amount of depreciation allowed for this book during the current year. Asset Management prorates this amount if the asset is in the first year of service. Entering an annual depreciation amount overrides the Asset Management-calculated amount for the current fiscal year. To apply the annual depreciation amount to another year, enter it again after new-year processing.
17	In-Service Date	date	Required The calendar date you placed the asset into use as a depreciable asset. This is the date the asset starts recognizing depreciation. Asset Management can use the acquisition date as the default for the in-service date. If you change the acquisition date, you can choose to change the in-service date to the new acquisition date.

Field	Name	Length, Type, Values	Description
18	Property Account Identifier	12 alphanumeric	Conditional A unique identifier for the property account the asset belongs to. This is for assets with Reference as the depreciable status. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
19	Regulation	2 alphanumeric FC = Facts and Circumstances AC = ACRS MA = MACRS CC = CCA AD = ADR GR = Group	Required for depreciable assets. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field if the depreciable status for the asset is Inventory. A code that indicates the financial or tax rules that apply to the asset. These rules affect depreciation calculations and the calculation of gain or loss at retirement.
20	Depreciable Status	1 alphanumeric D = Depreciable–Life Based V = Depreciable–Value Based F = Fully Depreciated O = Out-of-Service N = Nondepreciable I = Inventory U = Depr. - Uncapped R = Reference	Required Indicates the depreciable characteristics of the asset. Can default from a category table.
21	Depreciation Method	3 alphanumeric SLU = straight-line (unrecovered cost) SLG = straight-line (gross cost) 000 = enter the declining balance percentage; for example, 020 GTP = gross table percentage NTP = net table percentage UCT = UOP–common table UAT = UOP–individual asset SYU = sum-of-the-years-digits (unrecovered cost) SYG = sum-of-the-years-digits (gross cost)	Required for depreciable assets. Indicates the depreciation method to use in calculating depreciation for a book for an asset. Enter an asterisk (*) to enter spaces in the field if the depreciable status for the asset is Inventory or Nondepreciable. .Can default from a category table.

Field	Name	Length, Type, Values	Description
22	Switch Depreciation	1 alphanumeric Y = Switch N = Do not switch	A code that indicates whether you want Asset Management to change an asset's depreciation method from an accelerated method to a straight-line method when it becomes more advantageous to use straight-line. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
23	Depreciation Percentage Table Identifier	7 alphanumeric	Required for gross table percentage and net table percentage depreciation methods. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A unique identifier for the depreciation percentage table Asset Management uses to calculate depreciation for an asset using the gross table percentage or net table percentage depreciation method.
24	Unit-of-Production Table Identifier	12 alphanumeric	Required for UOP-individual and UOP-common table depreciation methods. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A unique identifier for the UOP table Asset Management uses to calculated depreciation for an asset using the UOP-individual or UOP-common table depreciation method.

Field	Name	Length, Type, Values	Description
25	Acquisition Year Proration Method	alphanumeric 1 = Half Year 2 = Actual Periods 3 = Full Year 4 = None 5 = Number of Periods After 6 = Modified Half Year–ADR 7 = Midperiod 8 = Actual Days 9 = Midquarter 10 = Modified Half Year–Japan 11 = Actual Half 12 = Modified Actual Days 13 = Modified Midperiod 14 = Modified Actual Periods 15 = Actual Quarter 16 = Quarter After 17 = Half After 18 = Alternative Modified Actual Days	Required for depreciable assets. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates how Asset Management prorates depreciation for the year you place the asset in service. Asset Management performs certain validations on prorate codes based on the regulation code, depreciation method, and, in some cases, the tax class when you add an asset. Although you can use many of the proration methods for both the acquisition year and the retirement year, you do not have to select the same code for both years.

Field	Name	Length, Type, Values	Description
26	Retirement Year Proration Method	alphanumeric 1 = Half Year 2 = Actual Periods 3 = Full Year 4 = None 6 = Modified Half Year 7 = Midperiod 8 = Actual Days 9 = Midquarter 11 = Actual Half 12 = Modified Actual Days 13 = Modified Midperiod 15 = Actual Quarter 16 = Quarter After 17 = Half After 18 = Alternative Modified Actual Days	Required for depreciable assets. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates how Asset Management prorates depreciation for the year you retire the asset.
27 -28	Estimated Life (Years) Estimate Life (Periods)	2 numeric	Required for an asset with a depreciation method other than unit-of-production (UOP) and with one of the following depreciable statuses: Depreciable–life based Depreciable–uncapped Depreciable–value based Fully depreciated Out-of-service The estimated useful life of an asset, stated in years (field 27) and periods (field 28), over which Asset Management depreciates an asset. This field can default from a category table.
29 - 30	Elapsed Life (Years) Elapsed Life (Periods)	2 numeric	The portion of the asset's estimated life already used, stated in years (field 29) and periods (field 30). You can enter this to override the system-calculated elapsed life.

Field	Name	Length, Type, Values	Description
31	Annual Limit Table Identifier	7 alphanumeric	A unique identifier for a table that contains the maximum depreciation amount you can take in a year in an asset's life. If you use an annual limit table, the depreciable status for the asset must be depreciable–value based. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
32	Switch Depreciation Year	4 numeric	The fiscal year in which the depreciation method of an asset's book changed from an accelerated method to a straight-line or sum-of-the-years-digits method. This field is for information only. Asset Management maintains the switch depreciation year. You may want to enter this year if you add an asset for which the depreciation method has already been switched.
33	Previous Depreciation Method	alphanumeric SLU = straight-line (unrecovered cost) SLG = straight-line (gross cost) 000 = enter the declining balance percentage; for example 020 GTP = gross table percentage NTP = net table percentage SYU = sum-of-the-years-digits (unrecovered cost) SYG = sum-of-the-years-digits (gross cost)	The depreciation method used for an asset before it was switched to a different method to maximize depreciation expense. Asset Management uses this field when recalculating life-to-date depreciation and determining the alternative depreciation method for alternative minimum tax (AMT). On a change transaction, enter an asterisk (*) to reset the field to its initial value. If you choose to switch depreciation, Asset Management automatically switches depreciation and updates the Previous Depreciation Method field.
34 - 35	Returned- or Out-of-Service Year Returned- or Out-of-Service Period	4 numeric	Required when returning an asset to service or changing its depreciable status to Out-of-Service. The year (field 34) and period (field 35) you return the asset to service or temporarily take it out of service.
36 - 37	User Book Amount 1 - 2	amount	Required if set up as required in asset policy. User-defined amounts used on asset windows and reports. You can enter two user amounts for each book of an asset. These fields are for information only. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
38 - 39	User Book Date 1 - 2	date	Required if set up as required in asset policy. User-defined dates used on asset windows and reports. You can enter two user dates for each book of an asset. These fields are for information only. If you do not want to use these dates but they default in from a category or location table, enter an asterisk (*) on an add or change transaction to reset the fields to their initial value of 1/1/1753. You can also leave this field blank on an add transaction.
40	Convert Currency Indicator	alphanumeric Y = Yes N = No	Indicates to convert currency entered to currency for this book. The currency amount entered should be in the same currency as that of the associated book. For example, book 1 is in U.S. dollars, book 2 is in French francs, and book 2 is associated with book 1. When adding or updating book 2, enter the currency in U.S. dollars, enter Y to convert currency, and Asset Management converts the currency to French francs.
41	Currency Rate	8 numeric	The rate used to convert amounts in a book from one currency in one book to another currency in an associated book.
42	Currency Rate Date	date	The date the currency rate becomes effective. Enter an asterisk (*) to enter spaces in the field.
43	Rate Entity Identifier	5 alphanumeric	The identifier for the rate table containing a set of rates that Asset Management uses to convert asset costs when assets are added or to convert proceeds, selling expense, and cost of removal when assets are retired. Enter an asterisk (*) to enter spaces in the field.
44	Currency Rate Type	1 alphanumeric	The user-defined identifier for the type of currency exchange rate. The rate type must be valid for rate entity. Enter an asterisk (*) to enter spaces in the field.

Field	Name	Length, Type, Values	Description
45	Projected Retirement Date	date	The date you plan to retire the asset. Used for depreciation projection reporting only. On a change transaction, enter an asterisk (*) if you do not want to use this field. An asterisk resets the field to its initial value of 1/1/1753. Enter this date if you plan to retire the asset before the end of its depreciable life and you want the depreciation projection reports to stop reflecting depreciation for this asset after this date. When you run the depreciation projection reports, you can choose to ignore the projected retire date.
46	Tax Rule Identifier	20 alphanumeric	A generic tax rule that includes information describing a particular type of tax and rates used to calculate the amount of tax and any reclaimable amount. The tax rule indicates if the appropriate amounts should be adjusted when the taxable usage for an asset using this rule changes. Enter an asterisk (*) to enter spaces in the field.
47	Tax Amount	amount	The amount of tax associated with the asset. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
48	Tax Rate	8 numeric	The percentage at which an asset is taxed. The rate cannot be greater than 100.
49	Input Tax Credit	amount	The amount of input tax credit claimed to date for this asset. The GST input tax credit amount cannot exceed the GST amount paid. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
50	Current Taxable Usage Percentage	percentage	The percentage of the asset's current usage that Asset Management uses to produce taxable goods and services (versus non-taxable goods and services). The current usage percentage cannot be greater than 100.
51	Current Taxable Percentage Date	date	The date the current tax rate was established. On a change transaction, enter an asterisk (*) if you do not want to use this field. An asterisk resets the field to its initial value of 1/1/1753.

Field	Name	Length, Type, Values	Description
52	Previous Taxable Usage Percentage	percentage	The last usage percentage that required an adjustment to the input tax credit.
53	Taxable Usage Change Date	date	The date the previous usage percentage changed. This is also the date of the end of the current booked-through period. On a change transaction, enter an asterisk (*) if you do not want to use this field. An asterisk resets the field to its initial value of 1/1/1753.
54	Original Taxable Usage Percentage	percentage	The percentage of the asset's usage used to produce taxable goods and services (versus nontaxable goods and services) in the year you place the asset in service. The original usage percentage cannot be greater than 100.
55	Number of Adjustment Years	2 numeric	The number of years, according to VAT tax laws, that you must track whether the asset is used to produce taxable or nontaxable goods. If the current taxable percentage is changed within the given number of adjustment years, then you should adjust the original input tax. This field can default from a category table.
56	Fair Market Value	amount	Current fair market value of the asset. Asset Management uses this value to calculate the GST input tax credit adjustments. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
57	Estimated Total Units	8 numeric	The estimated number of units the asset will produce over its life. Asset Management uses estimated total units to calculate unit cost if you do not enter unit cost or estimated total units for the asset. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
58	Unit Cost	amount	The amount of depreciation to apply for each unit the asset produces. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
59	Year-to-Date Units	13 numeric	The number of units the asset produced over the current fiscal year. Asset Management updates this total when it calculates depreciation. It also uses the year-to-date units as part of unit cost when estimated remaining units are entered on the unit-of-production (UOP) table. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
60	Life-to-Date Units	13 numeric	The number of units the asset produced during its life to date. Asset Management updates this total each time it calculates current depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
61	Additional Depreciation Table Identifier	7 alphanumeric	A unique identifier for a table that contains the additional depreciation policies for the asset. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
62	Year-to-Date Additional Depreciation	amount	The additional depreciation for this asset's book that has been calculated so far this fiscal year at the current location. If additional depreciation applies to the asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets or if there is a change in year-to-date depreciation. If you adjust depreciation in the current period, Asset Management calculates depreciation from the beginning of the current period. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
63	Life-to-Date Additional Depreciation	amount	The amount of additional depreciation accumulated over the life of the asset. If an additional depreciation table is associated with the asset, Asset Management updates this field when you book depreciation. If additional depreciation applies to an asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets or if there is a change in the life-to-date additional depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
64	Annual Additional Depreciation	amount	Required if the additional depreciation calculation method on the additional depreciation table is Standard Amount. On a change transaction, enter an asterisk (*) to reset the field to its initial value. The total amount of additional depreciation allowed for this book during the current year. For assets that do not use standard amounts, if you do not enter this amount and an additional depreciation table is associated with the asset's book, Asset Management calculates the additional annual depreciation amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
65	Journal Voucher	20 alphanumeric	A number that ties an asset to all the entries created for that asset. All transactions created for an asset, such as additions, adjustments, transfers, depreciation, and retirements, use the same voucher number. This voucher number is stored in the asset's book. Enter an asterisk (*) to enter spaces in the field.
66	Effective Date	date	The accounting processing date of the journal.
67 - 78	Ledger Key 1 - 12	30 alphanumeric	Parts of the accounting key. When Asset Management is implemented, the installation team defines the number and contents of elements for your enterprise. Elements can represent various parts of your accounting structure. Enter an asterisk (*) to enter spaces in the field.

Asset Book Transaction 2

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ABKM	Required Identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required Unique identifier for an asset within an asset entity. For asset entities that have Asset ID Generation selected, you can leave this field blank by entering at least one blank space. If you enter an identifier, it must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies one book of a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added. This field can default from a category table.
7	Transaction Sequence Number	2 = Asset book transaction 2	Required The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change J = Adjust P = Percentage	Required A code that identifies the action to perform on the asset book information. Use batch action code **J** to adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts. Use batch action code **P** to adjust numeric values by a specific percentage. You can enter up to two decimal positions. For example, 50.25 would be 50.25%.

Field	Name	Length, Type, Values	Description
9	Tax Classification	5 alphanumeric	Required for MACRS, ACRS, Canadian CCA assets, and assets depreciable in Japanese tax books. Can default from a category table. Enter an asterisk (*) to enter spaces in the field. A classification that describes the asset for tax accounting. Asset Management uses the tax classification to group various types of assets for regulatory reports and to verify that you enter valid depreciation rules for the asset. The values you can enter depend on the regulation code or the accounting function you selected in asset policy.
10	Reduce Salvage	U = U.S. 10% Rule J = Japanese 5% Rule N = Do not reduce (default)	A code that indicates if the salvage amount for the asset should be reduced according to either the U.S. or Japanese tax regulation for salvage reduction. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
11	Capital Gains Classification	1= 1245 2 = 1250 3 = 1245 Elevators B = Buildings I = Improvements N = Non-depreciable O = Other	Required for a depreciable asset's U.S. tax book. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates how to classify a capital gain – as a gain or a loss.
12	Capital Gains Index Table Identifier	7 alphanumeric	Required for an asset's Australian tax book if the capital gains class code is Building, Improvements, or Other. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A unique identifier for the rate table to use for calculating Australian capital gains. The capital gains index table is used primarily with Australian tax books.
13	Property Tax Class	A = Automobile C = Construction M = Machinery or Equipment P = Plane S = Ship T = Tools, Dyes, or Furniture	A code that indicates the asset's property tax classification for Japanese financial or tax books. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
14	Property Tax Exempt Percentage	percentage	The percentage of the asset value to exempt from property taxes. This is used for reporting purposes only. It is primarily used in Japan. This field can default from a category table.

Field	Name	Length, Type, Values	Description
15	Tax Credit Amount 1	amount	The amount of tax credit 1 for the asset's book. Asset Management calculates this amount using the percentages defined in tax credit table 1. If you change the tax credit amount and a basis adjustment percentage is associated with the tax credit, Asset Management recalculates the basis adjustment for the asset's book. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
16	Basis Adjustment Percentage 1	percentage	The percentage of tax credit amount 1 used to reduce the depreciable basis of the asset's book. This field can default from a category table.
17	Tax Credit Table Identifier 1	7 alphanumeric	A unique identifier for the tax credit table that defines the tax credit type and the percentages used to calculate the tax credit amount and tax credit recapture for tax credit 1. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
18	Tax Credit Amount 2	amount	The amount of tax credit 2 for the asset's book. Asset Management calculates this amount using the percentages defined in tax credit table 2. If you change the tax credit amount and a basis adjustment percentage is associated with the tax credit, Asset Management recalculates the basis adjustment for the asset's book. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
19	Basis Adjustment Percentage 2	percentage	The percentage of tax credit amount 2 used to reduce the depreciable basis of the asset's book. This field can default from a category table.
20	Tax Credit Table Identifier 2	7 alphanumeric	A unique identifier for the tax credit table that defines the tax credit type and the percentages used to calculate the tax credit amount and tax credit recapture for tax credit 2. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.

Field	Name	Length, Type, Values	Description
21	Tax Credit Amount 3	amount	The amount of tax credit 3 for the asset's book. Asset Management calculates this amount using the percentages defined in tax credit table 3. If you change the tax credit amount and a basis adjustment percentage is associated with the tax credit, Asset Management recalculates the basis adjustment for the asset's book. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
22	Basis Adjustment Percentage 3	amount	The percentage of tax credit amount 3 used to reduce the depreciable basis of the asset's book. This field can default from a category table.
23	Tax Credit Table Identifier 3	7 alphanumeric	A unique identifier for the tax credit table that defines the tax credit type and the percentages used to calculate the tax credit amount and tax credit recapture for tax credit 3. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
24, 25	ADR Midpoint Life (Years) ADR Midpoint Life (Periods)	2 numeric	Required for an asset with a regulation code of ACRS or MACRS. The life in years (field 24) and periods (field 25) associated with the midpoint of the asset depreciation range (ADR) guideline classification for the asset. The ADR midpoint life is used instead of estimated life to calculate alternative minimum tax (AMT) and adjusted current earnings (ACE). This field can default from a category table.

Field	Name	Length, Type, Values	Description
26	Previous Year ACE Life-to-Date	amount	The life-to-date depreciation for the asset's adjusted current earnings (ACE) depreciation as of the end of the previous year. Asset Management uses this amount to determine the current year's ACE depreciation for the Alternative Minimum Tax (AMT) reports. If you add an ACRS or MACRS asset placed in service in a previous year, Asset Management assumes you reported ACE depreciation in all previous years and calculates the previous year ACE life-to-date depreciation. Asset Management then adds the current year ACE life-to-date depreciation to this previous year's ACE life-to-date depreciation. If you choose to recalculate life-to-date depreciation, Asset Management recalculates regular life-to-date depreciation and previous year's ACE life-to-date depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
27	Previous Year AMT Life-to-Date	amount	The life-to-date depreciation for the asset's alternate minimum tax (AMT) depreciation as of the end of the previous year. Asset Management uses this amount to determine the current year's AMT depreciation for the Alternative Minimum Tax reports. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
28	Minimum or Maximum Depreciation Code	M = Minimum X = Maximum	A code indicating whether Asset Management calculates the minimum or maximum amount of annual depreciation according to the French tax rules. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.

Field	Name	Length, Type, Values	Description
29	Minimum Proration	1 = Half Year 2 = Actual Periods 3 = Full Year 4 = None 5 = Number of Periods After 7 = Midperiod 8 = Daily 9 = Midquarter 10 = Modified Half Year - Japan 11 = Actual Half 12 = Modified Actual Days 13 = Modified Midperiod 15 = Actual Quarter 16 = Quarter After 17 = Half After 18 = Alternative Modified Actual Days	A code that indicates how Asset Management prorates depreciation in the year you acquired and placed the asset in service. This is used primarily for French tax books when calculating minimum depreciation. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
30	Deferred Depreciation	amount	The difference between the maximum amount of depreciation allowed by the French tax laws and the amount actually recognized. Used for French tax accounting only. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
31	Previous Year Deferred Depreciation	amount	The deferred depreciation amount for the asset as of the end of the previous year. Asset Management calculates this amount and uses it to determine minimum or maximum depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
32	Previous Year Straight-Line Depreciation	amount	The life-to-date depreciation for the asset as of the end of the previous year, using the straight-line unrecovered depreciation method. Asset Management uses this amount to determine minimum or maximum depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
33	CCA Beginning Undepreciated Capital Cost	amount	The undepreciated capital cost (UCC) of the capital cost allowance (CCA) asset as of the end of the previous fiscal year. Asset Management maintains this amount only for CCA depreciable assets and property accounts and uses it to calculate CCA depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field If you enter batch action code **P**, you can enter an adjustment percentage in this field.
34	CCA Current Year Cost	amount	The total cost of assets placed in service during the current fiscal year. Asset Management adds this amount to the beginning undepreciated capital cost (UCC) in determining the ending UCC for current-year capital cost allowance (CCA) calculations. Asset Management maintains this amount only for depreciable CCA assets and CCA property accounts. You can enter this amount to override the Asset Management-calculated amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
35	CCA Current Year Addition Adjustment	amount	The total amount of investment tax credit claimed during the previous fiscal year. Asset Management subtracts this amount from beginning undepreciated capital cost (UCC) in determining the ending UCC for the current-year capital cost allowance (CCA) calculations. Asset Management updates this amount in new-year processing with the balance in the current-year tax credit amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
36	CCA Current Year Undepreciated Capital Cost	amount	The amount of government assistance received or entitled to be received in the current fiscal year plus investment tax credits claimed in the preceding fiscal year. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
37	CCA Current Year Addition Proceeds	amounts	The total amount of proceeds received during the fiscal year. Asset Management subtracts this amount from beginning undepreciated capital cost (UCC) in determining the ending UCC for the current-year capital cost allowance (CCA) calculations. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
38	CCA Current Year Tax Credit	amount	The total amount of investment tax credit claimed during the current fiscal year. Asset Management subtracts this amount from beginning undepreciated capital cost (UCC) in determining the ending UCC for the following year capital cost allowance (CCA) calculations. Asset Management maintains this amount only for depreciable CCA assets and property accounts. You can enter this amount to override the Asset Management-calculated amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment amount in this field.

Field	Name	Length, Type, Values	Description
39	CCA Previous Year Net Additions	amount	The net amount of current-year cost and current-year addition adjustments during the previous fiscal year. Asset Management uses this amount to calculate current-year capital cost allowance (CCA) for assets with CCA classes 24, 27, 29, or 34. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
40	CCA Total Cost Retired	amount	The total cost retired from ordinary retirement of assets. Asset Management calculates this amount for capital cost allowance (CCA) assets and property accounts. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
41	Previous Cost	amount	The previous year cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalizable low limit set up in asset policy. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
42	Previous Year-to-Date Depreciation	amount	The depreciation for this asset's book that was taken the previous fiscal year at the current location. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
43	Previous Year-to-Date Additional Depreciation	amount	The additional depreciation for this asset's book that was calculated the previous fiscal year at the current location. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
44	Previous Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the asset through the previous year. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
45	Previous Life-to-Date Additional Depreciation	amount	The amount of additional depreciation accumulated over the life of the asset through the previous year. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
46-65	Cost Elements 1 - 20	amount	User-defined amount fields used to distribute costs that can be rolled up into the total asset cost. You can define up to 20 cost elements. You can use cost elements to track miscellaneous costs associated with an asset, such as sales and freight charges, or to track ownership of an asset. For example, if you own 60% of an asset and another party owns the remaining 40%, you can use the cost elements to track ownership by party You can depreciate only the percentage that you own by entering that amount in the total asset cost.
66	Source System Code	2 alphanumeric	Indicates if the source information comes from SmartStream Projects (PJ) or SmartStream Payables (IN).
67	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the asset.

Field	Name	Length, Type, Values	Description
68	Project	20 alphanumeric	A unique identifier for the project associated with the asset.
69	Component	20 alphanumeric	A unique identifier for the component associated with the asset.

Asset Book Delete Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ABKM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies the book for an asset entity or associated entity to be deleted. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Asset book delete transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	D = Delete	Required A code that identifies the action to perform on the asset book information.
9	Effective Date	date	Required The accounting processing date of the journal.

Property Account Base Transaction 1

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRAM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that the property account belongs to.
4	Property Account Identifier	12 alphanumeric	Required A unique identifier for a property account within an asset entity. The property account identifier must conform to the account edit format entered in asset policy.
5, 6	blank	blank	
7	Transaction Sequence Number	1 = Property account base transaction 1	Required The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change J = Adjust P = Percentage	Required A code that identifies the action to perform on the property account base information. Use batch action code **J** to adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts. Use batch action code **P** to adjust numeric values by a specific percentage. You can enter up to two decimal positions. For example, 50.25 would be 50.25%.
9	Property Account Description	80 alphanumeric	A description of the property account. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
10	Acquisition Date	date	Required when adding a property account. The date the asset entity acquired the property account. Asset Management uses this date as the default for the in-service date when depreciation begins.

Field	Name	Length, Type, Values	Description
11	Category Table Identifier	7 alphanumeric	A unique identifier for a category table that enters descriptive, depreciation, and tax information for the property account. The category table must be set up before you can select it for a property account. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
12	Redefault Category Information	Y = Use redefault N = Do not use redefault	An indicator you select to update descriptive, depreciation, and tax information with the information from the new category table you entered.
13	Location Table Identifier	7 alphanumeric	A unique identifier for a table that provides default location information for the property account. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
14	Redefault Location Information	Y = Use redefault N = Do not use redefault	An indicator you select to update location and descriptive information with information from the new location table you entered.
15	Property Type	P = Personal property R = Real property	Required if the property account is depreciated in a U.S. tax book. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates whether the property account is personal property or real property.
16	Condition	N = New U = Used	Required if the property account is depreciated in a U.S. tax book. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates whether the assets in the property account are new or used when acquired. The condition code can determine the correct classification of property accounts for investment tax credits.

Field	Name	Length, Type, Values	Description
17	Quantity	numeric	The number of similar property accounts associated with a single property account identifier. You can depreciate property accounts as a group if you want to match the invoice when the property accounts are acquired, or if you do not want to keep specific identifiers for property accounts. If you enter a quantity in this field, you can transfer or retire a partial quantity of the property account. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
18	Unit of Measure	4 alphanumeric	The unit of measurement associated with the quantity you entered for the property account. The measurement is used for informational purposes only. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
19 20, 21 22, 23 24 - 32 33, 34 35 - 38	User Field 1 User Fields 2 and 3 User Fields 4 and 5 User Fields 6 - 14 User Fields 15 and 16 User Fields 17 - 20	20 alphanumeric 15 alphanumeric 10 alphanumeric 5 alphanumeric 2 alphanumeric 1 alphanumeric	Required if set up as required in asset policy. These fields can default from category and location tables. Enter an asterisk (*) to enter spaces in the field. Fields that are on property account windows and reports. User fields are defined in asset policy.
39, 40	User Amounts 1 and 2	amount	Required if set up as required in asset policy. User-defined amounts used on property account windows and reports. You can enter two user amounts for the base information for a property account. These fields are for informational purposes only. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
41, 42	User Dates 1 and 2	date	Required if set up as required in asset policy. User-defined dates used on property account windows and reports. You can enter two user dates for the base information for a property account. These fields are for informational purposes only. If you do not want to use these date but they default in from a category or location table, enter an asterisk (*) on an add or change transaction to reset the field to their initial value of 1/1/1753. You can also leave this field blank on an add transaction.
43	Reason Code	3 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring a property account.
44 - 47	Activity References 1 - 4	10 alphanumeric	User-defined fields for information you can use to attach a reference for adding, updating, transferring, or retiring a property account.
48-52 53-57	User Fields 21-25 User Fields 26-30	15 alphanumeric 10 alphanumeric	Required if set up as required in asset policy. These fields can default from category and location tables. Enter an asterisk (*) to enter spaces in the field. The user fields are on property account windows and reports. User fields are defined in asset policy.

Property Account Base Transaction 2

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRAM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.

Field	Name	Length, Type, Values	Description
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that the property account belongs to.
4	Property Account Identifier	12 alphanumeric	Required A unique identifier for a property account within an asset entity. The property account identifier must conform to the account edit format entered in asset policy.
5, 6	blank	blank	
7	Transaction Sequence Number	2 = Property account base transaction 2	Required The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change J = Adjust P = Percentage	Required A code that identifies the action to perform on the property account base information. Use batch action code **J** to adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts. Use batch action code **P** to adjust numeric values by a specific percentage. You can enter up to two decimal positions. For example, 50.25 would be 50.25%.
9	Additional Descriptive Text	255 alphanumeric	Additional information about a property account. Use this field for your reference. On a change transaction, enter an asterisk (*) to reset the field to its initial value.

Property Account Base Delete Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRAM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that the property account belongs to.
4	Property Account Identifier	12 alphanumeric	Required A unique identifier for a property account within an asset entity. The property account identifier must conform to the account edit format entered in asset policy.
5, 6	blank	blank	
7	Transaction Sequence Number	1 = Property account base delete transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	D = Delete	Required A code that identifies the action to perform on the property account base information.
9	Reason Code	3 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring a property account.
10 - 13	Activity References 1 - 4	10 alphanumeric	User-defined fields you can use to attach a reference for adding, updating, transferring, or retiring a property account.
14	Effective Date	date	The accounting processing date of the journal.

Property Account Book Transaction 1

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PBKM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that the property account belongs to.
4	Property Account Identifier	12 alphanumeric	Required A unique identifier for a property account within an asset entity. The property account identifier must conform to the asset edit format entered in asset policy.
5	blank		
6	Book Number	2 numeric	Required Identifies one book of a set of books for an asset entity or associated entity. The number of financial books and tax books that a property account can have is defined when the entity is added. This field can default from a category table.
7	Transaction Sequence Number	1 = Property account book transaction 1	Required The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change J = Adjust P = Percentage	Required A code that identifies the action to perform on the property account book information. Use batch action code **J** to adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts. Use batch action code **P** to adjust numeric values by a specific percentage. You can enter up to two decimal values. For example, 50.25 would be 50.25%.

Field	Name	Length, Type, Values	Description
9	Cost	amount	Required for depreciable property accounts and reference property accounts. The cost of the property account for the book being referenced; used to determine depreciable basis. The cost must be greater than the capitalization low limit set up in asset policy. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
10	Year-to-Date Depreciation	amount	The depreciation for this property account's book that has been calculated so far this fiscal year at the current location. You can enter this amount if you added existing property accounts to Asset Management and depreciation has already begun for those accounts or if there is a change in life-to-date depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
11	Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the property account. Asset Management updates this field each time you book depreciation. You can enter this amount if you added existing property accounts to Asset Management and depreciation has already begun for those property accounts or if there is a change in life-to-date depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment amount in this field.

Field	Name	Length, Type, Values	Description
12	Salvage Percentage	numeric	The percentage of original cost that the property account retains in value when you remove it from service at the end of its useful life. If you enter a salvage percentage for the property account but no salvage amount, Asset Management calculates a salvage amount by multiplying the property account's cost by its salvage percentage. The salvage amount reduces the depreciable basis of the property account. This field can default from a category table.
13	Salvage Amount	amount	The estimated value of a property account when you remove it from service at the end of its useful life. This is also known as residual value. The salvage amount reduces the depreciable basis of the property account. If you enter a salvage percentage for the property account but no salvage amount, Asset Management calculates a salvage amount by multiplying the property account's cost by its salvage percentage. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
14	Basis Adjustment Amount	amount	The amount by which to reduce the depreciation basis of the property account. When Asset Management calculates depreciation, it subtracts the basis adjustment amount from the depreciable basis of the property account. If you do not enter the basis adjustment amount and a basis adjustment percentage is associated with a tax credit on the property account's book, Asset Management calculates the basis adjustment amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
15	Annual Depreciation	amount You can enter the following values in this field: The new annual depreciation value A space, which leaves the previously set value unchanged Nothing, which leaves the previously set value unchanged An asterisk (*) on a change transaction, which causes Asset Management to recalculate the annual depreciation based on the current settings for cost and asset depreciation information An adjustment amount on an adjustment transaction.	The total amount of depreciation allowed for this book during the current year. Asset Management prorates this amount if the property account is in the first year of service. Entering an annual depreciation amount overrides the system-calculated amount for the current fiscal year. To apply the annual depreciation amount to another year, enter it again after new-year processing.
16	In-Service Date	date	The calendar date you placed the property account into service as a depreciable property account. This is the date the property account starts recognizing depreciation. Asset Management can use the acquisition date as the default for the in-service date. If you change the acquisition date, you can choose to change the in-service date to the new acquisition date.
17	Regulation	FC = Facts and Circumstances AC = ACRS MA = MACRS CC = CCA AD = ADR GR = Group GG = German Group	Required for depreciable property accounts. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field if the depreciable status for the asset is Inventory. A code that indicates the financial or tax rules that apply to the property account. These rules affect depreciation calculations and the calculation of gain or loss at retirement.

Field	Name	Length, Type, Values	Description
18	Depreciable Status	D = Depreciable–Life Based V = Depreciable–Value Based F = Fully Depreciated O = Out-of-Service N = Non-Depreciable I = Inventory U = Depreciable–Uncapped R = Reference	Required A code that indicates the depreciable characteristics of the property account. This field can default from a category table.
19	Depreciation Method	SLU = straight-line (unrecovered cost) SLG = straight-line (gross cost) 000 = enter the declining balance percentage; for example, 020 GTP = gross table percentage NTP = net table percentage UCT = UOP–common table UAT = UOP–individual table SYU = sum-of-the-years-digits (unrecovered cost) SYG = sum-of-the-years-digits (gross cost)	Required for depreciable property accounts. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field if the depreciable status for the asset is Inventory or Nondepreciable. A code that indicates the depreciation method to be used in calculating depreciation for a book for a property account.
20	Switch Depreciation	Y = Switch N = Do not switch	A code that indicates whether you want Asset Management to change a property account's depreciation method from an accelerated method to straight-line when it becomes more advantageous to use straight-line. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
21	Depreciation Percentage Table Identifier	7 alphanumeric	Required for gross table percentage and net table percentage depreciation methods. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A unique identifier for the depreciation percentage table Asset Management uses to calculate depreciation for assets in the property account asset using the gross table percentage or net table percentage depreciation method.

Field	Name	Length, Type, Values	Description
22	Unit-of-Production Table Identifier	7 alphanumeric	Required for UOP-individual and UOP-common table depreciation methods. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A unique identifier for the UOP table Asset Management uses to calculate depreciation for assets in the property account using the UOP-individual or UOP-common table depreciation method.
23	Acquisition Year Proration Method	1 = Half Year 2 = Actual Periods 3 = Full Year 4 = None 5 = Number of Periods After 6 = Modified Half Year–ADR 7 = Midperiod 8 = Daily 9 = Midquarter 10 = Modified Half Year–Japan 11 = Actual Half 12 = Modified Actual Days 13 = Modified Midperiod 14 = Modified Actual Periods 15 = Actual Quarter 16 = Quarter After 17 = Half After 18 = Alternative Modified Actual Days	Required for depreciable assets. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates how Asset Management prorates depreciation for the year you place the property account in service. Asset Management performs certain validations on prorate codes based on the regulation code, depreciation method, and, in some cases, the tax class when you add a property account. Although you can use many of the proration methods for both the acquisition year and the retirement year, you do not have to select the same code for both years.

Field	Name	Length, Type, Values	Description
24	Retirement Year Proration Method	1 = Half Year 2 = Actual Periods 3 = Full Year 4 = None 6 = Modified Half Year 7 = Midperiod 8 = Daily 9 = Midquarter 11 = Actual Half 12 = Modified Actual Days 13 = Modified Midperiod 15 = Actual Quarter 16 = Quarter After 17 = Half After 18 = Alternative Modified Actual Days	Required for depreciable assets. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates how Asset Management prorates depreciation for the year you retire the property account. Although you can use many of the proration methods for both the acquisition year and the retirement year, you do not have to select the same code for both years.
25, 26	Estimated Life (Years and Periods)	2 numeric	Required for a property account with a depreciation method other than unit-of-production (UOP) and with one of the following depreciable statuses: Depreciable–Life Based Depreciable–Uncapped Depreciable–Value Based Fully depreciated Out-of-service The estimated useful life of a property account, stated in years (field 25) and periods (field 26), over which Asset Management depreciates a property account. This field can default from a category table. The estimated life must be greater than the minimum life and less than the maximum life set up in asset policy.

Field	Name	Length, Type, Values	Description
27, 28	Elapsed Life (Years and Periods)	2 numeric	The portion of the property account's estimated life already used, stated in years (field 27) or periods (field 28). You can enter this value to override the Asset Management-calculated estimated life. Asset Management calculates useful life based on the date depreciation began and the acquisition year proration method. As you book depreciation, Asset Management increments elapsed useful life with the number of periods booked. Asset Management does not increment elapsed useful life for the periods the property account is out of service.
29	Annual Limit Table Identifier	7 alphanumeric	A unique identifier for a table that contains the maximum depreciation amount you can take in a year in a property account's life. If you use an annual limit table, the depreciable status for the property account must be Depreciable–Value Based. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
30	Switch Depreciation Year	2 numeric	The fiscal year in which the depreciation method of a property account's book changed from an accelerated method to a straight-line or sum-of-the-years-digits method. This field is for informational purposes only. Asset Management maintains the switch depreciation year. You may want to enter this year if you add a property account for which the depreciation method has already been switched.
31	Previous Depreciation Method	SLU = straight-line (unrecovered cost) SLG = straight-line (gross cost) 000 = enter the declining balance percentage; for example, 020 GTP = gross table percentage NTP = net table percentage SYU = sum-of-the-years-digits (unrecovered cost) SYG = sum-of-the-years-digits (gross cost)	The depreciation method used for a property account before it was switched to a different method to maximize depreciation expense. Asset Management uses this field when recalculating life-to-date depreciation and determining the alternative depreciation method for alternative minimum tax (AMT). For a change transaction, enter an asterisk (*) to reset the field to its initial values. If you choose to switch depreciation, Asset Management automatically updates the Previous Depreciation Method field when conditions for changing the depreciation method are optimal and switches depreciation.

Field	Name	Length, Type, Values	Description
32, 33	Returned- or Out-of-Service (Year and Period)	2 numeric	Required when returning a property account to service or changing its depreciable status to Out-of-Service. The year (field 32) and period (field 33) you return the property account to service or temporarily take it out of service.
34	Beginning Undepreciated Capital Cost	amount	The undepreciated capital cost (UCC) of the capital cost allowance (CCA) property account as of the end of the previous fiscal year. Asset Management maintains this amount only for CCA depreciable property accounts and assets, and uses it to calculate CCA depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
35	CCA YTD Cost Added	amount	The total cost of assets placed in service during the current fiscal year. Asset Management adds this amount to the beginning undepreciated capital cost (UCC) in determining the ending UCC for current-year capital cost allowance (CCA) calculations. Asset Management maintains this amount only for depreciable CCA assets and CCA property accounts. You can enter this amount to override the Asset Management-calculated amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
36	Current Year Addition Adjustment	amount	The total amount of investment tax credit claimed during the previous fiscal year. Asset Management subtracts this amount from beginning undepreciated capital cost (UCC) in determining the ending UCC for the current-year capital cost allowance (CCA) calculations. Asset Management updates this amount in new-year processing with the balance in the current-year tax credit amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
37	Current Year Undepreciated Capital Cost	amount	The amount of government assistance received or entitled to be received in the current fiscal year plus investment tax credits claimed in the preceding fiscal year. Asset Management also uses this amount to record any previous year's activity not recorded until the current year. Asset Management maintains this amount for only CCA depreciable assets and property account. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
38	Current Year Addition Proceeds	amount	The total amount of proceeds received during the fiscal year. Asset Management subtracts this amount from beginning undepreciated capital cost (UCC) in determining the ending UCC for the current-year capital cost allowance (CCA) calculations. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
39	Current Year Tax Credit	amount	The total amount of investment tax credit claimed during the current fiscal year. Asset Management subtracts this amount from beginning undepreciated capital cost (UCC) in determining the ending UCC for the following-year capital cost allowance (CCA) calculations. Asset Management maintains this amount only for depreciable CCA assets and property accounts. You can enter this amount to override the Asset Management-calculated amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
40	Previous Year Net Additions	amount	The net amount of current-year cost and current-year addition adjustments during the previous fiscal year. Asset Management uses this amount to calculate current-year capital cost allowance (CCA) for property accounts with CCA classes 24, 27, 29, or 34. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
41	Total Cost Retired	amount	The total cost retired from ordinary retirement of assets. Asset Management calculates this amount for capital cost allowance (CCA) property accounts and assets. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
42	Group Beginning Cost	amount	For regulated group property accounts, this amount indicates the beginning balance of cost. Asset Management uses this amount to calculate depreciation with half year, midperiod, and periods after proration methods. When you first add property accounts, you should enter this amount for accounts using these proration methods. Asset Management maintains this amount during future processing. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
43	Group Beginning Life-to-Date Depreciation	amount	For regulated property accounts, this amount indicates the beginning balance of depreciation life-to-date. Asset Management uses this amount to calculate depreciation for property accounts with half-year, midperiod, and periods after proration methods. When you add property accounts, enter this amount for accounts using these proration methods. Asset Management maintains this amount during future processing. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
44	Group Additional Beginning LTD Depreciation	amount	For regulated property accounts, this amount indicates the beginning balance of additional depreciation life-to-date. Asset Management uses this amount to calculate depreciation for property accounts with half-year, midperiod, and periods after proration methods. When you add property accounts, enter this amount for accounts using these proration methods. Asset Management maintains this amount during future processing. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
45	Group Year-to-Date Proceeds	amount	The total amount of proceeds received during the current fiscal year from ordinary retirement of assets that reference a regulated group property account. Asset Management uses this amount to reverse retirements applied to assets that reference the account. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
46	Group Total Proceeds	amount	The total amount of proceeds received from the ordinary retirement of assets that reference a regulated group property account over the life of the property account. This field is used for informational purposes only. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
47	Group Total Cost Retired	amount	The total costs retired from ordinary retirement of assets that reference a regulated group property account over the life of the property account. This field is used for informational purposes only. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
48, 49	User Book Amounts 1 and 2	amount	Required if set up as required in asset policy. User-defined amounts used on property account windows and reports. You can enter two user amounts for each book of a property account. These fields are for informational purposes only. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
50, 51	User Book Dates 1 and 2	date	Required if set up as required in asset policy. User-defined dates used on asset property account windows and reports. You can enter two dates for each book of a property account. These fields are for informational purposes only. If you do not want to use these dates but they default in from a category or location table, enter an asterisk (*) on an add or change transaction to reset the fields to their initial value of 1/1/1753. You can also leave this field blank on an add transaction.
52	Convert Currency Indicator	Y = Yes N = No	Indicates to convert currency entered to currency for this book. The currency amount entered should be in the same currency as that of the associated book. For example, book 1 is in U.S. dollars, book 2 is in French francs, and book 2 is associated with book 1. When adding or updating book 2, enter the currency in U.S. dollars, enter Y to convert currency, and Asset Management converts the currency to French francs.
53	Conversion Rate	numeric	The rate used to convert amounts from one currency in a book to another currency in an associated book. If you choose to convert amounts from one book to another when you define asset policy, Asset Management displays the conversion rate in this field when you add a property account or change information for a property account.
54	Conversion Rate Date	date	The date the currency conversion rate takes effect. Asset Management can use the acquisition date as the default for the conversion rate date. Enter an asterisk (*) to enter spaces in the field.

Field	Name	Length, Type, Values	Description
55	Rate Entity Identifier	5 alphanumeric	The identifier for the rate table containing a set of rates that Asset Management uses to convert asset costs when assets are added or to convert proceeds, selling expense, and cost of removal when assets are retired. Enter an asterisk (*) to enter spaces in the field.
56	Currency Rate Type	1 alphanumeric	The user-defined identifier for the type of currency exchange rate. The rate type must be valid for rate entity. Enter an asterisk (*) to enter spaces in the field.
57	Estimated Total Units	numeric	The estimated number of units the property account will produce over its life. Asset Management uses estimated total units to calculate unit cost if you do not enter unit cost or estimated total units for the property account. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
58	Unit Cost	amount	The amount of depreciation to apply for each unit the property account produces. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
59	Year-to-Date Units	numeric	The number of units the property account produced over the current fiscal year. Asset Management updates this total when it calculates depreciation. It also uses the year-to-date units as part of unit cost when estimated remaining units are entered on the UOP table. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter the adjustment percentage in this field.
60	Life-to-Date Units	numeric	The number of units produced over the property account's life to date. Asset Management updates this total each time it calculates current depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
61	Additional Depreciation Table Identifier	7 alphanumeric	A unique identifier for a table that contains the additional depreciation policies for the property account. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
62	Year-to-Date Additional Depreciation	amount	The additional depreciation for the property account's book that has been calculated so far this fiscal year at the current location. If additional depreciation applies to the property account, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in year-to-date depreciation. If you adjust depreciation in the current period, Asset Management calculates depreciation from the beginning of the current period. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an ajustment percentage in this field.
63	Life-to-Date Additional Depreciation	amount	The amount of additional depreciation accumulated over the life of the assets in a property account. If an additional depreciation table is associated with the property account, Asset Management updates this field when you book depreciation. If additional depreciation applies to a property account, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in the life-to-date additional depreciation. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
64	Annual Additional Depreciation	amount	Required if the additional depreciation calculation method on the additional depreciation table is Standard Amount. On a change transaction, enter an asterisk (*) to reset the field to its initial value. The total amount of additional depreciation allowed for this book during the current year. For property accounts that do not use standard amounts, if you do not enter this amount and an additional depreciation table is associated with the property account's book, Asset Management calculates the additional annual depreciation amount. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
65	Journal Voucher	20	A number that ties an asset to all the entries created for that asset. All transactions created for an asset, such as additions, adjustments, transfers, depreciation, and retirements, use the same voucher number. This voucher number is stored on the asset's book. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
66	Effective Date	date	The accounting processing date of the journal.
67 - 78	Ledger Key 1 - 12	30 alphanumeric	Parts of the accounting key. When Asset Management is implemented, the installation team defines the number and contents of elements for your enterprise. Elements can represent various parts of your accounting structure. Enter an asterisk (*) to enter spaces in the field.

Property Account Book Transaction 2

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PBKM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that the property account belongs to.
4	Property Account Identifier	12 alphanumeric	Required A unique identifier for a property account within an asset entity. The property account identifier must conform to the asset edit format entered in asset policy.
5	blank		
6	Book Number	2 numeric	Required Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that a property account can have is defined when the entity is added. This field can default from a category table.
7	Transaction Sequence Number	2 = Property account book transaction 2	Required The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change J = Adjust P = Percentage	Required A code that identifies the action to perform on the property account book information. Use batch action code **J** to adjust numeric values by a specific dollar amount. You can enter negative adjustment amounts. Use batch action code **P** to adjust numeric values by a specific percentage. You can enter up to two decimal positions. For example, 50.25 would be 50.25%.

Field	Name	Length, Type, Values	Description
9	Tax Classification	5 alphanumeric	Required for MACRS, ACRS, and Canadian CCA property accounts, and property accounts depreciable in Japanese tax books. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A classification that describes the property account for tax accounting. Asset Management uses the tax classification to group various types of property accounts for regulatory reports and to verify that valid depreciation rules are entered for the property account. The values you can enter depend on the regulation code or the accounting function you selected in asset policy.
10	Reduce Salvage	U = U.S. 10% Rule J = Japanese 5% Rule N = Do not reduce (default)	A code that indicates if the salvage amount for the property account should be reduced according to either the U.S. or Japanese tax regulation for salvage reduction. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
11	Capital Gains Classification	1 = 1245 2 = 1250 3 = 1245 Elevators B = Buildings I = Improvements N = Non-depreciable O = Other	Required for a depreciable property account's U.S. tax book. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A code that indicates how to classify a capital gain – as a gain or a loss.
12	Capital Gains Index Table Identifier	7 alphanumeric	Required for a property account's Australian tax book if the capital gains class code is Building, Improvements, or Other. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field. A unique identifier for the rate table to use for calculating Australian capital gains. The capital gains index table is used primarily with Australian tax books.
13	Property Tax Class	A = Automobile C = Construction M = Machinery or Equipment P = Plane S = Ship T = Tools, Dyes, or Furniture	A code that indicates the property account's classification for property tax reporting for Japanese financial or tax books. This field can default from a category table. Enter an asterisk (*) to enter spaces in the field.
14	Property Tax Exempt Percentage	percentage	The percentage of the asset value to exempt from property taxes. This is used for reporting purposes only. It is primarily used in Japan. This field can default from a category table.

Field	Name	Length, Type, Values	Description
15, 16	ADR Midpoint Life (Years and Periods)	2 numeric	Required for a property account with a regulation code of ACRS or MACRS. The life in years (field 15) and periods (field 16) associated with the midpoint of the asset depreciation range (ADR) guideline classification for the property account. The ADR midpoint life is used instead of estimated life to calculate alternative minimum tax (AMT) and adjusted current earnings (ACE). This field can default from a category table.
17	Previous Year ACE Life-to-Date	amount	The life-to-date depreciation for the property account's adjusted current earnings (ACE) depreciation as of the end of the previous year. Asset Management uses this amount to determine the current year's ACE depreciation for the alternative minimum tax reports. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
18	Previous Year AMT Life-to-Date	amount	The life-to-date depreciation for the property account's alternate minimum tax (AMT) depreciation as of the end of the previous year. Asset Management uses this amount to determine the current year's AMT depreciation for the alternative minimum tax reports. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
19	Projected Retirement Date	date	The date you plan to retire the assets in the property account. Used for depreciation projection reporting only. On a change transaction, enter an asterisk (*) if you do not want to use this field. An asterisk resets this field to it initial value of 1/1/1753. Enter this date if you plan to retire the property account before the end of its depreciable life and you want the depreciation projection reports to stop reflecting depreciation for this property account after this date. When you run the depreciation projection reports, you can choose to ignore the projected retire date.

Field	Name	Length, Type, Values	Description
20	Previous Cost Amount	amount	The previous year cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalizable low limit set up in asset policy. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
21	Previous YTD Depreciation	amount	The depreciation for this asset's book that was calculated the previous fiscal year at the current location. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
22	Previous YTD Additional Depreciation	amount	The additional depreciation for this asset's book that was calculated the previous fiscal year at the current location. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
23	Previous LTD Depreciation	amount	The amount of depreciation accumulated over the life of the asset through the previous year. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
24	Previous LTD Additional Depreciation	amount	The amount of additional depreciation accumulated over the life of the asset through the previous year. You can enter this amount to compare two books for different years. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
25	ADR First Half Cost	amount	The cost of the asset added to the vintage account that has an in-service date in the first half of the acquisition year. When you are converting, you may enter this cost for any reference assets that have been retired. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
26	ADR Last Half Cost	amount	The cost of the asset added to the vintage account that has an in-service date in the last half of the acquisition year. When you are converting, you may enter this cost for any reference assets that have been retired. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
27	ADR First Half Cost Retired	amount	The cost of the asset that has an in-service date within the first half of the acquisition year and was retired from the vintage account in an ordinary retirement. For extraordinary and trade-in retirements, Asset Management removes the cost and depreciable reserve from the account, so this field is not affected. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
28	ADR Last Half Cost Retired	amount	The cost of the asset that has an in-service date within the last half of the acquisition year and was retired from the vintage account in an ordinary retirement. For extraordinary and trade-in retirements, Asset Management removes the cost and depreciable reserve from the account, so this field is not affected. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
29	ADR Total Proceeds	amount	The cumulative net proceeds received for assets retired from the vintage account in ordinary retirements. For extraordinary and trade-in retirements, Asset Management removes the cost and depreciable reserve from the account, so this field is not affected. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
30	ADR Year-to-Date Proceeds	amount	The net proceeds received for assets retired from the vintage account within the current fiscal year in ordinary retirements. For extraordinary and trade-in retirements, Asset Management removes the cost and depreciable reserve from the account, so this field is not affected. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
31	ADR Year-to-Date Proceeds Added	amount	The amount of proceeds added to the vintage account's depreciation reserve for ordinary retirements during the current fiscal year. For extraordinary and trade-in retirements, Asset Management removes the cost and depreciable reserve from the account, so this field is not affected. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.

Field	Name	Length, Type, Values	Description
32	ADR Depreciable Basis at Switch Year	amount	The depreciation basis at the beginning of the year depreciation was switched from a declining balance method to SYU or SLU. The depreciation basis is calculated as Cost - LTD Depreciation - Basis Adjustment - Additional LTD Depreciation This amount is used to calculate annual depreciation for all years after the switch from a declining balance method. You might enter this amount if you are converting after the property account is switched to SYU or SLU. If you enter batch action code **J**, you can enter an adjustment amount in this field. If you enter batch action code **P**, you can enter an adjustment percentage in this field.
33	ADR Remaining Life at Switch Year	2 numeric	The remaining life at the year depreciation was switched from a declining balance method to SYU or SLU. The remaining life is calculated as Estimated Life - Elapsed Life This life is used to calculate annual depreciation for all years after the switch from a declining balance method. You might enter this life if you are converting after the property account is switched to SYU or SLU. If you do enter the remaining life at switch year, Asset Management uses the standard depreciation methods for SYU and SLU.
34	ADR Remaining Life at Switch Period	2 numeric	The remaining life at the period depreciation was switched from a declining balance method to SYU or SLU. The remaining life is calculated as Estimated Life - Elapsed Life This life is used to calculate annual depreciation for all years after the switch from a declining balance method. You might enter this life if you are converting after the property account is switched to SYU or SLU. If you do enter the remaining life at switch year, Asset Management uses the standard depreciation methods for SYU and SLU.

Field	Name	Length, Type, Values	Description
35-54	Cost Elements 1 - 20	amount	User-defined amount fields used to distribute costs that can be rolled up into the total property account cost. You can define up to 20 cost elements. You can use cost elements to track miscellaneous costs associated with a property account, such as sales and freight charges, or to track ownership of an asset. For example, if you own 60% of an asset and another party owns the remaining 40%, you can use the cost elements to track ownership by party. You can depreciate only the percentage you own by entering that amount in the total asset cost.

Property Account Book Delete Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PBKM	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset that the property account belongs to.
4	Property Account Identifier	12 alphanumeric	Required A unique identifier for a property account within an asset entity. The property account identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies the book for an asset entity or associated entity to delete. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Property account book delete transaction	The sequence number of the transaction within the type of transaction.

Field	Name	Length, Type, Values	Description
8	Batch Action Code	D = Delete	Required A code that identifies the action to perform on the property account book.
9	Effective Date	date	The accounting processing date of the journal.

UOP Table Maintenance Transaction Layouts

For more information on the limits you can enter in amount, percentage, and unit fields, see Entering Values.

For additional information on book processing, see Processing All Books with Book 0 Transactions.

Use the following transaction layouts to perform UOP table maintenance:

UOP Table Maintenance Transaction Layout	Use this transaction layout to...
UOP Table Base Transaction	Add, change, or delete a UOP table.
UOP Table Year Transaction	Add a new year, change a year, or delete a year from an existing UOP table.
UOP Table Period Transaction	Add a new fiscal period, change the period units, or delete a fiscal period from an existing UOP table.

UOP Table Base Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter UOPM	Required A unique identifier for the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that maintains this unit-of-production table. Asset policy determines whether an entity uses its own tables or those of an associated entity.

Field	Name	Length, Type, Values	Description
4	Unit-of-Production Table Identifier	12 alphanumeric	Required A unique identifier for this unit-of-production table. Asset Management displays the table identifier when it lists tables on windows. If this table is for a single asset or property account (for the UOP–individual table depreciation method), enter the asset identifier or property account identifier as the table identifier.
5, 6	Blank	Blank	
7	Transaction Sequence Number	1 = UOP base transaction 1	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change D = Delete	Required A code that identifies the action to perform on the UOP table base information.
9	Table Description	80 alphanumeric	A name or title that describes this unit-of-production table. Asset Management displays this description when it lists tables on windows. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
10	Source Document	80 alphanumeric	The information, either paper or online documentation from another system, used for the production estimates in this table. Use this field for your reference. Asset Management does not use the source document name in its processing. On a change transaction, enter an asterisk (*) to reset the field to its initial value.
11	Estimated Total Units	numeric	The estimated number of units the asset will produce over its life. Asset Management uses estimated total units to calculate unit cost if you do not enter unit cost or estimated total units for the asset or estimated remaining units on the table. Enter a positive, whole number.

UOP Table Year Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter UPYM	Required A unique identifier for the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that maintains this unit-of-production table. Remember that asset policy determines whether an entity uses its own tables or those of an associated entity.
4	Unit-of-Production Table Identifier	12 alphanumeric	Required A unique identifier for this unit-of-production table. Asset Management displays the table identifier when it lists tables on windows. If this table is for a single asset or property account (for the UOP–individual table depreciation method), enter the asset identifier or property account identifier as the table identifier.
5	Fiscal Year	4 numeric	Required The fiscal year in which the units are produced and the asset is to be depreciated. Enter a year from 1753 to 2017.
6	Blank		
7	Transaction Sequence Number	1 = UOP table year transaction 1	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change D = Delete	Required A code that identifies the action to perform on the UOP table year information.
9	Projected Annual Units	numeric	A projection of the total units that will be produced during the fiscal year. Asset Management uses projection annual units to calculate the average number of units for depreciation projections. Enter a positive, whole number.

Field	Name	Length, Type, Values	Description
10	Estimated Remaining Units	numeric	The estimated number of units the asset will produce over the remainder of its life, beginning with this fiscal year. Asset Management uses estimated remaining units to calculate unit cost if you do not enter estimated total units for either the asset or the UOP table, or do not enter a unit cost for the asset. Enter a positive, whole number.

UOP Table Period Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter UPPM	Required A unique identifier for the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity that maintains this UOP table. Remember that asset policy determines whether an entity uses its own tables or those of an associated entity.
4	Unit-of-Production Table Identifier	12 alphanumeric	Required A unique identifier for this unit-of-production table. Asset Management displays the table identifier when it lists tables on windows. If this table is for a single asset or property account (for the UOP–individual table depreciation method), enter the asset identifier or property account identifier as the table identifier.
5	Fiscal Year	4 numeric	Required The fiscal year in which the units are produced and the asset is to be depreciated. Enter a year from 1753 to 2017.

Field	Name	Length, Type, Values	Description
6	Fiscal Period	2 numeric	Required The fiscal period in which the units are produced. You can define up to 52 periods for one fiscal year.
7	Transaction Sequence Number	1 = UOP table period transaction 1	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	A = Add C = Change D = Delete	Required A code that identifies the action to perform on the UOP table period information.
9	Period Units	numeric	The number of units produced during the fiscal period. Asset Management uses the units entered to calculate current depreciation for the fiscal period of the indicated year. You can enter a negative number to adjust the previous period's units. Enter a whole number, either positive or negative.

Transfer Transaction Layouts

For more information on the limits you can enter in amount, percentage, and unit fields, see Entering Values.

For additional information on book processing, see Processing All Books with Book 0 Transactions.

Use the following transaction layouts to perform asset transfers:

Transfer Transaction Layout	Use this transaction layout to...
Asset Transfer Base Transaction	Transfer an Asset
Asset Transfer Book Transaction	Transfer an asset's book.
Property Account Transfer Base Transaction	Transfer a property account.
Property Account Transfer Book Transaction	Transfer a property account's book.

Asset Transfer Base Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ASTT	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	leave blank	
6	Book Number	leave blank	Leave blank since this is transfer base information. Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Transfer base transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	T = Transfer	Required A code that identifies the action to perform on the asset base information.

Field	Name	Length, Type, Values	Description
9	Transfer Date	date	The calendar date the asset was transferred. If you do not enter the retirement date, Asset Management inserts the date of the end of the current accounting period.
10	Transfer Beginning or End Code	B = Beginning E = End	A code indicating whether the transfer of an asset or property account is effective as of the beginning or end of the transfer accounting period. This code also determines whether or not to calculate depreciation at the transfer location for the period in which the transfer is performed. Enter **B** if you want to calculate year-to-date depreciation for the transfer period associated with the receiving location, or enter **E** if you want to calculate year-to-date depreciation for the transfer period associated with the transferring location.
11	Partial or Complete Code	C = Complete P = Partial	Indicates whether to partially or completely transfer the asset.
12	Quantity	19 numeric	The quantity of the asset being transferred. Used to transfer part of an asset.
13	Transfer Asset Entity Identifier	5 alphanumeric	A unique identifier for the asset entity that the asset is being transferred to.
14	Transfer To Asset Identifier	12 alphanumeric	A unique identifier for the asset being transferred to. For a partial transfer, this field is required. For a complete transfer, enter an identifier in this field only if it is different from the identifier entered in the Asset Identifier field (Field 4).
15	Location Table Identifier	7 alphanumeric	A unique identifier for a location table that provides default location information for the asset.
16	Category Table Identifier	7 alphanumeric	A unique identifier for a category table that provides default descriptive, depreciation, and tax information for the asset. The category table must be set up before you can enter the category table identifier for an asset.
17 18, 19 21, 21 22 - 30 31, 32 33 - 36	User Field 1 User Fields 2 and 3 User Fields 4 and 5 User Fields 6 - 14 User Fields 16 and 16 User Fields 17 - 20	20 alphanumeric 15 alphanumeric 10 alphanumeric 5 alphanumeric 2 alphanumeric 1 alphanumeric	Required if set up as required in asset policy. Fields that are on asset windows and reports. User fields are defined in asset policy.

Field	Name	Length, Type, Values	Description
37	Reason Code	3 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring an asset.
38 - 41	Activity Reference 1 - 4	10 alphanumeric	User-defined fields for information you can use to attach a reference for adding, updating, transferring, or retiring an asset.
42-46 47 - 51	User Fields 21 - 25 User Fields 26 - 30	15 alphanumeric 10 alphanumeric	Required if set up as required in asset policy. Fields that are on asset windows and reports. User fields are defined in asset policy.

Asset Transfer Book Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ABKT	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Transfer book transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	T = Transfer	Required A code that identifies the action to perform on the asset base information.

Field	Name	Length, Type, Values	Description
9	Cost	amount	Required for depreciable assets and reference assets. The cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalization low limit set up in asset policy.
10	Percentage of Cost	percentage	Percentage of the total cost of the asset that is being transferred.
11	Year-to-Date Depreciation	amount	The depreciation for this asset's book that has been calculated so far this fiscal year at the current location. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.
12	Year-to-Date Additional Depreciation	amount	The additional depreciation for the asset's book that has been calculated so far this fiscal year, at the current location. If additional depreciation applies to the asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in year-to-date depreciation. If you adjust depreciation in the current period, Asset Management calculates depreciation from the beginning of the current period.
13	Property Account Identifier	12 alphanumeric	A unique identifier for the property account which is used to group many assets into a depreciable account for a category of assets.
14	Property Account Option	B = Cost and depreciation C = Cost only N = None	Indicates whether you want to transfer depreciation from the previous property account to the receiving property account when you transfer a reference asset to a new property account.
15	Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the asset. Asset Management updates this field each time you book depreciation. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.

Field	Name	Length, Type, Values	Description
16	Voucher Number	15 alphanumeric	A number that ties an asset to all the entries created for that asset. All transactions created for an asset, such as additions, adjustments, transfers, depreciation, and retirements, use the same voucher number. This voucher number is stored in the asset's book.
17	Effective Date	date	The accounting processing date of the journal.
18 - 29	Ledger Key 1 - 12	30 alphanumeric	Parts of the accounting key. When Asset Management is implemented, the installation team defines the number and contents of elements for your enterprise. Elements can represent various parts of your accounting structure. If you want to leave an element blank, type an asterisk (*) in its field.

Property Account Transfer Base Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRATT	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
7	Transaction Sequence Number	1 = Transfer base transaction	The sequence number of the transaction within the type of transaction.

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRATT	Required A code that identifies the scheduled transaction.
6	Book Number	leave blank	Leave blank since this is transfer base information. Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Transfer base transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	T = Transfer	Required A code that identifies the action to perform on the asset base information.
9	Transfer Date	date	The calendar date the asset was transferred. If you do not enter the retirement date, Asset Management inserts the date of the end of the current accounting period.
10	Transfer Beginning or End Code	B = Beginning E = End	A code indicating whether the transfer of an asset or property account is effective as of the beginning or end of the transfer accounting period. This code also determines whether or not to calculate depreciation at the transfer location for the period in which the transfer is performed. Enter **B** if you want to calculate year-to-date depreciation for the transfer period associated with the receiving location, or enter **E** if you want to calculate year-to-date depreciation for the transfer period associated with the transferring location.
11	Partial or Complete Code	C = Complete P = Partial	Indicates whether to partially or completely transfer the asset.
12	Quantity	19 numeric	The quantity of the asset being transferred. Used to transfer part of an asset.
13	Transfer Asset Entity Identifier	5 alphanumeric	A unique identifier for the asset entity that the asset is being transferred to.
14	Transfer Asset Identifier	12 alphanumeric	A unique identifier for an asset within an asset entity that is being transferred. The asset must exist within the asset entity it is being transferred from.
15	Location Table Identifier	7 alphanumeric	A unique identifier for a location table that provides default location information for the asset.

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRATT	Required A code that identifies the scheduled transaction.
16	Category Table Identifier	7 alphanumeric	A unique identifier for a category table that provides default descriptive, depreciation, and tax information for the asset. The category table must be set up before you can enter the category table identifier for an asset.
17 18, 19 20, 21 22 - 30 31, 32 33 - 36	User Field 1 User Fields 2 and 3 User Fields 4 and 5 User Fields 6 - 14 User Fields 15, and 16 User Fields 17 - 20	20 alphanumeric 15 alphanumeric 10 alphanumeric 5 alphanumeric 2 alphanumeric 1 alphanumeric	Required if set up as required in asset policy. Fields that appear on asset windows and reports. User fields are defined in asset policy.
37	Reason Code	3 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring an asset.
38 - 41	Activity References 1 - 4	10 alphanumeric	User-defined fields for information you can use to attach a reference for adding, updating, transferring, or retiring an asset.
42 - 46 47 - 51	User Fields 21 through 25 User Fields 26 - 30	15 alphanumeric 10 alphanumeric	Required if set up as required in asset policy. Fields that appear on asset windows and reports. User fields are defined in asset policy.

Property Account Transfer Book Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PBKT	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.

Field	Name	Length, Type, Values	Description
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Transfer book transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	T = Transfer	Required A code that identifies the action to perform on the asset base information.
9	Cost	amount	Required for depreciable assets and reference assets. The cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalization low limit set up in asset policy.
10	Percentage of Cost	percentage	Percentage of the total cost of the asset that is being transferred.
11	Year-to-Date Depreciation	amount	The depreciation for this asset's book that has been calculated so far this fiscal year at the current location. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.

Field	Name	Length, Type, Values	Description
12	Year-to-Date Additional Depreciation	amount	The additional depreciation for the asset's book that has been calculated so far this fiscal year at the current location. If additional depreciation applies to the asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in year-to-date depreciation. If you adjust depreciation in the current period, Asset Management calculates depreciation from the beginning of the current period.
13	Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the asset. Asset Management updates this field each time you book depreciation. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.
14	Transfer Regulation Code	C = Current year P = Previous year blank = None	Indicates which year's cost to update when doing a direct transfer for a CCA property account. You do a direct transfer for a CCA asset when you partially transfer directly to the property account and not the reference asset.
15	Effective Date	date	The accounting processing date of the journal.
16	Voucher Number	15 alphanumeric	A number that ties an asset to all the entries created for that asset. All transactions created for an asset, such as additions, adjustments, transfers, depreciation, and retirements, use the same voucher number. This voucher number is stored on the asset's book.
17 - 28	Ledger Keys 1 - 12	30 alphanumeric	Parts of the accounting key. When Asset Management is implemented, the installation team defines the number and contents of elements for your enterprise. Elements can represent various parts of your accounting structure. If you want to leave an element blank, type an asterisk (*) in its field.

Field	Name	Length, Type, Values	Description
29	Transfer From	F = First half L = Last half	Indicates the half of the year to which you want to apply the transfer amount from the ADR property account. This is required when you are applying the transfer directly to the property account. Choose **First** to apply the transfer amount to the first half of the year or **Last** to apply the transfer amount to the last half of the year.

Retirement Transaction Layouts

For more information on the limits you can enter in amount, percentage, and unit fields, see Entering Values.

For additional information on book processing, see Processing All Books with Book 0 Transactions.

Use the following transaction layouts to perform asset retirement:

Retirement Transaction Layout	Use this transaction layout to...
Asset Retirement Base Transaction	Retire an asset.
Asset Retirement Book Transaction	Retire an asset's books.
Property Account Retirement Base Transaction	Retire a property account.
Property Account Retirement Book Transaction	Retire a property account's book.

Asset Retirement Base Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ASTR	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.

Field	Name	Length, Type, Values	Description
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	leave blank	
6	Book Number	leave blank	Leave blank since this retirement base information. Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Retirement base transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	R = Retirement	Required A code that identifies the action to perform on the asset retirement base information.
9	Retirement Date	date	The calendar date the asset is taken out of service. If you do not enter the retirement date, Asset Management inserts the date of the end of the current accounting period.
10	Retirement Beginning or End Code	B = Beginning E = End	A code indicating whether the transfer of an asset or property account is effective as of the beginning or end of the transfer accounting period. This code also determines whether or not to calculate depreciation at the transfer location for the period in which the transfer is performed. Enter **B** if you want to calculate year-to-date depreciation for the transfer period associated with the receiving location, or enter **E** if you want to calculate year-to-date depreciation for the transfer period associated with the transferring location.
11	Partial or Complete Code	C = Complete P = Partial	Indicates whether to partially or completely transfer the asset.

Field	Name	Length, Type, Values	Description
12	Quantity	19 numeric	The quantity of the asset being retired. Used to retire part of an asset. For example, you can retire 2 desks from an asset consisting of 25 desks. When you enter a retirement quantity, Asset Management calculates retirement cost as cost times the ratio of retirement quantity to quantity on hand. Cost and percentage of cost fields are updated when you enter a quantity.
13	Reason Code	3 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring an asset.
14 - 17	Activity References 1 - 4	10 alphanumeric	User-defined fields for information you can use to attach a reference for adding, updating, transferring, or retiring an asset.
18	Source System Code	2 alphanumeric	Indicates if the source information comes from SmartStream Projects (PJ) or SmartStream Payables (IN).
19	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the asset.
20	Project	20 alphanumeric	A unique identifier for the project associated with the asset.
21	Component	20 alphanumeric	A unique identifier for the component associated with the asset.

Asset Retirement Book Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter ABKR	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.

Field	Name	Length, Type, Values	Description
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Retirement book transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	R = Retirement	Required A code that identifies the action to perform on the asset retirement base information.
9	Retirement Proceeds	amount	The amount received from the sale of the asset. If this retirement was initiated by a retirement request, a proceeds amount appears in this field. You can enter or change the proceeds amount for any book.
10	Retirement Selling Expense	amount	The amount of any expenses incurred in selling the asset. Asset Management subtracts this amount from proceeds when determining gain or loss. If this retirement was initiated by a retirement request, a selling expense amount appears in this field. You can enter or change the selling expense amount for each book you want to retire.
11	Cost of Removal	amount	The amount of any expenses incurred to disassemble or remove the asset. Asset Management subtracts this amount from proceeds when determining gain or loss. If this retirement was initiated by a retirement request, a cost of removal amount appears in this field. You can enter or change the cost of removal amount for each book you want to retire.
12	Retirement Type Code	O = Ordinary E = Extra N = Normal A = Abnormal T = Trade	Indicates whether the retirement was due to normal or unusual circumstances. If you do not select a retirement type, Ordinary is the default value.

Field	Name	Length, Type, Values	Description
13	Cost	amount	Required for depreciable assets and reference assets. The cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalization low limit set up in asset policy.
14	Percentage of Cost	percentage	Percentage of the total cost of the asset that is being retired. Amounts that appear in this field come either from entries made on the Retirement Request window or from Asset Management calculations Asset Management calculates the retirement cost for the specific book by multiplying total cost on the book times a ratio of retirement cost to total cost of the first book being retired.
15	Convert Currency Indicator	Y - Yes N - No	Indicates to convert currency entered to currency for this book. The currency amount entered should be in the same currency as that of the associated book. For example, book 1 is in U.S. dollars, book 2 is in French francs, and book 2 is associated with book 1. When adding or updating book 2, enter the currency in U.S. dollars, enter Y to convert currency, and Asset Management converts the currency to French francs.
16	Currency Rate	8 numeric	The rate used to convert amounts from one currency in a book to another currency in an associated book.
17	Currency Rate Date	date	The effective date for the currency rate.
18	Rate Entity Identifier	5 alphanumeric	The identifier for the rate table containing a set of rates that Asset Management uses to convert asset costs when assets are added or to convert proceeds, selling expense, and cost of removal when assets are retired.
19	Rate Type	1 alphanumeric	The user-defined identifier for the type of currency exchange rate. The rate type must be valid for rate entity.
20	Retirement Fair Market Value	19 alphanumeric	The fair market value of the asset when the asset is retired. This amount is used in calculating Canadian GST input tax credit adjustments.

Field	Name	Length, Type, Values	Description
21	Year-to-Date Depreciation	amount	The depreciation for this asset's book that has been calculated so far this fiscal year at the current location. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.
22	Year-to-Date Additional Depreciation	amount	The additional depreciation for the asset's book that has been calculated so far this fiscal year at the current location. If additional depreciation applies to the asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in year-to-date depreciation. If you adjust depreciation in the current period, Asset Management calculates depreciation from the beginning of the current period.
23	Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the asset. Asset Management updates this field each time you book depreciation. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.
24	Life-to-Date Additional Depreciation	amount	The amount of additional depreciation accumulated over the life of an asset. If an additional depreciation table is associated with the asset, Asset Management updates this field when you book depreciation. If additional depreciation applies to an asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in the life-to-date additional depreciation.
25	Effective Date	date	The accounting processing date of the journal.
26	Source System Code	2 alphanumeric	Indicates if the source information comes from SmartStream Projects (PJ) or SmartStream Payables (IN).
27	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the asset.
28	Project	20 alphanumeric	A unique identifier for the project associated with the asset.

Field	Name	Length, Type, Values	Description
29	Component	20 alphanumeric	A unique identifier for the component associated with the asset.

Property Account Retirement Base Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PRAR	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	leave blank	Leave blank since this retirement base information. Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Retirement base transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	R = Retirement	Required A code that identifies the action to perform on the asset retirement base information.
9	Retirement Date	date	The calendar date the asset is taken out of service. If you do not enter the retirement date, Asset Management inserts the date of the end of the current accounting period.

Field	Name	Length, Type, Values	Description
10	Retirement Beginning or End Code	B = Beginning E = End	A code indicating whether the transfer of an asset or property account is effective as of the beginning or end of the transfer accounting period. This code also determines whether or not to calculate depreciation at the transfer location for the period in which the transfer is performed. Enter **B** if you want to calculate year-to-date depreciation for the transfer period associated with the receiving location, or enter **E** if you want to calculate year-to-date depreciation for the transfer period associated with the transferring location.
11	Partial or Complete Code	C = Complete P = Partial	Indicates whether to partially or completely transfer the asset.
12	Quantity	19 numeric	The quantity of the asset being retired. Used to retire part of an asset. For example, you can retire 2 desks from an asset consisting of 25 desks. When you enter a retirement quantity, Asset Management calculates retirement cost as cost times the ratio of retirement quantity to quantity on hand. Cost and percentage of cost fields are updated when you enter a quantity.
13	Reason Code	2 alphanumeric	A user-defined field you can use to attach a reason for adding, updating, transferring, or retiring an asset.
14 - 17	Activity References 1 - 4	10 alphanumeric	User-defined fields for information you can use to attach a reference for adding, updating, transferring, or retiring an asset.
18	Source System Code	2 alphanumeric	Indicates if the source information comes from SmartStream Projects (PJ) or SmartStream Payables (IN).
19	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the asset.
20	Project	20 alphanumeric	A unique identifier for the project associated with the asset.
21	Component	20 alphanumeric	A unique identifier for the component associated with the asset.

Property Account Retirement Book Transaction

Field	Name	Length, Type, Values	Description
1	Batch Transaction	Enter PBKR	Required A code that identifies the scheduled transaction.
2	Set Identifier	17 alphanumeric	Required Unique identifier you give the asset for the purpose of this scheduled transaction. Used to tie all the transaction rows together for the same asset, property account, or UOP table that have the same batch action code. See Assigning a Set Identifier.
3	Asset Entity Identifier	5 alphanumeric	Required A unique identifier for the asset entity to which the asset belongs.
4	Asset Identifier	12 alphanumeric	Required A unique identifier for an asset within an asset entity. The asset identifier must conform to the asset edit format entered in asset policy.
5	Blank	blank	
6	Book Number	2 numeric	Required Identifies one book in a set of books for an asset entity or associated entity. The number of financial books and tax books that an asset can have is defined when the entity is added.
7	Transaction Sequence Number	1 = Retirement book transaction	The sequence number of the transaction within the type of transaction.
8	Batch Action Code	R = Retirement	Required A code that identifies the action to perform on the asset retirement base information.
9	Retirement Proceeds	amount	The amount received from the sale of the asset. If this retirement was initiated by a retirement request, a proceeds amount appears in this field. You can enter or change the proceeds amount for any book.
10	Retirement Selling Expense	amount	The amount of any expenses incurred in selling the asset. Asset Management subtracts this amount from proceeds when determining gain or loss. If this retirement was initiated by a retirement request, a selling expense amount appears in this field. You can enter or change the selling expense amount for each book you want to retire.

Field	Name	Length, Type, Values	Description
11	Cost of Removal	amount	The amount of any expenses incurred to disassemble or remove the asset. Asset Management subtracts this amount from proceeds when determining gain or loss. If this retirement was initiated by a retirement request, a cost of removal amount appears in this field. You can enter or change the cost of removal amount for each book you want to retire.
12	Retirement Type Code	O = Ordinary E = Extra N = Normal A = Abnormal T = Trade	Indicates whether the retirement was due to normal or unusual circumstances. If you do not select a retirement type, Ordinary is the default value.
13	Cost	amount	Required for depreciable assets and reference assets. The cost of the asset for a specific book used to determine the depreciable basis. The cost must be greater than the capitalization low limit set up in asset policy.
14	Percentage of Cost	percentage	Percentage of the total cost of the asset that is being retired. Amounts that appear in this field come either from entries made on the Retirement Request window or from Asset Management calculations Asset Management calculates the retirement cost for the specific book by multiplying total cost on the book times a ratio of retirement cost to total cost of the first book being retired.
15	Convert Currency Indicator	Y = Yes N = No	Indicates to convert currency entered to currency for this book. The currency amount entered should be in the same currency as that of the associated book. For example, book 1 is in U.S. dollars, book 2 is in French francs, and book 2 is associated with book 1. When adding or updating book 2, enter the currency in U.S. dollars, enter Y to convert currency, and Asset Management converts the currency to French francs.
16	Currency Rate	8 numeric	The rate used to convert one currency in a book to another currency in an associated book.
17	Currency Rate Date	date	The effective date for the currency rate.

Field	Name	Length, Type, Values	Description
18	Rate Entity Identifier	5 alphanumeric	The identifier for the rate table containing a set of rates that Asset Management uses to convert asset costs when assets are added or to convert proceeds, selling expense, and cost of removal when assets are retired.
19	Rate Type	1 alphanumeric	The user-defined identifier for the type of currency exchange rate. The rate type must be valid for rate entity.
20	Year-to-Date Depreciation	amount	The depreciation for this asset's book that has been calculated so far this fiscal year at the current location. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.
21	Year-to-Date Additional Depreciation	amount	The additional depreciation for the asset's book that has been calculated so far this fiscal year at the current location. If additional depreciation applies to the asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in year-to-date depreciation. If you adjust depreciation in the current period, Asset Management calculates depreciation from the beginning of the current period.
22	Life-to-Date Depreciation	amount	The amount of depreciation accumulated over the life of the asset. Asset Management updates this field each time you book depreciation. You can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in life-to-date depreciation.
23	Life-to-Date Additional Depreciation	amount	The amount of additional depreciation accumulated over the life of an asset. If an additional depreciation table is associated with the asset, Asset Management updates this field when you book depreciation. If additional depreciation applies to an asset, you can enter this amount if you added existing assets to Asset Management and depreciation has already begun for those assets, or if there is a change in the life-to-date additional depreciation.

Field	Name	Length, Type, Values	Description
24	Effective Date	date	The accounting processing date of the journal.
25	Retire From	F = First half L - Last half	Indicates the half of the year to which you want to apply the retirement amount from the ADR property account. This is required when you are applying the retirement directly to the property account. Choose **First** to apply the retirement amount to the first half of the year or **Last** to apply the retirement amount to the last half of the year.
26	Source System Code	2 alphanumeric	Indicates if the source information comes from SmartStream Projects (PJ) or SmartStream Payables (IN).
27	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the asset.
28	Project	20 alphanumeric	A unique identifier for the project associated with the asset.
29	Component	20 alphanumeric	A unique identifier for the component associated with the asset.

Asset Management Reporting

Asset Management provides reports to help you analyze and monitor your assets. You can modify these reports to meet the specific needs of your enterprise. You can run these reports on demand or schedule the reports. For general information on Asset Management reporting, see What Is Asset Reporting? in the *Asset Management* guide.

Note: Before running the reports delivered with SmartStream, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Scheduling Asset Management Reports

The following table gives a summary of the reporting jobs:

Report Job	Description
ffacrept	UNIX job that extracts the assets or property accounts for the report you want to print. You can then print the report in Access or schedule a print job using msaccess.exe.
msaccess.exe	Windows job that runs and prints the reports.

The directory where these jobs reside is the directory where SmartStream Financials is installed.

Running ffacrept

Available for supported Windows and UNIX platforms. After you create selection criteria and report controllers in Access, Asset Management saves the controller information on the tables in another database called DBSfwrk. The following table shows the tables on which Asset Management saves the controllers and explains what each extract table contains:

Table	What It Contains
work_generated_sql	Selection criteria for the assets or property accounts for which you want to run reports
work_report_process_controller	Controlling information for the reports you want to run
ffa_expense_ledger_extract	Information that was extracted for the Expense Ledger report
ffa_reserve_summary_extract	Information that was extracted for the Reserve Summary report
ffa_4797_extract	Information that was extracted for the 4797 report

Table	What It Contains
ffa_alt_min_tax_extract	Information that was extracted for the Alternative Minimum Tax report
ffa_alt_min_tax_retmt_ext	Information that was extracted for the Alternative Minimum Tax retirement Report
ffa_gain_loss_extract	Information that was extracted for the Gain or Loss report
ffa_reconciliation_extract	Information that was extracted for the Reconciliation report
ffa_cost_summary_extract	Information that was extracted for the Cost Summary report

Enter the following program parameters for the job **ffacrept** to run reports:

Program Parameter	Description
Report controller identifier	The identifier for the reports
Report type code	The code for the type of report you want to schedule.
User ID	A valid user identifier for the server where the database resides. This must be the same user identifier that was used to save the report controller.

After you run the reporting job in the Job Scheduler, you can print the reports in Access based on your user ID.

Running Msaccess.exe

Available for Windows platform. Each input parameter starts with a forward slash (/) and is followed by a space. You must end the program parameters line with a single forward slash (/).

Enter the following parameters to run scheduled reports:

Input Parameter	Description
ffarpt32.mdb	The database from which to run the reports. You must also include the path.
/cmd	The msaccess command option.
User identifier	A valid user identifier for the server where the database resides.
Password	A valid password for the user identifier.

Input Parameter	Description
Language	A language identifier. The default value is **EN**.
Dialect	The dialect identifier. The default value is blank.
Report type code	The code for the type of report you want to schedule. The list of available report type codes follows this table.
Controller identifier	The identifier for the report option within ffasrpt.mdb to be used when processing the object.

The report type code and controller identifier are required. If you do not enter them, Access runs in interactive mode.

Note: You must run against existing data when running the msaccess.exe job. If you want to extract other data, do it using the Asset Management Reporting activity.

Example

The following example shows the full path of the program parameters for running a report:

c:\sstrm*xx*\ffarpt32.mdb /cmd /user1 /passwd /EN / /AMT /ray1 /

Special Considerations

Before scheduling these reports, make sure

- The **ffarpt32.mdb** resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
- The location of the **ffarpt32.mdb** is specified in your parameters from the point of view of the Job Server.
- The report option ID is saved to the **ffarpt32.mdb** version that is visible to the Job Server.

Report Type Codes

Select any of the following report type codes for the type of report you want to schedule:

Code	Report
EL	Expense Ledger Report
4797	4797 Report
4797D	4797 Part III Report
AMT	Alternative Minimum Tax Report

Code	Report
AMTR	Alternative Minimum Tax Retirement Report
GL	Gain Loss Report
RC	Reconciliation Report
RS	Reserve Summary
CS	Cost Summary Report
DPPROJ	Depreciation Projection Report
ADPRJ	Additional Depreciation Projection Report

All codes except the following are available for ffacrept:

- DPPROJ
- ADPRJ
- 4797D

5 Billing

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Billing Processing

Most Billing business functions can be performed on Billing windows. See the Billing guide for an online-oriented presentation of Billing and the business needs it serves. You can also perform some Billing functions by running scheduled processes that perform transactions unattended in the SmartStream environment:

Using Billing Windows

On the Billing windows you can process billing transactions interactively. See the Billing online Help for procedures that you can perform using the windows. Online Help also provides detailed information about each window and its associated fields.

Scheduling Processes

Billing provides programs that you can schedule to process a large number of transactions in cases where online processing is impractical. Using the Job Scheduler, you can run these programs to perform the following tasks:

Task	Program
Extract and copy billing documents to the transaction tables.	Bulk Copy
Load, display, and change billing documents in the Billing database tables.	Billing Document Load
Print billing documents.	Microsoft Access Program – Billing Document Print program
Produce the various revenue recognition reports	Microsoft Access Program – Revenue Recognition Reporting
Convert billing documents and Billing policies associated with a ledger entity using a national currency to a new ledger entity using the euro	Billing Booking Currency Conversion

Copying Documents to the Billing Transaction Table

When online processing is impractical, you can load large numbers of documents to transaction tables by using one of the following methods:

- Copying transactions to the transaction tables using the Bulk Copy program and Job Scheduler
- Writing transactions directly to the transaction tables

Using the Bulk Copy Program and Job Scheduler

During scheduled processing, the Bulk Copy program copies transaction information from the source database to a Billing transaction table and adds a time stamp in the first column. The transaction table is a staging table for the Billing database.

Billing also adds a user identifier to the transaction during bulk copying. If you enter a SmartStream user identifier on the Bulk Copy Parameters window, Billing uses that identifier. If you do not enter a SmartStream user identifier, the user identifier found in the security profile for that scheduled processing run is used.

This table lists the major steps you perform to copy large numbers of documents into the Billing transaction table using the Bulk Copy program (dbsbulk.exe) and Job Scheduler.

Step	Task	Description
1	Define a security profile and set up the Enterprise and Billing policies.	Before you load any data, be sure that you have defined a security profile to specify a user identifier for the user who has database owner authority. Also, be sure that you have set up the applicable Enterprise and Billing policies.
2	Extract and format transaction data.	For each transaction type, extract data from the source database and create a text file formatted according to the specific transaction layout. **Note:** If you use Microsoft Excel to create the formatted text file, be sure to save the file as .txt (tab delimited) or .csv (comma delimited).
3	Move the formatted text files to the same directory as the Poll program or to a directory mapped to the Poll program.	For more information about the Poll program, see The Poll Program in the *SmartStream Administration* guide.
4	Set the Bulk Copy parameters to copy transaction text files to the transaction table.	Use the Bulk Copy Parameters window to enter parameters for each transaction type: Billing Document Control Group (BLCG) Billing Document Header (BLHR) Billing Document Comment (BLCM) Billing Document Line (BLLN)

Step	Task	Description
5	Enter the Job Scheduler parameters to run the Bulk Copy program (dbsbulk.exe).	Use the bulk copy parameter key that you defined on the Bulk Copy Parameters window as the parameter for this program.
6	Run Job Scheduler to copy the data.	The Bulk Copy program copies the text files to the transaction table.
7	View the progress, statistics, or errors of the scheduled job.	To review the status of Bulk Copy jobs, view the Scheduler Log window or your mail folder for results mailed through SmartStream Mail Gateway To Do messages Reports.

Bulk Copy Parameters

Use the Bulk Copy Parameters window to specify options for copying transaction files from your source database to the Billing transaction tables. The following table lists values you enter on this window for the Billing Document Load Program (fblc0100):

Field	Value
Family Name	bill
Destination Table	bill_trans
Before Stored Procedure	fsp_upd_blbt_before_bulk_copy
After Stored Procedure	fsp_upd_blbt_after_bulk_copy
Number of Columns	70

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling the Bulk Copy process.

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe	User-defined Bulk Copy Parameter Key established on the Bulk Copy Parameters window.

Writing Transactions Directly

If you generate transactions from another product, such as an in-house product, you can write your own extract and load programs to add transactions directly to the transaction tables.

Follow this procedure to update the Billing transaction table (bill_trans) directly.

Step	Action
1	Define a security profile and set up the Enterprise and Billing policies. The security profile must specify a user identifier for the user who has database owner authority.
2	Run or perform the contents of the stored procedure DBSbill.dbo.fsp_upd_blbt_ before_bulk_copy.
3	Update the Billing transaction table using your own method.
4	Run or perform the contents of the stored procedure DBSbill.dbo.fsp_upd_blbt_ after_bulk_copy.

Using Billing Transaction Layouts

Bulk Copy scheduled processing uses text files to hold the information for transactions and expects these files to be in a specific format. The text files can come from a third-party product or an internal billing product. Transaction layout tables provided in the following sections list the field information and the arrangement you must use when formatting the text files.

Creating a Text File

These are some of the tools that you can use to extract data and create text files:

- Spreadsheets such as Microsoft Excel or Lotus 1-2-3
- Microsoft Access
- User-created tools that download data from a host.

If you use Microsoft Excel or Lotus 1-2-3 to create the formatted text file, be sure to save the file as .txt (tab delimited) or .csv (comma delimited).

Note: You can use Notepad to verify the formatting before you begin processing.

Entering Field Information

Follow these guidelines when entering the field information:

- Determine the delimiter to use to separate the values for the fields. You can choose a comma (,), a tab, or a pound sign (#).
- If a field is required, enter a value.
- If the field is blank, enter a delimiter as a placeholder for the blank field.
- If a field is conditionally required, enter a value for the field depending on the rules that apply to the other fields you entered for the Billing transaction.
- If a field is optional, you can leave it blank. If you do leave it blank, make sure you enter the delimiter you defined to hold its place.
- If a field is optional and accepts a default value, enter a pound sign (#) in the field if you want to leave it blank.

Field Type Formats

Each field type has a required format. The following table describes these formats.

Field Type	Format Requirements
Alphanumeric	Use alphabetic letters, numbers, or a combination of both. Use a single blank to represent an empty field.
Date	All dates must be entered in yyyy/mm/dd format for Billing transactions. Enter a separator between year, month, and day. You do not need to enter leading zeros for month or day. For example, you can enter 3 or 03 for March. The format of the date as it appears on your screen is determined by choices made on the Windows Control Panel of the Poll machine. Display choices include the way you display the month, day, and year, and the kind of separator you use.
Numeric	Enter an amount with or without the decimal separator. If you do not enter a decimal separator, Billing treats the amount as a whole number. If you enter a number with decimal positions, the number of positions you enter must be less than or equal to the number of decimal positions specified for the associated transaction currency. Enter a positive or a negative value with its corresponding sign. The Receivables policy choices made on the Currency view of Enterprise Policy window determine the display formats. For percentages, enter a number between 1 and 100 with or without a decimal separator. Use the International option on the Windows Control Panel of the Poll machine to define the decimal separator you use with percentages and to indicate whether to display leading zeros. SmartStream Financials determines how many numerals it displays to the right of the decimal separator; it can be fewer or more than you enter.

Billing Document Transaction Layouts

Use the following transaction layouts to load billing documents:

Billing Document Transaction Layout	Use this transaction layout to...
Billing Document Control Group (BLCG)	Define a control group composed of billing document entries.
Billing Document Header (BLHR)	Define the header information for the billing document.

Billing Document Transaction Layout	Use this transaction layout to...
Billing Document Line (BLLN)	Define the line items for the billing document.
Billing Document Comment (BLCM)	Enter comments associated with the Billing document.

Note: When you add a new document, only the BLHR and BLLN transactions are mandatory.

Billing Document Control Group Transaction (BLCG)

Column	Field	Name	Length	BLCG Transaction Field Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the DOS text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always BLCG.
3	Key 1	Control Group ID	10 alphanumeric	Required Identifies the control group of billing documents.
4	Key 2	Control Group Date	10 date	Required Date of the control group. Current date is the default.
5	1	Control Group Total	25 numeric	Optional Total amount of the billing documents you expect to enter for the control group. Balanced against the actual amount of the billing documents entered for the control group. If you want to balance the control group based on the number of documents only, leave this field blank or enter **0**.
6	2	Control Count	15 numeric	Required Number of billing documents you expect to enter for the control group. Balanced against the actual number of billing documents in the control group.
7	3	Effective Date	10 date	Optional Date to use for posting the billing document to ledger.

Column	Field	Name	Length	BLCG Transaction Field Description
8	4	Assigned To	30 alphanumeric	Optional User responsible for the control group. Receives all messages generated as a result of processing the control group.

Billing Document Header Transaction (BLHR)

Column	Field	Name	Length	BLHR Transaction Field Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always BLHR.
3	Key 1	Billing Doc ID	22 alphanumeric	Required Unique identifier for the billing document.
4	Key 2	blank	19	Must be empty.
5	1	Description	35 alphanumeric	Optional Description for the billing document.
6	2	Control Group ID	10 alphanumeric	Conditional If your Billing enterprise policy specifies that control groups are required, enter the control group identifier in this field.
7	3	Control Group Date	10 date	Conditional If your Billing enterprise policy specifies that control groups are required, enter the date of the control group in this field.
8	4	Account ID	17 alphanumeric	Required Unique identifier for the customer account that is responsible for payment of the document's balance.
9	5	Entity ID	5 alphanumeric	Required User-defined identifier that you define on the Receivable Entity Policy window. It represents a set of receivables policy decisions including processing rules that organize billing documents based on how you decide to track them within your enterprise.

Column	Field	Name	Length	BLHR Transaction Field Description
10	6	Document Category	3 alphanumeric	Required Classification of the billing document. INV = Invoice CM = Credit memo
11	7	Document Type	15 alphanumeric	Conditional User-defined identifier that you define on the Receivable Document Type Policy window. It represents subclasses for a billing document. For sales, this field is optional, and the document type defined for the billing customer or billing defaults, in that order, serves as the default for this transaction. For credit memos, this field is required.
12	8	Billing Date	10 date	Optional Date of the billing document. Corresponds to the date of the invoice or credit memo. Current date is the default.
13	9	Effective Date	10 date	Optional Date to use for posting the billing document to ledger after it has been processed by Receivables. If the document belongs to a control group, the effective date of the control group serves as the default; otherwise, the date is determined using the policy defined for the receivable entity.
14	10	Due Date	10 date	Optional Date payment is due for the billing document. Can be entered or calculated based on the payment terms in effect.
15	11	Terms	17 alphanumeric	Optional Unique code identifying the terms of payment associated with the billing document. If this field is left blank, the terms in the document type policy, the account, or the receivable entity, in that order, serve as the default.

Column	Field	Name	Length	BLHR Transaction Field Description
16	12	Assigned To	30 alphanumeric	Optional Identifies the user responsible for the billing document. This user receives all messages generated as a result of processing the document. If this field is left blank, the user ID associated with the security profile for the job serves as the default.
17	13	Currency Code	3 alphanumeric	Optional Identifies the currency used for the transaction. The currency code in account policy, entity policy, or enterprise policy, in that order, serves as the default.
18	14	Cross-Reference Number	22 alphanumeric	Optional Unique number linking this billing document to a related billing document. For example, a credit memo can be cross-referenced to an earlier invoice using this number. The default is blank.
19	15	Original Document	22 alphanumeric	Optional Unique code that cross-references a billing document to the most recent document the billing originates from. The default is the ID for the current billing document.
20	16	Base Document	22 alphanumeric	Optional Unique code that cross-references a billing document to the first document in a series of documents that this document originates from. The default is the ID for the current billing document.
21	17	Purchase Order	22 alphanumeric	Optional Identifying number that the customer's order processing department assigns to the purchase order.
22	18	Voucher Number	15 alphanumeric	Reserved for future use. If you enter a voucher number, the load process ignores it.
23	19	Shipment Date	10 date	Optional Date the goods were shipped or services rendered.

Column	Field	Name	Length	BLHR Transaction Field Description
24	20	Shipment Reference Number	22 alphanumeric	Optional Number assigned by the original shipper to identify a specific shipment of goods.
25	21	Carrier Identifier	17 alphanumeric	Optional Identifies the person or enterprise used to transport goods between two locations.
26	22	Ship-To Code	8 alphanumeric	Conditional User-defined identifier for the location where the goods will be shipped. If you enter an identifier in this field, that identifier is used to retrieve all ship-to information on the billing document. **If you are providing information for a one-time ship-to address, leave this field blank.** If you leave this field blank, and you are **not** providing information for a one-time ship-to address, the default, if activated, comes from the billing customer defaults.
27	23	Revenue Recognition Rule	22 alphanumeric	Conditional User-defined identifier for the revenue recognition posting rule. The default is taken from the billing defaults. This field is required if one of the billing document lines has the Revenue Recognition flag set to Y. The rule you enter must already be added to Billing.
28	24	Revenue Recognition Period Start Date	10 date	Conditional This field is required if the revenue recognition rule entered or used as the default in this transaction has a revenue recognition rule type of D – dynamic.
29	25	Revenue Recognition Period End Date	10 date	Conditional This field is required if the revenue recognition rule entered or used as the default in this transaction has a revenue recognition rule type of D – dynamic. The date must be later than the revenue recognition period start date entered

Column	Field	Name	Length	BLHR Transaction Field Description
30	26	Planned Document	1 alphanumeric	Optional Enter **Y** to indicate that the billing document is subject to either a recurring invoice plan or a scheduled payment plan. Default is N.
31	27	Print Status	1 alphanumeric	Reserved for future use. If you enter a print status, the load process ignores it.
32	28	Bill-To Contact Name	45 alphanumeric	Optional The name of an individual to contact when you need to ask questions or resolve issues about the billing document. You can use spaces, abbreviations, and special characters. The first contact name from the receivable account serves as the default.
33	29	Bill-To Contact Title	30 alphanumeric	Optional The business title of the contact person for your billing document. You can use abbreviations, spaces, and special characters. The first contact title from the receivable account serves as the default.
34	30	Bill-To Address Format	6 alphanumeric	Optional Specified form or style used to enter a bill-to address. The format you choose determines how address information is handled for the billing document including address, street or PO box number, city name, state or province code, postal code, and country code. Make sure that the address information is placed in the address fields that correspond to the correct address format. The address format from the receivable account serves as the default.
35-39	31-35	Bill-To Address Lines 1-5	35 alphanumeric	Optional The first through fifth lines of the bill-to address for the billing document. Entries in these fields depend on the address format chosen. The address lines from the receivable account serves as the default.

Column	Field	Name	Length	BLHR Transaction Field Description
40-42	36-38	Bill-To Street or PO Box 1-3	35 alphanumeric	Optional The first through third lines used to enter the street or PO box number for the bill-to address of the billing document. Entries in these fields depend on the address format chosen. The street or PO box from the receivable account serves as the default.
43	39	Bill-To City	35 alphanumeric	Optional Name of the city for the bill-to address of the billing document. The city from the receivable account serves as the default.
44	40	Bill-To Province - State Code	9 alphanumeric	Optional Unique identifier for the province or state for the bill-to address of the billing document. The province or state code from the receivable account serves as the default.
45	41	Bill-To Postal Code	9 alphanumeric	Optional Unique identifier for the delivering post office for the bill-to address of the billing document. Used in the address formats for Canada, France, the United Kingdom, and the U.S. and in the generic address format. The postal code from the receivable account serves as the default.
46	42	Bill-To Country	2 alphanumeric	Conditional Unique identifier for the country for the bill-to address of the billing document. This field is required if a value is entered in the Province - State Code field. The country code from the receivable account serves as the default.
47	43	Ship-To Contact Name	45 alphanumeric	Optional The name of the contact person for the one-time ship-to address. You can use spaces, abbreviations, and special characters. If you are not providing information for a one-time ship-to address, leave this field blank.

Column	Field	Name	Length	BLHR Transaction Field Description
48	44	Ship-To Contact Title	30 alphanumeric	Optional The business title of the contact person for the one-time ship-to address. You can use abbreviations, spaces, and special characters. If you are not providing information for a one-time ship-to address, leave this field blank.
49	45	Ship-To Name	35 alphanumeric	Optional The name for the one-time ship-to address. You can use abbreviations, spaces, and special characters. If you are not providing information for a one-time ship-to address, leave this field blank.
50	46	Ship-To Address Format	6 alphanumeric	Optional Specified form or style used to enter a one-time ship-to address. The format you choose determines how address information is handled for the billing document including address, street or PO box number, city name, state or province code, postal code, and country code. Make sure that the address information is placed in the address fields that correspond to the correct address format. If you are not providing information for a one-time ship-to address, leave this field blank.
51-55	47-51	Ship-To Address Lines 1-5	35 alphanumeric	Optional. The first through fifth lines for the one-time ship-to address of the billing document. Entries in these fields depend on the address format chosen. If you are not providing information for a one-time ship-to address, leave this field blank.
56-58	52-54	Ship-To Street or PO Box 1-3	35 alphanumeric	Optional The first through third lines used to enter the street or PO box number for the one-time ship-to address of the billing document. Entries in this field depend on the address format chosen. If you are not providing information for a one-time ship-to address, leave this field blank.

Column	Field	Name	Length	BLHR Transaction Field Description
59	55	Ship-To City	35 alphanumeric	Optional Name of the city for the one-time ship-to address of the billing document. If you are not providing information for a one-time ship-to address, leave this field blank.
60	56	Ship-To Province - State Code	9 alphanumeric	Optional Unique identifier for the province or state for the one-time ship-to address of the billing document. If you are not providing information for a one-time ship-to address, leave this field blank.
61	57	Ship-To Postal Code	9 alphanumeric	Optional Unique identifier for the delivering post office for the one-time ship-to address of the billing document. Used in the address formats for Canada, France, the United Kingdom, and the U.S. and in the generic address format. If you are not providing information for a one-time ship-to address, leave this field blank.
62	58	Ship-To Country	2 alphanumeric	Optional Unique identifier for the country for the one-time ship-to address of the billing document. Required if a value is entered in the Province - State Code field. If you are not providing information for a one-time ship-to address, leave this field blank.

Billing Document Line Transaction (BLLN)

Column	Field	Name	Length	BLLN Transaction Field Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always BLLN.
3	Key 1	Billing Document Identifier	22 alphanumeric	Required Unique identifier for the billing document.

Column	Field	Name	Length	BLLN Transaction Field Description
4	Key 2	Line Number	8 numeric	Required Number assigned to each line item associated with a billing document. Must start with 1 and increase by 1. A line number of 0 is allowed for an accounting distribution for deferred revenue.
5	1	Line Type	3 alphanumeric	Required The type of line being added. The following line types are supported for a billing document: ▪ 800 – Used for entering lines associated with sales items. ▪ 802 – Used for entering freight associated with a billing document. ▪ 804 – Used for entering additional miscellaneous charges associated with a billing document. ▪ 801 – Deferred Revenue – Used when the document has a revenue recognition rule. This type is only valid for Line Number 0 ▪ N – Used for entering descriptive text.
6	2	Item Number	35 alphanumeric	Conditional Identifier for the sales item. This field is validated using the Sales Item Catalog and the Sales Price List. This is only required when the line type entered is 800. For all other line types, leave this field blank
7	3	Short Description	35 alphanumeric	Conditional For sales lines (800) and deferred revenue lines (801), leave this field blank. The description from the sales item catalog serves as the default. For other line types, enter the description of the billing document line.
8	4	Unit of Measure	4 alphanumeric	Conditional For sales lines (800), this is the user-defined identifier for the unit of measure in which a quantity of goods or services is managed. The unit of measure for that sales item in the catalog serves as the default. For all other line types, leave this field blank

Column	Field	Name	Length	BLLN Transaction Field Description
9	5	Unit Price	25 amount	Conditional Price for one unit of an item or service. The unit price is based on the unit of measure. For sales lines (800), the field is optional as the unit price from the Sales Item Price Lists serves as the default. For freight (802) and miscellaneous charges (804) lines, this field is required. For narrative (N) and deferred revenue (801) lines, leave this field blank.
10	6	Quantity	25 amount	Conditional Quantity of the sales item, freight, or miscellaneous charge expressed in the unit of measure for the item. Enter a positive number. A negative quantity is allowed only for documents with the type of invoice. For narrative (N) and deferred revenue (801) lines, leave this field blank.
11	7	Tax Rate	25 amount	Reserved for future use. If you enter a tax rate, the load process ignores it. The rate associated with the tax rate code is applied to the line.
12	8	Description	255 alphanumeric	Optional Free-form description about the billing document line. For deferred revenue lines (801), leave this field blank.
13	9	Revenue Recognition	1 alphanumeric	Optional Valid values are Y (yes) and N (no). The default comes from the sales item catalog. For narrative (N) and deferred revenue (801) lines. leave this field blank.

Column	Field	Name	Length	BLLN Transaction Field Description
14	10	Tax Rule	20 alphanumeric	Optional Set of tax rules applied to the billing document, for example, sales tax or use tax. The tax rule in the item catalog, the customer defaults, or the billing defaults, in that order, serves as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, leave this field blank. For narrative (N) and deferred revenue (801) lines, leave this field blank.
15	11	Tax Rate Code	5 alphanumeric	Optional Identifier for the percentage to use to multiply the tax basis when calculating the tax amount. The tax rate code in the item catalog, the customer defaults, or the billing defaults, in that order, serves as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, leave this field blank. For narrative (N) and deferred revenue (801) lines, leave this field blank.
16	12	Originating Tax ID	20 alphanumeric	Optional The unique identifier a taxing authority issues to identify the shipper representing the location that shipped the goods. The originating tax ID in the billing defaults serves as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, leave this field blank. For narrative (N) and deferred revenue (801) lines, leave this field blank.

Column	Field	Name	Length	BLLN Transaction Field Description
17	13	Destination Tax ID	20 alphanumeric	Optional The unique identifier a taxing authority issues to identify the person or enterprise receiving the shipment of goods. The destination tax ID in the billing customer defaults serves as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, leave this field blank. For narrative (N) and deferred revenue (801) lines, leave this field blank.
18	14	Destination Exempt Tax ID	20 alphanumeric	Optional The unique identifier a taxing authority uses to exempt the receiver of a shipment of goods from tax liability. The destination exempt tax ID in the billing customer defaults serves as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, leave this field blank. For narrative (N) and deferred revenue (801) lines, leave this field blank.
19	15	Ledger Entity (line)	5 alphanumeric	Optional Group within Ledger that has its own accounting, reporting and control requirements. This Is the ledger entity used when posting the line amounts to the appropriate offset distribution, such as sales, freight, miscellaneous, or deferred revenue. The ledger entity determined by the accounting distribution derivation process serves as the default. For narrative lines (N), leave this field blank.
20-31	16-27	Ledger Key 1-12	30 alphanumeric	Optional The accounting distribution elements of the offset distribution used when posting the sales, freight income, miscellaneous income, or deferred revenue amounts to your ledger. Elements determined by the accounting distribution derivation process serve as the default. For narrative lines (N), leave this field blank.

Column	Field	Name	Length	BLLN Transaction Field Description
32	28	Tax Ledger Entity (line)	5 alphanumeric	Optional Group within Ledger that has its own accounting, reporting, and control requirements. This is the ledger entity used when posting the tax amount to your ledger. The ledger entity determined by the accounting distribution derivation process serves as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, the load process ignores this field. For narrative (N) and deferred revenue (801) lines, leave this field blank.
33-44	29-40	Tax Ledger Key 1-12	30 alphanumeric	Optional. The accounting key elements of the offset distribution used when posting the tax amount to your ledger. Elements determined by the accounting distribution derivation process serve as the default. When the Tax Exempt option is selected for the customer in the billing customer defaults, the load process ignores this field. For narrative (N) and deferred revenue (801) lines, leave this field blank.

Billing Document Comment Transaction (BLCM)

Column	Field	Name	Length	BLCM Transaction Field Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always BLCM.
3	Key 1	Billing Document Identifier	22 alphanumeric	Required Unique identifier of the billing document with which this transaction is associated.

Column	Field	Name	Length	BLCM Transaction Field Description
4	Key 2	Sequence Number	4 numeric	Required Number assigned to the comment. It is used to determine the order of entry for the comment. A billing document can have multiple comments.
5	1	Comment	255 alphanumeric	Optional Free-form comment about the billing document.
6	2	Comment Type Code	1 alphanumeric	Optional The type of comment. Default is A. I = Internal E = External A = All D = Display only

Loading Billing Documents into the Billing Database

The Billing Document Load program reads the transactions written to the Billing Transaction table (bill_trans) and loads them into tables in the Billing database. It then performs all validations associated with each transaction.

Scheduling Billing Document Load

Follow this process to schedule billing document load processing and determine if the job completed successfully:

Stage	Task	Action or Activity
1	Enter Job Scheduler parameters to run the Billing Document Load program (fblc0100) to load and validate transactions. As the load program runs, it edits and validates the source data. The program then moves the valid data from the Billing Transaction table to tables in the Billing database.	Job Scheduler window
2	Review messages that result from the Poll program.	Scheduler Log window
3	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway To Do messages Reports
4	Diagnose and correct any transaction errors.	Billing Transaction Maintenance window
5	Run the Billing Document Load program again only when you have corrected transaction errors. Repeat steps 2, 3, and 4 until the billing documents load successfully with no errors.	Job Scheduler window
6	Diagnose and correct any document errors. When you edit the Billing Document window, you make changes directly to the Billing database tables. You do not need to run the Job Scheduler again.	Billing Document window

Job Scheduler Parameters

The Billing Document Load program has the following parameters:

Program	Program Name	Program Parameters
Billing Document Load	**Windows:** fblc0100.exe **UNIX:** fblc0100	None – Processes both billing documents currently being loaded and previously loaded documents that still have a status of Incomplete. NEW_DOCS_ONLY – Processes only the documents currently being loaded. Incomplete billing documents previously loaded will not be processed. This parameter reduces the amount of time required to load new documents.

Billing Document Load Program

When you schedule and run the Billing Document Load program, you can load transactions for existing documents with a status of Incomplete, or you can load new documents.

During the billing document load processing, Billing

- Adds billing documents
- Adds comments for billing documents
- Adds control groups
- Updates the control group header with the number and amount of the billing documents it calculates if the billing document is part of a control group
- Changes the document status to Pending Approval, Plan Required, or Complete if the document is successfully loaded and validated.

When the document is successfully loaded, you can approve and print the document.

Validation

During processing, validation occurs in two phases:

- Transaction validation - Ensures that transaction values are the correct data type and within an acceptable range. The program treats each transaction as a separate entity without regard for other transactions.
- Document validation - Ensures that specific field values of all incomplete documents are valid.

Transaction Validation

The transaction validation process verifies that

- All numeric fields contain numeric data
- The transaction type is a valid transaction type

- All date fields contain valid dates based on a yyyy/mm/dd format.

If a transaction fails to meet any of these conditions, the program rejects it and the data remains on the transaction table so that you can correct it. An activity message is sent to the user specified on the transaction informing the user of the error.

To correct invalid data on the transaction table, follow these steps:

Step	Action
1	Open the Billing Transaction Maintenance window.
2	Select File Open and Search. The window displays a list of all the transactions in error.
3	Double-click the transaction to display an error message.
4	Edit the data in any of the fields of the transaction maintenance window.
5	Save your edits.

Document Validation

When a transaction passes the transaction validation, the load program moves the transaction to tables in the Billing database with a status of Pending Approval, Plan Required, or Complete.

Next the load program verifies that the data loaded to the tables in the Billing database has valid identifiers for items such as the billing document, receivable entity, receivable account, currency, taxes, and control group. When the document passes validation, the load program changes its status from Incomplete to Pending Approval, Plan Required, or Complete.

To correct a billing document with errors, follow these steps:

Step	Action
1	Open the Billing Document window.
2	Select File Open and search for documents with a status of Incomplete.
3	Double-click any document in the list that has a status of Incomplete.
4	Select the Error Message view to display information about the error.
5	Edit the data on the Billing Document window to correct the error.
6	Save your edits.

Tailoring the Sample Pricing User Exit

To provide greater flexibility, Billing delivers a pricing user exit that you can use to enhance the standard Billing pricing process and apply the rules you define to determine unit prices. Both the Billing Document Load scheduled process and the Billing Document window can use this user exit.

How the User Exit Works

Billing calls the pricing user exit stored procedure immediately after the quantity is entered for a sales line of a billing document associated with a receivable entity using a pricing user exit and passes it the following line details:

- Line type (800 only)
- Item
- Description
- Quantity
- UOM
- Receivable entity
- Receivable account
- Transaction currency
- Document date
- Document type
- Default list price

The stored procedure then applies your user-defined method of retrieving or calculating the unit price and returns the following information that Billing uses to update the line:

- Price
- Extended description

The Tailoring Process

Billing provides a sample pricing user exit called fsp_price_user_exit_sample in the DBSbill database. The source file fblp1105.sp resides in the DBMS\DBSbill directory on your SmartStream file server.

You can tailor this sample stored procedure as needed to meet the pricing needs of your enterprise. For example, you can design it to apply special discounts to certain customers, products, or quantities, or you can have it retrieve prices from databases external to Billing.

The user exit sample provides instructions for performing the following pricing functions:

- Quantity-based pricing

  Example: The item is MYITEM1, the unit of measure is EA, and the quantity is greater than 100. The price and an extended description of **Quantity based pricing user exit applies** are returned.

- Quantity-based discounting

  Example: When the line quantity is greater than 100, a 10 percent discount is taken from the default list price. The price and an extended description of **Quantity based discounting user exit applies** are returned.

- Pricing based on a factor other than quantity

  Example: The item is MYITEM1 and the unit of measure is EA. The price and an extended description of **Non quantity based pricing user exit applies** are returned.

- Discounting based on a factor other than quantity

  Example: A 10 percent discount is taken from the default list price. The price and an extended description of **Non quantity based discounting user exit applies** are returned.

Printing Billing Documents

You can schedule billing documents to print as a standalone program or as part of other scheduled jobs. For example, you can schedule billing documents to print as a step before the program that loads documents into SmartStream Receivables.

Scheduling billing documents to print is a two-step process:

Stage	Description
1	Select the documents to print and specify printing options
2	Scheduling the Billing Document Print program

Before you schedule the Billing Document Print program, you must select the billing documents you want to print and the printing options to use on the Billing Document Print window.

Job Scheduler Parameters

Use the following parameters to schedule billing document printing:

Program	Parameter Set
msaccess.exe	Access mdb Name /CMD ,print type,run date,receivable entity,,,language,,process date

When you enter the program name, you must enter the complete directory path to the Microsoft Access program. For example, **c:\Program Files\Microsoft Office\Office\msaccess.exe**

This table describes each parameter in the parameter set and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access database file. You must enter the complete directory path.	**c:\sstrmxx\fbl32.mdb**
/CMD	Separator that tells Access information is being passed to this mdb.	**/**CMD

Parameter	Description	Example
Print Type	The type of printing run: Batch (B) This parameter indicates to the Microsoft Access .mdb that you are running the program in batch mode. Batch mode prints all the billing documents selected for printing that have a date on or before the specified process date. (See the Process Date parameter at the bottom of this table.)	B
Run Date	The run date in dd/mm/yy format.	02/01/2003
Receivable Entity	The identifier for the receivable entity to process.	MJRE2
Unused	Not used for scheduled printing.	
Unused	Not used for scheduled printing.	
Language	A two-digit code for the language Access uses to display error messages and other information.	/EN
Unused	Not used for scheduled printing.	
Process Date	The process date associated with the job in dd/mm/yy format	02/01/2003

Example

c:\sstrm*xx*\fbl32.mdb /CMD ,B,02/01/2003,MJRE2,,,EN,,02/01/2003

For more information about using Job Scheduler, see Using the Job Scheduler or Job Scheduler Help.

Special Considerations

Before scheduling the document printing process, make sure

- Each parameter is separated by at least one comma (,). Also, be sure to insert commas for the unused parameters (three commas before the language code and two after it).
- The location of msaccess.exe is specified from the point of view of the Job Server.
- The location of the .mdb is specified in your parameters from the point of view of the Job Server.

Loading Billing Documents into Receivables

When billing documents are printed and have a status of Sent, you can load them as receivable documents into the Receivable Transaction table in SmartStream Receivables where they wait for loading and validation. Rejected transactions remain in the Receivable Transaction table until they are corrected. Accepted transactions are loaded into the Receivable tables.

For more information about the Receivable Document Transaction program (farc0101) used to load billing documents, see Loading Data.

Generating Revenue Accounting Journal Entries

When you load billing information into SmartStream Receivables, you can load and post the documents at the same time, or you can load the documents and run the Receivable Document Posting program (farc0120) later. Posting receivable documents with revenue recognition rules originating in Billing generates revenue accounting journal entries according to the rules assigned.

For more information about generating journal entries in Receivables, see Receivable Document Posting Program.

Producing Revenue Recognition Reports

Billing provides reports to help you analyze and monitor your revenue accounting and recognition information. You can tailor these reports to meet the specific needs of your enterprise. You can run these reports on demand or schedule them.

Note: Before running the supplied reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Prerequisite

You must load billing documents into Receivables and post them in Receivables and Ledger before you can run revenue recognition reports about them.

Running Reports on Demand

Receivables uses Microsoft Access to produce reports. You can choose the Revenue Recognition Reporting activity from your Activity List to generate the reports that are described in the following table.

Report Name	Description
Ledger Reconciled Deferred Revenue	Reconciles ledger balances of deferred revenue accounts with the detailed revenue accounting journal entries in Receivables.
Ledger Unreconciled Deferred Revenue	Provides information about revenue accounting journal entries that are not reconciled to ledger balances of deferred revenue accounts for one or more of the following reasons: ▪ They have not been extracted to Ledger. ▪ They have errors. ▪ They are suspended.
Revenue Reconciliation by Document	Provides information about the revenue for a specific period by document. It shows the direct and deferred revenue with revenue details.
Revenue Forecast Posted Documents - by Period	Provides information about the future revenue by period for an account. It shows the direct and deferred revenue with document details.
Revenue Forecast Posted Documents - by Account	Provides information about the future revenue by account for a specific period. It shows the direct and deferred revenue with document details.

Scheduling Revenue Recognition Reports

You can schedule a report to run standalone or as a part of other scheduled jobs. For example, you can schedule a revenue recognition report after Receivables posting.

When you schedule a report, you must specify the name of a parameter set as part of the program parameters. This parameter set identifies a set of report parameters you defined on the appropriate report parameters window. List program parameters on one line. Separated the report name parameter and the parameter set parameter by a comma (,).

Job Scheduler Parameters

Use the following parameters to schedule revenue accounting reports:

Program	Parameter Set
msaccess.exe	Access mdb Name /Xfbl_Sched_Parm /CMD report name, report parameter set

When you enter the program name, you must enter the complete directory path to the Microsoft Access program. For example, **c:\Program Files\Microsoft Office\Office\msaccess.exe**

This table describes each parameter and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access database file. You must enter the complete directory path.	c:\sstrm*xx*\fblrev32.mdb
/X	Microsoft Access macro that runs on startup of the .mdb.	/Xfbl_Sched_Parm
/CMD	Separator that tells Access information is being passed to this mdb.	***/***CMD
Report Name,	Name of the report you want to generate.	Revenue Reconciliation by Document
Report Parameter Set	User-defined name of the set of report parameters you previously set up in the .mdb.	, test01

Example

c:\sstrm*xx*\fblrev32.mdb /Xfbl_Sched_Parm /CMD Revenue Reconciliation by Document, test01

For more information about using Job Scheduler, see Using the Job Scheduler or Job Scheduler Help.

Special Considerations Before scheduling these reports, make sure

- The location of msaccess.exe is specified from the point of view of the Job Server.
- The location of the .mdb is specified in your parameters from the point of view of the Job Server.
- The report parameter set you plan to use is saved to the .mdb version that is visible to the Job Server.

Billing Booking Currency Conversion

Billing booking currency conversion is a scheduled process used to convert all billing documents and billing policies associated with a ledger entity using a former national currency to a **new ledger entity** using the euro. Only enterprises in euro participating countries need to run this conversion.

For an overview of Euro Currency processing, including booking currency conversion, see the Overview chapter in the Shared Components *Euro Currency* guide.

Prerequisites

Before running the booking currency conversion process for Billing, ensure that

- All printed billing documents have been successfully loaded into Receivables. Any incomplete load transactions must be corrected and successfully loaded before you run the Billing booking currency conversion process.
- Booking currency conversion has been successfully run for Receivables.

  For more information, see Receivables Booking Currency Conversion in the Shared Components *Euro Currency* guide.

Booking Currency Conversion Process

The booking currency conversion process transfers all billing documents and billing policy for the processed ledger entity to the new euro ledger entity.

Job Scheduler Parameters

Enter the following values for the Program Name and Program Parameters fields when scheduling the Booking Currency Conversion program:

Program	Program Name	Program Parameters
Billing Booking Currency Conversion	**Windows:** fblc0200.exe **UNIX:** fblc0200	Set ID - This set ID is defined during the Ledger Booking Currency Conversion

Reviewing the Status of Billing Jobs

You can look in the following places for information about the status of jobs Billing processes:

- Scheduler Log window to view Scheduler messages.
- Mail to view program processing messages.
- Billing Transaction Maintenance window to view Billing transaction messages.
- Billing Document window to view document status and errors.

Scheduler Messages

The Poll program generates informational messages about the progress of a scheduled job and its steps. It also indicates the job's final result (ended successfully, ended with errors, or terminated before completion). You can see the messages by selecting the Scheduler Log activity and using the Scheduler Log window.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window and their meanings:

Return Code	Meaning	Possible Cause	Suggested Action
-9	Could not reference program text file.	Text file not found	Call the database administrator.
-6	A database error occurred.	Interruption or did not connect.	Call the database administrator.
-5	Could not connect to a database.	Interruption or did not connect.	Call the database administrator.
-4	An error occurred while trying to get location information.	Interruption or did not connect.	Call the database administrator.
-3	An error occurred while trying to get security information.	Interruption or did not connect.	Call the database administrator.
-2	An error occurred while trying to get job step information.	Interruption or did not connect.	Call the database administrator.
-1	An error occurred while trying to get Connect information.	Interruption or did not connect.	Call the database administrator.
1	An application error occurred.		See Program Processing Messages.
2	The Cancel command was issued.		See Program Processing Messages.

Return Code	Meaning	Possible Cause	Suggested Action
5	Could not find the program or could not process the parameters.	Program failed due to some error in processing.	See the Scheduler log and correct the problem. **Note:** For Revenue Recognition reports, this return code is normal and does not indicate the status of the job.

Program Processing Messages

Messages that appear in the Scheduler log about processing a Billing program are sent to a message table (psc_messages). After processing is complete, the Scheduler log is automatically sent to the users identified in the Distribution ID field on the Job Scheduler window.

You can display these Scheduler log messages by selecting the Mail Folder InBox from your desktop.

Billing produces the following types of messages:

- Error
- Number of items processed
- Number of items in error
- Status code.

Transaction Messages

The Bulk Copy program copies the text files to the transaction table. As the load program runs, it edits and validates the source data. Validation of transactions ensures that the values are within an acceptable range. If the data fails the validation, it remains on the transaction table until you correct it and run the load program again.

If errors occur, Billing displays the errors on message tables. Review the messages from the Billing Transaction Maintenance window.

Document Status Messages

View the document status using the Billing Document window. Documents that pass validation and are loaded into the Billing database successfully have a status of Pending Approval, Plan Required, or Complete. A status of Incomplete indicates that the document has an error. If the data fails validation, it remains on the billing document tables with a status of Incomplete until you correct the error.

Billing Document Print Messages

Messages generated during printing of billing documents appear in an error report. Error messages that occur during processing of scheduled transactions appear in the Scheduler log.

Revenue Recognition Reporting Errors

If a scheduled report does not run because of an error, a Scheduler log is generated that lists the date and error messages for each report that did not run.

A return code of 5 is normal and does not indicate the status of the report.

Billing Booking Currency Conversion

Use the Booking Currency Conversion Log report found in the Euro Reports activity to list all problems and errors associated with a run of the Billing Booking Currency Conversion process.

6 Budget

Chapter Contents

6-1 Before Installing Budget Workbench on Client Workstations
6-3 Remote Workbench Setup
6-8 Import Request Authorization
6-9 Uploading Budget Data
6-16 Creating a Workbench Request
6-19 Budget Reporting
6-20 Budget Scheduled Processes
6-22 Budget Troubleshooting
6-24 Budget Load Information

Before Installing Budget Workbench on Client Workstations

Before using the Budget Workbench, the Budget administrator must run the budent32.exe program. Run this program

- After SmartStream Budget is installed on the database server.
- After Budget Enterprise policy is established.
- After one client workstation has been installed with SmartStream.
- Before users install the Workbench on their client workstations.

What Happens When Budent32.exe Runs?

The budent32.exe program performs the following functions:

- Customizes the budget.ini file
- Sets up how the Workbench (budget32.exe) runs for your company
- Creates remote installation diskettes for users who do not connect to the database server (For more information, see Remote Workbench Setup.)

Using Budent32.exe

To create customized data for your company, follow this procedure.

Step	Action
1	Install SmartStream on the workstation running the Workbench Setup (**budent32.exe**). This user needs authority to add directories and files where the file server is installed.
2	Run budent32.exe from the location where SmartStream is installed on the file server. For example, *drive*:**\sstrmxx\ss\enterprz\budent32.exe**, where *drive* is the location of SmartStream.
3	Enter the information and exit Workbench Setup. **Result:** The budget.ini file is updated. The Budget Workbench (budget32.exe)is ready for installation on the client workstations.

Remote Workbench Setup

At the client level, users review budget balances, apply calculations, and create new budgets for the enterprise within an environment called Budget Workbench.

One of the key features of Budget Workbench is its portability. Users are not required to maintain a connection to a server or network to perform tasks using Budget Workbench. For example, a Workbench user can load Workbench information onto a laptop computer, take it on a business trip, and still perform all Workbench functions remotely.

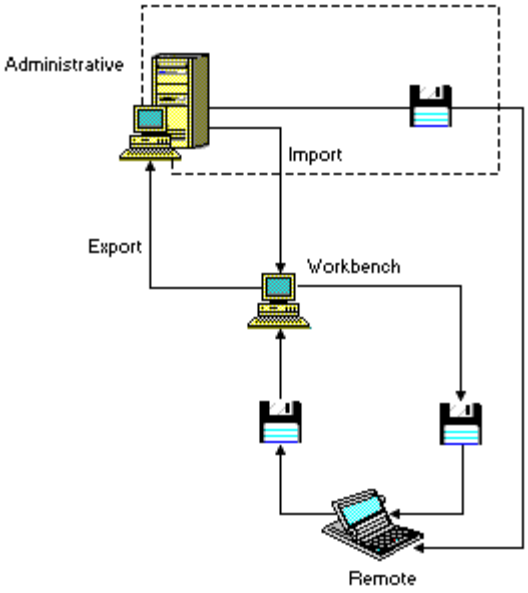
Importing to a Remote Workstation

To import Workbench data and use it at a remote workstation, you must complete tasks at three levels: administrative, Workbench (connected to the network), and remote. These tasks are described in the following table:

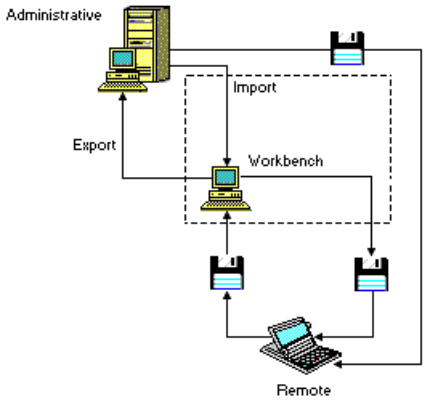
Stage	Description	Activity or Function
Administrative	See diagram	
1	Create appropriate Budget Workbench Import Requests for the remote user	Budget Workbench Import Request window
2	Run budent32.exe	See Using Budent32.exe
3	Create Workbench setup disks by choosing *Create Workbench Install Disks* from the File menu.	Budget Workbench Setup window
Workbench (connected to server)	See diagram	
4	Execute Budget Workbench Import Requests	Budget Workbench Data Access window
5	Save imported data to disk	Choose Save Data from the File menu
6	Remove imported data from networked Workbench	Choose Drop Client Data from the File menu
Remote	See diagram	
7	Install Budget from setup disks created in Step 2.	Installation
8	Log on to Workbench using appropriate password and user ID	Workbench logon

Stage	Description	Activity or Function
9	Copy imported data from disk to remote workstation, copying to the same directory as Workbench files	File Copy
10	Perform Workbench functions	Budget Workbench

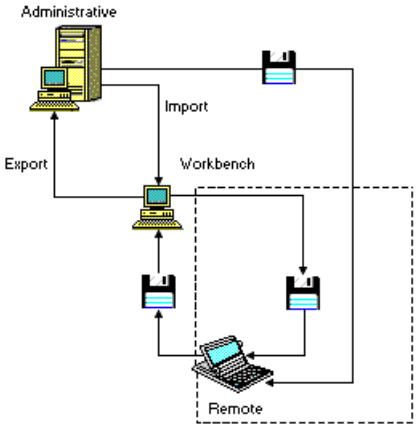
Administrative Level Tasks - Import



Workbench Level Tasks - Import



Remote Level Tasks - Import

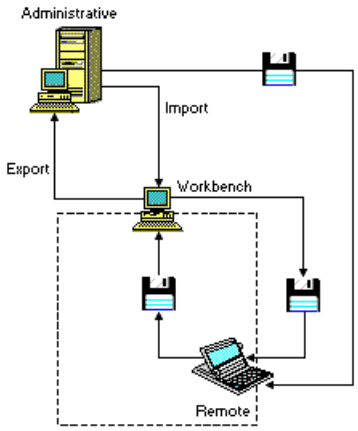


Exporting from a Remote Workstation

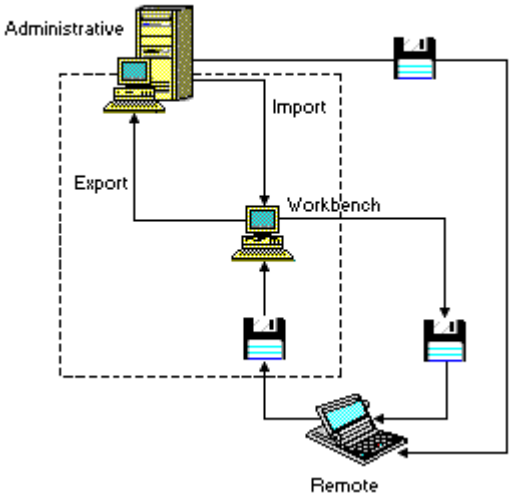
After Workbench functions are complete at the remote workstation, the following steps are required to bring the data back to the server. These tasks are required at three levels: remote, Workbench, and administrative.

Stage	Description	Activity or Function
Remote	See diagram	
1	Save data to disk	File Save
Workbench	See diagram	
2	Copy data to the non-remote Budget Workbench, taking care not to overlay any existing Workbench packages	File Copy
3	Log on to Workbench using the same password and user ID used for the Workbench import	Workbench Logon
Administrative	See diagram	
4	Export data to server by choosing the Export button	Budget Workbench Data Access window

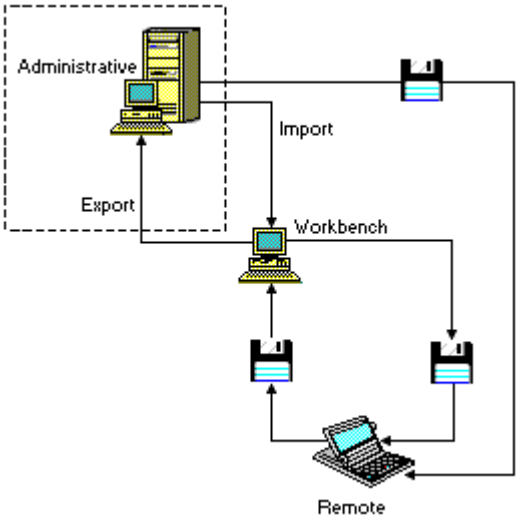
Remote Level Tasks - Export



Workbench Level Tasks - Export



Administrative Level Tasks - Export



Import Request Authorization

To access the Budget information required for an import, the user or group must have authority to read the following tables:

- bud_workbench_user
- bud_prep_suptg_doc_xref
- bud_prep_note_xref
- bud_package_prep_status
- bud_prep_amt_class
- bud_prep_inact_suptg_doc_xref

If permissions for these tables are not accurately established, the user may receive the following message:

```
ODBC call to server failed - could not find input table or query for one of the following:
BUD_AMT_CLASS
INACTIVE_DOCS
WRKBNCH
XLBBT_DOCS
XLBBT_NOTE
```

If a user receives this message, ensure that permissions are set up properly through Microsoft Access. Also, check the dbs.mdb file to ensure that it contains the correct permanent table names.

Uploading Budget Data

When budgets are completed, you can transfer them from the server to a host system. Budgets can be stored at the host, or their data can be used in host-based applications.

Preparing the Data for Upload

Before you can upload Budget information to a host, the data you want to upload must be prepared as a comma- or tab-delimited ASCII file. You can use any PC-based file export utility to create this file.

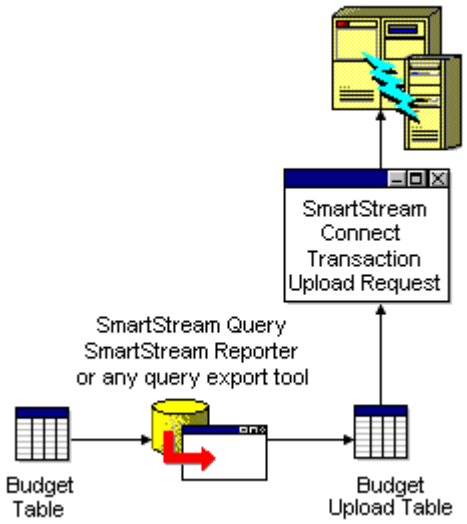
Note: SmartStream Query has a facility that saves data generated by a query to a spreadsheet. A file created by this process can be used as a source for host uploads. Also, Query saves data generated by a query to a table that can be used in SmartStream Connect transaction uploads. For more information about this facility, see Run With Options.

Performing the Upload

The procedures you use to perform the host upload depend on whether you are currently a user of SmartStream and other Geac applications (SmartStream Connect, E Series, or M Series) or a new SmartStream user.

SmartStream Connect Transaction Uploads

SmartStream Connect transaction upload processing provides a way to upload transaction data from Budget to the host. Connect helps you to maintain data consistency between the host and the client/server environments.



Processing Overview

SmartStream Connect transaction upload processing includes the following stages:

Stage	Description
1	Using any supported query export tool an administrator creates a Budget table. This table becomes the source of data for the upload transaction.
2	A data administrator creates a Connect Transaction Upload request designating a stored procedure that sets the data from Step 1 into a format readable by the Host Maintenance program.
3	The Job Scheduler issues the Connect Transaction Upload request as a step in a job.
4	SmartStream Connect runs the stored procedure specified in the request and transmits the data to the host, where it is written to a Connect VSAM file named IQUPLD.
5	An application batch job on the host runs a Connect host utility program (IQCOPY) to copy the records from IQUPLD to an application transaction file and then processes the transactions.

Creating the Budget Upload Table

Follow this process to create the Budget Upload table using a query:

Stage	Process
1	Add the bud_acct_bal table as the table you want the query to use.
2	Build your table according to the specified format. See the Required Columns for Budget Upload section following this table.
3	Add any sorting selections to organize your data in the query.
4	Specify any calculations to formulate data in the query.
5	Run your query to display the query answer set, using the Save Results as Table output method.
6	Save your query specification. Use one of the following table names in the Table Name for Query Output field, depending on the host ledger product: **GL:M 2.0 Series -** bud_acct_bal_upload_m2e **GL:M 3.0 Series -** bud_acct_bal_upload_m3 **GL:E Series -** bud_acct_bal_upload_m2e

Required Columns for Budget Upload

The Budget Upload Table that you build requires a fixed format, using specific columns of the Budget Balance table. The following chart lists these specifications:

This table...	Requires these columns...
bud_acct_bal_upload_m2e	ldr_entity_id account center acct_type_code ldr_amt_(0-12) Use a calculated column to rename your account and center elements so that their column headings in the query read **account** and **center** (must be lower case).
bud_acct_bal_upload_m3	ldr_entity_id accounting key dbs_division dbs_account dbs_department dbs_product dbs_project curr_code ldr_amt_(0-12) Replace the five dbs_ element accounting key names with your own accounting key element names.

Creating the SmartStream Connect Transaction Upload Request

With a Connect Transaction Upload Request you can upload transactions from a DBMS to a Connect VSAM file on the host. Connect runs the request according to instructions you supply on this window.

Stored Procedure Names and Parameters

The stored procedure name and parameters you specify through this window depend on the ledger software you are using on your host.

GL:M 3.0

The load to GL:M 3.0 Ledger uses stored procedure bsp_sel1_bdbu and requires two parameters: Amount Class and Currency Switch. The Amount Class identifies the host amount class that server balances will be uploaded to. All balances in the file, regardless of the number of entities, will be loaded to the same amount class. If you need to upload server balances to multiple amount classes, you must recreate the bud_acct_bal_upload_m3 table for each amount class.

The Currency Switch determines whether to load blanks into the currency code column (a switch value of N or blank) or whether to load the value in the server curr_code column into the host currency code column (a switch value of Y). A Currency Switch value of Y is necessary only if the receiving host enterprise is multiple-currency.

When the host receives the file, the amount fields for the GL:M 3.0 maintenance transactions must be set to packed decimal. Consult with the personnel who are responsible for administering your host operations to determine how to properly set these values.

GL:M 2.0

The load to GL:M 2.0 Ledger uses stored procedure bsp_sel2_bdbu and requires one parameter, the Card Type. The Card Type indicates which balance category the server balances will be uploaded to. All balances in the file, regardless of the number of entities, are loaded to the same Card Type. If you need to upload server balances to multiple card types, you must recreate the bud_acct_bal_upload_m2e table for each card type.

GL:E

The load to GL:E Ledger uses stored procedure bsp_sel3_bdbu and requires three parameters: Version, Year, and Process Option. All balances in the bud_acct_bal_upload_m2e table are uploaded to the same Version and Year and use the same Process Option. If you need to upload server balances to multiple Version, Year, and Process Option combinations, you must recreate the bud_acct_bal_upload_m2e table for each combination.

The GL:E upload file contains one BA record for each run, and a BB record for each company. The BA record's values are set to spaces. The BB record is entered as follows:

Position	Value
1 - 2	BB
3 - 6	ldr_entity_id (company)
7 - 8	Version (parameter 1)
9 - 11	Spaces
12	Process Option (parameter 3) R = Revision C = Create
13	Space if Process Option is R 4 if Process Option is C
14	2 if Process Option is R Space if Process Option is C
15 - 16	2-digit Year (parameter 2)
17 - 80	Spaces

Note: For the BT records, the group value is set to 1 and the class value is set to 1 for assets, 2 for liabilities, 3 for equity, 4 for income, 5 for expense, 7 for volume, and 8 for balance.

Summary

Use the following chart as a reference in making these entries:

If your host package is...	Enter this stored procedure name...	And these parameters
GL:M 2.0 Series	bsp_sel2_bdbu	Card Type - 1-2 Characters (Host Amount Class)
GL:M 3.0 Series	bsp_sel1_bdbu	Amount Class - 1-7 Characters Currency Switch - Y = Load currency from table - - N = Load blanks for currency - - (default)
GL:E Series	bsp_sel3_bdbu	Version - - 1-2 Characters (Amount Class)

Running the Connect Upload

Use the Job Scheduler to create a job to upload transactions from multiple servers to a single host and then initiate host processing of those transactions. In the following example, three steps accomplish this task. The first two steps upload transactions to the host and the third consolidates the transaction information into a single application file on the host.

The following table shows information to enter in the Program Name and Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Associated Request
Upload transactions			
Step 1	Connect Transaction Upload	Transaction upload request name For example BUDG_BOSTON	SmartStream Connect Transaction Upload Request
Step 2	Connect Transaction Upload	Transaction upload request name For example BUDG_ATLANTA	SmartStream Connect Transaction Upload Request
Consolidate transaction information			
Step 3	Connect Host Job Submission	CONSOLIDATE_ BUDGETS	SmartStream Connect Host Job Submission Request

Connect Host Job Submission File

Connect uses transactions from the VSAM IQULPD file to create an application file for processing. This job submits user JCL that does the following:

Stage	Description
1	Runs IQCOPY, which copies the uploaded (Boston and Atlanta) transactions from the IQUPLD file into the budget application file. The transaction type IDs specified in the IQCOPY JCL are BUDG_BOSTON and BUDG_ATLANTA.
2	Runs an existing host-based posting program that processes uploaded transactions.

For information about the Job Scheduler, see Job Scheduler Overview.

E Series Uploads

If you are an E Series user, use ExpertLink as a tool to upload your Budget data to your host. This utility uploads the data into Information Expert (I.E.).

Uploading Using ExpertLink

Use the following procedure to upload Budget data to the host using ExpertLink:

Step	Action
1	Format your data as a tab- or comma-delimited ASCII file.
2	Sign on to your workstation and access ExpertLink.
3	Sign on to the host and access I.E.
4	Choose the Information Access Facility.
5	Choose the ExpertLink option.
6	Choose Upload.
7	Select the host data frame that you want to upload Budget data to, then type **S** and press **Enter**.
8	Press **Shift+F6** to establish communication between the workstation and the host.
9	When the Database Sharing Upload screen is displayed, enter the name of the file you want to upload and press **Enter**. **Result:** When the process is completed, the message Data Transfer Complete is displayed.

For more information, see the *Guide to ExpertLink*.

M Series Uploads

If you are an M Series user, use PC Link as a tool to upload Budget data to your host. This utility uploads data to a Millennium workfile on the host. Use the following procedure to upload Budget to the host:

Step	Action
1	Format your data as a tab- or comma-delimited ASCII file.
2	Sign on to your workstation and access PC Link.
3	Choose File Transfer Upload from the PC Link Service menu.
4	Enter the name of the ASCII file in the File to Upload field. Complete the remainder of the fields according to your standards. **Result:** PC Link transmits the data to a workfile in Millennium. The data remains in this workfile until extracted by a batch program.

For more information, see the *Interactive PC Link User Guide*.

Uploading to Other Host Applications

If you are a new SmartStream user (not an E Series or M Series user), you probably have an upload package available that your enterprise uses to transfer data from the server to the host. You should familiarize yourself with that package and ensure that your SmartStream Budget data is in the proper format for its use before uploading.

For more information, see the documentation for your uploading software.

Creating a Workbench Request

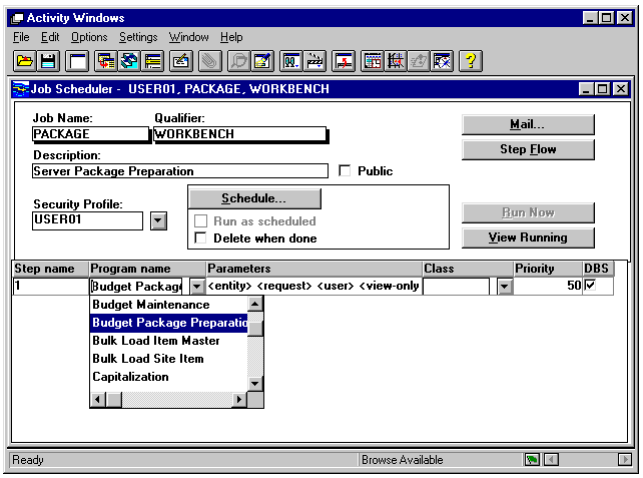
To import data to the Workbench you can either

- Prepare the data (package) on the server before importing it to the Workbench
- Prepare the data and deliver the package to the Workbench (client) when you sign on to the Workbench

Note: You must have a valid Budget Import Request completed before importing data to the Workbench.

Package Preparation

To prepare Workbench packages in advance using Job Scheduler, complete the following steps:

Step	Action
1	Access the Job Scheduler activity.
2	Select Budget Package Preparation in the Program Name field and the parameter values are displayed in the Parameters field. Enter the appropriate parameters and save. 

Considerations

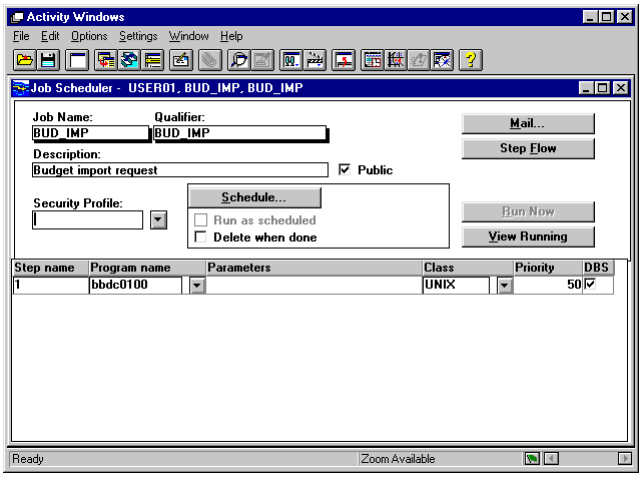
You can create only one package for each user ID. If you create more than one, only the data for the last request is saved and displayed with a checkout status of In Use on the Budget Checkout List window.

After the package is created and the user signs on to the Workbench, the request is displayed in the Server Package box of the window. Choose Deliver Server Package to deliver the package to the Workbench.

Note: The Master Scheduler and Poll must be running to import packages.

Preparing and Delivering Data

To run a Workbench Import Request through the Workbench, complete the following steps:

Step	Action
1	Create a template using the Job Scheduler activity. Enter **BUD_IMP** in the Job Name and Qualifier fields. Check Public and leave the security profile blank. In the Step area, specify one of the following program numbers and enter the appropriate class: ▪ **bbdc0100.exe** if you use Windows ▪ **bbdc0100** if you use UNIX.  After you save this request you can sign on to the Budget Workbench and import a request. **Note:** This step has to be completed only once. The template created is valid for all users.
2	Set up a dbsched.ini file for the workstation that will be running the Workbench import request. This action sets up the valid server, user ID, and password. Run pscc0030.exe to configure the dbsched.ini file. (Note that an appropriate dbsched.ini file is also required on the polling machine.)
3	Make sure the following permission is set up for each user who will be performing a Budget Workbench import or export on the DBSbdgt database: GRANT CREATE TABLE TO <USERNAME> (for Workbench Imports) Contact your database administrator for assistance.
4	Log on to the Workbench, and select the import request you want to use.

Note: The Master Scheduler and Poll must be running to import packages successfully.

Workbench Undo Facility

Using the Undo facility you can restore data to a previous version. You can restore data on any of these windows:

- Attachment Manager
- Group Change
- Solo Change

Additional Considerations

- The Undo facility has a KEEPUNDO.!!! subdirectory and a *budundo.mdb* database.. Do not delete the subdirectory or change the information in the .mdb.
- The Undo facility uses additional Windows memory.
- The Undo facility stores up to 15,000 changes in the budundo.mdb. To reset the database either
  - Disable the Undo on the Budget Workbench Settings window and then enable it
  - Export the data to the server and reimport it into the Workbench.

Using the Undo Facility

To use the Undo facility, see Restoring Budget Workbench Data.

Budget Reporting

Before running the reports delivered with SmartStream, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Scheduling Budget Reports

You can schedule a report to run standalone or as a part of other scheduled jobs. For example, you can run the Budget Load program in Step 1 of a job, then run the Budget Balance Audit Listing in Step 2 of the same job. Running both these steps produces the report immediately following the job.

When you schedule a report using the Job Scheduler window, you can specify an SQL macro or a parameter set you defined on the Budget reporting activity as part of the program parameters. Information about both methods and an example are included in the following table:

Type	Program Name Field
SQL Macro	[Path of Microsoft Access executable (msaccess.exe)] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, SQL]
- Example	c:\access\msaccess.exe c:\access\bbd32.mdb /XFGL_SCHED_SQL /CMD Budget Balance Audit Listing, LDR_ENTITY_ID = "US2"
Report Parameter Set	[Path of Microsoft Access executable (msaccess.exe)] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, Parameter Set, Most Recent]
- Example	c:\access\access.exe c:\access\bbd32.mdb /XFGL_Sched_parm /CMD Budget Balance Audit Listing, Rpt_Parm, Y

Report Status

Before running a job, check the DBS checkbox to get a return code of 0 if the job runs successfully. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

Maintaining Reporting Tables

Each time you run Budget processing, Budget stores messages on a table. When the items on the message table are not needed, delete them. You can access all message table deletion utilities by choosing the Utility button on the Budget Reporting window. To delete messages, access the appropriate message table, enter the parameters, and delete the messages.

Budget Scheduled Processes

Some of the work in Budget involves a large number of transactions that are best handled during times other than peak work hours. Some people refer to these as *batch processes*. SmartStream refers to these types of functions as *scheduled processes*.

Budget requests are processed by including them as steps that run within jobs using the Job Scheduler activity. The following table shows the programs and parameters needed for the Job Scheduler.

Request	Processing Description	Program Name and Program Parameters
Budget Load Request	Adds or changes accounts and balances. Can be used for initial loads or periodic updates. You must create a file to load the data. Commit Interval: A default value of 250 is used if no value is entered. Entering a value of 0 forces the entire job to complete before any entries are written to the tables.	**Budget Load** (bbdc0920 - UNIX) (bbdc0920.exe - Windows) Request ID, Destination table name (bud_acct or bud_acct_bal or bud_user_flds), Commit Interval
Budget Maintenance Request	Copies periodic balances between SmartStream Financials and SmartStream Budget or within Budget. Deletes and updates accounts and balances.	**Budget Maintenance** (bbdc0910 - UNIX) (bbdc0910.exe - Windows) Budget Entity, Cycle ID (optional), Request ID (optional) ▪ To run a single request, enter: bbdc0910.exe <entity> <cycle ID> <request ID> ▪ To run all maintenance requests in a cycle, enter: bbd0910.exe <entity> <cycle ID> To run all maintenance requests in an entity, enter: bbd0910.exe <entity>
Budget Workbench Import Request	Creates a package on the server keyed by the user ID, containing all balance information to be imported to the Budget Workbench through the Package Delivery program. (Delivery is run through the Workbench.) Requires a Workbench Import Request.	**Budget Workbench Import Request** (bbdc0100 - UNIX) (bbdc0100.exe - Windows) Entity ID, Request ID, User ID, View Only (Y or N)

Request	Processing Description	Program Name and Program Parameters
Document File Cleanup (no request)	Deletes references to supporting documents and notes that have been previously logically deleted by Budget Workbench. If all references to a supporting document or note have been deleted, this program deletes the supporting file.	**Document File Cleanup** (bbdc0130.exe - Windows only) No parameters

Note: Separate parameters with one space in the Job Scheduler Parameter field.

For more information about Job Scheduler, see

Topic	Description
Designating a Job Scheduler Administrator	Discusses setting up Job Scheduler.
Using the Job Scheduler	Discusses scheduling jobs and reviewing their status
Defining Jobs and Steps	Discusses Job Scheduler windows.

Budget Troubleshooting

This section discusses where to look for information about the status of any scheduled processing transactions.

Messages

Three types of messages provide information about what has happened during Budget processing:

- Server messages
- Job Scheduler messages
- Budget messages.

Note: SmartStream provides a file called bbdmsgen.txt that is used in translating Budget messages into languages other than English. Before running Budget processes, be sure that this file is installed in the same directory as the program you are running. For example, if you are running bbdc0910.exe, make sure that bbdmsgen.txt resides in the same directory as bbdc0910.exe. If the file is not available, the process ends with an error message showing an error status 5.

Server Messages

When processing begins, a text or UNIX file is created, depending on your platform. The program writes messages to this file that could not be written to psc_messages because of problems with the server. Each file is created with a unique file name; however, the file extension is always **.err**. For the Budget Load Program (bbdc0920) this file is *upxxxxx.err* where *xxxxx* is the Request ID.

If the program runs to completion, this file is deleted. If the program does not run to completion, this .err file is stored in either the working directory or the directory where the Poll program is running.

Job Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps and the job's final result. You can view messages using the Scheduler Log activity.

Messages written as a result of Budget program processing are sent to a message table (psc_messages). After the process completes, these messages are automatically sent to the user or users identified in the Distribution ID field of the Job Scheduler window. The messages are automatically deleted from the psc_messages table.

For more information, see

- Return Codes
- Job Scheduler Troubleshooting.

Budget Messages

Budget messages are generated from data that fails the program's edits. For example, an account that you are attempting to add may fail validation edits. These messages are written to the bud_trans_errs table.

You can view these errors by running the Budget Maintenance Error Listing report. For information about this and other Budget reports, see Presenting Budget Reporting Tools in the *Budget* guide.

Troubleshooting Budget Workbench Errors

The following table lists questions and information to assist the Workbench Administrator correct errors using the Workbench.

Have you...?	Troubleshooting Information
Read Before Installing Budget Workbench on Client Workstations	
Run budent32.exe to customize the Budget.ini file	See Using Budent32.exe.
Installed Budget correctly	Install Workbench to local machine.
	If using workbench remotely, create and install remote workbench
Installed additional software*	MS Access
	Spreadsheet (Microsoft Excel or Lotus 123)
Checked client database connections	Must have a datasource called DBS for MS Access.
Checked server database connections	Must have Sybase or Microsoft SQL Server setup connections.
	Remote Workbench has no connection.
Created the same entry for the repository for linked spreadsheet	Check NetPath entry in Budget.ini file.
	Path must be same for all Workbench users and cannot be on the local client machine.
Setup a request for importing budget data	Budget Import Request
Prepared and imported data	Prepare import data.
Reviewed the bbdc0100.log file	Located in same directory as Poll program.

Note: See Supported Technical Environments document on AnswerLink for version numbers.

Budget Load Information

The Budget Load program inserts new records in either the Budget Chart of Accounts table or the Budget Balance table. It also inserts and updates records in the Budget User Fields table. The program replaces records if the transaction key already exists.

The Budget Load Process

Use the following procedure to perform a budget load:

Step	Action	Activity
1	Prepare the data for loading.	Any comma- or tab-delimited file saved as an ASCII text file, or a .obb file created through SmartStream Allocations.
2	Request the Budget Load program.	Budget Load Request
3	Set the Account and Balance Auditing option (to record an audit trail of maintenance).	Budget Entity Policy
4	Schedule the Budget Load.	Job Scheduler
5	Confirm the Budget Load.	Check all error files. Run the Maintenance Error and Budget Balance Audit reports.

Prepare the Data

When you enter the data for budget loading, follow these guidelines:

First row of the file must contain the column headings.

- Column headings of the data must match exactly the column headings on the Budget Chart of Accounts table (bud_acct), Budget Balance table (bud_acct_bal), or Budget User Fields table (bud_user_flds). Refer to Appendix A for a list of tables and the columns they contain.
- Date format must be in MM/DD/YYYY format; acceptable delimiters are slash (/), hyphen (-), or period (.).
- Key fields are required.
- Fields may be entered in any order; they do not have to match the order of the Budget Chart of Accounts table (bud_acct), Budget Balance table (bud_acct_bal), or Budget User Fields table (bud_user_flds).
- Only key fields and required fields are necessary in the file. Fields not in the file will be set to default values. For example, you can update ldr_amt_6 in the Budget Balance table by building a file containing ldr_entity_id, the accounting key, amt_class, and ldr_amt_6.
- Natural balances for Liability and Income accounts are always signed. Include signs for other balances as appropriate. The sign must precede the balance (for example, -500); it cannot follow the value or be enclosed in parentheses.

- Spaces are equivalent to zeros. Leading zeros in a balance are ignored.
- If you are adjusting balances through a budget balance load or adjusting amounts through a user amount load, add a column named _update_bal_code to your text file. Records with a value of A or a in this column will adjust amounts. Records with a value of R, r, or blank in this column will replace amounts. If this column does not exist in the text file, all transactions will replace amounts.

Required Chart of Accounts Information

The following table shows the column information from the Budget Chart of Accounts table. You need this information to create your text file for Budget Load.

Column Name	Field Type	Field Length	User Information
ldr_entity_id	char	5	User defined
UDAK 1-12	char	varies	User defined

Optional Chart of Accounts Information

The following table shows information you may want to include even though it is not required by the Budget Load program:

Column Name	Field Type	Field Length	User Information
acct_descp_2	char	35	User defined
acct_status_code	char	1	O = Open I = Inactive
actual_ind	char	1	Y = Allow balances with amount class usage codes of blank or Actual N = Do not allow balances with amount class usage codes of Actual
budget_ind	char	1	Y = Allow balances with amount class usage codes of blank or Budget N = Do not allow balances with amount class usage codes of Budget
date_created	datetime	8	mm/dd/yyyy
date_last_maintained	datetime	8	mm/dd/yyyy

Column Name	Field Type	Field Length	User Information
acct_type_code	char	1	A - = - Assets L - = - Liability I - = - Income E - = - Expense Q - = - Equity B - = - Balance (debit balance, life-to-date statistical accounts) V - = - Volume (debit balance statistical accounts) You must enter a value on an insert if validation is not active.
acct_descp_1	char	35	User defined You must enter a value on an insert if validation is not active.

User Field Information

Budget Load can accept files that update the User Field table, enabling user text fields, user date fields, and user amounts to be adjusted or replaced. Budget Load accepts the following information for user fields:

Column Name	Field Type	Field Length	User Information
ldr_entity_id	char	5	User-defined (required)
UDAK 1-12	char	varies	User defined (required)
user_fld_1-2	char	5	User defined
user_fld_3-4	char	20	User defined
user_fld_5-6	char	50	User defined
user_date_1-2	char	datetime	mm/dd/yyyy
user_amt_1-4	char	money	User-defined monetary value. Do not include currency sign or commas. Include decimal indicator. Always include sign for Liability and Income amounts, and for other amounts as appropriate.
_update_bal_code	char	1	Identifies adjustment transactions applying to user amount columns. A or a = Adjustment R, r, or blank = Replace Default is Replace.

Required Balance Information

The following table shows the column information from the Budget Balance table. You need this information to create your spreadsheet for the Budget Load program:

Column Name	Field Type	Field Length	User Information
ldr_entity_id	char	5	User defined
UDAK 1-12	char	varies	User defined
processing_yr	smallint	4	Integers 1-4 = Year CC/YY (Example: 1994)
amt_class_type	char	10	Characters 1-10 = User defined

Optional Budget Balance Information

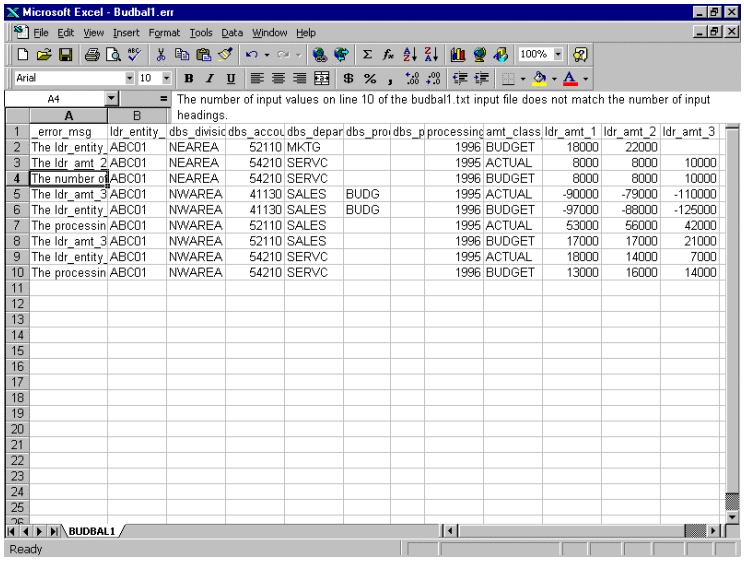
The following table shows information you may want to include even though it is not required by the Budget Load program:

Column Name	Field Type	Field Length	User Information
date_created	datetime	8	mm/dd/yyyy
date_last_maintained	datetime	8	mm/dd/yyyy
ldr_amt_0	money	15	Beginning balances for Asset, Liability, Equity, and Balance account types
ldr_amt_n	money	15	Activity for each of your accounting periods. Do not include currency sign or commas. Include decimal indicator. Always include sign for Liability and Income accounts, and for other balances as appropriate.
_update_bal_code	char	1	Identifies adjustment transactions applying to balance columns. A or a = Adjustment R, r, or blank = Replace Default is Replace.
curr_type	char	3	Must be blank (System sets to TEB)
curr_code	char	3	Must be blank (System sets to entity's balance currency)
equiv_curr_code	char	4	Must be blank (System sets to entity's balance currency)

Load Processing

The Load program processes all rows in the input file and loads those without errors to the proper table. It writes all rows containing errors to a file with the same name as the input file but with an .err extension. For example, if the original file is budbal1.txt the error file is budbal1.err.

After you correct your errors, rename the .err file and resubmit the job. The following Excel spreadsheet shows an .err file. Notice that the error message appears in the first column:



	A	B									
1	_error_msg	ldr_entity_	dbs_divisic	dbs_accou	dbs_depar	dbs_prov	dbs_p	processing	amt_class	ldr_amt_1	ldr_amt_2	ldr_amt_3
2	The ldr_entity_	ABC01	NEAREA	52110	MKTG			1996	BUDGET	18000	22000	
3	The ldr_amt_2	ABC01	NEAREA	54210	SERVC			1995	ACTUAL	8000	8000	10000
4	The number of	ABC01	NEAREA	54210	SERVC			1996	BUDGET	8000	8000	10000
5	The ldr_amt_3	ABC01	NWAREA	41130	SALES	BUDG		1995	ACTUAL	-90000	-79000	-110000
6	The ldr_entity_	ABC01	NWAREA	41130	SALES	BUDG		1996	BUDGET	-97000	-88000	-125000
7	The processin	ABC01	NWAREA	52110	SALES			1995	ACTUAL	53000	56000	42000
8	The ldr_amt_3	ABC01	NWAREA	52110	SALES			1996	BUDGET	17000	17000	21000
9	The ldr_entity_	ABC01	NWAREA	54210	SERVC			1995	ACTUAL	18000	14000	7000
10	The processin	ABC01	NWAREA	54210	SERVC			1996	BUDGET	13000	16000	14000

Note: The Load program ignores the error column name (_error_msg) since it begins with an underscore (_).

Commit Logic

Using commit logic with the Load program (default value is 250), if an error occurs in line 915 of a 1000 line file, 750 lines are loaded to the table leaving only 250 lines to process rather than 1000. To process the remaining 250 lines, correct the errors and resubmit the job using the same Job Scheduler request.

Load Integrity

To ensure the integrity of each Load process

- An stopped process must complete before another file can be loaded
- The text file of an stopped process cannot be changed.

Safeguards are included in the commit-recovery design of this program. At the beginning of the process, the name of the text file used by the Load program is changed to bd_inproc.920. When the process completes the file is renamed to its original name using an .lxt file type.

If for some reason the process stops and cannot be recovered you must either

- Restore the database and start over
- Use the database in its current condition. In that case,
  - Remove the load entry from the bud_process_run table (if any) and
  - Delete the bd_inproc.920 file if it was generated.

Request the Budget Load

Use the Budget Load Request window to identify the type of budget load and the name and location of the text file you are loading. Use the Parameters field on the Job Scheduler window to specify the commit interval. See Budget Scheduled Processes for parameter information.

7 Consolidations

Chapter Contents

7-1 Consolidations Processing
7-18 Consolidations Security
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7-22 Maintaining Message Tables

Consolidations Processing

This section provides information about the processes you perform in Consolidations:

- Balance Load
- Journal Load
- Chart of Accounts Load
- Eliminations
- Journal Posting
- Consolidations

Balance Load Program

The Balance Load program (fco0030) loads subsidiary balances into Consolidations. Each subsidiary transfers the ledger balances as specially formatted ASCII text files and stores them in a specific directory set up for consolidations on a UNIX or supported Windows server. The Load program can be run on a UNIX or Windows server, or as a Windows service.

Stages of Loading Balances

The following table lists the process for loading balances. Some of these tasks are performed by the subsidiaries. Some are performed by the consolidating entity and require a working knowledge of the UNIX or supported Windows operating system.

Stage	Task	Activity
1	Create UNIX or Windows directories for text files.	Create a separate directory for each amount class type and year.
2	Create files for loading.	Create files in a tab-delimited ASCII format and name them in accordance with the specified naming convention.
3	Copy ASCII text files into specified UNIX or Windows directories.	Use any file transfer program.
4	Define the load configurations.	Specify the year, period, and amount class type of the data to load.
5	Load the balances.	Run the Load program. **Note:** You cannot use the Job Scheduler to run the Load program.
6	Approve the load, if not using automatic approval	Use the Consolidation Load Certification window, accessed from the To Do message.
7	Verify the results.	Use the Consolidation Error Listing window and the Consolidation Trial Balance window.

Creating Directories for Text Files

When storing files containing data from more than one amount class type, create a separate directory for each amount class type. The directory names can identify the year and amount class of the data in the files. For example, you might create directory names similar to the ones listed here:

```
\consol\2000actual
\consol\2000budget
```

Creating Files for Loading

Use one of the following methods to create the load file:

- Use a tool such as a spreadsheet or Microsoft Access
- Download the data from a host system
- Use the Load File Creation utility (fcocxfer.exe) to create a file from SmartStream Ledger.

The Load program accepts only tab-delimited ASCII files. Follow these guidelines when creating load files:

- The file must have a name composed of the accounting period and the entity ID. The accounting period must be two integers, and the entity ID can be as many as

five characters. For example, if the US2 entity and is reporting balances for the first accounting period, use a file name of 01US2.

- The file must not have an extension.
- The file must contain a header row in the first line with the entity ID (uppercase), accounting period, processing year, amount class type, currency code, and conversion indicator (for multiple-currency consolidations) in that order.
- End each line with a line termination character such as a carriage return, new line character, or line feed.
- Beneath the header row, use one line for each account with no blank lines between accounts. Each line must contain the balance amount and, if the policy does not allow for account generation, a valid accounting key from the consolidation chart of accounts. The accounting key is case-sensitive.
- Insert a tab for any blank elements.
- Use a period (.) as the decimal separator for an amount.
- Use a leading minus sign (-) for a credit amount.
- Add a line containing a tilde (~) at the end to identify the end of the file.

Overriding the Currency Code The load process expects the currency of the amounts being loaded to be the same as the entity's currency as specified for the consolidation structure. During the load process, amounts are converted into the defined reporting currencies. To load amounts in a currency **other than** the currency defined for the structure, enter the currency in the header of the load file. This currency overrides the currency defined for the structure.

For example, the local currency for entity ABC as defined for the structure is JPY, and the reporting currencies are CAD and USD. Budgeting for entity ABC is prepared in CAD, not JPY. You enter CAD as the currency in the load file for the Budget amounts. During the currency conversion process, the amounts in the load file are converted from CAD to USD, and back to JPY.

Data for the Load File Use the following data to create the ASCII file:

Data	Values
Entity ID	Valid entity ID (uppercase)
Accounting period	Accounting period of load data.
Processing year	Processing year of load data.
Amount class type	Amount class type of load data.
Currency code	Required only when overriding the currency specified for the structure. See Overriding the Currency Code..
Conversion indicator	Use Y or Blank to convert currencies into the reporting currencies. Use N to not convert currencies.

Data	Values
Balance amount	Net amount.
Accounting key	If Consolidations policy does not allow for automatic account generation, this value must be a valid accounting key from the consolidation chart of accounts. The accounting key is case-sensitive and can contain 2 to 12 elements.

Load File Example The following example shows a load file for entity **10200**, period **1 2000**, where the amount class type is **ACTUAL**, currency of the data is **CAD**, and conversion indicator is **Y**:

```
10200 1      2000   ACTUAL CAD    Y
113420ADMIN  11110
213147ADMIN  11120
-488  ADMIN  11130
~
```

Defining Load Configurations

Use the Consolidation Load Configuration window to define the parameters for the data to be loaded. In each load configuration, you specify a year, period, and amount class type, and the UNIX or Windows path for the files. The Load program uses these configurations to find the files to load.

If you intend to load balances that have different combinations of processing year, accounting period, and amount class type, CREATE a separate configuration for each combination.

Running the Load Program

You can run the Load program from a command prompt on a UNIX or Windows server, or as a Windows service. When you run the Load program, you specify which load configuration to use. You can run load multiple configurations simultaneously.

Running the Load Program from a Command Prompt From a UNIX command prompt, enter the following parameters in the command line to start the Load program:

```
nohup fco0030  load configuration ID  user ID  security profile
name  maximum number of processes  &
```

From an Windows command prompt, enter the following parameters in the command line to start the Load program:

```
fco0030  load configuration ID  user ID  security profile name
maximum number of processes  NOSERVICE
```

Enter a space between each parameter. The following table describes the command parameters:

Parameter	Description
nohup	This is a UNIX command that is optional and allows the Load program to continue running after you log off of your session.
fco0030	The Load program name.
load configuration ID	The ID of the load configuration you want to use (defined on the Consolidation Load Configuration window).
user ID	A valid user ID for the server. The user ID is case-sensitive.
security profile name	The user's security profile.
maximum number of processes	This is an optional parameter that defines the number of load files that can be processed concurrently in this run. The default value is 5.
NOSERVICE	Use this parameter when running the Load program from an Windows command prompt. Do not use it when using a Windows service.
&	This is a UNIX operand that is optional and allows the Load program to run in the background, allowing you to continue using your session.

Example Your load configuration ID is ACTUAL97_01, your user ID is USER01, your security profile is SECURE, and you want to process four load files concurrently, so you type the following command line from a UNIX command prompt:

nohup fco0030 ACTUAL97_01 USER01 SECURE 4 &

You type the following command line from a Windows command prompt:

fco0030 ACTUAL97_01 USER01 SECURE 4 NOSERVICE

Creating a Windows Service Follow this process to create a Windows service for the Load program:

Step	Action
1	Open the command prompt.
2	Navigate to the directory containing the Load program.
3	Enter the following command in the command line: **fco0030 -Install(***name***)** where *name* is a user-defined name for the Windows service. **Result:** A message is displayed informing you that the program is installed as a service.

Using a Windows Service Follow this process to use a Windows service to run the Load program:

Step	Action
1	Select Services from the Control Panel.
2	Select the name of the service**.**
3	In the Startup Parameters field, enter the following parameters: ▪ load configuration ID ▪ user ID ▪ security profile name ▪ maximum number of processes Enter a space between each parameter.
4	Click the Startup button. **Result:** The Load program is started and runs in the background. The fco0031.exe icon is displayed when a text file is being processed.
5	**To pause the service**, select the desired service and click the Pause button. To start it up again, click Continue. The service remembers the parameters that you entered initially. **To stop the service**, select the desired service and click the Stop button.

What Happens During the Load? The Load program uses the path specified in the load configuration to monitor the directory and find the files to load. When the program finds a file with a valid file name and valid header information, it

- Verifies the rows
- If the company uses account generation, adds new accounts to the consolidation chart of accounts according to policy
- Loads the error-free rows to the Consolidation Account Stage table (csldtn_acct_bal_stage)
- Determines if the debits equal the credits, depending on the amount class type policy, and converts the amounts. For information about how the load program uses rate types and rate dates to perform currency conversion, see the Currency Conversion Example.

If automatic approval is...	Then the program...
Checked	Automatically loads the amounts to the Consolidation Account Balance table (csldtn_acct_bal) and sends notification to the user specified in the configuration.
Not checked	Gives the file an extension of .ldg. It sends an approval request to the user specified in the configuration.

The Load program continues to monitor the directory until you stop the program in UNIX or Windows, from the Windows service, or from the Consolidation Load Configuration window.

Approving the Load If the load file did not use automatic approval, you can accept or reject the load using the Consolidation Load Certification window, accessed from the To Do message. The program will not load any more data for the same entity, year, period, and amount class type until you accept or reject the current data. If you accept the data, the load program loads it to the balance table (csldtn_acct_bal). If you reject it, the Load program deletes it from the stage table (csldtn_acct_bal_stage).

For audit trail and archive purposes, each time you accept data in a file, the program moves a copy of the file into an Accept directory. The program attaches an extension to the file name reflecting the number of times you have accepted files for the same period, year, and entity. Rejected files are treated in the same manner. The Accept and Reject subdirectories are created automatically by the Load program and reside in the same directory as the files you are currently loading.

Troubleshooting the Balance Load Program

If...	Then...
The load file has an extension of .ldg but is not being loaded	Change the name of the file back to the original name and ensure that the Load program is running. The program will attempt to load the file.
You are using automatic approval but the data was not automatically approved	The load file has errors. Valid rows were loaded to the Stage table. Use the Consolidation Load Certification window to view the error messages. For more information, see Processing Files That Have Errors.

Journal Load Program

The Journal Load program (fcoc2000) loads subsidiary journals from SmartStream or external applications into Consolidations. The program reads journals in the Consolidation Journal Upload table (csldtn_jrnl_upload) to add new journals into Consolidations and new lines into existing Consolidation journals. The Consolidation

Journal Upload table is a database table that can be updated using SQL, BCP, Microsoft Access, or other tools.

The Load program validates entity, period, year, amount class type, currency, and accounting keys of the balances. If specified at run time, this program runs the Journal Posting program.

Stages of Loading Journals

Follow this process to load journals into Consolidations:

Stage	Task	Activity
1	Prepare files for loading.	To determine column information needed to create this file, see Consolidation Journal Upload Table.
2	Run the Consolidation Journal Load program.	Use the Job Scheduler to request this process.
3	Verify the load.	The Journal Load program sends a message with the totals for ▪ Processed journals ▪ Posted journals ▪ Lines remaining in the csldtn_jrnl_upload table ▪ Errors in posting and processing. Review the errors on the Error Listing window or the Error Access Report window.
4	Correct any errors encountered.	Use the Journal Entry window to correct errors.

Parameters for Processing the Journal Load Program

The following table describes the parameters required for the journal load program:

Parameter	Description
Request ID	This is a user-defined code to group journals together. Enter the request ID of the journals to process or enter an asterisk (*) to process all journals in the table.
Automatic Post Indicator	Y (Yes) automatically post the journals during the upload process. N (No) do not post the journals during the upload. The default value is No.

Consolidation Journal Upload Table

The following table shows the column information from the Journal Upload table. Use this information to create the upload file.

Column	Field Type	Field Length	Consolidation Journal Upload Table Values
rqst_id	alphanumeric	10	User-defined code to identify and group journals for processing. This is a required field.
ldr_entity_id	alphanumeric	5	Valid ledger entity ID This is a required field.
jrnl_id	alphanumeric	20	User-defined code to identify a journal. This is a required field.
processing_yr	smallint	2	Format: yyyy If you are loading a template, this value must be zero (0). This is a required field.
pd_nbr	smallint	2	If you are loading a template, this value must be 0. This is a required field.
jrnl_line_nbr	int	4	Use consecutive numbers. If you are loading a template, at least one line is required. This is a required field.
jrnl_descp	alphanumeric	35	User-defined
jrnl_type_code	alphanumeric	1	G (General) T (Template) The default value is G.
amt_class_type	alphanumeric	10	Valid amount class type. If you are loading a new journal, this field is required.
curr_rate_date	datetime	8	mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd The default is the current rate date defined in the policy.
curr_jrnl_ind	alphanumeric	1	Y (yes) N (no) For multicurrency, the default value is Y; otherwise, the default is N.

Consolidations UDAK	alphanumeric	1-231	User-defined accounting key, from 2 to 12 elements. Any one element can be as many as 30 characters. Each element is individually defined. The accounting key must be valid, depending on the Consolidations account generation policy.
trans_curr_code	alphanumeric	3	User-defined. This value must be a valid currency code, depending on the Consolidations policy. The default is the primary book value defined by Consolidations policy.
trans_amt	money	8	The amount of the journal line. Credit is usually negative. Required for general journals.
curr_rate_type	alphanumeric	1	User-defined The default is the currency rate type defined for the Consolidation amount class type for the account type.
jrnl_line_descp	alphanumeric	80	User-defined
dr_cr_code	alphanumeric	1	D (debit) C (credit) This is a required field.
chgstamp	smallint		Must be 0.

Chart of Accounts Load Program

The Chart of Accounts Load program is a high-volume method of loading many accounting keys into the Consolidation Account table (csldtn_acct). The program uses the SmartStream Connect Insert Request and takes advantage of the DBMS transaction management feature (commit and rollback) to ensure that all the specified processing completes as a unit.

Stages of Loading Accounting Keys

Follow this process to load accounting keys into Consolidations:

Stage	Task	Activity
1	Prepare files for loading.	Create the files in a comma-delimited ASCII format.
2	Create a request to load the files.	Use the Consolidation COA Load Request window.

Stage	Task	Activity
3	Load the files.	Run the Connect Insert Request program (piqc0051) in Job Scheduler. Enter the request ID in the Program Parameters field. For more information about using Job Scheduler, see Using the Job Scheduler.
4	Verify the load.	Check the Scheduler messages and your Mail messages for errors, and run the Chart of Accounts Listing report or the Chart of Accounts Audit report. For more information, see About Producing Reports in the *Consolidations* guide.
5	Resolve any load errors.	If the program resulted in errors, edit the file and reload it or edit the Consolidation Account table directly.

Preparing Files for Loading

Note: If you are deleting accounts without loading new accounts, you must provide an empty load file. Specify the delete criteria on the Consolidations COA Load Request window. Failure to specify delete criteria in this circumstance would result in all accounts being deleted.

Use one of the following methods to create the load file:

- Use a tool such as a spreadsheet or Microsoft Access
- Download the data from a host system
- Use the SmartStream Connect Stored Procedure Request to load data from any DBMS table.

The Load program accepts only comma-delimited ASCII files. Alphanumeric and date fields must be enclosed in double quotes. Follow these guidelines:

- Fields must be entered in the order of the Consolidation Chart of Accounts table (csldtn_acct).
- All fields are required.
- The ASCII file must reside in a file system to which the Chart of Accounts Load program has access.
- The name of the ASCII file must have an extension of .prn.

Field Type Formats Each field type has a required format. The following table describes these formats.

Field Type	Format Requirements
Alphanumeric	Use a single blank to represent an empty field.
	Do not insert trailing blanks.
	Enclose the data in double quotes.
	Use a comma to indicate the end of the field.
Date	Use the format yyyymmdd to specify the year, month, and day.
	Enclose the date in double quotes.
	Use a comma to indicate the end of the field.
Numeric	Can use leading zeros to align this left-justified field.
	Do not insert trailing blanks.
	Only use a comma to indicate the end of the field. Do not use a comma as a separator within the number.
	Use a single blank to represent an empty field.

Consolidation Chart of Accounts Table The following table shows the column information from the Chart of Accounts table. Use this information to create the ASCII file.

Column	Field Type	Field Length	Consolidation Chart of Accounts Table Values
UDAK (1-12)	alphanumeric	1-231	User-defined accounting key, 2 to 12 elements. Any one element can be as many as 30 characters. Each element must be individually defined.
acct_type_code	alphanumeric	1	A (assets) L (liabilities and equities) Q (equity) E (expense) I (income) B (balance) V (volume)
acct_descp_1	alphanumeric	35	User-defined; must not be spaces
acct_descp_2	alphanumeric	35	User-defined
acct_closed_ind	alphanumeric	1	N (not closed) Y (closed)
acct_opt_code	alphanumeric	1	S (standard) M (minority interest) C (currency balancing)

Column	Field Type	Field Length	Consolidation Chart of Accounts Table Values
subsidiary_entity_id	alphanumeric	5	Entity ID (uppercase) of partially owned subsidiary. If acct_opt_code is M, must not be spaces.
open_year	numeric	4	1900, or before or the same as close_year.
close_year	numeric	4	The same as or after open_year.
date_last_maintained	date	8	Date the account was loaded.
date_created	date	8	Date the account was loaded.
curr_code	alphanumeric	3	Currency code (uppercase) of the currency balancing account. For the currency code of [ALL], enter a percent sign (%) in this column. If acct_opt_code is C, must not be spaces.
curr_rate_type	alphanumeric	1	A specific currency conversion rate type for this account to use when balances are loaded. This rate type is used instead of the default rate type for the amount class type.
curr_rate_date	date	8	A specific currency conversion rate date for this account to use when balances are loaded. This rate date is used instead of the default rate date defined on the Consolidation Policy window.
chgstamp	numeric	1	Must be zero (0).

Load File Example The following example shows a chart of accounts load file called **loadcoa.PRN**:

```
"OPER","10000"," ","A","Cash","Operating - Cash","N","S"," ",1900,2000,"20001001","20001001"," "," "," ",0
"OPER","11000"," ","A","Cash","ASSET OPEN STANDARD","N","S"," ",1900,2000,"20001001","20001001"," ","P"," ",0
"OPER","11100"," ","Q","Cash","EQUITY OPEN MIN NTRST","N","M","US2",1900,2000,"20001001","20001001"," ","
","20000901",0
"OPER","11110"," ","E","Cash","XPNS OPEN CRNCY BAL","N","C"," ",1900,2000,"20001001","20001001","USD"," "," ",0
"OPER","11111"," ","V","Cash","VOL CLOSED STANDARD","Y","S"," ",1900,2000,"20001001","20001001"," "," "," ",0
```

Elimination Program

The Elimination program (**fco0020**) uses consolidation structures and elimination rules to cancel transactions between affiliated subsidiaries of a parent company such as fees, chargebacks, sales, asset transfers, and investments.

Prerequisites

Before you can run the Elimination program, you must add

- The appropriate consolidation structures
- Elimination Rules
- A request to run the Elimination program.

Consolidation Structures

Consolidation structures used to cancel intercompany transactions are parent-child rollup structures that represent the organization of a parent company and its affiliated subsidiaries. When you add one of these consolidation structures on the SmartStream Structures window, be sure that you

- Add the structure in the Consolidations group
- Select Consolidations as the type for the structure
- Define an elimination entity for each tier of the structure
- Limit point names to five alphanumeric characters, entered in uppercase
- Enter **Yes** for the Elimination Entity attribute of any point you want to use as an elimination entity.

Elimination Rules

Elimination rules compare groups of subsidiaries and accounts (entities) to match and eliminate the intercompany transactions. You define them on the Consolidations Elimination Rules window.

Elimination Request

You specify the consolidation structures and elimination rules for the Elimination program to use when you define the elimination request on the Consolidation Elimination Request window.

Elimination Processing

Elimination processing

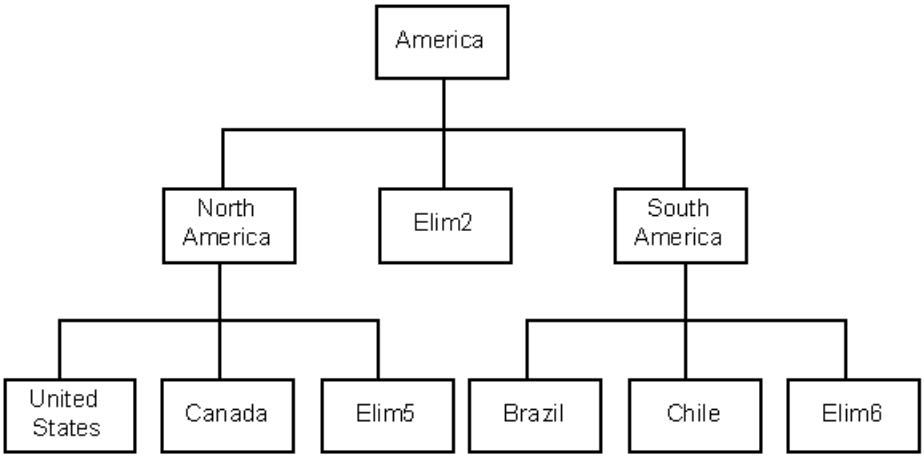
- Uses elimination rules to match intercompany transactions between entities
- Generates elimination journal entries
- Posts elimination entries to an elimination entity
- Posts differences to a balancing account defined in the elimination rules
- Updates the Consolidation Journal Control (csldtn_jrnl_ctrl), Consolidation Journal Lines (csldtn_jrnl_lines), Consolidation Account Balance (csldtn_acct_bal), and Consolidation Error Report (csldtn_err_report) tables.

The Elimination program uses the following process to determine the elimination entity to use when generating elimination journal entries:

- It uses the specified structure and elimination rules to identify the **Match** and **With** intercompany entities to compare.
- It uses the selected structure to find the common parent for these entities.
- It then uses the elimination entity defined for the common parent to post the elimination journal entries to.

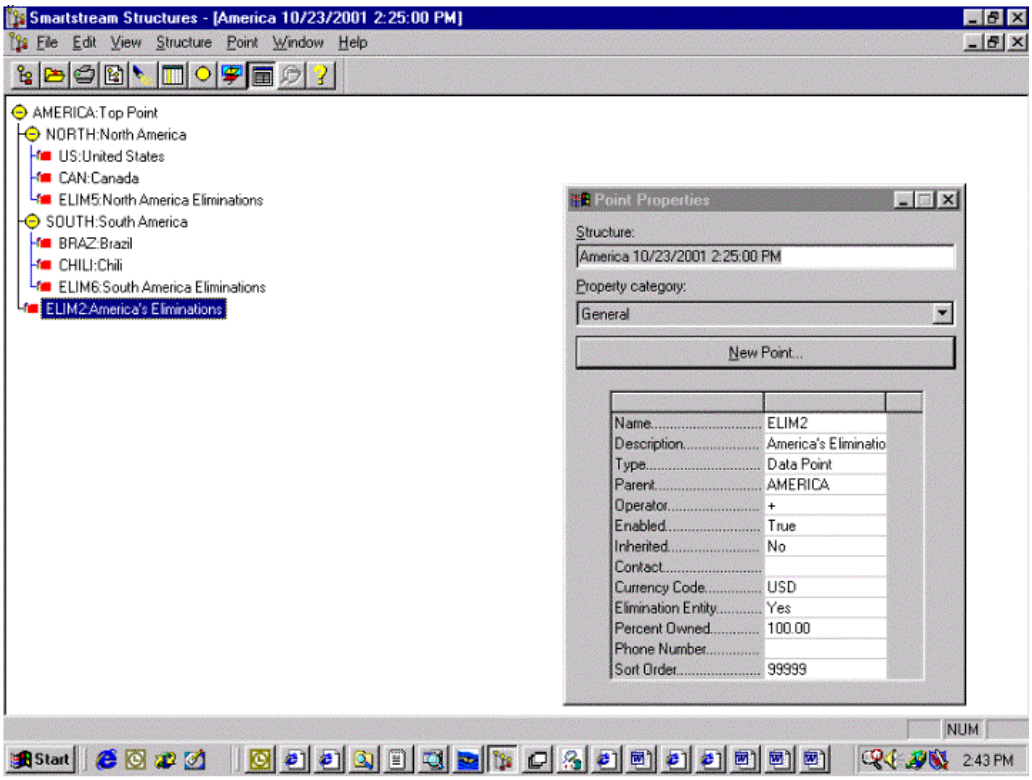
Example

The following diagram shows a parent-child roll-up structure with an elimination entity defined for each tier of the structure: Elim2, Elim5, and Elim6.



In this diagram, if the **United States** and **Brazil** have intercompany transactions to eliminate. The common parent for these two entities or data points is **America** (the top point), and the elimination entity that records the elimination journal entries is **Elim2**. If the elimination rule is changed so that the United States and Canada require elimination journal entries, then the common parent becomes **North America** and **Elim5** is the selected elimination entity.

The following figure shows how these same entities or data points are displayed on the SmartStream Structures window.



Running Eliminations

You can run eliminations online or use the Job Scheduler. For information on how to run eliminations, see Eliminating Intercompany Debt in the online Help.

Journal Posting Program

The Journal Posting program (fco0040) updates the Consolidation Account Balance table (csldtn_acct_bal) with journal adjustments. The program

- Validates the processing year, period, amount class type, and accounting key of the journal
- Adds accounts to the chart of accounts, if specified in the Consolidations policy
- Depending on the amount class type policy, determines if the file is in balance and rejects it if it is not
- Converts the amounts into the reporting currencies, if requested on the journal.

Stages of Performing a Post

To post one journal at a time, use the Consolidation Journal Entry window. To run a high-volume post, use the Consolidations Posting Request window, run the Journal Posting program or run the Journal Load program with the Automatic Post parameter set to Y. For detailed information about how to run posting, see Posting Journal Adjustments.

Posting Security

Because the Consolidation Posting Request window uses SmartStream activity security, users with access to this window can specify a posting request for **all** entities, regardless of data control security.

To post journals online, you must be given access through action security. To post journals using a scheduled process, you must be given access through activity security. Both online and scheduled posting require you to have data security access to the entities, amount classes, and years for the journals to be posted.

For more information, see Consolidations Security.

Consolidations Program

The Consolidations program (fco0010) uses a specified consolidation structure and consolidation point to summarize accounting keys that are exactly the same, calculate minority interest of net income, and create consolidated amounts. The program can consolidate in any of the reporting currencies specified on the Consolidation Policy window, but only one currency for each run. The Consolidations program stores the summarized amounts on the Consolidation Account Balance table (csldtn_acct_bal).

The Consolidations program does not perform any additional currency conversion or balancing. Currencies are converted only during the Balance Loading and Journal Posting processes.

Stages of Performing Consolidations

You can run consolidations online or use the Job Scheduler. For information about running consolidations, see Consolidating Balances.

Scheduling Consolidations Processes

For general information on scheduling jobs, see Using the Job Scheduler. To schedule Consolidations processes, enter the following parameters in the Program Name and Parameters fields on the Job Scheduler window:

Process	Program Name	Program Parameters
Chart of Accounts Load	Connect Insert Request (piqc0051)	Request ID
Eliminations	Eliminations (fco0020)	Request ID
Consolidations	Consolidations (fco0010)	Request ID
Journal Posting	Post (fco0040)	Request ID
Journal Loading	Journal Load (fcoc2000)	Request ID, automatic post indicator

Note: You cannot use the Job Scheduler to run the Balance Load program. For information about loading balances, see Balance Load Program.

For information about correcting problems that occur during scheduled processing, see Job Scheduler Troubleshooting.

Consolidations Security

Consolidations works with SmartStream security so that you can grant security privileges to users or security groups to perform Consolidations functions. Three levels of security determine user access to Consolidations.

Type of Security	Description
Activity	Determines the security privileges a user has to each Consolidations activity. For example, you can use activity security to determine if a user can view or update the consolidation chart of accounts.
Data	Determines the entities, amount classes, and years to which a user has access. For example, you can use data security to limit a user to posting journals for the current year only.
Action	Determines the actions a user can perform from a Consolidations window. This type of security is unque to Consolidations. For example, you can use action security to permit a user to post journals from the Consolidation Journal Entry window.

These security levels work together to determine the activities a user can perform. For example, activity security allows a user to enter journals on the Journal Entry window, but action security does not allow that same user to post the journals from that window. In this case, another user with the proper levels of security posts the journals.

Use the Consolidation Action Security window to assign action security privileges. For more information about security, see Maintaining Security Groups, Users, Activity Security, and Data Control.

The following tables show the activities and actions that you must define security for in Consolidations.

Scheduled Processes

Note: Action security does not apply to scheduled processes

Activity	Activity Security	Data Security
Chart of Accounts Load (piqc0051)	None	None
Balance Load (fco0030/fco0031)	Consolidation Chart of Accounts, if automatic account generation is used	None

Activity	Activity Security	Data Security
Journal Load (fcoc2000)	▪ Consolidation Journal Load ▪ Consolidation Posting, if automatic post is used ▪ Consolidation Chart of Accounts, if automatic account generation is used	▪ Consolidation Journal Entry ▪ Consolidation Posting, if automatic post is used
Journal Post (fco0040)	▪ Consolidation Posting ▪ Consolidation Chart of Accounts, if automatic account generation is used	▪ Consolidation Posting
Eliminations (fco0020)	None	Consolidation Posting
Consolidations (fco0010)	None	None
Consolidation Load File Creation Utility	Account Balance List (Ledger)	Account Balance List for Control Type (if Ledger Account Balance Control)

Online Activities

Note: You must set up activity security for all the online activities.

Activity	Data Security	Action Security
Consolidation Account Balance	Consolidation Account Balance	Not applicable
Consolidation Action Security	None	Not applicable
Consolidation Amount Class Types	None	Not applicable
Consolidation Chart of Accounts	None	Not applicable
Consolidation COA Load Request	None	Not applicable
Consolidation Elimination Request	▪ Consolidation Eliminations Control ▪ Consolidation Posting for Eliminate Action	Eliminate Action
Consolidation Elimination Rules	Consolidation Eliminations Control	Not applicable

Activity	Data Security	Action Security
Consolidation Error Listing	None	Not applicable
Consolidation Journal Entry	▪ Consolidation Journal Entry ▪ Consolidation Posting for Post and Undo Post actions	▪ Post Journal Action ▪ Undo Posted Journal Action
Consolidation Load Configuration	None	Not applicable
Consolidation Map	None	Not applicable
Consolidation Policy	None	Not applicable
Consolidation Posting Request	Consolidation Posting Request	Post Journal Action
Consolidation Reporting	None	Not applicable
Consolidation Request	None	Consolidate Action
Consolidation Trial Balance	None	Not applicable

Consolidations Reporting

Consolidations provides a number of reports you can use to verify balances and processing results. You can tailor these reports to meet the specific needs of your enterprise. You can run these reports on demand or schedule them. For general information about Consolidations reporting, see About Producing Reports in the *Consolidations* guide.

Note: Before running the reports delivered with SmartStream, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Scheduling Consolidations Reports

You schedule reports using the Job Scheduler and the report parameter set name defined in the Consolidations Reporting module. To schedule a report, enter the following parameters in the Program Name and Parameters fields on the Job Scheduler window:

[Path of Microsoft Access executable] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, Parameter Set Name, Server, User ID, Password]

Example

Assuming the Consolidation Reporting database is named **fco32.mdb** and the macro is named **fco_sched_parm**, you enter the following parameters to schedule the Trial Balance report using a report parameter set name of TB_Parm:

c:\msaccess\msaccess.exe c:\SSTRM*xx*\fco32.mdb /Xfco_sched_parm /CMD Trial Balance, TB_Parm, frmhp02s1, USER01, password

For more information about using Job Scheduler, see Using the Job Scheduler or Job Scheduler Help.

Report Status

Before running a report, check the DBS checkbox on the Job scheduler window. If the job runs successfully, you get a return code of 0. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

Maintaining Message Tables

Consolidations writes messages to the Consolidation Error Report table (csldtn_err_report) each time you run one of the following processes:

- Balance Load
- Journal Load
- Eliminations
- Journal Posting
- Consolidations

To delete messages from the Consolidation Error Report table, use the Consolidation Error Listing window.

8 Credit Management

Chapter Contents

8-1 Types of Scheduled Credit Management Processing
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Types of Scheduled Credit Management Processing

You can schedule several Credit Management jobs. Although these processes are different, you perform similar steps to initiate them. The following table describes Credit Management processes.

Process	Description
Activity statistics update	Updates credit activity.
Credit account load	Adds credit accounts.
Credit update	Updates credit accounts.
Days Past Terms	Calculates the Days Past Terms measurement.
Dunning	Prints dunning letters.

Stages of Scheduled Credit Management Processing

Follow this process to schedule credit account load and update processing and determine whether the job completed successfully:

Stage	Task	Action or Activity
1	Enter the scheduled job parameters for bulk copying if you are not writing the transactions to database management system (DBMS) tables directly.	Bulk Copy Parameters window
2	Bulk copy all transactions if you are not writing the transactions to DBMS tables directly.	Job Scheduler window
3	Load and validate all the scheduled and online transactions using the Credit Account Load Transaction process.	Job Scheduler window
4	Review messages that result from the Poll process.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway To Do message.
6	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	

Writing Transactions to DBMS Tables

You can write credit account transactions to the DBMS tables directly or using the Bulk Copy process. It is not necessary to use the Job Scheduler to write transactions to DBMS tables if you are writing transactions directly.

Bulk Copying Transactions

The Bulk Copy method of writing transactions to the DBMS tables is made up the following stages:

Stage	Task	Action or Activity
1	Enter the scheduled transaction parameters for bulk copying, including the path for the transaction files.	Bulk Copy Parameters window
2	Copy all transactions using the Bulk Copy Processing program.	Job Scheduler window.

Entering Scheduled Transaction Parameters

You can use the Bulk Copy process to copy transactions to a transaction table before processing them. If a transaction does not process successfully, Credit Management sends a mail message to notify you of any errors encountered during the Bulk Copy process.

To run scheduled processes, you must define a security profile that specifies a user identifier for a user who has database owner authority because the **before** stored procedure drops the index on the transaction table and the **after** stored procedure recreates the index on the transaction table.

Writing Transactions Directly

If you generate transactions from another product, such as an in-house product, add transactions directly to DBMS tables.

Procedure

Follow this procedure to update the Credit Account transaction table (cred_acct_trans) directly:

Step	Action
1	Run or perform the contents of the stored procedure by running DBScred.dbo.fsp._upd_crbt_before_bulk_copy.
2	Update the credit transaction table using your own method.
3	Run or perform the contents of the stored procedure by running DBScred.dbo.fsp._upd_crbt_after_bulk_copy.

Contents of Stored Procedures

You can perform the contents of either of the stored procedures rather than running them.

Job Scheduler Parameters for Credit Management

This section summarizes the information you enter for the Program Name and Parameters fields on the Job Scheduler window to submit a scheduled job for processing.

For more information about this window, see Understanding the Job Scheduler in the *SmartStream Administration* guide.

Values for Parameters

Enter the following values for the Program Name and Parameters fields when scheduling the following programs:

Program	Program Name	Program Parameters
Activity Statistics Update	**Windows:** fcrc0201.exe **UNIX:** fcrc0201	U = Update R = Recalculate If entering the Recalculate mode, the date format is yy/mm/dd or yyyy/mm/dd. The date determines the point at which you want recalculation to start.
Bulk Copy	**Windows:** dbsbulk.exe	User-defined bulk copy parameter key established on the Bulk Copy Parameters window.
Credit Account Load	**Windows:** fcrc0400.exe **UNIX:** fcrc0400	None
Credit Update	**Windows:** fcrc0105.exe **UNIX:** fcrc0105	None
Days Past Terms	**Windows:** fcrc0102.exe **UNIX:** fcrc0102	The beginning and ending dates of the period for which the DPT calculation is to be performed. Valid date formats are yyyy/mm/dd, yyyy-mm-dd, yyyy.mm.dd. Account Activity Statistics Policy ID required.

Report Parameters

Before running delivered reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

When you use scheduled reporting, include specific scheduling information. List program parameters on one line, separated by forward slashes (/). Be sure to enter a forward slash after the last parameter.

Use the following parameters to schedule dunning:

Program	Parameter Set
msaccess.exe	Access mdb Name /CMD /User ID/Password/ Language/Dialect/Report Option/

This table describes each parameter and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access database file. You must enter the complete directory path.	c:\sstrm*xx*\fcrdun.mdb
/cmd	Separator that tells Access that information is being passed to this mdb.	/cmd
/User ID	Identifier for the user who runs the report.	/user04
/Password	Password for the user who runs the report.	/logon
/Language	Code for the language Access uses to display error messages and other information.	**/EN** - Display messages in English. (**Note:** You must enter this code in all capital letters.)
/Dialect	Code for language dialect Access uses to display error messages and other information. **Note:** Currently, you must enter a blank space for this parameter.	**/**
/Report Option/	Name of the report option you previously set up in the mdb.	/DUN1/

Example

The complete set of parameters for the report used in the Example column is as follows:

c:\sstrm*xx*\fcrdun.mdb /cmd /user04/logon/EN/ /DUN1/

Note: Currently, English is the only valid value for the Language parameter, and a blank is the only valid value for the Language Dialect parameter. This means you must enter a forward slash (/) followed by a blank space for the Language Dialect parameter. See the examples in the preceding table.

Special Considerations Before scheduling these reports, make sure

- The appropriate Credit Management .mdb resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
- The location of the .mdb is specified in your parameters from the point of view of the Job Server.
- The report option ID is saved to the .mdb version that is visible to the Job Server.

Reviewing the Status of the Job

You can look in two places for information about the status of any job processed by Credit Management:

- Scheduler Log
- Mail

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps, as well as the job's final result (ended successfully, ended with errors, terminated before completion). You can view messages using the Scheduler Log activity.

Return Codes

If a scheduled report does not run because of an error, a Scheduler error log is created that lists the date and error messages for each report that did not run.

The following table lists the possible return codes:

Return Code	Meaning	Possible Cause	Suggested Action
-9	Could not reference program text file.	Text file not found.	Call the database administrator.
-6	A database error occurred.	Interruption or did not connect.	Call the database administrator.
-5	Could not connect to a database.	Interruption or did not connect.	Call the database administrator.
-4	An error occurred while attempting to get location information.	Interruption or did not connect.	Call the database administrator.
-3	An error occurred while attempting to get security information.	Interruption or did not connect.	Call the database administrator.
-2	An error occurred while attempting to get job step information.	Interruption or did not connect.	Call the database administrator.
-1	An error occurred while trying to get InterQ information.	Interruption or did not connect.	Call the database administrator.
1	A product error occurred.		See the program processing messages.

Return Code	Meaning	Possible Cause	Suggested Action
2	The Cancel command was issued.		See the program processing messages.

Program Processing Messages

Messages written as the result of running Credit Management programs are stored on a message table. After processing is complete, these message are automatically sent to the users identified in the Distribution ID field on the Job Scheduler window.

You can display these messages by selecting the Mail Folder InBox from your desktop.

Credit Management produces the following types of messages:

- Errors
- Number of items processed
- Number of items in error
- Status code

Credit Management Messages

Credit Management writes error messages resulting from running scheduled jobs to a table. You can review and correct the errors using the Credit Account Transaction Maintenance window.

Using Microsoft Access

The following Access reports and forms are delivered with Credit Management:

- Account activity statistics
- Dunning notices

Account Activity Statistics

Account Activity Statistics are Microsoft Access forms that display statistical information. The activity used to display statistics is updated in a scheduled process, then displayed in Microsoft Access. For more information, see the Displaying Account Information chapter in the Credit Management guide.

Dunning Notices

To produce dunning notices, you must run a query you generate using SmartStream Query or any supported query export tool to create a set of documents you want to run dunning for. You must have a user identifier with dbo authority. Then you must run the dunning notices using the dunning notice report options form. You may also create a two-step job using Query and the Job Scheduler to schedule the process to run. The first step in initiating dunning is to run a query through Query.

Because dunning notices are created from a standard predefined table, you must enter information for reports using the answers and settings in the next section. This creates a table from your receivables information in a form Credit Management requires to produce dunning notices.

Creating and Scheduling the Query

To perform a new query to select information for reports, you use the steps in the following table. SmartStream Query is structured into activities that are displayed on separate pages as you progress through the query.

Stage	Description
1. Query	Choose the Query Tool and select New from the Query main menu.
2. Add Tables	Select the table for your query. To generate dunning notices, select recv_doc. Go to the next window.
3. Query Type	Select Standard Query.
4. Specify Your Columns	Select all columns from the recv_doc table. If more than one table is being used, make sure only recv_doc columns are displayed.
5. Skip Structures	Select Next to skip Structure for statements and reports.
6. Specify Criteria	Use the list of available columns and comparison, logical, and mathematical operators to enter the criteria for selecting accounts for use in your dunning notices.

Stage	Description
7. Skip Sort Order	Select **Next** to skip the sort order selection. SmartStream does not recognize nonstandard sort orders for dunning notices.
8. Select No Prompt	Indicate that you want no prompt for selecting fields.
9. Save the Query	Enter a unique query name and use the name for the Table Name for Query Output. For receivable document dunning notices, the table name begins with recv_dunning_doc Save to DBSrrcv.
10. Run the Query	Select Run from the Specify Query Details window to run the query for your statements immediately. Select Save to save the Query results, then select Exit to return to the Query main menu. If you want to run the report at a later time use Query to create a report series.
11. Exit to Activity List	Close the Query menu to return to SmartStream.

When you close Query, your SmartStream Activity List is displayed. You can then enter your dunning input parameters.

After Stage 10, if you want to schedule the query, you should create a report series using the query you have created. After the query is scheduled, you can use the Job Scheduler window to change the job to include a step that initiates dunning.

What Happens During Processing?

This section contains information about the tables affected during processing.

Credit Account Load Process

To add credit accounts, credit account contacts, and credit account comments, the credit account load process performs edits on the data. These edits validate that

- All numeric fields contain numeric data.
- The transaction type is a valid transaction type.
- All date fields contain valid dates based on a yyyy/mm/dd format.
- All required and conditionally required fields contain valid data.

If a transaction fails an edit, Credit Management rejects it and leaves it on the transaction table so that you can correct it. An activity message is generated to the user specified on the security profile informing the user of the error.

You can correct the transaction by accessing the Activity List and choosing Credit Account Transaction Maintenance or by choosing a task from your To Do List. After you make the corrections, you can submit the transactions again by rescheduling the load and validate process.

Activity Statistics Process

The activity statistics process

- Reads information from Receivables tables and creates or updates daily activity records. Records are maintained based on the effective date and statistics policy for a particular account entity and currency.
- Can be run in two modes:
  - Update (parameter = U for scheduled job)
  - Recalculate (parameters are R and a date format of yyyy/mm/dd for a scheduled job)
- Reads activity added since the last activity statistics process was run in update mode.
- Reads all activity that effectively occurred on or after the input recalculate date in recalculate mode.
- Updates Credit Management enterprise policy with the date the process was last run.

Credit Update Process

The credit update process

- Adds receivable account totals for each credit account and updates credit account amounts.
- Converts the receivable account amounts to the credit account's conversion currency using the rate information for the credit account, if necessary.
- Updates the credit account with the date the credit update was last run.

Dunning Process

The dunning process

- Prints dunning letters using criteria you saved earlier.
- Runs an Access job on a client machine.

Days Past Terms

Days Past Terms (DPT) is a weighted measure of the difference between the number of days granted a customer to make payment and the number of days that actually transpire before the customer makes the payment.

For each credit account, the DPT process

- Sums the Days Used Accumulator, Days Granted Accumulator, and Total Receivable Allocated Amount columns of all Account Remittance Activity Statistics records where the
  - Account Activity Statistics policy ID in the acct_remit_statistics table is equal to the user-entered activity statistics policy ID or the policy selected from the Credit Enterprise Policy.
  - Record belongs to a receivable account associated with the credit account.
  - Record's account activity effective date is within the date range specified as a parameter on the job.
- Subtracts the Days Granted Accumulator total from the Days Used Accumulator total and divides the result by the Total Receivable Allocated Amount total.
- Writes the result in the Days Past Terms table, along with the credit account identifier, beginning date, and ending date.

A positive number indicates that the account pays late; a negative number indicates that the account pays early.

Although you may run this process as often as desired, it is intended to be run monthly. The Credit Account Snapshot window displays the last 13 DPT calculations.

Credit Management Transaction Layouts

Credit Management scheduled processing uses text files to hold the information for transactions. These text files usually come from a billing system or other software. You format them to meet the required Credit Management format. Use the transaction layout tables to determine the required format for the text files.

If you need to correct transactions after they are loaded into Credit Management, you can change them using the Credit Account Transaction Maintenance window.

Entering Field Information

Follow these guidelines when entering the field information:

- You define the delimiter that is used to separate the values for the fields.
- If a field is required, you must enter a value. If the field is blank, enter a comma immediately after the previous field's comma to hold the blank field's place.
- If a field is conditionally required, you may have to enter a value for the field depending on the rules that apply or the other fields entered for the Credit Management transaction.
- If a field is optional you can leave it blank. If you do leave it blank, make sure you enter your user-defined delimiter to hold its place.
- To reset a credit account transaction to spaces or zeros, enter an asterisk (*) in the corresponding field on the transaction change. For example, an amount field resets to zeros and a name field to spaces.

Field Type Formats

Each field type has a required format. The following table describes these formats.

Field Type	Format Requirements
Alphanumeric	Can contain alphabetic letters, numbers, or a combination of both. Use a single blank to represent an empty field.
Date	Enter a separator between month, day, and year. You do not need to enter leading zeros for month or day. For example, you can enter 3 or 03 for March. The display format is determined by choices made on the Windows Control Panel. Display choices include the order in which to show month, day, and year, and the kind of separator used. You can also choose whether to display the century indicator. All dates must be entered in yyyy/mm/dd format for Credit Management transactions.

Field Type	Format Requirements
Numeric	Enter an amount with or without the decimal separator. If you do not enter a decimal separator, Credit Management treats the amount as a whole number. If you enter a number with decimal positions, the number of positions you enter must be less than or equal to the number of decimal positions specified for the associated transaction currency. Enter all amounts in a positive format. If the document is a credit memo, Credit Management converts each amount to a negative value.

Address, Phone, and Fax Information Formatting

The scheduled process moves address, phone, and fax data to the corresponding fields in the master tables according to the formats specified in policy. No validation of the phone format information you enter is performed for scheduled credit account transactions. Be sure to format this information in the transactions according to the policy specified.

For detailed descriptions of the address formats used with Credit Management, see Address and Phone Formats in the *Shared Components Technical Reference*.

Credit Account General Information Transaction

Format the address information on your credit account General Information transactions according to the address format you specify in the transaction. For example, you should make sure information for address lines 1-5 corresponds to the address format you specified.

Credit Account Contact Transaction

Phone and fax information entered for the Credit Account Contact Transaction must correspond to the format specified in your enterprise policy. Make sure that the layout of phone and fax numbers you enter fits the phone and fax format required by policy.

Types of Transactions

Scheduled credit account processing includes the following types of transactions:

Transaction	Description
Credit Account General Information (CAAI)	Adds basic credit account information such as customer, remit-to, and credit analyst.
Credit Account Contact (CACT)	Enters information for contacting a representative for a credit account.
Credit Account Comment (CACM)	Adds comments describing credit account transactions.
Credit Account Credit Limit (CACL)	For credit accounts, adds credit limit information such as the tolerance amount and notification percentage.
Credit Account Currency Information (CACU)	Adds currency conversion information and exchange rate information for credit accounts that use multiple currencies

Transaction	Description
Credit Account Dunning Information (CADP)	Enters information about dunning policy and most recent dunning activity for credit accounts
Credit Account User Fields (CAUF)	Defines fields for any credit management information you want to maintain. Use these fields on user-defined reports and for sorting.

Transactions and Maintenance

Scheduled credit account transactions add entries to tables if they do not exist.

The update process is a field-by-field move of all fields in the transaction to the target table. Transaction fields left blank result in blank fields in the target table.

Credit Account General Information Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	Must be empty the first time you access credit accounts.
	Transaction Code	4 CAAI	Required A code that identifies the scheduled transaction.
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2	Name	35 alphanumeric	Required A unique user-defined name or label for a credit account. The name might include other descriptive information such as a department or division name.

Field	Name	Length	Description
3	Status Code	3 alphanumeric	Required The current status for a credit account. Valid values include ▪ INA for inactive ▪ ACT for active ▪ PND for pending ▪ REJ for credit rejected.
4	DUNS Number	9 alphanumeric	The Dun & Bradstreet Universal Number System (DUNS) number assigned to the company associated with the credit account.
5	Address Format	6 alphanumeric	Required The specified form or style used to enter a credit account address. The format you choose determines how address information is handled for credit accounts including address, street or PO box number, city name, state or province code, postal code, and country code. Make sure that the address information is placed in the address fields that correspond to the correct address format. For example, information for Address Lines 1-5 should correspond to the Address Format you specified.
6 - 10	Address Lines 1 - 5	35 alphanumeric	The first through fifth lines of the mailing address for the credit account.
11 - 13	Street or PO Box 1 - 3	35 alphanumeric	The first through third lines used to enter the street or post office box number for the credit account.
14	City	35 alphanumeric	The name of the city for the credit account mailing address.
15	Province - State Code	9 alphanumeric	The unique identifier for the province or state for the credit account mailing address.
16	Postal Code	9 alphanumeric	The unique identifier for the delivering post office for the credit account. This code is used in the Canada, France, Generic, and United Kingdom formats.

Field	Name	Length	Description
17	Country	2 alphanumeric	Conditional The unique identifier for the country for the credit account mailing address. This field is required when you enter a Province/State code.
18	Credit Analyst ID	30 alphanumeric	A unique, user-defined identifier for the person primarily responsible for handling the credit account.
19	Credit Analyst Name	35 alphanumeric	The name of the credit analyst who is primarily responsible for handling the credit account.
20	Secondary Credit Analyst ID	30 alphanumeric	A unique, user-defined identifier for the person who has secondary responsibility for handling the credit account.
21	Secondary Credit Analyst Name	35 alphanumeric	The name of the credit analyst who has secondary responsibility for handling the credit account.
22	Remit-To	17 alphanumeric	The unique, user-defined identifier for the remit-to information for this credit account. Remit-to information can include the address to send remittances to and the name, phone, and fax number of the remit-to location. You must define this identifier in the enterprise policy Remit-to table.
23	Default Country Code	2 alphanumeric	An identifier for the name of the country for a credit account mailing address. This identifier defaults from the country code. If the country code is not entered, it defaults from the enterprise policy.
24	Customer ID	17 alphanumeric	The unique, user-defined identifier for the customer to which the credit account is associated. This identifier must be defined in the enterprise policy Customer table.
25	Language	2 alphanumeric	The identifier for the default language for the credit account. The International Standards Organization (ISO) maintains the list of valid language identifiers. This code is used with dunning notices and other reports.

Field	Name	Length	Description
26	Language Dialect	2 alphanumeric	The identifier for the regional variety of language distinguished by features of vocabulary, grammar, and pronunciation. This field is not used at this time.
27	Negative Number Display	2 alphanumeric	Indicates how you want to display negative amounts on reports and correspondence for the credit account. Valid values are: ▪ LN for leading negative sign ▪ PN for parenthesis ▪ TN for trailing negative sign.
28	Phone Format Code	6 alphanumeric	The identifier for the form or style for a telephone number. The phone format is set in enterprise policy.
29	Date Format Option	1 alphanumeric	The identifier for the form or style for a date. The date format is set in enterprise policy.
30	Thousand Separator	1 alphanumeric	The character used to indicate thousands in numeric amounts. The separator cannot be a number. The thousand separator defaults from enterprise policy.
31	Decimal Separator	1 alphanumeric	The character used to indicate the decimal in numeric amounts. The separator cannot be a number. The decimal separator defaults from enterprise policy.
32	Phone Format Delimiter	1 alphanumeric	The character used to separate parts of a telephone number.
33	Sold Since Date	10 alphanumeric	The date of the first sale to this credit account.
34	This Year Sales Amount	22 money	The total amount of net sales to the credit account this calendar year.
35	Last Year Sales Amount	22 money	The total amount of net sales to the credit account last calendar year.
36	Fiscal Year End Month	2 alphanumeric	The month during which the credit account's fiscal year ends.
37	Fiscal Year End Day of Month	2 alphanumeric	The day on which the credit account's fiscal year ends.

Field	Name	Length	Description
38	Last Financial Statement Received	10 alphanumeric	The date on which a financial statement from this credit account was last received.

Credit Account Contact Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	This field must be empty the first time you access credit accounts.
	Transaction Code	4 CACT	Required A code that identifies the scheduled transaction.
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2	Contact Name	45 alphanumeric	Required The name of an individual to contact when you need to ask questions or resolve issues about the credit account. You can use spaces, abbreviations, and special characters when you enter a name in this field.
3	Contact Correspondence Indicator	1 alphanumeric	Required Indicates whether you want the credit account contact person to receive correspondence for an account. You must enter Y for yes or N for no.
4	Contact Title	30 alphanumeric	The business title of the contact person for your credit accounts. You can use abbreviations, spaces, and special characters when you enter a title in this field.

Field	Name	Length	Description
5	Phone International Code	4 alphanumeric	A code for the format of the phone numbers. Make sure the phone numbers you enter in transactions match the phone format specified. For example, if your policy calls for a three-digit area city code, make sure you enter three digits for this field in the Phone Area City Code field.
6	Phone Country Code	4 alphanumeric	Conditional A code identifying the country for the phone system. This field is required if you enter the Phone International Code.
7	Phone Area City Code	4 alphanumeric	A code identifying a geographic area (for example, phone system service area) within the phone system.
8	Phone Number	12 alphanumeric	Conditional The number for a telephone within the area that the phone system designates as local. This field is required if you enter the Phone International Code.
9	Phone Extension	5 alphanumeric	The part of the telephone number that accesses an individual phone connected to the main phone line.
10	Fax International Code	4 alphanumeric	A code for the format of the phone number for the fax. Make sure that the layout of fax numbers you enter fits the fax number format specified.
11	Fax Country Code	4 alphanumeric	Conditional A code used by the identifying the country for the phone system. This field is required if you enter the Phone International Code.
12	Fax Area City Code	4 alphanumeric	A code identifying a geographic area (for example, phone system service area) within the phone system used by the fax.
13	Fax Number	12 alphanumeric	Conditional The number used by the fax within the telephone area that the phone system designates as local. This field is required if you enter the Phone International Code.

Field	Name	Length	Description
14	Contact Email Address	255 alphanumeric	Optional The email address of the contact person for the credit account.

Credit Account Comment Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	This field must be empty the first time you access credit accounts.
	Transaction Code	4 CACM	Required A code that identifies the scheduled transaction.
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2	Comment Sequence Number	6 numeric	Require A number assigned to comment lines. A receivable can have multiple comments. The sequence number is used to determine the order of entry associated with a particular comment.
3	Comment Type	1 alphanumeric	An identifier assigned to a comment. The default is A. Examples: ▪ I for internal ▪ E for external ▪ A for all ▪ D for display only.
4	Comment	255 alphanumeric	Required Free-form comment about the credit account.

Credit Account Credit Limit Information Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	This field must be empty the first time you access credit accounts.
	Transaction Code	4 CACL	Required A code that identifies the scheduled transaction.
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2	Amount	22 alphanumeric	The amount of credit (in conversion currency) that is extended to a credit account.
3	Review By Date	10 alphanumeric	Required The date by which the limit for this credit account should be reappraised.
4	Credit Calculation Method	6 alphanumeric	Conditional The method Credit Management uses to calculate the available credit for an account. This field is required if the credit limit amount is greater than zero. Valid value: Receivable Total Due (R). The available credit equals the credit limit minus all outstanding receivable balances
5	Credit Hold Indicator	1 alphanumeric	Required Indicates whether a credit account is on credit hold. Valid values are Y for yes and N for no. If you enter N, the credit limit amount must be greater than zero.

Field	Name	Length	Description
6	Maximum Tolerance Amount	25 amount	The amount (in conversion currency) by which a credit account can exceed its credit limit and still obtain automatic credit approval. This amount must be positive. You can enter both a tolerance amount and a tolerance percentage. If you enter both values, Credit Management uses the lesser value to determine the acceptable credit limit.
7	Tolerance Percent	0-100 numeric	The percentage by which a credit account can exceed its credit limit and still obtain automatic order and credit approval. You can enter both a tolerance percentage and a tolerance amount. If you enter both values, Credit Management uses the lesser value to determine the acceptable credit limit. You must enter a value between zero and 100.
8	Notification Amount	25 amount	Required The amount of credit that an account can use before Credit Management alerts the credit analyst to review the status of the credit account. Use notification to alert credit analysts when an account is approaching or is over its credit limit. You can enter either a positive or negative value for the notification amount. If you want notification after the account exceeds the credit limit, enter a positive value. If you want notification before the account reaches the credit limit, enter a negative value.
9	Notification Percent	-100-100, numeric	The percentage of the credit limit that an account can use before Credit Management alerts the credit analyst to review the status of the account. You must enter a value between -100 and 100.

Field	Name	Length	Description
10	Last Update Amount	25 amount	The amount of the last credit limit established for the account.
11	Last Update Date	10 date	Required The date that the last credit limit was established for the account.
12	Last Update User	30 alphanumeric	The user identifier for the person that last updated the credit limit for the account.
13	This Year High Credit Amount	22 money	The largest amount a credit account owed during the current calendar year.
14	This Year High Credit Date	10 date	The date in the current calendar year on which the largest amount a credit account owed.
15	Last Year High Credit Amount	22 money	The largest amount a credit account owed during the previous calendar year.
16	Last Year High Credit Date	10 alphanumeric	The date in the previous calendar year on which the largest amount a credit account owed.
17	Open Order Balance Amount	25 amount	Not in use.
18	Committed Order Balance Amount	25 amount	Not in use.
19	Pending Order Balance Amount	25 amount	Not in use.

Credit Account Currency Information Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	This field must be empty the first time you access credit accounts.
	Transaction Code	4 CACU	Required A code that identifies the scheduled transaction.

Field	Name	Length	Description
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2	Currency Option	1 alphanumeric	Required A unique code identifying whether the credit account uses single or multiple currencies. Valid values are S for single and M for multiple. If the Enterprise Policy Currency view sets the currency to Single, you can set this option to S (Single) only. If the Enterprise Policy Currency view sets the currency to Multiple, you can set this option to S (Single) or M (Multiple).
3	Rate Entity	5 alphanumeric	Conditional The code identifying the source of monetary conversion rates for the credit account. This field is required if the credit account Currency Option is set to M (Multiple). This field is optional if the Enterprise Policy Currency view is set to Multiple, and the credit account Currency Option is set to S (Single). If both the Enterprise Policy Currency view and the credit account Currency Option are set to Single, leave this field blank.

Field	Name	Length	Description
4	Rate Type	1 alphanumeric	Conditional The identifier for the currency exchange rate that a rate entity uses. This field is required if the credit account Currency Option is set to M (Multiple). This field is optional if the Enterprise Policy Currency view is set to Multiple, and the credit account Currency Option is set to S (Single). If both the Enterprise Policy Currency view and the credit account Currency Option are set to Single, leave this field blank.
5	Transaction Currency	3 alphanumeric	Conditional An identifier for the default currency that the credit account uses for business transactions. This field is required ▪ if the credit account Currency Option is set to M (Multiple), or ▪ if the Enterprise Policy Currency view is set to Multiple and the credit account Currency Option is set to S (Single). If both the Enterprise Policy Currency view and the credit account Currency Option are set to Single, leave this field blank.

Credit Account Dunning Information Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	This field must be empty the first time you access credit accounts.
	Transaction Code	4 CADP	Required A code that identifies the scheduled transaction.

Field	Name	Length	Description
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2	Dunning Policy Identifier	10 alphanumeric	Required A unique code identifying the dunning policy for a credit account. The code must match an entry in the Dunning Policy table.
3	Dunning Next Letter Identifier	22 alphanumeric	The identifier for the dunning letter that Credit Management will include in the next dunning run. Credit Management updates this field each time you run dunning for the credit account. The identifier must match an entry in the Dunning Policy/Letter table.
4	Dunning Group Code	3 alphanumeric	A user-defined identifier for a group of dunning notices. You can group your dunning notices according to any organizational criteria you need, such as frequency of sending dunning notices or geographical location.
5	Dunning Exempt Indicator	1 alphanumeric	Required Indicates whether the credit account should receive dunning notices. Valid values are Y for yes and N for no.
6	Dunning Last Letter Number	22 alphanumeric	The number assigned to the last dunning letter that was sent for the selected dunning policy for the credit account.
7	Dunning Last Letter Sent	22 alphanumeric	The identifier of the dunning letter that was most recently sent for the credit account. The identifier must match an entry in the Dunning Policy/Letter table.
8	Dunning Last Letter Date	10 date	The date that the most recent dunning letter was sent for a credit account.

Credit Account User Fields Transaction

Field	Name	Length	Description
	Time Stamp	8 numeric	This field must be empty the first time you access credit accounts.
	Transaction Code	4 CAUF	Required A code that identifies the scheduled transaction.
1	Credit Account	17 alphanumeric	Required A unique user-defined identifier for an account to track credit worthiness and grant credit approval. Automatic credit approval is based on outstanding receivables balances and the amount of available credit for an account.
2 - 6	User Fields 1 - 5	15 alphanumeric	The user-defined information for a credit account.
7 - 11	User Dates 1 - 5	10 date	The user-defined date information for a credit account.
12 - 16	User Amounts 1 - 5	14 amount	The user-defined amount information for a credit account.

Archiving Credit Data

Using the archive and purge process you can remove outdated information from the Credit Management data tables and move it to either a history table or to a file that you can store on a disk or tape.

Using the Archive/Purge Request window, you can

Archive…	When you want to…
Data to a history table	Reduce the size of the active data tables and provide access to data on the history table occasionally.
Data to a disk	Retain the data in a file, but currently have no need to access it.
History table to a disk	Reduce the size of the history table and retain the data in a file, but currently have no need to access it.

Before You Begin

Before beginning the archive process, run the following programs and Microsoft Access database to be sure that all of the data tables contain the most up-to-date information and that the journal entries are posted to the Ledger.

Filename	Description
farc0210.exe	Aging
fcrc0105.exe	Credit Update
fcrc0201.exe	Activity Statistics Update
fcrc0102.exe	Days Past Terms
fglc0900.exe	General Ledger Posting
farbal32.mdb	Receivables/Remittances Balancing

Archive Conditions

This table lists the types of data you can archive, and the conditions that each archive type must meet before you can begin.

Archive Type	Conditions
Credit Accounts	▪ Associated journal entries are posted to Ledger. ▪ All associated Receivable Accounts have been archived/purged. See Archiving Receivables Data for more information.

Archive Process

To archive Credit Management data, follow this process:

Step	Description	Activity
1	Determine the data that you want to archive and verify that the data meets the archive conditions.	
2	Select an archive activity, enter a unique identifier in the Archive/Purge Request field, and specify the selection criteria. Note: Your activity security determines the archive activities displayed in the drop-down menu.	Archive/Purge Request window
3	Use the Archive/Purge Request identifier as the program parameter to schedule the archive process. To preview the data you want to archive before removing it, schedule the archive process with the parameter of P. This Preview option is available only when you archive to the History table and not to disk. Run the archive/purge process.	Job Scheduler
4	If you used the Preview option, schedule and run the reports.	Recv Archive & Purge Reports
5	Review the reports and, if necessary, revise the data.	Recv Archive & Purge Reports
6	Rerun the archive/purge process in standard mode to archive the data.	Job Scheduler

Selection Criteria

For each archive type, you can specify selection criteria on the Archive/Purge Request window. By entering criteria for specific fields, you specify the data that you want to archive. When you archive data to disk, the disk files created appear in the following format:

```
xxxxnnnn.bcp
```

where
xxxx is the table ID
nnnn is the sequence number

The following table lists the selection criteria fields for the Credit Account archive type and the data tables with the table identifier that are archived.

Archive Type	Selection Criteria	Table Name	Table ID
Credit Accounts	Credit Account Identifier	cr_acct	crac
	Last Credit Run Date	cr_acct_comnt	crcc
		cr_acct_contact	crct
		cr_acct_days_past_terms	crdp
		acct_recv_statistics	cavs
		acct_remit_statistics	cars
		dso_calc_credit_acct	crdc

9 Funds Control

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Scheduling Funds Control Processes

For general information on scheduling jobs, see Using the Job Scheduler in the *SmartStream Administration* guide.

Concurrent Processing

Certain restrictions apply to the Funds Control scheduled processes. Certain processes cannot run while another process is already running. This is controlled by the fund_server_process table. When a scheduled process is started, a row is inserted into this table containing information about the process such as when it was started and which parameters the process is being run for. When the process successfully completes, this row is removed from the fund_server_process table. At the beginning of the process, this table is checked to verify that another process is not already running. If another one is running, the process issues the appropriate message and stops processing. Because scheduled processes can vary slightly in this processing, a separate section under each scheduled process describes it in more detail.

When a scheduled process ends before completion, sometimes the process does not remove the row from the fund_server_process table. Until that row is removed, other processes cannot run. The normal sequence of steps when this occurs is to rerun the scheduled process and have the row removed by the process completing successfully. If, under extenuating circumstances, the scheduled process cannot be rerun, or it is not desirable to rerun it, you can delete the entry from the fund_server_process table manually. Do this only if you are sure that the job should not be restarted (for example, a backup of your database has occurred).

Verifying Your Job Results

To verify the status of your job, the following areas can be reviewed:

- Job Scheduler return codes and messages
- Mail processing
- Funds Control messages

Job Scheduler Return Codes and Messages

The Poll program generates informational messages about the progress of a job and its steps, as well as the job's final result (ended successfully, ended with errors, ended before completion). You can view messages using the Scheduler Log activity.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window:

Return Code	Meaning	Possible Cause	Suggested Action
0	Program completed successfully.		Use the Funds Control Reporting activity to view all informational messages issued.
1	Program completed successfully with the application issuing informational messages.		Use the Funds Control Reporting activity to view all warning messages issued.
2	Program completed successfully with the application issuing warning messages.		
3	Program completed successfully with the application issuing error messages.	The data did not pass all the edits that enable the job to be fully processed.	Consult the Job Results section for the specific scheduled process to determine where to obtain additional information, correct the data, and rerun.
4	A database problem has occurred.	Server is unavailable. Stored procedure does not exist. Server logs may be full. Database is out of space.	Check mail or the local log file for specific information about the problem. Correct the problem in the DBMS environment and rerun.
5	Fatal processing error occurred and program cannot continue processing.	Client cannot open required connections to the server. Login failed the security check.	Check mail or the local log file for specific information about the problem. Correct the problem and rerun.

Return Code	Meaning	Possible Cause	Suggested Action
6	Program encountered invalid parameter errors.	The input parameters did not pass all the edits that enable the job to be fully processed.	Consult the Job Parameters section for the specific scheduled process to determine the parameters and valid values, correct the parameters, and rerun.

Program Processing Messages

Messages written as a result of Funds Control scheduled processing are sent to a message table (psc_messages). These messages have information about the return codes viewed on the Scheduler Log window. After processing is complete, these messages are automatically sent to the recipients identified on the Mail dialog box of the Job Scheduler window for the specific job. The messages are automatically deleted from the psc_messages table.

For information about correcting problems that occur during scheduled processing, see Job Scheduler Troubleshooting in the *SmartStream Administration* guide.

Mail Processing

Any database errors encountered during scheduled processing are written as mail messages. Also, all Funds Control scheduled processes write the results of the processing to mail. The mail is sent to the recipients identified on the Mail dialog box of the Job Scheduler window for the specific job. For more information on the mail messages that a scheduled process produces, consult the Job Results section for the specific scheduled process.

Funds Control Messages

Funds Control messages are generated from data that fails the program's edits. For example, during a rollup explosion, a number of rows are not processed because a valid Ledger Entity was not found. All Funds Control scheduled processes can also be run in debug mode. When a program runs in debug mode, it not only writes out error messages, but it also writes out informational messages about all important data manipulations during the run of the program. This allows you to track exactly what the program has done and makes it easier to determine the possible cause of a problem.

All Funds Control error messages are written to the fund_error_messages table in database DBSfund. Use the Funds Control Reporting activity, to view all messages from the message file.

Running in Debug Mode

The following table describes how to create a level (.lvl) file that automatically generates a log file (.dbg) that can be used to track program processing and detect potential problems. All scheduled processes, with the exception of the Budget Upload process, create a debug file when running the process in debug mode. The Budget Upload process does not use the following naming scheme. For information on the debug file produced by this process, consult the Running in Debug Mode section of the upload process.

Task	Action
1	Create a text file that contains the following line of text: **0xFFFFFFFF**
2	Save the file in the working directory of the poll program (pscc0020) with the following file name, **<Program name>.lvl** where the program name is the name of the scheduled process you are running. For example, ffcc0300.lvl would be the file name for the Funds Control Rollup Explosion level file.
3	Run the scheduled process with a debug parameter of “Y”.
4	When the program has finished processing, the following file is generated in the working directory of the poll program: **<Program name>.dbg** This file contains information about calls to stored procedures and mail messages that can be used to detect where a problem occurred.

The prior procedures produce a single output file containing all debug and output messages. If you set up two lines of text in Task 1, instead of one, multiple output files are produced. The standard **.dbg file is still produced**. Multiple files with extensions .d01, .d02, .d03, and so on, are also produced. These output files contain different types of output messages. For example, all database calls and errors are written to the .d03 output file and all mail messages are written to the .d09 output file.

Rollup Structures Explosion

The Rollup Structures Explosion is the process by which the rollup structures ranges and SmartStream structures stored on the Funds Control Definition table and Funds Control Structures Extract table are exploded to create the distribution maintenance tables.

Job Parameters

To schedule the Rollup Structures Explosion process, enter the following values in the Program Name and Program Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Required or Optional	Comments
Rollup Structures Explosion	ffcc0300	Processing Mode	R	C (Create) - Delete all rows on the distribution table for the entered ledger entity/budget year if rollup structure ID is * and rebuild distribution tables. if a rollup structure ID is given delete only rows for the entered ledger entity/budget year/rollup structure ID. UN (Update/New) - Explode only new rollup structures that are not on the distribution tables. UA (Update/All) - Explode all rows again, adding only the ones that are not already on the distribution tables.
		Ledger Entity	R	The ledger entity for which to explode the rollup structure.
		Budget Year	R	The budget year for which to explode the rollup structure.
		Rollup Structure ID	R	The rollup structure to process. The rollup structure entered here includes all levels for the structure. You can choose one or enter * for all.
		Restart Indicator	O	Y – Restart the job. Use this option when the previous attempt to run the job stopped before completion. Only the user who started the job can restart it. N – Run job in normal mode (default)
		Debug Indicator	O	Y – Write additional debugging information to the fund_error_messages table. N – Run job in normal mode (default)

Database Tables

The Rollup Structures Explosion process uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Rollup Structures	fund_rollup_ structures	R	Fund accounts for which rollup ranges or SmartStream Structures data points are set up.
Funds Control Rollup Structures Extract	fund_rollup_struct_ extract	R	Ranges or SmartStream Structures data points that roll up to the fund account defined in the fund_rollup_structures table.
Funds Control Accounts	fund_acct	R	Fund account policy settings.
Structure Point	SRG_POINT	R	SmartStream Structures data points definitions.
Structure Summary Point Navigation	SRG_SUMMARY_ NAVIGATION	R	SmartStream Structures Summary Points view.
Structure Data Point Navigation	SRG_DATA_ NAVIGATION	R	SmartStream Structures Data Points view.
Ledger Chart of Accounts	ldr_acct	R	Ledger account policy settings.
Funds Control Distribution Summary	fund_distribution_ summary	R,I,D	Fund accounts that accounts (either detail Ledger accounts or other fund accounts) roll up to.
Funds Control Distribution Detail	fund_distribution_ detail	R,I,D	Accounts (either detail Ledger accounts or lower level fund accounts) rolling up to higher level fund accounts.
Funds Control Error Messages	fund_error_ messages	I	All of the errors encountered during the various runs of the scheduled processes in Funds Control.
Funds Control Balance Work	fund_balance_work	I,D	Information during the fund balance update step of the rollup explosion process. This is the work table. It should be empty after the process has ended.
Funds Control Balance	fund_balance	R,U	Periodic and annual balances by ledger entity/budget year/rollup structure for all the Funds Control amount classes: Release, Allotment, Commitment, Encumbrance, Expense, Available and Payment .
Funds Control Budget	fund_budget	I	Funds Control budget and cash amounts that can be made available for spending.
Funds Control Distribution View	fund_distribution_ view	R	The view that joins information from the fund_distribution_summary and fund_distribution_detail tables.

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Server Process	fund_server_ process	R,I,D	The server process IDs of active processes running for a set ID. It is used by the scheduled process to ensure that a set ID is not being processed by another scheduled program.
Funds Control Distribution Work	fund_distribution_ work	R,I,D	Information during the rollup explosion process. This is the work table. It should be empty after the process has ended.

Concurrent Processing

The Rollup Structures Explosion process cannot be run under the following circumstances:

- If another explosion process is already running for the same ledger entity/budget year/rollup structure and the user ID (from the security profile on the Job Scheduler window) is different from the user ID currently running the explosion process.
- If another explosion process is already running for the same ledger entity/budget year/rollup structure, the user ID (from the security profile on the Job Scheduler window) is the same as the user ID currently running the explosion process and the restart indicator is N.

Job Results

The Explosion process generates beginning and ending mail messages for each structure that is processed. Within each structure, each level/rollup sequence that is processed has mail messages for the total distribution work table rows read, the total distribution detail rows written, the total distribution summary rows written, and the total rows in error After completing the structure, the process generates mail messages for the total balance rows processed, the total balance rows skipped, and the total balance rows updated.

All errors resulting from the Rollup Explosion process are logged in the Funds Control Error Messages table. Use the standard Funds Control Reporting activity to print a list of all errors encountered during the Rollup Explosion process. After correcting all errors, resubmit the Rollup Explosion process to reprocess the rows that contained the errors.

Funds Control Budget Upload

The Funds Control Budget Upload scheduled process is used to copy budget data, based on the import request, into the Funds Control budget table by processing the parameters entered.

Prerequisite for Importing from External Application

The budget import from an external application copies budgets from the fund_budget_upload table in DBSfund database. You have to insert the data from the external application into the database table before running the Funds Control Budget Upload. The following steps are involved in loading the external data into the fund_budget_upload table:

Stage	Process
1	Export your external data to a text file that uses a pound sign (#), tab, or comma as the delimiter, and put it on a network directory accessible to your job server.
2	Define parameters for the Bulk Copy process using the Bulk Copy Parameters window: ▪ Family Name : fund ▪ Destination Table : fund_budget_upload ▪ Before Stored Procedure : [None] ▪ After Stored Procedure : [None] ▪ Read Transactions From : network path and text file name ▪ Action To Take : Move After Processing ▪ Move To directory : network path you want to move the file to after successful import ▪ Column Delimiter : tab, comma, or # ▪ Number of Columns : Enter the total number of columns in the file you are uploading plus 1 (for the Change Time Stamp column that SmartStream adds). This number depends on your user-defined accounting key. ▪ SmartStream User ID : valid SmartStream user ID **Note:** The SmartStream user ID must have INSERT permission for the fund_budget_upload table in the DBSfund database.

Stage	Process
3	Run the Bulk Copy process to copy the information from the text file into the table specified in your Bulk Copy parameters. Set up a Job Scheduler request as follows: ▪ Program name: dbsbulk.exe ▪ Parameters: your Bulk Copy parameters ID Run the job through the Job Scheduler and verify the completion mail.

Input Transaction Layout

Table Name: fund_budget_upload

Column Name	Data Type	Notes/Values
ldr_entity_id	char(5) key	The ledger entity for the budget upload
dbs_division	char(6) Key	The first element of the summary accounting key.
dbs_account	char(5) Key	The second element of the summary accounting key.
dbs_department	char(6) Key	The third element of the summary accounting key.
dbs_product	char(4) Key	The fourth element of the summary accounting key.
dbs_project	char(5) Key	The fifth element of the summary accounting key.
processing_yr	smallint key	The budget year for the budget upload.
curr_code	char(3)	The currency for the budget upload
acct_descp_1	char(35)	The primary description of the account
acct_descp_2	char(35)	The secondary description of the account
ldr_amt_0	money	Ledger amount 0 for the budget upload
ldr_amt_1	money	Ledger amount 1 for the budget upload
ldr_amt_2	money	Ledger amount 2 for the budget upload
ldr_amt_3	money	Ledger amount 3 for the budget upload
ldr_amt_4	money	Ledger amount 4 for the budget upload
ldr_amt_5	money	Ledger amount 5 for the budget upload

Column Name	Data Type	Notes/Values
ldr_amt_6	money	Ledger amount 6 for the budget upload
ldr_amt_7	money	Ledger amount 7 for the budget upload
ldr_amt_8	money	Ledger amount 8 for the budget upload
ldr_amt_9	money	Ledger amount 9 for the budget upload
ldr_amt_10	money	Ledger amount 10 for the budget upload
ldr_amt_11	money	Ledger amount 11 for the budget upload
ldr_amt_12	money	Ledger amount 12 for the budget upload
ldr_amt_13	money	Ledger amount 13 for the budget upload
ldr_amt_14	money	Ledger amount 14 for the budget upload
chgstamp	smallint	Change stamp indicator

Job Parameters

To schedule the Funds Control Budget Upload process, enter the following values in the Program Name and Program Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Required or Optional	Comments
Funds Control Budget Upload	ffcc0520	Request ID	R	This ID must be in the fund_budget_request_table.
		Debug Indicator	O	Indicator that determines whether debug information is written to an error file during the execution of the program. Debug information can help you determine why the budget upload does not produce the expected results. Values: Y – Write debug information. N – Do not write debug information (default) You can run the Funds Control Scheduled Process Errors report to view the debug information written to the fund_error_messages table.

Database Tables

The Funds Control Budget Upload process uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Budget	fund_budget	R	Funds Control budget and cash amounts that can be made available for spending.
Funds Control Balance	fund_balance	R, I, U, D	Periodic and annual balances by ledger entity/budget year/rollup structure for all the Funds Control amount classes: Release, Allotment, Commitment, Encumbrance, Expense, Available and Payment.
Funds Control Budget Request	fund_budget_ request	R	Parameters that control the import of budgets from SmartStream Budget, SmartStream Ledger or an external application.
Funds Control Account	fund_acct	R	Fund account policy settings.
Ledger Account Balance	ldr_acct_bal	R	Account balances for the ledger entity, accounting year and currency type.
Budget Account Balance	bud_acct_bal	R	Account balances for the budget entity and budget year.
Funds Control Budget Upload	fund_budget_ upload	R, D	Budget amounts from an external application that have to be imported into SmartStream Funds Control.
Funds Control Policy	fund_policy	R	Funds Control policy settings for a ledger entity and budget year.
Budget Entity Policy	bud_entity_policy	R	Budget entity policy settings.
Funds Control Distribution Detail	fund_distribution_ detail	R	Accounts (either detail Ledger accounts or lower level fund accounts) rolling up to higher level fund accounts.
Funds Control Distribution Summary	fund_distribution_ summary	R	Fund accounts that accounts (either detail Ledger accounts or other fund accounts) rollup to.
Ledger Entity Policy	ldr_entity_policy	R	Ledger entity policy settings.

Besides these database tables, the Budget Upload process reads a local error messages file (ffcmsgen.txt) to retrieve basic error messages.

Job Results

The Budget Upload process generates a beginning and ending mail message with the start and stop time of processing. It also generates mail messages for certain types of errors (the budget request is inactive or locked). If any application errors are detected, it generates a generic message instructing the user to run the Fund Error report because errors have been found.

All errors resulting from the Budget Upload process are logged in the Funds Control Error Messages table. Use the standard Funds Control Reporting activity to print a list of all errors encountered during the Budget Upload process. After correcting all errors, resubmit the Budget Upload process to reprocess the rows that contained the errors.

Running in Debug Mode

If the Budget Upload process is run with a debug parameter of “Y” or if any application errors are detected, a file is generated containing all error messages. The output file name is

fcbu*Upload Request ID***.err**

For example, assuming that the upload request ID is rqst25, the error file name is fcburqst25.err.

Funds Control Budget Release

The Budget Release scheduled process is a two-step process. The first step is to use the Budget Release Request window to enter a budget release request. Then, using the same window, perform the Budget Preparation action. The Budget Preparation action builds and runs the dynamic SQL entered on the request to write rows to the fund_budget_request_work table. The rows on the work table contain the budget accounts to release based on the SQL criteria entered.

If necessary, the second step in the process is to load the fund_budget_release_override table with data specifying how to release budgets for specific budget accounts. Before releasing funds for a specific budget account, a check is made to see if data for that budget account is in the fund_budget_release_override table for the release request being processed. If data is found, the release amount for that budget account is computed using the data in the table. If no data is found, the information entered in the budget release request is used to compute the release amount for that budget account. For more information, see Overriding Release Amounts for Specific Budget Accounts later in this section.

The last step in the process is to run the Budget Release scheduled process. This process takes the budget release request ID as an input parameter. The scheduled process then reads the fund_budget_request_work table for the release request and performs the Budget Release process for each row in the table.

Job Parameters

To schedule the Funds Control Budget Release process, enter the following values in the Program Name and Program Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Required Optional	Comments
Budget Release	ffcc0530	Request ID	R	This ID must be in the fund_budget_release_request table.
		Restart Indicator	O	Y – Restart the job. Use this option when the previous attempt to run the job ended before completion. Only the user who started the job can restart it. N – Run job in normal mode (default)
		Debug Indicator	O	Y – Write additional debugging information to the fund_error_messages table. N – Run job in normal mode (default)

Overriding Release Amounts for Specific Budget Accounts

To override the amount to release for specific budget accounts, you can load data into the fund_budget_release_override table in the DBSfund database. The data in this table applies to both the release and unrelease process.

A description of the table and its data elements follows. You have to insert the data into the table before running the Funds Control Budget Release program. Complete the following steps to load the data into the fund_budget_release_override table:

Stage	Process
1	Create a text file that uses a pound sign (#), tab, or comma as the delimiter containing the data you want to load into the fund_budget_release_override table, and put it on a network directory accessible to your job server.
2	Define parameters for the Bulk Copy process using the Bulk Copy Parameters window: ▪ Family Name : fund ▪ Destination Table : fund_budget_release_override ▪ Before Stored Procedure : [None] ▪ After Stored Procedure : [None] ▪ Read Transactions From : network path and text file name ▪ Action To Take : Move After Processing ▪ Move To directory : network path you want to move the file to after successful import ▪ Column Delimiter : tab, comma, or # ▪ Number of Columns : number of accounting key elements + 3 ▪ SmartStream User ID : valid SmartStream user ID **Note:** The SmartStream user ID must have INSERT permission to the fund_budget_release_override table in the DBSfund database.
3	Run the Bulk Copy process to copy the information from the text file into the table specified in your Bulk Copy parameters. Set up a Job Scheduler request as follows: ▪ Program name: dbsbulk.exe ▪ Parameters: your Bulk Copy parameters ID Run the job through the Job Scheduler and verify the completion mail.

Input Transaction Layout

Table Name: fund_budget_release_override

Column Name	Data Type	Notes/Values
release_rqst_id	char (10) key	The budget release request ID the account information is associated with. A budget release request is entered when running the budget release process. This release request is used to read the fund_budget_release_override table data to determine what data is related to the budget release process being run.
dbs_division	char (6) Key	The first element of the summary accounting key.
dbs_account	char (5) Key	The second element of the summary accounting key.
dbs_department	char (6) Key	The third element of the summary accounting key.
dbs_product	char (4) Key	The fourth element of the summary accounting key.
dbs_project	char (5) Key	The fifth element of the summary accounting key.
release_type	char (1)	Determines whether to release a percentage or amount for the budget account. Valid Values: P – Percent. The release value is a percentage of the budget amount, for each period entered in the FROM and TO period fields in the budget release request, to release to Allotment. A – Amount. The release value is an amount of the budget amount, for each period entered in the FROM and TO period fields in the budget release request, to release to Allotment. If an invalid value is entered, Percentage is assumed.
release_value	money	The release amount or percentage, based on the release type, to release. If an invalid percentage value is entered, a message is displayed on the error report and nothing is released for the budget account being processed.

Database Tables

The Funds Control Scheduled Budget Release program uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Error Messages	fund_error_ messages	I	All of the errors encountered during the various runs of the scheduled programs in Funds Control.
Funds Control Budget	fund_budget	R	Funds Control budget and cash amounts that can be made available for spending.
Funds Control Balance	fund_balance	I, U	Periodic and annual balances by ledger entity/budget year/Rollup Structure for all the Funds Control amount classes: Release, Allotment, Commitment, Encumbrance, Expense, Available and Payment.
Funds Control Budget Release Request	fund_budget_ release_request	R, U	Parameters that control the release of budgets.
Funds Control Budget Release Request Work	fund_budget_rel_ rqst_work	R, D	Prepared SQL criteria that control which budget accounts are selected for the budget release.
Funds control Accounts	fund_acct	R	Fund account policy settings.
Funds Control Server Process	fund_server_ process	R, I, U, D	Stores the server process IDs of active processes running for a set ID. It is used by the scheduled programs to ensure that a set ID is not being processed by another scheduled program.
Funds Control Budget Release Override	fund_budget_ release_override	R	Stores release amounts for specific budget accounts being processed.

Concurrent Processing

The Budget Release process cannot be run under the following circumstances:

- If the Explosion process is currently being run for the same ledger entity/processing year/rollup structure.
- If another budget release process is already running for the same ledger entity/processing year/rollup structure and the user ID (from the security profile on the Job Scheduler window) is different from the user ID currently running the budget release process.
- If another budget release process is already running for the same ledger entity/processing year/rollup structure, the user ID (from the security profile on the Job Scheduler window) is the same as the user ID currently running the budget release process and the restart indicator is N.

Job Results

The Budget Release process generates a beginning and ending mail message with the start and stop time of processing. It also generates mail messages with the number of budget rows prepared to be processed, the number of budget rows updated, and the number of budget rows bypassed. If any application errors are detected, it generates a generic message instructing the user to run the Fund Error report because errors have been found.

All errors resulting from the Budget Release process are logged in the Funds Control Error Messages table. Use the standard Funds Control Reporting activity to print a list of all errors encountered during the Scheduled Budget Release process. After correcting all errors, resubmit the Budget Release process to reprocess the rows that contained the errors.

Funds Control Journal Creation

The Funds Control Journal Creation process prepares Funds Control journals for posting to SmartStream Ledger.

If a Funds Control journal fails to post to Ledger and the journal remains in the Unposted Journals table, the journal can be corrected in Ledger. However, saving these journals does not trigger available funds checking.

The Funds Control Journal Creation program is the first step in posting Funds Control activity to Ledger. It takes the Funds Control transactions as input and generates and prepares Funds Control journals in the funds_control_jrnl_ctrl and funds_control_jrnl_line tables.

Job Parameters

To schedule the Funds Control Journal Creation process, enter the following values in the Program Name and Program Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Required Optional	Comments
Journal Creation	ffcc0900	Ledger Entity ID	R	The ledger entity ID for which funds transactions are selected and journals are generated during this run of the program.
		Effective Date	O	The effective date to use when selecting the transactions to process. All transactions with an effective date on or before the effective date parameter are processed. It must be entered in yyyymmdd format. This is an optional parameter. If it is not entered, 29990101 is used as the default.
		Restart Indicator	O	Y – Restart the job. Use this option when the previous attempt to run the job ended before completion. Only the user who started the job can restart it. N – Run job in normal mode (default)
		Debug Indicator	O	Y – Write additional debugging information to the fund_error_messages table. N – Run job in normal mode (default)

Database Tables

The Funds Control Journal Creation process uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Journal Create	funds_control_jrnl_ctrl	R, I, U	Funds Control journal headers.
Funds Control Journal Line	funds_control_jrnl_line	R, I, U	Funds Control journal lines.
Funds Control Transactions	fund_transactions	R, U	Active Funds Control transactions as a result of an update to a Funds Control balance amount class type.
Funds Control Transactions Audit	fund_transactions_audit	R, U	All Funds Control history transactions as a result of an update to a Funds Control balance amount class type.
Ledger Entity Policy	ldr_entity_policy	R	Ledger entity policy settings.
Funds Control Policy	fund_policy	R	Funds Control policy settings for a ledger entity and budget year.
Funds Control Accounts	fund_acct	R	Fund account policy settings.
Funds Control Server Process	fund_server_process	R, I, D	Stores the server process IDs of active processes running for a set ID. It is used by the scheduled programs to ensure that a set ID is not being processed by another scheduled program.
Funds Control Posting Rule	funds_control_posting_rule	R, I, U, D, R	Rules and accounting distribution types for posting of Funds Control activity to Ledger.
Funds Control Posting Rule Accounting Distributions	posting_rule_acctg_distn	R, I, U, D	Accounts in the Ledger chart of accounts that the Funds Control activity amounts are posted to.
Ledger Chart of Accounts	ldr_acct	R	Ledger account policy settings.
Enterprise Funds Control Policy	entp_funds_control_policy	R	Funds Control Enterprise policy settings.
Funds Control Exceptions	fund_exceptions	R,U	All types of Funds Control exceptions that occurred for a fund account during available funds checking. **Exception Types** Fund Policy Structure Currency Unit of measure

Concurrent Processing

The Journal Creation process cannot be run under the following circumstances:

- The Journal Creation process is currently being run for the same ledger entity and the user ID (from the security profile on the Job Scheduler window) is different from the user ID currently running the journal creation process.
- The Journal Creation process is currently being run for the same ledger entity, the user ID (from the security profile on the Job Scheduler window) is the same as the user ID currently running the journal creation process, and the restart indicator is N.

Job Results

The Journal Creation process generates mail messages with the total fund transaction audit table rows read, the total fund transaction table rows read, the total fund transaction audit rows processed, the total fund transaction rows processed, the total journal controls written, and the total journal lines written. If any application errors are detected, it generates a generic message instructing the user to run the Fund Error report because errors have been found.

All errors resulting from the Journal Creation process are logged in the Funds Control Error Messages table. Use the standard Funds Control Reporting activity to print a list of all errors encountered during the Journal Creation process. After correcting all errors, resubmit the Journal Creation process to reprocess the rows which contained the errors.

Fund Transaction Upload

The Fund Transaction Upload process loads large numbers of fund transactions. These transactions can be generated from SmartStream and external applications. Funds Control does not differentiate between a fund transaction created by a SmartStream application and one loaded by the Fund Transaction Upload process.

The Fund Transaction Upload process can add new fund transactions into Funds Control and make adjustments to existing Funds Control transactions. If a fund transaction already is in Funds Control, the uploaded fund transaction is treated as an adjusting entry. If the fund transaction being uploaded is not already in Funds Control, it is processed as a new fund transaction.

The Fund Transaction Upload process is a two-step process:

1. Upload the fund transactions into the fund_transaction_upload table. You can use any method to populate this table including BCP.

2. Run the Fund Transaction Upload program ffcc1100 to process the fund transactions.

Fund transactions on the fund_transaction_upload table grouped for processing by the fund transaction document ID. Therefore, all fund transactions for a given document are processed together.

Input Transaction Layout

Table Name: fund_transaction_upload

Column Name	Data Type	Notes/Values
upload_rqst_id	char (10) **KEY**	This is a user defined value that is stored for each group of fund transactions when the fund transactions are loaded into the fund_transaction_upload table. The ID groups fund transactions so that they can be uploaded as a group. **Required**

Column Name	Data Type	Notes/Values
fund_transaction_id	char (100)	This is the concatenated key (each is element separated by a tab character) representing the unique key of the Funds Control transaction. Funds Control uses this key to determine if prior activity for a funds transaction has occurred and to identify a unique funds transaction. This value should not change for a funds control transaction if multiple calls to Funds Control are made. The first part of this key **must** be the fund_trans_doc_id associated with this funds transaction. If it is not, Funds Control cannot find the funds transactions associated with a specific document. **Required**
ldr_entity_id	char (5)	The ledger entity associated with the fund transaction. **Required**
rollup_structure_id	char(10)	The rollup structure updated by this funds transaction: This is currently used only by Funds Control Adjustments. Leave theis field balank for all other applications. (**Default) – Blank, not used**
fund_transaction_doc_id	char (100) **Alternate Key**	This is the concatenated key (each is element separated by a tab character) of the document being processed. Funds Control uses this key to call the application so that it can retrieve its fund transaction information after parsing the key. If the application does not have a document, this should be set to the same value as the funds transaction ID. Funds Control also uses this key to group fund transactions for a specific document. **Required**
udak_surr_key	numeric	The surrogate key of the fund_acct table associated with the accounting key on the data row. This is currently used only by Funds Control Adjustments. Enter 0 in this field for all other applications. (**Default) – 0, not used**
dbs_division	char(6)	Accounting key element 1 (**Default) – Blank, not used**
dbs_account	char(5)	Accounting key element 2 (**Default) – Blank, not used**

Column Name	Data Type	Notes/Values
dbs_department	char(6)	Accounting key element 3 (**Default) – Blank, not used**
dbs_product	char(4)	Accounting key element 4 (**Default) – Blank, not used**
dbs_project	char(5)	Accounting key element 5 (**Default) – Blank, not used**
ldr_key_6	char(1)	Accounting key element 6 (**Default) – Blank, not used**
ldr_key_7	char(1)	Accounting key element 7 (**Default) – Blank, not used**
ldr_key_8	char(1)	Accounting key element 8 (**Default) – Blank, not used**
ldr_key_9	char(1)	Accounting key element 9 (**Default) – Blank, not used**
ldr_key_10	char(1)	Accounting key element 10 (**Default) – Blank, not used**
ldr_key_11	char(1)	Accounting key element 11 (**Default) – Blank, not used**
ldr_key_12	char(1)	Accounting key element 12 (**Default) – Blank, not used**
trans_amt	money	The amount in the transaction currency to funds check. This amount should not include any tax amounts (applies to SmartStream Purchasing only) **Required**
trans_curr_code	char(3)	The currency of the transaction amount. **Required**
qty	float	The quantity associated with the transaction amount. If quantity is not used, enter 0 in this field. **Required**
unit_of_measure	char(4)	The unit of measure associated with the quantity. If no quantity is entered, set this value to blank. (**Default) – Blank, not used**
disc_unit_price	money	The unit price used to compute the trans_amt. If no unit price is entered, set this value to the trans_amt. **Required**

Column Name	Data Type	Notes/Values
dr_cr_code	char(1)	Whether the fund transaction is a debit or credit. Valid Values: D – Debit C – Credit **Required**
eff_date	datetime	The effective date of the fund transaction. This date is used to determine the budget year and period that the funds transaction affects. **Required**
assoc_document_key	char (100)	This is the fund_transaction_id of the fund transaction associated with this fund transaction. Funds Control uses this to determine if the associated document had funds activity that needs to be updated. For example, invoices may be associated with purchase order line schedules. If the fund transaction has no associated document, set this to blank. (**Default) – Blank, not used**
assoc_doc_type	char(2)	This is the type of the document associated with the fund transaction. For example, invoices may be associated with purchase order line schedules. If the assoc_doc_key is left blank, leave this field blank also. If the fund transaction has no associated document, set this to blank. Valid Associated Document Types: PO – Purchase Order RQ – Requisition RR – Replenishment Requisition PY – Payment PR – Payment Request UJ – Unposted Journal RV – Receivable Document DI –Direct Issue IR – Issue To Requester RT – Return to Stockroom FC - Funds Control Budget Amendment AJ - Funds Control Adjustment (Default) – Blank, not used

Column Name	Data Type	Notes/Values
non_reclaimable_tax_amt	money	The non-reclaimable tax amount associated with the fund transaction. **Purchase orders are the only document type that currently uses this field. Enter 0 in this field for all other document types.** If the fund transaction has is no non-reclaimable tax amount, set this value to zero. (**Default) – 0, not used**
total_tax_amt	money	The total tax amount (including reclaimable and non-reclaimable taxes) associated with the fund transaction. **Purchase orders are the only document type that currently uses this field. Enter 0 in this field for all other document types.** If the fund transaction has no tax amount, set this value to zero. (**Default) – 0, not used**
document_type	char(2)	Identifies the application document type associated with the Funds Control transactions to be processed. Valid Values: PO – Purchase Order RQ – Requisition RR – Replenishment Requisition PY – Payment PR – Payment Request UJ – Unposted Journal RV – Receivable Document DI – Direct Issue IR – Issue To Requester RT – Return to Stockroom AJ - Funds Control Adjustment Required
trans_to_prim_exchange_rate	float	The currency exchange rate for the transaction to primary currency conversion. If no currency conversion rate is defined, this value should be set to 0. (Default) – 0, not used
trans_to_euro_exchange_rate	float	The currency exchange rate for the transaction to euro currency conversion. If no currency conversion rate is defined, this value should be set to 0. (Default) – 0, not used
prim_to_euro_exchange_rate	float	The currency exchange rate for the primary to euro currency conversion. If no currency conversion rate is defined, this value should be set to 0. (Default) – 0, not used

Column Name	Data Type	Notes/Values
prim_to_secdy_exchange_rate	float	The currency exchange rate for the primary to secondary currency conversion. If no currency conversion rate is defined, this value should be set to 0. (Default) – 0, not used
euro_to_prim_exchange_rate	float	The currency exchange rate for the euro to primary currency conversion. If no currency conversion rate is defined, this value should be set to 0. (Default) – 0, not used
euro_to_secdy_exchange_rate	float	The currency exchange rate for the euro to secondary currency conversion. If no currency conversion rate is defined, this value should be set to 0. (Default) – 0, not used
disc_amt	money	The amount of discount for early payment. Used only by payment documents. All other applications should set this to zero. (Default) – 0, not used
curr_gain_or_loss_amt	money	The currency gain/loss amount for a fund transaction. **This value is currently not used and should be set to zero** (Default) – 0, not used**.**
fund_amt_class	char(2)	The amount class updated as a result of this transaction. CM - Commitment EX – Expense EN – Encumbrance PM – Payment BU – Budget This is currently used only by Funds Control Adjustments. Leave this field blank for all other applications. (Default) – Blank, not used

Column Name	Data Type	Notes/Values
fund_account_type	char(1)	The type of account the accounting elements represent: D – The accounting key represents a detail ledger account S - The accounting key represents a Funds Control summary account The Summary option (S) is currently used only by Funds Control Adjustments. Enter D in this field for all other applications. **Required**
source_doc_ref	char(100)	This is the source_doc_ref_key value. It is the same source_doc_ref_key value used by Ledger. In most cases, this will be the same as the fund_transaction_doc_id field. Funds Control uses this information to drill back to the application document from which the Funds Control transaction originated. **Required**
assoc_doc_close_ind	char(1)	Notifies Funds Control to reverse all the remaining funds for the associated document. This is used, for example, by Supplies Management to close a requisition short. Valid Values: Y – Fully reverse the remaining funds for the associated document. N- Do not fully reverse the remaining funds of the associated document. Reverse the amount based on the funds transaction information. (**Default) – N**
fund_appl_workflow_id	char(30)	Used to send workflow messages to application personnel assigned to documents ready for reprocessing after funds exceptions have been resolved. ID of user or workgroup to receive the workflow messages. (**Default) – Blank, not used**

Column Name	Data Type	Notes/Values
fund_appl_workflow_id_type	char(1)	Used to send workflow messages to application personnel assigned to documents ready for reprocessing after funds exceptions have been resolved. U – User G – Workgroup (**Default) – Blank, not used**
assoc_doc_bypass_ind	char(1)	Determines whether the funds transaction, although associated with a document, processes the associated document. Y – Bypass associated document processing N – Process associated document if one exists (Default) – N, not used
uomm_site_id	char(4)	Used for unit of measure conversion between a fund transaction and its associated document. This value is associated with the fund transaction. For example, a purchase order associated with a requisition would pass this value as the item for the purchase order fund transaction. Currently only two document types use the UOMM fields. They are Purchase Order (PO) and Invoice (PR). Leave this field blank for all other document types. (Default) – blank, not used
uomm_item_id	char(26)	Used for unit of measure conversion between a fund transaction and its associated document. This value is associated with the fund transaction. For example, a purchase order associated with a requisition would pass this value as the site for the purchase order fund transaction. Currently only two document types that use the UOMM fields. They are Purchase Order (PO) and Invoice (PR). Leave this field blank for all other document types. (Default) – blank, not used

Column Name	Data Type	Notes/Values
uomm_entity_cd	char(1)	Used for unit of measure conversion between a fund transaction and its associated document. This value is associated with the fund transaction. This value is associated with the fund transaction. For example, a purchase order associated with a requisition would pass this value as the entity for the purchase order fund transaction. Currently only two document types use the UOMM fields. They are Purchase Order (PO) and Invoice (PR). Leave this field blank for all other document types. Valid Values: V - Vendor P - Item W - Workstation N - None (Default) – blank, not used
uomm_entity_value	char(10)	Used for unit of measure conversion between a fund transaction and its associated document. This value is associated with the fund transaction. This is the value associated with the uomm_entity_cd entered. For example, if an uomm_entity_cd of Vendor (V) is entered, this value is a vendor_id. Currently only two document types that use the UOMM fields. They are Purchase Order (PO) and Invoice (PR). Leave this field blank for all other document types. (Default) – blank, not used
uomm_discrete_ind	char(1)	Used for unit of measure conversion between a fund transaction and its associated document. This value is associated with the fund transaction. This value indicates whether the UOM is a discrete UOM. Currently only two document types that use the UOMM fields. They are Purchase Order (PO) and Invoice (PR). Leave this field blank for all other document types. Valid Values: N – UOM is a discrete UOM and quantities will be rounded. Y – UOM is a not discrete UOM and quantities will not be rounded. (Default) – Y

Column Name	Data Type	Notes/Values
reason_code	char(4)	The reason code associated with the funds transaction. Currently this field is used only by fund transactions originating within Funds Control. For all other applications, this field is left blank. (Default) – blank, not used
site_id	char(5)	The site for the entity associated with the document (if any). **This is not the ledger entity (see the note for the entity_id column that follows).** Funds Control uses the site and entity combination to determine if the entity has been excluded from funds processing. If an entity is entered for the document in the entity_id column, site is required for the following document types: **PO** – Purchase Order (**Purchase Entity)** **RQ –** Requisition (**Requisition Entity)** **RR –** Replenishment Requisition (**Requisition Entity)** Leave this field blank for all other document types. **(Default) – Blank, not used**
entity_id	char(5)	The entity (if any) associated with the document. Funds Control uses this entity to determine if the entity has been excluded from funds processing. The following entities and their document types may be excluded in the 1.0 release of Funds Control: **Payable Entity** – Payment or payment request **Purchase Entity** – Purchase order **Requisition Entity** – Requisition, replenishment requisition **Receivable Entity** – Remittance or receivable document Leave this field blank for all other document types. **Note: This is not the ledger entity. This is the document entity.** **(Default) – Blank, not used**

Column Name	Data Type	Notes/Values
upload_status_ind	char(1)	blank – Not processed X – Exception occurred. C – Transaction processed successfully E – Transaction has an invalid value that prevented funds checking. This value should be set to blank when the transaction is loaded to the table. It is then updated by the Fund Transaction Upload program. (Default) – blank, not processed
fund_exception_code	char(3)	Code representing the exception that occurred. This field is not uploaded by the client. It is set by the Fund transaction Upload program
unique_id	numeric identity **KEY**	This IDENTITY column is used to identify and access rows in the funds_checking_work table. This value should be set to zero when the transaction is loaded into the table using the Bulk Copy scheduled process.

Note: The order in which fund transactions are loaded into the fund_transaction_upload table determines the order in which the upload program reads and processes them. **This is very important** because it affects the way Funds Control processes the transactions. For example, if purchase order transactions are loaded before requisition transactions and the purchase orders are associated with the requisitions, the requisitions are not uncommitted because at the time the purchase orders are processed, the requisitions are not yet added to Funds Control.

Job Parameters

To schedule Funds Control processes, enter the following values in the Program Name and Program Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Required Optional	Comments
Fund Transaction Upload	Ffcc1100	Upload Request ID	R	This is a user defined value that is stored for each group of fund transactions when the fund transactions are loaded into the fund_transaction_upload table. The ID groups fund transactions so that they can be uploaded as a group. If the user enters an asterisk (*) for this value, all fund transactions on the fund_transaction_upload table are processed.
		Override Fund Exceptions Indicator	O	Indicates whether Funds Checking automatically overrides exceptions. Y - Override any funds exceptions generated. Funds are updated. Fund exceptions are written with an overridden status to the fund_exceptions table. A return code of 5 is returned to the application. All other exceptions (account, currency, UOM, policy) are written to the fund_exceptions table as exceptions (based on Funds Control policy). N - Write all exceptions to the fund_exceptions table (based on Funds Control policy). Funds are not updated. A return code of 1 (Exception) is returned to the application. I - Do not write exceptions to the fund_exceptions table. Funds are not updated. A return code of 1 (Exception) is returned to the application. **Default – N**
		Restart Indicator	O	Y – Restart the job. Use this option when the previous attempt to run the job ended before completion. Only the user who started the job can restart it. N – Run job in normal mode (default)
		Debug Indicator	O	Y – Write additional debugging information to the fund_error_messages table. N – Run job in normal mode (default)

Database Tables

The Fund Transaction Upload process uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Error Messages	fund_error_ messages	I	All of the errors encountered during the various runs of the scheduled programs in Funds Control.
Funds Control Transaction Upload	fund_transaction_ upload	R, U	Transactions from external applications to upload and funds check in Funds Control.
Funds Control Server Process	fund_server_ process	R, I, U, D	The server process IDs of active processes running for a set ID. It is used by the scheduled programs to ensure that a set ID is not being processed by another scheduled program.
Ledger Entity Security	ldr_scrty_entity	R	Ledger entity security settings.

Concurrent Processing

The Fund Transaction Upload process cannot be run under the following circumstances:

- The Fund Transaction Upload process is currently being run for the same upload request ID and the user ID (from the security profile on the Job Scheduler window) is different from the user ID currently running the upload process.
- The Fund Transaction Upload process is currently being run for the same upload request ID, the user ID (from the security profile on the Job Scheduler window) is the same as the user ID currently running the upload process, and the restart indicator is N.
- The Fund Transaction Upload process is currently being run and the user ID (from the security profile on the Job Scheduler window) is the same as the user ID currently running the upload process, the restart indicator is Y, the upload request IDs are different, and one of them is an asterisk (*).

Job Results

The Fund Transaction Upload process generates mail messages with the total fund transaction upload rows read, the total fund transaction upload rows processed, the total fund transaction upload rows in error, and total fund transaction upload rows in exception.

All errors resulting from the Fund Transaction Upload process are logged in the Funds Control Error Messages table. Use the standard Funds Control Reporting activity to print a list of all errors encountered during the Fund Transaction Upload

process. After correcting all errors, resubmit the Fund Transaction Upload process to reprocess the rows which contained the errors.

Funds Checking Module

The Funds Checking module is the central module of the funds checking process. It is produced as a Windows .dll and UNIX .lib so a single module can be called from both online and scheduled programs.

The funds checking process is driven by application transactions that contain information about the accounting distribution and financial information relating to a specific ledger transaction. Information about the journals in combination with other information, (such as quantity ordered, unit price, currency, and so on), is used to update Funds Control budgets.

Database Tables

The Funds Checking module uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Roll-up Structures	fund_rollup_ structures	R	Fund accounts for which rollup ranges or SmartStream Structures data points are set up.
Funds Control Policy	fund_policy	R	Funds Control policy settings for a ledger entity and budget year.
Funds Control Accounts	fund_acct	R	Fund account policy settings.
Ledger Chart of Accounts	ldr_acct	R	Ledger account policy settings.
Funds Control Distribution Detail	fund_distribution_ detail	R, I	Accounts (either detail Ledger accounts or lower level fund accounts) rolling up to higher level fund accounts.
Funds Control Checking Work	fund_checking_ work	R, I, U, D	Temporary work transactions used during the funds checking process for updating fund balances and generating permanent fund transactions.
Funds Control Transactions	fund_transactions	R, I, U, D	Active Funds Control transactions as a result of an update to a Funds Control balance amount class type.
Funds Control Transactions Audit	fund_transactions_ audit	I	Audit transactions for all budgetary amendments and transfers.

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Exceptions	fund_exceptions	R, I, U, D	All types of Funds Control exceptions associated with a fund account during available funds checking. **Exception Types:** Fund Policy Structure Currency Unit of Measure

Workflow Messages

Event Identifier	Category	Next Step	Type of Exception
ffcexpprr	ffc00700	Informational To Do	Fund
ffcexprqr	ffc00701	Informational To Do	Fund
ffcexppor	ffc00702	Informational To Do	Fund
ffcexprvr	ffc00703	Informational To Do	Fund
ffcexpujr	ffc00704	Informational To Do	Fund
ffcexprrr	ffc00705	Informational To Do	Fund
ffcpofex	ffcc1001	Funds Control Workbench	Fund
ffcrrfex	ffcc1002	Funds Control Workbench	Fund
ffcrqfex	ffcc1003	Funds Control Workbench	Fund
ffcpyfex	ffcc1004	Informational To Do	Fund
ffcprfex	ffcc1005	Funds Control Workbench	Fund
ffcrcfex	ffcrcfex	Funds Control Workbench	Fund
ffcujfex	ffcc1006	Funds Control Workbench	Fund
ffcrmfex	ffcc1007	Informational To Do	Fund
ffcrvfex	ffcc1008	Funds Control Workbench	Fund
ffcdifex	ffcc1009	Informational To Do	Fund
ffcirfex	ffcc1010	Informational To Do	Fund
ffcrtfex	ffcc1011	Informational To Do	Fund
ffcajfex	ffcc1012	Informational To Do	Fund
ffcpoaex	ffcc1013	Funds Control Exception Handling window	Account

Event Identifier	Category	Next Step	Type of Exception
ffcrraex	ffcc1014	Funds Control Exception Handling window	Account
ffcrqaex	ffcc1015	Funds Control Exception Handling window	Account
ffcpyaex	ffcc1016	Informational To Do	Account
ffcpraex	ffcc1017	Funds Control Exception Handling window	Account
ffcrcaex	ffcrcaex	Funds Control Exception Handling window	Account
ffcujaex	ffcc1018	Funds Control Exception Handling window	Account
ffcrmaex	ffcc1019	Funds Control Exception Handling window	Account
ffcrvaex	ffcc1020	Funds Control Exception Handling window	Account
ffcdiaex	ffcc1021	Informational To Do	Account
ffciraex	ffcc1022	Informational To Do	Account
ffcrtaex	ffcc1023	Informational To Do	Account
ffcajaex	ffcc1024	Informational To Do	Account
ffcpocex	ffcc1025	Funds Control Workbench	Currency
ffcrrcex	ffcc1026	Funds Control Workbench	Currency
ffcrqcex	ffcc1027	Funds Control Workbench	Currency
ffcpycex	ffcc1028	Informational To Do	Currency
ffcprcex	ffcc1029	Funds Control Workbench	Currency
ffcrccex	ffcrccex	Funds Control Workbench	Currency
ffcujcex	ffcc1030	Funds Control Workbench	Currency
ffcrmcex	ffcc1031	Funds Control Workbench	Currency
ffcrvcex	ffcc1032	Funds Control Workbench	Currency
ffcdicex	ffcc1033	Informational To Do	Currency
ffcircex	ffcc1034	Informational To Do	Currency
ffcrtcex	ffcc1035	Informational To Do	Currency
ffcajcex	ffcc1036	Informational To Do	Currency
ffcpouox	ffcc1037	Funds Control Workbench	Unit of Measure
ffcrruox	ffcc1038	Funds Control Workbench	Unit of Measure
ffcrquox	ffcc1039	Funds Control Workbench	Unit of Measure

Event Identifier	Category	Next Step	Type of Exception
ffcpruox	ffcc1040	Funds Control Workbench	Unit of Measure
ffcrcuox	ffcrcuox	Funds Control Workbench	Unit of Measure
ffcdiuox	ffcc1041	Informational To Do	Unit of Measure
ffciruox	ffcc1042	Informational To Do	Unit of Measure
ffcrtuox	ffcc1043	Informational To Do	Unit of Measure
ffcajuox	ffcc1044	Informational To Do	Unit of Measure
ffcexfpx	ffcc1045	Funds Control Exception Handling window	Fund Policy
ffcexspx	ffcc1046	Funds Control Exception Handling window	Structure
ffcpofew	ffcc1047	Informational To Do	Fund Warning
ffcrrfew	ffcc1048	Informational To Do	Fund Warning
ffcrqfew	ffcc1049	Informational To Do	Fund Warning
ffcpyfew	ffcc1050	Informational To Do	Fund Warning
ffcprfew	ffcc1051	Informational To Do	Fund Warning
ffcrcfew	ffcrcfew	Informational To Do	Fund Warning
ffcujfew	ffcc1052	Informational To Do	Fund Warning
ffcrmfew	ffcc1053	Informational To Do	Fund Warning
ffcrvfew	ffcc1054	Informational To Do	Fund Warning
ffcdifew	ffcc1055	Informational To Do	Fund Warning
ffcirfew	ffcc1056	Informational To Do	Fund Warning
ffcrtfew	ffcc1057	Informational To Do	Fund Warning
ffcajfew	ffcc1058	Informational To Do	Fund Warning
ffcpofxo	ffcc1059	Informational To Do	Fund Exception Override
ffcrrfxo	ffcc1060	Informational To Do	Fund Exception Override
ffcrqfxo	ffcc1061	Informational To Do	Fund Exception Override
ffcpyfxo	ffcc1062	Informational To Do	Fund Exception Override
ffcprfxo	ffcc1063	Informational To Do	Fund Exception Override
ffcrcfxo	ffcrcfxo	Informational To Do	Fund Exception Override
ffcujfxo	ffcc1064	Informational To Do	Fund Exception Override
ffcrmfxo	ffcc1065	Informational To Do	Fund Exception Override
ffcrvfxo	ffcc1066	Informational To Do	Fund Exception Override
ffcdifxo	ffcc1067	Informational To Do	Fund Exception Override
ffcirfxo	ffcc1068	Informational To Do	Fund Exception Override

Event Identifier	Category	Next Step	Type of Exception
ffcrtfxo	ffcc1069	Informational To Do	Fund Exception Override
ffcajfxo	ffcc1070	Informational To Do	Fund Exception Override
ffcdiufx	ffcc1071	Funds Control Workbench	Upload Fund
ffcajufx	ffcc1072	Funds Control Workbench	Upload Fund
ffcdiuax	ffcc1073	Funds Control Exception Handling window	Upload Account
ffcajuax	ffcc1074	Funds Control Exception Handling window	Upload Account
ffcdiucx	ffcc1075	Funds Control Workbench	Upload Currency
ffcajucx	ffcc1076	Funds Control Workbench	Upload Currency
ffcdiuux	ffcc1077	Funds Control Workbench	Upload Unit of Measure
ffcpofxt	ffcc1078	Informational To Do	Tolerance Applied
ffcrrfxt	ffcc1079	Informational To Do	Tolerance Applied
ffcrqfxt	ffcc1080	Informational To Do	Tolerance Applied
ffcpyfxt	ffcc1081	Informational To Do	Tolerance Applied
ffcprfxt	ffcc1082	Informational To Do	Tolerance Applied
ffcrcfxt	ffcrcfxt	Informational To Do	Tolerance Applied
ffcujfxt	ffcc1083	Informational To Do	Tolerance Applied
ffcrmfxt	ffcc1084	Informational To Do	Tolerance Applied
ffcrvfxt	ffcc1085	Informational To Do	Tolerance Applied
ffcdifxt	ffcc1086	Informational To Do	Tolerance Applied
ffcirfxt	ffcc1087	Informational To Do	Tolerance Applied
ffcrtfxt	ffcc1088	Informational To Do	Tolerance Applied
ffcajfxt	ffcc1089	Informational To Do	Tolerance Applied
ffcexdpx	ffcexdpx	Funds Control Exception Handling window	Date Policy
ffcexadx	ffcexadx	Funds Control Exception Handling window	Associated Document Date Policy

Return Codes

The following return codes are issued from the Funds Checking module:

- 0 - Funds checking occurred successfully.
- 1 - A fund exceptions were detected.

- 2 - A fund warnings were detected.
- 3 - Funds checking was not required.
- 4 - Invalid data was passed to the funds checking module by the application.
- 5 - A fund exceptions were detected, but was overridden.
- 6 - A fund exceptions were detected but ignored.
- -1 - A database or calendar error was detected.

Running in Debug Mode

To run the Funds Checking module in debug mode, create the ffcc1000.lvl file according to the steps outlined in the generic Running in Debug Mode section. If you use the method with the .lvl file containing two lines of text, then a separate output file named ffcc1000.d10 is produced that contains only the debug messages produced by the Funds Control stored procedures.

User Exit (Stored Procedure ffcp1019)

Funds Control provides a user exit program that you can use to override policy settings to determine whether to funds check a specific transaction; and if so, how to process it.

This procedure is a user exit for the Funds Checking module. You can tailor it at installation. The procedure is passed the unique ID of the current work table row (fund transaction) being processed, enabling access to all information for the fund transaction.

Example

```
select   @w_trans_amt = trans_amt
from     fund_checking_work
where    unique_id = @p_work_tbl_unique_id
```

After performing the necessary validations and edits, one of the following processing codes (that you determine at installation) is returned to the OUTPUT variable @p_processing_ind to specify how to process the current fund transaction:

- N - Do not funds check.
- C - Continue, let the Funds Checking module determine whether funds checking is needed.
- F - Perform funds checking using an error level of Fatal.
- W - Perform funds checking using an error level of Warning.
- I - Update funds only; no funds checking required.
- Not N, C, F, W, or I; assume C (default).

Archiving and Purging Fund Transactions

Funds Control writes activity records to activity tables for most types of fund transactions. The activity table contains a before image, an after image, or both along with information unique to the type of transaction. Because of the volume and size of the activity tables, they can take up extensive disk space. You can purge activity records to remove unnecessary activity records and reduce the amount of disk space used.

Rules

- You must archive records before you can purge them.
- Archive fund transactions only after final year-end closing.
- You cannot archive fund balances that still have corresponding fund transactions (you must run an archive request for transactions successfully before you can run an archive request for fund balances).
- You can archive fund transaction audits any time.

The Archiving and Purging Process

The following table explains the steps of the purge process:

Step	Description
1	Create purge request, including which activity records to purge.
2	Run the scheduled process to purge activity records.

For more information, see About Archive/Purge.

What Can You Purge?

You can purge information from the following Funds Control activity tables:

- Fund Transactions Candidate Table
- Fund Balance Candidate Table
- Fund Transaction Audit Candidate Table

Selection Criteria

You can specify criteria to select the information to purge from each table. Funds Control applies the selection criteria to an activity table for each activity type. All records that meet the selection criteria are purged. The following table shows the selection criteria fields you can use for each activity type and the activity tables from which records are purged:

Type of Purge	Selection Criteria Fields	Activity Table
Fund Transactions	ldr_entity_id processing_yr	Fund_transactions_candidate
Fund Balance	ldr_entity_id processing_yr rollup_structure_id	Fund_balance_candidate
Fund Transaction Audit	ldr_entity_id date_and_tm_of_activity	Fund_trans_audit_candidate

Types of Purges

Based on the type of purge, Funds Control deletes specific types of information.

Fund Transactions Activity Records

Purging the Fund Transactions activity records deletes all information related to fund transactions.

Fund Balance Activity Records

Purging the Fund Balance activity records deletes all information related to fund balances.

Fund Transaction Audit Activity Records

Purging the Fund Transaction Audit activity records deletes all information related to fund transaction audits.

Related Activity Tables

When Funds Control finds records that meet the selection criteria on the activity table for each activity type, it purges all records on related tables that are linked by the same ID and activity date and time.

The following table shows the related records purged for each type of purge:

Type of Purge	Related Records Purged
Fund Transaction Activity	Fund_transactions
	Fund_transactions_audit
	Funds_ctrl_jrnl_ctrl
	Funds_ctrl_jrnl_line
	Funds_exception
	Funds_exception_reject_comnt
	Fund_Adjustment_comm
Fund Balance Activity	Fund_balance
	Fund_budget
	Fund_budget_comnt
	Fund_distribution_summary
	Fund_distribution_detail
Fund Transaction Audit Activity	Fund_transaction_audit

Funds Control Year End

Funds Control Year End processing carries budget amounts, commitment transactions, and encumbrance transactions forward into the new year. It can also remove budgets from the current year. In addition, it can automatically release the amounts it carried into the new year and make them available for use.

Year End processing can bring the corresponding budget amounts of commitment and encumbrance transactions forward into the new year. Those same budget amounts can be removed from the current year. These budgets are automatically released in the new year.

Account selection criteria is available for selecting the budgets and transactions to carry forward. Combinations of the previous options are allowed. For example, you can define the carry forward budget options using one set of account selection criteria, define the carry forward commitment transaction options using a different set of account selection criteria, and define the carry forward encumbrance transaction options using still another set of account selection criteria. You can also carry forward certain transactions only. For example, if no commitment transaction options are defined, then no commitment transactions are carried forward.

Different options can be defined by using different year end request sequences. The year end process can be run for a specific sequence or all sequences for a year end request.

After budgets and balances are carried forward, any changes made to budgets and balances for the prior year are not reflected in future years and must be made manually.

Prerequisite Year End Processing Task

To improve the performance of the Funds Control Year End process, you can add indexes to several tables in the DBSfund database.

Complete the following steps to add the indexes:

Step	Action
1	Find the **yrendbef.sql** file in the directory where SmartStream is installed on your file server.
2	Access the DBSfund database using an SQL editor.
3	Open the yrendbef.sql file and run it. **Result:** The indexes are added to the appropriate tables.

These indexes are necessary only during year end processing. You must remove them after year end processing is complete so that performance in other areas is not adversely affected. For more information, see Post Year End Processing Task.

Job Parameters

To schedule the Funds Control Year End process, enter the following values in the Program Name and Program Parameters fields on the Job Scheduler window:

Scheduled Job	Program Name	Program Parameters	Required Optional	Comments
Funds Control Year End	ffcc2000	Year End Request ID	R	The identifier of the year end request to use for this run of the process.
		Year End Sequence ID	R	The sequence number for the year end request.
		Restart Indicator	O	Y – Restart the job. Use this option when the previous attempt to run the job ended before completion. Only the user who started the job can restart it. N – Run job in normal mode (default)
		Debug Indicator	O	Y – Write additional debugging information to the fund_error_messages table. N – Run job in normal mode (default)

Database Tables

The Funds Control Year End process uses the database tables listed in the following table:

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Year End Request	year_end_request	R	The year end request processing parameters entered on the Main view of the Funds Control Year End Request window.
Year End Request Account Selection	year_end_rqst_ acct_sel	R	The year end request account selections entered on the Account view of the Funds Control Year End Request window.
Year End Work	year_end_work	R, I, D	Work table used only during scheduled year end processing.
Funds Control Balance	fund_balance	R, I, U	Periodic and annual balances by ledger entity/budget year/rollup structure for all the Funds Control amount classes: Release, Allotment, Commitment, Encumbrance, Expense, Available, and Payment.
Funds Control Budget	fund_budget	R, I, U	Funds Control budget and cash amounts that can be made available for spending.

Table	Server Name	Mode (Read; Insert; Update; Delete)	This table contains…
Funds Control Accounts	fund_acct	R	Fund account policy settings.
Account Relationship	acct_relationship	R	The account relationship new account parameters as entered on the Funds Control Account Relationship window.
Account Relationship Extract	acct_relationship_ extract	R	The account relationship accounting key range criteria as entered on the Funds Control Account Relationship window.
Funds Control Policy	fund_policy	R	Funds Control policy settings for a ledger entity and budget year.
Funds Control Structure Assignments	fund_structure_ assignments	R	The rollup structures assigned to each ledger entity and budget year.
Funds Control Distribution Detail	fund_distribution_ detail	R	Accounts (either detail Ledger accounts or lower level fund accounts) rolling up to higher level fund accounts.
Funds Control Distribution Summary	fund_distribution_ summary	R	Fund accounts that accounts (either detail Ledger accounts or other fund accounts) roll up to.
Funds Control Transactions	fund_transactions	R, I	Active Funds Control transactions as a result of an update to a Funds Control balance amount class type.
Funds Control Transactions Audit	fund_transactions_ audit	I	All Funds Control history transactions as a result of an update to a Funds Control balance amount class type.
Funds Control Server Process	fund_server_ process	R, I, U, D	Stores the server process IDs of active processes running for a set ID. It is used by the scheduled programs to ensure that a set ID is not being processed by another scheduled program.
Ledger Entity Security	ldr_scrty_entity	R	Ledger entity security settings.
Ledger Entity Policy	ldr_entity_policy	R	Ledger entity policy settings.

Job Results

The Funds Control Year End process generates a beginning and ending mail message with the start and stop time of processing. It also generates mail messages with the number of budgets, commitments, and encumbrances selected; the number of budgets, commitments, and encumbrances carried forward; and the number of budgets, commitments, and encumbrances bypassed. If any application errors are detected, it generates a generic message instructing the user to run the Fund Error report because errors have been found.

All errors resulting from the Funds Control Year End process are logged in the Funds Control Error Messages table. Use the standard Funds Control Reporting activity to print a list of all errors encountered during the Funds Control Year End process. After correcting all errors, run the Year End process again to reprocess the budgets or transactions that contained the errors.

Post Year End Processing Task

Complete the following steps to remove the indexes you added to improve the performance of the Funds Control Year End process:

Step	Action
1	Find the **yrendaft.sql** file in the directory where SmartStream is installed on your file server.
2	Access the DBSfund database using an SQL editor.
3	Open the yrendaft.sql file and run it. **Result:** The indexes added before year end processing are removed.

Funds Control Reporting

Funds Control provides a number of Policy, Audit, and Available Funds Balances reports you can use to verify that certain processes have occurred. You can run these reports on demand using the Funds Control Reporting activity or schedule the reports using the Job Scheduler.

Note: Before running the reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Producing Reports

The following table describes the process you use to produce the reports:

Stage	Task	Window
1	Access the reporting activity.	Choose Funds Control Reporting from an Activity List.
2	Select the appropriate report.	Funds Control Reporting Main window.
3	Enter run-time parameters as needed.	Funds Control Report Parameters window.
4	Choose Preview or Print.	Funds Control Report Parameters window. You can also schedule the reports. For more information, see the Scheduling Funds Control Reports section following this table.

For more information about producing Funds Control reports, see the Funds Control Reporting online Help.

Scheduling Funds Control Reports

You can schedule reports using the Job Scheduler and the report parameter set name defined on the Funds Control Report Parameters window. To schedule a report, enter the following parameters in the Program Name and Parameters fields on the Job Scheduler window:

[Path of Microsoft Access executable] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, Parameter Set Name, Server, User ID, Password]

Example

Assuming that the Funds Control reporting .mdb is named ffc32.mdb and the reporting macro is ffc_sched_parm, you enter the following parameters to schedule the Fund Account Policy Audit report using a report parameter set name of PSNP1:

c:\msaccess\msaccess.exe c:\sstrm*xx*\ffc32.mdb /Xffc_sched_parm /CMD Fund Account Audit, PSNP1, frmhp02s1, USER01, password

For more information about using the Job Scheduler, see Using the Job Scheduler or the Job Scheduler Help.

Special Considerations

Before scheduling these reports, make sure

- The **ffc32.mdb** resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
- The location of the ffc32.mdb is specified in your parameters from the point of view of the Job Server.
- The report option ID is saved to the ffc32.mdb version that is visible to the Job Server.

Report Status

Before running a report, check the DBS checkbox on the Job Scheduler window. If the job runs successfully, you will get a return code of zero. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

dbs.ini Settings for Funds Control

When SmartStream is installed on a client, the following section is inserted in your dbs.ini file:

[Funds Control]

The following settings are maintained in this section:

MaxTransactionsViewed=nnn

To enhance performance, this setting controls how many fund transactions are retrieved during one call to the database when you zoom to transactions from a fund account's balance. If there are more than that number of transactions, Funds Control pauses and you can click the More Transactions action to display the next batch of transactions. This value can be set to a lower or higher value.

The default is set to 500.

WFCompleteTreeExpand=Y

Generally , the performance of the Funds control Workbench slows down when a fund structure has a large number of fund accounts on the same level. If you have performance issues, consider the following information:

You can use the WFCompleteTreeExpand parameter to control how to show exceptions in the Funds Control Workbench when you double-click on a workflow message.

If you set this parameter to Y, retrieving exceptions through the workflow expands the complete Funds Control rollup structure tree.

If you set it to N, retrieving exceptions through the workflow displays only the direct ancestor nodes of the fund account node on which the exception occurred. Also, internal representation is used for displaying the accounts in the tree. This saves a number (nbr_of_udak_elements * nbr_of_accounts) of time-consuming concatenations.

The default is set to Y.

10 Ledger

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Ledger Processes

Select from the following list for information about the scheduled processes you can initiate in Ledger:

- Posting
  - Parallel processing
  - Posting steps
  - Tuning your environment
- Ledger maintenance

- Loading to Ledger
- Revaluation
- Archive/Purge
- Year-End maintenance
- Average Balances
- Euro End of Transition

Knowing Your Job Status

When jobs do not complete as expected, check any messages of the following types that are issued:

- Server messages
- Job Scheduler messages
- Ledger messages

Server Messages

When processing begins, a file is created. The program writes messages to this file that could not be written to psc_messages because of problems with the server. Each file is created with a unique file name; however, the file extension is always .err.

If the program runs to completion, this file is deleted. If the program does not run to completion, this .err file is stored either in the working directory or in the directory where the Poll program is running.

The following table lists the process and file name format for the message file that contains these messages:

For this process...	File name is formatted as...
Posting	fgl*xxxxx*.err where *xxxxx* = Request ID.
Ledger Maintenance	hv*xxxxx*.err where *xxxxx* = Request ID.
Loading to Ledger	up*xxxxx*.err where *xxxxx* = Request ID.
Revaluation	fglc0930.err
Archive/Purge	ccfc0800.dbg
Year End	ye*xxxxx*.err where *xxxxx* = Ledger Entity ID.
Average Balances	adb*xxxxx*.err where *xxxxx* = Request ID.

The .err file uses a .txt file to generate messages in the appropriate language. If you move a scheduled processing program to another directory, you must also move the appropriate .txt file to the same directory. Ledger scheduled processing programs use the fglmsg*xx*.txt file, where *xx* identifies the language.

Sample .Err Log

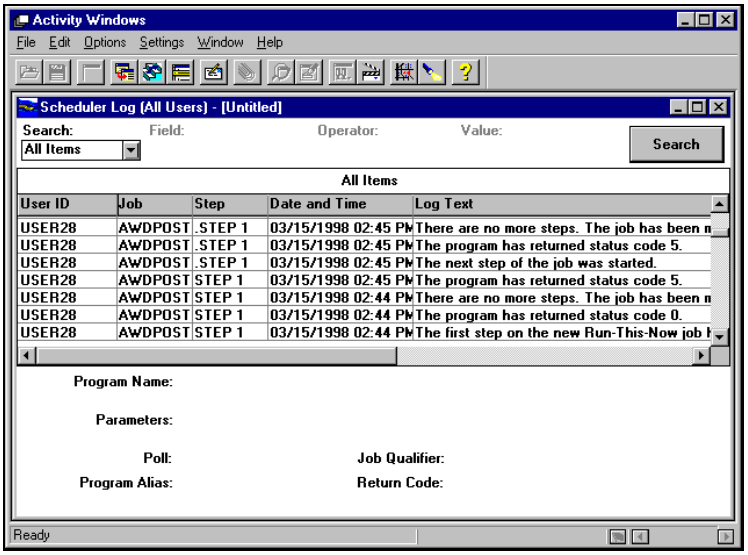
```
Log Date: Fri Jul 23 15:31:13 2002. Status Message:
Start POSTING Processing for Request ID: FIRST. Batch StepID: 7552.

Log Date: Fri Jul 23 15:32:17 2002. Error Number: 10004 Text:
Unable to connect: SQL Server is unavailable or does not exist.
SQL_Command buffer:
exec psp_sel_tsdx_1 'glep', '*'
Notify your system administrator.

Log Date: Fri Jul 23 15:32:17 2002. Status Message:
Job Completed with ERRORS.
```

Job Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps, as well as the job's final result (ended successfully, ended with errors, ended before completion). You can view messages using the Scheduler Log activity.



Return Codes

The following table lists the possible result codes displayed on the Scheduler Log window:

Return Code	Meaning	Possible Cause	Suggested Action
0	Program completed successfully.		
2	Warnings were issued.	Some informational type messages were generated.	Check mail and the error report to view information.

Return Code	Meaning	Possible Cause	Suggested Action
3	Application errors.	The data did not pass all the edits that enable the job to be fully processed.	Run the applicable error report, correct the data, and rerun.
4	DBMS error - stored procedure could not be run.	Server is unavailable. Stored procedure was not found. Server logs are full. Database is out of space.	Check mail or the local log file for specific information about the problem. Correct the problem in the DBMS environment and rerun.
5	Fatal processing error occurred and program could not continue processing.	Client cannot open required connections to the server. Login failed the security check.	Check mail or the local log file for specific information about the problem. Correct the problem and rerun.

Program Processing Messages

Messages written as a result of Ledger programs processing are sent to a message table (psc_messages). These messages have information about the return codes viewed on the Scheduler Log window. After processing is complete, these messages are automatically sent to the recipients identified on the Mail dialog box of the Job Scheduler window. The messages are automatically deleted from the psc_messages table.

Sample Mail Message

```
< JOB START INFORMATION >

Name:           VALPOST
Qualifier:      __VALPOST
User ID:        USER24
Database:       DBSctlg
Server:         lnxhp01s3_____________________________________________

< STEP INFORMATION >

Name:           1
Program:        fglc0900
Arguments:      US3 V P _NEWNAME 1197
Unique ID:      1197
Started:        Feb  15 2000  02:54:15:523PM
Request ID US3,  ,   started at Tue Feb  15 02:54:20 2000.
Finished Application glep *,
Validation completed normally
            US3 4 journals processed, 2 journals valid, 2 journals in error, 0 journals inconclusive
            US3 2 journals processed, 2 journals posted, 0 journals in error, 0 journals inconclusive
Request ID US3,   ended at  , Tue Feb  15 02:55:34 2000.

>> Step 1 has completed.
Return code:  3
Ended:  Feb  15 2000  02:56:00:663PM
```

For more information, see Job Scheduler Troubleshooting in the *SmartStream Administration* guide.

Ledger Messages

Ledger messages are generated from data that fails the program's edits. For example, a journal may contain errors because it is not in balance and cannot post. Depending on the program running, these messages are written to a specific table defined in the program.

Posting

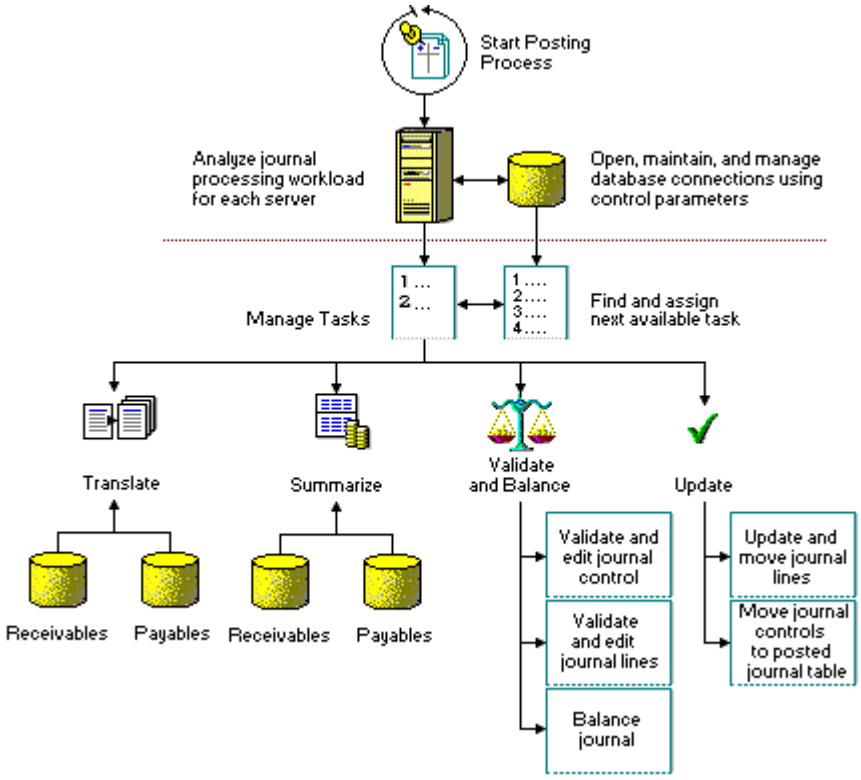
The posting process updates the Account Balance (ldr_acct_bal) and Account Balance Detail (ldr_acct_bal_detail) tables with amounts from journal transactions. The number of balance rows each journal transaction updates depends on the requirements specified on the Ledger Policy window.

Journal Processing Steps

Journal processing consists of the following steps:

Step	Description
Translation	Selected journals are translated using translation rules set up for your enterprise and associated with the appropriate ledger entities and journal sources. These translation rules define the selection criteria, generation specifications, and processing options to use to control journal translation.
Summarization	Journals are summarized according to accounting key by ledger entity, journal source (such as payment requests), and effective date. Translated journals and journal lines can be summarized, depending on the options and settings defined. The entries are written to a summarization table. The detailed journals are left in the tables of each product. The detail of summarized posted journals can be viewed using the drill down feature. If the original documents are deleted from the product tables, you can view only the summarized information. You cannot view source documents for summarized Ledger journals because Ledger does not retain the detail transactions.
Validation	Journals are validated, edited, and balanced according to user-defined policies.
Update	Posts amounts to the appropriate row on the Balance table (ldr_acct_bal). Journals are inserted into posted journal tables (posted_jrnl_ctrl and posted_jrnl_line) and removed from the unposted journal tables (unposted_jrnl_ctrl and unposted_jrnl_line).
All steps	Runs the entire posting process.

The following diagram shows an overview of the posting process:



Journal Processing Parameters

When using the posting process, you can run the steps individually, in combination with one another, or all at the same time. If you request all the steps, the posting tasks are run sequentially, starting with translation, then summarization, validating and balancing the journals, and updating and moving the journals to the posted journal tables. Step interdependencies are listed below:

Task	Conditions
Translation	Optional – must be done before summarization.
Summarization	Optional – must be done before validation.
Validation	If using suspense error handling and an error occurs, when the journal is processed its status is changed to Suspendable (H). The journal can be corrected before the Update. If no correction occurs, the suspense journal is created when Update is run.
Update	If you have run Validation before an Update, a version number is compared for changes between previously validated journals. If no changes occurred, Update is run. If changes occurred the journal must be revalidated before the Update takes place.

Restarting the Posting Process

You can specify how to restart the posting process if you receive a return code of four or greater from Job Scheduler. Use the Control Parameter window to specify your restart option, before you run the posting program.

On the Control Parameters window, if you specify...	And the job is interrupted...	Then...
Autorecover or continue	Resubmit the original Job Scheduler request.	The job completes according to the option you specified.
Manual	Specify either the recover or continue action on the Ledger Process Run window.	Resubmit the original Job Scheduler request.

Posting Troubleshooting

You can determine the status of a job using reports and messages generated during processing.

Reports

Use this report...	To...
Journal Error	Determine which journal has errors.
Accounting Keys Generated from Posting	Determine which accounting keys were generated during posting.
Ledger Balance Summary Posting Control	View effects of posting on Ledger Balance.

Messages

Message Type	Example	Possible Solution	Information
Processing	Unable to locate or access server X.	Verify *parallel connections* parameter on the Control Parameters window to ensure the correct server is defined. If correct server is selected, is it entered correctly on tsdx? If the correct server is defined in both of the previous cases, does the user have proper security to access the server?	Messages returned to people specified on the Mail dialog box of the Job Scheduler window.
Ledger Posting	Application errors in the journal control, for example, invalid Ledger entity	Correct invalid Ledger entity and resubmit to the Job Scheduler.	Messages written to ldr_trans_errs table.

Determining Where to Restart Posting

SmartStream created an internal programming mechanism that identifies unprocessed journals resulting from fatal errors. It uses this mechanism to determine where to start processing when posting is restarted. If, for example, the server loses a connection, the journals remaining unprocessed are listed as **inconclusive** as shown in the following Mail Message:

```
Validation completed normally
            US3 4 journals processed, 2 journals valid, 2 journals in error, 4 journals inconclusive
```

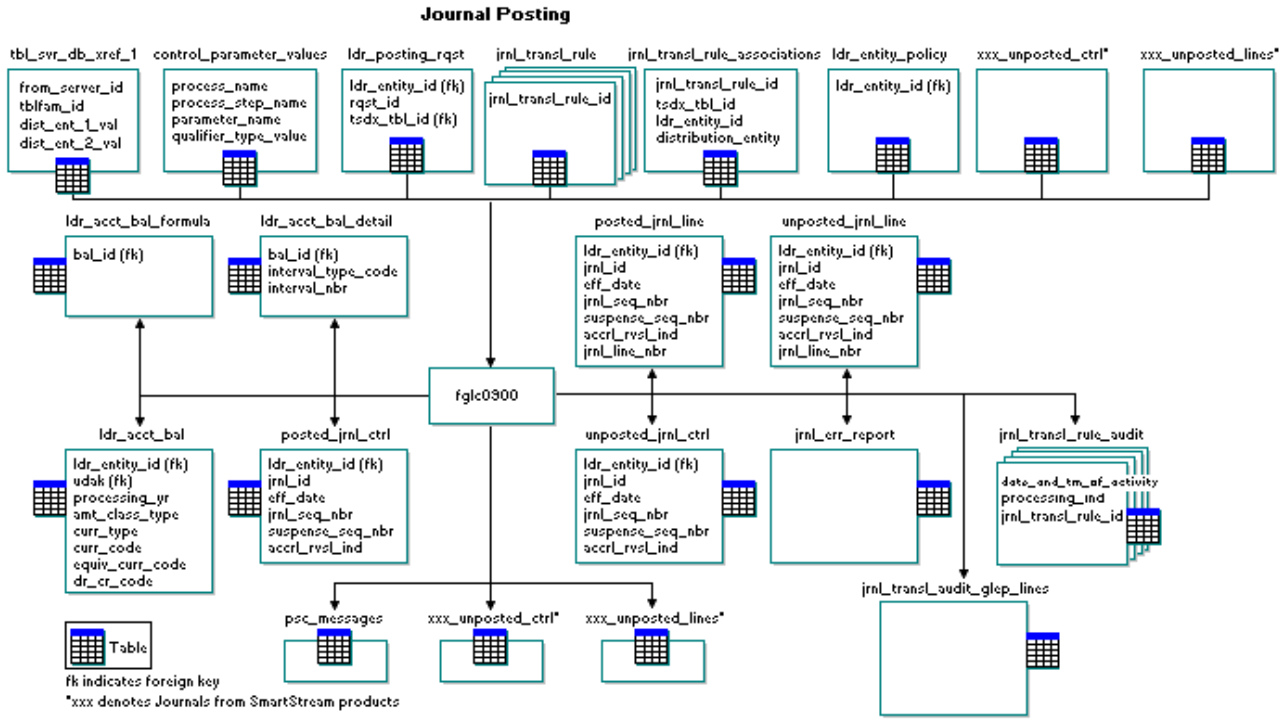
Considerations for Online Posting

Online posting is started from the Unposted Journal List window. It validates and edits the journals before they are posted. Error handling occurs as specified on Ledger Policy: Defaults View.

Consider the following information when using online posting:

- Proper security is required
  - Activity security (fgl0030)
  - Data control security
  - Access to the fgl6000 activity.
- Parallel processing is not available during online posting
- All journals must reside in the DBSglep database

Tables Used During Posting Process



During the posting process, some tables are read for editing purposes. These tables are not shown in this posting diagram.

Summarized Versus Detailed Journals

During the posting process, Ledger processes summarized and detailed journals differently. The following columns in the application journal line tables (xxx_jrnl_line) are updated for detailed journal lines but not for summarized journal lines:

- amt_class_1
- amt_class_2
- curr_rate_date
- jrnl_prev_line_status
- ldr_entity_policy_version
- ldr_amt_class_type_version
- curr_rate_version
- posting_yr

Tailoring Sample User Exits

To provide greater flexibility, Ledger provides user exits for intraentity balancing and journal translation processing.

Intraentity Balancing

Ledger delivers two user exits that you can use to enhance the standard method for deriving control and rule values for intraentity balancing.

How the User Exits Work

These user exits are stored procedures residing in the dbms\glep directory of the SmartStream file server. The user exit for deriving control values is fglpcp47.sp, the one for deriving rule values is fglpcp48.sp.

Intraentity balancing calls fglpcp47.sp during intraentity balancing if the journal is subject to two-sided intraentity balancing after obtaining any control information defined for the control identifier and passes it the following details:

- Ledger entity ID
- Journal ID
- Effective date
- Journal sequence number
- Suspense sequence number
- Accrual reversal indicator
- Intraentity balancing control ID
- Control values for balancing elements

The stored procedure then applies your user-defined method of assigning values to balancing elements and returns the following updated information:

- Control values for balancing elements
- User exit status
- User exit message text

Intraentity balancing calls fglpcp48.sp during intraentity balancing for each combination of out-of-balance elements if intraentity balancing is turned on for the journal and for the entity with the out-of-balance situation and passes it the following details:

- Ledger entity ID
- Journal ID
- Effective date
- Journal sequence number

- Suspense sequence number
- Accrual reversal indicator
- Intraentity balancing rule ID
- Indicator of whether values are for a control or entries detail rule
- Debit/Credit code of the intraentity entry to generate
- Values for the out-of-balance balancing elements
- Rule values

The stored procedure then applies your user-defined method of assigning values to balancing and offsetting rules and returns the following updated information:

- Rule values
- User exit status
- User exit message text

The Tailoring Process

Ledger provides sample user exits called fsp_intraentity_ctrl_user_exit and fsp_intraentity_rule_user_exit in the DBSglep database. The source files fglpcp47.sp and fglpcp48.sp reside in the dbms\glep directory of your SmartStream file server.

You can tailor these sample stored procedures as needed to meet the intraentity balancing needs of your enterprise. For example, you can design them to apply masking characters to certain accounting elements, or vary the values assigned to the generated entries based on journal information other than that available through Ledger.

The user exit sample provides instructions with more information about the parameters passed to the stored procedure and the values that can be returned to the calling function.

Journal Translation

Ledger also delivers two user exits that you can use to enhance the standard method for

- Selecting journal controls and lines to process
- Deriving translation specifications.

How the User Exits Work

These user exits are stored procedures residing in the dbms\glep directory of the SmartStream file server. The user exit for selecting journal controls and lines is fglpjt07.sp, the one for deriving translation specifications is fglpjt05.sp.

Posting calls fglpjt07.sp during journal translation if the ledger entity and source for the journal is subject to translation after obtaining any selection criteria defined for the journal translation rule and passes it the following details:

- tsdx table ID
- Distribution entity ID
- Journal ID
- Effective date
- Journal sequence number
- Suspense sequence number
- Accrual reversal indicator
- Journal line number
- Amount class types 1 and 2
- Source table ID
- Journal translation rule ID
- User exit status

The stored procedure then applies your user-defined method of selecting journal controls and lines and returns one of the following user exit statuses:

- Y - Select line for translation processing
- N - Do not select the line for translation processing

Posting calls fglpjt05.sp during journal translation if the ledger entity and source for the journal is subject to translation after obtaining any specification information defined for the journal translation rule and passes it the following details:

- tsdx table ID
- Distribution entity
- Row for translated journal

The stored procedure then applies your user-defined method of assigning values to the translated journal to update the translated journal or add entries to it.

The Tailoring Process

Ledger provides sample user exits called fsp_jrnl_translation_selection_user_exit and fsp_jrnl_translation_spec_user_exit in the DBSglep database. The source files fglpjt07.sp and fglpjt05.sp reside in the dbms\glep directory of your SmartStream file server.

You can tailor these sample stored procedures as needed to meet the journal translation needs of your enterprise. For example, the translation selection user exit can be designed to perform additional user-specific logic so that only a subset of the journal controls and lines usually selected by the translation rule are processed for translation.

The user exit samples provide instructions with more information about the parameters passed to the stored procedures and the values that can be returned to the calling function.

Ledger Maintenance

Ledger maintenance allows high- or low-volume changes to occur to Chart of Accounts and Balance tables. The following table shows the type of maintenance allowed:

Table	Type of Maintenance
Ledger Account Balance (ldr_acct_bal)	**Archive** moves amount class rows from this table to a history table (ldr_acct_bal_hist). After they are moved, the rows from the ledger account balance table are deleted. **Update** amounts only. **Delete** entire amount classes for a ledger entity.
Ledger Account (ldr_acct)	**Update** any non-key information on the table. **Delete** rows from the table. Delete is allowed based on criteria selected in the Allow Account Deletions When field on Ledger Policy: Options View.
User Fields (ldr_user_flds)	**Update** any non-key information on the table. **Delete** rows from the table. **Insert** rows in the table.

Restarting Ledger Maintenance

If Ledger Maintenance processing is interrupted, all maintenance performed to that point is backed out. Correct the problem and restart using the same request identifier.

Ledger Maintenance Troubleshooting

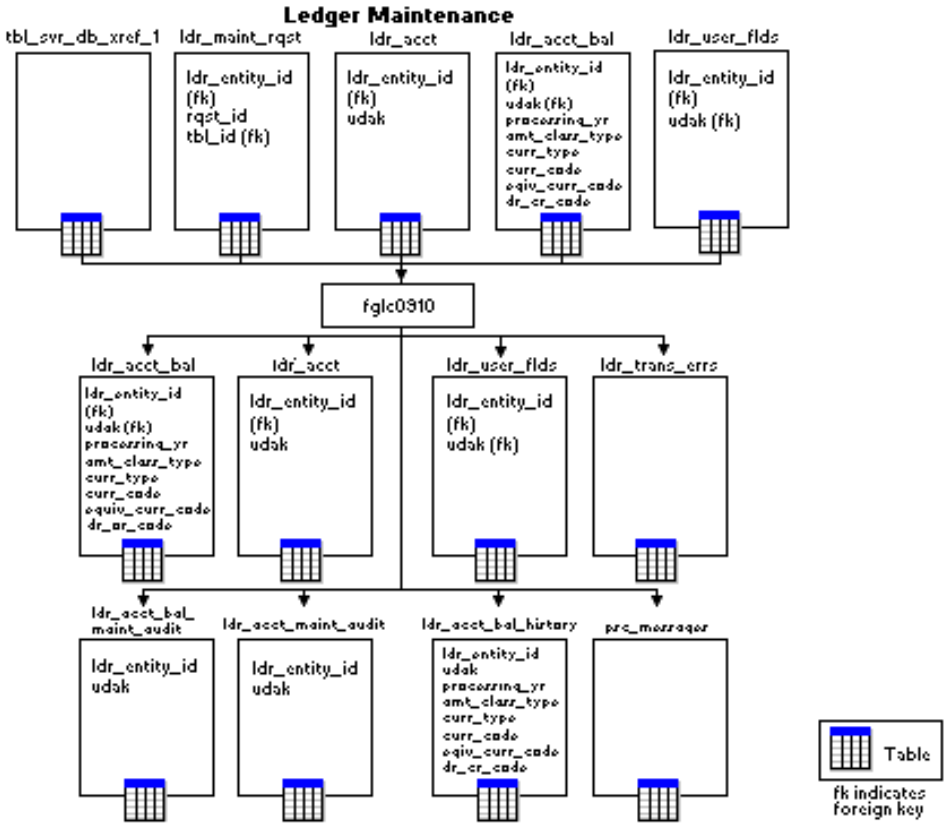
Use the Maintenance and Load Error report to verify the results of the Ledger maintenance.

Messages

Use the following table to assist you in solving any problems occurring during the maintenance process:

Message Type	Example	Information
Processing	Incorrect parameters on the Ledger maintenance request	Messages returned to people specified on the Mail dialog box of the Job Scheduler window.
Ledger Maintenance	Account type not A, I, E, L, Q, B, or V	Messages written to ldr_trans_errs table.

Tables Used During Ledger Maintenance



Loading to Ledger

Adding large amounts of information to Ledger is accomplished by loading from an external file. You can load journal line information or chart of accounts accounting keys, balances, and average balances.

The Load program

- Loads data from an external file.
- Accepts either comma- or tab-delimited text files.

Depending on the type of information loaded, you can either insert or update information in the following tables:

Table	Type of Load
Unposted Journal Lines (unposted_jrnl_line)	**Insert** journal line transactions.
Ledger Accounts (ldr_acct)	**Insert** new accounting keys or **update** non-key fields of existing accounting keys.
Ledger Balances (ldr_acct_bal)	**Insert** or **update** ledger balances.
Ledger Account Balance Detail (ldr_acct_bal_detail)	**Insert** or **update** average balances.

For information about the column name, type, length, and values for each table used in the load process as well as how to prepare the data for loading, refer to the following topics:

- Ledger Load Transaction Information
- Loading Accounting Keys
- Loading Account Balances
- Loading Journals

The Load program processes all rows in the input file and loads those without errors to the proper table. It writes all rows containing errors to a file with the same name as the input file but with an .err extension. For example, if the original file is **uk3jrnl1.txt** the error file is **uk3jrnl1.err**.

Restarting Ledger Loads

After you correct your errors, rename the .err file using the .txt extension and resubmit the job. The Load program ignores the error column name (_error_msg) because it begins with an underscore (_).

Commit Logic

The Load program has commit logic (default value is 100), which reduces processing time if you have to restart the Load program. If, for example, processing is interrupted at line 915 of a 1000 line file, 900 lines are loaded to the table leaving only 100 lines to process rather than 1000.

To ensure the integrity of each Load process

- A process that ended before completion must complete before another file can be loaded
- The text file of a process ended before completion cannot be changed.

Checking Job Status

To determine if the Load program ran to completion, check the status on the Ledger Process Run window. If the load request appears on the window, resubmit the job using the same Job Scheduler request. If no entry appears on this window, the Load program ran to completion.

Safeguards

Safeguards are included in the commit and recovery design of this program. At the beginning of the process, the name of the text file used by the Load program is changed to inproc.920. When the process completes, the file is renamed to its original name using an .lxt file type.

If the process ends before completion and rerunning it does not allow it to recover and complete successfully, you must either

- Restore the database and start over
- Use the database in its current condition

  In that case, remove the process_run entry from the table (if any) and delete the inproc.920 file if it was generated.

Ledger Load Troubleshooting

You can determine the status of a job by using reports and messages generated during processing.

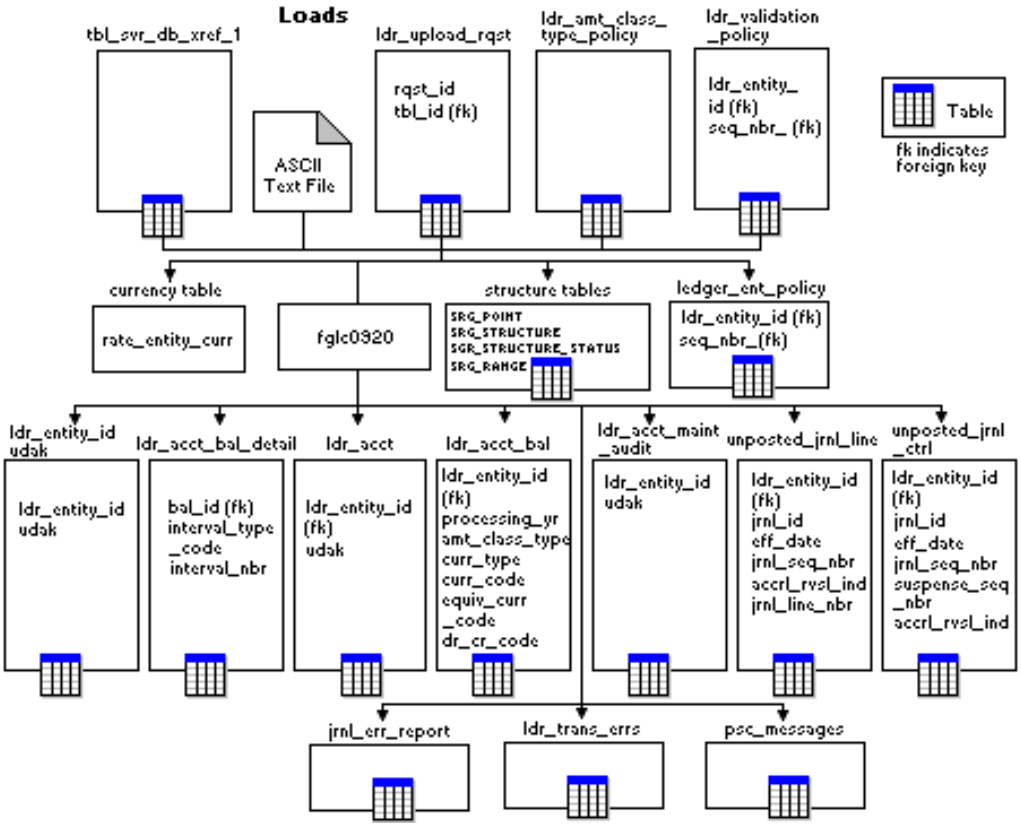
Reports

Use this report...	To...
Journal Error	Verify loading journal lines.
Maintenance and Load Error	Verify loading of accounting keys or ledger balances.

Messages

Message Type	Example	Information
Processing	Incorrect parameters on the Load Request	Messages returned to people specified on the Mail dialog box of the Job Scheduler window.
Ledger Load	Invalid column name	Messages written to jrnl_err_report table when loading journal lines. Messages written to ldr_trans_errs table when loading accounting keys, ledger balances, and average balances.

Tables Used During the Load



Revaluation Processing

For information, see Revaluation Process in the *Ledger* guide.

Restarting Revaluation

If for any reason the revaluation process does not run to completion, everything is rolled back from the journal tables and deleted from the work tables. After you have corrected the problem, restart the processing using the same request identifier.

Revaluation Troubleshooting

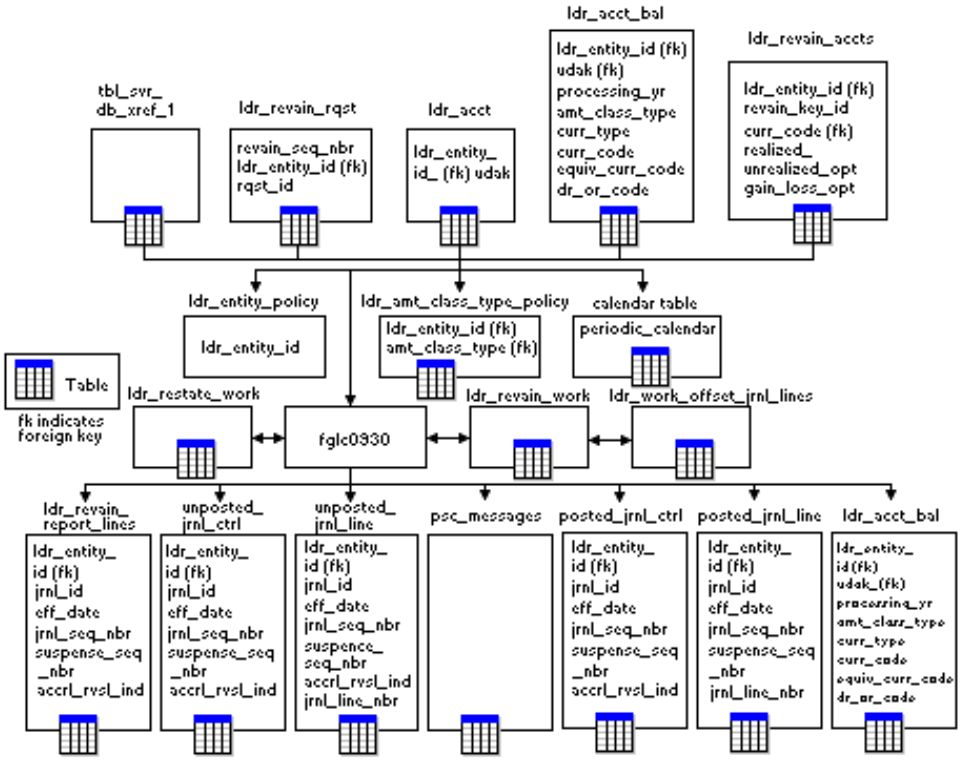
Use the Revaluation/Restatement Error report to verify the results of revaluation processing.

Messages

Use the following table to assist you in solving any problems occurring during revaluation processing.

Message Type	Example	Information
Processing	Incorrect parameters in the revaluation/restatement request	Messages returned to people specified on the Mail dialog box of the Job Scheduler window.
Revaluation	Booking of unrealized gain is disallowed for the revaluation/restatement request.	Messages written to ldr_reval_report_lines table.

Tables Used During the Revaluation Process



Archive/Purge

In Ledger, using the Archive/Purge process you can remove outdated information from your posted journals tables (posted_jrnl_ctrl and posted_jrnl_line) on the DBSjepc database. Based on user-defined parameters, data can be archived to either a history table or to a file that can be stored on disk or tape before it is purged.

For more information, see About Archive/Purge.

To use the Archive/Purge process in Ledger, you must have the following activity security established on the Activity Security window:

Establish Activity Security for these Activities	Enter These Archive IDs as Security Value1 For Each Activity
ccf0770 Archive Purge Request	fjejea1cad Archive journal history to disk
ccf0800 Archive Purge Scheduled Process	fjejepccad Archive posted journals to disk
	fjejepccah Archive posted journals to history

Year-End Maintenance

When a ledger entity ends its fiscal year, it prepares to close its books. The year-end process closes the ledger for the current year and opens a new year. Before you start year-end processing, certain closing tasks, such as balancing the ledger, must occur. For a list of these tasks, see Complete Year-End Processing in the *Ledger* guide.

Types of Year-End Maintenance

With Job Scheduler you can perform two types of year-end maintenance. One type to opens your amount classes for future posting; the other moves you to the new year.

Year-End Process	Description
Interim Year Open	Opens only the selected amount classes in the future year. The current year is not advanced.
Complete Year-End	Advances the current year and opens the future year's amount classes.

Removing Prior-Year Balances

You can archive prior-year balances when the ledger is ready to close its books or at any time by submitting a Ledger maintenance request. This request should include the names of the amount classes to archive.

Archiving maintenance can be performed as the second step on the same Job Scheduler activity you complete to perform year-end processing.

The following processing occurs when the year-end program is run:

If the request type is...	Then the year-end process...
Complete Year-End	▪ Calculates ending balances for the ending year. ▪ Adds or corrects the beginning balances for the new year. This is done for all life-to-date accounts (asset, liability, equity, and balance). ▪ Calculates the ending balances of the new year if future-year posting has occurred. ▪ Advances the processing year for each ledger entity by – Updating the ledger entity policy with the new processing year – Setting the current period to Period 1 – Setting the effective date to the last day of the period.

If the request type is...	Then the year-end process...
Interim Year Open	▪ Calculates ending balances for the ending year. ▪ Corrects or adds the beginning balances in the future year. This is done for all life-to-date accounts (assets and liabilities). ▪ Does not advance the processing year.

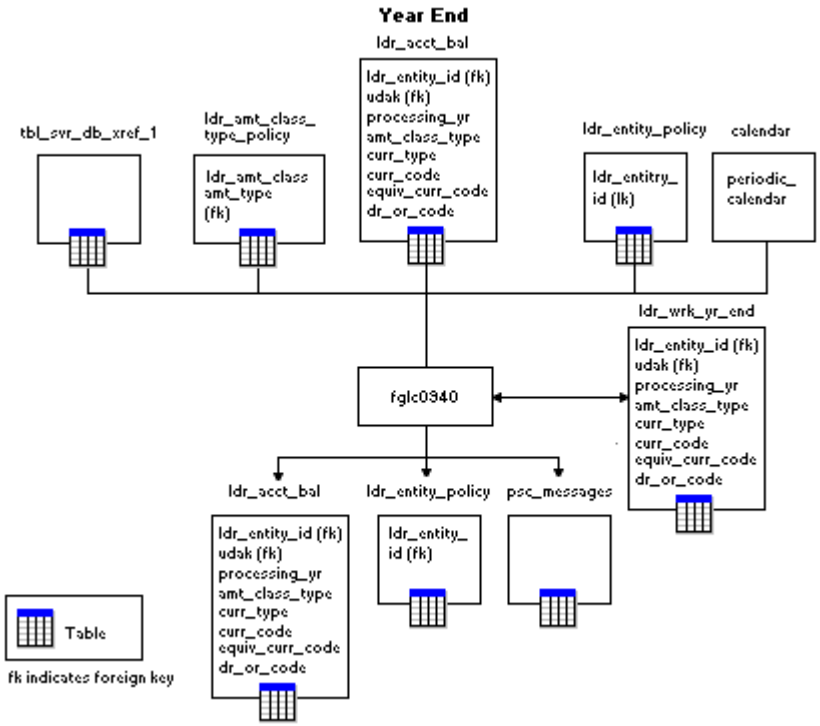
Restarting Year End

If for any reason Year End does not run to completion, all requested processing is backed out. After you have corrected the problem, restart the processing using the same request identifier.

Year-End Troubleshooting

You can determine the status of a job by using messages generated during processing. These messages are returned to people specified on the Mail dialog box of the Job Scheduler window.

Tables Used During Year-End Processing



Average Balances

Average Balances is an optional Ledger feature used by banks and other financial institutions that must report average balances to federal and other local regulatory agencies. The average balances program updates the average balances of the specified average balance ledger entities through the Job Scheduler.

After updating average balances, use the Formula Resolution scheduled process to extract the most current values for Average Balance reporting. This process uses values extracted from the Ledger Account Balance Detail (ldr_acct_bal_detail) table to update the Resolved Formula (ldr_acct_bal_formula) table with resolved average balance formula information. This activity usually occurs on a schedule established according to your enterprise's reporting needs.

Before you successfully run the Formula Resolution scheduled process, you must run the average balance update request and the Posting process in SmartStream Ledger. For more information, see Establishing Average Balances in the *Ledger* guide.

Restarting Average Balances

If for any reason Average Balances does not run to completion, the processing is backed out to the last completed entity. After you have corrected the problem, restart the processing using the same request identifier.

Average Balances Troubleshooting

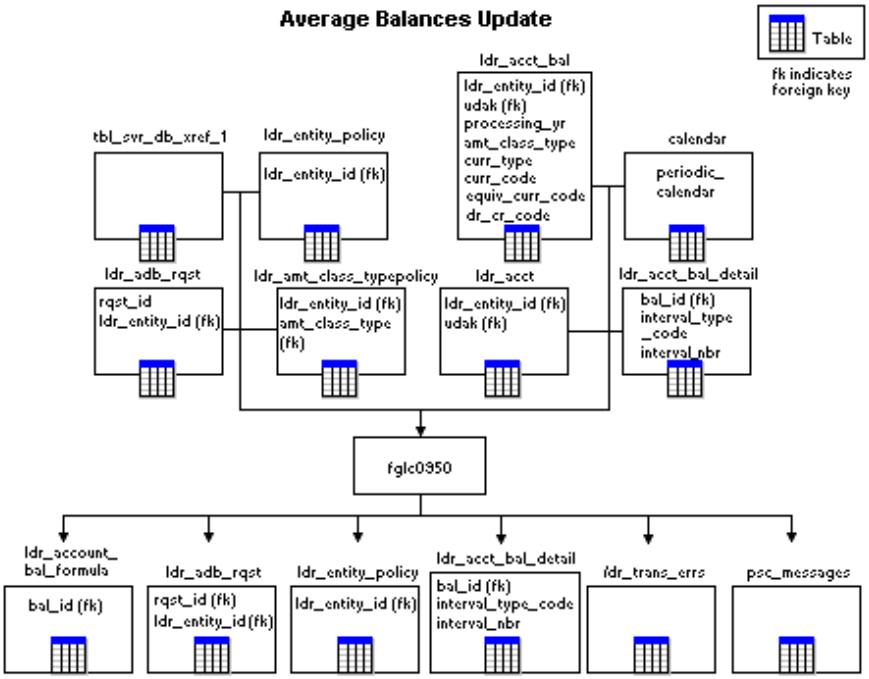
Use the Maintenance and Load Error report to view errors identified during average balance update processing or when loading balances to the ldr_acct_bal_detail table with the Load program.

Messages

Use the following table to assist you in solving any problems occurring during the Average Balances process.

Message Type	Example	Information
Processing	Incorrect parameters on the request.	Messages returned to people specified on the Mail dialog box of the Job Scheduler window.
Average Balances	There are no rows to process on ldr_acct_bal for this entity.	Messages written to ldr_trans_errs table.

Tables Used during Average Balances Processing



Euro End of Transition Processing

The euro end of transition process (fglc2001) generates the journal lines necessary to reverse balances in participating currencies and post their equivalents to euro balances. It runs as part of the routine posting job stream and uses parameters specified in the euro end transition request to select the ledger entities and amount class types to process.

For each ledger entity and amount class type selected, the process determines which participating currencies have transaction balances that need clearing. The process then creates a journal with two journal lines for each transaction balance greater than zero after the transition period end date. The first journal line reverses the balance amount in the participating currency; the second one contains the balance amount in the euro currency. When the journal is posted, it converts the participating currency balance to a euro currency balance.

Note: If an amount class requires debit/credit balancing, the euro end of transition process does not process the currency clearing account for the currency. You must clear any remaining amount in the currency clearing account using the appropriate windows.

Journal Creation

The euro end of transition process creates the required journals for a participating currency for periods after the transition period end date. Where the transition period end date falls within your fiscal calendar affects journal creation. The following table shows how the euro end of transition process handles the various possibilities:

If the transition period end date is…	Then the process…
A period end date	Creates journals to convert balances for the following periods.
Not a period end	Requires you to specify whether you want to convert the balances for the period containing the transition period end date.
	If you want to convert the balances, this period becomes the post-transition period (the first fiscal period that cannot have any participating currency balances), and the process converts all balances from the post-transition period forward.
	The balance the process converts includes the calculated year-to-date balance for the post-transition period and the activity amount for all other periods.
The end date of the fiscal year	Converts the following year's beginning balance (Period 0) in the first period.
Not the end date of the fiscal year	Converts the balances for Period 0 through the period before the post-transition period for the year containing the transition period end date.

The process creates a journal for each ledger entity, amount class, period, and participating currency combination that has a balance other than zero. Each journal contains both the participating currency transaction amount and the euro offset amount.

Override Start Year

After a year is closed to posting, the balances do not change; therefore, you do no need to analyze balances for that year. Using the override start year option, you can exclude years closed to posting from euro end of transition processing and improve processing efficiency.

When you specify an override start year, the euro end of transition process takes less time to complete because it the does not analyze balances for any year before the year you specify.

Currency Balancing

When an amount class requires debit/credit balancing, the euro end of transition process creates a journal for the ledger entity and participating currency combination and then determines whether the debit and credit amounts for both the participating currency and the euro currency balance. If debits do not equal credits, the process creates entries to the currency clearing account in transaction currencies to balance the journal.

Note: Although transaction currencies usually balance, they do **not** balance in the following situation:

When you are closing to retained earnings and you choose to book retained earnings only to the booking currency, at year end the balance sheet entries are brought forward, but the income and the expense amounts in the transaction currency are not. This can make the debit and credit amounts in the transaction currency differ by the amount of the accumulated retained earnings.

Scheduling Ledger Processes

For a process to schedule jobs and determine if they ran to completion, see Using the Job Scheduler in the *SmartStream Administration* guide.

Scheduling Your Jobs

Enter the following values for the Program Name and Program Parameters fields when scheduling the following processes. The final column lists the Ledger request associated with each process.

Scheduled Job	Program Name	Program Parameters	Associated Request
Archive and Purge	**Windows:** ccfc0800.exe **UNIX:** ccfc0800	Use only one of these processing modes per request: - Preview **(P)** - Cleanup **(C)** - Restart **(R)** - Blank **()** Archive\Purge Request ID Entries must be separated by a space.	Archive/ Purge Request
Ledger Maintenance	**Windows:** fglc0910.exe **UNIX:** fglc0910	Ledger Entity Maintenance Request ID Table Name (ldr_acct **or** ldr_acct_bal **or** ldr_user_flds) Entries must be separated by a space.	Ledger Maintenance Request
Loading to Ledger	**Windows:** fglc0920.exe **UNIX:** fglc0920	Load Request ID Table Name (ldr_acct **or** ldr_acct_bal **or** ldr_acct_bal_detail **or** unposted_jrnl_line) Entries must be separated by a space. **Note:** Load processing time increases if you use automatic accounting key generation.	Ledger Load Request

Scheduled Job	Program Name	Program Parameters	Associated Request
Posting	**Windows:** fglc0900.exe **UNIX:** fglc0900	▪ Posting Request ID ▪ Posting step – M = translate – S = summarize – V = validate – P = update – Blank = all steps ▪ Journal processing parameter – _P2_ = process journals and journal lines in parallel If you do not include a parameter, the program will determine which method is more appropriate for a particular journal. See Posting Parameters Note. ▪ _TracE_ *<trace file name>* To run the trace facility, type **_TracE_** after the last parameter for the job. Follow it with a space and then the name of the file you want the trace facility to generate. The trace facility generates the file in the directory where the poll and the fglc0900 program reside. Entries must be separated by a space.	Ledger Posting Request
Revaluation	**Windows:** fglc0930.exe **UNIX:** fglc0930	Revaluation Request ID	Revaluation/ Restatement Request
Year End Maintenance	**Windows:** fglc0940.exe **UNIX:** fglc0940	Ledger Entity You can close multiple entities sequentially by listing each entity as a separate step on the Job Scheduler window.	Year End Request
Average Balances Update	**Windows:** fglc0950.exe **UNIX:** fglc0950	Request ID	Ledger Average Balances Update Request
Average Balances Formula Resolution	**Windows:** pfoc0100.exe **UNIX:** pfoc0100	-m 0 -t **n** Include a space between each entry. **n=0**-Log lists program processing steps. **n=1**-Log lists information about formula parameters as well as processing steps.	Formula Resolution Parameters Entity Resolution Parameters

Scheduled Job	Program Name	Program Parameters	Associated Request
Euro End of Transition	**Windows:** fglc2001.exe **UNIX:** fglc2001	Request ID	Euro End Transition Request

Archive and Purge Processing Parameters

Mode	Description
Preview (**P**)	Review changes before they are made.
Blank ( )	Perform archive/purge. If used after Preview processing also performs cleanup.
Cleanup (**C**)	If you decide not to run archive and purge (Blank) after preview processing, cleanup removes the table lock.
Restart (**R**)	Complete a job that was interrupted.

Posting Parameters Note

If no parameter is supplied on the command line, the Posting program determines which method is more appropriate for a particular journal.

If...	Then...	Else...
The highest line number on a journal is less than either the maximum number of lines per validation region or the maximum number of lines per update region as specified on the Control Parameters window.	Journals process in parallel; journal lines do not.	Journals and lines process in parallel.

For more information about Job Scheduler, see

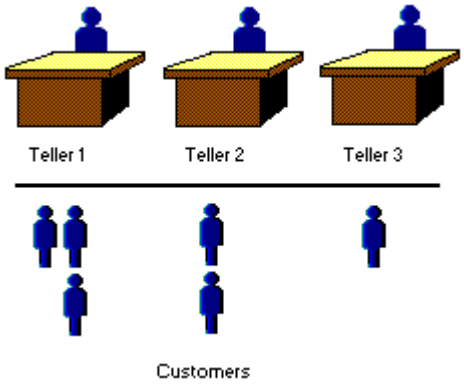
Topic	Description
Designating a Job Scheduler Administrator	Discusses setting up Job Scheduler.
Using the Job Scheduler	Discusses scheduling jobs and reviewing their status
Defining Jobs and Steps	Discusses Job Scheduler windows.

Journal Posting and Parallel Processing

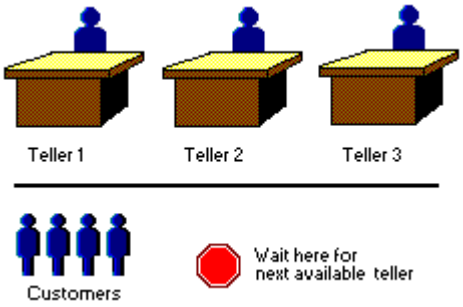
SmartStream allows its customers to take advantage of the highly scaleable parallel processing feature of symmetric multiprocessing (SMP) systems during the posting process. Post can be run as a single process or as multiple cooperating processes depending on your business practices.

Example

As a bank manager your goal is to increase the speed of customers' transactions. Currently customers come in the bank and queue up at any teller's window. Depending upon the number and length of customer transactions some customers have to wait a long time to complete their transactions while others finish their business quickly. This depends on which teller's line a customer chooses.



To increase the speed of each customer's transaction, you institute a queuing system. You install a sign stating, "Wait here for next available teller." This allows a smooth flow of customers to tellers.



This example helps explain parallel processing. By efficiently moving the people (data) to transact their business with the tellers (CPUs) the job is done sooner (performance is enhanced). The queuing strategy ("Wait here for next available teller") serves as the task manager. It decides when the next job starts and sends the task to the appropriate teller.

How Posting Works

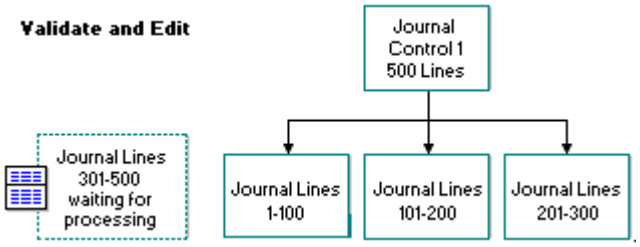
Parallel processing allows you to perform steps and tasks simultaneously. Steps in the posting process may have associated tasks as shown in the following list:

- Translation
- Summarization
- Validation
  - Validate and edit the journal control
  - Validate and edit journal lines
  - Balance the journal
- Update
  - Post amounts to the ldr_acct_bal table
  - Move journal lines to posted_jrnl_line table
  - Move journal control to posted_jrnl_ctrl table

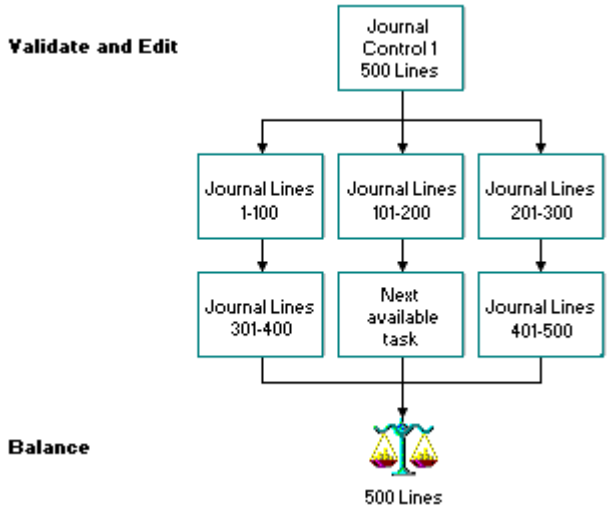
Example

The following series of illustrations show how one journal control with 500 lines is processed in parallel. In this example we have established our control parameters to process one journal control and 100 journal lines (using three different regions) at a time.

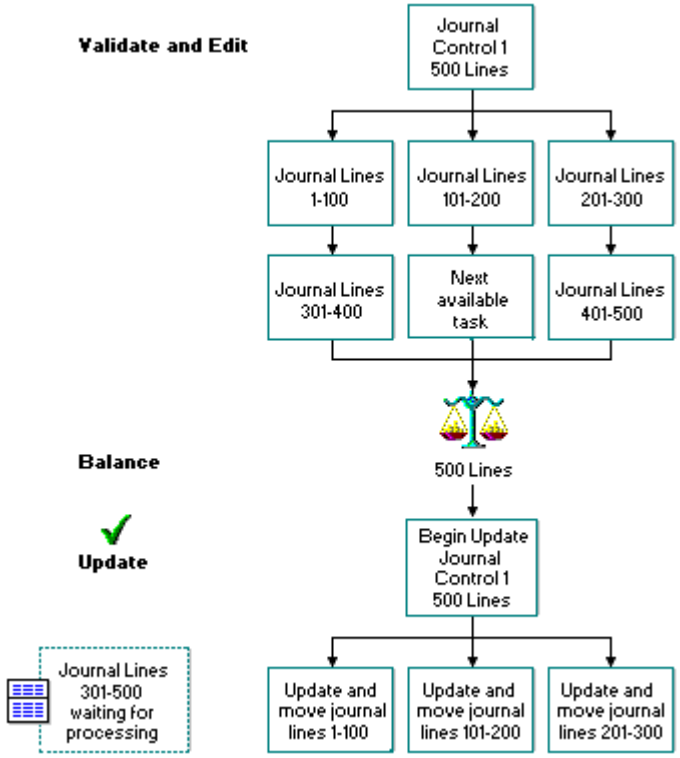
Notice that journal lines 301-500 are waiting for an available connection. Since journal lines are validated and edited independently, journal line 1 can be processing at the same time as journal line 200.



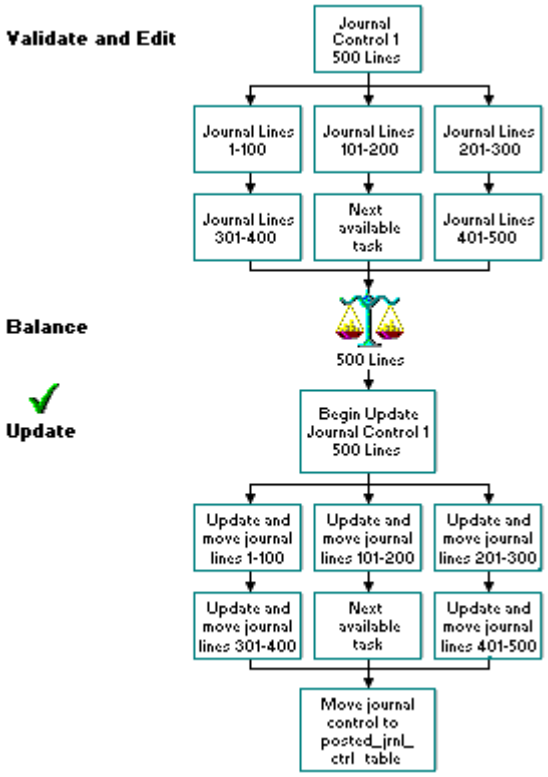
When Validation and Editing are complete the journal is ready for balancing. The Balance task is processed as one unit of work and balances the journal lines with its control.



Update posts amounts to the balance table (ldr_acct_bal) and moves the journal lines and its control to the posted journal tables (posted_jrnl_line and posted_jrnl_ctrl). Journals post line by line, allowing journal line 1 to be posted at the same time as journal line 130.



After updating all the lines, the final task moves the journal control to the posted_jrnl_ctrl table.



Tuning Your Environment for Posting

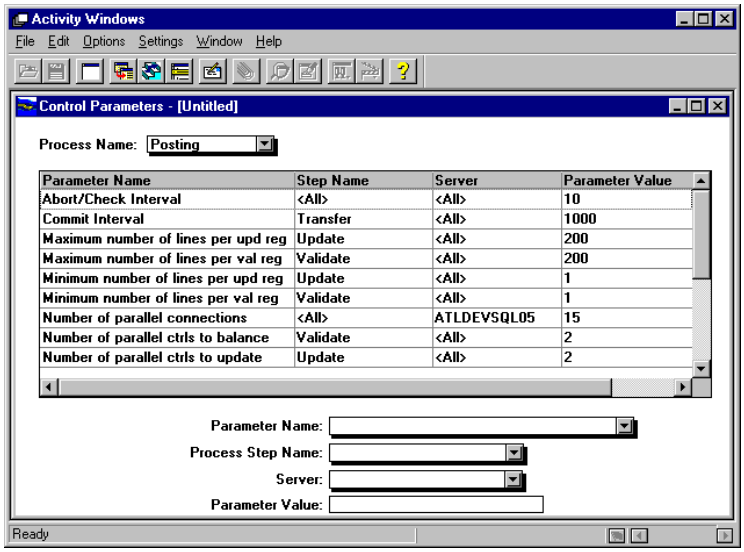
After you analyze your own business practices, you create an environment that allows the most efficient use of the posting program. Some factors to consider are

- System workload
  - Number of users
  - Number and types of applications
  - Amount and types of tasks performed by users
- Hardware configuration
  - Memory
  - CPU speed and capacity
  - Disk configuration
  - Network throughput.

Allocating Posting Processing Resources

With SmartStream you can determine the allocation of processing resources when you run posting. Decisions you make such as the number of parallel connections allowed, the number of parallel processes allowed, and the number of regions available for each process can be adjusted to meet your particular business requirements. Establish these values at implementation time or when the server environment changes.

After you determine the most efficient values for your particular business situation, enter them on the Control Parameters window.



For an explanation of the Parameter Names, see the online Help.

Warning: You must complete the Control Parameters window before you run the Ledger posting process.

Determining Posting Control Parameters for Translation

The following table lists some questions about the Translation step of the posting process for you to consider.

Parameter (Value)	Items to Consider	Explanation
Number of parallel translations	How many databases containing data that requires translation will I be processing in a single posting run? How many journals will the translation step process in that same posting run (from the same or a different database)?	DBSfast and DBSpymt databases are processed during the same posting run. By specifying two parallel processes, two journals (from either database) can be processed at the same time. Increasing the number of parallel translations can increase the overall performance of the Translation step.

Determining Posting Control Parameters for Summarization

The following table lists some questions about the Summarization step of the posting process for you to consider.

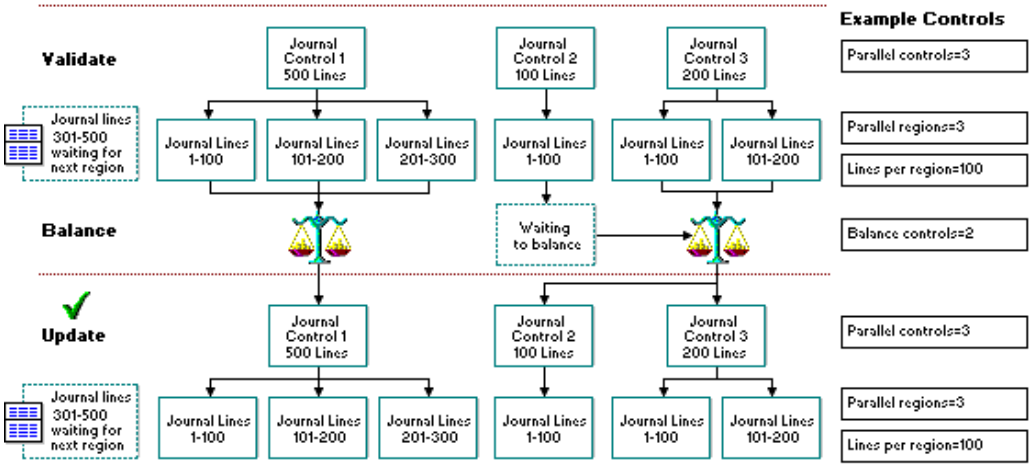
Parameter (Value)	Items to Consider	Explanation
Number of parallel summarizations	How many databases containing data that can be summarized will I be processing in a single posting run?	DBSfast and DBSpymt databases are processed during the same posting run. By specifying two parallel processes, both databases can be summarized in parallel. Because summarization is performed by journal source, if you have only one journal source on the request being processed during a single posting run, increasing this value does not enhance performance.

Determining Posting Control Parameters for Validation and Update

The following table lists some considerations and gives some examples about the Validation and Update steps of the posting process. The number in parentheses (*9*) relates to the **Example Controls** section in the diagram that follows this table.

This example is for illustrative purposes only. It does not suggest a recommended configuration.

Parameter (Value)	Items to Consider	Explanation
Parallel controls for Validation (3) Parallel controls for Balancing (2) Parallel controls for Update (3)	How many journal controls do I process during posting?	The parameter values vary if you process a large number of journals each with few lines or a few journals each with many lines. If processing 500 journal controls with 2 lines each, use more parallel controls to enhance processing.
Parallel regions for Validation (3) Parallel regions for Update (3)	How many parallel regions should I choose to maximize journal line processing?	If one journal control contains 1,000 lines, opening more parallel regions and fewer parallel controls allows quicker journal processing.
Number of lines for Validation (1-100) Number of lines for Update (1-100)	How many journal lines do I want processed at one time in one region?	When determining the range of lines, remember the number of commits decrease as the maximum number of lines increase. This keeps network use lower and maximizes the use of the server. However, as the number and size of transactions increase the greater the chance for creating a deadlock condition.

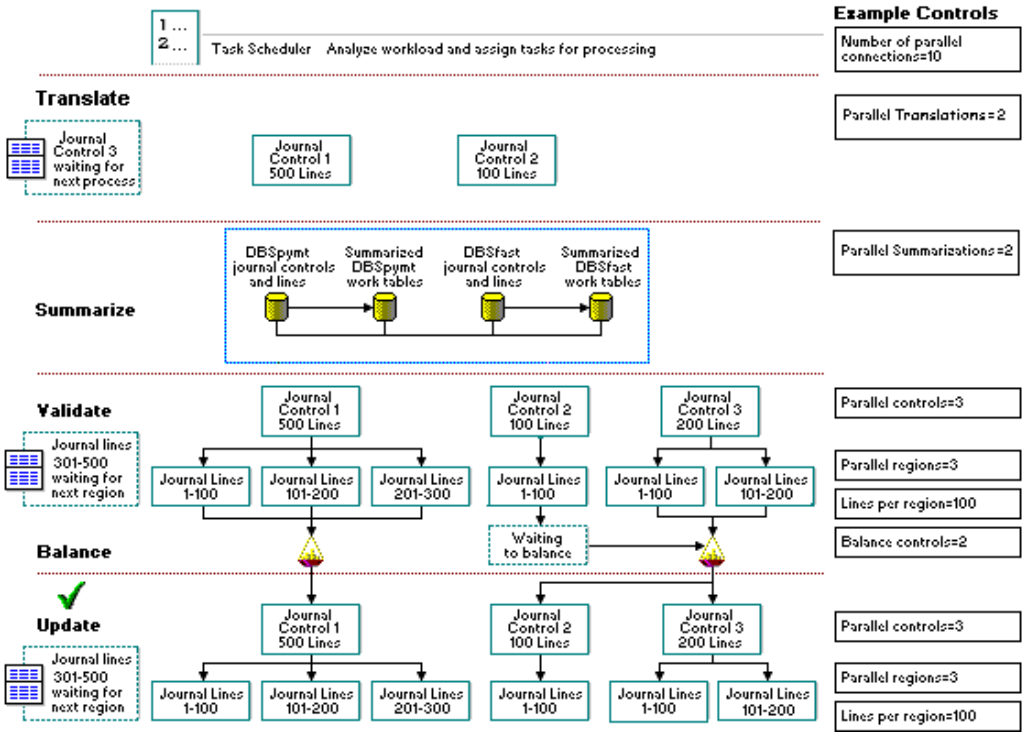


The following table explains why exceeding the number of parallel connections for any of these parameters will not enhance performance:

If you choose to...	And specify...	These steps or tasks...
▪ Summarize Asset Management and Payment Request ▪ Validate journals using three regions ▪ Update balances using two regions	Seven parallel connections	Can be run in parallel. For example, when Payment Request is summarizing, steps not dependent on other tasks can be processing in parallel. Journals in different phases of validation or update may be processing at the same time another journal source is summarized.
	Three parallel connections	Only three will run in parallel. For example, if validation is occurring in three regions, summarization of another journal source cannot occur until validation is complete.

Parallel Posting Process Illustration

The following illustration shows the parallel posting process:



Additional Posting Control Decisions

The following table lists the remaining control parameters:

Parameter (Value)	Items to Consider	Explanation
Abort Check interval	How often should the system check to see if the user requests job termination?	
Commit interval	How many lines do you process before a commit is made? **Note:** This parameter is used only by the transfer process, which is no longer supported.	You are processing 10,000 lines per journal control and set this parameter to 1,000. If the system goes down after 9,000 lines are committed, when the step is restarted the system processes only the remaining 1,000 lines.
Number of parallel connections	What is the processing load? Do I want to allocate all my resources to one process? How many system resources do I want to use for posting?	This can enhance performance by allowing for I/O and CPU resource leveraging. It limits the number of database connection used by the posting process.
Restart/Recovery option	How do you want to recover when posting does not run to completion?	Whether you choose manual or automatic recovery you must resubmit the job using the Job Scheduler activity.
Sleep interval	How long does the process wait before checking all server connections for results?	If a task completes in one second (freeing up a connection) and this parameter is 10 seconds, 9 seconds elapse before the system checks again for an available connection.
Timeout interval	How long should the stored procedure run before completing successfully?	This interval is used by the program to detect deadlocking. The program stops and then runs the stored procedure again if this interval is exceeded.

Performance Tuning

To take advantage of the parallel processing capabilities of the posting process, you must be using the supported version of Sybase Adaptive Server Enterprise or Microsoft SQL Server. For information about software requirements for SmartStream, see the Supported Technical Environments topic on the AnswerLink Bulletin Board.

Consider the following points when you are determining your posting process parameters.

- Tune your servers (see your database systems administration documentation)
- Consider your business requirements and hardware configuration when establishing your control parameters and posting process steps.
- After analyzing all your business requirements, you may find that tuning the Validation and Update steps have the greatest effect on performance.
- If you experience problems processing multiple transactions and a large volume of data
  - Use fewer lines (around 25) in the Validation regions
  - Set the Update parameters to one (1) Parallel Control and many lines in a region.

Note: These considerations are based on processing 100,000 single currency journal lines using different Control Parameter values.

Ledger Reporting

Before running the reports delivered with SmartStream, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Scheduling Ledger Reports

You can schedule and run reports using the Job Scheduler window by entering the reporting parameters in the Program Name field.

Schedule the job using the parameter set that was defined using the reporting activity. The following table shows how to use the report parameter set.

Type	Program Name Field
Report Parameter Set	[*Path of Microsoft Access executable*] [*Path of reporting database*] [/*XMacro name*] [/CMD] [*Report Name*, *Parameter Set*, *Most Recent*] If you enter a Y as the value for the Most Recent parameter, reports that are date sensitive are run for the most recent date.
- Example	c:\access20\msaccess.exe c:\access\fgl32.mdb /XFGL_Sched_parm /CMD Posted Journal Summary Report, Rpt_Parm, Y **Note:** The Average Balances mdb is named fglab32.mdb. The Average Balances macro is FAB_Sched_Parm.

Report Status

Before running a job, check the DBS checkbox on the Job Scheduler window to get a return code of 0 if the job runs successfully. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

Maintaining Reporting Tables

Ledger writes the messages to the tables every time you use one of the following processes:

- Ledger, account, and balance maintenance
- Journal posting
- Revaluation

When the items on the message table are not needed, delete them. You can access all message table deletion utilities by choosing the Utility button on the Ledger/Journal/Currency Reporting window. To delete messages, access the appropriate message table, enter the parameters, and delete the messages.

FRx Migration for Structures

If you are using FRx Visual Management Reporting™ to replace Management Reporter and you want to continue using some of the hierarchical information you defined in SmartStream structures to generate your financial reports, you must migrate this information to FRx.

Note: This is a limited migration. FRx accommodates only one structure for each accounting key element.

FRx Trees

FRx uses trees to generate reports. Trees are similar to structures, but unlike structures that are always defined for a single accounting key element, trees can be defined across more than one element.

Migration Process

You can load your chart of accounts information into FRx and use it to build your trees. However, to include summary data point and point value description information from structures in these trees, you must use the FRx migration for structures. The migration process requires that you run the fsp_ins_frx_frxs stored procedure once for each ledger entity and accounting key element combination that you want to load a structure for. The stored procedure populates the frx_seg_code_tree table. You can then use this migration table to build your FRx trees.

Limitations of the Migration Process

The FRx structure migration has the following limitations:

- You can migrate only one structure for each accounting key element. You must choose the structure that best represents each accounting key element.
- FRx handles only nine levels of summary points. The migration process loads only the lower nine levels for structures with more than nine levels.
- FRx handles only 8000 points per structure.
- In FRx, the number of characters in a summary point name cannot exceed the maximum length defined for the accounting key element it is associated with. You must rename summary points whose names are too long before running the migration process.

- FRx does not support the following special characters in point names and values:

Plus sign (+)	Colon (:)	Semicolon (;)
Pound sign (#)	Exclamation point (!)	Comma (,)
Percent sign (%)	Question mark (?)	Double quotation mark (")
At sign (@)	Dash (-)	Single quotation mark (')
Underscore (_)	Equal sign (=)	Opening and closing parentheses ( )
Dollar sign ($)	Asterisk (*)	Opening and closing brackets ([ ])
Ampersand (&)	Caret (^)	Slashes - forward (/) and backward (\ )

Methods

You can use either of the following methods to migrate structures information to FRx trees.

- Run the migration process once before the first data load to FRx to load the frx_seg_code_tree migration table. After the first data load, you can build your FRx trees using the information in the frx_seg_code_tree table. You maintain the FRx trees as needed within FRx.
- Delete the frx_seg_code_tree table and have the migration process rebuild it before each data load. This method requires you to rebuild the FRx trees from the frx_seg_code_tree table before changes in the FRx reports are implemented. Also, this method makes dual maintenance of structures in SmartStream and trees in FRx unnecessary.

Running the Stored Procedure

The following table explains the stages of the migration process:

Stage	Description
1	On the Stored Procedure Request window, enter options for a request to run the fsp_ins_frx_frxs stored procedure, including the selection criteria.
2	Using Job Scheduler window, run the stored procedure request to complete the migration of structures information to FRx. **Note:** The request ID you enter on the Stored Procedure Request window is used as a parameter when you set up the migration process in Job Scheduler.

Stored Procedure Request

When you enter the stored procedure request, you must enter the following information:

- Database: DBSglep
- Stored Procedure: fsp_ins_frx_frxs
- Input parameters - type double quotation marks ("") around each parameter
  - Ledger entity
  - Structure name
  - Accounting key element column name
  - If you want to select a structure from a group other than Financials, add the name of the group as a fourth parameter.

Input Parameter Example: "US01","SDI CENTERS","center","Reporting Tools"

Run the stored procedure once for each ledger entity and accounting key element combination.

Job Scheduler Parameters

Enter the following parameters on the Job scheduler window to run the fsp_ins_frx_frxs stored procedure.

Program	Program Name	Program Parameter
Connect Stored Procedure	**Windows:** piqc0030.exe **UNIX:** piqc0030	Identifier for the request that you defined on the Stored Procedure Request window.

Migration Table Layout

Database Name	Table ID	Table name
DBSglep	frxs	frx_seg_code_tree

Column Name	Description
ldr_entity_id	SmartStream ledger entity identifier
seg_num	Accounting key element number (1– 12)
seg_code	Point value
seg_code_descp	Point description
seg_code_is_parent	0=Data point 1=Summary point

Column Name	Description
seg_status	0=Enabled 1=Not enabled
child_low	Ending value of the segment range
child_high	Beginning value of the segment range (this value is the same as the child_low value if you are not loading a range)
child_is_parent	All points in the child range must be the same type: 0=Data point 1=Summary point

Ledger Load Transaction Information

SmartStream provides a facility for loading data to the Ledger. You can use this facility to create or update your chart of accounts, balances, journal lines, and average balances. This section describes

- Tools for generating the data
- Guidelines for entering the information
- Specific table information.

Tools for Generating Source Data

Some examples of tools you can use to create the source data are

- Spreadsheets, such as Microsoft Excel or Lotus 1-2-3
- Microsoft Access
- Tools that download data from a host.

Guidelines for Entering Data

When you enter the data for any of the load programs, follow these guidelines:

- Enter table column headings as the first row of the file.
- Column headings of the data must match exactly the column headings on the appropriate table
  - Chart of Accounts (ldr_acct).
  - Balance (ldr_acct_bal)
  - Unposted Journal Line (unposted_jrnl_line)
  - Average Balance Detail (ldr_acct_bal_detail)
- Enter key fields. They are required.
- Enter fields in any order; they do not have to match the table order.

Format Guidelines

- Acceptable delimiters for the date format are slash (/), hyphen (-), or period (.).
- Use a period as the decimal separator for an amount.
- Use a leading minus sign (-1849) or parentheses (1849) on credit amounts.
- If field type is int or float, do not use leading zeros.

Specific Guidelines by Table

- For the Balance table, add a column heading called _update_bal_code to specify whether the loaded amount replaces the existing amount (Replace) or if it is added (Adjust) to the existing amount.

  Note: The ldr_acct_bal table does not contain this column.

- When loading accrual journals, you must use a journal template to generate the control information.

Note: When loading accounting keys and balances, the load goes through the validation process as defined on Ledger Policy: Validation View.

How Data is Stored

The field type and field length columns represent how the DBMS stores the data. The following table describes how these data are stored.

Field Type	Field Length
int	10 characters plus a sign
money	15 characters plus 4 decimal places. This entry can also contain a sign.
tinyint	Any whole numbers between 0 and 255

Loading Accounting Keys

The following table shows the column information from the Chart of Accounts table that is required. Use this information to create the external file.

Column Name	Field Type	Field Length	Values
ldr_entity_id	char	5	Valid Ledger Entity ID
UDAK 1-12	char	varies	User-defined
acct_type_code **If you are using validation, this column is optional.**	char	1	A = Asset L = Liability Q = Equity I = Income E = Expense B = Balance V = Volume Enter value on an insert if validation is inactive
acct_descp_1 **If you are using validation, this column is optional.**	char	35	User-defined

Optional Information for Ledger Accounts Load

Column Name	Field Type	Field Length	Values
acct_descp_2	char	35	User-defined
acct_status_code	char	1	O = Open I = Inactive
summ_ind	char	1	Y = Summarize N = Do not summarize
open_date	datetime	8	Blank or less than or equal to close_date Format: mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd
close_date	datetime	8	Must enter value if use open_date Format: mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd
revaln_opt	char	1	U = Unrealized gain/loss R = Realized gain/loss N = Do not revalue

Column Name	Field Type	Field Length	Values
revaln_key_id	char	5	Blank if revaln_opt is N Valid user-defined Key ID if Y
revaln_rate_type	char	1	Valid user-defined type code for the rate entity for that Ledger entity
revaln_rate_date	datetime	8	Format: mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd
revaln_date_opt	char	2	N = Do not use date option S = Specific Date CF = First Day Current Period CL = Last Day Current Period PF = First Day Prior Period PL = Last Day Prior Period FF = First Day Future Period FL = Last Day Future Period
restate_opt	char	1	U = Unrealized gain/loss R = Realized gain/loss N = Do not revalue
restate_key_id	char	51	Blank if restate_opt is N Valid user-defined Key ID if Y
restate_rate_type	char	1	Valid user-defined type code for the rate entity for that Ledger entity
restate_rate_date	datetime	8	Format: mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd
restate_date_opt	char	2	N = Do not use date option S = Specific Date CF = First Day Current Period CL = Last Day Current Period PF = First Day Prior Period PL = Last Day Prior Period FF = First Day Future Period FL = Last Day Future Period
life_to_date_ind	char	1	Y for Asset, Liability, Equity, and Balance account types N for Income, Expense, and Volume account types
chgstamp	smallint	2	This value must be zero (0)

Special Considerations

If you use the Date Option and Rate Date fields for either revaluation or restatement, note the following information:

If…	And…	Then…
S (specific date) is the value in the Date Option field	The Rate Date field is blank	An error message is generated and the line is not written to table.
A date is entered in the Rate Date field	The value in the Date Option field is not S	The Date Option value is changed to S.
S is not the value in the Date Option field	A date is entered in the Rate Date field	Date of 01/01/1900 is used.

Additional Fields

The following fields are maintained by Ledger and should not be used:

- udak_surr_key
- date_created
- date_last_maintained

Loading Account Balances

The following tables show the column information from the balance tables. Use this information to create your ASCII file.

Balance Table (ldr_acct_bal)

The following table shows the required column information.

Column Name	Field Type	Field Length	Values
ldr_entity_id	char	5	Valid Ledger Entity ID
UDAK 1-12	char	varies	User-defined
curr_type	char	3	TEB if single currency If multiple currency, see Entering Currency Information on the Balance Table.
curr_code	char	3	Booking currency code if single currency. If multiple currency, see Entering Currency Information on the Balance Table.
equiv_curr_code	char	3	Booking currency code if single currency. If multiple currency, see Entering Currency Information on the Balance Table.
processing_yr	smallint	2	Current processing year Format: yyyy
amt_class_type	char	10	Valid user-defined amount class type The activity status for the amount class type must be all activities or balance maintenance.
dr_cr_code	char	1	Enter value if you store debits and credits separately. D if debit C if credit If not, column must be blank.
_update_bal_code	char	1	This column is used only by the load process and does not appear on the Balance Table. A to adjust balance amount R to replace balance amount

Optional Information for Balance Table

Column Name	Field Type	Field Length	Values
ldr_amt_0	money	8	Beginning balances for Asset, Liability, Equity, and Balance account types Leading minus sign (-) or parentheses ( ) on credit amounts
ldr_amt_1...n where n represents your maximum number of accounting periods	money	8	Net activity for each of your periods Leading minus sign (-) or parentheses ( ) on credit amounts
chgstamp	smallint	2	This value must be zero (0).

Additional Fields

The following fields are maintained by Ledger and should not be used:

- udak_surr_key
- date_created - Uses the current date when record is inserted
- date_last_posted - Uses the first day of January, 1900 when record is inserted
- date_last_maintained
- bal_id

Average Balances Table (ldr_acct_bal_detail)

The following table shows the required column information.

Column Name	Field Type	Field Length	Values
ldr_entity_id	char	5	Valid ledger entity ID.
UDAK 1 - 12	char	varies	User-defined.
processing_yr	int	2	Year balance is stored for.
amt_class_type	char	10	Valid user-defined amount class type.
curr_type	char	3	TEB if a single-currency enterprise. Transaction (T) currency only if a multiple-currency enterprise. For more information about currency and the Balance table, see Entering Currency Information on the Balance Table.
curr_code	char	3	Currency of the Ledger entity if a single-currency enterprise. Transaction currency code if a multiple-currency enterprise.
equiv_curr_ code	char	3	Must be blank.

Column Name	Field Type	Field Length	Values
dr_cr_code	char	1	Enter **D** if you store debits and credits separately (D/C storage). If not, leave the column blank.
interval_type_ code	char	1	D is for daily interval. M is for monthly interval.
interval_nbr	smallint	2	Number of interval.
interval_date	datetime	8	Date associated with each interval number.
interval_days	smallint	2	Number of days since the first day of the calendar period (that is, Julian days for a January-December calendar).
_update_bal_ code	char	1	This column is used only by the load process and does not appear on the Account Balance Detail table. A to adjust balance amount R to replace balance amount

Determining the Interval Number

If the daily retention option in ldr_entity_policy is more than 0, define interval_type_code as D and calculate interval_nbr as follows:

Step	Action	
1	Open the Periodic Calendar Year window.	
2	Enter the identifier of the calendar assigned to the ledger entity.	
3	Determine the calendar begin date.	
4	Use the calendar begin date to determine the sequential number of the day in the fiscal year that the effective date is based on.	
5	Use the sequential number to determine the interval number as follows:	
	If the sequential number is...	**Then...**
	Less than the daily retention number defined in the ledger entity policy	Use the sequential number as the interval number.
	Greater than the daily retention number defined in the ledger entity policy	Divide the sequential number by the daily retention number. The remainder is the interval number. **Note:** If the remainder is 0, then the interval number equals the daily retention.

Examples

Daily Retention	Calendar Begin Date	Effective Date	Calculation
60	January 1, 2002	February 1, 2002	Day in fiscal calendar is 32 32 is less than 60 Interval number is 32
60	January 1, 2002	May 2, 2002	Day in fiscal calendar is 122 122 is greater than 60 Remainder of (122/60) is 2 Interval Number is 2
60	January 1, 2002	August 29, 2002	Day in fiscal calendar is 241 241 is greater than 60 Remainder of (241/60) is 1 Interval Number is highest Interval number is 1
60	January 1, 2002	August 28, 2002	Day in fiscal calendar is 240 240 is greater than 60 Remainder of (240/60) is 0 Interval number is 60 (the daily retention)

Optional Information

Column Name	Field Type	Field Length	Values
eff_bal_amt	money	8	Current total balance of account balance row.
eff_adj_amt	decimal	9	Adjustment to effective balance.
eff_aggr_amt	decimal	13	Current aggregate amount.
eff_aggr_adj_amt	decimal	13	Adjustment to aggregate.
value_bal_amt	money	8	If not provided, is sum of eff_bal_amt + eff_adj_amt.
value_aggr_amt	decimal	9	If not provided, is sum of eff_aggr_amt + eff_adj_aggr_amt.

Entering Currency Information on the Balance Table

Entering the correct currency values for the balance table requires understanding how values are stored. The following table explains the currency information stored in the balance table.

Column	Description	Example
currency type (curr_type)	Designates whether the row contains book, equivalent, or transaction currencies.	Transaction values are indicated by T.
currency code (curr_code)	Designates the transaction and book currencies	If the primary book is pounds sterling, this column is GBP.
equivalent currency code (equiv_curr_code)	Designates the codes for the equivalent currencies.	If the transaction currency is French francs, this column contains FRF.

The following table shows how these three columns work together.

Currency Type Value	Currency Code	Equivalent Currency Code
B1	Primary book	Blank
B2	Secondary book	Blank
T	Transaction currency	Blank
E1	Primary Equivalent	Transaction currency code
E2	Secondary Equivalent	Transaction currency code

Note: The B1 and B2 currency types are stored only if you elect to store book balances on the Ledger Policy window. If the books are not stored on the Ledger Account Balance Detail table, then totals are not calculated or reported.

Example

The following example shows one accounting key on the balance table when the ledger entity:

- Stores book balances
  - Primary - United States dollars (USD)
  - Secondary - Pounds sterling (GBP)
- Uses two transaction currencies
  - United States dollars (USD)
  - Japanese yen (JPY)

Year	Amount Class Type	Currency Type	Currency Code	Equivalent Currency Code	Explanation
2002	ACTUAL	B1	USD		Summarized balance for primary book in USD
2002	ACTUAL	B2	GBP		Summarized balance for secondary book in GBP
2002	ACTUAL	E1	USD	JPY	Equivalent amount for primary book (JPY converted to USD)
2002	ACTUAL	E1	USD	USD	Equivalent amount for primary book (primary and equivalent codes are the same when the transaction currency is also the primary book)
2002	ACTUAL	E2	GBP	JPY	Equivalent amount for secondary book (JPY converted to GBP)
2002	ACTUAL	E2	GBP	USD	Equivalent amount for secondary book (USD converted to GBP)
2002	ACTUAL	T	JPY		Transaction entered in JPY before conversion
2002	ACTUAL	T	USD		Transaction entered in USD before conversion

Note: The more transaction currencies used, the greater the number of rows on the balance table for storing the transaction and equivalent values.

Retrieving Currency Information

You can query balances posted in a transaction currency using the three-character currency code. You can report on book balances for primary or secondary books by using the indicator in the currency type (curr_type) column. If you do not store book balances, you derive these balances by totaling the balance rows starting with the equivalent designation of E1 or E2 in the currency type column.

Loading Journals

The following pages show the fields on the Unposted Journal Line table. The information is separated into the following categories:

- Required fields for all journals
- Required fields if using amount class 2
- Optional fields for all journals
- Additional required fields for multiple currency journals
- Optional fields for multiple currency journals
- Optional fields for journal controls or templates

Required Information for All Journals

Column Name	Field Type	Field Length	Values
ldr_entity_id	char	5	Valid ledger entity ID
jrnl_id	char	20	A user-defined, uppercase value is required. The load process converts the journal ID to uppercase as needed.
eff_date	datetime	8	mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd
jrnl_seq_nbr	int	4	User-defined
jrnl_line_nbr	int	4	Increase by one. This is not required for loading only a template (_template_ctrl_only set to Y).
line_ldr_entity_id	char	5	Same as ldr_entity_id, except on interentity journals This is not required for loading only a template (_template_ctrl_only set to Y).
UDAK 1-12	char	varies	User-defined UDAK 1 is required for loading only a template (_template_ctrl_only set to Y), but the value can be blank. UDAK 2 - 12 are not required for loading only a template.
trans_amt	money	8	Leading minus sign (-) or parenthesis ( ) on credit amounts This is not required for loading only a template (_template_ctrl_only set to Y).

Column Name	Field Type	Field Length	Values
prim_dr_cr_code	char	1	D = Debit C = Credit This is not required for loading only a template (_template_ctrl_only set to Y).

Required Fields for Journals That Use Amount Class 2

Column Name	Field Type	Field Length	Values
misc_dr_cr_code	char	1	D = Debit C = Credit
misc_amt	money	8	Amount class 2 transaction amount Leading minus sign (-) or parenthesis ( ) on credit amounts

Optional Fields for All Journals

Column Name	Field Type	Field Length	Values
jrnl_user_fld_amt	money	8	User-defined
jrnl_user_alpha_fld_1	char	10	User-defined
jrnl_user_alpha_fld_2	char	15	User-defined
jrnl_user_alpha_fld_3	char	20	User-defined
descp	char	35	If using a template, this value comes from journal control and cannot be changed. If no template is used, value is user-defined.
amt_class_1	char	13	All lines per journal must use the same amount class. If using a template, the values must match the template.
amt_class_2	char	13	All lines per journal must use the same amount class. If using a template, the values must match the template.
user_id	char	30	User-defined
acctg_distn_type_code	char	3	User-defined
distribution_entity			**Note:** Used by SmartStream Projects Valid Project entity
source_doc_ref	char	100	User-defined

Column Name	Field Type	Field Length	Values
adb_value_date	datetime	8	mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd
_validate_acct	char	1	Y = Yes N = No If this value is set to Y, the load process checks that ▪ The accounting key is valid and generates the account if the Automatic Generation option is selected in entity policy. ▪ The journal control is not already in the posted_jrnl_ctrl table before it inserts it.

Additional Fields

The following fields are maintained by Ledger and should not be used:

- accrl_rvsl_ind
- apprvl_list_id
- bal_status_code
- chgstamp
- curr_rate_version
- date_created
- date_updated
- detail_line_id
- jrnl_line_status
- jrnl_origin_code
- jrnl_prev_line_status
- jrnl_prev_status_code
- jrnl_status_code
- last_line_nbr
- ldr_acct_version
- ldr_amt_class_type_version
- ldr_entity_policy_version
- nbr_of_lines_in_err

- posting_pd
- posting_yr
- prim_curr_code
- summ_ind
- suspense_seq_nbr
- udak_surr_key

Required Fields for Multiple Currency Entity

Column Name	Field Type	Field Length	Values
trans_curr_code	char	3	User-defined
curr_rate_type	char	1	User-defined
curr_rate_date	datetime	8	mm/dd/yyyy or dd/mm/yyyy or yyyy/mm/dd

Optional Fields for Multiple Currency Entity

Column Name	Field Type	Field Length	Values
prim_amt	money	8	Enter converted amount to override the amount Currency calculates. See the rule following this table.
secdy_amt	money	8	Enter converted amount to override the amount Currency calculates. See the rule following this table.
trans_to_prim_ exchange_rate	float	8	Enter conversion rate if you want to override the rate in Currency. See the rule following this table.
trans_to_euro_ exchange_rate	float	8	Enter conversion rate if you want to override the rate in Currency. See the rule following this table.
euro_to_prim_ exchange_rate	float	8	Enter conversion rate if you want to override the rate in Currency. See the rule following this table.
prim_to_euro_ exchange_rate	float	8	Enter conversion rate if you want to override the rate in Currency. See the rule following this table.

Additional Fields

The following fields are maintained by Ledger and should not be used:

- curr_converted_ind
- euro_to_secdy_exchange_rate
- prim_to_secdy_exchange_rate
- secdy_curr_code

Rule

If you want to enter amounts and bypass currency conversion, you must

- Use a template **and** set the Override Books field to Warn or Balance on the Additional Control view of the Unposted Journals window.

  or

- Load the journal with curr_converted_ind set to Y or B.

Considerations

Inaccurate or missing information can cause errors during posting. Any errors detected during posting are processed based on the parameters established for the journal.

If you want to identify journal errors before posting, access and save the journal using the Unposted Journals activity. (You must change the journal, for example, adding a period in the Description field.) Ledger edits the journal when you save it. You can make corrections before the journal is posted.

Optional Fields for Journal Control for Any Journal

The Journal Load process allows you to enter journal control information for a journal or for a journal template.

Column Name	Field Type	Field Length	Values
jrnl_descp	varchar	35	User-defined
jrnl_type_code	char	1	A = Accrual/Reversal D = Detail Adjustment G = General T = Template If there is a valid accrual reversal date, the default is A. If template control only is set to Y, the default is T. Otherwise, the default value is G.
accrl_rvsl_date	datetime		If this is an accrual or reversal journal, enter a valid date.

Column Name	Field Type	Field Length	Values
dr_ctrl_tot_misc	money		The default value is zero (0).
cr_ctrl_tot_misc	money		The default value is 0.
dr_ctrl_tot_trans	money		The default value is 0.
cr_ctrl_tot_trans	money		The default value is 0.
rate_entity_id	char	5	User-defined
jrnl_vou	char	15	User-defined
err_handling_opt	char	1	R = Error Recycle S = Suspense If there is a value in the Suspense ID column, the default is S. Otherwise, the default is R.
adj_pd	tinyint		Blank, 0, or any positive integer.
suspense_id	char	5	If the error handling option is S, you must enter a suspense ID.
lock_ind	char	1	Y = Yes N = No The default value is N.
distribution_entity	varchar	30	**Note:** Used by SmartStream Projects Valid Project entity
source_doc_key	varchar	80	
accrl_rvsl_pds_ahead	tinyint		0 - 12 The default value is 0.
accrl_rvsl_day	char	1	F = First L = Last Blank If the accrual reversal periods ahead is not zero, the default is L. Otherwise, the default value is Blank.
jrnl_note	varchar	255	User-defined
curr_converted_ind	char	1	Y = If the books are out of balance, post the journals as is and issue a warning message. N = Perform currency conversion during posting. B = Perform currency balancing during posting and create a balancing entry if the books are out of balance.

Column Name	Field Type	Field Length	Values
_template_ctrl_only	char	1	Y = Yes N = No If this value is set to Y, only the control information in this batch is uploaded. The default value is No.
ldr_intraentity_bal_ind	char	1	Indicates whether this journal will be balanced by accounting element (intraentity balancing). **Valid Values** Y - Yes N - No Blank - The posting process determines the value. If the value is Yes, the posting process also determines the default identifier for the intraentity balancing control. Blank is the default.
ldr_intraentity_ctrl_id	char	20	The identifier of the balancing control values to balance this journal to during intraentity balancing. If value in the ldr_intraentity_bal_ind field is Y and two-sided intraentity balancing is required, a valid control identifier is required. If the value in the ldr_intraentity_bal_ind field is N or blank, **do not** enter a value for this field. If the posting process sets the intraentity balancing indicator to Yes, it also determines the default identifier for this field.
ldr_intraentity_rule_id	char	20	The identifier for the balancing rule to use for this journal during intraentity balancing. If the value in the ldr_intraentity_bal_ind field is Y, a valid rule identifier is required. If the value in the ldr_intraentity_bal_ind field is N or blank, **do not** enter a value for this field. If the posting process sets the intraentity balancing indicator to Yes, it also determines the default identifier for this field.

Column Name	Field Type	Field Length	Values
jrnl_translation_ind	char	1	Indicates whether to translate this journal using the associated journal translation rule or rules. **Valid Values** Y - Submit this journal for translation processing (translation rule associations determine which rules to use during translation). N - Do not submit this journal for translation processing. Blank - The posting process determines the value. Blank is the default.

11 Payables

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Types of Scheduled Processing

You can schedule several Payables jobs. Although the processes are different, you perform similar steps to initiate them. The Payables scheduled processes are

- Invoice and control group
- Evaluated receipt settlement (ERS)
- Matching
- Generating drafts
- Payments
- Draft payment
- Receipt accrual

Invoice and Control Group

Three scheduled processes are used to load invoices and control groups:

- Bulk copy
- Invoice and control group load
- Reset logical locks for invoice and control group load

Prerequisite

If invoices in the invoice load scheduled process reference quick vendors, be sure to run the vendor load scheduled process first to add those quick vendors.

Bulk Copy

To process the different types of invoice transactions, copy the transactions from an external business source to the DBMS tables. You can use one of the following methods to perform this task:

- Copying the transactions to the DBMS tables in bulk
- Writing the transactions directly to the DBMS tables

If you are using the bulk copy method, you can schedule this process using Job Scheduler. If you are writing the transactions directly to the DBMS tables, you do not need to use the bulk copy process.

Invoice and Control Group Load

Run the program to read the invoice and control group transactions written to the DBMS tables and load them into product-specific tables in the database. The program performs all validations associated with each transaction.

Reset Logical Locks for Invoice Load

Run the program to reset logical locks for invoice load when you do not receive a return code of 0 after scheduled invoice and control group processing. This program resets the locks on the payment request server process table.

Evaluated Receipt Settlement

After you receive goods ordered from vendors set up to use evaluated receipt settlement (ERS) processing, run the ERS scheduled process to

- Identify all invoices from your ERS vendors
- Generate invoice transactions automatically from the information on the receipts for those vendors
- Produce credit memos for returns made to the vendors

Payables includes these invoice transactions in the next invoice and control group load scheduled process, and then routes them through the matching scheduled process. If the purchase order line schedules match successfully with the associated invoice lines and receipts, Payables can generate payments for the vendors in the next payment run.

Matching

Run the program to determine if an invoice line matches successfully with a purchase order and receipt. If an invoice line does not match, the process sends a task to review the details of the matching exception. If an invoice line matches successfully, the process updates the invoice header and the appropriate purchasing tables.

Generating Drafts

Run the program to automatically generate drafts from existing invoices.

Payments

Three scheduled process are used for payments:

- Preview payments
- Produce payments
- Reset logical locks for payments

Preview Payments

Run the program to select the payment requests that are to be paid based on the date criteria the user provides. The process calculates withholding and updates a table that shows payment requests that are about to be paid.

Produce Payments

Run the program to produce payments based on payment controls set up by the user. The process calculates withholding, determines the amount to be paid to the vendor, and updates the tables to reflect that a payment request is paid.

Network Connections

If you start the program from Job Scheduler, you run it on the UNIX server or on your workstation. Job Scheduler requires 13 connections for payments and 5 connections for the Poll program.

If you do not have enough connections, an error message appears in the local error log:

```
Unable to connect:  DBMS is unavailable
or does not exist.

SQL_Command Buffer:  exec psp_sel_tsdx_1 'glep", '*'
```

Most network software packages set the default number of connections to a value far lower than 18. Consult your network documentation for information about establishing an adequate number of network connections.

Reset Logical Locks for Payments

Run the program to reset logical locks for when the payments process does not return a code of zero (0). This program resets logical locks between the payments tables and the payment request tables.

Draft Payment

Run the program to keep Payables up to date with the automatic payments your bank makes for drafts.

Receipt Accrual

Run the program to generate accrual accounting journal entries that reflect timing differences between when you receive or issue goods and when you receive the invoice for these goods.

Options for Scheduling Reports

You can also run Microsoft Access reports using Job Scheduler.

You can schedule a report to run stand-alone or as a part of other scheduled jobs. For example, you can schedule the Payment Register report as a step following the payment run.

When you schedule a report, you must specify a report option as part of the program parameters. This report option identifies a set of report parameters you selected and saved using the Payment Register Reports activity.

For more information about payment register reports, see Payment Register Report Parameters window.

Stages of Invoice and Control Group Scheduled Processing

Scheduled control group and invoice processing is made up of three stages:

- Initial setup
- Load invoices and control groups
- Reset logical locks

Initial Setup

Complete the following tasks before scheduling invoice and control group processing:

- Complete the parameters for copying a text file to the DBMS table. Use the Bulk Copy window to complete this task. For information, see Writing Transactions to DBMS Tables.
- Complete the parameters to schedule the jobs for bulk copy and scheduled invoice processing. Use the Job Scheduler window to perform this task. For information, see Job Scheduler Parameters for Payables.
- Grant dbo authority for the pmt_rqst_trans table to users who will be running scheduled invoice transactions.
- Write a conversion program to convert your invoice transaction file to Geac format.

Invoice and Control Group Load

Follow this process to schedule processing for invoice and control group transactions and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Bulk copy transactions into the pmt_ rqst_trans table.	Job Scheduler window
2	Load and validate all the scheduled transactions using the Invoice Load transaction process.	Job Scheduler window
3	Review messages that result from the poll process.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through To Do messages and SmartStream Mail (SmartStream Mail gateway)
5	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	

Reset Logical Locks for Invoice Load

Follow this process to schedule processing to reset logical locks if the scheduled invoice processing did not receive a return code of 0:

Stage	Task	Action or Activity
1	Reset logical locks in the payment_rqst_server_ process table.	Job Scheduler window
2	Review messages that result from the poll process.	Scheduled Log window
3	Review messages that result from program processing.	SmartStream Mail

Stages of Evaluated Receipt Settlement

Follow this process to produce evaluated receipt settlement (ERS) invoices and to determine if the job completed successfully.

Stage	Task	Action or Activity
1	Set the Matching Controls on the Payment Options view to ERS for each vendor if you want evaluated receipt settlement invoices created.	Vendor Payables Information
2	Create and send purchase orders for these vendors.	Purchase Order
3	Create receipt of ordered materials.	Receipt
4	Complete the job parameters for the Evaluated Receipt Settlement and Credit Memos program (**fapc4500**) to schedule and generate ERS invoices and create credit memos for goods returned to all vendors. **Note**: When scheduling the job, you can indicate the number of days to delay creating the invoice. For instance, you can enter 0, and the invoice is created immediately after receipt. If you enter 2, the invoice is created two days after receipt.	Job Scheduler
5	Complete the job parameters for the Invoice and Control Group Load program (**fapc4000**) to schedule and load the invoice lines from the payment request transaction table to the appropriate SmartStream tables.	Job Scheduler

Stages of Matching Scheduled Processing

Follow this process to schedule matching of invoices, purchase orders, and receipts and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Complete the parameters to schedule the job and run the job. For information, see Job Scheduler Parameters for Payables.	Job Scheduler window
2	Determine the status of the job. If the job is not listed, continue with the next stage.	View Server Queue window
3	Review messages that result from the poll process.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through To Do messages
5	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	

Stages of Generating Drafts Processing

Follow this process to schedule generation of drafts and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Run the Access Query that selects invoices to combine into drafts. The payables_draft_pmt_rqst_select table is updated.	
2	Complete the parameters to schedule the job and run the job. For information, see Job Scheduler Parameters for Payables.	Job Scheduler window
3	Determine the status of the job. If the job is not listed, continue with the next stage.	View Server Queue window
4	Review messages that result from the poll process.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through To Do messages
6	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	
7	Print the drafts.	

Stages of Payments Scheduled Processing

Scheduled payments processing is made up of three stages:

- Preview and produce payments
- Produce draft payments
- Reset logical locks

Preview and Produce Payments

Follow this process to schedule payments processing and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Add the payment controls to set data criteria for selecting invoices for the Payment Preview or Payments (fpyc0400) program.	Payment Control
2	Complete the parameters to schedule the job and run the job. For information, see Job Scheduler Parameters for Payables.	Job Scheduler window
3	Determine the status of the job. If the job is not listed, continue with the next stage.	View Server Queue window
4	Review messages that result from the poll process.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway, To Do messages, Reports
6	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	

Draft Payments

Follow this process to produce draft payments and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Complete the parameters to schedule the job and run the job. For information, see Job Scheduler Parameters for Payables.	Job Scheduler window
2	Determine the status of the job. If the job is not listed, continue with the next stage.	View Server Queue window
3	Review messages that result from the poll process.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through To Do messages
5	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	

Reset Logical Locks for Payments

Follow this process to schedule processing to reset logical locks if the payments processing received a return code of 4 or higher:

Stage	Task	Action or Activity
1	Reset logical locks in pmt_server_process table.	Job Scheduler window
2	Review messages that result from the poll process.	Scheduled Log window
3	Review messages that result from program processing.	SmartStream Mail

Stages of Receipt Accrual Scheduled Processing

Follow this process to generate accounting journal entries and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Add the receipt accrual controls to set data criteria schedules for selecting purchase order lines for the Receipt Accrual (fapc0600) program.	Receipt Accrual Request window
2	Complete the parameters to schedule the job and run the job. For information, see Job Scheduler Parameters for Payables.	Job Scheduler window
3	Determine the status of the job. If the job is not listed, continue to the next stage.	View Server Queue window
4	Review messages that result from the poll process.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway
6	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	

Writing Transactions to DBMS Tables

You can write invoice and invoice control group transactions to the DBMS tables directly, or you can use the Bulk Copy process. It is not necessary to use Job Scheduler to write transactions to DBMS tables if you write transactions directly.

Writing Transactions Using the Bulk Copy Program

The Bulk Copy method of writing transactions to the DBMS tables is made up of the following stages:

Stage	Task	Action or Activity
1	Enter the scheduled transaction parameters for bulk copying.	Bulk Copy Parameters window
2	Copy all transactions using the Bulk Copy process.	Job Scheduler window

You can use the Bulk Copy process to copy transactions to a transaction table before processing them. If a transaction does not process successfully, Payables sends mail to notify you of any errors encountered during the Bulk Copy process.

Writing Transactions Directly

If you generate transactions using another product, such as an in-house product, add transactions directly to DBMS tables.

Procedure

Follow this procedure to directly update the Payment Request transaction table (pmt_rqst_trans):

Step	Action
1	Run or perform the contents of the stored procedure fsp_upd_prbt_before_bulkcopy.
2	Update the Payment Request transaction table using your own method.
3	Run or perform the contents of the stored procedure fsp_upd_prbt_after_bulkcopy.

Note: You can perform the contents of the stored procedure instead of running it.

Job Scheduler Parameters for Payables

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window to submit a scheduled job for processing. For more information, see Understanding the Job Scheduler in the *SmartStream Administration* guide.

Values for Parameters

Enter the following values for the Program Name and Parameters fields when scheduling the following programs:

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe	User-defined Bulk Copy Parameter Key established on the Bulk Copy Parameters window.
Invoice and Control Group Load	**Windows:** fapc4000.exe **UNIX**: fapc4000	Y - The program will delete previously unprocessed transactions from the transaction table. N - The program will not delete previously unprocessed transactions from the transaction table. Through Date - If Delete Unprocessed Transactions is Y, program compares parameter Through Date to system date on unprocessed transaction and deletes transaction if system date is earlier than through date. If Through Date is invalid, invoice load program stops.
Reset Logical Locks for Invoice Load	**Windows:** fapc4100.exe **UNIX:** fapc4100	None
Matching	**Windows:** fapc0900.exe **UNIX:** fapc0900	None

Program	Program Name	Program Parameters
Preview Payments and Produce Payments	**Windows:** fpyc0400.exe **UNIX:** fpyc0400	**For Preview Payments:** **PR** *yyyymmdd hh:mm:ss* where *yyyymmdd* specifies the date of the preview *hh:mm:ss* specifies the time of the preview Payables uses AM as the default for the time. To include AM or PM with the time, enter it after the time, with no space. Example: 09:00:00PM The data corresponds to the date and time of run date on payment controls. The run date/time on the Payment Control window must be before or on the current date and time. If the payment control run date/time is in the future, the payment job will not run for this payment control. **For Producing Payments:** SYTM
Payment Print File	**Windows:** fpyc0500.exe **UNIX:** fpyc0500	The program requires an output file name for the print file. If you enter **N**, the output file is not produced. Payables requires a payment method. Run date/time is optional. *yyyymmdd hh:mm:ss* where *yyyymmdd* specifies the date the program is run *hh:mm:ss* specifies the time the program is run Payables uses AM as the default for the time. To include AM or PM with the time, enter it after the time, with no space. Example: 09:00:00PM The data corresponds to the date and time of run date on payment controls.
Generate Drafts	**Windows:** fapc1000.exe **UNIX:** fapc1000	User ID that you entered to run the Access Query.
Reset Logical Locks for Payments	**Windows:** fpyc0410.exe **UNIX:** fpyc0410	None

Program	Program Name	Program Parameters
Receipt Accrual	**Windows:** fapc0600.exe **UNIX:** fapc0600	Receipt accrual request ID established on the Receipt Accrual Request window. Optionally, enter a space then **_ARCHIVE_** if you want to include archived invoices in the receipt accrual calculation. **Note:** Processing time increases if archived invoices are included in the calculation. To reset the Receipt Accrual scheduled process, rerun Receipt Accrual using RSTPRG as the program parameter instead of the receipt accrual request ID
Draft Payment	**Windows:** fpyc1000.exe **UNIX:** fpyc1000	Ledger effective date for cash entries. Must be in the format yyyymmdd. Optionally, payment method

Reviewing the Status of the Job

You can determine the status of the job from the messages that are generated during processing. This section includes information about the following types of messages:

- Scheduler messages
- Program processing messages

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps. It also indicates the job's final result (ended successfully, ended with errors, ended before completion). You can see any message using the Scheduler Log activity.

Return Codes

The return codes displayed on the Scheduler Log window refer to other more detailed messages. The following table lists the possible return codes and the type of message being referred to. See the appropriate section for more information about specific messages.

Return Code	Meaning	Type of Message
1 - 3	An error message has been issued by Payables.	Payables messages
4 - 5	A error message has been issued by the DBMS.	Program processing messages

Payables Messages

Some scheduled processes generate messages when data fails the program's edits.

Payments

Application errors generated by scheduled payments are written to the pmt_run_message table. The Payment Register reports print these messages as part of the registers.

For details on the Payment Registers, see Payment Register Report Parameters window.

Control Groups and Invoice Transactions

Application errors as a result of entering scheduled control group and invoice transactions are written to the pmt_rqst_trans_message table.

Review the invoice and control group transaction errors using one of the following windows:

- Invoice Control Group
- Invoice
- Payment Request Transaction Correction

Drafts

The drafts scheduled process does not write its results to a table.

Program Processing Messages

Messages written as the result of a Payables program are sent to a message table (psc_messages). After the process is complete, these messages are automatically sent to the user identified in the Distribution ID field on the Job Scheduler window. The messages are then deleted automatically from the psc_messages table.

You can display these messages by selecting the Mail Folder In Box from your desktop.

Payables produces the following types of messages:

- Number of items processed
- Number of items in error

Troubleshooting

This section provides general information about correcting problems that occur during processing.

Payments Process Interrupted

Problem: The Payments process does not run to completion because it is interrupted.

The maintenance being performed on the transaction that is interrupted is rolled back or undone. All the maintenance tasks completed for transactions before the interruption are saved. Available Reference Number does not use the two-phase commit process. Therefore, the last number successfully processed was not updated on the pmt_ref_nbr table.

Action: Use the Available Reference Number window to reset reference numbers. After identifying the cause of the problem and correcting it, you can resubmit the job immediately or at the regularly scheduled time. When the job is resubmitted processing resumes with the transaction that was interrupted.

Policy Updates Not Saved

Problem: Updates made to policy while entering an invoice were not saved to the document.

Action: Because policy is retrieved when the window is opened, close the Invoice window and reopen it. The updated policy defaults are retrieved.

Another User Running Invoice Load

Problem: The message that another user is running the invoice load program is displayed because another scheduled invoice load process is running.

Action: Run the Logical Lock Reset program (fpyc0410).

Scheduled Job Interrupted

Problem: The scheduled job does not complete because it is interrupted.

The maintenance being performed on the transaction that is interrupted is rolled back. All the maintenance tasks completed for transactions before the interruption are saved.

Possible Action: After identifying the cause of the problem and correcting it, resubmit the job immediately or at the regularly scheduled time. When you resubmit the job, processing resumes with the transaction that was interrupted.

Duplicate To Do Messages

Problem: You receive duplicate To Do messages for matching exceptions.

Possible Action: You can turn on the Duplicate Checking option in Workflow Workbench.

Warning: Turning on duplicate checking increases processing time.

What Happens During Processing?

This section describes how Payables performs scheduled processes. It also contains information about the tables affected during processing.

Bulk Copy Process

The bulk copy process writes payment request transactions from a text file to the pmt_rqst_trans table and updates the table with a user identifier.

SmartStream uses the user identifier in the bulk copy parameters, if one was entered; otherwise, it uses the user identifier for the security profile used in Job Scheduler for that scheduled run of bulk copy.

Invoice and Control Group Load Process (fapc4000)

Running scheduled invoice and control group processing applies the payment request load transactions from the DBMS pmt_rqst_trans table. You can run the job on the UNIX server or on your workstation.

When checking security, Payables uses the user identifier on the transaction. If any of the transactions have errors, Payables sends a message to the user that the transaction is assigned to.

The following table shows the stages of the invoice and control group load process:

Stage	Description
1	The program reads all payment request transactions and validates the information.
2	If a transaction passes all edits, Payables adds it to the payment request tables.
3	If a noncritical error occurs, all valid information is written to the payment request tables. Invoice transactions are added with a status of Incomplete. A workflow message prompts you to correct the data.
4	If a critical error occurs, the transaction remains in the transaction table. These transactions are corrected through the Payment Request Transaction Correction window. A workflow message prompts you to correct the transaction.

Class Edits

When this process reads the transactions, it performs class edits to verify that

- All numeric fields contain numeric data
- The transaction type is a valid transaction type
- All date fields contain valid dates based on the server date format.

Product Edits

Payables also performs product edits appropriate for the transaction being validated. Product edits include edits to check that the transaction uses valid identifiers for items such as the invoice, terms, payable entity, currency, taxes, and control group.

Reset Logical Lock for Invoice Load Process (fapc4100)

The invoice load (fapc4000) program updates the pmt_rqst_server_process table with a row that is used to set a logical lock on the DBSprqt database.

Although Payables allows many concurrent processes, it starts the Logical Lock Reset program (fapc4100) for the invoice load process to prevent two invoice load processes from running at the same time.

The logical lock reset program deletes the row in the pmt_rqst_server_ process table to remove the logical lock.

Matching Process (fap0900)

The matching process updates the invoice line, purchase order line schedule, and matching exception information.

Matching Invoices and Purchase Orders

The matching process performs the following tasks to match invoice lines to purchase order line schedules and receipts successfully:

- Funds all invoices, including debit memos and credit memos, that are eligible for matching. If an invoice has lines to match, the status of the invoice is Awaiting Match or In Exception.
- Sorts invoice lines by site
- Revalidates all key information for a purchase order line schedule
- Processes all credit memos and debit memos first
- Processes one invoice line at a time and completes all updates for an invoice before moving to the next
- Processes one purchase order line schedule at a time
- Updates the invoice header
- Updates the purchase order line schedule
- Deletes entries for the purchase order line schedule from the Consolidated Purchase Order Line Schedule

Processing Invoices with Matching Exceptions

When the server process encounters a matching exception, it

- Sends the To Do message Review matching exception details
- Does not update the invoice header
- Does not update the purchase order line schedule
- Makes an entry in the Exception Activity table

- Continues processing the invoice line or stops processing the line, depending on the exception detected.

At the beginning of the next scheduled process run, the process searches for all invoices that have a status of In Exception and processes them along with the invoices that have an Awaiting Match status.

Processing Invoices with Exceptions

When the server process successfully matches an invoice that had an In Exception status, it

- Moves all comments for the invoice from the Matching Exception Comments table to the Payment Request Comments table and then deletes the exception comments
- Deletes all outstanding To Do messages for the invoice
- Makes an entry in the Exception Activity table.

Payments Process (fpyc0400)

The payments process uses the payments program (fpyc0400) to select payment requests and produce payments.

Payment Request Selection

The Payments program performs the following tasks to evaluate payment requests and select those that are eligible for payment:

- Selects invoices based on status and dates
- Creates rows in the pmt_temp_pmt_rqst table for each invoice selected
- Calculates withholding for each invoice line as defined by a withholding rule, then stores the result on the pmt_run_temp_pmt_rqst_line table
- Summarizes pmt_run_temp_pmt_rqst information and places it in the pmt_temp_pmt table to combine invoices into a payment
- Records vendor information in the pmt_run_vendor_info table for audit purposes
- Records bank information in the pmt_run_bank_info and pmt_run_pmt_meth tables for audit purposes

Running Payments (fpcy0400)

After the payment requests are selected, the program

- Assigns a reference number to each payment
- Creates rows in the pmt table - one row for each payment
- Creates rows in the pmt_run_pmt_rqst table - one row for each invoice associated with a payment
- Creates rows in the pmt_jrnl_ctrl table - one row for each payment

- Creates rows in the pmt_jrnl_line table - one row for each journal entry generated for a payment
- Creates rows in the pmt_run_pmt_meth table - one row for each payment method that has payments produced
- Creates rows in the pmt_run_bank_info table - one row for each bank that has payments produced
- Creates rows in the pmt_run_vendor_info table - one row for each vendor that has payments produced
- Updates payment reference numbers to remove any reference numbers now assigned to payments
- Updates the pmt_rqst table
- Updates the vendor totals.

Reset Logical Locks for Payments Process (fpyc0410)

If the Payments program (fpyc0400) ends before completion, you can run the Logical Lock Reset program (fpyc0410).

Purpose of the Program

The Payments program (fpyc0400) updates the pmt_server_process table with a row that is used to set a logical lock on the DBSprqt and DBSpymt databases.

Although Payables allows many concurrent processes, it starts the Logical Lock Reset program (fpyc0410) to prevent the following conditions:

- Two payment cycles running at the same time
- Resequencing payments while the Payments program is running
- Replacing payments while the Payments program is running
- Maintaining invoices for the combination of payment method and payable entity that are processing. (You can, however, continue to add payments.)

The program also removes orphan records from the pmt_temp_pmt, pmt_temp_pms_rqst and pmt_run_pmt_rqst tables. Because these tables are not part of the two-phase commit transaction, if the Payments program does not run to completion these rows remain on the table.

The Logical Lock Reset program

- Removes the pmt_run_pmt_meth row if it finds no payments on the pmt_run_temp_pmt table for the combination of run date and payment method
- Removes the pmt_run_vendor_info row if it finds no payments on the pmt or pmt_run_temp_pmt table for the combination of run date, vendor, and vendor location
- Removes the pmt_run_bank_info row if it finds no payments on the pmt or pmt_run_temp_pmt table for the combination of run date and payment method

- Deletes the row in pmt_server_process to remove the logical lock.

Receipt Accrual Process (fapc0600)

The Receipt Accrual program performs the following tasks to generate accrual accounting journal entries for differences between the time goods are received or issued and the time the goods are invoiced:

- Updates the pmt_rqst_server_process.
- Selects purchase order line schedule activity to include the accrual based on the ledger entity and dates entered in the receipt accrual request.
- Uses receipt and invoice amounts from the receipt accrual table to calculate accrual amounts and determine the accounting distributions for those amounts.
- Updates the Receipt Accrual Journal Control table with new journal identifiers and new sequence numbers.
- Updates purchase order line schedules with journal identifiers and sequence numbers.
- Writes posting transactions to the Journal Line table for receipt accruals.

Producing Payment and Remittance Advice Documents

You can use either Microsoft Access or the SmartStream Payment Print File program to produce payment and remittance advice documents. The Payment Print File program is recommended for high-volume payment production.

Using Microsoft Access

Payables loads the payment information into the Microsoft Access program. Next, Microsoft Access uses the report names identified for the payment method to format the payments, check print file, and remittance advice documents.

For information on defining report names for payment methods, see Setting Up Payment Methods for Bank Accounts in the *Bank* guide.

Payments

Payables uses the following reports to produce paper payment documents:

- Check/cheque payment report
  - CheckDocument-Box
  - CheckDocument-Script
- International check
  - Int'l Check Document-Box
  - Int'l Check Document-Script

Check Print File

Payables uses the CheckDocument-PrintFile report to produce an ASCII file that contains check print information and a control report.

Separate Remittance Advice Documents

If you create a text file of checks to print using third-party software and you want to print separate remittance advice documents, you must use the report SeparateRemitDocument or one with this name to print the remittance advice report.

Remittance Advice Documents

Payables uses the following reports to produce separate remittance advice documents:

- Check/cheque remittance report: SeparateRemitDocument
- Letter of transfer payment report: LetterTransferDocument
- Int'l Letter of Transfer Document

Subreports

The Microsoft Access database fpyregs.mdb contains the following subreports:

- CheckRemitDetail
- CheckRemitTotal

- CheckWithScriptBoxes
- CheckWithScriptLines

These subreports are linked to actual documents, based on payment reference numbers. The subreports call functions written to format dates, addresses, and amounts for international formats.

The subreports are used with the following document formats:

Use this subreport...	With check box format...	With check script format...	With separate remittance format...
CheckRemitDetail	X	X	X
CheckRemitTotal	X	X	X
CheckWithScriptBoxes	X		
CheckWithScriptLines		X	

Electronic Payments

The fpypaymt.mdb also provides formats for electronic payments that are suitable for electronic funds transfer.

Note: For security purposes, only the person who actually runs payments should know where this mdb resides.

The following table lists the types of electronic payments and the report or module name:

Payment Type	Transfer Formats	Module	Procedure
Bankers Automated Clearing Service (BACS)		BACS Link	
Bank transfers	Virement-Belgium	Bank Transfer Link	BelguimVRMTReportBT
	Virement-France	Bank Transfer Link	FrenchVRMTReportBT
	Custom	Bank Transfer Link	MakeCustomBankTransfer
International Bank Transfers	EDI Ansi X12	Bank Transfer Link	MakeEDIReport
	Custom	Bank Transfer Link	MakeCustomIntlBankTransfer
ACH		ACH Link	
CEMTEX		CEMTEX Link	

Using the Payment Print File Program

If your enterprise requires high-volume paper or electronic payment production, this is the recommended method of producing payments.

Prerequisite

You must run the scheduled process that generates payments (fpyc0400) before running the payment print file scheduled process.

Running the Payment Print File Program

After generating payments, you can run the Payment Print File program (fpyc0500) to produce the payment print file or the ACH payment file. The payment program and the print file program can be run as steps in the same job.

Output

The output files produced by the Payment Print File program have the same format as the output files produced by Microsoft Access (fpypmt32.mdb). The ACH file complies with the format specified in the NACHA 1999 Rules documentation.

The payment print file or the ACH file is generated if an output file name is specified; otherwise, payment information is stored in the pmt_temp_print_file table in the DBSpymt database.

Log Files

If the type of payment is CHK, the Payment Print File program generates a log file and stores it in the directory containing the program. The name of the log file depends on whether you specify an output file.

When an output file is...	The file name used is the...
Specified	Output file name with the file extension .log.
Not specified	Payment method identifier with the file extension .log.

Examples

You want the Payment Print File program to create a print file, so you enter the following Job Scheduler parameters:

chk0802.txt USCH1 8/2/99 10:12:30

The print file, chk0802.txt, is created in the directory where the program resides. The USCH1 payment method is for the CHK type of payment, so the log file, chk0802.log, is created in the same directory.

For another run of the program you do not want a print file created, so you enter these parameters:

N USCH1 8/2/99 10:12:30

The print file is not created. The USCH1 payment method is for the CHK type of payment, so the log file, USCH1.log, is created in the same directory where the program resides.

Special Considerations

If the type of payment is CHK, the report name specified in the payment method included in the program parameters must be **CheckDocument-PrintFile**.

Security

You can control security by granting permission to run the stored procedures associated witht the Payment Print File program to selected persons or groups. At minimum, you should secure the following stored procedures:

- fsp_gen_pmt_file
- fsp_gen_check_file
- fsp_gen_ach_file

Customization

The print file is created by a series of stored procedures. Without changing the C code, you can customize these stored procedures to produce output that meets your business requirements. Use these guidelines when you customize the stored procedures:

- The output table (pmt_temp_print_file) has 7 blocks of data, 255 bytes each. Each row represents a line of the output file.
- Each block can be customized to hold the user's data in the appropriate order for printing.
- Each block can hold up to 254 characters of data.
- A colon (:) is used to show the end of data in the block.
- To use the payment print information from the table, you must remove the colon at the end of each block.

Displaying the International Bank Account Number (IBAN)

The format of international bank account numbers on payments and remittance advice documents depends on whether these documents are distributed using paper or electronic media.

IBAN Displayed on Paper

Paper formats display the international bank account number (IBAN) by grouping the values into sets of four characters separated by a space. The first two values are the two-character country code, the next two values are the two-digit check digit, and the remaining values are the basic bank account number. The last set of values may vary in length, but cannot exceed four characters as shown in the second example.

Paper Example 1: Belgian Bank Account

Component	Value
Country code	BE
Check digit	62
Basic bank account number	510007547061

The IBAN for this account is BE62 5100 0754 7061

Paper Example 2: French Bank Account

Component	Value
Country code	FR
Check digit	14
Basic bank account number	20041010050500013M02606

The IBAN for this account is FR14 2004 1010 0505 0001 3M02 606

Int'l Letter of Transfer

The Int'l Letter of Transfer report displays IBAN information in the Transfer From Bank Account Number and Transfer To Bank Account Number fields on remittance advice documents only if the IBAN check digit value is entered for the associated account in the vendor bank transaction table.

IBAN Displayed Electronically

Electronic formats display the IBAN as a string of values without spaces. The first two values are the two-character country code, the next two values are the two-digit check digit, and the remaining values are the basic bank account number.

Electronic Examples

Belgium BE62510007547061

France FR1420041010050500013M02606

International Bank Transfers

International Bank Transfers (EDI and Custom) display IBAN information for an account only if the IBAN check digit value is entered for that account in the vendor bank transaction table.

Scheduling Payables Reporting

Before running the supplied reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Payment Register Reports

When you use Job Scheduler to produce a payment register report, you must include specific information about producing the report in the parameter set. List program parameters on one line, separated by forward slashes (/). Enter a blank space before each forward slash. Be sure to enter a forward slash after the last parameter.

Special Considerations

- When you set up this job on the Job Scheduler window, make sure that the DBS check box is **not** selected.
- If the Microsoft Access directory is not included in the environment's path, the scheduled process cannot find the Microsoft Access program. In that case, you must specify the fully qualified path and the program name, for example, c:\program files\microsoft office\office\msaccess.exe.
- Microsoft Access must be installed on the Job Server that you plan to use to run this job.
- Before scheduling these reports, make sure
  - The fpyregs32.mdb resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
  - The location of the fpyregs32.mdb is specified in your parameters from the point of view of the Job Server.
  - The report option ID is saved to the fpyregs32.mdb version that is visible to the Job Server.

Job Scheduler Parameters

Use the following parameters to schedule a Payment Register report:

Program	Parameter Set
msaccess.exe	Access mdb Name /cmd /User ID /Password /Language /Dialect /Report Option /

This table describes each parameter and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access Payment Register database file. You must enter the complete directory path.	c:\sstrm*xx*\fpyregs32.mdb
/cmd	Separator that tells Access information is being passed to this mdb.	**/cmd**
/User ID	Identifier for the user who runs the report.	/USER04
/Password	Password for the user who runs the report.	/logon
/Language	Code for the language Access uses to display error messages and other information.	**/EN** - Display messages in English. **Note:** You must enter this code in all capital letters.
/Dialect	Code for language dialect Access uses to display error messages and other information.	**/** **Note:** Currently, you must enter a blank space for this parameter.
/Report Option/	Name of the report option you previously set up in the mdb. For information about setting up report options, see the Payment Register - Report Parameters Window topic in the Payment Processing Help.	/Payment Register Report/

The complete set of parameters for the report used in the Example column is as follows:

c:\sstrm*xx*\fpyregs32.mdb /cmd /USER04 /logon /EN / /Payment Register Report /

Note: Currently, English is the only valid value for the Language parameter, and a blank is the only valid value for the Language Dialect parameter. This means you must enter a forward slash (/) followed by a blank space for the Language Dialect parameter. See the examples in the preceding table.

Payables Balancing Reports

When you use Job Scheduler to produce a Payables balancing report, you must include specific information for producing the report in the parameter set. List program parameters on one line, separated by forward slashes (/). Enter a blank space after the user ID, password, and language. Be sure to enter a forward slash after the last parameter.

Special Considerations

- When you set up this job on the Job Scheduler window, make sure that the DBS check box is **not** selected.
- If the Microsoft Access directory is not included in the environment's path, the scheduled process cannot find the Microsoft Access program. In that case you must specify the fully qualified path and the program name, for example, c:\program files\microsoft office\office\msaccess.exe.
- Microsoft Access must be installed on the Job Server that you plan to use to run this job.
- Before scheduling these reports, make sure
  - The fapbal32.mdb resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
  - The location of the fapbal32.mdb is specified in your parameters from the point of view of the Job Server.
  - The report option ID is saved to the fapbal32.mdb version that is visible to the Job Server.

Job Scheduler Parameters

Use the following parameters to schedule a Payables balancing report:

Program	Parameter Set
msaccess.exe	Access mdb Name/cmd /User ID /Password / Language /Dialect/Report Option/

This table describes each parameter and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access database file. You must enter the complete directory path.	c:\sstrm*xx*\fapbal32.mdb
/cmd	Separator that tells Access information is being passed to this mdb.	**/cmd**
/User ID	Identifier for the user who runs the report.	/USER04

Parameter	Description	Example
/Password	Password for the user who runs the report.	/logon
/Language	Code for the language Access uses to display error messages and other information.	**/EN** - Display messages in English. **Note:** You must enter this code in all capital letters.
/Dialect	Code for language dialect Access uses to display error messages and other information.	**/** **Note:** Currently, you must enter a blank space for this parameter.
/Report Option/	Name of the report option you previously set up in the mdb. For information about setting up report options, see the Payables Balancing Report Parameters Window topic in the Payment Request Processing Help.	/Trial/

The complete set of parameters for the report used in the Example column is as follows:

c:\sstrm*xx*\fapbal32.mdb/cmd/USER04 /logon /EN / /Trial/

Note: Currently, English is the only valid value for the Language parameter, and a blank is the only valid value for the Language Dialect parameter. This means you must enter a forward slash (/) followed by a blank space for the Language Dialect parameter. See the examples in the preceding table.

Return Code

If a scheduled report does not run because of an error, a Scheduler Error Log is created that lists the date and error messages for each report that did not run.

To display the return code for an error, select the More Step Information view of the Job Scheduler window. Choose the Geac Program checkbox so that it is **not** active, then choose Save.

Restarting Payables Jobs

Sometimes jobs stop before completion. A job must be completed before you can do any Payables online processing or run other scheduled jobs.

Restart jobs through Job Scheduler. Job Scheduler restarts jobs from the point at which they stopped. The jobs do not have to be rerun from the beginning.

Payables Jobs

The Payables jobs you can restart are

- Invoice load
- Payments.

Notification

Job Scheduler mails notice of job termination. When you set up Job Scheduler, indicate who is to receive messages for each job.

Restart Point

Processing takes place in groups of transactions. A group is processed, the changes to that group are committed to the database, and a record is written to the commit table.

Job Scheduler reads the commit table to restart a job from the beginning of the group of transactions in which the job stopped.

The commit point marks the beginning of each transaction group. The number for transactions between commit points is 1000.

For the invoice load scheduled process, all valid transactions are removed from the pmt_rqst_server_process table during processing, and transactions with errors remain in the table.

For the payments scheduled process, all valid transactions are removed from the pmt_server_process table during processing, and transactions with errors remain in the table.

When Job Scheduler restarts a Payables job, only the transactions remaining in the table are processed.

Determining How Much of the Job Is Left

Look at the transaction table to determine which transaction group the job stopped in. This helps you determine the percentage of the job left to be run and, therefore, approximately how long it will take to finish the job.

Purging Payables

Payables writes activity records to activity tables for most types of Payables transactions. The activity table contains a before image, an after image, or both along with information unique to the type of transaction. Because of the volume and size of the activity tables, they can take up extensive disk space. You can purge activity records to remove unnecessary activity records and reduce the amount of disk space used.

Purge Process

The following table explains the steps of the purge process:

Step	Description
1	Create purge request, including which activity records to purge.
2	Run the scheduled process to purge activity records.

For more information, see About Archive/Purge in the *SmartStream Administration* guide.

What Can You Purge?

You can purge information from the following Payables activity tables:

- Payment Request Activity Table
- Payment Activity Table
- Payment Clearance Activity Table

Before You Begin

Before beginning the purge process, clear payments using the Bank Clearance window or the Bank Clearance scheduled process (fbkbatch.exe) to ensure that your activity tables contain the most up-to-date information and that the clearance journal entries are generated.

Purge Conditions

To archive or purge Payables transactions, you must have full security access to the transactions you intend to process.

Also, Payables transactions must be purged in a specific order, and they must meet certain conditions to be eligible for archiving and purging. The following table shows the required order and the eligibility criteria:

Order	Eligibility Criteria
1. Payment clearances	▪ Journal entries for the payment clearnace are posted to ledger. ▪ The payment associated with the payment clearance is cleared (pmt_status_code is CLR). ▪ DBSbank.dbo.pmt_clearance contains clearances. ▪ The payment clearance meets the date criteria specified in the purge request.
2. Payments	▪ Payment link to Access is completed for the payment (pmt_link_status is DONE). ▪ Journal entries for the payment are posted to ledger. ▪ Remittance link to Access is completed for the payment (separate_remit_link_status is DONE or NONE). ▪ The payment clearance associated with the payment is purged (Pmt_status_code is **not** CLRX and PAID). ▪ The payment meets the criteria of the purge request.
3. Payment requests	▪ The status for the payment request is Cancel (CA) or Paid (PD). ▪ Journal entries for the payment request are posted to ledger. ▪ The payment request does not have a draft number. ▪ The payment request did not generate project journal entries. ▪ Payments associated with the payment request are purged. ▪ The payment request meets the criteria of the purge request.

You must successfully purge each type of information before moving on to the next. For example, you must successfully purge payment clearances before you can purge payments.

Selection Criteria

You can specify criteria for selecting information to purge from each table. Payables applies the selection criteria to an activity table for each activity type. All records that meet the selection criteria are purged. The following table shows the selection criteria fields you can use for each activity type and the activity tables from which records are purged:

Type of Purge	Selection Criteria Fields	Activity Table
Payment Request	date_updated	pmt_rqst
	payable_entity_id	
Payment	run_date	pmt
	payable_entity_id	
	bank_id	
	bank_account_number	
Payment Clearance	bank_identifier	pmt_clearance
	activity_date	
	bank_account_number	

Types of Purges

Based on the type of purge, Payables deletes specific types of information.

Payment Request Activity Records

Purging the payment request activity records deletes all information related to payment requests.

Payment Activity Records

Purging the payment activity records deletes all records related to payments.

Payment Clearance Activity Records

Purging the payment clearance activity records deletes all records related to the clearance of payments.

Related Activity Tables

When Payables finds records that meet the selection criteria on the activity table for each activity type, it purges all records on related tables that are linked by the same ID and activity date and time.

Note: When you enter a purge request, you must enter the date for the purge, but Payables purges tables according to the date and time. The time starts at 12:00:01 a.m., so if you enter a date of 8/15/2002, all records as of 8/15/2002 12:00:01 a.m. will be purged.

The following table shows the related records purged for each type of purge:

Type of Purge	Related Records Purged
Payment Request Activity	pmt_rqst_activity
	pmt_rqst_apprvl_comnt
	pmt_rqst_apprvl_status
	pmt_rqst_ctrl_grp
	pmt_rqst_comnt
	pmt_rqst_jrnl_ctrl
	pmt_rqst_jrnl_line
	pmt_rqst_line
	pmt_rqst_line_tax
	pmt_rqst
	pmt_rqst_trans_message
	pmt_rqst_tax
Payment Activity	pmt_run_bank_info
	pmt_jrnl_ctrl
	pmt_jrnl_line
	pmt_run_pmt_rqst
	pmt
	pmt_run_pmt_meth
	pmt_comnt
	pmt_resequence_audit
	pmt_run_message
	pmt_run_vendor_info
Payment Clearance Activity	pmt_clearance
	bank_jrnl_ctrl
	banK_jrnl_line
	pmt_clearance_comnt

Payables Transaction Layouts

Invoice scheduled processing uses text text files to hold information for scheduled processing transactions.

Use the scheduled invoice and control group transaction layouts to map the transactions received from a vendor into a text file in the SmartStream format.

There are eight Payables transactions. The transaction layouts contain a set number of fields. An individual transaction may not use all fields. Unused fields have a space as the value.

How Transactions Are Added

The text files hold a series of values (fields), separated by a tab. Enter the appropriate value for each field, followed by the tab delimiter. If you choose to omit an optional field, be sure to enter the space and delimiter before making the entry for the next field.

Entering Field Information

Use the table in this section to map the incoming data from the payment request to the text file. The table contains the order of fields for the transaction and the format or actual codes for each field.

Delimiters

Separate each field in a transaction layout with the column delimiter established in the bulk copy parameters. If you leave a field blank, be sure to enter a space and the delimiter to hold its place.

Alphanumeric Fields

Alphanumeric fields can contain alphabetic letters, numbers, or a combination of both.

Numeric Fields

Numeric fields can contain only numbers.

Amount Fields

Follow these guidelines when entering amounts for money:

- Enter the number with or without a decimal point. If you do not enter a decimal point, a whole number is assumed.
- Enter up to four decimal places.
- Do not enter thousand separators.
- Indicate a negative number with a minus sign (–) before the number.

The currency of the amount determines how many numerals Financials displays to the right of the decimal separator.

Date Fields

You can enter dates in two formats: yyyymmdd or the DBMS default date format. DBMS date formats vary; for example, in the United States a typical date format is

mm/dd/yyyy, but in Europe the dd/mm/yyyy format is more common. If you do not know the DBMS default date format, contact your SmartStream system administrator.

Follow these guidelines when entering dates in the DBMS default date format:

- Use a separator between month, day, and year.
- Enter month and day with or without leading zeros. For example, enter March as 3 or 03.
- Enter four digits for the year.

Payment Request Control Group Transaction

Use this transaction to enter control groups.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRCG.
2	Control Group	10 alphanumeric	Required Identifier for a control group of invoices.
3	Control Date	10 date	Required Date the operator entered the control group.
4	Control Total	25 numeric	Conditional Total amount of all transactions you expect to enter for the control group. Required if you do not enter a control count.
5	Control Count	6 numeric	Conditional Number of invoices you expect to enter for the control group. Required if you do not enter a control total.
6	Payable Entity	5 alphanumeric	Optional User-defined identifier for a particular set of payables policy decisions.
7	Accrual Effective Date	10 date	Optional Date to use as the effective date for posting the accrual to ledger. Determined by payable entity policy option or entered for the control group.

Payment Request Document Transaction

Use this transaction to enter information for the invoice document as a whole, one transaction per invoice.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRQT.
2	Vendor	10 alphanumeric	Required Identifier for the vendor who receives payment for the invoice.
3	Vendor Location	3 alphanumeric	Required User-defined identifier for a vendor. If the vendor has locations set up, you must enter the location. If the vendor does not have locations set up, you must enter spaces for the location.
4	Invoice Number	22 alphanumeric	Required Reference number used by the vendor to identify an invoice.
5	Invoice Date	10 Date	Required Date on the invoice document. It is used to calculate discount due date and final due date.
6	Scheduled Payment Number	3 numeric	Optional Number assigned to a payment for an invoice divided into recurring payments. If you enter a scheduled payment number while adding an invoice, the number must be zero. Default is zero.
7	Payable Entity	5 alphanumeric	Conditional User-defined identifier for a particular set of payables policy decisions. Required if no default payable entity comes from the control group.
8	Remittance Message	60 alphanumeric	Optional Description that appears on the remittance advice for a payment for the invoice.
9	Payment Method	5 alphanumeric	Conditional User-defined identifier for the bank, bank account, and payment options you use to generate payments in the appropriate format. Required if no default payment method comes from the vendor or payable entity. If the vendor for the invoice is a quick vendor (vendor payables status Q), the type of payment defined for the payment method must be Check/Cheque.

Field	Name	Length	Description
10	Invoice Type	4 alphanumeric	Optional Values are ▪ INVC (Invoice) ▪ CRMM (Credit memo) ▪ DBMM (Debit memo) ▪ FORM (Form). Default is INVC.
11	Discount Due Date	10 Date	Conditional Date a payment is due in order to qualify for a discount. Required if a discount amount is entered and a date is not calculated based on options from the terms code.
12	Final Due Date	10 Date	Conditional Date the payment is due. Required if a date is not calculated based on options from the terms code.
13	Terms Code	17 alphanumeric	Optional Identifier for the terms policy that determines discounts and payment terms. It is used to calculate discount due date, final due date, discount amount, and discount basis. You can override a default terms code with spaces by entering an asterisk (*) in this column.
14	Transaction Currency Code	3 alphanumeric	Optional Identifier for the currency used in the transaction. Default comes from vendor or payable entity policy.
15	Discount Amount	25 numeric	Conditional Amount to subtract from the total amount of a payment. Required if discount due date is entered and an amount is not calculated. The discount amount is based on options from the terms code.
16	Freight Amount	25 numeric	Optional Freight amount included in an invoice.
17	Miscellaneous Amount	25 numeric	Optional Amount of miscellaneous charges included in an invoice.
18	Invoice Total Amount	25 numeric	Required Total amount of an invoice from the vendor. Value is positive for an invoice, negative for a credit memo or debit memo. If the value is negative, you must enter a minus sign (-).

Field	Name	Length	Description
19	Accrual Effective Date	10 Date	Optional Date to use as the effective date for posting the accrual to ledger. Default accrual effective date comes from the control group or is determined by the policy option selected for the payable entity.
20	Number of Recurring Payments	3 numeric	Conditional Number of recurring payments you schedule. Required if you enter a recurring frequency.
21	Recurring payment frequency	4 alphanumeric	Conditional Required when the number of recurring payments is greater than zero. Values are ▪ WKLY (weekly) ▪ MNLY (monthly) ▪ QRLY (quarterly). No default value.
22	Accrue Full Amount Indicator	1 alphanumeric	Optional You can enter a value if the number of recurring payments is greater than zero. Values are ▪ Y (Yes) - All recurring payments accrue in the first month ▪ N (No) - Accrual is based on the calculated date for each recurring payment. Default is N.
23	Voucher Number	15 numeric	Conditional Internal number assigned to the document. Required if payable entity policy requires voucher numbers. Generated automatically if payable entity policy specifies automatic generation of voucher numbers.
24	Tax Only Indicator	1 alphanumeric	Optional Values are ▪ Y (Yes) - Payment request contains only tax information ▪ N (No) - Payment request is not a tax-only payment request. Default is N.

Field	Name	Length	Description
25	Control Group ID	10 alphanumeric	Conditional Identifier for a control group of invoices. Required if payable entity policy requires control groups.
26	Control Group Date	10 alphanumeric-	Conditional Date the operator entered the control group. Required if payable entity policy requires control groups.
27	Approval List ID	10 alphanumeric	Not used in this transaction.
28	Rate Entity	5 alphanumeric	Conditional User-defined identifier for the policies for storing and retrieving currency exchange rates. Required if transaction currency and booking currency are different. If currency information is not entered for the invoice, default currency information from payable entity policy is used.
29	Currency Rate Type	1 alphanumeric	Conditional User-defined identifier for the type of currency exchange rate. Required if rate entity is entered.
30	Currency Rate Date	10 date	Conditional Date to use when retrieving currency exchange rates. Required if rate entity is entered.
31	Exchange Rate	25 numeric	Optional Rate used to convert the currency of the invoice into an equivalent amount in the ledger currency. Default is 1.00 if the transaction uses a single currency. Value is retrieved from Currency based on rate information.
32	Draft Class	5 alphanumeric	Conditional The type of draft. Required if the type of payment selected for the payment method is draft. Values are ▪ LCRNR - Bill of exchange ▪ LCR - Bill of exchange requiring acceptance ▪ LCC - Traditional bill of exchange ▪ BCC - Traditional promissory note ▪ BOR - Promissory note.
33 - 36	Custom Fields 1 - 4	15 alphanumeric	Optional User-defined identifier for any invoice information you want to maintain.

Field	Name	Length	Description
37 - 39	Custom Fields 5 - 7	5 alphanumeric	Optional User-defined identifier for any invoice information you want to maintain.
40 - 42	Customs Field 8 - 10	3 alphanumeric	Optional User-defined identifier for any invoice information you want to maintain.
43	Short Description	35 alphanumeric	Optional. User-defined description for a new invoice form.
44	Project Entity	5 alphanumeric	A unique identifier for the project entity associated with the payment request.
45	Origin Code	6 alphanumeric	For system use only.
46	Payment Currency	3 alphanumeric	Not used at this time.
47	Transaction to Euro Exchange Rate	25 numeric	Optional. For euro only. The rate of exchange between the invoice currency and the euro currency.
48	Euro to Booking Exchange Rate	25 numeric	Optional. For euro only. The rate of exchange between the euro currency and the primary booking currency.

Payment Request Line Transaction

Use this transaction to enter invoice line detail information, one transaction per invoice line.

Note: If you enter an accounting distribution on the invoice line, the invoice load process does not use the default hierarchy to enter missing information in the accounting distribution. If you plan to override default values, you need to enter all the components of the accounting distribution you want to appear on the invoice.

If you enter tax information on the invoice line, the invoice load process does not use the default hierarchy to enter missing tax information. If you plan to override default values, you need to enter all tax information you want to appear on the invoice line.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRLN.
2	Vendor	10 alphanumeric	Required User-defined identifier for a vendor.

Field	Name	Length	Description
3	Vendor Location	3 alphanumeric	Required User-defined identifier for the vendor location.
4	Invoice Number	22 alphanumeric	Required Reference number the vendor uses to identify the invoice.
5	Invoice Date	10 Date	Required Date on the invoice document.
6	Scheduled Payment Number	3 numeric	Optional Number assigned to a payment for an invoice divided into recurring payments or partial payments. If you enter a scheduled payment number while adding an invoice, the number must be zero. Default is zero.
7	Payment Request Line Number	4 numeric	Required Line number for the invoice item. The invoice lines must be in consecutive order. Value must be between 0001 and 9999. You must zero-fill numbers you enter.
8	Description	35 alphanumeric	Conditional User-defined description of the invoice line item. Required if line item is an asset. If the invoice line is matched, the default comes from the purchase order line.
9	Line Amount	25 numeric	Conditional Amount of the invoice line. If the invoice line is matched, Payables calculates the default by multiplying the purchase order unit price by the permit-to-pay quantity.
10	Asset ID	12 alphanumeric	Optional Unique identifier for the asset that belongs to the asset entity entered.
11	Asset Entity	5 alphanumeric	Optional Unique identifier for the asset entity that owns or maintains this asset.
12	Serial Number	18 alphanumeric	Optional Manufacturer's identifier for the item associated with this invoice line.
13	Manufacturer	16 alphanumeric	Optional Name of the company that made the item associated with this invoice line.
14	Model/Part Number	16 alphanumeric	Optional Model name or part number that the manufacturer uses to identify the item associated with this invoice line.

Field	Name	Length	Description
15	Quantity	10 numeric	Conditional Number of assets associated with a single asset identifier or quantity ordered on the purchase order. Required if item is an asset. If invoice line is matched, the default comes from purchase order line.
16	Earnings and Withholding Rule	4 alphanumeric	Optional Type of earnings and withholding rule that applies to this vendor. Default comes from the vendor. You can block the default for an invoice line by entering an asterisk (*).
17	Earnings and Withholding Category	5 alphanumeric	Conditional User-defined identifier for the earnings and withholding category used to classify documents for reporting taxable earnings. Required if earnings and withholding rule is 1099. Default comes from the vendor. You can block the default for an invoice line by entering an asterisk (*).
18	Item Number	26 alphanumeric	Optional A user-defined internal identifier for an item. An item can be any manufactured or purchased part, material, intermediate, subassembly, or product. If invoice line is matched, the default comes from purchase order line.
19	Vendor Item Identifier	35 alphanumeric	Optional User-defined identifier for a vendor item. This identifier is used to reference the vendor item throughout the purchasing and vendor tasks. If invoice line is matched, the default comes from purchase order line.
20	Site	4 alphanumeric	Conditional Identifies the location where the purchase order was issued. Required on matched invoice lines.
21	Purchase Order Number	12 alphanumeric	Conditional Unique user-defined identification number used to identify a purchase order. Required on matched invoice lines.
22	Purchase Order Line Number	5 numeric	Conditional Number of the line on the purchase order document. Required on matched invoice lines.

Field	Name	Length	Description
23	Ship-to Site	4 alphanumeric	Conditional User-defined identifier that indicates where goods are shipped. Required on matched invoice lines.
24	Ship-to Code	8 alphanumeric	Conditional User-defined identifier for the shipping method. Required on matched invoice lines.
25	Purchase Order Required Date	10 date	Conditional Date the date the buyer requires the vendor to deliver the goods. Required on matched invoice lines.
26	Unit of Measure	4 alphanumeric	Optional Standard measurement used for one unit of an item, such as each, pounds, gallons, or feet. If the invoice line is matched, the default comes from purchase order line.
27	Allocate Discount Indicator	1 alphanumeric	Optional Indicates if you want to allocate discount to the invoice line. This option is available only if the discount method of the payable entity is Net. Values are ▪ Y (Yes) ▪ N (No).
28	Allocate Freight Indicator	1 alphanumeric	Optional Indicates whether you want to allocate freight charges to the invoice line. Values are ▪ Y (Yes) ▪ N (No). Default comes from payable entity policy.
29	Allocate Miscellaneous Amount Indicator	1 alphanumeric	Optional Indicates whether you want to allocate miscellaneous charges to the invoice line. Values are ▪ Y (Yes) ▪ N (No). Default comes from payable entity policy.

Field	Name	Length	Description
30	Tax Rule 1	20 alphanumeric	Optional User-defined identifier for a type of tax. Default comes from purchase order line, tax defaults transaction, or from the vendor or payable entity. You can override all default tax information with spaces by entering an asterisk (*) in this field.
31	Tax Rate Code 1	5 alphanumeric	Optional User-defined identifier for a percentage used to calculate tax amounts. Default comes from purchase order line, tax defaults transaction, or from the vendor or payable entity.
32	Tax Reclaimable Code 1	5 alphanumeric	Optional User-defined identifier for the percentage of tax paid that is reclaimable. Default comes from purchase order line, tax defaults transaction, or from the vendor or payable entity.
33	Tax Rule 2	20 alphanumeric	Optional User-defined identifier for a type of tax. Default comes from purchase order line, tax defaults transaction, or from the vendor or payable entity.
34	Tax Rate Code 2	5 alphanumeric	Optional User-defined identifier for a percentage used to calculate tax amounts. Default comes from purchase order line, tax defaults transaction, or from the vendor or payable entity.
35	Tax Reclaimable Code 2	5 alphanumeric	Optional User-defined identifier for the percentage of tax paid that is reclaimable. Default comes from purchase order line, tax defaults transaction, or from the vendor or payable entity.
36	Ledger Entity (Expenditure)	5 alphanumeric	Optional Group within the ledger that has its own accounting, reporting, and control requirements. Associated with the accounting distribution for expenditure. Default comes from purchase order line, vendor, or payable entity.
37 - 48	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for expenditure. Default comes from purchase order line, vendor, or payable entity.
49 - 52	Custom Fields 1 - 4	15 alphanumeric	Optional User-defined identifier for any invoice information you want to maintain.

Field	Name	Length	Description
53 - 55	Custom Fields 5 - 7	5 alphanumeric	Optional User-defined identifier for any invoice information you want to maintain.
56 - 58	Custom Fields 8 - 10	3 alphanumeric	Optional User-defined identifier for any invoice information you want to maintain.
59	Project ID	20 alphanumeric	Identifier for the project associated with the payment request.
60	Component ID	20 alphanumeric	Identifier for the component associated with the payment request.
61	Cost Element ID	10 alphanumeric	Identifier for the cost element associated with the payment request.
62	Rate Code	10 alphanumeric	Identifier for the rate code associated with the payment request.
63	Receipt ID	10 alphanumeric	For system use only.
64	Picklist ID	12 alphanumeric	For system use only.
65	Picklist Sequence Number	5 numeric	For system use only.
66	Return ID	10 alphanumeric	For system use only.
67	Return Line Number	5 numeric	For system use only.

Payment Request Tax Accounting Distribution Transaction

Use this transaction to enter or override tax accounting distributions, one transaction per tax rule and tax rate combination referenced on the invoice.

Even your accounting distribution does not contain values for all 12 accounting key elements, you need to enter a delimiter for all 12 positions.

Note: If you enter accounting distributions on this transaction, the invoice load process does not use the default hierarchy to enter missing tax accounting distribution information. If you plan to override default values, you need to enter all the components of the accounting distribution you want to appear on the invoice.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRTA.
2	Vendor	10 alphanumeric	Required Unique user-defined identifier for a vendor.

Field	Name	Length	Description
3	Vendor Location	3 alphanumeric	Required User-defined identifier for a vendor's location.
4	Invoice Number	22 alphanumeric	Required Reference number the vendor uses to identify the invoice.
5	Invoice Date	10 Date	Required Date on the invoice document.
6	Scheduled Payment Number	3 numeric	Optional Number assigned to a payment for an invoice divided into recurring payments or partial payments. If you enter a scheduled payment number when adding an invoice, the number must be zero. Default is zero.
7	Tax Rule	20 alphanumeric	Required User-defined identifier for a type of tax.
8	Tax Rate Code	5 alphanumeric	Required User-defined identifier for a percentage used to calculate tax amounts.
9	Ledger Entity (Tax Expense)	5 alphanumeric	Optional Group within the ledger that has its own accounting, reporting, and control requirements. It is associated with the accounting distribution for tax expense.
10 - 21	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for tax expense.
22	Ledger Entity (Reclaimable)	5 alphanumeric	Optional A group within the ledger that has its own accounting, reporting, and control requirements. It is associated with the accounting distribution for reclaimable tax.
23 - 34	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for reclaimable tax.
35	Ledger Entity (Self-Assessed Tax Liability)	5 alphanumeric	Optional A group within the ledger that has its own accounting, reporting, and control requirements. It is associated with the accounting distribution for self-assessed tax.
36 - 47	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for self-assessed tax.

Payment Request Comments Transaction

Use this transaction to enter invoice comments.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRCM.
2	Vendor	10 alphanumeric	Required Unique user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required User-defined identifier for a vendor's location.
4	Invoice Number	22 alphanumeric	Required Reference number the vendor uses to identify the invoice.
5	Invoice Date	10 Date	Required Date on the invoice document.
6	Scheduled Payment Number	3 numeric	Optional Number It is assigned to a payment for an invoice divided into recurring payments or partial payments. If you enter a scheduled payment number when adding an invoice, the number must be zero. Default is zero.
7	Comment Type	1 alphanumeric	Required Type of comment. Values are ▪ A (All) ▪ I (Internal) ▪ E (External) ▪ D (Display-only).
8	Comment Text	255 alphanumeric	Required Free-form explanation or description about any aspect of the invoice.

Payment Request Tax Transaction

Use this transaction to enter tax amounts, one transaction for each tax rule referenced on the invoice. The maximum number of tax rules that Payables can process on a single invoice during the invoice load process is 10.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRTX.
2	Vendor	10 alphanumeric	Required Unique user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required User-defined identifier for a vendor's location.
4	Invoice Number	22 alphanumeric	Required Reference number the vendor uses to identify the invoice.
5	Invoice Date	10 Date	Required Date on the invoice document.
6	Scheduled Payment Number	3 numeric	Optional Number assigned to a payment for an invoice divided into recurring payments or partial payments. If you enter a scheduled payment number when adding an invoice, the number must be zero. Default is zero.
7	Tax Rule	20 alphanumeric	Required. User-defined identifier for the type of tax.
8	Tax Amount	25 numeric	Conditional Amount of tax calculated for the invoice for the tax rule. Required if the tax rule is not self-assessed.
9	Tax Basis	25 numeric	Conditional The sum of the amounts used to calculate the tax amount. Required on tax-only invoices. You cannot enter a value for regular invoices.

Payment Request Accounting Distributions Transaction

Use this transaction to enter or override accounting distributions for accounts payable liability, freight expense, and miscellaneous charges expense, one transaction per invoice.

Even your accounting distribution does not contain values for all 12 accounting key elements, you need to enter a delimiter for all 12 positions.

Note: If you enter accounting distributions on this transaction, the invoice load process does not use the default hierarchy to enter missing accounting distribution information. If you plan to override default values, you need to enter all the components of the accounting distribution you want to appear on the invoice.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRAD.
2	Vendor	10 alphanumeric	Required Unique user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required User-defined identifier for a vendor's location.
4	Invoice Number	22 alphanumeric	Required Reference number the vendor uses to identify the invoice.
5	Invoice Date	10 Date	Required Date on the invoice document.
6	Scheduled Payment Number	3 numeric	Optional Number assigned to a payment for an invoice divided into recurring payments or partial payments. If you enter a scheduled payment number when entering an invoice, the number must be zero. Default is zero.
7	Ledger Entity (Accounts Payable Liability)	5 alphanumeric	Optional A group within the ledger that has its own accounting, reporting, and control requirements. It is associated with the accounting distribution for accounts payable liability.
8 - 19	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for accounts payable liability.
20	Ledger Entity (Freight Expense)	5 alphanumeric	Optional A group within the ledger that has its own accounting, reporting, and control requirements. It is associated with the accounting distribution for freight expense.
21 - 32	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for freight expense.
33	Ledger Entity (Miscellaneous Charges Expense)	5 alphanumeric	Optional A group within the ledger that has its own accounting, reporting, and control requirements. It is associated with the accounting distribution for miscellaneous charges expense.
34 - 45	Key 1 - Key 12	30 alphanumeric	Optional One of the components of your user-defined accounting key. It is associated with the accounting distribution for miscellaneous charges expense.

Payment Request Default Tax Transaction

Use this transaction to enter or override default tax information. You can set up two default tax rules for the invoice. The values you enter on this transaction are used as default values for all lines on the invoice.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always PRTD.
2	Vendor	10 alphanumeric	Required Unique user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required User-defined identifier for a vendor's location.
4	Invoice Number	22 alphanumeric	Required Reference number the vendor uses to identify the invoice.
5	Invoice Date	10 Date	Required Date on the invoice document.
6	Scheduled Payment Number	3 numeric	Optional Number assigned to a payment for an invoice divided into recurring payments or partial payments. If you enter a scheduled payment number when adding an invoice, the number must be zero. Default is zero.
7	Tax Rule 1	20 alphanumeric	Required User-defined identifier for the type of tax.
8	Tax Rate Code 1	5 alphanumeric	Optional User-defined identifier for a percentage used to calculate tax amounts.
9	Tax Reclaimable Code 1	5 alphanumeric	Optional User-defined identifier for the percentage of tax paid that is reclaimable.
10	Tax Freight Code 1	5 alphanumeric	Optional User-defined identifier for a percentage used to tax freight charges separately on payment requests.
11	Tax Misc Charge Code 1	5 alphanumeric	Optional User-defined identifier for a percentage used to tax miscellaneous charges separately on payment requests.
12	Tax Rule 2	20 alphanumeric	Optional User-defined identifier for the type of tax.

Field	Name	Length	Description
13	Tax Rate Code 2	5 alphanumeric	Optional User-defined identifier for a percentage used to calculate tax amounts.
14	Tax Reclaimable Code 2	5 alphanumeric	Optional User-defined identifier for the percentage of tax paid that is reclaimable.
15	Tax Freight Code 2	5 alphanumeric	Optional User-defined identifier for a percentage used to tax freight charges separately on payment requests.
16	Tax Misc Charge Code 2	5 alphanumeric	Optional User-defined identifier for a percentage used to tax miscellaneous charges separately on payment requests.

Dividends Output Transaction

The Payables Regulatory Earnings and Withholding report generates six output transactions. Each transaction layout represents a 1099 form. You can use any third-party software to import an ASCII file from Payables to use to generate 1099 forms or magnetic media according to the IRS government specifications.

Geac has tested this process with the Year End Solutions! (Y.E.S.) package by Newport*Wave*, Incorporated. For information on this package, contact Newport*Wave* at 1-800-999-2611.

Use this transaction to output 1099 dividend information to a third party. The logical record length is 257.

Field	Name	Length	Description
1	Form Identifier	3 alphanumeric	Code identifying the 1099 form. Value is always DIV.
2	Vendor Tax Identifier	11 numeric	A unique identifier that a tax authority assigns to the vendor.
3	Vendor Name	40 alphanumeric	The operating name for the vendor.
4	Address Line 1	40 alphanumeric	The first line of the vendor's address.
5	Address Line 2	40 alphanumeric	The second line of the vendor's address.
6	City	29 alphanumeric	The name of the city for the address.
7	State	2 alphanumeric	The name of the state for the address.
8	Postal Code	9 alphanumeric	The code indicating the delivery post office.
9	Ordinary Dividends	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.

Field	Name	Length	Description
10	Capital Gains Distribution	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
11	Nontaxable Distribution	10 numeric	An earning and withholding category for reporting taxable 1099 earnings.
12	Investments	10 numeric	An earning and withholding category for reporting taxable 1099 earnings.
13	Federal Tax Withheld	10 numeric	The taxable 1099 earnings withheld by the payee to report to the Internal Revenue Service.
14	Foreign Tax Paid	10 numeric	An earning and withholding category for reporting taxable 1099 earnings.
15	Cash Liquidation	10 numeric	An earning and withholding category for reporting taxable 1099 earnings.
16	Noncash Liquidation	10 numeric	An earning and withholding category for reporting taxable 1099 earnings.
17	Second TIN Notice	1 alphanumeric	A code indicating that a second tax identification number (B) notice was received from the Internal Revenue Service.

Interest Output Transaction

Use this transaction to output 1099 interest information to a third-party 1099 software package. The logical record length is 227.

Field	Name	Length	Description
1	Form Identifier	3 alphanumeric	The code identifying the 1099 form. Value is always INT.
2	Vendor Tax Identifier	11 numeric	A unique identifier that a taxing authority assigns to the vendor.
3	Vendor Name	40 alphanumeric	The operating name for the vendor.
4	Address Line 1	40 alphanumeric	The first line of the vendor's address.
5	Address Line 2	40 alphanumeric	The second line of the address.
6	City	29 alphanumeric	The name of the city for the address.
7	State	2 alphanumeric	The name of the state for the address.
8	Postal Code	9 alphanumeric	The code indicating the delivery post office.
9	Interest Income	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
10	Early Withdrawal Penalty	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
11	US Savings Bonds	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.

Field	Name	Length	Description
12	Federal Tax Withheld	10 numeric	The taxable 1099 earnings withheld by the payee to report to the Internal Revenue Service.
13	Foreign Tax Paid	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
14	Second TIN Notice	1 alphanumeric	A code indicating that a second tax identification number (B) notice was received from the Internal Revenue Service.

Miscellaneous Output Transaction

Use this transaction to output miscellaneous 1099 information to a third-party 1099 software package. The logical record length is 285.

Field	Name	Length	Description
1	Form Identifier	3 alphanumeric	The code identifying the 1099 form. Value is always MIS.
2	Vendor Tax Identifier	11 numeric	Identifier that a tax authority assigns to the vendor.
3	Vendor Name	40 alphanumeric	The operating name for the vendor.
4	Address Line 1	40 alphanumeric	The first line of the vendor's address.
5	Address Line 2	40 alphanumeric	The second line of the address.
6	City	29 alphanumeric	The name of the city for the address.
7	State	2 alphanumeric	The name of the state for the address.
8	Postal Code	9 alphanumeric	The code indicating the delivery post office.
9	Rents	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
10	Royalties	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
11	Other Income	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
12	Federal Tax Withheld	10 numeric	The taxable 1099 earnings withheld by the payee to report to the Internal Revenue Service.
13	Fishing Boat Proceeds	10 numeric	An earning and withholding category for reporting taxable 1099 earnings.
14	Medical & Health Payments	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
15	Nonemployee Compensation	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
16	Substitute Payments	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.

Field	Name	Length	Description
17	Crop Insurance Proceeds	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
18	State Tax Withheld	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
19	Gross proceeds paid to an attorney in connection with legal services	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
20	Second TIN Notice	1 alphanumeric	A code indicating that a second tax identification number (B) notice was received from the Internal Revenue Service.

Original Discount Output Transaction

Use this transaction to output 1099 original discount information to a third-party 1099 software package. The logical record length is 217.

Field	Name	Length	Description
1	Form Identifier	3 alphanumeric	The code identifying the 1099 form. Value is always ODI.
2	Vendor Tax Identifier	11 numeric	Identifier that a tax authority assigns to the vendor.
3	Vendor Name	40 alphanumeric	The operating name for the vendor.
4	Address Line 1	40 alphanumeric	The first line of the vendor's address.
5	Address Line 2	40 alphanumeric	The second line of the address.
6	City	29 alphanumeric	The name of the city for the address.
7	State	2 alphanumeric	The name of the state for the address.
8	Postal Code	9 alphanumeric	The code indicating the delivery post office.
9	Original Issue Discount	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
10	Other Interest	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
11	Early Withdrawal Penalty	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
12	Federal Tax Withheld	10 numeric	The taxable 1099 earnings withheld by the payee to report to the Internal Revenue Service.
13	Second TIN Notice	1 alphanumeric	A code indicating that a second tax identification number (B) notice was received from the Internal Revenue Service.

Taxable Distributions Output Transaction

Use this transaction to output 1099 taxable distributions information to a third-party 1099 software package. The logical record length is 257.

Field	Name	Length	Description
1	Form Identifier	3 alphanumeric	The code identifying the 1099 form: Value is always TDI.
2	Vendor Tax Identifier	11 numeric	Identifier that a tax authority assigns to the vendor.
3	Vendor Name	40 alphanumeric	The operating name for the vendor.
4	Address Line 1	40 alphanumeric	The first line of the vendor's address.
5	Address Line 2	40 alphanumeric	The second line of the address.
6	City	29 alphanumeric	The name of the city for the address.
7	State	2 alphanumeric	The name of the state for the address.
8	Postal Code	9 alpha numeric	The code indicating the delivery post office.
9	Patronage	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
10	Nonpatronage Dividends	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
11	Retain Allocations	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
12	Federal Tax Withheld	10 numeric	The taxable 1099 earnings withheld by the payee to report to the Internal Revenue Service.
13	Redemption	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
14	Investment Credit	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
15	Energy Credit	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
16	Jobs Credit	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
17	Second TIN Notice	1 alphanumeric	A code indicating that a second tax identification number (B) notice was received from the Internal Revenue Service.

Government Output Transaction

Use this transaction to output 1099 government information to a third-party 1099 software package. The logical record length is 231.

Field	Name	Length	Description
1	Form Identifier	3 alphanumeric	The code identifying the 1099 form. Value is always GOV.
2	Vendor Tax Identifier	11 numeric	Identifier that a tax authority assigns to the vendor.
3	Vendor Name	40 alphanumeric	The operating name for the vendor.
4	Address Line 1	40 alphanumeric	The first line of the vendor's address.
5	Address Line 2	40 alphanumeric	The second line of the address.
6	City	29 alphanumeric	The name of the city for the address.
7	State	2 alphanumeric	The name of the state for the address.
8	Postal Code	9 alphanumeric	The code indicating the delivery post office.
9	Unemployment Compensation	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
10	Tax Refunds	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
11	Tax Year	4 numeric	Year from Report Controls window.
12	Federal Tax Withheld	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
13	Taxable Grants	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
14	Agriculture Payments	10 numeric	An earnings and withholding category for reporting taxable 1099 earnings.
15	Second TIN Notice	1 alphanumeric	A code indicating that a second tax identification number (B) notice was received from the Internal Revenue Service.

Check Print Output Transaction

Use this transaction to output check information to a third-party check print software package.

Field	Name	Length	Description
1	Form Identifier	6 alphanumeric	The code identifying the check form. Value is always CHEQUE.
2	Payment Reference Number	10 numeric	Check number.
3	Payment Reference Date	8 date	Check date in YYYYMMDD format.
4	Payment Method	5 alphanumeric	A user-defined identifier for the combination of bank, bank account, type of payment, and formatting options used to produce payments.

Field	Name	Length	Description
5	Bank ID	11 alphanumeric	A unique identifier for the financial institution used to issue a payment.
6	Bank Account Number	30 alphanumeric	The unique identification number the financial institution assigns to the account that Payables makes the payments from.
7	Bank Number	17 alphanumeric	
8	Bank Name	70 alphanumeric	The legal name of the bank Payables used to make the payment.
9	Bank Branch Address Format	6 alphanumeric	The form or style of the bank branch address.
10	Bank Branch Address Line 1	35 alphanumeric	The first line of the bank branch address.
11	Bank Branch Address Line 2	35 alphanumeric	The second line of the bank branch address.
12	Bank Branch Street or Post Office Box 1	35 alphanumeric	The first line of the bank branch's street or post office box.
13	Bank Branch Street or Post Office Box 2	35 alphanumeric	The second line of the bank branch's street or post office box.
14	Bank Branch City name	35 alphanumeric	The name of the city for the bank branch address.
15	Bank Branch Postal Code	9 alphanumeric	The code indicating the delivery post office for the bank branch.
16	Bank Branch Country Sub Entity Code	9 alphanumeric	The country sub entity code for the bank branch.
17	Payable Entity Name	35 alphanumeric	The name or description, or both, of a user-defined payable entity. This name identifies the division, location, or reporting category the payable entity represents.
18	Payable Entity Address Format	6 alphanumeric	The form or style of the payable entity address.
19	Payable Entity Address Line 1	35 alphanuemric	The first line of the payable entity address.
20	Payable Entity Address Line 2	35 alphanumeric	The second line of the payable entity address.
21	Payable Entity Street or Post Office Box 1	35 alphanumeric	The first line of the payable entity's street or post office box.

Field	Name	Length	Description
22	Payable Entity Street or Post Office Box 2	35 alphanumeric	The second line of the payable entity's street or post office box.
23	Payable Entity City Name	35 alphanumeric	The name of the city for the payable entity address.
24	Payable Entity Postal Code	9 alphanumeric	The code indicating the delivery post office for the payable entity.
25	Payable Entity Country Sub Entity Code	9 alphanumeric	The country sub entity code for the payable entity.
26	Vendor ID	10 alphanumeric	Vendor ID (not factor ID)
27	Vendor Location Code	3 alphanumeric	Vendor location (not factor location)
28	Vendor Name or Factor Vendor Name	45 alphanumeric	Name and address of vendor or factor
29	Address Format	6 alphanumeric	The form or style of the vendor address.
30	Address Line 1	35 alphanumeric	The first line of the vendor address.
31	Address Line 2	35 alphanumeric	The first line of the vendor address.
32	Street or Post Office Box 1	35 alphanumeric	The first line of the vendor's street or post office box.
33	Street or Post Office Box 2	35 alphanumeric	The second line of the vendor's street or post office box.
34	City Name	35 alphanumeric	The name of the city for the vendor address.
35	Postal code	9 alphanumeric	The code indicating the delivery post office for the vendor.
36	Country Sub Entity Code	9 alphanumeric	The country sub entity code for the vendor.
37	Number of Payment Requests	5 numeric	Number of invoices paid by check
38	Payment Amount	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
39	Second Signature Amount	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.

Field	Name	Length	Description
40	Payment Status Code	4 alphanumeric	Values are: ▪ PAID - Normal check ▪ VOID - Overflow check ▪ ALGN - Alignment check
41	Transaction Currency Code	3 alphanumeric	The currency code for the payment transaction.
42	Currency Number of Decimals	1 alphanumeric	The number of decimals used in the currency for the payment.
43	Decimal Separator	1 alphanumeric	The character used to separate decimal digits from whole numbers in the payment.
44	Thousand Separator	1 alphanumeric	The character used to separate thousands in amounts in the payment.
45	Payment Amount in Display Format	35 alphanumeric	Padded with asterisks (*) on the left
46	Second Signature Amount	35 alphanumeric	Padded with asterisks (*) on the left
47	Payment Amount in Script Format	255 alphanumeric	Padded with asterisks (*) on the right

Remittance Header Record Transaction

The remittance header record contains the information shown in the remittance header. Each check contains one of these records. It follows the CHEQUE record.

Field	Name	Length	Description
1	Form Identifier	6 alphanumeric	The code identifying the check header. Value is always REMITH.
2	Payment Reference Number	10 numeric	Check number.
3	Payment Reference Date	8 date	Check date in YYYYMMDD format.
4	Vendor ID	10 alphanumeric	The unique, user-defined identifier for the vendor. Not the factor ID.
5	Vendor Location Code	3 alphanumeric	The unique, user-defined identifier for the vendor location. Not the factor location.
6	Vendor Name	45 alphanumeric	The name of the vendor.

Field	Name	Length	Description
7	Factor Vendor ID	10 alphanumeric	Conditional The identifier of the vendor receiving another vendor's receivables.
8	Factor Vendor Location Code	3 alphanumeric	Conditional The location identifier of the factor vendor.
9	Factor Vendor Name	45 alphanumeric	Conditional The name of the factor vendor.

Remittance Detail Record Transaction

The remittance detail record contains the information shown in the remittance detail lines. Each check contains many of these records (the limit is approximately 32000). These lines follow the REMITH record.

Field	Name	Length	Description
1	Form Identifier	6 alphanumeric	The code identifying the check detail. Value is always REMITD.
2	Payment Reference Number	10 numeric	Check number.
3	Payment Reference Date	8 date	Check date in YYYYMMDD format.
4	Payment Request Number	22 numeric	The reference number of the payment request the check is for.
5	Payment Request Date	8 Date	In YYYYMMDD format.
6	Payment Request Gross Amount	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
7	Discount Taken	18 currency	Discount amount - discount lost nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
8	Earnings and Withholding Amount Payment Amount	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.

Field	Name	Length	Description
9	Payment Amount	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
10	Purchase Order Number	12 alphanumeric	All X's if purchase order number not printed
11	Remit Message	60 alphanumeric	
12	Payment Request Gross Amount in Display Format	35 alphanumeric	Padded with asterisks (*) on the left
13	Payment Amount in Display Format	35 alphanumeric	Padded with asterisks (*) on the left
14	Earnings and Withholding Amount in Display Format	35 alphanumeric	Padded with asterisks (*) on the left

Total Record Transaction

This record contains the information shown in the total line on the remittance page. Each check contains one of these records. The total line follows the REMITD records.

Field	Name	Length	Description
1	Form Identifier	6 alphanumeric	The code identifying the total record. Value is always TOTALS.
2	Payment Reference Number	10 numeric	Check number.
3	Payment Reference Date	8 date	Check date in YYYYMMDD format.
4	Remit Invoice Total	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
5	Remit Discount Total	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
6	Remit Withholding Total	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.

Field	Name	Length	Description
7	Remit Payment Total	18 currency	nnnnnnnnnnnnnnn.nn or nnnnnnnnnnnnnn.nn The number of decimal places depends on the currency.
8	Overflow Message	60 alphanumeric	
9	Remit Invoice Total in Display Format	35 alphanumeric	Padded with asterisks (*) on the left
10	Remit Discount Total in Display Format	35 alphanumeric	Padded with asterisks (*) on the left
11	Remit Withholding Total in Display Format	35 alphanumeric	Padded with asterisks (*) on the left
12	Remit Payment Total in Display Format	35 alphanumeric	Padded with asterisks (*) on the left

12 Projects

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Window Processing

Most of the business functions SmartStream Projects provides can be performed on Projects windows. See the *Projects* guide for an online-oriented presentation of Projects and the business needs it serves. See the Projects online Help for detailed information about each field and window, and detailed procedures for performing window tasks.

Scheduled Processing

You can perform many Projects functions by running a scheduled process. You use Job Scheduler to schedule and run the following Projects processes:

- Archive/Purge
- Balance Reorganization
- Capitalization
- Copy Projects Allocation Transactions
- Copy Projects Asset Transactions
- Project and Component Load
- Project Copy
- Project Journal Load
- Projects Allocation
- Projects Balance Load
- Projects Posting
- Projects Process Unlock
- Projects Year Open

Archive/Purge

Use the Archive/Purge process to remove outdated information from your database tables. Depending on the options you select, you can archive data from a specific project entity to history tables or to a file for storage on disk or tape before SmartStream purges it.

You can archive and purge the following information from Projects:

- Project journal
- Project and associated project journals

Prerequisite Processing

Enter a request on the Archive/Purge Request window before using the Archive/Purge scheduled process. The request ID you enter on this window is used as a parameter when you set up the Archive/Purge process in Job Scheduler.

Follow-Up Processing

After you run the Archive/Purge scheduled process, run reports to review results and errors.

Transactions

None

Balance Reorganization

The Balance Reorganization scheduled process reorganizes and copies monetary and statistical balances stored in Projects tables.

It reorganizes rows in the...	And copies them to the...
Component Monetary Balance table	Component Monetary Balance Reorganization 1 and 2 tables.
Component Statistical Balance table	Component Statistical Balance Reorganization 1 and 2 tables.

For each table, the Balance Reorganization process reorganizes rows for two years:

- The project entity's fiscal year
- The year before the project entity's fiscal year

This reorganization arranges the information into a more efficient format for reporting on the Project Detail and Projects Summary reports.

Prerequisite Processing

If you are reporting for a year that is not open, run the Projects Year Open process before you run the Balance Reorganization process. Otherwise, the Project Detail and Projects Summary reports can be inaccurate.

Also, enter process parameters on the Projects Balance Reorganization Request window. The request ID you enter on this window is used as a parameter when you set up the Balance Reorganization process in Job Scheduler.

When you run the Balance Reorganization process, it processes all balance rows in all projects associated with the project entities you selected on the Projects Balance Reorganization Request window.

Follow-Up Processing

After you run the Balance Reorganization process, you can run the Project Detail and Projects Summary reports.

Transactions

None

Capitalization

The Capitalization scheduled process generates asset transactions for Projects components.

The Copy Projects Asset Transactions scheduled process, which you run after the Capitalization process, copies the asset transactions from the Project Asset Maintenance Transaction table in Projects to the Asset Maintenance Transaction table in SmartStream Asset Management.

The Capitalization process also generates ledger journals and records capitalization and retirement information in Projects.

You can develop your own conversion process to format the results from the Capitalization process to suit your ledger or asset processing needs.

Defining Capitalization and Retirement Information

Use the following windows to define capitalization policy, asset information, and cost information for the project or component before running the Capitalization process:

- Project (Capitalization view) or Component (Capitalization view)
- Capitalization Policy
- Capitalization Component Policy (optional)
- Capitalization Transaction

Prerequisite Processing

Enter a request to select the components to capitalize or retire on the Capitalization Request window before running the Capitalization scheduled process.

Date Format Asset Maintenance transactions can originate in

- Asset Management
- The Capitalization process and be copied to Asset Management by the Copy Projects Asset Transactions process.

Transactions that originate in the Capitalization process always use the date format specified by enterprise policy. However, when you enter Asset Maintenance transactions in Asset Management, you can use a different date format.

You should not process transactions with different date formats as part of a single job. Therefore, if you are processing Asset Maintenance transactions that use a date format different from the format specified by enterprise policy, do not process any Asset Maintenance transactions originating in the Capitalization process as part of the same job.

Follow-Up Processing

If your enterprise has Asset Management installed, run the Copy Projects Asset Transactions process and then Asset Management's Asset Maintenance scheduled process immediately after you run the Capitalization process. As a recommendation, set up these scheduled processes as three steps of a single job so that they automatically run consecutively.

Transactions

None

Copy Projects Allocation Transactions

The Copy Projects Allocation Transactions scheduled process copies the results of the Projects Allocation scheduled process to the Project Journal Load Transaction table.

Prerequisite Processing

Run the Projects Allocation process before you run the Copy Projects Allocation Transactions process.

Follow-Up Processing

Immediately after you run the Copy Projects Allocation Transactions process, run the following scheduled processes to post the results to Projects:

Stage	Process	Description
1	Project Journal Load	Generates project journals
2	Projects Posting	Posts the project journals to Projects and generates ledger journals if you selected this option in Projects
3	SmartStream Ledger Posting	Posts the ledger journals generated by the Projects Posting process if you selected this option for the allocation request

Transactions

None

Copy Projects Asset Transactions

The Copy Projects Asset Transactions scheduled process copies the asset addition, adjustment, and retirement transactions from the Project Asset Maintenance Transaction table in Projects to the Asset Maintenance Transaction table in Asset Management.

When you run the Asset Maintenance scheduled process, it changes the asset capitalization and retirement information in Asset Management tables for projects that you define in Projects.

Prerequisite Processing

Run the Capitalization scheduled process before you run the Copy Projects Asset Transactions process.

Follow-Up Processing

After you run the Copy Projects Asset Transactions process, run the Asset Maintenance scheduled process in Asset Management.

Transactions

None

Project and Component Load

Use the Project and Component Load scheduled process to add, change, and delete project and component information. When you run this scheduled process, it also adds or deletes the associated Work Breakdown structure or point in SmartStream Structures.

Using the Process to Delete a Component or Project

Deleting a component automatically deletes all associated records for the component, for example, cost elements and accounting distributions. However, deleting a project does not delete the project's components; you must delete the components for a project before the Project and Component Load process can delete the project.

Initial Setup

Ensure that all users who use the bulk copy process to copy Project and Component transactions have the **PROJ_SEC** security profile. The system administrator must define this profile.

Prerequisite Processing

If you are processing new Project and Component Load transactions, run the Bulk Copy scheduled process before you run the Project and Component Load process. Use the bulk copy process to copy the transactions to the server where you added the associated project entity.

If you are reprocessing corrected Project and Component Load transactions, you do not have to run the Bulk Copy process.

Follow-Up Processing

None

Transactions

You can use nine transactions for the Project and Component Load process:

- Project, which contains project definition information
- Project Accounting Distribution

- Project Amount Class
- Project Cost Element
- Component, which contains component definition information
- Component Accounting Distribution
- Component Cost Element
- Component Capitalization
- Component Capitalization Policy

Correcting Transaction Errors

If the Project and Component Load process applies any transactions that contain errors, correct the errors on the Project Component Transaction Correction window and rerun the process.

Equivalent Windows

You can also use the following windows to add, change, and delete project and component information:

- Project window
- Project Accounting Distribution window
- Project Amount Class window
- Project Cost Element window
- Capitalization Component Policy window
- Capitalization Transaction window
- Component window
- Component Accounting Distribution window
- Component Cost Element window

Project Copy

Use the Project Copy scheduled process to add projects from existing projects. You can select online multiple projects within an entity to copy. This process copies the project, project amount classes, project accounting distributions, project cost elements, components, component cost elements, component accounting distributions, structures, and, if you request them, budget balances.

Prerequisite Processing

Enter a request on the Project Copy Request window before using the Project Copy scheduled process. The request ID you enter on this window is used as a parameter when you set up the Project Copy process in Job Scheduler.

Follow-Up Processing

None

Transactions

None

Correcting Transaction Errors

When the Project copy scheduled process successfully copies a transaction, it removes the transaction from the project_copy_request table. If the process does not run to successful completion, restart it to process the transactions that were not processed when the errors interrupted it.

Project Journal Load

Use the Project Journal Load scheduled process to generate project journals from transaction files. The process validates the transactions and loads them into project journal files for subsequent posting by the Projects Posting scheduled process.

You can choose to generate ledger journals from project journal transactions. If you choose this option, the Projects Posting process generates ledger journals for the SmartStream Ledger Posting process.

Note: While you are running this scheduled process, you cannot update any project entities using Projects windows.

Prerequisite Processing

If you are processing new Project Journal Load transactions, run the Bulk Copy scheduled process before you run the Project Journal Load process. Use the bulk copy process to copy the transactions to the server where you added the associated project entity.

If you are reprocessing corrected Project Journal Load transactions, you do not have to run the Bulk Copy process.

Follow-Up Processing

To post the journals, run the Projects Posting scheduled process after you run the Project Journal Load process.

Transactions

You can use four transactions for the Project Journal Load process:

- Project Journal Control

- Project Journal Line
- Project Journal Accounting Distribution
- Project Journal Comments

Date Format Project Journal Load transactions can originate in two places:

- Direct entry, via the bulk copy process
- Copy Projects Allocation Transactions scheduled process, which copies the results of the Projects Allocation scheduled process to the Project Journal Load Transaction table.

The transactions generated by the Copy Projects Allocation Transactions process always use the date format specified by enterprise policy. However, when you enter Project Journal Load transactions directly, you can use a different date format.

You should not process transactions with different date formats as part of a single job. Therefore, if you are processing Project Journal Load transactions that use a date format different from the format specified by enterprise policy, do not process any Project Journal Load transactions generated by the Copy Projects Allocation Transactions process as part of the same job.

Correcting Transaction Errors

If the Project Journal Load process applies any transactions that contain errors, correct the errors as follows:

- Use the Project Journal Transaction Correction window to correct errors that occur as a result of incorrect information in any key field, for example, a project entity that is not valid.
- Use the Unposted Project Journal window to correct errors that occur when you enter an incorrect value in a data field. Projects saves any project journals containing data errors with a status of Incomplete or In Error.

Equivalent Window

You can also use the Unposted Project Journal window to add, change, and delete unposted project journal information.

Projects Allocation

Use the Projects Allocation scheduled process to distribute amounts to one or more projects based on rules that you define.

Defining Allocations

Use the following windows to define how to extract, calculate, and distribute amounts:

- Formulas (in SmartStream Formulas)

- Projects Allocation Pool
- Projects Allocation Distribution
- Projects Allocation Cycle

Results from the Projects Allocation process are written to either

- The Project Journal Load Transaction table. The Copy Projects Allocation Transactions scheduled process copies the results from the Projects Allocation process to this table.
- A communication table, which you can use as input for other allocations.

Prerequisite Processing

Enter a request on the Projects Allocation Request window. The request ID you enter on this window is used as a parameter when you set up the Projects Allocation process in Job Scheduler.

Follow-Up Processing

After you review the results of the Projects Allocation process, run the Copy Projects Allocation Transactions process to copy the allocation results to the Project Journal Load Transaction table.

Transactions

None

Projects Balance Load

Use the Projects Balance Load scheduled process to add, replace, and delete Projects balances

- Of either type, monetary or statistical
- In any amount class that is valid for the project.

Note that when you enter a balance through this process, you are replacing the existing balance, not adjusting it as you do when entering project journals.

Projects does not perform funds checking on any balances that you enter through the Projects Balance Load process.

Prerequisite Processing

If you are processing new Projects Balance Load transactions, run the Bulk Copy scheduled process before you run the Projects Balance Load process. Use the bulk copy process to copy the transactions to the server where you added the associated project entity.

If you are reprocessing corrected Projects Balance Load transactions, you do not have to run the Bulk Copy process.

Follow-Up Processing

None

Transactions

You can enter two transactions for the Projects Balance Load process:

- Monetary Balance
- Statistical Balance

Correcting Transaction Errors

If the Projects Balance Load process applies any transactions that contain errors, correct the errors on the Projects Balance Transaction Correction window and rerun the process.

Equivalent Window

You can also use the Projects Balance Maintenance window to add, replace, and delete balance information.

Projects Posting

Project journals can be generated in any of the following ways:

- The Project Journal Load scheduled process can generate them.
- The Projects Allocation scheduled process can generate them.
- You can add them on the Unposted Project Journal window.
- The Project Journal Reversal procedure in the Projects Posting scheduled process generates reversal journals for project journals that have a reversal option of Periods Ahead or Specific Date. For more information about this procedure, see Criteria for Generating a Reversal Journal in the *Projects* guide.
- Other SmartStream products generate them, for example, Payables, Purchasing, and Supplies.

After journals are generated, you can post them to Projects only, or to both Projects and SmartStream Ledger:

- You use the Projects Posting process to post the journals to Projects.
- For journals you post to Projects and Ledger, the Projects Posting process generates ledger journal control and journal line transactions for the Ledger Posting process.

Projects Posting and Projects Year Open

If you run the Projects Posting process and include journals that post to an unopened year, the process simulates the Projects Year Open scheduled process and adds balance rows for the posting year. The difference in Projects Posting's and Projects Year Open's addition of balance rows is that Projects Posting adds balance rows only for the specific amount classes and cost elements used for a particular journal, while Projects Year Open adds all rows for the year.

Prerequisite Processing

Enter a request on the Projects Posting Request window. The request ID you enter on this window is used as a parameter when you set up the Projects Posting process in Job Scheduler.

Follow-Up Processing

After you run the Projects Posting process, run the Ledger Posting scheduled process to post the ledger journals.

Transactions

None

Projects Process Unlock

When you run a Projects scheduled process, it adds a row to the Process Server table to lock the process and to prevent other processes that affect the same data from running. Usually, the last step of the scheduled process is to delete the row from the Process Server table and unlock the data.

However, if the process does not run to successful completion and therefore does not reach the final unlock step, the data processing remains locked and unavailable for use by other Projects processes. You must run the Projects Process Unlock scheduled process to delete the appropriate row and unlock the data.

Note: Because the Projects Process Unlock process can unlock a process that is currently running, have only an approved supervisory-level administrator run it for your enterprise.

Prerequisite Processing

None

Follow-Up Processing

None

Transactions

None

Projects Year Open

When you set up a project, you identify the project's fiscal year. At that point, Projects adds balance rows for that year to the balance tables for all of the project's amount classes.

If a project continues beyond the end of its fiscal year, or if a project's fiscal year is earlier than its project entity's fiscal year, you must run the Projects Year Open scheduled process to add balance rows for the project for the new year. The Projects Year Open process changes the fiscal year to the opened year for all processed projects and project entities.

For funds checking purposes and accurate reporting of balances, balance rows must be set up for a specific year before you post any amounts for that year.

The Projects Year Open process

- Adds new balance rows for both statistical and monetary balances for the year being opened. If any project has a fiscal year earlier than its project entity, the Projects Year Open process also adds rows for all years between the project fiscal year and the year being opened.
- Initializes balance rows with project-to-date and capitalized-to-date totals from the previous year
- Changes the summary balance rows, including the funds check and summary budget, for the new year.

See also Projects Posting and Projects Year Open.

Prerequisite Processing

You can start the Projects Year Open process by either

- Adding a request on the Projects Year Open Request window.
- Changing a project's status from Cancelled or Closed to any other status on the Projects Status Maintenance window. This automatically
  - Adds a Projects Year Open request if the current fiscal year of the project is earlier than the current fiscal year for the associated project entity. Identifiers for requests that are added automatically begin with *chg*.
  - Schedules the Projects Year Open process to run.

Adding a Request

When you add a request to run the Projects Year Open process, you must schedule the process yourself in Job Scheduler. The Projects Year Open process processes all projects associated with the selected project entities, except those that have

- A status of Cancelled, Closed, or Validating. If a project has a status of Validating, wait until Projects finishes the validation process and changes the project's status.
- A project fiscal year that is the same as the year you are opening.

Changing a Project's Status

When the Projects Year Open process starts automatically because you change a project's status, the process runs only for that project. Projects assumes that the year you are opening for the project is the fiscal year for the associated project entity.

Follow-Up Processing

None

Transactions

None

Project Validation

Project Validation is a Projects process that checks for certain conditions before you can change the status of a project or component. The following Projects activities use the Project Validation process:

- Project and Component Load scheduled process
- Projects Status Maintenance window
- Project window

Project Validation Subprocesses

The Project Validation process consists of six subprocesses. The following table identifies each subprocess and whether it applies to project status changes or component status changes:

Subprocess	Project Status Changes	Component Status Changes
Setup Validation	Yes	
Funds Checking Table Build	Yes	
Close Edit	Yes	Yes
Reopen Edit	Yes	Yes
Activation Edit	Yes	Yes
Component Edit		Yes

Setup Validation

The Setup Validation subprocess verifies that the project includes minimally required information:

- At least one amount class
- At least one cost element
- At least one detail component
- Any user fields defined as required by the associated project entity

The Setup Validation subprocess also verifies that

- The summary tier is valid for the project in SmartStream Structures.
- The format of any entered user fields is valid based on the format defined for the project entity.
- The component category assigned to components of the project meet the following criteria:

  - No detail components have a component category of Capital and Expense.
  - Any summary components with a category of Capital have only capital detail components under them.
  - Any summary components with a category of Asset Production have only asset production detail components under them.
- All components that roll up to the summary tier have the same ledger currency if the funds checking and summary currency type is Ledger.
- All components have a valid rate entity and rate type.

Funds Checking Table Build

After a project completes the Mega Edit validations, Projects can start the Funds Checking Table Build subprocess for the project. This subprocess adds rows for a project to the Funds Checking and Summary table (component_sum_monetary_bal table).

Note: Because the Funds Checking and Summary table contains summary balances and funds checking information, Projects adds rows to the table for every project, even if the No Funds Checking option is selected for the project.

L Rows and P Rows For each project, the Funds Checking and Summary table contains *L rows*, which contain balances in the ledger currency. For projects with a currency option that specifies the use of both project and ledger currencies, the Funds Checking and Summary table also contains *P rows*, which contain balances in the project currency. The following table identifies when the subprocess inserts each type of row in the Funds Checking and Summary table:

The subprocess inserts...	For...
L rows	▪ Detail components that have existing balances in any of the following amount classes: – Actual – Commitment – Funds checking and summary ▪ Summary components on the summary tier if – Enterprise policy specifies a single currency – The project entity specifies that balances are to be stored in the ledger currency only – The project entity specifies that balances are to be stored in both the project and ledger currencies, and you select the Ledger Balances at Summary Tier option for the associated project.
P rows	▪ Detail components that have existing balances in the Actual, Commitment, or funds checking and summary amount class. ▪ Summary components on the summary tier if – Project entity policy allows both project and ledger currencies – You select the Ledger Balances at Summary Tier option for the associated project.

Project Statuses If a project has one of the following statuses, Projects has already processed the Funds Checking Table Build subprocess and the Funds Checking and Summary table for the project contains rows.

- Active
- Cancelled
- Closed
- Complete
- On Hold

Close Edit

Projects starts the Close Edit subprocess when you change a project's status from Active, Complete, or On Hold to Cancelled or Closed. The Close Edit subprocess verifies that no detail components of the project

- Have outstanding commitments

- Have uncapitalized amounts in the Actual amount class if the components have a category of Asset Production or Capital.

Reopen Edit

When you reopen a project, Projects starts the Project Reopen Edit subprocess and compares the project entity fiscal year and the project fiscal year. If they differ, the subprocess automatically runs the Projects Year Open scheduled process to change the project fiscal year to the project entity fiscal year.

Activation Edit

Projects starts the Activation Edit subprocess when you change a project's status to Active. This subprocess is a combination of the Setup Validation and Funds Checking Table Build subprocesses.

Component Edit

Projects starts the Component Edit subprocess when you change a component's status from Active, Complete, or On Hold to Cancelled or Closed. This subprocess is the same as the Close Edit subprocess except that the Component Edit processes

- An individual detail component
- All detail components under a summary component, if you cascade the changes you make on the Projects Status Maintenance window.

Project Validation Processing

Projects automatically starts Project Validation subprocesses when you change a project's status.

Projects automatically starts this subprocess...	When you change a project's status to...	From...
Setup Validation	Pending Approval	In Error or Preparing.
Funds Checking Table Build	Active, Cancelled, or Closed	Pending Approval.
Close Edit	Cancelled or Closed	Active, Complete, or On Hold.
Reopen Edit	Active, Complete, or On Hold	Cancelled or Closed.
Activation Edit	Active, Cancelled, or Closed	In Error or Preparing.

You also can run the Setup Validation subprocess immediately for a project by choosing the Validate Project action on the Project or Projects Status Maintenance window.

Component Edit Subprocess

Projects also automatically starts the Component Edit subprocess when you change a component's status from Cancelled or Closed to Active Complete, In Error, or On Hold.

Note About Project Templates

You can change the status of a project template only to Preparing. Because changing a project to this status does not start Project Validation subprocesses, Projects does not run any of the subprocesses for project templates.

However, you can manually start the Setup Validation subprocess for project templates by selecting the Validate Project action on the Project or Projects Status Maintenance window.

Changes You Cannot Make After the Activation Edit

After a project or component is activated, you can no longer change the

- Project currency
- Funds checking currency
- Summary tier
- Ledger Balances at Summary Tier option
- Funds checking and summary amount class In addition, you cannot delete this amount class from the associated project entity.

Automatic Setting of Project Status

The Project Validation process automatically sets project status in specific situations. The following table identifies these situations:

Project Validation sets status to...	When...
In Error	The Setup Validation subprocess runs by itself and does not run to successful completion.
Original status value (ignores the new status you entered)	The process has any of the following results: ▪ The Activation subprocess does not run to successful completion. ▪ The Close Edit subprocess does not run to successful completion. ▪ The Reopen Edit subprocess does not run to successful completion. ▪ The Funds Checking Table Build subprocess runs by itself and does not run to successful completion. ▪ The Component Edit subprocess does not run to successful completion.
Validating	Any Project Validation subprocess is in the process of running for the project or component.

Writing Transactions to DBMS Tables

Before you run any of the three Projects load processes, you must enter the transactions that you want to process into the appropriate DBMS table:

- Project and Component Load transaction table (proj_load_trans)
- Project Journal Load transaction table (project_jrnl_load_trans)
- Projects Balance Load transaction table (component_balance_trans)

You can use one of two methods to write balance load, project and component load, and project journal load transactions to the DBMS tables:

- Using the Bulk Copy scheduled process.
- Writing the transactions directly to the tables. Use this method if you generate transactions using another product, such as an in-house product.

Writing Transactions Using the Bulk Copy Process

The Bulk Copy method of writing transactions to the DBMS tables has two stages:

Stage	Task	Window
1	Enter the scheduled transaction parameters for bulk copying.	Bulk Copy Parameters
2	Copy all transactions using the Bulk Copy process.	Job Scheduler

Writing Transactions Directly

If you write transactions directly to the DBMS tables, you do not use Job Scheduler.

Procedure

Follow this procedure to update any of the load transaction tables directly:

Stage	Task
1	Run the appropriate stored procedure: ▪ fsp_before_pjtx for Project and Component Load transactions ▪ fsp_upd_pjbl_before_bulk_copy for Project Journal Load transactions ▪ fsp_upd_pjbt_before_bulk_copy for Projects Balance Load transactions
2	Update the transaction table using the method you choose.

Stage	Task
3	Run the appropriate stored procedure: ▪ fsp_after_pjtx for Project and Component Load transactions ▪ fsp_upd_pjbl_after_bulk_copy for Project Journal Load transactions ▪ fsp_upd_pjbt_after_bulk_copy for Projects Balance Load transactions **Note:** These stored procedures use the SmartStream user ID entered on the Bulk Copy Parameters window. The stored procedures copy this user ID to each transaction that they process and use the identifier as the distribution user ID for To Do and SmartStream Mail messages that they generate. Instead of running the stored procedures, you can manually perform the tasks they contain.

Archiving and Purging Projects Information

In Projects, you can use the Archive/Purge process to remove outdated information from your database tables. Depending on the options you select, you can archive data from a specific project entity to history tables or to a file for storage on disk or tape before SmartStream purges it.

For more information about this process, see About Archive/Purge.

Security

To use the Archive/Purge process in Projects, you must have the following activity security defined for you on the Activity Security window:

- Access to these activities:
  - Archive/Purge Request (ccf0770)
  - Archive/Purge processor (ccf0800)
  - Appropriate Projects activities
- Security Entity 1 status assigned to these archive IDs:
  - Project Journal Archive to History (fpjpjctcah)
  - Project Journal Archive to Disk (fpjpjctcad)
  - Project Journal History Archive to Disk (fpjapjccad)
  - Project and Journals Archive to History (fpjprojcah)
  - Project and Journals Archive to Disk (fpjprojcad)
  - Project and Journals History Archive to Disk (fpjaprjcad)
- Security Entity 2 status assigned to the appropriate project entities.

You must also have maintenance-level data security for the appropriate projects defined for you on the Security Data Control window.

When you run the Archive/Purge process using Job Scheduler, you must use the security profile of DBS.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	Create the archive and purge request, including which activity records to archive and purge.
2	Run the offline scheduled process that archives and purges activity records.
3	Review results using reports.

What Can You Archive and Purge?

Using the archive and purge activities delivered for the Projects application, you can archive and purge the following types of information:

- Project journals
- Project and associated project journals

Project Journals Archive and Purge Activities

The Project Journals archive and purge activities process the following activity tables:

- project_jrnl_ctrl
- project_jrnl_line
- project_jrnl_line_acctg_dist
- project_jrnl_ctrl_comnt

Projects Archive and Purge Activities

The Projects archive and purge activities process the following activity tables:

- project
- project_comnt
- project_amount_class
- project_acctg_distn
- project_cost_element
- component
- component_cmnt
- component_cost_element
- component_acctg_distn
- srg_structure
- srg_structure_status

- srg_point
- srg_summary_navigation
- srg_data_navigation
- srg_column_association
- srg_column_description
- srg_owner
- srg_global_dyn_data
- srg_dynamic_data
- srg_access
- srg_distribution
- srg_entity_association
- srg_layer
- srg_layer_point
- srg_model
- srg_next_strc_object_id
- srg_range
- srg_tot_levels
- component_monetary_balance
- component_stat_balance

Related Activity Tables

Besides the activity tables just listed, the Projects archive and purge activities also include the following related activity tables during processing.

- project_jrnl_ctrl
- project_jrnl_ctrl_comnt
- project_jrnl_line
- project_jrnl_line_acctg_dist

Types of Archive and Purge Activities

You can manage the information in your Projects activity and history tables using the following archive and purge activities:

- Project Journals
  - Project Journal Archive to History - Moves project journal information from the original activity tables to history tables.

  - Project Journal Archive to Disk - Moves project journal information from the original activity tables to a disk or tape.
  - Project Journal History Archive to Disk - Moves project journal information from the history tables to disk or tape.

- Projects
  - Project and Journals Archive to History - Moves information about projects and their journals from the original activity tables to history tables.
  - Project and Journals Archive to Disk - Moves information about projects and their journals from the original activity tables to a disk or tape.
  - Project and Journals History Archive to Disk - Moves information about projects and their journals from history tables to disk or tape.

Selection Criteria

You can specify the criteria for selecting the information to include in the archive/purge process. All records that meet the selection criteria are purged, and if requested, they are archived. The following information shows the selection criteria you can identify for each activity type:

- Project Journals
  - Project Entity ID
  - Project Journal ID
  - Project Journal Sequence Number
- Projects
  - Project Entity ID
  - Project ID
  - Project Closed Date

Job Scheduler Parameters for Projects

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window to submit a scheduled process. For more information, see Understanding the Job Scheduler in the *SmartStream Administration* guide.

Values for Parameters

Enter the following values for the Program Name and Program Parameters fields when scheduling Projects processes. If a program has more than one parameter:

- Enter the information in the indicated sequence.
- Do not skip parameters.
- Separate the information with a space.

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccfc0800.exe **UNIX:** ccfc0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements, and archives it if requested. – P - Preview. Displays the data to be purged and archived if requested before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if no SmartStream data changed or system processing occurred since the preview. ▪ Job ID automatically supplied by Job Scheduler if requested **Note:** You must use the security profile of DBS when you run the Archive/Purge process.
Balance Reorganization	**Windows:** fpjc9200.exe **UNIX:** fpjc9200	Request ID entered on the Projects Balance Reorganization Request window.
Bulk Copy	**Windows:** dbsbulk.exe	User-defined bulk copy parameter key entered on the Bulk Copy Parameters window.
Capitalization	**Windows:** fpjc8600.exe **UNIX:** fpjc8600	▪ Project entity. ▪ Project ID - Optional. If you do not enter a project, all projects for that project entity are processed.
Copy Projects Allocation Transactions	**Windows:** fpac4800.exe **UNIX:** fpac4800	Server ID - Optional. The default is the primary server for the user who requests the scheduled process. The identifier for the server where the Projects Allocation transactions are located. This should be the same server as the project entity that is associated with the transactions.

Program	Program Name	Program Parameters
Copy Projects Asset Transactions	**NT:** fpjc8900.exe **UNIX:** fpjc8900	▪ Server ID - Optional. The default is the primary server for the user who requests the scheduled process. The identifier for the server where the Projects asset addition, asset adjustment, and asset retirement transactions are located. This should be the same server as the project entity that is associated with the transactions. ▪ User ID - Optional. Enter a user ID to override the user ID already defined for asset transactions.
Project and Component Load	**Windows:** fpjc4200.exe **UNIX:** fpjc4200	▪ Date format - Required. Values are ddmmyy ddmmyyyy mmddyy mmddyyyy yymmdd yyyymmdd. ▪ Decimal separator - Required. The character used in amount fields to indicate decimal places. Values are . (period) , (comma). ▪ Server ID - Optional. The default is the primary server for the user who requests the scheduled process. The identifier for the server where you loaded the Project and Component Load transactions. This should be the same server as the project entity that is associated with the transactions.
Project Copy	**Windows:** fpjc5000.exe **UNIX:** fpjc5000	▪ Project entity ▪ Request ID ▪ Request ID entered on the Projects Copy Request window.

Program	Program Name	Program Parameters
Project Journal Load	**Windows:** fpjc7100.exe **UNIX:** fpjc7100	▪ Date format - Required. The default comes from enterprise policy. Values are ddmmyy ddmmyyyy mmddyy mmddyyyy yymmdd yyyymmdd. If you run the Project Journal Load scheduled process as a follow-up to the Copy Projects Allocation Transactions scheduled process, enter **yyyymmdd** for this field. ▪ Decimal separator - Optional. The default comes from enterprise policy. The character used in amount fields to indicate decimal places. Values are . (period) , (comma). ▪ Delete orphaned transactions - Optional. Value is Y or Yes - Delete Project Journal Load transactions that do not have an associated journal control transaction. If you do not want to delete these transactions, leave this field blank. ▪ Server ID - Optional. The default is the primary server for the user who requests the scheduled process. The identifier for the server where you loaded the Project Journal Load transactions. This should be the same server as the project entity that is associated with the transactions.
Projects Allocation	**Windows:** fpac4900.exe **UNIX:** fpac4900	▪ Project entity ID ▪ Request ID

Program	Program Name	Program Parameters
Projects Balance Load	**NT:** fpjc3500.exe **UNIX:** fpjc3500	▪ Decimal separator - Optional. The default comes from enterprise policy. The character used in amount fields to indicate decimal places. Values are . (period) , (comma). ▪ Server ID - Optional. The default is the primary server for the user who requests the scheduled process. The identifier for the server where you loaded the Projects Balance Load transactions. This should be the same server as the project entity or entities that are associated with the transactions.
Projects Posting	**Windows:** fpjc7000.exe **UNIX:** fpjc7000	Request ID entered on the Projects Posting Request window
Projects Process Unlock	**Windows:** fpjc1000.exe **UNIX:** fpjc1000	▪ Activity ID - The program name for the scheduled process you want to unlock. ▪ User ID - Optional. If you enter this parameter, the Projects Process Unlock process deletes only those rows from the Process Server table that include this SmartStream user ID. This is the user ID of the person who originally requested the scheduled process that is now locked. ▪ Server ID - Optional. The default is the primary server for the user who requests the scheduled process. The identifier for the server where you ran the scheduled process you want to unlock.
Projects Year Open	**Windows:** fpjc8800.exe **UNIX:** fpjc8800	Request ID entered on the Projects Year Open Request window

Reviewing the Status of the Job

You can determine the status of Projects jobs from the messages they generate while processing. Use this process to review all the messages.

Process

Stage	Description
1	Display the Scheduler Log window to review the return code for the job and the job's final status (ended successfully, ended with errors, ended before completion). For a list of return codes and their descriptions, see Return Codes.
2	Review SmartStream Mail messages, which provide information such as process summaries, database errors, and general application errors, for example, insufficient activity security and concurrent processing errors. Also, review all messages generated by nonload processes. Projects scheduled processes do not generate SmartStream Mail messages if processing of a job produces certain return codes.
3	Review To Do messages. Besides SmartStream Mail messages, the three Projects load processes (Balance Load, Project and Component Load, and Project Journal Load) generate To Do messages if they encounter transaction errors. You can choose each message on the To Do List to access the appropriate transaction correction window.

Message Processing

The Projects allocation and load processes write error, warning, and informational messages to specific message tables:

This scheduled process...	Writes messages to this message table...
Copy Projects Allocation Transactions and Projects Allocation	project_alloc_err_report.
Project and Component Load	proj_load_trans_msg.
Project Journal Load	▪ project_jrnl_load_msg (for key errors) ▪ project_journal_message (for data errors).
Projects Balance Load	component_balance_msgs.

Error Messages

The scheduled process writes the transaction error messages to the message table and generates a To Do message.

Informational and Warning Messages

Because the informational and warning messages that Projects allocation and load processes generate do not require you to perform any action, they do not appear in your To Do List. For example, if a balance load transaction is applied with no errors but generates informational and warning messages, the Balance Load scheduled process writes the messages to the Component Balance Messages table (component_balance_msgs) and does not generate a To Do message.

You can review these informational and warning messages only through a query that you define to get them from the message table.

Identifying the Transaction Informational and warning messages do not identify the specific transaction in error. To help you match these messages with the transactions that generated them, the load processes always generate one message per transaction that contains the key field information for the transaction. Although each message has a unique message number, the message ID is the same for all messages associated with a specific transaction.

The query that you define can group messages by message ID so that you can easily identify which transaction generated each message.

Determining Whether and When to Run the Query To determine whether you should run the query after each scheduled process runs, check the process summary using SmartStream Mail. Each process summary includes the number of informational and warning messages generated by the process. If the number is zero, you do not need to run your query.

When a load process begins running, it deletes all existing messages in the message table. Therefore, if you plan to run a query to get messages for a particular process run, you must do it before that load process runs again.

Return Codes

The return codes displayed on the Scheduler Log window refer to other, more detailed messages. The following table lists the possible return codes and the type of message they refer to:

Return Code	Meaning	Possible Cause	Suggested Action
-9	The program did not find the text file used for language conversion.	The file is missing or corrupted.	Call your database administrator.
-6	An SQL call to the database server failed, preventing the program from completing.	The call was interrupted or could not connect.	Call your database administrator.
-5	A call to dbopen() or dblogin() failed, generating a database connection error and preventing the program from completing.	The call was interrupted or could not connect.	Call your database administrator.
-4	The Job Scheduler GetLocationInfo API function call failed. The program did not run.	The call was interrupted or could not connect.	Call your database administrator.

Return Code	Meaning	Possible Cause	Suggested Action
-3	The Job Scheduler GetSecurity API function call failed. The program did not run.	The call was interrupted or could not connect.	Call your database administrator.
-2	The Job Scheduler GetStepInfo API function call failed. The program did not run.	The call was interrupted or could not connect.	Call your database administrator.
-1	The Job Scheduler AttachUser API function call failed. The program did not run.	The call was interrupted or could not connect.	Call your database administrator.
0	The program completed successfully with no errors, warnings, or informational messages.	Not applicable	None
1	The program completed and generated only informational messages, not warning or error messages.	Not applicable	Review the informational messages using SmartStream Mail or a user-defined query.
2	The program completed and generated warning messages, not any error messages.	Although the process completed successfully, it encountered conditions that you should be aware of.	Review the warning and informational messages using SmartStream Mail or a user-defined query.
3	The program generated error messages but completed successfully.	The error message identifies the cause.	Review the error message using SmartStream Mail or the specific message table, if a Projects load process, to determine the action.
4	The program generated error messages and did not complete.	The error message identifies the cause.	Review the error message using SmartStream Mail to determine the action.
5	Reserved for Job Scheduler errors. Projects scheduled processes do not generate SmartStream Mail messages if the job produces this return code.	The information you entered on the Job Scheduler window is incorrect, for example, the program name is not valid.	Review and correct the information entered on the Job Scheduler window, then resubmit the process.
6	Job Scheduler did not pass the correct parameters to the program.	The parameters you entered on the Job Scheduler window are incorrect, for example, the date format is not valid.	Review and correct the information entered on the Job Scheduler window, then resubmit the process.
7	The scheduled process did not run because another process prevented it from running.	Another scheduled process is already running that this process cannot run with.	Wait until the conflicting process finishes before running the process.

Troubleshooting

This section provides general information about correcting problems that occur during processing.

Scheduled Process	Problem	Possible Action
All	A Projects process does not run to completion because it is interrupted. The maintenance being performed for the transaction that is interrupted is reversed or deleted. All the maintenance tasks completed for transactions before the interruption are saved.	▪ Identify the cause of the problem and correct it. ▪ Run the Projects Process Unlock scheduled process. ▪ Resubmit the job immediately or at the regularly scheduled time. When you resubmit the job, processing resumes with the transaction that was interrupted.
All	You receive an error stating that you cannot run a scheduled process because another process is already running. After checking, you determine that the scheduled process identified in the message is not really running.	A Projects process did not run to completion. Run the Projects Process Unlock scheduled process to unlock the data.
Balance Reorganization	You try to run the Balance Reorganization scheduled process and receive a concurrent processing error.	Wait until the conflicting process is finished, and rerun the Balance Reorganization scheduled process.
Balance Reorganization	You try to run the Balance Reorganization scheduled process and receive an activity security error.	Perform one of the following actions: ▪ Set up a new request on the Projects Balance Reorganization Request window. ▪ Run the process using a different user ID that has security access for the process and the project entity being processed.
Project Journal Load	You entered transactions for the Project Journal Load scheduled process without entering an associated journal control transaction, resulting in orphaned transactions.	Use the Bulk Copy process to copy the missing journal control transaction to the project_jrnl_load_trans table and rerun the Project Journal Load process. The process applies the journal control transaction first, then the associated transactions.

If Projects Tables Reach the Maximum Number of Rows

Six Projects tables include an identity column, which contains a number that uniquely identifies each row in the table:

- Error message tables
  - project_alloc_message (DBSpjal database)
  - project_common_message (DBSpjcm database)
  - project_journal_message
  - project_message
- project_ast_maint_trans (DBSpwrk database)
- project_server_process

The maximum length of the identity column is 28, and the maximum number of rows for these tables is calculated as follows:

(1 to the 28th power) -1

If a Projects process tries to insert a row in a table that has reached its maximum, an error message appears stating that the insert was not successful.

Procedure

To reset the identity column to zero so that Projects can once again insert rows in the table, follow this procedure:

Step	Action
1	Review the contents of the table to determine if you need to perform any related actions. If the table is ▪ An error message table, correct any outstanding errors ▪ The project_ast_maint_trans table, run the Copy Projects Asset Transactions scheduled process to copy any new asset transactions to the Asset Maintenance Transaction table in Asset Management ▪ The project_server_process table, either – Rerun any processes that remain in the table because they did not run to successful completion – Run the Projects Process Unlock scheduled process to remove the process row from the table.
2	Optionally copy the contents of the table to a text file for storage and retrieval purposes.
3	Delete the table from the Projects database.
4	Recreate the table and any associated indexes and triggers.

What Happens During Processing?

This section describes how Projects performs scheduled processes. It also contains information about the tables that are affected during processing.

Note: Unless otherwise noted, all tables referred to in this section are in the Projects DBSproj or DBSpjcm databases.

Archive/Purge Process (ccfc0800)

The following table describes the stages of the Archive/Purge process:

Stage	Description
1	Reads the archive/purge request on the purg_request_ctrl table to determine the Projects information to process.
2	Depending on the type of processing requested, it adds and deletes rows in the appropriate Projects and Structures tables. See Archiving and Purging Projects Information.
3	Maintains the purge_server_process table as needed: If the archive/purge processing is ▪ Successful, it deletes the request from this table. ▪ Unsuccessful, it leaves the request in this table and writes error messages in the prj_candidate table or the prj_jrnl_candidate table in the DBScand database.

Balance Reorganization Process (fpjc9200)

The following table describes the stages of the Balance Reorganization scheduled process and the tables that it affects:

Stage	Description
1	Reads the following Projects tables to determine which tables you want to reorganize: balance_reorg_request balance_reorg_request_entities
2	Deletes any rows currently in the ▪ component_monetary_bal_reorg1 and 2 tables if you select Monetary or Both for the amount type ▪ component_stat_bal_reorg1 and 2 tables if you select Statistical or Both for the amount type.

Stage	Description
3	Reads the component_monetary_balance table, the component_stat_balance table, or both, based on the request parameters.
4	Reorganizes and copies the information from those tables to the following balance reorganization tables: component_monetary_bal_reorg1 component_monetary_bal_reorg2 component_stat_bal_reorg1 component_stat_bal_reorg2

Reorg2 Tables

The Balance Reorganization process uses the reorg2 tables depending on the number of accounting periods defined for your enterprise. If your enterprise uses

- 14 or fewer accounting periods, the process uses only the reorg1 tables
- More than 14 accounting periods, the process uses both the reorg1 and reorg2 tables.

Bulk Copy Process (dbsbulk.exe)

Unless you write transactions directly to the DBMS tables, you must run the Bulk Copy scheduled process before running the three Projects load processes to apply new transactions:

- Project and Component Load
- Project Journal Load
- Projects Balance Load

You can run the Bulk Copy process multiple times before running the Projects load process.

If you are reprocessing corrected load transactions, you do not need to run the Bulk Copy process.

Processing Stages

The Bulk Copy process

- Writes the load transactions from a text file to the appropriate table.
- Updates the table with the user ID (last_maint_user_id) defined in the bulk copy parameters.
- Sets the trans_message_id and chgstamp column control fields to 0 for transactions processed during this run of the process (identified based on the last_maint_user_id being null).

Tables That the Process Copies To

The following information identifies the table that the Bulk Copy process copies information to for each Projects load process:

For this scheduled process...	The Bulk Copy process copies transactions to this table...
Project and Component Load	proj_load_trans.
Project Journal Load	project_jrnl_load_trans.
Projects Balance Load	component_balance_trans.

Note: When you use the Bulk Copy process for Projects scheduled processes, copy the transactions to the server where you added the associated project entity.

Prerequisite Tasks

Before running the Bulk Copy process:

- Ensure that the information you want to load is formatted into individual transactions in a text file. For information about transaction layouts, see Entering Field Information.
- Add a set of bulk copy parameters on the Bulk Copy Parameters window. You must define a bulk copy parameter key for each set of parameters.

When your transactions are ready to load, set up the Bulk Copy process (dbsbulk.exe) in Job Scheduler, entering the appropriate Bulk Copy Parameter Key.

Capitalization Process (fpjc8600)

The following table describes the stages of the Capitalization scheduled process and the tables that it affects:

Stage	Description
1	Reads the following Projects tables: capitalization_comp_policy capitalization_error capitalization_policy capitalization_transaction component component_acctg_distn component_cost_element component_monetary_balance project project_entity project_server_process
2	Reads the following Asset Management tables in the DBSfast database: asset ast_cat ast_entity_book ast_entity_policy ast_loc property_account
3	Generates the asset maintenance transactions for capitalization and retirement.
4	Inserts rows in the following Projects tables: capitalization_error capitalization_summary capitalization_trans_audit component_audit component_monetary_audit component_monetary_balance_audit project_ast_maint_trans (DBSpwrk database) project_ldr_jrnl_ctrl project_ldr_jrnl_line project_server_process
5	Updates the following Projects tables with the asset maintenance transaction information: capitalization_error capitalization_transaction component component_monetary_balance project_server_process

Copy Projects Allocation Transactions Process (fpac4800)

You run the Copy Projects Allocation Transactions scheduled process after the Projects Allocation scheduled process. The following table describes the stages of the Copy Projects Allocation Transactions process and the tables that it affects:

Stage	Description
1	Reads the following tables in the DBSpjal database: project_alloc_distn_jrnl_ctrl project_alloc_distn_jrnl_line
2	Inserts rows in the following tables to complete the copy process: project_jrnl_load_trans project_alloc_err_report

Copy Projects Asset Transactions Process (fpjc8900)

You run the Copy Projects Asset Transactions scheduled process to copy asset maintenance transactions from the Project Asset Maintenance Transaction table in Projects to the Asset Maintenance Transaction table in Asset Management. The following table describes the stages of the Copy Projects Asset Transactions process and the tables that it affects:

Stage	Description
1	Reads the ▪ First row in the project_ast_maint_trans table ▪ project_server_process table.
2	Copies the row to the ast_maint_trans table.
3	Updates the project_server_process table.
4	Deletes the row from the project_ast_maint_trans_table if the copy process is successful.
5	Repeats these steps for each row in the project_ast_maint_trans table.

Project and Component Load Process (fpjc4200)

The following table describes the stages of the Project and Component Load scheduled process and the tables that it affects:

Stage	Description
1	Reads the proj_load_trans table, which the Bulk Copy process wrote the project and component load transactions to.
2	Adds, changes, and deletes rows in the following Projects tables, as applicable: capitalization_component_policy capitalization_transaction component component_acctg_distn component_cost_element project project_acctg_distn project_amount_class project_cost_element
3	Inserts an addition, change, or deletion row in the corresponding Projects audit table each time it adds, changes, or deletes a row in the tables identified in stage 2: capitalization_trans_audit component_audit component_acctg_distn_audit component_cost_elem_audit project_audit project_acctg_distn_audit project_amount_class_audit project_cost_element_audit
4	If you add or delete a project or component, adds or deletes the associated Work Breakdown structure or point in SmartStream Structures by updating the following SmartStream Structures tables (in the DBSosst database), depending on the type of transactions you enter: SRG_COLUMN_ASSOCIATION SRG_COLUMN_DESCRIPTION SRG_DATA_NAVIGATION SRG_OWNER SRG_POINT SRG_STRUCTURE SRG_STRUCTURE_STATUS SRG_SUMMARY_NAVIGATION

Processing Separate Transactions

Projects processes each Project and Component Load transaction as one logical transaction, independent of other transactions that you may enter for a specific project or component.

Exception

The Component Capitalization (C4) transaction is an exception. Because part of the C4 transaction validation involves totalling fields for all of a component's capitalization

transactions, the Project and Component Load process applies all of a specific component's Component Capitalization addition and change transactions as a group.

Adding a Project or Component

The following table describes the processing of the Project and Component Load process when you add a project or component.

When you enter a...	The Project and Component Load process first adds a...
Project (P1) transaction to add a project	Structure to Structures, with the project as the top point.
Component (C1) transaction to add a component	Point to the appropriate structure on Structures.

If the Project and Component Load process successfully adds a structure or adds a component to a structure, the process then adds the project or component information to the Projects tables.

Failure to Add a Project or Component

If the process cannot add the project or component to Structures, it does not update the DBSproj tables. Also, if the process fails to add the project or component to the DBSproj tables, it removes the corresponding information from Structures.

Project Copy Process (fpjc5000)

The following table describes the stages of the Project Copy scheduled process and the tables that it affects:

Stage	Description
1	Reads the project_copy_request table to determine the projects to copy.
2	Inserts rows in the following tables to complete the copy process: project project_amount_class project_acctg_distn project_cost_element component component_cost_element component_acctg_distn SRG_STRUCTURE SRG_STRUCTURE_STATUS SRG_POINT SRG_SUMMARY_NAVIGATION SRG_DATA_NAVIGATION SRG_COLUMN_ASSOCIATION SRG_COLUMN_DESCRIPTION SRG_OWNER component_monetary_balance component_start_balance

Stage	Description
3	Deletes the row from the project_copy_request table if the copy process is successful.
4	If copy is unsuccessful row remains on the project_copy_request table and error messages are written to the project_message table.

Project Journal Load Process (fpjc7100)

The following table describes the stages of the Project Journal Load scheduled process and the tables that it affects:

Stage	Description
1	Reads the project_jrnl_load_trans table, to which the Bulk Copy process wrote the project journal load transactions.
2	Adds, changes, or deletes rows in these Projects tables, as applicable: project_jrnl_ctrl project_jrnl_ctrl_comnt project_jrnl_line project_jrnl_line_acctg_distn

Projects Allocation Process (fpac4900)

The Projects Allocation scheduled process consists of four subprocesses:

- Extract
- Subtotalling
- Calculation
- Distribution

The following table describes the stages of each subprocess and the tables that each one affects:

Extract

Stage	Description
1	Extracts amounts from the following Projects tables: component_stat_balance component_monetary_balance formula formula_proj project project_alloc_pools project_alloc_pool_extract project_entity
2	Writes rows to the following tables: project_alloc_err_report project_alloc_extract_amount project_alloc_extract_units project_alloc_source_pool project_alloc_source_pool_time project_alloc_variable_pool

Subtotalling

Stage	Description
1	Reads the following Projects tables if you enter a variable pool for allocation or if a source pool requires subtotalling: project_alloc_cycle project_alloc_source_pool project_alloc_subtotal_parms project_alloc_variable_pool
2	Inserts the results into two tables: project_alloc_source_subtotal project_alloc_variable_subtotal

Calculation

Stage	Description
1	Calculates the amounts to extract by reading the following Projects tables: project_alloc_cycle project_alloc_distn_seqs project_alloc_source_subtotal project_alloc_variable_subtotal project_entity
2	Inserts the results into two tables: project_alloc_work project_alloc_err_report

Distribution

Stage	Description
1	Reads the following tables to determine how to process the extracted amounts: calendar (DBSpclh database) project_alloc_cycle project_alloc_distn_ctrl project_alloc_distn_seqs project_alloc_work project_entity
2	Updates the project_alloc_source_pool_time table.
3	Inserts the results in the following Projects tables: project_alloc_comm_amount project_alloc_comm_units project_alloc_distn_amount project_alloc_distn_jrnl_ctrl project_alloc_distn_jrnl_line project_alloc_distn_units project_alloc_err_report

Projects Balance Load Process (fpjc3500)

The following table describes the stages of the Projects Balance Load scheduled process and the tables that it affects:

Stage	Description
1	Reads the component_balance_trans table, which the Bulk Copy process wrote the balance load transactions to.
2	Changes the appropriate balance rows in these Projects tables: component_monetary_balance component_stat_balance
3	Inserts an addition, change, or deletion row in the corresponding Projects audit table each time it adds, changes, or deletes a row in the tables identified in stage 2: component_monetary_balance_aud component_stat_balance_audit

Stage	Description
4	Updates balances in the funds checking and summary table (component_sum_monetary_bal) if the ▪ Project has a status of Active or Complete. ▪ Amount class that you are adding, replacing, or deleting balance information for is the – Amount class identified as the funds checking amount class for the project – Actual or Commitment amount class. ▪ Fiscal year that you are adding, replacing, or deleting balance information for is the same as the project fiscal year.

Projects Posting Process (fpjc7000)

The following table describes the stages of the Projects Posting scheduled process and the tables that it affects:

Stage	Description
1	Reads the project_posting_reqst table to determine which project journals you want to post.
2	Gets information about the appropriate project journals from the following Projects tables, based on the request parameters: project_jrnl_ctrl project_jrnl_line project_jrnl_line_acctg_distn
3	Updates balances in the following Projects tables when it posts the project journals: ▪ component_monetary_balance and component_sum_monetary_bal, if the project journal affects a monetary amount ▪ component_stat_balance, if the project journal affects a statistical quantity

Posting Project Journals from Other Products

The Projects Posting process reads tables in other SmartStream products if the project journal originated outside of Projects.

If the posting request identifies the journal source as...	The Projects Posting process reads the following tables to get the project journal information...
Cost	SmartStream Supplies tables: cost_proj_jrnl_ctrl cost_proj_jrnl_line
Payment Request	SmartStream Payables tables: pmt_rqst_proj_jrnl_ctrl pmt_rqst_proj_jrnl_line
Purchase Order	SmartStream Purchasing tables: purchase_order_proj_jrnl_ctrl purchase_order_proj_jrnl_line

When the process posts these project journals, it

- Writes them to the Projects journal tables
- Changes the journal status to Posted on the Payables, Purchasing, or Supplies tables.

Generating Ledger Journals

For every project journal designated for posting to SmartStream Ledger, the Projects Posting process generates a corresponding ledger journal and writes it to the following Projects ledger journal tables, which are input tables for the Ledger Posting process:

- project_ldr_jrnl_ctrl
- project_ldr_jrnl_line

For more information about the Projects Posting process, see Projects Journals in the *Projects* guide.

Projects Process Unlock (fpjc1000)

Each Projects scheduled process adds a row to the Process Server table (project_server_process) to lock the process and prevent other processes that affect the same data from running.

Table Information

Each row in this table contains the

- Activity ID of the scheduled process
- User ID of the person who requested the process
- Date and time that the process began running
- Project key, the project entity, project, component, and cost element

Incomplete Processing

If a Projects scheduled process does not run to successful completion, it does not unlock the data it was processing. You must run the Projects Process Unlock scheduled process to delete the appropriate row from the table and unlock the data. The process uses the parameters you enter on the Job Scheduler window to determine which process to delete from the project_server_process table.

Job Scheduler Parameters

You enter the activity ID as a parameter on the Job Scheduler window to identify the process you want to delete from the project_server_process table.

You can optionally enter the user ID as a parameter to identify more specifically the Projects process that you want to delete a row for. This additional parameter is useful if a scheduled process has more than one row on the project_server_process table and you do not want to delete all rows for that process.

Warning: The project_server_process table also contains a row for each process that is currently running. If you run the Projects Process Unlock process and delete a row for a process that is running, the results are unpredictable. Therefore, before running the Projects Process Unlock process, ensure that the process is locked and not still running

Projects Year Open Process (fpjc8800)

The following table describes the stages of the Projects Year Open scheduled process and the tables that it affects:

Stage	Description
1	Reads the following tables to determine the year to open and the project entities to open it for: year_open_request year_open_request_entities
2	Reads each monetary and statistical balance row for the previous year.
3	Adds new rows for the opened year to the following Projects tables: component_monetary_balance component_stat_balance

The Projects Year Open process also

- Adds the year-to-date total from any row that already existed for the new year to the appropriate amount class on the component_sum_monetary_bal table.
- Updates detail component summary balances for the following amount classes:
  - Actual
  - Commitment
  - Funds checking and summary
- Changes the fiscal year to the opened year in the following tables:
  - project
  - project_entity

Restarting and Rerunning Projects Jobs

If a Projects scheduled process does not run to successful completion—for example, if the server goes down while processing a job—you can use Job Scheduler to restart or rerun it:

- When you restart a job, processing starts where it stopped processing.
- When you rerun a job, processing starts with the first transaction.

In either case, the procedure for starting the job is identical. The difference is that processing time for restarting can be much less than for rerunning. Whether you can restart a process depends on how it applies transactions and how the transactions within the job relate to each other.

Archive/Purge

If the Archive/Purge scheduled process does not run to successful completion, it sends a to-do message notifying you to run the appropriate preview report to determine the cause of the errors. When you make the corrections, you can restart the process where the previous job stopped.

Balance Reorganization

Rerun the Balance Reorganization scheduled process if its processing ends with any of the following statuses:

- PROCESSING
- PROCMONETY
- PROCSTATIS

Capitalization

If the Capitalization scheduled process does not run to successful completion, it writes the errors to an error table and uses SmartStream Mail to notify the user ID entered on the Job Scheduler window.

Depending on the type of error, use one of the following windows to correct errors:

- Capitalization Component Policy
- Capitalization Policy
- Capitalization Transaction

After you correct the errors, run the process again from Job Scheduler.

Copy Projects Allocation Transactions

When the Copy Projects Allocation Transactions scheduled process successfully applies all transactions for a journal, it copies the transactions to the Project Journal Load Transaction table. The process removes from the transaction table transactions that were generated during a previous run if you selected the option on the Projects Allocation Request window to clean out the allocation tables before running the process.

If the process does not run to successful completion, you have two options for reprocessing the job:

- Start the job again from Job Scheduler. The process copies the remaining transactions that were not copied when errors interrupted it.
- If you rerun the process, remove the copied transactions from the Project Journal Load Transaction table before starting the job again. The process copies all the transactions.

Copy Projects Asset Transactions

Restart the Copy Projects Asset Transactions scheduled process if it fails. The process copies the remaining transactions that were not copied when errors interrupted it.

Project and Component Load

When the Project and Component Load scheduled process successfully applies a transaction, it removes the transaction from the transaction table. If the process does not run to successful completion, restart it to process the transactions that were not processed when errors interrupted it.

Key Validation Errors

If any Project and Component Load transaction contains a key validation error

- The transaction remains in the Project and Component Load Transaction table (proj_load_trans).
- The process generates a To Do message. From each To Do message, you can access the incorrect transaction on the Project Component Transaction Correction window and correct it so that you can reenter the transaction in the next run of the Project and Component Load process.

Automatic Failure of Transactions

Some Project and Component Load transactions fail automatically under these conditions:

- If a Project (P1) or Component (C1) addition transaction fails, all other transactions entered for that project or component automatically fail.
- Because the Project and Component Load process groups all of a component's Component Capitalization (C4) transactions into one logical transaction, all C4 transactions entered for a component automatically fail if one fails.

Failure of a transaction does not prevent the process from performing field edits. If a Project and Component Load transaction fails, the process still performs as many edits as possible and issues all appropriate error messages. For example, if a C1 addition transaction fails validation because of a Sybase error in SmartStream Structures, the process still edits the remaining transactions entered for that component. If a field on the Component Cost Element (C3) transaction for the component contains an invalid value, the process generates an error message instructing you to change the value so that the C3 transaction does not contain errors when you reprocess it.

Project Copy

When the Project Copy scheduled process successfully copies a transaction, it removes the transaction from the project_copy_request table. If the process does not run to successful completion, you must rerun the job. When the process encounters errors, it resets (rolls back) the data to the original condition before the process began.

Project Journal Load

As the Project Journal Load scheduled process successfully applies a transaction, it removes the transaction from the transaction table. If the process does not run to successful completion, restart it to process the transactions that were not processed when errors interrupted it.

If the process encounters a key error, it does not validate the remaining data.

The process writes error messages to the Project Journal Load message table (project_jrnl_load_msg). The Unposted Project Journal and Project Journal Transaction Correction windows access this table to display the messages.

Errors You Cannot Correct Online

You cannot use the Projects windows to correct these types of Project Journal Load transaction errors:

- Invalid transaction code
- Orphaned transactions

Correct these types of errors in the Project Journal Load Transaction table (project_jrnl_load_trans) and reprocess the transactions.

Projects Allocation

If the Projects Allocation scheduled process cannot process an allocation sequence, the next stage in the process depends on which error handling option you selected for the sequence on the Projects Allocation Cycle window.

If you selected...	The Projects Allocation process...
Stop Processing	Stops processing.
Go to Next Sequence	Stops processing the current sequence and goes to the next sequence.
Go to Next Cycle	Stops processing the current cycle and goes to the next cycle.

Correcting Errors

To process the sequences that were not originally processed, you must first correct any errors. The process writes errors to an error table and uses SmartStream Mail to notify the user ID entered on the Job Scheduler window.

Depending on the type of error, use any of the following windows to correct errors:

- Formulas (in SmartStream Formulas)
- Projects Allocation Cycle
- Projects Allocation Distribution
- Projects Allocation Pool

After you correct any errors, run the process again from Job Scheduler to process any allocation sequences that were not processed because of errors.

If the process does not run to successful completion because of hardware or software problems, you must run it again from Job Scheduler. The process starts from the beginning; the error handling option has no effect in this case.

Projects Balance Load

If a transaction does not process completely, the Projects Balance Load scheduled process reverses the processing already done for only the transaction that was not completed. Other transactions in the same job that processed before job interruption are not reversed.

If the process runs to successful completion but encounters errors, it routes the error messages to the To Do List for the user ID entered on the Bulk Copy Parameters window. You can choose a message to access the Projects Balance Transaction Correction window, where you correct the errors. After you correct the errors, you can process the transaction during the next run of the Projects Balance Load process.

Projects Posting

Because the Projects Posting scheduled process applies a project journal as a unit, you cannot restart it. If the job does not run to successful completion, rerun it. Processing starts with the project journal that is next in line for posting. If an error occurred during processing for a particular journal, the process tries to reprocess the entire journal.

Projects Process Unlock

If the Projects Process Unlock scheduled process does not run to successful completion, rerun it.

Projects Year Open

As the Projects Year Open scheduled process successfully processes a project, it changes the project fiscal year to the year being opened. If the process does not run to successful completion, restart it. The process determines which projects have been processed by checking the fiscal year. If the fiscal year is the same as the year you requested to open, the project has already been processed. The process skips it and continues to the next project.

Projects Reporting

Projects provides reports that you can use to monitor your projects. For more information about the Projects reports, see About Projects Reports in the *Projects* guide.

Before running reports delivered with SmartStream, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Producing Reports

You can run these reports on demand using the select Projects Reporting activity or schedule them using Job Scheduler.

Using the Projects Reporting Activity

Request Projects reports in Microsoft Access. To start Access, select Projects Reporting from your SmartStream Activity List.

For detailed instructions, see Producing a Projects Report in the online Help.

Using Job Scheduler

The program that you use to run and print the reports is called msaccess.exe. When you enter the program name, you must enter the complete directory path to the Microsoft Access program. For example, c:\Program Files\Microsoft Office\Office\msaccess.exe.

Running msaccess.exe

This job is available for the Windows platform only.

You schedule reports using the Job Scheduler and the parameter set name that you defined on the Projects Report Parameters window. To schedule a report, enter the name of the Microsoft Access program in the Program name field and the input parameters in the Parameters field on the Job Scheduler window. For Projects reports, be sure to enter a space after each input parameter.

The following example shows you the parameters to enter to schedule the Project Detail report, assuming that the

- Name of the report parameter set is **PJDET1**
- Projects Reporting database is **fpj32.mdb**
- Macro is **FPJ_Scheduler**:

Input Parameter	Example
[Path of reporting database]	c:\sstrm*xx*\fpj32.mdb
[/XMacro name]	/XFPJ_Scheduler
[/CMD]	/CMD

Input Parameter	Example
[Report Name, Parameter Set Name, Server, User ID, Password]	Project Detail Report, PJDET1, atlhp23s1, USER01, password

c:\sstrm*xx*\fpj32.mdb /XFPJ_Scheduler /CMD Project Detail Report, PJDET1, atlhp23s1, USER01, password

Special Considerations

Before scheduling these reports, make sure

- The **fpj32.mdb** resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
- The location of the fpj32.mdb is specified in your parameters from the point of view of the Job Server.
- The report option ID is saved to the fpj32.mdb version that is visible to the Job Server.

Report Status

Before running a report, ensure that the DBS checkbox on the Job Scheduler window is **not** selected. If the job runs successfully, you receive a return code of 0. If a scheduled report does not run because of an error, the Job Scheduler generates a Scheduler Error Log that lists the date and error messages for each report that did not run.

Overview of Projects Transaction Layouts

Projects scheduled processing uses text files to hold information for scheduled processing transactions.

Use the transaction layouts to map the transactions into a text file in the appropriate format.

Entering Field Information

When you enter information in Projects transaction fields, use the following guidelines:

- Enter the transaction information in the order in which the table lists the fields.
- Separate each field in a transaction layout with the column delimiter established in the bulk copy parameters. If you leave a field blank, be sure to enter a space and the delimiter to hold its place. Note that, because the delimiter cannot appear in any of the data to be processed, the tab character is recommended. For example, if you select a comma as your delimiter, and you also use comma as a decimal separator, the results will be unpredictable.
- Enter an asterisk (*) in a field to clear existing information.

Field Types

The transaction layout table identifies each field as one of the following types:

- **Alphabetic** - Alphabetic fields accept letters only.
- **Alphanumeric** - Alphanumeric fields can contain alphabetic letters, numbers, special characters such as decimal points and slashes, or a combination of these.
- **Date** - See the Note About Date Fields.
- **Numeric** - Numeric fields accept numbers only.

Note About Amount Fields

Projects monetary amount fields are alphanumeric. Follow these guidelines when you enter information in these fields:

- Enter the number with or without a decimal separator. A Job Scheduler parameter determines whether your valid decimal separator is a period (.) or comma (,). If you do not enter a decimal separator, a whole number is assumed.
- Enter up to five decimal places for quantities and up to four decimal places for amounts. (The currency of the amount determines how many numerals display to the right of the decimal separator.)
- Do not enter thousand separators.
- Indicate a negative number with a minus sign (-) before the number.

Note About Date Fields

Projects accepts dates in two formats: yyyymmdd or the database server default date format. Database server date formats vary, for example, in the United States a typical date format is mm/dd/yyyy, while in Europe the dd/mm/yyyy format is more common. If you do not know the database server default date format, contact your SmartStream system administrator.

Follow these guidelines when you enter information in date fields:

- Use a separator between month, day, and year.
- Enter the month and day with or without leading zeros. For example, enter March as **3** or **03**.
- Enter the year with or without the century. When you enter only the last two digits of the year, Projects scheduled processes
  - Assume the twenty-first century (2000s) if you enter **01** through **49**.
  - Assume the twentieth century (1900s) if you enter **50** through **99**.

Note: To override these defaults, enter all four digits for the year

Required and Optional Fields

The description of each transaction field includes information about whether the field is required or optional:

- You must enter information for required fields. If you do not, the transaction is in error and is not processed successfully.
- You do not have to enter information for optional fields. These fields include those that
  - Are not essential for storing and accessing the record or for processing the information.
  - Have default values that Projects automatically enters if you do not enter values in the fields.

Detailed Transaction Layouts

To see the detailed layouts for the Projects load transactions, go to the following sections:

- Project and Component Load Transaction Layouts
- Project Journal Load Transaction Layouts
- Projects Balance Load Transaction Layouts

Project and Component Load Transaction Layouts

The Project and Component Load scheduled process uses nine transactions:

- Four transactions for entering project information:
  - Project
  - Project Accounting Distribution
  - Project Amount Class
  - Project Cost Element
- Five transactions for entering component information:
  - Component
  - Component Accounting Distribution
  - Component Cost Element
  - Component Capitalization
  - Component Capitalization Policy

Project Transaction

The Project transaction contains the information for the Project Load job in the Project and Component Load scheduled process. You must enter a Project transaction to add, change, or delete a project through the Project and Component Load process. When you use this transaction to add or delete a project, it also adds or deletes the associated Work Breakdown structure in SmartStream Structures.

Transaction Fields

User Fields 52-87

User fields 52 through 87, described in the following table, can have additional characteristics depending on their definition on the User Fields view of the Project Entity window. They can

- Be required.
- Require a special format.
- Contain information that Projects sends to SmartStream Asset Management for capitalizable components.

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is P1.
2	Action Code	1 alphabetic	Required Values are: A - Add. C - Change. D - Delete. If you use this transaction to delete a project, enter only the ▪ Transaction code ▪ Project entity ▪ Project ▪ Batch sort level. Note that deleting a project does not delete the project's components; you must delete the components for a project before the Project and Component Load process can successfully delete the project. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the project.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the project. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project you add, change, or delete. Even if your enterprise policy specifies use of the next available number feature to automatically generate project IDs, enter the project ID. The Project and Component Load process does not use the next available number feature.
5	blank	blank	
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.

Field	Name	Length	Description
7-8	blank	blank	
9	Project Currency	3 alphanumeric	Optional The project currency used for storing amounts charged to this project. Values are defined on the Currency Code Maintenance window. The default is the currency for the associated project entity.
10	Project Description	70 alphanumeric	Required if you add a project. A user-defined description of the project.
11	Project Rate Entity	5 alphanumeric	Optional A user-defined identifier for the rate entity Projects uses to determine the rate of exchange for converting transaction amounts to the project currency for this project. Do not enter a rate entity if your enterprise policy specifies a single currency. Values are defined on the Rate Entity Maintenance window.
12	Project Rate Type	1 alphanumeric	Optional A user-defined identifier for the rate type that Projects uses to determine the rate of exchange for converting transaction amounts to the project currency. Do not enter a rate type if your enterprise policy specifies a single currency. Values are defined on the Rate Type Maintenance window.
13	Ledger Entity	5 alphanumeric	Required if the associated project entity does not identify a ledger entity. The ledger entity associated with the project. This ledger entity must have the same calendar as the associated project entity. The default is the ledger entity for the project entity.
14	Ledger Currency	3 alphanumeric	Optional. Because the default is the currency for the associated ledger entity, and you cannot override this default, the Project and Component Load process ignores anything you enter for this field. The Projects ledger currency used to store amounts charged to components of this project. This is the currency for the ledger entity's primary book. Values are defined on the Currency Code Maintenance window.

Field	Name	Length	Description
15	Fiscal Year	4 numeric	Optional. The fiscal year for the project. The year must be valid for the calendar used by the associated project entity; it cannot be later than the fiscal year for the associated project entity. If charges have been made to the project, you cannot use this transaction to change the fiscal year. Instead, use the Projects Year Open scheduled process. The default is the project entity fiscal year.
16	Parent Project Entity	5 alphanumeric	Required if you enter a parent project. A user-defined identifier for the project entity associated with the parent project. If you enter an asterisk (*) to clear this field for an existing project, the Project and Component Load process deletes any parent project ID you enter or any parent project ID already stored for the project. Values are defined on the Project Entity window.
17	Parent Project	20 alphanumeric	Optional A user-defined identifier for the project that this project is a subproject for.
18	Project Manager ID	30 alphanumeric	Optional The SmartStream user ID for the person who is primarily responsible for the project. Values are defined on the User window. If the person is not a SmartStream user, leave this field blank and enter his or her name in the Project Manager Name field.
19	Project Manager Name	30 alphanumeric	Optional The person who is primarily responsible for the project. If you enter a valid project manager ID, the Project and Component Load process enters the correct manager name, overriding anything you enter here.
20	Project Start Date	10 date	Optional The date that the project becomes active. The date must be earlier than the project estimated end date. If you add a project, the default start date is the first day of the year 1900. You can enter an asterisk (*) to reset the start date to the first day of 1900 for an existing project.

Field	Name	Length	Description
21	Project Estimated End Date	10 date	Optional The date that you estimate the project will end. The date must be later than the project start date. If you add a project, the default end date is the last day of the year 2999. You can enter an asterisk (*) to reset the end date to the last day of 2999 for an existing project.
22	Project Status	1 alphabetic	Optional The progress of the project through processing. The status determines Whether or not you can change the project Which project amount classes you can post to or add, replace, and delete balances for. Values are: P - Preparing (default). You can add, change, and delete project information, and you can post project journals to and add, replace, and delete balances for any valid amount class except Actual and Commitment. Projects assigns this status to the project when you first add it. A - Active. You can Add, change, and delete project information. Post project journals to any valid amount class. Add, replace, and delete balances for any valid amount class. C - Closed. The only project information you can change is the status. You cannot post project journals to or add, replace, or delete balances for any amount class. You cannot change this status for an existing project. O - On Hold. You can add, change, and delete project information, but you cannot post project journals to or add, replace, or delete balances for any amount class. R - Pending Approval. The only project information you can change is the status. You cannot post project journals to or add, replace, or delete balances for any amount class. You cannot change this status for an existing project. *(continued)*

Field	Name	Length	Description
22	Project Status *(continued)*	1 alphabetic	T - Complete. You can Add, change, and delete project information. Post project journals to any valid amount class except Commitment. For the Commitment amount class, you can post credits only, to relieve existing commitments. Add, replace, and delete balances for any valid amount class except Commitment. X - Cancelled. The only project information you can change is the status. You cannot post project journals to or add, replace, or delete balances for any amount class. You cannot change this status for an existing project. If the project currently has a status of Cancelled, Closed, or Pending Approval, enter another status. If the status remains Cancelled, Closed, or Pending Approval, this transaction does **not** change the project.
23	Project Type	1 alphabetic	Optional The type of project you add, change, or delete. Values are: P - Project (default). T - Template. If you enter this project type, enter Preparing for the project status. No other status is valid for templates.
24	Project Category	1 alphabetic	Required if you add a project. An indicator for the characteristics of the project. Values are: A - Asset Production. All components of the project generate capital assets that post to the Asset Production accounting distribution type (type code 154) in SmartStream Ledger. European countries usually use this category to identify a particular type of capital project, for example, the French LASM. B - Capital and Expense. Some components of the project generate capital assets; others do not. C - Capital. All components of the project generate capital assets. E - Expense. All components of the project are used for expense accumulation only. O - Other. User defined.

Field	Name	Length	Description
25	Classification	10 alphanumeric	Optional A user-defined identifier for a group of projects. You can use the classification to clarify the project category. This classification is the default for components on the first tier of this Work Breakdown structure.
26	Funds Checking Severity	1 alphabetic	Optional An option that indicates whether to charge project journals to the project that are not within the project's budget. Values are: 1 - No Funds Checking. You can post all project journals regardless of the available funds. 2 - Funds Checking with Warnings. You can post project journals even if they cause the total amount to be over budget. Projects generates a warning message to let you know that you posted a project journal for an amount that is more than the available funds. 3 - Funds Checking with Errors. You cannot post a project journal amount that is more than the available funds. Projects generates an error message to let you know that you cannot post the project journal. The default is the Funds Checking Severity option for the associated project entity.
27	Allow Funds Warning by Component	1 alphabetic	Optional Values are N - No. Do not allow the option of choosing funds checking with warnings for individual components of this project. Y - Yes. Allow the option. If you add a project, the default comes from one of the following options: If you enter Funds Checking with Errors for the Funds Checking Severity option, the default is the Allow Funds Warning by Component option for the associated project entity. If you enter Funds Checking with Warnings or No Funds Checking for the Funds Checking Severity option, the default is No. You cannot override this default.

Field	Name	Length	Description
28	Funds Checking and Summary Amount Class	10 alphanumeric	Required if you enter Funds Checking with Warnings or Funds Checking with Errors for the Funds Checking Severity option. The amount class to use when checking funds and summarizing balances. Enter this amount class only if you add a project or change an existing project that has any of the following statuses: In Error Pending Approval Preparing The default is the funds checking and summary amount class for the associated project entity. You cannot enter the Actual or Commitment amount class.
29	Funds Checking Tolerance Percentage	8 alphanumeric	Optional. The percentage of the total budgeted amount the project is allowed to be under or over budget before Projects does one of the following, depending on the Funds Checking Severity option: Generates a message. Prevents the transaction from posting and generates a message. You can enter a positive or negative percentage. You can enter both a funds checking tolerance percentage and tolerance amount. If you enter both, Projects uses the tolerance that is most restrictive. For example, if your budgeted amount is 1000 USD, and you enter a tolerance amount of 20 USD and a tolerance percentage of 5 percent , Projects uses the tolerance amount because it restricts the total project amount to 1020, while the tolerance percentage allows a total project amount of 1050. Values are -99.99 through +100.00. The default is the funds checking tolerance percentage for the associated project entity.

Field	Name	Length	Description
30	Funds Checking Tolerance Amount	20 amount	Optional The amount the project is allowed to be under or over budget before Projects does one of the following, depending on the Funds Checking Severity option: ▪ Generates a message. ▪ Prevents the transaction from posting and generates a message. You can enter a positive or negative amount. If you enter a ▪ Positive amount, Projects lets you know when your project goes over the budget. ▪ Negative amount, Projects lets you know when your project is approaching the budget. You can enter both a funds checking tolerance amount and tolerance percentage. If you enter both, Projects uses the tolerance that is most restrictive. For example, if your budgeted amount is 1000 USD, and you enter a tolerance amount of 20 USD and a tolerance percentage of 5 percent, Projects uses the tolerance amount because it restricts the total project amount to 1020, while the tolerance percentage allows a total project amount of 1050. The default is the funds checking tolerance amount for the associated project entity. The Project and Component Load process sets the funds checking tolerance amount to 0 if you do not enter an amount and, for this transaction: ▪ The Action code is C (change). ▪ You change the Projects ledger currency or project currency. ▪ The funds checking currency type is either – Ledger and you change Projects ledger currency. – Project and you change project currency.

Field	Name	Length	Description
31	Summary Tier	2 numeric	Required if you add a project. The tier of the Work Breakdown structure where Projects checks for available funds and summarizes balances. Enter this tier only if you add a project or change an existing project that has not been validated and therefore has any of the following statuses: In Error Pending Approval Preparing Note that project setup is the only time you can select a summary tier. If you enter zero for the summary tier when you first add the project, you will not be able to change it after the project is validated. Values are: 0 - No summary tier. 1 - Project level. Other numbers representing specific levels on your WBS. The default is the summary tier for the associated project entity.
32	Funds Checking Currency Type	1 alphabetic	Required if: You enter Funds Checking with Warnings or Funds Checking with Errors for the Funds Checking Severity option. The associated project entity does not specify a funds checking currency type. The type of currency to use for funds checking. Enter this currency type only if you add a project or change an existing project that currently uses funds checking and that has any of the following statuses: In Error Pending Approval Preparing Values are: L - Projects Ledger Currency. Enter this value if the project entity does not allow a separate project currency. N - None. You can enter None only if you enter No Funds Checking for the Funds Checking Severity option. P - Project Currency. The default is the funds checking currency type for the associated project entity.

Field	Name	Length	Description
33	Funds Checking Level	1 alphabetic	Optional Values are: D - Perform funds checking at the detail component level. N - None. You can enter None only if you enter No Funds Checking for the Funds Checking Severity option. S - Perform funds checking at the summary tier level. The default is the level for the associated project entity. If you enter No Funds Checking for the Funds Checking Severity option, the default is None.
34	Ledger Balances at Summary Tier	1 alphanumeric	Optional Values are: N - No. Do not summarize ledger balances at the summary tier in the Work Breakdown structure. Y - Yes. Summarize ledger balances at the summary tier. Enter this option only if you add a project or change an existing project that has any of the following statuses: In Error Pending Approval Preparing The default depends on the Funds Checking Severity option and the summary tier. If the summary tier is zero, the default is No.
35	Security Code	10 alphanumeric	Required if you add a project. The security code assigned to the project. This code determines which users have access to the project and what level of access they have. To enter this transaction, you must have maintenance access for the project security code. Values are defined on the Projects Common Security Code window.
36	Work Location	10 alphanumeric	Optional A user-defined identifier for the physical site of the work for the project. Values are defined on the Projects Common Location window.
37	Location	10 alphanumeric	Optional A user-defined identifier for the location of the project, for example, the physical site of the work or the organizational unit responsible. Values are defined on the Projects Common Location window.

Field	Name	Length	Description
38	Asset Maintenance Type	1 alphanumeric	Optional. An option that identifies the type of SmartStream Asset Management transactions that the Capitalization scheduled process generates for components of the project if Asset Management is installed. Values are: A - Component Assets. Adds an asset when you run the Capitalization process for the Projects component the first time and adds an asset component for the existing asset each additional time you process the Projects component. J - Asset Adjustment. Adds an asset when you run the Capitalization process for the Projects component the first time and adjusts the existing asset each additional time you process the Projects component. R - Asset Retirement. Generates a retirement transaction for the Projects component costs. The asset must already exist in Asset Management before you can retire it from Projects.
39	Billing Contact Name	30 alphanumeric	Optional. The client contact for issues or questions related to billing for the project.
40	Client Name	30 alphanumeric	Optional. The client for which you do the project.
41	Project Contact Name	30 alphanumeric	Optional. The principal client contact for issues or questions related to the project.
42	Client Project Description	70 alphanumeric	Optional The description that the client uses for the project.
43	Client Project Number	20 numeric	Optional A user-defined identifier that the client uses for the project.
44	Contract ID	30 alphanumeric	Optional The identifier for the client contract that controls the project.
45	Contract Description	70 alphanumeric	Optional A description of the client contract that controls the project.
46	Estimated Project Amount	20 amount	Optional The estimated total cost of the project.

Field	Name	Length	Description
47	Estimated Project Amount Currency	3 alphanumeric	Required if you enter an estimated project amount. An identifier for the currency of the estimated project amount. If you enter a zero or an asterisk in the Estimated Project Amount field, the Project and Component Load process overrides any estimated project amount currency you enter with spaces. Values are defined on the Currency Code Maintenance window. If your enterprise policy specifies a single currency for all SmartStream products, the Project and Component Load process overrides any currency you enter with the enterprise currency.
48	Allow Project Cost Maintenance by Component	1 alphanumeric	Optional. Do not enter an asterisk (*) to clear the field. Values are: Y - Yes (default). Allow changes to project cost accounting distribution information for components of this project. N - No. Do not allow changes to accounting distribution information.
49	Project Percentage Complete	6 numeric	Optional The current percentage of completion for the project. The Project Detail report uses this percentage to calculate the following report fields: Estimated Cost to Complete Estimated Total Cost Estimated Variance Values are 0-100. You can enter the percentage with no, one, or two decimal places. If you add a project, the default percentage complete is zero.
50	Asset Entity	5 alphanumeric	Optional A user-defined identifier for the asset entity that you want to generate asset maintenance or retirement transactions for. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. Values are defined in Asset Management. If Asset Management is not installed, values are user defined. The default is the asset entity for the parent structure point.

Field	Name	Length	Description
51	Asset Category	7 alphanumeric	Optional An identifier for the Asset Management category table to use when you first add an asset. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. If you enter an asset entity, the Project and Component Load process verifies that the asset category is valid for the asset entity if Asset Management is installed. Values are defined in Asset Management. If Asset Management is not installed, values are user defined.
52	Asset Location	7 alphanumeric	Optional. A user-defined identifier for the location of the asset you capitalize or retire. This is a default value that you can override for each component of the project for the Component Capitalization transaction or online using the Capitalization Transaction window. If you enter an asset entity, the Project and Component Load process verifies that the asset location is valid for the asset entity if Asset Management is installed.
53	Manufacturer	16 alphanumeric	Optional. A user-defined identifier for the manufacturer of the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset.
54	Model or Part Number	16 alphanumeric	Optional. The model or part number for the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset.
55	User Field 1	20 alphanumeric	Optional User-defined field.
56-57	User Field 2-3	15 alphanumeric	Optional User-defined fields.
58-59	User Field 4-5	10 alphanumeric	Optional User-defined fields.
60-68	User Field 6-14	5 alphanumeric	Optional User-defined fields.
69-70	User Field 15-16	2 alphanumeric	Optional User-defined fields.
71-74	User Field 17-20	1 alphanumeric	Optional User-defined fields.

Field	Name	Length	Description
75-79	User Field 21-25	15 alphanumeric	Optional User-defined fields.
80-84	User Field 26-30	10 alphanumeric	Optional User-defined fields.
85-86	User Date 1-2	10 date	Optional User-defined dates.
87-90	User Amount 1-4	20 amount	Optional User-defined amounts.

Project Accounting Distribution Transaction

Use the Project Accounting Distribution transaction to identify a full or partial default accounting distribution for a project. This transaction is conditionally required when you use the Project and Component Load scheduled process to add a project:

- If you enter No for the project's Allow Project Cost Maintenance by Component option, enter a Project Accounting Distribution transaction to identify project cost distribution information.
- If you enter Yes for the project's Allow Project Cost Maintenance by Component option, this transaction is optional because you can enter project cost distribution information at the component level. For each component of the project, you can override the default project cost distribution you enter for this transaction.

Processing Conditions

The Project and Component Load process does not apply this transaction if the project has any of the following statuses:

- Cancelled
- Closed
- Pending Approval
- Validating

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is P2.
2	Action Code	1 alphabetic	Required Values are ▪ A - Add. ▪ C - Change. ▪ D - Delete. If you use this transaction to delete accounting distribution information for a project, enter only the – Transaction code – Project entity – Project – Batch sort level – Distribution type. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the project accounting distribution information.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the project. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project that you add, change, or delete accounting distribution information for. Values are defined on the Project transaction or online using the Project window.
5	blank	blank	

Field	Name	Length	Description
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Distribution Type	3 numeric	Required The type of accounting distribution that you add, change, or delete information for. Values are: 150 - Project Cost. Used for all initial charges booked to the project. 152 - Project Clearing. Used as the debit offset for all capitalized transactions from the project. 154 - Asset Production. Used as the credit offset for all capitalized transactions for projects that have a category of Asset Production. 156 - Ledger Journal Offset. Used as the offset for journals posting to SmartStream Ledger.
8	Alias	5 alphanumeric	Optional A short name for a full or partial accounting distribution. This alias must be associated with the same ledger entity as the project, if you entered one for the project. Values are defined on the Ledger Alias window.
9-20	Ledger Key 1–12	30 numeric	Optional The first through twelfth elements in the default accounting distribution that you want SmartStream Ledger to post journals to for this project. The default is the accounting distribution you entered for the alias.

Project Amount Class Transaction

Use the Project Amount Class transaction to add and delete amount classes for the project and to enter start and end dates for project amount classes.

Processing Conditions

The Project and Component Load scheduled process does not apply this transaction if the project has any of the following statuses:

- Cancelled
- Closed
- Pending Approval
- Validating

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is P3.
2	Action Code	1 alphabetic	Required Values are ▪ A - Add. ▪ C - Change. ▪ D - Delete. If you use this transaction to delete amount class information for a project, enter only the – Transaction code – Project entity – Project – Batch sort level – Amount class. Note that you cannot delete the Actual amount class or the funds checking and summary amount class for the project. Also, you cannot delete an amount class from a project if charges are booked to it. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the project amount class.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the project. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project that you add, change, or delete amount class information for. Values are defined on the Project transaction or online using the Project window.

Field	Name	Length	Description
5	blank	blank	
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Amount Class	10 alphanumeric	Required The amount class that you add, change, or delete for the project. The Actual and funds checking and summary amount classes are preselected for all projects. You cannot delete these two amount classes for a project. You cannot delete any amount class if amounts are charged to it. Amount classes are defined on the Amount Class Types window. Any or all of these defined amount classes are selected for use by the project entity on the Project Entity Amount Class window. You can enter any amount class that is valid for the associated project entity.
8	blank	blank	
9	Allow Activity Date	10 date	Optional The earliest date that you can enter charges to this amount class for the project. If you add a project amount class, the default date is the project start date. You can enter an asterisk (*) to set the start date to the first day of the year 1900 for an existing project amount class.
10	Stop Activity Date	10 date	Optional The last date that you can enter charges to this amount class for the project. If you add a project amount class, the default date is the project estimated end date. You can enter an asterisk (*) to set the start date to the last day of the year 2999 for an existing project amount class.

Project Cost Element Transaction

Use the Project Cost Element transaction to

- Select cost elements that are valid for the project.

- Select default cost elements for components of the project.
- Identify the full default project cost accounting distribution for each cost element.

This transaction is required when you use the Project and Component Load scheduled process to add a project.

Processing Conditions

The Project and Component Load process does not apply this transaction if the project has any of the following statuses:

- Cancelled
- Closed
- Pending Approval
- Validating

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is P4.
2	Action Code	1 alphabetic	Required Values are: ▪ A - Add. ▪ C - Change. ▪ D - Delete. If you use this transaction to delete cost element information for a project, enter only the – Transaction code – Project entity – Project – Batch sort level – Cost element. Note that you cannot delete a cost element from a project if any of the project's components uses the element. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the project cost element.

Field	Name	Length	Description
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the project. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project that you add, change, or delete cost element information for. Values are defined on the Project transaction or online using the Project window.
5	blank	blank	
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Cost Element	10 alphanumeric	Required. Do not enter an asterisk (*) to clear the field. A user-defined identifier for the cost element that you add, change, or delete for the project. Values are defined on the Projects Common Cost Element window.
8	Alias	5 alphanumeric	Optional A short name for a full or partial accounting distribution that you post to for this cost element. This alias must be associated with the same ledger entity as the project, if you entered one for the project. Values are defined on the Ledger Alias window.
9-20	Ledger Key 1–12	30 numeric	Required if: You enter No for the project's Allow Project Cost Maintenance by Component option The Project Accounting Distribution transaction does not include full accounting distribution information. The first through twelfth elements in the default accounting distribution that you want SmartStream Ledger to post journals to for this cost element. The default is the accounting distribution you entered for the alias.

Field	Name	Length	Description
21	Default to Component	1 alphabetic	Optional Values are: Y - Yes (default). Set up the cost element as a default cost element for each component of the project. N - No. Do not set it up as a default cost element.
22	Allow Transaction Override	1 alphabetic	Optional Values are: N - No (default). Do not allow changes to the default Project Cost accounting distribution when posting journals for this cost element. Y - Yes. Allow changes to the default Project Cost accounting distribution.

Component Transaction

The Component transaction contains the information for the Component Load job in the Project and Component Load scheduled process. You must enter a Component transaction to add, change, or delete a component through the Project and Component Load process. When you use this transaction to add or delete a component, it also adds or deletes a point on the associated Work Breakdown structure in SmartStream Structures.

Processing Conditions

The Project and Component Load process does not apply this transaction if the project has any of the following statuses:

- Cancelled
- Closed
- Pending Approval
- Validating

Transaction Fields

User Fields 32-67

User fields 32 through 67, which are described in the following table, can have additional characteristics depending on their definition on the User Fields view of the Project Entity window. They can

- Be required.
- Require a special format.
- Contain information that Projects sends to SmartStream Asset Management for capitalizable components.

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is C1.
2	Action Code	1 alphabetic	Required Values are: ▪ A - Add. ▪ C - Change. Enter this value if the component has a status of Cancelled or Closed. ▪ D - Delete the component from Projects and SmartStream Structures. Enter only the – Transaction code – Project entity – Project – Component – Batch sort level. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the component.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the component. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project associated with the component. Values are defined on the Project transaction or online using the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the component you add, change, or delete.

Field	Name	Length	Description
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Parent Component	20 alphanumeric	Required if you add a component. A user-defined identifier for the summary component that you want to establish a relationship to. If the component is a direct child of the project, enter the project.
8	blank	blank	
9	Component Type	1 alphabetic	Required if you add a component. The type of component. This type is permanently associated with the component on the project Work Breakdown structure (WBS) in SmartStream Structures. Do not enter this type if you use this transaction to change an existing component. You cannot change a component type. Values are: D - Detail component. S - Summary component.
10	Description	70 alphanumeric	Required if you add a component. A user-defined description of the component.
11	Ledger Entity	5 alphanumeric	Required if you add a component. The ledger entity associated with this component. You can change the ledger entity for an existing component only if the associated project has a status of In Error or Preparing. This ledger entity must have the same calendar as the associated project entity. The default is the ledger entity for the parent structure point.

Field	Name	Length	Description
12	Ledger Currency	3 alphanumeric	Optional. Because the default is the currency for the associated ledger entity, and you cannot override this default, the Project and Component Load process ignores anything you enter for this field. The Projects ledger currency used to store amounts charged to this component. This is the currency for the ledger entity's primary book. Values are defined on the Currency Code Maintenance window.
13	Component Manager ID	30 alphanumeric	Optional The SmartStream user ID for the person who is primarily responsible for the component. Values are defined on the User window. If the person is not a SmartStream user, leave this field blank and enter his or her name in the Component Manager Name field. The default is the manager for the parent structure point.
14	Component Manager Name	30 alphanumeric	Optional The person who is primarily responsible for the component. If you enter a valid component manager ID, the Project and Component Load process enters the correct manager name, overriding anything you enter here. The default is the manager name for the parent structure point.
15	Component Start Date	10 date	Optional The date that the component becomes active. The date must be earlier than the component estimated end date. The default is the start date for the parent structure point.
16	Component Estimated End Date	10 date	Optional The date that you estimate the component will end. The date must be later than the component start date. The default is the end date for the parent structure point.

Field	Name	Length	Description
17	Component Status	1 alphabetic	Optional. Do not enter an asterisk (*) to clear the field. The progress of the component through processing. The status determines ▪ Whether or not you can change the component ▪ Which component amount classes you can post to or add, replace, and delete balances for. Values are: A - Active. You can: Add, change, and delete component information Post project journals to any valid amount class. Add, replace, and delete balances for any valid amount class. C - Closed. The only component information you can change is the status. You cannot post project journals to or add, replace, or delete balances for any amount class. If the component currently has a status of Closed and this is a change transaction, enter another status. If the status remains Closed, this transaction does **not** change the component. *(continued)*

Field	Name	Length	Description
17	Component Status *(continued)*	1 alphabetic	O - On Hold. You can add, change, and delete component information, but you cannot post project journals to or add, replace, or delete balances for any amount class. Do not change the status to On Hold if the current status is In Error or Preparing. P - Preparing. You can add, change, and delete component information, and you can post project journals to and add, replace, and delete balances for any valid amount class except Actual and Commitment. Projects assigns this status to the component when you first add it. T - Complete. You can Add, change, and delete component information. Post project journals to any valid amount class except Commitment. For the Commitment amount class, you can post credits only, to relieve existing commitments. Add, replace, and delete balances for any valid amount class except Commitment. Do not change the status to Complete if the current status is In Error or Preparing. X - Cancelled. The only component information you can change is the status. You cannot post project journals to or add, replace, or delete balances for any amount class. If the component currently has a status of Cancelled and this is a change transaction, enter another status. If the status remains Cancelled, this transaction does **not** change the component. The default is the status for the parent structure point.

Field	Name	Length	Description
18	Component Category	1 alphabetic	Optional. Do not enter an asterisk (*) to clear the field. An indicator for the characteristics of the component. Values are: A - Asset Production. The component generates a capital asset that posts to the Asset Production accounting distribution type (type code 154) in Ledger. European countries usually use this category to identify a particular type of capital project, for example, the French LASM. If you enter this option for a summary component, identify the Asset Production category for all detail components associated with it. B - Capital and Expense. The component is a summary component with some detail components that generate capital assets and some that do not. C - Capital. The component generates a capital asset. If you enter this option for a summary component, identify the Capital category for all detail components associated with it. E - Expense. The component is used for expense accumulation only. O - Other. User defined. You can change a category as follows: ▪ Capital and Expense, Expense, or Other to Asset Production or Capital only if both the project and the component have a status of In Error or Preparing. ▪ Asset Production or Capital to another category if the – Component has not been capitalized. – Category of the parent structure point is Capital and Expense, Expense, or Other. – The default is the category for the parent structure point.

Field	Name	Length	Description
19	Classification	10 alphanumeric	Optional A user-defined identifier for a group of components. You can use the classification to clarify the component category. Values are defined on the Projects Common Classification window. The default is the classification for the parent structure point.
20	Location	10 alphanumeric	Optional A user-defined identifier for the location of the component, for example, the physical site of the work or the organizational unit responsible. Values are defined on the Projects Common Location window. The default is the location for the parent structure point.
21	Security Code	10 alphanumeric	Optional. Do not enter an asterisk (*) to clear the field. The security code assigned to the component. This code determines which users have access to the component and their level of access. To enter this transaction, you must have maintenance access for the component security code. Values are defined on the Projects Common Security Code window. The default is the security code for the parent structure point.

Field	Name	Length	Description
22	Asset Maintenance Type	1 alphanumeric	Required if you enter Asset Production or Capital for the component category. An option that identifies the type of SmartStream Asset Management transactions that the Capitalization scheduled process generates for the component if Asset Management is installed. You cannot change the maintenance type for an asset that has been capitalized or retired through the Capitalization scheduled process. Values are: A - Component Assets. Adds an asset when you run the Capitalization process for the Projects component the first time and adds an asset component for the existing asset each additional time you process the Projects component. Do not enter this value if the Asset ID Generation option for the associated asset entity policy is Generate Using Full 12 Positions. J - Asset Adjustment. Adds an asset when you run the Capitalization process for the Projects component the first time and adjusts the existing asset each additional time you process the Projects component. R - Asset Retirement. Generates a retirement transaction for the Projects component costs. The asset must already exist in Asset Management before you can retire it from Projects. The default is the asset maintenance type for the parent structure point.
23	Asset Entity	5 alphanumeric	Optional A user-defined identifier for the asset entity that you want to generate asset maintenance or retirement transactions for. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. Values are defined in Asset Management. If Asset Management is not installed, values are user defined. The default is the asset entity for the parent structure point.

Field	Name	Length	Description
24	Asset Category	7 alphanumeric	Optional An identifier for the Asset Management category table to use when you first add an asset. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. If you enter an asset entity, the Project and Component Load process verifies that the asset category is valid for the asset entity if Asset Management is installed. Values are defined in Asset Management. If Asset Management is not installed, values are user defined. The default is the asset category for the parent structure point.
25	Asset Location	7 alphanumeric	Optional A user-defined identifier for the location of the asset you capitalize or retire. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. If you enter an asset entity, the Project and Component Load process verifies that the asset location is valid for the asset entity if Asset Management is installed. Values are defined in Asset Management. If Asset Management is not installed, values are user defined. The default is the asset location for the parent structure point.
26	Manufacturer	16 alphanumeric	Optional A user-defined identifier for the manufacturer of the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset. The default is the manufacturer for the parent structure point.
27	Model or Part Number	16 alphanumeric	Optional The model or part number for the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset. The default is the model or part number for the parent structure point.

Field	Name	Length	Description
28	Funds Checking Severity	1 numeric	Optional An option that indicates whether to charge transactions to the component that are not within the component's budget. Enter this option only: For detail components. If the Allow Funds Warning by Component option for the associated project is Yes. If the Funds Checking Severity option for the associated project is Funds Checking with Errors. Values are 2 - Funds Checking with Warnings. You can post project journals even if they cause the total amount to be over budget. Projects generates a warning message to let you know that you posted a project journal for an amount that is more than the available funds. 3 - Funds Checking with Errors. You cannot post a project journal amount that is more than the available funds. Projects generates an error message to let you know that you cannot post the project journal.
29	Estimated Component Amount	20 amount	Optional The estimated total cost of the component.
30	Estimated Component Amount Currency	3 alphanumeric	Required if you enter an estimated component amount. An identifier for the currency of the estimated component amount. If you enter a zero or an asterisk in the Estimated Component Amount field, the Project and Component Load process overrides any estimated component amount currency you enter with spaces. Values are defined on the Currency Code Maintenance window. If your enterprise policy specifies a single currency for all SmartStream products, the Project and Component Load process overrides any currency you enter with the enterprise currency.

Field	Name	Length	Description
31	Component Percentage Complete	6 numeric	Optional The current percentage of completion for the component. The Project Detail report uses this percentage to calculate the following report fields: Estimated Cost to Complete Estimated Total Cost Estimated Variance Values are 0-100. You can enter the percentage with no, one, or two decimal places. If you add a component, the default percentage complete is zero.
32	User Field 1	20 alphanumeric	Optional User-defined field. The default is the information in user field 1 for the parent structure point.
33-34	User Field 2-3	15 alphanumeric	Optional User-defined fields. The default is the information in user fields 2 and 3 for the parent structure point.
35-36	User Field 4-5	10 alphanumeric	Optional User-defined fields. The default is the information in user fields 4 and 5 for the parent structure point.
37-45	User Field 6-14	5 alphanumeric	Optional User-defined fields. The default is the information in user fields 6 through 14 for the parent structure point.
46-47	User Field 15-16	2 alphanumeric	Optional User-defined fields. The default is the information in user fields 15 and 16 for the parent structure point.
48-51	User Field 17-20	1 alphanumeric	Optional User-defined fields. The default is the information in user fields 17 through 20 for the parent structure point.

Field	Name	Length	Description
52-56	User Field 21-25	15 alphanumeric	Optional User-defined fields. The default is the information in user fields 21 through 25 for the parent structure point.
57-61	User Field 26-30	10 alphanumeric	Optional User-defined fields. The default is the information in user fields 26 through 30 for the parent structure point.
62-63	User Date 1-2	10 date	Optional User-defined dates. The default is the information in user date fields 1 and 2 for the parent structure point.
64-67	User Amount 1-4	20 amount	Optional User-defined amounts. The default is the information in user amount fields 1 through 4 for the parent structure point.
68	Component Rate Entity	5 alphanumeric	Required if Your enterprise policy specifies multiple currencies No default rate entity is defined. A user-defined identifier for the rate entity that Projects uses to determine the rate of exchange for converting transaction amounts to the ledger currency for this component. Values are defined on the Rate Entity Maintenance window. The default is the rate entity for the component's ledger entity or, if the component's ledger entity has no rate entity, the parent component's ledger entity. If that ledger entity does not have a rate entity, the default is the rate entity for the parent component, if one is defined.

Field	Name	Length	Description
69	Component Rate Type	1 alphanumeric	Required if Your enterprise policy specifies multiple currencies No default rate type is defined. A user-defined identifier for the rate type that Projects uses to determine the rate of exchange for converting transaction amounts to the ledger currency for this component. Values are defined on the Rate Type Maintenance window. The default is the rate type for the component's ledger entity or, if the component's ledger entity has no rate type defined, the parent component's ledger entity. If the ledger entity does not have a rate type, the default is the rate type for the parent component, if one exists.
70-90	blank	blank	

Component Accounting Distribution Transaction

Use the Component Accounting Distribution transaction to identify a full or partial default accounting distribution for a component.

Processing Conditions

The Project and Component Load scheduled process does not apply this transaction if the

- Component has a status of Cancelled or Closed.
- Component is part of a project that has any of the following statuses:
  - Cancelled
  - Closed
  - Pending Approval
  - Validating
- Distribution type is Project Cost (150) and the component is part of a project with No entered for the Allow Project Cost Maintenance by Component option.

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is C2.
2	Action Code	1 alphabetic	Required Values are: ▪ A - Add. ▪ C - Change. ▪ D - Delete. If you use this transaction to delete accounting distribution information for a component, enter only the – Transaction code – Project entity – Project – Component – Batch sort level – Distribution type. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the component accounting distribution information.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the component. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project associated with the component. Values are defined on the Project transaction or online using the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the component that you add, change, or delete accounting distribution information for.

Field	Name	Length	Description
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Distribution Type	3 alphanumeric	Required The type of accounting distribution that you add, change, or delete information for. Values are: 150 - Project Cost. Used for all initial charges booked to the component. You cannot enter this type for summary components. 152 - Project Clearing. Used as the debit offset for all capitalized transactions from the component. 154 - Asset Production. Used as the credit offset for all capitalized transactions for components that have a category of Asset Production. 156 - Ledger Journal Offset. Used as the offset for journals you post to SmartStream Ledger. You cannot enter this type for summary components.
8	Alias	5 alphanumeric	Optional A short name for a full or partial accounting distribution. This alias must be associated with the same ledger entity as the component, if you entered one for the component. Values are defined on the Ledger Alias window.

Field	Name	Length	Description
9-20	Ledger Key 1–12	30 numeric	Required if: You do not enter an alias, or the alias has a partial accounting distribution The distribution type is: Project Clearing Asset Production Ledger Journal Offset. The first through twelfth elements in the default accounting distribution that you want SmartStream Ledger to post journals to for this component. The default is the accounting distribution you entered for the alias, if you entered one. A full accounting distribution is required for Project Clearing, Asset Production, and Ledger Journal Offset distribution types. If the default contains partial information, you can enter the remaining elements. If no default exists, enter the full accounting distribution. If you enter No for the Allow Project Cost Maintenance by Component option for the associated project, the default project cost accounting distribution is the project cost accounting distribution for the project. You cannot override this default.

Component Cost Element Transaction

Use the Component Cost Element transaction to

- Enter all cost elements that are valid for the component.
- Identify the full default project cost accounting distribution for each cost element.

Information you enter for this transaction overrides the cost element information for the project and the accounting distribution information for the component.

You can use this transaction for detail components only.

Processing Conditions

The Project and Component Load process does not apply this transaction if the

- Component has a status of Cancelled or Closed.
- Associated project has any of the following statuses:
  - Cancelled
  - Closed
  - Pending Approval
  - Validating

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is C3.
2	Action Code	1 alphabetic	Required Values are: ▪ A - Add. ▪ C - Change. ▪ D - Delete. If you use this transaction to delete cost element information for a component, enter only the – Transaction code – Project entity – Project – Component – Batch sort level – Cost element. Note that you cannot delete a cost element from a component if charges are booked to it. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the component cost element.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the component. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project associated with the component. Values are defined on the Project transaction or online using the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the component that you add, change, or delete cost element information for.

Field	Name	Length	Description
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Cost Element	10 alphanumeric	Required. Do not enter an asterisk (*) to clear the field. A user-defined identifier for the cost element that you add, change, or delete for the component. Values are defined on the Project Cost Element window.
8	Alias	5 alphanumeric	Optional A short name for a full or partial accounting distribution that you post to for this cost element. This alias must be associated with the same ledger entity as the component, if you entered one for the component. Values are defined on the Ledger Alias window.
9-20	Ledger Key 1–12	30 numeric	Required. The first through twelfth elements in the default accounting distribution that you want SmartStream Ledger to post journals to for this cost element. If the component has an accounting distribution defined for the Project Cost distribution type, it is the default. If the default accounting distribution contains partial information, enter the remaining elements. If you enter No for the Allow Project Cost Maintenance by Component option for the associated project, the default is the project cost accounting distribution for the associated project cost element. You cannot override this default.
21	Allow Actuals	1 alphabetic	Optional Values are: Y - Yes (default). Allow charges to the Actual amount class for this cost element. N - No. Do not allow charges to the Actual amount class for this cost element.

Field	Name	Length	Description
22	Allow Commitments	1 alphabetic	Optional Values are: Y - Yes (default). Allow charges to the Commitment amount class for this cost element. N - No. Do not allow charges to the Commitment amount class for this cost element.
23	Allow Transaction Override	1 alphabetic	Optional Values are: N - No. Do not allow changes to the cost element's default accounting distribution when posting journals for this cost element. Y - Yes. Allow changes to the default accounting distribution. The Project and Component Load process ignores anything you enter for this field if the associated project's Allow Project Cost Maintenance by Component option is No. The default comes from the Allow Transaction Override option for the cost element on the Project Cost Element window. If you enter No for the cost element's Default to Component option, the default is No.

Component Capitalization Transaction

Use the Component Capitalization transaction when you set up projects to add, change, or retire assets.

You can use this transaction only for components that have a category of Asset Production or Capital. You enter the category for the Component transaction or online using the Component window.

Processing Conditions

The Project and Component Load scheduled process does not apply this transaction if the

- Component has a status of Cancelled or Closed.
- Associated project has any of the following statuses:
  - Cancelled
  - Closed
  - Pending Approval
  - Validating

Because the validation for this transaction includes totalling fields on all of a component's capitalization transactions, the Project and Component Load process applies all Component Capitalization addition and change transactions for the component as a group.

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is C4.
2	Action Code	1 alphabetic	Required Values are: A - Add. C - Change.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the component. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project associated with the component. Values are defined on the Project transaction or online using the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the component that you add, change, or delete capitalization or retirement transaction information for.
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Asset Entity	5 alphanumeric	Optional A user-defined identifier for the asset entity that you want to generate asset maintenance or retirement transactions for. Values are defined in SmartStream Asset Management. If Asset Management is not installed, values are user defined.

Field	Name	Length	Description
8	Asset ID	12 alphanumeric	Required if this is an addition transaction. Do not enter an asterisk (*) to clear the field. The unique identifier for the asset or property account.
9	Asset or Property Account Type	1 alphabetic	Optional An option that indicates whether an asset or a property account receives the component cost or cost of removal for the purposes of capitalization or retirement. Values are: A - Asset (default). Enter this value if you enter Asset Adjustment or Component Assets for the asset maintenance type. P - Property Account.
10	Description	70 alphanumeric	Optional A user-defined description of the asset or property account. Projects sends this information to Asset Management, if installed, when you capitalize the asset.
11	In-Service Date	10 date	Required if: This is an addition transaction. The asset maintenance type is Asset Adjustment or Component Assets. The date that you place the asset in service. Asset Management begins depreciating the asset on this date. You cannot change the in-service date for an asset that has been capitalized. If you enter the in-service date for the first book of an asset, it serves as a default for all of the asset's other books. If you do not enter this date for the first book, the default in-service date is the acquisition date.
12	Date Asset Retired	10 date	Required if: This is an addition transaction. The asset maintenance type is Asset Retirement. The date that you want to retire the asset.

Field	Name	Length	Description
13	Asset Category	7 alphanumeric	Required if you do not enter a component asset category. Do not enter an asterisk (*) to clear the field. An identifier for the Asset Management category table to use when you first add an asset. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. If the Capitalization scheduled process has run once for the component, you cannot override the current asset category. You cannot change the asset category for an asset that has been capitalized. If you enter an asset entity, the Project and Component Load process verifies that the asset category is valid for the asset entity if Asset Management is installed. Values are defined in Asset Management. If Asset Management is not installed, values are user defined. The default is the asset category for the component.
14	Asset Location	7 alphanumeric	Required if: you select the Location Table Required option in the asset entity policy in Asset Management, if installed. You do not enter the asset location for the component anywhere else. A user-defined identifier for the physical location of the asset you capitalize or retire. You cannot change the asset location for an asset that has been capitalized. This is a default value that you can override for the Component Capitalization transaction or online using the Capitalization Transaction window. Values are defined in Asset Management. If Asset Management is not installed, values are user defined. The default is the asset location for the parent structure point.
15	Quantity	7 numeric	Optional The number of items or units for the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset. You can enter a quantity with up to five decimal places. The default is 1.00.

Field	Name	Length	Description
16	Copy to All Books	1 alphanumeric	Optional An option that indicates which asset books Projects updates with component costs during the Capitalization scheduled process. Values are: N - Projects uses capitalization policy or capitalization component policy and sends component costs only to those asset books defined in the policy. This is the default if: This is an addition transaction. The capitalization component policy includes only the primary book. Y - Projects ignores capitalization policy or capitalization component policy and sends component costs to all asset books from the category table for the asset and generates a book 0 transaction. This is the default if: This is an addition transaction. The capitalization component policy includes books other than the primary book.
17	Manufacturer	16 alphanumeric	Optional A user-defined identifier for the manufacturer of the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset. You cannot change the manufacturer for an asset that has been capitalized. The default is the manufacturer for the parent structure point.
18	Model or Part	16 alphanumeric	Optional The model or part number for the asset. Projects sends this information to Asset Management, if installed, when you capitalize the asset. You cannot change the model or part number for an asset that has been capitalized. The default is the model or part number for the parent structure point.
19	Serial Number	18 alphanumeric	Optional The manufacturer's identifier for the asset. Projects sends this information to Asset Management when you capitalize the asset. You cannot change the serial number for an asset that has been capitalized.

Field	Name	Length	Description
20	Capitalization Amount or Cost of Removal Amount	20 amount	Optional The contents of this field depend on the component's asset maintenance type. If the asset maintenance type is ▪ Asset Adjustment or Component Assets, this is the capitalization amount. Enter the monetary amount to capitalize for the asset. ▪ Asset Retirement, this is the cost of removal amount. Enter the monetary amount to use to update the cost of removal for an asset retirement transaction. This amount is the **total amount** that you want capitalized for this asset or that you want the cost of removal amount updated with, which is not necessarily the amount that you want to capitalize or update the cost of removal amount with during the next run of the Capitalization scheduled process. For example, if you have previously capitalized 2000 USD for an asset, and you now want to capitalize an additional 1000 USD, you would enter **3000** in this field to indicate the total amount you want capitalized for the asset after the next run of the Capitalization process. This amount is expressed in the Projects ledger currency. If you capitalize the component cost, the total of the component's capitalized-to-date balance, existing capitalization transaction amounts, and this capitalization amount cannot exceed the component's project-to-date balance. For a single component's assets, you can enter capitalization or cost of removal amounts or percentages, not both. You can enter a positive or negative amount. The default is 0.

Field	Name	Length	Description
21	Capitalization Percentage or Cost of Removal Percentage	6 numeric	Required if other capitalization transactions for the component have capitalization percentages. The contents of this field depend on the component's asset maintenance type. If the asset maintenance type is: Asset Adjustment or Component Assets, this is the capitalization percentage. Enter the percentage of the component's cost to capitalize. Asset Retirement, this is the cost of removal percentage. Enter the percentage of the component cost for Projects to use to update the cost of removal for an asset retirement transaction. Values are 0-100. You can enter the number with no, one, or two decimal places. This percentage is the **total percentage** of the component cost that you want capitalized for this asset or that you want the cost of removal amount updated with, which is not necessarily the percentage that you want to capitalize or update the cost of removal amount with during the next run of the Capitalization scheduled process. For example, if you have previously capitalized 75 percent of the component cost for an asset, and you now want to capitalize an additional 10 percent, you would enter **85** in this field to indicate the total percentage of the component cost that you want capitalized for the asset after the next run of the Capitalization process. For a single component's assets, you can enter capitalization or cost of removal amounts or percentages, not both.
22	Asset Retirement Percentage	6 numeric	Optional The percentage that you retire of the original cost of the asset. Projects sends this percentage to Asset Management during the next Capitalization scheduled process. Enter a percentage only if the component's asset maintenance type is Asset Retirement. Values are 0-100. You can enter the percentage with no, one, or two decimal places. The default is 100.

Component Capitalization Policy Transaction

Use the Component Capitalization Policy transaction to override options chosen on the Capitalization Policy window for each cost element. The override options you enter here affect a specific component of a project and control where to send costs charged to a cost element for that component.

You can use this transaction only for components that have a category of Asset Production or Capital. You enter the category for the Component transaction or online using the Component window.

Processing Conditions

The Project and Component Load scheduled process does not apply this transaction if the

- Component has a status of Cancelled or Closed.
- Associated project has any of the following statuses:
  - Cancelled
  - Closed
  - Pending Approval
  - Validating

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is C5.
2	Action Code	1 alphabetic	Required Values are ▪ A - Add. ▪ C - Change. ▪ D - Delete. If you use this transaction to delete capitalization policy information for a component, enter only the – Transaction code – Project entity – Project – Component – Batch sort level – Cost element – Asset book number. The Project and Component Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the component capitalization policy information.

Field	Name	Length	Description
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity associated with the component. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project associated with the component. Values are defined on the Project transaction or online using the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the component that you add, change, or delete capitalization policy information for.
6	Batch Sort Level	6 numeric	Required The number identifying the order in which you want the Project and Component Load process to apply this transaction. This number determines the sequence for processing transactions of the same type (Add, Change, Delete). Use it to ensure that the Project and Component Load process applies transactions for the parent component before its child components.
7	Cost Element	10 alphanumeric	Required. Do not enter an asterisk (*) to clear the field. A user-defined identifier for the component cost element that you associate with an asset book or an asset cost element. Values are defined on the Component Cost Element window.
8	Asset Book Number	2 numeric	Required The number of the asset book that you want Projects to update with the cost of capitalization or cost of removal of the component during the Capitalization scheduled process. Values are 1-99. If you use this transaction to change the asset primary book, you can change only the asset cost element number.
9	Asset Book Included	1 alphanumeric	Optional Values are: N - No. Do not send the costs for the component cost element to the asset book. Y - Yes (default). Send the costs to the asset book. You can override the default for all asset books except the primary asset book.

Field	Name	Length	Description
10	Asset Cost Element Number	2 numeric	Optional A number defined in SmartStream Asset Management for a cost element that you associate with the component cost element. Values are 0-20. These values are defined in Asset Management. If Asset Management is not installed, values are user defined.

Project Journal Load Transaction Layouts

The Project Journal Load scheduled process uses four transactions:

- Project Journal Control
- Project Journal Line
- Project Journal Accounting Distribution
- Project Journal Comments

Note: While you are running this scheduled process, you cannot update any project entities using Projects windows.

Project Journal Control Transaction

The Project Journal Control transaction contains the header information for the project journal. You must enter at least one journal control transaction to run the Project Journal Load scheduled process. Any Project Journal Load transaction that does not have an associated journal control transaction is considered to be an orphan.

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required Value is PJCT.
2	Action	1 alphabetic	Required Values are: A - Add. D - Delete the entire project journal. You can use this transaction to delete unposted project journals only. If the Projects Posting scheduled process has already generated a reversal journal for this project journal, this transaction does **not** delete the reversal journal. The Project Journal Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the project journal.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity that you add or delete the project journal transaction or transactions for. Values are defined on the Project Entity window.

Field	Name	Length	Description
4	Journal ID	20 alphanumeric	Required A user-defined identifier for the project journal transaction or transactions. Together, the journal ID and sequence identify the project journal within a project entity.
5	Sequence	5 numeric	Optional The sequence number of the project journal transaction. Use this number to associate multiple project journals with a single journal ID. The default is 1. Values are 1-99999.
6	Journal Type	1 alphabetic	Optional Values are: U - The project journal is unbalanced (default). Debits do not equal credits in the transaction currency. B - The project journal is balanced. Debits equal credits in the transaction currency.
7	Post to Adjustment Period	1 alphabetic	Optional Values are: N - No (default). Do not post the project journal lines associated with this transaction to an adjustment period. Y - Yes. Post all lines associated with this project journal to the adjustment period.
8	Adjustment Period	2 numeric	Required if you enter Yes for the Post to Adjustment Period option. The adjustment period that you want to post the project journal lines associated with this transaction to. The transaction's effective date must be within this adjustment period.

Field	Name	Length	Description
9	Currency	3 alphanumeric	Required The transaction currency for the project journal. The Project Journal Load process uses this currency for all lines of the project journal. Values are defined on the Currency Code Maintenance window. If you enter a currency code that is not valid, the Project Journal Load process overrides it with the default currency. If your enterprise policy specifies: Single currency for all SmartStream products, that currency is the default. You cannot override this default. Multiple currencies, the default is the: Project currency for the associated project entity, if your enterprise policy allows multiple currencies Currency for the primary book of the ledger entity associated with the project entity, if the project currency and Projects ledger currency are the same.
10	Post to Ledger	1 alphabetic	Optional The default for the Post to Ledger option for the project journal lines. You can override the default for each line in the project journal. The only Projects amounts you can post to Ledger are those in the Actual amount class. Values are: Y - Yes (default). Generate a ledger journal transaction from this project journal transaction. Note that if any lines of the project journal post to Ledger, all ledger entities associated with the transactions posting to Ledger must have the same primary book currency. N - No. Do not generate a ledger journal transaction from this transaction.
11	Post to Projects	1 alphabetic	Optional The default for the Post to Projects option for the project journal lines. You can override the default for each line in the project journal. Values are: Y - Yes (default). Post this transaction to Projects. N - No. Do not post this transaction to Projects.

Field	Name	Length	Description
12	Effective Date	10 date	Optional The effective date of the project journal. The Project Journal Load process uses this date for all project journal lines associated with this transaction. The default is the project entity's next effective date, if entered. If the project entity does not have a next effective date, the default is the current date. This process verifies that the: Project currency and Projects ledger currency rates of exchange, if entered, are valid for this date. If you do not enter them, Projects uses the effective date and the rate entity and rate type associated with the component to determine the correct currency rate of exchange. Effective date occurs during a ledger period that is open for posting, if you post any monetary journals associated with this transaction to SmartStream Ledger Amount class you enter for a statistical or monetary transaction is valid for this date. This process uses the effective date to determine the: Accounting period to which the journal posts Effective date of the reversal journal, if you select a reversal option Project rate to use, if you enter a project rate code Valid adjustment periods, if you select the Post to Adjustment Period option.
13	Reversal Option	1 alphabetic	Optional Values are: blank - Do not reverse the journal (default). Enter this value if you enter Yes for the Post to Adjustment Period option. D - Specific Date. Reverse the journal on a specific date. P - Periods Ahead. Reverse the journal a specific number of periods after the original journal's posting period.
14	Reversal Date	10 date	Required if you enter Specific Date for the reversal option. Projects calculates the reversal date if you enter Periods Ahead for the reversal option. The effective date of the reversal journal. This date must be the same as or later than the project journal effective date.

Field	Name	Length	Description
15	Nbr of Periods Ahead	2 numeric	Required if you enter Periods Ahead for the reversal option. The number Projects uses to calculate the accounting period when it will reverse the journal. Projects adds this number to the original journal's posting period (as determined by the journal's effective date) to calculate the reversal accounting period. Values range from 1 to one less than the maximum number of accounting periods in the calendar for the project entity associated with the journal
16	Reverse On	1 alphabetic	Required if you enter Periods Ahead for the reversal option. Values are: F - The effective date of the reversal journal is the first day of the reversal accounting period (default). L - The effective date of the reversal journal is the last day of the reversal accounting period.
17	Description	70 alphanumeric	Optional A user-defined description of the project journal.
18	Voucher	15 numeric	Required if your enterprise policy specifies the Require Voucher Number option. A number identifying the document associated with this project journal. Enterprise policy determines whether: The voucher number is automatically generated. You can override an automatically generated number.
19	Generate Ledger Journal Offset	1 alphabetic	Optional Values are: Yes - Yes (default). Projects generates a project cost and an offset ledger journal line for each project journal line amount you post to Ledger, for example, if you post a debit amount to Ledger, Projects generates an equal credit amount. When you run the SmartStream Ledger Posting scheduled process, it posts the offset journal line amount to the accounting distribution for the Ledger Journal Offset accounting distribution type. N - No. Projects generates a one-sided ledger journal line for each project journal line amount you post to Ledger. The net debits and credits you post to Ledger for all lines in the journal must be zero, in both the transaction currency and the Projects ledger currency.

Field	Name	Length	Description
20	Source Document Key	80 alphanumeric	Optional A user-defined identifier for the source of the journal if it is a non-Projects source, for example, a third-party payroll system. The default is the project journal key, which contains the Project entity Project journal ID Project journal sequence number.

Project Journal Line Transaction

The Project Journal Line transaction contains the line information for the Project Journal Load scheduled process. You must enter at least one Project Journal Line transaction to add journals that are complete. If you run the process with a journal control transaction but no journal line transaction, Projects marks the journal as incomplete. You cannot post the journal until you complete it by adding a journal line.

You cannot use this transaction to add journal lines to unposted project journals that currently exist. However, you can use the Unposted Project Journal window to add lines to these project journals.

Transaction Requirements

Enter a journal control transaction with the Project Journal Line transaction.

A project journal line can include up to three transactions:

- Statistical
- Monetary 1
- Monetary 2

Post at least one transaction within every project journal line to Projects.

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required Value is PJLN.
2	Action	1 alphabetic	Required Value is A (add).
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity that you add the transaction for. This identifier must be the same as the project entity for the journal control transaction. Values are defined on the Project Entity window.

Field	Name	Length	Description
4	Journal ID	20 alphanumeric	Required An identifier for the project journal transaction or transactions. This identifier must be the same as the journal ID for the journal control transaction.
5	Sequence	5 numeric	Optional The sequence number of the project journal transaction. This number must be the same as the sequence number for the journal control transaction. The default is 1. Values are 1-99999.
6	Line	4 numeric	Required A unique number for the project journal line. Zero is not a valid value. You must add journal lines sequentially, beginning with line number 1. To add a project journal line, enter a nonzero value for at least one of the following fields: Statistical Quantity Monetary 1 Transaction Amount Monetary 2 Transaction Amount
7	Project	20 alphanumeric	Required A user-defined identifier for the project that you charge the quantities and amounts for the project journal line to. Values are defined on the Project window.
8	Component	20 alphanumeric	Required A user-defined identifier for the component that you charge the project journal to. You can charge to a component only if it is a detail component and if it has any of the following statuses: Active Complete Preparing. If the component has this status, you can post only to amount classes that have a user-defined type (anything other than Actual and Commitment).

Field	Name	Length	Description
9	Debit or Credit	1 alphabetic	Optional An option that indicates whether the project journal line is to debit or credit project balances. This option applies to all transactions within the project journal line; you cannot change it for individual project journal line transactions. Values are: D - Debit (default). C - Credit. Enter this value for the Commitment amount class if the project or component has a status of Complete.
10	Line Description	80 alphanumeric	Optional A user-defined description of the project journal line.
11	Ledger Currency Rate of Exchange	20 numeric	Optional The rate of exchange that the Project Journal Load process uses to convert the transaction amount from the transaction currency to the Projects ledger currency. Do not enter this rate if: Enterprise policy specifies a single currency for all SmartStream products. The transaction currency and the Projects ledger currency are the same. You enter the monetary 1 or monetary 2 amount in project currency. The default is the rate of exchange for the rate entity, rate type, and effective date defined in SmartStream Currency.
12	Ledger Currency Rate Entity	5 alphanumeric	Optional A user-defined identifier defined for the rate entity that the Project Journal Load process uses to determine the rate of exchange for converting the transaction amount to the Projects ledger currency. Do not enter this rate entity if: Enterprise policy specifies a single currency for all SmartStream products. The transaction currency and the Projects ledger currency are the same. You enter the monetary 1 or monetary 2 amount in project currency. Values are defined on the Rate Entity Maintenance window. The default is the rate entity for the currency for the primary book of the ledger entity associated with the component.

Field	Name	Length	Description
13	Ledger Currency Rate Type	1 alphanumeric	Optional A user-defined identifier for the rate type that the Project Journal Load process uses to determine the rate of exchange for converting the transaction amount to the Projects ledger currency. Do not enter this rate type if: Enterprise policy specifies a single currency for all SmartStream products. The transaction currency and the Projects ledger currency are the same. You enter the monetary 1 or monetary 2 amount in project currency. Values are defined on the Rate Type Maintenance window. The default is the rate type for the currency for the primary book of the ledger entity associated with the component.
14	Project Currency Rate of Exchange	20 numeric	Optional The rate of exchange that the Project Journal Load process uses to convert the transaction amount from the transaction currency to the project currency. Enter this rate only if: Enterprise policy allows a separate currency for Projects. The transaction currency and the project currency are the same. You do not enter the monetary 1 or monetary 2 amount in project currency. The default is the rate of exchange for the rate entity, rate type, and effective date defined in SmartStream Currency.
15	Project Currency Rate Entity	5 alphanumeric	Optional A user-defined identifier for the rate entity that the Project Journal Load process uses to determine the rate of exchange for converting the transaction amount to the project currency. Enter this rate entity only if: Enterprise policy allows a separate currency for Projects. The transaction currency and the project currency are the same. You do not enter the monetary 1 or monetary 2 amount in project currency. Values are defined on the Rate Entity Maintenance window. The default is the project rate entity.

Field	Name	Length	Description
16	Project Currency Rate Type	1 alphanumeric	Optional A user-defined identifier for the rate type that the Project Journal Load process uses to determine the rate of exchange for converting the transaction amount to the project currency. Enter this rate type only if: Enterprise policy allows a separate currency for Projects. The transaction currency and the project currency are the same. You do not enter the monetary 1 or monetary 2 amount in project currency. Values are defined on the Rate Type Maintenance window. The default is the project rate type.
17	Statistical Post to Projects	1 alphabetic	Optional Values are: N - No. Do not post the statistical journal to Projects. Y - Yes. Post the journal to Projects. If you enter a valid statistical rate code, the default comes from the Post Original Transaction to Projects option for the rate on the Project Entity Rate Code window. Otherwise, the default is the Post to Projects option you enter for the journal control transaction.
18	Statistical Cost Element	10 alphanumeric	Required if both of the following conditions exist: The Project Entity Rate Code window does not specify a cost element for the rate. You enter a statistical quantity. A user-defined identifier for the component cost element that you charge the statistical journal to. The default is the cost element for the rate on the Project Entity Rate Code window.

Field	Name	Length	Description
19	Statistical Amount Class	10 alphanumeric	Required if both of the following conditions exist: The Project Entity Rate Code window does not specify an amount class for the rate. You enter a statistical quantity. The Projects amount class that you want to post the statistical journal to. The amount class you enter must: Be valid for the project.. Have an activity date range that includes the journal's effective date Have an activity option of All Activities or Journal Entry Only on the Project Entity Amount Class window. Depending on the amount class you enter, the Project Journal Load process limits the projects and components that you can charge the statistical quantity to: For the Actual amount class, you can charge the statistical quantity to projects and components that have a status of Active or Complete. For the Commitment amount class, you can Debit or credit the statistical quantity to projects and components that have a status of Active Credit the statistical quantity to projects and components that have a status of Complete. For an amount class that has a user-defined type (anything other than Actual and Commitment), you can charge the statistical quantity to projects and components that have the following statuses: Active Complete In Error (applies to projects only) Preparing The default is the amount class for the rate on the Project Entity Rate Code window.
20	Statistical Quantity	20 numeric	Required if you enter a statistical rate code. The number of items or units that the statistical journal line transaction is for.

Field	Name	Length	Description
21	Statistical Rate Code	10 alphanumeric	Optional A user-defined identifier for the collection of rates that you want the Project Journal Load process to apply to the project journal statistical quantity to calculate the monetary 1 transaction amount. The rate you enter must be defined as one of the following types on the Project Entity Rate Code window: Both monetary and statistical Statistical
22	Statistical Unit of Measure	4 alphanumeric	Required if you enter a statistical quantity but not a statistical rate code. The unit of measure associated with the statistical quantity, for example, dozen and hours. Used with the statistical quantity and statistical rate code to calculate the project journal monetary 1 transaction amount. Values are defined on the Unit of Measure window. The default is the unit of measure for the rate on the Project Entity Rate Code window. You cannot override this default.
23	Monetary 1 Cost Element	10 alphanumeric	Optional if the Project Journal Load process calculates the project journal monetary 1 transaction amount using rate information entered in the statistical fields. In this case, the default is the cost element for the rate on the Project Entity Rate Code window. If the rate does not specify a cost element, the default is the statistical cost element. Required if you enter a monetary 1 transaction amount but not a statistical rate code. A user-defined identifier for the component cost element that you charge the project journal monetary 1 transaction amount to.

Field	Name	Length	Description
24	Monetary 1 Amount Class	10 alphanumeric	Optional if the Project Journal Load process calculates the project journal monetary 1 transaction amount using rate information entered in the statistical fields. In this case, the default is the amount class for the rate on the Project Entity Rate Code window. If the rate does not specify an amount class, the default is the statistical amount class. Required if you enter a monetary 1 transaction amount but not a statistical rate code. The Projects amount class that you want to post the project journal monetary 1 transaction amount to. The amount class you enter must: Be valid for the project. Have an activity date range that includes the journal's effective date. Have an activity option of All Activities or Journal Entry Only on the Project Entity Amount Class window. Depending on the amount class you enter, the Project Journal Load process limits the projects and components that you can charge the monetary amount to: For the Actual amount class, you can charge the amount to projects and components that have a status of Active or Complete. For the Commitment amount class, you can: Debit or credit the amount to projects and components that have a status of Active Credit the amount to projects and components that have a status of Complete. For an amount class that has a user-defined type (anything other than Actual and Commitment), you can charge the amount to projects and components that have the following statuses: Active Complete In Error (applies to projects only) Preparing

Field	Name	Length	Description
25	Monetary 1 Transaction Amount	20 amount	Optional The project journal monetary 1 transaction amount for the journal line. The amount is expressed in the transaction currency and can be positive or negative. The Project Journal Load process calculates this amount if you enter the following information: Statistical quantity Statistical rate code If the process calculates the amount, it overrides any transaction amount you enter.
26	Monetary 1 Amount In Ledger Currency	20 amount	Optional The project journal monetary 1 transaction amount in the Projects ledger currency. If the transaction posts to: Projects, this is the amount posted to the Projects ledger currency balances. SmartStream Ledger, this is the amount for the ledger journal. The amount can be positive or negative. If you do not enter this amount, the Project Journal Load process calculates it by using the Projects ledger currency rate information to convert the transaction amount. If you do enter this amount, enter Yes for the Monetary 1 Ledger Currency Converted option to instruct the Project Journal Load process to ignore any default or entered rate information. If you do not enter Yes, the process overrides any ledger amount you enter with the amount it calculates.
27	Monetary 1 Ledger Currency Converted	1 alphabetic	Optional Values are: N - No (default). Do not enter the monetary 1 amount in ledger currency. The Project Journal Load process calculates the amount. If you enter a monetary 1 amount in ledger currency, the process overrides it with the calculated amount. Y - Yes. Enter the monetary 1 amount in ledger currency. The Project Journal Load process does not calculate the amount. The monetary 1 amount in ledger currency you enter for this transaction is the correct journal amount in the Projects ledger currency. **Note:** If you enter a statistical quantity and a statistical rate code for this transaction, the Project Journal Load process automatically calculates the monetary 1 transaction amount. If this happens, the process also automatically performs currency conversion to calculate the monetary 1 amount in ledger currency, regardless of the value in this field.

Field	Name	Length	Description
28	Monetary 1 Post to Ledger	1 alphabetic	Optional Values are N - No. Do not generate ledger journal entries for the project journal monetary 1 amount. Y - Yes. Generate ledger journal entries for the amount. When you select this journal for Projects Posting processing, the process generates either one or two ledger journal entries; the number depends on the Generate Ledger Journal Offset option you enter for the journal control transaction. Note that if any lines of the project journal post to Ledger, all ledger entities associated with the transactions posting to Ledger must have the same primary book currency. The only Projects amounts you can post to Ledger are those in the Actual amount class. The default comes from the Post to Ledger option for the journal control transaction.
29	Monetary 1 Amount In Project Currency	20 amount	Optional The project journal monetary 1 transaction amount in the project currency. If the transaction posts to Projects, the project balance is updated by this amount. It can be positive or negative. Enter this amount only if The enterprise currency option is Multiple The project entity currency option is Project and Ledger Currency. If both of these conditions exist and you do not enter the project amount, the Project Journal Load process calculates it from the transaction amount based on the project currency rate of exchange. If you do enter this amount, enter Yes for the Monetary 1 Project Currency Converted option to instruct the Project Journal Load process to ignore any default or entered rate information. If you do not enter Yes, the process overrides any project amount you enter with the amount it calculates.

Field	Name	Length	Description
30	Monetary 1 Project Currency Converted	1 alphabetic	Optional Values are N - No (default). Do not enter the monetary 1 amount in project currency. The Project Journal Load process calculates the amount. If you enter a monetary 1 amount in project currency, the process overrides it with the calculated amount. Y - Yes. Enter the monetary 1 amount in project currency. The Project Journal Load process does not calculate the amount. The monetary 1 amount in project currency you enter for this transaction is the correct journal amount in the project currency. **Note:** If you enter a statistical quantity and a statistical rate code for this transaction, the Project Journal Load process automatically calculates the monetary 1 transaction amount. If this happens, the process also automatically performs currency conversion to calculate the monetary 1 amount in project currency, regardless of the value in this field.
31	Monetary 1 Post to Projects	1 alphabetic	Optional Values are: N - No. Do not post the project journal monetary 1 transaction amount to Projects. Y - Yes. Post the transaction amount to Projects. If you enter a valid monetary 1 rate code, the default comes from the Post Original Transaction to Projects option for the rate on the Project Entity Rate Code window. Otherwise, the default is the Post to Projects option you enter for the journal control transaction.
32	Monetary 1 Rate Code	10 alphanumeric	Optional A user-defined identifier for the collection of rates that you want the Project Journal Load process to apply to the project journal monetary 1 transaction amount to calculate the monetary 2 transaction amount. The rate you enter must be defined as one of the following types on the Project Entity Rate Code window: Both monetary and statistical Monetary

Field	Name	Length	Description
33	Monetary 2 Cost Element	10 alphanumeric	Optional if the Project Journal Load process calculates the monetary 2 transaction amount using rate information entered in the monetary 1 fields. In this case, the default is the cost element for the rate on the Project Entity Rate Code window. If the rate does not specify a cost element, the default is the monetary 1 cost element. Required if you enter a monetary 2 transaction amount but not a monetary 1 rate code. A user-defined identifier for the component cost element that you charge the project journal monetary 2 amount to.

Field	Name	Length	Description
34	Monetary 2 Amount Class	10 alphanumeric	Optional if the Project Journal Load process calculates the monetary 2 transaction amount using rate information entered in the monetary 1 fields. In this case, the default is the amount class for the rate on the Project Entity Rate Code window. If the rate does not specify an amount class, the default is the monetary 1 amount class. Required if you enter a monetary 2 transaction amount but not a monetary 1 rate code. The Projects amount class that you want to post the project journal monetary 2 amount to. The amount class you enter must: Be valid for the project. Have an activity date range that includes the journal's effective date Have an activity option of All Activities or Journal Entry Only on the Project Entity Amount Class window. Depending on the amount class you enter, the Project Journal Load process limits the projects and components that you can charge the monetary amount to: For the Actual amount class, you can charge the amount to projects and components that have a status of Active or Complete. For the Commitment amount class, you can: Debit or credit the amount to projects and components that have a status of Active. Credit the amount to projects and components that have a status of Complete. For an amount class that has a user-defined type (anything other than Actual and Commitment), you can charge the amount to projects and components that have the following statuses: Active Complete In Error (applies to projects only) Preparing The journal's effective date must be within the range of acceptable dates for the amount class.

Field	Name	Length	Description
35	Monetary 2 Transaction Amount	20 amount	Optional The project journal monetary 2 transaction amount for the journal line. The amount is expressed in the transaction currency and can be positive or negative. The Project Journal Load process calculates this amount if you enter the following information: Monetary 1 transaction amount (can be entered or calculated) Monetary 1 rate code If the process calculates the amount, it overrides any transaction amount you enter with the calculated amount.
36	Monetary 2 In Ledger Currency	20 amount	Optional The project journal monetary 2 transaction amount in the Projects ledger currency. If the transaction posts to: Projects, this is the amount posted to the Projects ledger currency balances. SmartStream Ledger, this is the amount for the ledger journal. The amount can be positive or negative. If you do not enter this amount, the Project Journal Load process calculates it by using the Projects ledger currency rate information to convert the transaction amount. If you do enter this amount, enter Yes for the Monetary 2 Ledger Currency Converted option to instruct the Project Journal Load process to ignore any default or entered rate information. If you do not enter Yes, the process overrides any ledger amount you enter with the amount it calculates.

Field	Name	Length	Description
37	Monetary 2 Ledger Currency Converted	1 alphabetic	Optional Values are: N - No (default). Do not enter the monetary 2 amount in ledger currency. The Project Journal Load process calculates the amount. If you enter a monetary 2 amount in ledger currency, the process overrides it with the calculated amount. Y - Yes. Enter the monetary 2 amount in ledger currency. The Project Journal Load process does not calculate the amount. The monetary 2 amount in ledger currency that you enter for this transaction is the correct journal amount in the Projects ledger currency. **Note:** If you enter a monetary 1 rate code and a monetary 1 transaction amount exists (either because you entered it or the process calculated it), the Project Journal Load process automatically calculates the monetary 2 transaction amount. If this happens, the process also automatically performs currency conversion to calculate the monetary 2 amount in ledger currency, regardless of the value in this field.
38	Monetary 2 Post to Ledger	1 alphabetic	Optional Values are: N - No. Do not generate ledger journal entries for the project journal monetary 2 amount. Y - Yes. Generate ledger journal entries for the amount. When you select this journal for Projects Posting processing, the process generates either one or two ledger journal entries; the number depends on the Generate Ledger Journal Offset option you enter for the journal control transaction. Note that if any lines of the project journal post to Ledger, all ledger entities associated with the transactions posting to Ledger must have the same primary book currency. The only Projects amounts you can post to Ledger are those in the Actual amount class. The default comes from the Post to Ledger option for the journal control transaction.

Field	Name	Length	Description
39	Monetary 2 Amount in Project Currency	20 amount	Optional The project journal monetary 2 transaction amount in the project currency. If the transaction posts to Projects, the project balance is updated by this amount. It can be positive or negative. Enter this amount only if: The enterprise currency option is Multiple. The project entity currency option is Project and Ledger Currency. If both of these conditions exist and you do not enter the project amount, the Project Journal Load process calculates it from the transaction amount based on the project currency rate of exchange. If you do enter this amount, enter Yes for the Monetary 2 Project Currency Converted option to instruct the Project Journal Load process to ignore any default or entered rate information. If you do not enter Yes, the process overrides any project amount you enter with the amount it calculates.
40	Monetary 2 Project Currency Converted	1 alphabetic	Optional Values are: N - No (default). Do not enter the monetary 2 amount in project currency. The Project Journal Load process calculates the amount. If you enter a monetary 2 amount in project currency, the process overrides it with the calculated amount. Y - Yes. Enter the monetary 2 amount in project currency. The Project Journal Load process does not calculate the amount. The monetary 2 amount in project currency you enter for this transaction is the correct journal amount in the project currency. **Note:** If you enter a monetary 1 rate code and a monetary 1 transaction amount exists (either because you entered it or the process calculated it), the Project Journal Load process automatically calculates the monetary 2 transaction amount. If this happens, the process also automatically performs currency conversion to calculate the monetary 2 amount in project currency, regardless of the value in this field.

Field	Name	Length	Description
41	Monetary 2 Post to Projects	1 alphabetic	Optional Values are: N - No. Do not post the project journal monetary 2 transaction to Projects. **Note:** Do not enter this value if the journal line has no monetary 2 amounts. Y - Yes. Post the transaction to Projects. The default comes from the Post to Projects option for the journal control transaction.
42	User Amount	20 amount	Optional A user-defined amount.
43	User Date	10 date	Optional A user-defined date.
44	User Field 1	10 alphanumeric	Optional A user-defined field that you can use to enter additional information about the project journal line.
45	User Field 2	15 alphanumeric	Optional A user-defined field that you can use to enter additional information about the project journal line.
46-48	User Field 3-5	20 alphanumeric	Optional User-defined fields that you can use to enter additional information about the project journal line.
49	Source Document Reference	100 numeric	Optional A user-defined identifier for the source of the project journal line if it is a non-Projects source, for example, a third-party payroll system. If you do not enter this identifier, the Project Journal Load process generates the identifier during the Projects Posting scheduled process. The generated source document reference identifier contains the following information: Project entity Project journal ID Project journal sequence number Project journal line number

Field	Name	Length	Description
50	Trans to Euro Ledger Exchange Rate	30 numeric	The rate of transaction currency to the Euro currency. Euro Compliant currency conversion requires a new calculation method called triangulation. The triangulation calculation method uses a two-step process that converts through the Euro Currency. Triangulation uses two exchange rates: one rate from the transaction currency to the Euro and one rate from the Euro to the resultant (project or ledger) currency.
51	Euro to Ledger Exchange Rate	30 numeric	The rate of the Euro currency to the ledger currency. Euro Compliant currency conversion requires a new calculation method called triangulation. The triangulation calculation method uses a two-step process that converts through the Euro Currency. Triangulation uses two exchange rates: one rate from the transaction currency to the Euro and one rate from the Euro to the resultant (project or ledger) currency.
52	Trans to Euro Project Exchange Rate	30 numeric	The rate of transaction currency to the Euro currency. Euro Compliant currency conversion requires a new calculation method called triangulation. The triangulation calculation method uses a two-step process that converts through the Euro Currency. Triangulation uses two exchange rates: one rate from the transaction currency to the Euro and one rate from the Euro to the resultant project currency.
53	Euro to Project Exchange Rate	30 numeric	The rate of Euro currency to the project currency. Euro Compliant currency conversion requires a new calculation method called triangulation. The triangulation calculation method uses a two-step process that converts through the Euro Currency. Triangulation uses two exchange rates: one rate from the transaction currency to the Euro and one rate from the Euro to the project currency.

Project Journal Accounting Distribution Transaction

The Project Journal Accounting Distribution transaction contains accounting distribution information for the Project Journal Load scheduled process.

Use this transaction only to

- Enter a user-defined ledger reconciliation identifier
- Enter the accounting distribution for journals that you post to SmartStream Ledger if the default accounting key information does not contain a full accounting distribution.
- Override the default accounting distributions for journals that you post to Ledger.

The Project Journal Load process ignores this transaction for journals that are posted only to Projects.

You cannot use this transaction to override accounting distributions for unposted ledger journals that currently exist. However, you can use the Unposted Project Journal window to override these accounting distributions.

Transaction Requirements

Enter a corresponding Project Journal Line transaction with the Project Journal Accounting Distribution transaction.

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required Value is PJAD.
2	Action	1 alphabetic	Required Value is A (add).
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity that you add the transaction for. This identifier must be the same as the project entity for the journal control transaction.
4	Journal ID	20 alphanumeric	Required An identifier for the project journal transaction or transactions. This identifier must be the same as the journal ID for the journal control transaction.
5	Sequence	5 numeric	Optional The sequence number of the project journal transaction. This number must be the same as the sequence number for the journal control transaction. The default is 1. Values are 1-99999.
6	Line	4 numeric	Required The number identifying the project journal line.
7	Distribution Group	2 alphanumeric	Required The portion of the project journal line that this transaction applies to. Values are: M1 - Monetary 1. M2 - Monetary 2.

Field	Name	Length	Description
8	Distribution Type	3 numeric	Required The type of accounting distribution for which to override the default distribution information, ledger reconciliation identifier, or both. Values are: 150 - Project Cost. You can enter this distribution type only if you enter Yes for the Allow Transaction Override option for the cost element. 156 - Ledger Journal Offset. You can enter this distribution type only if the Generate Ledger Journal Offset option for the journal control transaction is Yes.
9	Ledger Entity	5 alphanumeric	Required A user-defined identifier for the ledger entity that you post the journal to.
10-21	Accounting Key Elements 1–12	30 numeric	Required One through twelve elements in the accounting distribution that the journal posts to. Enter the full accounting distribution established by enterprise policy. For example, if your enterprise uses only elements 1 through 4, enter those elements.
22	Ledger Reconciliation ID	100 alphanumeric	Optional A user-defined identifier for relating ledger entities to project entities. If you do not enter this identifier, the Projects Posting scheduled process you run generates the identifier. The generated reconciliation ID contains the following information: Project journal ID Project journal sequence number Project journal line number Ledger entity Effective date

Project Journal Comments Transaction

The Project Journal Comments transaction is optional and contains header comments for the Project Journal Load scheduled process. Use this transaction only to add comments about the journal.

You cannot use this transaction to add comments to unposted project journals that currently exist. However, you can use the Unposted Project Journal window to add comments to these project journals.

Transaction Requirements

You can enter multiple journal comments transactions for a single project journal.

Enter a journal control transaction with the journal comments transactions.

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required Value is PJCM.
2	Action	1 alphabetic	Required Value is A (add).
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity that you add the transaction for. This identifier must be the same as the project entity for the journal control transaction.
4	Journal ID	20 alphanumeric	Required An identifier for the project journal transaction or transactions. This identifier must be the same as the journal ID for the journal control transaction.
5	Sequence	5 numeric	Optional The sequence number of the project journal transaction. This number must be the same as the sequence number for the journal control transaction. The default is 1. Values are 1-99999.
6	Type	1 alphabetic	Optional The type of comment you add. Values are: A - All (default). D - Display Only. E - External. I - Internal.
7	Comments	255 alphanumeric	User-defined comments.

Projects Balance Load Transaction Layouts

The Projects Balance Load scheduled process uses two transactions:

- Monetary Balance
- Statistical Balance

Performing Balance Maintenance as a Prerequisite for Deletions

You can perform balance maintenance before deleting an element of the monetary balance key or statistical balance key, such as the amount class, cost element, or component. However, if you try to delete an element of the balance key that has amounts or quantities charged to it, Projects displays a message. You must delete the charges for the element before you can delete the element. Entering a zero for the balances is not a valid option; you must actually delete the amounts or quantities by entering a deletion transaction.

Monetary Balance Transaction

Use the Monetary Balance transaction to add, replace, or delete monetary balances in Projects.

Projects monetary balances are stored on the Component Monetary Balance table. The key to this table is the *monetary balance key*, which contains the following information:

- Project entity
- Project
- Component
- Cost element
- Amount class
- Currency code
- Currency type
- Fiscal year

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is M1.
2	Action Code	1 alphabetic	Required Values are: A - Add. C - Change (replace existing balances). D - Delete. If a project has balances in any year later than the fiscal year that you want to delete, you cannot enter a deletion transaction. For example, you cannot delete a project's 2001 balances if the project has balances for 2002. The Projects Balance Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the balance information.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity that you want to add, replace, or delete balance information for. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project that you want to add, replace, or delete balance information for. The project type must be Project, not Template. Values are defined on the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the detail component that you want to add, replace, or delete balance information for.
6	Cost Element	10 alphanumeric	Required A user-defined identifier for the cost element that you want to add, replace, or delete balance information for.

Field	Name	Length	Description
7	Amount Class	10 alphanumeric	Required The amount class that you want to add, replace, or delete balance information for. If this is the Actual amount class The project and component must have statuses of Active or Complete. The Allow Actuals option for the component cost element must be Yes. If this is the Commitment amount class The project and component must have statuses of Active. The Allow Commitments option for the component cost element must be Yes. If this is an amount class that has a user-defined type (anything other than Actual and Commitment), the project and component must have one of the following statuses: Active Complete In Error (applies to projects only) Preparing
8	Currency Type	1 alphabetic	Required An option that indicates the type of currency that you add, replace, or delete balances in. Values are: L - Projects Ledger Currency. Enter this value if the transaction affects the balances stored on Projects in the Projects ledger currency. Enter this value if your enterprise policy does not allow a separate currency for Projects. P - Project Currency. Enter this value if the transaction affects the balances stored on Projects in the project currency. You can choose project currency only if the project entity specifies that balances are maintained in both project and Projects ledger currencies. Note that the Projects Balance Load process does not automatically affect both types of balances. For example, if you replace balances stored in the project currency, the process does not convert your new balances to the Projects ledger currency or automatically replace the corresponding balances stored in the Projects ledger currency. Manually ensure that both sets of balances remain synchronize.

Field	Name	Length	Description
9	Fiscal Year	4 numeric	Optional The fiscal year that you add, replace, or delete balance information for. Be aware that if this fiscal year is a future year—that is, a year later than the project's fiscal year—Projects does not synchronize it with balances for prior years. This means that the balances you see when displaying a future year are the balances you entered for that year; Projects does not bring forward any balances from prior years to calculate project-to-date balances. For accurate prior year balance information, inquire on the project fiscal year's project-to-date balance, not the future year's prior year project-to-date balance. You can run the Projects Year Open scheduled process for the project to synchronize all balances. The default is the fiscal year for the project.
10	Project Year-to-Date Amount	20 amount	Optional For the specified monetary balance key, this is the total amount posted to accounting and adjustment periods during the current fiscal year. If you enter a year-to-date amount but do not enter project period amounts, the Projects Balance Load process Evenly distributes the amount among all accounting periods defined for the project entity calendar for the fiscal year if this is an addition transaction. Calculates the difference between the year-to-date amount you enter and the year-to-date amount currently stored for this monetary balance key. The Projects Balance Load process then evenly distributes the result among all accounting periods defined for the project entity calendar for the fiscal year. If this calculation results in an uneven allocation, the process allocates the remainder to the last valid period. If you enter a year-to-date amount and project period amounts, the sum of the project period amounts must equal the year-to-date amount. If you enter only the project period amounts, the Projects Balance Load process totals them to calculate the year-to-date amount.
11	Prior Year Project-to-Date Amount	20 amount	Optional The total amount charged to the specified monetary balance key through the end of the previous fiscal year. Enter this amount only if you enter Yes for the Initial Load option.

Field	Name	Length	Description
12-71	Project Period Amount 1-60	20 amount	Optional For the specified monetary balance key, this is the amount that you add or replace for a specific period. Each Project Period Amount field corresponds to a period on the project entity calendar. You can enter amounts only for periods that are valid for the calendar. For example, if the project entity uses a calendar with 12 defined periods, you cannot enter an amount in the Project Period Amount 13 field. Adjustment periods follow accounting periods. Therefore, if the project entity calendar uses 12 accounting periods and 2 adjustment periods, the adjustment periods are 13 and 14. If you enter a year-to-date amount and project period amounts, the sum of the project period amounts must equal the year-to-date amount. If you enter only the project period amounts, the Projects Balance Load process calculates the year-to-date amount by totalling the amounts you enter and any existing amounts for other periods in the fiscal year.
72	Initial Load	1 alphabetic	Optional An option that indicates whether you enter the prior year project-to-date amount. Usually, you enter an initial load transaction to load balances for a project that does not currently have balance information in Projects, for example, when you convert data from a formerly used project management system to Projects. Values are: N - No (default). Y - Yes. Enter this value if you enter the prior year project-to-date amount.

Statistical Balance Transaction

Use the Statistical Balance transaction to add, change, or delete statistical balances in Projects.

Projects statistical balances are stored on the Component Statistical Balance table. The key to this table is the *statistical balance key*, which contains the following information:

- Project entity
- Project
- Component
- Cost element

- Amount class
- Unit of measure
- Fiscal year

Transaction Fields

Field	Name	Length	Description
1	Transaction Code	2 alphanumeric	Required Value is S1.
2	Action Code	1 alphabetic	Required Values are: A - Add. C - Change (replace existing balances). D - Delete. If a project has balances in any year later than the fiscal year that you want to delete, you cannot enter a deletion transaction. For example, you cannot delete a project's 2001 balances if the project has balances for 2002. The Projects Balance Load process applies deletion transactions first. If you enter addition and deletion transactions with identical key values, the process adds the balance information.
3	Project Entity	5 alphanumeric	Required A user-defined identifier for the project entity that you want to add, replace, or delete balance information for. Values are defined on the Project Entity window.
4	Project	20 alphanumeric	Required A user-defined identifier for the project that you want to add, replace, or delete balance information for. The project type must be Project, not Template. Values are defined on the Project window.
5	Component	20 alphanumeric	Required A user-defined identifier for the detail component that you want to add, replace, or delete balance information for.
6	Cost Element	10 alphanumeric	Required A user-defined identifier for the cost element that you want to add, replace, or delete balance information for.

Field	Name	Length	Description
7	Amount Class	10 alphanumeric	Required The amount class that you want to add, replace, or delete balance information for. If this is the Actual amount class: The project and component must have statuses of Active or Complete The Allow Actuals option for the component cost element must be Yes. If this is the Commitment amount class The project and component must have statuses of Active The Allow Commitments option for the component cost element must be Yes. If this is an amount class that has a user-defined type (anything other than Actual and Commitment), the project and component must have one of the following statuses: Active Complete In Error (applies to projects only) Preparing
8	Unit of Measure	4 alphanumeric	Required The unit associated with the statistical quantity you want to add, replace, or delete, for example, dozen and hours. Values are defined on the Unit of Measure window.
9	Fiscal Year	4 numeric	Optional The fiscal year that you want to add, replace, or delete balance information for. Be aware that if this fiscal year is a future year—that is, a year later than the project's fiscal year—Projects does not synchronize it with balances for prior years. This means that the balances you see when displaying a future year are the balances you entered for that year; Projects does not bring forward any balances from prior years to calculate project-to-date balances. For accurate prior year balance information, inquire on the project fiscal year's project-to-date balance, not the future year's prior year project-to-date balance. You can run the Projects Year Open scheduled process for the project to synchronize all balances. The default is the fiscal year for the project.

Field	Name	Length	Description
10	Project Year-to-Date Quantity	20 numeric	Optional For the specified statistical balance key, this is the total quantity posted to accounting and adjustment periods during the current fiscal year. If you enter a year-to-date quantity but do not enter project period quantities, the Projects Balance Load process: Evenly distributes the statistical quantity among all accounting periods defined for the project entity calendar for the fiscal year if this is an addition transaction. Calculates the difference between the year-to-date quantity you enter and the year-to-date quantity currently stored for this statistical balance key. The Projects Balance Load process then evenly distributes the result among all accounting periods defined for the project entity calendar for the fiscal year. If this calculation results in an uneven allocation, the process allocates the remainder to the last valid period. If you enter a year-to-date quantity and project period quantities, the sum of the project quantities must equal the year-to-date quantity. If you enter only the project period quantities, the Projects Balance Load process calculates the year-to-date quantity by totalling the quantities you enter and any existing quantities for other periods in the fiscal year.
11	Prior Year Project-to-Date Quantity	20 numeric	Optional The total statistical quantity charged to the specified statistical balance key through the end of the previous fiscal year. Enter this statistical quantity only if you enter Yes for the Initial Load option.
12-71	Project Period Quantity 1-60	20 numeric	Optional For the specified statistical balance key, this is the statistical quantity that you add or replace for a specific period. Each Project Period Quantity field corresponds to a period on the project entity calendar. You can enter quantities only for periods that are valid for the calendar. For example, if the project entity uses a calendar with 12 defined periods, you cannot enter a quantity in the Project Period Quantity 13 field. Adjustment periods follow accounting periods. Therefore, if the project entity calendar uses 12 accounting periods and 2 adjustment periods, the adjustment periods are 13 and 14. If you enter a year-to-date quantity and project period quantities, the sum of the project quantities must equal the year-to-date quantity. If you enter only the project quantities, the Projects Balance Load process totals them to calculate the year-to-date quantity.

Field	Name	Length	Description
72	Initial Load	1 alphabetic	Optional An option that indicates whether you enter the prior year project-to-date quantity. Usually, you enter an initial load transaction to load balances for a project that does not currently have balance information in Projects, for example, when you convert data from a formerly used project management system to Projects. Values are: N - No (default). Y - Yes. Enter this value if the Prior Year Project-to-Date Quantity is entered.

13 Purchasing

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Types of Scheduled Processing

You can schedule several SmartStream® Purchasing jobs. Although the processes are different, you perform similar steps to initiate them. The types of Purchasing scheduled processes are

- Requisition
- Purchase Order

- Requisition to Purchase Order
- Purchase Order Send
  - Selecting purchase orders and releases
  - Purchase order update and extract
  - Producing ouput for purchase orders
- Producing Purchase Order Documents
- Archive/Purge.

Requisition Processing

Purchasing uses three scheduled processes to load requisitions:

Bulk Copy

To process the different types of requisition transactions, copy the transactions from an external business source to database management system (DBMS) tables. You can use one of the following methods to perform this task:

- Copy the transactions to the DBMS table in bulk. Use Job Scheduler to schedule this process. For information, see Understanding the Job Scheduler.
- Write the transactions directly to the DBMS table. Do not use bulk copy for this process.

Requisition Load

Run the program to read the requisition transactions written to the DBMS tables and load them into product-specific tables in the database. The program performs all validations associated with each transaction.

Reset Logical Locks for Requisition Load

Run the program to reset logical locks for Requisition Load when you receive a return code of 3 after scheduled requisition processing. This program resets the locks on the requisition server process table.

Stages of Requisition Scheduled Load Processing

Scheduled requisition load processing has three stages:

- Initial setup
- Load requisitions
- Reset logical locks

This section gives a brief description of each stage. The subsequent sections provide detailed information about individual steps within these stages.

Initial Setup

Complete the following tasks before scheduling requisition load processing:

- Complete the parameters for copying a text file to the DBMS table. Use the Bulk Copy window to complete this task. For information, see Writing Requisition Transactions to DBMS Tables.
- Complete the parameters to schedule the jobs for bulk copy and scheduled requisition processing. Use the Job Scheduler window to perform this task. For information, see Job Scheduler Parameters for Requisitions.
- Grant dbo authority for the req_trans table to users who will be running Bulk Copy for scheduled requisition transactions.
- Format your requisition data to conform to the layout of the req_trans table.

Requisition Load

Follow this process to schedule processing for requisition transactions and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Bulk copy transactions into the req_trans table.	Job Scheduler window
2	Load and validate all the scheduled transactions using the Requisition Load transaction process.	Job Scheduler window
3	Review return code status.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through To Do messages and SmartStream Mail (SmartStream Mail gateway)
5	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	Requisition Transaction table Requisition Transaction Correction window

Requisition Load Process Summary

Summary information for the Requisition Load Process is mailed via MAPI Mail. The summary information contains totals for the transactions processed.

Reset Logical Locks for Requisition Load

Follow this process to schedule processing to reset logical locks if the scheduled requisition load processing returns a return code of 3 and if a record is inserted onto the req_server_process table.

Stage	Task	Action or Activity
1	Reset logical locks in the req_server_process table.	Job Scheduler window
2	Review messages that result from the poll process.	Scheduled Log window
3	Review messages that result from program processing.	SmartStream Mail

Writing Requisition Transactions to DBMS Tables

You can write requisition and purchase order transactions to the DBMS tables directly, or you can use the Bulk Copy process. It is not necessary to use Job Scheduler to write transactions to DBMS tables if you write transactions directly. This section includes information about both methods.

Writing Requisition Transactions Using the Bulk Copy Program

The Bulk Copy method of writing transactions to the DBMS tables consists of the following stages:

Stage	Task	Action or Activity
1	Enter the scheduled transaction parameters for bulk copying.	Bulk Copy Parameters window
2	Copy all transactions using the Bulk Copy process.	Job Scheduler window

You can use the Bulk Copy process to copy transactions to a transaction table before processing them. If a transaction does not process successfully, Purchasing sends mail to notify you of any errors encountered during the Bulk Copy process.

Writing Transactions Directly

If you generate transactions using another product, such as an in-house product, add transactions directly to DBMS tables.

Procedure

Follow this procedure to directly update the Requisition transaction table (req_trans):

Step	Action
1	Run or perform the contents of the stored procedure msp_upd_rqbt_before_bulkcopy.
2	Update the Requisition transaction table using your own method.
3	Run or perform the contents of the stored procedure msp_upd_rqbt_after_bulkcopy.

Note: You can perform the contents of the stored procedure instead of running it.

Job Scheduler Parameters for Requisitions

For information about Job Scheduler, see Understanding the Job Scheduler.

Values for Parameters

Enter the following values for the Program Name and Program Parameters fields when scheduling the following programs:

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe	User-defined Bulk Copy Parameter Key established on the Bulk Copy window.
Requisition Load	**Windows:** mrqc0200.exe **UNIX**: mrqc0200	Site: Requisition Load uses site to determine which transactions to process. If a single site is entered, Requisition Load processes requisition transactions for that site only. If * is entered for site, Requisition Load processes transactions for all sites on the req_trans table. Delete Unprocessed Transactions: Y - The program will delete previously unprocessed transactions from the transaction table. N - The program will not delete previously unprocessed transactions from the transaction table. N is the default. Through Date: If Delete Unprocessed Transactions is Y, Purchasing compares the through date to the system date on an unprocessed transaction and deletes the transaction if the system date is earlier than the through date. If the Through Date is invalid, the requisition load program stops. Save as Incomplete: Y - Purchasing saves all requisitions added through the Requisition Load scheduled process with a status of Incomplete, even if there are no data errors. N - Purchasing saves requisitions added through the Requisition Load scheduled process with a status of Incomplete only if there data errors; otherwise, Purchasing saves the requisitions with a status of Open:Approved or Open:Pending Approval. The default is N. If you enter anything other than Y or N, the default is N. Save Uncataloged Vendor Items and Description-only Items as Incomplete: Y - Purchasing saves all requisitions with uncataloged vendor

Program	Program Name	Program Parameters
		items and description-only items added through the Requisition Load scheduled process with a status of Incomplete, even if there are no data errors. N - Purchasing saves requisitions with uncataloged vendor items and description-only items added through the Requisition Load scheduled process with a status of Incomplete only if there data errors; otherwise, Purchasing saves the requisitions with a status of Open:Approved or Open:Pending Approval. The default is N. If you enter anything other than Y or N, the default is N.
Reset Logical Locks for Requisition Load	**Windows:** mrqc0300.exe **UNIX:** mrqc0300	Site: Must match the site in the req_server_process table.

Reviewing the Status of the Job

You can determine the status of the job from the messages that are generated during processing.

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps. It also indicates the job's final result (ended successfully, ended with errors, terminated before completion). You can see any message using the Scheduler Log activity.

Return Codes

The return codes displayed on the Scheduler Log window refer to other more detailed messages. The following table lists the possible return codes and the type of message being referred to.

Return Code	Meaning	Type of Message
1 - 3	An error in Job Scheduler parameters or another user is running the job at the same site or all sites	Purchase order processing
4 - 5	A server processing problem	Server processing

Requisition Messages

Error messages generated by the Requisition Load scheduled process are written to the req_trans_message table.

Review the Requisition Load transaction errors using one of the following windows:

- Requisition
- Requisition Transaction Correction

What Happens During Requisition Processing?

Bulk Copy Process

The bulk copy process writes transactions from a file to the transaction tables.

The bulk copy process writes...	To this table...
Requisition transactions	req_trans.

Because the user identifier of the person running bulk copy must have access to the database referenced in the bulk copy parameters, it is recommended that the SmartStream user identifier entered on the Bulk Copy Parameters window be DBS.

The security profile referenced on the Job Scheduler window for Bulk Copy must have the DBS login and password.

Requisition Load Process (MRQC0200)

Running requisition scheduled processing writes the requisition load transactions from the DBMS req_trans table to the requisition tables. You can run the job on the UNIX server or on your workstation.

When checking security, Purchasing uses the user identifier on the transaction. If any of the transactions have errors, Purchasing sends a To Do message to the user on the transaction.

The following table shows the stages of the Requisition Load process:

Stage	Description
1	The program reads all requisition transactions and validates the information.
2	If a transaction passes all edits, Purchasing adds it to the requisition tables.
3	If a noncritical error occurs, all valid information is written to the requisition tables. Requisition transactions are added with a status of Incomplete. A workflow message will prompt you to correct the data.
4	If a critical error occurs, the transaction remains on the transaction table. These transactions are corrected through the Requisition Transaction Correction window. A workflow message prompts you to correct the transaction.

Stage	Description
5	If a transaction error occurs, the transaction remains on the transaction table and must be corrected using a tool or utility outside of SmartStream. Types of Transaction errors ▪ The transaction identifier is invalid ▪ A line transaction has no header transaction

Class Edits

When this process reads the transactions, it performs class edits to verify that

- All numeric fields contain numeric data
- The transaction type is a valid transaction type
- All date fields contain valid dates based on the server date format.

Reset Logical Lock for Requisition Load Process (MRQC0300)

The Requisition Load program (MRQC0200) updates the req_server_process table with a row that is used to logically lock the DBSreqm database for the specified site.

Although Purchasing allows many concurrent processes, it starts the Logical Lock Reset program for the Requisition Load process to prevent two Requisition Load processes from running at the same time for the same site.

The logical lock reset program (MRQC0300) deletes the row in the req_server process table to remove the logical lock.

Requisition Transaction Layouts

Requisition scheduled processing uses text files to hold information for scheduled processing transactions.

Use the transaction layouts to map the transactions into a text file in the SmartStream format.

How Transactions Are Added

The text files hold a series of values (fields), separated by a tab or a comma. Enter the appropriate value for each field, followed by the delimiter. If you choose to omit an optional field, be sure to enter the space and delimiter before making the entry for the next field.

Purchasing has three requisition transactions. The transaction layouts contain a set number of fields. An individual transaction may not use all the fields. Unused fields have a space as the value.

Entering Field Information

Use the tables in this section to map the incoming data from the requisitions to the text files. The tables contain the order of fields for the transactions and the format or actual codes for each field.

Delimiters

Separate each field in a transaction layout with the column delimiter established in the bulk copy parameters. If you leave a field blank, be sure to enter a space and the delimiter to hold its place.

Alphanumeric Fields

Alphanumeric fields can contain alphabetic letters, numbers, or a combination of both.

Numeric Fields

Numeric fields can contain only numbers.

Amount Fields

Follow these guidelines when entering amounts for money:

- Enter the number with or without a decimal point. If you do not enter a decimal point, a whole number is assumed.
- Enter up to six decimal places.
- Thousand separators are not required.

Date Fields

You can enter dates in two formats: yyyymmdd or the DBMS default date format. DBMS date formats vary; for example, in the United States a typical date format is mm/dd/yyyy; where as, in Europe the dd/mm/yyyy format is more common. If you do not know the DBMS default date format, contact your SmartStream system administrator.

Follow these guidelines when entering dates in the DBMS default date format:

- Use a separator between month, day, and year.

- Enter month and day with or without leading zeros. For example, enter March as 3 or 03.
- Enter the year with or without the century. When you enter only the last two digits of the year, the Purchase Order Load scheduled process
  - Uses the twenty-first century (2000s) if you enter 01 through 49
  - Uses the twentieth century (1900s) if you enter 50 through 99.

Note: To override these defaults, enter all four digits for the year.

Requisition Header Transaction

Use this transaction to enter information for the requisition header for regular requisitions and replenishment requisitions. Enter one transaction per requisition.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always REQM.
2	Site	4 alphanumeric	Required User-defined identifier for the requisition site.
3	Requisition ID	12 alphanumeric	Required User-defined identifier for a requisition.
4	Requester	30 alphanumeric	Required User-defined identifier for the requester. The default value is the user ID in the security profile if it is a valid requester.
5	Date Needed	10 Date	Required Date the requester wants delivery of the items on the requisition.
6	Vendor	10 alphanumeric	Optional User-defined identifier for a vendor.
7	Vendor Location	3 alphanumeric	Required if you enter a vendor and that vendor has location codes defined. User-defined identifier for a vendor location.
8	Ship-To Code	8 alphanumeric	Required if no default value is defined. User-defined identifier for the address to where you want the items on the requisition shipped. For default information, see Ship-To (Requisition). You can override the default on a regular requisition.

Field	Name	Length	Description
9	Deliver-To Code	8 alphanumeric	Optional User-defined identifier that specifies where to distribute items after you receive them. For default information, see Deliver-To (Requisition). You can override the default on a regular requisition.
10	Ship-Via Code	8 alphanumeric	Optional User-defined identifier for the shipping method the vendor uses.
11	Reference Text	10 alphanumeric	Optional User-defined information used to associate related information with the requisition.
12	Description	80 alphanumeric	Optional Description of the requisition form or the requisition.
13	Project Entity ID	5 alphanumeric	Optional The project entity associated with the requisition.
14	Requisition Type	1 numeric	Required for replenishment requisitions. Blank for a regular requisition. For replenishment requisitions, enter 5.
15	Stockroom	10 alphanumeric	Required for replenishment requisitions. The stockroom to replenish. Available only for replenishment requisitions.

Requisition Line Transaction

Use this transaction to enter information for the requisition line for regular requisitions and replenishment requisitions. Enter one transaction per requisition line.

This transaction is optional.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always REQL.
2	Site	4 alphanumeric	Required User-defined identifier for the requisition site.
3	Requisition ID	12 alphanumeric	Required User-defined identifier for the requisition.
4	Line Number	5 numeric	Required Number for the requisition line.

Field	Name	Length	Description
5	Date Needed	10 date	Date the requester wants delivery of the item on the requisition line. The default comes from the requisition header. You can override the default.
6	Vendor	10 alphanumeric	Required for vendor items. User-defined identifier for a vendor. For default information, see Vendor and Location. You can override the default.
7	Vendor Location	3 alphanumeric	Required for vendors that have locations defined. User-defined identifier for a vendor location. For default information, see Vendor and Location. You can override the default.
8	Ship-To Code	8 alphanumeric	User-defined identifier for the address to where you want the item on the requisition line shipped. The default comes from the requisition header. You can override the default for a regular requisition.
9	Deliver-To Code	8 alphanumeric	User-defined identifier that specifies where to distribute items after you receive them. The default comes from the requisition header. You can override the default for a regular requisition.
10	Item	26 alphanumeric	Required for a regular requisition unless you enter a vender item or a description-only item. Required for a replenishment requisition. User-defined identifier for specific goods or a service. For default information, see Item.
11	Description	35 alphanumeric	Required for purchase requests on a regular requisition if no default value is defined. Description of an item, vendor item, or description-only item. For default information, see Description.
12	Vendor Item	35 alphanumeric	Required for purchase requests on a regular requisition unless you enter an item or a description-only item. User-defined identifier for a vendor item. For default information, see Vendor Item.

Field	Name	Length	Description
13	Quantity	15 numeric	Required The number of units of the item on the requisition line that you want to order. The default is 0.00. For a stockroom request, Purchasing converts the requested quantity to a new quantity, based on the UOM of the issuing stockroom item or site item, if different. For a transfer, Purchasing also converts the quantity to a new quantity, based on the UOM of the receiving stockroom item, if different. This converted quantity appears on the scheduled receipt so the item can be received in the receiving stockroom's UOM.
14	Unit of Measure	4 alphanumeric	Required if no default value is defined. The UOM used for one unit the item. For default information, see UOM. For a stockroom request, Purchasing converts the UOM to the UOM of the issuing stockroom item or site item, if different. For a transfer, Purchasing also converts the UOM to the UOM of the receiving stockroom, if different. This converted quantity appears on the scheduled receipt so the item can be received in the receiving stockroom's UOM. If the UOM is converted, the quantity is also converted to the equivalent quantity in the new UOM.
15	Unit Price	15 alphanumeric	Required if no default value is defined. (Can be 0.) The price for one unit of an item. For default information, see Unit Price.
16	Delivery Instructions	25 alphanumeric	Optional Special instructions for delivering the item on the requisition line.
17	Purchase Site	4 alphanumeric	A value will always default for purchase requests. Blank for stockroom requests. Site that buys the item on the requisition line. For default information, see Purchase Site. You can override the default in some cases.

Field	Name	Length	Description
18	Buyer, Buyer Workgroup	30 alphanumeric	A value will always default for purchase requests. Blank for stockroom requests. The buyer responsible for purchasing the item on the requisition line or the buyer workgroup assigned to resolve the exception when no buyer is entered or found. For default information, see Buyer or Buyer Workgroup. You can override the default.
19	Stockroom	10 alphanumeric	For use in a future release.
20	Issue Site	4 alphanumeric	Required for stockroom requests if no default value is defined. Blank for purchase requests. Site the item is to be issued or transferred from. For default information, see Issue Site. Available only if SmartStream Supplies Management is installed.
21	Issue Stockroom	10 alphanumeric	Required for stockroom requests if no default value is defined. Blank for purchase requests. Stockroom the item is to be issued or transferred from. For default information, see Issue Stockroom. Available only if Supplies Management is installed.
22	Project ID	20 alphanumeric	Optional The project associated with the requisition.
23	Component ID	20 alphanumeric	Optional The project component associated with the requisition.
24	Cost Element ID	10 alphanumeric	Optional The project cost element associated with the requisition.
25	Ledger Entity	5 alphanumeric	Optional The default comes from Site Commodity, Vendor, Requester, Requisition Entity, and Site. Required if elements are entered so the Requisition Load process can validate each element. If any elements are entered, all components of the distribution must be entered.
26 - 37	Key 1 - Key 12	30 alphanumeric	Optional

Field	Name	Length	Description
38	Funds Control Effective Date	10 date	Optional The budget year and period when funds for the accounting distribution must be in the funds control account. The default value is determined by SmartStream Funds Control policy, where it can be set to be either the document entry date or the date the goods or services are needed. Available only if Funds Control is installed.

Requisition Comments

Use this transaction to enter comments for a regular requisition or replenishment requisition.

This transaction is optional.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always REQC.
2	Site	4 alphanumeric	Required Identifier for the purchasing site.
3	Requisition ID	12 alphanumeric	Required User-defined identifier for a requisition.
4	Line Number	5 numeric	Conditional. If you leave the line number blank or enter an invalid line number, the comments are added to the requisition header.
5	Comment Type	1 alphanumeric	Optional A - All D - Display only E - External I - Internal Defaults to A if invalid.
6	Comment Text	255 alphanumeric	Optional

Purchase Order Processing

Purchasing uses three scheduled processes for purchase orders.

Bulk Copy

To process the different types of purchase order transactions, copy the transactions from an external business source to DBMS tables. You can use one of the following methods to perform this task:

- Copy the transactions to the DBMS table in bulk
- Write the transactions directly to the DBMS table

If you are using the bulk copy method, you can schedule this process using Job Scheduler. For more information, see Understanding the Job Scheduler.

If you are writing the transactions directly to the DBMS table, you do not need to process using Job Scheduler.

Purchase Order Load

Run the program to read the purchase order transactions written to the DBMS tables and load them into product-specific tables in the database. The program performs all validations associated with each transaction.

Reset Logical Locks for Purchase Order Load

Run the program to reset logical locks for Purchase Order Load when you do not receive a return code of 0 after scheduled purchase order processing. This program resets the locks on the purchase order server process table.

Stages of Purchase Order Scheduled Load Processing

Scheduled purchase order load processing is made up of three stages:

- Initial setup
- Load purchase orders
- Reset logical locks

This section gives a brief description of each stage. The subsequent sections provide detailed information about individual steps within these stages.

Initial Setup

Complete the following tasks before scheduling purchase order load processing:

- Complete the parameters for copying a file to the DBMS table. Use the Bulk Copy Parameters window to complete this task. For information, see Writing Purchase Order Transactions to DBMS Tables.
- Complete the parameters to schedule the jobs for bulk copy and scheduled purchase order processing. Use the Job Scheduler window to perform this task. For information, see Job Scheduler Parameters for Purchase Orders.
- Grant dbo authority for the purchase_order_trans table to users who will be running Bulk Copy for scheduled purchase order transactions.
- Format your purchase order data to conform to the layout of the purchase_order_trans table.

Purchase Order Load

Follow this process to schedule processing for purchase order transactions and to determine if the job completed successfully:

Stage	Task	Action or Activity
1	Bulk copy transactions into the purchase_order_trans table.	Job Scheduler window
2	Load and validate all the scheduled transactions using the Purchase Order Load transaction process.	Job Scheduler window
3	Review messages that result from the poll process.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through To Do messages and SmartStream Mail (SmartStream Mail gateway)

Stage	Task	Action or Activity
5	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	Purchase Order Transaction table Purchase Order Transaction Correction window Purchase Order window

Reset Logical Locks for Purchase Order Load

Follow this process to schedule processing to reset logical locks if the scheduled purchase order load processing did not receive a return code of 0:

Stage	Task	Action or Activity
1	Reset logical locks in the purchase_order_server_process table.	Job Scheduler window
2	Review messages that result from the poll process.	Scheduled Log window
3	Review messages that result from program processing.	SmartStream Mail

Writing Purchase Order Transactions to DBMS Tables

You can write requisition and purchase order transactions to the DBMS tables directly, or you can use the Bulk Copy process. It is not necessary to use Job Scheduler to write transactions to DBMS tables if you write transactions directly. This section includes information about both methods.

Writing Purchase Order Transactions Using the Bulk Copy Program

The Bulk Copy method of writing transactions to the DBMS tables is made up of the following stages:

Stage	Task	Action or Activity
1	Enter the scheduled transaction parameters for bulk copying.	Bulk Copy Parameters window
2	Copy all transactions using the Bulk Copy process.	Job Scheduler window

You can use the Bulk Copy process to copy transactions to a transaction table before processing them. If a transaction does not process successfully, Purchasing sends mail to notify you of any errors encountered during the Bulk Copy process.

Writing Transactions Directly

If you generate transactions using another product, such as an in-house product, add transactions directly to DBMS tables.

Procedure

Follow this procedure to directly update the Purchase Order transaction table (purchase_order_trans):

Step	Action
1	Run or perform the contents of the stored procedure msp_upd_pobt_before_bulkcopy.
2	Update the Purchase Order transaction table using your own method.
3	Run or perform the contents of the stored procedure msp_upd_pobt_after_bulkcopy.

Note: You can perform the contents of the stored procedure instead of running it.

Job Scheduler Parameters for Purchase Orders

For more information about Job Scheduler, see Understanding the Job Scheduler.

Values for Parameters

Enter the following values for the Program Name and Program Parameters fields when scheduling the following programs:

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe	User-defined Bulk Copy Parameter Key established on the Bulk Copy window.
Purchase Order Load	**Windows:** mpoc0600.exe **UNIX:** mpoc0600	Site: Purchase Order Load uses site to determine which transactions to process. If a single site is entered, Purchase Order Load processes purchase order transactions for that site only. If * is entered for site, Purchase Order Load processes transactions for all sites on the purchase_order_trans table. Delete Unprocessed Transactions: Y - The program will delete previously unprocessed transactions from the transaction table. N or blank - The program will not delete previously unprocessed transactions from the transaction table. Through Date: If Delete Unprocessed Transactions is Y, program compares parameter Through Date to transaction date on unprocessed transaction and deletes transaction if transaction date is earlier than or the same as through date. If Through Date is invalid, Purchase Order Load program stops.
Reset Logical Locks for Purchase Orders	**Windows:** mpoc0620.exe **UNIX:** mpoc0620	Same as load parameter, either * or a site identifier.

Reviewing the Status of the Job

You can determine the status of the job from the messages that are generated during processing.

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps. It also indicates the job's final result (ended successfully, ended with errors, terminated before completion). You can see any message using the Scheduler Log activity.

Return Codes

The return codes displayed on the Scheduler Log window refer to other more detailed messages. The following table lists the possible return codes and the type of message being referred to.

Return Code	Meaning	Type of Message
1 - 3	An error in Job Scheduler parameters or another user is running the job at the same site or all sites	Purchase order processing
4 - 5	A server processing problem	Server processing

Purchase Order Messages

Application errors generated by Purchase Order Load scheduled processing are written to the purchase_order_trans_message table.

Review the Purchase Order Load transaction errors using one of the following windows:

- Purchase Order
- Purchase Order Transaction Correction

What Happens During Purchase Order Processing?

Bulk Copy Process

The bulk copy process writes transactions from a text file to the transaction tables.

The bulk copy process writes...	to this table...
Requisition transactions	req_trans
Purchase order transactions	purchase_order_trans

Because the user identifier of the person running bulk copy must have access to the database referenced on the bulk copy parameters, it is recommended that the SmartStream user identifier entered on the Bulk Copy Parameters window be DBS.

The security profile referenced on the Job Scheduler window for Bulk Copy must have the DBS login and password.

Purchase Order Load Process (MPOC0600)

Running scheduled purchase order processing applies the purchase order load transactions from the DBMS purchase_order_trans table to the purchase order tables. You can run the job on the UNIX server or on your workstation.

The following table shows the stages of the Purchase Order Load process:

Stage	Description
1	The program reads all purchase order transactions and validates the information.
2	If a transaction passes all edits, Purchasing adds it to the purchase order tables.
3	If a noncritical error occurs, all valid information is written to the purchase order tables. Purchase order transactions are added with a status of Incomplete. A workflow message prompts you to correct the data.
4	If a key or required field error occurs, the transaction remains on the transaction table. Correct these transactions through the Purchase Order Transaction Correction window. A workflow message prompts you to correct the transaction.

Stage	Description
5	Transactions remain on the transaction table if a transaction error occurs because ▪ The transaction identifier or action identifier is invalid ▪ A line transaction has no header transaction ▪ A line schedule transaction has no line transaction. Correct these errors using a tool or utility outside of SmartStream.

For the Purchase Order Load scheduled process, all valid transactions and all transactions with data errors are removed from the purchase_order_trans table during processing, and the transactions with errors remain in the table. When Job Scheduler restarts the Purchasing job, only the transactions remaining on the table are processed.

Class Edits

When this process reads the transactions, it performs class edits to verify that

- All numeric fields contain numeric data
- The transaction type and action identifier are valid
- All date fields contain valid dates based on the server date format.

Reset Logical Lock for Purchase Order Load Process (MPOC0620)

The Purchase Order Load program (MPOC0600) updates the purchase_order_server_process table with a row that is used to logically lock the DBSpuen database.

Although Purchasing allows many concurrent processes, Purchase Order Load updates the server process table to prevent two load processes from running at the same time for the same site.

If the load process ends abnormally, processing will not delete this row from the server process table. The Server process reset job will delete the row for the site.

The logical lock reset program (MPOC0620) deletes the row in the purchase_order_server process table to remove the logical lock.

Purchase Order Transaction Layouts

Purchase Order scheduled processing uses text files to hold information for scheduled processing transactions.

Use the transaction layouts to map the transactions into a text file in the SmartStream format.

How Transactions Are Added

The text files hold a series of values (fields), separated by a tab or a comma. Enter the appropriate value for each field, followed by the delimiter. If you choose to omit an optional field, be sure to enter the space and delimiter before making the entry for the next field.

Purchasing uses three purchase order transactions. The transaction layouts contain a set number of fields. An individual transaction may not use all the fields. Unused fields have a space as the value.

Entering Field Information

Use the tables in this section to map the incoming data from the purchase orders to the text files. The tables contain the order of fields for the transactions and the format or actual codes for each field.

Delimiters

Separate each field in a transaction layout with the column delimiter established in the bulk copy parameters. If you leave a field blank, be sure to enter a space and the delimiter to hold its place.

Alphanumeric Fields

Alphanumeric fields can contain alphabetic letters, numbers, or a combination of both.

Numeric Fields

Numeric fields can contain only numbers.

Amount Fields

Follow these guidelines when entering amounts for money:

- Enter the number with or without a decimal point. If you do not enter a decimal point, a whole number is assumed.
- Enter up to six decimal places.
- Thousand separators are not required.

Date Fields

You can enter dates in two formats: yyyymmdd or the DBMS default date format. DBMS date formats vary; for example, in the United States a typical date format is mm/dd/yyyy, but in Europe the dd/mm/yyyy format is more common. If you do not know the DBMS default date format, contact your SmartStream system administrator.

Follow these guidelines when entering dates in the DBMS default date format:

- Use a separator between month, day, and year.

- Enter month and day with or without leading zeros. For example, enter March as 3 or 03.
- Enter the year with or without the century. When you enter only the last two digits of the year, the Purchase Order Load scheduled process
- Uses the twenty-first century (2000s) if you enter 01 through 49
- Uses the twentieth century (1900s) if you enter 50 through 99.

Note: To override these defaults, enter all four digits for the year.

Addition Processing

The following information applies to purchase order addition processing:

- You can add header transactions alone.
- You can add line transactions alone. If there is an existing header with the same site and purchase order number as the line, the Purchase Order Load scheduled process adds the line transactions to the header.
- You can add line schedule transactions alone. If there is an existing line with the same site, purchase order number, and line number as the line schedule, the Purchase Order Load scheduled process adds the line schedule transaction to the line.
- You can add header transactions, line transactions, and line schedule transactions together.
- You can add a line transaction without a line schedule transaction. The Purchase Order Load schedule process adds the line schedule using information from the header and line.

Maintenance Processing

The following information applies to purchase order change transactions:

- You can enter change transactions only for line schedules with a status of Open, Sent, or Change Order.
- You can change only the promised date, promised quantity, promised unit of measure, promised unit price, and revised required date.
- You receive an error message stating the change did not occur if a change is invalid, and Purchasing retains the original value.

Purchase Order Header Transaction

Use this transaction to enter information for the purchase order header, one transaction per purchase order.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always POHR.
2	Action	1 alphanumeric	Required Valid value is 1. If not entered, the default is 1.
3	Site	4 alphanumeric	Required User-defined identifier for a purchase site.
4	Purchase Order Number	12 alphanumeric	Required
5	Buyer ID	30 alphanumeric	Required User-defined identifier for a buyer. The default is the User identifier of the person processing the job if that person is a valid buyer for the site.
6	Purchase Entity	5 alphanumeric	Required User-defined identifier for a purchase entity. The default is the buyer's default purchase entity.
7	Vendor	10 alphanumeric	Required User-defined identifier for a vendor.
8	Vendor Location	3 alphanumeric	Conditional Required if a location is defined for the vendor. User-defined identifier for a vendor location.
9	Ship-To Code	8 alphanumeric	Required User-defined identifier for the location where the item will be shipped. The default is from the purchase entity, if active.
10	Payable Entity	5 alphanumeric	Required User-defined identifier for the payable entity. The default is from the purchase entity, if active.
11	Currency Code	3 alphanumeric	Required User-defined identifier for the currency. If left blank, the default is from the vendor, payable entity, or enterprise.
12	Terms Code	17 alphanumeric	Required User-defined identifier for the payment terms. The default is from vendor purchasing information, if active.

Field	Name	Length	Description
13	Ship Via	8 alphanumeric	Required User-defined identifier for the shipping method. The default is from vendor purchasing information, if active.
14	Required Date	10 Date	Optional Must be a valid workday. This date becomes the default for the line schedule required date.
15	Blanket Order Number	12 alphanumeric	Not enterable in this release
16	FOB Point Code	2 alphanumeric	Required User-defined identifier for the free-on-board point. The default is from vendor purchasing information.
17	Freight Terms	8 alphanumeric	Required User-defined identifier for freight terms. The default is from vendor purchasing information.
18	Deliver-To Code	8 alphanumeric	Optional The default is from the requester or requisition entity, if active. User-defined identifier for the person the items will be delivered to.
19	Freight Amount	15 numeric	Optional
20	Requester	30 alphanumeric	Optional The default is the User identifier of the person who submitted the job if that person is a valid requester for the site. User-defined identifier for the requester.
21	Customer	17 alphanumeric	Optional
22	Matching Control	1 alphanumeric	Optional 1 - PO/Receipt/Invoice 2 - ERS The default is from vendor payables information. If the default is 1, you cannot change the value to 2.

Field	Name	Length	Description
23	Purchase Order Send Method	1 alphanumeric	Optional The default is from vendor location purchasing information. E - EDI F - Fax P - Printed purchase order
24	Suppress Purchase Order Send Indicator	1 alphanumeric	Optional Y - Suppress the production of paper copy, fax, or EDI transmission of the purchase order. N - Do not suppress the production of paper copy, fax, or EDI transmission of the purchase order. If left blank, the default is N.
25	Miscellaneous Charge Amount	15 numeric	Optional
26	Discount Percent	15 numeric	Optional
27	Original Purchase Order Indicator	1 alphanumeric	Optional Y - This is the original purchase order. N - This is not the original purchase order. If left blank, the default is Y.
28	Rate Type	1 alphanumeric	Not available in this release.
29	Rate of Exchange	15 numeric	Not available in this release.
30	Rate Date	10 date	Not available in this release.
31	Rate Entity	1 alphanumeric	Not available in this release.
32	Project Entity	5 alphanumeric	Optional. The project entity for the projects the purchase order commitment is applied to. A purchase order can have only one project entity associated with it. The project entity is not required on the purchase order, but you must enter it to activate the other project fields on the purchase order.
33	Project Rate Code	10 alphanumeric	Identifies the rate amount that will be applied to the project work breakdown structure. If Projects is installed, must be a valid project rate code for the project entity. If you enter a valid project rate code on the purchase order header, it becomes the default project rate code for all new line schedules that have a valid project ID.

Purchase Order Line Transaction

Use this transaction to enter information for the purchase order line, one transaction per purchase order line.

This transaction is optional.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always POLN.
2	Action	1 alphanumeric	1 - Add If left blank, the default is 1.
3	Site	4 alphanumeric	Required User-defined identifier for a purchase site.
4	Purchase Order Number	12 numeric	Required
5	Line Number	5 numeric	Required Leading zeros are not required.
6	Item	26 alphanumeric	Required if no value is entered for vendor item or description. The identifier for the goods or service being ordered.
7	Vendor Item	35 alphanumeric	Required if no value entered for item or description. The vendor's identifier for the goods or service being ordered.
8	Description	35 alphanumeric	Required if no value is entered for item or vendor item or if an uncataloged vendor item is entered. You can enter only a description **only** if the Allow Description-Only Items option for the purchase entity is Yes.
9	Required Date	10 date	Required if no line schedule transaction is present. The default comes from the purchase order header if a required date was entered there. The default value or entry value becomes the default value for the line schedule required date. Must be a valid workday.
10	Quantity	15 numeric	Required Must be greater than zero.

Field	Name	Length	Description
11	Unit of Measure	4 alphanumeric	Required for an uncataloged vendor item or description-only item. If a cataloged vendor item was entered on the purchase order line, the default unit of measure comes from the vendor item primary unit of measure. If an item was entered on the purchase order line, the default unit of measure comes from the site item's unit of measure.
12	Unit Price	15 numeric	Required for an item, uncataloged vendor item, or description-only item. Required if a vendor item is entered and there is no price for the cataloged vendor item.
13	Discount Percent	15 numeric	Optional The default comes from the purchase order header if a discount percent was entered there.
14	Service Indicator	1 alphanumeric	Optional The default comes from the item or vendor item. This field can be entered only if an uncataloged vendor item or description-only item is entered. The default is N if an uncataloged vendor item or description-only item is entered and a service indicator is not entered.
15	Send Item Comments	1 alphanumeric	Optional The default is Y if an item is on the line.
16	Trade In Amount	15 numeric	Optional
17	Manufacturer Item Number	35 alphanumeric	Optional The default is from the cataloged vendor item.
18	Manufacturer	16 alphanumeric	Optional The default is from the cataloged vendor item.
19	International Commodity	15 alphanumeric	Optional The default is from the item or vendor item.
20	Contract Number	30 alphanumeric	Optional
21	Net Mass	15 alphanumeric	Required if unit of mass is entered. The default is from the item or vendor item.
22	Unit of Mass	1 alphanumeric	Required if net mass is entered. 0 - kgs 1 - lbs

Field	Name	Length	Description
23	Expense Indicator	1 character	Optional Indicates whether this nonconsignment stocked item is to be treated as an expense item for this purchase. Valid values are Y and N. The default value is N. Available only if Supplies Management is installed.
24	Stockroom ID	10 alphanumeric	Required for stocked, expensed items. Also required for stocked items unless the Expense indicator is Y. The stockroom where the item should be delivered when received. Available only if Supplies Management is installed.
25	Project	20 alphanumeric	Optional. The project the purchase order line commitment is applied to. If Projects is installed, must be a valid project for the project entity. If entered on the purchase order line, it becomes a default for all new purchase order line schedules.
26	Component	20 alphanumeric	Optional. The project component the purchase order line commitment is applied to. If Projects is installed, must be a valid component for the project and must be a detail point of the project work breakdown structure. If entered on the purchase order line, it becomes a default for all new purchase order line schedules.
27	Cost Element	10 alphanumeric	Optional The cost element the purchase order line commitment is applied to. If Projects is installed, must be a valid cost element for the project and component. If entered on the purchase order line, it becomes the default for all new purchase order line schedules.

Field	Name	Length	Description
28	Funds Control Effective Date	10 date	Optional The budget year and period when funds for the accounting distribution must be in the funds control account. The default value is determined by SmartStream Funds Control policy, where it can be set to be either the document entry date or the date the goods or services are needed. Available only if Funds Control is installed.

Purchase Order Line Schedule Transaction

Use this transaction to enter information for the purchase order line schedule. There may be multiple purchase order line schedules for one purchase order line.

This transaction is optional.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required Value is always POLS.
2	Action	1 alphanumeric	1 - Add 2 - Maintenance If left blank, the default is 1.
3	Site	4 alphanumeric	Required User-defined identifier for a purchase site.
4	Purchase Order Number	12 alphanumeric	Required
5	Line Number	5 numeric	Required Leading zeros are not required.
6	Ship-To Site	4 alphanumeric	Required The default is from the purchase order header purchase site.
7	Ship-To Code	8 alphanumeric	Required If entered for a stocked item, this value must be the same as the stockroom ship-to code. If no stockroom is entered, the default comes from the purchase order header. If a stockroom is entered, the default comes from the stockroom.

Field	Name	Length	Description
8	Required Date	10 date	Required The default is from the purchase order line.
9	Quantity	20 numeric	Required Must be greater than zero.
10	Requester	30 alphanumeric	Required if no stockroom is on the purchase order line The default is from the purchase order header.
11	Deliver-To Code	8 alphanumeric	Optional The default is from the purchase order header. If the header has no value, the default is from the requester.
12	Promised Quantity	15 alphanumeric	Optional Required if Promised Unit of Measure is entered.
13	Promised Unit of Measure	4 alphanumeric	Optional Required if Promised Quantity is entered.
14	Promised Unit Price	15 numeric	Optional
15	Promised Date	10 date	Optional Must be a valid workday.
16	Nature of Transaction	2 alphanumeric	Optional The default is from vendor location purchasing information.
17	Country of Consignment	2 alphanumeric	Optional The default is from vendor location purchasing information.
18	Regime	2 alphanumeric	Optional The default is from vendor location purchasing information.
19	Mode of Transport	1 alphanumeric	Optional The default is from vendor location purchasing information.
20	Country of Origin	2 alphanumeric	Optional The default is from the vendor item.
21	Tax Rule 1	20 alphanumeric	Required if other tax 1 fields are entered. The default is from purchasing item tax information.

Field	Name	Length	Description
22	Tax Rate 1	5 alphanumeric	Optional The default is from purchasing item tax information. If the tax rule does not use the tax rate method of calculation, tax rate cannot be entered.
23	Tax Reclaimable 1	5 alphanumeric	Optional The default is from purchasing item tax information. If the tax rule does not use the tax rate method of calculation, tax reclaimable cannot be entered.
24	Entity Tax ID 1	20 alphanumeric	Optional The default is from the payable entity.
25	Entity Tax Exempt 1	20 alphanumeric	Optional The default is from the payable entity.
26	Tax Rule 2	20 alphanumeric	Required if other tax 2 fields are entered The default is from purchasing item tax information.
27	Tax Rate 2	5 alphanumeric	Optional The default is from purchasing item tax information. If the tax rule does not use the tax rate method of calculation, the tax rate cannot be entered.
28	Tax Reclaimable 2	5 alphanumeric	Optional The default is from purchasing item tax information. If the tax rule does not use the tax rate method of calculation, tax reclaimable cannot be entered.
29	Entity Tax ID 2	20 alphanumeric	Optional The default is from the payable entity
30	Entity Tax Exempt 2	20 alphanumeric	Optional The default is from the payable entity
31	Ledger Entity (Exp/AP Clearing)	5 alphanumeric	Conditional
32 - 43	Key 1 - Key 12	30 alphanumeric	Optional A component of your user-defined accounting key.
44	Ledger Entity (Purchase Price Variance)	5 alphanumeric	Required if accounting distribution entered.
45 - 56	Key 1 - Key 12	30 alphanumeric	Optional A component of your user-defined accounting key. It is associated with the accounting distribution for Purchase Price Variance.

Field	Name	Length	Description
57 - 69			Not used in this release.
70	Revised Required Date	10 date	Optional Can be entered only on a maintenance transaction.
71	Project	20 alphanumeric	Optional The project the purchase order line schedule commitment is applied to. If Projects is installed, must be a valid project for the project entity. The default is from the purchase order line.
72	Stockroom	10 alphanumeric	Required for stocked, expensed items. Required for stocked items if the Expense indicator is N. The stockroom to replenish. The default value comes from the PO line, if entered on the line.
73	Component	20 alphanumeric	Optional. Required on line schedule if project ID is entered for the line schedule. The project component the purchase order line schedule commitment is applied to. If Projects is installed, must be a valid component for the project and must be a detail point of the project work breakdown structure. The default is from the purchase order line.
74	Cost Element	10 alphanumeric	Required on line schedule if component is entered for the line schedule. The cost element the purchase order line schedule commitment is applied to. If Projects is installed, must be a valid cost element for the project and component. The default is from the purchase order line.
75	Project Rate Code	10 alphanumeric	Optional Identifies the rate amount that will be applied to the project work breakdown structure. If Projects is installed, must be a valid project rate code for the project entity. The default is from the purchase order header if the project key is valid.

Field	Name	Length	Description
76	Funds Control Effective Date	10 date	Optional The budget year and period when funds for the accounting distribution must be in the funds control account. The default value is determined by SmartStream Funds Control policy, where it can be set to be either the document entry date or the date the goods or services are needed. Available only if Funds Control is installed.

Requisition-to-Purchase-Order Scheduled Processing

The Requisition-to-Purchase-Order scheduled process attaches approved requisition lines to purchase orders and purchase order releases.

Requisition lines that have accounting distributions with funds control exceptions cannot be attached to a purchase order. You must first resolve the exceptions.

You can use this scheduled process or the Purchase Order window to generate purchase orders from requisitions.

Types of Requisitions

The Requisition-to-Purchase-Order scheduled process handles two types of requisitions:

- Regular requisitions added using the Requisition window or the Requisition Load scheduled process
- Replenishment requisitions added using the Replenishment Requisition window or the Replenishment and Requisition Load scheduled processes.

Finding a Match

When Purchasing processes requisition lines, it tries to attach them to New:Incomplete purchase orders and New:Incomplete purchase order releases. Purchasing compares the information on the requisition line with the information on the purchase order. If the information matches, Purchasing adds the information from the requisition line to the purchase order. If the information does not match, Purchasing generates a new purchase order or rejects the requisition line.

Purchase orders and purchase order lines with a status of New:Incomplete are the only ones you can select for combining.

Requisition lines with a type of purchase request and a status of Open:Approved or Assigned:Partial are the only ones that can be selected.

Projects

A requisition line without a project entity can be combined onto a purchase order with or without a project entity. However, if a requisition line contains project keys, it can only be combined onto a purchase order line schedule with the same project keys. If the project keys are different, then a new purchase order line is created.

Processing Results

After Purchasing processes a requisition line, it sends a message to your To Do List. The message tells you whether Purchasing added the requisition line to a purchase order or rejected it. It also notifies you of any errors that occurred during processing.

If you choose a message, Purchasing takes you to one of the following windows:

- The Purchase Order window, where you can correct any errors on the purchase order line
- The Requisition Line Exception window, where you can correct the requisition line and resubmit it for scheduled processing. You cannot change project information.

Processing Scheduled Requisition-to-Purchase-Order Transactions

Requisition-to-Purchase-Order scheduled processing involves processing requisition lines through Job Scheduler and attaching them to purchase order lines.

The following table describes the tasks Purchasing performs during the Requisition-to-Purchase-Order scheduled process:

Task	Description
1	Selects requisition lines based on the parameters you enter for Job Scheduler.
2	Qualifies the requisition lines for processing based on certain conditions. Begins processing those that qualify and skips those that do not.
3	Processes the requisition lines assigned to blanket orders and attaches the lines to New:Incomplete purchase order releases or generates new purchase order releases.
4	Processes the requisition lines not assigned to blanket orders and attaches the lines to New:Incomplete purchase order releases, New:Incomplete purchase orders, or generates new purchase order releases.
5	Groups the requisition lines for each purchase order line and determines the purchase order line price.
6	Converts the requisition line's quantity to a quantity equal to a valid unit of purchase (UOP).
7	Attaches the requisition lines to existing line schedules or adds new line schedules.
8	Updates the blanket order, purchase order line status, requisition status, and requisition line status.
9	Finds the default accounting distributions to use.
10	Determines the tax information.

Approval

You can establish approval workflow that starts the approval review. In the workflow, you identify conditions that require purchase order approval and assign a user, a list of users, or a workgroup to approve the purchase orders. The approvers are identified by an approval ID. When a purchase order meets the conditions for approval, the approvers receive workflow tasks to review the purchase order and approve or reject it.

Automatically Forward for Approval

For blanket orders, you can choose to have Purchasing automatically forward for approval any purchase order releases created through the Requisition-to-Purchase-Order scheduled process.

If your Auto Forward Releases for Approval option is no, Purchasing saves the purchase order as Incomplete. If the Auto Forward Releases for Approval option is yes, Purchasing checks to see if the purchase order meets the conditions for approval set up in workflow.

If the purchase order does not meet the conditions for approval, then approval is not required and no approval ID is assigned. Purchasing checks to see if the purchase order contains any project keys that require funds checking with errors. If the purchase order requires funds checking with errors, the purchase order cannot be sent until the project journal is posted.

If approval is not required and if funds checking is not required, Purchasing checks the purchase entity auto select to send option to determine whether it can automatically select to send the purchase order to the vendor.

If you chose the Auto Forward Releases for Approval option for the purchase entity, and if there is no hold on ordering from the vendor, Purchasing can automatically select to send to vendors any purchase orders that meet one of the following conditions:

- It does not require approval.
- It has been approved.
- It requires funds checking and has been posted by Projects.

If the purchase order meets the conditions for approval, it goes through the approval process. For more information, see Approving Purchase Orders.

Comments

If you chose the Requisition Header Comments Defaulting to PO and the Requisition Line Comments Defaulting to PO options for the purchase entity, Purchasing can automatically copy requisition header and line comments with a type of All or External to the corresponding purchase order header and lines for all purchase orders processed using the purchase entity.

Job Scheduler Parameters for Requisition-to-Purchase-Order

You can use Job Scheduler to run the Requisition-to-Purchase-Order scheduled process on a regular basis. Job Scheduler is part of SmartStream. You can use it to add, schedule, and submit jobs that run unattended. A job is composed of one or more steps that are processed as a unit. For more information, see Understanding the Job Scheduler.

Job Scheduler runs the Requisition-to-Purchase-Order scheduled process when you schedule it. It uses the parameters you enter to select requisition lines and attach them to purchase orders and purchase order releases.

Values for Parameters

Enter values for the following parameters when scheduling Requisition-to-Purchase-Order processing:

Parameter	Description
Requisition Site	The site of the requisition lines to be processed. Only one requisition site parameter is allowed.
Purchase Site	The purchase site or sites where the purchase order is created. You can choose one purchase site or use the asterisk (*) to denote all purchase sites.
Buyer Identifier	The buyer or buyers who will process the requisition lines. You can choose one buyer or use the asterisk (*) to denote all buyers.
Date Needed	The date needed on the requisition lines. Must be entered in the yyyy/mm/dd format. The buyer chooses a date that includes all requisition lines needed. To include all requisition lines, enter 9999/12/31 or any other future date.
Combine Stocked and Nonstocked Items on a Purchase Order	Y - Combine stocked and nonstocked items on the same purchase order or purchase order release. N or Blank - Do not combine stocked and nonstocked items on the same purchase order or purchase order release.

Running the Requisition-to-Purchase-Order Scheduled Process

After you set up Job Scheduler, you can process scheduled Requisition-to-Purchase-Order transactions to add requisition lines to purchase orders and releases.

Procedure

Follow this procedure to start the scheduled process:

Step	Action
1	In SmartStream, choose Job Scheduler from the Activity List. The Job Scheduler window appears.
2	Enter the name and job qualifier for the Requisition-to-Purchase-Order job.
3	Enter the distribution identifier or accept the default value. This is the user identifier to send the mail to.
4	Enter the identifier for the security profile or accept the default values.
5	Enter **01** as the step.
6	Enter the path of the program name. Program name: **mpob0020.exe**
7	Enter the parameters for the scheduled processing transaction. Leave a comma between parameters.
8	Enter the class. Usually your identifier.
9	Choose Save to save the entries for the Requisition-to-Purchase-Order scheduled transactions
10	Choose the Run Now action. A message appears telling you that the data will not be updated and the window will be cleared if you continue.
11	Choose Yes. While the jobs are running, a message box appears telling you which transactions are processing.
12	Exit Job Scheduler.
13	Access your To Do List to see any messages indicating that Requisition-to-Purchase-Order scheduled processing transactions were not successful.

What Happens During Requisition-to-Purchase-Order Processing?

Qualifying Requisition Lines

Purchasing uses the information in the following table to qualify each requisition line included in Requisition-to-Purchase-Order jobs added using Job Scheduler:

Field	Condition
Purchase Site	Must exist on the requisition line, and you must include it in the parameters you enter.
Buyer	Must exist on the requisition line, and you must include it in the parameters you enter.
Requisition Line Status	Must have a status of Open:Approved or Assigned:Partial.
Requisition Line Type	Must have a value of Purchase Request.
Item	Must appear on the requisition line if the line does not include a vendor item identifier. The item must have a status of Active.
Vendor Item	Must appear on the requisition line if the line does not include an item identifier.
Funds Exception	The accounting distributions cannot have funds control exceptions.

Common Qualifying Conditions

When Purchasing processes requisition lines, it applies the following same conditions to all vendors, blanket orders, and purchase orders.

Vendors

All vendors must have a status of

- Certified and
- Active or Privileged.

Status of Open

The following documents and their parts must have a status of Open:

- Blanket order
- Blanket order line

Status of New:Incomplete

The following documents and their parts must have a status of New:Incomplete:

- Purchase order

- Purchase order line
- Purchase order release
- Purchase order release line

Blanket Orders

To use a blanket order to process requisition lines, the blanket order must include the following information:

- Effective date that is earlier than or the same as the current date
- Expiration date that is later than or the same as the current date
- Blanket order status of Open
- The automatic release option set to Yes. If the automatic release option for the blanket order is set to No, Purchasing cannot use the blanket order to process requisition lines using the scheduled process.

Blanket Order Lines

To use a blanket order line to process requisition lines, the blanket order line must include the following information:

- Blanket order line status of Open
- The automatic release option set to Yes. If the automatic release option for the blanket order line is set to No, Purchasing cannot use the blanket order line to process requisition lines using the scheduled process.

Processing Requisition Lines

After Purchasing qualifies the requisition lines for processing, the way it processes each line depends on whether

- The requisition lines are assigned to blanket orders
- The requisition lines are for items not assigned to blanket orders
- The requisition lines are for vendor items not assigned to blanket orders.

Also, the scheduled process performs an additional task to attach multiple requisition lines to the same purchase order or purchase order release.

Assigned to Blanket Orders

When Purchasing uses blanket orders and blanket order lines to process requisition lines, it first tries to find a purchase order release generated from the information on a blanket order or blanket order line. If it finds a purchase order release, it looks for a purchase order line and adds the information from the requisition line to the purchase order line. If it finds more than one New:Incomplete purchase order release that matches, Purchasing rejects the requisition line.

If Purchasing cannot find a purchase order release, it tries to generate a new purchase order release from the information on a blanket order or blanket order line.

Not Assigned to Blanket Orders

When requisition lines are not already assigned to blanket orders or blanket order lines, the Requisition-to-Purchase-Order scheduled process tries to find matching blanket orders first. If it does not find matching blanket orders, it tries to add the requisition lines to New:Incomplete purchase orders.

With Items and Vendor Items

When Purchasing processes a requisition line that has both an item and a vendor item, it can use information from both the item and the vendor item.

Multiple Lines to Same Document

During processing, Purchasing can find multiple requisition lines to attach to the same purchase order or purchase order release. It combines the requisition lines to attach them to the purchase order or purchase order release.

Assigning Requisition Lines to Blanket Orders

Use the Requisition Line Exceptions window to assign requisition lines to blanket orders and blanket order lines.

Matching Purchase Order Releases

Purchasing uses the information in the following table to find matching purchase order releases for requisition lines assigned to blanket orders.

This information...	Must match the...
Purchase order's blanket order identifier	Requisition line's blanket order identifier.
Purchase order's buyer identifier	Requisition line's buyer identifier.

Matching Purchase Order Release Lines

Purchasing uses different information to match requisition lines and purchase order release lines for the different types of blanket orders.

Quantity Blanket Orders

The following table shows the information Purchasing uses to find matching purchase order release lines for requisition lines assigned to quantity blanket orders and blanket order lines.

This information...	Must match the...
Purchase order's blanket order identifier	Requisition line's blanket order identifier.
Purchase order line's blanket order line	Requisition line's blanket order line.

Amount and Date Blanket Orders

The following table shows the information Purchasing uses to find matching purchase order release lines for requisition lines assigned to amount or date blanket orders.

This information...	Must match the...
Purchase order's blanket order identifier	Requisition line's blanket order identifier.
Purchase order line's item identifier or vendor item identifier	Requisition line's item identifier or vendor item identifier.

Processing Requisition Lines Assigned to Blanket Orders

The following table shows how Purchasing processes requisition lines assigned to blanket orders. If it does not find a blanket order, Purchasing rejects the requisition line.

If Purchasing finds the blanket order and...	Then Purchasing...
▪ Finds a purchase order release ▪ Finds a purchase order release line	Adds the requisition line to the purchase order release line.
Does not find a purchase order release	▪ Generates a new purchase order release ▪ Adds a new purchase order release line.
▪ Finds a purchase order release ▪ Does not find a purchase order release line	Generates a new purchase order release line if a purchase order release was generated during the current job.
▪ Finds a purchase order release ▪ Does not find a purchase order release line	Generates a new purchase order release and a purchase order release line if a purchase release was not generated during the current job.

Processing Requisition Lines Assigned to Blanket Order Lines

The following table shows how Purchasing processes requisition lines assigned to blanket order lines. If it does not find the blanket order line, Purchasing rejects the requisition line.

If Purchasing finds the blanket order line and...	Then Purchasing...
▪ Finds a purchase order release ▪ Finds a purchase order release line	Adds the requisition line to the purchase order release line.
Does not find a purchase order release	▪ Generates a new purchase order release ▪ Adds a new purchase order release line.

If Purchasing finds the blanket order line and...	Then Purchasing...
▪ Finds a purchase order release ▪ Does not find a purchase order release line	Generates a new purchase order release line if the New:Incomplete purchase order release was generated during the current job.
▪ Finds a purchase order release ▪ Does not find a purchase order release line	Generates a new purchase order release if the purchase release was not generated during the current job.

Processing Requisition Lines for Items Not Assigned to Blanket Orders

This section describes how Purchasing processes requisition lines for items not assigned to blanket orders.

Matching Quantity Blanket Orders

Purchasing uses the information in the following table to identify matching quantity blanket orders and blanket order lines for requisition lines with items not assigned to blanket orders:

This information...	Must match the...
Blanket order's purchase site	Requisition line's purchase site.
Blanket order's buyer identifier	Requisition line's buyer identifier.
Blanket line's Item identifier	Requisition line's item identifier.

Matching Purchase Order Release Lines and Purchase Order Lines

Purchasing uses different information to match requisition lines to purchase order release lines and to purchase order lines for items not assigned to blanket orders.

Purchase Order Release Lines

The following table shows the information Purchasing uses to match purchase order release lines and requisition lines for items not assigned to blanket orders:

This identifier...	Must match the...
Purchase order's blanket order	Blanket order line's blanket order identifier.
Purchase order's buyer	Requisition line's buyer identifier.
Purchase order line's blanket order line	Blanket order line.

Purchase Order Lines

The following table shows the information Purchasing uses to identify matching purchase order lines for requisition lines for items not assigned to blanket orders:

This information...	Must match the...
Purchase order's site	Requisition line's purchase site.
Purchase order's buyer	Requisition line's buyer identifier.
Purchase order line's purchase order	Purchase order identifier
Purchase order line's item	Requisition line's item identifier.

Processing Requisition Lines

The following table shows how Purchasing processes requisition lines for items that are not assigned to blanket orders. When Purchasing uses blanket orders to process these requisition lines, it uses only quantity blanket orders. It does not use amount or date blanket orders.

If Purchasing...	And...	ThenPurchasing...
▪ Finds a quantity type blanket order ▪ Finds a blanket order line	▪ Finds a purchase order release ▪ Finds a purchase order release line	Adds the requisition line to the purchase order release line.
▪ Finds a quantity blanket order ▪ Finds a blanket order line	Does not find a purchase order release	▪ Generates a new purchase order release ▪ Adds a new purchase order release line.
Does not find a quantity blanket order	Finds a purchase order line	Adds the requisition line to the purchase order line.
Does not find a quantity blanket order	Does not find a purchase order line	Rejects the requisition line.

Processing Requisition Lines for Vendor Items Not Assigned to Blanket Orders

This section describes how Purchasing processes requisition lines for vendor items not assigned to blanket orders.

Matching Quantity Blanket Orders

Purchasing uses the information in the following table to identify quantity blanket orders and blanket order lines for requisition lines for vendor items not assigned to blanket orders.

This information...	Must match the...
Blanket order's site	Requisition line's purchase site.
Blanket order line's vendor item identifier	Requisition line's vendor item identifier.

Matching Purchase Order Release Lines and Purchase Order Lines

Purchasing uses different information to match requisition lines to purchase order release lines and to purchase order lines for vendor items not assigned to blanket orders.

Purchase Order Release Lines

Purchasing uses the information in the following table to match purchase order release lines and requisition lines for vendor items not assigned to blanket orders.

This information...	Must match the...
Blanket order's site	Requisition line's purchase site.
Purchase order's blanket order identifier	Blanket order line's blanket order identifier.
Purchase order's buyer identifier	Requisition line's buyer identifier.
Purchase order line's blanket order line	Blanket order line.

Purchase Order Lines

Purchasing uses the information in the following table to match purchase order lines and requisition lines for vendor items not assigned to blanket orders.

This information...	Must match the...
Purchase order's site	Requisition line's purchase site.
Purchase order's buyer identifier	Requisition line's buyer identifier.
Purchase order line's vendor item identifier	Requisition line's vendor item identifier.

Identifying a Purchase Order for the Vendor

If Purchasing cannot find a blanket order line or a purchase order line, it looks for a purchase order that matches the vendor information. If it finds one, it tries to generate a new purchase order line.

Processing Information

Purchasing uses the information in the following table to find the matching purchase order for the vendor:

This information...	Must match the...
Purchase order site	Requisition line's purchase site.
Purchase order buyer identifier	Requisition line's buyer identifier.
Purchase order vendor identifier	Requisition line's vendor identifier.
Purchase order's vendor location	Requisition line's vendor location.

Processing Requisition Lines

The following table shows how Purchasing processes requisition lines for vendor items that are not assigned to blanket orders:

If Purchasing...	And...	Then Purchasing...
▪ Finds a quantity blanket order ▪ Finds a blanket order line	▪ Finds a purchase order release ▪ Finds a purchase order release line	Adds the requisition line to the purchase order release line.
▪ Finds a quantity blanket order ▪ Finds a blanket order line	Does not find a purchase order release	▪ Generates a new purchase order release ▪ Adds a new purchase order release line.
Does not find a quantity blanket order	▪ Finds a purchase order ▪ Finds a purchase order line	Adds the requisition line to the purchase order line.
Does not find a quantity blanket order	▪ Finds a purchase order ▪ Does not find a purchase order line ▪ The Create PO Line option is set to Yes for the purchase entity	Generates a new purchase order line.
Does not find a quantity blanket order	▪ Finds a purchase order ▪ Does not find a purchase order line ▪ The Create PO Line option is set to NO for the purchase entity	Rejects the requisition line.
Does not find a quantity blanket order	Does not find a purchase order	Rejects the requisition line.

Multiple Requisition Lines for the Same Purchase Order or Release

After adding or rejecting each requisition in a scheduled job, Purchasing groups all requisition lines matched to the same purchase order or purchase order release line.

Completing the Requisition-to-Purchase-Order Scheduled Process

After Purchasing finds purchase order release lines or purchase order lines for the requisition lines, Purchasing performs the following tasks to complete the Requisition-to-Purchase-Order scheduled process:

Task	Description
1	Calculates the purchase order release line or purchase order line price.
2	Converts the requisition line quantities to a quantity equal to a valid unit of purchase (UOP). If Purchasing cannot find a valid UOP quantity for the requisition lines, it rejects them.

Task	Description
3	Attaches the group of requisition lines to an existing purchase order line schedule or generates a new line schedule. If Purchasing cannot place the group of requisition lines onto a line schedule, it rejects them.
4	Updates the blanket orders.
5	Updates the status for the purchase order release line or purchase order line.
6	Finds the default accounting distributions to use.
7	Finds the default tax information to use.

Calculating Purchase Order Line Prices

After Purchasing attaches the requisition lines to a purchase order line, it determines the unit price for the purchase order line.

Existing Purchase Order Lines

Purchasing uses the unit price source indicator on the purchase order line to determine the price for existing purchase order lines. The following table shows how Purchasing determines the unit price when it adds the requisition lines to an existing purchase order line:

If the source indicator is...	Then...
E (estimated price)	Purchase order line price remains the same.
C (stored in the vendor item database)	Purchasing retrieves the price stored in the vendor item database. If it cannot find a price for the vendor item, it rejects the requisition lines.

New PO Line from Quantity Blanket Order Line

The following table shows how Purchasing determines the unit price when it generates a new purchase order line from a quantity blanket order line:

If the unit price on the blanket order line is...	Then Purchasing...
Greater than zero	Uses the blanket order line's price.
Blank	Retrieves the price stored in the vendor item database. If it cannot find a price for the vendor item, it rejects the requisition lines.

New PO Line from Amount or Date Blanket Order

Purchasing uses the unit price source indicator on the requisition line to determine the unit price. The following table shows how Purchasing determines the unit price when it generates a new purchase order line from an amount or date blanket order for the requisition lines:

If the source indicator is...	Then Purchasing...
M (manual price)	Uses the requisition line's price.
C (stored in the vendor item database)	Retrieves the price stored in the vendor item database. If it cannot find a price for the vendor item, it rejects the requisition lines.

New PO Line for Purchase Order for Vendor

Purchasing uses the unit price source indicator on the requisition line to determine the unit price. The following table shows how Purchasing determines the unit price when it generates a new purchase order line from a purchase order for a vendor:

If the source indicator is...	Then Purchasing...
C (stored in the vendor item database)	Retrieves the price stored in the vendor item database. If it cannot find a price for the vendor item, it rejects the requisition lines.

Converting Requisition Line Quantities

After Purchasing combines the requisition lines into groups, it converts the requisition line quantity using a valid UOP. If Purchasing cannot find a valid UOP for the requisition lines, it rejects them.

The following table shows how Purchasing converts quantities using a valid UOP:

If Purchasing...	Then it must convert the requisition line's quantity to this quantity...
Finds an existing purchase order line	Purchase order line's UOP.
Generates a new purchase order release for a quantity blanket order	Blanket order line's UOP.
Generates a new purchase order release for an amount or date blanket order	▪ Requisition line's primary vendor item's UOP or ▪ Requisition line's UOM (if you changed it on the Requisition Line Exception window).
Generates a new purchase order line for a purchase order for a vendor	Requisition line's vendor item's primary UOP.

Attaching Purchase Order Line Schedules

After Purchasing groups the requisition lines associated with a purchase order line, it attaches the requisition lines to an existing purchase order line schedule or generates a new line schedule. If it cannot attach the requisition lines on a line schedule, Purchasing rejects the group of requisitions lines.

Purchasing attaches requisition lines to purchase order line schedules based on your choices for the following options:

- Requisition Date Defaulting to PO option on the Purchase Entity window
- Requisition indicator on the Scheduled Lines view of the Purchase Order window

Requisition Lines to PO Line Schedules

The following table shows how Purchasing attaches the requisition lines to existing purchase order line schedules. If Purchasing does not find a line schedule that matches, it generates a new line schedule for the group of requisition lines.

If Purchasing finds a line schedule and the...	And...	Then Purchasing...
▪ Requisition Date Defaulting to PO option is selected ▪ Requisition Indicator is selected	▪ The line schedule required date is the same as the requisition line date needed ▪ The line schedule ship-to site is the same as the requisition line site ▪ The line schedule ship-to address is the same as the requisition line ship-to address ▪ The line schedule project keys are the same as the requisition line project keys	Adds the requisition lines to the line schedule.
▪ Requisition Date Defaulting to PO is selected ▪ Requisition Indicator is not selected	▪ The line schedule required date is the same as the requisition line date needed ▪ The line schedule ship-to site is the same as the requisition line site ▪ The line schedule ship-to address is the same as the requisition line ship-to address ▪ The line schedule project keys are the same as the requisition line project keys	Rejects the requisition lines because you cannot have identical line schedules attached to the same purchase order line.
▪ Requisition Date Defaulting to PO is selected ▪ Requisition Indicator is selected	▪ The line schedule required date is the same as the requisition line date needed ▪ The line schedule ship-to site is the same as the requisition line site ▪ The line schedule ship-to address is the same as the requisition line ship-to address ▪ The line schedule project keys are the same as the requisition line project keys	Adds the requisition lines to the line schedule.

If Purchasing finds a line schedule and the...	And...	Then Purchasing...
▪ Requisition Date Defaulting to PO is not selected ▪ Requisition Indicator is selected	▪ The line schedule required date is not the same as the requisition line date needed ▪ The multiple line schedules ship-to sites is the same as the requisition line site ▪ The multiple line schedules ship-to addresses is the same as the requisition line ship-to address ▪ The line schedule project keys are the same as the requisition line project keys	Adds the requisition lines to the line schedule with the earliest line schedule required date.

Updating Blanket Orders

After Purchasing converts the requisition line's UOM to a valid UOP, it updates the quantity and amount blanket orders it used to process the requisition lines.

Quantity Blanket Orders and Blanket Order Lines

Purchasing compares the converted quantity for the requisition lines to the remaining quantity for the blanket order line. The following table shows how Purchasing updates quantity blanket orders and blanket order lines:

If...	Then Purchasing...
Requisition lines' quantity is less than the blanket order line's remaining quantity	Subtracts the requisition lines' quantity from the blanket order line's remaining quantity and updates the blanket order line.
Requisition lines' quantity is greater than the remaining quantity for the blanket order line	Rejects the requisition lines.

Amount Blanket Orders

Purchasing calculates the converted quantity for the requisition lines to a monetary amount and compares it to the remaining amount for the blanket order. The following table shows how Purchasing updates amount blanket orders:

If...	Then Purchasing...
Requisition lines' amount is less than the blanket order's remaining amount	Subtracts the requisition lines' amount from the blanket order's remaining amount and updates the blanket order.
Requisition lines' amount is greater than the remaining amount for the blanket order	Rejects the requisition lines.

Placing Lines and Line Schedules On Hold

Purchasing places a line schedule on hold if the

- Quantity is fractional and the UOM is discrete
- Accounting distribution is invalid
- Project keys are invalid.

If even one line schedule is on hold, the line is on hold. If all lines are on hold, Purchasing ignores the Auto Forward Releases for Approval indicator and does not send the purchase order for approval.

Finding Default Accounting Distributions

When Purchasing processes requisition lines, it can add accounting distribution information for the following types of accounts:

- Expenditure - The cost incurred for purchasing nonstocked or stocked, expensed items. Also, the cost incurred for purchasing stocked items if the Expense indicator is Y (Yes).
- Purchase price variance - The difference between actual cost (invoice price) and the purchase order price. Purchase price variance applies only to stocked items.
- Accounts payable clearance - A temporary account that holds the estimated liability for a receipt until you receive the invoice for stocked items.

Using Default Accounting Distributions

Purchasing uses the default accounting distributions specified on the requisition line for the purchase order. If no default accounting distributions come from the requisition line, Purchasing uses the default accounting distributions designated in the following policies for expensed items:

- Site commodity
- Vendor
- Requester
- Requisition entity
- Site

Purchasing uses the default accounting distributions designated in the following policies for stocked items:

- Site commodity
- Stockroom
- Site

For more information about accounting distributions, see Requisition Accounting Distributions.

Required Accounting Key Elements

When you define a purchase entity, you can designate the accounting key elements that a buyer must include on a purchase order.

When Purchasing searches for accounting distributions, it checks the purchase entity to determine the required accounting key elements. Each required element must have a value. If no value exists, Purchasing saves the purchase order line schedule with a status of On Hold and sends a warning message to the buyer.

Validating Accounting Distributions

If you select the Validate Accounting Key in Ledger option in purchase entity policy, Purchasing tells Ledger to validate the accounting distributions for the purchase order using the chart of accounts in your ledger.

If Ledger finds an error when it validates the accounting distribution, Purchasing saves the purchase order line schedule with a status of On Hold and sends a warning message to the buyer.

When Ledger validates an accounting distribution, it requires a ledger entity. If it cannot find a ledger entity, the validation does not occur. Purchasing saves the purchase order line schedule with a status of On Hold and sends a warning message to the buyer.

Finding Default Tax Information

When Purchasing generates a new purchase order, it uses default tax information from the vendor and payable entity policies for the purchase order header. For each purchase order line schedule it generates, Purchasing uses default tax information from purchasing item policy.

If problems occur during processing, Purchasing sends a warning message to the buyer.

For more information about tax policy, see the *Tax Policy* guide.

Common Processing Errors and Warnings

Processing errors prevent Purchasing from attaching requisition lines to a purchase order line. Warnings do not prevent processing, but they do notify you about insufficient or incorrect information that may cause processing errors in the future.

Error and Warning Messages

After Purchasing processes a requisition line, it sends a message to your To Do List indicating whether Purchasing attached the requisition line to a purchase order line or rejected it.

Send Duplicate Message Option

Purchasing sends a To Do message for every requisition line it processes. You can clear the Send Duplicate Message option in SmartStream to see only one message for a group of rejected requisition lines. You can then use the To Do Detail view to review all the requisition lines in the group that Purchasing rejected.

Selecting To Do Messages

When you select a warning message from your To Do List, Purchasing displays the Purchase Order window where you can correct any problems with the purchase order line. When you select an error message, Purchasing displays the Requisition Line Exceptions window where you can correct the requisition line and resubmit it for scheduled processing.

Correcting Errors

Purchasing rejects a requisition line as soon as it encounters an error that prevents it from processing the line. Therefore, if you correct the error then resubmit the line, and Purchasing finds another error, it rejects the line again.

If Purchasing encounters errors, it rejects the lines and sends you a To Do task. If you choose the task, Purchasing accesses the Requisition Line Exceptions window and displays a message telling you what happened during processing.

The following table shows a workflow you can follow to correct requisition line errors:

Purchasing accesses...	If you cannot correct the error, you can go here...	If you cannot correct the error, you can go here...	If you cannot correct the error, then you can...
The Requisition Line Exceptions window	Purchasing activity windows	Purchase Order window	Cancel the requisition line.

Correcting Warnings

You can use the Purchase Order window to correct the problems that generate warnings during processing.

When you choose the warning from your To Do List, Purchasing accesses the Purchase Order window and displays a message that tells you what problem occurred during processing.

Warnings

Warnings do not prevent Purchasing from attaching requisition lines to purchase order lines, but they are problems that can cause errors in future processing. Purchasing updates the purchase order line with a status of On Hold for all warnings except for tax warnings.

Clearing Locked Table Problems

If your job did not end normally, the scheduled process can leave tables containing data out in the database. If you or another user later need to use the tables, Purchasing generates an error message telling you the tables are in use.

When to Clear Locked Tables

Run this procedure only if RTOPO returns a message that says the work tables must be reset.

Use the information in the following table to determine why the table is locked:

If...	And...	Then...
You check the buyer identifier and the date and time stamp	The identifier is not your buyer identifier or the time is not at or about the time your job ended abnormally	Another user is using the table. Do *not* use the procedure below.
You check the buyer identifier and the date and time stamp	The identifier is your buyer identifier and the time is at or about the time your job ended abnormally	Run the job to reset the tables.

Procedure

When you determine that no one else is using the work tables, you can follow this procedure to reset them:

Step	Action
1	In SmartStream, choose Job Scheduler from the Activity List. The Job Scheduler window appears.
2	Enter the name and job qualifier for the Requisition-to-Purchase-Order reset logical locks job.
3	Enter the distribution identifier or accept the default value. This is the user identifier to send the mail to.
4	Enter the identifier for the security profile or accept the default values.
5	Enter **01** as the step.
6	Enter the path of the program name. Program name: **mpob0040.exe**
7	Enter Site for the parameter.
8	Enter the class. Usually your identifier.

Step	Action
9	Choose Save to save the entries.
10	Choose the Run Now action. A message appears telling you that the data will not be updated and the window will be cleared if you continue.
11	Choose Yes. While the jobs are running, a message box appears telling you which transactions are processing.
12	Exit the Job Scheduler.

Setting Run-Time Parameters

The only parameter for this job is the requisition site.

Table Updates

When you run the job or when Job Scheduler runs the job to reset the work tables, the stored procedure msp_del_rpow_rpo deletes all the rows from these work tables:

- req_to_po_conv_work
- req_to_po_conv_chgstamps

Purchase Order Send Processing

When you finish adding a purchase order, you need to complete the processing needed to send it to a vendor. Purchase orders are processed using a scheduled process that you start after selecting the purchase orders to send on the Select Purchase Orders to Send window.

Purchase Order Send processing occurs in the stages shown in the following table:

Stage	Description
1	Select the purchase orders and releases to send.
2	Update and extract ▪ Purchase order tables ▪ Statistics ▪ Activity records for output ▪ Purchase order annals ▪ Scheduled receipt information.
3	Produce the purchase order in the desired format to send. Formats include ▪ Fax ▪ EDI ▪ Print.

Selecting Purchase Orders and Releases to Send

The following table describes the process for selecting purchase orders or releases to send:

Task	Description
1	Access the Select Purchase Orders to Send window.
2	Choose Select Purchase Orders.
3	Select one or more purchase orders from the list. Choose the Change Sending Method action, if you want to change the current sending method.
4	Choose Send to schedule the orders to send. This changes the status for the selected purchase orders to *outbound.*

If you chose the option for the purchase entity, and if there is no hold on ordering from the vendor, Purchasing can automatically select to send to vendors any purchase orders that meet the following conditions:

- If it requires approval, it has been approved.
- If it requires SmartStream Projects funds checking, it has been posted by Projects.
- If it requires SmartStream Funds Control funds checking, it has no funds control exceptions.

Resending Purchase Orders

Certain business needs can require you to resend a purchase order. If you try to send a purchase order that is currently outbound, Purchasing issues an error. You can, however, resend orders using the process outlined in the following table:

Task	Description
1	Access the Select Purchase Orders to Send window.
2	Choose Select Purchase Order History.
3	Select one or more purchase orders to send from the list.
4	Choose Resend.

Starting the Update and Extract Process

The following information explains how to start the update and extract process for the orders you selected to send.

Starting the Update Process

The purchase order update process updates the purchase order information and purchasing extract tables and creates statistics and the scheduled receipt used in the receiving process.

Follow these steps to initiate the update process:

Step	Action
1	In SmartStream, choose Job Scheduler from the Activity List. The Job Scheduler window appears.
2	Enter the name and job qualifier for the Purchase Order Update job.
3	Enter the distribution identifier or accept the default value. This is the user identifier to send the mail to.
4	Enter the identifier for the security profile or accept the default values.
5	Enter **01** as the step.
6	Enter the path of the program name. Program name: **mpoc0030**.
7	Enter the parameters for the scheduled processing transaction. Leave a space between each parameter.
8	Enter the class. Usually your identifier.
9	Choose Save to save the entries.
10	Choose the Run Now button.
11	Exit the Job Scheduler.
12	Access the Scheduler Log to view the status of the job when completed.

Setting Run-Time Parameters

Run-time parameters determine which orders the scheduled process selects from the purchase order extract table. Use the following table to determine how to set your run-time parameters:

Parameter	Valid values
Site	Enter any site for which you have security access. Only one is allowed.
Buyer identifier	Enter any valid buyer identifier or an asterisk (*) for all buyers for a site.

Parameter	Valid values
Purchase Order #	Enter a specific purchase order number or an asterisk (*) for all purchase orders for a site.
Change Order #	Enter a specific change order number or an asterisk for all change orders for a site.

Table Updates

When Job Scheduler runs the update job, Purchasing updates several values. The following table outlines the updates Purchasing makes:

Category	Change Made
▪ Status ▪ PO header ▪ PO line ▪ PO line schedule	Changed to *Sent.*
▪ Date ▪ PO header date ▪ PO line ▪ PO line schedule	Changed to current date.
PO statistics	Changed to reflect the purchase orders you send.
Items	Updates the vendor item tables if the purchase order line references an uncataloged vendor item and your purchase entity policy allows cataloging of vendor items.
Annals	Changed to reflect the purchase orders you send.
Scheduled receipts	Added to reflect what is expected to arrive (from the purchase order line schedule) and where it should arrive (purchase site). If a scheduled receipt exists, it is updated to reflect current changes to a purchase order line schedule or cancelled if the purchase order line schedule was cancelled. The scheduled receipt serves as receipt header for all receiving activity for a purchase order line schedule.
Requisitions	Updates the requisition line scheduled quantity and requisition line status.
Extract information	Updates the purchase order status and update indicator.

Starting the Extract Process

The purchase order extract process updates the purchasing extract tables with information used to create purchase order printed, faxed, or file output (used for EDI).

Follow these steps to initiate the extract process:

Step	Action
1	In SmartStream, choose Job Scheduler from the Activity List. The Job Scheduler window appears.
2	Enter the name and job qualifier for the Purchase Order Extract job.
3	Enter the distribution identifier or accept the default value. This is the user identifier to send the mail to.
4	Enter the identifier for the security profile or accept the default values.
5	Enter **01** as the step.
6	Enter the path of the program name. Program name: **mpoc0100**.
7	Enter the parameters for the scheduled processing transaction. Leave a space between each parameter.
8	Enter the class. Usually your identifier.
9	Choose Save to save the entries.
10	Choose the Run Now button.
11	Exit Job Scheduler.
12	Access the Scheduler Log to view the status of the job when completed.

Setting Run-Time Parameters

Enter run-time parameters to indicate

- The site for which you want to extract purchase order information
- Whether to include blanket order and vendor item comments in the output.

Enter values for the following parameters for purchase order send processing:

Parameter	Valid values
Site	Enter a valid site that you want to extract purchase order information for.
Vendor item comments	Y - Include vendor item comments in output. N - Do not include vendor item comments in output.

Parameter	Valid values
Blanket order comments	Y - Include blanket header and line comments in output. N - Do not include blanket header and line comments in output.

Table Updates

When the Job Scheduler runs the extract job, Purchasing updates the purchase order header extract table and inserts information on the purchase order line and line schedule extract tables.

Producing Output for Purchase Orders

After the update and extract stage is completed, you can produce the output for the selected purchase orders. You can produce output only for orders for which the update and extract stage is complete.

Before You Produce Output

Set up your reporting options before you produce purchase order output.

Faxing Purchase Orders

SmartStream gives you the capability of faxing purchase orders to your vendors using any fax software that complies with component object model (COM) standards.

Sample Code

Sample code for this function is delivered in two COM-compliant .dll files, which use the same COM format that the Captaris RightFax™ fax software uses:

- **72_mpofax.dll** (supports RightFax 7.2)
- **85_mpofax.dll** (supports RightFax 8.5)

These files reside in the file server's **utility\samples\faxintg** directory. How you use these files depends on the fax software you use.

RightFax Users

If you use RightFax, change the name of the sample .dll file that supports the release of RightFax you use to **MPOFAX.dll**.

Then, copy the sample .dll file that your renamed from the file server directory to your SmartStream client or Job Server workstations.

Users of Fax Software Other Than RightFax

If you use a COM-compliant software other than RightFax, change the name of one of the sample .dll files to **MPOFAX.dll**.

Next, tailor that MPOFAX.dll to support the format your fax software uses. For guidelines to help you tailor the MPOFAX.dll, see Fax COM DLL in the *Shared Components Technical Reference*.

Then, copy the sample .dll file that you renamed and tailored from the file server directory to your SmartStream client or Job Server workstations.

Prerequisites

Before faxing purchase orders, complete the following steps:

Step	Action
1	Install the fax **server** software.
2	Install the fax **client** software on the SmartStream client or Job Server workstation.
3	Verify that the following updates are made to the Purchasing .mdb (mpoact32.mdb) on the client or Job Server workstation. ▪ Open the .mdb in design mode ▪ Open the fax module ▪ Enter your fax server name in the **global const servername** variable: global const servername= 'fax server' ▪ Change the **NT Auth** variable to 'True' if NT Authentication is on. ▪ Save changes to the mpoact32.mdb. **Note**: The total number of workstations you plan to use to fax purchase orders helps you determine where to make changes to the .mdb. You can make changes to the .mdb **either** – On the file server so that the changed .mdb is copied to all client workstations and Job Server workstations. – On any workstation (client or Job Server, or both) that you plan to use to fax purchase orders. For more information, see the SmartStream *Installation Guide.*
4	Tailor the delivered MPOFAX.dll if you cannot use the sample code.
5	Copy the sample MPOFAX.dll or your tailored version to each SmartStream client or Job Server workstation you plan to use to produce faxes. **Note**: The MPOFAX.dll resides in the file server's **utility\samples\faxintg** directory.
6	Use **regsvr32.exe** to register the MPOFAX.dll on each SmartStream client or Job Server workstation where you copied it.
7	Copy the following files to the Job Server directory if you intend to start Access using the Job Scheduler: ▪ mpoact32.mdb ▪ prperror.mda ▪ cepfrmt.mda

Step	Action
8	Create a new default printer on the client or Job Server workstation to use to generate faxes. Be sure to enter ▪ **GEACFAX.PCL** as the name of the local printer port (this name is case sensitive; be sure to enter it in uppercase letters or it will not work) ▪ **HP** as the required manufacturer ▪ **HP Laserjet 5000 Series PCL** as the required model. ▪ **300x300** as the printer resolution. **Note**: Because this printer must be the default printer, you may want to consider setting up a dedicated workstation for faxing purchase orders.

Generating Purchase Order Output Using Job Scheduler

The following procedure lists the steps for generating your purchase order output using a scheduled process run from the Job Scheduler. For more information about parameters for this scheduled process, see Using Job Scheduler.

Step	Action
1	Open Job Scheduler and select the identifier for the scheduled process you need to run.
2	Define or verify the following parameters: ▪ User identifier and password **Note:** For faxing purchase orders, the user ID and password must be valid for the fax server. ▪ Language code (always **EN**) ▪ Dialect code (blank) ▪ Site ▪ Buyer identifier ▪ Purchase Order Number ▪ Change Order Number ▪ Filename ▪ Report Option ID

Step	Action
3	Choose Run Now or close the window and allow the job to run at its scheduled time. **Result**: The scheduled process generates the output specified in the Report Option ID field. ▪ Print - The order is printed using Microsoft Access. ▪ Fax - The order is sent to the port defined by the external software when it was installed. ▪ EDI - The order is generated to a flat file of all orders selected during the update process.

Scheduled Error Log

If the scheduled process you are using to generate purchase order output encounters errors, a scheduled error log is generated that lists the date and all error messages for that process.

If the scheduled process encounters errors while…	You must check…
Printing purchase orders or generating EDI transactions,	The printed error log to determine the cause of the error.
Faxing purchase orders,	The **mpofaxerr.txt** error log created in the Job Server directory where Access was started.

Possible Fax Errors

These are the errors you can encounter when you fax purchase orders:

- The MPOFAX.dll was not found on the Job Server workstation.
- The MPOFAX.dll was not registered properly on the Job Server workstation, either the .dll was not registered or the registry environment is corrupt.
- Fax client software was incorrectly installed on the Job Server workstation.
- The Fax server was not available or the user ID and password from the security profile were not valid for the fax server.
- Fax server software was unable to send or attach fax elements.

Generating Purchase Order Output Using the Purchasing Reports Activity

The following procedure lists the steps for starting Access from the Purchasing Reports activity to generate your purchase order output.

Step	Action
1	Open the Purchasing Reports activity from SmartStream Activity List. **Note**: If MPOFAX.dll resides on the client workstation, the purchasing .mdb attempts to reference the .dll. If it cannot reference the .dll, an error message is displayed. You must correctly register the .dll on your client and then run the Purchasing .mdb again.
2	Enter the following information on the Remote Processing Server Login window ▪ User ID and password **Note:** For faxing purchase orders, the user ID and password must be valid for the fax server. ▪ EN for language ▪ A valid value for site **Note**: Before selecting OK, you may enter a valid buyer ID, purchase order number, and change order number.
3	Select a predefined report option ID, or select a report to run using the Purchasing Reports - Report Parameters window.
4	Select the individual purchase order and change order number from the list or select the **Select All** option to have output generated for all purchase orders.
5	Select the Print, Fax, or EDI button depending on the report selected to run. **Note**: The purchase order is printed or faxed or an EDI transaction is generated. Also, if errors are encountered, error messages are displayed.

Possible Fax Errors

These are the errors you can encounter when you fax purchase orders using the Purchasing Reports activity. These errors must be resolved before you can complete the task.

- The MPOFAX.dll was not found in the SmartStream client directory.
- Fax client software was incorrectly installed on the SmartStream client workstation.
- Fax server was not available or the user ID and password passed from the Remote Processing Server Login window were not valid for the fax server.
- Fax server software was unable to send or attach fax elements.

Print or Fax Output

The following information prints on the order if you choose fax or print output:

Type of Information	Information printed on the purchase order
Purchase Order Header Information	Bill-to address Blanket order identifier Change order sequence number Currency Customer identifier Date needed FOB point Freight terms Order date Page number Purchase order Ship via Ship-to address Tax number Terms Vendor name and address
Purchase Order Line Information	Description Item number Line comment Line number Line standard phrases Line total Manufacturer Manufacturer item number Trade in amount Vendor item number
Line schedule information	Amount Date needed Schedule quantity Ship-to address Unit price UOP
Miscellaneous	Buyer information Purchase order header comments Purchase order header standard phrases Purchase order totals

EDI File Output

If you direct your output to an EDI file, Purchasing produces an EDI output text file that complies with the EDIFact 91.1 standard. Two components make up the first ten characters of this text file:

- First, a four-digit segment number unique to Purchasing

  For a list of the Purchasing segment numbers and their corresponding EDI segment identifiers, see Purchase Order (Message Code 105) and Change Order (Message Code 230) later in this section.

- Next, a six-digit sequence number, starting with 000001.

  When the EDI segment has multiple lines, the sequence number provides a unique identifier for each line.

The EDI file can contain the following segments with elements that have a limited set of possible code values:

EDI Segment ID	Element ID	Possible Value	Description
ALC	5463	C	Charge
		H	Line item allowance
		M	Line item charge
BGM	1001	105	Purchase order
		230	Change order
	1225	1	Cancel (order)
		4	Change (order)
		7	Duplicate (resend of order)
		9	Original (order)
CUX	6347	2	Reference currency
	6343	9	Order currency
DTM	2005	2	Required date
		4	Order date
		134	Exchange rate date
	2379	203	Date format ccyymmddhhmm
FTX	4451	PUR	Purchasing information
		CUR	Customer remarks
		LIN	Line item
IMD	7009	ZZZ	Mutually defined
LIN	1229	1	Added
		2	Cancelled
		3	Changed
	7143	SA	Supplier's article number
	5495	1	Subline information
LOC			

EDI Segment ID	Element ID	Possible Value	Description
MOA	5025	23	Charge amount
		64	Freight charge
		204	Allowance amount
NAD	3035	PD	Purchaser's department buyer
		PM	Party to receive paper memo of invoice
		BY	Buyer
		VN	Vendor
		ST	Ship-to address
		MF	Manufacturer of goods
PAT			
PCD	5245	12	Discount
PIA	4347	5	Product identification
	7143	MF	Manufacturer's article number
PRI	5125	INF	Information
	5387	CP	Current price
		DPR	Discount price
QTY	6063	129	Units per unit price
RFF	1153	ON	Order number (purchase)
		ADE	Account number (customer identifier)
		BO	Blanket order number
		LI	Line item reference number
		CT	Contract number
SCC	4017	4	Planning or forecast
TAX	5283	9	Tax-related information
TDT	8051	20	Main-carriage transport
TOD	4053	FOB	Free-on-board point
UNS		D	Detail section
		S	Summary section

The following tables list all EDI elements that you can generate in an EDI file using the mpoact32.mdb:

Purchase Order (Message Code 105)

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0001							
BGM	0	10	1001	3	A	BGM01	Document name coded
BGM	0	89	1225	3	A	BGM06	Message function
Segment 0002							
DTM	0	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	0	13	2380	35	A	DTM02	Date/Time/Period
DTM	0	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0005							
IMD	0	16	7009	7	A	IMD03	Item description ID
IMD	0	29	7008	35	A	IMD06	Item description
Segment 0006							
FTX	0	104451	3	A	FTX01	Subject qualifier	
Segment 0007							
RFF	1	10	1153	3	A	RFF01	Reference qualifier
RFF	1	13	1154	35	A	RFF02	Reference number
RFF	1	48	1156	6	A	RFF03	Line Number
Segment 0008							
DTM	1	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	1	13	2380	35	A	DTM02	Date/Time/Period
DTM	1	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0009							
NAD	2	10	3035	3	A	NAD01	Party qualifier
NAD	2	13	3039	17	A	NAD02	Party ID identification
NAD	2	36	3124	35	A	NAD05	Address line 1
NAD	2	71	3124	35	A	NAD06	Address line 2
NAD	2	106	3124	35	A	NAD07	Address line 3
NAD	2	141	3124	35	A	NAD08	Address line 4
NAD	2	176	3124	35	A	NAD09	Address line 5
NAD	2	211	3036	35	A	NAD10	Party name 1
NAD	2	246	3036	35	A	NAD11	Party name 2

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
NAD	2	281	3036	35	A	NAD12	Party name 3
NAD	2	316	3042	35	A	NAD13	Street and number/PO Box 1
NAD	2	351	3042	35	A	NAD14	Street and number/PO Box 2
NAD	2	386	3042	35	A	NAD15	Street and number/PO Box 3
NAD	2	421	3164	35	A	NAD16	City name
NAD	2	456	3229	9	A	NAD17	Country subentity identification
NAD	2	465	3251	9	A	NAD18	Post code
NAD	2	474	3207	3	A	NAD19	Country
Segment 0010							
LOC	2	10	3227	3	A	LOC01	Place/Location qualifier
LOC	2	44	3224	17	A	LOC05	Place/Location
Segment 0012							
RFF	3	10	1153	3	A	RFF01	Reference qualifier
RFF	3	13	1154	35	A	RFF02	Reference number
RFF	3	48	1156	6	A	RFF03	Line Number
Segment: 0013							
DTM	3	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	3	13	2380	35	A	DTM02	Date/Time/Period
DTM	3	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0015							
DTM	4	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	4	13	2380	35	A	DTM02	Date/Time/Period
DTM	4	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0018							
TAX	6	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	6	13	53446	20	A	TAX18	Party tax ID Number
Segment 0019							
MOA	6	10	5025	3	A	MOA01	Monetary Amount Type Qual

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
MOA	6	13	5004	18	N	MOA02	Monetary Amount
Segment 0020							
LOC	6	10	3227	3	A	LOC01	Place/Location qualifier
LOC	6	44	3224	17	A	LOC05	Place/Location
Segment 0021							
CUX	7	10	6347	3	A	CUX01	Currency Detail Qual
CUX	7	13	6345	3	A	CUX02	Currency Code
CUX	7	16	6343	3	A	CUX03	Currency Qual
CUX	7	23	6347	3	A	CUX05	Currency Detail Qual
CUX	7	26	6345	3	A	CUX06	Currency Code
CUX	7	29	6343	3	A	CUX07	Currency Qual
CUX	7	36	5402	12	N	CUX09	Rate of Exchange
CUX	7	48	6341	3	A	CUX10	Currency Market Exchng Code
Segment 0022							
DTM	7	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	7	13	2380	35	A	DTM02	Date/Time/Period
DTM	7	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0023							
PAT	8	10	4279	3	A	PAT01	Payment Terms Type Qual
PAT	8	13	4277	17	A	PAT02	Terms of Payment ID
Segment 0024							
DTM	8	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	8	13	2380	35	A	DTM02	Date/Time/Period
DTM	8	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0025							
PCD	8	10	5245	3	A	PCD01	Percentage Qual
PCD	8	13	5482	8	N	PCD02	Percentage
Segment 0026							
MOA	8	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	8	13	5004	18	N	MOA02	Monetary Amount

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0027							
TDT	9	10	8051	3	A	TDT01	Transport stage qualifier
TDT	9	75	3127	17	A	TDT07	Carrier ID
TDT	9	98	3128	35	A	TDT10	Carrier name
Segment 0028							
LOC	10	10	3227	3	A	LOC01	Place/Location qualifier
LOC	10	44	3224	17	A	LOC05	Place/Location
Segment 0029							
DTM	10	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	10	13	2380	35	A	DTM02	Date/Time/Period
DTM	10	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0030							
TOD	11	13	4215	3	A	TOD02	Method of Payment Code
TOD	11	16	4053	3	A	TOD03	Terms of Delivery Code
TOD	11	25	4052	70	A	TOD06	Terms Of Delivery
Segment 0031							
LOC	11	10	3227	3	A	LOC01	Place/Location qualifier
LOC	11	44	3224	17	A	LOC05	Place/Location
Segment 0035							
RFF	13	10	1153	3	A	RFF01	Reference qualifier
RFF	13	13	1154	35	A	RFF02	Reference number
RFF	13	48	1156	6	A	RFF03	Line Number
Segment 0036							
DTM	13	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	13	13	2380	35	A	DTM02	Date/Time/Period
DTM	13	48	2379	3	A	DTM03	Date/Time/Period format qualifier

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0041							
FTX	14	10	4451	3	A	FTX01	Subject qualifier
Segment 0042							
SCC	15	10	4017	3	A	SCC01	Delivery plan status
Segment 0043							
FTX	15	10	4451	3	A	FTX01	Subject qualifier
Segment 0044							
RFF	15	10	1153	3	A	RFF01	Reference qualifier
RFF	15	13	1154	35	A	RFF02	Reference number
RFF	15	48	1156	6	A	RFF03	Line Number
Segment 0045							
QTY	16	10	6063	3	A	QTY01	Quantity qualifier
QTY	16	13	6060	15	A	QTY02	Quantity
QTY	16	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0046							
DTM	16	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	16	13	2380	35	A	DTM02	Date/Time/Period
DTM	16	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0048							
DTM	17	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	17	13	2380	35	A	DTM02	Date/Time/Period
DTM	17	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0050							
ALC	18	10	5463	3	A	ALC01	Allowance/Charge Qual
Segment 0052							
QTY	19	10	6063	3	A	QTY01	Quantity qualifier
QTY	19	13	6060	15	A	QTY02	Quantity
QTY	19	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0054							
PCD	20	10	5245	3	A	PCD01	Percentage Qual
PCD	20	13	5482	8	N	PCD02	Percentage

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0056							
MOA	21	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	21	13	5004	18	N	MOA02	Monetary Amount
Segment 0060							
TAX	23	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	23	13	53446	20	A	TAX18	Party tax ID Number
Segment 0061							
MOA	23	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	23	13	5004	18	N	MOA02	Monetary Amount
Segment 0063							
RFF	24	10	1153	3	A	RFF01	Reference qualifier
RFF	24	13	1154	35	A	RFF02	Reference number
RFF	24	48	1156	6	A	RFF03	Line Number
Segment 0064							
DTM	24	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	24	13	2380	35	A	DTM02	Date/Time/Period
DTM	24	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0065							
FTX	24	10	4451	3	A	FTX01	Subject qualifier
Segment 0067							
LIN	25	10	1082	6	A	LIN01	Line item number
LIN	25	16	1229	3	A	LIN02	Action request/noti-fication
LIN	25	19	7140	35	A	LIN03	Item number
LIN	25	54	7143	3	A	LIN04	Item number type
LIN	25	63	5495	3	A	LIN07	Subline indicator
Segment 0068							
PIA	25	10	4347	3	A	PIA01	Product ID function
PIA	25	13	7140	35	A	PIA02	Item number
PIA	25	48	7143	3	A	PIA03	Item number type
PIA	25	57	7140	35	A	PIA06	Item number
PIA	25	92	7143	3	A	PIA07	Item number type

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
PIA	25	101	7140	35	A	PIA10	Item number
PIA	25	136	7143	3	A	PIA11	Item number type
PIA	25	145	7140	35	A	PIA14	Item number
PIA	25	180	7143	3	A	PIA15	Item number type
PIA	25	189	7140	35	A	PIA18	Item number
PIA	25	224	7143	3	A	PIA19	Item number type
Segment 0069							
IMD	25	16	7009	7	A	IMD03	Item description ID
IMD	25	29	7008	35	A	IMD06	Item description
Segment 0071							
QTY	25	10	6063	3	A	QTY01	Quantity qualifier
QTY	25	13	6060	15	A	QTY02	Quantity
QTY	25	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0072							
PCD	25	10	5245	3	A	PCD01	Percentage Qual
PCD	25	13	5482	8	N	PCD02	Percentage
Segment 0074							
DTM	25	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	25	13	2380	35	A	DTM02	Date/Time/Period
DTM	25	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0075							
MOA	25	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	25	13	5004	18	N	MOA02	Monetary Amount
Segment 0079							
FTX	25	10	4451	3	A	FTX01	Subject qualifier
Segment 0080							
PRI	26	10	5125	3	A	PRI01	Price Qual
PRI	26	13	5118	15	N	PRI02	Price
PRI	26	31	5387	3	A	PRI04	Price Type Qual
Segment 0083							
DTM	26	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	26	13	2380	35	A	DTM02	Date/Time/Period

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
DTM	26	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0084							
RFF	27	10	1153	3	A	RFF01	Reference qualifier
RFF	27	13	1154	35	A	RFF02	Reference number
RFF	27	48	1156	6	A	RFF03	Line Number
Segment 0085							
DTM	27	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	27	13	2380	35	A	DTM02	Date/Time/Period
DTM	27	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0089							
RFF	29	10	1153	3	A	RFF01	Reference qualifier
RFF	29	13	1154	35	A	RFF02	Reference number
RFF	29	48	1156	6	A	RFF03	Line Number
Segment 0090							
DTM	29	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	29	13	2380	35	A	DTM02	Date/Time/Period
DTM	29	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0092							
LOC	30	10	3227	3	A	LOC01	Place/Location qualifier
LOC	30	44	3224	17	A	LOC05	Place/Location
Segment 0093							
QTY	30	10	6063	3	A	QTY01	Quantity qualifier
QTY	30	13	6060	15	A	QTY02	Quantity
QTY	30	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0094							
DTM	30	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	30	13	2380	35	A	DTM02	Date/Time/Period
DTM	30	48	2379	3	A	DTM03	Date/Time/Period format qualifier

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0095							
TAX	31	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	31	135	3446	20	A	TAX18	Party tax ID Number
Segment 0096							
MOA	31	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	31	13	5004	18	N	MOA02	Monetary Amount
Segment 0097							
LOC	31	10	3227	3	A	LOC01	Place/Location qualifier
LOC	31	44	3224	17	A	LOC05	Place/Location
Segment 0098							
NAD	32	10	3035	3	A	NAD01	Party qualifier
NAD	32	13	3039	17	A	NAD02	Party ID identification
NAD	32	36	3124	35	A	NAD05	Address line 1
NAD	32	71	3124	35	A	NAD06	Address line 2
NAD	32	106	3124	35	A	NAD07	Address line 3
NAD	32	141	3124	35	A	NAD08	Address line 4
NAD	32	176	3124	35	A	NAD09	Address line 5
NAD	32	211	3036	35	A	NAD10	Party name 1
NAD	32	246	3036	35	A	NAD11	Party name 2
NAD	32	281	3036	35	A	NAD12	Party name 3
NAD	32	316	3042	35	A	NAD13	Street and number/PO Box 1
NAD	32	351	3042	35	A	NAD14	Street and number/PO Box 2
NAD	32	386	3042	35	A	NAD15	Street and number/PO Box 3
NAD	32	421	3164	35	A	NAD16	City name
NAD	32	456	3229	9	A	NAD17	Country subentity identification
NAD	32	465	3251	9	A	NAD18	Post code
NAD	32	474	3207	3	A	NAD19	Country
Segment 0099							
LOC	32	10	3227	3	A	LOC01	Place/Location qualifier
LOC	32	44	3224	17	A	LOC05	Place/Location

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0100							
RFF	33	10	1153	3	A	RFF01	Reference qualifier
RFF	33	13	1154	35	A	RFF02	Reference number
RFF	33	48	1156	6	A	RFF03	Line Number
Segment 0101							
DTM	33	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	33	13	2380	35	A	DTM02	Date/Time/Period
DTM	33	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0103							
DTM	34	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	34	13	2380	35	A	DTM02	Date/Time/Period
DTM	34	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0106							
ALC	36	10	5463	3	A	ALC01	Allowance/Charge Qual
Segment 0108							
QTY	37	10	6063	3	A	QTY01	Quantity qualifier
QTY	37	13	6060	15	A	QTY02	Quantity
QTY	37	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0110							
PCD	38	10	5245	3	A	PCD01	Percentage Qual
PCD	38	13	5482	8	N	PCD02	Percentage
Segment 0112							
MOA	39	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	39	13	5004	18	N	MOA02	Monetary Amount
Segment 0116							
TAX	41	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	41	135	3446	20	A	TAX18	Party tax ID Number

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0117							
MOA	41	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	41	13	5004	18	N	MOA02	Monetary Amount
Segment 0118							
TDT	42	10	8051	3	A	TDT01	Transport stage qualifier
TDT	42	75	3127	17	A	TDT07	Carrier ID
TDT	42	98	3128	35	A	TDT10	Carrier name
Segment 0119							
LOC	43	10	3227	3	A	LOC01	Place/Location qualifier
LOC	43	44	3224	17	A	LOC05	Place/Location
Segment 0120							
DTM	43	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	43	13	2380	35	A	DTM02	Date/Time/Period
DTM	43	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0121							
TOD	44	13	4215	3	A	TOD02	Method of Payment Code
TOD	44	16	4053	3	A	TOD03	Terms of Delivery Code
TOD	44	25	4052	70	A	TOD06	Terms of Delivery
Segment 0122							
LOC	44	10	3227	3	A	LOC01	Place/Location qualifier
LOC	44	44	3224	17	A	LOC05	Place/Location
Segment 0126							
FTX	45	10	4451	3	A	FTX01	Subject qualifier
Segment 0127							
SCC	46	10	4017	3	A	SCC01	Delivery plan status
Segment 0128							
FTX	46	10	4451	3	A	FTX01	Subject qualifier
Segment 0129							
RFF	46	10	1153	3	A	RFF01	Reference qualifier
RFF	46	13	1154	35	A	RFF02	Reference number
RFF	46	48	1156	6	A	RFF03	Line Number

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0130							
QTY	47	10	6063	3	A	QTY01	Quantity qualifier
QTY	47	13	6060	15	A	QTY02	Quantity
QTY	47	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0131							
DTM	47	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	47	13	2380	35	A	DTM02	Date/Time/Period
DTM	47	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0133							
RFF	48	10	1153	3	A	RFF01	Reference qualifier
RFF	48	13	1154	35	A	RFF02	Reference number
RFF	48	48	1156	6	A	RFF03	Line Number
Segment 0134							
DTM	48	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	48	13	2380	35	A	DTM02	Date/Time/Period
DTM	48	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0135							
FTX	48	10	4451	3	A	FTX01	Subject qualifier
Segment 0137							
MOA	0	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	0	13	5004	18	N	MOA02	Monetary Amount
Segment 0139							
ALC	49	10	5463	3	A	ALC01	Allowance/Charge Qual
Segment 0141							
MOA	49	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	49	13	5004	18	N	MOA02	Monetary Amount

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Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0001							
BGM	0	10	1001	3	A	BGM01	Document name coded
BGM	0	89	1225	3	A	BGM06	Message function
Segment 0002							
DTM	0	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	0	13	2380	35	A	DTM02	Date/Time/Period
DTM	0	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0005							
IMD	0	16	7009	7	A	IMD03	Item description ID
IMD	0	29	7008	35	A	IMD06	Item description
Segment 0006							
FTX	0	10	4451	3	A	FTX01	Subject qualifier
Segment 0007							
RFF	1	10	1153	3	A	RFF01	Reference qualifier
RFF	1	13	1154	35	A	RFF02	Reference number
RFF	1	48	1156	6	A	RFF03	Line Number
Segment 0008							
DTM	1	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	1	13	2380	35	A	DTM02	Date/Time/Period
DTM	1	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0009							
NAD	2	10	3035	3	A	NAD01	Party qualifier
NAD	2	13	3039	17	A	NAD02	Party ID identification
NAD	2	36	3124	35	A	NAD05	Address line 1
NAD	2	71	3124	35	A	NAD06	Address line 2
NAD	2	106	3124	35	A	NAD07	Address line 3
NAD	2	141	3124	35	A	NAD08	Address line 4
NAD	2	176	3124	35	A	NAD09	Address line 5
NAD	2	211	3036	35	A	NAD10	Party name 1
NAD	2	246	3036	35	A	NAD11	Party name 2

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
NAD	2	281	3036	35	A	NAD12	Party name 3
NAD	2	316	3042	35	A	NAD13	Street and number/PO Box 1
NAD	2	351	3042	35	A	NAD14	Street and number/PO Box 2
NAD	2	386	3042	35	A	NAD15	Street and number/PO Box 3
NAD	2	421	3164	35	A	NAD16	City name
NAD	2	456	3229	9	A	NAD17	Country subentity identification
NAD	2	465	3251	9	A	NAD18	Post code
NAD	2	474	3207	3	A	NAD19	Country
Segment 0010							
LOC	2	10	3227	3	A	LOC01	Place/Location qualifier
LOC	2	44	3224	17	A	LOC05	Place/Location
Segment 0012							
RFF	3	10	1153	3	A	RFF01	Reference qualifier
RFF	3	13	1154	35	A	RFF02	Reference number
RFF	3	48	1156	6	A	RFF03	Line Number
Segment 0013							
DTM	3	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	3	13	2380	35	A	DTM02	Date/Time/Period
DTM	3	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0015							
DTM	4	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	4	13	2380	35	A	DTM02	Date/Time/Period
DTM	4	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0018							
TAX	6	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	6	135	3446	20	A	TAX18	Party tax ID Number

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0019							
MOA	6	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	6	13	5004	18	N	MOA02	Monetary Amount
Segment 0020							
LOC	6	10	3227	3	A	LOC01	Place/Location qualifier
LOC	6	44	3224	17	A	LOC05	Place/Location
Segment 0021							
CUX	7	10	6347	3	A	CUX01	Currency Detail Qual
CUX	7	13	6345	3	A	CUX02	Currency Code
CUX	7	16	6343	3	A	CUX03	Currency Qual
CUX	7	23	6347	3	A	CUX05	Currency Detail Qual
CUX	7	26	6345	3	A	CUX06	Currency Code
CUX	7	29	6343	3	A	CUX07	Currency Qual
CUX	7	36	5402	12	N	CUX09	Rate of Exchange
CUX	7	48	6341	3	A	CUX10	Currency Market Exchng Code
Segment 0022							
DTM	7	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	7	13	2380	35	A	DTM02	Date/Time/Period
DTM	7	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0023							
PAT	8	10	4279	3	A	PAT01	Payment Terms Type Qual
PAT	8	13	4277	17	A	PAT02	Terms of Payment ID
Segment 0024							
DTM	8	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	8	13	2380	35	A	DTM02	Date/Time/Period
DTM	8	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0025							
PCD	8	10	5245	3	A	PCD01	Percentage Qual
PCD	8	13	5482	8	N	PCD02	Percentage

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0026							
MOA	8	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	8	13	5004	18	N	MOA02	Monetary Amount
Segment 0027							
TDT	9	10	8051	3	A	TDT01	Transport stage qualifier
TDT	9	75	3127	17	A	TDT07	Carrier ID
TDT	9	98	3128	35	A	TDT10	Carrier name
Segment 0028							
LOC	10	10	3227	3	A	LOC01	Place/Location qualifier
LOC	10	44	3224	17	A	LOC05	Place/Location
Segment 0029							
DTM	10	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	10	13	2380	35	A	DTM02	Date/Time/Period
DTM	10	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0030							
TOD	11	13	4215	3	A	TOD02	Method of Payment Code
TOD	11	16	4053	3	A	TOD03	Terms of Delivery Code
TOD	11	25	4052	70	A	TOD06	Terms of Delivery
Segment 0031							
LOC	11	10	3227	3	A	LOC01	Place/Location qualifier
LOC	11	44	3224	17	A	LOC05	Place/Location
Segment 0035							
RFF	13	10	1153	3	A	RFF01	Reference qualifier
RFF	13	13	1154	35	A	RFF02	Reference number
RFF	13	48	1156	6	A	RFF03	Line Number
Segment 0036							
DTM	13	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	13	13	2380	35	A	DTM02	Date/Time/Period
DTM	13	48	2379	3	A	DTM03	Date/Time/Period format qualifier

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0041							
FTX	14	10	4451	3	A	FTX01	Subject qualifier
Segment 0042							
SCC	15	10	4017	3	A	SCC01	Delivery plan status
Segment 0043							
FTX	15	10	4451	3	A	FTX01	Subject qualifier
Segment 0044							
RFF	15	10	1153	3	A	RFF01	Reference qualifier
RFF	15	13	1154	35	A	RFF02	Reference number
RFF	15	48	1156	6	A	RFF03	Line Number
Segment 0045							
QTY	16	10	6063	3	A	QTY01	Quantity qualifier
QTY	16	13	6060	15	A	QTY02	Quantity
QTY	16	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0046							
DTM	16	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	16	13	2380	35	A	DTM02	Date/Time/Period
DTM	16	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0048							
DTM	17	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	17	13	2380	35	A	DTM02	Date/Time/Period
DTM	17	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0050							
ALC	18	10	5463	3	A	ALC01	Allowance/Charge Qual
Segment 0052							
QTY	19	10	6063	3	A	QTY01	Quantity qualifier
QTY	19	13	6060	15	A	QTY02	Quantity
QTY	19	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0054							
PCD	20	10	5245	3	A	PCD01	Percentage Qual
PCD	20	13	5482	8	N	PCD02	Percentage

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0056							
MOA	21	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	21	13	5004	18	N	MOA02	Monetary Amount
Segment 0060							
TAX	23	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	23	13	53446	20	A	TAX18	Party tax ID Number
Segment 0061							
MOA	23	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	23	13	5004	18	N	MOA02	Monetary Amount
Segment 0063							
RFF	24	10	1153	3	A	RFF01	Reference qualifier
RFF	24	13	1154	35	A	RFF02	Reference number
RFF	24	48	1156	6	A	RFF03	Line Number
Segment 0064							
DTM	24	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	24	13	2380	35	A	DTM02	Date/Time/Period
DTM	24	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0065							
FTX	24	10	4451	3	A	FTX01	Subject qualifier
Segment 0066							
LIN	25	10	1082	6	A	LIN01	Line item number
LIN	25	16	1229	3	A	LIN02	Action request/noti-fication
LIN	25	19	7140	35	A	LIN03	Item number
LIN	25	54	7143	3	A	LIN04	Item number type
LIN	25	63	5495	3	A	LIN07	Subline indicator
Segment 0067							
PIA	25	10	4347	3	A	PIA01	Product ID function
PIA	25	13	7140	35	A	PIA02	Item number
PIA	25	48	7143	3	A	PIA03	Item number type
PIA	25	57	7140	35	A	PIA06	Item number
PIA	25	92	7143	3	A	PIA07	Item number type

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
PIA	25	101	7140	35	A	PIA10	Item number
PIA	25	136	7143	3	A	PIA11	Item number type
PIA	25	145	7140	35	A	PIA14	Item number
PIA	25	180	7143	3	A	PIA15	Item number type
PIA	25	189	7140	35	A	PIA18	Item number
PIA	25	224	7143	3	A	PIA19	Item number type
Segment 0068							
IMD	25	16	7009	7	A	IMD03	Item description ID
IMD	25	29	7008	35	A	IMD06	Item description
Segment 0070							
QTY	25	10	6063	3	A	QTY01	Quantity qualifier
QTY	25	13	6060	15	A	QTY02	Quantity
QTY	25	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0071							
PCD	25	10	5245	3	A	PCD01	Percentage Qual
PCD	25	13	5482	8	N	PCD02	Percentage
Segment 0073							
DTM	25	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	25	13	2380	35	A	DTM02	Date/Time/Period
DTM	25	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0074							
MOA	25	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	25	13	5004	18	N	MOA02	Monetary Amount
Segment 0078							
FTX	25	10	4451	3	A	FTX01	Subject qualifier
Segment 0079							
PRI	26	10	5125	3	A	PRI01	Price Qual
PRI	26	13	5118	15	N	PRI02	Price
PRI	26	31	5387	3	A	PRI04	Price Type Qual
Segment 0082							
DTM	26	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	26	13	2380	35	A	DTM02	Date/Time/Period

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
DTM	26	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0083							
RFF	27	10	1153	3	A	RFF01	Reference qualifier
RFF	27	13	1154	35	A	RFF02	Reference number
RFF	27	48	1156	6	A	RFF03	Line Number
Segment 0084							
DTM	27	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	27	13	2380	35	A	DTM02	Date/Time/Period
DTM	27	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0088							
RFF	29	10	1153	3	A	RFF01	Reference qualifier
RFF	29	13	1154	35	A	RFF02	Reference number
RFF	29	48	1156	6	A	RFF03	Line Number
Segment 0089							
DTM	29	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	29	13	2380	35	A	DTM02	Date/Time/Period
DTM	29	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0091							
LOC	30	10	3227	3	A	LOC01	Place/Location qualifier
LOC	30	44	3224	17	A	LOC05	Place/Location
Segment 0092							
QTY	30	10	6063	3	A	QTY01	Quantity qualifier
QTY	30	13	6060	15	A	QTY02	Quantity
QTY	30	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0093							
DTM	30	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	30	13	2380	35	A	DTM02	Date/Time/Period
DTM	30	48	2379	3	A	DTM03	Date/Time/Period format qualifier

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0094							
TAX	31	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	31	13	53446	20	A	TAX18	Party tax ID Number
Segment 0095							
MOA	31	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	31	13	5004	18	N	MOA02	Monetary Amount
Segment 0096							
LOC	31	10	3227	3	A	LOC01	Place/Location qualifier
LOC	31	44	3224	17	A	LOC05	Place/Location
Segment 0097							
NAD	32	10	3035	3	A	NAD01	Party qualifier
NAD	32	13	3039	17	A	NAD02	Party ID identification
NAD	32	36	3124	35	A	NAD05	Address line 1
NAD	32	71	3124	35	A	NAD06	Address line 2
NAD	32	106	3124	35	A	NAD07	Address line 3
NAD	32	141	3124	35	A	NAD08	Address line 4
NAD	32	176	3124	35	A	NAD09	Address line 5
NAD	32	211	3036	35	A	NAD10	Party name 1
NAD	32	246	3036	35	A	NAD11	Party name 2
NAD	32	281	3036	35	A	NAD12	Party name 3
NAD	32	316	3042	35	A	NAD13	Street and number/PO Box 1
NAD	32	351	3042	35	A	NAD14	Street and number/PO Box 2
NAD	32	386	3042	35	A	NAD15	Street and number/PO Box 3
NAD	32	421	3164	35	A	NAD16	City name
NAD	32	456	3229	9	A	NAD17	Country subentity identification
NAD	32	465	3251	9	A	NAD18	Post code
NAD	32	474	3207	3	A	NAD19	Country
Segment 0098							
LOC	32	10	3227	3	A	LOC01	Place/Location qualifier
LOC	32	44	3224	17	A	LOC05	Place/Location

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0099							
RFF	33	10	1153	3	A	RFF01	Reference qualifier
RFF	33	13	1154	35	A	RFF02	Reference number
RFF	33	48	1156	6	A	RFF03	Line Number
Segment 0100							
DTM	33	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	33	13	2380	35	A	DTM02	Date/Time/Period
DTM	33	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0102							
DTM	34	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	34	13	2380	35	A	DTM02	Date/Time/Period
DTM	34	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0105							
ALC	36	10	5463	3	A	ALC01	Allowance/Charge Qual
Segment 0107							
QTY	37	10	6063	3	A	QTY01	Quantity qualifier
QTY	37	13	6060	15	A	QTY02	Quantity
QTY	37	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0109							
PCD	38	10	5245	3	A	PCD01	Percentage Qual
PCD	38	13	5482	8	N	PCD02	Percentage
Segment 0111							
MOA	39	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	39	13	5004	18	N	MOA02	Monetary Amount
Segment 0115							
TAX	41	10	5283	3	A	TAX01	Duty/Tax/Fee Function Qual
TAX	41	135	3446	20	A	TAX18	Party tax ID Number

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0116							
MOA	41	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	41	13	5004	18	N	MOA02	Monetary Amount
Segment 0117							
TDT	42	10	8051	3	A	TDT01	Transport stage qualifier
TDT	42	75	3127	17	A	TDT07	Carrier ID
TDT	42	98	3128	35	A	TDT10	Carrier name
Segment 0118							
LOC	43	10	3227	3	A	LOC01	Place/Location qualifier
LOC	43	44	3224	17	A	LOC05	Place/Location
Segment 0119							
DTM	43	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	43	13	2380	35	A	DTM02	Date/Time/Period
DTM	43	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0120							
TOD	44	13	4215	3	A	TOD02	Method of Payment Code
TOD	44	16	4053	3	A	TOD03	Terms of Delivery Code
TOD	44	25	4052	70	A	TOD06	Terms of Delivery
Segment 0121							
LOC	44	10	3227	3	A	LOC01	Place/Location qualifier
LOC	44	44	3224	17	A	LOC05	Place/Location
Segment 0125							
FTX	45	10	4451	3	A	FTX01	Subject qualifier
Segment 0126							
SCC	46	10	4017	3	A	SCC01	Delivery plan status
Segment 0127							
FTX	46	10	4451	3	A	FTX01	Subject qualifier
Segment 0128							
RFF	46	10	1153	3	A	RFF01	Reference qualifier
RFF	46	13	1154	35	A	RFF02	Reference number
RFF	46	48	1156	6	A	RFF03	Line Number

Segment ID	Group	Offset	Element ID	Length	Type	Field Name	Description
Segment 0129							
QTY	47	10	6063	3	A	QTY01	Quantity qualifier
QTY	47	13	6060	15	A	QTY02	Quantity
QTY	47	28	6411	3	A	QTY03	Measure unit qualifier
Segment 0130							
DTM	47	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	47	13	2380	35	A	DTM02	Date/Time/Period
DTM	47	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0132							
RFF	48	10	1153	3	A	RFF01	Reference qualifier
RFF	48	13	1154	35	A	RFF02	Reference number
RFF	48	48	1156	6	A	RFF03	Line Number
Segment 0133							
DTM	48	10	2005	3	A	DTM01	Date/Time/period qualifier
DTM	48	13	2380	35	A	DTM02	Date/Time/Period
DTM	48	48	2379	3	A	DTM03	Date/Time/Period format qualifier
Segment 0134							
FTX	48	10	4451	3	A	FTX01	Subject qualifier
Segment 0136							
MOA	0	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	0	13	5004	18	N	MOA02	Monetary Amount
Segment 0138							
ALC	49	10	5463	3	A	ALC01	Allowance/Charge Qual
Segment 0140							
MOA	49	10	5025	3	A	MOA01	Monetary Amount Type Qual
MOA	49	13	5004	18	N	MOA02	Monetary Amount

Producing Purchase Order Documents

You can produce purchase orders on demand using the Purchasing Reports activity or schedule them using Job Scheduler.

Using the Purchasing Reports Activity

You can use Microsoft Access to produce your purchase order documents on demand.

Purchasing loads the purchase order information into the Microsoft Access program. Next, the Microsoft Access program uses the Purchasing Reports Activity to format the purchase order documents.

Purchasing uses Purchase Order - Print for the Report to Run option of the Purchasing Reports Activity to produce paper purchase orders.

Using Job Scheduler

Before running scheduled reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

When you use scheduled purchasing reporting, you must include specific scheduling information. List program parameters on one line, separated by forward slashes (/). Be sure to enter a forward slash after the last parameter.

Use the following parameters to schedule Purchasing reporting:

Program	Parameter Set
msaccess.exe	Access mdb Name /CMD /User ID/Password/ Language/Dialect/Purchasing Site/Buyer ID/PO Number/Change Order Number/EDI Output File/Report Option/

This table describes each parameter and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access Purchasing database file (mpoact32.mdb). You must enter the complete directory path.	**c:\sstrm*xx*\mpoact32.mdb**
/cmd	Separator that tells Access information is being passed to this mdb.	**/**cmd
/User ID	Identifier for the user who runs the report.	/**USER01**

Parameter	Description	Example
/Password	Password for the user who runs the report.	/**password**
/Language	Code for the language Access uses to display error messages and other information.	**/EN** - Display messages in English. **Note:** You must enter this code in all capital letters.
/Dialect	Code for language dialect Access uses to display error messages and other information.	**/** **Note:** Currently, you must enter a blank space for this parameter.
/Purchasing Site	The identifier of the purchase site.	**/US01**
/Buyer ID	The identifier of the buyer.	**/BUY1** **Note:** Enter an asterisk (*) for all.
/PO Number	The purchase order number.	**/1234** **Note:** Enter an asterisk (*) for all.
/Change Order Number	The change order number.	**/1** **Note:** Enter an asterisk (*) for all.
/EDI Output File	The path and name of the text file to use to store the EDI transactions generated. Enter this parameter only when the report option ID used has the EDI Orders and Changes report selected.	**c:\ediout\editxn.txt**
/Report Option/	The report option ID you previously saved on the Purchasing Reports - Report Parameters dialog box. See Procedures for Purchasing Reports - Report Parameters dialog box in the SmartStream Purchasing Help.	/**Poprint**/

Example Parameter Sets

The following examples show the complete parameter sets for generating the three types of purchase order output:

Printed Output Parameters

c:\sstrm*xx*\mpoact32.mdb /cmd /USER01/password/EN/ /US01/BUY1**/*/*/**Poprint/

FAX Output Parameters

c:\sstrm*xx*\mpoact32.mdb /cmd /USER01/password/EN/ /US01/BUY1**/*/*/**PoFAX/

EDI Output Parameters

c:\sstrm*xx*\mpoact32.mdb /cmd /USER01/password/EN/
/US01/BUY1**/*/*/c:\ediout\editxn.txt/**PoEDI/

Special Considerations

- Currently, English is the only valid value for the Language parameter, and a blank is the only valid value for the Language Dialect parameter. This means you must enter a forward slash (/) **followed by a blank space** for the Language Dialect parameter. See the examples in the preceding table.
- When you set up this job on the Job Scheduler window, make sure that the DBS check box is **not** selected.
- If the Microsoft Access directory is not included in the environment's path, the scheduled process cannot find the Microsoft Access program. In that case you must specify the fully qualified path and the program name, for example, c:\program files\microsoft office\office\msaccess.exe.
- Microsoft Access must be installed on the Job Server that you plan to use to run this job.
- Before scheduling these reports make sure
  - The mpoact32.mdb resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
  - The location of the mpoact32.mdb is specified in you parameters from the point of view of the Job Server.
  - The report option ID is saved to the mpoact32.mdb version that is visible to the Job Server.
- When generating EDI output, if you do not enter the fully qualified path with name of the output file, the file is generated in the default Access directory. To determine where this default directory is, start Access and select Open from the File menu. The default directory given here is the directory in which the EDI output file is generated unless you specify otherwise.
- Before faxing purchase orders using the Job Scheduler, ensure that you have completed the prerequisite tasks (see the Producing Output for Purchase Orders section).
- If the fax server software requires you to add users to the fax server, the user ID and password entered as parameters in the security profile associated with the scheduled process on the Job Scheduler window are sent to the fax server. For additional information about faxing purchase orders, see the Producing Output for Purchase Orders section.

Scheduled Error Log

When a scheduled process encounters errors during processing, a scheduled error log is generated that lists the date and all error messages for that process.

For information about errors encountered during purchase order output processing, see the Generating Purchase Order Output Using Job Scheduler section.

Archiving and Purging Purchasing Information

Use the Archive/Purge process to remove outdated purchasing information from your database tables. Depending on the options you select, you can archive purchasing data from activity tables to history tables or from history tables to a file for storage on disk or tape before SmartStream purges it.

For more information about this process, see About Archive/Purge.

Security

To use the Archive/Purge process in Purchasing, you must have the following activity security defined for you on the Activity Security window:

- Access to the these activities:
  - Archive/Purge Request (ccf0720)
  - Archive/Purge scheduled process (ccf0800)
- Security Entity 1 status assigned to these archive IDs:
  - Archive Requisitions to History (mrqreqmcah)
  - Archive Requisition History to Disk (mrqreqacad)
  - Archive Purchase Orders to History (mpopohrcah)
  - Archive Purch Order History to Disk (mpopohacad)
  - Archive Blanket Orders to History (mpoblkhcah)
  - Archive Blkt Order History to Disk (mpoblkacad)
- Security Entity 2 status assigned to the appropriate sites

When you run the Archive/Purge process using Job Scheduler, you must use the security profile of DBS.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	On the Archive/Purge Request window, enter your options for the archive and purge request, including the selection criteria.
2	Using Job Scheduler, run the offline scheduled process that archives and purges activity records. **Note:** The request ID you enter on the Archive/Purge Request window is used as a parameter when you set up the Archive/Purge process in Job Scheduler.
3	Review results using the Purchasing Archive/Purge Reporting window.

What Can You Archive and Purge?

Using the archive and purge activities delivered for the Purchasing application, you can archive and purge the following types of information:

- Requisition

  If SmartStream Supplies Management is installed, picklists and demand detail are archived when the associated requisitions are archived.

- Purchase Order

- Blanket order

Types of Archive and Purge Processes

You can manage the information in your Purchasing activity and history tables using the following archive and purge processes.

- Requisition
  - Archive Requisitions to History - Moves requisition information from the original activity tables to history tables.
  - Archive Requisition History to Disk - Moves archived requisition information from history tables to a file for storage on disk or tape.
- Purchase Order
  - Archive Purchase Orders to History - Moves purchase order information from the original activity tables to history tables.
  - Archive Purchase Order History to Disk - Moves archived purchase order information from history tables to a file for storage on disk or tape.
- Blanket Order
  - Archive Blanket Orders to History - Moves blanket order information from the original activity tables to history tables.
  - Archive Blanket Order History to Disk - Moves archived blanket order information from history tables to a file for storage on disk or tape.

Do not attempt to run the archive to history and archive history to disk processes simultaneously.

Tables Processed

Archive to History Processes

The Purchasing archive to history processes archive and purge information from the following activity tables, except where noted.

Requisition

- DBSreqm
  - req
  - req_apprvl_comnt
  - req_apprvl_status
  - req_audit **(purge only)**
  - req_comnt
  - req_line
  - req_line_audit **(purge only)**
  - req_line_comnt
  - req_line_jrnl_line
- DBSiplm
  - inventory_demand_dtl **(purge only)**
  - inventory_demand_dtl_udak **(purge only)**
  - supplies_picklist
  - supplies_picklist_line

Purchase Order

- DBSpuen
  - po_line_sched_audit **(purge only)**
  - po_line_sched_tax_audit **(purge only)**
  - po_project_jrnl_ctrl
  - po_project_jrnl_line
  - purchase_order
  - purchase_order_apprvl_comnt
  - purchase_order_apprvl_status
  - purchase_order_audit **(purge only)**
  - purchase_order_comnt
  - purchase_order_jrnl_line
  - purchase_order_line
  - purchase_order_line_audit **(purge only)**
  - purchase_order_line_comnt

  - purchase_order_line_sched
  - purchase_order_line_sched_tax
  - purchase_order_line_std_phrase
  - purchase_order_std_phrase
  - purchase_order_tax
  - purchase_order_tax_audit **(purge only)**
- DBSreqm
  - purchase_order_req
  - purchase_order_req_audit **(purge only)**
  - sched_rcpt_doc_xref
- DBSpoan
  - purch_ord_ln_std_phrase_annals
  - purch_ord_std_phrase_annals
  - purchase_ord_item_comnt_annals
  - purchase_order_annals
  - purchase_order_comnt_annals
  - purchase_order_ext **(purge only)**
  - purchase_order_line_annals
  - purchase_order_line_ext **(purge only)**
  - purchase_order_ln_comnt_annals
  - purchase_order_ln_sched_annals
  - purchase_order_ln_sched_ext **(purge only)**
- DBSprqt
  - consolidated_schld_recpt_dtl

Blanket Order

- DBSpuen
  - blanket_order
  - blanket_order_comnt
  - blanket_order_line
  - blanket_order_line_comnt

- blanket_order_line_std_phrase
- blanket_order_std_phrase

Archive History to Disk Processes

The Purchasing archive history to disk processes archive and purge information from the archive tables. Information from each archive table is written to a separate file.

Selection Criteria

You can specify the criteria for selecting information to include in archive/purge processing when you define an archive/purge request. Only information that meets the selection criteria is included in the run of the request. The following information shows the selection criteria you can identify for each process type:

Archive to History Processes

- Requisition
  - Site
  - Vendor ID
  - Vendor location
  - Requester
  - Requisition number
  - Date updated
- Purchase Order
  - Site
  - Purchase order number
  - Purchase entity
  - Vendor ID
  - Vendor location
  - Buyer
  - Date updated
- Blanket Order
  - Site
  - Blanket order ID
  - Purchase entity
  - Vendor ID
  - Vendor location
  - Buyer ID

Archive History to Disk Processes

- Requisition, Purchase Order, and Blanket Order
  - Site
  - Date archived

Eligibility Validation for Archiving and Purging to History

The requisitions, purchase orders, and blanket orders that match your selection criteria must also meet the following conditions to be eligible for archiving and purging.

Requisitions

The status of the requisition must be Closed or Cancelled.

Returns to stockroom and replenishment transfer orders referencing the requisition are complete.

None of the following items reference the requisition (because they have been archived and purged):

- Purchase orders
- Receipts for replenishment transfer orders

Purchase Orders

The status of the purchase order must be Closed or Cancelled.

If Projects is installed, project journals have been posted.

None of the following items reference the purchase order (because they have been archived and purged):

- Matched payment requests
- Receipts

Blanket Orders

The blanket order must be closed or cancelled.

None of the following items reference the blanket order (because they have been archived and purged):

- Purchase orders
- Requisitions

Prerequisite Archive/Purge Processing

Whether information is eligible for archiving and purging depends on other archive/purge processes being run in a specific sequence. The following table shows the recommended prerequisite archive/purge processing for each type of information:

If you want to archive and purge…	You must first archive and purge…
Returns	Receipts
Purchase orders	Payment Requests Receipts
Requisitions	Receipts Purchase Orders
Blanket orders	Purchase Orders Requisitions
Vendor items	Payment Requests Returns Purchase orders Requisitions Blanket orders
Vendors	Payment Requests Returns Purchase orders Requisitions Blanket orders Vendor items
Stockroom items	Receipts Purchase orders Requisitions Kit orders
Item	Receipts Returns Purchase orders Requisitions Blanket orders Stockroom items
Cost	Receipts (for transfer orders)

Job Scheduler Parameters for Archiving and Purging Purchasing Information

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For more information about this window, see Understanding the Job Scheduler.

Values for Parameters

Enter the following values in the Program Name and Parameters fields when scheduling the archive/purge programs.

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccf0800.exe **UNIX:** ccf0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements and archives it. – P - Preview. Displays the data to be purged and archived before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview. **Note:** You must use the security profile of DBS when you run the Archive/Purge process.

What Happens During Purchasing Archive/Purge Processing?

The following table describes the stages of the Archive/Purge process:

Stage	Description
1	Reads the archive/purge request on the purge_request_ctrl table to determine the purchasing information to process.
2	Writes information to the appropriate candidate table for each purchase order, requisition, or blanket order that meets the selection criteria and is closed or cancelled.
3	Validates each row of the candidate table and deletes ineligible ones.
4	Depending on the type of processing requested, it adds and deletes rows in the appropriate purchasing tables.
5	Maintains information in the purge tables as needed.

14 Receivables

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Receivables Processing

Receivables is a software application that records customer purchases and payments for goods and services. It records the activity of invoices, remittances, write-offs, chargebacks, finance charges, and other related transactions.

You can process Receivable transactions by

- Using the applicable Receivable windows to enter information in the fields
- Scheduling processes to perform transactions and run unattended in the SmartStream environment.

Using Receivables Windows

Using the Receivables windows you can process accounts receivable transactions interactively. See the Receivables online Help for procedures that you can perform using the windows. Also, online Help provides detailed information about each window and its associated fields.

Scheduling Processes

Receivables provides programs that you can schedule to process a large number of transactions in cases where online processing is impractical. Using the Job Scheduler, you can run these programs to perform the following tasks:

Task	Program
Extract and copy Receivable accounts, documents, remittances, and drafts to the transaction tables.	Bulk Copy
Load, display, and change Receivable accounts, documents, remittances, and drafts on the data tables.	Receivable Account Load Receivable Document Transaction Remittance Transaction Receivable Draft Load
Update and post totals of Receivable documents, remittances, deposits, and remittance allocations to the Receivable Document Journal Line table.	Receivable Document Posting Remittance Allocation Posting
Allocate remittances to pay Receivable documents including remittance-on account entries, write-offs, credit memos, debit memos, and full or partial payments.	Remittance Algorithm Allocation
Create and delete finance charge notices on the data tables.	Finance Charge Notice Generation Finance Charge Notice Delete
Create a receivable document for a finance charge notice.	Finance Charge Receivable Document Create
Generate drafts based on Receivable policy.	Receivable Draft Generation
Distribute Receivable drafts to banks for payment processing.	Receivable Draft Bank Distribution
Make drafts available for bank clearance.	Receivable Draft Maturity
Calculate the age of receivable documents and accumulate aging totals.	Aging
Analyze receivable documents and drafts; extract and store data for user-defined DSO calculation.	Days Sales Outstanding (DSO)
Produce statements and reports.	Microsoft Access Programs – Statement – Aged Trial Balance – Draft Print – Balancing – Algorithm Allocation Statistics – Finance Charge Notice Print

Task	Program
Remove outdated information from the Receivables data tables and move it to either a history table or a file for storing on a disk or tape.	Archive/Purge

Loading Data

Use Receivable windows to set up and process individual transactions. You can access these windows from the Activity List.

- Receivable Account window
- Receivable Document window
- Remittances window
- Receivable Draft window

When online processing is impractical, you can load large numbers of accounts, documents, remittances, and drafts to data tables using one of the following methods:

- Copying transactions to the tables using the Bulk Copy program and Job Scheduler
- Writing transactions directly to the transaction tables.

Using the Bulk Copy Program and Job Scheduler

When you copy transactions using bulk copy, Receivables adds a user identifier to the transaction. If you enter a SmartStream user identifier, Receivables uses that identifier. If you do not enter a SmartStream user identifier, the user identifier found in the security profile for that scheduled processing run is used.

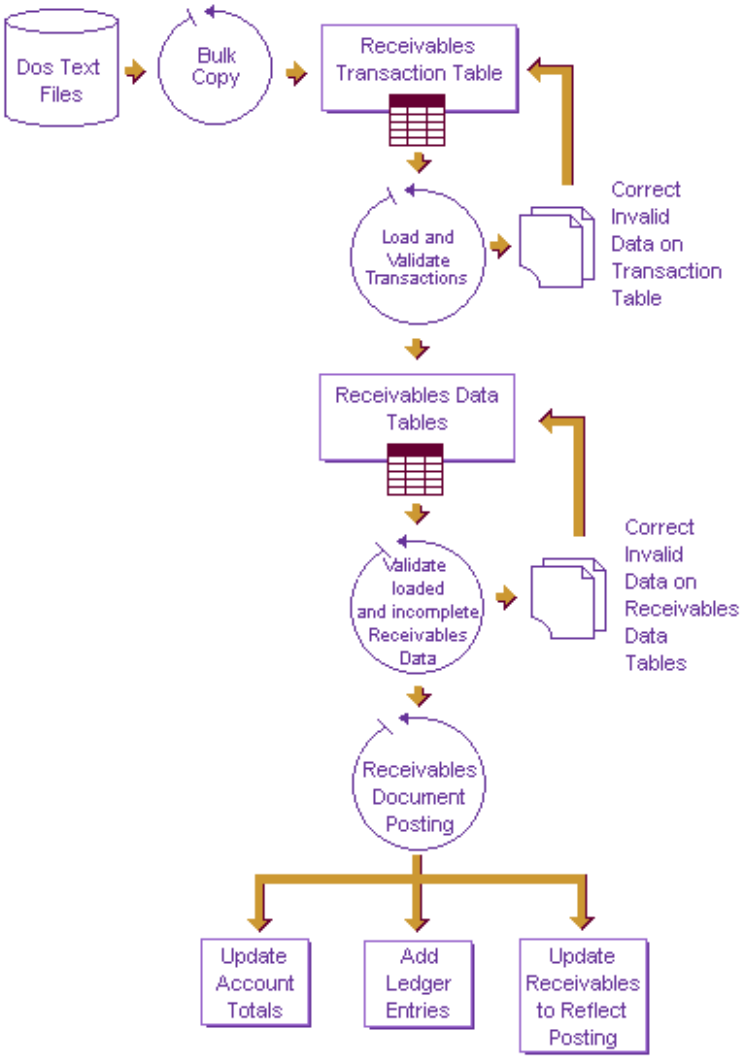
This table lists the major steps you perform to load large numbers of accounts, documents, remittances, and drafts into Receivables using the Bulk Copy program (dbsbulk.exe), load programs, and Job Scheduler.

Step	Task	Description
1	Define a security profile and set up the Enterprise and Receivables policies.	Before you load any data, be sure that you have defined a security profile to specify a user identifier for the user who has database owner authority. Also, be sure that you have set up the applicable Enterprise and Receivable policies.
2	Extract and format transaction data.	For each transaction type, extract data from the source database and create a text file formatted according to the specific transaction layout. **Note:** If you use Microsoft Excel to create the formatted text file, be sure to save the file as .txt (tab delimited) or .csv (comma delimited).
3	Move the formatted text files to the same directory as the Poll program or to a directory mapped to the Poll program.	For more information about the Poll program, see The Poll Program in the SmartStream Administration guide.

Step	Task	Description
4	Set the Bulk Copy parameters to copy transaction text files to the transaction table.	Use the Bulk Copy Parameters window to enter parameters for each transaction type: Receivable Account Transaction Receivable Document Transaction Remittance Transaction Receivable Draft Transaction
5	Set the Job Scheduler parameters to create a job.	Use the Job Scheduler window to enter parameters creating a job for the transaction types. The job consists of steps that organize and run the Bulk Copy and load programs.
6	Run Job Scheduler to load and validate the data.	Run the Job Scheduler. The Bulk Copy program copies the text files to the transaction table. As the load program runs, it edits and validates the source data. The program then moves the valid data from the transaction table to the Receivable tables in the database.
7	View the progress, statistics, or errors of the scheduled job.	To review the status of Receivable jobs, view the Scheduler Log window, your mail folder, or the applicable transaction maintenance window.
8	Correct any invalid data on the transaction table.	To correct data on the transaction table, use one of the transaction maintenance windows, depending on the transaction type: For accounts, use the Recv Acct Transaction Maintenance window. For documents, use the Receivable Transaction Maintenance window. For remittances, use the Remittance transaction Maintenance window. For drafts, use the Recv Draft Transaction Maintenance window.
9	Rerun only the load program after correcting errors on the transaction table.	After you correct the invalid transaction data, create a new job in Job Scheduler to run just the load program again. Then repeat steps 7 and 8 until the data loads successfully with no errors.

Step	Task	Description
10	Correct any invalid data on the Receivables tables.	To correct data on the Receivables tables, edit the data on the appropriate window and make changes directly to the data tables. For accounts, use the Receivable Account window. For documents, use the Receivable Document window. For remittances, use the Remittance window. For drafts, use the Receivable Draft window. Because you make changes directly to the data tables when you edit the window, you do not need to run a load program again.

The following diagram shows how Receivables processes scheduled transactions.



Bulk Copy Parameters

Use the Bulk Copy Parameters window to specify values when copying transaction files from your source database to the Receivables data tables. This section lists the values you enter for the Family Name, Destination Table, Before Stored Procedure, After Stored Procedure, and Number of Columns fields for each transaction type.

Receivable Account Load Program (farc4450)

Field	Value
Family Name	rrcv
Destination Table	recv_acct_trans
Before Stored Procedure	fsp_upd_rabt_before_bulk_copy
After Stored Procedure	fsp_upd_rabt_after_bulk_copy
Number of Columns	30

Receivable Document Transaction Program (farc0101)

Field	Value
Family Name	rrcv
Destination Table	recv_trans
Before Stored Procedure	fsp_upd_rrbt_before_bulk_copy
After Stored Procedure	fsp_upd_rrbt_after_bulk_copy
Number of Columns	52

Remittance Transaction Program (farc2200)

Field	Value
Family Name	rrcv
Destination Table	remit_trans
Before Stored Procedure	fsp_upd_rcbt_before_bulk_copy
After Stored Procedure	fsp_upd_rcbt_after_bulk_copy
Number of Columns	26

Receivable Draft Load Program (farc6500)

Field	Value
Family Name	rrcv
Destination Table	recv_draft_trans
Before Stored Procedure	fsp_upd_rfbt_before_bulk_copy
After Stored Procedure	fsp_upd_rfbt_after_bulk_copy
Number of Columns	16

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe	User-defined Bulk Copy Parameter Key established on the Bulk Copy Parameters window.

Validating a Transaction

During scheduled processing, the Bulk Copy program copies transaction data from the source database to a Receivables transaction table and adds a time stamp in the first column. The transaction table is a staging table for the Receivables database.

Converting Transactions into Receivables Data

After the Bulk Copy program creates a copy of the transaction, the load program verifies that

- All numeric fields contain numeric data
- The transaction type is a valid transaction type
- All date fields contain valid dates based on a yyyy/mm/dd format.

If a transaction fails to meet any of these conditions, the program rejects it and the data remains on the transaction table so that you can correct it. An activity message is sent to the user specified on the transaction informing the user of the error.

When a transaction passes the transaction validation, the load program moves it to the Receivable data tables with a status of Incomplete.

Next the load program verifies that the data loaded to the Receivable data tables has valid identifiers for items such as the receivable document, terms, entity, account, currency, taxes, and control group. When the document passes validation, the load program changes its status from Incomplete to Unposted, or if the NO_POST parameter is not set, to a status of Open (posted).

Writing Transactions Directly

If you generate transactions from another product, such as an in-house product, you can write your own extract and load programs to add transactions directly to the transaction tables.

Follow this procedure to update directly the

- Receivables transaction table (recv_trans)
- Receivable account transaction table (recv_acct_trans)
- Receivable draft transaction table (recv_draft_trans)
- Remittance transaction table (remit_trans)

Step	Task	Description
1	Define a security profile and set up the Enterprise and Receivables policies.	Before you load any data, be sure that you have defined a security profile to specify a user identifier for the user who has database owner authority. Also, be sure that you have set up the applicable Enterprise and Receivable policies.
2	Run or perform the contents of the stored procedure.	
	If running...	**Then run...**
	Receivable account transactions	DBSrrcv.dbo.fsp_upd_rabt_before_bulk_copy
	Receivable document transactions	DBSrrcv.dbo.fsp_upd_rrbt_before_bulk_copy
	Remittance transactions	DBSrrcv.dbo.fsp_upd_rcbt_before_bulk_copy
	Receivable draft transactions	DBSrrcv.dbo.fsp_upd_rfbt_before_bulk_copy
3	Update the Receivables transaction table using your own method.	
4	Run or perform the contents of the stored procedure.	
	If running…	**Then run…**
	Receivable account transactions	DBSrrcv.dbo.fsp_upd_rabt_after_bulk_copy
	Receivable document transactions	DBSrrcv.dbo.fsp_upd_rrbt_after_bulk_copy
	Remittance transactions	DBSrrcv.dbo.fsp_upd_rcbt_after_bulk_copy
	Receivable draft transactions	DBSrrcv.dbo.fsp_upd_rfbt_after_bulk_copy
5	Run the load program to load and validate the data.	As the load program runs, it validates the source data. Then the program moves the valid data from the transaction table to the Receivables Document data tables.
	If loading…	**Then run the load program…**
	Receivable account transactions	Windows: farc4450.exe UNIX: FARC4450
	Receivable document transactions	Windows: farc0101.exe UNIX: FARC0101
	Remittance transactions	Windows: farc2200.exe UNIX: FARC2200
	Receivable draft transactions	Windows: farc6500.exe UNIX: FARC6500
6	View the status.	To review the status of Receivable jobs, view the Scheduler Log window, your mail folder, or the applicable transaction maintenance window.

Step	Task	Description
7	Correct any invalid data on the transaction table.	To correct data on the transaction table, use one of the transaction maintenance windows, depending on the transaction type: For accounts, use the Recv Acct Transaction Maintenance window. For documents, use the Receivable Transaction Maintenance window. For remittances, use the Remittance transaction Maintenance window. For drafts, use the Recv Draft Transaction Maintenance window.
8	Rerun only the load program after you correct transaction errors	After you correct the transaction errors on a transaction maintenance window, create a new job in Job Scheduler to run the load program again. Then repeat steps 6 and 7 until the data loads successfully with no errors.
	Correct invalid data on the Receivables tables.	To correct data on the Receivables tables, use the appropriate Receivable document window to make changes directly to the data tables. Because you make changes directly to the data tables on the document windows, you do not need to run a load program again.

Using Receivables Transaction Layouts

Receivables scheduled processing uses text files to hold the information for transactions and expects these files to be in a specific format. The text files can come from a third-party product or an internal billing product. Transaction layout tables provided in the following sections list the field information and the arrangement you must use when formatting the text files.

If you need to correct transactions after they are loaded into Receivables, you can change them using the appropriate online transaction maintenance window.

Creating a Text File

Some tools that you can use to extract data and create text files are

- Spreadsheets such as Microsoft Excel or Lotus 1-2-3
- Microsoft Access
- User-created tools that download data from a host.

If you use Microsoft Excel or Lotus 1-2-3 to create the formatted text file, be sure to save the file as .txt (tab delimited) or .csv (comma delimited).

Note: You can use Notepad to verify the formatting before you begin processing.

Entering Field Information

Follow these guidelines when entering the field information:

- Determine the delimiter to use to separate the values for the fields. You can choose a comma (,), a tab, or a pound sign (#).
- If a field is required, enter a value.
- If the field is blank, enter a delimiter as a placeholder for the blank field.
- If a field is conditionally required, enter a value for the field depending on the rules that apply to the other fields you entered for the Receivables transaction.
- If a field is optional, you can leave it blank. If you do leave it blank, make sure you enter the delimiter you defined to hold its place.
- If a field is optional and accepts a default value, enter a pound sign (#) in the field if you want to leave it blank.

Field Type Formats

Each field type has a required format. The following table describes these formats.

Field Type	Format Requirements
Alphanumeric	Use alphabetic letters, numbers, or a combination of both. Use a single blank to represent an empty field.
Date	All dates must be entered in yyyy/mm/dd format for Receivables transactions. Enter a separator between year, month, and day. You do not need to enter leading zeros for month or day. For example, you can enter 3 or 03 for March. The format of the date as it appears on your windows is determined by choices made on the Windows Control Panel of the Poll machine. Display choices include the way you display the month, day, and year, and the kind of separator you use. You can also choose whether to display the century indicator.
Numeric	Enter an amount with or without the decimal separator. If you do not enter a decimal separator, Receivables treats the amount as a whole number. If you enter a number with decimal positions, the number of positions you enter must be less than or equal to the number of decimal positions specified for the associated transaction currency. Enter a positive or a negative value with its corresponding sign. The Receivables policy choices made on the Currency view of Enterprise Policy window determine the display formats. For percentages, enter a number between 1 and 100 with or without a decimal separator. Use the Windows defaults for the Poll machine to define the decimal separator you use with percentages and to indicate whether to display leading zeros. SmartStream Financials determines how many numerals it displays to the right of the decimal separator; it can be fewer or more than you enter.

Types of Transactions

Receivables provides four types of transactions that you can process using the Job Scheduler:

- Receivable Account Transaction Layouts
- Receivable Document Transaction Layouts
- Remittance Transaction Layouts
- Receivable Draft Transaction Layouts

Processing Receivable Accounts

The Receivable Account Load program reads the receivable account transactions copied to the transaction tables and loads them into Receivables tables in the database. It then performs all validations associated with each transaction.

Scheduling Receivable Account Processing

Follow this process to schedule receivable account processing and determine if the job completed successfully:

Step	Task	Action or Activity
1	Enter the Bulk Copy parameters to copy transaction text files to the transaction table. Skip this step if you are writing the transactions to the data tables directly.	Bulk Copy Parameters window
2	Enter Job Scheduler parameters to run the Bulk Copy program (dbsbulk.exe) and copy all transactions to the transaction table. Enter the Bulk Copy Parameter key that you created in Step 1 as the parameter for the Bulk Copy program. Skip this task if you are writing the transactions to the data tables directly. Enter Job Scheduler parameters to run the Receivable Account Load program (farc4450) to load and validate all the scheduled and online transactions.	
3	Review messages that result from the Poll program.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway To Do messages Reports
5	Diagnose and correct any transaction errors.	Recv Acct Transaction Maintenance window
6	Rerun only the Receivable Account Load program (farc4450) when you have corrected transaction errors. After you correct the invalid transaction data, create a new job in Job Scheduler to run just the Receivable Account Load program again. Repeat steps 3, 4 and 5 until the data load successfully with no errors.	Job Scheduler window

Job Scheduler Parameters

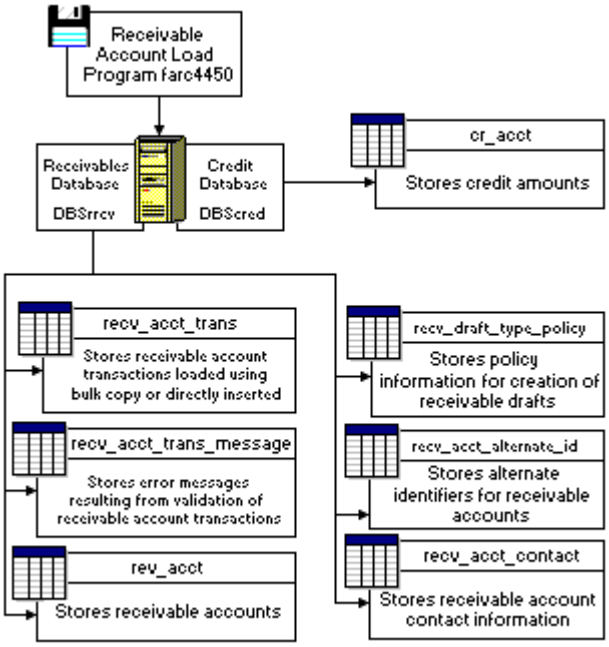
Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Receivable Account Load	**Windows:** farc4450.exe **UNIX:** farc4450	None

Receivable Account Load Program

During the loading of accounts, Receivables

- Loads input transactions
- Loads receivable account bank account information
- Updates the appropriate tables with valid transactions
- Flags invalid transactions as errors.



Receivable Account Transaction Layouts

For general information about adding transactions, see Entering Field Information.

Scheduling Transaction Changes

When you schedule a transaction change, the only fields that you need to include are the receivable account identifier and the fields that you want to change along with any related fields. You can leave all other fields blank; the blank fields have no effect on the existing receivable account.

To reset a receivable account transaction to spaces or zeros, enter an asterisk (*) in the corresponding field on the transaction change. For example, an amount field resets to zeros and a name field to spaces.

Formatting Address, Phone, and Fax Information

The scheduled process moves address, phone, and fax data to the corresponding fields in the Receivable data tables according to the formats specified in policy. No validation of phone format information you enter is performed for scheduled receivable account transactions. Be sure to format this information in the transactions according to the policy specified. For more information about address formats, see Address Formats in the *Shared Components Technical Reference*.

Layout Details

Use the following transaction layouts to process receivable accounts:

Receivable Account Transaction Layout	Use this transaction layout to...
Receivable Account General Information (RAAA)	Add basic receivable account records.
Receivable Account History (RAAH)	Add information about previous account maintenance including the last receivable document, remittance, statement, and dunning notice associated with the account.
Receivable Account Report Information (RARI)	Add information used by the reporting activities. Receivables uses enterprise policy information as a default if this information is not loaded for an account.
Receivable Account Draft Information (RADR)	Enter information about drafts pertaining to receivable accounts. A valid RADR transaction turns on the Draft Allowed indicator on the receivable account.
Receivable Account Comment (RACM)	Add comments describing each receivable account.
Receivable Account Alternate Identifier (RAAI)	Enter information to define an additional identifier for a receivable account.
Receivable Account Contact (RAAC)	Enter contact information for a receivable account.
Receivable Account Delete (RADL)	Delete receivable accounts. The receivable account is not physically deleted, but the active/inactive indicator is set to inactive. For an account to qualify for deletion (inactive), it cannot have any open receivable documents, receivable drafts, or remittances for the account.

Note: When adding a new account, only the RAAA transaction is mandatory. When updating an existing receivable account, all transactions are optional. When deleting an account, enter only the RADL transaction.

Receivable Account General Information Transaction (RAAA)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Record transactions, enter RAAA.
3	1	Receivable Account	17 alphanumeric	Required Unique identifier for the customer account responsible for payment of a receivable account balance.
4	2	Account Name	60 alphanumeric	Required Unique user-defined name or label for a receivable account.
5	3	Address Format	6 alphanumeric	Required Specified form or style used to enter a receivable account address. The format you choose determines how address information is handled for receivable accounts including address, street or PO box number, city name, state or province code, postal code, and country code. Make sure that the address information is placed in the address fields that correspond to the correct address format. For more information about address formats, see Address Formats in the Shared Components Technical Reference.
6 7 8 9 10	4 5 6 7 8	Address Lines 1-5	35 alphanumeric	Optional The first through fifth lines of the address for the receivable account. Entries in this field are dependent on the address format chosen. For more information, see Address Formats.
11 12 13	9 10 11	Street or PO Box 1-3	35 alphanumeric	Optional The first through third lines used to enter the street or PO box number for the receivable account. Entries in this field are dependent on the address format chosen. For more information, see Address Formats.

Column	Field	Name	Length	Description
14	12	City	35 alphanumeric	Optional Name of the city for the receivable account mailing address.
15	13	Province - State Code	9 alphanumeric	Optional Unique identifier for the province or state for the receivable account mailing address.
16	14	Postal Code	9 alphanumeric	Optional Unique identifier for the delivering post office for the receivable account. Used in the Canada, France, Generic, United Kingdom, and U.S. formats.
17	15	Country	3 alphanumeric	Conditional Unique identifier for the country for the receivable account. Required if a value is entered for the Province - State Code.
18	16	Terms Policy ID	17 alphanumeric	Optional Unique code identifying the terms of payment policy associated with the receivable document or receivable draft.
19	17	Remit -To	17 alphanumeric	Optional Unique code identifying the location where you want customers to send remittances for the receivable account.
20	18	Credit Account	17 alphanumeric	Optional Identifies the credit account that you want to associate with the receivable account. The credit account determines credit policy for the receivable account.
21	19	Default Country Code	3 alphanumeric	Optional Identifies the name of the country for the receivable account. If you selected a country when you entered the receivable account address, that country serves as the default for this field. Otherwise, the default country comes from enterprise policy.

Column	Field	Name	Length	Description
22	20	Draft Allowed	1 alphanumeric	Required Indicates whether this receivable account permits drafts. Y = Yes N = No. If you enter Y, you must also add a Receivable Account Draft Information (RADR) transaction.
23	21	Currency Option	1 alphanumeric	Required Unique code identifying whether the receivable account is single or multiple currency. M = Multiple S = Single.
24	22	Rate Entity	5 alphanumeric	Conditional Identifies the source of monetary conversion rates for the receivable account. Must be blank if the currency option is set to S (Single), or if the rate entity field is blank. Required if the currency option is set to M (Multiple).
25	23	Rate Type	1 alphanumeric	Conditional Identifies the currency exchange rate that a rate entity uses. Must be blank if the currency option is set to S (Single), or if the rate entity field is blank. Required if the currency option is set to M (Multiple).
26	24	Rate Date Option	3 alphanumeric	Conditional The date option to use when Receivables retrieves currency exchange rates during processing of receivable document or receivable drafts. Required if the currency option is set to M (Multiple). Must be blank if the currency option is set to S (Single), or if the rate entity field is blank. DOC = Creation date assigned to the receivable document or draft ENT= Date you enter the document or draft into Receivables EFF = Effective date for the receivable document or draft.

Column	Field	Name	Length	Description
27	25	Transaction Currency	3 alphanumeric	Optional Identifies the default currency that the receivable account uses for conducting business transactions.
28	26	Use Algorithm for Allocation	1 alphanumeric	Required Enter **Y** for yes if you want Receivables scheduled processing to attempt to allocate remittances for the account using the algorithm(s) specified by the algorithm policy. Enter **N** for no if you do not want to use algorithms for remittance allocation.
29	27	Algorithm Policy	30 alphanumeric	Optional Unique identifier of an algorithm policy. If you do not specify an algorithm policy identifier and you entered Y for yes for the Use Algorithm for Allocation field, during allocation, Receivables uses the identifier specified for enterprise policy.
30	28	Ignore Remittance Advice	1 alphanumeric	Conditional Enter **Y** for yes if you want Receivables scheduled processing to disregard the remittance advice information entered for Receivable Account General Information transactions. Enter **N** for no if you want the remittance advice information to apply. This policy is in effect only if you entered Y for the Use Algorithm for Allocation field, and remittance advice transactions are submitted with the remittance.
31	29	Use Non-Deposit Checks	1 alphanumeric	Conditional Enter **Y** for yes if you want Receivables to attempt to use algorithms to allocate remittances that are not associated with deposits for the account. Enter **N** for no if you do not want to use algorithms for remittance allocation. This option applies only if you entered Y for the Use Algorithm for Allocation field.

Column	Field	Name	Length	Description
32	30	DUNS Number	9 alphanumeric	Optional Unique nine-digit number issued to an organization by Dun & Bradstreet Information Services for credit reporting purposes. DUNS is an acronym for Dun & Bradstreet Universal Numbering System.

Receivable Account History Transaction (RAAH)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account History transactions, enter RAAH.
3	1	Receivable Account	17 alphanumeric	Required A unique identifier for the customer account responsible for payment of a receivable account balance.
4	2	Last Receivable ID	22 alphanumeric	Optional A unique identifier for the last receivable document for this account.
5	3	Last Receivable Date	10 date	Optional The date associated with the last receivable document for this account.
6	4	Last Allocated Remittance ID	22 alphanumeric	Optional The first element of the unique identifier for the last remittance associated with the account. Receivables uses the number with the qualifier to uniquely identify a remittance.
7	5	Last Allocated Remittance Qualifier	4 numeric	Optional The second element of the unique identifier for the last remittance associated with the account. Receivables uses the qualifier with the remittance ID to uniquely identify a remittance.

Column	Field	Name	Length	Description
8	6	Late Allocated Remittance Date	10 date	Optional The date the last remittance was allocated for the account.
9	7	Last Statement Number	22 alphanumeric	Optional A cross-reference to the number of the last statement on which the account appears.
10	8	Last Statement Date	10 date	Optional The date associated with the last statement on which the receivable account appears.
11	9	Last Dunning Number	22 alphanumeric	Optional The sequential number of the last dunning notice sent to the receivable account.
12	10	Last Dunning Letter	22 alphanumeric	Optional The unique policy identifier for the last dunning letter sent to the receivable account.
13	11	Last Dunning Date	10 date	Optional The date associated with the last dunning notice on which the receivable account appears.
14	12	Last Maintenance	10 date	Optional The date of the last maintenance to the receivable account.
15	13	Last Maintenance User ID	30 alphanumeric	Optional The unique identifier for the last user who maintained the receivable account.

Receivable Account Report Information Transaction (RARI)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Report Information transactions, enter RARI.
3	1	Receivable Account	17 alphanumeric	Required A unique identifier for the customer account responsible for payment of a receivable account balance.
4	2	Language	2 alphanumeric	Required The identifier for the default language for the account. The International Organization of Standards (ISO) maintains the list of valid language identifiers.
5	3	Language Dialect	2 alphanumeric	Optional The identifier for the default language dialect for the account. This field is currently not used by Receivables and is reserved for future use.
6	4	Statement Group Code	3 alphanumeric	Optional Indicates the group in which statements for the receivable account should be included.
7	5	Statement Exempt Indicator	1 alphanumeric	Required Indicates that the receivable account should not receive statements Y = The account does not receive a statement N = The account does receive a statement.
8	6	Negative Number Display	2 date	Required Character used to indicate a negative amount on a receivables account report. PN = Parentheses. This is the default. LN = Leading minus sign TN = Trailing minus sign.

Column	Field	Name	Length	Description
9	7	Phone Number Format Code	6 alphanumeric	Required Specifies the number of fields and characters in each field that make up a telephone number. Some formats include international phone number information. You choose to include or exclude this information by the format you select. Do not enter a phone format code for a format that conflicts with phone information you are loading for the account.
10	8	Dunning Exempt Indicator	1 alphanumeric	Required Code that indicates that the receivable account should not receive dunning letters. Y = Receivable account does not receive dunning letters. N = Receivable account receives dunning letters if Credit Management is installed and the account qualifies for a dunning notice.
11	9	Date Format Option	1 alphanumeric	Required Identifies the date format used on receivable account reports. M = mm/dd/yy D = dd/mm/yy Y = yy/mm/dd
12	10	Thousand Separator	1 alphanumeric	Optional Character to use to indicate thousands in amounts on receivables account reports.
13	11	Decimal Separator	1 alphanumeric	Required Character to use to indicate decimals on receivable account reports.
14	12	Phone Format Delimiter	1 alphanumeric	Optional The symbols that separate parts of the phone number such as hyphen (-) or slash (/). Used on all phone numbers printed on reports that are sent to the account.
15	13	User Field 1	25 alphanumeric	Optional User-defined data that Receivables does not validate.

Column	Field	Name	Length	Description
16	14	User Field 2	25 alphanumeric	Optional User-defined data that Receivables does not validate.

Receivable Account Draft Information Transaction (RADR)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Draft Information transactions, enter RADR.
3	1	Receivable Account	17 alphanumeric	Required Identifies the customer account responsible for payment of a receivable account balance.
4	2	Draft Category	3 alphanumeric	Required A unique identifier for the draft category used by the receivable account. Must be valid according to draft type policy table.
5	3	Draft Type	15 alphanumeric	Required A unique identifier for the draft type used by the receivable account. This must be valid according to draft type policy table.
6	4	Generation Option	1 alphanumeric	Required The code for the option used to generate drafts for the receivable account. S = Single invoice per draft D = Group by due date A = All documents for the account.

Receivable Account Comment Transaction (RACM)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Comment transactions, enter RACM.
3	1	Receivable Account	17 alphanumeric	Required A unique identifier for the customer account responsible for payment of a receivable account balance.
4	2	Comment Sequence Number	6 numeric	Required A number assigned to comment lines. A receivable account can have multiple comments. The sequence number is used to determine the order of entry associated with a particular comment.
5	3	Comment Type	1 alphanumeric	Optional Identifies the comment. Default is A. I = Internal E = External A = All D = Display only.
6	4	Comment	255 alphanumeric	Required Free-form comment about the receivable account.

Receivable Account Alternate Identifier Transaction (RAAI)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Alternate Identifier transactions, enter RAAI.
3	1	Receivable Account	17 alphanumeric	Required A unique identifier for the customer account responsible for payment of a receivable account balance.
4	2	Alternate ID Type	5 alphanumeric	Required A user-defined identifier used to categorize the alternate identifier.
5	3	Alternate ID	30 alphanumeric	Required A user-defined, additional identifier used to identify the correct receivable account during remittance allocation. A receivable account can have many alternate identifier types and you can define many alternate identifiers within each type.
6	4	Alternate ID Description	35 alphanumeric	Optional A brief description of the alternate identifier for a receivable account.

Receivable Account Contact Transaction (RAAC)

Note: Phone and fax information entered for the Receivable Account Contact Transaction must correspond to the Phone Format Code entered on the RARI transaction. If you do not enter an RARI transaction, Receivables uses the phone format specified in your enterprise policy. Make sure that the layout of phone and fax numbers you enter fits the phone and fax format required by policy.

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Contact transactions, enter RAAC.
3	1	Receivable Account	17 alphanumeric	Required A unique identifier for the customer account responsible for payment of a receivable account balance.
4	2	Contact Name	45 alphanumeric	Required Name of an individual to contact when you need to ask questions or resolve issues about the receivable account. You can use spaces, abbreviations, and special characters.
5	3	Contact Title	30 alphanumeric	Optional Business title of the contact person for your receivable accounts. You can use abbreviations, spaces, and special characters.
6	4	Phone International Code	4 alphanumeric	Optional Code for the format of the phone numbers. Make sure the phone numbers you enter in transactions match the phone format specified. For example, if your policy calls for a three-digit area city code, make sure you enter three digits for this field in the Phone Area City Code field.
7	5	Phone Country Code	4 alphanumeric	Conditional Identifies the country for the phone system. Required when an international code is entered.

Column	Field	Name	Length	Description
8	6	Phone Area/City Code	4 alphanumeric	Optional Identifies a geographic area (for example, phone system service area) within the phone system
9	7	Phone Number	12 alphanumeric	Conditional Number for a telephone within the area that the phone system designates as local. Required when an international code is entered.
10	8	Phone Extension	5 alphanumeric	Optional The part of the telephone number that accesses an individual phone connected to the main phone line.
11	9	Fax International Code	4 alphanumeric	Optional Code for the format of the phone number for the fax. The layout of fax numbers you enter must fit the fax number format specified.
12	10	Fax Country Code	4 alphanumeric	Conditional Code used by the identifying the country for the phone system. Required when an international code is entered.
13	11	Fax Area/City Code	4 alphanumeric	Optional Identifies a geographic area (for example, phone system service area) within the phone system used by the fax.
14	12	Fax Number	12 alphanumeric	Conditional Number used by the fax within the telephone area that the phone system designates as local. Required when an international code is entered.
15	13	Contact Email Address	255 alphanumeric	The email address of the contact person for the receivable account.

Receivable Account Delete Transaction (RADL)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Account Delete transactions, enter RADL.
3	1	Receivable Account	17 alphanumeric	Required A unique identifier for the customer account responsible for payment of the receivable account balance.

Processing Receivable Documents

A receivable document is a record of an entry made to a receivable account.

You can process receivable documents using the Receivable Document window, or you can schedule the Bulk Copy program to copy receivable transactions to a transaction table and the Receivable Document Transaction program to read those transactions from the transaction table and load them into Receivable tables in the database. You can also schedule the Receivable Document Posting program to update account totals and generates journal entries.

Note: You should run the Aging program before loading receivable document transactions.

Scheduling Receivable Document Processing

Follow this process to schedule receivable document processing and determine if the job completed successfully:

Stage	Task	Action or Activity
1	Enter the Bulk Copy parameters to copy transaction text files to the transaction table. Skip this step if you are writing the transactions to the data table directly.	Bulk Copy Parameters window
2	Enter Job Scheduler parameters to run the Bulk Copy program (dbsbulk.exe) and copy all transactions to the transaction table. Enter the Bulk Copy Parameter key that you created in stage 1 as the parameter for the Bulk Copy program. Skip this task if you are writing the transactions to the data tables directly. Enter Job Scheduler parameters to run the following scheduled programs: ▪ Load and validate all the scheduled and online transactions using the Receivable Document Transaction program (farc0101). ▪ Post all scheduled and online transactions using the Receivable Document Posting program (farc0120). **Note:** Run this program depending on the parameters you set for the Receivable Document Transaction program (farc0101).	Job Scheduler window
3	Review messages that result from the Poll program.	Scheduler Log window
4	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway To Do messages Reports
5	Diagnose and correct any transaction errors.	Receivable Transaction Maintenance window

Stage	Task	Action or Activity
6	Rerun only the Receivable Document Transaction program when you have corrected transaction errors. After you correct the invalid transaction data, create a new job in Job Scheduler to run just the Receivable Document Transaction program again. Repeat steps 3, 4, and 5 until the data load successfully with no errors.	Job Scheduler window
7	Diagnose and correct any document errors. When you edit the Receivable Document window, you make changes directly to the data table. You do not need to run the Job Scheduler again.	Receivable Document window

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Receivable Document Transaction	**Windows:** farc0101.exe **UNIX:** farc0101	None – Loads and posts receivable documents. NO_POST – Only loads receivable documents. Status remains Unposted. To post the documents, run the Receivable Document Posting program (farc0120). **Note:** If Enterprise policy sets Funds Control for Receivables documents, the Receivable Document Transaction program runs with the NO_POST parameter. NEW_DOCS_ONLY – Processes only documents currently being loaded. Incomplete receivable documents previously loaded will not be processed. This parameter reduces the amount of time required to load new documents. **Note:** Separate multiple parameters with a space.
Receivable Document Posting	**Windows:** farc0120.exe **UNIX:** farc0120	None

Funds Control Integration

If Funds Control is installed and funds checking is enabled for Receivable Documents in enterprise policy or Funds Control policy, schedule the Receivable Document Transaction program and the Receivable Posting program to load and post documents.

- To schedule the loading of Receivable documents, schedule the Receivable Document Transaction program (farc0101) to run with the NO_POST parameter.
- To schedule the posting of unposted Receivable documents, schedule the Receivable Posting program (farc0120).

Funds checking occurs each time a document is posted. If the document passes funds checking, the Receivable Posting program continues to post the document, and the document status changes to Open.

If funds checking fails, the document is not posted. The status of the document remains Unposted. A workflow message notifies the Funds Control manager that an exception occurred that needs resolution and identifies the type of exception. The Scheduler log also displays a message that an exception has occurred.

Receivable Document Transaction Program

When you schedule and run the Receivable Document Transaction program, you can load transactions for existing documents with a status of Incomplete or Unposted, or you can load new documents.

During the receivable document transaction processing, Receivables

- Adds invoices, credit memos, and debit account receivable documents
- Adds comments for receivable documents
- Adds control groups and control group comments
- Updates the customer receivable account detail with the receivable document
- Updates the customer receivable accounts total due and all related totals
- Generates journal entries to update Ledger balances
- Updates the control group header with the number and amount of the receivable documents it is posting if the receivable document is part of a control group
- Changes the document status to Unposted if the document is successfully loaded and validated.
- Changes the document status to Open if you do not use the NO_POST parameter and the document is successfully posted.

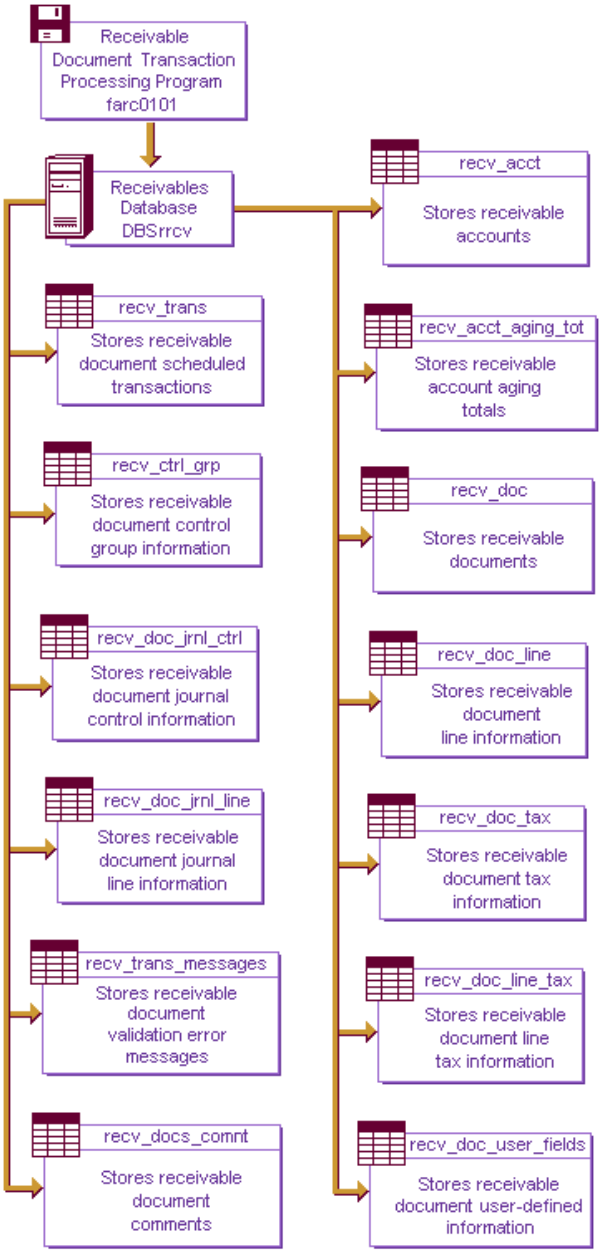
When the document is successfully posted, you can age the document, as well as generate drafts and remittances.

Validation

During processing, validation occurs in two phases:

- Transaction validation - Ensures that transaction values are the correct data type and within an acceptable range. The program treats each transaction as a separate entity without regard for other transactions.

- Document validation - Ensures that specific field values of all incomplete documents are valid. This validation includes documents that you just loaded as well as documents that have transactions associated with them or have a status of Incomplete.



Receivable Document Transaction Layouts

For general information about adding transactions, see Entering Field Information.

Layout Details

Use the following transaction layouts to process receivable documents:

Receivable Document Transaction Layout	Use this transaction layout to...
Receivable Document Control Group (RRCG)	Define a control group composed of receivable document entries.
Receivable Document (RRCV)	Define the basic receivable document information.
Receivable Document Accounting Distribution (RRCD)	Define the ledger distributions associated with the receivable document.
Receivable Document Tax (RRTX)	Define all taxes that apply to the receivable document total, freight total, or miscellaneous charge total.
Receivable Document Line (RRLN)	Define the receivable line items for the receivable document.
Receivable Document Line Tax (RRLT)	Define the tax amounts and distributions for receivable line items.
Receivable Document Comment (RRCM)	Enter comments concerning a receivable entry.
Receivable Document User Field (RRUF)	Enter text or amounts in user-defined fields.

Note: When you add a new document, only the RRCV transaction is mandatory.

Receivable Document Control Group Transaction (RRCG)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRCG.
3	Key 1	Control Group ID	10 alphanumeric	Required Identifies the control group of receivable documents.
4	Key 2	Control Group Date	10 date	Required Date of the control group. Current date is the default.

Column	Field	Name	Length	Description
5	1	Control Group Amount	25 numeric	Required Total amount of the receivable documents you expect to enter for the control group. Balanced against the actual amount of the receivables entered for the control group. If you enter multiple currencies in the same control group, this total represents a hash total.
6	2	Control Count	15 numeric	Required Number of receivable documents you expect to enter for the control group. Balanced against the actual number of receivable documents in the control group.
7	3	Effective Date	10 date	Optional Date to use for posting the receivable document to ledger.
8	4	Operator ID	30 alphanumeric	Optional User responsible for the control group. Receives all messages generated as a result of processing the control group.

Receivable Document Transaction (RRCV)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRCV.
3	Key 1	Receivable ID	22 alphanumeric	Required Unique identifier for the receivable.
4	Key 2	blank	19	Must be empty.
5	1	Description	35 alphanumeric	Optional Description for the receivable document.

Column	Field	Name	Length	Description
6	2	Control Group ID	10 numeric	Conditional If your enterprise policy specifies that control groups are required, enter the control group identifier in this field. If the receivable document participates in the control group, enter the control group identifier in this field.
7	3	Control Group Date	10 date	Conditional If your enterprise policy specifies that control groups are required, enter the date of the control group in this field. If the receivable document participates in the control group, enter the date of the control group in this field.
8	4	Account ID	17 alphanumeric	Required Unique identifier for the customer account that is responsible for payment of the document's balance.
9	5	Entity ID	5 alphanumeric	Required User-defined identifier that you define on the Receivable Entity Policy window. It represents a set of processing rules. The processing rules organize receivable documents based on how you decide to track them within your enterprise.
10	6	Document Category	3 alphanumeric	Required Classification of the receivable document. INV = Invoice DM = Debit memo CM = Credit memo
11	7	Document Type	15 alphanumeric	Required User-defined identifier that you define on the Receivable Document Type Policy window. It represents subclasses for a receivable document.
12	8	Receivable Date	10 date	Optional Date of the receivable document. Corresponds to the date of the invoice, credit memo, debit memo, and chargeback. Current date is the default.

Column	Field	Name	Length	Description
13	9	Effective Date	10 date	Optional Date to use for posting the receivable document to Ledger.
14	10	Due Date	10 date	Optional Date payment is due for a receivable document. Can be entered or calculated based on the payment terms in effect.
15	11	Dispute Date	10 date	Optional Date a receivable document is assigned a disputed status.
16	12	Disputed	1 alphanumeric	Optional Indicates whether the accuracy of the receivable document is in question. Y = Yes N = No
17	13	Terms	17 alphanumeric	Optional Unique code identifying the terms of payment associated with the receivable document.
18	14	Discount Due Date	10 date	Optional Date payment is due to qualify for the discount according to the terms defined for the receivable document. Overrides the discount due date calculated based on the terms policy.
19	15	Adjusted Discount Due Date	10 date	Optional Discount due date adjusted by adding the grace days. Overrides the adjusted discount due date calculated based on the terms policy.
20	16	Nondiscount Amount	14 amount	Optional Portion of the document for which no discount can be taken.
21	17	Discount Amount	25 amount	Optional Amount a customer can deduct from a receivable if the full payment is received before the discount due date calculated according to the terms policy. Overrides the discount amount calculated based on the terms policy.

Column	Field	Name	Length	Description
22	18	Assigned To	30 alphanumeric	Optional Identifies the user responsible for the receivable document. This user receives all messages generated as a result of processing the document.
23	19	Goods and Services Amount	14 amount	Conditional Total amount of goods and services for the receivable document. If you enter line items, this amount is the total of the sales line amounts. Enter either a positive amount or a negative amount. If the document is a credit memo and you enter a positive amount, Receivables converts it to a negative number.
24	20	Freight Amount	25 amount	Conditional Freight charges included in the receivable document's total. If you enter line items, this amount is the total of the line amounts. Enter either a positive amount or a negative amount. If the document is a credit memo and you enter a positive amount, Receivables converts it to a negative number
25	21	Miscellaneous Charge Amount	25 amount	Conditional Charges in the receivable document total other than charges for goods and services, taxes, or freight. If you enter line items, this amount is the total of the line amounts. Enter either a positive amount or a negative amount. If the document is a credit memo and you enter a positive amount, Receivables converts it to a negative number.
26	22	Document Total	25 amount	Required Sum of the document's goods and services amount, freight amount, miscellaneous charges, and taxes. Represents the balance due for a receivable document. Enter a positive number; if the document is a credit memo, Receivables converts the amount to a negative number.
27	23	Statistical Amount	25 amount	Optional Amount used to record statistical information about a receivable document. Passed to Ledger during posting.

Column	Field	Name	Length	Description
28	24	Currency Code	3 alphanumeric	Optional Identifies the currency used for the transaction. The currency code in account policy, entity policy, or enterprise policy, in that order, serves as the default.
29	25	Rate Entity Identifier	5 alphanumeric	Optional Identifies the entity used to maintain the exchange rate. The rate entity in account policy, entity policy, or enterprise policy, in that order, serves as the default. If you use the euro triangulation process to convert currencies or to override a rate of exchange, enter a euro-compliant rate entity.
30	26	Currency Rate Type	1 alphanumeric, user-defined	Optional One-character, user-defined identifier representing the type of rate being used. If you use the euro triangulation process to convert currencies or to override a rate of exchange, enter a euro-compliant rate type. The rate type must associate an exchange rate for the conversion of the transaction currency to the euro, as well as an exchange rate for the conversion of the euro to the booking currency.
31	27	Rate of Exchange	15 numeric	Optional Percentage used to convert the transaction currency of the document to its associated booking currency. The default is based on the rate entity and rate type. You can enter a rate of exchange for a transaction when either of the following conditions is met: ▪ When the rate entity is not euro-compliant ▪ When the rate entity is euro-compliant and triangulation is not used. If the conditions in the preceding list are **not** met and you enter a rate of exchange, the transaction is loaded with a status of Incomplete and system rates are used as defaults.

Column	Field	Name	Length	Description
32	28	Currency Rate Date	10 date	Optional Date used when determining the rate of exchange.
33	29	Cross-Reference Number	22 alphanumeric	Optional Unique number linking this receivable document to a related receivable document. For example, a credit memo can be cross-referenced to an earlier invoice using this number.
34	30	Original Document	22 alphanumeric	Optional Unique code that cross-references a receivable to the most recent document the receivable originates from. For example, if a base document that is an invoice results in two later chargebacks, the originating document for the first chargeback is the invoice, and the originating document for the second chargeback is the first chargeback.
35	31	Base Document	22 alphanumeric	Optional Unique code that cross-references a receivable document to the first document in a series of documents that this document originates from.
36	32	Purchase Order	22 alphanumeric	Optional Identifying number that the customer's order processing department assigns to the purchase order.
37	33	Voucher Number	15 alphanumeric	Conditional Unique identifier assigned to the receivable. Required if your receivable entity policy specified the Required Voucher number option. Do not enter an identifier in this field if the Allow Overrides option is off.
38	34	Shipment Date	10 date	Optional Date the goods were shipped or services rendered.
39	35	Shipment Reference Number	22 alphanumeric	Optional Number assigned by the original shipper to identify a specific shipment of goods.
40	36	Carrier Identifier	17 alphanumeric	Optional Identifies the person or enterprise used to transport goods between two locations.

Column	Field	Name	Length	Description
41	37	Remittance Type	5 alphanumeric	Optional Identifies the type of remittance. Check Draft
42	38	Draft Category	3 alphanumeric	Conditional Classification of the draft. Required only if the Remittance Type option is Draft. PRO = Promissory note DRF = Bill of exchange
43	39	Draft Type	15 alphanumeric	Conditional User-defined identifier that lets you define different policies associated with the draft category of a Receivable document.
44	40	Trans to Euro Rate	16 numeric	Optional When triangulation is used, this is the exchange rate used to convert the transaction currency to the euro. You can enter this rate for a transaction only when **all** the following conditions are met: ▪ The rate entity is euro-compliant with the Euro Compliance options set to Triangulation with One Participating Currency ▪ The transaction currency is not participating If the conditions in the preceding list are **not** met and you enter a transaction to euro rate, the transaction is loaded with a status of Incomplete and system rates are used as defaults.

Column	Field	Name	Length	Description
45	41	Euro to Base Rate	16 numeric	Optional When triangulation is used, this is the exchange rate used to convert the euro to the base (booking) currency. You can enter this rate for a transaction only when **all** the following conditions are met: ▪ The rate entity is euro-compliant with the Euro Compliance options set to Triangulation with One Participating Currency ▪ The base currency is not participating If the conditions in the preceding list are **not** met and you enter a euro to base rate, the transaction is loaded with a status of Incomplete and system rates are used as defaults.

Receivable Document Accounting Distribution Transaction (RRCD)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRCD.
3	Key 1	Receivable ID	22 alphanumeric	Required Unique identifier for the receivable document with which this transaction is associated.
4	Key 2	blank	19	Must be empty.
5	1	Ledger Entity (AR)	5 alphanumeric	Optional The Ledger entity for posting the accounts receivable entry generated as a result of adding the document.
6-17	2-13	Ledger Key 1-12 (AR)	30 alphanumeric	Optional Identifier for the format of accounts receivable distribution you use when posting the Ledger entity.
18	14	Ledger Entity (sales)	5 alphanumeric	Optional Identifier for a group within Ledger that has its own accounting, reporting, and control requirements. Is the Ledger entity used when posting sales entries to your ledger.
19-30	15-26	Ledger Key 1-12 (sales)	30 alphanumeric	Optional Identifier for the format of the sales distribution used when posting sales entries to your ledger.
31	27	Ledger Entity (freight)	5 alphanumeric	Optional Identifier for a group within Ledger that has its own accounting, reporting, and control requirements. Is the ledger entity used when posting freight income to your ledger.
32-43	28-39	Ledger Key 1-12 (freight)	30 alphanumeric	Optional Identifier for the format of the freight income distribution used when posting freight income to your ledger.

Column	Field	Name	Length	Description
44	40	Ledger Entity (misc.)	5 alphanumeric	Optional Identifier for a group within Ledger that has its own accounting, reporting, and control requirements. Is the Ledger entity used when posting the miscellaneous charges to your ledger.
45-56	41-52	Ledger Key 1-12 (misc.)	30 alphanumeric	Optional Identifier for the format of the miscellaneous charge distribution used when posting miscellaneous charges to your ledger.

Receivable Document Tax Transaction (RRTX)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRTX.
3	Key 1	Receivable Identifier	22 alphanumeric	Required Unique identifier of the receivable document this transaction is associated with.
4	Key 2	blank	19	Must be empty.
5	1	Tax Type	1 alphanumeric	Required Code used to classify taxes included in the receivable document. D = Document F = Freight M = Miscellaneous
6	2	Tax Rule	20 alphanumeric	Required Set of tax rules applied to the receivable document, for example, sales tax or use tax.
7	3	Tax Rate Code	5 alphanumeric	Optional Identifier for the percentage to use to multiple the tax basis when calculating the tax amount.

Column	Field	Name	Length	Description
8	4	Orig. Tax Identifier	20 alphanumeric	Required Unique identifier a taxing authority issues to identify the location of the company that shipped the goods.
9	5	Destination Tax Identifier	20 alphanumeric	Required Unique identifier a taxing authority issues to identify the person or enterprise receiving the shipment of goods.
10	6	Destination Exempt Tax Identifier	20 alphanumeric	Optional Unique identifier a taxing authority uses to relieve the receiver of a shipment of goods from a tax liability.
11	7	Tax Amount	25	Optional Amount of tax billed for the specified tax rule or rate.
12	8	Basis Amount	25	Optional Amount used to calculate the tax amount for the receivable document. The amount can include goods, freight, miscellaneous charge, or other taxes depending on policy decisions.
13	9	Ledger Entity	5 alphanumeric	Optional Identifier for a group within Ledger that has its own accounting, reporting, and control requirements. Use the Ledger entity when posting the tax amount to your ledger.
14-25	10-21	Ledger Key 1-12	30 alphanumeric	Optional Key to the accounts that reside on the Chart of Accounts table. Is a combination of the ledger entity and two to twelve elements and is established when enterprise policy is installed. Identifies the format of the tax distribution used when posting the tax amounts to your ledger.

Receivable Document Line Transaction (RRLN)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRLN.
3	Key 1	Receivable Identifier	22 alphanumeric	Required Unique identifier for the receivable document with which this transaction is associated.
4	Key 2	Line Number	8 alphanumeric	Required Number assigned to each line item associated with a receivable. Must start with 1 and increment sequentially by 1.
5	1	Description	35 alphanumeric	Optional Name or description of a receivable line item.
6	2	Line Amount	25 amount	Required Amount of goods or services, freight, or miscellaneous charges associated with a line item. Using the corresponding sign, enter either a positive or a negative value. Enter a negative value for the line amount if you want to reverse the normal debit and credit journal entries. If a line amount is currently negative, but you want it to be positive, you must delete the line and then enter it as a negative value.
7	3	Statistical Amount	15 numeric	Optional Amount that can be used to record statistical information about a receivable document. Enter this amount as either a positive or negative value, regardless of the sign of the corresponding line amount. Receivables passes this amount on the journal entry generated for the line signed the way you enter it.
8	4	Item Number	35 alphanumeric	Optional Identifier for a line item. Can be used for a product number, serial number, or other identifier.

Column	Field	Name	Length	Description
9	5	Distribution Type Code	3 alphanumeric	Optional Identifies the type of distribution associated with the line amount. 800 = Sales 802 = Freight Income 804 = Miscellaneous Income
10	6	Ledger Entity (line)	5 alphanumeric	Optional Group within Ledger that has its own accounting, reporting, and control requirements. Is the ledger entity used when posting the line amount to the appropriate offset distribution, such as sales, freight, miscellaneous charges.
11- 22	7-18	Ledger Key 1-12	30 alphanumeric	Optional Identifier for the format of the offset distribution used when posting the sales, freight income, and miscellaneous income amount(s) to your ledger. Depends on the value in the Distribution Type Code field.

Receivable Document Line Tax Transaction (RRLT)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRLT.
3	Key 1	Receivable Identifier	22 alphanumeric	Required Unique identifier of the receivable document with which this transaction is associated.
4	Key 2	Line Number	8 alphanumeric	Required Number indicating which line is associated with the tax.
5	1	Tax Rule	20 alphanumeric	Required Set of tax rules applied to the receivable document, for example, sales tax or use tax.

Column	Field	Name	Length	Description
6	2	Tax Rate Code	5 alphanumeric	Required Identifier for the percentage to use to multiple the tax basis when calculating the tax amount.
7	3	Originating Tax ID	20 alphanumeric	Required Unique identifier a taxing authority issues to identify the shipper representing the location that shipped the goods.
8	4	Destination Tax ID	20 alphanumeric	Required Unique identifier a taxing authority issues to identify the person or enterprise receiving the shipment of goods.
9	5	Destination Exempt Tax ID	30 alphanumeric	Optional Unique identifier a taxing authority uses to relieve the receiver of a shipment of goods from a tax liability.
10	6	Tax Amount	25 amount	Optional Amount of tax associated with a line on a receivable document. Enter the tax amount using the same sign as the line amount, either positive or negative. If you enter a positive amount for a credit memo, Receivables automatically converts it to a negative value.
11	7	Basis Amount	25 amount	Optional Taxable amount used to calculate the tax amount for the receivable document. Enter the basis amount using the same sign as the line amount, either positive or negative. If you enter a positive amount for a credit memo, Receivables automatically converts it to a negative value.
12	8	Ledger Entity	5 alphanumeric	Optional Group within Ledger that has its own accounting, reporting, and control requirements. Is the Ledger entity used when posting the line amount to the appropriate offset distribution, such as sales, freight, miscellaneous charges.
13-24	9-20	Ledger Key 1-12	30 alphanumeric	Optional Identifies the offset distribution used when posting the line tax amount to your ledger.

Receivable Document Comment Transaction (RRCM)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRCM.
3	Key 1	Receivable Identifier	22 alphanumeric	Required Unique identifier of the receivable document with which this transaction is associated.
4	Key 2	Sequence Number	4 numeric	Required Number assigned to comment lines. A receivable can have multiple comments. Used to determine the order of entry associated with a particular comment.
5	1	Comment	255 alphanumeric	Optional Free-form comment about the receivable document.
6	2	Comment Type Code	1 alphanumeric	Optional Identifier assigned to a comment. Default is A. I = Internal E = External A = All D = Display only

Receivable Document User Field Transaction (RRUF)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. Value is always RRUF.
3	Key 1	Receivable Identifier	22 alphanumeric	Required Unique identifier of the receivable document with which this transaction is associated.

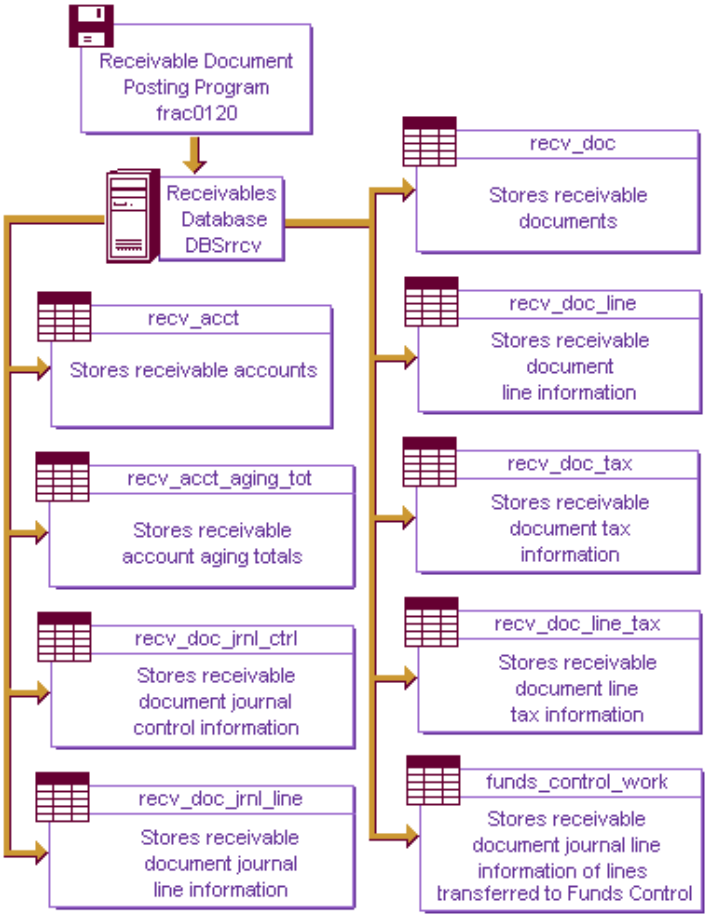
Column	Field	Name	Length	Description
4	Key 2	Blank	19	Must be empty.
5 6 7 8 9	1 2 3 4 5	Text Field	60 alphanumeric	Optional User-defined information associated with the receivable document.
10 11 12 13 14	6 7 8 9 10	Numeric Field	15 alphanumeric	Optional User-defined numeric information associated with the receivable document
15 16 17 18 19	11 12 13 14 15	Date Field	10 date	Optional User-defined dates associated with the receivable document

Receivable Document Posting Program

When scheduling Receivable documents, you can run the Receivable Transaction Load program (farc0101) with the NO_POST parameter set and then run the Receivable Document Posting program (farc0120). The Receivable Document Posting program

- Updates the customer receivable account detail with the receivable document
- Updates the customer receivable accounts total due and all related totals
- Generates entries to update Ledger balances
- Updates the control group header with the number and amount of the receivable documents it is posting if the receivable document is part of a control group
- Changes the document status to Open if the document is successfully posted.
- If Funds Control is installed and funds checking is enabled for receivable documents in enterprise policy or FundsControl policy, the Posting program triggers funds checking for each unposted document.

When the document is successfully posted, you can run additional programs to age the document, as well as generate drafts and remittances.


Receivable Document Posting Program frac0120
Receivables Database DBSrrcv
recv_acct
Stores receivable accounts
recv_acct_aging_tot
Stores receivable account aging totals
recv_doc_jrnl_ctrl
Stores receivable document journal control information
recv_doc_jrnl_line
Stores receivable document journal line information
recv_doc
Stores receivable documents
recv_doc_line
Stores receivable document line information
recv_doc_tax
Stores receivable document tax information
recv_doc_line_tax
Stores receivable document line tax information
funds_control_work
Stores receivable document journal line information of lines transferred to Funds Control

Processing Remittances

Remittances are payments for goods received or services rendered.

You can process Remittance using the Remittance window or scheduled processes. Regardless of the process you use, processing remittances is a multiple step process of entering remittances, allocating all or a part of remittances to one or more receivable documents, and generating journal entries for posting to Ledger.

You can also use algorithms to allocate remittances. An algorithm is a predefined set of rules and user-defined calculations that you can schedule to run at any time.

Scheduling Remittance Processing

Follow this process to schedule Remittance processing and determine if the jobs have completed successfully:

Stage	Task	Action or Activity
1	Enter the Bulk Copy parameters to copy transaction text files to the transaction table. Skip this step if you are writing the transactions to the data table directly.	Bulk Copy Parameters window
2	Enter Job Scheduler parameters to run the Bulk Copy program (dbsbulk.exe) and copy all transactions to the transaction table. Enter the Bulk Copy Parameter key that you created in stage 1 as the parameter for the Bulk Copy program. Skip this task if you are writing the transactions to the data table directly.	Job Scheduler window
3	Enter Job Scheduler parameters to process remittance transactions using the Remittance Transaction program (farc2200).	Job Scheduler window
4	Review messages that result from the Poll program.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway, To Do messages, Reports
6	Diagnose and correct any transaction errors.	Remittance Transaction Maintenance window.
7	Rerun only the Remittance Transaction program when you have corrected transaction errors. Repeat steps 4, 5, and 6 until the data load successfully with no errors.	Job Scheduler window
8	Enter Job Scheduler parameters to run scheduled programs in the following order: ▪ Allocate remittances based on established algorithms using the Remittance Algorithm Allocation program (farc2400). ▪ Post allocations using the Remittance Allocation Posting program (farc2000).	Job Scheduler window

Job Scheduler Parameters

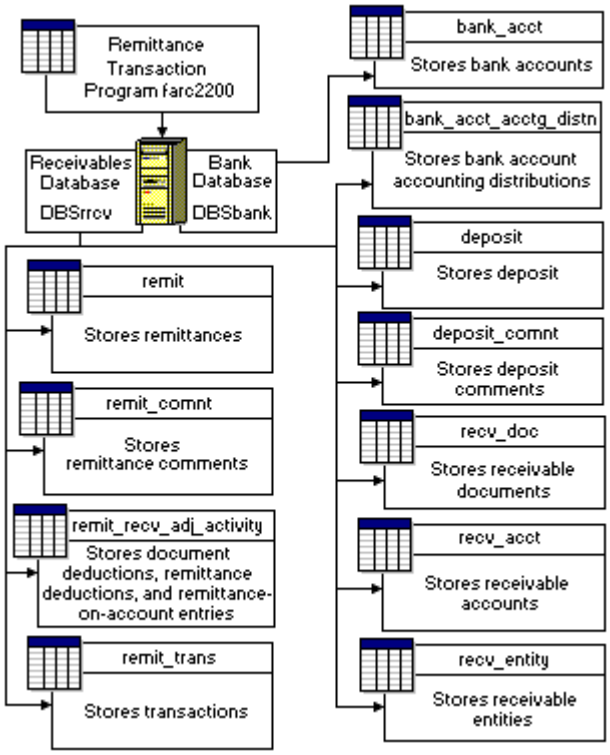
Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Remittance Transaction	**Windows:** farc2200.exe **UNIX:** farc2200	Y - If criteria select one or more ineligible documents, allocation is not completed. N or blank - Allocation is completed even though one or more selected documents are ineligible.
Remittance Algorithm Allocation	**Windows:** farc2400.exe **UNIX:** farc2400	None
Remittance Allocation Posting	**Windows:** farc2000.exe **UNIX:** farc2000	None

Remittance Transaction Program

During the remittance transaction program, Receivables

- Adds deposits and deposit comments
- Adds remittances and remittance comments
- Tags a document or combination of documents based on the reference identifiers
- Creates remittance and receivable document chargebacks and write-offs.



Remittance Transaction Layouts

In Receivables you can map data from segments in both the EDI ANSI x. 12 820 and 823 transaction sets and transactions in standard bank lockbox BAI format.

For general information about adding transactions, see Entering Field Information.

Layout Details

Use the following transaction layouts to process remittances:

Remittance Transaction Layout	Use this transaction layout to...
Deposit (DEP)	Add deposits.
Deposit Comment (DEC)	Add comments describing each deposit.
Remittance (REM)	Add remittances with or without associating them to deposits.
Remittance Allocation (RAA)	Includes ability to tag documents based on reference identifiers to be paid by remittances. Offset invoices, debit memos, and chargebacks with credit memos and remittance-on-account.
Document Deduction (RAD)	Create receivable document-level chargebacks and write-offs.

Remittance Transaction Layout	Use this transaction layout to...
Remittance Deduction or On-Account (RAR)	Includes ability to Create remittance-level chargebacks and write-offs Add remittance-on-account entries to post cash to a customer's account.
Remittance Processing Comment (RAC)	Add comments concerning remittance processing activity.

Note: When adding a new remittance, only the REM transaction is mandatory.

Deposit Transaction (DEP)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For Deposit transactions, enter DEP.
3	1	Bank Identifier	11 alphanumeric	Required Identifies the bank associated with your deposits.
4	2	Bank Account Number	17 alphanumeric	Required Unique identification number the bank assigns to the account associated with your deposits. Number must be valid for the associated bank, and it must be active. Cash and accounts receivable clearance distributions must be defined and valid.
5	3	Deposit Date	10 date	Required Date the deposit was made.
6	4	Deposit Slip Number	15 alphanumeric	Conditional Unique identifier for the document associated with a deposit. If your bank account policy specifies that deposit slip numbers are required, enter a number or Receivables generates one using Next Available Number facility.

Column	Field	Name	Length	Description
7	5	Deposit Amount	21 numeric	Required Monetary total of all remittances in a deposit.
8	6	Remittance Count	5 numeric	Optional Total number of remittances in a deposit.
9	7	Effective Date	10 date	Optional Date that the deposit is effective in Ledger. This date must be in an open or future accounting period.
10	8	Origin	30 alphanumeric	Optional User-defined identifier for the source of a deposit, such as a bank lockbox.
11	9	Remittance Assign-To	30 alphanumeric	Optional Unique user identifier for the person responsible for allocating the remittances. This identifier is the default for all remittances in the deposit.
12	10	Transaction Currency	3 alphanumeric	Optional Unique identifier for the monetary unit of exchange used for the deposit and all remittances associated with the deposit.
13	11	Rate Entity	3 alphanumeric	Optional Unique identifier for the source of monetary exchange rates. If you use the euro triangulation process to convert currencies or to override a rate of exchange, enter a euro-compliant rate entity.
14	12	Rate Type	1 alphanumeric	Optional Unique identifier for the type of currency exchange rate for the remittances. If you use the euro triangulation process to convert currencies or to override a rate of exchange, enter a euro-compliant rate type. The rate type must associate an exchange rate for the conversion of the transaction currency to the euro, as well as an exchange rate for the conversion of the euro to the booking currency.
15	13	Rate Date	10 date	Optional Date to use when retrieving currency exchange rates for the remittance.

Column	Field	Name	Length	Description
16	14	Rate of Exchange	16 numeric	Optional Percentage used in converting the transaction currency for the remittance to the booking currency. You can enter a rate of exchange for a transaction when either of the following conditions is met: ▪ When the rate entity is not euro-compliant ▪ When the rate entity is euro-compliant and triangulation is not used. If the transaction currency and the booking currency are different, the conditions in the preceding list are **not** met, and you enter a rate of exchange, the transaction causes an error. However, if the transaction currency and the booking currency are the same, the value you enter is ignored, and the transaction does not cause an error.
17	15	Trans to Euro Rate	16 numeric	Optional When triangulation is used, this is the exchange rate used to convert the transaction currency to the euro. You can enter this rate for a transaction only when **all** the following conditions are met: ▪ The rate entity is euro-compliant with the Euro Compliance options set to Triangulation with One Participating Currency ▪ The transaction currency is not participating If the transaction currency and the booking currency are different, the conditions in the preceding list are **not** met, and you enter a rate of exchange, the transaction causes an error. However, if the transaction currency and the booking currency are the same, the value you enter is ignored, and the transaction does not cause an error.

Column	Field	Name	Length	Description
18	16	Euro to Base Rate	16 numeric	Optional When triangulation is used, this is the exchange rate used to convert the euro to the base (booking) currency. You can enter this rate for a transaction only when **all** the following conditions are met: ▪ The rate entity is euro-compliant with the Euro Compliance options set to Triangulation with One Participating Currency ▪ The base currency is not participating If the transaction currency and the booking currency are different, the conditions in the preceding list are **not** met, and you enter a rate of exchange, the transaction causes an error. However, if the transaction currency and the booking currency are the same, the value you enter is ignored, and the transaction does not cause an error.

Deposit Comment Transaction (DEC)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For deposit comment transactions, enter DEC.
3	1	Bank Identifier	11 alphanumeric	Required Unique code that identifies the bank associated with your deposits.
4	2	Bank Account Number	17 alphanumeric	Required Unique identification number the bank assigns to the account associated with your deposits. Number must be valid for the associated bank, and it must be active. Cash and accounts receivable clearance distributions must be defined and valid.
5	3	Deposit Date	10 date	Required Date the deposit was made.
6	4	Deposit Slip Number	15 alphanumeric	Conditional Unique identifier for the deposit to which a remittance belongs. If your bank account policy specifies that deposit slip numbers are required, enter a number in this field.
7	5	Transaction Comment Sequence Number	4 numeric	Required Unique tracking number you want to assign to the comment you are adding for a scheduled transaction. You can enter multiple comments for a transaction.
8	6	Comment Type Code	1 alphanumeric	Required Specifies the type of comment you are adding. Default is A. E = External I = Internal D = Display only A = All
9	7	Comment Text	255 alphanumeric	Optional Describes a scheduled transaction. Enter up to 255 characters.

Remittance Transaction (REM)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For remittance transactions, enter REM.
3	1	Remittance Number	22 alphanumeric	Required First element of the unique identifier for a remittance. Receivables uses the number with the qualifier to uniquely identify a remittance.
4	2	Remittance Qualifier	4 numeric	Required Second element of the unique identifier for a remittance. Receivables uses the qualifier with the number to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.
5	3	Remittance Amount	14 numeric	Required Monetary amount for a remittance.
6	4	Bank Identifier	11 alphanumeric	Required Name of the financial institution the bank account uses for the deposit.
7	5	Bank Account Number	17 alphanumeric	Required Unique identification number for a bank account in which a remittance was deposited. Number must be valid for the associated bank and be active. Cash and accounts receivable accounting distributions must be defined and valid.
8	6	Deposit Date	10 date	Conditional Date the deposit was made.
9	7	Deposit Slip Number	15 alphanumeric	Conditional Unique identifier for the deposit to which a remittance belongs. If your bank account policy specifies that deposit slip numbers are required, enter a number in this field.

Column	Field	Name	Length	Description
10	8	Alternate Account Identifier Type	5 alphanumeric	Optional The kind of alternate identifier for a receivable account. Use with the alternate account identifier as an alternate way to identify the receivable customer account for which you are processing remittances.
11	9	Alternate Account Identifier	22 alphanumeric	Conditional Alternate way to identify the receivable customer account for which you are processing remittances. Use with the alternate account identifier type. If you enter an account identifier type and alternate identifier combination that does not exist, Receivables automatically adds the combination when it saves the remittance.
12	10	Document Identifier	22 alphanumeric	Optional Unique, user-defined identifier for an entry for a receivable document belonging to a receivable account. Use as an alternate way to identify the receivable account and entity a remittance belongs to. Use either this field or the alternate account identifier and alternate account identifier type combination, but not both.
13	11	Receivable Account	17 alphanumeric	Optional Unique identifier for the receivable account with which the remittance is associated. The account must be active. Enter a receivable account identifier only if you do not enter a document identifier.
14	12	Receivable Entity	5 alphanumeric	Optional Unique identifier for the particular set of processing rules and options whose receivable documents a remittance is paying. Enter a receivable entity only if you do not enter a document identifier.
15	13	Remittance Date	10 date	Optional Date you add the remittance. If you associate remittances with deposits, the deposit date serves as the default for this field. Otherwise, the entry date serves as the default.

Column	Field	Name	Length	Description
16	14	Effective Date	10 date	Optional Date that the remittance or deposit is effective in Ledger. If you associate remittances with an incomplete deposit, the effective date of the deposit serves as the default for its remittance. Otherwise, Receivables generates a default based on the effective date option selected for the bank account. The effective date can be in a past, current, or future accounting period as long as the accounting period is open in Ledger.
17	15	Voucher	15 alphanumeric	Conditional Unique identifier assigned to the remittance. If your enterprise selected the Require Voucher Number option, enter an identifier in this field. If your enterprise selected the Auto-Generate Voucher Number option but you do not enter an identifier in this field, Receivables generates a number using the Next Available Number facility. You can enter an identifier in this field if the Allow Overrides option is on.
18	16	Trace Reference	30 alphanumeric	Optional Trace reference number assigned to a remittance that is received through an electronic data interchange (EDI) transaction.
19	17	Origin	30 alphanumeric	Optional User-defined identifier for the source of a deposit, such as a bank lockbox.
20	18	Remittance Assign-To	30 alphanumeric	Optional Unique user identifier for the person who is responsible for allocating the remittance.
21	19	Transaction Comment Identifier	22 alphanumeric	Conditional Unique identifier you assign to the comments describing a remittance.

Column	Field	Name	Length	Description
22	20	Transaction Currency	3 alphanumeric	Optional Unique identifier for the monetary unit of exchange used for a remittance or deposit. The transaction currency of a regular remittance must be the transaction defined for the bank account. Enter a transaction currency only if your enterprise uses multiple currencies. If you associate remittances with deposits and the deposit is set up in Receivables, the transaction currency of the deposit serves as the default for this field. If the deposit is not set up in Receivables, the transaction currency of the bank account serves as the default.
23	21	Rate Entity	5 alphanumeric	Optional Unique identifier for the source of monetary exchange rates. Enter a rate entity if your enterprise uses multiple currencies and the transaction and booking currencies are different. If you use the euro triangulation process to convert currencies or to override a rate of exchange, enter a euro-compliant rate entity. If you associate remittances with deposits, the rate entity for the deposit serves as the default. If you do not associate remittances with deposits or the deposit you specify is not set up in Receivables, the rate entity for the bank account serves as the default for this field.

Column	Field	Name	Length	Description
24	22	Rate Type	1 alphanumeric	Optional Unique identifier for the type of currency exchange rate to use for the remittances. Enter a rate type if your enterprise uses multiple currencies and the transaction and booking currencies are different. If you use the euro triangulation process to convert currencies or to override a rate of exchange, enter a euro-compliant rate type. The rate type must associate an exchange rate for the conversion of the transaction currency to the euro, as well as an exchange rate for the conversion of the euro to the booking currency. If you associate remittances with deposits, the rate type of the deposit serves as the default. If you do not associate remittances with deposits or the deposit you specify is not set up in Receivables, the rate type for the bank account serves as the default.
25	23	Rate Date	10 date	Optional Date to use when retrieving currency exchange rates for the remittance. Enter a rate date if your enterprise uses multiple currencies and the transaction and booking currencies are different. If you associate remittances with deposits, the rate date of the deposit serves as the default. If you do not associate remittances with deposits or the deposit you specify is not set up in Receivables, the rate date for the bank account serves as the default.

Column	Field	Name	Length	Description
26	24	Rate of Exchange	16 alphanumeric	Optional Percentage used in converting the transaction currency for the remittance to the booking currency. You can enter a rate of exchange for a transaction when either of the following conditions is met: ▪ When the rate entity is not euro-compliant ▪ When the rate entity is euro-compliant and triangulation is not used. If the transaction currency and the booking currency are different, the conditions in the preceding list are **not** met, and you enter a rate of exchange, the transaction causes an error. However, if the transaction currency and the booking currency are the same, the value you enter is ignored, and the transaction does not cause an error. If you associate remittances with deposits and you enter a rate of exchange for this transaction, it is ignored and the rate of exchange of the deposit is used instead.

Column	Field	Name	Length	Description
27	25	Trans to Euro Rate	16 numeric	Optional When triangulation is used, this is the exchange rate used to convert the transaction currency to the euro. You can enter this rate for a transaction only when **all** the following conditions are met: ▪ The rate entity is euro-compliant with the Euro Compliance options set to Triangulation with One Participating Currency ▪ The transaction currency is not participating If the transaction currency and the booking currency are different, the conditions in the preceding list are **not** met, and you enter a rate of exchange, the transaction causes an error. However, if the transaction currency and the booking currency are the same, the value you enter is ignored, and the transaction does not cause an error. If you associate remittances with deposits and you enter a trans to euro rate for this transaction, it is ignored and the rate of exchange of the deposit is used instead.

Column	Field	Name	Length	Description
28	26	Euro to Base Rate	16 numeric	Optional When triangulation is used, this is the exchange rate used to convert the euro to the base (booking) currency. You can enter this rate for a transaction only when **all** the following conditions are met: ▪ The rate entity is euro-compliant with the Euro Compliance options set to Triangulation with One Participating Currency ▪ The base currency is not participating If the transaction currency and the booking currency are different, the conditions in the preceding list are **not** met, and you enter a rate of exchange, the transaction causes an error. However, if the transaction currency and the booking currency are the same, the value you enter is ignored, and the transaction does not cause an error. If you associate remittances with deposits and you enter a euro to base rate for this transaction, it is ignored and the rate of exchange of the deposit is used instead.

Remittance Allocation Transaction Layout (RAA)

You can use various criteria for selecting the receivable documents (including credit memos and remittance-on-account entries) for allocation.

Example

You could enter combinations to select a receivable document 123453, or all eligible documents for account HR564 and receivable entity ATL, or all documents with a purchase order number of PO3434, and so on. Receivables formulates the select statement just as it does in online remittance allocation by joining the criteria using an implied *and*.

In this example, if you want to tag document 123453, enter **1** in the Reference Identifier Code field and **123453** in the Reference Identifier field in the RAA transaction.

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For allocation transactions, enter RAA.
3	1	Remittance Number	22 alphanumeric	Required First element of the unique identifier for a remittance. Receivables uses the number with the qualifier to uniquely identify a remittance.
4	2	Remittance Qualifier	4 numeric	Required Second element of the unique identifier for a remittance. Receivables uses the qualifier with the number to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.
5 7 9 11 13	3 5 7 9 11	Reference Identifier Code	2 alphanumeric	Conditional The type of reference identifier. Use this field with the reference identifier to specify the type of receivable documents you want to select for allocation. For more information, see Entering Reference Identifiers.
6 8 10, 12 14	4 6 8 10 12	Reference Identifier	22 alphanumeric	Conditional Identifier you use with the reference identifier code to build combinations specifying the type of allocations you want to process. For more information, see Entering Reference Identifiers
15	13	Current Allocated Amount	21 numeric	Optional Amount that Receivables allocates to the receivable document during the current allocation activity. Enter a value in this field only when the transaction selects a single receivable document. Default is zero.

Column	Field	Name	Length	Description
16	14	Allowed Discount	21 numeric	Optional Amount of the discount that the customer earned and you granted. Default is zero. You **cannot** enter a value in this field if the Document type is remittance on account (ROA) Remittance date is later than the adjusted discount due date Document balance is not equal to the original document amount Amount will exceed the document available discount amount.
17	15	Transaction Comment Identifier	22 alphanumeric	Conditional Unique identifier you assign to the comments for a transaction. If you enter a value in this field, one or more corresponding remittance allocation comment transactions must have the same number.

Entering Reference Identifiers

The combinations you enter must refer to one or more eligible, unallocated receivable documents. You must enter at least the first combination, and you can enter as many as five sets of combinations. If you enter more than one set, do not skip a set by leaving it blank. No two sets can have the same identifier. The combinations must refer to existing receivable documents, accounts, entities, and alternate account identifiers.

For a referenced receivable document to be eligible for selection, the

- Transaction and booking currencies must be the same as those for the associated remittance
- Effective date of the receivable document must be the same as or earlier than the effective date of the remittance
- Receivable document must have a status of Open
- Receivable document must not be tagged for processing by another user
- Document's current allocated amount must be zero.

These are the values you can enter for the reference identifier code:

Value	Description
1	Receivable document number
2	Receivable account number
3	Purchase order number
4	Statement number
5	Shipment reference number
6	Receivable entity
7	Original amount
8	Balance amount
9	Currency
10	Alternate account identifier type
11	Alternate account identifier

Document Deduction Transaction (RAD)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For transactions, enter RAD.
3	1	Remittance Number	22 alphanumeric	Required First element of the unique identifier for a remittance. Receivables uses the number with the qualifier to uniquely identify a remittance.
4	2	Remittance Qualifier	4 numeric	Required Second element of the unique identifier for a remittance. Receivables uses the qualifier with the number to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.

Column	Field	Name	Length	Description
5	3	Document Identifier	22 alphanumeric	Required Unique identifier for the receivable document for which you are adding a deduction. Receivable documents include invoices, chargebacks, credit memos, debit memos, and remittance-on-account documents. The identifier must represent an existing receivable document. The receivable document must be eligible for selection.
6	4	Adjustment Activity	5 alphanumeric	Required The kind of adjustment you want to add. DWO = Document write-offs. Valid for all document categories DCBK = Document chargeback. This is the default value. Valid for all document categories except remittance on account.
7	5	Adjustment Activity Type	15 alphanumeric	Required User-defined identifier for either the write-off policy type or the receivable document policy type that you want to assign to the deduction you are adding.
8	6	Adjustment Activity Amount	21 numeric	Required Amount of the deduction you want to add. Default is the calculated document balance. The adjustment activity amount cannot be more than the calculated document balance. Calculated document balance = Document balance - Current allocated - Discount - Total deductions entered.
9	7	New Receivable Document Identifier	22 alphanumeric	Optional Unique identifier you can assign to the deduction if it is a chargeback. The Next Available Number facility provides the default value for this field. You **cannot** enter an identifier if the adjustment activity code is DWO (document write-off).
10	8	Receivable Document Cross-Reference	22 alphanumeric	Optional Unique identifier that you want Receivables to associate with the chargeback you are adding.

Column	Field	Name	Length	Description
11	9	Transaction Comment Identifier	22 alphanumeric	Optional Unique identifier you assign to the comments for a transaction. If you enter a value in this field, one or more corresponding comment transactions must have the same number.

Remittance Deduction or On-Account Transaction (RAR)

Column	Field	Name	Length	Description
1		Time Stamp	4 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For remittance deduction or on-account transactions, enter RAR.
3	1	Remittance Number	22 alphanumeric	Required First element of the unique identifier for a remittance. Receivables uses the number with the qualifier to uniquely identify a remittance.
4	2	Remittance Qualifier	4 numeric	Required Second element of the unique identifier for a remittance. Receivables uses the qualifier with the number to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.
5	3	Adjustment Activity	5 alphanumeric	Required The kind of adjustment you want to add. RWO = Write-off RCBK = Chargeback ROA = Remittance on-account
6	4	Adjustment Activity Type	15 alphanumeric	Required User-defined identifier for either the write-off policy type or the receivable document policy type that you want to assign to the deduction or remittance on account you are adding. For example, if the activity code is RWO, then the activity type code must be a write-off.

Column	Field	Name	Length	Description
7	5	Adjustment Activity Amount	21 alphanumeric	Required Amount of the deduction or remittance-on-account you want to add. Do not sign this field unless the Activity Code is RWO and you are entering a negative amount.
8	6	Receivable Account	17 alphanumeric	Conditional Unique identifier for the receivable account that the chargeback or remittance-on-account receivable document is for. You **cannot** enter a value in this field if the adjustment activity type is RWO (write-off).
9	7	Receivable Entity	5 alphanumeric	Required Unique identifier for the receivable entity.
10	8	New Receivable Document Identifier	22 alphanumeric	Optional Unique identifier you want to assign to the chargeback or remittance on account you are adding for a receivable document. The Next Available Number facility provides the default value for this field. You **cannot** enter a value in this field if the adjustment activity type is RWO (document write-off).
11	9	Receivable Document Cross Reference	22 alphanumeric	Optional Unique identifier that you want Receivables to associate with the receivable document you are adding.
12	10	Transaction Comment Identifier	22 alphanumeric	Optional Unique identifier you assign to the comment for a transaction. If you enter a value in this field, one or more corresponding comment transactions must have the same number.

Remittance Processing Comment Transaction (RAC)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	3 alphanumeric	Required Identifies the scheduled transaction. For remittance processing comment transactions, enter RAC.
3	1	Remittance Number	22 alphanumeric	Required First element of the unique identifier for a remittance. Receivables uses the number with the qualifier to uniquely identify a remittance.
4	2	Remittance Qualifier	4 numeric	Required Second element of the unique identifier for a remittance. Receivables uses the qualifier with the number to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.
5	3	Transaction Comment Code	1 alphanumeric	Optional Identifies the type of scheduled transaction for which you are adding a comment. Default is R. R = Remittance A = Allocation J = Adjustment. See Entering Transaction Comments.
6	4	Transaction Comment Identifier	22 numeric	Required Unique identifier you assign to the comment for a transaction. Corresponds to the transaction comment identifiers you enter for the associated scheduled transaction. See Entering Transaction Comments.
7	5	Transaction Comment Sequence Number	4 numeric	Required Unique tracking number you want to assign to the comment you are adding for a scheduled transaction.

Column	Field	Name	Length	Description
8	6	Comment Type Code	1 alphanumeric	Optional Identifier used to specify the type of comment you are adding. Default is A. E = External I = Internal D = Display only A = All
9	7	Comment Text	255 alphanumeric	Optional Describes a scheduled transaction. Enter as many as 255 characters.

Entering Transaction Comments

If the transaction comment code is...	You must set up one or more of the following transactions with the same transaction comment identifier...
R	Remittance.
A	Remittance allocation.
J	Document deduction, remittance deduction, or on-account entry.

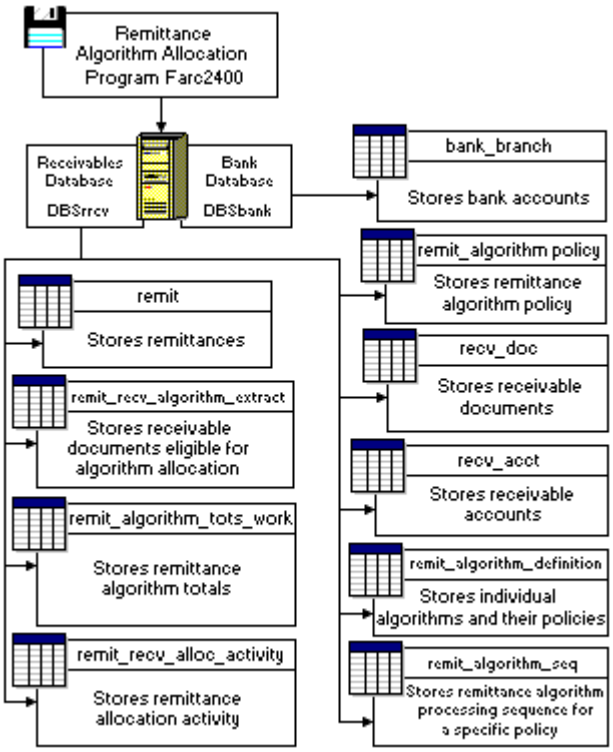
Remittance Algorithm Allocation Program

The Remittance Algorithm Allocation program reads and allocates the eligible remittances to receivable documents according to the rules established by the specific algorithms used.

During the remittance algorithm allocation program, Receivables

- Checks the enterprise policy and the receivable account remittance algorithm policy to determine if allocation by algorithms is allowed
- Determines the remittances to allocate for the account
- Derives the remittance allocation effective date using remittance bank policy
- Determines if the account has eligible receivable documents
- Creates a subset of the receivable document table
- Compares the eligible document count to the maximum number of documents in the algorithm policy for the account or enterprise
- Calculates the tolerance amount for remittances
- Controls the sequence of algorithm processing

- Handles error processing and remittance and receivable document table updates.



Algorithm Stored Procedures

The following four algorithm stored procedures are delivered with Receivables:

Algorithm Name and ID	Task
Single Receivable Document (fsp_upd_rcmt_algor_single)	Allocates the remittance to a single receivable document, starting with the oldest document based on due date.
Multiple Receivable Documents (fsp_upd_rcmt_algor_multi)	Allocates the remittance to multiple receivable documents, starting with the oldest document based on due date, until the remittance is completely allocated.
Last Statement Balance (fsp_upd_rcmt_algor_stmt)	Allocates the remittance only if the remittance reduces the balance of the last statement issued to zero.
Account Balance (fsp_upd_rcmt_algor_bal)	Allocates the remittance only if the remittance reduces the receivable account balance to zero.

Processing Remittances Using an Algorithm

Step	Action
1	If using the algorithm API, set up an algorithm using the Remittance Algorithm Definition activity.
2	Select the Remittance Algorithm Policy activity. Set up an algorithm policy and specify the names of the algorithms in the order that you want Receivables to process them.
3	In the Receivable Enterprise Policy activity, select Use Algorithm Allocation and enter the name of the policy that you set up.
4	If you want to enter the remittance using the Remittance activity, select Allocate Using Algorithm in the Remittance activity and Use Algorithm Allocation in the Receivable Account activity. If you want to use the Remittance Transaction program (farc2200) to process remittances, select Use Algorithm Allocation in the Receivable Account activity.

Scheduling Algorithm Processing

Algorithm processing is a scheduled process. The algorithm control processor

- Checks the algorithm policy to determine which algorithms to process and their sequence
- Creates a subset of eligible remittances based on account policy
- Creates an extract table of receivable documents that are eligible for allocations
- Creates a table of totals and other information used by the algorithms
- Calls the appropriate algorithms.

After each algorithm completes processing, the algorithm control processor

- Determines whether to run another algorithm-
- Balances the allocation
- Updates the receivable documents and remittances
- Stores errors in a processing summary.

Using the Algorithm API

The algorithm application programming interface (API) allows you to create your own algorithms for remittance.

User-Written Algorithms

Receivables can process user-written algorithms. User-written algorithms must be in TRANSACT SQL form.

Specify the stored procedure name of the algorithm on the Algorithm Definition window.

User-written algorithms cannot update the receivable document or remittance table directly. User-written algorithms can update the receivable document or remittance table only through the worktables.

Work Tables

The algorithm control processor creates the following two worktables to communicate information between the control processor and the algorithm:

- Remittance Receivable Algorithm Extract Table (DBMS name: remit_recv_algorithm_extract)
- Remittance Algorithm Totals Work Table (DBMS name: remit_algorithm_totals_work)

Extract Table

The following table describes the columns in the Remittance Receivable Algorithm Extract Table:

Column Name	Description
recv_doc_id	Unique identifier of the receivable document, such as an invoice number
recv_entity_id	Receivable entity for the receivable document
recv_doc_cat_code	Identifier for one of the following document types:
	INV - invoice
	CM - credit memo
	CBK - chargeback
	ROA - remittance on account
	DM - debit memo
statement_number	Last statement number
sort_seq_code	Sequence code that ensures credit memos sort before chargebacks for a specific due date. Valid values are
	1 - ROA
	2 - CM
	3 - CBK, DM, INV
final_due_date	Due date of the receivable document
disputed_ind	Disputed documents indicator. Y is disputed.

Column Name	Description
total_amt	Original total amount of the receivable document
bal_amt	Remaining unpaid balance of the receivable document
adjusted_disc_due_date	Last day on which a terms discount is accepted
recv_doc_disc_amt	Amount of discount allowed
temporary_alloc_amt	Remittance amount allocated to a receivable document during algorithm processing
temp_earned_disc_taken	Amount of discount earned from the current allocation during algorithm processing
net_recv_bal_amt	Receivable document remaining amount due net of eligible discount
chgstamp	Numeric indicator of last receivable event update. Not used by an algorithm. If altered, allocation of the recv_doc table fails.

Totals Work Table

The following table describes the columns in the Remittance Algorithm Totals Work Table:

Column Name	Description
recv_acct_id	Identifier of the receivable account submitting the remittance
statement _number	Last statement processed for the receivable account
remit_amt	Amount of the remittance
tolerance_amt	Maximum amount of tolerance allowed, based on algorithm policy and remittance amount
tot_recv_bal_amt	Total balance amount for documents in the extract table
tot_net_recv_bal_amt	Total net receivable balance amount for all documents in the extract table
tot_last_stmt_bal_amt	Total balance amount of all documents in the extract table with the same statement number
tot_net_last_stmt_bal_amt	Total of the total net receivable balance amount of all documents in the extract table with the same statement number
tot_non_disputed_bal_amt	Total balance amount of all documents in the extract table whose disputed indicator is off
tot_net_non_disputed_bal_amt	Total of the balance amount net of all documents in the extract table whose disputed indicator is off

Column Name	Description
algorithm_tol_allowed_ ind	Algorithm policy tolerance indicator. If algorithm policy tolerance is allowed during allocation, indicator is Y.
apply_first_if_multi_ doc_ind	Use First Successful Algorithm field indicator from algorithm policy
use_disputed_docs_ind	Algorithm policy indicator allows use of disputed documents during allocation
multiple_entity_ind	Multiple receivable entities indicator for receivable documents in the extract table
tot_remit_on_acct	Total remittance on account. Not used at this time.
tot_writeoff_amt	Total writeoff amount. If a tolerance and writeoff amount is necessary to complete an allocation, the amount must be returned to the algorithm control processor through this column. If it is not, the allocation will be out of balance and the remittance allocation will not be done.
algorithm_status_code	Status code of the algorithm after processing. Values are: F - Failed allocation A - Allocated
chgstamp	Numeric indicator of last remittance document update. Not used by an algorithm. If altered, allocation of the remittance table fails.

Tagging a Document

If an algorithm can allocate a document, the document must be tagged.

To tag a document, include the following steps in your database script:

- Move the amount of the remittance to be allocated to the temporary_alloc_amt column in the extract table
- Move the earned discount amount that applies to the paid document to the temp_earned_disc_taken column in the extract table.

Balancing

Any algorithm you write to interface with Receivables must balance. Balancing means that the total amount of a remittance must be

- Allocated to a document
- Allocated as a remittance on account
- Written off as a tolerance.

To pass the total amount of the remittance allocated or the total amount of the write-off to the control processor through the Remittance Algorithm Totals Work Table, include the following steps in your database script:

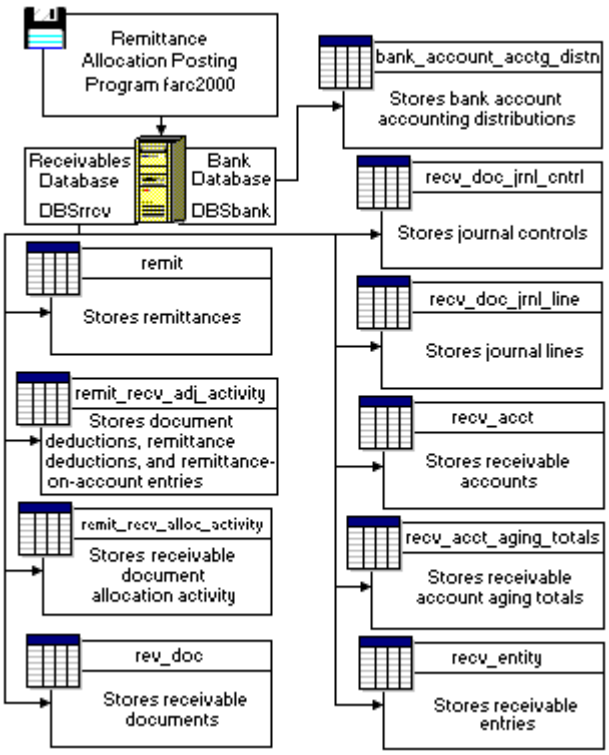
- Move the total write-off amount to the tot_writeoff_amt column
- Move the status code to the algorithm_status_code column.

Remittance Allocation Posting Program

The Remittance Allocation Posting program processes all remittances, deposits, and remittance allocations that are awaiting posting.

During the remittance allocation posting program, Receivables

- Updates invoices, debit memos, and chargebacks that have been allocated, charged back, and written off
- Updates credit memos and remittance-on-account documents that have been allocated and written off
- Generates journal entries based on allocation of remittances
- Updates the customer receivable accounts total due and all allocated totals. If the remittance type is Draft, Receivables increases the total due, adjusted total due, aging totals for the account that owns the draft for the amount of the remittance.
- Changes the document's status to Closed if the activity reduces the document's balance to zero
- Inserts the allocated activity record for receivable drafts
- Creates the receivable draft accounting distribution entry if applicable
- Updates the journal identifier and sequence number on the add, gen, or load activity record for the draft with the allocation's journal control identifier and sequence number if applicable
- If applicable, generates currency gain or loss Ledger journals.


Remittance Allocation Posting Program farc2000
Receivables Database DBSrrcv
Bank Database DBSbank
bank_account_acctg_distn
Stores bank account accounting distributions
recv_doc_jrnl_cntrl
Stores journal controls
remit
Stores remittances
recv_doc_jrnl_line
Stores journal lines
remit_recv_adj_activity
Stores document deductions, remittance deductions, and remittance-on-account entries
recv_acct
Stores receivable accounts
remit_recv_alloc_activity
Stores receivable document allocation activity
recv_acct_aging_totals
Stores receivable account aging totals
rev_doc
Stores receivable documents
recv_entity
Stores receivable entries

Processing Finance Charges

A finance charge is an interest charge conditionally assessed on or granted for a receivable document.

Receivables provides the capability of handling the following types of finance charges:

Type	This finance charge is calculated...
Past due	Periodically on the overdue balance amount of a receivable document.
Current due	Periodically on the balance amount of a receivable document before its due date.
Late remittance	On the amount paid on the overdue balance amount of a receivable document.
Early remittance	On the amount paid **early** on the balance amount of a receivable document.

Scheduling Finance Charge Processing

Regardless of the type of finance charge, four basic tasks are involved in processing finance charges:

Task	Description
1	Determining the eligibility of receivable documents.
2	Calculating finance charges.
3	Producing finance charge notices.
4	Producing finance charge receivable documents.

The Finance Charge Notice Generation scheduled process performs the first three tasks, and the Finance Charge Receivable Document Create scheduled process performs the fourth task. When you no longer need finance charge notices, you can delete them using the Finance Charge Notice Delete process.

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Finance Charge Notice Generation	**Windows:** farc5021.exe **UNIX:** farc5021	Run options identifier from the Finance Charge Notice Generation Options window.

Program	Program Name	Program Parameters
Finance Charge Receivable Document Create	Windows: farc5024.exe UNIX: farc5024	Run options identifier from the Finance Charge Receivable Document Create Options window.
Finance Charge Notice Delete	Windows: farc5315.exe UNIX: farc5315	Run options identifier from the Finance Charge Notice Delete Options window.

Producing Finance Charge Notices

The Finance Charge Notice Generation scheduled process (farc5021) generates notices from all eligible receivable documents according to the specified generation options and the applicable finance charge policy. It generates a separate finance charge notice for each receivable account, receivable entity, generation identifier, as-of date, and transaction currency combination.

A finance charge notice shows a total finance charge amount, which can include taxes, and detailed information about the individual finance charges for each receivable document. This detail includes remittance information when the finance charge is for an early or late remittance or for current due when warranted.

When generating finance charge notices, Receivables

- Groups all receivable documents by receivable account, receivable entity, and transaction currency.
- Determines the eligibility of a receivable document.
- Calculates one or more finance charges for each eligible document.
- Adds all finance charges and if the total is
  - Zero, processes the next group of receivable documents
  - Greater than zero, based on the sign of the charge amount, checks the applicable finance charge policy's Charge Calculate option. If it is not selected, the program does not generate a notice and processes the next group of receivable documents.
- Calculates applicable taxes.
- Adds the tax total to the finance charge total and checks whether the sum is less than the appropriate finance charge policy minimum amount. If it is, the program processes the next group of receivable documents.
- Adds the finance charge notice.

Recommendations

- Generate late remittance finance charges before past due charges because generating past due charges causes the basis date in the late remittance finance charge policy to change.

- Complete a cycle for one type of finance charge (that is, generate, preview, print, and create finance charge receivable documents) before starting the cycle for another type.

Eligibility

The generation process calculates finance charges only for eligible receivable documents. Eligibility criteria vary by type of finance charge.

Past Due

A past due finance charge is calculated for every receivable document that meets the following criteria:

- The receivable document's status is Open.
- The receivable document's associated receivable entity has a past due finance charge policy record.
- If the receivable document is in dispute, the generation option's Include Disputed Documents indicator is on.
- If the receivable document's receivable account has a past due finance charge policy record, the policy's exempt indicator is off.
- If the receivable document's document type policy has a past due finance charge policy record, the policy's exempt indicator is off.
- The receivable document past due finance charge policy's exempt indicator is off.
- The receivable document past due finance charge policy's past due pending indicator is off.
- The receivable document past due finance charge policy's adjusted due date is before the generation option's as-of date.
- The receivable document past due finance charge policy's basis date is on or before the generation option's as-of date.

Current Due

A current due charge is calculated on the balance amount for every receivable document that meets the following criteria. Also, a charge can be calculated for any payment made during the finance charge period.

- The document date is before the generation option's as-of date.
- The associated receivable entity has a current due finance charge policy record.
- If the receivable document is in dispute, the generation option's Include Disputed Documents indicator is on.
- If the receivable document's receivable account has a current due finance charge policy record, the policy's exempt indicator is off.
- If the receivable document's document type policy has a current due finance charge policy record, the policy's exempt indicator is off.

- The receivable document current due finance charge policy's exempt indicator is off.
- The receivable document current due finance charge policy's basis date is on or before the document's due date and on or before the generation option's as-of date.
- If the receivable document has a status of Closed, it has an applicable current due finance charge policy. A current due finance charge is calculated for a closed document if it has an unpaid charge amount. A closed document is eligible for a finance charge only if the policy was in effect before it was closed.

The generation process can calculate more than one finance charge for a receivable document if the customer has made partial payments. It calculates a separate finance charge for each eligible partial payment made for an eligible document. Each finance charge appears as a separate line on the finance charge notice.

A remittance is eligible if it has

- Been allocated
- A remittance date after the document's basis date and on or before its due date
- A type of Check.

Late Remittance

A late remittance charge is calculated for any eligible remittance allocated during the finance charge period. Charges are calculated for eligible receivable documents paid late by eligible remittances.

A remittance is eligible if it has

- Been allocated
- A type of Check
- A remittance amount greater than zero.

A receivable document is eligible if it meets the following criteria:

- The associated receivable entity has a late remittance finance charge policy record created **before** the remittance was allocated.
- If the receivable document is in dispute, the generation option's Include Disputed Documents indicator is on.
- If the receivable document's receivable account has a late remittance finance charge policy record, the policy's exempt indicator is off.
- If the receivable document's document type policy has a late remittance finance charge policy record, the policy's exempt indicator is off.
- The receivable document late remittance or past due finance charge policy's exempt indicator is off.

- The receivable document past due finance charge policy's pending indicator is off.
- The receivable document late remittance finance charge policy's adjusted due date is before the remittance date of the remittance.
- The receivable document late remittance finance charge policy's basis date is on or before the remittance date of the remittance.

Early Remittance

Early remittance charges a calculated for eligible receivable documents paid early by eligible remittances.

A remittance is eligible if it has

- Been allocated
- A type of Check
- A remittance amount greater than zero.

A receivable document is eligible if it meets the following criteria:

- The associated receivable entity has a early remittance finance charge policy record created **before** the remittance was allocated.
- If the receivable document is in dispute, the generation option's Include Disputed Documents indicator is on.
- If the receivable document's receivable account has a early remittance finance charge policy record, the policy's exempt indicator is off.
- If the receivable document's document type policy has a early remittance finance charge policy record, the policy's exempt indicator is off.
- The receivable document early remittance finance charge policy's exempt indicator is off.
- The receivable document early remittance finance charge policy's adjusted due date is after the remittance date of the remittance.

Calculations

Finance charge calculation varies for each type of charge. The formula for calculating past due, current due, and late remittance charges is as follows:

(Basis amount x Rate percentage x Finance charge interval) / Annualization period

For early remittance finance charges, the generation process uses this formula and multiplies the resulting charge by -1.

The generation process performs the calculation for each interval in the finance charge period. If more than one interest rate is in effect, an effective percentage rate is calculated using the following formula:

(Total charge amount x Annualization period) / (Basis amount x Total interest days)

The generation process uses the following tasks while calculating the various types of finance charges:

Past Due

Task	Description
1	Determine the finance charge period start date, end date, and duration.
2	Check whether minimum number of days has elapsed since a charge was last calculated. If the minimum number of days is greater than the duration of the finance charge period, a charge is not calculated.
3	Check whether the document's finance charge is subject to a maximum rate. This check is performed only if the Check Finance Charge Rate Maximum option is selected for the applicable finance charge policy and a maximum rate is defined.
4	Determine which finance rate policies are in effect for the rate policy specified for the document's finance charge policy.
5	Calculate a finance charge for each interval.
6	Add the finance charges calculated for each interval.
7	Add the number of interest days in each interval and calculate the effective rate percentage.

Current Due

Task	Description
1	Determine the finance charge period start date, end date, and duration.
2	If the charge is for the balance amount on an open document and the as-of date is before the document's due date, check whether minimum number of days has elapsed since a charge was last calculated. If the minimum number of days is greater than the duration of the finance charge period, a charge is not calculated.
3	Determine the basis amount
3	Check whether the document's finance charge is subject to a maximum rate. This check is performed only if the Check Finance Charge Rate Maximum option is selected for the applicable finance charge policy and a maximum rate is defined.

Task	Description
4	Determine which finance rate policies are in effect for the rate policy specified for the document's current due finance charge policy.
5	Calculate a finance charge for each interval.
6	Add the finance charges calculated for each interval.
7	Add the number of interest days in each interval and calculate the effective rate percentage.

Late Remittance

Task	Description
1	Determine the finance charge period start date, end date, and duration.
2	Check whether minimum number of days has elapsed since a charge was last calculated. If the minimum number of days is greater than the duration of the finance charge period, a charge is not calculated.
3	Set the basis amount to the amount allocated to the document.
4	Check whether the document's finance charge is subject to a maximum rate. This check is performed only if the Check Finance Charge Rate Maximum option is selected for the applicable finance charge policy and a maximum rate is defined.
5	Determine which finance rate policies are in effect for the rate policy specified for the document's late remittance finance charge policy.
6	Calculate a finance charge for each interval.
7	Add the finance charges calculated for each interval.
8	Add the number of interest days in each interval and calculate the effective rate percentage.

Early Remittance

Task	Description
1	Determine the finance charge period start date, end date, and duration.
2	Set the basis amount to the amount allocated to the document.
3	Check whether the document's finance charge is subject to a maximum rate. This check is performed only if the Check Finance Charge Rate Maximum option is selected for the applicable finance charge policy and a maximum rate is defined.
4	Determine which finance rate policies are in effect for the rate policy specified for the document's late remittance finance charge policy.

5	Calculate a finance charge for each interval.
6	Add the finance charges calculated for each interval.
7	Add the number of interest days in each interval and calculate the effective rate percentage.

Reviewing the Job Status

If you expected the process to generate a notice and it did not, the process might have encountered an error or you might need to change your policy settings. If an error occurs during generation processing, the program writes an error message to the corresponding Scheduler log file.

The following lists show errors and policy settings that might prevent notices from generating.

Errors

- The program cannot find the specified generation option.
- The program cannot find the specified extract table.
- The extract table does not contain the receivable document identifier or remittance number and qualifier.
- The specified receivable documents or remittances are ineligible.
- The specified receivable documents have finance charges pending.
- The finance charge rate policy has an error (for example, no active rate policy is defined).
- The rate policy specifies an algorithm associated with a store procedure that the program cannot find, or the algorithm fails to return the required information
- The tax policy has an error (for example, no active rate policy is defined).
- The default terms are not defined for the document type specified in the finance charge policy.

Policy Settings

- The receivable document is ineligible.
- The applicable calculate option is not on in the finance charge policy
- The calculated notice total is less than the minimum amount defined in the applicable finance charge policy.

Producing Finance Charge Receivable Documents

Creating receivable documents for finance charge notices is optional. The Finance Charge Receivable Document Create scheduled process (farc5024) creates a receivable document with a status of Unposted for each finance charge notice and updates the receivable document finance charge policy of each document as needed.

Updating Finance Charge Policy

Whether the create process updates finance charge policy depends on the print status of a notice. If a notice was printed, the print process updated the finance charge policy. If the policy has not been updated, the create process updates it by turning the pending indicator off, changing the last finance charge date to the generation as-of date, changing the last finance charge amount to the finance charge calculated for the receivable document, and adding the calculated finance charge amount to the total finance charge amount.

Reviewing the Job Status

The create process produces a Scheduler log file that contains details about the processing time and number of documents created.

Deleting Finance Charge Notices

The Finance Charge Notice Delete process (farc5315) deletes the finance charge notices that meet the criteria you specify in the delete option you define on the Finance Charge Notice Delete Options window and enter as a parameter when you run this process using the Job scheduler.

Reviewing the Job Status

The delete process produces a Scheduler log file that contains details about the processing time and number of documents deleted.

Processing Drafts

A receivable draft is a secured payment for one or more receivable documents.

You can process drafts using the Receivable Draft window or a scheduled process. Regardless of the process you use, creating receivable drafts is a multiple step process of entering drafts, allocating drafts to pay receivable documents, posting the allocation, and then distributing and maturing the drafts.

For more information about this process, see About Receivable Drafts in the *Receivables* guide.

Scheduling Drafts

Follow this process to schedule Draft processing and determine if the jobs have completed successfully:

Step	Task	Action or Activity
1	Enter the Bulk Copy parameters to copy transaction text files to the transaction table. Skip this step if you are writing the transactions to the data tables directly.	Bulk Copy Parameters window
2	Enter Job Scheduler parameters to run the Bulk Copy program (dbsbulk.exe) and copy all transactions to the transaction table. Enter the Bulk Copy Parameter key that you created in stage 1 as the parameter for the Bulk Copy program. Skip this task if you are writing the transactions to the data tables directly.	Job Scheduler window
3	Enter the Job Scheduler parameters to add drafts using the Receivable Draft Load program (farc6500).	Job Scheduler window
4	Review messages that result from the Poll program.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through SmartStream Mail Gateway To Do messages Reports
6	Diagnose and correct any transaction errors.	Recv Draft Transaction Maintenance window
7	Rerun only the Receivable Draft Load program (farc6500) when you have corrected transaction errors. Repeat steps 4, 5, and 6 until the data load successfully with no errors.	Job Scheduler window

Step	Task	Action or Activity
8	Enter the Job Scheduler parameters to run any of the following scheduled programs: ▪ Generate drafts based on existing receivable documents using the Receivable Draft Generation program (farc6000). ▪ Distribute drafts to bank for payment using the Receivable Draft Bank Distribution program (farc6100). ▪ Mature drafts before aging using the Receivable Draft Maturity program (farc6400).	Job Scheduler window

Job Scheduler Parameters

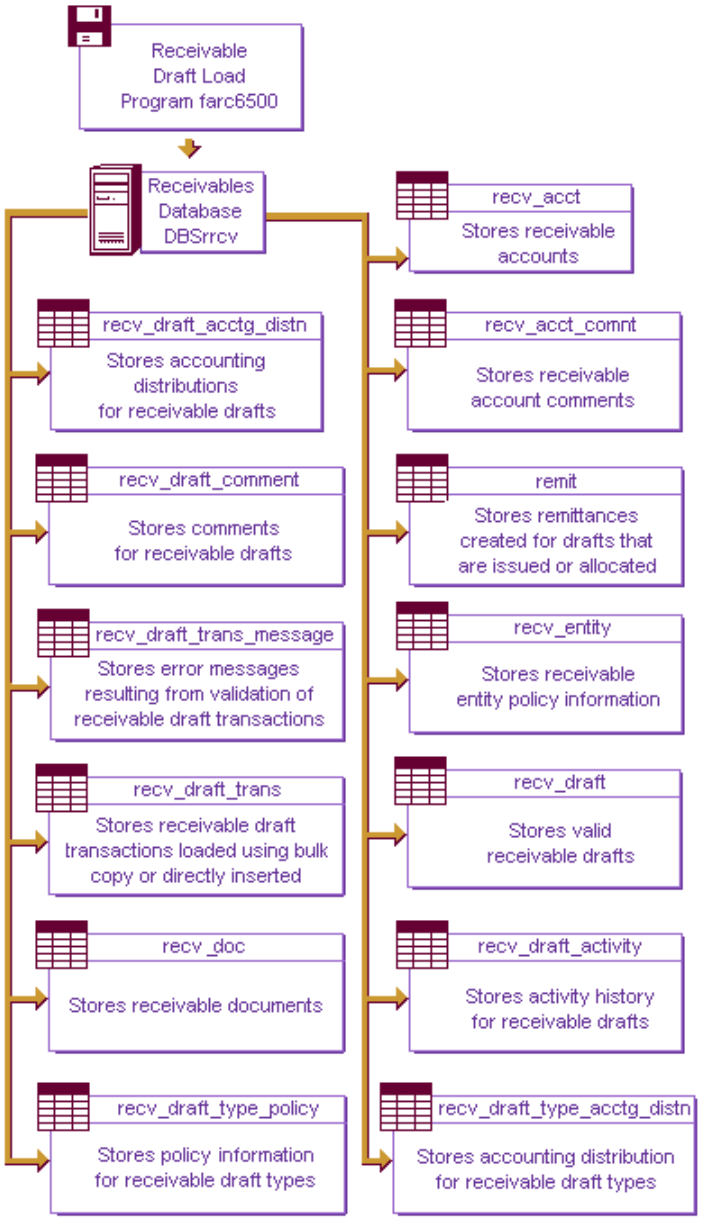
Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Receivable Draft Load	**Windows:** farc6500.exe **UNIX:** farc6500	None
Receivable Draft Generation	**Windows:** farc6000.exe **UNIX:** farc6000	Run options identifier from the Receivable Draft Generation Options window.
Receivable Draft Bank Distribution	**Windows:** farc6100.exe **UNIX:** farc6100	Run options identifier from the Receivable Draft Bank Distribution Options window.
Receivable Draft Maturity	**Windows:** farc6400.exe **UNIX:** farc6400	None

Receivable Draft Load Program

The Draft Load program reads the draft transactions written to the transaction table and loads them into product-specific tables in the database. It then performs all validations associated with each transaction. During the loading of drafts, Receivables

- Reads the Receivable Draft Load transaction table (recv_draft_trans)
- Creates receivable drafts, activities, comments, and accounting distributions
- Stores error messages associated with each draft transaction.



Receivable Draft Transaction Layouts

For general information about adding transactions, see Entering Field Information.

Layout Details

Use the following transaction layouts to process receivable drafts:

Receivable Draft Transaction Layout	Use this transaction layout to...
Receivable Draft Addition (DRAD)	Add all essential receivable draft information.
Receivable Draft Allocation (DRDA)	Identify the receivable documents allocated to the draft.
Receivable Draft Comment (DRCM)	Add comments describing each receivable draft.

Note: When adding a new draft, only the DRAD transaction is mandatory.

Receivable Draft Addition Transaction (DRAD)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Draft Addition transactions, enter DRAD.
3	1	Draft Number	22 alphanumeric	Required Unique identifier for the receivable draft.
4	2	Receivable Account ID	17 alphanumeric	Required Unique identifier for the customer account responsible for payment of a receivable draft balance.
5	3	Draft Category	3 alphanumeric	Required Classification for a receivable draft. DRF = Bill of Exchange PRO = Promissory Note.
6	4	Draft Type	15 alphanumeric	Required User-defined code or number that lets you define different policies for a receivable draft category.
7	5	Acceptance date	10 numeric	Optional Date this receivable draft is accepted (signed) by the customer.

Column	Field	Name	Length	Description
8	6	Receivable Entity	5 alphanumeric	Required User-defined identifier that represents a set of receivable policy decisions. This set of decisions contains processing rules that organize receivable documents and receivable drafts based on how you decide to track them within your enterprise.
9	7	Draft Date	10 numeric	Required Date a receivable draft was created.
10	8	Effective Date	10 numeric	Optional Ledger posting date associated with all ledger entries generated as a result of adding this receivable draft.
11	9	Date Due	10 numeric	Required Date a receivable draft is due for payment.
12	10	Draft Amount	21 numeric	Required Monetary value of the receivable draft. Amount of the draft must be equal to or more than the minimum draft amount defined in the draft type policy. The sum of the amounts on the DRDA transaction must equal this amount.
13	11	Transaction Currency Code	3 alphanumeric	Required Unique code identifying the billing currency for receivable drafts. The currency of the associated receivable document determines the currency of the draft. In addition, the transaction currency must match the transaction currency of the bank account in which the remittance is deposited.
14	12	Draft Guarantor	35 alphanumeric	Optional Identifier of the person or institution that guarantees payment of the receivable draft.
15	13	Account Draft Number	22 alphanumeric	Conditional Unique identifier for the receivable draft account. You must enter an account draft number if the Draft Category field classification is PRO.
16	14	Voucher Number	15 alphanumeric	Optional Unique code assigned to a receivable draft. Typically used to reference the receivable draft to a paper document.

Column	Field	Name	Length	Description
17	15	Receivable Account Bank Number	17 alphanumeric	Optional Bank number of the customer. You can change the bank to reflect the bank account indicated on the receivable draft. This number applies to the combination of the Bank and Bank Account numbers because that combination uniquely identifies the receivable account bank information.
18	16	Receivable Account Bank/Bank Account	17 alphanumeric	Optional Combination of the Bank and Bank Account numbers that uniquely identifies the receivable account bank information.

Receivable Draft Allocation Transaction (DRDA)

Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Optional Identifies the scheduled transaction. For Receivable Draft Allocation transactions, enter DRDA.
3	1	Draft Number	22 alphanumeric	Required Unique identifier for the receivable draft.
4	2	Receivable Account ID	17 alphanumeric	Required Unique identifier for the customer account responsible for payment of a receivable draft balance.
5	3	Receivable Document ID	22 alphanumeric	Required Unique identifier for a receivable document to which the receivable draft is allocated.
6	4	Receivable Document Amount	21 numeric	Required Total amount of the receivable document to which the receivable draft is allocated.

Receivable Draft Comment Transaction (DRCM)

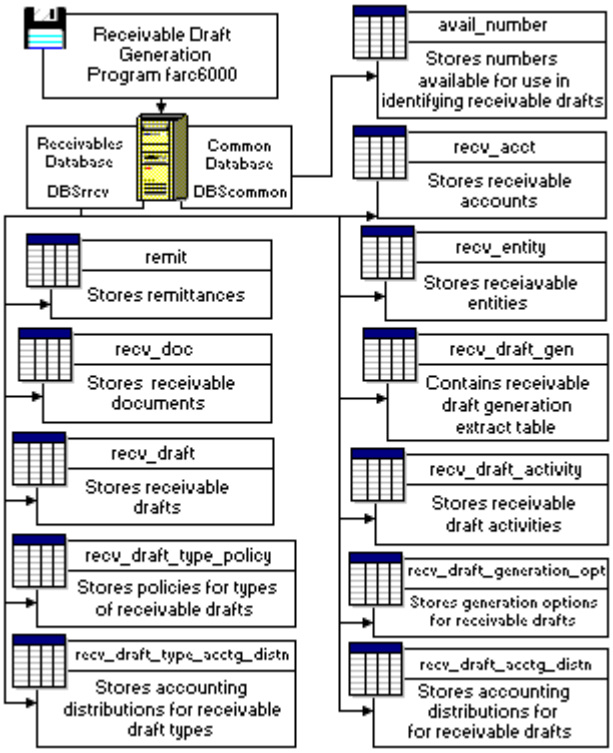
Column	Field	Name	Length	Description
1		Time Stamp	8 numeric	Enter only a delimiter when creating the text file. The first time you run the Bulk Copy program, the program enters a time in this field.
2		Transaction Code	4 alphanumeric	Required Identifies the scheduled transaction. For Receivable Draft Comment transactions, enter DRCM.
3	1	Draft Number	22 alphanumeric	Required Unique identifier for the receivable draft.
4	2	Receivable Account ID	17 alphanumeric	Required Unique identifier for the customer account responsible for payment of the document's balance.
5	3	Comment Text	255 alphanumeric	Required Free-form comment about the receivable draft.
6	4	Comment Sequence Number	6 alphanumeric	Required Number assigned to comment lines. A receivable draft can have multiple comments. The sequence number is used to determine the order of entry associated with a particular comment.
7	5	Comment Type Code	1 alphanumeric	Required Identifier assigned to a comment. I = Internal E = External A = All D = Display only.

Receivable Draft Generation Program

The Draft Generation program reads the open receivable documents and generates drafts based on Receivables policy. You can use this program with the Receivable Draft Load program. You also can use this program instead of the Receivable Draft Load and the Remittance Allocation Posting program.

During the generation of receivable drafts, Receivables

- Reads the parameters that control receivable draft generation
- Selects the receivable documents for which you want to generate drafts
- Verifies that the selected documents are eligible to be included on a draft, allocates them if they are, and creates the drafts
- Interacts with Remittance Allocation Posting to post the allocated drafts
- Prints drafts with a status of Issued and the associated remittance advice.



Receivable Draft Bank Distribution Program

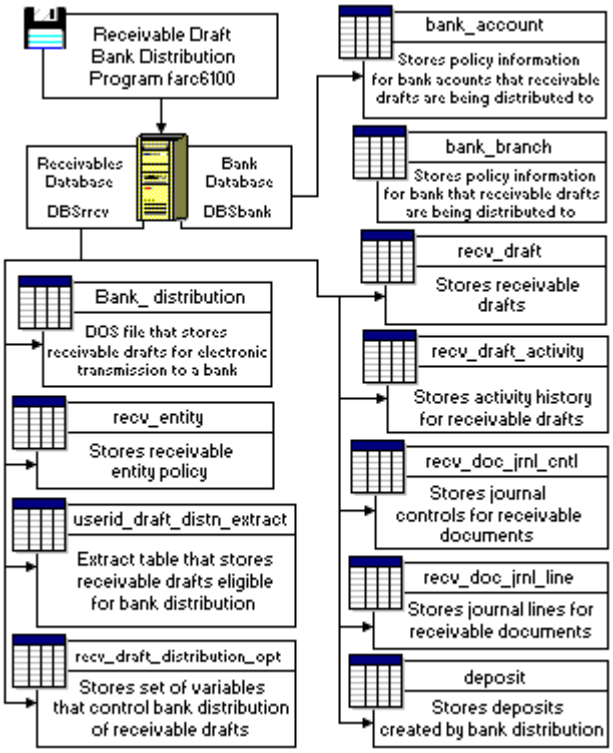
The Receivable Draft Bank Distribution program groups receivable drafts belonging to a bank and distributes them to the bank for payment processing.

During the distribution of bank drafts, Receivables

- Reads the parameters entered on the Receivable Draft Bank Distribution window
- Reads the extract table specified on the Recv Draft Bank Distribution window.

  The extract table can be either recv_draft or a user-defined extract table created using SmartStream and supported third-party reporting tools. The name of any user-defined extract table must begin with **recv_dist_ext**.

  If the user extracts a table, the draft must have a status of Allocated, and the cumulative amount of the selected drafts cannot exceed the maximum bank amount. Also, the draft booking and transaction currency must be the same as the bank booking and transaction currency, and the effective date must be on or after the draft effective date.
- Updates the status of the selected drafts and the journal sequence number in the Receivable Draft table
- Creates journal entries
- Updates the Receivable Draft Activity table
- Accumulates totals
- Creates a deposit, if applicable.
- Creates a distribution file (farc6100.txt) to send to the bank.

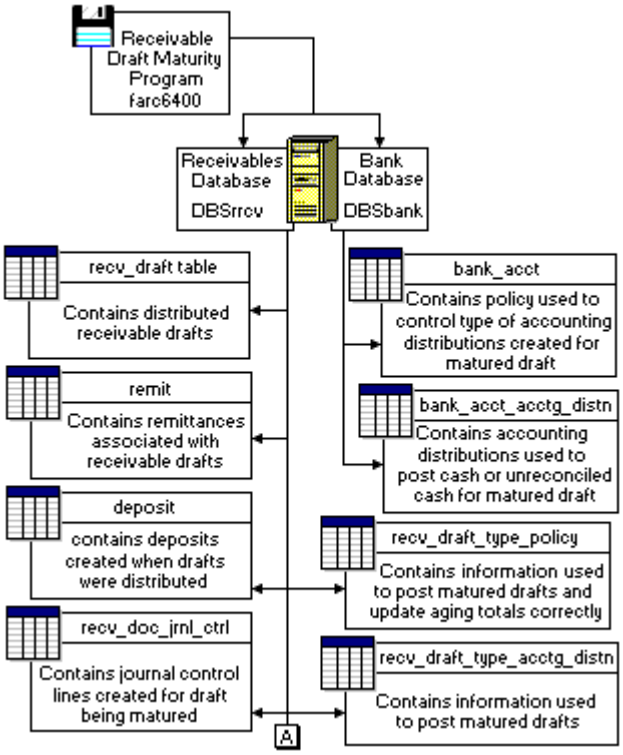


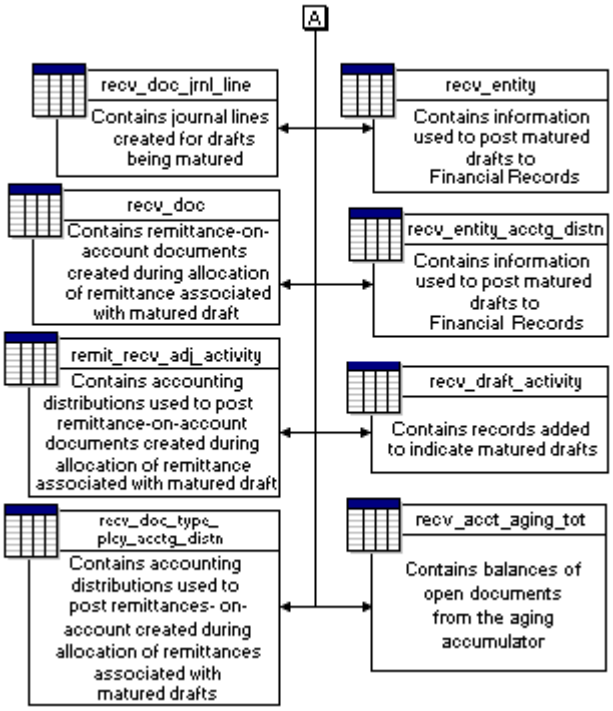
Receivable Draft Maturity Program

The Draft Maturity program reads the draft due dates and updates the cash account. This program makes drafts available for bank clearance.

During the draft maturity program, Receivables

- Reads the receivable draft table to identify those eligible for maturity (those with a due date the same as or later than the current date)
- Joins the eligible drafts to their related remittance records
- Sorts the resultant table using the remittance bank identifier, bank account number, deposit date, and deposit slip number
- Generates journal entries for each eligible draft
- Changes the status of the selected drafts to Mature
- Creates entries in the Draft Activity table to reflect the maturation
- Updates the remittance record
- Updates the drafts journal identifier and sequence number
- If applicable, generates currency gain or loss Ledger journal entries
- Updates receivable account aging totals
- Updates the Receivable Account table.




A
recv_doc_jrnl_line
Contains journal lines created for drafts being matured
recv_entity
Contains information used to post matured drafts to Financial Records
recv_doc
Contains remittance-on-account documents created during allocation of remittance associated with matured draft
recv_entity_acctg_distn
Contains information used to post matured drafts to Financial Records
remit_recv_adj_activity
Contains accounting distributions used to post remittance-on-account documents created during allocation of remittance associated with matured draft
recv_draft_activity
Contains records added to indicate matured drafts
recv_doc_type_plcy_acctg_distn
Contains accounting distributions used to post remittances- on-account created during allocation of remittances associated with matured drafts
recv_acct_aging_tot
Contains balances of open documents from the aging accumulator

Aging Receivable Documents

The Receivables Aging program performs the following functions:

- Ages all open receivable documents and drafts
- Accumulates predefined aging totals

The product performs due-date aging of receivable documents according to the aging policy your enterprise defines for the receivable entity. For more information, see Setting Up Aging Policy in the *Receivables* guide.

Information Requirements

To ensure data integrity, do not run the Aging program and add receivable documents at the same time. If documents are in the Receivables data tables, run the aging program before a batch of invoices is loaded to Receivables.

The following table shows the information required for running the Aging program and describes how the program uses it:

Information	Function
Receivable document final due date	Used with the aging date to determine the age of a receivable document.
Enterprise aging date	Used with the final due date to determine the age of a receivable document.
Aging totals table	Used to update with totals determined by aging processor.
Aging policy table	Used to obtain aging details for each receivable entity.
Receivable entity policy table	Used to obtain the entity's aging policy.
Receivable document type policy table	Used to determine whether to update any totals accumulators including disputed and not-aged accumulators.

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Aging	**Windows:** farc0210.exe **UNIX:** farc0210	Age of documents in yy/mm/dd or yyyy/mm/dd format. Current date is the default.

Aging Program

When you run the Aging program, it

- Calculates the age of the receivable documents, determines accumulator type, and updates the document.
- Updates all aging amounts based on the due date and aging date of each receivable document.
- Updates the aging date for the enterprise with the last aging date used.
- Sends messages through mail to notify the operator when the product ages the receivable documents based on a specified date.
- Does not age receivable documents because an appropriate accumulator does not exist.
- Deletes previously generated messages in the To Do List stating that a receivable document was not aged. Receivables generates these messages when you add or change receivable documents.

The Aging program searches the database file for all receivable documents with an Open status, then ages the open receivable documents and updates the accumulators.

Aging Receivables

The Aging program calculates the age of receivable documents based on the receivable due date and the aging date. If you do not enter an aging date, the program uses the current date.

Calculation

The program calculates the age of a receivable document based on the input aging date, the receivable document due date, and the age of the receivable document.

Updating Aging Categories

After the program ages the receivable document, it updates the aging totals. The product provides you with totals by receivable account, receivable entity, and currency.

Guidelines for Updating Accumulators

The Aging program uses the calculated age to determine the correct aging accumulator. Otherwise, the program uses receivable documents that are not aged to update accumulators according to the following guidelines:

If the receivable document is...	Then the aging program updates the...
Disputed	Disputed accumulator.
Not Aged	Not-aged accumulator.

Accumulator Types

If the age of a receivable document is negative, the Aging program updates the current accumulator or a future accumulator. If the age is positive, the program updates a past due accumulator.

Example. Smart Direction Industries defines the following aging policy:

Aging Category	Number of Days	Past or Future	Description
1	120	Future	91-120 days (future)
2	90	Future	61-90 days (future)
3	60	Future	31-60 days (future)
4	30	Current	0-30 days (current)
5	30	Past	1-30 (past due)
6	60	Past	31-60 (past due)
7	90	Past	61-90 (past due)
8	120	Past	91-120 days (past due)
9	150	Past	121-150 days (past due)
10	210	Past	151-210 days (past due)
11	N/A	Not aged	Not aged
12	N/A	Disputed	Disputed

The Aging program determines which category to update based on the age of the receivable document.

If the age of a receivable document falls between...	Then the aging program updates the...
0 and -30 days	Current category.
-61 and -90 days	Second aging category.
61 and 90 days	Seventh aging category.

When the program identifies the proper aging accumulator for a receivable document, it adds the receivable amount to the accumulator. This amount is either positive or negative. For example, if this is a credit receivable document, the amount is negative.

Updating Account, Entity, Currency Total Due

The Aging program updates the following receivable account and entity amounts by currency:

- Total due amount. After the program updates an aging accumulator, it adds the receivable amount to the account entity total due amount by currency.

- Adjusted total due amount. If the Adjusted Total Due indicator is turned on in the receivable document type policy, the program adds the receivable amount to the adjusted total due amount for the appropriate currency.
- Past due amount. If the age of the receivable document is positive, the program updates the past due amount.

Adding or Maintaining Documents

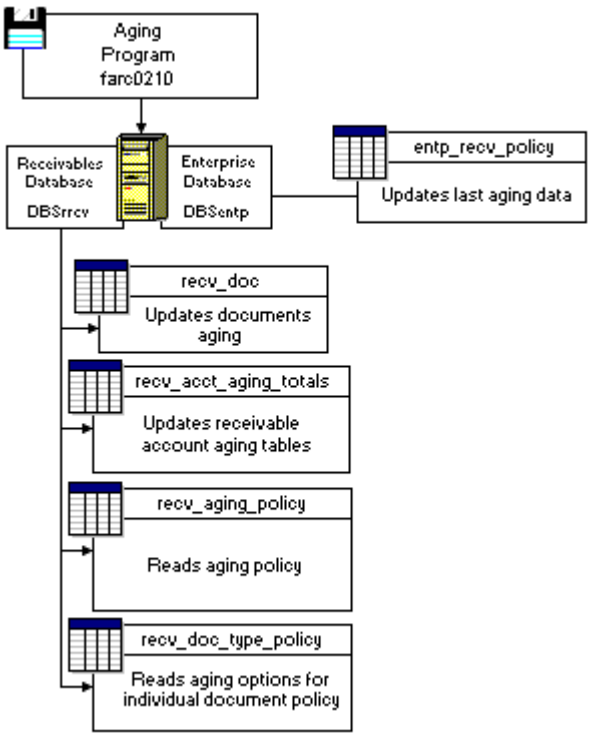
When you add or change a document online, Receivables calculates the document's age based on the

- Aging date stored at the enterprise. This is the date that was used in the Aging program during the last run.
- Receivable document due date, and
- Age of the receivable document.

During the document posting program (farc0120), the appropriate aging total is updated, as well as the total due, adjusted total due, and past due amounts.

If a document's age falls outside of its entity's aging policy, a message is displayed, and an activity message is sent indicating that the document that was added did not fall in an aging accumulator.

When the Aging program is run in a scheduled process, it deletes all the outstanding messages and writes any errors that are still in the SmartStream Mail output from the Aging program. Be sure to review the mail after each aging run.


Aging
Program
farc0210
Receivables
Database
DBSrrcv
Enterprise
Database
DBSentp
entp_recv_policy
Updates last aging data
recv_doc
Updates documents
aging
recv_acct_aging_totals
Updates receivable
account aging tables
recv_aging_policy
Reads aging policy
recv_doc_type_policy
Reads aging options for
individual document policy

Calculating Days Sales Outstanding (DSO)

The Days Sales Outstanding (DSO) program analyzes Receivable documents and drafts, and then extracts and stores data that you can use as input to a user-written DSO calculation. You can see DSO on the Credit Account Snapshot window.

The Days Sales Outstanding program creates or updates the DSO Receivable Account Input table, which contains data that you can access and use as input to a user-defined calculation for computing each account's Days Sales Outstanding measurement.

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

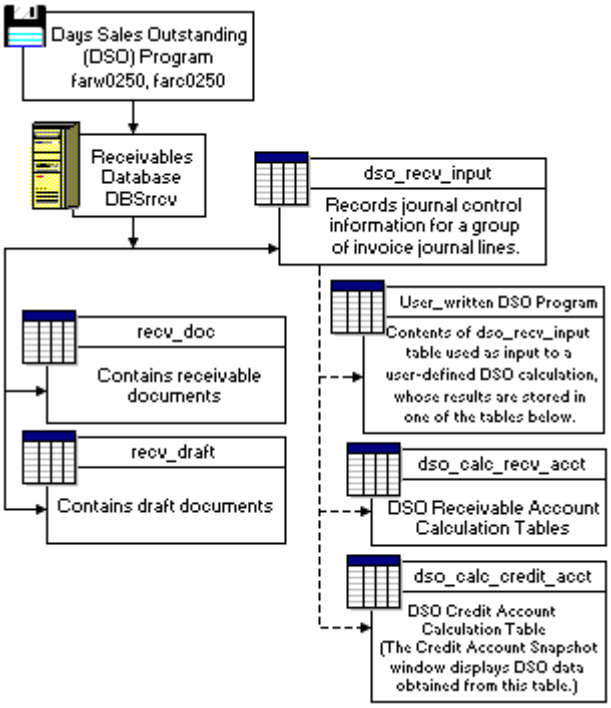
Program	Program Name	Program Parameters
Days Sales Outstanding (DSO)	**Windows:** farc0250.exe **UNIX:** farc0250	Starting and ending date of the period to examine; format is yy/mm/dd, yyyy/mm/dd, yy-mm-dd, yyyy-mm-dd, yy.mm.dd, or yyyy.mm.dd.

Days Sales Outstanding Program

The Receivables Days Sales Outstanding program performs the following functions:

- Reads the entered parameters (beginning and ending dates)
- Reads the Receivable Document table
- Selects those receivable documents (both open and closed) having an effective date within the specified range
- Adds the balance amount of each selected document to the following fields of the DSO Receivable Account Input table
  - Appropriate DSO Aging Totals (as determined by the Aging Policy)
  - DSO Total Amount Due
  - DSO Past Due Amount (if the document is past due)
- Adds the total amount of each selected document to the following fields of the DSO Receivable Account Input table
  - DSO Receivable Invoice Total (if the recv_doc_cat_code = INV)
  - DSO Receivable Debit Memo Total (if the recv_doc_cat_code = DM)
  - DSO Receivable Credit Memo Total (if the recv_doc_cat_code = CM)

- Selects all drafts with a status of ALLOC or REMIT and having an effective date within the specified range
- Adds the balance amount of each selected draft to the following fields of the DSO Receivable Account Input table
  - Appropriate DSO Aging Totals (as determined by the Aging Policy)
  - DSO Total Amount Due
  - DSO Past Due Amount (if the draft is past due).



DSO Input Format

The following table lists the field information and the arrangement you must use when formatting data as input to a user-written DSO calculation:

DSO Receivable Input (dso_recv_input)

Key	Column Name	Description	Type	Length	Col. #
P/F	recv_acct_id	Receivable Account ID	char	17	30015
P	dso_beginning_eff_date	Beginning effective date	datetime	10	26932
P	dso_ending_eff_ date	Ending effective date	datetime	10	26933
P/F	curr_code	Currency code	char	3	30363
P/F	recv_aging_policy_ id	Aging Policy identifier	char	10	24050

Key	Column Name	Description	Type	Length	Col. #
	dso_aging_tot_1	Aging Total bucket 1	money	26	26994
	dso_aging_tot_2	Aging Total bucket 2	money	26	26995
	dso_aging_tot_3	Aging Total bucket 3	money	26	26996
	dso_aging_tot_4	Aging Total bucket 4	money	26	26997
	dso_aging_tot_5	Aging Total bucket 5	money	26	26998
	dso_aging_tot_6	Aging Total bucket 6	money	26	26999
	dso_aging_tot_7	Aging Total bucket 7	money	26	27000
	dso_aging_tot_8	Aging Total bucket 8	money	26	27001
	dso_aging_tot_9	Aging Total bucket 9	money	26	27002
	dso_aging_tot_10	Aging Total bucket 10	money	26	27050
	dso_aging_tot_11	Aging Total bucket 11	money	26	27051
	dso_aging_tot_12	Aging Total bucket 12	money	26	27052
	dso_tot_amt_due	Total Amount Due	money	26	27053
	dso_past_due_amt	Past Due Amount	money	26	27054
	dso_recv_invoice_ tot	Rcv. Invoice total	money	26	27055
	dso_recv_dr_memo_tot	Rcv. Debit Memo total	money	26	27056
	dso_recv_cr_memo_tot	Rcv. Credit Memo total	money	26	27057
	chgstamp	Change stamp	smallint		

P=Primary key, F=Foreign key

User-Defined DSO Calculation

Because the DSO formulae and methods abound in today's industry, Receivables cannot provide a standard process that accurately reflects your specific requirements. Therefore, you must code your own DSO calculation, using the results of the Receivables DSO process (as stored in the dso_recv_input table) as input. Three of the more popular DSO formulae are provided for your information.

Three-Month Average DSO

This is the most commonly used formula, according to the Credit Research Foundation (CRF) and National Association of Credit Management (NACM). The formula is

(ATR * 90) / TOTSALES

Where:

ATR = Average of three month-end **total** receivables

TOTSALES = Total sales for the corresponding three months

Optimum DSO – Extracting Variables Method

This method extracts the financial variables that affect DSO unfavorably, such as dating, deductions, and sales to marginal accounts. The items that cause temporary dislocations in the DSO are excluded from both accounts receivable and sales. The formula is

(ACR – EXTOT) * 90 / (TOTSALES – EXTOT)

Where:

ACR = Average accounts receivable balance for the last three months

EXTOT = Total for the last three months of the sales category to be extracted (such as "disputed")

TOTSALES = Total sales for the last three months

To use this formula, you create an aging policy that defines one of the 12 aging totals as "disputed."

Optimum DSO – Best Possible DSO Method

This method develops the best possible DSO using **current** accounts receivable instead of total accounts receivable. It helps distinguish between delinquency and length of the selling terms as causes for shifts in DSO. The formula is

(ACR * 90) / CRSALES

Where:

ACR = Average **current** receivables balance for the last three month-ends

CRSALES = Credit sales for the last three months

DSO Results

Place the results of the user-defined DSO calculation in either the DSO Calculation Receivable Account table (dso_calc_recv_acct in the Receivable data tables) or the DSO Calculation Credit Account Table (dso_calc_credit_acct in the Credit data tables).

Note: The Credit Account Snapshot window, which displays the results of your DSO calculation, extracts data only from the DSO Calculation Credit Account Table.

The following tables show the formats of these database tables.

DSO Receivable Account Calculation Table (dso_calc_recv_acct)

Key	Column Name	Description	Type	Length	Col. #
P/F	recv_acct_id	Receivable Account ID	char	17	30015
P	date_last_maintained	Maintenance date	datetime	10	30807
	dso_calc	DSO calculation for a Receivable Account	smallint	4	27058
	chgstamp	Change stamp	smallint		

DSO Credit Account Calculation Table (dso_calc_credit_acct)

Key	Column Name	Description	Type	Length	Col. #
P/F	credit_acct_id	Credit Account ID	char	17	26099
P	date_last_maintained	Maintenance date	datetime	10	30807
	dso_calc	DSO calculation for a Credit Account	smallint	4	27058
	chgstamp	Change stamp	smallint		

P=Primary key, F=Foreign key

Producing Receivable Reports

Receivables provides statements, aged trial balance reports, and standard accounting reports to help you analyze and monitor your receivables. You can tailor these reports to meet the specific needs of your enterprise. You can run these reports on demand or schedule thems.

Note: Before running the supplied reports, you must perform some setup tasks. For more information, see Setting Up for Reporting.

Running Reports on Demand

Receivables uses Microsoft Access to produce reports. You can choose activities from your Activity List to generate the reports that are described in the following table.

Report	Activity	Program Name
Displays details of account balances including aging information.	Aged Trial Balance	faratb32.mdb
Previews results of transactions that you archived when you execute with the P parameter.	Recv Archive & Purge Reports	farpur32.mdb
Prints notices of assessed finance charges.	Finance Charge Notice Print	farfcp32.mdb
Displays results of balancing, auditing, and reviewing receivables and remittances. Produces reconciliation reports for receivables and remittances.	Receivables/Remittances Balancing	farbal32.mdb
Prints statements.	Receivable Account Statements	farstm32.mdb
Displays exposure or aging totals for a specified account.	Receivable Account Totals	fartot32.mdb
Displays statistics on all remittances applied by algorithm for a specified date range.	Remittance Algorithm Statistics Report	farasr32.mdb
Prints drafts.	Receivable Draft Print	fardrp32.mdb

Scheduling Receivables Reports

You can schedule a report to run standalone or as a part of other scheduled jobs. For example, you can schedule statement production after Receivables posting.

When you schedule a report, you must specify a report option as part of the program parameters. This report option identifies a set of report parameters you defined on the aged trial balance and statement input windows. List program parameters on one line, separated by forward slashes (/). Be sure to enter a forward slash after the last parameter.

Scheduling Parameters

Use the following parameters to schedule statements, the Aged Trial Balance, and drafts:

Program	Parameter Set
msaccess.exe	Access mdb Name /CMD /User ID/Password/ Language/Dialect/Report Option/

This table describes each parameter and gives examples:

Parameter	Description	Example
Access mdb Name	Fully qualified location of the Access database file. You must enter the complete directory path.	c:\sstrm*xx*\farstm32.mdb for statements or c:\sstrm*xx*\faratb32.mdb for ATB
/cmd	Separator that tells Access information is being passed to this mdb.	**/**cmd
/User ID	Identifier for the user who runs the report.	/user04
/Password	Password of the user who runs the report.	/logon
/Language	A two-digit code for the language Access uses to display error messages and other information.	/EN
/Dialect	Code for the language dialect Access uses to display error messages and other information. **Note:** Currently, you must enter a blank space for this parameter.	**/**
/Report Option/	Name of the report parameters you previously set up in the mdb.	/STMT1/ – statements /ATB/ – aged trial balance /DRAFTS/ – drafts /RECVINPEXT/ – receivable input extract /RECVRECONEXT/ – receivables reconciliation extract /REMINPEXT/ – remittances input extract /REMRECONEXT/ – remittances reconciliation extract

Example

The complete set of parameters used in the Example column is as follows:

- c:\sstrm*xx*\farstm32.mdb /cmd/user04/logon/EN/ /STMT1/ for statements
- c:\sstrm*xx*\faratb32.mdb /cmd/user04/logon/EN/ /ATB1/ for the aged trial balance report.

Note: Currently, English is the only valid value for the Language parameter, and a blank is the only valid value for the Dialect parameter. You must enter a forward slash (/) followed by a blank space as the value for this parameter.

For more information about using Job Scheduler, see Using the Job Scheduler or Job Scheduler Help.

Special Considerations

Before scheduling these reports, make sure

- The appropriate Receivables .mdb resides on the Job Server in the same directory as the Poll that you plan to use to run this job.
- The location of the .mdb is specified in your parameters from the point of view of the Job Server.
- The report option ID is saved to the .mdb version that is visible to the Job Server.

Displaying Report Status

If a scheduled report does not run because of an error, a Scheduler Log is created that lists the date and error messages for each report that did not run.

To display the return code for an error, make sure that the DBS check box on the Job Scheduler window is **not** selected, and then choose Save.

Processing Statements

During processing of statements, Receivables

- Analyzes all open receivable documents for the accounts specified
- Selects receivable documents that meet the criteria entered on the Statements Options window
- Determines whether there are closed receivable documents to include
- Prints one statement for each account (account-level statement) or one statement for each account by entity (account-by-entity statements)
- Updates the last statement number and date for receivable documents and accounts included on the statements
- Calculate aging totals based on the age of the receivable document.

Scheduling Statements Reports

You can schedule the Statements report to run standalone or as a part of other scheduled jobs. For example, you can schedule the Receivable Account Statements program to run as a step following Receivable Posting program.

Scheduling statements is a two-step process:

Stage	Description
1	Using any supported query tool to extract receivable documents or receivable drafts
2	Scheduling the Receivable Account Statements program (farstm32.mdb)

When you schedule statements, you must specify a report option as part of the program parameters. This report option specifies a set of report parameters you selected and saved using the Statement Options form. The Statement Options window appears while the program is running. You can use this window to specify the name of the extract table that you set up using the query.

For more information about the statements, see Processing Receivable Accounts in the *Receivables* guide.

Scheduling Aged Trial Balance Reports

You can schedule the Aged Trial Balance report to run standalone or as part of other scheduled jobs. For example, you can schedule the Aged Trial Balance program to run as a step following the Receivable Posting program.

Scheduling the Aged Trial Balance program is a two-step process:

Stage	Description
1	Using any supported query tool to extract receivable documents or receivable drafts
2	Scheduling the Aged Trial Balance program (faratb32.mdg)

When you schedule the Aged Trial Balance program, you must specify a report option as part of the program parameters. This report option specifies a set of report parameters you selected and saved using the Aged Trial Balance Options window. The Aged Trial Balance Options window appears while the program is running. You can use the window to specify the name of the extract table that you set up using the query.

During processing of the Aged Trial Balance report, Receivables

- Uses criteria in the query to create the recv_atb_doc or recv_atb_draft file with the report data
- Determines which receivable accounts and documents and drafts to include on the report
- Calculates the balance for receivable documents and drafts based on their age. Receivables calculates the age of the document using the aged trial balance aging date, the receivable document due date, and the age of receivable document
- Calculates and updates aging totals and prints the report.

For more information about aged trial balances, see Aging Receivable Documents.

Note: Run the Aging program before running the Aged Trial Balance program.

Printing Drafts

You can print drafts as a standalone program or schedule them to print as part of other scheduled jobs. For example, you can schedule drafts to print as a step following the Draft Generation program.

Scheduling drafts to print is a two-step process:

Stage	Description
1	Using any supported query tool to extract documents
2	Scheduling the Receivable Draft Print program (fardrp32.mdb)

When you schedule the Receivable Draft Print program, you must specify a report option as part of the program parameters. This report option specifies a set of report parameters you selected and saved using the Draft Print Options window. The Draft Print Options window appears while the program is running. You can use the window to specify the name of the extract table that you set up using the query.

Balancing Receivables to Ledger Accounts

You can schedule the extraction of information from receivable tables to perform balancing and produce reports. You can schedule the reports to run standalone or as a part of other scheduled jobs. The Receivables/Remittance Balancing program (farbal32.mdb) can extract information that you specify and display the results.

Step	Program	Description
1	Receivables Input Balancing	Extracts information for all control groups and receivable documents with an entry date that falls within the range entered as run parameters.
2	Receivables to Ledger Reconciliation Extract	Extracts information for all of the receivable document activity records and their corresponding Ledger accounts receivable journal entries with an effective date that falls within the range entered as run parameters. Compares the extracted information to verify that the receivable document activity and the corresponding ledger journal entries are correct.
3	Remittance Input Balancing Extract	Extracts information for all of the deposits and their associated remittances with a deposit date that falls within the range entered as run parameters. Extracts information for all remittances not associated with deposits that have a remittance date that falls within the range entered as run parameters.
4	Remittances to Ledger Reconciliation Extract	Extracts information for all the remittances and their corresponding Ledger cash journal entries with an effective date that falls within the range entered as run parameters. Compares the extracted information to verify that the remittances and the corresponding journal entries are correct.

When you schedule the Receivables/Remittances Balancing program, you must specify a report options as part of the program parameters. The report options specify a set of report parameters you selected and saved using the Receivables/Remittances Balancing Menu window.

Reporting Algorithm Allocation Statistics

If you use algorithms to allocate remittances, you can review the results of the scheduled process by selecting Remittance Algorithm Statistics Report activity. This activity runs the farasr32.mdb.

Printing Finance Charge Notices

You can print finance charge notices as a standalone program or schedule them to print as part of other scheduled jobs. For example, you can schedule notices to print as a step following the Finance Charge Notice Generation program.

Scheduling notices to print is a two-step process:

Stage	Description
1	Using any supported query export tool to extract documents
2	Scheduling the Finance Charge Notice Print program (uses the farfcp32.mdb)

When you schedule the Finance Charge Notice Print program, you must specify an option identifier as part of the program parameters. This option identifier represents a set of print and layout options you selected and saved using the Finance Charge Notice Print window. You can also use this window to specify the name of the extract table that you set up using the query export tool.

Archiving Receivables Data

Using the archive and purge process you can remove outdated information from the Receivables data tables and move it to either a history table or to a file that you can store on a disk or tape.

Using the Archive/Purge Request window, you can

Archive…	When you want to…
Data to a history table	Reduce the size of the active data tables and provide access to data on the history table occasionally.
Data to a disk	Retain the data in a file, but currently have no need to access it.
History table to a disk	Reduce the size of the history table and retain the data in a file, but currently have no need to access it.

Before You Begin

Before beginning the archive process, run the following programs and Microsoft Access database to be sure that all of the data tables contain the most up-to-date information and that the journal entries are posted to the Ledger.

Filename	Description
farc0210.exe	Aging
fglc0900.exe	General Ledger Posting
farbal32.mdb	Receivables/Remittances Balancing

Archive Conditions

This table lists the types of data you can archive, and the conditions that each archive type must meet before you can begin. You must archive the data in the order listed, which is the reverse of the order in which you entered it. You must successfully archive each type before moving on to the next one. For example, you must successfully archive the deposit clearances before you can archive the remittance clearances.

Step	Archive Type	Conditions
1	Deposit Clearances	▪ The type of the deposit clearance is not Draft. ▪ The status is CLRX, and the audit activity code is Delete. ▪ The status is CLR and the activity date is before the Archive/Purge date, or the activity date is after the Archive/Purge date, and the audit activity code is Delete. ▪ The status of all the remittances belonging to the deposit is Allocated or Reversed - Unavailable. ▪ Associated bank journal entries are posted to Ledger.
2	Remittance Clearances	▪ The type of the remittance clearance is not Draft. ▪ The status is CLRX, and the audit activity code is Delete. ▪ The status is CLR and the activity date is before the Archive/Purge date, or the activity date is after the Archive/Purge date, and the audit activity code is Delete. ▪ The status of the corresponding remittance is Allocated or Reversed - Unavailable. ▪ Associated bank journal entries are posted to Ledger.

Step	Archive Type	Conditions
3	Remittances (including deposits)	For remittances ▪ The type of Remittance is not Draft. ▪ The status is Allocated or Reversed - Unavailable and Cleared. ▪ The corresponding journal entries are posted to Ledger. ▪ The corresponding remittance clearance has been archived and purged. ▪ If the remittance is part of a deposit, the remittance is archived through the deposit only and not individually. ▪ Corresponding documents have a status of Closed. Any corresponding documents that were reopened during remittance reversal must also be closed. For deposits ▪ The type of the deposit is not Draft. ▪ The corresponding deposit clearance is archived and purged. ▪ All the associated remittances are eligible for archiving and are included when you archive and purge the deposit. ▪ Corresponding journal entries are posted to Ledger.

Step	Archive Type	Conditions
4	Receivable Documents	▪ The type of receivable document is not Draft. ▪ The status is Closed. ▪ All journal entries associated with the document are posted to the Ledger. ▪ All the documents related to this document have a status of Closed. ▪ All remittances allocated to the document have been archived and purged. ▪ If a document is part of a control group, the status of the control group is Posted.
5	Receivable Accounts	▪ All receivable documents for the receivable account have been archived and purged. ▪ The total amount due is zero. ▪ The adjusted amount due is zero. ▪ The past due amount is zero.

Archive Process

To archive Receivables data, follow this process:

Step	Description	Activity
1	Determine the data that you want to archive and verify that the data meets the archive conditions mentioned earlier.	
2	Select an archive activity, enter a unique identifier in the Archive/Purge Request field, and specify the selection criteria. **Note:** Your activity security determines the archive activities displayed on the drop-down menu.	Archive/Purge Request window
3	Use the Archive/Purge Request identifier as the program parameter to schedule the archive process. To preview the data you want to archive before removing it, schedule the archive process with the parameter of P. This Preview option is available only when you archive to the History table and not to disk. Run the archive/purge process.	Job Scheduler (for information about the parameters to use, see Job Scheduler Parameters for Archive/Purge in the *SmartStream Administration* guide)
4	If you used the Preview option, schedule and run the reports.	Recv Archive & Purge Reports

Step	Description	Activity
5	Review the reports and, if necessary, revise the data.	Recv Archive & Purge Reports
6	Rerun the archive/purge process in standard mode to archive the data.	Job Scheduler

Job Scheduler Parameters

Enter the following values on the Job Scheduler window for the Program name and Program Parameters fields when scheduling receivable processes.

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccf0800.exe **UNIX:** ccf0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements and archives it. – P - Preview. Displays the data to be purged and archived before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview. **Note:** You must use the security profile of DBS when you run the Archive/Purge process.

Selection Criteria

For each archive type, you can specify selection criteria on the Archive/Purge Request window. By entering criteria for specific fields, you specify the data that you want to archive.

When you archive data to disk, the disk files created appear in the following format:

```
xxxxnnnn.bcp
```

where
xxxx is the table ID
nnnn is the sequence number

The following table lists the selection criteria fields for each Receivable archive type and the Receivable data tables with the table identifier that are archived.

Archive Type	Selection Criteria	Table Name	Table ID
Receivable Accounts	Receivable Account	recv_acct	ract
	Last Receivable Activity Date	recv_acct_alternate_id	raai
		recv_acct_bank_acct	rabk
		recv_acct_comnt	racc
		recv_acct_contact	rcon
		dso_calc_recv_acct	radr
		dso_recv_input	radi
		acct_recv_statistics	cavs
		acct_remit_statistics	cars
Receivable Documents	Receivable Entity Identifier	recv_doc	rrcv
	Receivable Account	recv_doc_activity	rrac
	Last Receivable Activity Date	recv_doc_comnt	rrcm
		recv_doc_line	rrln
		recv_doc_tax	rrtx
		recv_doc_line_tax	rrlt
		recv_doc_jrnl_ctrl	rrjc
		recv_doc_jrnl_line	rrjl
		recv_ctrl_grp	rrcg
Remittances and Deposits	Receivable Entity Identifier	remit	rcmt
	Receivable Account	remit_comnt	rcmc
	Remittance Date	remit_recv_alloc_activity	rcap
	Bank ID	remit_recv_adj_activity	rcad
	Bank Account Number	remit_recv_adj_activity_comnt	rcac
		recv_doc_jrnl_ctrl	rrjc
		recv_doc_jrnl_line	rrjl
		deposit	rdpt
		deposit_comnt	rdpc
Remittance Clearances	Receivable Activity Date	remit_clearance	bkcr
	Bank ID	remit_clearance_comnt	bkrl
	Bank Account Number	bank_jrnl_ctrl	bkjc
		bank_jrnl_line	bkjl
Deposit Clearances	Receivable Activity Date	deposit_clearance	bkcd
	Bank ID	deposit_clearance_comnt	bkdl
	Bank Account Number	bank_jrnl_ctrl	bkjc
		bank_jrnl_line	bkjl

Reviewing the Status of Receivable Jobs

You can look in the following places for information about the status of jobs processed by Receivables:

- Scheduler Log window to view Scheduler messages
- Mail to view program processing messages
- Transaction maintenance windows to view Receivable transaction messages
- Receivable Document window to view document status and errors

Scheduler Messages

The Poll program generates informational messages about the progress of a scheduled job and its steps. It also indicates the job's final result (ended successfully, ended with errors, or stopped before completion). You can see the messages by selecting the Scheduler Log activity and using the Scheduler Log window.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window and their meanings:

Return Code	Meaning	Possible Cause	Suggested Action
-9	Could not reference program text file.	Text file not found	Call the database administrator.
-6	A database error occurred.	Interruption or did not connect.	Call the database administrator.
-5	Could not connect to a database.	Interruption or did not connect.	Call the database administrator.
-4	An error occurred while trying to get location information.	Interruption or did not connect.	Call the database administrator.
-3	An error occurred while trying to get security information.	Interruption or did not connect.	Call the database administrator.
-2	An error occurred while trying to get job step information.	Interruption or did not connect.	Call the database administrator.
-1	An error occurred while trying to get Connect information.	Interruption or did not connect.	Call the database administrator.
1	An application error occurred.		See Program Processing Messages.
2	The Cancel command was issued.		See Program Processing Messages.

Return Code	Meaning	Possible Cause	Suggested Action
5	Could not find the program or could not process the parameters.	Program failed due to some error in processing.	See the Job Scheduler Log and correct the problem.

Program Processing Messages

Messages that appear in the Scheduler Log as the result of a Receivables program are sent to a message table (psc_messages). After processing is complete, the Scheduler Log is automatically sent to the users identified in the Distribution ID field on the Job Scheduler window.

You can display these Scheduler Log messages by selecting the Mail Folder InBox from your desktop.

Receivables produces the following types of messages:

- Error
- Number of items processed
- Number of items in error
- Status code

Transaction Messages

The Bulk Copy program copies the text files to the transaction table. As the load program runs, it edits and validates the source data. Validation of transactions ensures that the values are within an acceptable range. If the data fails the validation, it remains on the transaction table until you correct it and rerun the load program.

If errors occur, Receivables displays the errors on message tables. Review the messages from the following windows:

- Recv Acct Transaction Maintenance window
- Receivable Transaction Maintenance window
- Remittance Transaction Maintenance window
- Recv Draft Transaction Maintenance window

Correcting Transaction Data

To correct invalid data on the transaction table, follow these steps:

Step	Action
1	Open the applicable transaction maintenance window.
2	Select File Open and Search. The window displays a list of all the transactions in error.

Step	Action
3	Double-click the transaction to display an error message.
4	Edit the data in any of the fields of the transaction maintenance window.
5	Save your edits.

Document Status Messages

View the document status using the Receivable document window. Documents that pass validation and are loaded on the Receivable document data tables successfully have a status of Unposted, or if the NO_POST parameter is not set, a status of Open (Posted). A status of Incomplete indicates that the transaction has an error. If the data fails validation, it remains on the Receivable document data table with a status of Incomplete until you correct the error.

Correcting Data Tables

To correct invalid data on the Receivable document data tables with a status of Incomplete, follow these steps:

Step	Action
1	Open the Receivable document window.
2	Select File Open and search for documents with a status of Incomplete.
3	Double-click any document in the list that has a status of Incomplete.
4	Select the Error Message view to display information about the error.
5	Edit the data on the Receivable document window to correct the error.
6	Save your edits.

Aging Messages

The SmartStream Mail output lists any warning messages that the Aging program generates by receivable document identifier. If the program cannot place the document in an appropriate category, it displays a message.

If...	Then the program does not age the receivable document because...
An open nondisputed receivable document does not update any of your 12 accumulators	The document fell outside the aging boundaries defined by your aging policy.
The program encounters an open disputed receivable document, but a disputed accumulator is not defined	It did not find a disputed accumulator in your aging policy.
The program encounters a not-aged receivable document but a not-aged accumulator is not defined	It did not find a not-aged accumulator in your aging policy.

If a document does not update a category because of an error, it still updates the total due, adjusted total due, and past due appropriately.

Statements, Aged Trial Balance, and Draft Print Messages

Messages generated during processing of statements, aged trial balances, and drafts appear in an error report. For example, the Aged Trial Balances program produces two reports: the ATB Report and an error report when the program finishes processing. Error messages that occur during processing of scheduled transactions appear in the Job Scheduler Log.

15 Receiving

Chapter Contents

15-1 Window Processing
15-2 Scheduled Processing
15-3 Using Bulk Load Processing
15-4 Archiving and Purging Receiving Information
15-9 Job Scheduler Parameters for Archiving and Purging Receiving Information
15-10 What Happens During Receiving Archive/Purge Processing?

Window Processing

Most Receiving business functions can be performed on Receiving windows. See the Receiving guide for an online-oriented presentation of Receiving and the business needs it serves. See the Receiving online Help for detailed information about each window and its fields and procedures for performing window tasks.

Scheduled Processing

You can also perform some Receiving functions by running scheduled processes. You use Job Scheduler to schedule and run the following types of schedule processing:

- Bulk load
- Archive/purge

Using Bulk Load Processing

For information about

- Bulk load processing see the Bulk Load guide
- Table layout requirements for loading receipts, see Bulk Load Receipt in the Bulk Load Table Layout chapter of the Bulk Load guide.

Archiving and Purging Receiving Information

Use the archive/purge process to remove outdated receiving information from your database tables. Depending on the options you select, you can archive receiving data from activity tables to history tables or from history tables to a file for storage on disk or tape before SmartStream purges it.

For more information about this process, see About Archive/Purge.

Security

To use the archive/purge process in Receiving, you must have the following activity security defined for you on the Activity Security window:

- Access to these activities:
  - Archive/Purge Request (ccf0770)
  - Archive/Purge scheduled process (ccf0800)
- Security Entity 1 status assigned to these archive IDs:
  - Archive Receipts to History (mdssrhmcah)
  - Archive Receipt History to Disk (mdssrhacad)
  - Archive Returns to History (mdsrtnhcah)
  - Archive Return History to Disk (mdsrtnacad)
- Security Entity 2 status assigned to the appropriate sites

When you run the archive/purge process using Job Scheduler, you must use the security profile of DBS.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	On the Archive/Purge Request window, enter your options for the archive and purge request, including the selection criteria.
2	Using Job Scheduler, run the offline scheduled process that archives and purges activity records. **Note:** The request ID you enter on the Archive/Purge Request window is used as a parameter when you set up the archive/purge process in Job Scheduler.
3	Review results using the Purchasing Archive/Purge Reporting window.

What Can You Archive and Purge?

Using the archive and purge activities delivered for the Receiving application, you can archive and purge the following types of information:

- Receipt
  - Scheduled receipts
  - Receipt rejections
  - Unidentified receipts
- Return
  - Return headers
  - Return lines
  - Return comments

Types of Archive and Purge Processes

You can manage the information in your Receipt activity and history tables using the following archive and purge requests.

- Receipt
  - Archive Receipts to History - Moves receipt information from the original activity tables to history tables.
  - Archive Receipt History to Disk - Moves archived receipt information from the history tables to a file for storage on disk or tape.
- Return
  - Archive Returns to History - Moves return information from the original activity tables to history tables.
  - Archive Return History to Disk - Moves archived return information from the history tables to a file for storage on disk or tape.

Do not attempt to run the archive to history and archive history to disk processes simultaneously.

Tables Processed

Archive to History Processes

The archive to history processes for Receiving archive and purge information from the following activity tables:

Receipt

- DBSreqm
  - receipt_req_xref

  - receipt_shipment
  - sched_rcpt
  - sched_rcpt_com
  - sched_rcpt_detail
- DBSropm
  - discrepant_receipt
  - discrepant_receipt_comnt
  - discrepant_receipt_history
  - receipt_rejections
  - receipt_rejections_comnt

Return

- DBSreqm
  - return_req_xref
- DBSropm
  - return_comnt
  - return_header
- return_line

Archive History to Disk Processes

The archive history to disk processes for Receiving archive and purge information from the archive tables. Information from each archive table is written to a separate file.

Selection Criteria

You can specify the criteria for selecting the information to include in archive/purge processing when you define an archive/purge request. Only information that meets the selection criteria is included in the run of the request. The following information shows the selection criteria you can identify for each process type:

Archive to History Processes

- Receipt
  - Site
  - Due date (Required)
  - Vendor ID
  - Vendor location

- Return
  - Site
  - Return date
  - Return number
  - Vendor ID
  - Vendor location

Archive History to Disk Processes

- Receipt and Return
  - Site
  - Date archived

Eligibility Validation for Archiving and Purging to History

The receiving information that matches your selection criteria must also meet the following conditions to be eligible for archiving and purging.

Receipt

The status of the scheduled receipt must be Closed.

Scheduled receipts for

- Purchase orders must have no incomplete receipt rejections or incomplete returns to the vendor
- Transfer orders must have no incomplete receipt rejections or incomplete returns to the stockroom.
- Returns to stockroom must have no incomplete receipt rejections.

Return

The status of the return must be Complete.

The return to stockroom must have no receipts referencing it (they have been archived and purged).

Prerequisite Archive/Purge Processing

Whether information is eligible for archiving and purging depends on other archive/purge processes being run in a specific sequence. The following table shows the recommended prerequisite archive/purge processing for each type of information:

If you want to archive and purge…	You must first archive and purge…
Returns	Receipts
Purchase orders	Payment Requests Receipts
Requisitions	Receipts Purchase Orders

If you want to archive and purge…	You must first archive and purge…
Blanket orders	Purchase Orders Requisitions
Vendor items	Payment Requests Returns Purchase orders Requisitions Blanket orders
Vendors	Payment Requests Returns Purchase orders Requisitions Blanket orders Vendor items
Stockroom items	Receipts Purchase orders Requisitions Kit orders
Item	Receipts Returns Purchase orders Requisitions Blanket orders Stockroom items
Cost	Receipts (for transfer orders)

Job Scheduler Parameters for Archiving and Purging Receiving Information

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For additional information about this window, see Understanding the Job Scheduler.

Values for Parameters

Enter the following values in the Program Name and Program Parameters fields when scheduling the following program.

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccfc0800.exe **UNIX:** ccfc0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements, and archives it. – P - Preview. Displays the data to be purged and archived before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview. **Note:** You must use the security profile of DBS when you run the archive/purge process.

What Happens During Receiving Archive/Purge Processing?

The following table describes the stages of the archive/purge process:

Stage	Description
1	Reads the archive/purge request on the purge_request_ctrl table to determine the receiving information to process.
2	Writes information to the appropriate candidate table for each scheduled receipt or return that meets the selection criteria and is complete.
3	Validates each row of the candidate table and deletes those that are not eligible.
4	Depending on the type of processing requested, it adds and deletes rows in the appropriate receiving tables.
5	Maintains information in the purge tables as needed.

16 Supplies Management

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Supplies Management Scheduled Processes

You can schedule several Supplies Management jobs. The Supplies Management scheduled processes are

- Bulk Loads
  - Item Master
  - Item Stockroom
  - On Hand Quantities
  - Receipts
  - Item Average Cost
  - Remote Inventory Control (RIC)
- Reservation
- Replenishment

- Transaction Valuation
- Journal Creation
- Cost Item Setup
- Archive/Purge

Running Supplies Management Scheduled Processes

Most of the Supplies Management scheduled processes are started using Job Scheduler; however, you run the Journal Creation and Transaction Valuation programs using Supplies Management windows. These windows interface with Job Scheduler and use the Scheduler Log window to view the results of program processing.

Job Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps, as well as the job's final result (ended successfully, ended with errors, or ended before completion). You can view program results using the Scheduler Log window.

Program Processing Messages

Messages written as a result of Supplies Management programs processing are sent to a message table (psc_messages). These messages have information about the return codes viewed on the Scheduler Log window and program-related statistics, such as the number of rows processed.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window for Supplies Management scheduled processes:

Return Code	Meaning	Possible Cause	Suggested Action
0	Program completed successfully.		
1	Warnings or informational error was issued.	Some informational type messages were generated. **Note**: This code may also be generated when a user stops the job using the View Server Queue window.	Check mail to view information.
2	Warnings were issued.	Some informational type messages were generated.	Check mail to view information.
3	Application errors	The data did not pass all the edits that enable the job to be fully processed.	Run the report for the applicable error table, correct the data, and rerun.

Return Code	Meaning	Possible Cause	Suggested Action
4	DBMS error- stored procedures could not be executed.	Server is unavailable. Stored procedure does not exist. Server logs may be full. Database is out of space.	Check mail or the local log file for specific information about the problem. Correct the problem in the DBMS environment and rerun.
5	Fatal processing error occurred and program cannot continue processing.	Client cannot open required connections to the server. Login failed the security check.	Check local log file for specific information about the problem. Correct the problem and rerun.

After processing is complete, these messages are automatically sent to the recipients identified on the Mail dialog box of the Job Scheduler window. The messages are automatically deleted from the psc_messages table. For more information, see Job Scheduler Troubleshooting in the *SmartStream Administration* guide.

Each scheduled process generates program-specific processing messages.

Bulk Load Messages

Supplies Management Bulk Load programs generate processing messages on the Scheduler Log window and application errors on the Bulk Load Error Correction window. For more information, see the online help for the Bulk Load Error Correction window.

To resolve Bulk Load errors, see the Valid Values column of the table layout for the particular Bulk Load program. For more information, see the Bulk Load Table Layouts chapter in the Bulk Load guide..

Troubleshooting Scheduled Processes

Most program errors can be detected and resolved by reviewing the return code and program processing messages. When more information is required to resolve scheduled process errors, you can create a file that captures step-by-step program processing and helps you correct errors.

The following table describes how to create a trigger (.lvl) file that automatically generates a log (.dbg) file that can be used to track program processing and detect potential problems.

Task	Action
1	Create a text file that contains the following line of text: **0xFFFFFFFF**
2	Save the file in the working directory of the poll program (pscc0020) with the following filename, **<Program name>.LVL** where the program name is the name of the scheduled process you are running. For example, *mblc0060.lvl* would be the filename for the Bulk Load On Hand Quantities file.
3	Run the scheduled process.
4	When the program has finished processing, the following file is generated in the working directory of the poll program: **<Program name>.DBG** This file contains information about calls to stored procedures and mail messages that can be used to detect where a problem occurred.

Bulk Load Scheduled Processes

Bulk Load programs are used to process different types of inventory and cost transactions, by copying the transactions from an external business source to database management system (DBMS) tables.

You can use one of the following methods to perform this task:

- Copy the transactions to the DBMS table in bulk using Job Scheduler to schedule the Bulk Copy process.
- Write the transactions directly to the DBMS table.

Bulk Load Programs

Supplies Management provides the following Bulk Load programs:

- Bulk Load Item Master
- Bulk Load Item Stockroom
- Bulk Load On Hand Quantity
- Bulk Load Average Cost
- Bulk Load Receipt
- Bulk Load Remote Inventory Control (RIC)

For more information about Supplies Management Bulk Load programs, see the following sections in the Bulk Load guide:

- Overview of Bulk Load Processing
- Setting Up and Using Bulk Load
- Setting Up Bulk Load Defaults
- Bulk Load Table Layouts

Running Bulk Load Programs

You run Bulk Load programs using the Job Scheduler. To run a Bulk Load program, select the predefined program alias name or enter the program name.

The following table lists the Bulk Load program alias and program name for each Bulk Load program:

Note: All entries must be separated by the pipe character (|).

Bulk Load Program	Program Name (alias)	Program Name (Windows and UNIX)	Program Parameters
Bulk Load Item Master	Bulk Load Site Item	mblc0010	Generate Workflow: 0 - Do not generate Workflow 1 - Generate Workflow (default)
Bulk Load Item Stockroom	Bulk Load Item Stockroom	mblc3030	Generate Workflow 0 - Do not generate Workflow 1 - Generate Workflow (default)
Bulk Load On Hand Quantity	Bulk Load Adjust Inventory	mblc0060	Generate Workflow 0 - Do not generate Workflow 1 - Generate Workflow (default)
Bulk Load Average Cost	Bulk Load Average Cost	mblc3040	Generate Workflow 0 - Do not generate Workflow 1 - Generate Workflow (default)
Bulk Load Receipt	Bulk Load Receipt	mdsc3000	Generate Workflow 0 - Do not generate Workflow 1 - Generate Workflow (default)
Bulk Load Remote Inventory Control (RIC)	Bulk Load RIC Upload	mblc3010	Generate Workflow 0 - Do not generate Workflow 1 - Generate Workflow (default)

Program Parameters for Bulk Load Programs

When you run Bulk Load programs you can specify whether or not to generate workflow during processing.

The following table lists the valid options for the Generate Workflow parameter:

Generate Workflow Parameter	Description
0	Do not generate workflow
1	Generate workflow (default)

For more information, see Configuring Bulk Load Transaction Workflow.

Reviewing Bulk Load Logs

Review Bulk Load transaction logs using the Bulk Load Logs window. For more information, see the online help for the Bulk Load Logs window.

Reservation

The Reservation program is used to maintain desired inventory levels and to obtain the supplies you need on time. When the Reservation program runs it

- Examines all rows in the Inventory Tickler Demand (ivtd) file for changes made to requisitions since the last time the program ran
- Examines all rows in the InventoryTickler Supply (ivts) file for changes made to inventory since the last time the program ran
- Reserves available items against approved requisitions
- Creates backorders for unavailable, needed items.

For an overview of the Reservation process, see Reserving and Replenishing Supplies.

For a graphical representation of the Reservation process, see the Reservation Process Flowchart.

Running the Reservation Program

The Reservation program is a one-step job run using the Job Scheduler window. To run the Reservation program, select the predefined program alias (Batch Reservation) or enter the program name (mimc3000).

Job Scheduler Parameters for the Reservation Program

The following table lists the Job Scheduler parameters for the Reservation program. You can run only one site, stockroom at a time.

Note: Type the pipe character (|) after all entries, including the last.

Program Name	Parameters	Description
Windows: mimc3000.exe **UNIX**: mimc3000	Site	The site for which you are running the Reservation program.
	Stockroom	The stockroom for which you are running the Reservation program.

Reservation Program Input and Output Tables

The following table lists the tables processed by the Reservation program:

Table Name	Table ID	Family ID	Application	Mode
inventory_tickler_demand	ivtd	reqm	mrq	Read, Delete
req_line_jrnl_line	rqjl	reqm	mrq	Read
req_line	rqln	reqm	mrq	Read, Update
supplies_kit_order_line	skol	reqm	mim	Read, Insert
supplies_kit_order_line_dtl	skod	reqm	mim	Read, Update
supplies_kit_order	skoh	reqm	mim	Read, Insert
sched_rcpt	srhm	reqm	mim	Read
sched_rcpt_detail	srdm	reqm	mim	Read
inventory_stockroom	istm	iplm	mim	Read, Update
inventory_tickler_supply	ivts	iplm	mim	Read, Delete
inventory_demand_dtl	ivdd	iplm	mim	Read, Insert, Update, Delete
replenishment_grp	rplm	pplm	mbm	Read
stockroom	strm	strm	mim	Read
item_stockroom	pstm	iplm	mim	Read
vendor_loc_item	vitm	vmst	cvn	Read
vendor_loc_purchasing	vpur	vpur	cvn	Read
inventory_demand_dtl_udak	ivdu	iplm	mim	Insert, Delete

Dynamic Workflow

The Reservation program generates dynamic workflow assignments. To view application workflows, use the SmartStream Reference Tool.

Replenishment

The Replenishment program evaluates the inventory level specified and loads the req_trans table with replenishment requisition transactions. The req_trans table is then used as input for the Purchasing Requisition Load program, which you run after you run the Replishment program. This program loads the data that the Replishment program generates into the req and req_line tables to generate Supplies Management replenishment requisitions.

For more information, including the transaction layouts for the req_trans table, see About Requisition Transaction Layouts.

For a graphical representation of the Replenishment process, see Replenishment Program Flowchart.

Replenishment Program Considerations

- Run the Reservation program before the Replenishment program to update inventory stockroom quantities properly. Otherwise, some items may not meet the initial criteria to trigger replenishment.
- Before you run the Replenishment program for the first time, verify that the Next Available Number activity security has the following two rows defined:

  Row 1:

  Security Entity 1 = 15493 (Requisition ID)

  Row 2:

  Security Entity 1 = 5530 (Kit Order)

  Security Entity 2 = <Site>

Running the Replenishment Program

You run the Replenishment program using the Job Scheduler window. To run the Replenishment program, select the predefined program alias (Batch Replenishment) or enter the program name (mimc3010).

Job Scheduler Parameters for the Replenishment Program

The following table lists the Job Scheduler parameters for the Replenishment program.

Note: Type the pipe character (|) after all entries, including the last.

Program Name	Parameters	Description
Windows: mimc3010.exe **UNIX:** mimc3010	Site	The site you are replenishing. This parameter is required.
	Stockroom	The stockroom you are replenishing. This parameter is required.
	Replenishment Group	The replenishment group for which you are running the Replenishment program. This parameter is optional. You can enter multiple replenishment groups. For example, ATLA|STK1|REPLEN1|REPLEN2|REPLEN3|

Replenishment Input and Output Tables

The following table lists the tables processed by the Replenishment program:

Table Name	Table ID	Family ID	Application	Mode
inventory_tickler_demand	ivtd	reqm	mrq	Read, Delete
req_line_jrnl_line	rqjl	reqm	mrq	Read
req_line	rqln	reqm	mrq	Read, Update
supplies_kit_order_line	skol	reqm	mim	Read, Insert
supplies_kit_order_line_dtl	skod	reqm	mim	Read, Update
supplies_kit_order	skoh	reqm	mim	Read, Insert
sched_rcpt	srhm	reqm	mim	Read
sched_rcpt_detail	srdm	reqm	mim	Read
inventory_stockroom	istm	iplm	mim	Read, Update
inventory_tickler_supply	ivts	iplm	mim	Read, Delete
inventory_demand_dtl	ivdd	iplm	mim	Read, Insert, Update, Delete
replenishment_grp	rplm	pplm	mbm	Read
stockroom	strm	strm	mim	Read
item_stockroom	pstm	iplm	mim	Read
vendor_loc_item	vitm	vmst	cvn	Read
vendor_loc_purchasing	vpur	vpur	cvn	Read
inventory_demand_dtl_udak	ivdu	iplm	mim	Insert, Delete

Transaction Valuation

The Transaction Valuation program values inventory and creates credits and debits.

Running the Transaction Valuation Program

You run the Transaction Valuation program using the Transaction Valuation Run Options window. For detailed information about Transaction Valuation program run options, see the online help for the Transaction Valuation Run Options window.

Transaction Valuation Input and Output Tables

The following table lists the tables processed by the Transaction Valuation program:

Table Name	Table ID	Family	Application	Mode
cost_batch_parameters	bprm	cost	mcm	Read
cost_batch_parameters_detail	bprd	cost	mcm	Read
cost_curr	cfcu	cost	mcm	Read
cost_debug_errors	cbug	cost	mcm	Insert
cost_inv_acct	drcr	cost	mcm	Read, Insert
cost_inv_adjust	iadj	cost	mcm	Insert
cost_inv_consgt	stkc	cost	mcm	Insert
cost_inv_costed	ictd	cost	mcm	Read, Insert
cost_inv_hist	invh	cost	mcm	Insert
cost_inv_hld	ihld	cost	mcm	Insert, Update, Delete
cost_inv_misc_acct	msci	cost	mcm	Insert
cost_inv_proc_ctrl	invc	cost	mcm	Insert, Update
cost_inv_stkr	stki	cost	mcm	Insert
cost_inv_wip	wipi	cost	mcm	Insert
cost_inv_xfer_ord	xfri	cost	mcm	Insert
cost_item	itma	cost	mcm	Read
cost_item_elem	icdt	cost	mcm	Read, Insert, Update
cost_item_elem_change_history	iech	cost	mcm	Insert
cost_item_stkr	cist	cost	mcm	Read, Update
cost_kip	ckip	cost	mcm	Insert

Table Name	Table ID	Family	Application	Mode
cost_kit_ord_line	korl	cost	mcm	Read, Insert, Update, Delete
cost_kit_ord_line_dtl	kold	cost	mcm	Read, Insert, Update, Delete
cost_site_plcy	spol	cost	mcm	Read
cost_supp_inv_balance	sinb	cost	mcm	Insert, Update
cost_trans	ctrn	cost	mcm	Read
cost_type_item	itmc	cost	mcm	Read, Insert, Update
cost_uom_conversion	cuom	cost	mcm	Read, Insert, Delete
cost_xfer_avg_cost	xavg	cost	mcm	Read, Insert

Journal Creation

The Journal Creation program derives account numbers, generates journal entries, and stores them in a table from which the journal entries can be posted.

Running the Journal Creation Program

You run the Journal Creation program using the Journal Creation Run Options window. For detailed information about Journal Creation program run options, refer to the online help for the Journal Creation Run Options window.

Journal Creation Input and Output Tables

The following table lists the tables processed by the Journal Creation program:

Table Name	Table ID	Family	Application	Mode
acctg_distn_type_usage	oedt	entp	cep	Read
activity_master_1	actm	wact	pam	Read
activity_version_1	actv	wact	pam	Read
amt_class_type	cmat	cmat	pcd	Read
appl_master_1	appm	clg	pst	Read
cost_curr_def	ccdf	cost	mcm	Read
cost_inv_acct	drcr	cost	mcm	Read, Update
cost_inv_adjust	iadj	cost	mcm	Read
cost_inv_consgt	stkc	cost	mcm	Read
cost_inv_costed	ictd	cost	mcm	Read
cost_inv_misc_acct	msci	cost	mcm	Read
cost_inv_posted_gl	cpgl	cost	mcm	Read, Insert
cost_inv_stkr	stki	cost	mcm	Read
cost_inv_wip	wipi	cost	mcm	Read
cost_inv_xfer_ord	xfri	cost	mcm	Read
cost_item	itma	cost	mcm	Read
cost_jrnl_ctrl	cjct	cost	mcm	Insert
cost_jrnl_line	cjln	cost	mcm	Insert
cost_posted_acct	pact	cost	mcm	Read, Insert
cost_proj_jrnl_ctrl	cpjc	cost	mcm	Insert
cost_proj_jrnl_line	cpjl	cost	mcm	Insert
cost_site_plcy	spol	cost	mcm	Read
cost_trans_descp	tdes	cost	mcm	Read
cost_type	ctyp	cost	mcm	Read

Table Name	Table ID	Family	Application	Mode
cost_site_entity	cset	plmm	mcd	Insert
ldr_acct	glca	glep	fgl	Read
ldr_entity_policy	glep	glep	fgl	Read
ldr_validation_policy	glvp	glep	fgl	Read
udak_key_layout	udkl	udak	cud	Read

Cost Item Setup

The Cost Item Setup program (mcmc0010) is used during implementation to copy items to Supplies Management cost tables. This is required only if the customer has previously implemented Procurement applications without Supplies Management. If the customer is implementing Procurement and Supplies Management at the same time, Supplies Management cost tables are updated using triggers, and this process is not necessary.

Running the Cost Item Setup Program

You run the Cost Item Setup program using the Job Scheduler window. To run Cost Item Setup, select the predefined program alias (Cost Item Setup) or enter the program name (mimc0010).

Job Scheduler Parameters for the Cost Item Setup Program

The following table lists the Job Scheduler parameters for the Cost Item Setup program.

Note: All entries must be separated by the pipe character (|).

Program Name	Parameters	Description
Windows: mcmc0010.exe **UNIX**: mcmc0010	Site	The site for which you are loading item costs.
	Generate Workflow	0 - Do not generate Workflow 1 - Generate Workflow (default)

Cost Item Setup Input and Output Tables

The following table lists the tables processed by the Cost Item Setup program:

Table Name	Table ID	Family	Application	Mode
cost_item	itma	cost	mcm	Insert, Delete
item	pmam	pmam	mbm	Read
item_site_xref	ppxx	pmam	mbm	Read
item_plan	pplm	pplm	mbm	Read

Archiving and Purging Supplies Management Information

Use the archive/purge process to remove outdated supplies management information from your database tables. Depending on the options you select, you can archive supplies management data from activity tables to history tables or disk, or from history tables to a file for storage on disk or tape before SmartStream purges it.

For more information about this process, see About Archive/Purge.

Security

To use the Archive/Purge process in Supplies Management, you must have the following activity security defined for you on the Activity Security window:

- Access to the these activities:
  - Archive/Purge Request (ccf0720)
  - Archive/Purge scheduled process (ccf0800)
- Security Entity 1 status assigned to these archive IDs:
  - Archive Cost to History (mcmccpvcah)
  - Archive Cost History to Disk (mcminvacad)
  - Archive Kit Orders to History (mrqskohcah)
  - Archive Kit Order History to Disk (mrqskhacad)
  - Archive Move Tickets to Disk (mimmtkhdad)
  - Archive Stockroom Items to History (mbmppl5cah)
  - Archive Stckrm Item History to Disk (mbmppl6cad)
  - Archive Transaction History to Disk (mimapthdad)
- Security Entity 2 status assigned to the appropriate sites.

When you run the Archive/Purge process using Job Scheduler, you must use the security profile of DBS.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	On the Archive/Purge Request window, enter your options for the archive and purge request, including the selection criteria.
2	Using Job Scheduler, run the offline scheduled process that archives and purges activity records. **Note:** The request ID you enter on the Archive/Purge Request window is used as a parameter when you set up the Archive/Purge process in Job Scheduler.
3	Review results using the Supplies Management Archive/Purge Reporting window.

What Can You Archive and Purge?

Using the archive and purge activities delivered for the Supplies Management application, you can archive and purge the following types of information:

- Cost
  - If Supplies Management is installed and average cost is maintained for the stockroom, then stockroom-item-specific tables in the DBScost database that contain static information not related to transactions are archived when the stockroom item is archived.
  - If average cost is maintained for the site, this static data is archived with the item.
- Kit Order
- Move Ticket
- Stockroom Item
- Transaction History

Types of Archive and Purge Processes

You can manage the information in your Supplies Management activity and history tables using the following archive and purge processes.

- Cost
  - Archive Cost to History - Moves cost information from the original activity tables to history tables.
  - Archive Cost History to Disk - Moves archived cost information from the history tables to a file for storage on disk or tape.
- Kit Order
  - Archive Kit Orders to History - Moves kit order information from the original activity tables to history tables.

  - Archive Kit Order History to Disk - Moves archived kit order information from the history tables to a file for storage on disk or tape.

- Move Ticket
  - Archive Move Tickets to Disk - Moves move ticket information from the original activity tables to a file for storage on disk or tape. No preview option is allowed.

- Stockroom Item
  - Archive Stockroom Items to History - Moves stockroom item information from the original activity tables to history tables.
  - Archive Stckrm Item History to Disk - Moves archived stockroom item information from the history tables to a file for storage on disk or tape.

- Transaction History
  - Archive Transaction History to Disk - Moves transaction history information from the original activity tables to a file for storage on disk or tape. No preview option is allowed.

Do not attempt to run the archive to history, archive to disk, or archive history to disk processes simutaneously.

Tables Processed

Archive to History and Archive to Disk Processes

The Supplies Management archive to history and archive to disk processes archive and purge information from the following activity tables, except where noted.

Cost

- DBScost
  - cost_inv_acct
  - cost_inv_adjust
  - cost_inv_consgt
  - cost_inv_costed
  - cost_inv_hist
  - cost_inv_misc_acct
  - cost_inv_posted_gl
  - cost_inv_stkr
  - cost_inv_wip
  - cost_inv_xfer_ord
  - cost_jrnl_ctrl
  - cost_jrnl_line

  - cost_kip
  - cost_kit_ord_line
  - cost_kit_ord_line_dtl
  - cost_posted_acct
  - cost_proj_jrnl_ctrl
  - cost_proj_jrnl_line
  - cost_xfer_avg_cost

Kit Order

- DBSreqm
  - supplies_kit_order
  - supplies_kit_order_comnt
  - supplies_kit_order_line
  - supplies_kit_order_line_dtl
- DBSiplm
  - inventory_demand_dtl **(purge only)**
  - supplies_picklist
  - supplies_picklist_line

Move Ticket

- DBSiplm
  - move_ticket
  - move_ticket_detail

Stockroom Item

- DBSpplm
  - item_stockroom
  - item_stockroom_history
  - kit_definition
- DBScost
  - cost_item_elem
  - cost_item_elem_change_history
  - cost_item_stkr
  - cost_supp_inv_balance
  - cost_type_item

  - cost_type_item_comnts
  - cost_type_item_history
- DBSiplm
  - inventory_bin **(purge only)**
  - inventory_stockroom **(purge only)**
  - inventory_tickler_supply **(purge only)**

Transaction History

- DBSrcth
  - adj_physical_inv_trans_history
  - misc_issue_trans_history
  - misc_receipt_trans_history
  - move_stock_trans_history
  - receipt_rejections_trans_hist

Archive History to Disk Processes

The Supplies Management archive history to disk processes archive and purge information from the archive tables. Information from each archive table is written to a separate file.

Selection Criteria

You can specify the criteria for selecting the information to include in archive/purge processing when you define an archive/purge request. Only information that meets the selection criteria is included in the run of the request. The following information shows the selection criteria you can identify for each process type:

Archive to History Processes

- Cost
  - Site
  - Transaction date
- Kit Order
  - Site
  - Date/Time created
- Stockroom Item
  - Site
  - Item
  - Stockroom

Archive to Disk Processes

- Move Ticket
  - Site

  - Move ID
- Transaction History
  - Site
  - Transaction date

Archive History to Disk Processes

- Cost, Kit Order, and Stockroom Item
  - Site
  - Date archived

Eligibility Validation for Archiving and Purging to History

The supplies management information that matches your selection criteria must also meet the following conditions to be eligible for archiving and purging.

Cost

The status of any kit order line referenced in the cost transaction must be Closed.

No scheduled receipts for transfer orders or returns are associated with the cost transactions.

Kit Order

The status of the kit order must be Closed.

Stockroom Item

The status of the stockroom item must be Inactive.

Returns lines that reference the stockroom item are complete.

The stockroom item is not a component item in a kit definition.

Inventory balances for the stockroom item are zero.

None of the following items reference the stockroom item (because they have been archived and purged):

- Purchase orders
- Requistion lines
- Scheduled receipts for returns to stockroom
- Kit orders (as an item or component item)

The cost inventory transaction history information for the stockroom item and site must be valued, journalized, and posted.

Prerequisite Archive/Purge Processing

Whether information is eligible for archiving and purging depends on other archive/purge processes being run in a specific sequence. The following table shows the recommended prerequisite archive/purge processing for each type of information:

If you want to archive and purge…	You must first archive and purge…
Returns	Receipts
Purchase orders	Payment Requests Receipts
Requisitions	Receipts Purchase Orders
Blanket orders	Purchase Orders Requisitions
Vendor items	Payment Requests Returns Purchase orders Requisitions Blanket orders
Vendors	Payment Requests Returns Purchase orders Requisitions Blanket orders Vendor items
Stockroom items	Receipts Purchase orders Requisitions Kit orders
Item	Receipts Returns Purchase orders Requisitions Blanket orders Stockroom items
Cost	Receipts (for transfer orders)

Job Scheduler Parameters for Archiving and Purging

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For additional information about this window, see Understanding the Job Scheduler.

Values for Parameters

Enter the following values in the Program Name and Program Parameters fields when scheduling the following program.

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccfc0800.exe **UNIX:** ccfc0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements, and archives it. – P - Preview. Displays the data to be purged and archived before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview. **Note:** You must use the security profile of DBS when you run the Archive/Purge process.

What Happens During Archive/Purge Processing?

The following table describes the stages of the archive/purge process:

Stage	Description
1	Reads the archive/purge request on the purge_request_ctrl table to determine the supplies management information to process.
2	Writes information to the appropriate candidate table for each cost transaction, stockroom item, or kit order that meets the selection criteria and is closed (kit order) or inactive (stockroom item). **Note**: Move tickets and transaction history archives do not use candidate tables.
3	Validates each row of the candidate table and deletes the ineligible ones.
4	Depending on the type of processing requested, it adds and deletes rows in the appropriate purchasing tables.
5	Maintains information in the purge tables as needed.

Supplies Management Security

Activity Security

Activity (window) security restricts access to the windows that appear in the Activity Lists on the SmartStream desktop. For more information, see Securing Activities.

For a list of Supplies Management activities secured by site, see Activities Secured by Site for Supplies Management.

For a list of Supplies Management activities secured by site and stockroom, see Activities Secured by Site and Stockroom for Supplies Management.

Special security setup considerations apply to the following activities:

- Procurement Common History Options
- Item and Commodity History Options
- Item Average Cost
- Item Average Cost Change History
- Bulk Load Programs

Security for History Options

Using the Procurement Common and Item and Commodity History Option activities you can maintain history tables that are either secured or not secured by site. Usually, activity security includes valid site values for security entity 1 as well as a security entity 2 value of asterisk (*). However, a security entity 1 value of * is valid for setting audit history options for tables that are not secured by site.

Example

The following table shows how your SmartStream administrator might establish security for the security group TEST when history tables are not secured by site:

Activity Description	Security Entity 1 (NA)	Security Entity 2
Procurement Common History Options	*	*
Item and Commodity History Options	*	*

To maintain history tables that are secured by site, activity security must include a valid site value for security entity 1 as well as a security entity 2 value of *.

Example

The following table shows how your SmartStream administrator might establish security for a security group when history tables are secured by site:

Activity Description	Security Entity 1 (Site)	Security Entity 2 (NA)
Procurement Common History Options	ATL	*
Procurement Common History Options	BOS	*
Item and Commodity History Options	ATL	*
Item and Commodity History Options	BOS	*

Security for Item Average Cost and Item Average Cost Change History

Because Supplies Management provides the ability to secure the Item Average Cost and Item Average Cost Change History activity by site and stockroom, special consideration should be given when an enterprise maintains cost at the site level.

If your enterprise maintains cost at the site level and you choose site and stockroom level security for the Item Average Cost or the Item Average Cost Change History activity, security entity 2 (stockroom) is no longer applicable.

Usually, activity security includes valid site values for security entity 1 as well as a stockroom value for security entity 2. However, when costs are maintained at the site level, a security entity 2 value of * is valid.

If your enterprise maintains cost at the stockroom level, and you are implementing 2 levels of security, the security entity 2 value must include a valid stockroom.

Example

The following table shows how your SmartStream administrator might establish security for the security group TEST when cost is maintained at the site, and site/stockroom security is established for the Item Average Cost and Item Average Cost Change History activities:

Activity Description	Security Entity 1 (Site)	Security Entity 2 (Stockroom)
Item Average Cost	ATL	*
Item Average Cost	BOS	*
Item Average Cost Change History	ATL	*
Item Average Cost Change History	BOS	*

Example

The following table shows how your SmartStream administrator might establish security for the security group TEST when cost is maintained at the stockroom level and site/stockroom security is established for the Item Average Cost and Item Average Cost Change History activities:

Activity Description	Security Entity 1 (Site)	Security Entity 2 (Stockroom)
Item Average Cost	ATL	STKC1
Item Average Cost	ATL	STKC2
Item Average Cost Change History	ATL	STKC1
Item Average Cost Change History	ATL	STKC2

Security for Bulk Load Programs

Bulk Load programs require two categories of security: Job Scheduler and activity security. For information about setting up security for bulk load programs, see Activity Security in the *Bulk Load* guide

Customizing Printed Documents

Supplies Management uses PowerBuilder datawindows to produce picklists, reports, and receiving tickets and labels. You can use these datawindows to customize the layout and design of Supplies Management documents.

The following table lists Supplies Management documents and the name of the PowerBuilder datawindow used to customize each document:

Document	PowerBuilder Datawindow
Picklist (For Requisitions)	mim0800p_picklist_req
Picklist (For Kit Orders)	mim0800p_picklist_kit
Journalized Transaction by Account Report	mcm0930r_ledger_journal_report_new
Put-Away Label	mds0800d_putaway_label
Barcode Put-Away Label	mds0800d_barcode_label
Delivery Ticket	mds0800d_dellivery_ticket
Disposition Ticket	mds0800d_disposition_label
Return to Stockroom Ticket	mds3000s_print_return
Return to Vendor Ticket	mds3000v_print_return

Supplies Management Databases

You can view complete database information such as table names, column names, stored procedures, and triggers using the SmartStream Reference Tool.

For a list of databases used by Supplies Management, see Databases.

Supplies Management Codes

Order Type Codes

The following table lists the order type codes Supplies Management uses. SmartStream provides other order type codes, but Supplies Management does not use them.

Note: The database name for the order type code column is order_type_code.

Order Type Code	Order Type Description
RT	Return
PO	Purchase Order
RO	Requisition
KO	Kit order
TO	Transfer Requisition

Usage Codes

The following table lists the usage codes Supplies Management uses. SmartStream provides other usage codes, but Supplies Management does not use them.

Note: The database name for the usage code column is usage_code.

Usage Code	Usage Code Description
EX	Expensed
SE	Stocked/Expensed
IM	Stocked

Material Status Codes

The following table lists the material status codes Supplies Management uses.

Note: The database name for the material status code column is material_status_code.

Material Status Code	Material Status Description
STCK	Stocked
HOLD	On Hold

Journal Status Codes

The following table lists the journal status codes Supplies Management uses.

Note: The database name for the journal status code column is jrnl_status_code.

Journal Status Code	Journal Status Code Description
V	Valid
C	Complete
H	Suspendable
A	In Process
X	Posted

Accounting Distribution Type Codes

The following table lists the accounting distribution type codes Supplies Management uses. SmartStream provides other accounting distribution type codes, but Supplies Management does not use them.

Note: The database name for the accounting distribution type code column is acctg_distn_type_code.

Accounting Distribution Type Code	Accounting Distribution Type Description
200	Stockroom Inventory
216	Inventory Adjustment
220	Scrap Expense
224	Transfer Order Inventory
225	Transfer Order Inventory Adjustment
234	Inter-Company COGS
240	Inter-Company AP
252	Return to Vendor
275	Inventory Revaluation
276	Kits in Process
300	Expenditure
312	Purchase Price Variance
408	Accounts Payable Clearance

Transaction Codes

The following table lists the transaction codes Supplies Management uses.

Note: The database name for the transaction code column is trans_code.

Transaction Code	Transaction Code Description
A	Adjustment
I	Issue
M	Move
N	Return
R	Receive
S	Scrap

Cost Transaction Codes

The following table lists the cost transaction codes Supplies Management uses.

Note: The database name for the cost transaction code column is disposition_code for tables in the Cost table family.

Cost Transaction Code	Cost Transaction Code Description
IQI	Issue to Requester
IQIC	Issue to Requester - Consignment
ITI	Issue to Transfer (in-site)
ITIS	Issue to Transfer – Sending (cross site)
ITIR	Issue to Transfer – Receiving (cross site)
IKI	Issue to Kit Order
IDI	Direct Issue
IDIC	Direct Issue – Consignment
RKI	Received Assembled Kits
SKC	Scrap Kit Components
MII	Inventory Move
AIQ	Inventory Adjustment
RPI	Receive PO into Inventory
RPE	Receive PO into Exception
RNI	Receive Return Into Inventory
RNIC	Receive Return Into Inventory – Consignment

Cost Transaction Code	Cost Transaction Code Description
RPI	Receive PO Into Inventory
RTI	Receive Transfer Into Inventory or Receive Transfer Into Exception
SRO	Scrap Receipt at Owner's Expense
SRV	Scrap Receipt at Vendor's Expense
NVIP	Return to Vendor
NVEP	Return to Vendor From Exception
NVIX	Return to Vendor – No PO
NVEX	Return to Vendor from Exception – No PO
AQQ	Close Transfer Short
AIA	Adjust Average Cost
AIAB	Bulk Load Average Cost
AIAM	Inventory Price Variance

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Technical Reference
Shared Components

Version 6.5

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1 Deleting Education and Test Data

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How You Delete Education and Test Data

During installation you can install education data. In addition, you may have added data to test the SmartStream products in your environment.

You must remove all the data from all of the SmartStream product database tables before you configure your user-defined accounting key. Although the data is deleted, the table structures are kept intact. Preliminary data required to run the products is then reloaded into these tables.

When to Perform

Use the following table to determine when you should perform this procedure:

If you are performing...	Then...
An initial or subsequent implementation	Delete test and education data.
Subsequent implementation of a product that was not processed during the initial configuration	Do not delete test and education data.

Removing Data

Use the following procedure to remove the data:

Step	Action
1	Access the directory containing setup.exe and run it. If *l:\xxx* is the high-level drive and directory, this file is located in the *l:\xxx***dbms** subdirectory. **Result:** The SmartStream Table Initialization window displays.
2	Enter the Database Server, System Administrator ID, Password, and choose Next.
3	From the products displayed, select those you want to process and choose Next.
4	Review the compile summary information and choose Back to make changes or choose Next to continue the table initialization process.
5	Review and correct errors shown in the error and output files indicated on the Table Initialization Summary window.
6	Run the setup.exe again.
7	When the Table Initialization Complete window displays, choose Exit.

See the appropriate DBMS documentation for more information about errors.

What Happens Next?

After you delete the education and test data, you must configure your accounting key. For information about this next step, see About the User-Defined Accounting Key.

2 Configuring Your Accounting Key

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About the User-Defined Accounting Key

SmartStream products are delivered with a predefined accounting key that you change to suit your business needs.

When you configure your user-defined accounting key, you implement policy decisions about the management of your enterprise's accounting information.

The configuration process

- Changes the SmartStream-delivered accounting key to your user-defined accounting key
- Sets up high-level security and controls for automatically generating user-defined accounting keys
- Sets the number of accounting periods allowed for your enterprise.

Warning: Before adding data to SmartStream, you can configure the accounting key an unlimited number of times. However, after the configured key structure is used to tailor windows and database scripts **and data is added**, reconfiguring the accounting key results in loss of data.

Prerequisites

Before you configure your user-defined accounting key, you must perform the following tasks:

- Make your policy decisions. For information about policy, see User-Defined Accounting Key Decisions in the *Enterprise Accounting* guide.
- Delete education and test data from database tables. For information see, Removing Data.
- Ensure the client workstation you are using to run the user-defined accounting key (UDAK) program has the current version of
  - PowerBuilder – Desktop version at a minimum
  - SmartStream.

How You Configure Your Accounting key

The configuration process is made up of the following stages:

Stage	Description
1	Start the configuration process.
2	Enter your user-defined accounting key information.
3	Verify the accounting key information you entered and configure your key.
4	Check the results of the configuration process.
5	Apply your accounting key.
6	Regenerate the runtime libraries.

Stage 1: Start the Configuration Process

The following tasks are performed during this stage:

Task	Description	Activity or action	Considerations
1	Start the program.	udak.exe	The program is located in *I:\xxx***\dbms\udak\udak.exe**, where *I:\xxx* is the drive and directory where the SmartStream products are installed.
2	Enter the user logon information.	UDAK Log On	To run this process before the database server is installed complete the Database Server Status field. If you are using Full mode make sure the products being configured are not being used. If you are using Special mode and updating architecture tables make sure the products being updated are not being used.
3	Select the language and products to configure.	UDAK Language/ Product Selection	Bank, Enterprise, and Vendor are automatically selected and cannot be changed the first time you use the UDAK configuration process. If you select one of the following products—Allocations, Ledger, or Journals—then all three products are automatically selected if they are installed. If you select Projects or Projects Allocations, the other product is automatically selected if it is installed. You can configure an accounting key for Consolidations only after an initial product configuration.

Stage 2: Enter Your User-Defined Accounting Key Information

The following table describes each task for this stage:

Task	Description	Activity or Action	Considerations
1	Enter the database column name and maximum length for each element. If necessary, change the window column title for each element.	UDAK Element/Title Definition	Database column name and length cannot be changed after the initial configuration process. For more information about defining database column names, see the Naming Conventions section following this table. Consider all the languages you will be using throughout your enterprise when you decide on the maximum length for each element. The database column name is the default. Enter information for all languages selected.
2	Check the appearance of the user-defined accounting key.	Preview button	
3	Change the appearance of the user-defined accounting key, if necessary.	Modify Attributes button	
4	If you selected Ledger, Journals, Allocations, Consolidations, or Budget, enter the appropriate control information.	Modify Controls button	

Naming Conventions

You must follow certain naming conventions when you name the user-defined accounting key elements. The database column name

- Cannot be blank or contain imbedded spaces
- Must start with a-z, #, or _
- Can contain a-z, 0-9, #, _, or $ if not the first character
- Cannot be longer than 30 characters.

SmartStream Allocations and Naming Conventions

Warning: If you plan to use the masking function in SmartStream Allocations, do **not** use the reserved characters & or # in any of your element values.

Stage 3: Verify Accounting Key Information

The following table describes each task for this stage:

Task	Description	Activity or Action
1	Review your decisions.	Review Decisions button
2	Review logon information.	UDAK Log On Recap
3	Verify that the languages and products are correct, and change product information as needed.	UDAK Language/Product Recap
4	Verify that the database column names, lengths, and windowcolumn titles are correct, or change them as needed.	UDAK Element/Title Recap
5	If you selected Ledger, Journals, Allocations, Allocations, or Budget, verify the control information or change it as needed.	UDAK Controls Recap
6	Configure your accounting key.	Configure System button

Stage 4: Check Results

When you configure the user-defined accounting key, the configuration process

- Updates windows to reflect your newly defined accounting key elements.
- Changes database scripts from the accounting key delivered with SmartStream products to the newly defined user information. The database scripts include table create scripts, stored procedures, and triggers.
- Updates system table data to reflect the new column names and lengths you defined.

As the configuration process makes these changes, it displays a window showing the status of the configuration.

Sample Table Create Script

The following script is a sample table create script delivered with SmartStream products (**bold** entries indicate the delivered accounting key):

```
create table dbo.ldr_acct
(
ldr_entity_id          char (5)      not null,
division               char (6)      not null,
account                char (5)      not null,
department             char (6)      not null,
product                char (4)      not null,
project                char (5)      not null,
acct_type_code         char (1)      not null,
acct_descp_1           char (35)     not null,
acct_descp_2           char (35)     not null,
acct_status_code       char (1)      not null,
summ_ind               char (1)      not null,
open_date              datetime      not null,
close_date             datetime      not null,
date_created           datetime      not null,
date_last_maintained   datetime      not null,
revaln_opt             char (1)      not null,
revaln_key_id          char (5)      null,
life_to_date_ind       char (1)      not null,
chgstamp               smallint      not null
)
```

After you run udak.exe, the database scripts change to reflect your user-defined accounting key. In the following table create example, the new user-defined accounting key is indicated in **bold**:

```
create table dbo.ldr_acct
(
ldr_entity_id          char (5)      not null,
business_unit          char (10)     not null,
region                 char (6)      not null,
account                char (8)      not null,
acct_type_code         char (1)      not null,
acct_descp_1           char (35)     not null,
acct_descp_2           char (35)     not null,
acct_status_code       char (1)      not null,
summ_ind               char (1)      not null,
open_date              datetime      not null,
close_date             datetime      not null,
date_created           datetime      not null,
date_last_maintained   datetime      not null,
revaln_opt             char (1)      not null,
revaln_key_id          char (5)      null,
life_to_date_ind       char (1)      not null,
chgstamp               smallint      not null
)
```

Review the New Data

The name of each object changed during the configuration process and any errors that occurred during the running of the udak.exe are written to the udak.log file. The udak.log file is in the same directory as the udak.exe.

The udak.log file is optionally archived for history purposes and is named udaklog.*nnn*, where *nnn* is a sequential number.

It is recommended that before you run the database script utilities, you spot check the changed scripts to ensure their accuracy.

Sample Log File

An example of the udak.log file follows:

```
* * * User-Defined Accounting Key Configuration - START - 7/31/2002 12:00:00 * *

Run Mode: Full
Server:   server01

Language: ENGLISH (BASE)  (High-Level Drive/Directory: L:\XXX)


     Product: Ledger

          DataWindows Configured:
               fgl0330d_comb_checking
               fgl0330t_comb_chk_grid
               fgl0340_reval_accounts_t
               fgl0340_reval_accounts_u
```

```
                fgl0360d_currency_balancing
                . . .

          Database Scripts Configured - Family ID glep:
                FGLDGLAA.SQL
                FGLDGLAB.SQL
                FGLPAB01.SP
                FGLPAB02.SP
                FGLPAB03.SP
                FGLPAB04.SP
                . . .

* * * User-Defined Accounting Key Configuration - END - 7/31/2002 13:30:04 * * *
```

Stage 5: Apply Your Accounting Key

Apply your accounting key by running the compile utility setup.exe. The database utility applies your user-defined accounting key to tables, stored procedures, and triggers. If you are not sure which databases were affected, see your udak.log file for a list of all the databases that were affected. For example, the sample log file shows that database scripts were configured for glep. This indicates that you need to run the compile utility for the DBSglep database.

Procedure

To run the setup.exe, use the following procedure:

Step	Action
1	Access the directory containing setup.exe and start it. If *I:\xxx* is the high-level drive and directory, this file is located in the *I:\xxx***dbms\udak** subdirectory. Result: The SmartStream UDAK Compile window is displayed.
2	Enter the database server, system administrator ID, and password, and choose Next.
3	From the products displayed, select those you want to process and choose Next. If this process was run previously, those products will be dimmed.
4	Review the compile summary information and choose Back to make changes or choose Next to continue the UDAK compile process.
5	Correct errors displayed on the Database Error Review window and select Retry to start the process again.
6	When the Udak Compile Complete window is displayed, choose Exit.

What If the Program Encounters an Error?

If the UDAK Compile process encounters an error, .err files are generated. These files are in the drive and directory you entered in Step 1 of the previous procedure. See the appropriate database management system (DBMS) documentation for more information about errors.

Stage 6: Regenerate the Dynamic Runtime Library

After the utilities run successfully, you must regenerate your dynamic runtime library (.pbd) using the following process:

Stage	Description
1	Review the udak.log file.
2	Make the udakpbl application the current application in PowerBuilder.
3	Regenerate the runtime library (udak.pbd).
4	Copy the new udak.pbd to the file server.

Review the udak.log File

Review the udak.log file for any errors and for further instructions. It is found in the *I:\xxx***\dbms\udak** directory (*I:\xxx* is the drive and directory where the SmartStream products are installed). Resolve any errors before continuing.

Make the udakpbl Application the Current Application

Before you can regenerate the Runtime Library (udak.pbd), you must ensure that the udakpbl application is the current application in PowerBuilder 5.0.04.

Step	Action
1	Open PowerBuilder 5.0.04 and click the second Application icon. **Warning**: The first two icons in PowerBuilder 5.0.04 are for Application. Be sure to click the **second** Application icon.
2	Select File and click on Open. **Result**: The Select Application Library dialog box appears.
3	Find and select udak.pbl in the \ss directory on your file server.
4	Click Open. **Result**: The Select Application dialog box appears with udak.pbl highlighted.
5	Click OK.
6	Close PowerBuilder.

Regenerate the Runtime Library

The following procedure generates a new udak.pbd with changes to the user-defined accounting key.

Warning: Ensure that all painters, except the Library painter, are closed, or PowerBuilder returns the error, **PB cannot rebuild while painter is open**.

To regenerate the runtime library, complete the following steps:

Step	Action
1	Open PowerBuilder 5.0.04, click the Library icon, and verify that your udak.pbl is highlighted.
2	Select the Library menu and click Optimize.
3	After the Library has been optimized, select the Library menu again and click Build Runtime Library. **Result**: The Build Runtime Library dialog box appears.
4	Clear the Machine Code checkbox, leave the Resource Filename field blank, and click OK. **Result**: The Library dialog box appears.
5	At the prompt, Replace existing *path*/udak.pbd?, click Yes. **Result**: The Runtime Library (udak.pbd) is built.

Tip

If the Machine Code checkbox is not cleared, PowerBuilder generates udak.dll instead of udak.pbd. Repeat steps 1 through 5 and clear the Machine Code checkbox.

Copy New udak.pbd to the File Server

After you regenerate the udak.pbd, copy the new udak.pbd into the following directory on the file server:

*I:\xxx***patch\common**
(*I:\xxx* is the drive and directory where the SmartStream products are installed).

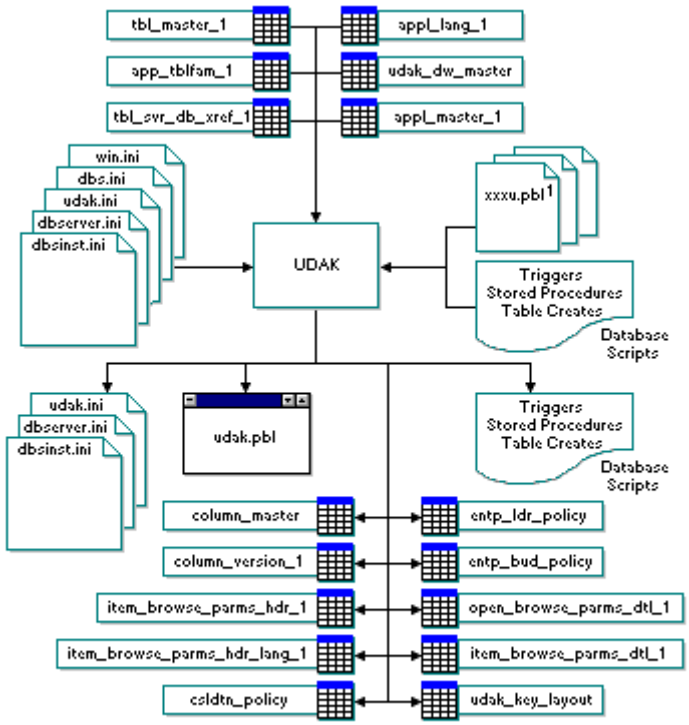
Check the following entry in the dbserver.ini:

```
[DBSUpdateApps]
Patch_Enable=1
```

This ensures that the client workstations are updated with the latest version the next time client workstations are refreshed.

What Happens During Processing?

The following diagram shows the processing that occurs during the configuration of your user-defined accounting key:



1 xxx represents the installed products which contain an accounting key
2 yyy represents a sequential number

Moving to Production Environment

In some instances you might configure your user-defined accounting key and use nonproduction data. To delete the nonproduction data, follow this procedure:

Step	Action
1	Access the directory containing setup.exe and start it. If *I:\xxx* is the high-level drive and directory, this file is in the *I:\xxx***dbms** subdirectory. For instructions, see Removing Data
2	Access the directory containing the udak.exe and start it. The program is in *I:\xxx***dbms\udak**, where *I:\xxx* is the drive and directory where the SmartStream products are installed.
3	On the User-Defined Accounting Key Log On window, choose Special Run Mode and Architecture Tables.

Customizing Product Reports for Your Accounting Key

Delivered reports and queries are written for the five-element accounting key and specified number of accounting periods delivered with SmartStream products. Before you use the reports for your own purposes you must

- Convert the SmartStream accounting key to your own accounting key
- Create a backup copy of the reporting database

For a list of the reporting databases delivered with SmartStream products, see Reporting Databases Installed with SmartStream in the Financials Reporting chapter of the *Financials Technical Reference*.

Converting Allocations, Budget, Consolidations, and Ledger

If you defined more than five elements in your accounting key (SmartStream used only five), the conversion routine adds the elements to the report. If the accounting key you defined has fewer than five elements, the conversion routine deletes the extra SmartStream-defined elements.

Accessing the Conversion Routine

To convert reports to your accounting key, follow this procedure:

Step	Action
1	Open the appropriate reporting activity. For example, Ledger/Journals/Currency Reporting
2	Choose the utilities button or menu.
3	Select the modify accounting key utility.
4	Run the utility.
5	If you are running this utility for Allocations, you must also tailor a function and tables. For more information, see Tailoring the Allocation Function and Tailoring Allocation Tables following this table.

For more information about this utility, see online reporting Help for the appropriate product.

Tailoring the Allocation Function

You must change the user-defined accounting key names for the Allocation function FAL_Pre_Load_Results in the FAL_Import module. The following example shows this function with the delivered accounting key.

```
Do Until rs.EOF
    p_ldr_entity_id = Trim(rs!ldr_entity_id)
    If IsNull(p_ldr_entity_id) Then p_ldr_entity_id = ""
    p_ldr_key_01 = Trim(rs!dbs_division)
    If IsNull(p_ldr_key_01) Then p_ldr_key_01 = ""
    p_ldr_key_02 = Trim(rs!dbs_account)
    If IsNull(p_ldr_key_02) Then p_ldr_key_02 = ""
    p_ldr_key_03 = Trim(rs!dbs_department)
    If IsNull(p_ldr_key_03) Then p_ldr_key_03 = ""
    p_ldr_key_04 = Trim(rs!dbs_product)
    If IsNull(p_ldr_key_04) Then p_ldr_key_04 = ""
    p_ldr_key_05 = Trim(rs!dbs_project)
    If IsNull(p_ldr_key_05) Then p_ldr_key_05 = ""
'    p_ldr_key_06 = Trim(rs!ldr_key_06)
    If IsNull(p_ldr_key_06) Then p_ldr_key_06 = ""
'    p_ldr_key_07 = Trim(rs!ldr_key_07)
    If IsNull(p_ldr_key_07) Then p_ldr_key_07 = ""
'    p_ldr_key_08 = Trim(rs!ldr_key_08)
    If IsNull(p_ldr_key_08) Then p_ldr_key_08 = ""
'    p_ldr_key_09 = Trim(rs!ldr_key_09)
    If IsNull(p_ldr_key_09) Then p_ldr_key_09 = ""
'    p_ldr_key_10 = Trim(rs!ldr_key_10)
    If IsNull(p_ldr_key_10) Then p_ldr_key_10 = ""
'    p_ldr_key_11 = Trim(rs!ldr_key_11)
    If IsNull(p_ldr_key_11) Then p_ldr_key_11 = ""
'    p_ldr_key_12 = Trim(rs!ldr_key_12)
    If IsNull(p_ldr_key_12) Then p_ldr_key_12 = ""
```

If your enterprise defined more than five elements you must remove the apostrophe at the beginning of the line and replace *udak_n* with your element name. For example:

' Q![key7] = Trim(rs!**udak_6)**

becomes

Q![key7] = Trim(rs!**dbs_business**)

The preceding action uncomments the code. If you have less than five elements, then comment out the appropriate lines.

To display the FAL_Pre_Load_Results function, follow this procedure:

Step	Action
1	Open Allocations Reporting from your SmartStream desktop.
2	Press **F11** to display the Database: FAL window.
3	Select the Module tab and highlight the FAL_import module.
4	Choose the Design button.
5	From the View menu, choose Procedures.
6	From the list of procedures, select FAL_Pre_Load_Results and press OK.

Tailoring Allocation Tables

To tailor the Allocations tables, follow this procedure:

Step	Action
1	Open Allocations Reporting from your SmartStream desktop.
2	Press **F11** to display the Database: FAL window.
3	Select the Table tab and highlight the FAL_alloc_distn_bal_import table.
4	Select the Design button.
5	For each of your user-defined elements enter the following information on the Field Properties window: **Default = ""** **Allow zero length = Yes**
6	Repeat steps 3 - 5 for the FAL_alloc_distn_jrnls_import table.

Converting Asset Management or Projects

When setting up your accounting key information in Asset Management or Projects reporting, you need to tailor the MDB. Use this procedure to tailor the MDB.

Step	Action
1	Select UDAK from the Utilities List.
2	Select Open.
3	Select the two-character code from the list box.
4	Select Modify Accounting Key. Asset Management or Projects converts all of the forms, queries, tables, reports, and functions to reflect the new accounting key.

3 Bank

Chapter Contents

3-1 Types of Scheduled Bank Processing
3-3 Stages of Scheduled Bank Processing
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3-20 Bank Summary Transaction

Types of Scheduled Bank Processing

You can perform four types of scheduled processing using the Job Scheduler:

- Bank Clearance
- Bank Notification
- Archive/Purge
- Bank Reporting

For more information about the Job Scheduler, see Understanding the Job Scheduler in the *SmartStream Administration* guide.

Bank Clearance

The process of clearing payment, deposit, and remittance information sent to you from the bank can be performed as a scheduled process. This process is made up of the following stages:

- Bulk copying the clearance information to the database tables

- Processing the clearance information using the Job Scheduler

Bank Notification

The process of recording notification information sent to you electronically or on tape by your bank. This process is made up of the following stages:

- Bulk copying the notification information to the database tables
- Processing the notification information using Job Scheduler

Archiving Payment Clearance Data

The process of removing payment clearance information from databases can be performed as a scheduled process. This process is made up of the following stages:

- Setting up the archive/purge request using the Archive/Purge Request window
- Processing the archive/purge information using Job Scheduler

Bank Reporting

You can schedule a report to run standalone or as part of other scheduled jobs. For example, you can schedule the Bank Activity Summary report as a step following scheduled bank processing.

Stages of Scheduled Bank Processing

Scheduled bank processing is made up of the following stages:

- Initial setup
- Clearing bank items or bank notification
- Bank reporting

Initial Setup

Be sure to complete the following before you schedule clearance processing, bank notification, or bank reporting:

- Complete the parameters to schedule the jobs for bulk copy, scheduled bank processing, and bank reporting. Use the Job Scheduler window to perform this task.

  Note: If you are scheduling bank reports without scheduling bank clearance or bank notification, this is the only initial setup step required.
- Grant database owner (dbo) authority for the appropriate tables to users who will be running scheduled bank transactions. For clearing payments, deposits, and remittances, you need dbo authority for the bank_trans table. For the bank notification process, you need dbo authority for the bank_notification_trans table.
- Complete the parameters for copying a text file to the database table. Use the Bulk Copy window to complete this task.
- Write a conversion program to convert your bank transaction file to SmartStream format.

Running Scheduled Bank Processing

To schedule bank clearance or bank notification processing and determine if it has run to completion, follow this process:

Stage	Description	Action or Activity
1	Receive clearance or notification information on magnetic media or by electronic transfer.	
2	Run the conversion program you wrote in the initial setup to convert the transmitted text file to a file in the DBS format.	
3	Copy the transaction file to the subdirectory specified.	Bulk Copy Parameters
4	Job Scheduler runs the scheduled bulk copy that writes the bank transactions to the appropriate tables according to the parameters entered when setting up the job. **Note:** Job Scheduler does not bulk copy bank transactions if you are automatically clearing items. Payables automatic clearance inserts directly to the bank_trans table.	

Stage	Description	Action or Activity
5	Job Scheduler runs the scheduled bank processing to clear bank items or record bank notification information according to parameters entered when setting up the job.	
6	Job Scheduler runs the scheduled bank reports according to the parameters entered when setting up the job. **Note:** You can schedule reports independently of bank clearance and bank notification. This is the only stage required if running reports independently.	
7	Identify and correct those transactions that encountered an error.	Draft Notification Statement window (for bank notification load) Scheduled Bank Transaction Summary window (for clearing bank items)
8	Run the scheduled bank processing again to apply transactions corrected.	Job Scheduler window

Job Scheduler Parameters for Bank

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For more information about this window, see Understanding the Job Scheduler in the *SmartStream Administration* guide..

Values for Parameters

Enter the following values for the Program Name and Program Parameters fields when scheduling the following programs:

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe **Note:** Bulk copy must be run at a workstation that has Microsoft Windows installed.	User-defined Bulk Copy Parameter Key entered on the Bulk Copy window
Bank Clearance	**Windows:** fbkbatch.exe **UNIX:** FBKBATCH	None
Bank Notification	**Windows:** fbkc1000.exe **UNIX:** FBKC1000	None

Bank Reporting

When scheduling a report, you must specify a report option as part of the program parameters. The report option identifies a set of report parameters you selected and saved using the Bank Reporting activity. For more information, see About Bank Reports.

When you run scheduled bank reporting, include specific scheduling information. You list program parameters on one line, separated by forward slashes (**/**), and enter a forward slash after the last parameter:

Program Name	Program Parameters
MSACCESS.EXE	Access MDB Name/CMD/User ID/Password/Language/Dialect/Report Option/

The following table describes each parameter and gives examples.

Parameter	Description	Example
Access MDB Name	The location of the Microsoft Access database file. You must enter the complete directory path.	c:\dbs\fbkact.mdb
CMD	A separator that tells Access that information is being passed to this MDB.	**cmd**
User ID	Identifier for the user who runs the report.	User04
Password	Password for the user who runs the report.	logon
Language	Code for the language Microsoft Access uses to display error messages and other information.	**EN** Display messages in English. Enter code only in uppercase letters.
Dialect	Code for language dialect Microsoft Access uses to display error messages and other information.	Currently, enter a blank space for this parameter.
Report Option	Name of the report option you previously set up using Bank.	Payment Clearances Added

Example

The complete set of parameters for the report used in the Example column follows:

c:\dbs\fbkact.mdb /cmd /User04/logon/EN/ /Payment Clearances Added/

Note: Currently, English is the only valid value for the language, and a blank is the only valid value for the language dialect. Enter a forward slash (/) followed by a blank space for the dialect.

Reviewing the Status of the Bank Job

You can determine the status of the job processed from the messages generated during processing.

Summary of Transactions

Use the Scheduled Bank Transaction Summary window to review the results of bank clearance processing.

You can access the Scheduled Bank Transaction Summary window by choosing the Scheduled Bank Transaction Summary from your To Do List.

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its final result (ended successfully, with errors, or before completion). You can display these messages using the Scheduler Log activity.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window:

Return Code	Meaning	Possible Cause	Suggested Action
0	Program completed successfully.		
3 and 4	Database server error.	Server is unavailable. Stored procedure does not exist. Server logs might be full. Database is out of space. Login failed security check. Two-phase commit error.	Check SmartStream mail or local log file for specific information about the problem. Correct problem in database server environment and run job again.
5	Fatal processing error occurred and the program cannot continue processing.	Client cannot open required connections to the server.	Check SmartStream mail or local log file for specific information about the problem. Correct the problem and run the job again.

For more information about the Job Scheduler, see Understanding the Job Scheduler in the *SmartStream Administration* guide.

What Happens During Bank Processing?

The following edits are performed during bank scheduled processing.

Bulk Copy

The bulk copy process writes bank transactions from a text file to the database tables and updates the tables with a user identifier. For the scheduled bank process, the bank_trans table is updated. For the bank notification process, the bank_notification_trans table is updated.

SmartStream uses the user identifier in the bulk copy parameters, if one was entered; otherwise, it uses the user identifier for the security profile used in the Job Scheduler for that scheduled run of bulk copy.

Bank Clearance

When you receive clearance information on magnetic media or by electronic transfer, use the scheduled bank process to clear items.

Running scheduled bank processing applies the clearance transactions from the database bank_trans table. You can run the job on the UNIX server or on your workstation. This process

- Updates the bank item with a clearance status and a status change date
- Adds a row in the appropriate clearance table
- Adds rows in the bank_jrnl_cntl and bank_jrnl_line tables for journal entries generated for clearance
- Generates To Do tasks to correct bank transactions with errors and to review the scheduled bank transaction summary.

Bank Notification

When you receive bank notification information on magnetic media or by electronic transfer, use the scheduled bank notification process.

Running scheduled bank processing applies the bank notification statement and draft notification transactions from the database bank_notification_trans table. You can run the job on the UNIX server or on your workstation. This process

- Records the bank notification statement
- Adds rows to the bank_notification_statement and draft_notification tables
- Generates To Do tasks to correct bank notification transactions with errors
- Generates a SmartStream Mail message, which contains a summary of the processing performed.

Bank Transaction Layouts

This document defines the positions, fields, and values for the bank clearance and notification transactions.

Four transactions can be processed during scheduled bank notification process

- Bank Notification
- Notification Statement
- Draft Notification
- Notification Summary.

Three transactions can be processed for clearance:

- Payment Clearance Transaction
- Deposit Clearance Transaction
- Remittance Clearance Transaction.

Adding a Transaction

Bank clearance and notification scheduled processing uses text files to hold information for scheduled processing transactions. These text files hold a series of values (fields), separated by a user-defined delimiter, such as a comma or tab.

Use the scheduled transaction layouts in this document to map the transactions received from a bank into a text file in the proper format.

Entering Field Information

Use the tables in this section to map the incoming data from the bank to the text file. These tables contains the order of fields for the transaction and the format or actual codes for each field.

Delimiters

Separate each field in a transaction layout with the column delimiter defined in the bulk copy parameters. If you leave a field blank, be sure to enter the delimiter and a space to hold its place.

Alphanumeric Fields

Alphanumeric fields can contain alphabetic letters, numbers, or a combination of both.

Numeric Fields

Numeric fields can contain only numbers.

Amount Fields

Follow these guidelines when entering amounts for money:

- Enter the number with or without a decimal point. If you do not enter a decimal point, a whole number is assumed.

  Note: For notification amounts enter the amount without the separator.
- Do not enter thousand separators.
- Indicate a negative number with a minus sign (–) before the number.

The currency of the amount determines how many numerals SmartStream Financials displays to the right of the decimal separator.

Date Fields

You can enter dates in two formats: yyyymmdd or the database server default date format. Database server date formats vary; for example, in the United States the date format could be mm/dd/yyyy, and in Europe, it could be dd/mm/yyyy. If you do not know the database server default date format, contact your SmartStream system administrator.

Follow these guidelines when entering dates in database server default date format:

- Use a separator between month, day, and year.
- Enter month and day with or without leading zeros. For example, enter March as 3 or 03.
- Enter four digits for the year.

Deposit Clearance Transaction

The following table lists the order and describes the content of each deposit clearance field.

Enter the appropriate value for each field, followed by the user-defined delimiter. If you choose to omit an optional field, be sure to enter the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Bank	11 alphanumeric	You must enter either the bank, bank number, or both. The user-defined code that identifies a bank to your organization must already be defined in bank policy.
2	Bank Number	Varies by country, as follows: Australia - 7 alphanumeric Belgium - 3 numeric France - 10 numeric Germany - 8 numeric Netherlands - 4 numeric U.K. - 6 numeric U.S. - 8 alphanumeric	You must enter either the bank, bank number, or both. The identification number for the bank must already be defined in bank policy.
3	Bank Account Number	Varies by country, as follows: Australia - 9 alphanumeric Belgium - 12 numeric France - 11 numeric Germany - 10 numeric Netherlands - 9 numeric U.K. - 8 numeric U.S. - 17 alphanumeric	Required. The identification number that the bank assigns to a specific account must already be defined in bank policy.
4	Transaction Type	2 alphanumeric	Required. The identifier for the transaction type. The identifier for deposit clearance is DC.
5	Deposit Date	date	Required. The date that the deposit was made. If you bank account policy specifies that all remittances must be part of a deposit, you must enter a date in this field.
6	Deposit Slip Number	15 alphanumeric	Required. The number for the document associated with a deposit. If your bank account policy specifies deposit slip numbers are required, you must enter a number in this field.

Field	Name	Length	Description
7	Clearance Date	date	Required. Date that the bank cleared the deposit. The clearance date must be the same as or later than the remittance date.
8	Bank Account Currency Clearance Amount	money	Required. The amount that the bank cleared for the deposit.
9	Bank Account Clearance Currency Code	3 alphanumeric	Optional. If the bank includes this information, you can enter it here for verification. The identifier for the currency of the bank account.
10	Deposit Currency Clearance Amount	money	Optional. When the currency of the deposit is different from the currency of the bank account, this field contains the amount cleared by the bank in the deposit transaction currency. For example, if pounds sterling are paid out of an account using U.S. dollars, the transaction currency clearance amount is in pounds sterling.
11	Deposit Currency Code	3 alphanumeric	Optional. The identifier for the currency of the deposit transaction.
12	Bank Transaction Reference Number	35 alphanumeric	Optional. The number that the bank assigns to the transaction, or a user-defined field.

Payment Clearance Transaction

The following table lists the order and describes the content of each payment clearance field.

Enter the appropriate value for each field, followed by the user-defined delimiter. If you choose to omit an optional field, be sure to enter the delimiter before making the entry for the next field.

Although the table has 17 columns, only the first 12 are used for payment clearance.

Field	Name	Length	Description
1	Bank	11 alphanumeric	You must enter either the bank, bank number, or both. The user-defined code that identifies a bank to your organization must already be defined in bank policy.
2	Bank Number	Varies by country, as follows: Australia - 7 alphanumeric Belgium - 3 numeric France - 10 numeric Germany - 8 numeric Netherlands - 4 numeric U.K. - 6 numeric U.S. - 8 alphanumeric	You must enter either the bank, bank number, or both. The identification number for the bank must already be defined in bank policy.
3	Bank Account Number	Varies by country, as follows: Australia - 9 alphanumeric Belgium - 12 numeric France - 11 numeric Germany - 10 numeric Netherlands - 9 numeric U.K. - 8 numeric U.S. - 17 alphanumeric	Required The identification number that the bank assigns to a specific account must already be defined in bank policy.
4	Transaction Type	2 alphanumeric	Required The identifier for the transaction type. The identifier for payment clearance is PC.
5	Payment Reference Number	9 numeric	Required The number assigned to each payment. This is the number the bank is clearing.

Field	Name	Length	Description
6	Type of Payment	4 alphanumeric	Required only if two forms of payments use the same series of payment reference numbers The identifier for the form of payment; values are ACH - ACH BT - Bank Transfer BACS - Electronic method CEMX - CEMTREX CHK - Check DLOT - Letter of Transfer IBT - International Bank Transfer ICHK - International Check XFER - International Transfer letter.
7	Clearance Date	date	Required Date that the bank cleared the payment
8	Bank Account Currency Clearance Amount	money	Required The amount that the bank cleared for the payment
9	Bank Account Clearance Currency Code	3 alphanumeric	Optional If the bank includes this information, you can enter it here for verification. The identifier for the currency of the bank account
10	Payment Currency Clearance Amount	money	Optional When the currency of the payment is different from the currency of the bank account, this field contains the amount cleared by the bank in the payment transaction currency. For example, if pounds sterling are paid out of an account using U.S. dollars the transaction currency clearance amount is in pounds sterling.
11	Payment Currency Code	3 alphanumeric	Optional The identifier for the currency of the payment transaction
12	Bank Transaction Reference Number	35 alphanumeric	Optional The number that the bank assigns to the transaction

Remittance Clearance Transaction

The following table lists the order and describes the content of each remittance clearance field.

Enter the appropriate value for each field, followed by the user-defined delimiter. If you choose to omit an optional field, be sure to enter the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Bank	11 alphanumeric	You must enter either the bank, bank number, or both. The user-defined code that identifies a bank to your organization must already be defined in bank policy.
2	Bank Number	Varies by country, as follows: Australia - 7 alphanumeric Belgium - 3 numeric France - 10 numeric Germany - 8 numeric Netherlands - 4 numeric U.K. - 6 numeric U.S. - 8 alphanumeric	You must enter either the bank, bank number, or both. The identification number for the bank must already be defined in bank policy.
3	Bank Account Number	Varies by country, as follows: Australia - 9 alphanumeric Belgium - 12 numeric France - 11 numeric Germany - 10 numeric Netherlands - 9 numeric U.K. - 8 numeric U.S. - 17 alphanumeric	Required. The identification number that the bank assigns to a specific account must already be defined in bank policy.
4	Transaction Type	2 alphanumeric	Required. The identifier for the transaction type. The identifier for remittance clearance is RC.
5	Remittance Number	22 alphanumeric	Required The first element of the unique identifier for a remittance. Receivables uses the number in combination with the qualifier to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.

Field	Name	Length	Description
6	Remittance Qualifier	4 numeric	Required. The second element of the unique identifier for a remittance. Receivables uses the qualifier in combination with the number to uniquely identify a remittance. By using a qualifier, you can add more than one remittance with the same number.
7	Clearance Date	date	Required. Date that the bank cleared the remittance. The clearance date must be the same as or later than the remittance date.
8	Bank Account Currency Clearance Amount	money	Required. The amount that the bank cleared for the remittance.
9	Bank Account Clearance Currency Code	3 alphanumeric	Optional. If the bank includes this information, you can enter it here for verification. The identifier for the currency of the bank account.
10	Remittance Currency Clearance Amount	money	Optional. When the currency of the remittance is different from the currency of the bank account, this field contains the amount cleared by the bank in the remittance transaction currency. For example, if pounds sterling are paid out of an account using U.S. dollars, the transaction currency clearance amount is in pounds sterling.
11	Remittance Currency Code	3 alphanumeric	Optional. The identifier for the currency of the deposit transaction.
12	Bank Transaction Reference Number	35 alphanumeric	Optional. The number that the bank assigns to the transaction, or a user-defined field.

Bank Notification Transaction

The following table lists the order and describes the content of each bank notification statement field.

Enter the appropriate value for each field, followed by the user-defined delimiter. If you choose to omit an optional field, be sure to enter the delimiter before making the entry for the next field.

Bank Record

Field	Name	Length	Description
1	Transaction Identifier	4 characters	Required Valid Value - BANK
2	Notification Date	10 date	Required The date the notification statement was created.
3	Bank	11 characters	Required The user-defined code that identifies a bank to your organization must already be defined in bank policy.
4	Bank Account	17 characters	Required The identification number the bank assigns to a specific account, must already be defined in bank policy.
5	Bank Name	45 characters	The legal name of the bank.
6	Processing Center	6 characters	Location of the bank's processing.
7-21	Reserved		

Statement Record

Field	Name	Length	Description
1	Transaction Identifier	4 character	Required Valid Value - NOTE
2	Notification Date	10 date	Required The date the notification statement was created.
3	Bank	11 characters	Required The user-defined code that identifies a bank to your organization must already be defined in bank policy.

Field	Name	Length	Description
4	Bank Account	17 characters	Required The identification number the bank assigns to a specific account, must already be defined in bank policy.
5	Bank Name	45 characters	The legal name of the bank.
6	Processing Center	6 characters	Location of the bank's processing.
7	Notification Number	16 character	Required A unique number assigned by the bank to identify the notification statement
8	Payment Date	10 character	Required The date funds will be transferred
9	Reply By Date	10 character	Required The date by which you must tell the bank if you accept or reject a notification statement
10-14	Reserved		
15	Notification Amount	15 character	Required The total amount due for the notification statement.
16	Reserved	1 character	
17	Value Date	10 date	Optional Date field used by your bank to indicate the valuation date for a currency.
18-21	Reserved		

Draft Notification Record

Field	Name	Length	Description
1	Transaction Identifier	4 character	Required Valid value - NDTL
2	Notification Date	10 date	Required Date the notification statement was created.
3	Bank	11 characters	Required The user-defined code that identifies a bank to your organization must already be defined in bank policy.

Field	Name	Length	Description
4	Bank Account	17 characters	Required The identification number the bank assigns to a specific account, must already be defined in bank policy.
5	Bank Name	45 characters	The legal name of the bank.
6	Reserved	6 character	
7	Notification Number	16 character	Required A unique number assigned by the bank to identify the notification statement
8	Payment Date	10 date	Required The date funds will be transferred
9	Draft Due Date	10 date	Required The date the payables draft is due
10	Draft Number	22 characters	Required Number that identifies the payables draft
11	Voucher Number	22 character	Internal number that identifies the draft
12	Vendor Bank	11 character	Required Identifier for the vendor's bank
13	Vendor Bank Account	17 character	Required Identifier for the bank account that funds are transferred to and that is receiving payment
14	Vendor Name	45 characters	Required Name of bank account receiving payment
15	Notification Payment Amount	15 money	Required The amount due for a draft notification
16	Draft Class	1 character	Identifier for the type of draft Codes: 0 - Bill of exchange requiring acceptance 1 - Bill of exchange 2 - Promissory note
17	Reserved	10 date	
18	Portfolio Date	10 date	The date the draft was received in the portfolio of the vendor's bank
19	Bank Reference Number	16 character	Number bank assigns to the notification.
20-21	Reserved		

Bank Summary Transaction

Field	Name	Length	Description
1	Transaction Identifier	4 character	Required Valid value - BSUM
2	Notification Date	10 date	Required The date the notification statement was created.
3	Bank	11 characters	Required The user-defined code that identifies a bank to your organization must already be defined in bank policy.
4	Bank Account	17 characters	Required The identification number the bank assigns to a specific account, must already be defined in bank policy.
5	Bank Name	45 characters	The legal name of the bank.
6	Processing Center	6 characters	Location of the bank's processing.
7	Reserved		
8	Payment Date	10 character	The date the bank is transferring funds.
8-14	Reserved		
15	Cumulative Payment Amount	15 character	Required Amount of payments to be made to bank account must equal sum of notification statements received for the bank account.
16-21	Reserved	1 character	

4 Currency

Chapter Contents

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4-3 Currency Scheduled Processes
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About Currency Processing

Currency is a business process for managing the retrieval and use of exchange rates. Using Currency you set up your rules, regulations, controls, and conversion processing parameters in a central location that can be accessed and used throughout your enterprise. Storing this commonly used data in and retrieving it from the same location eliminates the need to enter the same data over and over, making the management and generation of rate information an efficient and standardized process.

Your business areas supply to Currency the data to be converted. Currency applies the conversion parameters and routines you elected to use and immediately returns conversion results directly to the requesting business area.

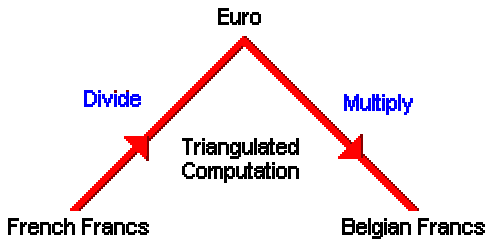
Currency and the Euro

If you use a euro-compliant rate entity, Currency uses triangulation during the currency conversion process. Triangulation uses rules established by the European Monetary Union. These rules do not allow direct rate conversion between participating currencies. This means a rate is established for the relationship between the

- Transaction and euro (EUR) currency
- Euro to the booking currency.

Example

When converting French francs (FRF) to Belgian francs (BEF), because both currencies are participating currencies, SmartStream converts the amount using the rate between FRF and EUR and then between EUR and BEF. The input format between the transaction and euro currency is divide. The format between euro and booking currency is multiply. These formats are fixed by European Monetary Union rules.



The Conversion Simulation window displays a calculated compound rate. This rate is used during transaction processing.

Compound Rate Formula

$$\frac{\text{Transaction amount}}{\text{Transaction to Euro rate}} \times \text{Euro to booking currency rate} = \text{Unrounded booking amount}$$

$$\frac{\text{Unrounded booking amount}}{\text{Transaction amount}} = \text{Compound rate (rounded to 8 places)}$$

Compound Rate Calculation

$$\frac{100\ (\text{FRF})}{6.46173} \times 39.7481 = 615.1309324283\ (\text{BEF})$$

$$\frac{615.1309324283\ (\text{BEF})}{100\ (\text{FRF})} = 6.15130932$$

Currency Scheduled Processes

These are the Currency scheduled processes:

- Loading Rates
- Rate Explosion
- Average Rate Calculation
- High-Volume Deletion of Rates

Although these scheduled processes have different purposes, you perform similar steps to run them.

Loading Rates to the Rate Table

Currency performs the following general edits on all rates regardless of the method used to add the rates to the Rate Entry (rate_entry) table:

- Currency does not add rates for any currency pairs for which the Block option is set to No Rate Entry Allowed or Manual Entry Only.
- Currency compares the date entered in the Rate Date field on the request window with the date in the Earliest Rate Date field for the rate entity. If the date in the Rate Date field is earlier than the date in the Earliest Rate Date field, Currency issues an error message and does not add the rates.
- Currency performs the following calculation to determine the input tolerance:

$$\text{Input Tolerance} = \frac{(\text{New rate} - \text{Existing rate})}{\text{Existing rate}}$$

- Currency then compares this percentage difference with the input tolerance percentage to determine if the defined tolerance percentage has been exceeded. Tolerance messages are issued regardless of whether the rate increased or decreased.
- Currency ensures that an error message is issued if a gap occurs between the most recent stale date and the new rate date for a currency pair. This gap is identified when Currency edits are performed on the rates already defined for this currency pair on the Rate table.

Rate Explosion

When rate explosion occurs, Currency calculates new exchange rates based on information already defined for central currencies stored on the Currency Pair (curr_pair) table. As new rates are defined using a central currency, these rates are stored on the Rate Entry (rate_entry) table.

Currency cannot generate a new rate if either of the following conditions occur:

- A rate is already defined for a base/transaction/rate type combination, and this process tries to generate a rate for the same day; Currency issues a warning message.
- The destination currency pair is blocked.

Only rates that have the same date are used in the rate explosion process; if these two dates do not match exactly, the rate explosion process cannot occur for a given currency pair.

Average Rate Calculation

The Average Rate Calculation process calculates exchange rate averages for currency pairs. An average of all rates that fall within a specified effective date range is used.

When entering a request for calculating rate averages, you must indicate the type of average calculation. The following table describes the calculation methods available for performing average rate calculations:

Average Rate Calculation Method	Description
Straight Average	Currency adds each rate that falls within a given date range and divides the rate total by the number of rates. See the straight average example in the *Currency* guide.
Weighted Average	Currency determines the comparative weight, or influence, of rates relative to the range of time for which they are effective. Currency also considers the availability of rates for the defined range on the Rate table when determining a weighted average. See the weighted average example in the *Currency* guide.

High-Volume Deletion of Rates

The high-volume deletion of rates process deletes a large number of rates. For example, you decide to store rates only for a specified period of time, or you accidentally added rates that you do not need.

You can delete rates using

- Scheduled processing, by running the high-volume rate deletion process
- Online processing, using various Currency windows.

Warning: Rates that are scheduled for deletion are deleted whether or not they are being used.

Scheduling Currency Processes

Enter the following values for the Program Name and Program Parameters fields when scheduling the following programs:

Scheduler Job	Program Name	Program Parameters	Associated Request
Load Downloaded Rates	**Windows:** fcmc0995.exe **UNIX:** FCMC0995	Rate Entity, Request ID, full path name and name of the text file you created.	Rate Download Request
Rate Explosion	**Windows:** fcmc0970.exe **UNIX:** FCMC0970	Rate Entity ID Request ID	Rate Explosion Request
Average Rate Calculation	**Windows:** fcmc1000.exe **UNIX:** FCMC1000	Rate Entity ID Request ID	Average Rate Request
High-Volume Deletion of Rates	**Windows:** fcmc0980.exe **UNIX:** FCMC0980	Rate Entity ID Request ID	Rate Delete Request

Note: Any Currency scheduled processing that has been started cannot be cancelled. After you complete the request and submit it on the Job Scheduler window, you cannot interrupt or stop the server processing routine after the stored procedures have started.

For more information about the Job Scheduler, see the following sections in the *SmartStream Administration* guide:

- Designating a Job Scheduler Administrator
- Using the Job Scheduler
- Defining Jobs and Steps

Currency Reporting

Before running the delivered SmartStream reports, you must perform some setup tasks. For more information, see Setting Up For Reporting in the *Financials Technical Reference*.

Scheduling Currency Reports

To schedule and run reports using the Job Scheduler window, enter the reporting parameters in the Program Name field, and then select the Save Password Locally option on the Attach SQL Server Login window when you open the Ledger/Journal/Currency Reporting activity

You can schedule a job using the parameter set defined in the reporting module. The following table shows how to use the report parameter set.

Type	Program Name Field
Report Parameter Set	[Path of Microsoft Access executable] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, Parameter Set, Most Recent]
Example	c:\access\msaccess.exe c:\access\fgl32.mdb /XFGL_Sched_parm /CMD Currency Rates by Rate Entity Report REPORT, Rpt_Parm, Y

Report Status

Before running a job, check the DBS checkbox to get a return code of 0 if the job runs successfully. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

Maintaining Reporting Tables

Each time you run Currency processes, messages are stored on a table. When the items on the message table are not needed, delete them. You can access all message table deletion utilities by choosing the Utility button on the Ledger/Journal/Currency Reporting window. To delete messages, access the appropriate message table, enter the parameters, and delete the messages.

Reviewing the Status of Currency Jobs

You can determine the status of the job processed from the messages generated during processing. The following section includes information about

- Scheduler messages
- Program processing messages
- Server messages.

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its steps, as well as the job's final result (ended successfully, with errors, or before completion). You can view these messages using the Scheduler Log activity.

For more information, see

- Return Codes in the *Financials Technical Reference*
- Job Scheduler Troubleshooting in the *SmartStream Administration* guide.

Program Processing Messages

Messages written as a result of Currency programs processing are sent to a message table (psc_messages). After the process completes, these messages are automatically sent to the user or users identified on the Distribution ID field of the Job Scheduler window. The messages are automatically deleted from the psc_messages table. Examples of what these messages communicate are the number of items processed and how many items were in error.

Server Messages

When processing begins, a file is generated. The program writes messages to this file that could not be written to psc_messages due to problems with the server. Each file is generated with a unique file name; however, the file extension is always .err. This .err file is stored in either the working directory or in the directory where the Poll program is running. If the program runs to completion, this file is deleted.

Exchange Rate Report

You can create a text file with rate information from banks or elsewhere and upload these exchange rates.

Format of the Exchange Rate Report

You can create or change the currency rate upload file using any text editor.

```
Exchange Rate Report

     Source currency: aaa


----------
bbb                                     cccccccccccc

Note:
```

If you are creating your own text file containing the currency information, you must include the following information at a minimum in the **exact** format given:

Information	Format	Example From Report
Text string **Exchange Rate Report**	Can start in any position but must precede the source currency line.	**Exchange Rate Report**
Text string **Source currency:** followed by a valid currency code	Must begin in column 6. Spaces to column 55. Blank line must follow this line.	**Source Currency: aaa**
Separate title from the transaction currency rate information	Use at least ten dashes (-)	----------
Transaction currency	Valid currency code	bbb
Rate of exchange	Use columns 42-54. Right justify . Use period (.) as decimal separator.	cccccccccccc
Text string **Note:**	Must begin in column 1.	**Note:**
Ending each line	Must use a line feed character.	

Additional Requirement

If you use a text file to load rates, when you enter the request to run the scheduled rate loading process on the Rate Download Request window, be sure to accept the default (DJN) in the External Source field.

Security

Currency uses two types of security:

- Activity security
- Data security

Activity Security

Activity (window) security restricts access to the windows that appear in the Activity Lists on the SmartStream desktop. For more information, see Securing Activities in the *SmartStream Administration* guide.

Data Security

Data security restricts access to data for an activity. Some SmartStream activities have control types, which allow data to be secured depending on specific data values. For example, the Rate Entity activity is secured by the Rate Entity control type. Currency also has activities that automatically secure other closely related activities. For a list of these related activities, see Currency Related Activities in the *Financials Technical Reference*.

For more information about implementing data security, see Securing Data in the *SmartStream Administration* guide. Use the SmartStream Reference Tool for a complete list of activities and their data control types. For more information, see SmartStream Reference Tool in the SmartStream Platform guide.

5 Euro Currency

Chapter Contents

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Introduction

The introductory sections of this chapter provide general guidelines for implementing Euro Currency in the SmartStream financial applications. These are the topics covered:

- Scheduled processes
- General principles about rates and Chart of Accounts reorganization
- Euro currency reporting.

The remaining sections of this chapter describe how Euro Currency is implemented in SmartStream Ledger and the subledgers. The Euro Currency implementation tasks are automatic (with occasional direct intervention). Therefore the information in these remaining sections is provided only for reference and troubleshooting purposes.

Scheduled Processes

For general information about scheduling jobs, see Using the Job Scheduler in the *SmartStream Administration* guide.

Booking Currency Conversion

To schedule Euro Currency processes for booking currency conversion, enter the parameters in the Program Name and Program Parameters fields on the Job Scheduler window as described in the following tables:

Ledger

Use these parameters to schedule the booking currency conversion scheduled processes for Ledger.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Chart of Accounts Copy	feuc0980	Set ID	char(10)	R	
Entity-Account Relation Build	feuc0981	Set ID	char(10)	R	
Balance Forward	feuc0982	Set ID	char(10)	R	
		Simulate Indicator	char(1)	O	Specify S for a simulation mode. Specify J or leave blank for real mode. No journals generated in simulation mode.
Average Balances Conversion	feuc0988	Set ID	char(10)	R	
		Rate Entity	char(5)	R	
		Rate Type	char(5)	R	
		Euro Ledger Entity	char(5)	O	Default is all the euro entities in the set that have their average balances set up.
Balance Synchronization	feuc0983	Set ID	char(10)	R	
		Cut-off Effective Date	datetime	O	Server date format OR YYYYMMDD format.
Final Synchronization	feuc0984	Set ID	char(10)	R	
		Audit Flag	char(1)	O	Specify A for audit reporting only. No synchronization rounding journals generated in audit mode.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Mono to Multi Conversion	feuc0986	Ledger Entity	char(5)	R	
		Rate Entity	char(5)	R	
		Rate Type	char(5)	R	
		Store Book Balance Indicator	char(1)	O	Specify Y to store book balances. If nothing specified, N is the default.

Common

Use these parameters to schedule the common booking currency conversion scheduled processes.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Subledger Prerequisites Check	feuc0900	Set ID	char(10)	R	
		Application ID	char(3)	O	Specify a subledger to perform the prerequisite check for valid values: ▪ ffa = Assets ▪ fbk = Bank ▪ fpj = Projects ▪ fap = Payables ▪ mpo = Purchasing ▪ far = Receivables ▪ cvn = Vendor ▪ ffc = Funds Control ▪ mim = Supplies ▪ mcd = Procurement Common If blank, the check is performed for all installed subledgers.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Subledger Booking Currency Conversion	feuc0901	Set ID Application ID	char(10) char(3)	R O	Specify a subledger to perform the prerequisite check for valid values: ▪ ffa = Assets ▪ fbk = Bank ▪ fpj = Projects ▪ fap = Payables ▪ mpo = Purchasing ▪ far = Receivables ▪ cvn = Vendor ▪ ffc = Funds Control ▪ mim = Supplies ▪ cep=Common ▪ mcd = Procurement Common If blank, the check is performed for all installed subledgers.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Reset Logical Lock	feuc0931	Set ID	char(10)	R	Specify a set id for booking currency conversion processes or the ledger entity id for the transition period programs.
		Program ID	char(8)	O	Specify a program ID. If blank, all entries for the set ID are reset.
		Application ID	char(3)	O	Specify a specific subledger to reset. Valid values are: cep = Common far = Receivables fpj = Projects fap = Payables cvn = Vendor mcd = Procurement - Common mpo = Purchasing fbk = Bank ffa = Assets mim = Supplies ffc = Funds If empty, the reset is performed for all subledgers installed and in the preceding sequence.

Projects

Use these parameters to schedule the booking currency conversion scheduled process for Projects.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Projects Copy Request Build	feuc0946	Set ID	char(10)	R	
		From project entity	char(5)	R	
		To project entity	char(5)	R	
		Request ID	char(10)	R	

Bank

Use these parameters to schedule the booking currency conversion scheduled process for Bank.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Payment Method Substitution	fbkc2000	Request ID	char(10)	R	

Asset Management

Use these parameters to schedule the booking currency conversion scheduled process for Asset Management.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Euro Book Initialization	feuc0910	Asset Entity ID To book nr	char(5) smallint	R R	

For information on correcting problems that occur during scheduled processing, see Job Scheduler Troubleshooting in the *SmartStream Administration* guide.

Job Server Return Codes

The scheduled jobs return the following return codes to the Job Scheduler:

Code	Meaning
5	Check the parameters or the name of the job.
4	A database problem has occurred. Check the jobs on file (in the job server directory) for more information.
3	Application errors have occurred. Run the Error Log Report for the job to obtain more information.
0	Successful and No Application Errors

Transition Period Functionality

To schedule Euro Currency processes for transition period functionality, enter the parameters in the Program Name and Program Parameters fields on the Job Scheduler window as described in the following tables:

Bank

Use these parameters to schedule the Euro Currency process for transition period functionality for Bank.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Bank Clearance Rounding	feuc0921	Request ID	char(10)	R	

Common

Use these parameters to schedule the common Euro Currency process for transition period functionality.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Reset Logical Lock	feuc0931	Set ID	char(10)	R	Specify a set ID for booking currency conversion processes or the ledger entity ID for the transition period programs.
		Program ID	char(8)	O	Specify a program ID. If blank, all entries for the set ID are reset.
		Application ID	char(3)	O	Specify a specific subledger to reset. Valid values are: cep = Common far = Receivables fpj = Projects fap = Payables cvn = Vendor mcd = Procurement - Common mpo = Purchasing fbk = Bank ffa = Assets mim = Supplies ffc = Funds If empty, the reset is performed for all subledgers installed and in the preceding sequence.

Ledger

Use these parameters to schedule the Euro Currency process for transition period functionality for Ledger.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Book 2 Initialization	feuc0987	Ledger Entity	char(5)	R	
		Secondary Book Currency	char(3)	R	
		Rate Date	datetime	R	Server date format OR YYYYMMDD format.
		Restatement Request ID	char(10)	R	
		Journal Conversion Indicator	char(1)	O	Specify Y to convert journals. If nothing specified, N is the default.

Payables

Use these parameters to schedule the Euro Currency processes for transition period functionality for Payables.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Initialization of Payables Visualisation	feuc0942	Ledger Entity	char(5)	R	
		Mode	char(1)	O	Specify U to update the visualization amounts (add new rows for adding reporting currencies, remove rows for removed reporting currencies). Specify R to recalculate all values for all reporting currencies. Default value is U.
Permanent Revaluation	feuc0941	Ledger Entity	char(5)	R	
		Rate Entity	char(5)	R	
		Revaluation Date	datetime	R	Server date format OR YYYYMMDD format.
		Revaluation Key ID	char(5)	R	
		Effective Date	datetime	R	Server date format OR YYYYMMDD format.

Purchasing

Use these parameters to schedule the Euro Currency process for transition period functionality for Purchasing.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Blanket Orders Conversion	feuc0951	Site ID	char(4)	R	
		Request ID	char(5)	R	

Receivables

Use these parameters to schedule the Euro Currency processes for transition period functionality for Receivables.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Initialization of Receivables Visualisation	feuc0964	Ledger Entity	char(5)	R	
		Mode	char(1)	O	Specify U to update the visualization amounts (add new rows for adding reporting currencies, remove rows for removed reporting currencies). Specify R to recalculate all values for all reporting currencies. Default value is U.
Permanent Revaluation	feuc0962	Ledger Entity	char(5)	R	
		Rate Entity	char(5)	R	
		Revaluation Date	datetime	R	Server date format OR YYYYMMDD format.
		Revaluation Key ID	char(5)	R	
		Effective Date	datetime	R	Server date format OR YYYYMMDD format.
Receivable Account - Transaction Currency Conversion	feuc0961	Request ID	char(5)	R	
Credit Account - Credit Currency Conversion	feuc0963	Request ID	char(5)	R	

Vendor

Use these parameters to schedule the Euro Currency process for transition period functionality for Vendor.

Program Name	Program ID	Program Parameters	Size	R(equired) O(ptional)	Comments
Transaction Currency Conversion	feuc0971	Request ID	char(5)	R	

Subledger Processing

Subledger Tables and Policy Records

When the Ledger booking currency conversion from former national currency to euro currency takes place, the following types of updates are needed in the subledgers:

- The policy records within the subledgers need to be changed because the ledger entity ID, the ledger entity primary booking currency, and the chart of accounts are updated.
- The subledger transaction and journal tables need to be updated in a number of different places.

Further sections of this chapter explain the impact on the different tables, the type of updates that need to be done, and the policy records that are affected.

Subledger Booking Currency Conversion Process

The basic stages for booking currency conversion (BCC) of a subledger are the same for all subledgers:

Stage	Description
1	Get the ledger entities and the relevant conversion parameters for the subledger.
2	Perform preprocessing checks. This step does the necessary checks before the conversion is executed. If the check conditions are not satisfied, error messages are given and the conversion is ended. For a description of the individual subledger checks, see the appropriate chapter in the *Euro Currency* guide.

Stage	Description
3	Initialize the subledger Master Audit table. Each subledger has a Master Audit table. This table resides in the subledger database. For each conversion set ID, the table contains a row for each ledger entity, a row for each subledger entity, and a column for each subprocess start and end date and time. Some objects are processed by ledger entity and some are processed by subledger entity. The template layout for each subledger Master Audit table is as follows: ▪ Key: – Conversion set ID – Entity type (L for Ledger, another value for the subledger entity) – Ledger-subledger entity ▪ Column (for each subprocess): – Start date/time – End date and time You can monitor progress or analyze problems from the master audit tables: ▪ For each subprocess, a start date and time with a corresponding end date and time means that the subprocess completed successfully. ▪ For each subprocess, a start date and time with no corresponding end date and time means that the subprocess stopped before completion.
4	Perform the subledger conversion, keeping detailed audits. For each converted subledger table, a Master Audit table is kept with the before and after image of the updated fields (except for the user-defined accounting key fields). These audit tables reside in the subledger database. The table names start with euro and end with audit, for example, in DBSbank the euro_bank_jeuc_audit table contains the audit for the Bank Journal Control table.
5	Complete conversion. The Subledger Master Audit table, euro_subldr_master_audit (DBSeuro), is updated. You can use this table to trace which subledgers have been converted.

For each of the steps that are not satisfied, a message is logged. These and other messages can be printed in the Booking Currency Conversion Log report.

The following subledger Master Audit tables are used:

Application	Table	Database
Asset Management	euro_fast_master_audit	DBSfast
Bank	euro_bank_master_audit	DBSbank
Enterprise (Subledger Common)	euro_comn_master_audit	DBSentp

Application	Table	Database
Funds Control	euro_fund_master_audit	DBSfund
Payables	euro_prqt_master_audit	DBSprqt
Procurement Common	euro_supc_master_audit	DBSudef
Projects	euro_proj_master_audit	DBSproj
Purchasing	euro_puen_master_audit	DBSpcde
Receivables	euro_recv_master_audit	DBSrrcv
Supplies	euro_supp_master_audit	DBSfesu
Vendor	euro_vend_master_audit	DBSvmst

Scheduled Processes and Multiple Processing

The following rules and limitations apply to the Euro Currency scheduled processes:

- When an scheduled process is running, that same process cannot be started again, for example, you cannot have the same Payables booking currency conversion process running twice at the same time.
- Different scheduled processes can be run at the same time, for example, Payables and Receivables booking currency conversions can run at the same time.

These rules are controlled by a table where each program creates a job entry while it is running. When an abnormal end occurs, this might prevent the same program from being restarted. If you are sure a job is no longer running and you get an error message saying that the job is already running, you can clear (delete) the entry for that program in the table as follows:

- For Ledger euro jobs, the table euro_ldr_server_process (DBSeuro) contains all entries for Ledger-related tasks
- For subledger euro jobs, the table euro_subldr_server_process_chk (DBSeuro) contains all entries for subledger-related tasks.

General Principles

This section lists the general principles for Euro Currency processing.

About Rates

When booking amounts are converted into euro from the former national currency, the rates on the conversion effective date are used.

Consider the following rate information (for example, on the journal tables):

- The booking currency conversion affects exchange rate pointers to currency management (rate entity ID and currency rate type). In most instances, if you have added the new rate information for euro to the existing rate entity and rate type, these pointers can stay at the same values. However, if rate entities were shared by participating countries and non-participating countries, after euro conversion, it might be necessary to have separate rate entities for participating and non-participating countries, depending on the approach that is taken for triangulation (new policy on the rate entity).
- Usually the rate_entity_id, curr_rate_type, and curr_rate_date are required only if the transaction currency is different from the booking currency. When the transaction currency is the same as the booking currency, then the rate_of_exchange is set to 1. This means that while converting the booking currency of a transaction, the following cases can occur before the conversion:
  - If the transaction currency is euro, the transaction has rate information that needs to be reinitialized during the conversion. To do this, blank out the rate_entity_id and the curr_rate_type, set the curr_rate_date to 1900-01-01 00:00:00,000 and accept the rate_of_exchange set to 1.
  - If the transaction currency is the same as the former national booking currency, the rate entity and rate type are taken from the conversion parameters. Set the curr_rate_date to the conversion effective date and the rate_of_exchange according to the other settings.
  - If the transaction currency is a third currency (participating or not), one of the conversion options indicates whether the existing rate information (rate_entity_id and curr_rate_type) is to be kept or is to be replaced by the information from the conversion parameters. If the curr_rate_date is before 1/1/1999, set it to the conversion effective date and calculate the rate_of_exchange from the transaction currency amount and the booking currency amount. Do not forget to take into account the per factor and the multiply/divide (on the currency pair).
- When converting the journal lines, use the conversion policy of the controlling ledger entity (the one from the Journal Control table).

About the Chart of Accounts Reorganization

At the time of the booking currency conversion, your company can decide to reorganize its chart of accounts. For example, Banking sector companies who use

the currency identifier in one of the accounting key elements will need to reorganize the chart of accounts.

If you need to reorganize the chart of accounts, you set up rules that are interpreted and a table is populated with a From account (from the previous chart of accounts) and a To account (from the new chart of accounts). The ledger and subledger conversion programs read from this table to determine the current user-defined accounting key and the replacement user-defined accounting key. However, for all the user-defined accounting key elements in the policy tables that need to be updated, unless otherwise stated, the following rule applies:

The accounting distribution as defined in policy is replaced whenever the accounting distribution is identifiable in the relationship.

Euro Currency Reporting

Euro Currency provides a number of reports you can use to verify the results of booking currency conversion and transition period functions. You can run these reports on demand using the Euro Reports activity or schedule the reports using the Job Scheduler.

Note: Before running the reports, you must perform some setup tasks. For more information, see Setting Up for Reporting in the *Financials Technical Reference*.

Producing Reports

The following table describes the process you use to produce the reports:

Stage	Task	Window
1	Select the reporting module.	Choose Euro Reports from an Activity List
2	Select the desired report.	Euro Currency Reporting
3	Change the run-time parameters as needed.	Euro Currency Report Parameters
4	Choose Preview or Print.	Euro Currency Report Parameters. You can also schedule the reports. For more information, see Scheduling Euro Currency Reports following this table.

For more information about producing Euro Currency reports, see the Euro Currency Reporting online Help.

Scheduling Euro Currency Reports

You can schedule reports using the Job Scheduler and the report parameter set name defined in the Euro Currency Reporting module. To schedule a report, enter the following parameters in the Program Name field on the Job Scheduler window:

[Path of Microsoft Access executable] [Path of reporting database] [/XMacro name] [/CMD] [Report Name, Parameter Set Name, Server, User ID, Password]

Example

The following parameters could be used to schedule the Balance Forward Summary report (booking currency conversion) using a report parameter set name of BFP1:

c:\msaccess\msaccess.exe c:\SSTRM\feubk32.mdb /Xfeu_sched_parm /CMD Balance Forward Summary, BFP1, frmhp02s1, USER01, password

Note: The Euro Currency Reporting mdb for booking currency conversion is named feubk32. The Euro Currency Reporting macro is feu_sched_parm.

For more information about using the Job Scheduler, see Using the Job Scheduler in the *SmartStream Administration* guide or the Job Scheduler Help.

Report Status

Before running a report, check the DBS checkbox on the Job Scheduler window. If the job runs successfully, you get a return code of zero. If a scheduled report does not run because of an error, a Scheduler Error Log is generated that lists the date and error messages for each report that did not run.

Ledger

This section includes the Euro currency processing information specific to Ledger.

Booking Currency Conversion

Scheduled Processes

Ledger booking currency conversion uses the scheduled processes described in the following table.

Program	Executable	Description
Chart of Accounts Copy	feuc0980	In this scheduled process, the chart of accounts for the former national currency entity is copied to the new euro currency entity. Validation of the accounting distribution is done before the copy to ensure that the generated account is valid for the new euro entity.
Entity-Account Relation Build	feuc0981	In this scheduled process, the entity-account relationship is built between the old national currency entity and the new euro currency entity. The relationship is based on the selection and destination criteria specified in the Chart of Accounts Relation Parameters window and the parameters specified in the Ledger Entity Relation Parameters window.
Balance Forward	feuc0982	This scheduled process brings forward opening balances, and optionally history balances, to the new euro currency entity from the former national currency entity. In the different steps of booking currency conversion, prerequisites are checked. The ability to check all prerequisites, in preparation for the real booking currency conversion, is an important tool for your company. It allows you to validate the system status and steps, before running the booking currency conversion. In SmartStream Ledger, you can check the prerequisites by running Balance Forward processing in Simulation mode.
Average Balances Conversion	feuc0988	This scheduled process brings forward average balances to the new euro currency entity from the former national currency entity.
Balance Synchronization	feuc0983	This scheduled process synchronizes the balances of the former national currency entity and the new euro currency entity. This process has two functions: ▪ Synchronization forward: Closing transactions posted in the former national currency entity after Balance Forward has been run are carried forward to the new euro currency entity. ▪ Synchronization backward: Transactions posted to the new euro currency entity with an effective date before the conversion effective date are posted back to the former national currency entity.
Final Synchronization	feuc0984	This scheduled process compares the balance in the new euro currency entity with the converted sum of balances in the corresponding former national currency entity. It synchronizes the balances of the former national currency entity and the new euro currency entity by posting the difference amount to the new euro currency entity as an adjustment.
Mono-to-Multi Conversion	feuc0986	In this scheduled process, the policy for the selected single currency ledger entity is updated, and account balances and journals are converted.

Database Tables

Ledger booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table…
Ledger Entity Relation Request	euro_ldr_entity_reln_rqst	Contains the ledger entity relationship parameters for the Balance Forward and the Balance Synchronization processes. It stores information about the relationship between the former national currency entity and the new euro currency entity.
Amount Classes to Convert	euro_ldr_entity_conv_ amtclass	Contains the amount classes to convert for a specified former national currency entity.
Chart of Accounts Relation Request	euro_ldr_acct_reln_rqst	Contains the relation parameters for the Selection Criteria and Destination Criteria tables of the chart of accounts relation request.
Chart of Accounts Relation Request - Selection Criteria	euro_ldr_sql_extract	Contains the SQL criteria to build the selection criteria for defining the chart of accounts relationship.
Chart of Accounts Relation Request - Destination Criteria	euro_ldr_acct_det_ criteria	Contains the destination criteria for defining the chart of accounts relationship.
Entity-Account Relation	euro_ldr_entity_acct_reln	Stores the relationship of the entities and chart of accounts involved in the booking currency conversion. It is populated by the Entity-Account Relation Build scheduled process (program feuc0981).
Server Process	euro_ldr_server_process euro_seubldr_server_ process_chk	Stores the server process IDs of active processes running for a set ID. It is used by the batch programs to ensure that a set ID is not being processed by another batch program.
Work Journal Control	euro_jeuc_work	Is used as a worktable for storing the journal controls created by the Balance Forward process. The journal controls are inserted into the unposted journal control table after successful insertion into the worktable.
Work Journal Line	euro_jeul_work	Is used as a worktable by the Balance Forward and Balance Synchronization processes to insert journal lines for a control inserted in the Work Journal Control table.
Balance Forward Amount Summary	euro_ldr_jrnl_summ_work	Is used as a worktable by the Balance Forward process to maintain the amount summaries per entity, amount class, and transaction currency.
Synchronization Audit	euro_ldr_sync_audit	Compares the equivalent amounts of the accounts of the new euro currency entity with the converted equivalent amounts of the corresponding accounts of the former national currency entity. It is the basis for the Synchronization Audit Report.
Euro Transaction Errors	euro_trans_errs	Contains all the errors encountered during the various runs of the Euro Currency batch programs.

Transition Period Functionality

Initialization of Book 2

Initialization of Book 2 uses the scheduled process described in the following paragraph.

Book 2 Initialization (program feuc0987)

In this scheduled process, a Book 2 is initialized in Ledger when there is no existing Book 2. This allows a second book to be kept in euro currency for reporting purposes, particularly useful when the booking currency conversion is not performed immediately.

Subledger Common

This section includes the Euro currency processing information common to all subledgers.

Scheduled Processes

Common booking currency conversion uses the scheduled processes described in the following paragraphs.

Subledger Booking Currency Conversion (program feuc0901)

In this scheduled process, enterprise policy records for former national currency entities (that is, tax rule, tax rate, earnings and withholding accounting distributions, asset integration rule, ledger alias and receipt accruals) are changed to reflect the ledger booking currency conversion to euro.

Subledger Prerequisites Check (program feuc0900)

In the different steps of booking currency conversion, prerequisites are checked. The abilty to check all prerequisites, in preparation for the real booking currency conversion, is an important tool for your company. It allows you to validate the system status and steps before running the booking currency conversion.

In SmartStream Ledger, running the Balance Forward process in Simulation mode checks the prerequisites.

In subledgers, the Subledger Prerequisites Check process performs all prerequisite logic that is imbedded in the different subledger booking currency conversions. It can be done at any time before the Ledger booking currency conversion.

The process accepts the application ID as an optional parameter. If it accepts this parameter it performs the prerequisites check for the chosen application.

Reset Logical Lock (program feuc0931)

In the different steps of booking currency conversion, and for transition period processes, a logical lock is set on the process in case of application or technical problems. This is to prevent accidental rerun before the problems are resolved. The lock is set by not removing an associated entry for the process from the euro_ldr_server_process table (DBSeuro) for the SmartStream Ledger processes, and from the euro_subldr_process_chk table (DBSeuro) for the subledgers processes.

After resolving the problems, you can remove the logical lock by running the Reset Logical Lock program. This can be performed for a specific program or for a series of programs at the same time.

Database Tables

Common booking currency conversion uses the following database table:

Common Master Audit Table (euro_comn_master_audit)

This table contains information about a set ID and its corresponding ledger entity whose related policy records should be converted.

Affected Table Groups

For Common booking currency conversion, the following table groups are affected:

- Tax Rule and Rate
- Earnings and Withholding Rules
- Asset Integration Rules
- Ledger Alias
- Receipt Accruals

Tax Rule and Rate

Booking currency conversion affects the following areas in Tax Rules policy:

- Tax rule accounting distributions
- Tax rate accounting distributions

Tax Rules to be Selected for Conversion

The Tax Rules booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the ledger entity that is being converted. Repeat the entire conversion process for tax rules for each ledger entity.

The principle is: convert all tax rules associated with the ledger entity being converted.

Table Summary

Table ID	Usage	Conversion Y/N
Tax_rule_acctg_distn	Tax rule accounting distributions	Y
Tax_rule_tax_rate_acctg_distn	Tax rule/rate default accounting distributions	Y

The tables requiring conversion are described in the following sections.

Tax Rule Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types:

- Tax Expense
- Tax Reclaimable
- Self Assessed Tax Liability
- Tax Liability

Rows to be Selected for Conversion

The rows for all tax rules associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Tax Rule/Rate Default Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types:

- Tax Expense
- Tax Reclaimable
- Self Assessed Tax Liability
- Tax Liability

Rows to be Selected for Conversion

The rows for all tax rules associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Earnings and Withholding Rules

Booking currency conversion affects the following area in Earnings and Withholding Rules policy:

- Earnings and withholding rule accounting distributions

Earnings and Withholding Rules to be Selected for Conversion

The Earnings and Withholding Rules booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the ledger entity that is being converted. Repeat the entire conversion process for earnings and withholding rules for each ledger entity.

The principle is: convert all earnings and withholding rules associated with the ledger entity being converted.

Table Summary

Table ID	Usage	Conversion Y/N
Earn_and_wh_acctg_distn	Earnings and withholding accounting distributions	Y

The table requiring conversion is described in the following section.

Earnings and Withholding Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types:

- Withholding Liability - 1099
- Withholding Liability - T4A
- Withholding Liability - CIT
- Withholding Liability - PPS
- Withholding Liability - PRWH

Rows to be Selected for Conversion

The rows for all earnings and withholding rules associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Asset Integration Rules

Booking currency conversion affects the following area in Asset Integration Rules policy:

- Asset Integration Rule

Asset Integration Rules to be Selected for Conversion

The Asset Integration Rules booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the ledger entity that is being converted. Repeated the entire conversion process for asset integration rules each ledger entity.

The principle is: convert all asset integration rules associated with the ledger entity being converted.

Table Summary

Table ID	Usage	Conversion Y/N
Asset_intg_acct	Asset integration rules	Y

The table requiring conversion is described in the following section.

Asset Integration Rules Table

This table stores accounting distributions used to identify asset integration on payment requests within SmartStream Payables. A default accounting distribution can be defined for each ledger entity.

Rows to be Selected for Conversion

The rows for all asset integration rules associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time the ledger entity ID is changed, then the new accounting distribution must replace this existing accounting distribution. **Note:** This accounting distribution needs to be a full distribution; therefore, the UDAK should be replaced with the new value from the chart of accounts relationship table.

Ledger Alias

Booking currency conversion affects the following area in Ledger Alias policy:

- Ledger Alias

Ledger Alias to be Selected for Conversion

The Ledger Alias booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the ledger entity that is being converted. Repeat the entire conversion process for ledger aliases for each ledger entity.

The principle is: convert all ledger aliases associated with the ledger entity being converted.

Table Summary

Table ID	Usage	Conversion Y/N
Ldr_alias	Ledger alias accounting distributions	Y

The table requiring conversion is described in the following section.

Ledger Alias Accounting Distributions Table

This table stores the ledger alias accounting distributions.

Note: In SmartStream, the ledger alias is a short name that represents a full or partial accounting distribution. A ledger alias is defined within an accounting distribution type. For each accounting distribution type it is possible to have multiple ledger alias definitions. A ledger alias can be associated with multiple accounting distribution types.

Rows to be Selected for Conversion

The rows for all ledger aliases associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Receipt Accruals

Booking currency conversion affects the following area in Receipt Accruals policy:

- Receipt Accrual Requests

Receipt Accrual Requests to be Selected for Conversion

The Receipt Accrual Requests booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the ledger entity that is being converted. Repeat the entire conversion process for receipt accrual requests for each ledger entity.

The principle is: convert all receipt accrual requests associated with the ledger entity being converted.

Table Summary

Table ID	Usage	Conversion Y/N
receipt_accrl_rqst	Receipt accrual requests	Y

The table requiring conversion is described in the following section.

Receipt Accrual Requests Table

This table stores the accounting distribution for the Accrual Liability accounting distribution type used by SmartStream Payables and SmartStream Purchasing.

Rows to be Selected for Conversion

The rows for all receipt accrual requests associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
selected _ledger_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting key. **Note:** This accounting distribution needs to be a full distribution and should be replaced with the new value from the chart of accounts relationship table.

Transition Period Functionality

Visualisation Reporting Currency Setup

Visualisation Reporting Currency Setup uses the scheduled process and database table described in the following paragraphs.

Visualisation Reporting Currency Set-up Table (euro_visualisation_setup)

This enterprise table contains all the reporting currencies for a ledger entity.

Receivables

This section includes the Euro currency processing information specific to Receivables.

Scheduled Processes

Receivables booking currency conversion uses the scheduled process described in the following paragraph.

Receivables Booking Currency Conversion (program feuc0901)

In this scheduled process, the policy and transaction records for the former national currency ledger entity are replaced by the records for the new euro ledger entity for each of the receivable entities to be converted. The before and after images of the records changed during the conversion process are maintained in the Receivables audit tables.

Database Tables

Receivables booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Receivables Master Audit	euro_recv_master_audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done
Receivable Entity Audit	euro_recv_entity_audit	Before and after image records of all the Receivable entities for which booking currency conversion is done
Receivable Document Type Policy Audit	euro_recv_doc_type_ audit	Before and after image records of all the policy records of all receivable document types for which booking currency conversion is done.
Receivable Draft Type Policy Audit	euro_recv_draft_type _audit	Before and after image records of all the policy records of all receivable draft types for which booking currency conversion is done.
Receivable Write-off Policy Audit	euro_write_off_audit	Before and after image records of all the policy records of all receivable write-off types for which booking currency conversion is done
Receivable Document Audit	euro_recv_doc_audit	Before and after image records of all the receivable documents for which booking currency conversion is done.
Receivable Document Activity Audit	euro_recv_doc_act_audit	Before and after image records of all the receivable document activities for which booking currency conversion is done.
Receivable Draft Audit	euro_recv_draft_audit	Before and after image records of all the receivable drafts for which booking currency conversion is done.
Receivable Draft Activity Audit	euro_recv_draft_act_ audit	Before and after image records of all the receivable draft activities for which booking currency conversion is done.
Receivable Remit Audit	euro_remit_audit	Before and after image records of all the remittances for which booking currency conversion is done.

Table	Server Name	This table contains the…
Receivable Remit Activity Audit	euro_remit_act_audit	Before and after image records of all the remittance activities for which booking currency conversion is done.
Remit Allocate Activity Audit	euro_remit_alloc_act _audit	Before and after image records of all the remittance allocations for which booking currency conversion is done.
Receivable Deposit Audit	euro_deposit_audit	Before and after image records of all the deposits for which booking currency conversion is done.
Receivable Document Journal Control Audit	euro_recv_doc_jrnl_ctrl _audit	Before and after image records of all the receivable document journal controls for which booking currency conversion is done.
Receivable Document Journal Line Audit	euro_recv_doc_jrnl_line _audit	Before and after image records of all the receivable document journal lines for which booking currency conversion is done.

Affected Table Groups

For Receivables booking currency conversion, the following table groups are affected:

- Enterprise Policies
- Receivable Entities
- Receivable Documents
- Remittances
- Deposits
- Drafts
- Receivables Journals.

Note: Receivable Account and other tables are not affected.

Enterprise Policies

Some policies are defined for the enterprise and are shared by different receivable entities. Booking currency conversion affects these policies.

Policies to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Note: Not all enterprise policies are linked to a ledger entity. This depends on how the policies have been set up. Some policies cannot be linked to a ledger entity and, therefore, cannot be converted even if they should be, for example, remit_algorithm_policy. Policies in tables linked to a ledger entity are converted.

Table Summary

Table ID	Usage	Conversion Y/N
Recv_aging_policy	Receivable aging policy	N
Recv_doc_type_policy	Receivable document type policy	Y
Recv_doc_type_plcy_acctg_distn	Receivable document type accounting distribution	Y
Recv_draft_type_policy	Receivable draft type policy	Y
Recv_draft_type_plcy_acctg_distn	Receivable draft type accounting distribution	Y
Recv_write_off_policy	Receivable write off policy	Y
Remit_algorithm_definition	Remittance algorithm definition	N
Remit_algorithm_policy	Remittance algorithm policy	N (can never be converted automatically)
Remit_algorithm_seq	Remittance algorithm sequence	N

The tables requiring conversion are described in the following sections.

Receivable Document Type Policy Table

This table stores policy for each of the document types. The chargeback limit is expressed in a currency. If this currency is a former booking currency, it needs to be converted to euro.

Rows to be Selected for Conversion

The rows that have accounting distributions (recv_doc_type_plcy_acctg_distn) for the selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Chargeback_limit	Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Chargeback_limit_curr _code	If this currency code is a former national currency, it needs to be changed to the euro currency code.

Receivable Document Type Accounting Distribution Table

This table stores accounting distributions for each of the document types.

Rows to be Selected for Conversion

The rows that are associated with the converted ledger entity and the associated information in the recv_doc_type_policy column need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.

Receivable Draft Type Policy Table

This tables stores policy for each of the draft types. The minimum draft amount is expressed in a currency. If this currency is a former national currency, it needs to be converted to euro.

Rows to be Selected for Conversion

The rows that have accounting distributions (recv_draft_type_acctg_distn) for the selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Min_draft_amt	Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Curr_code	If this currency code is a former national currency, it needs to be changed to the euro currency code.

Receivable Draft Type Accounting Distribution Table

This table stores accounting distributions for each of the draft types.

Rows to be Selected for Conversion

The rows that are associated with the converted ledger entity and the associated information in the recv_draft_type_policy column need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.

Receivable Write-Off Policy Table

This table stores policy and accounting distribution for each of the write-off types. The write-off limit amount is expressed in a currency. If this currency is a former national currency, it needs to be converted to euro.

Rows to be Selected for Conversion

The rows that are expressed in a former national currency and the rows that are associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Write_off_limit	Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Trans_curr_code	If this currency code is a former national currency, it needs to be chanhed to the euro currency code.
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.

Remittance Algorithm Policy Table

This table stores policy for each of the algorithms. The algorithm tolerance amount is expressed in a currency. If this currency is a former national currency, it needs to be converted to euro. However, because this table is not to any ledger entities, **it can never be converted automatically.**

Rows to be Selected for Conversion

The rows that are expressed in a former national currency need to be converted.

Columns to be Converted

Column ID	Description
Algorithm_tolerance_amt	Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Algorithm_tolerance_curr_code	If this currency code is a former national currency, it needs to be changed to the euro currency code.

Receivable Entities

For receivable entities, the impact is on policy (ledger entity ID and accounting distribution), amounts in booking currency, and exchange rates between transaction and booking currency.

Note: For companies who do not switch over to the euro currency on January 1, 1999, a minimum requirement is that you set the currency indicator on the receivable entity to Multicurrency (if it is not already set). The reason is that from January 1, 1999, receivable documents can be in both euro and former national currency. This setting can be changed on the Currency view of the Receivable Entity Policy window. At the same time, the rate entity and currency rate type must be provided. No conversion program is available; this has to be a manual user intervention.

Entities to be Selected for Conversion

This conversion step is based on the receivable entities identified in the Master Audit table.

Table Summary

Table ID	Comments	Conversion Y/N
Recv_entity	Receivable entity policy	Y
Recv_entity_acctg_distn	Receivable entity accounting distributions	Y
Recv_entity_security_ctrl	Receivable entity security	N
Recv_entity_wr_off_scrty_ctrl	Receivable entity / write-off security	N

The tables requiring conversion are described in the following sections.

Receivable Entity Policy Table

This table stores the booking currency for the receivable entity. The booking currency of the receivable entity needs to be changed in accordance with the change to the booking currency of the ledger entity. After transactions are entered for a receivable entity, its booking currency cannot be changed by the standard Receivable Entity Maintenance window. A conversion program changes the booking currency for selected receivable entities from former national currency to euro currency.

Logically the default transaction currency code should also be the national currency for entities dealing mostly with domestic suppliers and, therefore, should also be changed from former national currency to euro currency.

The receivable entity policy is stored in the recv_entity table in the DBSrrcv database.

Rows to be Selected for Conversion

This conversion step is based on the receivable entities identified in the Master Audit table.

Columns to be Converted

Column ID	Description
Curr_opt	Currency option: single or multiple. This option needs to be set to multiple because transactions will be in both national and euro currency.
Bkg_curr_code	Booking currency code.
Trans_curr_code	Default transaction currency code. If your trade is mostly domestic, logically the default transaction currency should reflect this fact. Needs to be converted if the receivables conversion parameter for this is On.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Max_remit_tolerance_curr_code	If this currency code is a former national currency, it needs to be changed to the euro currency code.
Max_remit_tolerance_amt	If the currency code was changed from former national currency to euro, this amount needs to be converted to its equivalent in euro.
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.

Receivable Entity Accounting Distributions Table

This table contains the default accounting distributions by distribution type (that is, Accounts Receivable, Sales, and so on) for all documents entered for the receivable entity.

Rows to be Selected for Conversion

This conversion step is based on the receivable entities identified in the Master Audit table. All converted receivable entities need conversion of their corresponding rows for the receivable entity from the recv_entity_acctg_distn table.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.

Receivable Documents

Invoices to be Selected for Conversion

- This conversion step is based on the receivable entities identified in the Master Audit table.
- Conversion is done for all status codes in the table, except for the status codes that are no longer valid.

The following table lists the possible status codes and a short description of each. It also shows whether conversion is required.

Status Code	Status Description	Conversion Y/N	Comments
I	Incomplete	N	This is a temporary status during entry or load. Complete all documents before running the conversion process.
E	Error	N	Correct all documents with errors before running the conversion process.
U	Unposted	N	Post all documents before running the conversion process.
C	Complete	Y	
O	Open	Y	

Table Summary

The receivable document is stored in the following database tables in the DBSrrcv database.

Table ID	Usage	Conversion Y/N
Recv_ctrl_grp	Receivables control group information containing control group totals and running totals for invoice entry validations.	N
Recv_doc	Receivable document header information containing document global information and document totals.	Y
Recv_doc_line	Receivable document lines information containing document line information.	N
Recv_doc_tax	Receivable document tax information for the document.	N
Recv_doc_line_tax	Receivable document lines information relating to tax for the document line.	N
Recv_doc_activity	Receivable document activity table.	Y
Recv_doc_comnt	Receivable document comments.	N
Recv_trans	Receivable document load temporary table.	N
Recv_trans_message	Receivable document load table containing the error messages for incomplete or incorrect documents.	N

The tables requiring conversion are described in the following sections.

Receivable Document Table

This table stores the document totals and all information that is common to all of the document lines.

Rows to be Selected for Conversion

Conversion is based on the receivable entities identified in the Master Audit table.

Columns to be Converted

Column ID	Description
Bkg_amt	Receivable document balance amount in primary booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.

Receivable Document Activity Table

This table stores the receivable document write-off activity information.

Rows to be Selected for Conversion

For each receivable document that is converted, any receivable document activity needs to be converted.

Columns to be Converted

Column ID	Description
Bkg_amt	Write-off amount in primary booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.

Remittances

Remittances to be Selected for Conversion

Select all remittances for the ledger entity to be converted (parameter for the conversion programs). The remittance for a ledger entity can be found as the controlling ledger entity (ldr_entity_id) on the recv_doc_jrnl_ctrl table for the RM journal origins.

Convert all statuses except for those statuses that are no longer valid:

Status Code	Status Description	Conversion Y/N	Comments
UT	Unallocated - Transaction Pending	N	Remittance transactions have been loaded. There are errors to be resolved. Correct them before the conversion.
UA	Unallocated - Available	Y	Remittances are entered and ready for allocation
UB	Unallocated - Being Allocated	Y	Remittance allocation is in progress.
AW	Allocated - Awaiting Posting	N	Remittances are allocated. You need to run Allocation Posting. Run Remittance Allocation Posting before the conversion.
A	Allocated	Y	

Conversion is done for all clearance statuses.

Table Summary

Table ID	Usage	Conversion Y/N
Remit	Remittance	Y
Remit_algorithm_error_work	Remittance algorithm allocation work table	N
Remit_algorithm_tots_work	Remittance algorithm allocation work table	N
Remit_alloc_select	Remittance allocation selection criteria	N
Remit_alloc_sort	Remittance allocation sort criteria	N
Remit_alloc_work	Remittance allocation work table	N
Remit_comnt	Remittance comment table	N
Remit_recv_adj_activity	Remittance adjustment activity created during remittance allocation.	Y

Table ID	Usage	Conversion Y/N
Remit_recv_adj_activity_comnt	Remittance allocation comments	N
Remit_recv_adj_activity_work	Remittance allocation work table	N
Remit_recv_alloc_activity	Remittance allocation activity	Y
Remit_trans	Remittance transactions	N
Remit_trans_error	Remittance transaction error messages	N

The tables requiring conversion are described in the following sections.

Remittance Table

This table stores the remittance totals.

Rows to be Selected for Conversion

Select all remittances for the ledger entity to be converted (parameter for the conversion programs). The remittance for a ledger entity can be found as the controlling ledger entity (ldr_entity_id) on the recv_doc_jrnl_ctrl table for the RM journal origins.

Columns to be Converted

Column ID	Description
Bkg_amt	Remittance amount in booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.

Column ID	Description
Tot_curr_gain_loss_amt	The currency gain or loss amount. This amount needs to be calculated from the Accounts Receivable clearance posting of the remittance entry and remittance allocation journal line.
Tolerance_bkg_amt	Needs to be converted to the euro equivalent value.

Remittance Allocation Adjustment Activity Table

This table stores the adjustment activity information that occurred during remittance allocation.

Rows to be Selected for Conversion

For each remittance that is converted, any remittance activity needs to be converted.

Columns to be Converted

Column ID	Description
Adj_activity_bkg_amt	Write-off amount in primary booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).

Remittance Allocation Activity Table

This table stores the allocation activity information that occurred during remittance allocation.

Rows to be Selected for Conversion

For each remittance that is converted, any remittance activity needs to be converted.

Columns to be Converted

Column ID	Description
Current_alloc_bkg_amt	Allocation amount in primary booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Allowed_disc_bkg_amt	Allowed discount amount in booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).

Deposits

Deposits to be Selected for Conversion

Select all deposits that are associated with bank accounts for the ledger entity to be converted. The bank account for a ledger entity can be found in the ledger entity of the cash accounting distribution.

Conversion is needed depending on the deposit status:

Status Code	Status Description	Conversion Y/N	Comments
UT	Transaction Pending	N	Deposit transactions have been loaded. There are errors to be resolved. Correct them before the conversion.
I	Incomplete	Y	Deposits are entered but not in balance. Deposit is available for clearance or for changing the clearance.
C	Complete	Y	Deposit is in balance. Deposit is available for clearance or for changing the clearance.

Conversion is needed for all clearance statuses:

Status Code	Status Description	Conversion Y/N	Comments
OPEN	Open	Y	Deposit has not been cleared. The clearance requires the deposit to be converted if unreconciled cash is used or if the deposit is multicurrency.
CLRX	Cleared with Exception	Y	Deposit has been cleared with exception. The exception needs to be resolved, requiring the deposit to be converted if unreconciled cash is used or if the deposit is multicurrency.
CLR	Cleared	Y	Deposit has been cleared, but because a clearance could be reversed, the deposit needs to be converted if unreconciled cash is used or if the deposit is multicurrency.

Table Summary

Table ID	Usage	Conversion Y/N
Deposit	Deposit	Y
Deposit_comnt	Comments about the deposit	N

The table requiring conversion is described in the following section.

Deposit Table

This table stores the deposit totals.

Rows to be Selected for Conversion

Select all deposits that are associated with bank accounts for the ledger entity to be converted. The bank account for a ledger entity can be found in the ledger entity of the cash accounting distribution.

Columns to be Converted

Column ID	Description
Bkg_amt	Deposit amount in booking currency. Needs to be converted to the euro equivalent value. If the deposit_status_code is I, the amount should be converted from the former bkg_amt. If the deposit_status_code is C, the bkg_amt should be equal to the converted remit_bkg_amt.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.
Remit_bkg_amt	The sum of the associated remittance booking amount (bkg_amt on the remit).

Drafts

Drafts to be Selected for Conversion

Conversion is needed for all draft statuses.

Table Summary

Table ID	Usage	Conversion Y/N
Recv_draft	Draft table	Y
Recv_draft_acctg_dist	Draft accounting distribution codes	Y
Recv_draft_activity	Draft activity log	Y
Recv_draft_activity_desc	Draft activity description	N
Recv_draft_comnt	Draft comments	N
Recv_draft_generation_description	Draft generation option description	N
Recv_draft_message	Draft transactions	N
Recv_draft_trans_message	Draft transactions error messages	N

The tables requiring conversion are described in the following sections.

Draft Table

This table stores the draft main information.

Rows to be Selected for Conversion

All drafts related to a receivable entity in the Master Audit table need to be converted.

Columns to be Converted

Column ID	Description
Draft_book_amt	Draft amount in booking currency. Needs to be converted to the euro equivalent value.
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.

Draft Accounting Distribution Code Table

This table stores the accounting distribution for the draft.

Rows to be Selected for Conversion

All rows related to drafts that are selected for conversion need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.

Draft Activity Table

This table stores the activity information that occurred for the draft.

Rows to be Selected for Conversion

All rows related to drafts that are selected for conversion need to be converted.

Columns to be Converted

Column ID	Description
Activity_booking_amt	Amount in primary booking currency. Needs to be converted to the euro equivalent value.

Receivables Journals

Journals to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Table Summary

The journal information is stored in the following database tables in the DBSrrcv database:

Table ID	Usage	Conversion Y/N
Recv_doc_jrnl_ctrl	Receivables journal header information containing journal global information for posting to SmartStream Ledger.	Y
Recv_doc_jrnl_line	Receivables journal line information containing journal line information (debit-credit lines) for posting to SmartStream Ledger.	Y

The tables requiring conversion are described in the following sections.

Receivables Journal Header Table

This table stores all journal control information for all receivables to Ledger postings. Currently, all journals related to converted ledger entities need to be converted. The journal control information is common to all journal lines. These journals are posted to Ledger.

Rows to be Selected for Conversion

Conversion is based on the ledger entities identified in the Master Audit table.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. See also About Rates.

Receivable Document Journal Lines Table

This table stores all accounting distributions for the document-related postings. These journal lines are posted to Ledger.

Rows to be Selected for Conversion

All journal lines for the converted journal controls need to be converted.

The following restrictions apply:

- For the receivable document journals: the account receivable DB (debit memos) or CR (credit memos) must always equal the booking liability amount on the receivable document (bkg_amt in table recv_doc), through the source document key of the journal.
- For the write-off journals: the write-off CR (debit memos) or DB (credit memos) must always equal the booking liability amount on the receivable document write-off activity record (bkg_amt in table recv_doc_activity), through the source document key of the journal.

For both restrictions, the amount in the journal can be recalculated. The reason is that there is no difference between the calculation here and the one on the receivable document or the write-off activity; that is, there is a straight conversion of one amount in participating currency to the euro equivalent.

Columns to be Converted

Column ID	Decscription
Ldr_entity_id	Controlling ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID.
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.
udak_surr_key	The udak_surr_key gets updated after posting. When changing either or both of the ledger entity and the UDAK elements, the new surrogate needs to be retrieved and updated.
Prim_amt	Primary booking amount. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option). Take the transaction amount (trans_amt) and, using the retrieved exchange rate, convert to the euro equivalent.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Prim_curr_code	Primary book currency code that is the former national currency code. Needs to be replaced by the euro currency code.
Trans_to_prim_exchange_rate	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.
trans_to_euro_exchange_rate	Always 0
euro_to_prim_exchange_rate	Always 0
secdy_curr_code	If the new entity has a secondary booking currency, it needs to be updated to the secondary booking currency of the new ledger entity. If the new entity does not have a secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency: ▪ If there is a secdy_amt, convert this amount to the secondary booking currency of the new entity ▪ If there is no secdy_amt, convert from updated prim_amt. If the new entity does not have a secondary booking currency, initialize to zero.

Column ID	Decscription
Prim_to_secdy_ exchange_rate	Exchange rate for conversion from primary booking amount to secondary booking amount. The primary book has been recalculated. Thus this exchange rate needs to be recalculated. **Note:** Determine the exchange rate from the primary booking amount and the secondary booking amount. Do not retrieve an exchange rate and recalculate the secondary booking amount.
prim_to_euro_ exchange_rate	Always 0
euro_to_secdy_ exchange_rate	Always 0

Additional Processing

Occasionally, rounding differences can cause the DB line totals not to equal the CR line totals. In this instance, the ledger posting adds a currency balancing entry.

Receivable Account

Booking currency conversion does not affect the receivable account tables.

Table Summary

Table ID	Usage	Conversion Y/N
Dso_calc_recv_acct	DSO calculations at receivable account level	N
Dso_recv_input	Input for DSO calculations	N
Recv_acct	Receivable account	N
Recv_acct_aging_tot	Aging totals - transaction currency only	N
Recv_acct_alternate_id	Alternate ID	N
Recv_acct_bank_acct	Receivable account bank account information	N
Recv_acct_comnt	Receivable account comment	N
Recv_acct_contact	Contacts	N
Recv_acct_trans	Receivable account transactions	N
Recv_acct_trans_ message	Receivable account transactions messages	N

Other Tables

Tables to be Selected for Conversion

These tables need to be converted when the ledger entity that they are linked to is converted.

Table Summary

Table ID	Usage	Conversion Y/N
Recv_atb_extract	Aged trial balance extract	N
Recv_reason_code	Reason codes	N
Recv_server_process	Running off-line processes	N
Recv_statement_ exclude_doc	Work table for statement processing	N
Recv_statement_extract	Statement extract table	N
Remit_recv_algorithm_ extract	Algorithm extract table	N
Work_recv_doc_summ_ jrnl_ctrl	Summarization posting work table	N
Work_recv_doc_summ_ jrnl_line	Summarization posting work table	N

The extract tables are temporary tables for the generation of Aged Trial Balance, Dunning, and Statement reports. These processes should be finished before the conversion.

Transition Period Functionality

Visualisation of Documents in Transaction, Booking and Reporting Currency

Visualisation of Documents uses the scheduled process and database tables described in the following paragraphs.

Initialization of Receivables Visualisation (program feuc0964)

In this scheduled process, the amounts in visualisation currencies are initialized or reinitialized for all transactions. The amounts in visualisation currencies are calculated and stored for the receivables documents, remittances, and drafts.

Receivables Document Reporting Currency Work Table (euro_rrcv_doc_report_work)

This table contains the converted amounts in the reporting currency of goods and services amount, freight amount, miscellaneous amount, and total amount of the receivables document table.

Receivables Document Reporting Currency View (euro_rrcv_doc_rept_curr_view)

This view table contains the converted amounts in the reporting currency of receivable amount of the receivables document table. The view is used for File Open of the Visualisation of Receivables Document window.

Receivables Remittance Reporting Currency Work Table (euro_rrcv_remit_report_work)

This table contains the converted amounts in the reporting currency of remittance amount of the remittance table.

Receivables Remittance Reporting Currency View (euro_rrcv_remit_rept_curr_view)

This view table contains the converted amounts in the reporting currency of remittance amount of the remittance table. The view is used for File Open of the Visualisation of Remittance window.

Receivables Draft Reporting Currency Work Table (euro_rrcv_draft_report_work)

This table contains the converted amounts in the reporting currency of draft amount of the receivables draft table.

Receivables Draft Reporting Currency View (euro_rrcv_draft_rept_curr_view)

This view table contains the converted amounts in the reporting currency of draft amount of the receivables draft table. The view is used for File Open of the Visualisation of Receivables Draft window.

Maintaining Visualisation Information through Daily Operations

When performing daily tasks in Receivables, the visualisation information is maintained through triggers. These capture the creation (online or through loads) of new documents, remittances, and drafts as well as any maintenance activity that affects the information stored. To update the visualisation tables, you need to make sure that ARPC is set up and running on your server.

Receivable Account - Transaction Currency Conversion

Receivable Account - Transaction Currency Conversion uses the scheduled process described in the following paragraph.

Receivable Account Transaction Currency Conversion (program feuc0961)

In this scheduled process, default transaction currency at the receivable account level is changed to reflect the transaction currency conversion to euro.

Affected Table Group

The Receivable Account table group is impacted by transition period functionality.

Table Summary

The receivable account information is stored in the following table in the DBSrecv database:

Table ID	Usage	Conversion Y/N
Recv_acct	Receivable account	Y

The table requiring conversion is described in the following section.

Receivable Account Table

These are the columns to be converted:

Column ID	Column ID
trans_curr_code	Default transaction currency code that needs to be replaced by the euro currency code.

Permanent Revaluation

Permanent Revaluation uses the scheduled process described in the following paragraphs.

Permanent Revaluation (program feuc0962)

In this scheduled process, the selected receivable documents, drafts, and remittances are revalued and the difference posted as a permanent gain or loss.

Credit Account - Credit Currency Conversion

Credit Account - Credit Currency Conversion uses the scheduled process described in the following paragraph.

Credit Account Credit Currency Conversion (program feuc0963)

In this scheduled process, the default credit currency for the credit account is changed to reflect the credit currency conversion to euro.

Affected Table Group

Transition period functionality affects the Credit Account table group.

Table Summary

The credit account information is stored in the following table in the DBScred database:

Table ID	Usage	Conversion Y/N
Cr_acct	Credit account	Y

The table requiring conversion is described in the following section.

Credit Account Table

These are the columns to be converted:

Column ID	Description
Conversion_curr_code	Currency code that needs to be replaced by the euro currency code.
Cr_limit_amt	Convert from the previous currency to euro.
Cr_limit_max_tolerance_amt	Convert from the previous currency to euro.
Cr_limit_notification_amt	Convert from the previous currency to euro.
Cr_limit_last_update_amt	Convert from the previous currency to euro.
This_yr_high_cr_amt	Convert from the previous currency to euro.
Last_yr_high_cr_amt	Convert from the previous currency to euro.
This_yr_sales_amt	Convert from the previous currency to euro.
Last_yr_sales_amt	Convert from the previous currency to euro.

Projects

This section includes the Euro currency processing information specific to Projects.

Scheduled Processes

Projects booking currency conversion uses the scheduled processes described in the following paragraphs.

Projects Copy Request Build (program feuc0946)

In this scheduled process, all projects for which information is in a participating ledger currency (or a project currency) are copied to another project entity.

Projects Booking Currency Conversion (program feuc0901)

In this scheduled process, the Project entity policy and transaction records for former national currency entities are changed to reflect the ledger booking currency conversion to euro.

Database Tables

Projects booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Projects Copy Relation	euro_project_copy _relation	From/To Project entity ID combinations with their corresponding relation set ID.
Projects Master Audit	euro_proj_master_audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Project Entity Audit	euro_proj_entity_audit	Before and after image records of all the Project entities for which booking currency conversion is done.
Project Audit	euro_proj_audit	Before and after image records of all the policy records of Projects for which booking currency conversion is done.
Component Audit	euro_comp_audit	Before and after image records of all the policy records of components for which booking currency conversion is done.
Rate Currency Audit	euro_rate_curr_audit	Before and after image records of all the policy records of rate currency for which booking currency conversion is done.
Component Monetary Balance Audit	euro_comp_mont_bal _audit	Before and after image records of all the policy records of the monetary balances for a component for which booking currency conversion is done.
Component Sum Monetary Balance Audit	euro_comp_sum_mont _bal_audit	Before and after image records of all the policy records of the monetary balances summation for a component for which booking currency conversion is done.

Table Groups affected by the Conversion Phases

For Projects booking currency conversion, the following conversion phases are required:

- Update Projects Policy
- Activate New Projects
- Convert Balances

Update Projects Policy

The following areas in Projects policy are affected:

- Project Entity
- Project
- Project Accounting Distribution
- Project Cost Element
- Component
- Component Accounting Distribution
- Component Cost Element
- Project Entity Rate Code
- Rate Accounting Distribution

Project Entities to be Processed

For each project entity defined in the Master Audit table, the following tables are processed.

Table Summary

Table ID	Usage	Update Y/N
project_entity	Project entity	Y
project	Project	Y
project_acctg_distn	Project accounting distribution	Y
project_cost_element	Project cost element	Y
component	Component	Y
component_acctg_distn	Component accounting distribution	Y
component_cost_element	Component cost element	Y
rate_currency	Project entity rate code	Y
rate_acctg_dist	Rate accounting distribution	Y

The tables that require updating are described in the following sections.

Project Entity Table

The project entity as generated by the projects copy program needs to be updated with the correct ledger entity and booking currency.

Rows to be Processed

The row for the project entity needs to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
Ledger_currency_code	Booking currency code of the To ledger entity.
Default_project_currency_code	If this currency is a participating currency, replace with the euro currency.

Project Table

The projects as generated by the projects copy program need to be updated with the correct ledger entity and booking currency.

Rows to be Processed

All projects for the project entity need to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	If this is the From ledger entity (in the ledger entity relation request table), update with the corresponding To ledger entity.
Ledger_currency_code	If the ldr_entity_id was changed, replace the currency code with the booking currency code of the new ledger entity.
Default_project_ currency_code	If this currency is a participating currency, replace with the euro currency.
Funds_check_ tolerance_amt	If the old project currency is a participating currency, convert this amount.
Estimated_project_amt	Expressed in project currency.
	If the old project currency is a participating currency, convert this amount.
Est_project_amt_curr_ code	If amount is converted to euro currency, replace this code.

User_amt_1 thru 4	Expressed in project currency. If the old project currency is a participating currency, convert this amount.

Project Accounting Distribution Table

The project accounting distributions as generated by the projects copy program need to be updated with the correct ledger entity and user-defined accounting distribution.

Rows to be Processed

All accounting distribution entries for all projects for the project entity need to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
UDAK_1 thru UDAK_12	Replace with the accounting distribution destination as per the UDAK correspondence table.

Project Cost Element Table

The project cost elements as generated by the projects copy program need to be updated with the correct ledger entity and user-defined accounting distribution.

Rows to be Processed

All cost elements for all projects for the project entity need to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
UDAK_1 thru UDAK_12	Replace with the accounting distribution destination as per the UDAK correspondence table.

Component Table

The components as generated by the projects copy program need to be updated with the correct ledger entity and booking currency.

Rows to be Processed

All components for all projects for the project entity need to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
Ledger_currency_code	Booking currency code of the To ledger entity.
Estimated_project_amt	Expressed in project currency. If the old project currency is a participating currency, convert this amount.
Est_project_amt_curr_code	If amount is converted to euro currency, replace this code.
User_amt_1 thru 4	Expressed in project currency. If the old project currency is a participating currency, convert this amount.

Component Accounting Distribution Table

The component accounting distributions as generated by the projects copy program need to be updated with the correct ledger entity and user-defined accounting distribution.

Rows to be Processed

All accounting distribution entries for all components of all projects for the project entity need to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
UDAK_1 thru UDAK_12	Replace with the accounting distribution destination as per the UDAK correspondence table.

Component Cost Element Table

The component cost elements as generated by the projects copy program need to be updated with the correct ledger entity and user-defined accounting distribution.

Rows to be Processed

All component cost elements of all projects of the project entity need processing.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
UDAK_1 thru UDAK_12	Replace with the accounting distribution destination as per the UDAK correspondence table.

Project Entity Rate Code Table

The project entity rate code as generated by the projects copy program needs to be updated with the euro currency code.

Rows to be Processed

All project entity rate code entries for all currency codes with a participating currency need to be processed.

Columns to be Processed

Column ID	Update
Curr_code	Update with the euro currency code.
Default_project_ currency_code	If this currency is a participating currency, replace with the euro currency.

Rate Accounting Distribution Table

The project entity rate accounting distributions as generated by the projects copy program need to be updated with the correct ledger entity and user-defined accounting distribution.

Rows to be Processed

All accounting distribution entries for all rates for the project entity need to be processed.

Columns to be Processed

Column ID	Update
Ldr_entity_id	Update with the To ledger entity from the ledger entity relation request table for the ledger entity value.
UDAK_1 thru UDAK_12	Replace with the accounting distribution destination as per the UDAK correspondence table.

Activate New Projects

For each project entity in the Master Audit table, all projects need to be activated. To do this, for each project, call the project status change stored procedure (fsp_val_project).

Convert Balances

The following areas in Projects policy are affected:

- Component Monetary Balance
- Component Sum Monetary Balance.

Project Entities to be Processed

For each project entity defined in the Master Audit table, the following tables are processed.

Table Summary

Table ID	Usage	Update Y/N
component_monetary_ balance	Component monetary balance	Y
component_sum_monetary _balance	Component sum monetary balance	Y

The tables that require updating are described in the following sections.

Component Monetary Balance Table

The monetary balances as copied over by the projects copy program need to be converted to euro currency.

Rows to be Processed

All balance rows that belong to the project entity and that satisfy either of the following conditions need to be processed:

- Rows having curr_type = L
- Rows having curr_type = P and curr_code is a participating currency

Columns to be Processed

Column ID	Update
Curr_code	Update with the euro currency code.
Project_amt_1 thru project_amt_14	Convert the amounts to the euro currency code.
Project_ytd_amt	Recalculate this as the sum of project_amt_1 thru project_amt_14 (depending on Enterprise Policy, could be up to 60 periods per fiscal year).
Project_cap_to_ date_amt	Amount should be converted to euro currency (should be equivalent to project_to_date_amt after capitalization).
Proj_pr_cap_to_ date_amt	Amount should be converted to euro currency.
Project_to_date_ amt	Amount should be converted to euro currency (accumulation/sum of all project_amt_1 thru project_amt_14 for all fiscal years that the project was open).
Proj_pr_project_to _date_amt	Amount should be converted to euro currency.

Component Sum Monetary Balance Table

The monetary balances as copied over by the projects copy program need to be recalculated in the euro currency.

Rows to be Processed

All balance rows that belong to the project entity and that satisfy either of the following conditions need to be processed:

- Rows having curr_type = L
- Rows having curr_type = P and curr_code is a participating currency

Columns to be Processed

Column ID	Update
Curr_code	Update with the euro currency code.
Proj_to_date_ actual_amt	Accumulation/sum of all periods, for all fiscal years by Amount Class (Actual).
Proj_to_date_ commit_amt	Accumulation/sum of all periods, for all fiscal years by Amount Class (Commitment).
Proj_to_date_ budget_amt	Accumulation/sum of all periods, for all fiscal years by Amount Class (Budget)

Payables

This section includes the Euro currency processing information specific to Payables.

Scheduled Processes

Payables booking currency conversion uses the scheduled process described in the following paragraph.

Payables Booking Currency Conversion (program feuc0901)

In this scheduled process, the policy and transaction records for the former national currency ledger entity are replaced by the records for the new euro ledger entity for each of the payable entities to be converted. The before and after images of the records changed during the conversion process are maintained in the Payables audit tables.

Database Tables

Payables booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Payables Master Audit	euro_prqt_master_audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Payable Entity Audit	euro_payable_entity_audit	Before and after image records of all the payable entities for which booking currency conversion is done.
Payment Request Audit	euro_pmt_rqst_audit	Before and after image records of all the invoices for which booking currency conversion is done.
Payment Request Journal Control Audit	euro_pmt_rqst_jrnl_ctrl _audit	Before and after image records of all the invoices journal controls for which booking currency conversion is done.
Payment Request Journal Line Audit	euro_pmt_rqst_jrnl_line _audit	Before and after image records of all the invoices journal lines for which booking currency conversion is done.
Payables Draft Audit	euro_payables_draft_ audit	Before and after image records of all the drafts for which booking currency conversion is done.
Payables Draft Journal Control Audit	euro_draft_jrnl_ctrl_audit	Before and after image records of all the draft journal controls for which booking currency conversion is done.
Payables Draft Journal Line	euro_draft_jrnl_line_audit	Before and after image records of all the invoices journal lines for which booking currency conversion is done.
Payment Audit	euro_pmt_audit	Before and after image records of all the payments for which booking currency conversion is done.
Payment Journal Control Audit	euro_pmt_jrnl_ctrl_audit	Before and after image records of all the payment journal controls for which booking currency conversion is done.

Table	Server Name	This table contains the…
Payment Journal Line Audit	euro_pmt_jrnl_line_audit	Before and after image records of all the payment journal lines for which booking currency conversion is done.

Affected Table Groups

For Payables booking currency conversion, the following table groups are affected:

- Payables Entities
- Payables Invoices
- Payable Drafts
- Payments
- Payables Journals
- Project Journals

Note: The Payables tables that are held to support the matching process are not converted.

Payables Entities

For payable entities, policy (ledger entity ID and accounting distribution), amounts in booking currency, and exchange rates between transaction and booking currency are affected.

Note: For companies who do not switch over to the euro currency on January 1, 1999, a minimum requirement is that you set the currency indicator for the payable entity to Multicurrency (if it is not already set). The reason is that from January 1, 1999, payable documents can be in both euro and former national currency. This setting can be changed on the Currency view of the Payable Entity Policy window. At the same time, the rate entity and currency rate type must be provided. No conversion program is available; this requires user intervention.

Payable Entities to be Selected for Conversion

This conversion step is based on the payable entities identified in the Master Audit table.

Table Summary

Table ID	Usage	Conversion Y/N
Payable_entity	Payable entity policy	Y
Payable_entity_acctg_distn	Payable entity default accounting distributions	Y
Payable_entity_security_ctrl	Payable entity security	N
Payable_entity_tax	Payable entity tax identification and tax defaults	N

The tables requiring conversion are described in the following sections.

Payable Entity Policy Table

This table stores the booking currency for the payable entity. The booking currency of the payable entity needs to be changed in accordance with the change to the booking currency of the ledger entity. After transactions are entered for a payable entity, its booking currency cannot be changed by the standard Payable Entity Maintenance window. A conversion program changes the booking currency for selected payable entities from former national currency to euro currency.

Logically the default transaction currency code should also be the national currency for entities dealing mostly with domestic suppliers and, therefore, should also be set from former national currency to euro currency.

Depending on the currency exchange rates between euro and other currencies (participating or nonparticipating currencies), the pointers to these exchange rates in Currency Management may need to be adjusted.

Default payment method IDs may need to be replaced manually.

The payable entity policy is stored in the payable_entity table in the DBSprqt database.

Rows to be Selected for Conversion

This conversion step is based on the payable entities identified in the Master Audit table.

Columns to be Converted

Column ID	Description
Curr_opt	Currency option: single or multiple. This option needs to be set to multiple because transactions will be in both national and euro currency.
Bkg_curr_code	Booking currency code.

Column ID	Description
Trans_curr_code	Default transaction currency code. If your trade is mostly domestic, logically the default transaction currency should reflect this fact. Needs to be converted if the payables conversion parameters for this is set to On.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.

Payable Entity Accounting Distributions Table

This table stores the default accounting distributions for a number of accounting distribution types (Accounts Payable Liability, Notes Payable Liability, Expense, and so on).

Rows to be Selected for Conversion

This conversion step is based on the payable entities identified in the Master Audit table. All converted payable entities need conversion of their corresponding rows for the payable entity from the payable_entity_acctg_distn table.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Payables Invoices

Documents for which booking currency conversion is done may need their payment methods changed because the existing payment method is no longer valid when the booking currency is changed. This is not done during Payables booking currency conversion, but through Payment Method Substitution (part of transition period functionality).

Prerequisites

Before conversion of the Payables Invoices and Payables subledger journals, all subledger journals with an effective date before accounting year 1999 have to be extracted and posted to Ledger. Any errors must be corrected and reposted from the Ledger Unposted Journals activity.

Documents to be Selected for Conversion

Conversion is based on the payable entities identified in the Master Audit table.

Table Summary

The payable invoice document is stored in the following tables in the DBSprqt database.

Note: Archive tables are associated with most database tables.

Table ID	Archive Table ID	Usage	Conv Y/N
Pmt_rqst	pmt_rqst_archive	Payment request header information containing document global information and document totals.	Y
Pmt_rqst_line	pmt_rqst_line_archive	Payment request lines information containing document line information.	N
Pmt_rqst_tax	pmt_rqst_tax_archive	Payment request tax information for the document (document tax keys and totals).	N
Pmt_rqst_line_tax	pmt_rqst_line_tax_archive	Payment request lines information relating to tax for the document line.	N
Pmt_rqst_activity	pmt_rqst_activity_archive	Payment request activity table (all changes to the payment request status), used for the balancing reports.	N
Pmt_rqst_comnt	pmt_rqst_comnt_archive	Payment request comments.	N
Pmt_rqst_ctrl_grp	pmt_rqst_ctrl_grp_archive	Payment request control group information containing control group totals and running totals for invoice entry validations.	N
Pmt_rqst_apprvl_status	pmt_rqst_apprvl_status_archive	Payment request approval information.	N
Pmt_rqst_apprvl_comnt	pmt_rqst_apprvl_comnt_archive	Payment request approval comments.	N
Pmt_rqst_pay_now		Payment request work table for On Demand Payments (ODPs). The table contains rows only during the ODP process or after an unsuccessful end to an ODP run.	N

Table ID	Archive Table ID	Usage	Conv Y/N
Pmt_rqst_server_ process		Temporary worktable to indicate whether a payment request server process (batch payment, ODP, matching, load, and so on) is currently running.	N
Pmt_rqst_trans		Invoice load temporary table.	N
Pmt_rqst_trans_ message		Invoice load table containing the error messages for incomplete or incorrect invoices.	N
Pmt_rqst_acctg_distn_ work		Work table containing data only during invoice entry.	N
Pmt_rqst_line_work		Work table containing data only during invoice entry.	N
Pmt_rqst_line_tax_work		Work table containing data only during invoice entry.	N
Pmt_rqst_tax_acctg_ distn_work		Work table containing data only during invoice entry.	N

The tables requiring conversion are described in the following sections.

Note: Archive tables will not have their booking currency converted. To reduce the conversion time and volume, you can archive history invoices first before running the Payables booking currency conversion.

Payment Request Header Table

This table stores the invoice totals and all information that is common to all of the invoice lines.

Rows to be Selected for Conversion

This conversion step is based on the payable entities identified in the Master Audit table.

Columns to be Converted

Column ID	Description
Bkg_liability_amt	Liability amount in primary booking currency. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option).
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.
project_entity_id	Needs to be replaced with the corresponding new value from the **projects copy relation** (see Projects).

Payment Request Lines Table

This table stores the invoice line details.

Interentity Invoices

Interentity invoices are invoices with expenses distributed over different ledger entities. On a single invoice, only ledger entities that have the same primary book currency can be combined. To comply with this limitation after booking currency conversion, all ledger entities on invoice lines must be converted at the same time. This implies that the entire conversion of these ledger entities in SmartStream Ledger and for the SmartStream subledgers has to happen at the same time.

Rows to be Selected for Conversion

This conversion step is based on the payable entities identified in the Master Audit table. Invoice header rows selected for conversion must have all of their associated invoice lines converted.

Columns to be Converted

Because all amounts are in transaction currency, no columns need to be converted.

Matching

In SmartStream Payables, a number of tables are held to support the matching process (three-way matching: Receipt to Purchase Order to Invoice).

Prerequisites

- Any batch matching process in progress must be completed before the Payables booking currency conversion process can start.
- The conversion of the booking currency for purchase orders and requisitions in Purchasing must be completed before, or immediately after, this conversion process and before any invoice matching in the new ledger entity setup. The reason is that the purchase order line schedule accounting distributions serve as defaults for the matched invoice lines. After conversion, the new ledger entity and accounting distributions need become the defaults. For more detailed information, see Purchasing.

Table Summary

Table ID	Usage	Conversion Y/N
Consolidated_po_line_sched	Purchase order line schedules from all purchasing sites that are available for matching.	N
Consolidated_schld_recpt_dtl	Scheduled receipts from all purchasing sites available for matching.	N
Matching_exception	Matching process exception details	N
Matching_exception_activity	Matching exception activity log	N
Matching_exception_comnt	Matching exception comments	N
Matching_exception_descp	Matching exceptions multilingual descriptions	N

Payable Drafts

Prerequisites

- Any draft maturation, draft payment, or draft notification process in progress must be completed and all errors must be resolved before starting the conversion process.
- Before the booking currency is changed to euro in SmartStream Ledger and before conversion of the Payables subledger journals, all subledger draft journals with an effective date before accounting year 1999 have to be extracted and posted to Ledger. Any errors must be corrected and reposted from the Ledger Unposted Journals activity.
- Invoices on drafts must be converted before the conversion of the Payable drafts.
- The euro currency identifier and the pointers to Currency for the retrieval of the exchange rates (rate entity, currency rate type) must be known to the conversion program.

Drafts to be Selected for Conversion Table Summary

Conversion is needed for all draft statuses.

Table ID	Usage	Conversion Y/N
Payables_draft	Draft header information	Y
Payables_draft_activity	Draft activity log	N
Payables_draft_activity_desc	Draft activity multilingual descriptions	N
Payables_draft_comnts	Draft comments	N
Payables_draft_pmt_rqst_select	Temporary table during payable draft entry	N
Payables_draft_temp	Temporary table during payable draft entry	N
Payables_draft_temp_pmt_rqst	Temporary table during payable draft entry	N
Payables_draft_vendor_info	Temporary table during payable draft entry	N

The table requiring conversion is described in the following section.

Payables Draft Table

This table stores such common draft information as draft total amount, due date, and vendor information.

Rows to be Selected for Conversion

Conversion is needed for all rows associated with the drafts selected for conversion.

Columns to be Converted

Column ID	Description
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.

Payments

Payments need to have their booking currency, ledger entity policy references, and accounting distribution references changed in accordance with the ledger entity conversion. Activity for payments can occur after they have reached the paid or cleared status. Cleared payments can be Uncleared and the payment can be cancelled. The cancellation and eventual repayment activities must be accounted for in the new euro ledger entity after the SmartStream Ledger and Payables booking currency conversion has taken place.

Prerequisites

All payment cycles in progress must be completed from start to finish before the conversion programs can start. A payment cycle cannot be in a Preview status when the conversion process starts because Payment Preview tables are not considered during booking currency conversion of Payments.

Payments to be Selected for Conversion

- Select all payments for the payable entity.
- All payments on file must have their booking currency converted from former national currency to euro currency:
- All payment statuses need to be converted.

Table Summary

Note: Archive tables are associated with most database tables.

Table ID	Archive Table ID	Usage	Conv Y/N
Pmt	pmt_archive	Payment details	Y
Pmt_comnt	pmt_comnt_archive	Payment comments	N
Pmt_ctrl		Payment controls for scheduled payments	N
Pmt_resequence_audit	pmt_resequence_audit_archive	Payment resequencing audit log	N
Pmt_run_bank_info	pmt_run_bank_info_archive	Payment run bank information	N
Pmt_run_message		Payment run error messages	N
Pmt_run_pmt_meth	pmt_run_pmt_meth_archive	Payment run, payment method information	N
Pmt_run_pmt_rqst	pmt_run_pmt_rqst_archive	Payment to payment request cross-reference table	N

The table requiring conversion is described in the following section.

Payment Details Table

This table stores the detail information about an individual payment.

Rows to be Selected for Conversion

All rows associated with the payments selected for conversion needed to be converted.

Columns to be Converted

Column ID	Description
Bkg_amt	Payment amount in booking currency. Needs to be converted to the euro equivalent value. This amount must equal the sum of the payment journal lines debits (all lines except the cash or unreconciled cash distribution lines).
Bkg_curr_code	The former national currency code. Needs to be replaced by the euro currency code.

Payables Journals

Journals to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Table Summary

The journal information is stored in the following tables in the DBSpmt and DBSprqt databases.

Note: Archive tables are associated with most database tables.

Table ID	Archive Table ID	Usage	Conv Y/N
Pmt_rqst_jrnl_ctrl	pmt_rqst_jrnl_ctrl_ archive	Payment request journal header information containing global journal information for posting to SmartStream Ledger.	Y
Pmt_rqst_jrnl_line	pmt_rqst_jrnl_line_ archive	Payment request journal line information containing journal line information (debit or credit lines) for posting to SmartStream Ledger.	Y
Payables_draft_jrnl_ctrl		Payables draft journal header	Y
Payables_draft_jrnl_line		Payables draft journal lines	Y
Pmt_jrnl_ctrl	pmt_jrnl_ctrl_archive	Payment journal header	Y
Pmt_jrnl_line	pmt_jrnl_line_archive	Payment journal lines	Y
receipt_accrl_jrnl_ctrl		Receipt accrual journal header	Y
receipt_accrl_jrnl_line		Receipt accrual journal lines	Y

The tables requiring conversion are described in the following sections.

Payment Request Journal Header Table

This table stores all journal control information that is common to all invoice journal lines. These are the journals that are posted to Ledger.

Rows to be selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to replaced by the new euro ledger entity ID.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Defaults to the journal lines. See also About Rates.

Payment Request Journal Lines Table

This table stores all accounting distributions for the invoice (expenses, liability, VAT, freight, charges, and so on). These journal lines are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

The following restriction applies:

The liability CR (or DB for cancellations and credit memos) must always equal the booking liability amount on the payment request header (bkg_liability_amt in table pmt_rqst). The amount in the journal can be recalculated. The calculation here is the same as the one on payment request header because there is a straight conversion of one amount in participating currency to the euro equivalent.

Interentity Invoices

Interentity invoices have invoices with expenses distributed over different ledger entities. On a single invoice, only ledger entities that have the same primary book currency can be combined. To comply with this limitation after booking currency conversion, all ledger entities on invoice lines must be converted at the same time. This implies that the entire conversion of these ledger entities in SmartStream Ledger and for the SmartStream subledgers has to happen at the same time.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Controlling ledger entity ID that needs to replaced by the new corresponding euro ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to replaced by the new corresponding euro ledger entity ID.

Column ID	Description
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.
udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or the user-defined accounting distributions, or both, the new surrogate needs to be retrieved and updated.
Prim_amt	Primary booking amount. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option). Take the transaction amount (trans_amt) and, using the retrieved x-rate, convert to the euro equivalent.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Prim_curr_code	Primary book currency code that is the former national currency code. Needs to be replaced by the euro currency code.
Trans_to_prim_exchange_rate	Exchange rate between the transaction amount and the primary booking amount. Because the primary booking currency has changed to euro, the exchange rate has to be adapted accordingly. Is the exchange rate used to calculate the new primary amount (prim_amt).
trans_to_euro_exchange_rate	Always 0
euro_to_prim_exchange_rate	Always 0
secdy_curr_code	If the new entity has a secondary booking currency, this needs to be updated to the secondary booking currency of the new ledger entity. If the new entity does not have a secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency ▪ When there is a secdy_amt, convert this amount to the secondary booking currency of the new entity ▪ When there is no secdy_amt, convert from the updated prim_amt. If the new entity does not have a secondary booking currency, initialize to zero.

Column ID	Description
Prim_to_secdy_ exchange_rate	Exchange rate for conversion from primary booking amount to secondary booking amount. The primary book has been recalculated. Thus this exchange rate needs to be recalculated. **Note:** Determine the exchange rate from the primary booking amount and the secondary booking amount. Do not retrieve an exchange rate and recalculate the secondary booking amount.
prim_to_euro_ exchange_rate	Always 0
euro_to_secdy_ exchange_rate	Always 0

Additional Processing

Occasionally, rounding differences can cause the DB line totals not to equal the CR line totals. In this instance, the ledger posting adds a currency balancing entry.

Payables Draft Journal Header Table

This table stores all journal control information that is common to all draft journal lines. These journals are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Defaults to the journal lines. See also About Rates.

Payables Draft Journal Lines Table

This table stores all accounting distributions for the draft. These journal lines are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Controlling ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID.
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.
udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or the user-defined accounting distributions, or both, the new surrogate needs to be retrieved and updated.
Prim_amt	Primary booking amount. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option). Take the transaction amount (trans_amt) and, using the retrieved x-rate, convert to euro equivalent.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Prim_curr_code	Primary book currency code that is the former national currency code. Needs to be replaced by the euro currency code.
Trans_to_prim_ exchange_rate	Exchange rate between the transaction amount and the primary booking amount. Because the primary booking currency has changed to euro, the exchange rate has to be adapted accordingly. Is the exchange rate used to calculate the new primary amount (prim_amt).
trans_to_euro_ exchange_rate	Always 0
euro_to_prim_ exchange_rate	Always 0
secdy_curr_code	If the new entity has a secondary booking currency, this needs to be updated to the secondary booking currency of the new ledger entity. If the new entity does not have a secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency ▪ When there is a secdy_amt, convert this amount to the secondary booking currency of the new entity ▪ When there is no secdy_amt, convert from the updated prim_amt. If the new entity does not have a secondary booking currency, initialize to zero.

Column ID	Description
Prim_to_secdy_ exchange_rate	Exchange rate for conversion from primary booking amount to secondary booking amount. The primary book has been recalculated. Thus this exchange rate needs to be recalculated. **Note:** Determine the exchange rate from the primary booking amount and the secondary booking amount. Do not retrieve an exchange rate and recalculate the secondary booking amount.
prim_to_euro_ exchange_rate	Always 0
euro_to_secdy_ exchange_rate	Always 0

Payment Journal Header Table

This table stores journal control information common to all payment journal lines. These journals are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to replaced by the new euro ledger entity ID.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Defaults to the journal lines. See also About Rates.

Payment Journal Lines Table

This table stores all accounting distributions for payment journals. These journal lines are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Controlling ledger entity ID that needs to replaced by the new corresponding euro ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to replaced by the new corresponding euro ledger entity ID.
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.
udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or the user-defined accounting distributions, or both, the new surrogate needs to be retrieved and updated.
Prim_amt	Primary booking amount. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option). Take the transaction amount (trans_amt) and, using the retrieved x-rate, convert to the euro equivalent.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Prim_curr_code	Primary book currency code that is the former national currency code. Needs to be replaced by the euro currency code.
Trans_to_prim_ exchange_rate	Exchange rate between the transaction amount and the primary booking amount. Because the primary booking currency has changed to euro, the exchange rate has to be adapted accordingly. Is the exchange rate used to calculate the new primary amount (prim_amt).
trans_to_euro_ exchange_rate	Always 0
euro_to_prim_ exchange_rate	Always 0
secdy_curr_code	If the new entity has a secondary booking currency, this needs to be updated to the secondary booking currency of the new ledger entity. If the new entity does not have a secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency ▪ When there is a secdy_amt, convert this amount to the secondary booking currency of the new entity ▪ When no secdy_amt, convert from the updated prim_amt. If the new entity does not have a secondary booking currency, initialize to zero.

Column ID	Description
Prim_to_secdy_ exchange_rate	Exchange rate for conversion from primary booking amount to secondary booking amount. The primary book has been recalculated. Thus this exchange rate needs to be recalculated. **Note:** Determine the exchange rate from the primary booking amount and the secondary booking amount. Do not retrieve an exchange rate and recalculate the secondary booking amount.
prim_to_euro_ exchange_rate	Always 0
euro_to_secdy_ exchange_rate	Always 0

Receipt Accrual Journal Header Table

This table stores all journal control information that is common to all receipt accrual journal lines. These are the journals that are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to replaced by the new euro ledger entity ID.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Defaults to the journal lines. See also About Rates.

Receipt Accrual Journal Lines Table

This table stores all accounting distributions for the receipts not yet invoiced. These journal lines are posted to Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Controlling ledger entity ID that needs to replaced by the new corresponding euro ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to replaced by the new corresponding euro ledger entity ID.
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.
udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or the accounting distributions, or both, the new surrogate needs to be retrieved and updated.
Prim_amt	Primary booking amount. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option). Take the transaction amount (trans_amt) and, using the retrieved x-rate, convert to the euro equivalent.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Prim_curr_code	Primary book currency code that is the former national currency code. Needs to be replaced by the euro currency code.
Trans_to_prim_ exchange_rate	Exchange rate between the transaction amount and the primary booking amount. Because the primary booking currency has changed to euro, the exchange rate has to be adapted accordingly. Is the exchange rate used to calculate the new primary amount (prim_amt).
trans_to_euro_ exchange_rate	Always 0
euro_to_prim_ exchange_rate	Always 0
secdy_curr_code	If the new entity has a secondary booking currency, this needs to be updated to the secondary booking currency of the new ledger entity. If there is no secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency: ▪ When there is a secdy_amt, convert this amount to the secondary booking currency of the new entity ▪ When no secdy_amt, convert from the updated prim_amt. If the new entity does not have a secondary booking currency, initialize to zero.

Column ID	Description
Prim_to_secdy_ exchange_rate	Exchange rate for conversion from primary booking amount to secondary booking amount. The primary book has been recalculated. Thus this exchange rate needs to be recalculated. **Note:** Determine the exchange rate from the primary booking amount and the secondary booking amount. Do not retrieve an exchange rate and recalculate the secondary booking amount.
prim_to_euro_ exchange_rate	Always 0
euro_to_secdy_ exchange_rate	Always 0

Project Journals

Journals to be Selected for Conversion

This conversion step is based on the project entities identified in the Master Audit table.

Table Summary

The journal information is stored in the following tables in the DBSpmt and DBSprqt databases:

Table ID	Usage	Conversion Y/N
pmt_rqst_proj_jrnl_ctrl	Payment request projects journal header information	Y
pmt_rqst_proj_jrnl_line	Payment request projects journal line information	Y

The tables requiring conversion are described in the following sections.

Payment Request Projects Journal Header Table

This table stores project-related information common to all invoice project journal lines. These are the journals that are already posted to Projects.

Rows to be Selected for Conversion

All rows associated with a selected project entity need to be converted.

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding value from the project relation table

Payment Request Projects Journal Lines Table

This table stores all project-related information for the invoice. These journal lines are posted to Projects.

Rows to be Selected for Conversion

All rows associated with a selected project entity need to be converted.

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding value from the project relation table.
ledger_currency_code	Replace with the euro currency code.
trans_to_ldr_exchange_rate	Recalculate from money1_trans_amt and money1_ldr_amt.
project_currency_code	If this is a participating currency, replace with the euro currency code.
Trans_to_proj_exchange_rate	If the project_currency_code was changed, recalculate from money1_trans_amt and money1_project_amt.
Money1_ldr_amt	Convert from the old ledger currency code to euro.
Money1_project_amt	If the project_currency_code was converted, convert this amount to euro.
Money2_ldr_amt	Convert from the old ledger currency code to euro.
Money2_project_amt	If the project_currency_code was converted, convert this amount to euro.
Trans_to_euro_ldr_xchg_rate	Always 0
Euro_to_ldr_exchange_rate	Always 0
Trans_to_euro_proj_xchg_rate	If project_currency_code was changed to euro, set to 0, else do not change.
Euro_to_proj_exchange_rate	If project_currency_code was changed to euro, set to 0, else do not change.

Transition Period Functionality

Visualisation of Documents in Transaction, Booking and Reporting Currency

Visualisation of documents uses the scheduled process and database tables described in the following paragraphs.

Initialization of Payables Visualisation (program feuc0942)

In this scheduled process, the amounts in visualisation currencies are initialized or reinitialized for all transactions. The amounts in visualisation currencies are calculated and stored for the payment requests, payments, and drafts.

Payables Reporting Currency Work Table (euro_prqt_inv_report_work)

This table contains the converted amounts in the reporting currency of freight amount, miscellaneous charges amount, discount amount, and gross amount of the payment request table.

Payables Reporting Currency View (euro_prqt_inv_report_curr_view)

This view table contains the converted amounts in the reporting currency of payment amount of the payment request table. The view is used for File Open of the Visualisation of Invoice window.

Payables Reporting Currency Work Table (euro_prqt_pmt_report_work)

This table contains the converted amounts in the reporting currency of payment amount of the payment table.

Payables Reporting Currency View (euro_pymt_pmt_report_curr_view)

This view table contains the converted amounts in the reporting currency of payment amount of the payment table. The view is used for File Open of the Visualisation of Payment Details window.

Payables Reporting Currency Work Table (euro_prqt_draft_report_work)

This table contains the converted amounts in the reporting currency of draft amount of the payables draft table.

Payables Reporting Currency View (euro_prqt_draft_rept_curr_view)

This view table contains the converted amounts in the reporting currency of payment amount of the payment request table. The view is used for File Open of the Visualisation of Payables Draft window.

Maintaining Visualisation Information through Daily Operations

When daily tasks are performed in Payables, the visualisation information is maintained through triggers. These capture the creation (online or through loads) of new documents, payments, and drafts as well as any maintenance activity that affects the information stored. To update the visualisation tables, you need to make sure that ARPC is set up and running on your server.

Permanent Revaluation

Permanent Revaluation uses the scheduled process described in the following paragraphs.

Permanent Revaluation (program feuc0941)

In this scheduled process, the selected invoices, drafts, and payments are revalued. The difference is posted as a permanent gain or loss if the invoices are posted to ledger. If not, the amounts are recalculated.

Vendor

This section includes the Euro currency processing information specific to Vendor.

Scheduled Processes

Vendor booking currency conversion uses the scheduled process described in the following paragraph.

Vendor Booking Currency Conversion (program feuc0901)

In this scheduled process, the policy records for former national currency entities at the Vendor level, that is, vendor accounting distributions, are changed to reflect the ledger booking currency conversion to euro.

Database Tables

Vendor booking currency conversion uses the database table described in the following paragraph.

Vendor Master Audit Table (euro_vend_master_audit)

This table contains information about a set ID and its corresponding ledger entity whose related policy records should be converted.

Affected Table Group

For Vendor booking currency conversion, the following table group is affected:

- Vendor Accounting Distributions

Vendor Accounting Distributions

Vendors to be Selected for Conversion

The Vendor booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the ledger entity that is being converted. Repeat the entire conversion process for vendors for each ledger entity.

The vendor accounting distributions that need to be converted when a ledger entity is converted can be determined from the ledger entity ID for the accounting distribution.

Table Summary

Table ID	Usage	Conversion Y/N
Vendor_loc_acctg_distn	Vendor location default accounting distributions	Y

The table requiring conversion is described in the following section.

Vendor Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types used by SmartStream Payables and SmartStream Purchasing:

- Accounts Payable Liability
- Notes Payable Liability
- Expenditure
- Freight Expense
- Miscellaneous Charge Expense

Rows to be Selected for Conversion

The rows for all vendor ccounting distributions associated with the converted ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Transition Period Functionality

Vendor Transaction Currency Conversion

Vendor Transaction Currency Conversion uses the scheduled process described in the following paragraph.

Vendor Transaction Currency Conversion (program feuc0971)

In this scheduled process, default transaction currency for the vendor, that is, vendor location records, is changed to reflect the transaction currency conversion to euro.

Procurement Common

This section includes the Euro currency processing information specific to Procurement Common.

Scheduled Processes

Procurement Common booking currency conversion uses the scheduled process described in the following paragraph.

Procurement Common Booking Currency Conversion (program feuc0901)

In this scheduled process, the policy and transaction records for the former national currency ledger entity are replaced by the records of the new euro currency ledger entity. The chart of accounts correspondence between the former national currency and the new euro currency ledger entities is obtained from DBSglep.ldr_entity_acct_reln. The before and after images of the records changed during the conversion process are maintained in audit tables.

Database Tables

Procurement Common booking currency conversion uses the database tables described in the following paragraphs.

Supplies Common Master Audit Table (euro_supc_master_audit)

This table contains the conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.

Site Audit Table (euro_site_audit)

This table contains the conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.

Affected Table Groups

The following table groups are affected:

- Site
- Item

Site

Booking currency conversion affects the following areas in Site policy:

- Site
- Site Accounting Distribution
- Reason Code Accounting Distribution

- Stockroom Accounting Distribution
- Cost Site Entity

Sites to be Selected for Conversion

The Procurement Common booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. The Procurement Common rows that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Procurement Common it is necessary to convert all rows associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Site	Site	Y
Site_acctg_distn	Site accounting distribution	Y
Reason_codes_acctg_distn	Reason code accounting distribution	Y
Stockroom_acctg_distn	Stockroom accounting distribution	Y
Cost_site_entity	Cost site entity	Y

The tables requiring conversion are described in the following sections.

Site Table

This table stores the ledger entity ID assigned to this site that is used in SmartStream Supplies Management. The default number of decimals to display for ledger is also stored at this policy level.

Rows to be Selected for Conversion

The Procurement Common rows that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Procurement Common it is necessary to convert all rows associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
Nbr_of_decimals	The number of decimals. Needs to be replaced with the number of decimals defined for the euro currency.
Curr_code	The site currency code that needs to be replaced by the new euro currency code
Cost_nbr_of_ decimals	If the cost_nbr_of_decimals is less than the number of decimals defined for the euro currency then cost_nbr_of_decimals needs to be changed to the number of decimals defined for the euro currency

Site Accounting Distribution Table

This table stores the default accounting distributions for a number of accounting distribution types used by the various SmartStream products. More than 20 accounting distribution types can be defined for a site, for example, Purchasing and Supplies Management use the following distribution types:

- Expenditure
- Inventory Adjustment
- Return To Vendor

Rows to be Selected for Conversion

The processing is done at site level.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Reason Code Accounting Distribution Table

This table stores the default accounting distributions for the following accounting distribution types used by Supplies Management and Purchasing:

- Expenditure
- Inventory Adjustment
- Scrap Expense

Rows to be Selected for Conversion

The processing is done on a site level.

Convert all reason codes associated with the selected sites.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Stockroom Accounting Distribution Table

This table stores the default accounting distributions for the following accounting distribution types used by Supplies Management and Purchasing:

- Accounts Payable Clearance
- Inventory Adjustment
- Kits in Progress
- Scrap Expense
- Return To Vendor
- Transfer Orders

Rows to be Selected for Conversion

The processing is done on a site level

Convert all stockrooms associated with the selected sites.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Cost Site Entity Table

This table stores the ledger entity IDs associated with the site used in SmartStream Supplies.

Rows to be Selected for Conversion

The Procurement Common rows to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Procurement Common it is necessary to convert all rows associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** If Supplies is not installed, this table may not contain any rows.

Item

Booking currency conversion affects the following area in Item policy:

- Item Accounting Distribution

Items to be Selected for Conversion

The Procurement Common booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. The Item rows in Procurement Common that need to be converted when a ledger entity is converted are determined by the associated ledger entity. For Items within Procurement

Common it is necessary to convert all rows associated with the ledger entities being converted within a conversion set (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Item_acctg_distn	Item accounting distribution	Y

The table requiring conversion is described in the following section.

Item Accounting Distribution Table

This table stores the default accounting distributions for a number of accounting distribution types used by Purchasing and Supplies Management. More than 20 accounting distribution types can be defined for an item, for example, Purchasing and Supplies Management use the following distribution types:

- Expenditure
- Inventory Adjustment
- Kits In Progress
- Transfer Order

Rows to be Selected for Conversion

The Item rows in Procurement Common that need to be converted when a ledger entity is converted are determined by the associated ledger entity. For Items within Procurement Common it is necessary to convert all rows associated with the ledger entities being converted within a conversion set (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Purchasing

This section includes the Euro currency processing information specific to Purchasing.

Scheduled Processes

Purchasing booking currency conversion uses the scheduled process described in the following paragraph.

Purchasing Booking Currency Conversion (program feuc0901)

In this scheduled process, the Purchasing policy and transaction records for former national currency entities are changed to reflect the ledger booking currency conversion to euro.

Database Tables

Purchasing booking currency conversion uses the database table described in the following paragraph.

Purchasing Master Audit Table (euro_puen_master_audit)

This table contains the conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.

Affected Table Groups

The following table groups are affected:

- Purchase Commodity
- Requester
- Requisition Entity
- Purchase Entity
- Requisitions
- Purchase Orders
- Requisition Journals
- Purchase Order Journals
- Project Journals

Purchase Commodity

Booking currency conversion affects the following area in Purchase Commodity policy:

- Purchase Commodity Accounting Distributions

Purchase Commodities to be Selected for Conversion

The Purchase Commodities which need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Purchase_commodity_acctg_distn	Purchase commodity accounting distributions	Y

The table requiring conversion is described in the following section.

Purchase Commodity Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types used within Purchasing:

- Expenditure
- Purchase Price Variance

Rows to be Selected for Conversion

The Purchase Commodities that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace this existing accounting distribution.

Requester

Booking currency conversion affects the following area in Requester policy:

- Requester Accounting Distributions

Requesters to be Selected for Conversion

The Purchasing booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. Thus all processing is driven by the site that is being converted. Repeat the entire conversion process for Purchasing for each site.

The requesters that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Requester_default_acctg_key	Requester accounting distributions	Y

The table requiring conversion is described in the following section.

Requester Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution type used within Purchasing:

Expenditure

Rows to be Selected for Conversion

The requesters that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Requisition Entity

Booking currency conversion affects the following areas in Requisition Entity policy:

- Requisition Entity Accounting Distributions

Requisition Entities to be Selected for Conversion

The requisition entities that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Req_entity	Requisition entity	N (manually updated)
Req_entity_default_acctg_key	Requisition entity accounting distributions	Y

The tables requiring conversion are described in the following sections.

Requisition Entity Table

This table is used to specify the accounting distribution requirements for requisitions processed using this requisition entity. The requester processing a requisition must provide values (accounting distributions) for the accounting key elements you specify in this table. SmartStream Ledger validates these accounting distributions on a requisition if you select the option to validate the accounting distribution in Ledger. After the Ledger booking currency conversion has taken place, it may be necessary to review the Ledger validation policies associated with a requisition entity.

Because the Requisition Entity table can be updated using the SmartStream Requisition Entity activity, no automated process to update the table is provided.

Rows to be Selected for Conversion

The conversion should be performed manually.

Columns to be Converted

The conversion should be performed manually.

Column ID	Description
Validate_acctg_distn_key_ind	Manually updated
Require_acctg_entity_ind	Manually updated
Require_acctg_element_ind (1 thru 12)	Manually updated

Requisition Entity Accounting Distributions Table

This table stores the default accounting distributions for the Expenditure accounting distribution type used within Purchasing:

Rows to be Selected for Conversion

The requisition entities that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Purchase Entity

Booking currency conversion affects the following area in Purchase Entity policy:

- Purchase Entity

Purchase Entities to be Selected for Conversion Table Summary

Because the policies can be updated using the SmartStream Purchase Entity activity, no automated process to update them is provided.

Table ID	Usage	Conversion Y/N
Purchase_entity	Purchase entity	N (manually updated)

The table requiring conversion is described in the following section.

Purchase Entity Table

This table is used to specify the accounting distribution requirements for purchase orders processed using this purchase entity. The buyer processing a purchase order must provide values (accounting distributions) for the accounting key elements you

specify in this table. SmartStream Ledger validates these accounting distributions on a purchase order if you select the option to validate the accounting distribution in Ledger. After the Ledger booking currency conversion has taken place, it may be necessary to review the Ledger validation policies associated with a purchase entity.

The purchase entity also maintains a default payable entity that is associated with purchase orders. Your company may change the payable entity as a result of conversion to the euro.

Rows to be Selected for Conversion

The conversion should be performed manually.

Columns to be Converted

The conversion should be performed manually.

Column ID	Description
Validate_acctg_distn_key_ind	Manually updated
Require_acctg_entity_ind	Manually updated
Require_acctg_element_ind (1 thru 12)	Manually updated
payable_entity_id	Manually updated

Requisitions

Requisitions to be Selected for Conversion

The requisitions to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Req	Requisitions	Y
Req_line	Requisition lines	Y
Sched_rcpt	Scheduled receipts	Y

The tables requiring conversion are described in the following sections.

Requisitions Table

This table stores information about the requisition.

Rows to be Selected for Conversion

The requisitions to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding new value from the **projects copy relation** (see Projects).
Curr_code	Change the currency code of the requisition to the new site currency code.

Requisition Line Table

This table stores unit prices in the currency of the site. All requisitions are valued in the requisition site currency.

Rows to be Selected for Conversion

The requisitions to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Unit_price	Convert the unit price amount from the old to the new site currency.

Scheduled Receipt Table

This table stores information about scheduled receipts.

Rows to be Selected for Conversion

The requisitions to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Curr_code	For transfers and returns, needs to be changed to the new site currency. For purchase orders, does not need to be changed.
Disc_price	Convert amount from old to new site currency
Ledger Entity and UDAK	These fields are not maintained; therefore, there is no reason to convert them.
project_entity_id	Needs to be replaced with the corresponding new value from the **projects copy relation** (see Projects).

Purchase Orders

Purchase Orders to be Selected for Conversion

The purchase orders to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Purchase_order	Purchase order	Y
Purchase_order_line_schedule	Purchase order line schedule	Y
Purchase_order_annals	Purchase order annals	Y

The tables requiring conversion are described in the following sections.

Purchase Order Table

This table stores information about the purchase order.

Rows to be Selected for Conversion

The purchase orders that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding new value from the **projects copy relation** (see Projects).

Purchase Order Line Schedule Table

This table stores the purchase order price converted into the site currency.

Rows to be Selected for Conversion

The purchase orders that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
Purch_ord_std_cost	Convert amount from old to new site currency.

Purchase Order Annals Table

This table stores information about the purchase order.

Rows to be Selected for Conversion

The purchase orders that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding new value from the **projects copy relation** (see Projects).

Requisition Journals

Requisitions to be Selected for Conversion

The requisitions that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Req_line_jrnl_ctrl	Requisition line journal control	N
Req_line_jrnl_line	Requisition line journal lines	Y

The table requiring conversion is described in the following section.

Requisition Line Journal Lines Table

This table is used by SmartStream Purchasing to hold the accounting distributions associated with requisitions. Currently the table is not being used to generate ledger postings to SmartStream Ledger. For this reason, Purchasing is not maintaining many of the table columns. Depending on the policy options for the requisition entity, accounting distributions for the requisition lines might not be complete.

Rows to be Selected for Conversion

The requisitions that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

These are the columns that Purchasing is currently updating:

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Purchase Order Journals

Purchase Orders to be Selected for Conversion

The purchase orders that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Table Summary

Table ID	Usage	Conversion Y/N
Purchase_order_jrnl_ctrl	Purchase order journal control	N
Purchase_order_jrnl_line	Purchase order journal lines	Y

The table requiring conversion is described in the following section.

Purchase Order Journal Lines Table

This table is used by SmartStream Purchasing to hold the accounting distributions associated with purchase orders. Currently the table is not being used to generate ledger postings to SmartStream Ledger. For this reason, Purchasing is not maintaining many of the table columns. Depending on the policy options for the purchasing entity, the accounting distributions for the purchase order lines might not be complete.

Rows to be Selected for Conversion

The purchase orders that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity (as defined in the Master Audit table).

Columns to be Converted

These are the columns that Purchasing is currently updating:

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Project Journals

Journals to be Selected for Conversion

This conversion step is based on the project entities identified in the Master Audit table.

Table Summary

The journal information is stored in the following database tables in the DBSpuen database:

Table ID	Usage	Conversion Y/N
Po_proj_jrnl_ctrl	Purchase order projects journal header information	Y
Po_proj_jrnl_line	Purchase order projects journal line information	Y

The tables requiring conversion are described in the following sections.

Purchase Order Projects Journal Header Table

This table stores all project-related information that is common to all purchase order project journal lines. These are journals that are already posted to Projects.

Rows to be Selected for Conversion

All rows associated with a selected project entity need to be converted.

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding value from the project relation table.

Purchase Order Projects Journal Lines Table

This table stores all project-related information for the purchase order. These journal lines are posted to Projects.

Rows to be Selected for Conversion

All rows associated with a selected project entity need to be converted.

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding value from the project relation table.
ledger_currency_ code	Replace with the euro currency code.
trans_to_ldr_ exchange_rate	Recalculate from money1_trans_amt and money1_ldr_amt.
project_currency_ code	If this is a participating currency, replace with the euro currency code.
Trans_to_proj_ exchange_rate	If the project_currency_code was changed, recalculate from money1_trans_amt and money1_project_amt.
Money1_ldr_amt	Convert from the old ledger currency code to euro.
Money1_project_ amt	If the project_currency_code was converted, convert this amount to euro.
Money2_ldr_amt	Convert from the old ledger currency code to euro.
Money2_project_ amt	If the project_currency_code was converted, convert this amount to euro.
Trans_to_euro_ldr _xchg_rate	Always 0
Euro_to_ldr_ exchange_rate	Always 0
Trans_to_euro_ proj_xchg_rate	If project_currency_code was changed to euro, set to 0, else do not change.
Euro_to_proj_ exchange_rate	If project_currency_code was changed to euro, set to 0, else do not change.

Transition Period Functionality

Blanket Order Currency Conversion

Blanket Order Currency Conversion uses the scheduled process and database tables described in the following paragraphs.

Blanket Order Currency Conversion (program feuc0951)

In this scheduled process, based on the selection criteria, new blanket orders are created with all monetary amounts converted to euro, a link is created between the old and the new blanket orders, and the status on the old blanket order is changed to Closed.

Blanket Order Conversion Request Table (euro_puen_blkt_ordr_conv_rqst)

This table contains the Blanket Order Conversion Request header information.

Blanket Order Conversion Selection Criteria Table (euro_puen_blkt_sql_extract)

This table contains the SQL criteria to build the selection criteria.

Blanket Orders Conversion Table Summary

The Blanket Order table group is affected.

Table ID	Usage	Conversion Y/N
blanket_order	blanket order	Y
blanket_order_std_phrase	blanket order standard phrase	Y
blanket_order_comnt	blanket order comment	Y
blanket_order_line	blanket order line	Y
blanket_order_line_comnt	blanket order line comment	Y
blanket_order_line_std_phrase	blanket order line standard phrase	Y

The tables requiring conversion are described in the following sections.

Blanket Order Table

Details about the Blanket Order table conversion follow.

Rows to be Selected for Conversion

- Only blanket orders with the blanket_order_status_code of 600 should be selected.
- Review the currency options for the vendor associated with the blanket order being converted. On the vendor_loc table in the DBSvmst database, if the curr_opt is S and the trans_curr_code is not euro, then the blanket order should not be converted.
- Review the currency options for the payable entity associated with the blanket order being converted. On the payable_entity table in the DBSprqt database, if the curr_opt is S and the trans_curr_code is not euro, then the blanket order should not be converted.

Processing Blanket Orders

For a blanket order that meets the selection criteria, a new blanket order is created. Use next available number processing to generate the blanket_order_id. The avail_nbr table in the DBScommon database is used to calculate the next available number. The column ID associated with blanket orders is 15054. The security entity value is the site ID. First search to find an entry with the default flag set to J. If one is not found, use the entry with the default flag set to B.

Columns to be Used on the New Blanket Order

When the conversion adds a row for the new blanket order, all the columns used should be the same as those on the old blanket order with the following exceptions:

Column ID	Description
blanket_order_id	Use the new blanket_order_id as calculated with the next available number process as previously described.
blanket_order_ status_code	The status code should be 600.
blanket_order_ max_amt	Amount that needs to converted to euro currency.
amt_released_to_ date	Amount that needs to converted to euro currency.
curr_code	Transaction currency code that needs to be replaced by the euro currency code.
date_updated	Today's date.
freight_amt	Amount that needs to converted to euro currency.
misc_chrg_amt	Amount that needs to converted to euro currency.
rate_entity_id curr_rate_type curr_rate_date rate_of_exchange	Not used by Purchasing

Columns to be Updated on the Original Blanket Order

Column ID	Description
blanket_order_ status_code	The status code should be changed to 2100.
date_updated	Today's date.

Blanket Order Standard Phrase Table

Details about the conversion of the Blanket Order Standard Phrase table follow.

Processing Blanket Order Standard Phrases

- For each blanket order that has been selected for conversion, copy any standard phrases from the original blanket order to the new blanket order.
- Note that a blanket order can have multiple standard phrases.

- Read through the blanket_order_std_phrase table and, for each row in the table for the original blanket order, add a new row in the table for the new blanket order. Replace only the blanket_order_id associated with the new blanket order.

Blanket Order Comments Table

Details about the conversion of the Balnket Order Comments table follow.

Processing Blanket Order Comments

- For each blanket order that has been selected for conversion, copy any comments from the original blanket order to the new blanket order.
- Note that a blanket order can have multiple comments.
- Read through the blanket_order_comnt table and, for each row in the table for the original blanket order, add a new row in the table for the new blanket order. Replace only the blanket_order_id associated with the new blanket order.
- For the original blanket order, add a new comment (increase the comnt_seq_nbr) with the text “This Blanket Order has been converted, please see the new blanket order nnnnnn” where nnnnnn is the blanket_order_id associated with the new blanket order.
- For the new blanket order add a new comment (increase the comnt_seq_nbr) with the text “This Blanket Order has been converted from the original blanket order nnnnnn” where nnnnnn is the blanket_order_id associated with the original blanket order.

Blanket Order Line

Details about the conversion of the Blanket Order Line table follow.

Processing Blanket Order Lines

- For each blanket order that has been selected for conversion, copy any blanket order lines from the original blanket order to the new blanket order.
- Note that a blanket order can have multiple blanket order lines. It is also possible for a blanket order to have no blanket order lines (as for amount type blanket orders).

Columns to be Used on the New Blanket Order Line

When the conversion adds a row for the new blanket order, all the columns used should be the same as those on the old blanket order with the following exceptions:

Column ID	Description
blanket_order_id	Use the new blanket_order_id as calculated with the next available number process as previously described.
unit_price	Price that needs to converted to euro currency.
disc_price	Price that needs to converted to euro currency.
blanket_order_line _status_code	The status code should be 600.

Columns to be Updated on the Original Blanket Order Line

Column ID	Description
blanket_order_line _status_code	The status code should be changed to 2100.

Blanket Order Line Standard Phrase Table

Details about the conversion of the Blanket Order Line Standard Phrases table follow.

Processing Blanket Order Line Standard Phrases

- For each blanket order line that has been selected for conversion, copy any standard phrases from the original blanket order line to the new blanket order line.
- Note that a blanket order line can have multiple standard phrases.
- Read through the blanket_order_line_std_phrase table and, for each row in the table for the original blanket order line, add a new row in the table for the new blanket order line. Replace only the blanket_order_id associated with the new blanket order line.

Blanket Order Line Comments Table

Details about the conversion of the Blanket Order Line Comments table follow.

Processing Blanket Order Line Comments

- For each blanket order line that has been selected for conversion, copy any comments from the original blanket order line to the new blanket order line.
- Note that a blanket order line can have multiple comments.
- Read through the blanket_order_line_comnt table and, for each row in the table for the original blanket order line, add a new row in the table for the new blanket order line. Replace only the blanket_order_id associated with the new blanket order line.

Bank

This section includes the Euro currency processing information specific to Bank.

Scheduled Processes

Bank booking currency conversion uses the scheduled processes described in the following paragraphs.

Bank Booking Currency Conversion (program feuc0901)

In this scheduled process, the policy records of former national currency entities for Bank (that is, bank account accounting distributions, payment method accounting distributions, remittance clearance, deposit clearance, payments clearance, and bank journals) are changed to reflect the ledger booking currency conversion to euro.

Payment Method Substitution (program fbkc2000)

In this scheduled process, old payment methods on the invoices that are incompatible are replaced with new payment methods that are compatible.

See also Payment Methods.

Database Tables

Bank booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Bank Master Audit	euro_bank_master_audit	A set ID and its corresponding ledger entity whose related policy records should be converted.
Bank Remit Clearance Audit	euro_bank_remit_audit	The remittance clearance image records whose Bank policy records should be converted.
Bank Deposit Clearance Audit	euro_bank_deposit_audit	The deposit clearance image records whose Bank policy records should be converted.
Bank Payments Clearance Audit	euro_bank_pmt_audit	The payments clearance image records whose Bank policy records should be converted.
Bank Journal Control Audit	euro_bank_jeuc_audit	The journal control image records whose Bank policy records should be converted.
Bank Journal Line Audit	euro_bank_jeul_audit	The journal line image records whose Bank policy records should be converted.
Payment Method Substitution Reference	bank_pmt_meth_substn _ref	A reference ID and its corresponding old payment methods to be replaced with the new payment methods.
Payment Method Substitution Request	bank_pmt_meth_substn _rqst	A request ID and the corresponding options for performing the payment method substitution.

Table	Server Name	This table contains the…
Payment Method Exception	bank_pmt_meth_substn _excp	A request ID and the list of incompatible payment methods.

Affected Table Groups

The following table groups are affected:

- Bank Account
- Payment Method
- Remittance Clearances
- Deposit Clearances
- Payables Clearances
- Bank Journals

Bank Account

Booking currency conversion affects the following area in Bank policy:

- Bank Account Accounting Distributions

Bank Accounts to be Selected for Conversion

The bank account accounting distributions that need to be converted when a ledger entity is converted are determined by the bank accounts that are associated with the ledger entity to be converted (through the cash accounting distribution type).

Table Summary

Table ID	Usage	Conversion Y/N
Bank_acct_acctg_distn	Bank account default accounting distributions	Y

The table requiring conversion is described in the following section.

Bank Account Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types used by Bank:

- Cash
- Unreconciled Cash - Drafts
- Unreconciled Cash - Payments
- Unreconciled Cash - Remittances

- Accounts Receivable Clearance

Rows to be Selected for Conversion

The bank account accounting distributions to be converted when a ledger entity is converted are determined by the bank accounts that are associated with the ledger entity to be converted (through the cash accounting distribution type).

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution.

Payment Method

Booking currency conversion affects the following area in the Payment Method policy:

- Payment Method Accounting Distributions

Payment Methods to be Selected for Conversion

The payment method accounting distributions to be converted when a ledger entity is converted are determined by the bank account that is associated with the ledger entity to be converted.

Table Summary

Table ID	Usage	Conversion Y/N
Pmt_meth_acctg_distn	Payment method default accounting distributions	Y

The table requiring conversion is described in the following section.

Payment Method Accounting Distributions Table

This table stores the default accounting distributions for the following accounting distribution types used by Bank:

- Cash
- Unreconciled Cash - Payments

Rows to be Selected for Conversion

The payment method accounting distributions that need to be converted when a ledger entity is converted are determined by the bank account that is associated with the ledger entity to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.

Remittance Clearances

Remittance Clearances to be Selected for Conversion

The Remittance Clearances to be converted when a ledger entity is converted are determined by the remittance clearances that are associated with the bank accounts to be converted (via the cash accounting distribution type).

Table Summary

Table ID	Usage	Conversion Y/N
Remit_clearance	Bank remittance clearance details	Y

The table requiring conversion is described in the following section.

Bank Remittance Clearance Details Table

This table stores the information that occurred during remittance clearance.

Rows to be Selected for Conversion

The remittance clearances that need to be converted when a ledger entity is converted are determined by the remittance clearances that are associated with the bank accounts to be converted (through the cash accounting distribution type).

Columns to be Converted

Column ID	Description
Curr_gain_or_loss_amt	Gain or loss amount in primary booking currency. Needs to be converted to the euro equivalent value.
Bkg_amt	Clearance amount in primary booking currency. Needs to be converted to the euro equivalent value.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.

Deposit Clearances

Deposit Clearances to be Selected for Conversion

The deposit clearances to be converted when a ledger entity is converted are determined by the deposit clearances that are associated with bank accounts to be converted (through the cash accounting distribution type).

Table Summary

Table ID	Usage	Conversion Y/N
Deposit_clearance	Bank deposit clearance details	Y

The table requiring conversion is described in the following section.

Bank Deposit Clearance Details Table

This table stores the information that occurred during deposit clearance.

Rows to be Selected for Conversion

The deposit clearances that need to be converted when a ledger entity is converted are determined by the deposit clearances that are associated with bank accounts to be converted (through the cash accounting distribution type).

Columns to be Converted

Column ID	Description
Curr_gain_or_loss_amt	Gain or loss amount in primary booking currency. Needs to be converted to the euro equivalent value.
Bkg_amt	Clearance amount in primary booking currency. Needs to be converted to the euro equivalent value.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.

Payables Clearances

Payables Clearances to be Selected for Conversion

The payables clearances to be converted when a ledger entity is converted are determined by the payables clearances that are associated with bank accounts to be converted (through the cash accounting distribution type).

Table Summary

Table ID	Usage	Conversion Y/N
Pmt_clearance	Payables clearance details	Y

The table requiring conversion is described in the following section.

Payables Clearance Details Table

This table stores the information that occurred during payables clearance.

Rows to be Selected for Conversion

The payables clearances that need to be converted when a ledger entity is converted are determined by the payables clearances that are associated with bank accounts to be converted (through the cash accounting distribution type).

Columns to be Converted

Column ID	Description
Curr_gain_or_loss_amt	Gain or loss amount in primary booking currency. Needs to be converted to the euro equivalent value.
Bkg_amt	Clearance amount in primary booking currency. Needs to be converted to the euro equivalent value.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. See also About Rates.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Curr_rate_date	Currency rate date used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.
Rate_of_exchange	Exchange rate for conversion from transaction to booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and booking amount.

Bank Journals

Journals to be Selected for Conversion

The journals related to the ledger entity need to be converted.

Table Summary

Table ID	Usage	Conversion Y/N
Bank_jrnl_ctrl	Bank journal header	Y
Bank_jrnl_line	Bank journal lines	Y

The tables requiring conversion are described in the following sections.

Bank Journal Header Table

This table stores all journal control information for all clearances to Ledger postings. Currently, all journals associated with ledger entities need to be converted. The journal control information is common to all journal lines.

Rows to be Selected for Conversion

The journals associated with the ledger entity need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to replaced by the new euro ledger entity ID.
Rate_entity_id	Rate entity ID used for conversions from transaction to booking. Defaults to the journal lines. See also About Rates.

Bank Journal Lines Table

This table stores all accounting distributions for the clearance-related postings. These journal lines are posted to Ledger.

Rows to be Selected for Conversion

All journal lines for the converted journal controls need to be converted.

Columns to be Converted

Column ID	Description
Ldr_entity_id	Controlling ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID.
UDAK key 1 thru UDAK key 12	The old accounting distribution that needs to be replaced by the new accounting distribution.
udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or the UDAK elements, or both, the new surrogate needs to be retrieved and updated.
Prim_amt	Primary booking amount. Needs to be converted to the euro equivalent value with the euro currency rate conversion parameters (rate entity, rate type, and rate date option). Take the transaction amount (trans_amt) and, using the retrieved x-rate, convert to the euro equivalent.
Curr_rate_type	Currency rate type used for conversions from transaction to booking. Conversion depends on the rate info conversion option. See also About Rates.

Column ID	Description
Prim_curr_code	Primary book currency code that is the former national currency code. Needs to be replaced by the euro currency code.
Trans_to_prim_ exchange_rate	Exchange rate for conversion from transaction to primary booking. Should be the rate from transaction currency to euro. Is calculated from the transaction and primary booking amount.
Prim_to_secdy_ exchange_rate	Exchange rate for conversion from primary booking amount to secondary booking amount. The primary book has been recalculated. Thus this exchange rate needs to be recalculated. **Note:** Determine the exchange rate from the primary booking amount and the secondary booking amount. Do not retrieve an exchange rate and recalculate the secondary booking amount.
trans_to_euro_ exchange_rate	Always 0
euro_to_prim_ exchange_rate	Always 0
secdy_curr_code	If the new entity has a secondary booking currency, it needs to be updated to the secondary booking currency of the new ledger entity. If the new entity does not have a secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency ▪ When there is a secdy_amt, convert this amount to the secondary booking currency of the new entity ▪ When there is no secdy_amt, convert from the updated prim_amt. If the new entity does not have a secondary booking currency, initialize to zero.
prim_to_euro_ exchange_rate	Always 0
euro_to_secdy_ exchange_rate	Always 0

Transition Period Functionality

Clearance Rounding

Clearance rounding uses the scheduled process and database tables described in the following paragraphs.

Bank Clearance Rounding (program feuc0921)

In this scheduled process, clearance transactions are generated to account for the rounding differences that occur because of the inter-bank settlement in euro currency.

Clearance Rounding Request Table (euro_clr_rounding_rqst)

This table contains information about the Request ID and its corresponding tolerance.

Clearance Rounding Information Table (euro_clr_rounding_info)

This table contains the clearance rounding difference details for each of the Payments, Remittances and Deposits.

Asset Management

This section includes the Euro currency processing information specific to Asset Management.

Scheduled Processes

Asset Management booking currency conversion uses the scheduled processes described in the following paragraphs.

Euro Book Initialization (program feuc0910)

The asset book information for Book n+2 for all the assets and property accounts within the asset entity being processed are generated. This process involves converting the former national currency book amounts into euro amounts using the exchange rate information set in the SmartStream Currency Management module

Assets Booking Currency Conversion (program feuc0901)

In this scheduled process, the former national currency book (From Book Number) and the new euro book are switched. The asset journal lines are changed to reflect the ledger booking currency conversion to euro. The Before and After images of the records modified during the conversion process are maintained in an audit table.

Database Tables

Asset Management booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Assets Master Audit	euro_fast_master_audit	The conversion start and completion times for each of the ledger entities and asset entities for which booking currency conversion is done.
Asset Journal Control Audit	euro_ast_jrnl_ctrl_audit	Information about the asset journal control image records for each of the asset entities being converted.
Asset Journal Line Audit	euro_ast_jrnl_line_audit	Information about the asset journal line image records for each of the asset entities being converted.

Supplies Management

This section includes the Euro currency processing information specific to Supplies Management.

Scheduled Processes

Supplies Management booking currency conversion uses the scheduled process described in the following paragraph.

Supplies Booking Currency Conversion (program feuc0901)

In this scheduled process, the Supplies Management policy and transaction records for the former national currency entities are changed to reflect the ledger booking currency conversion to euro.

Database Tables

Supplies Management booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Supplies Master Audit	euro_supp_master_audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Cost Master Audit	euro_cost_mgmt_master _audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Item Master Audit	euro_item_master_audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Supplies Management Master Audit	euro_supp_mgmt_master _audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Receiving Master Audit	euro_receiving_master _audit	Conversion start and completion times for each of the ledger entities and subledger entities for which booking currency conversion is done.
Cost Project Journal Control Audit	euro_cost_proj_jrnl_ctrl _audit	Before and after image records for each of the cost project journal control records for which booking currency conversion is done.
Cost Project Journal Line Audit	euro_cost_proj_jrnl_line _audit	Before and after image records for each of the cost project journal line records for which booking currency conversion is done.
Cost Journal Line Audit	euro_cost_jrnl_line_audit	Before and after image records for each of the cost journal line records for which booking currency conversion is done.
Cost Journal Control Audit	euro_cost_jrnl_ctrl_audit	Before and after image records for each of the cost journal control records for which booking currency conversion is done.
Cost Inventory Account Audit	euro_cost_inv_acct_audit	Before and after image records for each of the cost inventory account records for which booking currency conversion is done.
Cost Inventory Adjust Audit	euro_cost_inv_adjust _audit	Before and after image records for each of the cost inventory adjustment records for which booking currency conversion is done.

Table	Server Name	This table contains the…
Cost Inventory Consignment Audit	euro_cost_inv_consgt _audit	Before and after image records for each of the cost inventory consignment records for which booking currency conversion is done.
Cost Inventory History Audit	euro_cost_inv_hist_audit	Before and after image records for each of the cost inventory history records for which booking currency conversion is done.
Cost Inventory Stockroom Audit	euro_cost_inv_stkr_audit	Before and after image records for each of the cost inventory stockroom records for which booking currency conversion is done.
Cost Inventory Transfer Order Audit	euro_cost_inv_xfer_ord _audit	Before and after image records for each of the cost inventory transfer order records for which booking currency conversion is done.
Cost Item Element	euro_cost_item_elem _audit	Before and after image records for each of the cost item element records for which booking currency conversion is done.
Cost Item Element Change History	euro_cost_item _elmchghst_audit	Before and after image records for each of the cost item element change history records for which booking currency conversion is done.
Cost Kits in Progress Audit	euro_cost_kip_audit	Before and after image records for each of the cost kit in progress records for which booking currency conversion is done.
Cost Kit Order Line Audit	euro_cost_kit_ord_line _audit	Before and after image records for each of the cost kit order line records for which booking currency conversion is done.
Cost Kit Order Line Detail Audit	euro_cost_kitord_linedtl _audit	Before and after image records for each of the cost kit order line detail records for which booking currency conversion is done.
Cost Supplies Inventory Balance Audit	euro_cost_supp_inv_bal _audit	Before and after image records for each of the cost supplies inventory balance records for which booking currency conversion is done.
Cost Type Item Audit	euro_cost_type_item _audit	Before and after image records for each of the cost type item records for which booking currency conversion is done.
Cost Transfer Average Cost Audit	euro_cost_xfer_avg_cost _audit	Before and after image records for each of the transfer average cost records for which booking currency conversion is done.
Item Plan Audit	euro_item_plan_audit	Before and after image records for the item plan table for which booking currency conversion is done.
Item Stockroom Audit	euro_item_stockroom _audit	Before and after image records for the item plan table for which booking currency conversion is done.
Return Header Audit	euro_return_header_audit	Before and after image records for each of the returns for which booking currency conversion is done.
Return Line Audit	euro_return_line_audit	Before and after image records for each of the return lines for which booking currency conversion is done.
Miscellaneous Issue Transaction History Audit	euro_misc_iss_trns_hst _audit	Before and after image records for each of the miscellaneous issue transaction history records for which booking currency conversion is done.
Miscellaneous Receipt Transaction History Audit	euro_misc_rcpt_trns_hst _audit	Before and after image records for each of the miscellaneous receipt transaction history records for which booking currency conversion is done.

Table	Server Name	This table contains the…
Receipt Rejection History Audit	euro_rcpt_rejn_hst_audit	Before and after image records for each of the receipt rejection history records for which booking currency conversion is done.

Affected Table Groups

For Supplies Management booking currency conversion, the following table groups are affected:

- Cost Management Common
- Item
- Supplies Management
- Receiving
- Cost Journals
- Project Journals

Cost Management Common

Rows to be Selected for Conversion

The Supplies Management booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. The Cost Management Common rows that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Cost Management Common, it is necessary to convert all rows associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Table Summary

The cost common information is stored in the following database tables in DBScost:

Table ID	Usage	Conversion Y/N
Cost_curr	Cost Currency	N *
Cost_curr_def	Cost Currency Definition	N *
Cost_curr_def_history	Cost Currency Definition History	N
Cost_curr_history	Cost Currency History	N
Cost_type	Cost Type	N *
Cost_inv_acct	Cost Inventory Account	Y
Cost_inv_adjust	Cost Inventory Adjustment	Y
Cost_inv_consgt	Cost Inventory Consignment	Y
Cost_inv_hist	Cost Inventory History	Y
Cost_inv_misc_acct	Cost Inventory Miscellaneous Account	Y

Table ID	Usage	Conversion Y/N
Cost_inv_stkr	Cost Inventory Stockroom	Y
Cost_inv_xfer_ord	Cost Inventory Transfer Order	Y
Cost_item_elem	Cost Item Element	Y
Cost_item_elem_change_history	Cost Item Element Change History	Y
Cost_kip	Cost Kits In Progress	Y
Cost_kit_ord_line	Cost Kit Order Line	Y
Cost_kit_ord_line_dtl	Cost Kit Order Line Detail	Y
Cost_posted_acct	Cost Posted Accounts	Y
Cost_site_plcy	Cost Site Policy	Y
Cost_supp_inv_balance	Cost Supplies Inventory Balance	Y
Cost_type_item	Cost Type Item	Y
Cost_xfer_avg_cost	Cost Transfer Average Cost	Y

Note: Tables with N * in the Conversion column should contain the new currency information for costing that is euro-compliant.

The tables requiring conversion are described in the following sections.

Cost Inventory Account Table

The following table lists the column to be converted in the Cost Inventory Account table.

Column ID	Description
Trans_amt	Amount that needs to be converted from old site currency to new site currency.

Cost Inventory Adjustment Table

The following table lists the column to be converted in the Cost Inventory Adjustment table.

Column ID	Description
Trans_amt	Amount that needs to be converted from old site currency to new site currency.

Cost Inventory Consignment Table

The following table lists the columns to be converted in the Cost Inventory Consignment table.

Column ID	Description
Trans_amt	Amount that needs to be converted from old site currency to new site currency.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relationship table.

Cost Inventory History Table

The following table lists the columns to be converted in the Cost Inventory History table.

Column ID	Description
Trans_amt	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relationship table.

Cost Inventory Miscellaneous Account Table

The following table lists the columns to be converted in the Cost Inventory Miscellaneous Account table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Cost Inventory Stockroom Table

The following table lists the columns to be converted in the Cost Inventory Stockroom table.

Column ID	Description
Purch_ord_std_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Trans_amt	Amount that needs to be converted from old site currency to new site currency.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relationship table.

Cost Inventory Transfer Order Table

The following table lists the columns to be converted in the Cost Inventory Transfer Order table.

Column ID	Description
Trans_amt	If other than zero, the amount that needs to be converted from old site currency to new site currency.
From_curr_code	The currency of the transferring site. Use the xfer_site_id to see if this currency needs to be changed.

Cost Item Element Table

The following table lists the columns to be converted in the Cost Item Element table.

Column ID	Description
Trans_curr_code	Code that needs to be changed to the new site currency code.
At_this_lvl	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Trans_curr_at_this_lvl	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Item Element Change History Table

The following table lists the columns to be converted in the Cost Item Element Change History table.

Column ID	Description
Old_at_this_lvl	If other than zero, the amount that needs to be converted from old site currency to new site currency.
New_at_this_lvl	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Kits in Progress Table

The following table lists the column to be converted in the Cost Kits in Progress table.

Column ID	Description
Extd_avg_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Kit Order Line Table

The following table lists the column to be converted in the Cost Kit Order Line table.

Column ID	Description
Rcpt_total_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Kit Order Line Detail Table

The following table lists the columns to be converted in the Cost Kit Order Line Detail table.

Column ID	Description
Scrap_total_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Iss_total_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Kip_total_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Posted Accounts Table

The following table lists the columns to be converted in the Cost Posted Accounts table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Cost Site Policy Table

The following table lists the columns to be converted in the Cost Site Policy table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
Prim_curr_code	Code that needs to be changed to the new site currency code.

Cost Supplies Inventory Balance Table

The following table lists the columns to be converted in the Cost Supplies Inventory Balance table.

Column ID	Description
Total_issue_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Avg_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Beg_avg_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Type Item Table

The following table lists the column to be converted in the Cost Type Item table.

Column ID	Description
Item_tot_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Cost Transfer Average Cost Table

The following table lists the column to be converted in the Cost Transfer Average Cost table.

Column ID	Description
Order_avg_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Item

Item Rows to be Selected for Conversion

The Supplies Management booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. The Item rows that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Items it is necessary to convert all rows

associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Table Summary

The item information is stored in the following database tables in DBSpplm:

Table ID	Usage	Conversion Y/N
Item_plan	Item Plan	Y
Item_stockroom	Item Stockroom	Y

The tables requiring conversion are described in the following sections.

Item Plan Table

The following table lists the column to be converted in the Item Plan table.

Column ID	Description
Unit_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Item Stockroom Table

The following table lists the column to be converted in the Item Stockroom table.

Column ID	Description
Unit_cost	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Supplies Management

Supplies Management Rows to be Selected for Conversion

The Supplies Management booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. The Supplies Management rows that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Supplies Management, it is necessary to convert all rows associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Table Summary

The supplies management information is stored in the following database tables in DBSiplm and DBSrcth:

Table ID	Usage	Conversion Y/N
Inventory_demand_dtl_udak	Inventory Demand Detail UDAK	Y
Misc_issue_trans_history	Miscellaneous Issues Transaction History	Y
Misc_receipt_trans_history	Miscellaneous Receipts Transaction History	Y
Receipt_rejection_trans_history	Receipt Rejections Transactions	Y
Receipt_trans_history	Receipt Transactions History	N (now obsolete)

The tables requiring conversion are described in the following sections.

Inventory Demand Detail UDAK Table

The following table lists the columns to be converted in the Inventory Demand Detail UDAK table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.

Column ID	Description
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relation table.

Miscellaneous Issues Transaction History Table

The following table lists the columns to be converted in the Miscellaneous Issues Transaction History table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relation table.
Trans_amt	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Miscellaneous Receipts Transaction History Table

The following table lists the columns to be converted in the Miscellaneous Receipts Transaction History table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relation table.

Column ID	Description
Trans_amt	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Receipt Rejections Transactions Table

The following table lists the columns to be converted in the Receipt Rejections Transactions table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relation table.
Trans_amt	If other than zero, the amount that needs to be converted from old site currency to new site currency.

Receiving

Receiving Rows to be Selected for Conversion

The Supplies Management booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. The Receiving rows that need to be converted when a ledger entity is converted are determined by the site that is associated with the ledger entity. For Receiving, it is necessary to convert all rows associated with the sites being converted within a conversion set (as defined in the Master Audit table).

Table Summary

The receiving information is stored in the following database tables in DBSropm:

Table ID	Usage	Conversion Y/N
Return_header	Return Header	Y
Return_line	Return Line	Y

The tables requiring conversion are described in the following sections.

Return Header Table

The following table lists the column to be converted in the Return Header table.

Column ID	Description
Curr_code	For stockroom return only, the currency code that needs to be changed to the new site currency code.

Return Line Table

The following table lists the columns to be converted in the Return Line table.

Column ID	Description
Return_amt	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Return_chrg	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Disc_price	If other than zero, the amount that needs to be converted from old site currency to new site currency.
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.
project_entity_id	Project entity ID that needs to be replaced with the corresponding value from the project relation table.

Cost Journals

Cost Journals to be Selected for Conversion

The Supplies Management booking currency conversion is a direct result of the booking currency conversion of one or more ledger entities. For Cost Journals, it is necessary to convert all journals associated with the ledger entities being converted within a conversion set (as defined in the Master Audit table).

Table Summary

The cost journals information is stored in the following database tables in DBScost:

Table ID	Usage	Conversion Y/N
Cost_jrnl_ctrl	Cost Journal Control	Y
Cost_jrnl_line	Cost Journal Line	Y

The tables requiring conversion are described in the following sections.

Cost Journal Control Table

The following table lists the columns to be converted in the Cost Journal Control table.

Column ID	Description
Ldr_entity_id	The old ledger entity ID that needs to be changed to the new euro ledger entity ID.
Rate_entity_id	Switch to the new rate entity in the costing currency table (download is a prerequisite).

Cost Journal Line Table

The following table lists the columns to be converted in the Cost Journal Line table.

Column ID	Description
Ldr_entity_id	Ledger entity ID that needs to be replaced by the new euro ledger entity ID. **Note:** The ledger entity ID may be blank. If it is, leave it blank.
UDAK key 1 thru UDAK key 12	If the chart of accounts is reorganized at the same time as the ledger entity ID is changed, then the new accounting distribution must replace the current accounting distribution. **Note:** Because this can be a complete or partial accounting distribution, you need to review the UDAK key 1 thru UDAK key 12 manually. The conversion program converts only to the extent possible. **See also** About the Chart of Accounts Reorganization.
Line_ldr_entity_id	Change the old ledger entity ID to the new euro ledger entity ID.
Prim_amt	Amount that needs to be converted from old site currency to new site currency.
Trans_curr_code	Currency code that needs to be changed to the new site currency code.
Curr_rate_type	Switch to the new currency rate type in the costing currency table (download is a prerequisite).
Prim_curr_code	Currency code that needs to be changed to the new site currency code.
Secdy_curr_code	Convert secondary book values.

Column ID	Description
Prim_to_secdy_ exchange_rate	Convert secondary book values.
Trans_amt	Amount that needs to be converted from old site currency to new site currency.
Secdy_amt	Convert secondary book values.
Udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or the accounting distributions, or both, the new surrogate needs to be retrieved and updated.
Trans_to_euro_ exchange_rate	Always 0.
Euro_to_prim_ exchange_rate	Always 0.
Prim_to_euro_ exchange_rate	Always 1.
Euro_to_secdy_ exchange_rate	This should be set to the same value as prim_to_secdy_exchange_rate.

Project Journals

Journals to be Selected for Conversion

This conversion step is based on the project entities identified in the Master Audit table.

Table Summary

The project journal information is stored in the following database tables in DBScost.

Note: Archive tables are associated with these tables.

Table ID	Archive Table Name	Usage	ConvY/N
Cost_proj_jrnl_ctrl	Cost Project Journal Control	Cost Projects Journal header information.	Y
Cost_proj_jrnl_line	Cost Project Journal Line	Cost Order Projects Journal line information.	Y

The tables requiring conversion are described in the following sections.

Cost Project Journal Control Table

This table stores project-related information common to all cost project journal lines. These are the journals that are already posted to Projects.

Documents to be Selected for Conversion

All rows associated with a selected project entity need to be converted.

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding value from the project relation table
Trans_curr_code	Currency code that needs to be changed to the new site currency code. Use dist_entity_id to look up the site table.

Cost Project Journal Line Table

This table stores all project-related information for the cost transactions. These journal lines are posted to Projects.

Documents to be Selected for Conversion

All rows associated with a selected project entity need to be converted.

Columns to be Converted

Column ID	Description
project_entity_id	Needs to be replaced with the corresponding value from the project relation table.
trans_curr_code	Replace with the euro currency code.
ledger_currency_code	Replace with the euro currency code.
Money1_trans_amt	Amount to be converted to new site currency.
Money1_ldr_amt	For cost project journals, this is equal to the money1_trans_amt.

Note: There are other monetary amount rows, but these are not maintained for cost project journals.

Funds Control

This section includes the Euro currency processing information specfic to Funds Control.

Scheduled Processes

Funds Control booking currency conversion uses the scheduled process described in the following paragraph.

Funds Control Booking Currency Conversion (program feuc0901)

In this scheduled process, the Funds Control policy and transaction records for the former national currency entities are changed to reflect the Ledger booking currency conversion to euro.

Database Tables

Funds Control booking currency conversion uses the database tables described in the following table.

Table	Server Name	This table contains the…
Funds Control Master Audit	euro_fund_master_audit	Conversion start and completion times for each of the ledger entities for which booking currency conversion is done.
Funds Policy Audit	euro_fund_policy_audit	Before and after image records of all the ledger entities of the Funds Control policy records for which booking currency conversion are done.
Funds Account Audit	euro_fund_acct_audit	Before and after image records of all ledger entities of the Funds Control account records for which booking currency conversion are done.
Funds Budget Audit	euro_fund_budget_audit	Before and after image records of all ledger entities of the Funds Control budget records for which booking currency conversion are done.
Funds Transaction Audit	euro_fund_trans_audit	Before and after image records of all ledger entities of the Funds Control transactions records for which booking currency conversion are done.
Funds Transaudit Audit	euro_fund_transaud_audit	Before and after image records of all ledger entities of the Funds Control transactions audit records for which booking currency conversion are done.
Funds Balance Audit	euro_fund_balance_audit	Before and after image records of all ledger entities of the Funds Control balance records for which booking currency conversion are done.
Funds Control Journal Control Audit	euro_fund_jrnl_ctrl_audit	Before and after image records of all ledger entities of the Funds Control journal control records for which booking currency conversion are done.
Funds Control Journal Line Audit	euro_fund_jrnl_line_audit	Before and after image records of all ledger entities of the Funds Control journal line records for which booking currency conversion are done.
Funds Control Exceptions Audit	euro_fund_exceptions _audit	Before and after image records of all ledger entities of the Funds Control exceptions records for which booking currency conversion are done.

Affected Table Groups

Funds Control booking currency conversion affects the following table groups:

- Funds Control Policy
- Funds Control Accounts
- Funds Control Budget
- Funds Control Transactions and Balances
- Funds Control Journals

Funds Control Policy

Entities to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Table Summary

Table ID	Usage	Conversion Y/N
Fund_policy	Funds Control policy	Y
Fund_policy_audit	Funds Control policy audit	N
Fund_policy_comnt	Funds Control policy comments	Y
Fund_policy_excl_entities	Funds Control policy excluding entities	Y
Fund_structure_assignments	Funds Control structure assignments	Y
Funds_control_posting_rule	Funds Control posting rule	N
Posting_rule_acctg_distn	Posting rule accounting distribution	Y

Note: Not converting the audit table may mean that audit information will not be available through the standard audit report.

The tables requiring conversion are described in the following sections.

Funds Control Policy Table

This table stores the settings for Funds Control policy.

The following table lists the columns to be converted in the Funds Control Policy table.

Column ID	Description
Ldr_entity_id	Needs to be replaced with the corresponding To ledger entity.
Rate_entity_id	Rate entity ID used for conversions from transaction to book and that contains the new exchange rates for euro currency. If the current rate_entity is not euro-compliant, replace with the rate entity from the ledger entity parameters.
Curr_rate_type	Currency rate type used for conversions from transaction to book and that contains the new exchange rates for euro currency. If the rate_entity is replaced, change also to the rate type from the ledger entity parameters.

Funds Control Policy Comment Table

This table stores the comments for Funds Control policy.

The following table lists the column to be converted in the Funds Control Policy Comment table.

Column ID	Description
Ldr_entity_id	Needs to be replaced with the corresponding To ledger entity.

Funds Control Policy Excluding Entities Table

This table stores the excluding entities in Funds Control policy.

The following table lists the column to be converted in the Funds Control Policy Excluding Entities table.

Column ID	Description
Ldr_entity_id	Needs to be replaced with the corresponding To ledger entity.

Funds Structure Assignments Table

This table stores the structure assignments for Funds Control policy.

The following table lists the column to be converted in the Funds Structure Assignments table.

Column ID	Description
Ldr_entity_id	Needs to be replaced with the corresponding To ledger entity.

Posting Rule Accounting Distribution Table

This table stores the default accounting distributions.

The following table lists the columns to be converted in the Posting Rule Accounting Distribution table.

Column ID	Description
Ldr_entity_id	Needs to be replaced with the corresponding To ledger entity.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).

Funds Control Accounts

Accounts to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Table Summary

Table ID	Usage	Conversion Y/N
Fund_acct	Funds Control account	Y
Fund_acct_audit	Funds Control account audit	N
Fund_acct_comnt	Funds Control account comment	Y
Fund_distribution_detail	Funds Control distribution detail	Y
Fund_distribution_summary	Funds Control distribution summary	Y
Fund_rollup_struct_extract	Funds Control rollup structure extract	N
Fund_rollup_structures	Funds Control rollup structure	N

Note: Fund Control rollup structures need to be reviewed after the Funds Control booking currency conversion.

The tables requiring conversion are described in the following sections.

Funds Control Account Table

This table stores the account policy for Funds Control.

The following table lists the columns to be converted in the Funds Control Account table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).
Curr_code	If this currency is a participating currency, it needs to be replaced with euro.
Tolerance_amt	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro.
Nbr_of_decimals	If the curr_code is replaced with euro, this number is updated to 2.

Funds Control Account Comment Table

This table stores the comments in the account policy for Funds Control.

The following table lists the columns to be converted in the Funds Control Account Comment table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).

Funds Control Distribution Detail Table

This table stores the distribution detail for Funds Control.

The following table lists the columns to be converted in the Funds Control Distribution Detail table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).

Funds Control Distribution Summary Table

This table stores the distribution summary (header) for Funds Control.

The following table lists the columns to be converted in the Funds Control Distribution Summary table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distriburion must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).

Funds Control Budget

Budgets to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Table Summary

Table ID	Usage	Conversion Y/N
Fund_budget	Funds Control budget	Y
Fund_budget_comnt	Funds Control budget comment	Y

Table ID	Usage	Conversion Y/N
Fund_budget_rel_rqst_work	Funds Control budget release request work table	N
Fund_budget_release_ request	Funds Control budget release request	N
Fund_budget_request	Funds Control budget request	N

The tables requiring conversion are described in the following sections.

Funds Control Budget Table

This table stores the Funds Control budget.

The following table lists the columns to be converted in the Funds Control Budget table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).
Curr_code	If this currency is a participating currency, it needs to be replaced with euro.
Ldr_amt_0 thru ldr_amt_14	If the curr_code is replaced with euro, these amounts need to be converted to euro.
Annual_amt	If the curr_code is replaced with euro, recalculate this amount as the total of ldr_amt_0 thru ldr_amt_14.

Funds Control Budget Comment Table

This table stores the comments for the Funds Control budget.

The following table lists the columns to be converted in the Funds Control Budget Comment table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).

Funds Control Transactions and Balances

In this conversion, transactions are converted and then the balances are recalculated from the converted transactions.

Transactions to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table.

Table Summary

Table ID	Usage	Conversion Y/N
Fund_transactions	Funds Control transactions	Y
Fund_transactions_audit	Funds Control transactions audit	Y
Funds_exceptions	Funds Control exceptions	Y

The tables requiring conversion are described in the following sections.

Funds Control Transactions Table

This table stores the latest funds situation of a subledger transaction. It contains the latest activity for a processing year/roll-up structure/fund amount class/fund account and document.

The following table lists the columns to be converted in the Funds Control Transactions table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).
Curr_code	If this currency is a participating currency, it needs to be replaced with euro.
Remaining_funds _amt	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro.
Trans_amt_in_ fund_acct_curr	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro. **Warning:** If the trans_curr_code = euro, copy from the trans_amt.
Prim_amt	Needs to be converted to euro. **Warning:** If the trans_curr_code = euro, copy from the trans_amt.
Scdy_amt	Needs to be converted to the secondary currency (if there is one).
Trans_to_prim_ exchange_rate	Recalculate from trans_amt and prim_amt.
Trans_to_euro_ exchange_rate	Set to 0.
Prim_to_euro_ exchange_rate	Set to 0.
Prim_to_secdy_ exchange_rate	Recalculate from prim_amt and scdy_amt.
Euro_to_prim_ exchange_rate	Set to 0.
Euro_to_secdy_ exchange_rate	Set to 0.
Source_ldr_entity _id	Needs to be replaced with the corresponding To ledger entity ID.
Pending_update_ amt	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro.

Funds Control Transactions Audit Table

This table stores the history of funds activity for a subledger transaction. It contains the prior activity for a processing year/roll-up structure/fund amount class/fund account and document.

The following table lists the columns to be converted in the Funds Control Transactions Audit table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).
Curr_code	If this currency is a participating currency, it needs to be replaced with euro.
Remaining_funds _amt	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro.
Trans_amt_in_ fund_acct_curr	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro. **Warning:** If the trans_curr_code = euro, copy from the trans_amt.
Prim_amt	Needs to be converted to euro. **Warning:** If the trans_curr_code = euro, copy from the trans_amt.
Scdy_amt	Needs to be converted to the secondary currency (if there is one).
Trans_to_prim_ exchange_rate	Recalculate from trans_amt and prim_amt.
Trans_to_euro_ exchange_rate	Set to 0.
Prim_to_euro_ exchange_rate	Set to 0.
Prim_to_secdy_ exchange_rate	Recalculate from prim_amt and scdy_amt.
Euro_to_prim_ exchange_rate	Set to 0.

Column ID	Description
Euro_to_secdy_exchange_rate	Set to 0.
Source_ldr_entity_id	Needs to be replaced with the corresponding To ledger entity ID.
Pending_update_amt	If the curr_code is replaced with euro, this amount needs to be converted from the old curr_code to euro.

Funds Control Exceptions Table

This table stores the fund exceptions for a subledger transaction.

The following table lists the columns to be converted in the Funds Control Exceptions table.

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table. it should not be changed (and no error logged).
Detail_surr_key	This surrogate key is from the ledger chart of accounts. The detail_surr_key gets updated after posting. When changing the ledger entity or the accounting distribution, or both, the new surrogate needs to be retrieved and updated.
Curr_code	If this currency is a participating currency, it needs to be replaced with euro.

Balances to be Selected for Conversion

This conversion step is based on the ledger entities identified in the Master Audit table. It recalculates balances from the converted transactions.

Table Summary

Table ID	Usage	Conversion Y/N
Fund_balance	Funds Control balance	Y

The table requiring conversion is described in the following section.

Funds Control Balance Table

This table stores the Funds Control balance. It contains the balance amounts for each processing year/roll-up structure/fund amount class and fund account.

Note: The funds balance table is the roll-up of all activity (fund_transactions and fund_transactions_audit) for all documents for a processing year/roll-up structure/fund amount class and fund account. To avoid rounding issues, the funds balance table **is not converted but recalculated from roll-up of all activity (fund_transactions and fund_transactions_audit)**.

First, add or update the Funds Control Balance table columns as follows:

Column ID	Description
Ldr_entity_id	From the detail
Processing_yr	From the detail
Rollup_structure_id	From the detail
UDAK key 1 thru UDAK key 12	From the udak_surr_key that points to the fund_acct (from the detail)
Fund_amt_class	From the detail
Udak_surr_key	From the detail
Budget_surr_key	From the detail
Curr_code	From the budget currency (fund_budget)
Ldr_amt_0 thru ldr_amt_14	Use the processing_pd from the detail to add the trans_amt_in_fund_acct_curr from the detail to the relevant ldr_amt_x.

Then, for each row in the Funds Control Balance table, add ldr_amt_0 thru ldr_amt_14 into annual_amt.

Funds Control Journals

Journals to be Selected for Conversion Table Summary

This conversion step is based on the ledger entities identified in the Master Audit table.

Table ID	Usage	Conversion Y/N
Funds_control_jrnl_ctrl	Funds Control journal header	Y
Funds_control_jrnl_line	Funds Control journal lines	Y
Work_fc_summ_jrnl_ctrl	Funds Control journal header worktable	N
Work_fc_summ_jrnl_line	Funds Control journal lines worktable	N

The tables requiring conversion are described in the following sections.

Funds Control Journal Header Table

This table stores information common to all Funds Control journal lines. These journals are posted to SmartStream Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be processed.

Columns to be Converted

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
Rate_entity_id	Rate entity ID used for conversions from transaction to book and that contains the new exchange rates for the euro currency. If the current rate_entity is not euro-compliant, replace with the rate entity from the ledger entity parameters.

Funds Control Journal Lines Table

This table stores all accounting distributions for the draft. These journals are posted to SmartStream Ledger.

Rows to be Selected for Conversion

All rows associated with a selected ledger entity need to be processed.

Columns to be Converted

Column ID	Description
Ldr_entity_id	The ledger entity ID that needs to be replaced with the corresponding To ledger entity ID.
Line_ldr_entity_id	Journal line ledger entity ID that needs to be replaced by the new corresponding euro ledger entity ID if the line ledger entity equals the ledger entity from the parameters.
UDAK key 1 thru UDAK key 12	This UDAK can be a ledger chart of accounts or only a funds chart of accounts. If ledger chart of accounts relationships are set up, this accounting distribution must be replaced by the new accounting distribution. **See also** About the Chart of Accounts Reorganization. If a relationship is built and it cannot be found in the relation table, it should not be changed (and no error logged).
Udak_surr_key	The udak_surr_key gets updated after posting. When changing the ledger entity or accounting distributions, or both, the new surrogate needs to be retrieved and updated.
Prim_amt	Needs to be converted to euro. **Warning:** If the trans_curr_code = euro, copy from the trans_amt.
Curr_rate_type	Currency rate type used for conversions from transaction to book and that contains the new exchange rates for the euro currency. If the rate_entity is replaced, change also to the rate type from the ledger entity parameters.
Prim_curr_code	Primary book currency code that is the former national currency and has to be changed to the euro currency code.
Trans_to_prim_exchange_rate	Recalculate from trans_amt and prim_amt.
Trans_to_euro_exchange_rate	Set to 0.
Euro_to_prim_exchange_rate	Set to 0.
Secdy_curr_code	If the new entity has a secondary booking currency, it needs to be updated to the secondary booking currency of the new ledger entity. If the new entity does not have a secondary booking currency, blank out the field.
secdy_amt	If the new entity has a secondary booking currency, convert this amount to the secondary booking currency of the new entity.

Column ID	Description
Prim_to_secdy_exchange_rate	Recalculate from prim_amt and scdy_amt.
Prim_to_euro_exchange_rate	Set to 0.
Euro_to_secdy_exchange_rate	Set to 0.

6 Site and Item

Chapter Contents

6-1 Window Processing
6-2 Scheduled Processing
6-3 Using Bulk Load Processing
6-4 Archiving and Purging Item Information
6-8 Job Scheduler Parameters for Archiving and Purging Item Information
6-10 What Happens During Item Archive/Purge Processing?

Window Processing

Most Site and Item business functions can be performed on Site and Item windows. See Site and Item Setup for an online-oriented presentation of Site and Item and the business needs it serves. See the Site and Item online Help for detailed information about each window and its fields and procedures for performing window tasks.

Scheduled Processing

You can also perform some Site and Item functions by running scheduled processes. You use Job Scheduler to schedule and run the following types of schedule processing:

- Bulk load
- Archive/purge

Using Bulk Load Processing

For information about

- Bulk load processing see the Bulk Load guide
- Table layout requirements for loading items, see Bulk Load Item Master.

Archiving and Purging Item Information

Use the archive/purge process to remove outdated item information from your database tables. Depending on the options you select, you can archive item data from activity tables to history tables or from history tables to a file for storage on disk or tape before SmartStream purges it.

For more information about this process, see About Archive/Purge.

Security

To use the archive/purge process in Item, you must have the following activity security defined for you on the Activity Security window:

- Access to these activities:
  - Archive/Purge Request (ccf0770)
  - Archive/Purge scheduled process (ccf0800)
- Security Entity 1 status assigned to these archive IDs:
  - Archive Items to History (mbmpmamcah)
  - Archive Item History to Disk (mbmpmmacad)

When you run the Archive/Purge process using Job Scheduler, you must use the security profile of DBS.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	On the Archive/Purge Request window, enter your options for the archive and purge request, including the selection criteria.
2	Using Job Scheduler, run the offline scheduled process that archives and purges activity records. **Note:** The request ID you enter on the Archive/Purge Request window is used as a parameter when you set up the archive/purge process in Job Scheduler.
3	Review results using the Purchasing Archive/Purge Reporting window.

What Can You Archive and Purge?

Using the archive and purge activities delivered for the Item application, you can archive and purge the following types of information:

- Item and site item

- Item-specific cost
  - If Supplies Management is installed and average cost is maintained for the site, item-specific tables in the DBScost database that contain static information not related to transactions are archived when the item is archived.
  - If average cost is maintained for the stockroom, then stockroom-item-specific cost data is archived with the stockroom item.
- Item-specific accounting distribution

Types of Archive and Purge Processes

You can manage the information in your Item activity and history tables using the following archive and purge processes.

- Archive Items to History - Moves item information from the original activity tables to history tables.
- Archive Item History to Disk - Moves archived item information from the history tables to a file for storage on disk or tape.

Do not attempt to run the archive to history and archive history to disk processes simultaneously.

Tables Processed

Archive to History Process

The Item archive to history processes archive and purge information from the following activity tables.

- DBSpmam
  - item
  - item_comnt
  - item_history
  - item_site_xref
  - item_site_xref_history
- DBSpplm
  - item_plan
  - item_plan_comnt
  - item_plan_history
- DBSudef
  - item_acctg_distn
- DBScost

- cost_item
- cost_item_elem
- cost_item_elem_change_history
- cost_type_item
- cost_type_item_comnts
- cost_type_item_history

Archive History to Disk Process

The archive history to disk processes for Item archive and purge information from the archive tables. Information for each archive table is written to a separate file.

Selection Criteria

You can specify the criteria for selecting the information to include in archive/purge processing when you define an archive/purge request. Only information that meets the selection criteria is included in the run of the request. The following information shows the selection criteria you can identify for each process type:

Archive to History Process

- Item ID
- Commodity code (enterprise-level only)

Archive History to Disk Process

- Date archived

Eligibility Validation for Archiving and Purging to History

The items that match your selection criteria must also meet the following conditions to be eligible for archiving and purging.

The status of the item must be Inactive.

The item has no catalog information.

No vendor items reference the item.

None of the following items reference the item (because they have been archived and purged):

- Receipts
- Purchase orders
- Requisitions
- Blanket orders
- Kit orders
- Stockroom items
- Return lines

Prerequisite Archive/Purge Processing

Whether information is eligible for archiving and purging depends on other archive/purge processes being run in a specific sequence. The following table shows the recommended prerequisite archive/purge processing for each type of information:

If you want to archive and purge…	You must first archive and purge…
Returns	Receipts
Purchase orders	Payment Requests Receipts
Requisitions	Receipts Purchase Orders
Blanket orders	Purchase Orders Requisitions
Vendor items	Payment Requests Returns Purchase orders Requisitions Blanket orders
Vendors	Payment Requests Returns Purchase orders Requisitions Blanket orders Vendor items
Stockroom items	Receipts Purchase orders Requisitions Kit orders
Item	Receipts Returns Purchase orders Requisitions Blanket orders Stockroom items
Cost	Receipts (for transfer orders)

Job Scheduler Parameters for Archiving and Purging Item Information

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For additional information about this window, see Understanding the Job Scheduler.

Values for Parameters

Enter the following values in the Program Name and Program Parameters fields when scheduling the following program.

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccfc0800.exe **UNIX:** CCFC0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements, and archives it. – P - Preview. Displays the data to be purged and archived before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview. **Note:** You must use the security profile of DBS when you run the archive/purge process.

What Happens During Item Archive/Purge Processing?

The following table describes the stages of the archive/purge process:

Stage	Description
1	Reads the archive/purge request on the purge_request_ctrl table to determine the item information to process.
2	Writes information to the appropriate candidate table for each item that meets the selection criteria and is inactive.
3	Validates each row of the candidate table and deletes those that are not eligible.
4	Depending on the type of processing requested, it adds and deletes rows in the appropriate item tables.
5	Maintains information in the purge tables as needed.

7 Vendor

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Types of Scheduled Processing

For Vendor, you can perform the following types of scheduled processing using the Job Scheduler:

- Load
- Update Vendor Statisitcs
- Vendor Aging
- Archive/Purge
- Reporting

Load

The Load scheduled process is made up of the following steps:

- Bulk copying the vendor or vendor item information to the database management system (DBMS) tables.
- Processing the vendor or vendor item information using the Job Scheduler.

Also, the Reset Logical Locks for Vendor Item program resets the locks on the vendor item process table.

Update Vendor Statistics

The Update Vendor Statistics scheduled process calculates the vendor statistics that are displayed on the Vendor Payables Inquiry window. You can also update these statistics online to take into account activity that occurred after the latest scheduled update run.

Vendor Aging

The Vendor Aging scheduled process ages open payment requests and payable drafts and accumulates the aging totals that are displayed on the Vendor Payable Inquiry window.

Archive/Purge

The archive/purge process removes outdated vendor and vendor item information from your database tables. Depending on the options you select, you can archive data from activity tables to history tables or from history tables to a file for storage on disk or tape before SmartStream purges it.

You can archive and purge the following types of information from Vendor:

- Vendor and vendor location
- Vendor payables
- Vendor purchasing

Reporting

You can schedule a report to run standalone or as part of other scheduled jobs. For example, you can schedule the Vendor List report as a step following scheduled vendor processing.

Loading Vendors and Vendor Items

The schedule load program reads the transactions written to the vendor_trans or vendor_item_trans table, edits and validates them, and then moves the valid transactions from the transaction table into Vendor tables in the databases.

Stages of Scheduled Load Processing

The scheduled load process is made up of two stages:

- Initial setup
- Loading vendors or vendor items

This section gives a brief description of each stage. The subsequent sections provide detailed information about individual steps within these stages.

Initial Setup

You must complete the following tasks before you can schedule vendor or vendor item processing:

- Complete the parameters for copying a file to the DBMS table. (If you are scheduling vendor or vendor item reports without scheduling vendors or vendor items to be loaded, this is the only initial setup step required.)
- Complete the parameters to schedule the jobs for bulk copy and scheduled processing.
- Grant dbo authority for the vendor_trans or vendor_item_trans table to users who will be running the scheduled transactions.
- Write a conversion program to convert your transaction file to SmartStream format.

Running Scheduled Vendor or Vendor Item Load Processing

The following table lists and describes, at a high level, the stages of scheduled load processing:

Stage	Task	Action or Activity
1	Using a user-written program or appropriate application program, generate a file containing the vendor or vendor item transaction records. You must format the data to match the transaction layout.	
2	Enter parameters for bulk copy and run the Bulk Copy program to copy the transactions into the DBMS transaction table, vendor_trans or vendor_item_trans.	Bulk Copy Parameters window Job Scheduler window
3	Load and validate all the scheduled transactions using the vendor or vendor item transaction load process.	Job Scheduler window

Stage	Task	Action or Activity
4	Review messages that result from the Poll process.	Scheduler Log window
5	Review messages that result from program processing.	Results mailed through To Do messages and SmartStream Mail (SmartStream Mail gateway)
6	If the program processing resulted in errors, diagnose and correct them. Then resubmit the job.	Vendor windows Vendor Transaction Correction window Vendor item windows Vendor Item Transaction Correction window

Reset Logical Locks for Vendor Item Load

Follow this process to schedule processing to reset logical locks if the scheduled vendor item processing returns a return code of 3 in the vendor_item_server_process table.

Stage	Task	Action or Activity
1	Reset logical locks in the vendor_item_server_process table.	Job Scheduler window
2	Review messages that result from the poll process.	Scheduled Log window
3	Review messages that result from program processing.	SmartStream Mail

Writing Transactions to DBMS Tables

You can write transactions to the DBMS tables directly or you can use the Bulk Copy process. It is not necessary to use the Job Scheduler to write transactions to DBMS tables if you write transactions directly. This section includes information about both methods.

Writing Transactions Using the Bulk Copy Program

The Bulk Copy method of writing transactions to the DBMS tables is made up of the following stages:

Stage	Task	Action or Activity
1	Enter the scheduled transaction parameters for bulk copying	Bulk Copy Parameters window
2	Copy all transactions using the Bulk Copy program	Job Scheduler window

You can use the Bulk Copy process to copy transactions to a transaction table before processing them. If a transaction does not process successfully, Vendor sends mail to notify you of any errors encountered during the Bulk Copy process.

Writing Transactions Directly

If you generate transactions from another product, such as an in-house product, add transactions directly to DBMS tables.

Procedure for Vendors

Follow this procedure to update the Vendor transaction table (vendor_trans) directly:

Step	Action
1	Run or perform the contents of the stored procedure csp_upd_vnbt_before_bulkcopy.
2	Update the Vendor transaction table using your own method.
3	Run or perform the contents of the stored procedure csp_upd_vnbt_after_bulkcopy.

Note: You can perform the contents of the stored procedure instead of running it.

Procedure for Vendor Items

Follow this procedure to update the Vendor Item transaction table (vendor_item_trans) directly:

Step	Action
1	Run or perform the contents of the stored procedure csp_upd_vibt_before_bulkcopy.
2	Update the Vendor Item transaction table using your own method.
3	Run or perform the contents of the stored procedure csp_upd_vibt_after_bulkcopy.

Note: You can perform the contents of the stored procedure instead of running it.

Updating Vendor Statistics

The Update Vendor Statistics scheduled process reads the information in Payables and calculates vendor statistics according to the options you specify in the Parameters field on the Job Scheduler window.

Selection Criteria

You can specify the criteria for selecting the transactions to include in Update Vendor Statistics processing when you enter the parameters for running the scheduled process. Only information that meets the selection criteria is included in the run of the scheduled process. You can enter the following selection criteria:

- Vendor
- Payable entity
- Transaction currency
- Begin date parameter to calculate the statistics as of a specific date (optional)

Total Calculations

The statistics calculated include the payment request, draft, and payment totals you need to manage your vendor relationships effectively.

The status of a payment request or payable draft determines which total amount it is used to calculate.

Current Liabiltiy Amount

Vendor includes invoices with the following statuses when calculating this amount:

Complete	No Accrual;Pending	On Hold;Pending
On Draft	Temp On Hold	
On Hold	On Hold;Rejected	
No Accrual	No Accrual;Rejected	
Rejected	Awaiting Match	
Pending	In Exception	

This amount is also is affected by the Payables Discount Method option. If the option is Net, the current liability amount has deducted discount amounts taken from the vendor. If the option is Gross, current liability does not reflect discount in the totals.

Total Invoice Amount

Vendor includes invoices with the following statuses when calculating this amount:

Complete	No Accrual;Pending	On Hold;Pending
Paid	Temp On Hold	
On Hold	On Hold;Rejected	
No Accrual	No Accrual;Rejected	
Rejected	Awaiting Match	
Pending	In Exception	

Total Credit Memo Amount

Vendor includes credit memos with the following statuses when calculating this amount:

Complete	No Accrual;Pending	On Hold;Pending
Paid	Temp On Hold	
On Hold	On Hold;Rejected	
No Accrual	No Accrual;Rejected	
Rejected	Awaiting Match	
Pending	In Exception	

Total Debit Amount

Vendor includes debit memos with the following statuses when calculating this amount:

Complete	No Accrual;Pending	On Hold;Pending
Paid	Temp On Hold	
On Hold	On Hold;Rejected	
No Accrual	No Accrual;Rejected	
Rejected	Awaiting Match	
Pending	In Exception	

Total Incomplete Amount

Vendor includes payment requests with the following statuses when calculating this amount:

- Incomplete

- New (a temporary status that a payment request has while it is being added to Payables)

Total Pending Approval Amount

Vendor includes payment requests with the following statuses when calculating this amount:

- Pending
- On Hold;Pending
- No Accrual;Pending

Total Payment Amount

Vendor includes payments and payable drafts with a status of Paid when calculating this amount.

Total Complete Draft Amount

Vendor includes payable drafts with the following statuses when calculating this amount:

- Unapplied
- Pending
- Applied
- Matured
- Paid

Total Incomplete Draft Amount

Vendor includes payable drafts with the following statuses when calculating this amount:

- Incomplete
- New (a temporary status that a payable draft has while it is being added to Payables)

Vendor Aging

The Vendor Aging scheduled process reads all open payment requests and payable drafts, ages them according to the payable aging policy you specify in the Parameters field on the Job Scheduler window, and accumulates the aging totals.

This process uses the due date of the payment request or payable draft to calculate the age of documents.

Aging Process

The following table explains the stages of the Vendor Aging process:

Stage	Description
1	On the Payable Aging Policy window, enter the aging policies for your enterprise.
2	Using Job Scheduler, run the Vendor Aging scheduled process to age selected documents and accumulate aging totals. **Note:** You enter the ID of one of the aging policies you defined on the Payable Aging Policy window as a parameter when you set up the aging process in Job Scheduler.
3	Review the results using the Display Vendor Aging Totals action on the Vendor Payables Inquiry window.

Selection Criteria

You can specify the criteria for selecting the payment requests and payable drafts to include in aging processing when you enter the parameters for running the Vendor Aging scheduled process. Only information that meets the selection criteria is included in the run of the scheduled process. You can enter the following selection criteria:

- Vendor
- Payable entity
- Transaction currency

Archiving and Purging Information from Vendor

In Vendor, you can use the archive/purge process to remove outdated vendor and vendor item information from your database tables. Depending on the options you select, you can archive vendor or vendor item data from activity tables to history tables or from history tables to a file for storage on disk or tape before SmartStream purges it.

For more information about this process, see About Archive/Purge in the *SmartStream Administration* guide.

Security

To use the archive/purge process in Vendor, you must have the following activity security defined for you on the Activity Security window:

- Access to these activities:
  - Archive/Purge Request (ccf0770)
  - Archive/Purge scheduled process (ccf0800)
- Security Entity 1 status assigned to these archive IDs:
  - Archive Vendors to History (cvnvmstcah)
  - Archive Vendor History to Disk (cvnvmtacad)
  - Archive Vendor Items to History (cvnvimscah)
  - Archive Vendor Item History to Disk (cvnvmsacad)

You must also have maintenance-level data security for the appropriate vendors defined for you on the Security Data Control window.

When you run the archive/purge process using Job Scheduler, you must use the security profile of DBS.

Archive/Purge Process

The following table explains the stages of the archive/purge process:

Stage	Description
1	On the Archive/Purge Request window, enter your options for the archive and purge request, including the selection criteria.
2	Using Job Scheduler, run the offline scheduled process that archives and purges activity records. **Note:** The request ID you enter on the Archive/Purge Request window is used as a parameter when you set up the archive/purge process in Job Scheduler.
3	Review results using the Vendor Archive/Purge Reporting window.

What Can You Archive and Purge?

Using the archive and purge activities delivered for the Vendor application, you can archive and purge the following types of information:

- Vendor
- Vendor Item

Types of Archive and Purge Processes

You can manage the information in your Vendor activity and history tables using the following archive and purge processes.

- Vendor
  - Archive Vendors to History - Moves vendor information from the original activity tables to history tables.
  - Archive Vendor History to Disk - Moves archived vendor information from the history tables to a file for storage on disk or tape.
- Vendor Item
  - Archive Vendor Items to History - Moves vendor item information from the original activity tables to history tables.
  - Archive Vendor Item History to Disk - Moves archived vendor item information from history tables to a file for storage on disk or tape.

Do not attempt to run the archive to history and archive history to disk processes simultaneously.

Tables Processed

Archive to History Processes

The archive to history processes for Vendor archive and purge information from the following activity tables, except where noted:

Vendor

- DBSvend
  - vendor_loc_bank_acct
  - vendor_loc_bank_acct_history **(purge only)**
  - vendor_loc_history_tot
  - vendor_loc_payables
  - vendor_loc_payables_comnt
  - vendor_loc_pd_history_tot
  - vendor_loc_tax
- DBSvmst
  - vendor
  - vendor_history **(purge only)**
  - vendor_loc
  - vendor_loc_acctg_distn
  - vendor_loc_addr
  - vendor_loc_addr_history **(purge only)**
  - vendor_loc_commodity
  - vendor_loc_contact
  - vendor_loc_history **(purge only)**
  - vendor_loc_purch_com_amt_stats
  - vendor_loc_site_xref
  - vendor_order_amt_statistics
  - vendor_order_qty_statistics
  - vendor_perf_ratings_cmnt
  - vendor_performance_ratings_dtl
  - vendor_performance_ratings_hdr
- DBSvpur
  - vendor_loc_classification

  - vendor_loc_purchasing
  - vendor_loc_purchasing_comnt

Vendor Item

- DBSvmst
  - vendor_loc_item
  - vendor_loc_item_amt_statistics
  - vendor_loc_item_classn
  - vendor_loc_item_comnt
  - vendor_loc_item_manufacturer
  - vendor_loc_item_origin
  - vendor_loc_item_price
  - vendor_loc_item_purchase_site
  - vendor_loc_item_statistics

Archive History to Disk Processes

The archive history to disk processes for Vendor and Vendor Item archive and purge information from the archive tables. Information for each archive table is written to a separate file.

Selection Criteria

You can specify the criteria for selecting the information to include in archive/purge processing when you define an archive/purge request. Only information that meets the selection criteria is included in the run of the request. The following information shows the selection criteria you can identify for each process type:

Archive to History Processes

- Vendor
  - Last activity date (required)
  - Vendor ID
- Vendor Item
  - Last activity date (required)
  - Vendor ID
  - Vendor location
  - Commodity code
  - Vendor item ID

Vendor Item Consideration

When you are defining selection criteria for archiving vendor items to history, if you enter spaces or a value in the Vendor Location field, it is used as a selection criterion. If you leave the Vendor Location field blank, the vendor location column is not used to determine eligible vendor items.

Archive History to Disk Processes

- Vendor and Vendor Item
  - Date archived

Eligibility Validation for Archiving and Purging to History

The vendors and vendor items that match your selection criteria must also meet the following conditions to be eligible for archiving and purging.

Vendors

The vendor must have one of the following combinations of vendor payables and vendor purchasing statuses:

- A vendor payables and a vendor purchasing status of Inactive at all sites
- A vendor payables status of Quick without a corresponding vendor purchasing status

  Note: Quick vendors that meet this criterion are purged at the next run of the Vendor Archive/Purge process regardless of the vendor's last activity date.

- A vendor payables status of Quick and a vendor purchasing status of Inactive.

If Payables is installed, no payment requests reference the vendor (because they have been archived and purged).

If Purchasing is installed, none of the following items reference the vendor (because they have been archived and purged):

- Returns
- Purchase orders
- Requisition lines
- Blanket orders
- Vendor items

Vendor Items

The vendor item must have a status of Inactive at all sites.

The vendor item cannot have catalog information.

None of the following items reference the vendor item (because they have been archived and purged):

- Return lines
- Payment request lines
- Purchase order lines
- Requisition lines
- Blanket order lines

Prerequisite Archive/Purge Processing

Whether information is eligible for archiving and purging depends on other archive/purge processes being run in a specific sequence. The following table shows the recommended prerequisite archive/purge processing for each type of information:

If you want to archive and purge…	You must first archive and purge…
Returns	Receipts
Purchase orders	Payment Requests Receipts
Requisitions	Receipts Purchase Orders
Blanket orders	Purchase Orders Requisitions
Vendor items	Payment Requests Returns Purchase orders Requisitions Blanket orders
Vendors	Payment Requests Returns Purchase orders Requisitions Blanket orders Vendor items
Stockroom items	Receipts Purchase orders Requisitions Kit orders
Item	Receipts Returns Purchase orders Requisitions Blanket orders Stockroom items
Cost	Receipts (for transfer orders)

Job Scheduler Parameters

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For more information about this window, see Understanding the Job Scheduler in the *SmartStream Administration* guide.

Values for Parameters

Enter the following values in the Program Name and Program Parameters fields when scheduling the following programs.

Program	Program Name	Program Parameters
Bulk Copy	**Windows:** dbsbulk.exe **Note:** Bulk copy must be run at a workstation that has Microsoft Windows installed.	User-defined Bulk Copy Parameter Key established on the Bulk Copy window
Update Vendor Statistics	**Windows:** cvnc0100.exe **UNIX:** cvnc0100	▪ Vendor ID Enter the ID for a vendor that has already been defined, or if you want to calculate statistics for all vendors, enter an asterisk (*). Statistics are always updated for all locations for a vendor. ▪ Payable Entity ID Enter the ID for a payable entity that has already been defined, or if you want to calculate statistics for all payable entities, enter an asterisk (*). ▪ Transaction Currency Code Enter the code for a currency that has already been defined, or if you want to calculate statistics for all currencies, enter an asterisk (*). ▪ Begin Date Enter a valid date using ccyymmdd format. If you leave this parameter blank, all payables transactions are processed.

Program	Program Name	Program Parameters
Vendor Aging	**Windows:** cvnc0200.exe **UNIX:** cvnc0200	▪ Payable Aging Policy ID Enter the ID for an aging policy that has already been defined. ▪ Vendor ID Enter the ID for a vendor that has already been defined, or if you want to age transactions for all vendors, enter an asterisk (*). The process always ages all locations for a vendor. ▪ Payable Entity ID Enter the ID for a payable entity that has already been defined, or if you want to age transactions for all payable entities, enter an asterisk (*). ▪ Transaction Currency Code Enter the code for a currency that has already been defined, or if you want to age transactions for all currencies, enter an asterisk (*).
Scheduled Vendor Processing	**Windows:** cvnc6000.exe **UNIX:** cvnc6000	None
Scheduled Vendor Item Processing	**Windows:** cvnc6500.exe **UNIX:** cvnc6500	▪ Delete Unprocessed Transactions (Y or N) ▪ Through Date (for deleting unprocessed transactions) Use yyyymmdd format or use the DBMS default date format.
Reset Logical Locks for Vendor Item Load	**Windows:** cvnc6510.exe **UNIX:** cvnc6510	None

Program	Program Name	Program Parameters
Archive/Purge	**Windows:** ccfc0800.exe **UNIX:** ccfc0800	▪ Type of run – Blank - Archive/purge standard processing. Purges the data that meets selection criteria and eligibility requirements, and archives it. – P - Preview. Displays the data to be purged and archived before removing the data. – R - Restart. Begins processing where a previous job stopped. This option is available only if the interrupted job has purged or archived data. – C - Cleanup. Resets switches in the DBSpurg database to prepare for future processing. ▪ Request ID entered on the Archive/Purge Request window ▪ Validation option – Blank - Validate. Perform appropriate validations. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank. – V - Do not validate. Bypasses validation following a successful preview. This option is optional. If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview.

Note: The DBS check box on the Job Scheduler window must be checked.

Reporting

When scheduling a report, you must specify a report option as part of the program parameters. The report option identifies a set of report parameters you selected and saved using the Vendor Reporting activity or the Vendor Item Reporting activity. The DBS check box on the Job Scheduler window must **not** be selected.

For more information about vendor and vendor item reporting, see the Vendor Reporting chapter in the *Vendor* guide or one of the following topics in the online Help:

- Producing the Item/Vendor Item List Report
- Producing the Vendor List Report

When you invoke scheduled vendor or vendor item reporting, include specific scheduling information. List program parameters on one line, separated by forward slashes (***/***), and enter a forward slash after the last parameter.

Program Name	Program Parameters
msaccess.exe	For Vendors: Access MDB Name/CMD/User ID/Password/Language/Dialect/Report Option/
msaccess.exe	For Vendor Items: Access MDB Name/CMD/User ID/Password/Language/Dialect/Site/Report Option/

Note: Currently, English is the only valid value for the language, and a blank is the only valid value for the language dialect. Enter a forward slash (***/***) **followed by a blank space** for the dialect.

Vendor Reporting

This table describes each parameter and gives an example:

Parameter	Description	Example
Access MDB Name	The location of the Microsoft Access database file. You must enter the complete directory path.	c:\dbs\cvnrpts.mdb
CMD	A separator that tells Access that information is being passed to this MDB.	cmd
User ID	Identifier for the user who will run the report.	User04
Password	Password for the user who will run the report.	logon

Parameter	Description	Example
Language	Code for the language Microsoft Access will use to display error messages and other information.	EN Display messages in English. You must enter this code in all upper case letters.
Dialect	Code for language dialect Microsoft Access will use to display error messages and other information.	Currently, enter a blank space for this parameter.
Report Option	Name of the report option you previously set up using Vendor.	Vendor Listing

The complete sets of parameters for the reports used in the Example column are as follows:

c:\dbs\cvnrpts.mdb/cmd/User04/logon/EN/ /Vendor Listing/

Vendor Item Reporting

This table describes each parameter and gives an example:

Parameter	Description	Example
Access MDB Name	The location of the Microsoft Access database file. You must enter the complete directory path.	c:\dbs\cvnvitm.mdb
CMD	A separator that tells Access that information is being passed to this MDB.	cmd
User ID	Identifier for the user who will run the report.	User04
Password	Password for the user who will run the report.	password
Language	Code for the language Microsoft Access will use to display error messages and other information.	EN Display messages in English. You must enter this code in all upper case letters.
Dialect	Code for language dialect Microsoft Access will use to display error messages and other information.	Currently, enter a blank space for this parameter.
Site	Site for which the report should be run.	US01
Report Option	Name of the report option you previously set up using Vendor.	Vendor Item Listing

The complete sets of parameters for the reports used in the Example column are as follows:

c:\dbs\cvnvitm.mdb/cmd/User04/password/EN/ /US01/Vendor Item Listing/

Reviewing the Status of Jobs

You can determine the status of the job processed from the messages generated during processing.

Scheduler Messages

The Poll program generates informational messages about the progress of a job and its final result (ended successfully, with errors, or before completion). You can display these messages using the Scheduler Log activity.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window:

Return Code	Meaning	Possible Cause	Suggested Action
0	Program completed successfully.		
1	Program completed successfully with informational messages.		Review SmartStream Mail and To Do List messages.
2	Program completed successfully with warning messages.		Review SmartStream Mail and To Do List messages.
3 and 4	DBMS error.	Server is unavailable. Stored procedure does not exist. Server logs might be full. Database is out of space. Login failed security check. Two-phase commit error.	Check SmartStream mail or local log file for specific information about the problem. Correct the problem in the DBMS environment and run the job again.
5	Fatal processing error occurred and the program cannot continue processing.	Client cannot open required connections to the server.	Check SmartStream mail or local log file for specific information about the problem. Correct the problem and run the job again.

For more information about the Job Scheduler, see the Understanding the Job Scheduler in the *SmartStream Administration* guide.

What Happens During Processing?

The following edits are performed during vendor or vendor item scheduled processing.

Bulk Copy Process

The bulk copy process writes vendor or vendor item transactions from a text file to the DBMS vendor_trans table or vendor_item_trans table and updates the table with a user identifier.

When checking security, Vendor uses the user identifier on the transaction. If any of the transactions are in error, Vendor sends the message to the user on the transaction.

SmartStream uses the user identifier specified in the security profile used by the Job Scheduler for that scheduled run of bulk copy.

Scheduled Vendor Process

Running scheduled vendor processing applies the vendor load transactions from the DBMS vendor_trans table. You can run the job on the UNIX server or on your workstation. This process performs the following tasks:

If the transaction is...	Then this table is updated...
VMST	vendor_master
VMLC	vendor_loc
VMCT	vendor_contact
VNBK	vendor_loc_bank_acct
VNPY	vendor_loc_payables
VNTX	vendor_loc_tax
VNCM	vendor_loc_comnt
VNAD	vendor_loc_addr
VNDA	vendor_loc_acctg_distn
VPUR	vendor_loc_purchasing
VNCL	vendor_loc_classification
VPCM	vendor_loc_purchasing_cmnt
VCOM	vendor_loc_commodity

Special Considerations

The VNBK and VNPY transactions have special processing information you need to consider.

VNBK

If any bank information is invalid or missing in a VNBK transaction, SmartStream displays an error message and rejects the transaction.

For a VNBK transaction with a value entered in the IBAN Check Digit field, SmartStream validates all the international bank account number (IBAN) components (country code, check digit, domestic bank account number) using the standards defined by the European Committee for Banking Standards (ECBS).

Use the Vendor Transaction Correction window to correct bank information errors.

VNPY

For the VNPY transaction, the vendor_loc_payables table is updated with both payables and earnings and withholding data.

Errors

Each transaction updates the vendor_trans_message table if key field, bank information, or data errors are generated.

Scheduled Vendor Item Process

Running scheduled vendor item processing applies the vendor item load transactions from the DBMS vendor_item_trans table. You can run the job on the UNIX server or on your workstation. This process performs the following tasks:

If the transaction is...	Then this table is updated...
VIT1	vendor_loc_item_orgin
VIT2	vendor_loc_item vendor_loc_item_purchase_site
VIT3	vendor_loc_item_price
VIT4	vendor_loc_item_manufacturer
VIT5	vendor_loc_item_comnt
VIT6	vendor_loc_item_classn
VIT7	vendor_loc_item_purchase_site

Also, each transaction updates the vendor_item_trans_message table if data or key errors are generated.

Reset Logical Lock for Vendor Item Load Process (CVNC6510)

The vendor item load program (CVNC6500) updates the vendor_item_server_process table with a row that is used to logically lock the vendor item database.

Although Vendor allows many concurrent processes, it starts the Logical Lock Reset program for the Vendor Item Load process to prevent two vendor item load processes from running at the same time for the same site.

The logical lock reset program (CVNC6510) deletes the row in the vendor_item_server_process table to remove the logical lock.

Archive and Purge Process (CCFC0800)

The following table describes the stages of archive/purge processing:

Stage	Description
1	Reads the archive/purge request on the purge_request_ctrl table to determine the vendor or vendor item information to process.
2	Writes information to the appropriate candidate table for each vendor or vendor item that meets the selection criteria and is inactive.
3	Validates each row of the candidate table and deletes those that are not eligible.
4	Depending on the type of processing requested, it adds and deletes rows in the appropriate vendor and vendor item tables.
5	Maintains information in the purge tables as needed.

Processing Scheduled Transactions

All entry fields on the vendor and vendor item windows are included in the various transaction types. The same edits and validations that occur on the windows also take place when the transactions are processed through the Job Scheduler.

For information about the vendor and vendor item transaction types, including the transaction layout for each transaction type, see Vendor Transaction Layouts and Vendor Item Transaction Layouts.

Report

An End of Job report is generated as a result of vendor or vendor item scheduled processing. The report is sent to the distribution list specified on the Job Scheduler.

Vendor

The report generated by vendor scheduled processing lists each transaction type and the number of transactions added and rejected.

Vendor Item

The report generated by vendor item scheduled processing lists each transaction type and the number of transactions submitted, processed, and remaining.

Messages

The following messages are generated as a result of scheduled processing:

- Error Message
- Information Messages

Error Messages

The scheduled process generates application error messages for key field and data field errors.

Information Messages

Information messages inform those responsible for transaction processing that the transactions completed successfully.

Correcting Scheduled Transaction Processing Errors

Three types of errors can occur during scheduled transaction processing:

- Key field errors
- Bank information errors
- Data field errors

Key Field Errors

Key fields uniquely define vendor and vendor item information. Key field errors result from invalid or missing key field values. Key field errors prevent transactions from processing.

Key Fields for Vendor Transactions

The following table shows the types of vendor transactions and their key fields:

Transaction Type	Corresponding Window	Key Fields
VMST	Vendor Master	Vendor
VMLC	Vendor Location	Vendor Location
VNPY	Vendor Payables Information Vendor Earnings and Withholding	Vendor Location
VNAD	Vendor Address	Vendor Location Address Type
VMCT	Vendor Contact	Vendor Location Address Type Contact Name
VNTX	Vendor Tax	Vendor Location Tax Rule
VNBK	Vendor Bank	Vendor Location Type of Payment
VNCM	Vendor Payables Comments	Vendor Location Comment Type
VNDA	Vendor Account Distributions	Vendor Location

Transaction Type	Corresponding Window	Key Fields
VPUR	Vendor Purchasing Information	Vendor Location Site
VNCL	Vendor Classification	Vendor Location Site Classification Identifier
VPCM	Vendor Purchasing Comments	Vendor Location Site Comment Type
VCOM	Assign Commodities to Vendor	Vendor Location Commodity

Key Fields for Vendor Item Transactions

The following table shows the types of vendor item transactions and their key fields:

Transaction Type	Corresponding Window	Key Fields
VIT1	Vendor Item Master	Vendor Location Vendor Item
VIT2	Vendor Item Definition	Vendor Location Site Vendor Item
VIT3	Vendor Item Price	Vendor Location Site Vendor Item Transaction Currency Effective Date Unit Price UOM Quantity
VIT4	Vendor Item Manufacturer	Vendor Location Site Vendor Item Manufacturer Item Manufacturer

Transaction Type	Corresponding Window	Key Fields
VIT5	Vendor Item Comments	Vendor Location Vendor Item Comment Type Site
VIT6	Assign Classifications to Vendor Item	Vendor Location Site Vendor Item Classification
VIT7	Assign Participating Sites	Vendor Location Purchase Site Vendor Item Participating Site

For vendor item transactions, you must specify a valid action. The following table lists the valid actions for each transaction type:

Transactions	Valid Actions
VIT1 through VIT4	1 or 2 (Add or Change)
VIT5 through VIT7	1 (Add only)

Correcting Key Field Errors

When a key field error occurs, such as an attempt to add a duplicate transaction or missing key field information, the transaction remains on the vendor_trans or the vendor_item_trans table. The key to the transaction and the error message code are written to the vendor_trans_message table or the vendor_item_trans_message table. A message is generated informing you of the error.

You can correct the error on the Vendor Transaction Correction window or the Vendor Item Transaction Correction window. A message appears at the bottom of the window informing you of the corrections you must make. After correcting the key errors, you can resubmit the corrected transactions through the scheduled process.

Bank Information Errors

Bank information identifies the bank a vendor location uses for depositing payments. Bank information errors result from invalid or missing bank information. Bank information errors prevent transactions from processing.

Bank Information Fields

These are the bank information fields:

- Bank Number
- Bank Account Nbr

- Country
- IBAN Check Digit

Correcting Bank Information Errors

When a bank information error occurs, the transaction remains on the vendor_trans table. The key to the transaction and the error message code are written to the vendor_trans_message table. A message is generated informing you of the error.

You can correct the error on the Vendor Transaction Correction window. A message appears at the bottom of the window informing you of the corrections you must make. After correcting the bank information errors, you can resubmit the corrected transactions through the scheduled process.

Data Field Errors

Data fields are for values considered optional. Errors in these fields can be for missing or invalid information. Data field errors do not prevent transactions from processing.

Depending on the transaction processed, Vendor can make substitutions for missing or invalid information for these fields.

You can decide whether you want to keep or change the substituted information. For example, if the legal name was missing for the VMST transaction and vendor processing substituted the operating name, you can either keep or change the substituted name.

Default Substitutions for Vendor Transactions

The following table shows the substitutions Vendor can make for each vendor transaction type:

If the transaction type is...	And the error is...	Then Vendor substitutes...
VMST	Missing operating name	Missing Operation Name.
	Missing legal name	The operating name.
VMLC	Invalid country code	The enterprise country code.
	Invalid rate date option	None.
	Invalid currency option	Single.
	Invalid date format	The enterprise date format.
	Invalid currency code	The enterprise currency code.
	invalid language code	The enterprise language code.
	Invalid rate type	The enterprise rate type.

If the transaction type is...	And the error is...	Then Vendor substitutes...
VNPY	Invalid status	Inactive.
	Missing status	Active.
	Invalid remit hold	Y for the remit hold.
	Invalid payment selection code	E for the payment selection.
	Invalid withholding option	WHNOTIN for Hold (only if no tax ID).
	Invalid first B notice	N for the first B notice.
	Invalid second B notice	N for the second B notice.
	Invalid first B notice date	The processing date.
	Invalid second B notice date	The processing date.
VPUR	Invalid over tolerance percent	Spaces.
	Invalid under tolerance percent	Spaces.
	Invalid lead time in days	Spaces.
VNAD	Invalid address format	The enterprise address format.
VNBK	Invalid funds available	0 (Immediately Upon Request).
	Invalid standard entry code	CTP.
	Missing bank name	Missing Bank Name.
	Missing bank account name	Missing Account Name.
VNTX	Invalid default tax indicator	N for the default tax indicator.
VNCM	Invalid comment type	A for the comment type.

Default Substitutions for Vendor Item Transactions

The following table shows the substitutions Vendor can make for each vendor item transaction type. The substitutions apply to Add transactions only. If a value for a Change transaction is incorrect, the original value is retained.

Note: In column 2, the error is for an invalid value (or spaces) unless Missing is specified.

If the transaction type is...	And the error is...	Then Vendor substitutes...
VIT1 - Vendor Item Master	Missing description	Missing Description.
	Commodity	Spaces.
VIT2 - Vendor Item Definition	Site	Spaces.
	Item	Spaces.
	Minimum order quantity	0.
	Lead time in days	Blank.
	Contract	NA (not applicable)
	Preferred vendor item	N for not preferred.
	Fixed asset indicator	N for not a fixed asset.
	Service indicator	N for not a service.
	Primary purchase UOM	Spaces.
	Inactive indicator	N for not inactive.
	Country of origin	Spaces.
	International commodity	Spaces.
	Net mass	0.
	Over tolerance %	Spaces.
	Under tolerance %	Spaces.
	Commodity	Spaces.
VIT3 - Vendor Item Price	Expiration date	Spaces.
VIT4 - Vendor Item Manufacturer	Preferred manufacturer	N for not preferred.
VIT5 - Vendor Item Comments	NA	NA
VIT6 - Assign Classifications to Vendor Item	NA	NA
VIT7 - Assign Participating Sites	NA	NA

Correcting Data Field Errors

When a data field error occurs, the key to the transaction and the warning message code are written to the vendor_trans_message table or the vendor_item_trans_message table. Also, a message is generated informing you that the transaction was added with errors.

If you select the Display Offline Error Messages action on the SmartStream online vendor or vendor item windows, the vendor_trans_message table or the vendor_item_trans_message table is used to display the error messages. Because the transaction is added to the master tables, it is removed from the vendor_trans input table or the vendor_item_trans input table.

You correct data field errors on the same vendor or vendor item windows you usually use for adding or changing information in these fields. Vendor automatically displays the appropriate window for correcting the error when you select the error message.

Transaction Code Errors

If the transaction code is missing or invalid, Vendor treats the transaction as an unprocessed transaction. You must delete the transaction by setting the appropriate parameters for the scheduled process.

Vendor Transaction Layouts

Vendor scheduled processing uses text files to hold information for scheduled processing transactions. These text files hold a series of values (fields), separated by a delimiter. SmartStream requires that a tab be used as the delimiter.

Use the scheduled vendor transaction layout to map the transactions received from a vendor into a text file in the SmartStream format.

Entering Field Information

Use the table in this section to map the incoming data from the vendor to the text file. The table contains the order of fields for the transaction and the format or actual codes for each field.

Delimiters

Separate each field in a transaction layout with the column delimiter established in the bulk copy parameters. If you leave a field blank, be sure to enter the delimiter and a space to hold its place.

Alphanumeric Fields

Alphanumeric fields can contain alphabetic letters, numbers, or a combination of both.

Numeric Fields

Numeric fields can contain only numbers.

Amount Fields

Follow these guidelines when entering amounts for money:

- Enter the number with or without a decimal point. If you do not enter a decimal point, a whole number is assumed.
- Enter up to four decimal places.
- Do not enter thousand separators.
- Indicate a negative number with a minus sign (–) before the number.

The currency of the amount determines how many numerals SmartStream displays to the right of the decimal point.

Date Fields

You can enter dates in two formats: yyyymmdd or the DBMS default date format. DBMS date formats vary; for example, in the United States the date format could be mm/dd/yyyy, and in Europe, it could be dd/mm/yyyy. If you do not know the DBMS default date format, contact your SmartStream system administrator.

Follow these guidelines when entering dates in the DBMS default date format:

- Use a separator between month, day, and year.
- Enter month and day with or without leading zeros. For example, enter March as 3 or 03.

- Enter the year with or without the century. When you enter only the last two digits of the year, Vendor uses the
  - Twenty-first century (2000s) if you enter 01 through 49
  - Twentieth century (1900s) if you enter 50 through 99.

Note: To override these defaults, enter all four digits for the year.

Vendor Transactions

You can enter 13 transactions for a vendor, depending on the information you want to record. The transaction layout contains a set number of fields; however, each transaction may not use all fields. Enter a space for any unused field.

If you use the Bulk Copy program to add the transactions, the program enters any trailing delimiters and spaces for you. If you do not use this program, you must enter all trailing delimiters and spaces.

The following list shows the vendor transactions:

Transaction	Corresponding Window
VMST	Vendor Master
VMLC	Vendor Location
VMCT	Vendor Contact
VNBK	Vendor Bank
VNPY	Vendor Payables Information and Vendor Earnings and Withholding
VNTX	Vendor Tax
VNCM	Vendor Payables Comments
VNAD	Vendor Address
VNDA	Vendor Accounting Distributions
VPUR	Vendor Purchasing Information
VNCL	Vendor Classification
VPCM	Vendor Purchasing Comments
VCOM	Assign Commodities to Vendor

Note: You must install SmartStream Purchasing before you can process the following transactions:

- VCOM - Assign Commodities to Vendor
- VNCL - Vendor Classification
- VPUR - Vendor Purchasing
- VPCM - Vendor Purchasing Comments

Vendor Master Transaction

The following table lists the order and describes the content of each field used to add vendor master information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VMST. The identifier for the vendor master transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Operating Name	45 alphanumeric	Required. The name a vendor uses when it conducts business.
4	Legal Name	45 alphanumeric	Optional. The legal name of the vendor. If not entered, the operating name can serve as the default.
5	DUNS Number	15 alphanumeric	Optional. A unique number the Dun & Bradstreet Corporation issues an enterprise for credit reporting purposes.
6	DUNS Number Validation Indicator	1 alphanumeric	Optional. Indicates whether you want to validate the DUNS number. Valid values are Y or N. Default is Y.

Vendor Location Transaction

The following table lists the order and describes the content of each field used to add vendor location information. Vendor master information must be added before you can add vendor location information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VMLC. The identifier for the vendor location transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Optional. A unique, user-defined identifier for a vendor location.
4	Operating Name	45 alphanumeric	Optional. The name a vendor uses when it conducts business. If not entered, this value defaults from the vendor master. You can override this value.
5	Vendor Search	20 alphanumeric	Optional. An identifier that helps you find the vendor location online once you begin entering payment requests or updating vendor information.
6	Country	2 alphanumeric	Required. An identifier for the country for the vendor location. The country you enter serves as the default for the vendor's bank and tax rules.
7	Transaction Currency	3 alphanumeric	Conditional. A unique identifier for the currency used when a vendor issues a payment request. You must enter a value for this field if the Currency option is set to Multiple in Enterprise policy.

Field	Name	Length	Description
8	Rate Entity	5 alphanumeric	Optional. A user-defined identifier for the policies for storing and retrieving monetary conversion rates.
9	Rate Type	1 alphanumeric	Optional. An identifier for the type of currency exchange rate you want to use in retrieving the monetary conversion rate. Valid values are A - Average rates D - Daily F - Fixed assets P - Internal rates for period.
10	Currency Option	1 alphanumeric	Optional. Indicates whether you pay a vendor in single or multiple currencies. Valid values are M - Multiple S - Single.
11	Rate Date Option	3 alphanumeric	Optional. The date to use for retrieving monetary conversion rates. Valid values are Blank - Default from enterprise policy DOC - Date of the document EFF - Date the currency rate goes into effect ENT - Date the transaction is made.
12	Language Code	2 alphanumeric	Optional. The identifier for the language used on printed payments and remittance advice documents. Valid values exist on the language code table.
13	Dialect Code	2 alphanumeric	Optional. The dialect for the language code. Must be blank when using English.
14	Thousand Separator	1 alphanumeric	Optional. The character to use as the thousand separator for numbers on printed payments and remittance advice documents.

Field	Name	Length	Description
15	Decimal Separator	1 alphanumeric	Optional. The character to use as the decimal separator for numbers on printed payments and remittance advice documents.
16	Date Format Option	1 alphanumeric	Optional. The format for a date on printed payments and remittance advice documents. Valid values are D - DMY M - MDY Y - YMD.
17 – 20	Custom Field 1 – Custom Field 4	15 alphanumeric	Optional. Any vendor information you want to maintain.
21 – 23	Custom Field 5 – Custom Field 7	5 alphanumeric	Optional. Any vendor information you want to maintain.
24 – 26	Custom Field 8 – Custom Field 10	3 alphanumeric	Optional. Any vendor information you want to maintain.
27	DUNS Number	15 alphanumeric	Optional. A unique number the Dun & Bradstreet Corporation issues an enterprise for credit reporting purposes.
28	DUNS Number Validation Indicator	1 alphanumeric	Optional. Indicates whether you want to validate the DUNS number. Valid values are Y or N. Default is N.
29 – 35	Custom Field 11 – Custom Field 17	15 alphanumeric	Optional. Any vendor information you want to maintain.
36 – 38	Custom Field 18 – Custom Field 20	25 alphanumeric	Optional. Any vendor information you want to maintain.

Vendor Contact Transaction

The following table lists the order and describes the content of each field used to add vendor contact information. Vendor master and vendor location information must be added before you can add vendor contact information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VMCT. The identifier for the vendor contact transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Address Type	1 alphanumeric	Optional. An identifier for the type of address for the contact. You can have one vendor contact for all contact types or one vendor contact for each contact type. Valid values are O - Order from R - Remit to T - Return to.
5	Contact Name	45 alphanumeric	Required. The name of the person at the vendor company to contact when you need to ask questions or resolve issues about your vendor accounts.
6	Contact Title	30 alphanumeric	Optional. The business title of the contact person at the vendor place of business.
7	Phone International Code	4 alphanumeric	Optional. A code identifying the international phone access number.

Field	Name	Length	Description
8	Phone Country Code	4 alphanumeric	Optional. A code identifying the country for the phone system.
9	Phone Area Code	4 alphanumeric	Optional. A code identifying a geographic area (for example, phone system service area) within the phone system.
10	Phone Number	12 alphanumeric	Optional. The number for a telephone within the area of a phone system.
11	Phone Extension	5 alphanumeric	Optional. The part of the telephone number that accesses an individual phone connected to the main phone line.
12	Fax International Code	4 alphanumeric	Optional. The form or style for entering a facsimile (fax).
13	Fax Country Code	4 alphanumeric	Optional. A code identifying the country for a fax.
14	Fax Area Code	4 alphanumeric	Optional. A code identifying a geographic area for a fax.
15	Fax Number	12 alphanumeric	Optional. The number to call to send a fax.
16	Contact Email Address	255 alphanumeric	Optional. The email address of the contact person at the vendor place of business.

Vendor Bank Transaction

For information about processing the Vendor Bank transaction, see What Happens During Processing in this guide.

The following table lists the order and describes the content of each field used to add vendor bank information. Vendor master and vendor location information must be added before you can add vendor bank information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNBK. The identifier for the vendor bank transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Type of Payment	4 alphanumeric	Required. An identifier for the form of payment. Valid values are ACH - Automated Clearing House BT - Bank transfer BACS - Bankers Automated Clearing Service CEMX - CEMTEX CHK - Check DLOT - Letter of Transfer DRFT - Draft IBT - International bank transfer ICHK - International check XFER - International letter of transfer.
5	Bank Account Number	17 alphanumeric	Required. A unique identification number the bank assigns to the bank account for the vendor.

Field	Name	Length	Description
6	Bank Name	70 alphanumeric	Required. The name of the financial institution where the vendor has its account.
7	Bank Number	17 alphanumeric	Optional. The identification number for the vendor's bank. For IBAN purposes, the following countries require that you enter the first 4 uppercase letters of the BIC/SWIFT code followed by the numeric bank code.
			Country — **Bank Number** UK — *AAAAnnnnnn* or *AAAAnn-nn-nn* Ireland — *AAAAnnnnnn* or *AAAAnn-nn-nn* Netherlands — *AAAAnnnn* or *AAAAnn nn*
8	Branch Name	70 alphanumeric	Optional. The branch name of the financial institution where the vendor has its account.
9	Country	2 alphanumeric	Optional. The country for the address.
10	Address Line 1	35 alphanumeric	Optional. The first line of an address.
11	Address Line 2	35 alphanumeric	Optional. The second line of an address.
12	Address Line 3	35 alphanumeric	Optional. The third line of an address.
13	Address Line 4	35 alphanumeric	Optional. The fourth line of an address.
14	Address Line 5	35 alphanumeric	Optional. The fifth line of an address.
15	Street or PO Box 1	35 alphanumeric	Optional. The street name or post office box.
16	Street or PO Box 2	35 alphanumeric	Optional. The street name or post office box.
17	Street or PO Box 3	35 alphanumeric	Optional. The street name or post office box.
18	City	35 alphanumeric	Optional. The name of the city for the address.

Field	Name	Length	Description
19	Country Sub-Entity Code	9 alphanumeric	Optional. A break down of a country into other identifiers such as state, province, or county.
20	Postal Code	9 alphanumeric	Optional. Indicates the delivering post office. This field is used for address formats in the United States, Asia, Australia, and Japan.
21	Address Country Code	2 alphanumeric	Optional. A code identifying the country for an address.
22	Address Format	6 alphanumeric	Optional. The form or style for entering an address.
23	Standard Entry Class Code	3 alphanumeric	Optional. Indicates the format method used for a payment on tape. Used for ACH (Automatic Clearing House). Valid values are CCD – Cash concentration or disbursement CTP – Corporate trade payments CTX – Corporate trade exchange PPD – Prearranged payments and deposits.
24	Name on Account	45 alphanumeric	Optional. The name on the vendor bank account.
25	Building Society Roll Number	18 alphanumeric	Optional. A unique number that identifies a building society account to which payments are made for a vendor. It is used in the United Kingdom for BACS (Banker's Automated Clearing System).
26	Bank Account Type	1 alphanumeric	Optional. The type of bank account to use for electronic payments. Valid values are D - Deposit I - Investment S - Savings.
27	Payment Means	3 alphanumeric	Optional. A user-defined identifier used for validation against the Pan American Edifact Board. Used for BT (Bank Transfer) and IBT (International Bank Transfer) types of payment.

Field	Name	Length	Description
28	Payment Channel Code	3 alphanumeric	Optional. Provides the bank with the method to make a transmitted payment. Used for BT (Bank Transfer) and IBT (International Bank Transfer). Valid values are ACH - Automatic Clearing House BOP - Financial Institution Option PBC - Pay by Check ZZZ - Mutually Defined.
29	Funds Available	1 numeric	Optional. Identifies the time period, after a payment is made, when funds will be made available. Used for IBT (International Bank Transfer). Valid values are 0 - Immediately upon payment 1 - One day after payment 2 - Two days after payment 3 - Three days after payment.
30	Account Code	1 alphanumeric	Optional. An identifier for the type of Banker's Automated Clearing System (BACS) account. Valid values are 0, 1, 2, 4 - Deposit 3 - Savewise 5 - Deposit Bond 6 - Loan.
31	Guarantor Required	1 alphanumeric	Optional. Indicates whether drafts must be guaranteed for a vendor. Valid values are Y or N. Default is N.
32	Acceptor ID	30 alphanumeric	Optional. SmartStream user ID for the person who performs acceptance of drafts received from a vendor.

Field	Name	Length	Description
33	Draft Class	5 alphanumeric	Optional. The type of draft normally processed by the vendor. Valid values are BCC - Traditional Promissory Note (paper version) Blank - No default draft type BOR - Promissory Note LCC - Traditional Bill of Exchange (paper version) LCRNR - Bill of Exchange LCRR - Bill of Exchange requiring acceptance.
34	Prenote Status	1 alphanumeric	Conditional. Indicates the vendor status during the prenotification approval process. Default is A. Valid values are A - Authorize C - Complete I - Incomplete. If the value for the type of payment (field 4) is ACH, you must enter a value in this field.
35	Prenote Date	10 date	Conditional. Date the prenotification was sent. If the value for the type of payment (field 4) is ACH, you must enter a date in this field.
36	IBAN Check Digit	2 alphanumeric	Optional. If the vendor's bank account uses an international bank account number (IBAN), you must enter the IBAN check digit provided by the bank administering the account in this field. The IBAN check digit is calculated according to the requirements defined by the European Committee for Banking Standards (ECBS). It is used with an algorithm to confirm that the international bank account number is entered correctly. All components of the IBAN are validated (country code, IBAN check digit, and domestic bank account number).

Vendor Payables Transaction

The following table lists the order and describes the content of each field used to add vendor payables and vendor earnings and withholding information. Vendor master and vendor location information must be added before you can add vendor payables and vendor earnings and withholding information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNPY. The identifier for the vendor payables transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Status	1 alphanumeric	Optional. Indicates the current status of the vendor. Valid values are A - Active F - Factor I - Inactive Q - Quick V - Privileged.
5	Remit Hold Indicator	1 alphanumeric	Optional. Places all payments to a vendor location on hold. Valid values are Y or N. Default is N.
6	Terms	17 alphanumeric	Optional. A user-defined identifier for the policy that determines cash discounts, trade discounts, and net payment terms for the vendor.
7	Payment Method	5 alphanumeric	Required if the matching control is ERS. Indicates how you want Payables to generate payments.

Field	Name	Length	Description
8	Factor Vendor ID	10 alphanumeric	Optional. The identifier for a factor vendor receiving the vendor's receivables.
9	Factor Vendor Location	3 alphanumeric	Required if you defined a factor vendor with a location. The location identifier of the factor vendor.
10			Not used in this transaction.
11	Payment Option	1 alphanumeric	Optional. Indicates how you want Payables to generate payments. Valid values are D - Single payment per due date E - Single payment per entity I - Single payment per invoice.
12	Tax ID	20 alphanumeric	Optional. A unique identifier assigned by the tax authority associated with earnings and withholding.
13	Earnings and Withholding Rule	4 alphanumeric	Optional. The type of earnings and withholding rule that applies to a vendor location. Valid values are 1099 - United States Internal Revenue Service CIT - Construction Industry Tax PPS - Prescribed Payment System T4A - Revenue Canada.
14	Earnings and Withholding Category	5 alphanumeric	Optional. A user-defined identifier used in the classification of 1099 documents for tax reporting purposes.
15	Withholding Option	7 alphanumeric	Optional. Identifies the options for processing withholdings. Valid values are HOLDPMT - Hold payment if no vendor tax ID NOWITHH - Do not hold WHNOTIN - Hold only if no tax ID is present WITHHLD - Always hold.

Field	Name	Length	Description
16	First B Notice	1 alphanumeric	Optional. Indicates the first tax identification number notice received from the Internal Revenue Service (IRS). For 1099 earnings and withholding rule. Valid values are Y or N. Default is N.
17	First B Notice Date	10 date	Optional. The date of the first tax identification number notice from the Internal Revenue Service (IRS). For 1099 earnings and withholding rule.
18	Second B Notice	1 alphanumeric	Optional. Indicates the second tax identification number notice received from the Internal Revenue Service (IRS). For 1099 earnings and withholding rule. Valid values are Y or N. Default is N.
19	Second B Notice Date	10 date	Optional. The date of the second tax identification number notice received from the Internal Revenue Service (IRS). For 1099 earnings and withholding rule.
20	Certificate Number 1	9 alphanumeric	Optional. A number assigned to a certificate that a government issues as evidence of tax withholding to the owner of the certificate. For T4A, PPS, and CIT earnings and withholding rules.
21	Certificate 1 Type	1 alphanumeric	Optional. The classification of withholding for the first certificate. Use for T4A, PPS, and CIT earnings and withholding rules. Valid values are E - Exemption V - Variation.
22	Certificate 1 Begin Date	10 date	Optional. The starting date of a vendor's certificate of tax withholding. For T4A, PPS, and CIT earnings and withholding rules.
23	Certificate 1 End Date	10 date	Optional. The ending date of a vendor's certificate of tax withholding. For T4A, PPS, and CIT earnings and withholding rules.

Field	Name	Length	Description
24	Certificate 1 Withholding Rate	6 numeric	Optional. The percentage deducted from a payment and withheld for the government. For T4A, PPS, and CIT earnings and withholding rules.
25	Certificate Number 2	9 alphanumeric	Optional. A number assigned to a certificate that a government issues as evidence of tax withholding to the owner of the certificate. For T4A, PPS, and CIT earnings and withholding rules.
26	Certificate 2 Type	1 alphanumeric	Optional. The classification of withholding for the second certificate. Use for T4A, PPS, and CIT earnings and withholding rules. Valid values are E - Exemption V - Variation.
27	Certificate 2 Begin Date	10 date	Optional. The starting date of a vendor's certificate of tax withholding. For T4A, PPS, and CIT earnings and withholding rules.
28	Certificate 2 End Date	10 date	Optional. The ending date of a vendor's certificate of tax withholding. For T4A, PPS, and CIT earnings and withholding rules.
29	Certificate 2 Withholding Rate	6 numeric	Optional. The percentage deducted from a payment and withheld for the government. For T4A, PPS, and CIT earnings and withholding rules.
30	Drafts Allowed	1 alphanumeric	Optional. Indicates whether you want to use drafts to pay invoices. Valid values Y or N. Default is N.
31	Unit Price Tolerance %	6 numeric	Optional. Indicates the percentage of the purchase order discount price of an item that can be invoiced and still allow the invoice to be added without an exception. Valid values are 0 – 1,000,000.

Field	Name	Length	Description
32	Matching Control Code	1 alphanumeric	Optional. An identifier that indicates how the 3-way matching process occurs for purchase orders to a vendor. Default is 1. Valid values are 1 - (PO/Receipt/Invoice) The scheduled matching process matches the invoice with the related purchase order and receipt. 2 - (Evaluated Receipt Settlement - ERS) The scheduled matching process matches information from the receipt to the purchase order.
33	Prefix	20 alphanumeric	Optional. A meaningful identifier that precedes the generated number. Although the prefix can be up to 20 characters, the total length of the invoice number, including prefix and suffix, cannot exceed 20 characters.
34	Suffix	20 alphanumeric	Optional. A meaningful identifier that follows the generated number. Although the suffix can be up to 20 characters, the total length of the invoice number, including prefix and suffix, cannot exceed 20 characters.
35	Current Value	10 numeric	Required if the Matching Control is Evaluated Settlement Receipt (ERS). A value that represents the next number to generate for an ERS invoice.
36	Maximum Value	10 numeric	Required if the Matching Control is Evaluated Settlement Receipt (ERS). The last number of the series of next available invoice numbers.
37	Increment	4 numeric	Required if the Matching Control is Evaluated Settlement Receipt (ERS). The value that is added to the next available number to determine the next ERS invoice number to be used. For example, if you enter 5 in this field and the current value of the next available invoice number is 0, the invoice numbers generated are 0, 5, 10, 15, and so on. Default is 0.
38	User-defined Data	20 alphanumeric	Optional. Free-form text you can use for any other Construction Industry Scheme (CIS) needs.

Field	Name	Length	Description
39	CIS Certificate Type 1	5 alphanumeric	Optional. For work carried out within the Construction Industry Scheme (CIS), contractors must have a tax certificate (CIS5) and subcontractors must have either a registration card (CIS4) or a tax certificate (CIS6). If CIT – Construction Industry Tax is selected in the Withholding Rule field and no certificate information is entered, the subcontractor is assigned a CIS type of CIS4. Valid Values: CIS5 CIS6
40	User-defined Data 2		Optional. Free-form text than you can use for any other CIS needs.
41	CIS Certificate Type 2		Optional. For work carried out within the Construction Industry Scheme (CIS), contractors must have a tax certificate (CIS5) and subcontractors must have either a registration card (CIS4) or a tax certificate (CIS6). If CIT – Construction Industry Tax is selected in the Withholding Rule field and no certificate information is entered, the subcontractor is assigned a CIS type of CIS4. Valid Values: CIS5 CIS6
42	User-defined Data 3		Optional. Free-form text that you can use for any other Construction Industry Scheme (CIS) needs.

Vendor Tax Transaction

The following table lists the order and describes the content of each field used to add vendor tax information. Vendor master and vendor location information must be added before you can add vendor tax information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNTX. The identifier for the vendor tax transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Tax Rule	20 alphanumeric	Required. A user-defined identifier for a set of processing and calculation options used in calculating tax amounts for a specific tax authority on a payment request.
5	Default Tax Indicator	1 alphanumeric	Optional. Indicates whether you want to use the tax rule as a default for this vendor location. Valid values are Y or N. Default is N.
6	Tax Rate Code	5 alphanumeric	Optional. A user-defined identifier that represents a percentage used to calculate tax amounts.
7	Tax Reclaimable Code	5 alphanumeric	Optional. A user-defined identifier that represents the percentage of tax paid that is reclaimable.
8	Tax Miscellaneous Charge Rate Code	5 alphanumeric	Optional. A user-defined identifier that represents tax rates of miscellaneous charges for this vendor.

Field	Name	Length	Description
9	Tax Freight Rate Code	5 alphanumeric	Optional. A user-defined identifier that represents a percentage used to tax freight charges separately on payment requests for a vendor location.
10	Vendor Tax ID	20 alphanumeric	Optional. A unique identifier that a taxing authority issues.

Vendor Payables Comments Transaction

The following table lists the order and describes the content of each field used to add vendor payables comments. Vendor master, vendor location, and vendor payables information must be added before you can add vendor payables comments.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNCM. The identifier for the vendor payables comments transaction.
2	Vendor	10 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required. A unique, user-defined identifier for a vendor location.
4	Comment Type	1 alphanumeric	Required. The type of comments you want to be available. Valid values are A - All D - Display only E - External I - Internal.
5	Comments	255 alphanumeric	Required. Free-form text that you can use for explanations or descriptions for the invoice.

Vendor Address Transaction

The following table lists the order and describes the content of each field used to add vendor address information. Vendor master and vendor location information must be added before you can add vendor address information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNAD. The identifier for the vendor address transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Address Type	1 alphanumeric	Optional. An identifier for the type of address for the contact. You can have one vendor contact for all address types or one vendor contact for each address type. Valid values are O - Order from R - Remit to T - Return to.
5	Address Format	6 alphanumeric	Optional. The form or style for entering an address.
6	Address Line 1	35 alphanumeric	Optional. The first line of an address.
7	Address Line 2	35 alphanumeric	Optional. The second line of an address.
8	Address Line 3	35 alphanumeric	Optional. The third line of an address.
9	Address Line 4	35 alphanumeric	Optional. The fourth line of an address.
10	Address Line 5	35 alphanumeric	Optional. The fifth line of an address.

Field	Name	Length	Description
11	Street or PO Box 1	35 alphanumeric	Optional. The street name or post office box.
12	Street or PO Box 2	35 alphanumeric	Optional. The street name or post office box.
13	Street or PO Box 3	35 alphanumeric	Optional. The street name or post office box.
14	City	35 alphanumeric	Optional. The name of the city for the address.
15	Country Sub Entity Code	9 alphanumeric	Optional. A break down of a country into other identifiers such as state, province, or county.
16	Postal Code	9 alphanumeric	Optional. Indicates the delivering post office. This field is used for address formats in the United States, Asia, Australia, and Japan.
17	Address Country Code	2 alphanumeric	Optional. A code identifying the country for an address.
18	Phone Format Code	6 alphanumeric	Optional. The form or style for entering a telephone number.

Vendor Accounting Distributions Transaction

The following table lists the order and describes the content of each field used to add vendor default accounting distribution information. Vendor master and vendor location information must be added before you can add vendor accounting distribution information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNDA. The identifier for the vendor accounting distributions transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Distribution Type	3 alphanumeric	Required. The type of distribution for which the alias is defined, such as expense, sales, accounts receivable, and cash. Valid values are 300 - Expenditure 306 - Freight Expense 308 - Miscellaneous Charges 400 - AP Liability 401 - Drafts Payable Liability.
5	Ledger Entity	5 alphanumeric	Optional. The accounting key element for the ledger company.
6 – 17	Key 1 – Key 12	30 alphanumeric	Optional. An accounting key element can be an account, subaccount, responsibility center, or other user-defined part of your accounting structure.

Vendor Purchasing Transaction

The following table lists the order and describes the content of each field used to add vendor purchasing information. Vendor master and vendor location information must be added before you can add vendor purchasing information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VPUR. The identifier for the vendor purchasing transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Site	4 alphanumeric	Required. An identifier for a logical or physical location where your enterprise conducts business.
5	Status	1 alphanumeric	Optional. Indicates the current status of the vendor. Valid values are A - Active F - Factor I - Inactive V - Privileged. A status of Q (Quick) is currently invalid for VPUR transactions.
6	Order Hold	1 alphanumeric	Optional. Indicates whether to place all purchase orders for the vendor on hold. Valid values are Y or N. Default is Y.
7	Vendor Certified Option	1 alphanumeric	Optional. Indicates whether this vendor is certified for purchasing and manufacturing business. Valid values are Y or N. Default is N.

Field	Name	Length	Description
8	Terms ID	17 alphanumeric	Optional. A unique identifier for the policy that determines cash discounts, trade discounts, and net payment terms for the vendor.
9	Ship Via	8 alphanumeric	Optional. A unique, user-defined identifier for the shipping method the vendor uses. You can enter a form of transportation or the name of a specific carrier.
10	FOB Point	2 alphanumeric	Optional. A user-defined identifier for the point at which the buyer assumes responsibility for the goods ordered. The goods are considered to be free on board (FOB).
11	Freight Terms	8 alphanumeric	Optional. A user-defined identifier for standard freight terms.
12	Authorized Freight	1 alphanumeric	Optional. Indicates whether tax freight charges are authorized for the vendor. Valid values are Y or N. Default is N.
13	Authorized Miscellaneous Charges	1 alphanumeric	Optional. Indicates whether miscellaneous charges are authorized for the vendor. Valid values are Y or N. Default is N.
14	Over Tolerance %	6 character	Optional. The maximum percentage over the order quantity that you can receive without generating a receiving exception. Valid values are 0 – 999.99 or blank.
15	Late Days Allowed	3 alphanumeric	Optional. A negotiated number of days after the promise date that your enterprise accepts a vendor's delivery without generating a receiving exception.
16	Early Days Allowed	3 alphanumeric	Optional. A negotiated number of days before the promise date that you accept a vendor's delivery without generating a receiving exception.
17	Fax Format	6 alphanumeric	Optional. Format used for fax.
18	Fax Area City	4 alphanumeric	Optional. Area city for the fax.

Field	Name	Length	Description
19	Fax Country	4 alphanumeric	Optional. Fax country.
20	Fax International Code	4 alphanumeric	Optional. International code for the fax.
21	Fax Number	12 alphanumeric	Optional. Fax number.
22	Interchange Recipient Name	7 alphanumeric	Optional. The name of the person you want to receive a purchase order sent by electronic data interchange (EDI).
23	Network Name	8 alphanumeric	Optional. Name of the network.
24	Interchange Recipient ID	35 alphanumeric	Optional. The identification number of the person you want to receive a purchase order sent by electronic data interchange (EDI).
25	Purchase Order Send EDI	1 alphanumeric	Optional. EDI a print order for the vendor. Valid values are Y or N.
26	Purchase Order Send Fax	1 alphanumeric	Optional. Fax a purchase order for the vendor. Valid values are Y or N.
27	Purchase Order Send Print	1 alphanumeric	Optional. Print a purchase order for the vendor. Valid values are Y or N.
28	Change Notice Send EDI	1 alphanumeric	Optional. EDI a change notice for the vendor. Valid values are Y or N.
29	Change Notice Send Fax	1 alphanumeric	Optional. Fax a change notice for the vendor. Valid values are Y or N.
30	Change Notice Send Print	1 alphanumeric	Optional. Print a change notice for the vendor. Valid values are Y or N.

Field	Name	Length	Description
31	Purchase Order Send Default	1 alphanumeric	Optional. Default method for sending purchase orders to the vendor. Valid values are E - EDI F - Fax P - Print.
32	Change Notice Send Default	1 alphanumeric	Optional. Default method for sending change notices to the vendor. Valid values are E - EDI F - Fax P - Print.
33	Nature of Transaction	2 alphanumeric	Optional. Indicates the nature of transaction for Intrastat reporting.
34	Country of Consignment	2 alphanumeric	Optional. A member state where the goods were shipped from. Used for Intrastat reporting. Example values are DK - Denmark FR - France LU - Luxembourg NL - Netherlands.
35	Presumed Mode of Transport	1 alphanumeric	Optional. The actual or presumed mode of transport used for the arrival. Used for Intrastat reporting. Example values are 1 - Maritime or sea 2 - Rail 3 - Road 4 - Air.

Field	Name	Length	Description
36	Regime	2 alphanumeric	Optional. Indicates the dispatch of goods. Used for Intrastat reporting. Example values are 11 - Normal arrival of goods 19 - Dispatch exempted from VAT 22 - Dispatch which will be taxable in the EC distention state.
37	Vendor Certification Level	1 numeric	Optional. A user-defined level of certification for the vendor. You can enter a value only if the Vendor Certified option value is Y. Valid values are 0 – 5. Default is 0 (None).
38	Vendor Certification Date	10 date	Optional. Date you certified the vendor. You can enter this value only if the Vendor Certified option is Y.
39	Packing Slip Required on Receipt	1 alphanumeric	Optional. Indicates whether a packing slip is required for an ERS receipt. Valid values are Y or N. Default is N.
40	Bill of Lading Required on Receipt	1 alphanumeric	Optional. Indicates whether a bill of lading is required for an ERS receipt. Valid values are Y or N. Default is N.
41	Under Tolerance %	6 character	Optional. The maximum percentage under the order quantity that you can receive before receiving can automatically close a purchase order line schedule short during the receiving process. Valid values are 0 – 99.99 or blank.
42	Lead Time in Days	3 character	Optional. The number of days a vendor requires to deliver an item. Valid values are 0 – 999 or blank.

Vendor Classification Transaction

The following table lists the order and describes the content of each field used to add vendor classification information. Vendor master, vendor location, and vendor purchasing information must be added before you can add vendor classification information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VNCL. The identifier for the vendor classification transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Site	4 alphanumeric	Required. A unique identifier for a physical or logical location where your enterprise conducts business.
5	Classification ID	8 alphanumeric	Required. A user-defined classification identifier for your vendors. For example, FOREIGN indicates vendors outside your country.

Vendor Purchasing Comments Transaction

The following table lists the order and describes the content of each field used to add vendor purchasing comments. Vendor master, vendor location, and vendor purchasing information must be added before you can add vendor purchasing comments.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VPCM. The identifier for the vendor purchasing comments transaction.
2	Vendor	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required. A unique, user-defined identifier for a vendor location.
4	Site	4 alphanumeric	Required. The logical or physical location where you conduct business. Sites are the highest level of location you define for your enterprise.
5	Comments	255 alphanumeric	Required. Free-form text you can use for explanations or descriptions for this invoice.
6	Comment Type	1 alphanumeric	Required. The type of comments you want to be available. Valid values are A - All D - Display only E - External I - Internal.

Assign Commodities to Vendor Transaction

The following table lists the order and describes the content of each field for assigning commodities to a vendor. Vendor master, vendor location, and vendor purchasing information must be added before you can add information for assigning commodities to vendors.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Field	Name	Length	Description
1	Transaction ID	4 alphanumeric	Required. Value is always VCOM. The identifier for the assign commodities to vendor transaction.
2	Vendor ID	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
3	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
4	Commodity Code	4 alphanumeric	Required. An identifier for a group of goods or services that share common characteristics for trade or commerce.

Vendor Item Transaction Layouts

Vendor item scheduled processing uses text files to hold information for scheduled processing transactions. These text files hold a series of values (fields), separated by a delimiter. SmartStream requires that a tab be used as the delimiter.

Use the scheduled vendor item transaction layout to map the transactions received from a vendor into a text file in the SmartStream format.

Entering Field Information

Use the table in this section to map the incoming data from the vendor to the text file. The table contains the order of fields for the transaction and the format or actual codes for each field.

Delimiters

Separate each field in a transaction layout with the column delimiter established in the bulk copy parameters. If you leave a field blank, be sure to enter the delimiter and a space to hold its place.

Alphanumeric Fields

Alphanumeric fields can contain alphabetic letters, numbers, or a combination of both.

Numeric Fields

Numeric fields, which include monetary amount fields, can contain only numbers. Follow these guidelines when entering numeric values:

- Enter the number with or without a decimal point. If you do not enter a decimal point, a whole number is assumed.
- Enter the appropriate number of decimal places for the specific field.
- Do not enter thousand separators.
- Indicate a negative number with a minus sign (–) before the number.

The currency of the amount determines how many numerals SmartStream displays to the right of the decimal point.

For add transactions, data errors in numeric fields default to zero.

Date Fields

You can enter dates in two formats: yyyymmdd or the DBMS default date format. DBMS date formats vary; for example, in the United States the date format could be mm/dd/yyyy, and in Europe, it could be dd/mm/yyyy. If you do not know the DBMS default date format, contact your SmartStream system administrator.

Follow these guidelines when entering dates in the DBMS default date format:

- Use a separator between month, day, and year.
- Enter month and day with or without leading zeros. For example, enter March as 3 or 03.

- Enter the year with or without the century. When you enter only the last two digits of the year, Vendor uses the
  - Twenty-first century (2000s) if you enter 01 through 49
  - Twentieth century (1900s) if you enter 50 through 99.

Note: To override these defaults, enter all four digits for the year.

Prerequisites

You must define values for several vendor item fields before you can enter the values on the vendor item scheduled transactions. The following table lists the fields that require predefined values, the windows you define the values on, and the transactions that contain the fields.

Field	Window You Define the Values for the Field On	Vendor Item Transactions Containing the Field and Corresponding Window
Vendor ID	Vendor Master	All
Vendor Location	Vendor Location	All
Commodity	Commodity	VIT1 - Vendor Item Master
	Site Commodity	VIT2 - Vendor Item Definition
Site	Site	VIT2 - Vendor Item Definition
		VIT3 - Vendor Item Price
		VIT4 - Vendor Item Manufacturer
		VIT5 - Vendor Item Comments
		VIT6 - Assign Classification to Vendor Item
Item	Item	VIT2 - Vendor Item Definition
	Site Item	
Primary Purchase UOM	Unit of Measure	VIT2 - Vendor Item Definition
Country of Origin	Country Selection	VIT2 - Vendor Item Definition
International Commodity	International Commodity	VIT2 - Vendor Item Definition
Transaction Currency	Currency Code	VIT3 - Vendor Item Price
Unit of Measure	Unit of Measure	VIT3 - Vendor Item Price
Classification ID	Classifications	VIT6 - Assign Classification to Vendor Item
Participating Site	Site	VIT7 - Assign Participating Sites
Purchase Site	Site	VIT7 - Assign Participating Sites

Next Step Processing

No Next Step processing exists for vendor item scheduled processing. Only informational and error correction messages are generated.

Vendor Item Transactions

You can enter seven add transactions and four change transactions for vendor items.

The transaction layout for these transactions contains a set number of fields. However, each transaction may not use all fields. Unused fields must have a space as the value.

If you use the Bulk Copy program to add the transactions, the program enters any trailing delimiters and spaces for you. If you do not use this program, you must enter all trailing delimiters and spaces.

The following table lists vendor item transactions and the transaction types available for each:

Transaction	Corresponding Window	Transaction Types Available
VIT1	Vendor Item Master	Add and Change
VIT2	Vendor Item Definition	Add and Change
VIT3	Vendor Item Price	Add and Change
VIT4	Vendor Item Manufacturer	Add and Change
VIT5	Vendor Item Comments	Add
VIT6	Assign Classification to Vendor Item	Add
VIT7	Assign Participating Sites	Add

Change Transactions

The following information applies to vendor item change transactions:

- You can change only certain values using a change transaction. These fields are indicated with an *X* in the Change column in the tables that follow.
- If you do not enter values in the fields you can change on a change transaction, or if you enter values that are identical to what already exists, no message is generated. The transaction proceeds normally.
- If you enter an invalid value on a change transaction, the original value is retained and you receive an error message giving the invalid value.
- The scheduled process validates the combination of key fields in a record. If a key field value in a record is missing, you get a message that the record does not exist.

Vendor Item Must Be Active for Change Transactions

You cannot process change transactions containing an inactive vendor item. If you attempt to do so, the transaction is deleted from the input table.

Instead, you can

- Activate the vendor item online and make the desired changes online.
- Activate the vendor item online and then submit the change transaction.
- Create and submit a new transaction that activates the vendor item and makes the changes.

Vendor Item Master Transaction

The following table lists the order and describes the content of each field used to add or change vendor item master information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

In the following table, an *X* indicates a value you can change using a change transaction.

Field	Name	Length	Change	Description
1	Transaction Code	4 alphanumeric		Required. Value is always VIT1. The identifier for the vendor item master transaction.
2	Action	1 alphanumeric		Required. An identifier for the type of transaction. Default is 1 (Add). Valid values are 1 - Add 2 - Change.
3	Vendor ID	10 alphanumeric		Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric		Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric		Required. A unique, vendor-defined identifier for a specific good or service.
6	Unused field	4 spaces		4 spaces required.
7	Description	35 alphanumeric	X	Required. A brief description of the item you are purchasing from a vendor. If you do not enter a description, the transaction is added and you receive the data field error message, Missing Description. You need to enter the description online.

Field	Name	Length	Change	Description
8	Commodity	4 alphanumeric	X	Optional. A unique, user-defined identifier for a group of related items to use in assigning commodities to a buyer or vendor and in categorizing vendor items.

Vendor Item Definition Transaction

The following table lists the order and describes the content of each field used to add or change vendor item definition information. Vendor item master information must be added before you can add vendor item definition information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Note: You can add or change the values for the Fixed Asset Indicator, Service Indicator, and International Commodity fields **only if** no item is cross-referenced to the vendor item.

In the following table, an *X* indicates a value you can change using a change transaction.

Field	Name	Length	Change	Description
1	Transaction Code	4 alphanumeric		Required. Value is always VIT2. The identifier for the vendor item definition transaction.
2	Action	1 alphanumeric		Required. An identifier for the type of transaction. Default is 1 (Add). Valid values are 1 - Add 2 - Change.
3	Vendor ID	10 alphanumeric		Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric		Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric		Required. A unique, vendor-defined identifier for a specific good or service.

Field	Name	Length	Change	Description
6	Site	4 alphanumeric		Required. A unique identifier for a physical or logical location where your enterprise conducts business. The site automatically becomes the purchase site as well for this transaction.
7	Item	26 alphanumeric	X	Optional. A user-defined identifier for goods or a service you want to associate with this vendor item. If entered - A conversion factor must be defined between the item UOM and the primary purchase UOM - The vendor item purchase site must match the item purchase site - The vendor item commodity must match the item commodity - The status of the item must be Active.
8	Minimum Order Quantity	15 numeric	X	Optional. The least amount of a particular vendor item that you can purchase. Value values are If discrete, 1 – 999,999,999 If indiscrete, 1 – 999,999,999.99999.
9	Lead Time in Days	3 character	X	Optional. The number of days a vendor requires to deliver an item. Valid values are 0 – 999 or blank.
10	Contract ID	30 alphanumeric	X	Optional. The number of the contact between the purchasing department and vendor.
11	Preferred Vendor Item Indicator	1 alphanumeric	X	Optional. Indicates whether the vendor item is the preferred choice for the associated internal item. Valid values are Y or N. Default is N.

Field	Name	Length	Change	Description
12	Fixed Asset Indicator	1 character	X	Optional. Indicates whether the item is a fixed asset. Default is N.
13	Service Indicator	1 alphanumeric		Optional. Indicates whether the vendor item is a service. Valid values are Y or N. Default is N.
14	Primary Purchase UOM	4 alphanumeric	X	Required for add transactions. Optional for change transactions. The most common purchase unit of measure (UOM) associated with the vendor item.
15	Inactive Indicator	1 alphanumeric	X	Optional. Indicates whether the vendor item is inactive. Default is N. Valid values are Y - Inactive N - Active.
16	Country of Origin	2 alphanumeric	X	Optional. The country that produces the vendor item.
17	International Commodity Code	15 alphanumeric	X	Optional. A user-defined identifier for a group of similar items to use in assigning a buyer and in categorizing vendor items.
18	Net Mass	15 numeric	X	Optional. The net weight of a vendor item expressed in pounds (lbs) or kilograms (kgs). Valid values are 0 – 999,999,999.99999.
19	Unit of Mass	1 numeric		Required if Net Mass is entered. Unit the mass (weight) is measured in. Valid values are 0 - KGS 1 - LBS.
20	Over Tolerance %	6 character	X	Optional. The maximum percentage over the order quantity that you can receive without generating a receiving exception. Valid values are 0 – 999.99 or blank.

Field	Name	Length	Change	Description
21	Under Tolerance %	6 character	X	Optional. The maximum percentage under the order quantity that you can receive before receiving can automatically close a purchase order line schedule short during the receiving process. Valid values are 0 – 99.99 or blank.
22	Commodity	4 character	X	Optional. The commodity associated with the vendor item. The default value comes from the vendor item master if this value is defined for the current site.

Vendor Item Price Transaction

The following table lists the order and describes the content of each field used to add or change vendor item price information. Vendor item master and vendor item definition information must be added before you can add vendor item price information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Note: You cannot add vendor item price information for participating sites.

In the following table, an *X* indicates a value you can change using a change transaction.

Field	Name	Length	Change	Description
1	Transaction Code	4 alphanumeric		Required. Value is always VIT3. The identifier for the vendor item price transaction.
2	Action	1 alphanumeric		Required. An identifier for the type of transaction. Default is 1 (Add). Valid values are 1 - Add 2 - Change.
3	Vendor ID	10 alphanumeric		Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric		Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric		Required. A unique, vendor-defined identifier for a specific good or service.
6	Site	4 alphanumeric		Required. A unique identifier for a physical or logical location where your enterprise conducts business.

Field	Name	Length	Change	Description
7	Transaction Currency	3 alphanumeric		Required. A unique identifier for the currency of the vendor item price. If the vendor location currency is equal to single, the transaction currency value must match the currency value on the vendor location table. Valid values exist on the currency table.
8	Effective Date	10 date		Required. The date the price information for the vendor item goes into effect.
9	Unit of Measure	4 alphanumeric		Required. Code for the standard measurement used for one unit of the vendor item, such as each, feet, gallons, or pounds.
10	Quantity	15 numeric		Required. The number of vendor items you want to purchase. Quantity can be expressed in various units of measure such as each, feet, gallons, or pounds. Valid values are If UOM is discrete, 1 – 999,999,999 If UOM is indiscreet, 1 – 999,999,999.99999.
11	Expiration Date	10 date	X	Optional. The date the price information for the vendor item price expires. This date must be later than the effective date.
12	Unit Price	15 numeric	X	Required. The price for one unit of an item. Value values are 0.000000 – 99,999,999.999999.

Vendor Item Manufacturer Transaction

The following table lists the order and describes the content of each field used to add or change vendor item manufacturer information. Vendor item master and vendor item definition information must be added before you can add vendor item manufacturer information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Note: You cannot add vendor item manufacturer information for participating sites.

In the following table, an *X* indicates a value you can change using a change transaction.

Field	Name	Length	Change	Description
1	Transaction Code	4 alphanumeric		Required. Value is always VIT4. The identifier for the vendor item manufacturer transaction.
2	Action	1 alphanumeric		Required. An identifier for the type of transaction. Default is 1 (Add). Valid values are 1 - Add 2 - Change.
3	Vendor ID	10 alphanumeric		Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric		Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric		Required. A unique, vendor-defined identifier for a specific good or service.
6	Site	4 alphanumeric		Required. A unique identifier for a physical or logical location where your enterprise conducts business.

Field	Name	Length	Change	Description
7	Manufacturer Item	35 alphanumeric		Required. A unique, user-defined identifier for a good or service provided by a specific manufacturer.
8	Manufacturer	16 alphanumeric		Required. The name for a manufacturer of a specific good or service.
9	Preferred Manufacturer	1 alphanumeric	X	Optional. Indicates whether the manufacturer is the preferred source for a vendor item. You can define only one manufacturer and manufacturer item as preferred for a single vendor, location, and vendor item combination. Valid values are Y or N. Default is N.

Vendor Item Comments Transaction

The following table lists the order and describes the content of each field used to add vendor item comments. Vendor item master and vendor item definition information must be added before you can add comments.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Note: You cannot add comment information for participating sites.

Change transactions are not available for this transaction.

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required. Value is always VIT5. The identifier for the vendor item comments transaction.
2	Action	1 alphanumeric	Required. An identifier for the type of transaction. Valid value is 1 (Add). Default is 1.
3	Vendor ID	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric	Required. A unique, vendor-defined identifier for a specific good or service.
6	Site	4 alphanumeric	Required. A unique identifier for a physical or logical location where your enterprise conducts business.
7	Comment Type	1 alphanumeric	Required. Identifies the type of comments. Default is A. Valid values are A - All D - Display only E - External I - Internal.

Field	Name	Length	Description
8	Comment Text	255 alphanumeric	Required. Free-form text that you can use for explanations or descriptions.

Vendor Item Classifications Transaction

The following table lists the order and describes the content of each field used to add vendor item classification information. Vendor item master and vendor item definition information must be added before you can add vendor item classification information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Note: You cannot add classifications for participating sites.

Change transactions are not available for this transaction.

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required. Value is always VIT6. The identifier for the vendor item Classification transaction.
2	Action	1 alphanumeric	Required. An identifier for the type of transaction. Valid value is 1 (Add). Default is 1.
3	Vendor ID	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric	Required. A unique, vendor-defined identifier for a specific good or service.
6	Site	4 alphanumeric	Required. A unique identifier for a physical or logical location where your enterprise conducts business.
7	Classification ID	8 alphanumeric	Required. Identifier for grouping vendor items. The status of the Classification ID must be Active. Valid values exist in the Classification table.

Vendor Item Participating Site Transaction

The following table lists the order and describes the content of each field used to add vendor item participating site information. Vendor item master and vendor item definition information must be added before you can add vendor item participating site information.

Enter the appropriate value for each field, followed by the delimiter (a tab). If you choose to omit an optional field, enter a space and the delimiter before making the entry for the next field.

Change transactions are not available for this transaction.

Field	Name	Length	Description
1	Transaction Code	4 alphanumeric	Required. Value is always VIT7. The identifier for the vendor item participating site transaction.
2	Action	1 alphanumeric	Required. An identifier for the type of transaction. Valid value is 1 (Add). Default is 1.
3	Vendor ID	10 alphanumeric	Required. A unique, user-defined identifier for a vendor.
4	Vendor Location	3 alphanumeric	Required if defined for the vendor. A unique, user-defined identifier for a vendor location.
5	Vendor Item ID	35 alphanumeric	Required. A unique, vendor-defined identifier for a specific good or service.
6	Participating Site	4 alphanumeric	Required. A unique identifier for a site that can requisition a vendor item, but cannot purchase the vendor item or update the vendor item information. You can assign a participating site to only one purchase site for a single vendor, vendor location, and vendor item combination.
7	Purchase Site	4 alphanumeric	Required. A unique identifier for the site that has responsibility for ordering and maintaining a particular vendor item.

8 Product Processing Contentions

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About Processing Contentions

Some activities and scheduled processes should not be processed simultaneously. The following section lists all the activities or scheduled processes, grouped by product, that contend with other activities and scheduled processes when they are run simultaneously. The severity of the contention is also identified for each activity.

The following types of severity are identified:

Severity	Description
Cannot Run	SmartStream prevents you from processing these activities simultaneously.
Will Lock	These activities should not be processed simultaneously because SmartStream temporarily locks up if one process has exclusive locks on a data page or table and another process is waiting to access rows on that data page.
Not Recommended	Some activities change policy information. If one activity is changing policy information and another activity is editing or updating information based on policy, the edits and updates are inconsistent.

Allocations

Allocations scheduled processing contends with reporting when they are run simultaneously.

Recommendation: Do not run scheduled processing and reporting simultaneously.

Asset Management

The following Asset Management activities and scheduled processes contend with other activities and scheduled processes when they are processed simultaneously.

Note: When the severity in the following tables is Cannot Run and the asset entity being used online is included in the process controller set for the scheduled process currently running (New Year, Period Depreciation, or Depreciation Projection), Asset Management prevents you from performing the activities or scheduled process.

Asset and Asset Policy Maintenance Activities

The following activities contend with online asset maintenance and policy activities if they are run simultaneously:

Activity	Severity
Asset Management Reporting - selecting a majority of the assets	Not Recommended

The following scheduled processes contend with online asset maintenance and policy activities if they are run simultaneously:

Scheduled Process	Severity
Period Depreciation	Cannot Run
New Year Processing	Cannot Run
Asset Maintenance	Will Lock
Depreciation Projection	Will Lock, Not Recommended
Posting (Ledger)	Will Lock, Not Recommended
Revaluation (Ledger)	Will Lock, Not Recommended

Asset Maintenance

The following activities contend with the Asset Maintenance scheduled process if they are run simultaneously:

Activities	Severity
Asset Management Reporting - selecting a majority of the assets	Will Lock, Not Recommended
All Asset online activities	Not Recommended

The following scheduled processes contend with the Asset Maintenance scheduled process if they are run simultaneously:

Scheduled Process	Severity
Period Depreciation	Cannot Run
New Year	Cannot Run
Depreciation Projection	Cannot Run
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended
SmartStream Projects Copy Projects Asset Transactions	Cannot Run

Period Depreciation

The following activities contend with the Period Depreciation scheduled process if they are run simultaneously for the same entity:

Activities	Severity
Asset Management Reporting	Not Recommended
All Asset online activities	Cannot Run

The following scheduled processes contend with the Period Depreciation scheduled process if they are run simultaneously for the same entity:

Scheduled Process	Severity
New Year Processing	Cannot Run
Depreciation Projection	Cannot Run
Asset Maintenance	Cannot Run
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended

New Year Processing

The following activity contends with the New Year Processing scheduled process if they are run simultaneously for the same entity:

Activity	Severity
Asset Management Reporting	Not Recommended

The following scheduled processes contend with the New Year Processing scheduled process if they are run simultaneously for the same entity:

Scheduled Process	Severity
Period Depreciation	Cannot Run
Depreciation Projection	Cannot Run
Asset Maintenance	Cannot Run
Posting Journals	Will Lock, Not Recommended

Depreciation Projection

The following activity contends with the Depreciation Projection scheduled process if they are run simultaneously for the same entity:

Activities	Severity
Asset Management Reporting - for the same assets	Will Lock, Not Recommended
All Asset online activities	Not Recommended

The following scheduled processes contend with the Depreciation Projection scheduled process if they are run simultaneously for the same entity:

Scheduled Process	Severity
Period Depreciation	Cannot Run
New Year Processing	Cannot Run
Asset Maintenance	Cannot Run

Asset Management Reporting

Asset Management policy and asset maintenance activities performed online contend with Asset reporting if they are performed simultaneously.

Recommendation: Do not run these activities simultaneously.

Billing

The following scheduled processes contend with the Billing Document Load scheduled process if they are run simultaneously.

Scheduled Process	Severity
Billing Document Load	Cannot Run
Billing Document Load - Updating incomplete billing documents	Not Recommended
Billing Document Printing	Not Recommended

Credit Management

The following Credit Management scheduled processes contend when they are processed simultaneously.

Credit Update Scheduled Processing

Credit Update contends with the Credit Update scheduled process if they are run simultaneously.

The following reports contend with the Credit Update scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Activity Statistics Scheduled Processing

Activity Statistics contends with the Activity Statistics scheduled process if they are run simultaneously.

The following reports contend with the Activity Statistics scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Dunning

The following scheduled processes contend with Dunning if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Will Lock
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended
Receivable Account Transaction	Not Recommended
Credit Account Transaction	Not Recommended

The following reports contend with Dunning if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Currency

The following Currency activities and scheduled processing contend with other activities and scheduled processing when they are processed simultaneously.

Currency Policy Activities

The following scheduled processes contend with the Currency policy activities such as Currency Code, Rate Entity, Currency to Rate Entity Association, Rate Type, Currency Block, and rate entry activities if they are run simultaneously:

Scheduled Process	Severity
Rate Explosion	Not Recommended
Asynchronous Download of Currency Rates	Not Recommended
Average Rate Calculation	Not Recommended
High-Volume Deletion of Rates	Not Recommended

Rate Explosion

Currency policies and rate entry activities contend with rate explosion if they are run simultaneously.

The following scheduled processes contend with rate explosion if they are run simultaneously:

Scheduled Process	Severity
Asynchronous Download of Currency Rates	Will Lock, Not Recommended
Average Rate Calculation	Will Lock, Not Recommended
High-Volume Deletion of Rates	Will Lock, Not Recommended

Average Rate Calculation

Rate entry activities contend with the Average Rate Calculation scheduled process if they are run simultaneously.

The following scheduled processes contend with the Asynchronous Download of Currency Rates scheduled process if they are run simultaneously:

Scheduled Process	Severity
Rate Explosion	Not Recommended
Asynchronous Download of Currency Rates	Not Recommended
High-Volume Deletion of Rates	Not Recommended

High-Volume Deletion of Rates

Rate entry activities contend with the High-Volume Deletion of Rates scheduled process if they are run simultaneously.

The following scheduled processes contend with the High-Volume Deletion of Rates scheduled process if they are run simultaneously:

Scheduled Process	Severity
Rate Explosion	Not Recommended
Asynchronous Download of Currency Rates	Not Recommended
Average Rate Calculation	Not Recommended

Euro

Euro Booking Currency Conversion contends with all other SmartStream activity. Because the booking currency conversion updates policy tables, transactions, and journals in the various subledgers, it is not recommended that you perform online or scheduled activity or reporting simultaneously.

Funds Control

The following Funds Control activities and scheduled processes contend with other activities and scheduled processes when they are processed simultaneously.

Funds Checking Module

The Funds Control policy activities contend with funds checking if they are run simultaneously. Changing policies at the same time you are funds checking transactions online or offline may cause inconsistencies.

The following scheduled processes contend with funds checking if they are run simultaneously:

Scheduled Process	Severity
Transaction Upload	Not Recommended
Rollup Structure Explosion	Not Recommended

Journal Create

The Funds Control policy activities contend with the Funds Control Journal Create scheduled process if they are run simultaneously.

The following scheduled processes contend with the Funds Control Journal Create scheduled process if they are run simultaneously:

Scheduled Process	Severity
Transaction Upload	Not Recommended
Budget Upload	Not Recommended
Budget Release	Not Recommended
Rollup Structure Explosion	Will Lock, Not Recommended

Transaction Upload

The Funds Control policy activities contend with the Funds Control Transaction Upload scheduled process if they are run simultaneously.

The following scheduled processes contend with the Funds Control Transaction Upload scheduled process if they are run simultaneously:

Scheduled Process	Severity
Journal Create	Not Recommended
Budget Upload	Not Recommended

Scheduled Process	Severity
Budget Release	Not Recommended
Rollup Structure Explosion	Will Lock, Not Recommended

Budget Upload

The Funds Control policy activities contend with the Funds Control Budget Upload scheduled process if they are run simultaneously.

The following scheduled processes contend with the Funds Control Budget Upload scheduled process if they are run simultaneously:

Scheduled Process	Severity
Journal Create	Not Recommended
Transaction Upload	Not Recommended
Budget Release	Not Recommended
Rollup Structure Explosion	Will Lock, Not Recommended

Budget Release

The Funds Control policy activities contend with the Funds Control Budget Release scheduled process if they are run simultaneously.

The following scheduled processes contend with the Funds Control Budget Release scheduled process if they are run simultaneously:

Scheduled Process	Severity
Journal Create	Not Recommended
Transaction Upload	Not Recommended
Budget Upload	Not Recommended
Rollup Structure Explosion	Will Lock, Not Recommended

Rollup Structure Explosion

The Funds Control policy activities contend with the Funds Control Rollup Structure Explosion scheduled process if they are run simultaneously.

The following scheduled processes contend with the Funds Control Rollup Structure Explosion scheduled process if they are run simultaneously:

Scheduled Process	Severity
Journal Create	Will Lock, Not Recommended
Transaction Upload	Will Lock, Not Recommended
Budget Upload	Will Lock, Not Recommended
Budget Release	Will Lock, Not Recommended

Ledger

The following Ledger activities and scheduled processes contend with other activities and scheduled processes when they are processed simultaneously.

Unposted Journals Activity

The Ledger policy activities contend with the Unposted Journals activity if they are run simultaneously.

The following scheduled processes contend with the Unposted Journals activity if they are run simultaneously:

Scheduled Process	Severity
Load (all types)	Not Recommended
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended
Year End	Not Recommended

Journal Load

The following activities contend with the Journal Load scheduled process if they are run simultaneously:

Scheduled Process	Severity
Ledger Policies	Not Recommended

The following scheduled processes contend with the Journal Load scheduled process if they are run simultaneously:

Scheduled Process	Severity
Load - Chart of Accounts	Not Recommended
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended
Year End	Not Recommended
Average Balance Update	Not Recommended

Load Chart of Accounts

The following scheduled processes contend with the Load Chart of Accounts scheduled process if they are run simultaneously:

Scheduled Process	Severity
High-Volume Maintenance	Will Lock, Not Recommended
Posting Journals	Will Lock, Not Recommended
Year End	Will Lock, Not Recommended
Average Balance Update	Not Recommended

High-Volume Maintenance

The following activities contend with the High-Volume Maintenance scheduled process if they are run simultaneously:

Scheduled Process	Severity
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended
Year End	Will Lock, Not Recommended
Average Balance Update	Not Recommended

Posting

The following activities contend with the Posting scheduled process if they are run simultaneously:

Activities	Severity
Ledger policy activities	Will Lock, Not Recommended
Ledger/Journal/Currency Reporting	Will Lock, Not Recommended

The following scheduled processes contend with the Posting scheduled process if they are run simultaneously:

Scheduled Process	Severity
Revaluation	Will Lock, Not Recommended
Year End	Will Lock, Not Recommended

Revaluation

The following activities contend with the Revaluation scheduled process if they are run simultaneously:

Activity	Severity
Ledger policies	Not Recommended

The following scheduled processes contend with the Revaluation scheduled process if they are run simultaneously:

Scheduled Process	Severity
Reporting	Will Lock, Not Recommended
Year End	Will Lock, Not Recommended
Average Balance Update	Not Recommended

Year End

The following activities contend with the Year End scheduled process if they are run simultaneously:

Scheduled Process	Severity
Ledger Policies	Will Lock, Not Recommended
Reporting	Will Lock, Not Recommended
Average Balance Update	Not Recommended

Average Balance Update

The following activities contend with Average Balance Update scheduled process if they are run simultaneously:

Scheduled Process	Severity
Ledger Policies	Will Lock, Not Recommended
Reporting	Will Lock, Not Recommended

Projects

The following section identifies Projects activities, scheduled processes, and service programs that you cannot process simultaneously.

Balance Reorganization Scheduled Processing

The following activities contend with the Balance Reorganization scheduled process if they are run simultaneously:

Activity	Severity
Projects Balance Maintenance (for the same project server)	Cannot Run
Projects Balance Reorganization Request (for the Request ID that Balance Reorganization is currently processing)	Cannot Run

The following scheduled processes contend with the Balance Reorganization scheduled process if they are run simultaneously:

Scheduled Process	Severity
Other Balance Reorganization jobs	Cannot Run
Projects Balance Load (for the same project server)	Cannot Run
Projects Posting (for the same project server)	Cannot Run
Projects Year Open (for the same project server)	Cannot Run

Capitalization Scheduled Processing

The following activities contend with the Capitalization scheduled process if they are run simultaneously:

Activity	Severity
Capitalization Component Policy (for the same project)	Cannot Run
Capitalization Policy (for the same project)	Cannot Run
Capitalization Request (for the same project)	Cannot Run
Capitalization Transaction (for the same project)	Cannot Run

Activity	Severity
Projects Balance Maintenance (for the same project)	Cannot Run
Projects Status Maintenance (for the same project entity)	Cannot Run

The following scheduled processes contend with the Capitalization scheduled process if they are run simultaneously:

Scheduled Process	Severity
Copy Projects Asset Transactions (for the same project server)	Cannot Run
Other Capitalization jobs	Cannot Run
Project and Component Load (for the same project entity)	Cannot Run
Project Journal Load (for the same project entity)	Cannot Run
Projects Balance Load (for the same project entity)	Cannot Run
Projects Posting (for the same project entity)	Cannot Run
Projects Year Open (for the same project entity)	Cannot Run

Copy Projects Asset Transactions Scheduled Processing

The following scheduled processes contend with the Copy Projects Asset Transactions scheduled process if they are run simultaneously:

Scheduled Process	Severity
Capitalization (for the same project server)	Cannot Run
Other Copy Projects Asset Transactions jobs	Cannot Run
SmartStream Asset Management Asset Maintenance (for the same project entity)	Cannot Run

Project and Component Load Scheduled Processing

The following activities contend with the Project and Component Load scheduled process if they are run simultaneously:

Activity	Severity
Capitalization Component Policy (for the same project)	Cannot Run
Capitalization Policy (for the same project)	Cannot Run
Capitalization Request (for the same project entity)	Cannot Run
Capitalization Transaction (for the same project)	Cannot Run
Component (for the same project)	Cannot Run
Component Accounting Distribution (for the same component)	Cannot Run
Component Cost Element (for the same project)	Cannot Run
Project (for the same project)	Cannot Run
Project Accounting Distribution (for the same project)	Cannot Run
Project Amount Class (for the same project)	Cannot Run
Project Cost Element (for the same project)	Cannot Run
Project Entity Amount Class (for the same project entity)	Cannot Run
Projects Balance Maintenance (for the same project)	Cannot Run
Projects Status Maintenance (for the same project)	Cannot Run
Unposted Project Journal (or the same project)	Cannot Run
SmartStream Structures (for the Work Breakdown structure point representing the same project)	Cannot Run

The following scheduled processes contend with the Project and Component Load scheduled process if they are run simultaneously:

Scheduled Process	Severity
Capitalization (for the same project entity)	Cannot Run
Other Project and Component Load jobs	Cannot Run
Project Journal Load (for the same project entity)	Cannot Run
Projects Allocation (for the same project entity)	Cannot Run

Scheduled Process	Severity
Projects Balance Load (for the same project)	Cannot Run
Projects Posting (for the same project entity)	Cannot Run
Projects Year Open (for the same project entity)	Cannot Run

Project Journal Load Scheduled Processing

The following activities contend with the Project Journal Load scheduled process if they are run simultaneously:

Activity	Severity
Component (for the same project entity)	Cannot Run
Component Accounting Distribution (for the same project entity)	Cannot Run
Component Cost Element (for the same project entity)	Cannot Run
Project (for the same project entity)	Cannot Run
Project Amount Class (for the same project entity)	Cannot Run
Project Entity Amount Class (for the same project entity)	Cannot Run
Projects Status Maintenance (for the same project entity)	Cannot Run
Unposted Project Journal (for the same project entity)	Cannot Run
SmartStream Structures (for any Work Breakdown structure point in the same project entity)	Cannot Run

The following scheduled processes contend with the Project Journal Load scheduled process if they are run simultaneously:

Scheduled Process	Severity
Capitalization (for the same project entity)	Cannot Run
Other Project Journal Load jobs (for the same project server)	Cannot Run
Project and Component Load (for the same project entity)	Cannot Run
Projects Posting (for the same project entity)	Cannot Run

Scheduled Process	Severity
Projects Year Open (for the same project entity)	Cannot Run

Projects Allocation Scheduled Processing

The following activity contends with the Projects Allocation scheduled process if they are run simultaneously:

Activity	Severity
Projects Allocation Cycle (for the same cycle)	Not Recommended
Projects Allocation Request (for the same request)	Not Recommended
Projects Allocation Pool (for the same pool)	Not Recommended
Projects Allocation Distribution (for the same distribution)	Not Recommended
Projects Balance Maintenance (for the same project entity)	Cannot Run

The following scheduled processes contend with the Projects Allocation scheduled process if they are run simultaneously:

Scheduled Process	Severity
Other Projects Allocation jobs	Cannot Run
Project and Component Load (for the same project)	Cannot Run
Projects Balance Load (for the same project entity)	Cannot Run
Projects Posting (for the same project entity)	Cannot Run
Projects Year Open (for the same project entity)	Cannot Run

Projects Balance Load Scheduled Processing

The following activities contend with the Projects Balance Load scheduled process if they are run simultaneously:

Activity	Severity
Component (for the same project)	Cannot Run
Component Cost Element (for the same project)	Cannot Run
Project (for the same project)	Cannot Run
Project Amount Class (for the same project)	Cannot Run
Project Entity Amount Class (for the same project entity)	Cannot Run
Projects Balance Maintenance (for the same balance key)	Cannot Run
Projects Status Maintenance (for the same project)	Cannot Run
SmartStream Structures (for the Work Breakdown structure point representing the same project)	Cannot Run

The following scheduled processes contend with the Projects Balance Load scheduled process if they are run simultaneously:

Scheduled Process	Severity
Balance Reorganization (for the same project server)	Cannot Run
Capitalization (for the same project)	Cannot Run
Other Projects Balance Load jobs	Cannot Run
Project and Component Load (for the same project)	Cannot Run
Projects Allocation (for the same project entity)	Cannot Run
Projects Posting (for the same project entity)	Cannot Run
Projects Year Open (for the same project entity)	Cannot Run

Projects Posting Scheduled Processing

The following activities contend with the Projects Posting scheduled process if they are run simultaneously:

Activity	Severity
Projects Balance Maintenance (for the same project entity)	Cannot Run
Projects Posting Request window (for the Request ID that Projects Posting is currently processing)	Cannot Run
Unposted Project Journal (for the same project journal)	Cannot Run

The following scheduled processes contend with the Projects Posting scheduled process if they are run simultaneously:

Scheduled Process	Severity
Balance Reorganization (for the same project server)	Cannot Run
Capitalization (for the same project entity)	Cannot Run
Other Projects Posting jobs for the same Request ID in the same project entity	Cannot Run
Project and Component Load (for the same project)	Cannot Run
Project Journal Load (for the same project)	Cannot Run
Projects Allocation (for the same project entity)	Cannot Run
Projects Balance Load (for the same project entity)	Cannot Run
Projects Year Open (for the same project entity)	Cannot Run

Projects Year Open Scheduled Processing

The following activities contend with the Projects Year Open scheduled process if they are run simultaneously:

Activity	Severity
Projects Balance Maintenance (for the same project entity)	Cannot Run
Projects Status Maintenance (for the same project entity)	Cannot Run
Projects Year Open Request (for the Request ID that Projects Year Open is currently processing)	Cannot Run

Activity	Severity
Unposted Project Journal (for the same project entity)	Cannot Run

The following scheduled processes contend with the Projects Year Open scheduled process if they are run simultaneously:

Scheduled Process	Severity
Balance Reorganization (for the same project server)	Cannot Run
Capitalization (for the same project entity)	Cannot Run
Other Projects Year Open jobs (for the same project server)	Cannot Run
Project and Component Load (for the same project entity)	Cannot Run
Project Journal Load (for the same project entity)	Cannot Run
Projects Allocation (for the same project entity)	Cannot Run
Projects Balance Load (for the same project entity)	Cannot Run
Projects Posting (for the same project entity)	Cannot Run

Project Validation Services Program

The following scheduled processes contend with the Project Validation service program if they are run simultaneously:

Scheduled Process	Severity
Capitalization (for the same project entity)	Cannot Run
Project and Component Load (for the same project)	Cannot Run
Project Journal Load (for the same project entity)	Cannot Run
Projects Balance Load (for the same project)	Cannot Run
Projects Year Open (for the same project entity)	Cannot Run

Receivables

The following Receivables scheduled processes contend when they are processed simultaneously.

Receivable Transaction Scheduled Processing

The following scheduled processes contend with the Receivable Transaction scheduled process if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Will Lock
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended

The following reports contend with the Receivables Transaction scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Receivable Posting Scheduled Processing

The following scheduled processes contend with the Receivable Posting scheduled process if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Will Lock
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended

The following reports contend with the Receivables Posting scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Receivable Account Transaction Scheduled Processing

The following scheduled processes contend with the Receivable Account Transaction scheduled process if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Not Recommended
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended
Draft Transaction	Not Recommended
Credit Transaction	Not Recommended

The following reports contend with the Receivables Account Transaction scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Aging Scheduled Processing

The following scheduled processes contend with the Aging scheduled process if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Will Lock
Receivable Posting	Will Lock
Aging	Will Lock
Remittance Transaction	Will Lock
Remittance Posting	Will Lock

The following reports contend with the Aging scheduled process if they are run simultaneously:

Reports	Severity
Statements	Will Lock
Dunning	Will Lock

Remittance Transaction Scheduled Processing

The following scheduled processes contend with the Remittance Transaction scheduled process if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Will Lock
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended
Draft Transaction	Not Recommended
Draft Generation	Not Recommended

The following reports contend with the Remittance Transaction scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Remittance Posting Scheduled Processing

The following scheduled processes contend with the Remittance Posting scheduled process if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Will Lock
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended

The following reports contend with the Remittance Posting scheduled process if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Statements

The following scheduled processes contend with statements if they are run simultaneously:

Scheduled Process	Severity
Receivable Transaction	Not Recommended
Receivable Posting	Not Recommended
Aging	Will Lock
Remittance Transaction	Not Recommended
Remittance Posting	Not Recommended
Draft Transaction	Not Recommended
Draft Generation	Not Recommended
Receivable Account Transaction	Not Recommended
Credit Account Transaction	Not Recommended

The following reports contend with statements if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Draft Generation

The following scheduled processes contend with draft generation if they are run simultaneously:

Scheduled Process	Severity
Receivable Account Transaction	Not Recommended
Receivable Posting	Not Recommended

Scheduled Process	Severity
Remittance Transaction	Not Recommended
Aging	Will Lock
Remittance Posting	Not Recommended

The following reports contend with draft generation if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Draft Transactions

The following scheduled processes contend with draft transactions if they are run simultaneously:

Scheduled Process	Severity
Receivable Account Transaction	Not Recommended
Receivable Posting	Not Recommended
Remittance Transaction	Not Recommended
Aging	Will Lock
Remittance Posting	Not Recommended

The following reports contend with draft transactions if they are run simultaneously:

Reports	Severity
Statements	Not Recommended
Dunning	Not Recommended

Vendor

The following Vendor activities contend with other activities when they are processed simultaneously.

Vendor Reports

The following scheduled processes contend with Vendor reports if they are run simultaneously:

Scheduled Process	Severity
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended

Vendor Maintenance Activity

The following scheduled processes contend with Vendor maintenance if they are run simultaneously:

Scheduled Process	Severity
Posting Journals	Will Lock, Not Recommended
Revaluation	Will Lock, Not Recommended

9 Address and Phone Formats

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9-1 Address Formats
9-10 Phone Formats

Address Formats

This section includes a list of address format codes, descriptions, transaction numbers, and field descriptions. The list is organized by country.

Asia

Asia has only one address format:

Address Format Code	Address Format Description	Field Number	Field Name
AS1	Address line 1	Field 6	Address Line 1
	Address line 2	Field 7	Address Line 2
	Address line 3	Field 8	Address Line 3
	Address line 4	Field 9	Address Line 4
	Address line 5	Field 10	Address Line 5
	Address line 6	Field 11	Street or PO Box 1
	Post code	Field 16	Postal Code
	Country	Field 17	Address Country Code

Australia

Australia has four available address formats:

Address Format Code	Address Format Description	Field Number	Field Name
AU1	PO box	Field 11	Street or PO Box 1
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Post Code	Field 16	Postal Code
AU2	Line 1	Field 6	Address Line 1
	PO box	Field 11	Street or PO Box 1
	City	Field 14	City
	State	Field15	Country Sub Entity Code
	Post Code	Field16	Postal Code
AU3	Line 1	Field 6	Address Line 1
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Post Code	Field 16	Postal Code
AU4	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Post Code	Field 16	Postal Code
	Country	Field 17	Address Country Code

Canada

Canada has five available address formats:

Address Format Code	Address Format Description	Field Number	Field Name
CA1	Address line 1	Field 11	Street or PO Box 1
	City	Field 14	City
	Province	Field 15	Country Sub Entity Code
	Postal Code	Field 16	Postal Code
CA2	Line 1	Field 6	Address Line 1
	Address line 1	Field 11	Street or PO Box 1
	City	Field 14	City
	Province	Field 15	Country Sub Entity Code
	Postal Code	Field 16	Postal Code
CA3	Line 1	Field 6	Address Line 1
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	Province	Field 15	Country Sub Entity Code
	Postal Code	Field 16	Postal Code
CA4	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Address line 3	Field 13	Street or PO Box 3
	City	Field 14	City
	Province	Field 15	Country Sub Entity Code
	Postal Code	Field 16	Postal Code

Address Format Code	Address Format Description	Field Number	Field Name
CA5	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Address line 3	Field 13	Street or PO Box 3
	City	Field 14	City
	Province	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Postal Code	Field 16	Postal Code

Eastern Caribbean

Eastern Caribbean has only one address format:

Address Format Code	Address Format Description	Field Number	Field Name
EC1	Address line 1	Field 6	Address Line 1
	Address line 2	Field 7	Address Line 2
	Street	Field 11	Street or PO Box 1
	City or Region	Field 14	City
	Country	Field 17	Address Country Code
	Parish	Field 15	Country Sub Entity Code
	Postal Code	Field 16	Postal Code

France

France has only one available address format:

Address Format Code	Address Format Description	Field Number	Field Name
FR1	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Postal code	Field 16	Postal Code
	City	Field 14	City
	Country	Field 17	Address Country Code

Generic

Generic has five available address formats:

Address Format Code	Address Format Description	Field Number	Field Name
GN1	Address line 1	Field 11	Street or PO Box 1
	Location 1	Field 14	City
	Location 2	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Postal Code	Field 16	Postal Code
GN2	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Location 1	Field 14	City
	Location 2	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Postal Code	Field 16	Postal Code
GN3	Line 1	Field 6	Address Line 1
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Location 1	Field 14	City
	Location 2	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Postal Code	Field 16	Postal Code
GN4	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Location 1	Field 14	City
	Location 2	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Postal Code	Field 16	Postal Code

Address Format Code	Address Format Description	Field Number	Field Name
GN5	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Line 3	Field 8	Address Line 3
	Line 4	Field 9	Address Line 4
	Line 5	Field 10	Address Line 5
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Address line 3	Field 12	Street or PO Box 3
	Location 1	Field 14	City
	Location 2	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Postal Code	Field 16	Postal Code

Japan

Japan has only one available address format:

Address Format Code	Address Format Description	Field Number	Field Name
JP1	Postal code	Field 16	Postal Code
	Address line 1	Field 6	Address Line 1
	Address line 2	Field 7	Address Line 2
	Address line 3	Field 8	Address Line 3
	Address line 4	Field 9	Address Line 4
	Address line 5	Field 10	Address Line 5
	Address line 6	Field 11	Street or PO Box 1
	Country	Field 15	Address Country Code

New Zealand

New Zealand has three available address formats:

Address Format Code	Address Format Description	Field Number	Field Name
NZ1	Address line 1	Field 11	Street or PO Box 1
	Suburb	Field 6	Address Line 1
	City/Town	Field 14	City
NZ2	Address line 1	Field 12	Street or PO Box 2
	Address line 2	Field 13	Street or PO Box 3
	Suburb	Field 6	Address Line 1
	City/Town	Field 14	City
NZ3	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Address line 3	Field 13	Street or PO Box 3
	Suburb	Field 6	Address Line 1
	City/Town	Field 14	City
	Country	Field 17	Address Country Code

United Kingdom

United Kingdom has five available address formats:

Address Format Code	Address Format Description	Field Number	Field Name
UK1	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	County	Field 8	Address Line 3
	Postal code	Field 16	Postal Code
UK2	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Town	Field 14	City
	County	Field 8	Address Line 3
	Postal code	Field 16	Postal Code

Address Format Code	Address Format Description	Field Number	Field Name
UK3	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	Postal code	Field 16	Postal Code
UK4	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	Postal code	Field 16	Postal Code
UK5	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	Address line 3	Field 13	Street or PO Box 3
	Location 1	Field 14	City
	Location 2	Field 8	Address Line 3
	Postal code	Field 16	Postal Code
	Country	Field 17	Address Country Code

United States

United States has five available address formats:

Address Format Code	Address Format Description	Field Number	Field Name
US1	Street	Field 11	Street or PO Box 1
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Zip Code	Field 16	Postal Code
US2	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Zip Code	Field 16	Postal Code

Address Format Code	Address Format Description	Field Number	Field Name
US3	Line 1	Field 6	Address Line 1
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Zip Code	Field 16	Postal Code
US4	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 12	Street or PO Box 2
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Zip Code	Field 16	Postal Code
US5	Line 1	Field 6	Address Line 1
	Line 2	Field 7	Address Line 2
	Address line 1	Field 11	Street or PO Box 1
	Address line 2	Field 122	Street or PO Box 2
	City	Field 14	City
	State	Field 15	Country Sub Entity Code
	Country	Field 17	Address Country Code
	Zip Code	Field 16	Postal Code

Phone Formats

The following table includes a list of phone format codes, descriptions, examples, and sample markets using phone formats.

Phone Format Code	Online Description	Example	Sample Markets
L7	Local 7	11111 2222222 33333	Spain, Greece
L8	Local 8	11111 22222222 33333	Italy
L34	Local 3+4	11111 222 3333 44444	United States, Canada, Brazil
L24	Local 2+4	11111 22 2222 33333	Germany, Denmark
L2222	Local 2+2+2+2	11111 22 22 22 22 33333	France
IL6	International/Local 6	111 222 33333 444444 55555	United Kingdom, New Zealand
IL7	International/Local 7	111 222 33333 4444444 55555	Spain, Greece
IL8	International/Local 8	111 222 33333 444 44444 55555	Italy
IL34	International/Local 3+4	111 222 33333 444 4444 55555	United States, Canada, Brazil
IL24	International/Local 2+4	111 222 33333 44 4444 55555	Germany, Denmark
IL2222	International/Local	111 222 33333 44 44 44 44 55555	France
GEN	Generic		

10 Fax COM DLL

Chapter Contents

10-1 About MPOFAX.dll
10-2 Using the MPOFAX.dll
10-3 Guidelines for Tailoring the MPOFAX.dll

About MPOFAX.dll

The **MPOFAX.dll** file contains sample code for faxing documents using any fax software that complies with component object model (COM) standards. This sample code uses the same COM format that the Captaris RightFax™ software uses.

If your enterprise has installed SmartStream Purchasing and RightFax Enterprise software, you can use the sample MPOFAX.dll to fax purchase orders to vendors. For more information, see Using the MPOFAX.dll section.

If your enterprise has installed SmartStream Purchasing and is using COM-compliant fax software other than RightFax, you must tailor the sample MPOFAX.dll using the guidelines provided in the Guidelines for Tailoring the MPOFAX.dll section, and then complete the steps listed in the Using the MPOFAX.dll section.

Note: In the future, SmartStream may provide the capability of faxing documents using the MPOFAX.dll in other SmartStream applications.

Using the MPOFAX.dll

You must complete the following steps before you can fax purchase orders.

Step	Action
1	Copy the **MPOFAX.dll** from the **utility\samples\faxintg** directory on the file server to each client or Job Server workstation you plan to use to fax purchase orders.
2	Use **regsvr32.exe** to register the MPOFAX.dll on the SmartStream client or Job Server workstation.
3	Refer to Producing Output for Purchase Orders in the *Financials Technical Reference* for additional requirements for faxing purchase orders.

Guidelines for Tailoring the MPOFAX.dll

This section provides guidelines to help you tailor the MPOFAX.dll to work with COM-compliant fax software that does not use the same COM format as the RightFax software.

Visual Basic Object

The following Visual Basic 6.0 statements are provided to integrate with the RightFax COM.dll.

Object Name	Object Type	Description
FaxObject	**User Object**	Main user object
IsFileOpen(Filename As String)	**Private Function**	Function that checks whether the supplied filename is opened by another process.
Delete_FaxFiles()	**Private Function**	After the creation of the FaxObject, this function is used to delete the PCL files in the default system folder and fax queue folders.
CreateFaxQueueFolder()	**Private Function**	After the creation of the FaxObject, this function is used to create the fax queue folder if it does not exist.
AttachFax()	**Public Function**	Function that copies the .pcl file from the default system folder into the fax queue folder, then attaches the .pcl file from the fax queue folder into the RightFax Fax object.
FaxSoftwareInstalled()	**Public Function**	Function that returns True or False if the RightFax client is installed.
SendFax()	**Public Function**	Function that sends the FaxObject to the RightFax server.
SetFaxItem()	**Public Function**	Function that creates the instance of the RightFax fax object. **Note**: This function call should be performed when all of the server information is present.
FromFaxNumber()	**Property**	The fax number of sender
FromName()	**Property**	The name of sender
FromVoiceNumber()	**Property**	The voice number of sender
NTAuthenticationServer()	**Property**	Option determining whether to use NT authentication; the default is False.
ServerName()	**Property**	The name of the RightFax server. When this property is updated, an instance of the RightFax Faxserver object is created.

Object Name	Object Type	Description
ToCompany()	**Property**	The company name of the recipient.
ToFaxNumber()	**Property**	The fax number of the recipient.
ToName()	**Property**	The name of the recipient.
ToVoiceNumber()	**Property**	The voice number of the recipient
UserIdServer()	**Property**	The user ID to use to connect to the RightFax server. This function is not used if NTAuthenticationServer variable is set to True.
UserPasswordServer()	**Property**	The user ID's password to use to connect to the RightFax server. This function is not used if NTAuthenticationServer variable is set to True.
FaxFolder()	**Property**	Your default system folder, where the GEACFAX.pcl file resides. The default value is **c:\winnt\system32**.

User Object Functions

FaxObject

The following sample code is needed to instantiate the user object. This instantiate statement builds the fax queue folder as needed.

```
Dim FaxItemObj as FaxObject
Set FaxItemObj = new FaxObject
```

Function Details

The following functions are visible within the FaxObject user object:

AttachFax

This function copies the .pcl file from the default system folder into the fax queue folder, then attaches the .pcl file from the fax queue folder into the RightFax fax object.

Input Parameters. None

Output Parameters. None

Returns. Yes

Variable	Type	Description
Boolean	Boolean	Returns True if the file was successfully attached to the RightFax fax object. Returns False if the file was not successfully attached to the RightFax fax object.

When to Call. This function should be called when a .pcl file is created in the default system folder. The AttachFax function searches for a .pcl file until it finds it; therefore, an infinite loop can occur if the .pcl file was not created, or if it is in the wrong folder.

Code Example

```
...

If FaxItemObj.AttachFax then
   Msgbox(“Successful attachment of the file")
End if
```

FaxSoftwareInstalled

This function returns True or False depending on whether the RightFax client is installed.

Input Parameters. None

Output Parameters. None

Returns. Yes

Variable	Type	Description
Boolean	Boolean	Returns True if the RightFax client is installed. Returns False if the RightFax client is not installed.

When to Call. This function should be called when the application needs to know if software is installed before it can update properties.

Function Details. This function checks whether the RightFax software is installed. It determines that RightFax is not installed if it cannot find the .dll file indicating installation in the RightFax directory.

Note: When RightFax is installed on the client, the default folder should not be changed.

Code Example

```
...

Set FaxItemObj = new FaxObject
If FaxItemObj.FaxSoftwareInstalled then
  Msgbox("Fax software successfully installed")
End if
```

SendFax

This function sends the FaxObject to the RightFax server.

Input Parameters. None

Output Parameters. None

Returns. Yes

Variable	Type	Description
Boolean	Boolean	Returns True if the send is successful. Returns False if the send is unsuccessful.

When to Call. This function should be called when sufficient properties and files are properly filled.

Function Details. This function updates the RightFax COM object properties with the values that the application has updated and sends the FaxObject instance to the RightFax server.

Code Example

```
...

If FaxItemObj.SendFax then
  Msgbox("Successfully sent the fax")
End if
```

SetFaxItem

This function creates the instance of the RightFax fax object. This function should be called when all of the server information is present.

Input Parameters. None

Output Parameters. None

Returns. Yes

Variable	Type	Description
Boolean	Boolean	Returns True if the RightFax fax object was successfully created. Returns False if the RightFax fax object was not successfully created.

When to Call. This function is called when a new instance of the fax object is needed.

Function Details. This function creates a new instance of a fax object. This function can be called multiple times to refresh the fax object for another set of faxes.

Note: The fax object is not the user object FaxObject.

Code Example

```
...
If FaxItemObj.SetFaxItem then
  Msgbox("Successfully created the fax object")
End if
...
If FaxItemObj.SetFaxItem then
  Msgbox("Successfully created the fax object, but previous instance is erased")
End if
```

SMARTStream®

Technical Reference
SmartStream Administration

Version 6.5

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1 Users and Security

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Users and Security Groups

In SmartStream, you create SmartStream users and security groups.

Note: You must have a SmartStream user ID to access Employee Self-Service for SmartStream.

Users

Any individual in your organization who uses SmartStream is a user and, therefore, must be established as a SmartStream user. The user's ID is created by the SmartStream administrator using the User window.

SmartStream User IDs and DBMS

The SmartStream user ID also doubles as the user's DBMS login ID. The DBMS login ID is also created on the User window by the SmartStream database administration process.

For more information, see SmartStream Database Administration.

Each time SmartStream is started and a standard logon prompt is displayed, SmartStream requires the user to enter valid credentials (user ID and password pair) before completing connection to the server.

Security Groups

Security groups are groups of users, usually having some common characteristics, such as belonging to the same department. Users can belong to only one security group, and users in the same security group usually require access to the same activities because of their common characteristics. For example, users in the Accounts Payable department probably need access to activities for performing invoice processing.

The benefit of using security groups is that they limit the amount of maintenance the SmartStream administrator must perform. You can assign activities once to a security group rather than having to assign them to each individual user. After the activities are assigned; however, you can override the security group's activity security for an individual user.

SmartStream Security Groups and DBMS

A SmartStream security group doubles as a DBMS group. The SmartStream database administration process creates DBMS groups using the ID provided on the Security Group window.

Users that are assigned to the SmartStream security group are also added to the equivalent DBMS group during the database administration process. This is necessary to simplify data controls processing.

Rather than having to maintain data controls for each user, a SmartStream security administrator can maintain data controls for the group. This is similar to SmartStream activity security processing where users are granted access to activities through their membership in a SmartStream security group.

More Information

For more information about

- Data controls, see The DBMS public Group and SmartStream
- Database administration, see SmartStream Database Administration.

Overview of Security

SmartStream security is based on SmartStream's interaction with DBMS. Users view data that resides on DBMS database tables. Any updates a user makes to that data are performed through stored procedures.

The DBMS public Group and SmartStream

SmartStream grants Select privileges on all database tables (with some exceptions) to the DBMS group named **public** (all users of the database). This means that a user with the proper activity security can view all of the data on the table (or tables) that the activity's window displays.

Note: Some application database objects that may contain sensitive information (for example, DBSglep) do not have Select privileges granted to public.

SmartStream also grants Execute privileges on all stored procedures to the DBMS public group. This means that users with the proper activity security can update the data on the table (or tables) that the activity's window displays.

To secure access to the data, all stored procedures that perform updates (insert, update, delete) authenticate that the stored procedure is being run from a SmartStream application. This prevents another source from running a SmartStream update stored procedure.

To limit a user's access to data further, and to limit the operations (delete, add, update) the user can perform on the data, SmartStream security uses one of the following methods:

- Activity security
- Data security

You control activity security using the Activity Security window. You control data security using the Security Data Control window. The data-security method is currently used by SmartStream Financials activities and by SmartStream Human Resources activities that contain Employee data.

For more information about using the Activity Security and Security Data Control windows, see Creating Users and Security Groups and Assigning Activities.

Securing Activities

In SmartStream, an activity usually has a corresponding activity window. You enter information on an activity window to complete the activity. Therefore, when you secure an activity, you also secure the associated activity window. You secure only the method of access to the data (the window), not the data itself.

Security Entities

Security for an activity can be qualified at two levels known as security entities. Security entities are not used by all SmartStream applications, but when they are used, they are defined by the application.

A security entity has associated, valid security entity values. These values are assigned using the Activity Security window.

SmartStream Supplies Management Example

In many SmartStream Supplies Management activities, security entity 1 is defined as site. For example, if your enterprise has Boston, Atlanta, and Chicago sites, security entity 1 is site, and the security entity values for site are Boston, Atlanta, and Chicago.

Using the SmartStream Activity Security window, you give users in your manufacturing plant in Boston access to the Inventory Adjustment window. Also, you want to restrict the inventory data the users can access with this window so that they can access inventory data only for the Boston site (security entity 1). Therefore, the users are granted access to inventory data that relates to Boston (a security entity 1 value), but they are restricted from accessing inventory data for the sites in Atlanta or Chicago.

Within site, a second security entity, such as stockroom, is used by some activities to restrict what information user can access with that activity even further.

Default Security Entity

For activities that do not use security entities, an asterisk (*) is displayed in the Security Entity 1 column and the Security Entity 2 column in the list area in the middle panel of the Activity Security window.

For activities that do use security entities, * is the default security entity; however, * does not grant access to any entity. During implementation, you must delete all security rows for entity * and explicitly establish security for each entity by activity.

Securing Data

SmartStream Financials and SmartStream Human Resources business processes have classified many activities as sensitive. Sensitive activity windows access a view of the data, rather than the actual DBMS table that contains the data. This is an extension of activity security that, given access to an activity window, allows the user to access the actual DBMS table that contains the data.

Control Types

Sensitive activities have control types, which roughly correspond to SmartStream security entities. They are defined within each SmartStream Financials and SmartStream Human Resources business process, and each control type is associated with a specific set of activities. A security administrator uses the Security Data Control window to assign activities with control types to users and security groups.

Note: A security group or user must be assigned an activity or activities through the Activity Security window before you can assign data controls.

Data Control Types

After you assign an activity and its associated control type to a user or security group, you must assign one of two kinds of data control. The two kinds of data control are

- Maintenance
- View.

Maintenance allows a user to perform add, delete, and update operations. View allows a user only to view data, not maintain the data in any way.

Data Control Ranges

At least one data control range (from-to) must be defined for the control type. You can use data control ranges to restrict the access a user or security group has to an activity even further. Activities associated with data control ranges can be viewed or maintained only when users and security groups are assigned a specific data control range.

Use the SmartStream Reference Tool to retrieve information about data control security.

SmartStream Financials Example

Many activities in SmartStream Financials are secured by the control type named Ledger Entity. (A ledger entity is defined as a group in the ledger that has its own accounting, reporting, and control requirements. It can, but does not necessarily, refer to a legal entity. A ledger entity can be a balanced set of books.)

Assume your enterprise has three subsidiaries (or ledger entities) that operate autonomously: SUB A, SUB B, and SUB C. You want to secure user access to a ledger activity that uses the Ledger Entity control type so that users can access only the data that relates to their ledger entity (or subsidiary). You also want users to be able to maintain the data.

The data control From-To range for ledger users at SUB A appears as follows:

From: SUB A **To:** SUB A

The users are assigned Maintenance data control for this activity.

Ledger users that need access to data for all of your ledger entities (for example, corporate management that require information on all ledger entities) have the following data control from-to range:

From: SUB A **To:** SUB C

In some applications, when you secure an activity, SmartStream automatically secures related activities. For example, in Periodic Calendar, when you secure the Periodic Calendar Year activity, the Periodic Calendar Period activity is also secured.

For information about SmartStream Financials control types and related activities, see the Security section in the Workflows, Databases, and Security chapter of the *Financials Technical Reference*.

SmartStream Human Resources Example

SmartStream Human Resources uses the Organization Structure and Point control type for SmartStream Human Resources activities that access Employee data. These activities also use SmartStream Structures to define the data control ranges.

Note: For more information about Structures, see the Structures online Help topics. For more information about how Structures is used with SmartStream Human Resources security, see the *SmartStream Human Resources Technical Reference*.

Assume you are defining data security for the following portion of a structure:

```
13100  Manufacturing Plant 1

       13110  Plant 1 Administration
       13120: Plant 1 Personnel Services
       13130  Plant 1 Medical Services
       13140  Plant 1 Purchasing
       13150  Plant 1 Facilities
       13160  Quality Control
       13170  Plant 1 Product Line 1A

13200  Manufacturing Plant 2

       13210  Plant 2 Administration
       13220  Plant 2 Personnel Services
       13230  Plant 2 Medical Services
       13240  Plant 2 Purchasing
       13250  Plant 2 Facilities
       13260  Quality Control
       13270  Plant 2 Product Line

              13271  Plant 2 Product Line 2B
              13272  Plant 2 Product Line 2C
```

You need to grant the human resource specialist at Plant 1 authority to maintain Employee data for the plant. So that the human resource specialist can access information for comparison purposes, you also need to grant authority to display, but not change, the data for Plant 2.

Therefore, you define two data control ranges for the HR specialist for each employee activity.

You assign this kind of data control...	For these points...
Maintenance	From: **13100** To: **13100**
Viewing	From: **13200** To: **13200**

Note: By entering the same point in both the From and To fields, you provide access to all points below that point in the structure. For example, from 13200 to 13200 gives access to points 13210 through 13272, as well as any other points in the 13200 range that are added at a later time.

To provide a user data security for an entire structure, you can enter the identifier of the top point in the structure in both the From and To fields.

Security Administrators

SmartStream security administrators are responsible for administering a set of activities, usually all of the activities related to a particular application (for example, accounts payable).

Prepackaged User IDs

SmartStream is delivered with the user ID of **DBS**. DBS is a prepackaged user that has already been given security to perform all SmartStream administrative activities, including creating SmartStream security administrators.

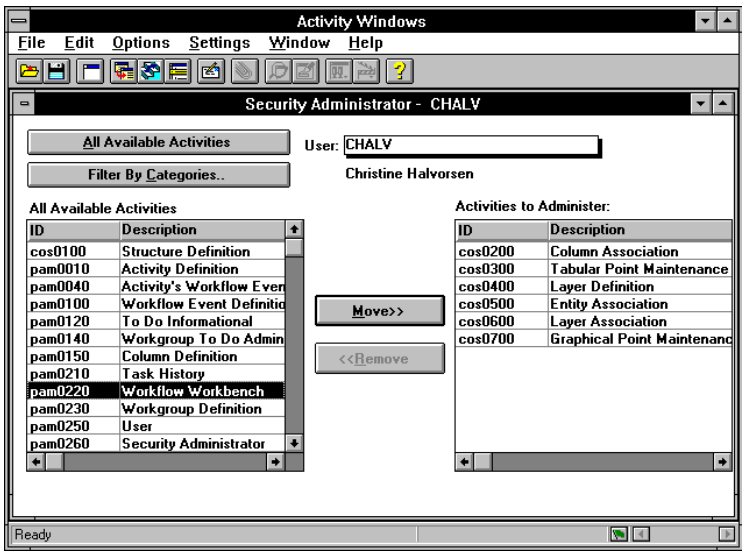
Another prepackaged user, **sa**, also has access to security-related activities, including Security Administrator window, as well as the database administration procedures described in the SmartStream Database Administration chapter.

Warning: In Sybase Adaptive Server Enterprise, the sa ID is assigned three security-related roles: SA, SSO, DBO. Sybase recommends a strategy of assigning each role to a separate user ID and then locking the sa ID. Do not follow this strategy because it prevents SmartStream from performing its security processing properly. For more information about Sybase Adaptive Server Enterprise security; the sa ID; and the SSA, SSO, and DBO roles, see the Sybase Adaptive Server Enterprise administration documentation.

A designated user at your site, logged on to SmartStream as user DBS or sa, assigns activities to a security administrator using the Security Administrator window. The security administrator is then responsible for assigning these activities to users and security groups using the Activity Security window.

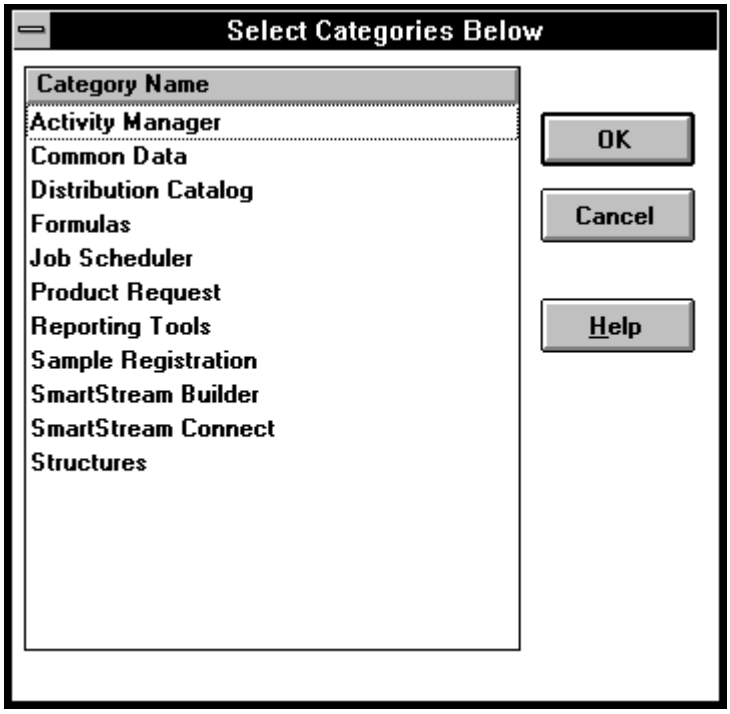
Creating Security Administrators

Use the Security Administrator window to create security administrators.



Filtering Activities

You can filter the list of all available activities so that it displays only a subset of activity categories. You perform this filtering by choosing the Filter By Categories button to access the following window:



Example

A security administrator administers only SmartStream Connect activities. You filter the list so it displays only activities belonging to the SmartStream Connect category. You can select all of those activities and assign them to the security administrator.

For more information, see the Security Administrator online Help topics.

Planning a Security Strategy

Before you begin to create users and security groups and assign them activities, develop a strategy for implementing security. A strategy saves time both when you initially set up security and when you maintain security as personnel changes occur.

Security Administrators

You can establish SmartStream security administrators that are responsible for administering a specific category or categories of activities (for example, all accounts payable activities).

The prepackaged user DBS has the ability to create security administrators. DBS can also grant the Security Administrators activity to another SmartStream user, thereby allowing that user to create security administrators.

Considerations

Carefully review the number of SmartStream security administrators you create and the activities they can assign to users. If you want a more secure environment, create only a small number of SmartStream security administrators with logical groupings of activities to administer. For example, a supervisor in accounts payable can be responsible for administering only accounts payable activities.

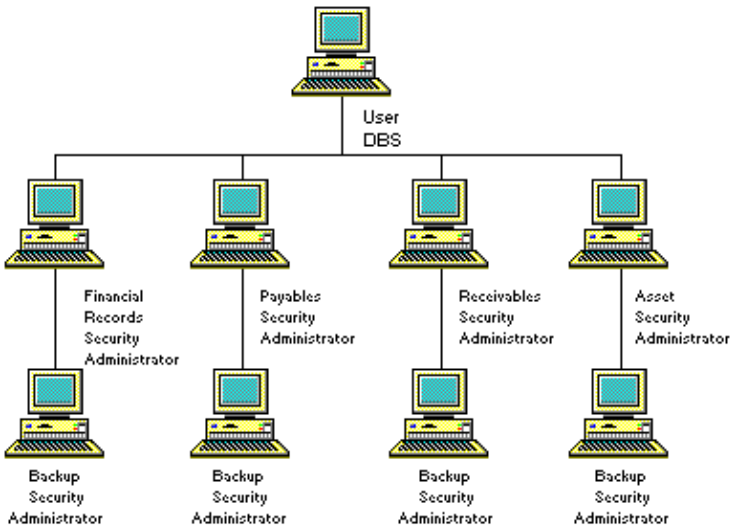
If you do not plan the number of security administrators you will have, and exactly what activities each security administrator is responsible for administering, several problems can occur.

Example

If you assign administration of the same activity to two different security administrators, one security administrator may end up changing the privileges that the other granted to a security group or user.

There are legitimate reasons, however, for assigning the same activities to two SmartStream security administrators. The second administrator can serve as a backup who can perform activity security duties when the primary administrator is unavailable (on vacation, sick, and so on).

An example of how security administration might be implemented at an organization using SmartStream Financials applications is illustrated in the following figure:



User DBS establishes a security administrator for each SmartStream Financials business process (Ledger, Receivables, Payables, and Asset Management), as well as a backup administrator for each business process. In this scenario, user DBS can also serve as a second backup to all of the individual security administrators.

Even if you decide to implement a backup strategy similar to the one described previously, be sure to plan the strategy carefully and to monitor that the strategy is operating as planned.

Security Groups

As discussed in Users and Security Groups, security groups are groups of users, usually having some interdependency, such as belonging to the same department. Users can belong to only one security group. The interdependency of the users in the security group usually requires that they have access to the same activities.

Security groups provide the following benefits:

- They provide a more secure environment by allowing you to control which activities the security group can access and what they can do to data they access (for example, view only).
- They make administration and maintenance an easier process. Rather than having to assign activities to each individual user in your organization, you assign them only once to an entire group.

When necessary, you can override the privileges of the security group for an individual or individuals within the group. Privileges assigned to an individual take precedence over the privileges granted to the security group he or she belongs to.

Password Expiration

You can also decide whether you want the SmartStream passwords for your users to expire periodically.

When users access SmartStream using the standard logon, SmartStream controls password expiration at the security group level.

To set up password expiration, use the **Days Password Expires** field on the Security Group window. The default value in this field is set to zero so that passwords do not expire. If you change the value for a security group from zero to a number between 1 and 999, password expiration is enabled for the users associated with that security group.

Creating Users and Security Groups and Assigning Activities

After you develop a strategy for implementing security, you can begin to create users and security groups and assign activities.

The following table briefly describes the process for setting up security for common components.

Stage	Description
1	Add a security group to SmartStream using the Security Group window.
2	Add users to SmartStream using the User window. You also use this activity to assign users to a security group.
3	Optionally, add SmartStream security administrators to help assign activities to security groups and users using the Security Administrator window.
4	Assign activities to security groups and users using the Activity Security window
5	Secure access to the data for the common components using the Security Data Control window. Use the Database Administration window to add the user ID to servers and the database.

For more information, see Process Overview.

Prerequisite Activities

To perform security-related processing, you need access to the activities listed in the following table. Contact your SmartStream system administrator if you require access to any of these activities but do not currently have it.

Activity	Use it to...
Activity Security	Assign activities to users and security groups. This activity is required to perform security administration.
Security Administrator	Create SmartStream security administrators. This is an optional activity. It should be assigned only to security administrators who need to create other security administrators.
Security Data Control	Secure access to data by performing data controls administration. This is an optional activity. It is used only if your company uses SmartStream Financials or SmartStream Human Resources. It should be assigned only to security administrators who need to add, delete, or maintain data control information.

Activity	Use it to...
Security Group	Add or delete security groups, or update security group information. This is an optional activity. It should be assigned only to security administrators who need to add, delete, or maintain security groups.
User	Add users, delete users, or update user information. This is an optional activity. It should be assigned only to security administrators who need to add, delete, or maintain users.

Prerequisite Processing

Before a SmartStream security administrator can perform security-related processing, the stages described in the following table must be completed:

Stage	Description
1	Using the prepackaged user ID DBS, a designated user at your site logs on to SmartStream.
2	Using the Security Group activity, DBS creates a security group (or groups) and assigns users to it.
3	Using the User activity, DBS creates SmartStream user IDs for those individuals that will be security administrators.
4	Using the Security Administrator activity, DBS assigns activities to each security administrator. The administrator is then responsible for assigning these activities to the appropriate security groups and users.
5	Using the Activity Security activity, DBS assigns the Activity Security activity (and Security Data Control activity if your site uses SmartStream Financials or SmartStream Human Resources) to the security administrators. **Note:** If your site also wants to permit security administrators to add users, security groups, or both to SmartStream, the security administrators need access to these activities as well.
6	Using the prepackaged user ID sa, a designated user at your site performs SmartStream database administration for the security administrator user IDs. For more information about performing SmartStream database administration, see SmartStream Database Administration.

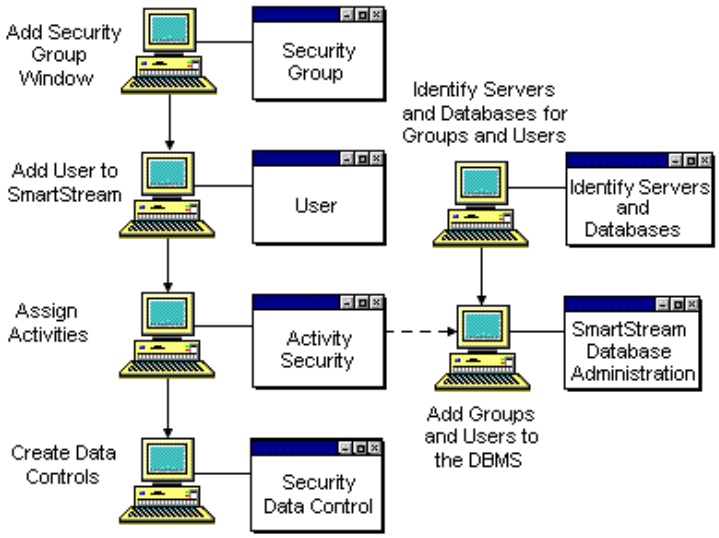
Process Overview

The following figure briefly describes the process that must be followed when

- Adding users and security groups to SmartStream

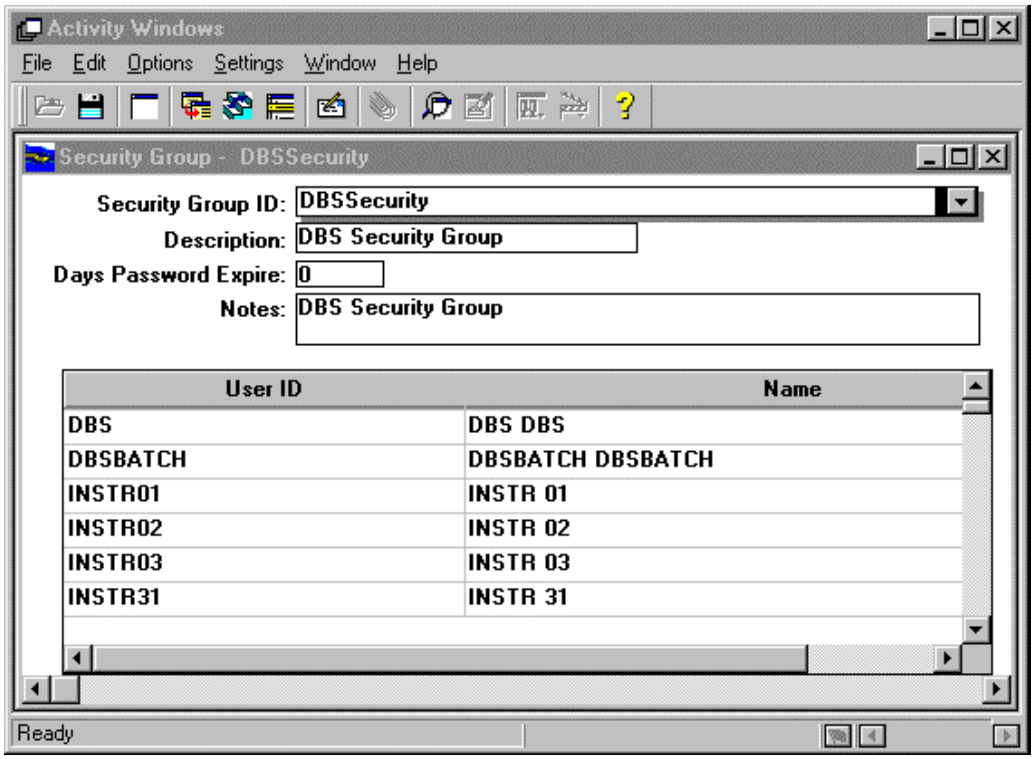
- Assigning activities to those users and security groups.

Note: The tasks shown on the right side of the figure relate to database administration. For more information about database administration, see SmartStream Database Administration.



Stage 1: Creating Security Groups

Use the Security Group window to create and maintain information about SmartStream security groups.

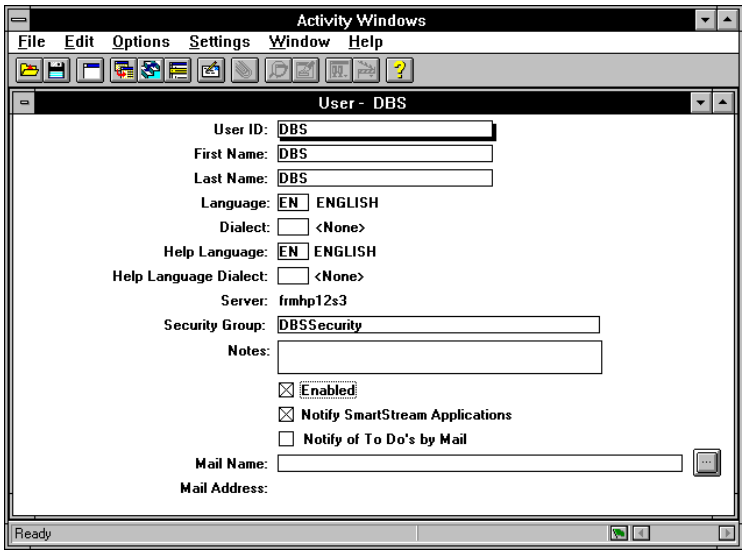


Users already assigned to the security group are displayed in the list area at the bottom of the window. This list is display only. To add users to a security group, use the User window. You can access the User window for a specific user from the Security Group window by double-clicking the user.

You also set up password expiration using the **Days Password Expires** field on the Security Group window. The default value in this field is set to zero so that passwords do not expire. You can change the value from zero to a number between 1 and 999 so that passwords expire. For more information, see the Security Group window online Help topics.

After you add security groups, you must also grant permissions to them on the database server. For more information, see Granting Database Server Permissions to Security Groups in the SmartStream Database Administration chapter.

Stage 2: Adding Users Use the User window to create and maintain information about SmartStream users.



Consideration for SmartStream Budget Users

If you use Sybase Adaptive Server Enterprise as your database management software, you must limit the user IDs for your SmartStream Budget users to 14 characters.

Assigning Users to Security Groups

To take full advantage of the SmartStream activity and data controls security features, after you add users, you must assign them to the appropriate security groups.

More Information

For more information about adding users, see the User window online Help topics. For more information about mail-enabled To Do tasks, see Overview of Workflow.

Stage 3: Optionally Adding Security Administrators

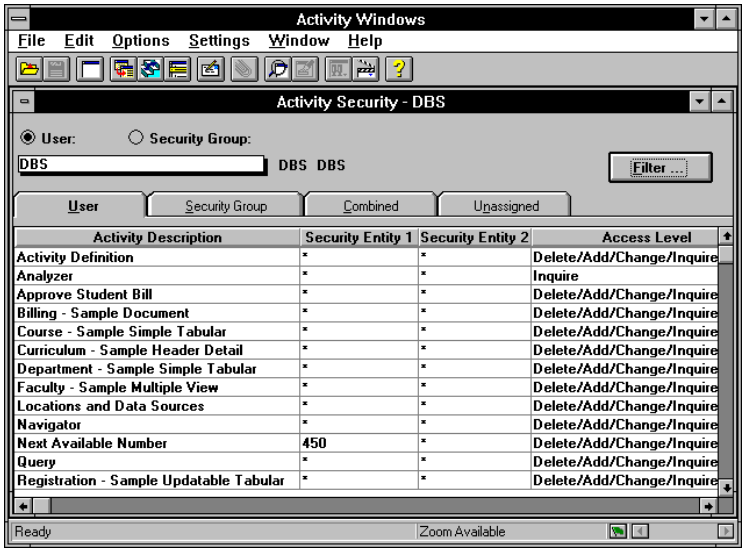
You can optionally add SmartStream security administrators to help assign activities to security groups and users using the Security Administrator window. For more information, see Security Administrators.

Stage 4: Assigning Activity Security to Security Groups and Users

Use the Activity Security window to assign activities to SmartStream users and security groups and perform the following tasks:

Task	Description
1	Enter or select a user or security group.
2	Select search criteria by Activity Category/Security Entity 1/Security Entity 2 value.
3	Select one or more activities from the display list.
4	Insert, update, or delete security information for the selected activities.

5	Change access levels and day and time restrictions.
6	Copy selected records to other users or security groups.
7	Define activity security by entity value.



Note: This window displays only activities this security administrator can administer.

Tabs on the Activity Security Window

The Activity Security window contains tabs that show the available views for a user or security group.

When the User option is selected on the Activity Security window, the following tabs are available:

Choose this tab...	To...
User	Display all the activities assigned to the user that can be updated by the security administrator. These activities override activities in the user's security group or new activities not assigned to the user's security group.
Security Group	Display the activities assigned to the user's security group. Security group activities assigned to the user appear on the User tab, they do not appear on this tab.
Combined	Display all the activities that a user has access to explicitly or through the group that the user is part of. Note that this is a read-only view and can be accessed only when maintaining security for a user.

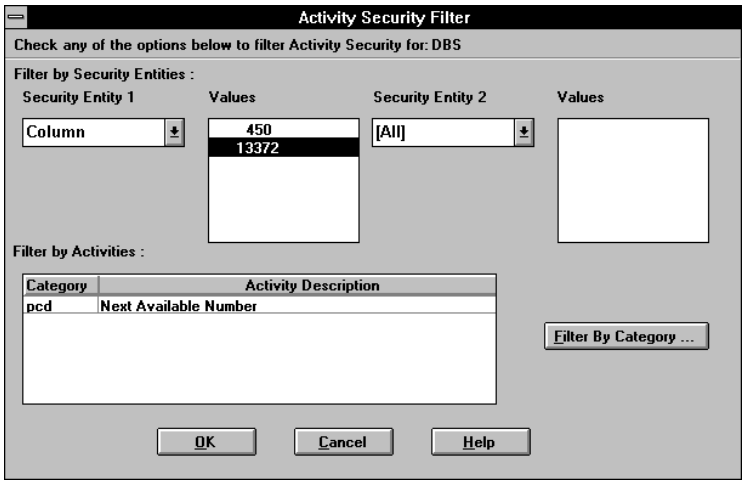
Choose this tab...	To...
Unassigned	Display activities not already assigned to the user that the security administrator can assign.

If the Security Group option is selected in the Activity Security window, the following tabs are available:

Choose this tab...	To...
Security Group	Display the activities assigned to the security group that can be assigned by the administrator.
Unassigned	Display the activities not assigned to the security group that can be assigned by the security administrator.

Activity Security Filter Dialog Box

By choosing the Filter button on the Activity Security window, you can enter search criteria by user, security group, security entity, security entity value, activity category, or activity.



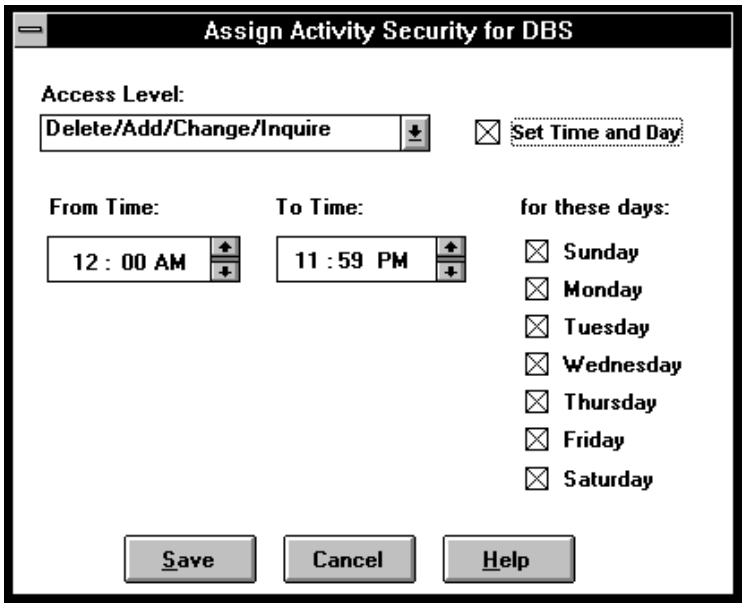
The administrator can use two security entities to filter information: Security Entity 1 and Security Entity 2. If the administrator chooses to filter by security entities, only one Security Entity 1 can be selected with one or more values. An administrator can further filter information using only one Security Entity 2 with one or more values. Security Entity 2 field is dimmed if **None** is chosen as the Security Entity 1. If the Filter By Security Entities option is not chosen, all dependent controls are dimmed.

The security administrator can enter search criteria by activities whether or not the Filter By Security Entities option is selected. If it is selected, then the activities that have Security Entity 1 and Security Entity 2 assigned to the security administrator are

displayed in the list at the bottom of the window. If it is not selected, then all the activities assigned to the security administrator are displayed.

Assign Activity Security Dialog Box

When you select an activity or activities and choose the Assign Activity Security command from the Actions menu on the Activity Security window, SmartStream opens the Assign Activity Security dialog box.



This dialog box is used by SmartStream security administrators to change access levels to activities and to restrict access during certain days and times. You select the activities you want to change or restrict access to on the Activity Security window.

Access Privileges. Administrators can restrict what users or security groups can do with the data they access after they have access to an activity. The following table describes the types of access privileges that the administrator can assign. These access privileges are listed in the drop-down list in the Access Level field.

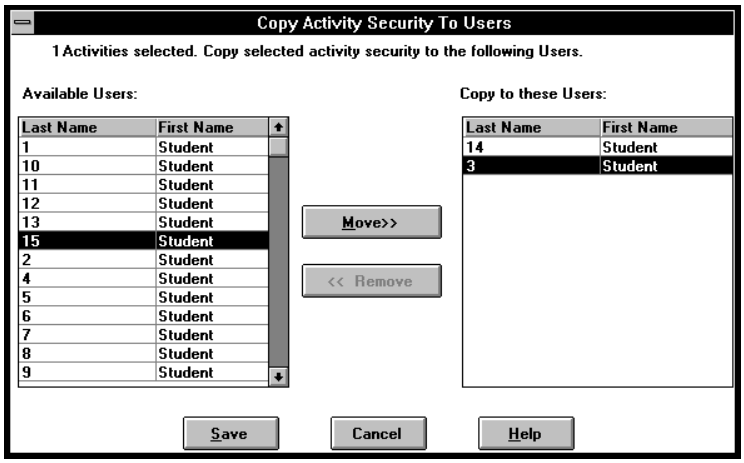
Access Privilege	Description
Delete/Add/Change/ Inquire	The user or group has all data access privileges for this activity. This is the highest level of access an administrator can grant.
Add/Change/Inquire	The user or group cannot delete any data using this activity, but can add, change, or view data.
Change/Inquire	The user or group cannot delete or add data using this activity, but can change existing data or view the data.
Inquire	A user or group can only view the data using this activity.

Access Privilege	Description
None	The user or security group cannot access any data using this activity.

Note: Regardless of the data access privileges granted, a user can view, add, or change, but not delete, data on the Workflow Workbench window.

Copy Activity Security Dialog Box

When you select an activity or activities and choose the Copy Activity Security command from the Actions menu on the Activity Security window, SmartStream opens the Copy Activity Security dialog box.



Note: The full title of this window changes dynamically based on whether you are copying activities from a user or a security group. For example, if you are copying activities from user DBS, the window title is Copy Activity Security To User.

If you have the User option selected on the Activity Security window, you can copy the security for activities from one SmartStream user to another SmartStream user. If you have the Security Group option selected, you can copy security for activities from one SmartStream security group to another SmartStream security group.

Note: You cannot copy the security for activities from a security group to a user and vice versa.

This function is useful when you are assigning activities to a user or security group and another user or security group requires access to the same activity or activities.

Define Activity Security By Entity Value Dialog Box

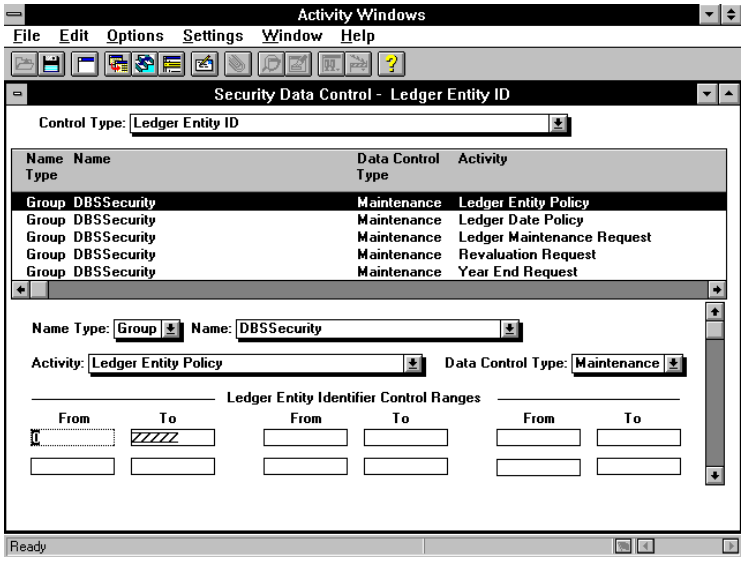
Using this dialog box, security administrators can define activity security by security entity values and define access level and time for the activity.

Administrators can use two security entities to define activity security: Security Entity 1 and Security Entity 2. If the administrator chooses to define activity security by security entities, only one Security Entity 1 can be selected with one or more values. An administrator can further define activity security using only one Security Entity 2 with one or more values. Security Entity 2 is dimmed if **None** is chosen as the Security Entity 1.

For more information about using the Activity Security window and its associated dialog boxes, see the SmartStream Security online Help topics.

Stage 5: Performing Data Controls Administration

Use the Security Data Control window to perform data controls administration. Data controls must be established for a group or user to display or maintain data. If they are not defined, the user cannot access any data.



When the security administrator adds data controls for an activity, if the value in the Name Type field is user, the user specified in the Name field must have his or her own record for the activity on the Activity Security window. If the user has access to the activity through membership in a security group, a record must be added for the same activity and have the user's ID in the User/Group column.

For more information about performing data controls administration, see the Security Administration online Help topics.

Administrator Activities

The following table lists the activities that require security for each SmartStream administration function that you perform:

If you are a...	You need security for these windows...	Activity IDs are...
Workflow administrator	Activity Definition	pam0010
	Activity's Workflow Events	pam0040
	Column Definition	pam0150
	Task History Definition	pam0020
	Workflow Event Definition	pam0170
	Workflow Workbench	pam0220
	Workgroup Definition	pam0230
	Workgroup To Do Administration	pam0140
	Activity Input Values	pam0540
	Approval List	pam0400
Workgroup manager	Workgroup To Do Administration	pam0140
Database administrator	Identify Servers and Databases	pst0100
	Database Administration	pst0130
Job Scheduler administrator	Job Scheduler	psc0020
	Master Scheduler Configuration	psc0040
	Poll Configuration	psc0060
	Scheduler Log (All Users)	psc1010
	View Polls	pcs1030
	View Scheduled Jobs (All Users)	psc1110
	View Server Queue	psc1020
Security administrator	Activity Security	pam0290
	Security Administrator	pam0250
	Security Data Control	pam0260
	Security Group	pam0270
	User	pam0300

Maintaining Security Groups, Users, Activity Security, and Data Control

You can maintain information in all editable fields, except key fields such as user ID and security group ID.

Maintaining Security Group Information

You maintain security group information using the Security Group window, illustrated earlier in this chapter.

Maintain security group information by accessing the security group's information you want to change and then editing the appropriate field or fields.

When you access SmartStream using the standard logon, SmartStream controls password expiration at the security group level. If you want password expiration enabled, you can edit the appropriate field on the Security Group window.

Security groups cannot be deleted if any users are still assigned to the security group.

For more information about the Security Group window, see Creating Users and Security Groups and Assigning Activities.

Maintaining User Information

User information is maintained on the User window. When you access this window, you can make changes to the appropriate fields.

Changing a User's Security Group

When you attempt to change the value in the Security Group field, SmartStream displays an informational message about your actions. Follow the instructions in the message, and contact your database administrator before changing a user's security group.

The database administrator needs to drop the user from the databases and the old DBMS security group before you change his or her SmartStream security group. This is necessary to ensure that the information for the user's SmartStream and DBMS security groups stays the same.

After the database administrator notifies you that the user has been dropped from the old DBMS security group, you can change the user's SmartStream security group, choose No when you are presented with this message, and continue.

Deleting a User

Users can be deleted in one of two ways, depending on whether the user has signed on to SmartStream.

When a User Has Never Logged On To SmartStream

A user's Home Drawer is created when the user logs on to SmartStream for the first time. Before this initial logon, the user has no objects (drawers, folders, lists, documents).

Therefore, deleting users who have never logged on to SmartStream is a straightforward process. You access that user's information on the User window, clear the Enabled option, and then choose Delete from the File menu.

For more information about the User window, see Creating Users and Security Groups and Assigning Activities and the online Help.

When a User Has Logged On To SmartStream

When a user logs on to SmartStream for the first time, the following objects are created and displayed in the Browser:

- Home Drawer
- Activity Lists folder
  - Your Activities list
- To Do Lists folder
  - New To Do List
- Workgroup To Do Lists folder

To delete a user from SmartStream for whatever reason (the user leaves the company, transfers to another department), you need to

- Inactivate the user
- Delete objects or reassign objects (particularly To Do and Workgroup To Do tasks) to another user or workgroup.

Inactivating the User

You must inactivate a user before you can delete the user's objects, reassign them, or both. You can inactive a user by clearing the Enabled option on the User window.

Note: A user can be activated again by selecting Enabled as long as you have not deleted or reassigned the user's Home Drawer.

After you inactivate the user, the Notify SmartStream Applications option is automatically enabled and selected.

If you clear this option, SmartStream application administrators are not notified that the user is inactivated. You might want to clear this option if you know the user is not involved in any application workflows.

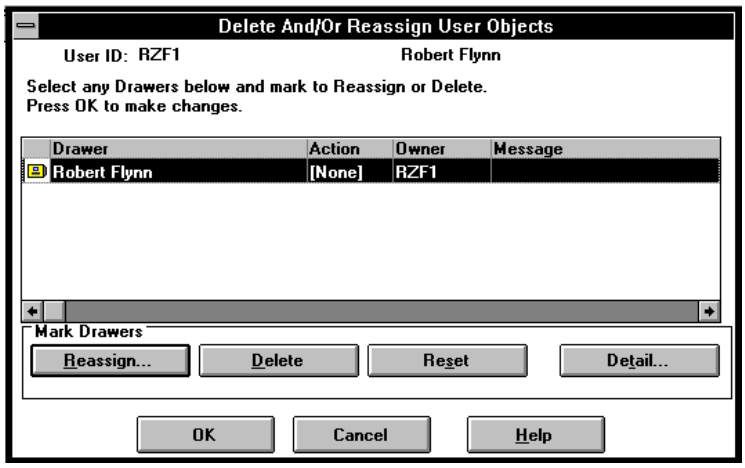
When this option remains selected, SmartStream sends workflow messages to the administrator of any applications that this user has access to. These messages inform the application administrators that the user has been inactivated. This allows the application administrators to make changes to workflows that this user may have been involved in.

Do not delete or reassign a user's objects until after SmartStream application administrators have had an opportunity to change any workflows that may have been affected by the inactivation of the user.

For more information about the User window, see Creating Users and Security Groups and Assigning Activities and the online Help.

Deleting and Reassigning User Objects

You use the Delete And/Or Reassign User Objects dialog box to delete and reassign user objects.



Viewing Object Details

Before deciding whether to reassign or delete a user's objects, you can view the details of the user's drawers by choosing the Detail button in the previous figure. This opens the Details dialog box.

After you examine the contents, you can close the Details dialog box by choosing either the OK or the Cancel button. This returns you to the Delete And/Or Reassign User Objects dialog box, where you can continue your processing.

Reassigning Objects

Choose the user or workgroup that you want to reassign objects to using the Reassign User Objects To dialog box. You can assign objects to another user or a workgroup by choosing the appropriate option in the window's list box.

You can reassign objects to a workgroup only if you are the manager of a workgroup (or workgroups); otherwise, the Workgroups I Manage option is dimmed.

For more information about maintaining user information and deleting users, see the User window online Help topics.

Maintaining Security Administrator Information

You maintain the list of activities the security administrator can assign using the Security Administrator window. To do so, access the security administrator's information, and then add activities to or remove activities from the Activities to Administer list.

For more information about the Security Administrator window, see Creating Users and Security Groups and Assigning Activities and the online Help.

Maintaining Activity Security Information

You maintain activity security information for a user or security group using the Activity Security window. To do so, access the user or security group's information and then change the appropriate field or fields.

You can perform the following maintenance using the Activity Security window:

- Add access to additional activities to the user or security group
- Delete activities from the user or security group
- Change access privileges
- Change day and time information

For more information about the Activity Security window, see Creating Users and Security Groups and Assigning Activities and the online Help.

Maintaining Data Control Information

You maintain activity data control information for a user or security group using the Security Data Control window.

Maintain data controls information by accessing the user or security group's information and then changing the appropriate field or fields.

You can perform the following maintenance using the Security Data Control window:

- Add additional data controls and data control ranges for a user or security group
- Delete a data control or data control range (or ranges) from a user or security group
- Change the data control type (maintenance or view)

For more information about the Security Data Control window, see Creating Users and Security Groups and Assigning Activities and the online Help topics.

2 SmartStream Database Administration

Chapter Contents

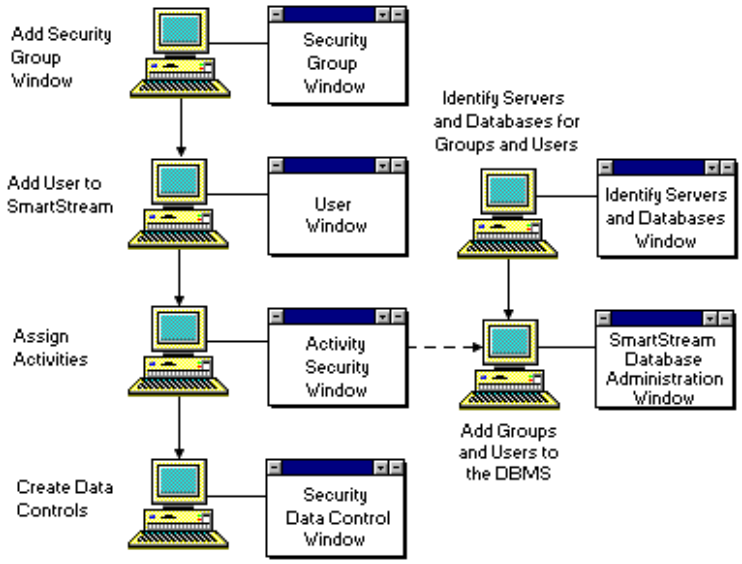
2-1 Overview of Database Administration
2-5 Performing SmartStream Database Administration
2-10 Miscellaneous Database Administration Tasks

Overview of Database Administration

SmartStream database administration refers to the process of

- Assigning activity categories to users and security groups
- Identifying the servers and databases a user or security group needs access to (no user intervention required)
- Generating and running the Structured Query Language (SQL) statements that
  - Create DBMS login IDs for the users
  - Add the security groups and users to the appropriate databases
  - Add the security groups to the DBMS.

You perform database administration only after you add security groups and users to SmartStream. However, you can perform tasks using the database administration activities (Identify Servers and Databases and Database Administration) concurrently with tasks using the security-related activities (Activity Security and Security Data Control), as shown in the following figure:



Assigning Activity Categories

The first step in the SmartStream database administration process is assigning activity categories to users or security groups. By associating a category (or categories) of activities with a user or security group, the SmartStream database administration process can identify the servers and databases a user or security group needs access to.

What Is An Activity Category?

An activity category is a group of activities that are related to a particular area of SmartStream functionality. The activity category ID also serves as a prefix to the activity ID. For example, Structures activities are in the **cos** activity category and thus are prefixed with **cos**, and SmartStream Connect activities are in the **piq** activity category and thus are prefixed with **piq**.

SmartStream automatically assigns activity categories to users or security groups using information that is entered on the Activity Security window when you assign activities to a user or security group. This approach is illustrated by the dotted line in the previous figure.

The processing performed to assign activity categories is described in the following table:

Stage	Description
1	A SmartStream security administrator assigns an activity (or activities) to a user or security group using the Activity Security window.
2	The Activity Security window checks the Application Users table (apus) to see if the unique, three-character activity category is already associated with the user or security group.

Stage	Description
3	If the activity category is not already associated with the user or security group, SmartStream updates the Application Users table to make the association between the user or security group and the activity category. The database administration process uses this information when it determines the server and databases that a user or security group needs access to.
4	If the activity category is already associated with the user or security, SmartStream does not have to update the Application Users table and processing is complete.

Alternative Approach

You can also assign a category or categories of activities to a user or security group using the Identify Servers and Databases window. The advantage of using this window is that you can perform SmartStream database administration before assigning activities to users and security groups.

This is beneficial because often the user performing SmartStream database administration is the DBMS system administrator (sa). Therefore, this user does not have to wait for a SmartStream security administrator to assign activities to users and security groups (and therefore update the Application Users table) before performing SmartStream database administration.

Identifying Servers and Databases

SmartStream uses information entered on the Activity Security window or the Identify Servers and Databases window to identify the servers and databases a user or security group needs access to.

No user intervention is required for this process, but it is explained here to aid your understanding of the SmartStream database administration process.

After users and security groups are associated with activity categories, SmartStream can use this information to associate a table family with each activity category.

Note: A table family is a group of related tables, stored procedures, triggers, and views that are treated as a single unit.

The database administration process accesses tables in the DBSctlg database (the SmartStream distribution catalog) and then uses the table family information to determine on what server and databases the table families live. As a result, it determines what server and databases the user or security group needs access to.

Example

A user at your site needs access to SmartStream Connect activities (activity category **piq**) and Structures activities (activity category cos). Using the Activity Security window or the Identify Servers and Databases window, you associate category **cos** (structures) and **piq** (SmartStream Connect) with this user.

Using the piq and cos activity category IDs, SmartStream determines that the table family ID for the SmartStream Connect (**piq**) activity category is **piqd**. Also, SmartStream determines that the table family ID for the Structures (**cos**) activity category is **osst**.

The database administration process, through a series of SQL table joins, then uses this information to identify the server and databases where the osst and piqd table families reside and, therefore, the server and databases the user needs access to.

The tsdx Table

The series of SQL table joins mentioned in the previous example accesses the Table Family/Server/Database Cross-Reference table (tsdx) during the joins. The tsdx table, among other things, serves as a directory to where table families reside in your environment (in other words, on what server and database or databases a table family resides).

Generating and Running SQL Statements

The database administration process uses the server and database information, along with information from the tsdx table, to generate SQL statements that

- Create user login IDs
- Add users to the appropriate databases and security groups
- Add the SmartStream security group as a DBMS group in the appropriate databases.

The exact SQL statements that are generated vary based on options you select on the Database Administration window. You may decide to generate all of the previously mentioned SQL statements, only one of those statements, or a combination of two of the three.

Note: Also, you can select to generate SQL statements that drop server login IDs, database users, or security groups.

For more information about SmartStream users and security groups, see Users and Security Groups.

Performing SmartStream Database Administration

You perform SmartStream database administration using the following windows:

- Identify Servers and Databases
- Database Administration

Note: The Identify Servers and Databases window is used only if you want to perform SmartStream database administration before assigning activities to users and security groups. Otherwise, SmartStream uses information entered on the Activity Security window to assign activity categories.

A prepackaged user ID of **sa** is delivered with SmartStream (**sa** is also the ID of the DBMS system administrator). A user at your site logs on to SmartStream as sa to perform the database administration activities. Also, sa has access to the security-related activities discussed in Users and Security Groups.

Note: A second prepackaged user ID, DBS is also delivered with SmartStream. This user can also perform the activities discussed in this section. However, you must be the DBMS system administrator (sa) to add server login IDs. You must be sa or DBS to add users and security groups to a database.

Sybase Adaptive Server Enterprise Warning

In Sybase Adaptive Server Enterprise, the sa ID is assigned three security-related roles: SA, SSO, DBO. Sybase recommends a strategy of assigning each role to a separate user ID and then locking the sa ID. Do **not** follow this strategy because it prevents SmartStream from performing its security processing properly. For more information about Sybase Adaptive Server Enterprise security; the sa ID; and the SSA, SSO, and DBO roles, see the Sybase Adaptive Server Enterprise system administration documentation.

Prerequisite Processing

The stages described in the following table must have occurred before you can perform SmartStream database administration processing:

Stage	Description
1	Security groups must be created using the Security Group window.
2	SmartStream user IDs must be created using the User window.
3	Optionally, SmartStream security administrators are created using the Security Administrator window.
4	Optionally, activities are assigned to users and security groups using the Activity Security window. **Note:** If you decide not to perform this step, you must assign activity categories to users and security groups using the Identify Servers and Databases window.

Security Access Requirements

To perform SmartStream database administration processing, you also need security access to the activities listed in the following table.

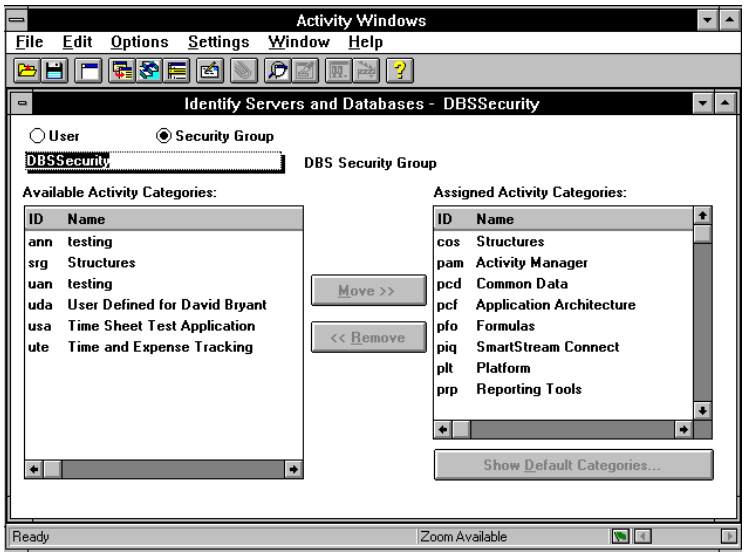
If you require access to any of these activities but do not currently have it, contact your SmartStream system administrator.

Activity	Allows you to...
Identify Servers and Databases	Assign activity categories to users and security groups. This activity is optional to perform database administration. If activities have already been assigned to security groups and users by a security administrator using the Activity Security window, you do not need to use this window.
Database Administration	Perform the following actions: ▪ Generate SQL statements that add or drop user IDs and security groups ▪ Change a user's default language ▪ Change a user's server password This is a required activity.

Assigning Activity Categories

Use the Identify Servers and Databases window to assign activity categories to users and security groups. SmartStream uses this information later in the database administration process to identify the server and databases a user or security group needs access to.

Note: You use this window to assign activity categories to users only if you want to perform SmartStream database administration before assigning activities to users and security groups. Otherwise, SmartStream uses information entered on the Activity Security window to assign activity categories.



No server or database information is displayed on the window. The information entered on this window, with information in other SmartStream tables, is used to identify the appropriate servers and databases.

Show Default Categories

When you assign activity categories to a user or security group, you can choose the Show Default Categories button and the Show Default Categories window is displayed. This window lists the activity categories that the user is already associated with through his or her membership in the security group.

If the user needs access to an activity category or categories that the user's security group does not have access to, return to the Identify Servers and Databases window and associate the user with the appropriate activity categories. You can do this by choosing the appropriate category (or categories) of activities from the Available Activity Categories list and adding them to the Assigned Activity Categories list.

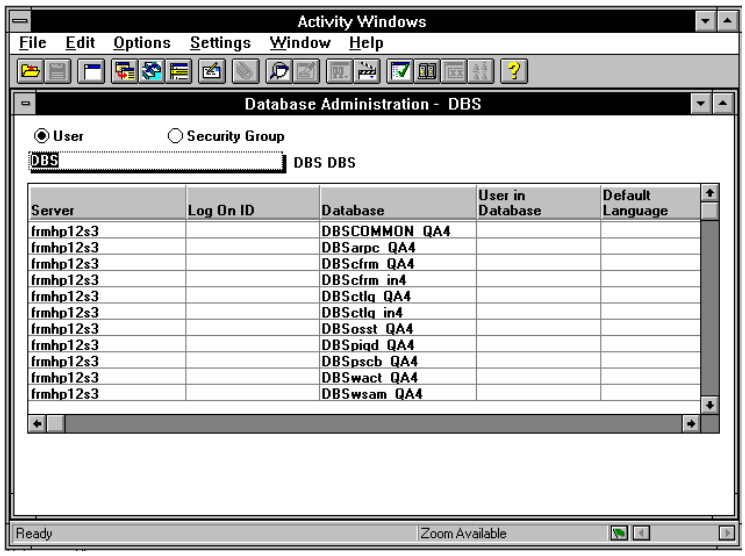
For more information, see the Identify Servers and Databases Window topic in the SmartStream Administrator's online Help.

Generating and Running SQL Statements

Use the Database Administration window to

- Generate SQL statements to add or drop server and database IDs
- Run the SQL statements or save the SQL in a text file to run later.

You must be the DBMS system administrator (sa) to add server login IDs, and you must be sa or DBS to add users and security groups to a database.



For more information about the DBMS sa role, see the documentation supplied by your database vendor.

The server and databases that the user or security group needs access to are displayed after you enter the ID for the user or security group.

Show Current Configuration

Choose the Show Current Configuration button on the Database Administration window toolbar to check whether a user or security group has an ID for the appropriate server and databases.

If the user ID is set up on the server, **YES** is displayed in the Log On ID field. If the user ID is not set up on the server, **NO** is displayed. To determine if the user has access to certain databases, refer to the **User in Database** column.

Note: Security groups are not assigned server logon IDs. Therefore, when you check to see if the security group has an ID set for the necessary server and databases, refer only to the information in the User in Database column on the window.

Add and Drop Options

Choose the Add and Drop Options button on the Database Administration window toolbar to select the SQL statements you want to generate. You select the SQL statements to generate from a list of options on the Add and Drop Options window.

Note: The Add User and Drop User group boxes are displayed only when you are performing database administration for a user.

The following table lists the three categories of SQL that you can choose the SQL statements from.

SQL Statements	Description
Add User	Choose to add the user's server logon ID, add the user to databases, add the user to the DBMS group, or none.
Drop User	Choose to drop the user's server logon ID, drop the user from databases, drop the user from the DBMS group, or none.
Add/Drop Security Group	Add the security group as a DBMS group to databases, drop the security group as a DBMS group from databases, or none.

Generated SQL

After you select the SQL statements you want to generate on the Add and Drop Options window, you can choose the Generate SQL button to display the actual SQL statements on the Generated SQL window.

On this window, you can choose to run the generated SQL immediately or to save the SQL to a text file to run later using ISQL.

Run SQL

If you run the SQL immediately by choosing the Run SQL button on the Generated SQL window, informational and error messages are displayed in the Database Message column in the list area in the middle of the window.

Save SQL to a File

If you choose to save the SQL to a text file by choosing the Save SQL button on the Generated SQL window, the Save As window is displayed.

Advantage of Saving to a File. One advantage of saving your SQL to a text file is that you can run SQL statements for many users or security groups at one time.

For example, if you are generating SQL statements that create server logon IDs for users, you can save the SQL generated for each user in individual files. Then, using a text editor, such as Windows Notepad, you can cut and paste each individual user's SQL statements into one large file. Then, using ISQL, you can run the SQL in this file and create all of the user logon IDs at one time.

Using Run SQL and Save SQL Together

You can choose to run the generated SQL immediately by choosing the Run SQL button, and then save the file after it is run as a text file by choosing the Save SQL button. This saves the SQL and all of the resulting messages in a file that can serve as a log or history file to reference at a later time as needed.

For more information, see the SmartStream Administrator's Help.

Miscellaneous Database Administration Tasks

Besides the SmartStream database administration tasks described in Performing SmartStream Database Administration, you can also

- Change a user's server password
- Change the DBMS default language

These tasks are performed by choosing the appropriate action from the Database Administration window. You must use the SmartStream ID of **sa** to perform these tasks.

Also, you must grant database server permissions to the security groups you add using the delivered .sql files as models.

Changing a User's Server Password

An individual user can change his or her own password by choosing Change Server Passwords from the File menu on the SmartStream Browser. However, it may be necessary for the database administrator to change a user's password.

The new password must be a minimum of six characters (this is a DBMS requirement) and must be entered twice for verification purposes.

The DBMS default password

When a user's DBMS login ID is created during the SmartStream database administration process, a default password of **password** (lowercase) is also created. The DBMS login ID and password are the same as the user's SmartStream ID and password.

Show Detail Button

Choosing the Show Detail button on the Change Server Passwords window displays the following additional information:

- The server the user has access to
- Whether the server is active
- Whether the password was changed

For more information, see the Change Server Passwords Window topic in the SmartStream Administrator's Help.

Changing the DBMS Default Language

Changing the DBMS default language causes all DBMS messages to be displayed in the chosen language. The server where you want to change the default language must have the appropriate Sybase International Language Kit (ILK) installed.

Use the Default Language window to set the DBMS default language for a user on a specific server.

Note: Changing the default language affects only the language DBMS messages are displayed in. This window is not related to what language SmartStream messages are displayed in. The language for these messages is based on the value in the Language field for the user on the User window.

After you select the appropriate server and default language, choose the Process button to process your changes.

For more information about changing a user's default language, see the Default Language Window topic in the SmartStream Administrator's Help.

Granting Database Server Permission to Security Groups

When you add a new security group in SmartStream, you must define permissions for your new security group on the database server. This is referred to as granting permissions for the tables and views within SmartStream.

File Open

You must grant Select permission for the File Open function within SmartStream because it builds the appropriate SQL statements dynamically based on the columns a user chooses to search on when processing the SmartStream window. Some applications, such as Human Resources, make use of extended security measures such as granting Select permission only to views that are dynamically created based on the security defined for the user within SmartStream.

The Process

On the SmartStream file server, most directories under the **/dbms** folder have a tblgrnt.sql file and a viewgrnt.sql file. These files are used during the installation process to grant permissions to the delivered security group, DBSSecurity. You can use these files as models for creating the grant statements for any new SmartStream security group that you add. Be sure, however, not to change the original files on the file server. Copy, update, and run the tblgrnt.sql and viewgrnt.sql files in the appropriate database families (for example, hrpn, hrpy, hrac) to grant Select permission to the new security group.

3 Defining Workgroups

Chapter Contents

3-1 Workgroups
3-4 Managing Workgroups

Workgroups

In your enterprise, groups of employees (such as buyers or accountants) perform similar or identical tasks. You can group these employees into **workgroups** and set up workflows so that tasks are assigned to workgroups rather than to individual users.

You create a workgroup by creating a workgroup ID and assigning users to the workgroup. A user can belong to any number of workgroups; you can create as many workgroups as you need.

Benefits

Having workgroups helps managers to even the workload when their employees are absent. It also helps you, the workflow administrator, to keep up with personnel changes without worrying about tasks being assigned to a user whose employment status has changed recently.

Workgroup To Do List

Workgroup tasks are assigned to the appropriate Workgroup To Do List, which appears in the Home Drawer of any user in the workgroup who has a status of manager or member. Managers can assign tasks from the Workgroup To Do List to members and guests, and members can take tasks from the Workgroup To Do List.

For more information about To Do Lists, see Tasks and To Do Lists.

Managers, Members, and Guests

Each user in the workgroup has a status of manager, member, or guest. How you determine the status of users depends on the type of workgroup that you want to set up.

The Manager's Role

A workgroup can have any number of **managers**, but probably should have one or two, depending on the size of the workgroup. The manager oversees the workgroup's tasks.

Using the Workgroup To Do Administration window, the manager can

- Assign the workgroup's tasks to users in the workgroup or any SmartStream user
- Reassign the workgroup's tasks within the workgroup from one user to another
- Reassign the workgroup's tasks to another workgroup that the manager manages
- Reassign the tasks in an individual user's To Do List to any user or workgroup the manager manages.

Note: Each user with a status of manager must have activity security for the Workgroup To Do Administration window. For information about how to set up activity security, see Users and Security Groups.

The Member's Role

Members can perform any task in the Workgroup To Do List, and can return any workgroup task to the Workgroup To Do List that it came from.

When a member chooses a task that belongs to the workgroup, the task automatically moves from the Workgroup To Do List to the member's To Do List. Even though the task is now in the member's To Do List, it still belongs to the workgroup and appears in inquiries that the manager makes on the workgroup's tasks.

The Guest's Role

A **guest** is a user in the workgroup that the manager assigns workgroup tasks to. A guest does not have access to the Workgroup To Do List.

How Workgroups Work

A workgroup works in the following ways:

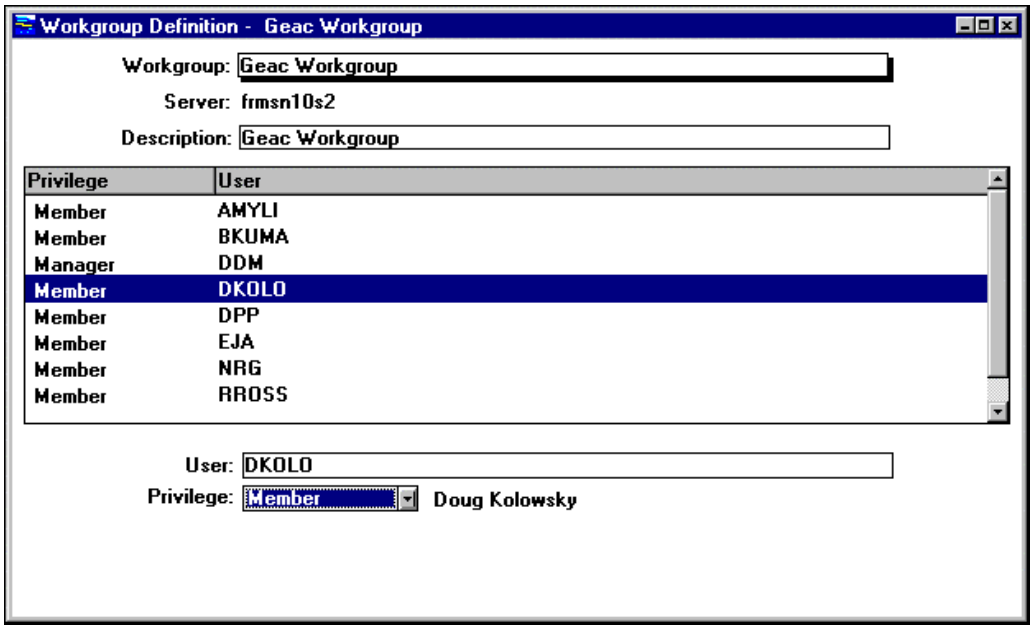
- A manager delegates work by moving tasks from the Workgroup To Do List to the To Do lists of users.
- The manager uses the Workgroup To Do Administration window to delegate tasks to users.
- Users choose tasks from the Workgroup To Do List and work on the tasks at their own pace. They can also return tasks to the Workgroup To Do List.

Note: Users with guest status do not have access to the Workgroup To Do List.

In any workgroup, a manager can use the Workgroup To Do Administration window to see how the workgroup's tasks are distributed among users, and the manager can assign and reassign tasks as needed.

Creating a Workgroup

Use the Workgroup Definition window to create a workgroup.



When creating a workgroup, keep in mind that

- Each user in the workgroup must have activity security to perform the tasks that are assigned to the workgroup
- Each manager in a workgroup must have activity security for the Workgroup To Do Administration window.

Note that the Server field in the previous figure refers to the server where tasks for To Dos assigned to the workgroup reside.

For more information about setting up activity security, see Users and Security Groups.

Managing Workgroups

When a workgroup is responsible for a step in a workflow, the task appears in the Workgroup To Do List. Users in the group work on the workgroup's tasks by choosing the tasks from one of these lists:

- The Workgroup To Do List
- Their own To Do lists after a manager has assigned the tasks to them.

Manager's Privileges

If you are a manager of a workgroup, you have privileges to manage the tasks in the Workgroup To Do List. You can see how the workgroup's tasks are distributed among the users in the workgroup, and you can assign or reassign tasks to other users.

Users in your workgroup with guest status cannot choose tasks from the Workgroup To Do List. Instead, you must assign tasks from the Workgroup To Do List to the To Do lists of users who are guests.

Workgroup To Do Administration

Using the Workgroup To Do Administration window, you can

- Display the workgroup tasks in the To Do lists of any or all users
- Assign tasks from the Workgroup To Do List to the To Do lists of any SmartStream user
- Pull workgroup tasks from any SmartStream user's To Do list back into the Workgroup To Do List
- Reassign tasks from the Workgroup To Do List to the To Do List of any other workgroup that you manage.

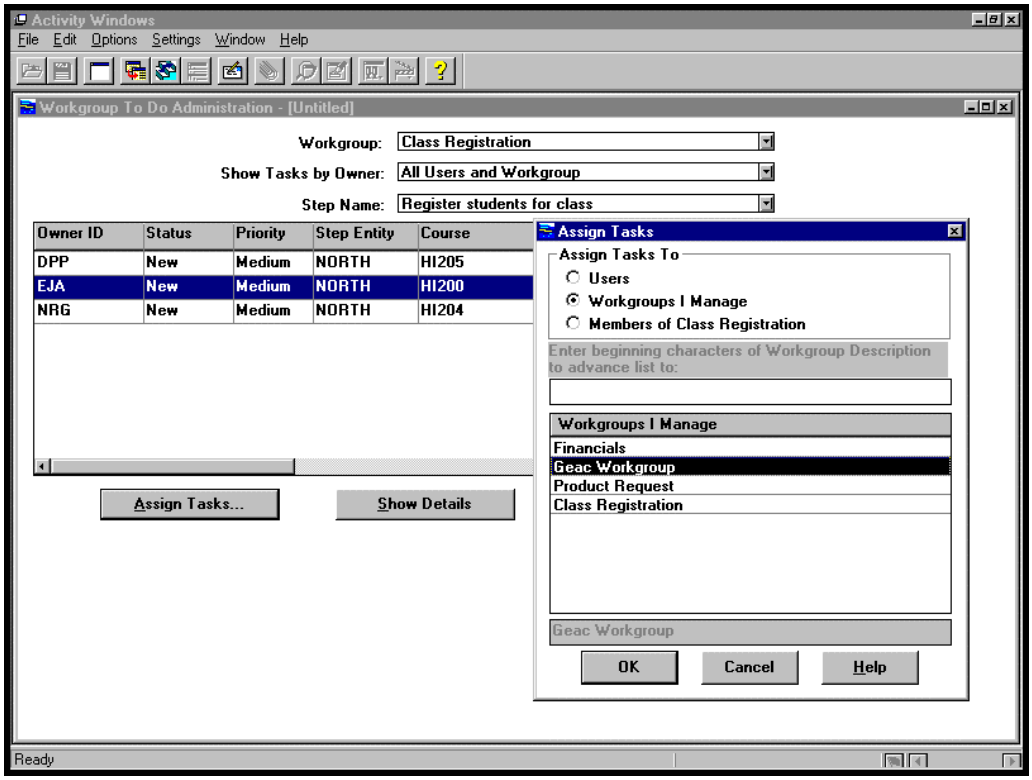
Deleted Tasks

After a user deletes a task, the task is no longer displayed in the Workgroup To Do Administration window. If the workflow is set up to track history for the step assignment, the task is saved as task history and can be displayed on the Task History window. For more information, see Keeping Task History.

Note: Users can delete tasks using this window, or they can choose the Delete Tasks Marked Done on the Preferences window. This automatically deletes tasks with a status of Done.

Managing a Workgroup To Do List

Use the Workgroup To Do Administration window to manage a Workgroup To Do List. Before you can manage a Workgroup To Do List, you must have manager privileges for the workgroup and activity security for this window.



Assigning Tasks

You can assign tasks to users and workgroups by choosing the Assign Tasks button on the Workgroup To Do window when a task is selected. This accesses the Assign Tasks window.

Viewing Details

You can view details by selecting a task on the Workgroup To Do Administration window and then choosing the Show Details button.

Setting Task Priority

You can set task priority by selecting a task or tasks in the Workgroup To Do Administration window and then choosing the Set Priority button. Setting task priority affects the order in which To Do categories are displayed in the To Do Lists of users or workgroups.

For more information, see the Workgroup To Do Administration Window topic in the SmartStream Administrator's Help.

4 Workflow

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4-30 Integration with Structures
4-45 The Role of the Workflow Administrator

Overview of Workflow

A workflow consists of a series of steps that drive a business process at your enterprise. With SmartStream, you can automate your business processes by setting up workflows that conform to the needs of your enterprise.

Each workflow has a beginning and an ending point and solves a business need that is specific to a department, division, or enterprise. SmartStream applications supply their own sets of predefined generic workflow processes. These generic workflow processes need to be customized to some degree before you can use them in your enterprise.

The workflow administrator works with the department managers to customize each workflow. Customization takes place with the Workflow Workbench, a graphical tool through which you can visually display and maintain workflows. These visual representations of workflows are called maps.

The DBSwact database is where all applications store their workflow process logic. With the Workflow Workbench, you can change existing workflow maps or create new workflow maps that reflect the workflow information in the DBSwact database tables.

From the user's perspective, the workflow process is straightforward. SmartStream activities generate workflow events. When an event is triggered, the SmartStream workflow engine determines what the next step should be and who should perform

the task. Workflow then assigns the To Do task to an assignee. The task and the assignee are determined by workflow definitions set up by the workflow administrator using the Workflow Workbench.

With the SmartStream Builder development tool you can create your own workflow activities and events. SmartStream Builder gives you the opportunity to create your own user-defined application workflows. For information about developing new activities for your workflows, see Developer's Guide in the SmartStream Builder Documentation (ssbbooks.chm).

How Workflows Work

Workflows consist of steps and events. A workflow step is a conceptual object that encompasses all of the components of a single workflow task. Events are used to link these workflow steps. To understand how workflows work, you need to understand the workflow components.

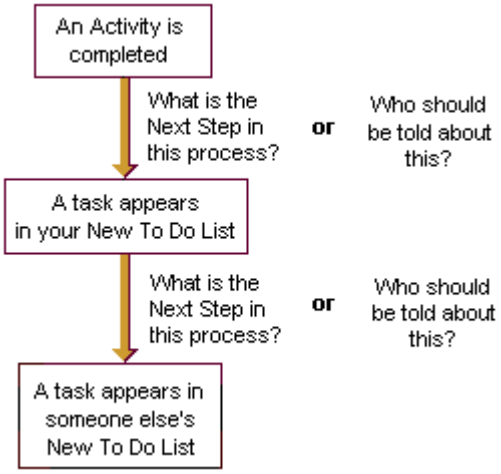
Each step in your business workflow is identified by an activity. An activity is

- A SmartStream activity window **or**
- A scheduled (batch) process, such as the Ledger Posting process in SmartStream Financials.

When you use an activity that changes a SmartStream database table, the activity triggers a workflow event. When such an event is triggered, the SmartStream workflow engine determines what the next step or steps are and who is responsible for completing them.

It then assigns a To Do message to an assignee in the form of either a To Do task or a To Do informational message. A To Do task message always appears in the user's New To Do List or within a Workgroup To Do List that a user has been given access to as either a manager or a member.

The To Do task is the heart of the SmartStream workflow. To Do tasks are sent to your New To Do List when someone completes an activity and triggers the next step. The following diagram illustrates how tasks arrive in your New To Do List.



A To Do task is your assignment. It represents an assignment to be carried out on a specific activity when you double-click the task. A To Do informational message can also appear your New To Do List or within a Workgroup To Do List. To Do

informational messages always appear in italic type so that you can distinguish them from To Do task messages in New To Do Lists or Workgroup To Do Lists.

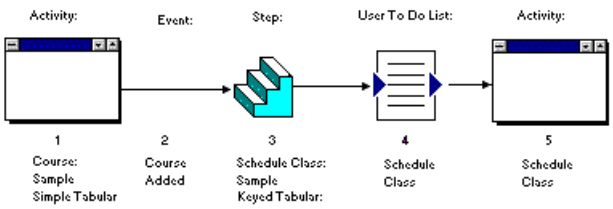
Each step clearly identifies

- Entry conditions that control whether to perform the step
- The activity (window or applet) on which to perform the step
- A To Do task message that tells you what needs to be done. (To the workflow administrator, this To Do task message appears as the step name on the Workflow Workbench and on the Workgroup To Do Administration window.)
- The assignment rules that determine who performs this step in the workflow
- Input mapping information that controls what data is passed from the previous step in the workflow and what data from the source activity is displayed to the assignee receiving the To Do task message.

Depending on this information, SmartStream sends To Do task messages to the users or groups responsible for performing the step. These messages are displayed in users' To Do or Workgroup To Do Lists.

When you select the To Do task message, SmartStream opens the appropriate activity window and fills in any data passed from the previous step. The following table, and the illustration that follows, describes a sample workflow process:

Stage	Description
1	Jean uses the *Course: Sample Simple Tabular* activity to create the new class WF101, Workflow Concepts, thus generating a workflow event.
2	SmartStream sees that the *Course Added* event occurred on the *Course: Sample Simple Tabular* activity.
3	Based on that event, SmartStream finds that the *Schedule: Sample Keyed Tabular* activity is the next step, and that user Paul is assigned this next step.
4	SmartStream sends the *Schedule Class* task message to Paul's To Do List.
5	Paul sees the new task in his To Do List and selects it. SmartStream opens the Schedule window and fills in WF101 as the Course ID. Paul enters the scheduling information for the course.



The Workflow Trigger Event Function

From a technical standpoint, workflow is accomplished by developing software activities that trigger workflow events. The workflow definitions associate these events with To Do task messages. These To Do task messages are sent as cues to begin the next step in the business process.

Each activity has the logic to trigger events at the appropriate times. These events usually occur after changing information in the database tables.

For each defined event, the Trigger Event function evaluates the next step or steps to determine which To Do task and informational messages are created for the workflow. These messages are stored in the message_queue_1 table within the DBSwact database on the server that contains the owners' SmartStream desktops.

The activity triggering the event also passes the relevant application data to this function. This cycle continues until each piece of information is pushed entirely through its business path. A key characteristic of this technology is that a SmartStream administrator can change the flow of information using the Workflow Workbench.

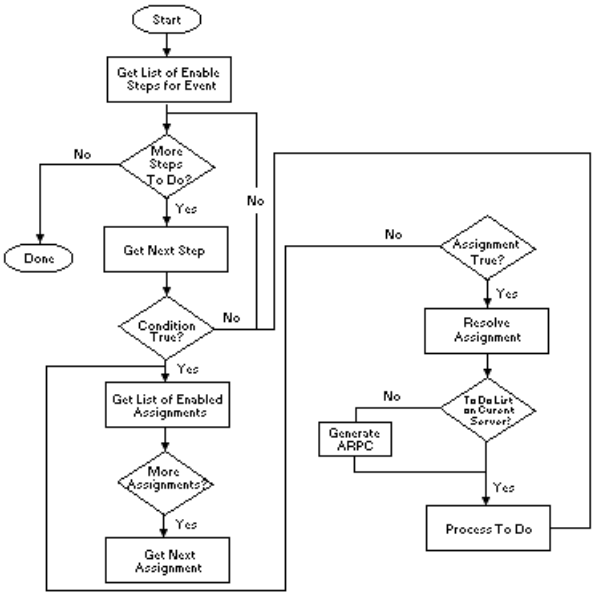
Trigger Event Processing

When a SmartStream application triggers an event, it calls one of two trigger event workflow API functions, which in turn calls the trigger event stored procedure. One trigger event function handles approval workflows and the other function handles non-approval workflows.

When the stored procedure is called, it reads the details of the event from the event_master_1 table. If the event is disabled, the stored procedure does nothing. If the event is enabled, the stored procedure gets a list of steps associated with the event and processes those steps. See the following table and the figure that follows for a detailed discussion of this process:

Stage	Stored Procedure
1	Evaluates the condition associated with the step. If the condition is false it skips to the next step in the list.
2	Retrieves a list of enabled assignments associated with the step. For each enabled assignment it evaluates the associated condition. The first assignment with a true condition becomes the assignment for the step.
3	Resolves the assignment into a user, workgroup, or approval list. Depending on the type of assignment, this processing may include evaluating a structure function, resolving a role, or validating a dynamic assignment to make sure it is valid. **Note:** If the assignment is for an approval step, the stored procedure saves the name of the list to be returned and continues with the next step in the list.
4	Determines the server where the New or Workgroup To Do List is stored.

Stage	Stored Procedure
5	If the assignee is a user, determines if the user receives To Do notification by mail. If so, the To Do task messages and any To Do informational messages are mailed to the user's Mail InBox through the mail gateway. If the user does not receive To Do messages (both tasks and informational) through the selected notification by mail option, then the stored procedure adds the To Do messages in the usual way to the user's New To Do or Workgroup To Do List.



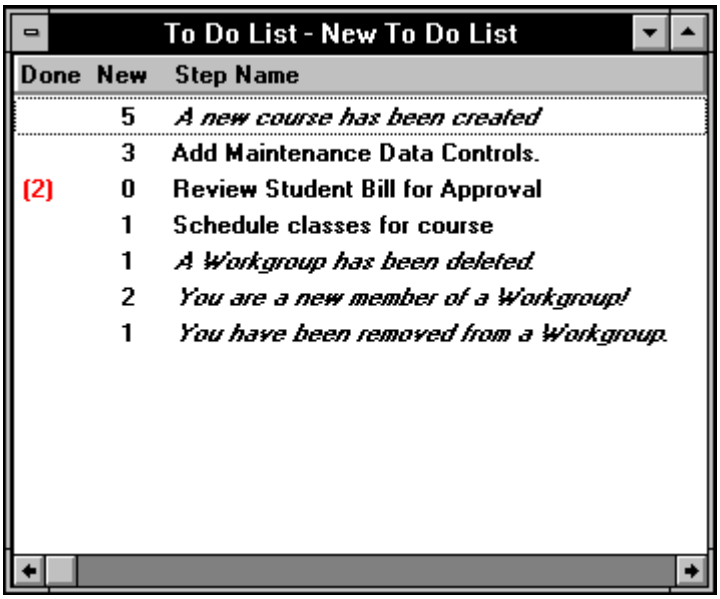
Network Implications

Because trigger event processing is entirely transaction-based, SmartStream assures that To Do messages are delivered reliably to both local and remote users. All remote workflow related processing is enqueued on the local server in ARPC tables so that later processing can reliably take place. Although network failures delay To Do delivery to users whose desktops and To Do Lists reside on remote servers, the To Do messages are delivered when the failure condition is corrected.

Tasks and To Do Lists

Each user and workgroup has its own To Do List that resides in each user's Home Drawer in the SmartStream Browser. A To Do List contains a list of all the tasks and informational messages that have been assigned to the user or workgroup.

Each task is associated with a next step that needs to be performed. The text for a task that appears in your To Do List is also the step name. The following figure shows a To Do List that contains tasks. Note that **Schedule classes for course** is an example of the step name and that you have one new task in this step.



To act on a task, choose it from the To Do List. When you choose the task, SmartStream opens an application window, then fills in data that helps you to complete the task.

Informational To Do messages are messages that, when acted upon, produce a dialog instead of opening a window. Informational To Do messages appear in an italic type in the To Do List, as illustrated in the previous figure. Many workflows end with an Informational To Do message.

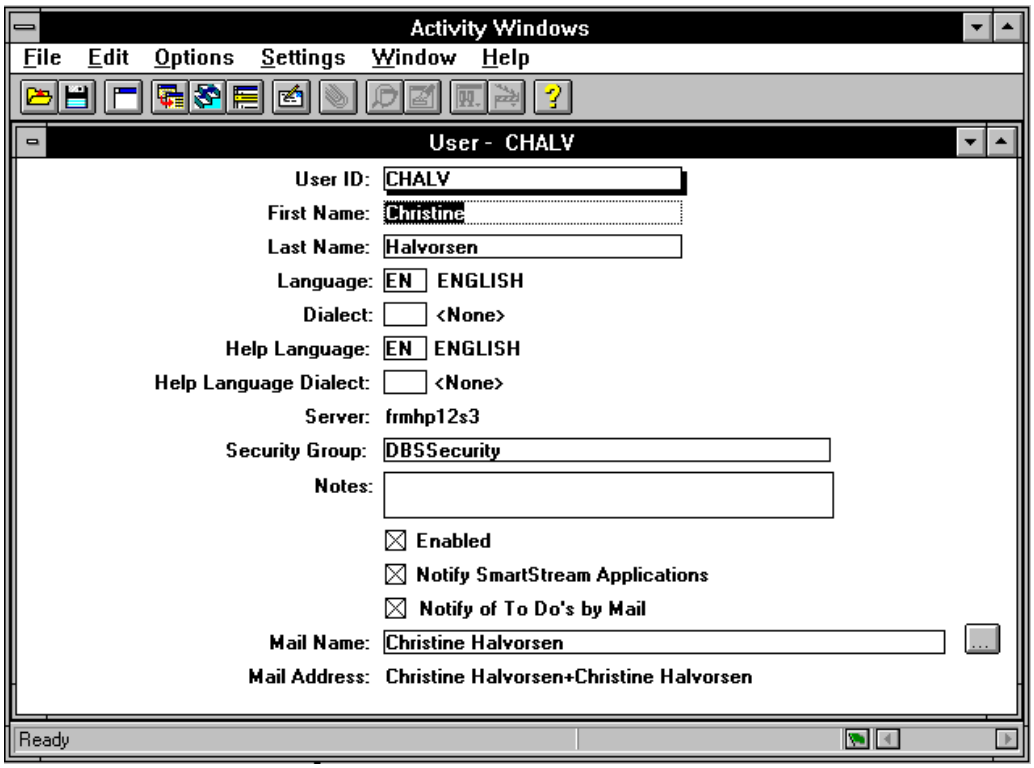
For information about Workgroup To Do Lists, see Defining Workgroups chapter in this guide.

Mail-Enabled To Do Tasks

Mail-enabled To Do tasks use electronic mail to notify you when you have been assigned a To Do task. Mail-enabled To Do tasks enable you to move directly to your assigned work. Note that the mail system specified in your SmartStream Mail Preferences dialog is the mail system that is accessed.

Note: If your actual mail address changes, you must change the mail address on the User window.

You can designate a user to receive To Do task notification by mail by selecting the Notify of To Do tasks by Mail option box on the User window and entering the appropriate mail address.



If the user is an assignee, the workflow engine writes the To Do task out to the server, and the Mail Gateway program reads the To Do task from the user's server. The user then receives a mail message containing the details of the assigned To Do and an attachment. Opening the attachment in the mail system starts SmartStream and opens the window of the assigned To Do task. The To Do task also appears in the user's To Do List, but it is automatically removed from the SmartStream desktop when it has been accessed and completed through the use of the mail system.

To Do tasks for a user can be mailed to anyone in the mail system. However, when the user clicks the attachment to open the To Do task, that user must log on to SmartStream as the user or member of the workgroup to which the task has been assigned.

Informational To Do messages operate similarly, with two exceptions:

- Informational To Do messages are mailed to the user who has requested mail-enabled To Do tasks or messages; they do not appear on the user's To Do List within the SmartStream browser.
- The Informational To Do mail message contains the informational message text, but does not contain an attachment.

For more information about Mail Gateway, see SmartStream Mail Gateway in the *SmartStream Platform* guide.

SmartStream Predefined Workflows

SmartStream business processes are delivered to your enterprise with predefined workflows in place. These workflows are used by SmartStream. They are described in the documentation of the business processes that your enterprise uses.

Workflows are tailored so that they run your enterprise's business processes. However, before you can tailor workflows, you must understand how workflows work.

Sample Application Workflow

To explain workflows and how they work, the sample application delivered with SmartStream is used throughout the workflow discussion. As each conceptual piece of a workflow is discussed, a reference to the sample application workflow is used as an illustration.

The sample application illustrates how SmartStream can automate a manual workflow at a large university. In the sample application, the administration manages a process that adds and schedules new courses and registers students for them.

Note: The sample application workflow is delivered with SmartStream only for demonstration and training purposes. It is not intended to be a fully functioning application.

The sample application workflow can be displayed by using the Workflow Workbench window. For more information, see Workflow Workbench.

When users initiate the sample application workflow, they must follow a predefined set of processes to complete the workflow. In this sample application example, these processes involve

- Adding a new course
- Scheduling the new course
- Registering students for the new course.

Workflow Components

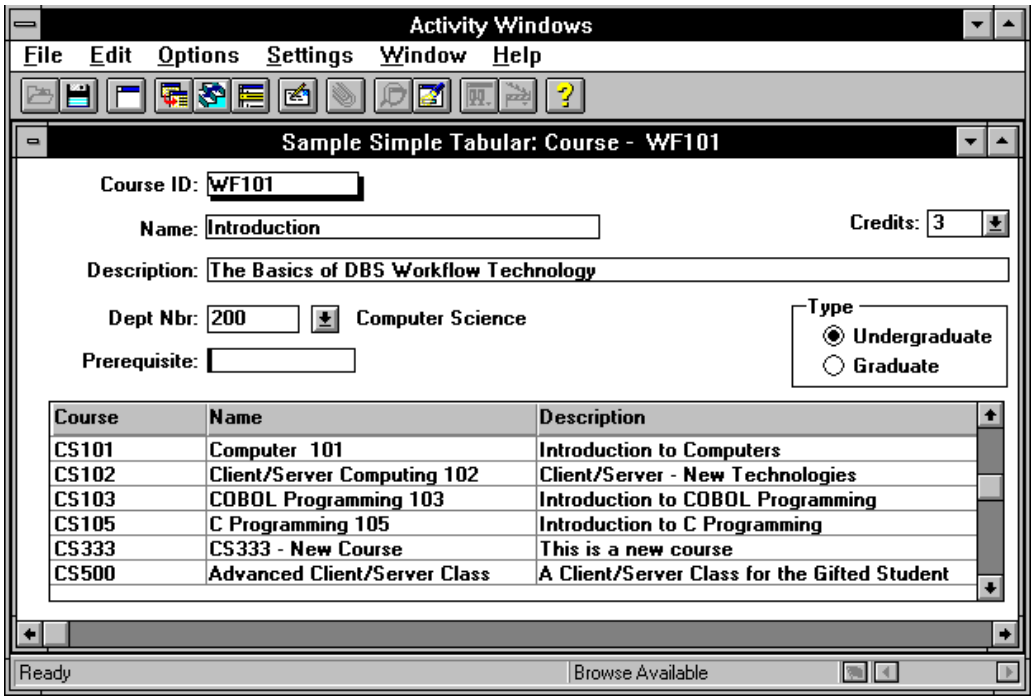
Each of the following components plays a distinct role in the workflow and starts some sort of processing required to complete the workflow.

Activities

Activities are the tools to perform tasks. To users at your enterprise, activities are windows (such as the Course window), scheduled processes (such as the Download Request program in Connect), or reporting tools (such as SmartStream Query, Reporter, and Report Series).

Sample Application: Adding a Course

An employee in the registrar's office adds a new course that will be offered this semester, Introduction to Workflow. The employee performs this task using the Course window. This window is an activity and is the first step in this workflow example.



The Course window has certain functions attached to it that continue the processing. These functions trigger events that are based on the task the user performs on the window.

Events

When a user uses an application window, events are triggered that indicate that data has been changed. The events, with the workflow definitions, determine what happens next in the workflow. Usually, these events are triggered when a user saves or deletes information on a window.

Note: Events are associated with activities. To associate events activities, or to create new activities with their own set of events, you must use SmartStream Builder.

Sample Application: Scheduling a Course

Scheduling the new course is the next step that needs to be performed in the workflow.

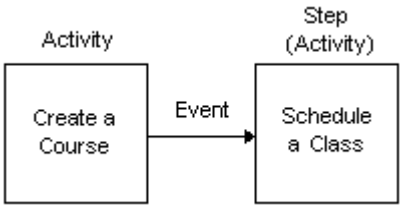
When a course is added using the Course activity, this triggers an event (Course Added). The triggering of this event causes a To Do task to be sent that informs the next person in the workflow to schedule the new course.

Steps

An activity can trigger various events depending on what actions the user performs on the window. Attached to each of the events are all of the steps that users must perform as a result of the event.

When an event is triggered, SmartStream determines the next steps in the workflow. SmartStream then assigns tasks to the users who are responsible for performing those steps.

The following diagram illustrates how steps relate to the other parts of a workflow:



Each step in a workflow identifies the following information:

- The event that requires the step to be performed.
- The activity (or window) that the step is performed on. This window opens automatically when a user selects the task from a To Do List.
- The step that has step name text that appears in the user's To Do List and informs the user of the tasks that need to be performed.
- Assignment rules, which determine who performs the step.
- Entry conditions that describe whether the step should be performed.
- Input mapping information, which controls the data from the source activity displayed for the user receiving the To Do task and the data passed to the next step activity.

Sample Application: Registration

The next step in the process is registering students. The Class Scheduled - Register Students event sets up the processing to do this. The Registration activity is where the task is completed.

Step Assignments

In setting up workflows, you must assign responsibility for each step that your enterprise uses. You can assign responsibility for performing a step to various assignee types.

To assign responsibility for a step to a user or workgroup, you create a **step assignment**. The step assignment identifies who is responsible for performing the step.

Assignee Types

An assignee type determines who receives a task generated by an event. You can set up your next step assignment so that these tasks are assigned according to one of the following options:

- Assign task to
  - Users
  - Workgroups
  - Roles
  - Senders
  - Structures Assignments
  - Approval Lists
- Assign Task Dynamically

You set up assignments using the Workflow Workbench. For more information, see Using the Workflow Workbench.

Users. You can set up your workflows so that specific users receive steps. These users can also belong to a workgroup. For example, you can have a group of planners out of which you want only one specific planner to be informed when a certain condition occurs.

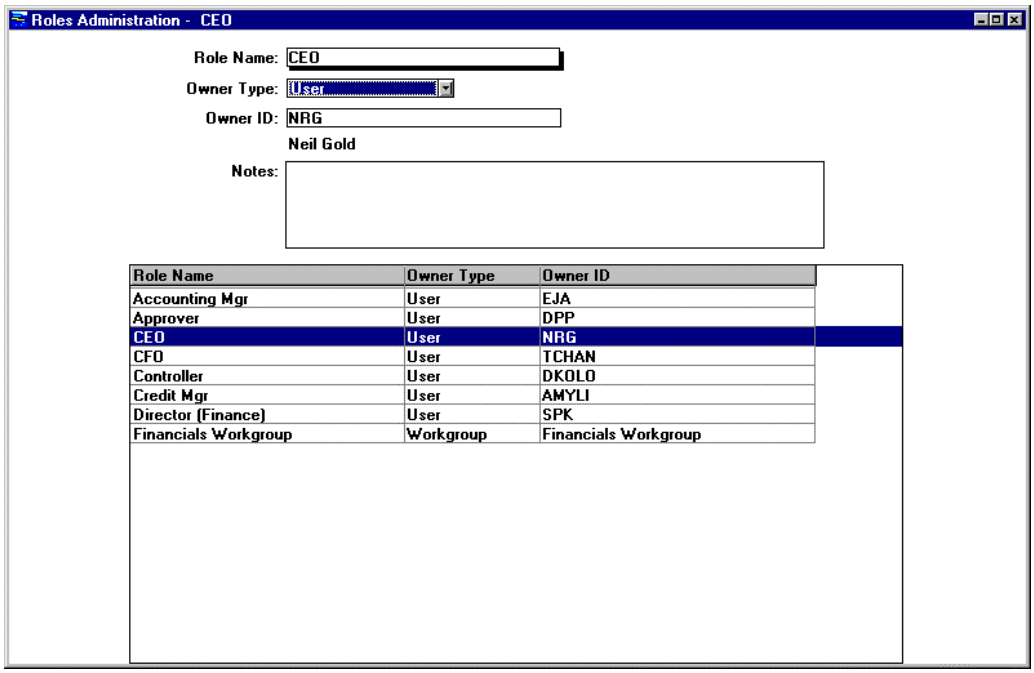
For information about setting up users, see Users and Security Groups.

Workgroups. Workgroups contain groups of users that perform similar functions, such as buyers or planners. SmartStream business processes deliver their own workgroups, and you can create workgroups to suit your own needs.

Every task must be assigned to a workgroup by default, even if your Assign To option is User, Sender, or Assign Task Dynamically. This ensures that a task does not get lost if a user is removed from SmartStream. When a user is removed from SmartStream, the task can be reassigned to the workgroup and then reassigned to another user by the manager, as needed.

For information about creating workgroups, see the Defining Workgroups chapter in this guide.

Roles. A role is the function a person performs. For example, the requisition approval administrator might be responsible for approving requisitions that meet certain criteria. A role is defined and assigned to a user or workgroup using the Roles Administration window.



Roles differ from workgroups in two ways:

- Only a single user (or workgroup) is defined to have a role
- All To Do tasks assigned to the role go directly to the responsible user (or workgroup).

Using roles the workgroup administrator can define workflow assignments by organizational function, rather than by user. Thus, when the user who is responsible for a function changes, this change can be made in one place (the Role Administrator window) rather than in multiple workflow definitions.

Senders. You can set up your workflow so that the sender (the originator of the step) receives the To Do task. For example, if a user is responsible for entering information on an activity window, you may want that same user to perform the next step and its associated task.

Structures Assignments. You can set up your workflow to assign tasks to a user or workgroup or approval list associated with a point in a structure.

Structures that are used in assignments must be in HR/Workflow groups. Three types of structures assignments can be assigned to a workflow:

Structures Assignment	Description
Point	Data point within a structure
Immediate Ancestor	The point above the current point
Ancestor at Layer	The point itself or a point somewhere above that point that has been defined in a layer associated with the structure.

Approval Lists. You can set up workflows to assign tasks to an approval list. Note that approval lists appear only in approval-enabled activities (such as the Billing sample application window).

For more information about approval lists, see Approval Process.

Assign Task Dynamically

Some activities support the Assign Task Dynamically feature. Using this feature you can make step assignments based on changes to data.

See your application-specific documentation for details about dynamic task assignments. For more information about Assign To options and the Assign Task Dynamically feature, see Specifying Who Is Responsible for a Step.

Conditional Assignments

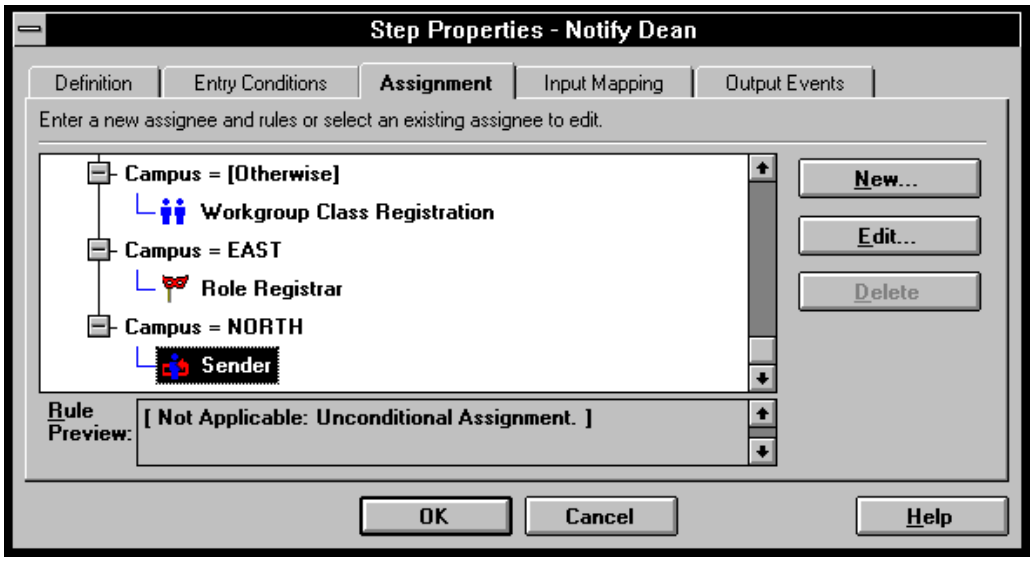
After an entry condition is satisfied, the workflow engine determines to whom the step is assigned using the assignment condition. The step is then assigned to the user or workgroup associated with the first condition that is evaluated as true. If no condition is defined or if all conditions fail, the step is assigned to the default user or workgroup.

Step Entities

Your enterprise is made up of several **entities** that are defined to your SmartStream business processes. An entity is a means of dividing your workflow and requiring security for accessing data. For example, an entity can be a site, a department, or an account.

If responsibility for a step varies by site, for example, you create a step assignment for each entity in which the step is performed.

The following figure displays step entities in the Workflow Workbench assignment tree for two different campuses (East and North) within the sample application.



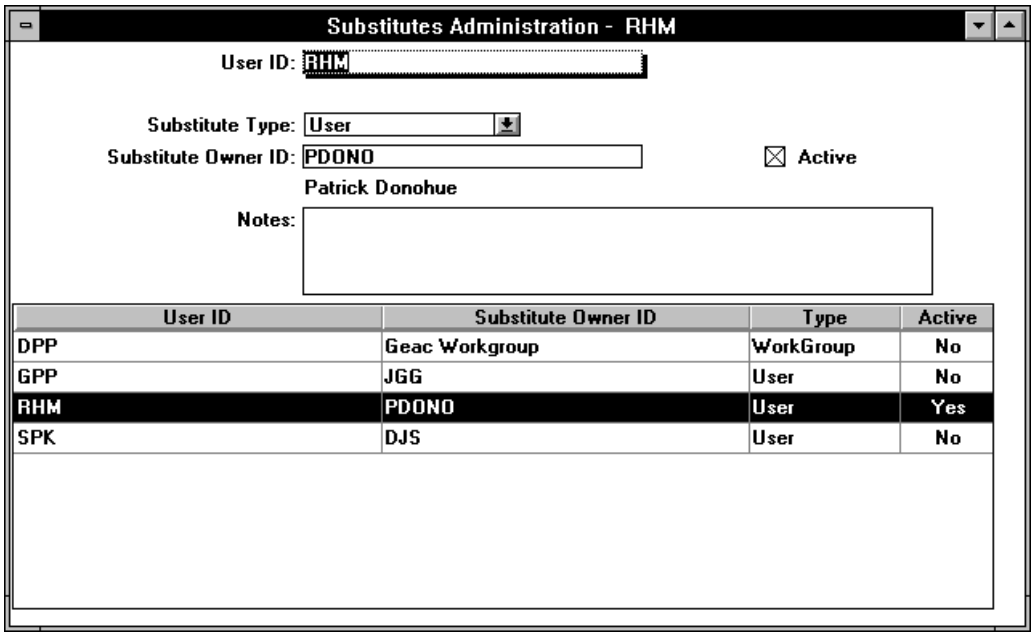
Note that the assignment for East is going to the person performing the role of registrar. The assignment for North is going to the sender.

For more information, see Assignment or the SmartStream Administrator's Help.

Substitutes

Substitutes are used when users want to have another user act on their behalf, usually for a short time (for example, during a user's vacation). When a user designates a substitute, all of the user's To Do tasks and messages are routed to the substitute until the substitute is deleted. In this way, workflows do not change to reflect temporary users.

On the My Substitute window users can specify substitutes for themselves. Note that when a substitute becomes active, only future workflows are affected. Tasks already assigned remain in the New To Do List.



Using the Substitutes Administration window an administrator can display the complete list of substitutes defined in SmartStream and change the substitute defined for any user.

The Workflow Workbench

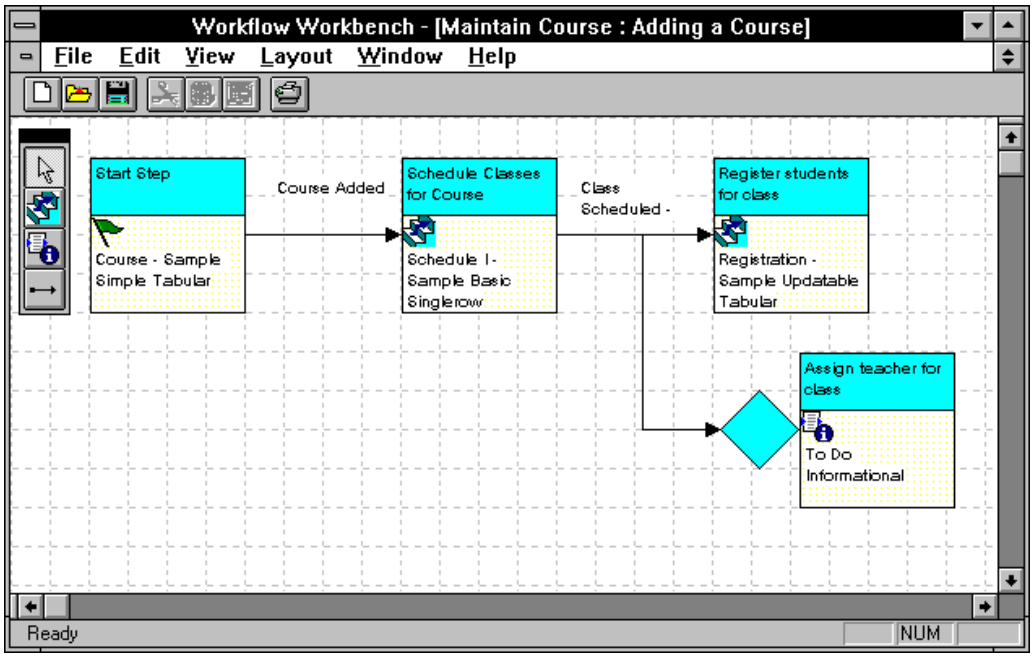
The Workflow Workbench is used to display workflow maps, map (or draw) new workflow maps, customize, save, and print them, and perform all other administration tasks related to workflow definition through a single, integrated interface.

The Workflow Workbench

- Enables creation and maintenance of simple, concise workflow maps.
- Makes the flow of control in workflows visually understandable.
- Enables the expression of sophisticated rules that control the conditions under which next steps are generated and to whom they are assigned, including support for Structures.
- Enables the approval process to take place using
  - Conditional logic to determine next step assignments based on arbitrary user-provided data (such as organizational unit, date, and data carried from the previous step)
  - A single step to represent a variable number of approvals that depend on the length of the approval list
  - Structures to leverage existing organization definitions.
- Allows you to specify column data passing between steps in a workflow.
- Allows you to organize related workflow maps into groups (workbooks).
- Provides activity-level security, including read-only access restrictions.

Using the Workflow Workbench

The Workflow Workbench displays workflow steps. You can use it to create maps, which are visual representations of your workflow. The following figure contains an example of the sample application workflow map.



Each box shown in the workflow map represents a step. The top of the box contains the step name (the actual To Do task text that appears in a user's To Do List) and the bottom contains the name of the activity. Each line connecting a step represents an event triggered by completing the step.

The Workbench can be used in two ways:

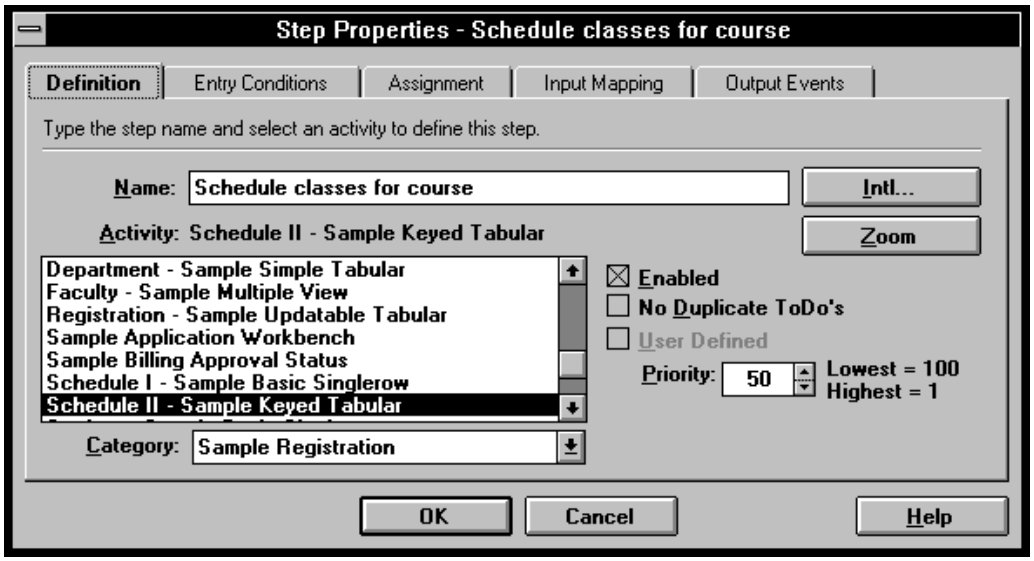
- To display workflows quickly
- To build and maintain new workflows

You can use the tools on the Workflow Workbench palette to build and change workflow maps. The following list shows the palette tools and their function:

- Pointer button - Points to an object. You can also use it to reset the Workflow Workbench palette so that a new button type can be selected
- New Step button - Creates a next step on the workflow map
- Informational Step button - Creates an Informational To Do step on the workflow map

- Event Connector button - Connects steps on the workflow map based upon a selected event

Information for steps on the Workflow Workbench window is displayed on the Step Properties dialog box. This dialog box contains **tabs** you can use to define specific characteristics for each step. You access the Step Properties dialog box by double-clicking the step.



Note that the start step in your workflow always contains only the Definition and Output Events tabs. All subsequent steps contain all of the tabs illustrated in the previous figure.

The following table lists each tab in the Step Properties dialog box and its function.

Tab	Use it to...
Definition	Define the name of the step and the activity used to perform the step. Select the output event or events associated with this step.
Entry Conditions	Create a conditional expression under which this step will operate.
Assignment	Designate who will be responsible for performing the task associated with the step.
Input Mapping	Map the fields from the previous step to the current step and reorder the To Do Display Order.
Output Events	Display events associated with the step so that you can initiate the next step in the workflow.

For more information about the Step Properties dialog box and tabs, see the Workflow Workbench Window topic in the SmartStream Administrator's Help.

Saving Workflows

Two types of Save operations occur in the Workflow Workbench:

- Saving the workflow to the database
- Saving the workflow map.

Each time you choose the OK button on one of the tabs on the Step Properties dialog box, any changes you made to the workflow properties are saved to the database.

When you use the Save commands on the Workflow Workbench menu bar, the workflow is saved to a **workflow map**. Workflow maps are saved in groups called workbooks. A **workbook** usually represents the set of related workflow maps that correspond to a business process. The Open, Save, and SaveAs menu commands are used to retrieve and save workflow maps from their associated workbooks.

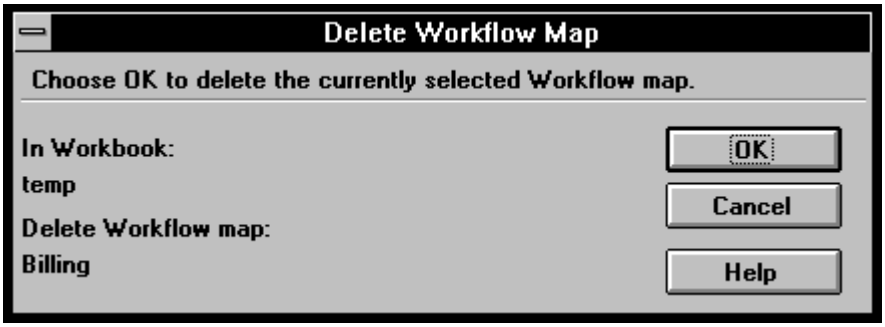
For more information about opening and saving workflows, see the Workflow and Workgroup Administration section of the SmartStream Administrator's Help.

Print Workflow Maps and Step Reports

Using the Print command from the File menu, you can print pages of your workflow map, the step reports associated with the workflow map, or both. A step report is a report that is automatically generated when you create a new step and can be displayed only when you are using print preview mode. The step report contains all of the information related to that step, such as entry conditions and assignments.

Deleting a Workflow Map

Using the Delete Workflow command from the File menu you can delete the currently selected workflow map. The following dialog box prompts you to confirm or cancel the deletion:



Note: Deleting the workflow map does not delete the actual workflow from the database. It just removes the visual representation of the workflow.

Removing Steps from a Workflow

Two commands from the Edit menu remove steps from a workflow:

- Remove from Map Only
- Delete from Workflow

Note: You can also access these commands by selecting a step to remove and clicking the right mouse button.

When you select a step on the workflow map and access the Remove from Map Only option, the selected step is automatically removed from the workflow map only. It does not delete the step from the actual workflow that is stored within workflow tables in the database.

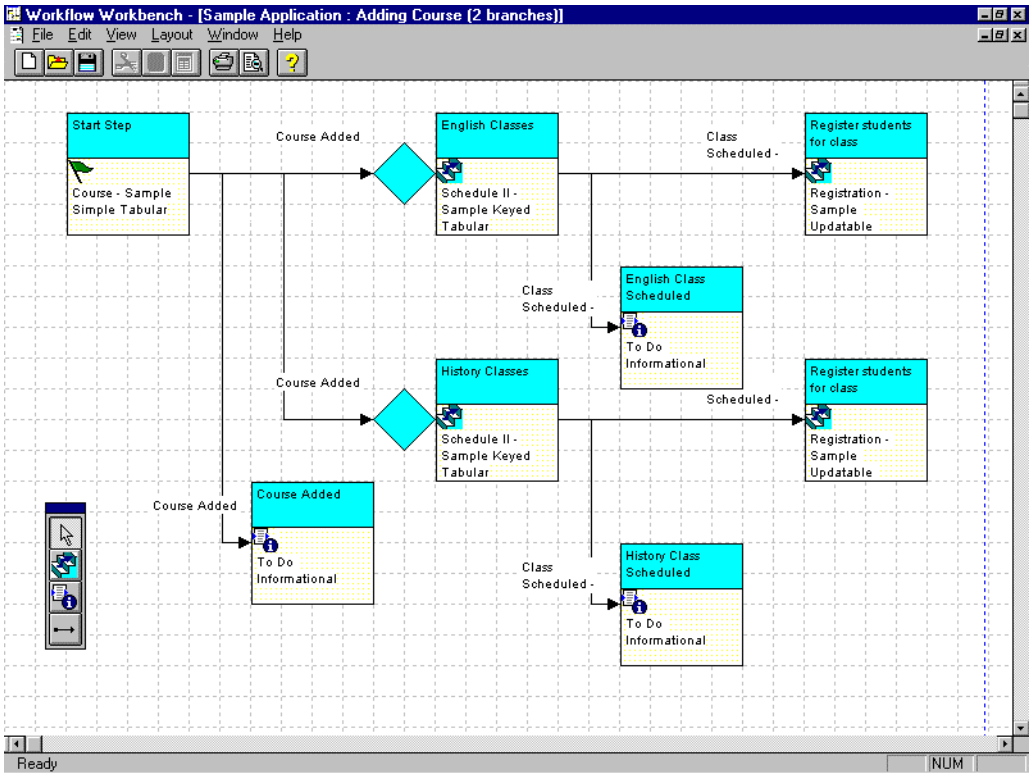
Note: Using the Cut button on the Workflow Workbench toolbar is the same as using the Remove from Map Only command.

When you select a step on the workflow map and access the Delete from Workflow command, you are prompted for confirmation to delete the selected workflow steps from the database. If you choose yes, the step is removed from the workflow map and from the database table. Any step that is deleted in this manner is removed from the workflow at both the map and database levels.

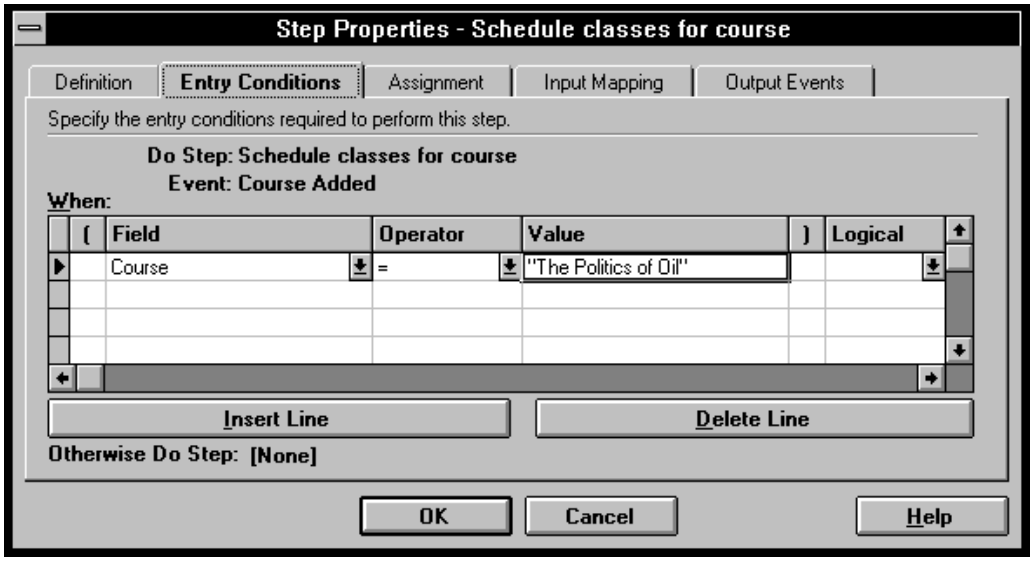
Entry Conditions

Conditional logic can be used to determine the next step, and to whom the next step should be assigned, or to select who should appear on an approval list. For more information about approval lists, see Approval Process.

An event can trigger no step or any number of steps. When an event splits into multiple paths, each next step in all paths is generated. Entry conditions that precede steps are represented as diamonds in the map, as shown below.



A next step task is generated only if the workflow evaluates the entry condition as true. The following figure shows an example of an entry condition:



Otherwise Steps

Otherwise steps are used to add if-then logic to your workflow. For example, you can add an entry condition to a workflow step for scheduling courses. The entry condition can specify that if the course begins with *HI*, to send the scheduling task to the workgroup for History scheduling. It can also state that if the course begins with *CS*, to send the task to the workgroup for Computer Science scheduling. In this example, the primary step is triggered if the course is a History course, and the otherwise step is triggered if the course is not a History course.

Use the following procedure to add an otherwise step to a workflow where you have already defined an entry condition.

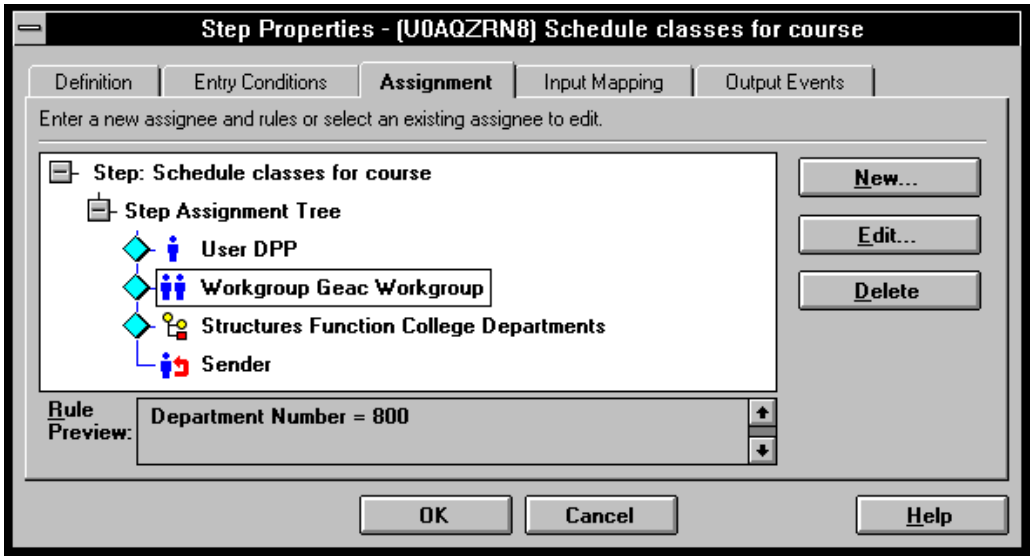
Step	Action
1	Access the workflow map you want to change.
2	Click the New Step button on the Workflow Workbench palette.
3	Place the step at or near its target location on the workflow map.
4	Double-click the new step. **Result:** The Step Properties Definition dialog box is displayed.
5	Enter the name of the new step and select an application category from the category list.
6	Select an activity name from the list of activities that is displayed.
7	Choose OK.
8	Connect the diamond-shaped entry condition to the new otherwise step that you are creating.
9	Click the Event Connector button on the Workflow Workbench palette.
10	Place the mouse pointer on the diamond-shaped entry condition that precedes the next step that you want to link to the otherwise step.
11	Click and drag the mouse pointer to the otherwise step that you want to link. **Result:** An arrow is displayed that links the entry condition step to the otherwise step.
12	Choose the Entry Condition tab on the Step Properties window and add the appropriate conditions for this step.

Each time you complete this procedure, a step report is automatically generated. This report contains information that is related to the step, such as entry conditions and step assignments. You can display step reports in hard copy and print preview mode only.

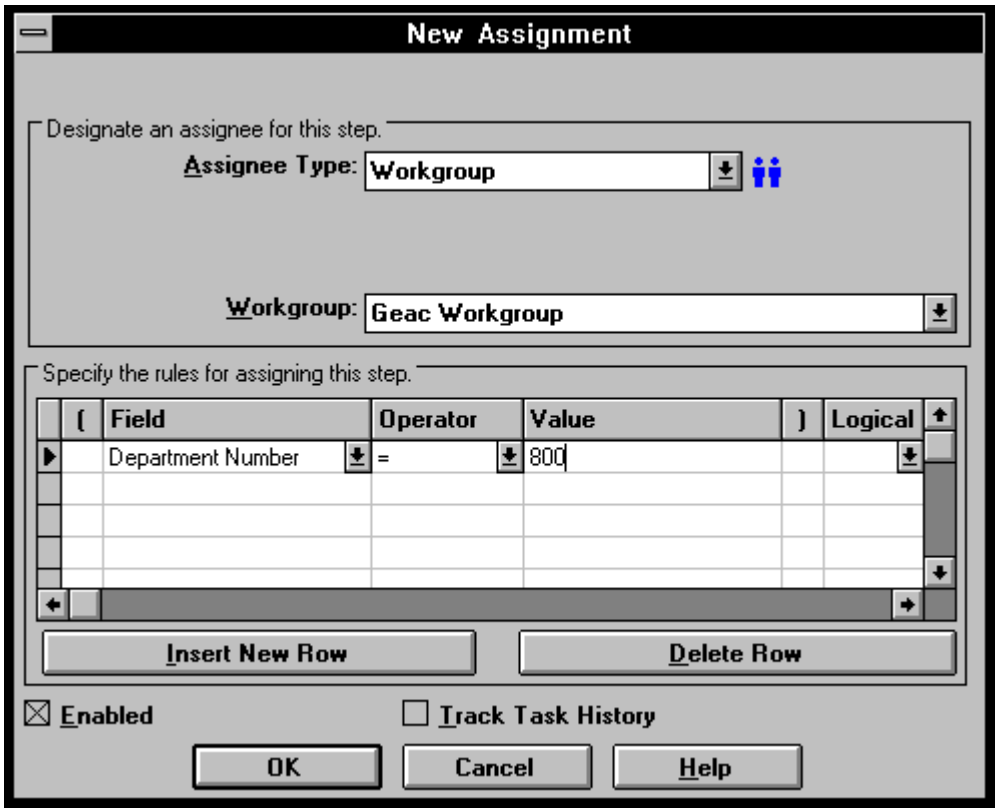
Assignment

All assignment rules associated with the conditional assignment are displayed on the Assignment tab. The default assignment is unconditional and therefore contains no

assignment rules. You can edit or delete assignments by clicking on the Edit and Delete buttons. The following figure shows a sample conditional assignment. Note that Sender is the default assignment. The remaining workgroups and user are assignments that have been added.

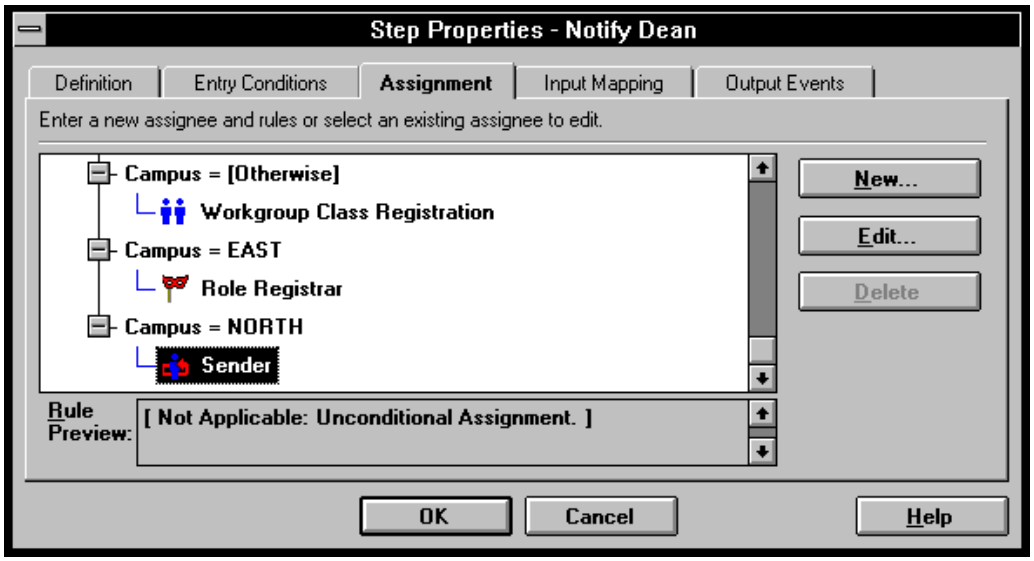


Clicking the New button on the Assignment tab accesses the New Assignment dialog box:



You can also add entities to your assignment tree. Entities take the highest level of assignment precedence.

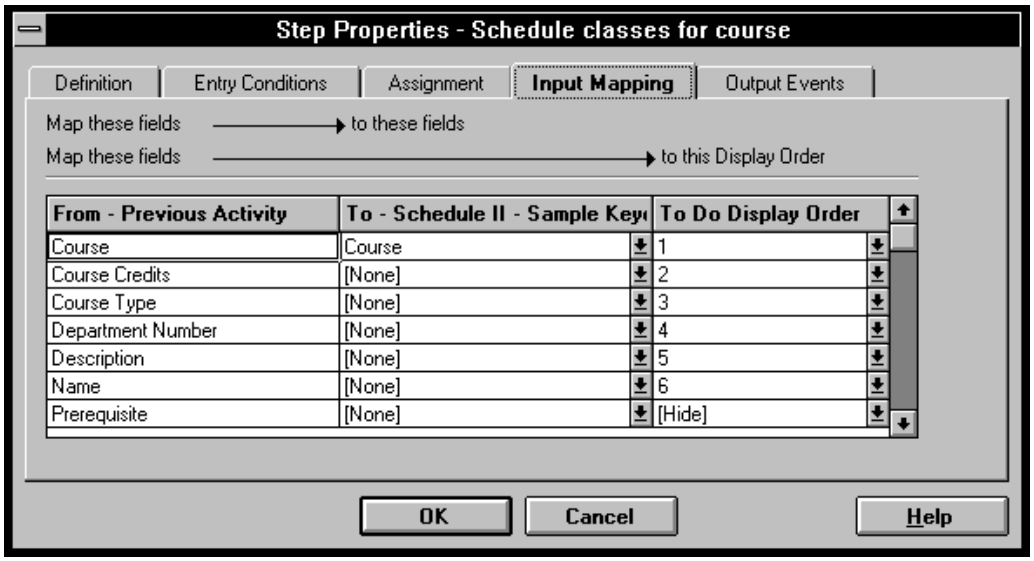
In the following figure, if the entity (campus) is EAST, then the assignment goes to the person who is performing the role of registrar. If the entity is NORTH, then the assignment goes to the sender. If the entity is neither of these campuses, then the assignment goes to the Class Registration workgroup.



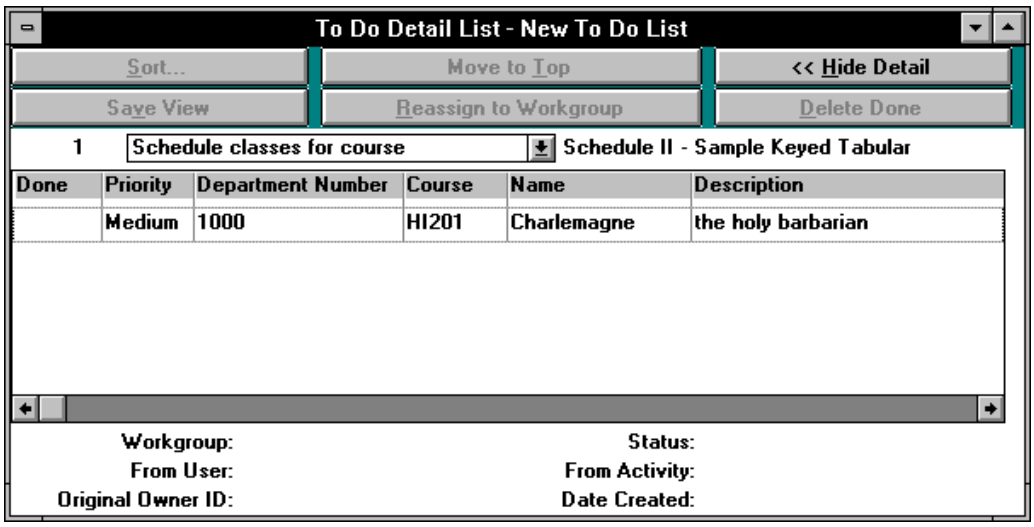
Input Mapping

Using the Input Mapping dialog box, you can map fields and their associated data from a previous step to a next step within a workflow. For example, in the sample workflow a previous step (the Course - Sample Simple Tabular activity) can have the data associated with the course field on its window automatically passed to the next step in the workflow (the Schedule II - Sample Keyed Tabular activity). This is done by specifying the name of a column on the To activity to receive the data from the previous activity. Through the use of the From column and the To column on the Input Mapping dialog box, you can populate fields in the current step with values from the previous activity. On this dialog box you can also reorder the To Do Display Order for tasks that are displayed in the To Do Detail List window.

In the following example, the Course field on the Previous Activity is being mapped to the Course field on the Schedule II activity. The To Do Display Order has the Department Number, Course, Name and Description columns appear in left to right order on the To Do Detail List window.

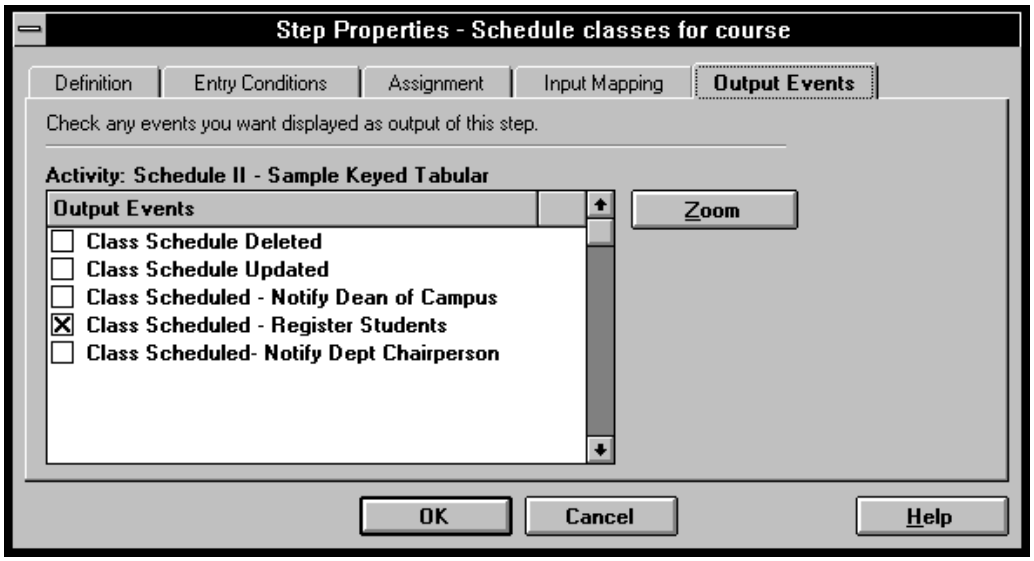


The To Do Display Order for workflow tasks appears in the To Do Detail List window as shown.



Output Events

The Output Events tab displays the selected events for the current activity. When you check an output event or events and choose OK, it displays the event and any connected steps in your map on the Workflow Workbench.



Choosing the Zoom button accesses the SmartStream Workflow Event Definition window for the current output event.

Defining and Managing Workgroups

In your enterprise, groups of employees (such as buyers or accountants) perform similar or identical tasks. You can group these employees into **workgroups** and set up workflow maps so that tasks are assigned to workgroups rather than to individual users.

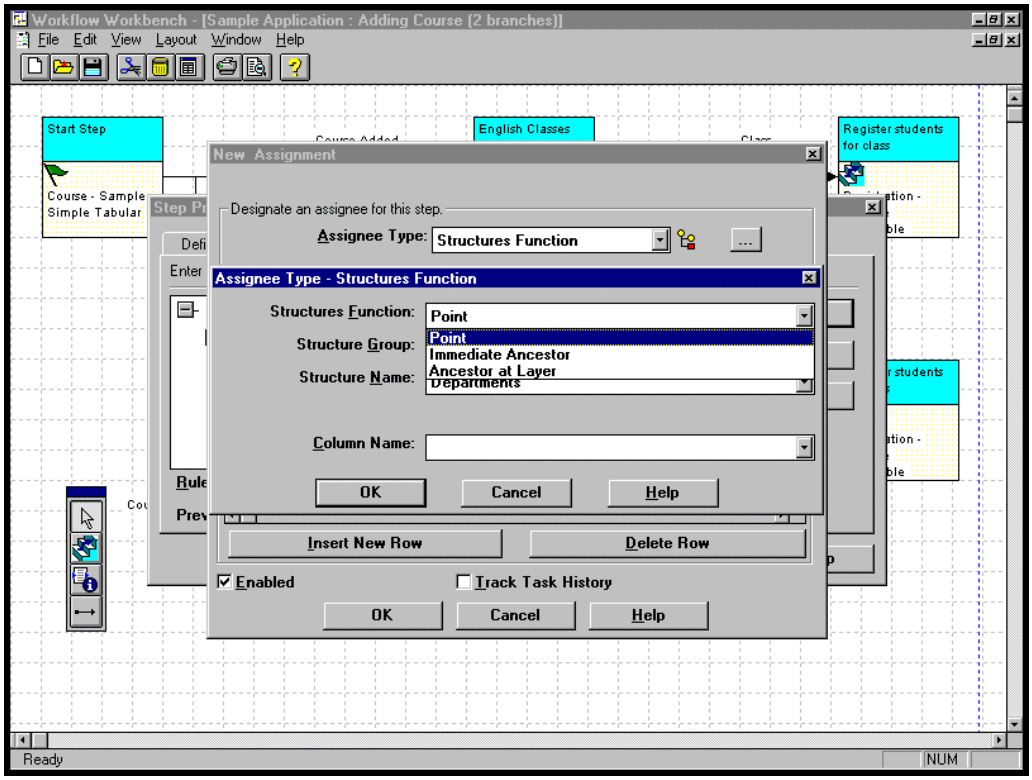
For more information about workgroups, see the Defining Workgroups chapter in this guide.

Integration with Structures

SmartStream workflow provides three types of Structures functions:

- Point
- Immediate Ancestor
- Ancestor at Layer

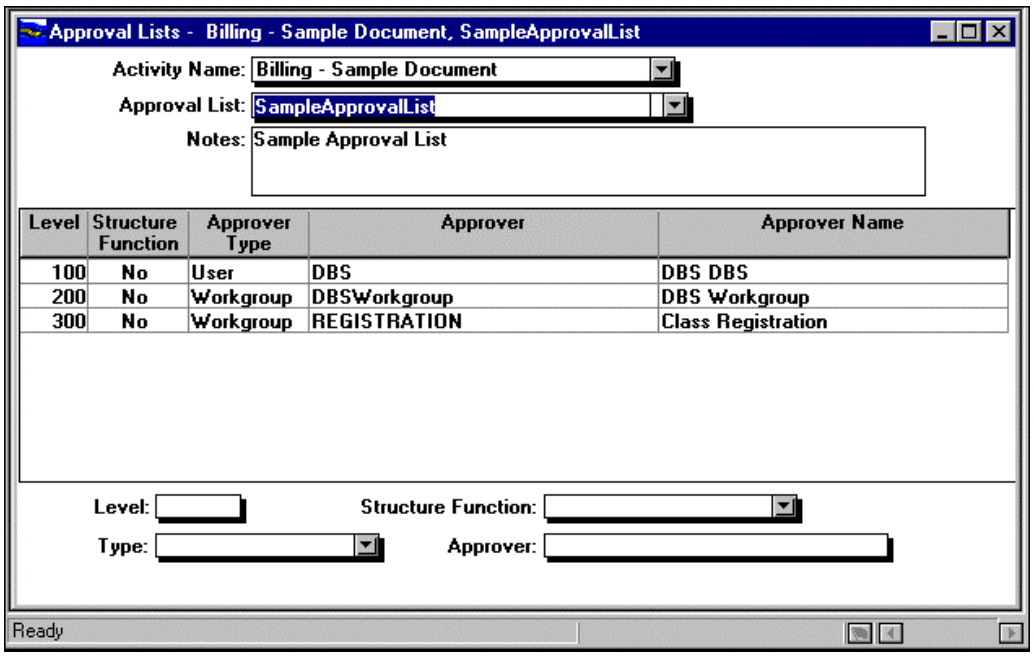
Structures functions are used within conditional expressions for workflow assignments. Each of the three Structures functions takes a point name value as input. This input value is a column value that is passed when the event is triggered.



These structure functions are used with the name of a structure group and a structure. With the Ancestor at Layer function, a layer name is also needed. You must also select the data source column over which the structure has been built.

A structures function can be used as an assignee type selected on the New Assignment dialog box. You can make a Structures function a node in the step assignment tree and associate it with any next step in your workflow map using with the Step Properties Assignment dialog box.

You specify Structures functions on the Workflow Workbench Step Properties Assignment dialog box or on the SmartStream Approval List window as shown:



You can assign the task to the user or workgroup associated with the workflow global dynamic property of the point, direct ancestor of the point, or ancestor of the point at the indicated layer.

Creating a Structure for Workflow Assignment Use

Use the following procedure to create a structure:

Step	Action
1	Open the SmartStream Structures.
2	Select New from the File menu on the SmartStream Structures window.
3	Choose Workflow Structures from the list associated with the Group field on the New Structure window.
4	Enter an appropriate name for the new structure.
5	Enter an appropriate description for the structure.

6	Choose Standard as the type of structure. **Note:** Do **not** click the following options: ▪ Inherit Points button (used only for Inheritance structures) ▪ Use ranges ▪ Restrict Summary Point Names ▪ Associate With All Entities
7	Click OK. **Result:** The name you gave your new structure is displayed in the title bar of the SmartStream Structures window.
8	Select Column Associations from the Structure.

Associating Columns

A column association determines the exact location of a structure's data. You must create a column association before you can add data points to a structure.

Use the following procedure to associate a column:

Step	Action	
1	Click the New button on the Column Associations window to begin the process of defining a column association. **Result:** The New Column Association: Step 1 window is displayed.	
2	Enter the name of the new column association. (You may want to make this meaningful by supplying a server, database, table and column name in this field.)	
3	Select whether you want to search for columns by server or application name in the Search By field.	
	If you choose to search by…	**You need to select…**
	Server	A server in the Server field that is displayed when you select this option. **Result**: A dialog box that lists all the installed databases on the selected server is displayed. Double-click the appropriate database to open a view with all the tables contained in the database. Select the appropriate table (the one that contains the column over which you are associating your structure).
	Application	An application in the Application field that is displayed when you select this option. **Result:** Only the server, databases, tables, and views that are valid for the selected application are displayed. Select the appropriate table.
4	Click Next.	

5	Choose the single column association option on the New Column Associations: Step 2 window.
6	Click Next.
7	Select the appropriate column on the New Column Associations: Step 3a window.
8	Click Finished. **Result:** The Column Association window is displayed.
9	Confirm that the correct column association name and characteristics are displayed on this window.
10	Click Close.

Creating Points Within a Structure

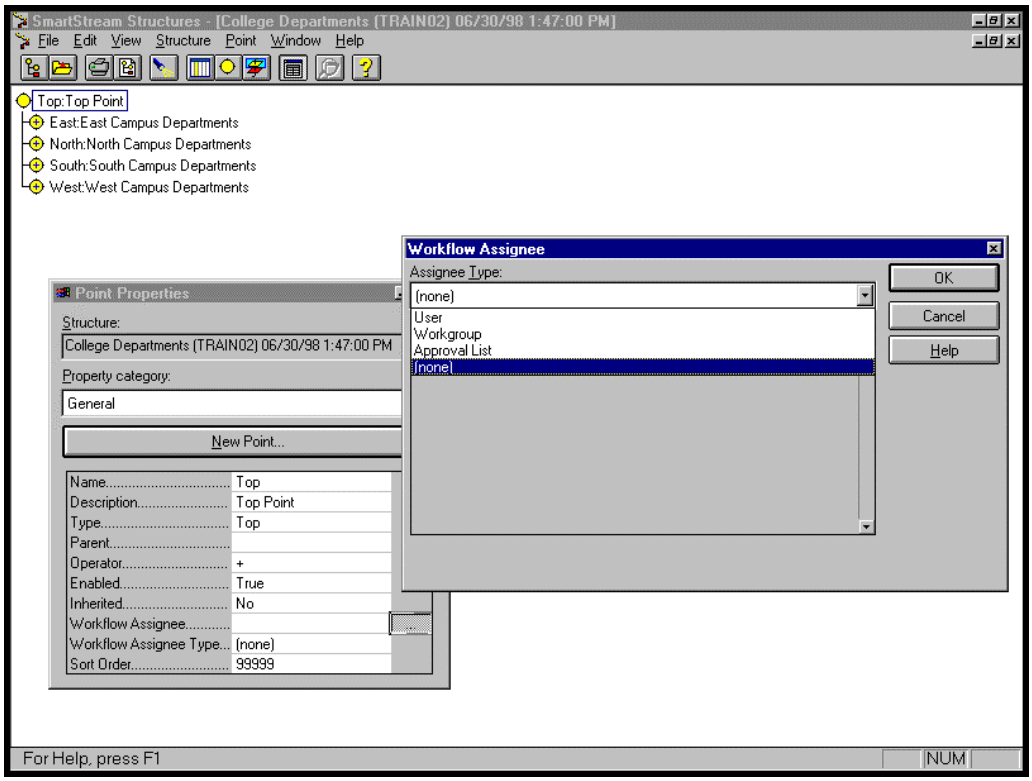
Creating a Point

Use the following procedure to create points within a structure.

Step	Action
1	On the Point Properties window, select a point on the tree where you want to add the new point. Decide whether the new point will be a child or sibling of the selected point. **Note:** You can change the selected point on the tree while adding new points. This allows you to change the sibling or parent point of the point you are adding.
2	Choose New from the Point menu, or click the New Point button. **Result:** The New Point window opens.
3	Select a point type.
4	Type the name and description of the new point.

Assigning a Workflow ID to a Point

Use the following procedure to assign a workflow ID to a point.



Step	Action
1	On the Point Properties window, click the ellipse button (...) next to the Workflow Assignee property. **Note:** You can also assign a workflow ID to a point by selecting the workflow assignment on the New Point window.
2	Choose whether you want to view a list of users, workgroups, or approval lists.
3	Select the ID that you want to associate with the current point In the Assignee field.
4	Choose a workflow assignee (user, workgroup, or approval list), and SmartStream automatically adds a workflow assignee type.
5	Click Apply to add the new point to the tree. **Result:** A new point is saved to the database each time you click Apply.

Quick Loading Data Points

Use the following procedure to create a quick loading data point.

Step	Action
1	Choose Quick Load from the Point menu. **Result:** The Quick Load window is displayed. **Note:** The Quick Load window displays all of the row values associated with the selected column from your table. These row values have not yet been added to the structure.
2	Select the rows that you want to add as data points.
3	Click OK. **Result:** Data points are added to the structure.
4	Select a data point on your structure. **Result:** The Point Properties window (located on top of the SmartStream Structures window) displays information about the data point that you selected, including the workflow assignee and workflow assignee type.
5	Click the Workflow Assignee field. **Result:** The Ellipse button appears to the right of this field.
6	Click the Ellipse button. **Result:** The Workflow Assignee window is displayed.
7	Select the appropriate assignee type (User, Workgroup, Approval List).
8	Select the appropriate entry (ID and name) from the assignee list and click OK.
9	Repeat this process for each data point for which you want to have a workflow assignee.

Workflow Assignments

Use the following procedure to specify a workflow assignment that is associated with a next step.

Step	Action
1	Access the Assignments tab on the Step Properties dialog box.
2	Click a node (an assignee point) in the step assignment tree. This activates the New button to the right.
3	Click New. **Result:** The New Assignment dialog box is displayed.
4	Select Structures Function as the assignee type.
5	Click the ellipse button to the right of the Assignee Type field. **Result:** The Assignee Type - Structures Function dialog box is displayed.
6	Select a structure function (Point, Immediate Ancestor, or Ancestor at Layer).

7	Identify the workflow structures group into which your structure has been placed. You must also identify the name of the structure that you will use within the replicated group.
8	Choose the column over which the structure has been built by selecting the appropriate column name for your structure in the Column Name field. **Note:** The selected column name is linked to the actual data values stored on the data table over which you will perform workflow processing.
9	Click OK. **Result:** The New Assignment dialog box is displayed.

Specifying Rules

On the New Assignment dialog box, you must specify the rules for assigning this step through a Structures function. Use the following procedure to complete this process.

Step	Action
1	Enter Field, Operator, and Value parameters.
2	Click OK.
3	Access the Step Properties dialog box, and verify that it displays the correct structure name associated with the Structures function that you have designated in the step assignment tree.
4	Confirm that the Rule Preview contains the correct rules for processing this step through the use of the Structures Function option.
5	Click OK.

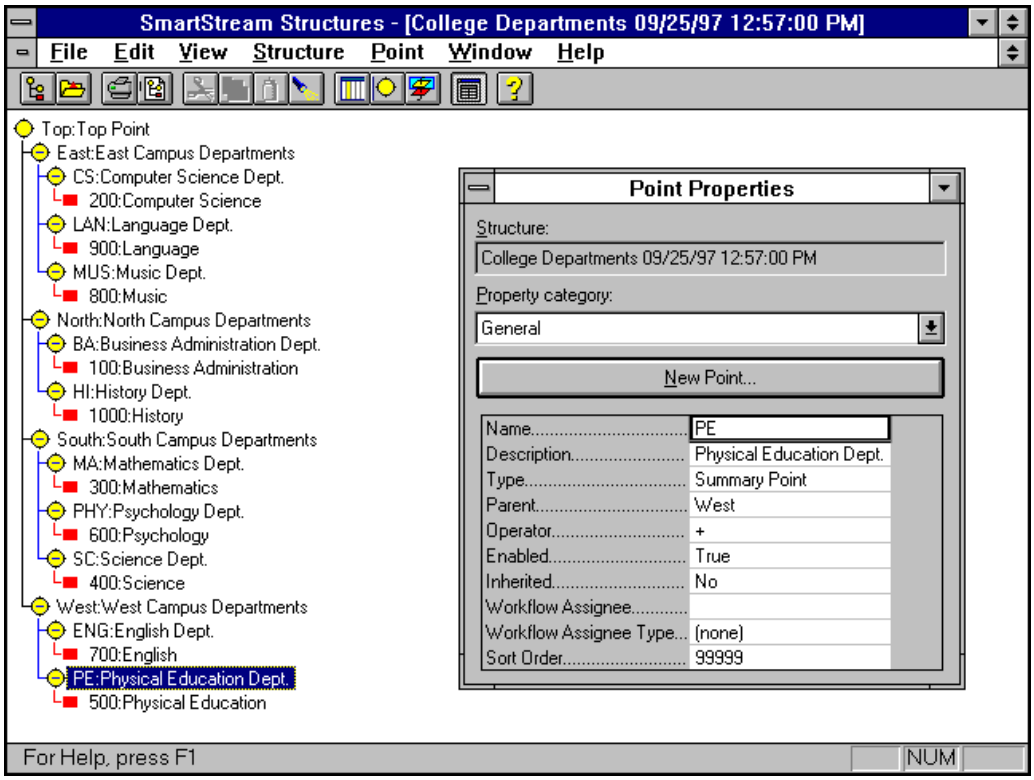
Workflow Structure Example

The following example from the SmartStream Sample Application illustrates how workflow can be used with Structures in SmartStream.

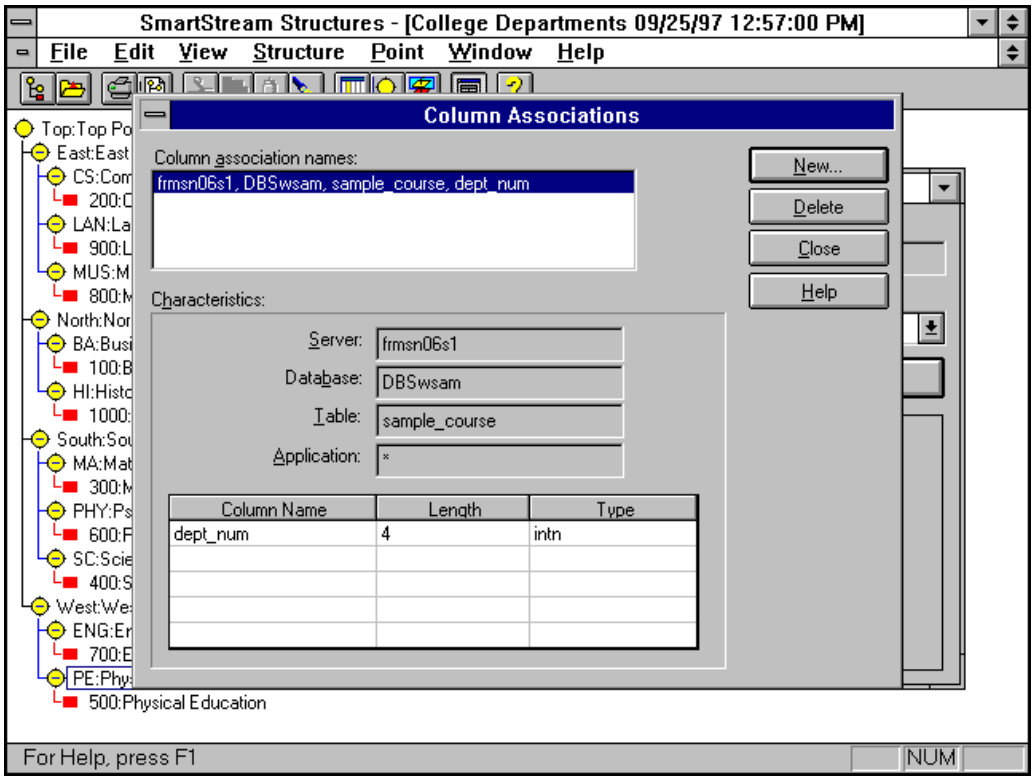
Suppose you have a need to assign course scheduling tasks conditionally based on the department or campus for which a new course has been created. You can build a workflow structure that can be used with the Course activity found in the sample application.

Every time a new course is added to the sample application through the Course activity, a workflow task is generated based upon the department number that has been entered. All workflow assignments are handled by a department number structure and through the use of structure functions defined using the workflow workbench activity.

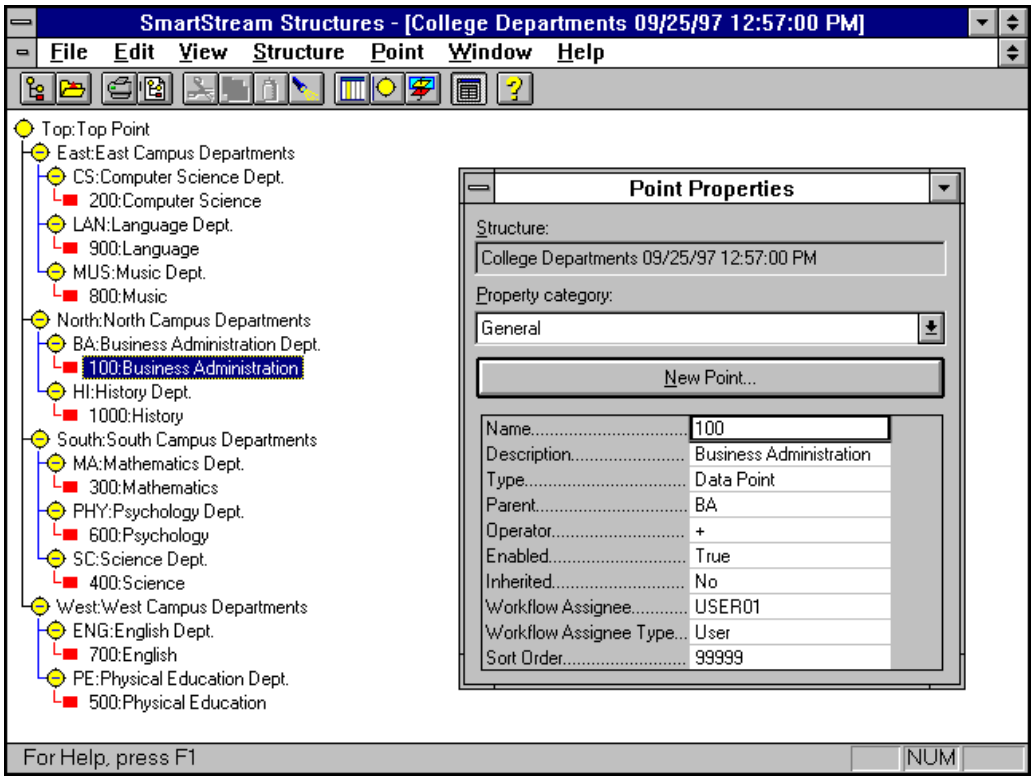
For use in workflow assignments, you must set up the department number structure within an HR/Workflow group. The following example illustrates what this structure might look like.



In the following structure, the data point is associated with the Dept Nbr column on the Course - Sample Simple Tabular window (column dept_num in the sample_course table) in the sample application.

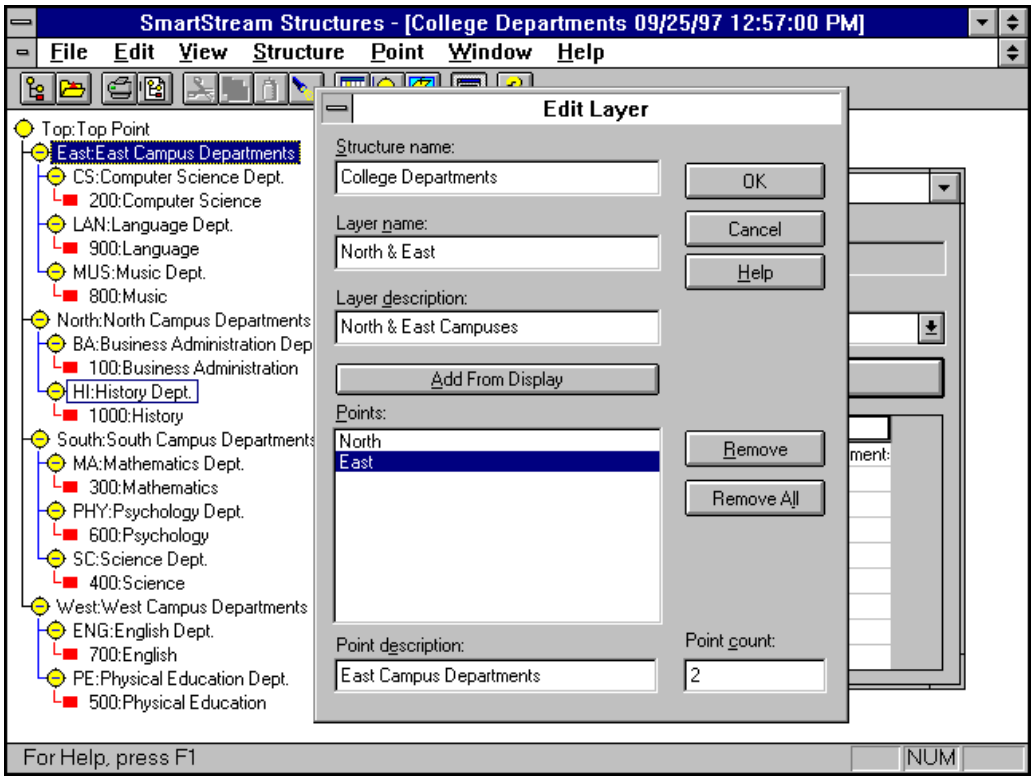


For each point on the following structure, you can assign a workflow assignee. For example, for the 100:Business Administration point you would assign the user USER01 as follows:



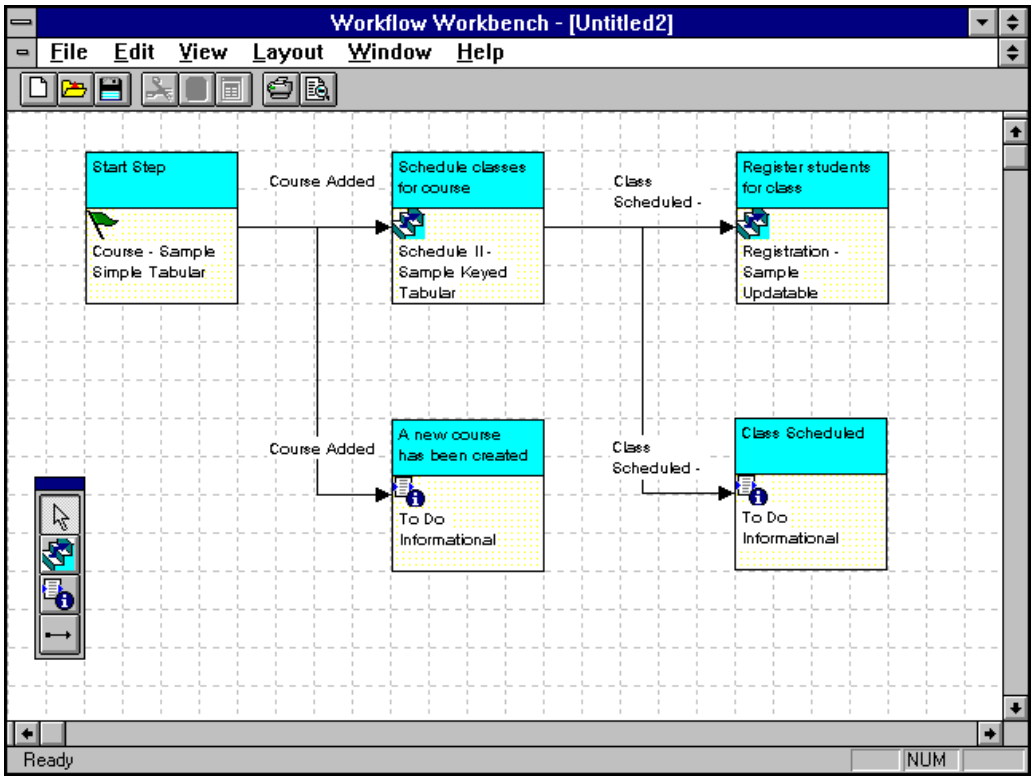
For the BA:Business Administration point on the structure you could assign the workgroup Geac Workgroup.

You can also define a layer that contains the points from the North and East campuses as follows:



For the North point within the structure you could assign a workflow assignee of North/East Layer with a workflow assignee type of Workgroup.

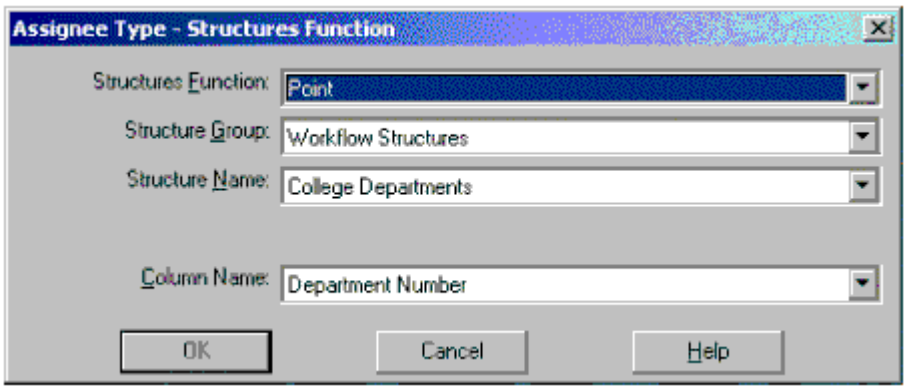
If you define workflow for the Course Added event within your workflow map as follows, you can use this structure to determine the assignment.



Three structures functions are available: Point, Immediate Ancestor, and Ancestor at Layer.

Point Structures Function

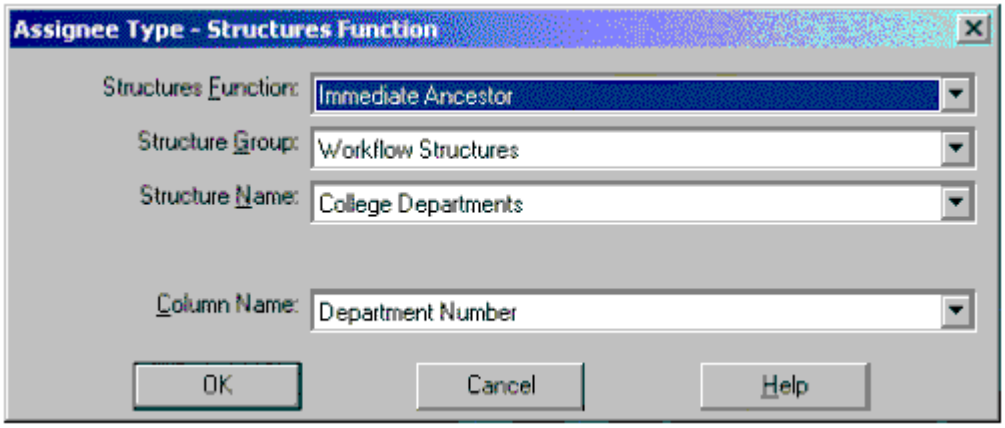
In the following example, note the use of the Point structures function on the Department Number column. When a user adds a new course with a department number of 100, the workflow is assigned to the user USER01.



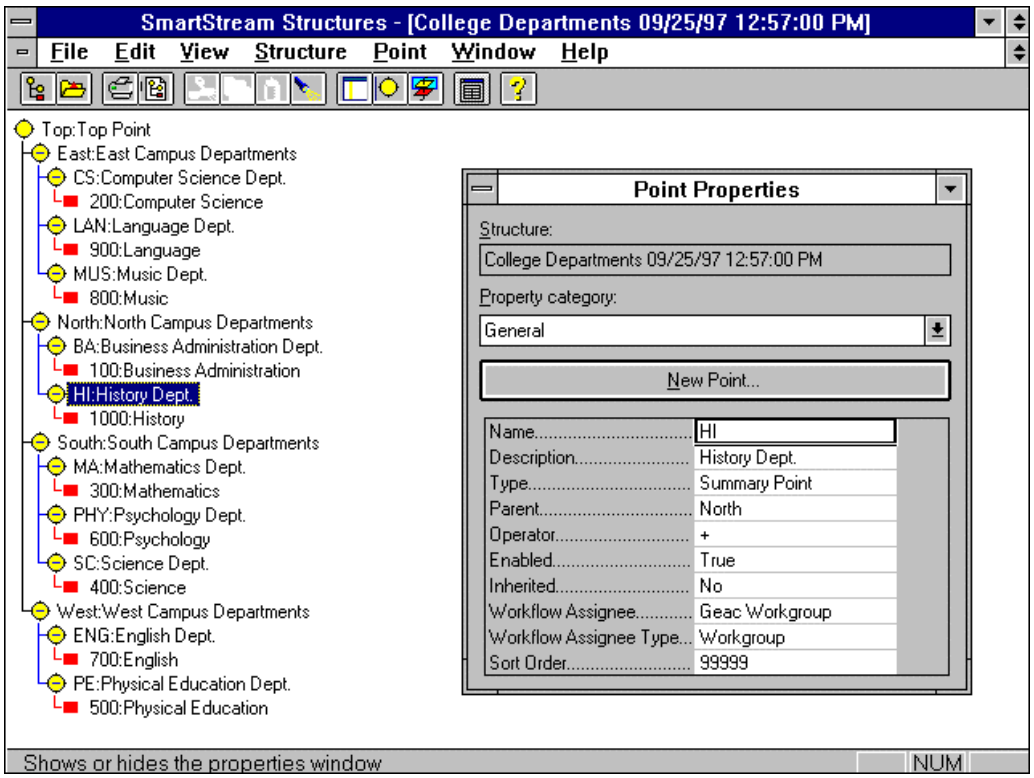
This is because USER01 is the workflow assignee associated with the point named 100 in the structure used in this workflow.

Immediate Ancestor Structures Function

The assignment is defined using the Immediate Ancestor structures function.



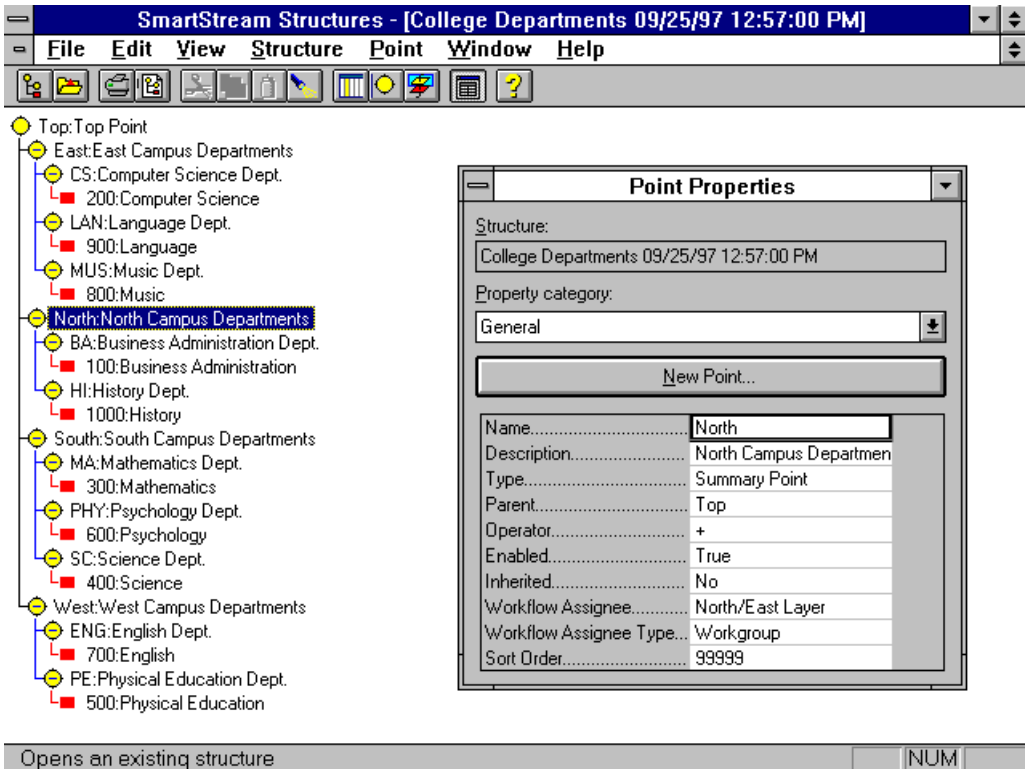
In the following example, note that HI:History Dept. is the immediate ancestor of the 1000:History point within the structure.



When the user adds a new course with the department number of 1000, the workflow is assigned to workgroup Geac Workgroup. This is because workgroup Geac Workgroup is the workflow assignee associated with the HI:History Dept. point.

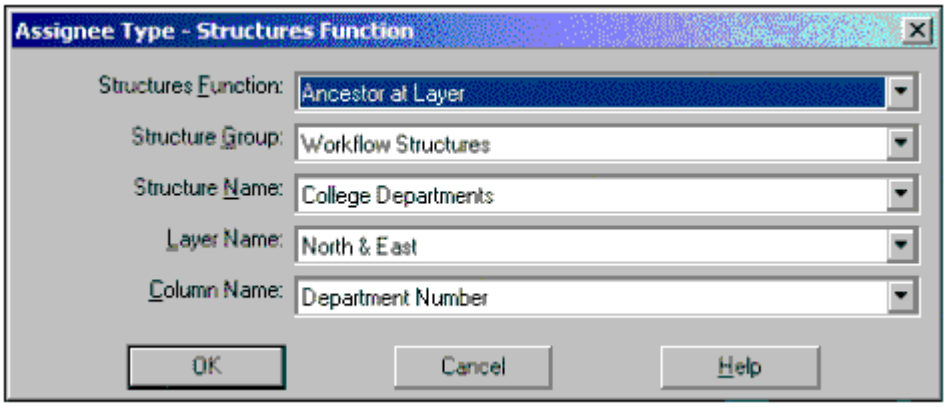
Ancestor at Layer Structures Function

In the following example, note that the North:North Campus Departments is the ancestor of the 100:Business Administration point at the North & East layer .



When the user adds a new course with a department number of 100, the workflow is assigned to the North/East Layer workgroup. This is because the North/East Layer workgroup is the workflow assignee associated with the North:North Campus Departments point.

Using the Ancestor at Layer structures function defined on the Assignee Type - Structures Function window allows the workflow task to be assigned to the point in the structure that is in fact the ancestor at layer for the new course that is being added with a department number of 1000.


Assignee Type - Structures Function
Structures Function:
Ancestor at Layer
Structure Group:
Workflow Structures
Structure Name:
College Departments
Layer Name:
North & East
Column Name:
Department Number
OK
Cancel
Help

The Role of the Workflow Administrator

SmartStream business processes delivered to you have workflow activities, events, and steps already defined. A default step assignment is also defined for you. As the workflow administrator, you set up workflows for your enterprise by performing the following tasks:

- Tailor the workflow maps so that they conform to your processes
- Keep workflow assignments current with changes in personnel
- Change the text of and enter translations for step and activity descriptions (including window titles) so that they more closely match your business terminology
- Set up and maintain workgroups.

Security Prerequisites

To tailor and maintain workflows, you must have activity security to use the following SmartStream windows:

Window	Use it to...
Workflow Workbench	Display workflow maps, map new workflow maps, save them, customize them, and perform all other administration tasks related to workflow definition. **Note:** Regardless of the data access privileges granted, a user can view, add, or change, but not delete, data on this window.
Workgroup Definition	Define a workgroup, add users, and specify user privileges in a workgroup.
Roles Administration	Define a role for a user or workgroup. When the user responsible for a function changes, the change can be made once on this window.
Approval Tracking	Display the current status of the approval process for the item shown. This window also displays a list of future approvers and allows the current user to approve or reject the item.
Substitutes Administration	Change any user's substitute. Any addition, deletion, or change does not affect the existing workflow.
Approval Lists	Create an approval list. Each list is keyed by the list name and the activity to which it applies.

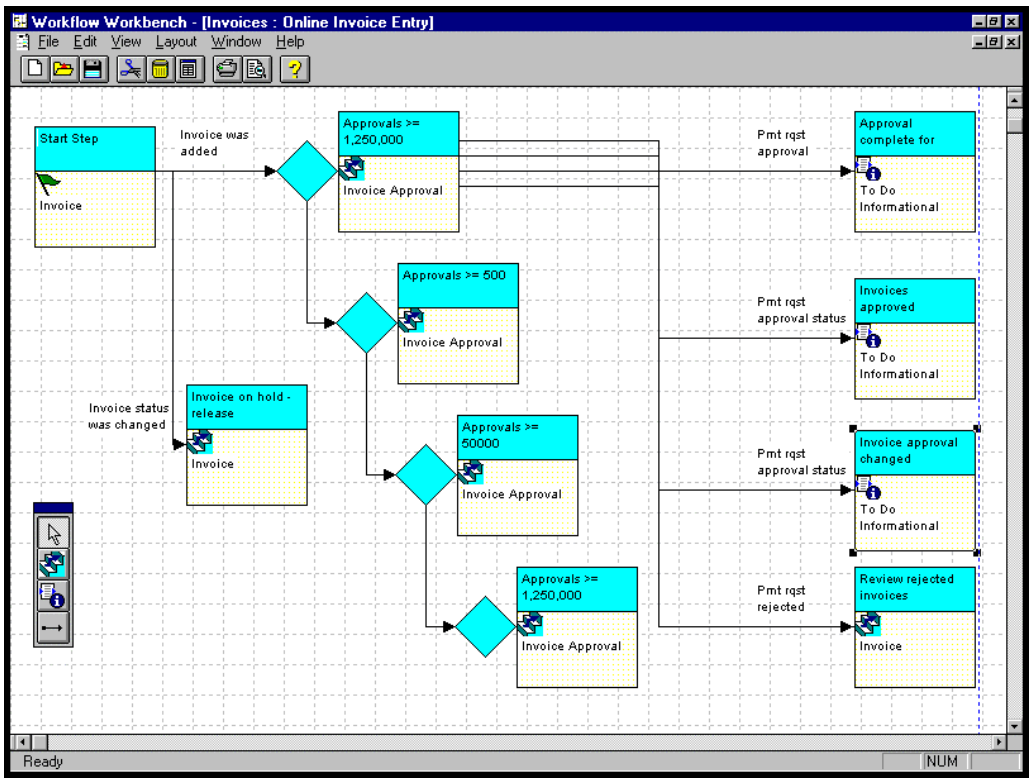
Approval Process

The approval process provides users, workgroups, roles, or structures functions with the right to approve expenditures within a business process. The workflow

administrator maps out an approval workflow process. Within an approval workflow map, an approval step represents a sequence of approvals of varying length based on an approval list that has been defined by the workflow administrator.

Some SmartStream activities, such as the Unposted Journal window, are approval enabled. Approval-enabled activities can be used in an approval workflow that defines a step as an approval activity. In an approval workflow, the same task is performed repeatedly by each user, group, or role on an approval list.

The workflow administrator maps the approval workflow. An approval step represents a sequence of approvals of varying length based on an approval list defined by the administrator. The following figure illustrates an approval process using the Workflow Workbench.



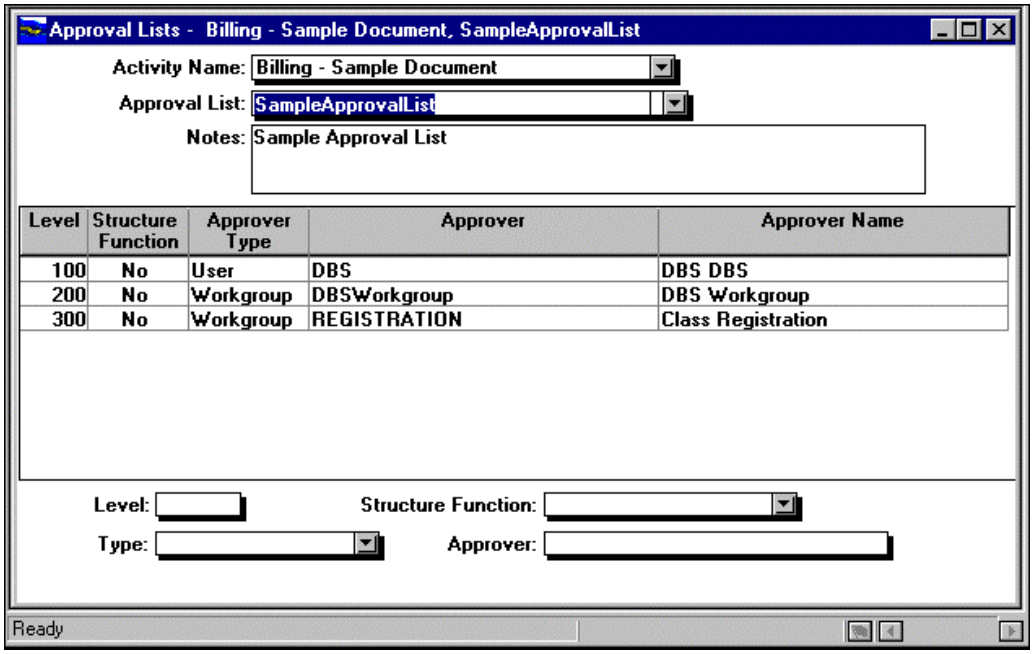
A step may be approved from an approval status window, the Task Details window, or the read-only version of the activity being approved, which is started from the To Do List or the To Do Details window.

User Activity Window Approve/Reject

One way to approve an activity is to use a read-only version of the original user activity window. The features on this window include Approve, Reject, Comments, Approval Complete, generation of the next level To Do messages, and updates to the instance tracking table. The Yellow Sticky object is movable so that all portions of the original activity can be seen.

Approval Lists Definition

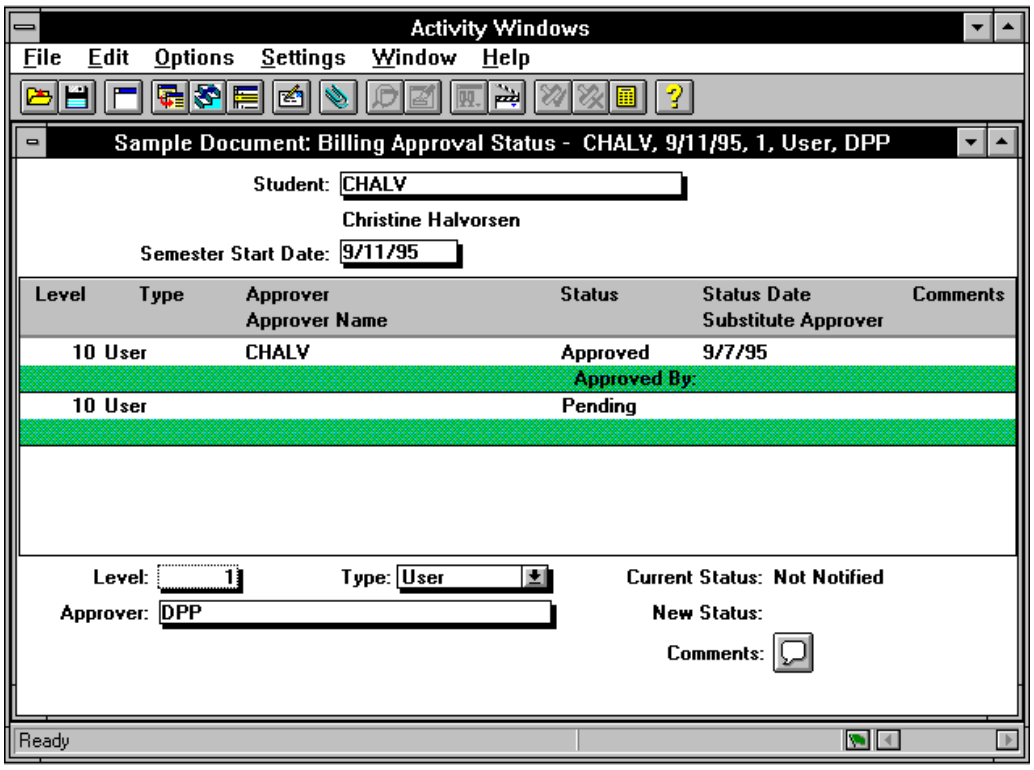
The administrator uses the Approval List window to create an approval list. Approval lists usually refer to structures functions to define approvers. The List maintenance program handles mismatches between Structures functions and arguments and resolves them before saving the copied list.



Using the Copy From Approval List window, you can copy one list to another to build new approval lists rapidly from existing ones.

Approval Status Window

The approval status window shows the current status of the approval process for the item shown. It lists future approvers and allows the current user to approve or reject an item, if appropriate. The popup menu and toolbar provide Accept, Reject, and Zoom to Document actions.



The Workflow Database Implementation

SmartStream workflow data resides in the DBSwact database. The primary database table in SmartStream workflow is the next_step table. Each row in this table represents a workflow step.

Each step in the next_step table is identified uniquely using the Message ID (msg_id) column. The Message ID column resides in several tables in the wact table family, including the message_queue_1 table. The message_queue_1 table contains a list of all the To Do task and informational messages.

The database portion of SmartStream workflow is implemented using collections of tables that define steps, activities, events, and To Do messages, as follows:

Activities	Events	Steps	To Do Messages (tasks/informational)
activity_master_1	event_master	next_step	message_queue_1
activity_trig_event	event_columns	next_step_options	message_queue_values
activity_version_1	event_lang_1	next_step_options_ conditions	message_queue_hist_1
			message_queue_hist_ values
		next_step_conditions	

Activities	Events	Steps	To Do Messages (tasks/informational)
		next_step_parameters	
		act_msg_version	

See the following table for a short description of the main workflow-related tables in the wact table family.

Table	Description
activity_master_1	Contains all activities used in SmartStream applications.
activity_version_1	Contains translated text for activity descriptions.
activity_trig_event	Associates activities with the workflow events they trigger.
act_msg_version	Contains the translated text for To Do task messages associated with a step.
event_master	Defines the events used in workflow processing
event_columns	Contains column values for an event
event_lang_1	Contains internationalized workflow event descriptions, by language and dialect.
next_step	Contains a step identifier (msg_id) and an identifier for the event and activity associated with the step. This is the workflow step master table.
next_step_options	Defines who a step is assigned to (user, workgroup, role, structures function, and so on); a user ID, for steps that are assigned to a user; and several columns related to structures functions
next_step_options_conditions	Contains the conditional expressions associated with a step assignment.
next_step_conditions	Contains the conditional expressions associated with the step's entry conditions.
next_step_parameters	Contains the step's input mappings, that is, the source-to-destination column mappings.
workpagenextstep	Contains the IDs of all steps in a workflow map.
workbook	Defines a workflow workbook.
workpage	Describes each workflow map in a workbook.
workgraph_1	Contains the picture of the workflow map in binary form.

See the following table for a short description of the main workflow-related tables in the wijt table family.

Table	Description
message_queue_1	Contains all workflow To Do task and informational messages.
message_queue_values	Contains column values for the message_queue_1 table.
message_queue_hist_1	Contains workflow To Do tasks deleted from the message_queue_1 table when the track history attribute is turned on for any particular step in a workflow as a form of audit trail. This is the Message Queue History table.
message_queue_hist_values	Contains column values for the message_queue_hist_1 table.

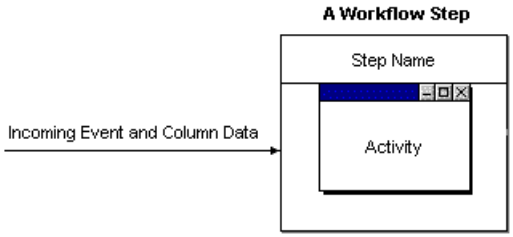
You can use the SmartStream Reference Tool to find more information about the tables and columns in the wact and wijt table families.

Workflow Steps and the Message Queue

Each step in a workflow contains, at minimum, a step name, an activity, an assignment, and an incoming event. Optionally, a step may also contain entry conditions and assignment conditions.

When a user performs a step and triggers a workflow event, the workflow engine generates a To Do task message and usually a To Do informational message, and adds a row to the Message Queue table (message_queue_1).

The following figure illustrates how a step is implemented in the wact table family.



Building Block	Description
Step name	Identifies a step. The step name is what actually appears on the New To Do List or the Workgroup To Do List.
Activity	Identifies the activity to be done
Incoming event	Identifies the event triggering the step
Column data	Describes the columns to be passed to the activity

To Do Administration

Workflow To Do task and informational messages are stored on the Message Queue table on the home server of the user or workgroup to which the To Do task or message is assigned. SmartStream users can reassign or process To Do tasks or messages from the following places:

- Workflow To Do Administration window
- User To Do List window
- User Task Detail window
- Group To Do List window
- Group Task Detail window
- Next Step menu item or toolbar button
- Next Task menu item or toolbar button
- Customer application developed with SmartStream Builder using the Workflow API.

To Do States

A To Do task message that is stored in SmartStream can be in one of two states: New or Completed.

A **New To Do** task is one that is waiting for a user to process it. A **Completed To Do** task is one that a user has completed but not deleted. Not all To Do tasks go into the Completed state. The user can set a preference in the Workflow section of preferences to cause completed To Do tasks to be deleted from SmartStream automatically.

Users and Workgroups

All To Do task messages, even those that are assigned to an individual user, are associated with a workgroup. On the Workflow To Do Administration window, the workflow manager can manage the To Do tasks that are associated with the workgroups that the manager manages. Using this window, the workgroup manager can set the priority, reassign To Do tasks to other users or workgroups, or delete To Do tasks.

Task History

SmartStream allows history to be collected on To Do tasks that have been processed. Whether history is collected for a To Do task is determined by a check box on the Assignment tab in the Workflow Workbench. When history is collected, SmartStream saves the history record when the To Do task is deleted from SmartStream. The history is saved in the message_queue_hist_1 table and message_queue_hist_values table. You can view this history using the Task History window, or you can use the SmartStream and supported third-party reporting tools to create custom reports on the history data.

Dependencies

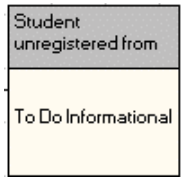
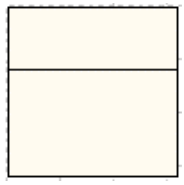
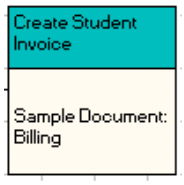
There are subtle differences in the way SmartStream processes To Do tasks. These differences depend on whether you are processing a Workgroup To Do List or a New To Do List. They also depend on whether you are using the New To Do list, the Task Details list, Next Step, Next Task, or Previous Task. The following table summarizes how To Do processing works in each of these cases.

User or Workgroup List	How Processed	SmartStream Processing
User	New To Do List	Read the first To Do task for that message type and start the appropriate activity window.
User	Task Details	Reorder the To Do task list so that the selected To Do task is the first To Do task in the list. Read the first To Do task for that message type and start the appropriate activity window.
User	Next Task	If the To Do task being processed has already been completed, read the first To Do task for that message type and process that To Do task on the current activity window. If the To Do task being processed has not been completed, read the To Do task in the list following the one being processed and process that To Do task on the current activity window. If no To Do task is found that meets the preceding criteria, search for other To Do tasks for the current activity window.
User	Previous Task	Read the New To Do List for unprocessed tasks that are listed before the one currently being processed. If a task is found, process that task.
User	Next Step	Read the user's New To Do List for other tasks assigned to this user that were generated by the current activity and have the same key values as the record currently being processed. If a task is found, process it.
Workgroup	To Do List	Reassign the To Do task from the Workgroup To Do List to the user's New To Do List. This To Do task will be prioritized as the first To Do task in the list. Read the first To Do task for that message type and start the appropriate activity window.
Workgroup	Task Details	Reassign the To Do task from the Workgroup To Do List to the user's New To Do List. This To Do task will be prioritized as the first To Do task in the list. Read the first To Do task for that message type and start the appropriate activity window.

User or Workgroup List	How Processed	SmartStream Processing
Workgroup	Next Task	Read the first entry for this task category from the Workgroup To Do List. If an entry is found, reassign the task to the user and process it. If no entry is found, look for other tasks that use the same activity that are assigned to the workgroup. If an entry is found, reassign the first such task to the user and process it. If no entry is found, look for other tasks that use the same activity that are assigned to the user. If an entry is found, process the To Do task.
Workgroup	Previous Task	There can never be a previous task when processing a To Do task from the Workgroup To Do List.
Workgroup	Next Step	Read the Workgroup To Do List for other tasks assigned to this workgroup that were generated by the current activity and have the same key values as the record currently being processed. If a To Do task is found, process it. If no To Do tasks are found for the workgroup, read the New To Do List for other tasks assigned to this user that were generated by the current activity and have the same key values as the record currently being processed. If a To Do task is found, process it.

Step States in the Workflow Workbench

Steps in a workflow can appear in one of three states:

Step	State	Description
	Gray	Disabled
	Yellow	New, undefined step that has been placed on the workflow map.
	Light blue and yellow	Step is connected in the workflow.

Miscellaneous Workflow Administration Tasks

Besides the SmartStream workflow administration tasks previously described, you can also

- Specify who is responsible for a step
- Eliminate a step
- Add a step
- Change or translate the text of a step name
- Keep task history.

Specifying Who Is Responsible for a Step

Before workflows can work for your enterprise, you must specify who is responsible for each step in each workflow that your enterprise uses. You do this by setting up step assignments.

Before you can specify who is responsible for a step, make sure that

- The users and workgroups who are responsible for the new steps have been defined.
- Users have been assigned the security they need to perform the step. Otherwise, users are assigned tasks, but they cannot access the activity necessary to complete the task.

For more information about defining workgroups, see Defining Workgroups chapter. For more information about creating users and assigning activity security, see the Users and Security chapter.

Assigning Responsibility

For each step in a workflow, set up step assignments that identify who is responsible for performing the step. You can assign responsibility for a step using one of the assign to options. You can use a different assign-to option for each step assignment.

Using the Workflow Workbench Assignment tab, you can define the assigned user or group to the corresponding step. For more information, see Assignment and the Workflow Workbench online Help topics.

Eliminating a Step

As you review the workflows that have been delivered to you with SmartStream, you will probably find steps that your enterprise does not perform. You can eliminate these steps from the workflow at any time. You eliminate steps by disabling events, steps, or step assignments.

Note: Some workflows have steps that you should not eliminate. Before eliminating a step, familiarize yourself with the workflow you are changing. Each SmartStream workflow is described in the printed documentation.

For more information about disabling steps, see the Step and Workflow Workbench online Help topics.

Adding a Step

As you review the workflows that are delivered to you, you may need to add steps to complete your enterprise's workflows. You can add steps to a workflow at any time.

For more information, see the Step and Workflow Workbench online Help topics.

Changing the Text of a Step Name

The step name is the text for the To Do task that appears in either a New To Do List or a Workgroup To Do List. For To Do informational steps, the step name is the text of the informational message. The text is displayed in the language used by the user who is logged on to SmartStream. As the workflow administrator, you can change the text of a step name for any language that your enterprise uses.

The text of a step name is displayed in the following places:

- In all To Do Lists in which the step name appears
- On the Workflow Workbench for all steps that the step name is associated with.

Changing Step Name Text

Use the following procedure to change step name text.

Step	Action
1	Access the Workflow Workbench.
2	Choose the Definition tab on the Step Properties window.
3	Enter the new text in the Name field.

Translating Step Name Text

Use the following procedure to translate step name text.

Step	Action
1	Access the Workflow Workbench.
2	Choose the Definition tab on the Step Properties window.
3	Choose the International button. **Result:** The Internationalization - Step Name window is displayed.

Step	Action
4	Use the drop-down lists to select the language and dialect to which you want to translate the text.

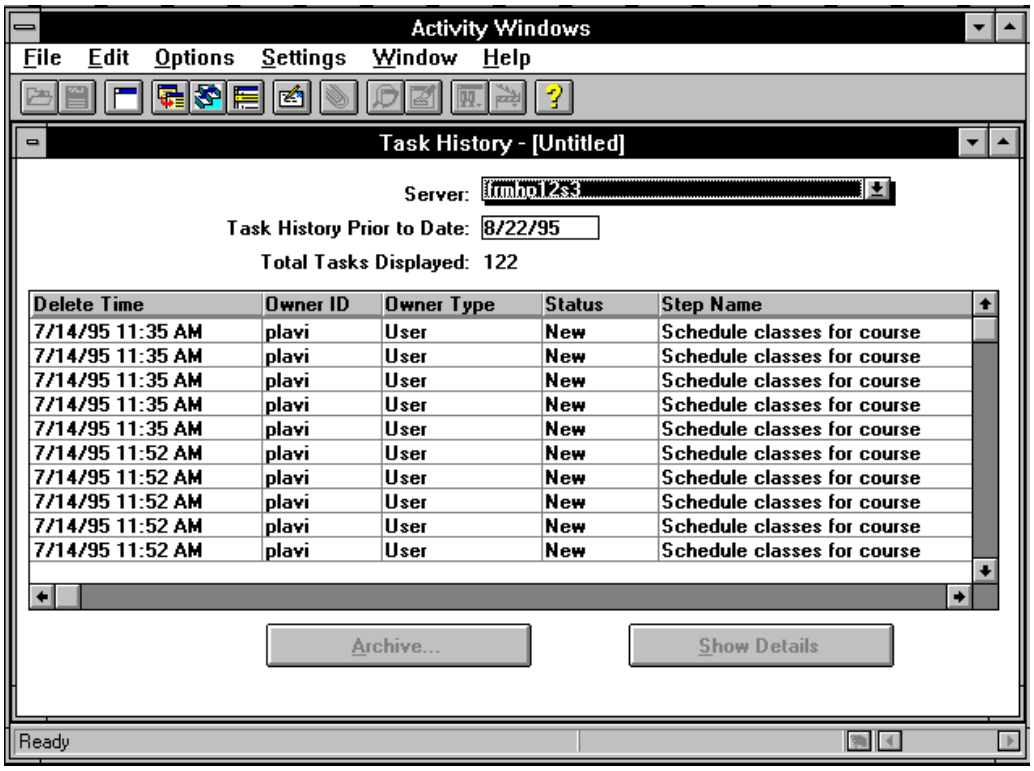
5	Enter the translated text for the step name. **Note:** You cannot have duplicate translations. SmartStream returns an error message if this occurs.

For more information, see the Step Properties and To Do online Help topics.

Keeping Task History

If the Track Task History option is selected on the Default Assignment or Conditional Assignment windows, SmartStream saves a history of tasks as they are deleted. For more information, see Assignment.

For each step assignment, you can track the history of tasks that are assigned to a New or Workgroup To Do List using the Task History window:



Note: Tasks are not moved to task history until you delete the task from the New To Do List or Workgroup To Do List. You can delete tasks manually, or you can delete them automatically by choosing the Delete Tasks Marked Done option on the SmartStream Preferences window.

The default value in the Task History Prior to Date field is the current date. To change the date, you must enter it in the format that is selected in your Microsoft Windows defaults. This is the default date format.

You can save the task history by choosing the Archive button or view the specific task history details by choosing the Show Details button on the Task History window.

For more information, see the Task History online Help topics.

5 Language and Country Selection

Chapter Contents

5-1 Language Master and Country Master Tables
5-3 Language Selection
5-4 Country Selection

Language Master and Country Master Tables

A Language Master table (language_master) and a Country Master table (country_master) are delivered with SmartStream as part of the DBSCOMMON database. These tables list all of the countries and languages that SmartStream supports.

To enhance the performance of SmartStream operations that refer to the Language Master and Country Master tables, the following subset tables of the Language Master and Country Master tables are provided:

- Language Code table (subset of the Language Master)
- Country Code table (subset of the Country Master)

The Language Code table is delivered with one entry — English (EN). The Country Code table is delivered with the following entries:

- Australia (AU)
- Belgium (BE)
- Canada (CA)
- France (FR)
- Japan (JP)
- Malaysia (MY)
- Martinique (MQ)

- Monaco (MC)
- New Zealand (NZ)
- Singapore (SG)
- Thailand (TH)
- United Kingdom (GB)
- United States (US)

Note: The entries on the Country Code table double as dialects in SmartStream windows that use dialect information (for example, the User window).

When a SmartStream process reads language data, country data, or both, from the subset tables, the access time is shorter than if the process had to read from the master tables, which contain many more records.

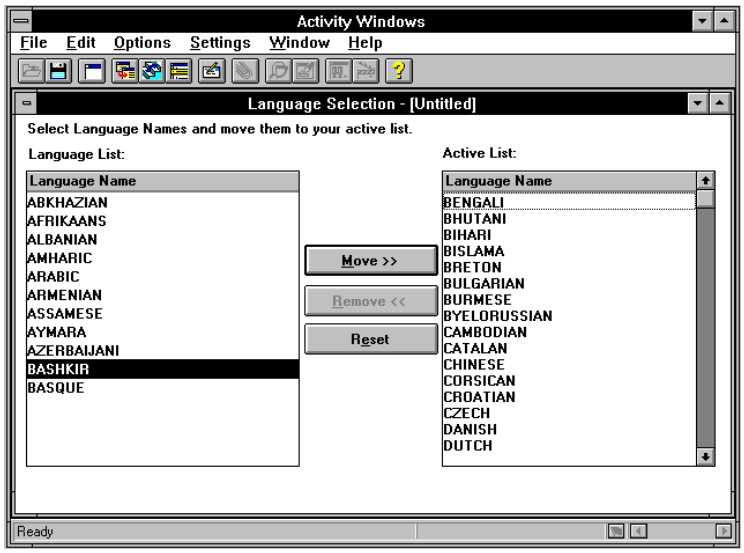
The Language Selection and Country Selection windows are used to update the subset tables when you need to add or delete countries, languages, or both.

Language Selection

To maintain the Language Code table, you use the Language Selection window.

Selecting New Languages

Use the Language Selection window to select the languages from the Language Master table that apply to your site.



The Language List box lists all of the languages on the Language Master table. The Active List box lists all of the languages on the Language Code table.

Use the Move and Remove buttons to add languages to or remove them from the Active List.

Country Selection

To maintain the Country Code table, you use the Country Selection window.

The countries on the Country Code table also double as dialects on SmartStream windows that access dialect information (for example, the User window).

Selecting New Countries

Use the Country Selection window to select the countries from the Country Master table that apply to your site. This window is similar in design to the Language Selection window. The Country List box lists all of the countries on the Country Master table. The Active List box lists all of the countries on the Country Code table.

Use the Move and Remove buttons to add countries to or remove them from the Active List.

6 Job Scheduler Administration

Chapter Contents

6-1 Understanding the Job Scheduler
6-3 Designating a Job Scheduler Administrator
6-4 Setting Up Job Scheduler
6-13 Setting Up Allocations, Budget, and Ledger Security for Job Scheduler
6-14 Maintaining the Job Scheduler
6-19 Verifying Job Scheduler Operations
6-20 Using the Job Scheduler
6-21 Preparing Security Profiles
6-22 Defining Jobs and Steps
6-23 Scheduling Jobs
6-24 Monitoring Your Job
6-25 Viewing Job Results
6-26 Job Scheduler Troubleshooting

Understanding the Job Scheduler

The Job Scheduler is a part of the SmartStream client/server environment. You use it to create, schedule, and submit jobs that run unattended in the SmartStream environment. These scheduled jobs can contain one or more steps and are stored on the database server.

Using the Job Scheduler you can

- Define a job and its steps
- Optionally, define the logic controlling when to run the steps
- Define when and how often a job runs
- Specify the conditions for running each step and the step's priority
- Define who should view the job results document.

Jobs and Steps

A job is composed of one or more steps that are processed as a unit. A step is a unit of work within the job. It can be

- An executable program
- A command (.cmd) or batch (.bat) file
- A UNIX script.

Example

You want to perform a SmartStream Connect download of month-end ledger data and insert the returned answer set into a DBMS table. After entering all of the necessary SmartStream Connect information, you access the Job Scheduler.

In this example, the job is the entire download and insert process, and it contains the following steps:

- The SmartStream Connect Download program (piqc0040)
- The SmartStream Connect Insert program (piqc0051)

You can create your own jobs, or you can choose predefined template jobs that SmartStream applications provide.

The Master Scheduler Program

The Master Scheduler program (pscc0010) monitors the Job Server table for jobs scheduled to run and moves the step information from the Step table to the Server Queue table in sequential order.

The Poll Program

The Poll program is a SmartStream executable program that starts job steps and monitors running steps to determine when they finish. Each instance of the Poll program monitors a Server Queue table for job steps that should be run. If the Poll program detects a step of the appropriate class, it starts the program specified.

Using the Poll Configuration window, you can define the classes of steps the Poll program starts. The class is a user-defined value that determines which instance of the Poll program runs a step.

The Poll program (pscc0020) runs continuously on each job server. If more than one step for the same class is in the Server Queue table, the Poll program runs the steps in priority order.

Designating a Job Scheduler Administrator

Your organization should designate a Job Scheduler administrator, and, optionally, a backup administrator. This position is not a full-time role, but it should be centralized for security and control reasons.

Job Scheduler administrator duties include

- Setting up the Job Scheduler
  - Installing job servers
  - Configuring the Poll program
  - Configuring the Master Scheduler program
  - Creating and maintaining dbsched.ini files
  - Starting the Master Scheduler program
  - Stopping the Master Scheduler program
  - Starting the Poll program
  - Stopping the Poll program
- Maintaining the Job Scheduler
  - Monitoring the Server Queue table
  - Monitoring the Master Scheduler program and instances of the Poll program
  - Monitoring scheduled jobs
  - Monitoring and clearing (purging) the Scheduler Log table and message files
  - Creating public jobs
  - Updating the Program Alias table (psc_program_alias)
  - Verifying Job Scheduler operations.

Establishing Security

As the Job Scheduler administrator, you need to have a higher level of security than other users for using the View Server Queue window.

End users should have only Inquire access to the View Server Queue activity. Inquire access allows them to view Server Queue information about their jobs, but it prevents them from changing the class and priority of a step or stopping a job.

Users or administrators who can change a step class and priority but who cannot terminate a job, need Update access to this activity.

Administrators who can stop jobs, as well as change a step class and priority, need Delete access to this activity.

Setting Up Job Scheduler

Job Scheduler is composed of the following elements:

- An instance of the Job Scheduler family (pscb) of DBMS tables.
- One job server running the Master Scheduler program (pscc0010).
- One or more job servers running the Poll program (pscc0020).
- A dbsched.ini file for each instance of the Poll program and for the Master Scheduler program.

The following table highlights the steps in setting up Job Scheduler:

Step	Action
1	Install the Job Scheduler. Default Job Scheduler database objects are set up when SmartStream is installed.
2	Determine job server needs. For example, how many machines running what operating systems are necessary for Job Scheduler.
3	Define instances of the Poll program and the associated classes using the Poll Configuration window.
4	Define the Master Scheduler program using the Master Scheduler Configuration window.
5	Create the dbsched.ini files for the Master Scheduler and the Poll programs.
6	Start the Master Scheduler and Poll programs.

Installing the Job Scheduler

Install the Master Scheduler program on one machine and install the Poll program on each machine that runs job steps.

Determining Job Server Needs

Machines that run any of the server services programs are referred to as job servers. Job servers can run on any server platform that SmartStream supports.

A supported Windows job server is dedicated to Job Scheduler processing. It is not intended that concurrent end-user activities (for example, using Microsoft Excel software) take place on the job server while the Poll program is running. You can use a supported Windows job server to perform end-user activities when the Poll program is not running.

For example, the job server can be used by end users during the day, and be dedicated to Job Scheduler processing at night when no user activity takes place.

Criteria for Determining Job Server Needs

At a minimum, your site should have

- One supported Windows job server running the Poll program for starting SmartStream queries and reports. (SmartStream Query and SmartStream Reporter are Windows-based applications and cannot be run on any other operating system.)
- One UNIX or supported Windows job server for running the Master Scheduler program.

You may also have other applications at your site that run on specific operating systems and must be run on a job server running that operating system.

As the needs of your site grow, you may want to distribute the Job Scheduler workload. For example, you might want to establish

- One job server running the Poll program for short duration or urgent steps, and another job server for steps that require longer processing periods. This distribution of workload prevents the urgent or short-duration steps from waiting in the queue behind longer running steps.
- A job server running the Poll program in a secure area for printing confidential or sensitive materials.
- Additional job servers running the Poll program to handle an increasing Job Scheduler processing workload. Whether you choose to increase the number of job servers depends on how powerful your current servers are.

For instructions on installing additional job servers, see the SmartStream *Installation Guide*.

Configuring Polls

To enable the Poll program to run specific steps on a designated job server, you must define poll configurations and associate them with the appropriate operating systems and classes. Use the Poll Configuration window to enter this information. You can have several instances of the Poll program active on a single physical machine, each running a unique configuration of the Poll program. The Poll program watches for steps of a specific class to run.

Classes and Priorities

Class is a user-defined value that determines which instance of the Poll program runs a step. This determination is based on the operating system of the job server. It can also be based on user-defined criteria, such as the capacity of the job server, security, or application.

You use the Poll Configuration window to define the classes that each Poll program is eligible to process. The value in the Class field for a particular step is posted to the Server Queue table, allowing polls to pick up and process steps in their class.

If steps are scheduled to run at the same time, the priority determines the order in which steps of the same class run. You can set a priority of 1 to 99, where a priority of 1 runs first.

For information about configuring the Poll program, see Job Scheduler online Help.

Configuring the Master Scheduler

The Master Scheduler program monitors the Job table for jobs that are scheduled to run and moves the step information from the Step table to the Server Queue table in sequential order. Active Poll programs monitor the Server Queue table for steps to run.

The Master Scheduler program also keeps track of the steps that have been posted back to the Server Queue table after they complete processing. It reports the status of the steps to the distribution ID specified on the Job Scheduler window in the form of messages in the Scheduler Log and mail.

If a step does not run in the period of time defined in the Maximum Wait field, the Master Scheduler program sends a Mail message to the Job Scheduler administrator. The Master Scheduler Configuration window specifies the name of the administrator.

Note: The Master Scheduler program determines if jobs should be run using the DBMS clock.

For information about configuring the Master Scheduler program, see Job Scheduler online Help.

Creating and Editing the dbsched.ini File

The dbsched.ini file provides information that the following programs use during start up and normal processing:

- Job Scheduler Master Scheduler program
- Job Scheduler Poll program
- Asynchronous RPC Master Server program

Use the DBSCHED.INI Configuration program (pscc0030) to create and edit the dbsched.ini file. This .ini file contains only one section: [SCHEDULER].

A version of the dbsched.ini file must reside in each directory where the Poll and Master Scheduler programs reside. Each client machine using Job Scheduler should have a dbsched.ini file in the same directory as SmartStream or the Poll program (for example, c:\sstrm*xx*). You create this file by using the Job Scheduler option in the Preferences window of SmartStream.

Settings in the dbsched.ini File

The following table describes the settings in the dbsched.ini file:

Setting	Description
Poll Name	The name of the Poll instance (optional).
Scheduler Location	The Job Scheduler to which the Poll instance belongs (optional).
Server Name	The name of the database server where the tsdx table resides.
Database Name	**DBSctlg**, which is the name of the database that contains the tsdx table.
User ID	The server and database logon ID for the server and database that contain the tsdx table. This field is encrypted.
Password	The password for the DBMS user ID. This field is encrypted.
ARPC Server Name	The Asynchronous RPC server if an Asynchronous RPC program is running (optional). This field does not appear in the dbsched.ini file of a Windows server.
Patch Enable	Determines whether the Poll program automatically refreshes files in its directory when it starts. This field does not appear in the dbsched.ini file of a server running the UNIX operating system.
Update Directory	The network directory that the Poll program uses to automatically refresh files. This field does not appear in the dbsched.ini file of a server running the UNIX operating system.

The tsdx Table

The Table Family/Server/Database Cross-Reference table (tsdx) is the primary table in the SmartStream Distribution Catalog. It acts as the directory of all SmartStream database objects (tables, views, stored procedures, and triggers) and defines how these database objects are physically distributed on the database server.

The dbsched.ini file contains information related to the tsdx table so that

- The Job Scheduler table family (pscb) can be found for Job Scheduler processing.
- The Asynchronous RPC table family (arpc) can be found for Asynchronous RPC processing by the server name for your Asynchronous RPC facility.

The locations in the dbsched.ini file must match locations you have defined on the tsdx table for the pscb or arpc table family or both.

Starting the Master Scheduler Program

The Master Scheduler program must be run on a supported Windows or UNIX machine.

The following table provides instructions for starting the Master Scheduler program.

Step	Action on UNIX Machines	Action on Supported Windows Machines
1	Go to the directory where the Master Scheduler program and its dbsched.ini file reside.	Open the SmartStream program group on your Windows desktop.
2	Type the following command at the prompt and press **Enter**: **nohup pscc0010 >> pscc0010.log &** **Note**: The **nohup** command allows the Master Scheduler program to continue running if the user who started the program logs off the system. The **>> pscc0010.log** command sends all of the program messages to a file named pscc0010.log. The **&** puts the process in background mode.	Choose the WinSched icon.

With a supported Windows operating system, you can also start the Master Scheduler program by opening a command window, accessing the directory where the Master Scheduler program resides, and typing **pscc0010** at the prompt. You can also start the program by choosing Run from the Start menu.

With UNIX, you can also start the Master Scheduler program by using a UNIX shell script that SmartStream provides. For information about these shell scripts, see UNIX Shell Scripts in the *SmartStream Platform* guide.

Restarting the Master Scheduler

If the Master Scheduler is abruptly stopped while the scheduler is still active in the DBMS, the associated SPID (SQL Process ID) may not be automatically stopped. If you try to restart it, you receive a message that the Master Scheduler program is already running and that it has a specific SPID or SPIDs. To restart the Master Scheduler program, you or the DBMS administrator must stop the SPID.

Use this procedure to stop the SPID.

Step	Action
1	Log on to ISQL as the system administrator (sa).
2	Type the following command at the prompt and press **Enter**: **kill [SPID]**

Stopping the Master Scheduler Program

Under normal operating conditions, the Master Scheduler program is never stopped. It should be stopped only in special circumstances, such as when the machine

running the Master Scheduler program has problems, or when you need to reboot the machine.

Note: Stop the Poll program before you stop the Master Scheduler.

For UNIX Machines

For machines running the UNIX operating system, you can stop the Master Scheduler program by using the following procedure:

Step	Action
1	Type the following command at the prompt, and press **Enter**: **ps -ef | grep pscc0010**
2	Type the following command at the prompt, and press **Enter**: **kill <process ID>**

You can also stop the Master Scheduler program using a UNIX shell script that SmartStream provides. For information about these shell scripts, see UNIX Shell Scripts in the *SmartStream Platform* guide.

Viewing the Log File

If the Master Scheduler program is running under the UNIX operating system and you want to watch the log file being updated, you do not have to stop the programs and run them again without redirecting. Instead, you can use the Tail command to view the last few lines of the specified log file.

The Tail command with the -f option displays the last few lines of the file and continues to display new information added to the file from that time forward.

Example: Type the following command and press **Enter** to view the last few lines of the pscc0010.log file:

$ tail -f pscc0010.log

For Supported Windows Machines

Stop the Master Scheduler program on a supported Windows machine either by

- Choosing the WinSched icon and choosing Close from the Command menu.
- Activating the Task List, selecting Master Scheduler from the list, and choosing End Task.

Starting the Poll Program

After you configure the Poll program and set up the dbsched.ini file, you can start the Poll program.

Step	Action on UNIX machines	Action on Supported Windows Machines
1	Go to the directory where the Poll program and its dbsched.ini file reside.	Open the SmartStream program group on your desktop.
2	Type the following command at the prompt and press **Enter**: **nohup pscc0020 >> pscc0020.log &** **Note:** The **nohup** command allows the Poll program to continue running if the user who started the program logs off the system. The **>> pscc0020.log** sends all of the program messages to a file named pscc0020.log. The **&** puts the process in background mode.	Choose the WinPoll Icon.

With UNIX job servers, you can also start the Poll program using a UNIX shell script that SmartStream provides. For information about these shell scripts, see UNIX Shell Scripts in the *SmartStream Platform* guide.

With supported Windows job servers, you can also start the Poll program through the command line by choosing Run from the Start menu.

Start the Poll program on supported Windows job servers only when all end-user activities (for example, Microsoft Excel) on the machine are finished. Run the Poll program during off hours, such as at night, on machines that are used by end users, or on a machine that is dedicated to Job Scheduler processing.

Windows Poll Window

When you start the Poll program on a supported Windows machine, the Windows Poll window appears. This window displays the current status of the instance of Poll program and any error messages.

Restarting the Poll Program

If the Poll program is abruptly stopped while it is still active in DBMS, the associated SPID (SQL Process ID) may not be automatically stopped. If you try to restart the Poll program, you may receive a message that the Poll program is already running and that it has a specific SPID. Before you can restart the Poll program, you or the DBMS administrator must stop the SPID.

Use this procedure to stop the SPID.

Step	Action
1	Log on to ISQL as the system administrator (sa).
2	Type the following command at the prompt and press **Enter**: **kill [SPID]**

Stopping the Poll Program

It is recommended that you stop the Poll program before you stop the Master Scheduler program.

For a UNIX Job Server

Stop the Poll program from running in background mode on a UNIX job server by using the following procedure, or stop it by using a UNIX shell script that SmartStream provides.

Step	Action
1	Type the following command at the prompt, and press **Enter**: **ps -ef | grep pscc0020**
2	Type the following command at the prompt, and press **Enter**: **kill <process ID>**

For a Supported Windows Job Server

Stop the Poll program from running on a supported Windows job server either by

- Choosing the WinPoll icon and choosing Close from the System menu.
- Activating the Task List, choosing Poll from the list, and choosing End Task.

Starting and Stopping the Master Scheduler and Poll Using UNIX Scripts

Sample scripts are delivered when the Job Scheduler is installed. You must review these sample scripts and tailor them to the needs of your site. For more information, see UNIX Shell Scripts in the *SmartStream Platform* guide.

Start Scripts

The Start scripts are

- pscsched.beg, which starts the Master Scheduler program.
- pscpoll.beg, which starts the Poll program.

Kill Scripts

The Start scripts dynamically create a Kill script that you can use to stop each program. The Kill scripts are

- pscsched.kil, which stops the Master Scheduler program.
- pscpoll.kil, which stops the Poll program.

Setting Environment Variables

Environment variables influence the behavior of the Master Scheduler and Poll program error messages. You can set the environment variables in

- UNIX shell scripts or from the command line.
- The supported Windows operating system choosing the System icon in the Control Panel or by using the SET command.

The following table describes the environment variables:

Variable	Description
DBSLANG	Defines the language code and language dialect that the Master Scheduler and Poll programs use when producing output messages and messages written to the standard output device. Change the script to see messages in the appropriate language. DBSLANG is a four-character variable. The first two characters represent the language code. The last two characters, which are optional, represent the language dialect.
DBSDEBF	Allows SmartStream Connect and Job Scheduler to send their output to a file when set to 1. The file name is [pid].out, where [pid] represents the process ID of the program.
DBSDEBS	Allows SmartStream Connect and Job Scheduler programs to send output to the terminal.
DBSDEBL	Defines the level of error message output that the Master Scheduler program generates. When this variable is set to 0 or not set, the Master Scheduler program produces minimal error messages. When it is set to 1, the program produces additional status messages such as starting job xxxx and running job xxxx.

Examples

Use the following examples to help you set environmental variables. Remember that UNIX commands are case sensitive.

Operating System	Example Command
UNIX (Bourne or Korn shell)	DBSDEBL=1 export DBSDEBL
UNIX (C shell)	setenv DBSDEBL 1
Supported Windows	SET DBSDEBL=1 (You must set the variable using the command prompt before starting Windows.)

Setting Up Allocations, Budget, and Ledger Security for Job Scheduler

The following table shows how Balance table security is provided for Allocations, Budget, and Ledger. This process allows users to select from the Balance tables when running Allocations, Budget, and Ledger scheduled processes (batch jobs) using the Job Scheduler.

Stage	Description
1	During the installation of DBSCOMMON, an additional user, DBSBATCH, is installed with a login of **DBSBATCH**.
2	The user adds the DBSBATCH security profile (owned by DBSBATCH) for the server to be accessed.

Note: To change the DBSBATCH password, change the password both in the DBMS and the security profile in SmartStream.

Do not add DBSBATCH to a group, add data level security rows for DBSBATCH, or delete DBSBATCH when you delete the other users that SmartStream provides.

Maintaining the Job Scheduler

SmartStream provides a variety of activities to help you manage and maintain the Job Scheduler.

- Monitoring the Server Queue table
- Monitoring the Scheduler log
- Monitoring instances of the Poll program
- Checking for upcoming jobs

What you can do using these activities depends on whether your security administrator has granted you Job Scheduler administrator privileges.

If...	Then you can...
You have administrator privileges	▪ View the scheduled jobs of all users. ▪ Manipulate activity in the Server Queue table. ▪ Stop jobs of other users. ▪ Change the class and priority of running steps.
You do not have administrator privileges	▪ View your own jobs. ▪ View, but not manipulate, the Server Queue table.

Monitoring the Server Queue Table

You can view information about steps that are currently running or pending to ensure that the Scheduler is running smoothly. If necessary, you can

- Change the class of a step.
- Change the priority of a step.
- Stop a step.
- Reset orphan jobs.

Changing the Class of a Step

You may need to change the class of a step in the following circumstances:

- A poll that accepts a particular class is inoperable
- A user enters the class name incorrectly
- Too many jobs are in the queue for a Poll program.

In these circumstances, you can change the class of the pending steps to a different class for the same operating system.

Changing the Priority of a Step

You may need to change the priority of a step when too many steps are in the queue for a particular class. This occurrence can cause an important step to get pushed down in the queue if other less important steps are submitted with a higher priority.

Stopping a Job

You can stop a job on the Server Queue table using the View Server Queue window.

SmartStream programs periodically check to see if they have been flagged to stop and, if so, stop themselves. The Master Scheduler program can stop a job that is running a step with a non-SmartStream program only after the step has finished.

The time it takes for a SmartStream program to stop varies. For example, a program that has started a long-running stored procedure cannot stop itself until control returns to the program after the stored procedure has finished running.

Resetting Orphaned Jobs

Under circumstances such as a system failure, jobs may become orphaned. The Master Scheduler program, the Poll program, or both programs may recognize the job as running when no step of the job is currently running. This occurrence prevents the job from being resubmitted.

You can reset an orphaned job either by

- Restarting the Poll program
- Using the View Server Queue window to select the running step and choose Reset Orphaned Job from the Action menu.

Monitoring the Scheduler Log

Use the Scheduler Log (All Users) window to perform the following tasks:

- Review job information to ensure the Job Scheduler is running smoothly
- Troubleshoot reported problems
- Clear Scheduler Log information

Reviewing Job Information

You can review all jobs that have run or restrict the display by searching for any of the following information:

- Date and time
- Job name
- Job qualifier
- Log text
- Parameters
- Poll
- Program alias
- Program name

- Step
- User ID

Clearing the Scheduler Log

Depending on how many Job Scheduler jobs you run, the Scheduler log can fill up very fast. Your organization should establish guidelines to determine how often you need to clear the Scheduler log.

There are two ways to clear the Scheduler log.

Action	Description
Use the Clear Scheduler Log action of the Clear Scheduler Log window	Enter a date in your Windows default short date format. Optionally, you can enter a time in your Windows default time format. All entries made to the Scheduler log before the date and time you enter are cleared.
Run the Clear Scheduler Log program (pscc0040)	Using the Clear Scheduler Log program you can automatically clear the Scheduler log periodically. Use the Job Scheduler to run the program as a step of a scheduled job. Enter a day offset value and optionally a time in the Parameters field for the step. The day offset value is the number of days before the date the program runs for which you want to retain log messages. The program clears the Schedule log of all messages dated earlier than the date you run the pscc0040 program minus the day offset value. You must have Delete access to the Scheduler Log (All Users) activity to run this program.

Example 1

Today is June 4. You want to run the Clear Scheduler Log program (pscc0040) today and delete all Scheduler Log entries dated before June 2. June 4 is the day that you want to run the Clear Scheduler Log program and the day offset value is 2.

Run the Clear Scheduler Log program		June 4
Delete Scheduler Log entries dated before	–	June 2
Determine the Day Offset value	=	2

Enter the following information on the Job Scheduler window:

- In the Program field, enter pscc0040.
- In the Parameter field, enter 2.

The time parameter is an optional parameter. When you do not include a time parameter, the Clear Scheduler Log program assumes the time is 12:00 a.m. (midnight).

Example 2

Today is June 4. You want to clear all log entries made before June 2 at 5:00 p.m.

Enter the following information on the Job Scheduler window:

- In the Program field, enter pscc0040.
- In the Parameter field, enter 2 5:00pm.

In this example, all log entries made after 5:00 p.m. on June 2 remain in the log.

Monitoring Polls

On the View Polls window you can monitor instances of the Poll program to determine which ones are running and what classes of job steps are eligible to run on individual polls. You can display information for all instances of the Poll program or for selected instances.

Checking for Upcoming Jobs

You can use the View Scheduled Jobs (All Users) window to check the Job table for upcoming jobs. You might want to view scheduled jobs to

- Monitor how much activity is scheduled for a specific period of time such as the upcoming night.
- View a list of jobs that are scheduled for a specific period of time.
- Find all the On Event jobs waiting for a specific event to occur before they run.

Using the Program Alias Table

Using Program Alias tables you can select programs to include in the Program Name field of a step. With Program Alias tables, you do not have to know the exact program name to select a program.

Example

The SmartStream Connect Download program (piqc0040) is defined on the Program Alias table with an alias of SmartStream Connect Download. SmartStream Connect Download appears in the drop-down list in the Program field on the Job Scheduler window.

The Program Alias table also includes hints for the parameters a program needs. These hints appear in the Program Parameters field on the Job Scheduler window when you select a program alias from the drop-down list in the Program field.

Adding Your Own Program Aliases

Using the Alias Configuration activity window, you can add programs that you use frequently to the Program Alias table. The alias appears in the drop-down list of program names in the Program Name field on the Job Scheduler window.

Verifying Job Scheduler Operations

SmartStream provides the Job Scheduler Demo program (psccdemo) to verify that the Job Scheduler is functioning correctly. With the psccdemo program, you can run the Job Scheduler without using any application programs. The psccdemo program connects to the DBMS in the same manner as other application programs and sleeps for a variable amount of time so that you can test the termination process.

Setting Up a psccdemo Job

To set up a psccdemo job, you must create a job that runs psccdemo as a step. Use the Calendar for scheduling jobs.

Your step containing the psccdemo program accepts the following input parameters:

Parameter	Description
Customer Name	Text that appears in messages sent to the user after the program finishes running successfully.
RunTime	Time, in minutes, that the program continues to run. Set this parameter to see the program in the Server Queue table and stop it, if necessary.

Program Processing

The psccdemo program performs the following process:

Stage	Description
1	Attaches to the standard database families (tsdx, pscb, message master) using the information from the dbsched.ini.
2	Reads the security profile and uses that logon to connect to pscb database. If these two steps run successfully, then you get a confirmation message in the results document (in the message box for the supported Windows operating system).
3	Sleeps for the interval that the RunTime parameter specifies. When the program awakes, it checks whether the job has stopped. You get a message indicating that the program has finished successfully, or that it has stopped.

Using the Job Scheduler

To schedule a job and determine if it ran successfully, follow this process:

Stage	Description	Action or Window
1	Establish a security profile that contains the appropriate logon IDs and passwords.	Security Profile
2	Create the requests or parameters to run the appropriate programs.	SmartStream application windows, for example, a SmartStream Connect Download request.
3	Specify the information to schedule the job, then run the job.	Job Scheduler Scheduler Calendar
4	Determine the status of the job.	View Scheduler Log View Polls View Scheduled Jobs (for more information about this window, see Checking for Upcoming Jobs) View Server Queue
5	Review messages that result from completed Job Scheduler processing.	View Scheduler Log Results document mailed through SmartStream Mail (for more information, see SmartStream Mail in the *SmartStream Platform* guide)

For information about setting up and using the Job Scheduler, see the Job Scheduler online Help.

For more information about scheduling jobs for a specific product, see the chapter for that product in the *Financials Technical Reference* or the *Shared Components Technical Reference*.

Preparing Security Profiles

A *security profile* is a collection of server and host user IDs and passwords that the Job Scheduler needs to run jobs that manipulate server data or download host data using SmartStream Connect.

You build security profiles using the Security Profile window and then attach the appropriate security profile to a job on the Job Scheduler window.

A single security profile can have entries for multiple hosts and servers.

Building Security Profiles

Individual users can build their own security profiles by specifying combinations of security details (predefined user IDs and passwords).

The security details supplied have already been set up on the User window by you or by systems personnel in your organization. You do not set up or change user IDs or passwords on the Security Profile window.

Changing Security Profiles

If you change user IDs or passwords for a server, host, Millennium, or I.E. entry, you must change affected security details accordingly. When you change a security detail in a security profile, the change affects only that security profile. Other profiles containing the same security detail are not changed. To update the same detail in all security profiles that contain it, you must change each profile using the Security Profile window.

Defining Jobs and Steps

You use the Job Scheduler window to define a job and its associated steps. The Job Scheduler window displays information on a main window and three views:

View	Purpose
Main Window	The default view. This view displays information about a job and its steps simultaneously. You can use this view to create, maintain, delete, and view job header information and step information.
More Job Information View	This view contains information about one job at a time. It provides more information about a job than the Main view. You can use this view to maintain and view, but not create, job header information.
More Step Information View	This view displays information about a step. It contains more information about a step than the Main view. You cannot use it to create a step.
Step Flow View	Using this view you can specify a conditional flow of execution for steps of a job.

Designating Public Jobs

The Job Scheduler window allows jobs to be designated as public jobs permitting other users to view but not change the job. By choosing File Open, you can find and examine public jobs. You can find public jobs of a specific user by entering the user's ID, or you can use a wildcard (*) to view all public jobs.

When you retrieve another user's public job, you can make your own copy of the job using Save As. If you do not choose to make a copy, you can view and change the components of the job. When you try to save your changes, you are prompted to use the Save As option to create your own version. You cannot make any changes to the original job.

Applying Conditional Logic to Steps

By default, the steps of a job run in the order in which they appear in the Main view. Using the Step Flow view of the Job Scheduler window, you can override the default logic and designate a conditional logic. The conditional logic runs the step only if a specific condition is satisfied. The conditional next step can be a subsequent step of a job, a previous step, or the same step.

Note: You can use conditional logic as a correction mechanism to restart and retry steps of a job. However, take care to avoid infinite loops and exhaustion of system resources.

Scheduling Jobs

On the Job Scheduler Calendar, you can schedule when jobs run. You can schedule jobs to run

- Once
- Periodically, such as daily, monthly or quarterly
- On specific dates, rather than at periodic intervals (using the Custom function)
- After a specific SmartStream Connect host event has occurred (using the On Event function).

You can also schedule jobs to run at various timing intervals within the chosen period or dates. For example, a job can run

- At one time (5:00 p.m.)
- At several times (9:00 a.m., 1:00 p.m., and 5:00 p.m.)
- At intervals (every two hours).

Jobs Running after Midnight

A job cannot be scheduled to start after 11:59 p.m. of the date in the Ending On field.

For example, if you schedule a job to run at hourly intervals beginning at 1 p.m. on the nineteenth day of the month, the last time that the job runs is at 11:00 p.m. on the nineteenth. The next hourly interval, 12:00 a.m., is on the twentieth day of the month, which is after the Ending On date.

Rescheduling Jobs

If you schedule jobs to run during a period when the Master Scheduler program is not running, the Master Scheduler program runs the jobs after it is restarted; you do not have to reschedule the jobs.

Monitoring Your Job

Use the following windows to monitor your jobs:

- The View Scheduled Jobs window displays information about your upcoming scheduled jobs. For more information, see Checking for Upcoming Jobs.
- The Scheduler Log window displays information about the progress of your job and its steps. When the job finishes, the window shows whether the job ended successfully, ended with errors, or stopped before completion. For more information, see Viewing the Scheduler Log.

Checking for Upcoming Jobs

Use the View Scheduled Jobs window to check the Job table for your upcoming jobs. You might want to check upcoming jobs to

- Monitor how many jobs you have scheduled for a specific period of time (such as the upcoming night).
- Check exactly which jobs are scheduled for a specific period of time.
- Find all the On Event jobs waiting for a specific SmartStream Connect host event to occur before they run.

You can check for your own jobs only. If you need to view other users' jobs, ask your security administrator to give you access to the View Scheduled Jobs (All Users) window.

Viewing Job Results

The job results document contains the following information:

- The start and end time of the job and each of its steps
- Problems encountered by each step
- The conditional flow of execution of the steps

When you define a job, you specify

- Whether you want a results document mailed when the job completes
- If so, who receives it.

To mail a results document, choose Mail on the Main view of the Job Scheduler window. You can choose to have the results document always distributed, never distributed, or distributed only if a step returns a value meeting a certain condition.

Return Codes

Programs can return codes as part of the step processing. Your application may return additional codes. See your application guide for more information.

Return Code	Description
0	Success; the program encountered no errors.
6	The Poll program was cancelled.

Viewing the Scheduler Log

You can view the progress of a job by accessing the Scheduler log. The Scheduler Log window displays information about a job in the Scheduler log at the time you access the window. If you refresh the window, it displays information about any new job that has been posted since the last time that you accessed the window.

Job Scheduler Troubleshooting

This section describes some common situations you may encounter when using the Job Scheduler. These situations are divided into three major categories:

- Server queue
- Job results document
- Other

The situations are described in a table that contains the following categories:

- The situation
- Its potential cause or causes
- The action you take to resolve the situation

Server Queue-Related Situations

The following table provides troubleshooting information related to the Server Queue.

Situation	Potential Cause	Action
A step does not arrive in the Server Queue	The job was not saved when it was created.	Verify that you saved your job by accessing the Job Scheduler window and then trying to access the job by entering key field information or by choosing Open from the File menu. If you cannot access the job, it was never saved and you need to reenter the job and save the information.
A step does not arrive in the Server Queue	The job is not scheduled to run at the time that you expect.	Check the next scheduled time for the job by accessing the View Scheduled Jobs window. To reschedule the job to run at an earlier time, access the Job Scheduler window and enter the new time in the Calendar field. Save the new job information.
	The job type is not Active.	Check that the job type is Active by accessing the job on the Job Scheduler window. Check the value in the Job Type field and change it to Active if it is currently set to Inactive or Template. Save the new job information.
	The Ignore Step option is selected.	Access the job using the Job Scheduler window. Clear the Ignore Step option and save the job.
	The Master Scheduler program is not running.	Contact your Job Scheduler administrator to verify that the Master Scheduler program is running.

Situation	Potential Cause	Action
The Step remains in pending status in the Server Queue.	The class for the step is an invalid class.	Verify that the class for the step is a valid class by accessing the job using the Job Scheduler window. Check the value in the Class field for the step. Then check the list of valid classes for your site to determine if this class value is valid. **Note:** Your Job Scheduler administrator should publish a list of valid classes. If your organization does not have such a list, contact the Job Scheduler administrator to determine if the class for your step is valid, or see the description of the View Polls activity.
The Step remains in pending status in the Server Queue	The Poll program that should process steps of this class is not running.	Verify that the Poll program is running on the poll that processes that class using the View Polls window.
	Other steps are running that are preventing your step from running.	See if other steps are currently running on that poll and blocking your step. Contact your Job Scheduler administrator. If your step needs to run as soon as possible, ask your Job Scheduler administrator to change the priority of the step.
	The priority of your step is too low (other steps may run before your step).	Check the priority of your step by accessing the job using the Job Scheduler window. Contact your Job Scheduler administrator to change the value in the Priority field for the appropriate step if the status of the job is pending. If the job is running, the priority cannot be changed.
The step remains in the Server Queue with a status of completed.	The Master Scheduler is not running.	Contact your Job Scheduler administrator to determine if the administrator has received any warning mail messages.

Job Results Document-Related Situations

This table provides troubleshooting information related to the job results document.

Situation	Potential Causes	Action
The job completes, but you do not receive the job results.	The distribution ID is incorrect.	Access the Job Scheduler window. Check the Distribution ID field to verify it contains your mail ID.
	The SmartStream Mail Gateway is not running.	Check that the SmartStream Mail Gateway is running by contacting your Job Scheduler administrator.
	Errors were encountered during the mailing process.	Check for SmartStream Mail Gateway mailing errors by contacting your Job Scheduler administrator.

Other Situations

This table provides troubleshooting information for other situations that may occur during Job Scheduler processing.

Situation	Potential Causes	Action
Insufficient disk space		Ask your Job Scheduler administrator to verify that the job server has sufficient disk space.
Incomplete scheduler mail documents	This is a high-activity database and could potentially result in insufficient disk space.	Ensure that the job server has sufficient disk space for temporary work files.
The database is full.		Ask your Job Scheduler administrator to check whether the Scheduler database is full.
Job Scheduler stops.	Sybase conditions such as syslogs full can cause the Job Scheduler to stop.	Ask your Job Scheduler administrator to adjust the transaction log for the database (DBSpscb) according to your needs.

7 Asynchronous RPC Administration

Chapter Contents

7-1 Understanding the Asynchronous RPC Facility
7-3 Setting Up Asynchronous RPC
7-4 Administering the Asynchronous RPC Facility

Understanding the Asynchronous RPC Facility

The Asynchronous RPC facility allows a DBMS transaction to be queued for execution on the database server. The facility allows a SmartStream application to

- Issue multiple Asynchronous RPC requests as a single transaction.
- Issue a single Asynchronous RPC request and a local stored procedure as a single transaction.
- Reliably queue updates to data on the database server even if it is down

Asynchronous RPC Facility Instance

The Asynchronous RPC facility must be configured on the database server. The Asynchronous RPC facility has the following elements:

- The Asynchronous RPC family of DBMS tables
- The Asynchronous RPC Master Server program
- The Asynchronous RPC Remote Processing program. This program is automatically started by the Master Server program as needed.

Note: The SmartStream and product installation processes automatically install the Asynchronous RPC table family on the database server in your SmartStream environment.

Overview of the Asynchronous RPC Master Server Program

The Asynchronous RPC Master Server program runs Asynchronous RPC requests on the database server and updates the Asynchronous RPC tables.

Setting Up Asynchronous RPC

The following table describes the steps that must be performed to set up Asynchronous RPC.

Stage	Description
2	Add the server to the arpc_cfg table using the Asynchronous RPC Configuration window. **Result:** A row with the server information is added in the arpc_cfg table.
3	Set the ARPC Server variable in the dbsched.ini file to point to the server. **Result:** Asynchronous RPC is configured.

Administering the Asynchronous RPC Facility

You can manage the Asynchronous RPC facility by

- Configuring the Asynchronous RPC Master Server.
- Starting the Asynchronous RPC Master Server program.
- Stopping the Asynchronous RPC Master Server program, if necessary.
- Monitoring the Asynchronous RPC queue.
- Responding to a To Do message that results from errors.
- Clearing the Asynchronous RPC error and transaction logs.

Configuring the Asynchronous RPC Master Server Program

If a SmartStream application will be issuing Asynchronous RPC requests, the administrator must configure the Asynchronous RPC Master Server program on the database server. The Asynchronous RPC Master Server program (pscc0050) gets configuration information from the Asynchronous RPC Configuration table.

Starting the Asynchronous RPC Master Server Program

Only one instance of the Master Server program is run on an Asynchronous RPC server.

For a UNIX Server

You can start the Master Server program manually as described in this section, or you can start it using a UNIX shell script that SmartStream provides. For sample scripts, see UNIX Shell Scripts in the *SmartStream Platform* guide.

Step	Action
1	Go to the directory where a job server has been installed.
2	Type the following command at the prompt and press **Enter**: nohup pscc0050 .. pscc0050.log&

If the Master Server is abruptly stopped while it is still active in the DBMS, the associated SPID (SQL Process ID) may not be automatically stopped. If you try to restart the Master Server program, you receive a message that the Master Server program is already running and that it has a specific SPID or SPIDs. You or the DBMS administrator must stop the SPID with a Kill command before you can restart the Master Server program.

Note: A delay occurs between the time an Asynchronous RPC request is posted and the time it appears on the monitor. This time interval is between 10 to 60 seconds, depending on the sleep interval set on the Asynchronous RPC Configuration window.

Both the server and database, rather than just the server, process Asynchronous RPC requests to decrease the processing time required. The ARPC pscc0051 scheduled process is displayed on the Asynchronous RPC Monitoring window for each server and database combination.

8 Structures Utilities

Chapter Contents

8-1 Introduction
8-4 Import and Export Utility
8-25 Multistructure Import Utility
8-31 Point Refresh Utility
8-34 Copy Utility

Introduction

Structures provides the following batch utilities:

- Import and Export utility (psrc5032.exe for Windows and psrc5000 for UNIX)
- Multistructure Import utility (psrc5532.exe for Windows and psrc5500 for UNIX)
- Point Refresh utility (psrc6032.exe for Windows and psrc6000 for UNIX)
- Copy utility (psrc9032.exe for Windows and psrc9000 for UNIX)

Environments

You can run these utilities in the UNIX and supported Microsoft Windows environments.

Starting Structures Utilities

You can start the Structures batch utilities from a command line or through SmartStream Job Scheduler.

Parameter Considerations

If you are running Structures utilities in a supported Windows environment, all parameters containing spaces must be enclosed in double quotes.

Example

```
psrc5032 C e:\sstrmxx\rpttools\temp\psrc5000.cfg -S "My Section"
```

The variables *xx* represent the release number

If you are running the utilities in a UNIX environment, all parameters containing spaces must be enclosed in single quotes with surrounding double quotes.

Example

```
psrc5000 -S "'My Section'"
```

If you run the utilities from Job Scheduler, all parameters containing spaces use the following syntax:

Example

```
"\My Section\""
```

Running Utilities from Job Scheduler

If you run these utilities from Job Scheduler, Structures reads the user ID and password from the server entry of the security profile that is defined for the job.

Return Codes

When you run these utilities using Job Scheduler, you can receive the following return codes:

Return Code	Description
0	Completed successfully
3	Non-fatal problems were encountered, for example, some points did not import
5	Fatal error, for example, files were missing

Note: Even though the Import and Export utility produces a code of 0, it might have encountered problems importing some points. Check the messages in the log file (psrc5100.log for export, psrc5200.log for import) to be sure no problems occurred.

Running Utilities from the Command Line

If you run these utilities from the command line, Structures reads the user ID and password from the dbsched.ini file.

dbsched.ini File Considerations

To ensure that the Structures batch utilities run, you must verify that a properly configured dbsched.ini file is located in the directory from where the Import and

Export utility is run. Dbsched.ini is created and maintained using the Dbsched.ini Configuration program (pscc0030). Do not change this file using a text editor.

In a Windows environment, the location of the dbsched.ini file can be referenced by the DBSCHED_INI entry in the win.ini file, [DBS] section.

Example

```
[DBS]
DBSCHED_INI=c:\sstrmxx\dbsched.ini
```

Testing the Run

Before you run these utilities, consider setting up a configuration file to run a limited test of the chosen utility in attended mode. Use parameters and values in the configuration file that are similar to larger jobs you plan to run.

Modes

You can run the utilities in either attended mode or unattended mode.

Mode	Description
Attended	When you run these programs in a supported Windows environment, attended mode requires you to respond to error messages before processing can proceed.
Unattended	When you run a utility in unattended mode, no messages are displayed. Use this mode to run the utility as a batch job.

Log File

A log file is written to the directory specified by the LogFilePath entry in the configuration file. The Export utility places all messages about an export in the log file called psrc5100.log and writes the file to the directory defined by the LogFilePath label in the configuration file.

If the path is invalid, the configuration file cannot be read, or the configuration file is invalid, messages are placed in the psrc5200.log.

Moving Files

If you move files from where they are originally installed (**c:\sstrm*xx*\rpttools**, where *xx* is the release number), be sure to move the xpmsg.db and pscmen files to the same location as the executables (psrc5032.exe or psrc5000, psrc5532.exe or psrc5500, psrc6032.exe or psrc6000, and psrc9032.exe or psrc9000). If these files do not reside in the same directory, you will have problems interpreting your error messages.

Import and Export Utility

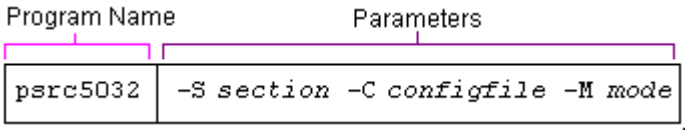
You can use the Import and Export utility (psrc5032.exe for Windows and psrc5000 for UNIX) to

- Import summary and data points to an existing structure from a .prl file.
- Import summary, data points, and optionally descriptions to an existing structure directly from a table.
- Export an open structure by copying point, tier, rollup, and optionally security and distribution data to a set of tables.
- Export a branch of points by copying them to a
  - File with Point Record Layout format (.prl)
  - Cognos PowerPlay DEF file (.def)
  - Pilot LightShip Server file (.lss).

You have two options for importing: import directly from a table or import from a .prl file. Import directly from a table when the table contains a hierarchy and maps cleanly to a structure.

Syntax

These are the command line parameters for running the Import and Export utility:



Enter the full path and program name in the Program Name field.

Example

```
c:\sstrmxx\rpttools\psrc5032.exe –S import –C
c:\strcprt.cfg –M A
```

Parameters

Parameters	Description
section (required)	The name of the section in the configuration file that you want to process. **Note:** Section names are case sensitive. **Example:** psrc5032 -C e:\sstrm*xx*\rpttools\temp\psrc5000.cfg -S Base-Open-Structures
configfile (optional)	The full path and name of the configuration file. The default is *current directory*\psrc5000.cfg.

Parameters	Description
mode (optional)	An option specifying the mode you want to use to run the utility: **A -** (Attended) **U -** (Unattended) Default.

Parameter Considerations

- The -S, -C, and -M must be in uppercase and must be followed by at least 1 space.
- Parameter values are case sensitive.

Configuration File

The configfile parameter represents a configuration text file. The file can have one or more sections (job names) that contain the input data (label=value) for a job. A section has the following format:

```
[SECTION]
Label=Value
```

Generating Export Configuration Files

If you are exporting an OpenStructure, you can create a configuration file to specify the export parameters, or it can be generated using the Export Open Structure window.

Configuration File Labels

The following table describes the values that you can use for the labels in the configuration file:

Label	Value
Group	For importing, the group containing the structure that you are importing points to. For exporting, the group containing the structure that you are exporting points from.
Structure	For importing, the structure that you are importing to. For exporting, the structure that you are exporting from.
DefaultParent	For importing and table importing, the summary point that you want to import points to, when the .prl file specifies an asterisk (*) as the parent point.
ExportFrom	For exporting, the point you want to export. If you specify a summary point, Structures exports all descendants of that summary point.
Operation	The operation you want to perform: ▪ **Import** if you are importing from a .prl file ▪ **TabImport** if you are importing directly from a table ▪ **Export** if you are copying to a .prl, .def, or a .lss file ▪ **OS Export** if you are performing an open structure export

Label	Value
File	For importing from a .prl file, the full path and file name of the .prl file that you are importing. For importing directly from a table, this value references a text file (.txt) that contains the location of the table to copy and the columns to copy. This file is described in the Table Importing example. For exporting, the full path and file name of the .prl file that you are exporting to. (The path defaults to the current directory if no path is entered.) **Notes:** ▪ If you are exporting to a Pilot LightShip Server file, you do not have to enter the file extension. Files with extensions of .lss and .ext are automatically created. ▪ No file value is used when performing an Open Structure export.
Layout	If the operation is **export**, enter **1** - To export to a Point Record Layout (.prl) file **2** - To export to a Cognos PowerPlay (.def) file **3** - To export to a Pilot LightShip Server (.lss) file If the operation is Open Structures Export, enter **1** - For Base Open Structures **2** - For Extended Open Structures
LogFilePath	The full path where the import, table import, or export log file resides. ▪ Import log file: psrc5200.log ▪ Export log file: psrc5100.log ▪ Table import log file: psrc5250.log The current directory is the default.
MessageFilePath	The full path where the xpmsg.db and pscmen files reside. For example, on a Microsoft Windows client, this location is **c:\sstrm*xx*\rpttools**, where *xx* is the release number. The current directory is the default.
Mode	**Unattended** (default) Messages are not displayed. Use this value when you are importing points in batch mode. **Attended** With a supported Windows environment, messages are displayed and processing stops for acknowledgment. With UNIX, a message is displayed and processing continues. **Note:** If you enter a run mode on the command line and in the configuration file, the mode on command line takes precedence.
DatePointExtension (optional)	For .prl and .lss exporting only . An extension is attached to data point names in the export file.

Open Structures Export Labels

The following table describes additional labels that are used only in the Base-Open-Structures and the Extended-Open-Structures sections:

Label	Value
Tag	The value used to identify the prefix for the exported table names. By default, the table tag is X_<Group id>_<Structure id>. You can edit this value. The tag value is limited to 17 characters and must follow the syntax rules for your DBMS table identifiers. For example, Sybase and SQL Server syntax requires table identifiers to begin with letters, followed by letters, digits, or special characters such as #, $ and _.
OverwriteTables	Valid Values **T** - Delete existing tables and create new tables. **F** - Do not delete existing tables with the same name (default)
EffectiveDate	The effective date of the structure to be exported. If no effective date is specified, the structure that is current at the time the export is run is used.
ExportDatabase	The name of the database where the tables will be created. If no database is specified, the export database defined in your dbserver.ini file is used.
ExportServer	The name of the server where the exported database resides. If no server is specified, the export server defined in the dbserver.ini file is used.

Import Examples

The following examples use the [IMPORT] and [TABLE-IMPORT] sections within the configuration file **strucprt.cfg.**

Importing Example

The following command runs the Import and Export utility using the values in the [IMPORT] section of the strucprt.cfg configuration file:

```
c:\psrc5032.exe -S IMPORT -C c:\strucprt.cfg
```

Configuration File [IMPORT] Section

The [IMPORT] section imports points from the psrc5000.prl file to the Import To structure in the Reporting Tools group.

```
[IMPORT]
Group=Reporting Tools
Structure=Import To
DefaultParent=Top
Operation=Import
File=c:\batchnti\psrc5000.prl
LogFilePath=c:\batchnti
MessageFilePath=c:\msg_file
Mode=A
```

Table Importing Example

This command runs the Import and Export utility using the values in the [TABLE-IMPORT] section of the strucprt.cfg configuration file:

```
c:\psrc5032.exe -S TABLE-IMPORT -C
c:\strucprt.cfg
```

Configuration File [TABLE-IMPORT] Section

The [TABLE-IMPORT] section copies points from a table specified in the timfile.txt file to the Table_Import structure in the Reporting Tools group.

```
[TABLE-IMPORT]
Group=Reporting Tools
Structure=Import To
DefaultParent=Top
Operation=TabImport
File=c:\sstrmxx\rpttools\temp\timfile.txt
LogFilePath=c:\batchnti
MessageFilePath=c:\msg_file
Mode=A
```

Table Import Text File

To import directly from a table, you must create a text file containing the specific information to be copied. The following table describes the layout and information you must provide in the text file.

Line	Description
1	The location of the tables to be copied (server, database, owner, table).
2 through the end	Each column to be copied. You must define a separate line for each column. Optionally, you can specify an alternate table from where a description can be copied for each column. (If alternate descriptions are not provided, the point name will be used.) Description tables cannot exist on an alternate. Each column except the last becomes a summary point in the structure.
Last line	The column specified in the last line becomes the data point in the structure.

The following sections show a sample text file, tables imported from, and the resulting structure.

Timfile.txt

```
Frmsn11s2,DBSosxp,dbo,CITY_TABLE
State,DBSosxp,dbo,DESC_TABLE, Item, Description
City, DBSosxp,dbo,DESC_TABLE, Item, Description
ZIP, DBSosxp,dbo,DESC_TABLE, Item, Description
```

Where	Represents
Frmsn11s2	The server where the table containing data to be copied resides
DBSosxp	The database where the table containing data to be copied resides
dbo	The owner of the table
CITY_TABLE	The table containing the data to be copied
State	The first column from the table to be copied
DESC_TABLE	The table containing the descriptions to be copied
Item	The foreign key to match City from the CITY_TABLE table
Description	The description to display in Structures
City	The second column from the table to be copied
ZIP	The third column from the table to be copied

Sample Tables **CITY_TABLE**

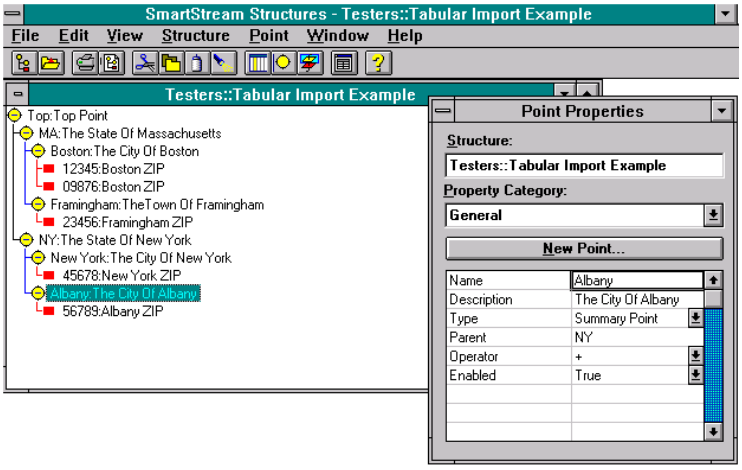
City	State	ZIP
Boston	MA	12345
Boston	MA	09876
Framingham	MA	23456
New York	NY	45678
Albany	NY	56789

DESC_TABLE

Item	Description
Boston	The City of Boston
Framingham	The Town of Framingham
New York	The City of New York
Albany	The City of Albany

Item	Description
MA	The State of Massachusetts
NY	The State of New York
12345	Boston ZIP
09876	Boston ZIP
23456	Framingham ZIP
45678	New York ZIP
56789	Albany ZIP

Resulting Structure



Configuration File Export Examples

The following examples use the [EXPORT], [Base-Open-Structures], and [Extended-Open-Structures] sections within the configuration file **strucprt.cfg**.

This command runs the Import and Export utility and uses the values in the [EXPORT] section of the strcprt.cfg configuration file:

```
c:\psrc5032.exe -S EXPORT -C
c:\batchnti\strcprt.cfg
```

[EXPORT] Section

The [EXPORT] section copies points from the Export From structure in the Reporting Tools group to the psrc5000.prl file.

```
[EXPORT]
Group=Reporting Tools
Structure=Export From
ExportFrom=Top
Operation=Export
File=c:\batchnti\psrc5000.prl
LogFilePath=c:\batchnti
MessageFilePath=c:\msg_file
Mode=A
Layout=1
DatePointExtension=
```

[Base-Open-Structures] Section

The [Base-Open-Structures] section copies the structure to a set of tables containing point, tier and rollup data in the export database.

```
[Base-Open-Structures]
LogFilePath=c:\log_dir
MessageFilePath=c:\msg_file
Operation=OS Export
Layout=1
Mode=A
Group=Group1
Structure=Structure1
EffectiveDate=06/28/97 9:52:00 AM
Tag=MY_TABLE_TAG
ExportDatabase=DBSosxp
ExportServer=Frmhp52
OverwriteTables=T
```

[Extended-Open-Structures] Section

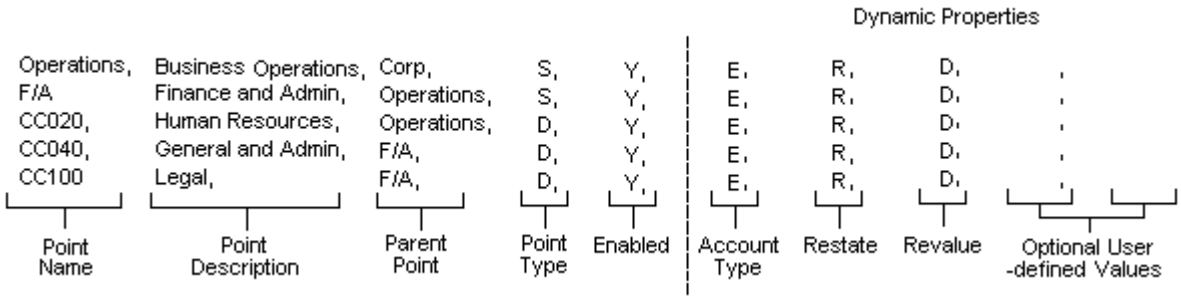
The [Extended-Open-Structures] section copies the structure to a set of tables containing point, tier, rollup, security and distribution data in the export database.

```
[Extended-Open-Structures]
LogFilePath=c:\log_dir
MessageFilePath=c:\msg_file
Operation=OS Export
Layout=2
Mode=A
Group=Group1
Structure=Structure1
EffectiveDate=06/28/97 9:52:00 AM
Tag=MY_TABLE_TAG
```

```
ExportDatabase=DBSosxp
ExportServer=frmhp52
OverwriteTables=T
```

Importing Points

With the Import and Export utility, you can add summary points and data points to an existing structure by using values from a comma-delimited ASCII file. The file must be in Point Record Layout format (.prl) as shown in the following diagram:



Layout of a Point Record Layout File

Each row in a Point Record Layout file has these fields:

Field	Required	Max Size	Valid Values
Point Name	Yes	240	Any string
Point Description	No	255	Any string. If you leave this field blank, Structures uses the value in the Name field as the point's description.
Parent Point	Yes	240	Any string. If you type an asterisk (*), Structures creates the new point as a child of the point specified with the DefaultParent label in the configuration file.
Point Type	No	1	**D** - Data point (default) **S** - Summary point **T** - Top point
Enabled	No	1	Y (default) or N

Field	Required	Max Size	Valid Values
Account Type (for data points only) or an alternate value to be applied to dynamic properties (could be a user-defined value)	No	1	**A** - Asset **B** - Balance **E** - Expense **I** - Income **L** - Liability **Q** - Equity **V** - Volume
Restate option or an alternate value to be applied to dynamic properties (could be a user-defined value)	No	1	For Restate: **N** - Do not restate **R** - Restate and book to the realized gain/loss account **U** - Restate and book to the unrealized gain/loss account
Revalue option or an alternate value to be applied to dynamic properties (could be a user-defined value)	No	1	For Revalue: **N** - Do not revalue **R** - Revalue and book to the realized gain/loss account **U** - Restate and book to the unrealized gain/loss account
Value to be applied to dynamic properties (could be a user-defined value)	No	255	This field can be used to import any column.
Value to be applied to dynamic properties (could be a user-defined value)	No	255	This field can be used to import any column.

Note: Any user-defined fields you elect to import are not used in any SmartStream applications. They are displayed for informational purposes in Structures.

Processing Dynamic Properties

The last five (optional) fields on the .prl are processed in same order that they are displayed on the Point Properties window.

Conventions

Separate all values with commas (,). You can omit the optional values by entering an extra comma followed by at least one space in the place of each value. (Do not enter a comma for the last field in the row.)

For example, to omit the Description and Enabled fields in the import file shown earlier, type the following values:

```
Operations, , Corp, S, , , ,
CC020, , Operations, S, , , ,
F/A, , Corp, D, ,  , ,
CC040, , F/A, D, ,  , ,
CC100, , F/A, D, ,  , ,
```

If you enter quotation marks with each value in the import file, Structures removes them during the import process.

Import Log File

The utility places all messages about an import in the log file psrc5200.log and writes the file to the directory defined by the LogFilePath label.

Rules for Importing Points

Follow these rules when you run the Import and Export utility to import points:

- You must be an owner of a structure to import points to that structure.
- The structure you are importing to must be in an unlocked state when you run the utility. It locks the structure while it imports points.
- Structures does not import any data point whose length exceeds the length of the structure's maximum point length.
- If you want to import data points, you must first add a column association for the target structure. Structures that have no column associations have a maximum point length of zero.
- If the structure that you are importing to has restricted summary point names, Structures does not import any summary point with a length that exceeds the length of the structure's maximum point length.
- If you want to import summary points to a structure that has restricted summary point names, you must first add a column association for the target structure.
- The order of the points in an import file is significant. Summary points must appear before the points that roll up to them.
- If you want the top points in the file you are importing to and the file you are exporting from to be the same, the top point names must be the same.
- You cannot insert points to structures that use ranges.

Exporting Points

With the Import and Export utility, you can export a branch of points to the following types of files:

- A file with Point Record Layout format (.prl)
- A Cognos PowerPlay DEF file (.def)
- A Pilot LightShip Server file (.lss)

The utility exports the following properties:

Export File Type	What the Utility Exports
.prl	Values from the Point Name, Description, Parent Point, and Enabled fields for each point
.def	The tier number of each point and values from its Point Name and Description fields
.lss	Values from the Point Name and Parent Point fields for each point

Export Considerations

When you export a structure that uses ranges, the Import and Export utility reviews the associated database column to find the values that fall within each range. It then writes a separate row in the export file for each value it finds.

Export Log File

The Export utility places all messages about an export in the log file called psrc5100.log and writes the file to the directory defined by the LogFilePath label.

Exporting a Structure for Open Structures

A structure is exported using the Export Open Structure window. This window generates a configuration file (psrc5000.cfg) that you use either to

- Export structure data and create tables immediately, or
- Generate the configuration file only, and create tables later using the Import and Export utility.

You select from one of two export formats:

- Base Open Structures
- Extended Open Structures

The export process copies point, tier, rollup, and optionally security and distribution data from a structure. It then creates a set of tables that are stored in an Microsoft SQL Server or Sybase database. You can then access table information for retrieval and reporting purposes using any supported third-party tool.

Export Table Names

By default, each export table name is prefixed with the table name X_<group id>_<structure id>_, followed by the export table type, for example, X_5_3_POINT.

You can change the table name prefix by entering a different tag entry in the configuration file or by entering a different table name prefix in the Export Table Tag field on the Export Open Structure window.

Note: Do not use SRG_ as a table name prefix for an Open Structure export. SmartStream Structures delivers tables with the SRG_ prefix. Using this prefix can cause a delivered Structure's table to be overwritten.

Example 1

The export process creates the following tables if the group ID is 5, the structure ID is 3, and no tag entry is specified in the configuration file:

- X_5_3_POINT
- X_5_3_TIER
- X_5_3_ROLLUP

Example 2

The export process creates the following tables if the tag entry in the configuration file is ACCBAL1:

- ACCBAL1_POINT
- ACCBAL1_TIER
- ACCBAL1_ROLLUP

Export Considerations

Structures with Ranges

When you export a structure that uses ranges, the Export utility reviews the associated database column to find the values that fall within each range. It then writes a separate row in the export file for each value it finds.

Note: Range points that are exported to OpenStructures tables are assigned negative point IDs.

Export Table Names

If you export a structure using both the Base Open Structures and the Extended Open Structures formats, be sure to specify different table names for each export. This prevents a later export from overwriting the results of an earlier one if the Overwrite Existing Tables option is set.

Structures with Effective Dates

When you use the batch utility to export, effective dates are not recognized in .def, .prl or .lss files. If you have effective-dated versions of the structure and you want to export a version other than the current one, use the Structures Editor to select and export.

Other Considerations

- Indexes are not automatically created for the exported tables, but you can add indexes to them.
- Open Structures does not support the export of summary-point-only structures. Summary-point-only structures are structures containing a summary that does not have associated data points.
- Regardless of how you create the export tables (using the appropriate windows or using the Import and Export utility), you must
  - Verify that you have create table permissions for the export database.
  - Specify the export database and the export server in the ExportDatabase= and ExportServer= entries of the psrc5000.cfg file.

Exporting a Structure for Base Open Structures

When you export a structure using the Base Open Structures format, it produces tables for point, tier, and rollup data.

Although both Base Open Structures and Extended Open Structures exports produce tables for point, tier, and rollup data, their formats are different. For example, the Base Open Structures format includes a dimension ID column. These differences in format are important when you write SQL or use any supported third-party tool to access the data in these tables.

Note: Use the Extended Open Structures format in place of the Base Open Structures format whenever possible.

Export Table Names

The Base Open Structures export process creates three tables. By default, each export table name is prefixed with the table name X_<group id>_<structure id>_, followed by the export table type. For example, X_5_3_POINT.

You can change the table name prefix by entering a different tag entry in the configuration file or by entering a different table name prefix in the Export Table Tag field on the Export Open Structure window.

Note: If you export a structure using both the Base Open Structures and the Extended Open Structures formats, be sure to specify different table name prefixes for each export. This prevents a later export from overwriting the results of an earlier one if the Overwrite Existing Tables option is set.

Example

The Base Open Structures export process creates the following tables when the tag entry in the configuration file is FINACCT:

- FINACCT_POINT
- FINACCT_TIER
- FINACCT_ROLLUP

Note: Indexes are not automatically created on the exported tables, but you can add indexes to them.

Base Open Structures POINT Table Layout

This table describes the top, summary, and data points for a structure.

Note: The term *dimension* is synonymous with *structure*. Each row in the Base Open Structures POINT table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
DIMENSION_ID	Reserved for future release.	Int	4	NA	Set to 0 - Not currently used.
DIMENSION_NAME	The name of the dimension (structure).	Varchar	64	SRG_STRUCTURE	NAME
POINT_ID	The ID of the POINT.	Int	4	SRG_POINT	POINT _ID
POINT_NAME	The name of the point.	Varchar	240	SRG_POINT	NAME
DESCRIPTION	The description of the point.	Varchar	255	SRG_POINT	DESCRIPTION
SUMTO_POINT_ID	The ID of the parent point for the point.	Int	4	SRG_SUMMARY (& DATA) _NAVIGATION	SUMTO_POINT_ID

Column Name	Description	Type	Length	Source Table	Source Column
SEQ_NO	The internal display sequence number for the point.	Smallint	2	SRG_SUMMARY (& DATA) _NAVIGATION	SEQ_NUMBER
SORT_ORDER	The order in which the points are printed.	Int	4	SRG_DYNAMIC_DATA	INTEGER_VALUE where LABEL = "Sort Order"
TIER	The tier level for the point.	Smallint	2	SRG_POINT	TIER
TOTALING_LEVEL	Reserved for future release.	Smallint	2	SRG_SUMMARY (& DATA) _NAVIGATION	Not currently used.
TYPE	The point type: T = Top F = Summary D = Data	Char	1	SRG_POINT	TYPE
ACCOUNT_TYPE	For account type A = Asset B = Balance E = Expense I = Income L = Liability Q = Equity V = Volume	Char	1	SRG_DYNAMIC_DATA	STRING_VALUE where LABEL = "Account Type"

Base Open Structures TIER Table Layout

The TIER table lists the tier levels for a given data point. For each data point, a list of N-1 (where N = Max Tier) columns are created containing the parent information (ID and name) at that tier.

Each row in the TIER table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
DIMENSION_ID	Reserved for future release.	Int	4	NA	Set to 0 - Not currently used.
POINT_ID	The ID of the point.	Int	4	SRG_POINT	POINT_ID
POINT_NAME	The name of the point.	varchar	240	SRG_POINT	NAME

Column Name	Description	Type	Length	Source Table	Source Column
TIER_(N-1)_SUM_ID	The summary point ID of the top or summary point on that tier.	Int	4	SRG_SUMMARY(&DATA)_NAVIGATION	SUMTO_POINT_ID
TIER_(N-1) _ SUM_ NAME	The summary point name of the top or summary point on that tier.	varchar	240	SRG_POINT	NAME
TIER_1_SUM_ID	The summary point ID of this point on the first tier.	Int	4	SRG_SUMMARY(&DATA)_NAVIGATION	SUMTO_POINT_ID
TIER_1_SUM_NAME	The summary point name of this point on the first tier.	varchar	240	SRG_POINT	NAME

Base Open Structures ROLLUP Table Layout

This table describes the rollup of data points into parent points for a structure. Each data point has a row for each of its ancestor summary points. The table is ordered by point and then by tier, with the lowest tier listed first.

Each row in the ROLLUP table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
DIMENSION_ID	Reserved for future release.	Int	4	NA	Set to 0 - Not currently used.
DATA_POINT_NAME	The name of the point.	Varchar	240	SRG_POINT	NAME
SUM_POINT_NAME	The name of the parent point.	Varchar	240	SRG_POINT	NAME

Exporting a Structure for Extended Open Structures

When you export a structure using the Extended Open Structures format, the export produces tables for point, tier, and rollup data and, additionally, distribution and security data.

Although both Base Open Structures and Extended Open Structures exports produce tables for point, tier, and rollup data, their formats are different. For example, the Base Open Structures format includes a dimension ID column. These differences in format are important when you write SQL or use any third-party tool to access the data in these tables.

Note: Use the Extended Open Structures format in place of the Base Open Structures format whenever possible.

Export Table Names

The export process creates five tables. By default, each export table name is prefixed with the table name X_<group id>_<structure id>_, followed by the export table type. For example, X_5_3_POINT.

You can change the table name prefix by entering a different tag entry in the configuration file or by entering a different table name prefix in the Export Table Tag field on the Export Open Structure window.

Example

The Extended Open Structures export process creates the following export tables if the tag entry in the configuration file is SALAR99:

- SALAR99_POINT
- SALAR99_TIER
- SALAR99_ROLLUP
- SALAR99_SECURITY
- SALAR99_DISTRIBUTE

Note: Indexes are not automatically created on the exported tables, but you can add indexes to them.

Extended Open Structures POINT Table Layout

This table describes the top, summary, and data points for a structure.

Note: The term *dimension* is synonymous with *structure*.

Each row in the POINT table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
DIMENSION_NAME	The name of the dimension (structure).	Varchar	64	SRG_STRUCTURE	NAME
POINT_ID	The ID of the POINT.	Int	4	SRG_POINT	POINT _ID
POINT_NAME	The name of the point.	Varchar	240	SRG_POINT	NAME
DESCRIPTION	The description of the point.	Varchar	255	SRG_POINT	DESCRIPTION

Column Name	Description	Type	Length	Source Table	Source Column
SUMTO_POINT_ID	The ID of the parent point for the point	Int	4	SRG_SUMMARY (& DATA) _NAVIGATION	SUMTO_POINT_ID
SEQ_NO	The internal display sequence number for the point.	Smallint	2	SRG_SUMMARY (& DATA) _NAVIGATION	SEQ_NUMBER
SORT_ORDER	The order the points are printed.	Int	4	SRG_DYNAMIC_D ATA	INTEGER_VALUE where LABEL = "Sort Order"
TIER	The tier level for the point.	Smallint	2	SRG_POINT	TIER
TOTALING_LEVEL	Reserved for future release.	Smallint	2	SRG_SUMMARY (& DATA) _NAVIGATION	Not currently used.
TYPE	The point type: T = Top F = Summary D = Data	Char	1	SRG_POINT	TYPE
ACCOUNT_TYPE	For account type A = Asset B = Balance E = Expense I = Income L = Liability Q = Equity V = Volume	Char	1	SRG_DYNAMIC_D ATA	STRING_VALUE where LABEL = "Account Type"

Extended Open Structures TIER Table Layout

The TIER table lists the tier levels for a given data point. For each data point, a list of N-1 (where N = Max Tier) columns are created containing the parent information (ID and name) at that tier.

Each row in the TIER table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
POINT_ID	The ID of the point.	Int	4	SRG_POINT	POINT_ID
POINT_NAME	The name of the point.	varchar	240	SRG_POINT	NAME

Column Name	Description	Type	Length	Source Table	Source Column
TIER_(N-1)_SUM_ID	The summary point ID of the top or summary point on that tier.	Int	4	SRG_SUMMARY(&DATA)_NAVIGATION	SUMTO_POINT_ID
TIER_(N-1) _ SUM_ NAME	The summary point name of the top or summary point on that tier.	varchar	240	SRG_POINT	NAME
TIER_1_SUM_ID	The summary point ID of this point on the first tier.	Int	4	SRG_SUMMARY(&DATA)_NAVIGATION	SUMTO_POINT_ID
TIER_1_SUM_NAME	The summary point name of this point on the first tier.	varchar	240	SRG_POINT	NAME

Extended Open Structures ROLLUP Table Layout

This table describes the rollup of data points into parent points for a structure. Each data point has a row for each of its ancestor summary points. The table is ordered by point and then by tier, with the lowest tier listed first.

Each row in the ROLLUP table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
DATA_POINT_NAME	The name of the point.	Varchar	240	SRG_POINT	NAME
SUM_POINT_NAME	The name of the parent point.	Varchar	240	SRG_POINT	NAME

Extended Open Structures SECURITY Table Layout

This table contains the user security information for a point in a structure (dimension). Although this table is created for all structures, it is empty if no point access security has been defined for the points on the structure.

Each row in the SECURITY table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
POINT_ID	The dimension (structure) point unique identifier.	Int	4	SRG_POINT	POINT_ID
USER_ID	The DecisionStream user or group that can access this point.	Varchar	30	SRG_ACCESS	USER_ID

Column Name	Description	Type	Length	Source Table	Source Column
USER_TYPE	Specifies whether the USER_ID is a user or a group (0=user, 1=group).	Tinyint	1	SRG_ACCESS	USER_TYPE
DRILL_THRU_FLAG	Reserved for future release.	Tinyint	1	SRG_ACCESS	Set to 1 - Not currently used

Extended Open Structures DISTRIBUTE Table Layout

This table contains the distribution information for a point in a structure (dimension). A single point can have several distribution records.

Each row in the DISTRIBUTE table contains the following columns:

Column Name	Description	Type	Length	Source Table	Source Column
POINT_ID	The dimension point unique identifier.	Int	4	SRG_POINT	POINT_ID
DISTRIBUTION_TYPE	The distribution type. 0=MAPI address	Tinyint	1	SRG_DISTRIBUTION	DISTRIBUTION_TYPE
DISTRIBUTION_LIST	The MAPI address to which to mail distributed results for a point.	Varchar	240	SRG_DISTRIBUTION	MAIL_ADDRESS

Multistructure Import Utility

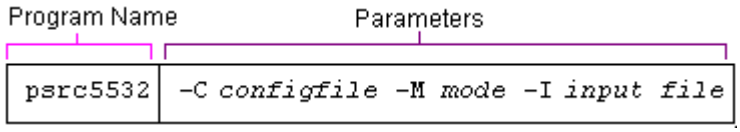
Use the Multistructure Import utility (psrc5532.exe for Windows and psrc5500 for UNIX) to import summary and data points from one input file that contains data from multiple structures.

For a list of conditions required to import points successfully, see Rules for Importing Points.

Also, you cannot insert points to a Work Breakdown Structure using the Multistructure Import utility.

Syntax

These are the command line parameters for running the Multistructure Import utility:



Enter the full path and program name in the Program Name field.

Example

c:\psrc5532.exe -I *dwnload.prn* -C c:\strcprt.cfg -M A

Parameters

Parameters	Description
configfile (optional)	The full path and name of the configuration file. The default is psrc5500.cfg.
mode (optional)	An option specifying the mode you want to use to run the utility: **A** (Attended) **U** (Unattended) Default
input file (optional)	The name of the file that you want to import into an existing structure. (Default: InputFileName in the configuration file)

Parameter Considerations

- The -C, -M, and -I must be in uppercase and must be followed by at least 1 space.
- Parameter values are case sensitive.

Configuration File

The configfile parameter represents a configuration text file. The file has two required sections and can have additional structure name sections. A section has the following format:

[SECTION]

Label=Value

The following labels are available for the configuration file.

Section	Label	Required	Description
[PSRC5500-COMMON]		Yes	Parameters in this section are set for all structures you are importing.
	InputFileName	Yes, unless the command line contains the input file name.	The name of the file that you want to import to an existing structure. **Note:** If you enter the input file name specified on the command line and in the configuration file, the input file name on the command line takes precedence.
	LogFilePath	No	The full path of the import log file. The import log file is psrc5500.log. The current directory is the default.
	MessageFilePath	No	The full path for the xpmsg.db and pscmen files. For example, on a Microsoft Windows client, this location is **c:\sstrm*xx*\rpttools**, where *xx* is the release number. The current directory is the default.
	AppendLog	No	An option indicating whether or not to add output to the log file. **Y** - Attach output information from this step to the log file. **N** - Recreate the log file. (Default).
	Mode	No	**Unattended** (default): Messages are not displayed. Use this value when you are importing points in batch mode. **Attended:** With a supported Windows environment, messages are displayed and processing stops for acknowledgment. With UNIX, a message is displayed and processing continues. **Note:** If you enter a run mode on the command line and in the configuration file, the mode entered on command line takes precedence.

Section	Label	Required	Description
[PSRC5500-DEFAULT]		Yes	The default values to be set for each imported structure. The utility overrides these values for any structure that has a section defined.
	Group	Yes	The group that contains the structure. Must be a valid group name.
	DeletePoints	No	An option indicating whether or not to delete all existing points before importing points. **Y**- Delete all existing points. **N**- Do not delete existing points. (Default).
	ReplaceDuplicates	No	An option indicating whether or not the point being imported will delete and replace all duplicate points. Y - All duplicate points will be deleted and replaced. **N** - Duplicate points will not be deleted and replaced (default). All duplicates will be listed in the error log.
	DefaultParent	No	For importing , the summary point that you want to import points to, when the .prl file specifies an asterisk (*) as the parent point. (Default: Top).
[<structure name>]		No	Sections used for individual structures that you want to override the default values for.
	Group	No	The group which contains the structure. Must be a valid group name. Defaults to value entered in the PSRC5500-DEFAULT section.
	DeletePoints	No	An option indicating whether or not to delete all existing points before importing points: **Y** - Delete all existing points. **N** - Do not delete existing points. Default is the value entered in the PSRC5500-DEFAULT section.
	ReplaceDuplicates	No	An option indicating whether or not the point being imported will delete and replace all duplicate points. **Y** - All duplicate points will be deleted and replaced. **N** - Duplicate points will not be deleted and replaced. All duplicates will be listed in the error log. The default is the value entered in the PSRC5500-DEFAULT section.
	DefaultParent	No	For importing, the summary point that you want to import points to, when the .prl file specifies an asterisk (*) as the parent point. The default is the value entered in the PSRC5500-DEFAULT section.

Section	Label	Required	Description
	StructureName	No	Specifies the structure to import to. If a name is specified here, it must be a structure that already exists. Users can enter structure names that generate, for example, mixed-case names. If you do not specify a structure name here, the name in the import file will be used.

Examples

The following command runs the Multistructure Import utility using the import file that is defined in the configuration file:

```
c:\batch\psrc5532.exe -C c:\strcprt.cfg
```

Configuration File

The following configuration file imports points from the dwnload.prn. The following events occur:

- The points in the dwnload.prn file from the MIXED CASE NAME structure are imported into the Mixed Case Name structure in the Reporting Tools group.
- The IMPORT structure is imported to the Import Test structure in the Financials group.
- The SECOND STRUCT structure is imported to the SECOND STRUCT structure in the Financials group.

```
[PSRC5500-COMMON]
InputFileName=c:\batch\dwnload.PRN
LogFilePath=c:\batch
MessageFilePath=c:\msg_file
AppendLog=N
Mode=A

[PSRC5500-DEFAULT]
Group=Financials
DeletePoints=Y
ReplaceDuplicates=Y
DefaultParent=Top
```

```
[MIXED CASE NAME]
Group=Reporting Tools
DeletePoints=N
ReplaceDuplicates=N
DefaultParent=Bottom
StructureName=Mixed Case Name


[IMPORT]
StructureName=Import Test
```

Import File

The import file in this example (dwnload.prn) contains the following data:

```
MIXED CASE NAME,PT1,DESC1,TOP,D,Y
MIXED CASE NAME,PT2,DESC2,TOP,D,Y
IMPORT,PT1,DESC1,TOP,D,Y
IMPORT,PT2,DESC2,TOP,D,Y
SECOND STRUCT,PT1,DESC1,TOP,D,Y
SECOND STRUCT,PT2,DESC2,TOP,D,Y
```

Results

The following three structures are imported in this example:

Imported Structure	Will be imported into...
MIXED CASE NAME	Mixed Case Name in the Reporting Tools group
IMPORT	Import Test in the Financials group
SECOND STRUCT	SECOND STRUCT in the Financials group because the configuration file does not have a [SECOND STRUCT] section specifying a different structure name.

Importing Points

With the Multistructure Import utility you can add summary points and data points to existing structures by using values from a comma-delimited ASCII file. The import file must use the format described in the following section.

Layout of Import File

Each row in an import file has these fields:

Field	Required	Max Size	Valid Values
Structure Name	Yes	64	Any existing valid structure if you are importing into an existing file.
Point Name	Yes	240	Any string

Field	Required	Max Size	Valid Values
Point Description	No	255	Any string. If you leave this field blank, Structures uses the value in the Point Name field as the point's description.
Parent Point	Yes	240	Any string. If you type an asterisk (*), Structures creates the new point will be created as a child of the point specified with the DefaultParent label in the configuration file.
Point Type	No	1	**D** - Data point (default) **S** - Summary point **T** - Top point
Enabled	No	1	**Y** (default) or **N**
Account Type (for data points only)	No	1	**A** - Asset **B** - Balance **E** - Expense **I** - Income **L** - Liability **V** - Volume

Conventions

Separate all values with by commas (,). You can omit the optional values by entering an extra comma followed by at least one space in the place of each value. (Do not enter a comma for the Account Type field because it is the last field in the row.)

For example, to omit the Description and Enabled fields in the preceding import file, you could type the following values:

```
Structure A,Operations, ,Corp, S, ,
Structure A,CC020,,Operations, S, ,
Structure A,F/A, ,Corp, D, ,
Structure A,CC040,,F/A, D, ,
Structure A,CC100,,F/A, D, ,
```

If you enter quotation marks with each value in the import file, Structures removes them during the import process.

Import Log File

The utility places all messages about an import in the log file psrc5500.log and writes the file to the directory defined by the LogFilePath label.

Rules for Importing Points

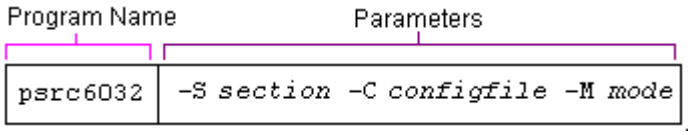
For a list of conditions required to import points successfully, see Rules for Importing Points.

Point Refresh Utility

Use the Point Refresh utility to refresh inherited points so that they reflect changes to the corresponding points in the parent structure.

Syntax

These are the command line parameters for running the Point Refresh utility:



Enter the full path and program name in the Program Name field.

Parameters

Parameter	Description
Section (required)	The name of the section in the configuration file that you want to process.
configfile	The full path and name of the configuration file. The default is psrc6000.cfg.
mode (optional)	An option specifying the mode you want to use to run the utility: **A** (Attended) **U** (Unattended) Default

Parameter Considerations

- The -S**,** -C, and -M must be in uppercase and must be followed by at least 1 space.
- Parameter values are case sensitive.

Configuration File

The configfile parameter represents a configuration text file. The file can have one or more sections (job names) that contain the input data (label=value) for a job. A section has the following format:

[SECTION]

Label=Value

The following table describes the values that you can use for the labels in the configuration file:

Label	Value
Group	The group containing the structure whose points you want to refresh.
Structure	The structure containing the points you want to refresh.
LogFilePath	The full path of the refresh log file (psrc6000.log). The current directory is the default.
MessageFilePath	The full path for the xpmsg.db and pscmen files. For example, on a Microsoft windows client, this location is **c:\sstrm*xx*\rpttools**, where *xx* is the release number. The current directory is the default.
mode	**U (Unattended)** (default): Messages are not displayed. Use this value when you are importing points in batch mode. **A (attended):** With a supported Windows environment, messages are displayed and processing stops for acknowledgment. With UNIX, a message is displayed and processing continues. **Note:** If you enter a run mode on the command line and in the configuration file, the mode entered on command line takes precedence.

Example

The following command runs the Point Refresh utility using the psrc6032 section that is defined in the configuration file:

```
c:\psrc6032 -S psrc6032 -C c:\strcpnt.cfg -M A
```

Configuration File

The values in the psrc6032 section of the strcpnt.cfg configuration file are used to refresh all inherited points in the child in the Reporting Tools group:

```
[psrc6032]
Group=Reporting Tools
Structure=Child
LogFilePath=c:\batch
MessageFilePatch=c:\msg_file
Mode=A
```

Refreshing Inherited Points

Through refresh processing, points that are inherited in a child structure contain the same changes as the corresponding points in the parent structure.

If the corresponding points in the parent structure are

- Modified, the inherited points are modified in the child structure.
- Deleted, the inherited points are deleted in the child structure.

The refresh process also adds specific types of points to the child structure as described in the following table:

Inheritance Option	Result of Refresh Processing
Child structure inherits all points	All points added to the parent structure since the last refresh are added to the child structure
Child structure inherits all summary points	All summary points added to the parent structure since the last refresh are added to the child structure
Child structure inherits all data points	All data points added to the parent structure since the last refresh are added to the child structure

Refresh Log File

The utility places all messages about a refresh of inherited points in the log file psrc6000.log and writes the file to the directory defined by the LogFilePath label.

Copy Utility

Use the Copy utility (psrc9032.exe for Windows and psrc9000.exe for UNIX) to copy structures within the same group, between groups, and between servers.

The following table lists the different types of copying you can perform using this utility:

Environment	You can copy...
Copying within a single server	▪ Between groups, with the option to change the structure name. ▪ Within the same group, where you must change the structure name.
Copying between multiple servers	▪ To the same group name, with the option to change the structure name. ▪ To different group names, with the option to change the structure name.

Considerations

When you copy structures between servers, the source and destination servers require a SmartStream user ID and a password that matches the **user ID** and **password** that either the dbsched.ini or a security profile sends the utility. A valid SmartStream user ID must be defined on both servers and the passwords must be the same.

The utility does not copy the owners of a source structure to the target structure. The new owner of a target structure is the user ID supplied in the userid parameter from the dbsched.ini or the security profile. After the copy process is complete, you can add new owners to the structure using the Structures Editor (psrc7032.exe).

Inheritance

You must copy a parent structure before you can copy any of its child structures. When the utility copies the parent structures, it does not assign child structures to the parent. It assigns a child to the parent when it copies the child. If the target parent structure is not defined when you copy the child structure, the utility generates an error message stating that the parent structure must already be defined.

When you copy a child structure, the target parent is determined by

1. The child structure's original parent group name and parent structure name. This is the default.

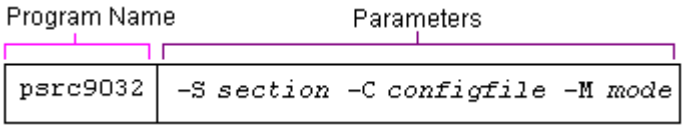
2. Getting the parent group name and parent structure name for the target child from the configuration (.cfg) file. With this option you can change the parent

group name or the parent structure name, or both, when copying the child structure. If this information is not in the configuration file, the utility uses option 1 by default.

Note: If you have previously copied and renamed a parent structure, when you copy a child, you must specify the new group and name of the original parent structure.

Syntax

These are the command line parameters for running the Copy utility:



Enter the full path and program name in the Program Name field.

Parameters

Parameters	Description
Section (required)	The name of the section in the configuration file that you want to process.
Configfile	The full path and name of the configuration file. The default is psrc9000.cfg.
mode (optional)	An option specifying the mode you want to use to run the utility: **A** (Attended) **U** (Unattended) Default

Parameter Considerations

- The -S, -C, and -M must be in uppercase and must be followed by at least 1 space.
- Parameter values are case sensitive.

Configuration File

The configfile parameter represents a configuration text file. The file can have one or more sections (job names) that contain the input data (label=value) for a job.
A section has the following format:

```
[SECTION]
Label=Value
```

Note: Section names, label names, and values are case sensitive.

The following table describes the values that you can use for the labels in the configuration file:

Label	Value
FromGroup	The source group containing the structure you want to copy from.
ToGroup	The target group containing the structure you want to copy to.
FromStructure	The source structure you want to copy from.
ToStructure	The target structure you want to copy to.
*FromServer	The source server containing the group and structure you want to copy from.
*ToServer	The target server containing the group and structure you want to copy to.
*FromTSDXDB	The source database containing the TSDX table on the FromServer.
*ToTSDXDB	The target database containing the TSDX table on the ToServer.
LogFilePath	The full path for the copy log file psrc9000.log file. If the program encounters a problem before encountering this statement, it will be written to the current directory. The current directory is the default.
MessageFilePath	The full path for the xpmsg.db and pscmen files. For example, on a Microsoft Windows client, this location is **c:\sstrm*xx*\rpttools**, where *xx* is the release number. The current directory is the default.
AppendLog	**Y** Attach output information from this step to the log file (Default). **N** Recreate the log file.
ToParentGroup	The target group containing the parent structure. This label is used for inherited structures only and is needed only if the target parent structures' group name or structure name is different from the source parent. The default is the source parent structure's group name. **Note**: You must use this label with the ToParentStructure label.
ToParentStructure	The target parent structure. This label is for Inherited structures only and is needed only if the target parent structures' group name or structure name is different from the source parent. The default is the source parent structure's structure name. **Note**: You must use this label with the ToParentGroup label.

***** If you do not enter values for FromServer, ToServer, FromTSDXDB, and ToTSDXDB, the utility reads them from the dbsched.ini file.

Example 1: Same Server Different Group

The following command runs the Copy utility using the SAME-SERVER-DIFF-GROUP section that is defined in the configuration file:

```
c:\psrc9032 -S SAME-SERVER-DIFF-GROUP -C
c:\batch\strcopy.cfg
```

Configuration File

The values in the [SAME-SERVER-DIFF-GROUP] section of the strcopy.cfg configuration file copy structures on the same server between different groups.

```
[SAME-SERVER-DIFF-GROUP]
FromGroup=Financials
ToGroup=Human Resources
FromStructure=ALL VALID ACCOUNTS
ToStructure=ALL VALID ACCOUNTS
LogFilePath=c:\batch
MessageFilePath=c:\msg_file
Mode=A
```

Example 2: Same Server and Group

The following command runs the Copy utility using the SAME-SERVER-SAME-GROUP section that is defined in the configuration file:

```
c:\psrc9032 -S SAME-SERVER-SAME-GROUP -C
c:\batch\strcopy.cfg
```

Configuration File

The values in the [SAME-SERVER-SAME-GROUP] section of the strcopy.cfg configuration file copy structures within the same server and group.

```
[SAME-SERVER-SAME-GROUP]
FromGroup=Financials
ToGroup=Financials
FromStructure=SOME VALID ACCOUNTS
ToStructure=ALL VALID ACCOUNTS
LogFilePath=c:\batch
MessageFilePath=c:\msg_file
Mode=A
```

Note: Because the values for FromServer, ToServer, FromTSDXDB, and ToTSDXDB are not entered, the utility reads them from the dbshed.ini file.

9 Windows System Services

Chapter Contents

9-1 What Is a Service?
9-2 Service Functions
9-3 SmartStream Windows System Services

What Is a Service?

A service, similar to a daemon in UNIX,

- Is a process (running program) that starts automatically with the system
- Runs whether or not someone is logged in.

Service Functions

A supported Windows operating system provides mechanisms to make sure a service does not start unless all the services it depends on have also started. It also allows services to be remotely started, stopped, paused, and continued on the server or from any supported Windows operating system environment.

Microsoft SQL Server is an example of a service. Because it is not convenient to log on to the server to run the database, Microsoft SQL Server registers itself as a service when it is installed. It is usually configured to start up every time the server is started.

SmartStream Windows System Services

SmartStream delivers the following programs that can be run as services on supported Windows operating systems:

- Master Scheduler
- Poll
- ARPC
- Ledger Consolidations
- Mail Gateway

More programs will be added to this list in the near future.

If you run Master Scheduler as a service, you must log on to the service with a domain administrator account that has access to the network with shared reference through a UNC path. The domain account has to belong to the local administrator on a supported Windows workstation or to the local Administrator or Server Operators group on a supported Windows server. If this is not done, Job Scheduler mail messages are created only in the batch directory where Job Server is installed.

Registering SmartStream System Services

The programs delivered with SmartStream must be registered to run as system services. You can register these programs as services using the ntsvc.dll file delivered with SmartStream. Enter the following command from a command prompt or using the Run command on the Start menu. The command must be executed from the directory where the program to be registered and the ntsvc.dll file reside.

```
c:\dir\ProgramID.exe -Install(ProgramName)
```

Example

```
c:\batch\pscc0020.exe -Install(Poll)
```

Command Line Syntax

- You must type .exe following the program ID.
- The *I* in Install must be capitalized.
- If you want to include spaces as part of the program name, the entire program name must be in double quotes. **Example:** ("Poll Program")

For more information about configuration of SmartStream system services, see the appropriate Microsoft Windows documentation.

Running Programs as Services

You start and stop programs that have been registered as services using the Services utility from the Windows Control Panel.

Running Programs as Non-Services

To run programs in a supported Windows environment as standard, non-system services, the program name must be followed by NOSERVICE. For example, use the following syntax to run master scheduler as a non-service:

```
c:\batch\pscc0010 NOSERVICE
```

10 Archive/Purge

Chapter Contents

10-1 About Archive/Purge
10-7 Stages of Scheduled Archive/Purge Processing
10-8 Job Scheduler Parameters for Archive/Purge
10-10 Archive/Purge Reporting
10-11 Reviewing the Status of the Jobs

About Archive/Purge

Using the Archive/Purge process you can remove outdated information from your database. Based upon your business requirements, the information is either purged or archived and purged. When archiving, you control whether the data is written to an archive table or to a file that can be stored on disk or tape.

Option	Description
Archive	Removes data from tables on the server by copying the data to disk or to an archive table. The data is retained for future reference.
Purge	Removes rows from tables (original or historical) on the server. With fewer rows on the tables, performance is enhanced.

Archiving Data

The following table describes how you can archive data and gives examples:

You can archive to...	Example
An archive table on the server	You still have access to data for reporting purposes, but archiving keeps active tables smaller and more efficient.
A disk	You have no further need to access the data, but you need to retain the information for audit purposes.

You can archive to...	Example
A disk from archive tables	You do not need to access the data, but you retain the information for audit purposes.

Security

Before running the Archive/Purge process, you must set up the proper activity security.

General

You must have access to the following activities:

Activity ID	Activity
ccf0770	Archive/Purge Request window
ccf0800	Archive/Purge processor

Note: You must use the security profile of DBS when running the Archive/Purge processor (ccf0800) on the Job Scheduler window.

Product-Specific

When defining activity security, the security administrator must grant the user or group access to the product's activities. The security administrator must specify the appropriate archive/purge ID in the Security Value 1 column. Use the following list to identify the archive/purge activities for each product.

Asset Management

Archive/ Purge ID	Archive/Purge Name
ffafaaacpr	Archive Account Base Activity
ffafabadpr	Archive Asset Book Activity
ffafadadpr	Purge Additional Depr Activity
ffafajcdpr	Purge Asset Posted Journals
ffafanadpr	Purge Annual Limit Activity
ffafasacpr	Archive Asset Base Activity
ffafbaadpr	Archive Account Book Activity
ffafctadpr	Purge Category Activity
ffafdeadpr	Purge Depr Percentage Activity
ffafloadpr	Purge Location Activity
ffafpcadpr	Purge Asset Policy Activity

Archive/ Purge ID	Archive/Purge Name
ffaftxadpr	Purge Tax Credit Activity
ffafuoadpr	Purge UOP Activity

Bank

Archive/ Purge ID	Archive/Purge Name
fbkbkcdcad	Archive Deposit Clearance to Disk
fbkbkcpcad	Archive Payment Clearance to Disk
fbkbkcpcah	Archive Payment Clearance to Hist
fbkbkcrcad	Archive Remit Clearance to Disk
fbkbkdrdad	Archive Deposit Clearance Hist to Disk
fbkbkprdad	Archive Payment Clearance Hist to Disk
fbkbkrrdad	Archive Remit Clearance Hist to Disk

Credit Management

Archive/ Purge ID	Archive/Purge Name
fcrcraccad	Archive Credit Account to Disk
fcrcrardad	Archive Credit Account History to Disk

Funds Control

Archive/ Purge ID	Archive/Purge Name
ffcfcblcad	Archive Fund Balance to Disk
ffcfcblcah	Archive Fund Balance to History
ffcfcbldad	Archive Fund Balance History to Disk
ffcfctacad	Archive Fund Transactions Audit to Disk
ffcfctacah	Archive Fund Transactions Audit to History
ffcfctadad	Archive Fund Transactions Audit History to Disk

Archive/ Purge ID	Archive/Purge Name
ffcfctxcad	Archive Fund Transactions to Disk
ffcfctxcah	Archive Fund Transactions to History
ffcfctxdad	Archive Fund Transactions History to Disk

Ledger

Archive/ Purge ID	Archive/Purge Name
fjejealcad	Journal History Archive to Disk
fjejepccad	Journal Archive to Disk
fjejepccah	Journal Archive to History

Payables

Archive/ Purge ID	Archive/Purge Name
fapprqrdad	Archive Payment Request History to Disk
fapprqtcad	Archive Payment Request to Disk
fapprqtcah	Archive Payment Request to History
fpypyhrdad	Archive Payment History to Disk
fpypylhcad	Archive Payments to Disk
fpypylhcah	Archive Payments to History

Projects

Archive/ Purge ID	Archive/Purge Name
fpjapjccad	Project Journal History Archive to Disk
fpjaprjcad	Project and Journals History Archive to Disk
fpjpjctcad	Project Journal Archive to Disk
fpjpjctcah	Project Journal Archive to History
fpjprocad	Project and Journals Archive to Disk

Archive/ Purge ID	Archive/Purge Name
fpjprojcah	Project and Journals Archive to History

Purchasing

Archive/ Purge ID	Archive/Purge Name
mpoblkacad	Archive Blkt Order History to Disk
mpoblkhcah	Archive Blanket Orders to History
mpopohacad	Archive Purch Order History to Disk
mpopohrcah	Archive Purchase Orders to History
mrqreqacad	Archive Requisition History to Disk
mrqreqmcah	Archive Requisitions to History

Receivables

Archive/ Purge ID	Archive/Purge Name
farractcad	Archive Receivable Account to Disk
farrcmtcad	Archive Remittance to Disk
farrrardad	Archive Receivable Account History to Disk
farrrcvcad	Archive Receivable Document to Disk
farrrdrdad	Archive Receivable Document History To Disk
farrrrrdad	Archive Remittance History to Disk

Receiving

Archive/ Purge ID	Archive/Purge Name
mdsrtnacad	Archive Return History to Disk
mdsrtnhcah	Archive Returns to History
mdssrhacad	Archive Receipt History to Disk
mdssrhmcah	Archive Receipts to History

Item

Archive/ Purge ID	Archive/Purge Name
mbmpmamcah	Archive Items to History
mbmpmmacad	Archive Item History to Disk

Supplies Management

Archive/ Purge ID	Archive/Purge Name
mbmppl5cah	Archive Stockroom Items to History
mbmppl6cad	Archive Stckrm Item History to Disk
mcmccpvcah	Archive Cost to History
mcminvacad	Archive Cost History to Disk
mimapthdad	Archive Transaction History to Disk
mimmtkhdad	Archive Move Tickets to Disk
mrqskhacad	Archive Kit Order History to Disk
mrqskohcah	Archive Kit Orders to History

Vendor

Archive/ Purge ID	Archive/Purge Name
cvnvimscah	Archive Vendor Items to History
cvnvmsacad	Archive Vendor Item History to Disk
cvnvmstcah	Archive Vendors to History
cvnvmtacad	Archive Vendor History to Disk

Stages of Scheduled Archive/Purge Processing

Scheduled archive/purge processing is made up of the following stages:

Stage	Description
1	Complete the archive/purge Request window.
2	Enter the appropriate parameters on the Job Scheduler window.
3	Run the archive/purge processor, ccfc0800, from the Job Scheduler window. **Result:** Job Scheduler runs archive/purge processing to archive and purge information. **Note:** If run in Preview mode, no data is removed from the target table.
4	Run archive/purge reports through Job Scheduler or product activity (for example, Bank Reporting).
5	If the Archive/Purge processor was run in Preview mode, review reports and revise the data or run parameters as needed.
6	Run the Archive/Purge processor again in preview mode if you want to review data, or run it in standard mode to archive and purge information.
7	Run the archive/purge reports (optional). Review the reports to confirm the results.

Job Scheduler Parameters for Archive/Purge

This section summarizes the information you enter for the Program and Program Parameters fields on the Job Scheduler window. You complete the Job Scheduler window to submit a scheduled job for processing.

For more information about this window, see the Understanding the Job Scheduler.

Program Name and Parameters

Enter the following values for the Program Name and Program Parameters fields when scheduling the following program:

Program	Program Name	Program Parameters
Archive/Purge	**UNIX:** ccfc0800	Run type Request ID Validation option

Values for Parameters

The following parameters are used in the Archive/Purge process:

Parameter	Value	Description	Use
Archive/Purge process type (run type)	Blank	Standard Processing mode	Purge or archive and purge all data meeting the selection criteria and eligibility requirements.
	P	Preview Processing mode	Review the data to be purged or archived and purged before removing the data. **Note:** This option is not available for all Archive/Purge activities. See the appropriate product guide to determine whether the preview function is available.
	R	Restart Processing mode	Begin processing where a previous job stopped. Restart is available only if the interrupted job has archived or purged data.
	C	Cleanup Processing mode	Prepare SmartStream for future processing. Cleanup resets switches on the DBSpurg database.
Request ID		Purge Request identifier	Identify the Archive/Purge request to be processed.
Validation option	Blank	Validate	Perform appropriate validation. This is the recommended option. If your SmartStream data changed or system processing occurred since you ran the archive/purge process successfully in preview mode, you must leave the Validation option blank.
	V	Do not validate	Bypass validation following a successful preview (optional). If you ran an archive/purge process successfully in preview mode and you are running it again in archive/purge mode, enter V as the Validation option only if **no** SmartStream data changed or system processing occurred since the preview.

Archive/Purge Reporting

When scheduling a report, you must specify a report option as part of the program parameters. The report option identifies a set of report parameters you selected and saved using a specific reporting activity. For more information about reporting, see the appropriate product documentation.

For Purchasing, Supplies Management, and Vendor archive/purge processing, the reporting function uses the following online activities instead of Microsoft Access:

- Purchasing Archive/Purge Reporting
- Supplies Archive/Purge Reporting
- Vendor Archive/Purge Reporting

Reviewing the Status of the Jobs

You can determine the status of the job processed from the messages generated during processing.

Summary of Transactions

Use the appropriate MAPI mail message or archive/purge report to review the results of Archive/Purge processing.

Job Scheduler Messages

The Poll program generates informational messages about the progress of a job and its final result (ended successfully, ended with errors, stopped before completion). You can display these messages using the Scheduler Log activity.

Return Codes

The following table lists the possible return codes displayed on the Scheduler Log window:

Return Code	Meaning	Possible Cause	Suggested Action
0	Program completed successfully.		
1	There is no data to archive or purge.	Selection criteria were not entered.	Make necessary revisions on the Job Scheduler or Archive/Purge Request window.
2	Program parameters are incorrect.	Parameters were entered incorrectly.	Make necessary revisions on the Job Scheduler or Archive/Purge Request window.
3	Archive/Purge activity is locked.	Another user is running the same Archive/Purge process.	Make sure the previous Archive/Purge process is complete before running the process again.
4	Insufficient access for this activity.	User is not authorized to run this Archive/Purge process.	Establish proper security.
5	Fatal processing error occurred and the program cannot continue processing.	Client cannot open required connections to the server.	Check SmartStream mail or local log file for specific information about the problem. Correct the problem and run the job again.

For more information about the Job Scheduler, see Understanding the Job Scheduler.

For information about using the Archive/Purge process for specific products, see the following sections:

- Asset Management
- Funds Control
- Ledger
- Payables
- Projects
- Purchasing
- Receiving
- Item
- Supplies Management
- Vendor

11 Open Analyzer

Chapter Contents

11-1 Introduction
11-2 Using Open Analyzer to Create a PowerCube
11-4 The Open Analyzer Process
11-7 Starting Open Analyzer

Introduction

Using Open Analyzer you can export points from one or more SmartStream structures directly to a Cognos PowerCube file (*.mdc) for use with the Cognos PowerPlay application.

A PowerCube is a multi-dimensional data file that is used with PowerPlay to perform dynamic, drill-down analysis of SmartStream data, using many different views and data combinations.

Note: You must be licensed for Open Analyzer to create PowerCubes using this feature.

Using Open Analyzer to Create a PowerCube

You can create a PowerCube online using the Open Analyzer window, or you can create it from a command line using the batch Export utility (psrc5032.exe for Windows).

You specify the structure and points to export and the location and names of the files to be created or referenced during the PowerCube generation process. You can perform the cube creation immediately, or you can choose to generate a configuration file (psrc5000.cfg) only and run the export later.

Rules for Creating a PowerCube

Follow these rules when you run the Export utility to create a PowerCube:

- The structure you are exporting cannot use
  - Reference points
  - Inheritance
  - Layers.
- The structure you are exporting can have compound, multiple, or single column associations. For compound and multiple column associations, use only one column.
- The structure you are exporting can use ranges.

Open Analyzer Considerations

Consider the following information when using Open Analyzer:

- Do not run exports in parallel; the export is a serial operation.
- Whenever possible, run the PowerCube update process in batch using the configuration file generated during the PowerCube creation process. Using the batch method ensures that the points previously exported are selected and that the Export utility accurately references existing files.
- Although you can use the Export utility to **update** a PowerCube, you cannot use it to **create** a PowerCube.
- The Export utility overwrites the [MDL] section of the psrc5000.cfg each time you create or update a PowerCube.
- The TempPath entry in the [Reporting Tools] section of the dbs.ini file specifies where to store both Open Analyzer and Reporting Tools output files.
- The Export utility creates files (.csv, .mdl, .pyh, and .mdc) that are never deleted. When a PowerCube is updated, the Export utility overwrites existing .csv and .mdc files.

If you do not want any files to be overwritten, you must specify unique names for the .mdl and .mdc files in the configuration file or on the PowerCube Export Options window.

Cognos Considerations

Multiple Versions of Cognos PowerPlay

You can run only one version of Cognos PowerPlay at a time on the same client workstation. If you have two versions on the same client machine, be sure you use the Cognos.ini file for the version of Cognos you are running.

Important: Before you install a second version of Cognos PowerPlay, back up the current Cognos.ini file; otherwise, the new version overwrites the original Cognos.ini.

Path File

Place the SmartStream Reporting Tools (rpttools) directory in front of the Cognos directory in your Path setting. This ensures that the SmartStream version of pctree32.dll is read instead of the version shipped with Cognos.

Cognos Setup Tasks

You must perform the following Cognos setup tasks before you can export a structure to a PowerCube file:

1. Create an Impromptu catalog to gain access to the database containing dimension and measures data.

2. Create an Impromptu report that contains only the drill-down and measures columns associated with each structure to be exported. Drill-down columns contain the hierarchical rollup information as defined by the structure. Measures are the amounts that are analyzed. Save your selections to an Impromptu Report file (.imr) so that you can maintain the report.

3. Save the .imr file as an Impromptu Query Definition file (.iqd). Transformer reads the query definition created by Impromptu and accesses the data directly.

Important: The query data column names you define in the Impromptu report must match the source level column names of the points selected when exporting. Column names are case sensitive. For example, account_bal is different from Account_Bal.

The Open Analyzer Process

When you run the Export utility (psrc5032.exe) to create a PowerCube, the following files are created:

- A .csv file for every point selected.
  - This file contains the structure hierarchy information.
  - The names of the .csv files generated are determined by the MDCFile= entry in the configuration file. For example, if you select three points and you specify MDCFile=MyPowerCube, the following .csv files are created: MyPowerCube1.csv, MyPowerCube2.csv, and MyPowerCube3.csv
- A Cognos Transformer .mdl file

  This file contains a reference to the Impromptu Query Definition file (.iqd). The .iqd file contains the query that defines the dimension columns associated with each structure and the numerical measures to analyze.

- A Cognos Transformer .pyh file

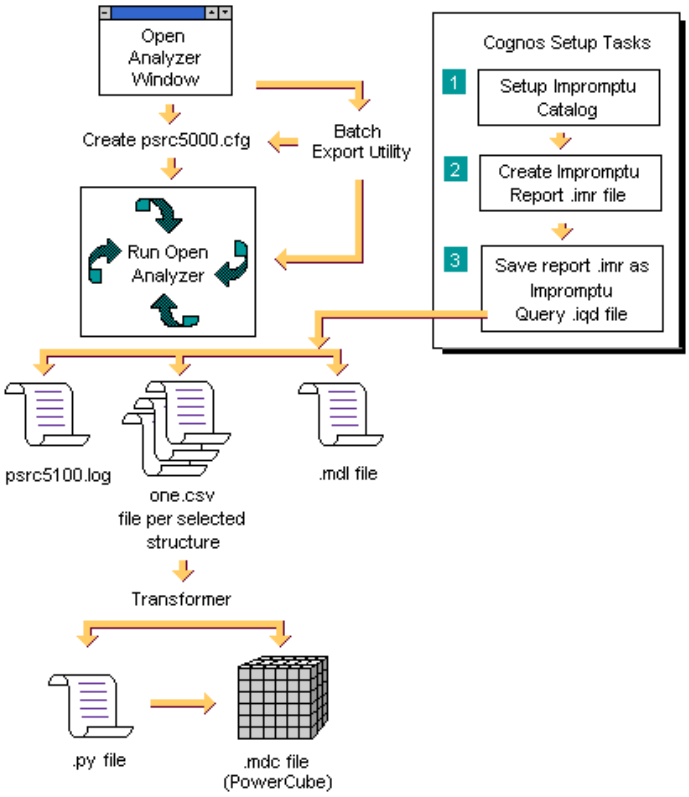
  This binary file contains all of the .mdl information. It also stores the database logon ID and password information.

- A PowerCube .mdc file

  This multi-dimensional data file contains the structure's dimension rollup information.

Open Analyzer Process Flow

The following diagram illustrates the Open Analyzer PowerCube creation process:



Updating a PowerCube

Whenever possible, run the PowerCube update process in batch using the configuration file generated during the PowerCube creation process. Using the batch method ensures that the points previously exported are selected and that the Export utility accurately references the Transformer files.

The Update Process

When you run the Export utility (psrc5032.exe) to update a PowerCube, the following processing occurs:

- The .csv file for every selected structure is updated with the latest structure hierarchy information.
- The utility references the previously created Transformer .mdl, and .pyh files.

  Do not save Transformer category information in the .mdl or .pyh files. The .pyh file uses a link reference to read the latest dimension information from the .csv files. Saving category information severs links to the data stored in the .csv files.
- A new PowerCube .mdc file is generated, which overwrites the prior .mdc file.

Updating .csv Files Only

With Open Analyzer you can update only the data in the .csv files. Updating only the .csv files and not the .mdl file prevents a user-modified .mdl file from being overwritten. This feature allows you to use the advanced functionality of Cognos Transformer to create a PowerCube without fear of overwriting the .mdl file.

To refresh only the .csv files, enter **3** as the Layout= value in the configuration file.

Starting Open Analyzer

You can start the Export utility to update a PowerCube from a command line or through SmartStream Job Scheduler.

Using Job Scheduler

Although you can use the Export utility to update a PowerCube, you cannot use Job Scheduler to create a PowerCube.

If you run the export from Job Scheduler, the utility reads the user ID and password from the server entry of the security profile that is defined for the job.

Return Codes

When you run the export using Job Scheduler, you can receive the following return codes:

Return Code	Description
0	Completed successfully
3	Non-fatal problems were encountered, for example, some points did not import
5	Fatal error, for example, files were missing

Note: Even though the Export utility produces a code of 0, check the messages in the log file (psrc5100.log) to be sure no problems occurred.

Using the Command Line

If you run the export from the command line, the utility reads the user ID and password from the dbsched.ini file.

dbsched.ini File Considerations

To ensure that the batch utility runs, you must verify that a properly configured dbsched.ini file is in the directory from where the Export utility is run. The dbsched.ini file is created and maintained using the dbsched.ini Configuration program (pscc0030). Never change this file using a text editor.

In a Windows environment, the location of the dbsched.ini file can be found using the DBSCHED_INI entry in the win.ini file, [DBS] section.

Example

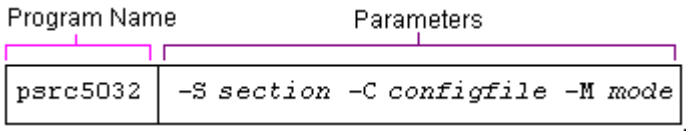
```
[DBS]
DBSCHED_INI=c:\sstrmxx\dbsched.ini
```

Testing the Run

Before you run the export utility, consider setting up a configuration file to run a limited test of the chosen utility in attended mode. Use parameters and values in the configuration file that are similar to larger jobs you plan to run.

Syntax

These are the command line parameters for running the Export utility:



Enter the full path and program name in the Program Name field.

Example

```
e:\sstrmxx\rpttools\psrc5032.exe –S MDL –C
e:\sstrmxx\rpttools\temp\psrc5000.cfg –M A
```

Note: The -S, -C, and –M must be in uppercase and must be followed by at least 1 space.

Parameters

Parameters	Description
section (required)	The name of the section in the configuration file that you want to process. **Note:** Section names are case sensitive. **For example:** psrc5032 -C e:\sstrm*xx*\rpttools\temp\psrc5000.cfg -S MDL
configfile	The full path and name of the configuration file. The default is *current directory*\psrc5000.cfg.
mode	An option specifying the mode you want to use to run the utility: **A** (Attended) **U** (Unattended) Default.

Configuration File

A configuration file (psrc5000.cfg) is generated automatically using the Open Analyzer window, or you can manually create a configuration file to specify the export parameters.

Configuration File Labels

The following table describes the values that you can use for the labels in the [MDL] section of the configuration file.

Label	Value
MDLFile	The full path and file name of the Model Definition File (.mdl) that you are exporting to. The current directory is used as the default if no path is entered.
PYHFile	The full path and file name of the Cognos Transformer application file (.pyh) to be created.
MDCFile	The full path and file name of the Cognos PowerCube file (.mdc) to be created. **Note**: The file name entered here is used to name the exported .csv files.
MeasuresIQDFile	The full path and file name of the Impromptu Query Definition file (.iqd) to use for the Measures query.
LogFilePath	The full path where the export log file resides. Export log file: psrc5100.log The current directory is the default.
MessageFilePath	The full path where the xpmsg.db and pscmen files reside. For example, on a supported Microsoft Windows client, this location is c:\sstrm*xx*\rpttools. The current directory is the default.
TempPath	The full path where Open Analyzer files are stored. By default, this value is determined by the TempPath entry in the [Reporting Tools] section of the dbs.ini file.
Operation	The operation you want to perform: PowerCube
Layout	The processing you want to perform. **1** - Create PowerCube **2** - Update PowerCube (updates the .csv file for selected point, the .mdc, and the log file) **3** - Update .csv files only
Source Layout	The format to use when displaying the point name in the PowerCube. This value is initially determined by the value entered in the [Structures} section of the dbs.ini file. **1** - To display the point name **2** - To display the point description (default) **3** - To display the point name:description For example, if a data point name in a structure is 41110, and its description is SALES, 41110 is displayed as the point name in the PowerCube if SourceLayout=1, and SALES is displayed if SourceLayout=2.
UseBlankPoints	The option to include undefined data points in the .mdc file. This value is initially determined by the value entered in the [Structures} section of the dbs.ini file. **Y** - (default) Include blank points in the PowerCube **N** - Do not include blank points in the PowerCube
CompressCube	The compression option to use. **T** - - Compress .mdc file **F** - - Do not compress .mdc file

Label	Value
Mode	The mode in which to run the processing. **U** - (Unattended): (default). Messages are not displayed. Use this value when you are importing points in batch mode. **A** - - (Attended): In a supported Windows environment, messages are displayed and processing stops for acknowledgment. In a UNIX environment, a message is displayed and processing continues. **Note:** If you enter a run mode on the command line and in the configuration file, the mode entered on command line takes precedence.
NumberOfStructures	The number of Structures to export to the PowerCube file. The value corresponds to the number of sections in the Configuration file (one section for each structure). For example, for the following entry: NumberOfStructures=4 The configuration file has the following four sections: [1] [2] [3] [4]
Group	The group containing the structure that you are exporting points from.
Structure	The structure that you are exporting from.
EffectiveDate (optional)	The effective date of the structure to export. If no effective date is specified, the structure that is current at the time the export is run is used.
Point	The point you want to export to the PowerCube. If you specify a summary point, Structures exports all descendants of that summary point.
Source Level	The name of the column that the data point in the structure is associated with. **Note:** The Source Level name of the point you are exporting must match the query data column name on the Impromptu report.
The following labels are used only for Structures that use ranges with multiple column associations.	
Server	The server where the column to export resides.
DatabaseOwner (optional)	The user ID of the owner of the database where the specified column resides.
DatabaseName (optional)	The name of the database where the specified column resides. Use this value only if a column association is not specified.
TableOwner	The user ID of the table where the specified column resides. Use this value only if a column association is not specified.
TableName	The name of the table where the specified column resides. Use this value only if a column association is not specified.

Label	Value
Column	A column association name that has already been specified in Structures. The column association specified is exported. If you specify a column association, you do not need to specify values for Server, DatabaseOwner, DatabaseName, TableOwner, TableName, and Column labels. If you do not specify a column association or any of the following labels, the primary column is exported.

Example - Configuration File [MDL] Section

In this example, the [MDL] section uses the PowerCube Operation to

- Create MDCFile1.csv and MDCFile2.csv
- Export points to the MDLFile.mdl
- Create PYHFile.pyh
- Create a PowerCube file MDCFile.mdc for the two specified structures.

```
[MDL]
MDLFile=f:\sstrmxx\rpttools\Temp\MDLFile.mdl
PYHFile=f:\sstrmxx\rpttools\Temp\PYHFile.pyh
MDCFile=f:\sstrmxx\rpttools\Temp\MDCFile.mdc
MeasureIQDFile=f:\sstrmxx\rpttools\Temp\Cube.
IQD
LogFilePath=f:\sstrmxx\rpttools
MessageFilePath=f:\sstrmxx\rpttools
TempPath=
Operation=PowerCube
Layout=1
CompressCube=F
Mode=A
NumberOfStructures=2

[1]
Group=Reporting Tools
Structure=SDI Job Class
EffectiveDate=5/1/98 9:52:00AM
Point=Job Class
SourceLevel=JobClass Level
SourceLayout=2
UseBlankPoints=Y
[2]
Group=Reporting Tools
Structure=SDI GENDER
EffectiveDate=5/1/98 9:52:00AM
Point=Gender
SourceLevel=Gender Level
```

```
SourceLayout=2
UseBlankPoints=Y
Server=BOSDEVSQL09
DatabaseName=DBSglep
DataBaseOwner=dbo
TableOwner=dbo
TableName=ldr_acct
Column=account
```

Log File

The Export utility places all messages about an export in the log file called psrc5100.log and writes the file to the directory defined by the LogFilePath label in the configuration file.

If the path is invalid, the configuration file cannot be read, or the configuration file is invalid, messages are placed in the psrc5200.log.

12 Troubleshooting

Chapter Contents

12-1 SmartStream Applications
12-4 Access Reports
12-6 SmartStream Scheduled Programs

SmartStream Applications

SmartStream is delivered with an online debugger, referred to as pbtrace, that is activated through the dbsched.ini file. You can use pbtrace to resolve application errors and performance issues.

Resolving Application Errors

Complete the following steps to activate and use the trace process:

Step	Action
1	Create a local copy of the dbserver.ini file on the workstation where the problem occurred (to avoid creating trace files on every client workstation).
2	Update the local dbs.ini file to point to the local version of the dbserver.ini file.
3	Update the local dbserver.ini file, as follows: ▪ For Microsoft SQL Server, change DBMS=MSS to **DBMS=TRACE MSS** ▪ For Sybase, change DBMS=SYT to **DBMS=TRACE SYT** **Note:** The abbreviation for Sybase is SYT, not SYB.
4	Open SmartStream. **Result:** SmartStream displays a message that the trace process is activated and identifies where to find the trace log file (pbtrace.log).

Step	Action
5	Immediately before duplicating the error, use **ALT+TAB** to open the pbtrace.log file being created, place a line of asterisks (**********) to mark the error, duplicate the error, and then close SmartStream. **Note:** You want a trace only of the error, so be sure that you do not perform other activities in SmartStream. Also, the line of asterisks shows Support where in the trace the error occurred. Leaving out this step increases the time needed to find the section of the trace file where the problem is indicated.
6	Inactivate the trace process to avoid filling up your drive with unnecessary trace data.

Besides using the trace process to resolve errors that occur in SmartStream applications, you can use it to check for such potential performance issues as long running queries because the trace log also shows the execution time for each stored procedure.

Resolving Performance Issues

When the response time on the window has degraded or is excessive, the problem is usually one or two queries used to retrieve data for the window.

When users can enter criteria to limit the number of records read during a search, they can improve response time by doing so. When users cannot control the criteria passed to a query, however, identifying the query causing the excessive delay is the first step in correcting the response time issue.

In SmartStream, most queries are run by stored procedures called from the PowerBuilder code used to build the windows.

Finding the Stored Procedure Running the Query

To determine the appropriate stored procedure, use pbtrace. After the trace is enabled, reproduce the problem in SmartStream to generate a log of the steps involved in returning data to the window. Review the pbtrace.log file for the stored procedure requiring an excessive amount of time to run.

Example

As the following lines of a pbtrace.log file show, the Receipt window took a long time to return even a few rows. Other stored procedures on this window showed an elapsed time of 0 - 20 milliseconds, so an elapsed time of 64823 milliseconds stands out as an excessive delay.

EXECUTE SERVER1.DBSreqm.dbo.msp_sel_srhm_srdm_labels 'COH', 'D056163', 'ALL', 'ALL', 'Y' (64823 MilliSeconds)

Finding the Query

After you identify the stored procedure, view its source to identify the query it is running and the table it is accessing:

You can view the source for a stored procedure in the either of the following ways:

- View the source file on the file server (the file extension is .sp)
- Log on to the database using a tool such as wisql or Query Analyzer, change to the database where the stored procedure resides, and run the sp_helptext command.

  For example, to view the source for the stored procedure used in the previous example, use the following commands:

  ```
  use DBSreqm
  go
  sp_helptext msp_sel_srhm_srdm_labels
  go
  ```

Access Reports

SmartStream reports are delivered in Microsoft Access format because this format facilitates customizing the delivered report formats to meet individual business needs.

Microsoft Access uses ODBC to make connections to the database server to retrieve data for the report. This is a different connection method from that used by the SmartStream windows.

If errors occur during processes that use ODBC for database connectivity, it may be necessary to trace the ODBC calls made to determine the cause of the error. An ODBC trace is the best way to resolve this type of error.

Microsoft delivers its ODBC applications with a trace facility. It can be activated in two ways:

- Updating the registry
- Using the ODBC Data Source Administrator

Updating the Registry

To trace only the commands being sent to the database server, use the following procedure to make the necessary registry changes on the workstation used to run the Access reports.

Step	Action
1	Run regedit.exe.
2	Go to MyComputer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Jet\4.0\Engines\ODBC and double-click the TraceSQLMode key.
3	Change the value of this key from 0 to 1. **Result:** The Trace process generates a sqlout.txt file and places it in your local profile folder.

After you run the Access report, review the sqlout.txt file, and remember to change the TraceSQLMode key back to 0 when you are finished.

Using the ODBC Data Source Administrator

You can also use the Tracing tab of the ODBC Data Source Administrator program to activate ODBC tracing; however, this method generally produces more extraneous data than the registry update method. To activate tracing through the ODBC Data Source Administrator, complete the following steps:

Step	Action
1	On the Start menu, point to Settings and click Control Panel. **Result:** The Control Panel opens.
2	Double-click Data Sources (ODBC). **Result:** The ODBC Data Sources Administrator opens.
3	Click the Tracing tab.
4	Follow the instructions on the tab, or see the appropriate Microsoft documentation for information about setting up the ODBC trace facility.

Remember to inactivate ODBC tracing when you are finished.

SmartStream Scheduled Programs

Many of scheduled (batch) programs are delivered with debugging and trace capabilities. The majority of the SmartStream scheduled programs are written in C, C++, or MicroFocus COBOL. Because only the executables are delivered, you cannot add debugging code to SmartStream scheduled programs.

Financials and Procurement LVL Files

To resolve errors with most Financials scheduled programs, you use an .lvl file.

The .lvl file is a text file with the same name as the program but an extension of .lvl (for example, fapc4000.lvl). It usually contains one or two lines with the following hexadecimal numbers: 0xFFFFFFFF, 0x0FFFFFFF, 0x00FFFFFF, or 0x00000000. These hexadecimal numbers contain the switches used to activate various levels of debugging within a program. A SmartStream customer support analyst may ask you to use one of these files to provide information if one of the scheduled jobs ends before completion. If the scheduled program supports a second line in the .lvl file, this second line causes the program to group the debugging information into separate files by category of information.

Place the .lvl file on the Job Server in the folder that contains the program with the same name.

Note: You can download .lvl files for the various applications from following solution or Bulletin Board topics.

Credit Management	Bulletin Board Topic 258232
Funds Control	Bulletin Board Topic 258185
Payables	Bulletin Board Topic 258184
Procurement	Bulletin Board Topic 258234
Projects	Solution 28871
Receivables	Bulletin Board Topic 258233

When the .lvl file generates a single file, that file has the same name as the .lvl file but an extension of .dbg. When the .lvl file generates multiple files, the names of those files contain the program name with extensions of .d01 through .d10, depending on the information captured in the trace. A .dbg file containing the cumulative trace information is also generated. Attach these files to AnswerLink for analysis by Customer Support.

Running in Debug Mode

To run a scheduled program in debug mode,

1. Ensure that the appropriate .lvl file is on the Job Server in the folder that contains the scheduled program you want to run in debug mode.

2. Run the scheduled program with the debug parameter set to **Y**.

When the program finishes processing, the debug file is generated in the directory where the .lvl file resides.

Programs Using LVL Files

The following SmartStream scheduled programs accept .lvl files:

Application	LVL Name	Program Description
All Financials	dbsbulk.lvl	Bulk Copy program used with all Financials applications
Billing	Fblc0100.lvl	Billing Document Load
Funds Control	ffcc0300.lvl	Rollup Structures Explosion
	ffcc0530.lvl	Budget Release
	ffcc0900.lvl	Journal Creation
	ffcc1000.lvl	Funds Checking Module **Special Considerations** Funds Control interfaces with other Financials applications. If you need to produce a debug file to determine the funds checking calls during the run of a scheduled process for another application, ensure that this .lvl file is in the same directory as the scheduled process when that process runs. You can also run online funds checking in debug mode by placing this .lvl file in the SmartStream directory of the workstation you are using to run the process that calls funds checking before you run that process.
	ffcc1100.lvl	Fund Transaction Upload
	ffcc2000.lvl	Funds Control Year End
	ffcc0520.lvl	Funds Control Budget Upload **Special Considerations** The debug file generated for this scheduled process does not use the naming convention of the other debug files. The following naming convention is used: fcbu*identifier of Upload Request*.err For example, fcburqst25.err is the name of the debug file where rqst25 is the identifier for the upload request.

Application	LVL Name	Program Description
Projects	fpac4800.lvl	Projects Allocation Step 1
	fpac4900.lvl	Projects Allocation Step 2
	fpj7000.lvl	Projects Posting
	fpj8900.lvl	Copy Projects Asset Transactions
	fpjc3500.lvl	Project Balance Load
	fpjc4201.lvl	Project and Component Load (fpjc4200)
	fpjc7100.lvl	Project Journal Load
	fpjc8600.lvl	Project Capitalization
	fpjc8900.lvl	Copy Projects to Assets
	fpjc9200.lvl	Balance Reorganization
Payables	fapc0600.lvl	Receipt Accrual
	fapc0900.lvl	Matching
	fapc4000.lvl	Invoice Load
	fapc4500.lvl	Evaluated Receipt Settlement
	fpyc0500.lvl	Payment Print
	fpyc0400.lvl	Payments
Procurement	mrqc0200.lvl	Requisition Load
	mrqc0300.lvl	Reset Logical Locks for Requisition Load
	mpoc0600.lvl	Purchase Order Load
	mpoc0620.lvl	Reset Logical Locks for Purchase Order Load
	mpoc0030.lvl	Purchase Order Send
	mpoc0100.lvl	Purchase Order Extract
	Note:	Batch Requisition to PO Processing (mpob0020) No .lvl file is necessary because the job generates a file called trace.dat in the folder where the program resides.
Receivables	farc0101.lvl	Receivable Document Load
	farc0120.lvl	Receivable Document Posting
	farc2200.lvl	Remittance Transaction Load
	farc2000.lvl	Remittance Allocation Posting
	farc2400.lvl	Remittance Algorithm Allocation
	farc4450.lvl	Receivable Account Load
	farc0210.lvl	Aging
	farc6000.lvl	Receivable Draft Generation
	farc6500.lvl	Receivable Draft Load

Application	LVL Name	Program Description
Receivables (cont'd)	farc6100.lvl	Receivable Draft Bank Distribution
	farc6400.lvl	Receivable Draft Maturity
	farc0250.lvl	Days Sales Outstanding (DSO)
	farc5021.lvl	Finance Charge Notice Generation
	farc5024.lvl	Finance Charge Receivable Document Create
	farc5315.lvl	Finance Charge Notice Delete
Credit Management	fcrc0201.lvl	Activity Statistics Update
	fcrc0400.lvl	Credit Account Load
	fcrc0105.lvl	Credit Update
	fcrc0102.lvl	Days Past Terms

Ledger

Although SmartStream Ledger does not use .lvl files for debugging, it has two programs that include trace facilities:

Program ID	Program Name	To activate the trace…
fglc0900	Ledger Posting	When you set up the job on the Job Scheduler window, after the last parameter for the job, type **_TracE_** (spelled exactly this way) followed by a space and then the name of the file you want the trace facility to generate. The trace facility generates the file in the directory where the poll and the fglc0900 program reside.
fglc0920	Ledger Load Program	Type **DEBUG** as the last parameter on the Job Scheduler window when running the Ledger Load process. A file called fglc0920.err is generated in the directory where the fglc0920 program resides on the Poll machine.

Allocations

Allocations also has a program that includes a trace facility:

Program ID	Program Name	To activate the trace…
falc0900	Allocations	Type **DEBUG** as the last parameter on the Job Scheduler window when running the Ledger Load process. A file called falc0900.err is generated in the directory where the falc0900 program resides on the Poll machine.

SmartStream Master Scheduler, Poll, and ARPC

SmartStream Master Scheduler, Poll, and ARPC must be restarted after the database server is cycled or shut down. Some backup products, such as BackupExec, stop the sqlserver service to make the backup. This action also disconnects Master Scheduler, Poll, and ARPC. These services must be restarted every time the database is started.

Several facilities can be used to troubleshoot problems with Master Scheduler, Poll, and ARPC. Check the following log files first:

- mastsched.log
- arpc.log
- poll.log

In a UNIX environment, these files contain information about what each of these programs is processing. Windows versions of these programs provide some information in the .log files, but most of the information is written by an application program.

SMARTStream®

Technical Reference
SmartStream Platform

Version 6.5

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1 SmartStream Architecture

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SmartStream Platform

The SmartStream platform provides common application services for SmartStream business applications, including security administration, activity lists, workflow control, agent processing, and interfaces to third-party products. The SmartStream platform consists of the following components:

Platform Services

A set of services that is available for use by all SmartStream applications. These services include the Browser, security, mail, workflow, document enablement, agents, and services for supporting multiple languages.

Application Architecture

A set of PowerBuilder-based ancestor objects and APIs used to build and run activity windows for SmartStream business applications. The activity windows built with the Application Architecture run on top of the common services provided by the SmartStream platform.

Batch Architecture

A set of APIs and services for building, scheduling, and running batch programs.

Decision Support Services Reporting Tools (DSS)

A set of tools for performing generic, application-independent queries and reports. The DSS Reporting Tools functions are 16-bit functions.

SmartStream Database

A set of database tables, views, stored procedures, and triggers, organized into table families, and used for accessing and storing data used by the platform.

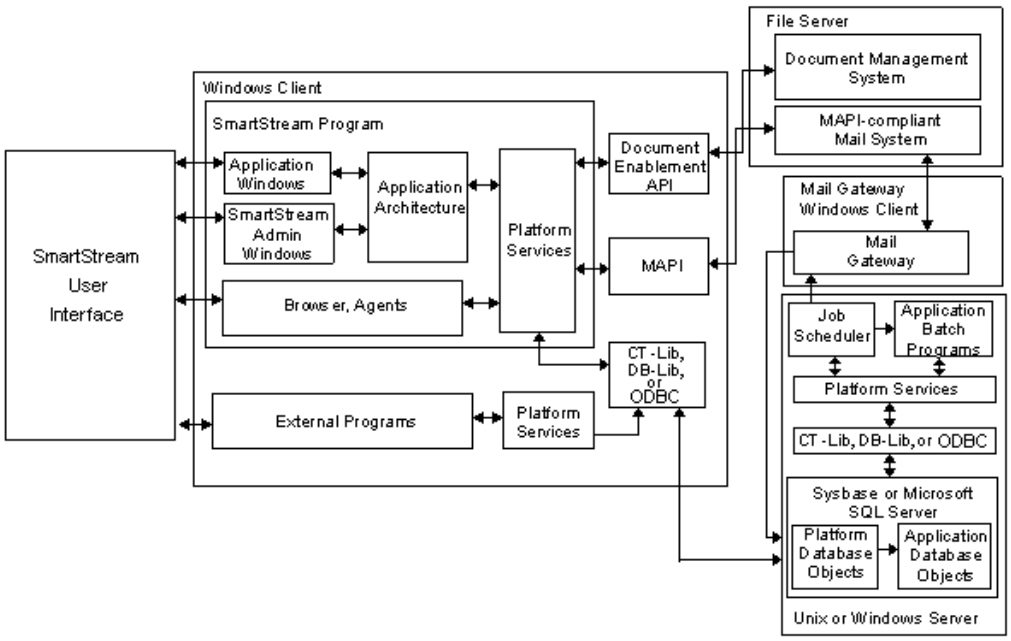
Installation and Migration Programs

Programs new users use to install SmartStream and existing users use to migrate from previous versions of the product.

Third-Party Products

These include the PowerBuilder run-time environment, Sybase Adaptive Server Enterprise or Microsoft SQL Server, Sybase Open Client or Microsoft SQL Client, Microsoft Access, and a variety of other products that are embedded in SmartStream.

The following figure illustrates the SmartStream platform and its place in the SmartStream architecture.



Platform Services

The SmartStream platform provides the following services to SmartStream business applications:

Browser

Using the SmartStream Browser, users can navigate to activity windows and other SmartStream features.

Security

The platform, with the native database security, provides both activity-level security and data-level security. Activity-level security allows the administrator to control which activities SmartStream users can use. Data-level security is used for securing sensitive data and controls the individual data records that a user can view or maintain.

Workflow

The platform workflow services allow all applications to be workflow enabled. Through the Workflow Workbench, system administrators can customize workflows and manage workflows that are in progress.

Multilingual Services

Through the multilingual services within SmartStream, users can connect to a single SmartStream installation and view all windows in their own local language.

Document Enablement

The document enablement service allows external documents to be attached to records in application tables. These documents may be flat-file documents stored in a network directory or documents stored in a supported document management system.

Agents

An agent is an electronic assistant that a user can set up to perform repetitive tasks automatically on his or her behalf. The SmartStream agent facility can process incoming mail, process workflow To Do tasks, run an application or a Sybase stored procedure, and create or distribute reports.

Mail

The SmartStream platform allows applications to integrate with external mail systems such as Microsoft Mail.

For each of these services the platform provides

- A user interface

- APIs to allow applications to invoke the service where appropriate
- Administrative tools for the administrator to use to configure and control the service.

Zoom to SmartStream

Besides opening activity windows from the SmartStream browser, users can open activity windows directly from their desktop or from non-SmartStream applications using the pzoom32.exe.

To use this utility,

- SmartStream and the specified application must be installed
- The user must have a valid SmartStream ID and password
- The user must have the required SmartStream security.

Opening Activity Windows from the Desktop

Use the following command to define a program item to open an activity:

```
c:\sstrmxx\pzoom32.exe XXXYYYY
```

Where *XXXYYYY* represents the activity ID of the activity window you want to open. For example, entering the following command opens the Unposted Journals window:

```
c:\sstrmxx\pzoom32.exe fje0010
```

Opening Activity Windows from Non-SmartStream Applications

When opening activity windows from a non-SmartStream application, you can choose either to

- Enable the SmartStream logon and complete use of SmartStream functionality
- Bypass the SmartStream logon disabling most SmartStream functionality.

With each of these methods, you can also supply the keys to a particular activity window, so windows open displaying data.

Opening Activity Windows with SmartStream Logon and SmartStream Capabilities

This method causes the standard SmartStream logon to appear before the specified activity window is opened. When users open windows with this method, they retain complete use of SmartStream functionality (for example, Activity Lists, To Do lists, and so on).

To enable this method, add the following message to the non-SmartStream application:

```
Zoom Activity ID [key value key column ID]
```

Example

```
Zoom mim0820 BOS1 650 WH02 940
```

Opening Activity Windows without SmartStream Logon or SmartStream Capabilities

If you simply want to open an activity window and not allow complete use of SmartStream functionality, add the following message to the non-SmartStream application:

```
AppFrameZoom UserID Password Activity ID [key
value key column ID]
```

Examples

```
AppFrameZoom USER12 baseball mim0820
AppFrameZoom USER12 baseball mim0820 BOS1 650
WH02 940
```

Use the SmartStream Reference Tool to retrieve a list of activity IDs.

Application Architecture

The Application Architecture provides a set of PowerBuilder ancestor objects and APIs that a developer can use to build application windows that have a common look and feel quickly and take advantage of the platform services. Most SmartStream application activities are built using the Application Architecture and are layered on top of the SmartStream platform.

The primary features of the SmartStream application architecture are described in the following sections.

Ancestor Windows

The Application Architecture for the business applications is based on a set of windows that use the concept of inheritance. All of the activity windows within the business applications are descendants of ancestor windows as defined by the SmartStream application architecture. The ancestor windows contain user-defined objects that are inherited by the descendant activity windows. These ancestor objects facilitate a common look and feel and a common development framework for building SmartStream applications.

The MDI Frame, Menus, and the Toolbar

The Application Architecture uses an MDI frame for the activity windows. This MDI frame provides common menu and toolbar options for most activity windows, such as File and Edit menu commands and Next Task and Next Step toolbar buttons. The application architecture also provides generic features for such items as File Open and Item Browse.

Batch Architecture

The batch architecture consists of the Job Server for controlling the execution of batch programs and a set of C-based APIs to support development of batch programs that can be integrated into the SmartStream environment.

Note: If you are running HP-UX, you must set the SHLIB_PATH environment variable to point to the Sybase shared libraries directory.

Example:

```
SHLIB_PATH=/sybase/install/lib
export SHLIB_PATH
```

Check with your system administrator for the appropriate shell commands to perform these changes.

Job Server

Job Server includes several SmartStream activity windows for configuring and monitoring the Job Server environment.

Activity Windows

Job Server activity windows are used to configure the Master Scheduler, ARPC programs, and Poll programs. There are also activities for defining jobs and monitoring their execution, viewing the current status of Poll and ARPC processes, and viewing a log of Master Scheduler activity periodically.

Master Scheduler

The Master Scheduler coordinates the running of jobs in the SmartStream environment. Where a job is a collection of steps, the Master Scheduler sequentially marks steps as ready to run. When all steps of a job have been run, Master Scheduler builds a job results document and distributes it to the mailing list specified with the job.

Poll

Poll runs the steps that have been marked as ready to run by the Master Scheduler. The class that a job step has been defined with determines which Poll processes the step.

Asynchronous RPC

The Asynchronous RPC facility is a mechanism for distributing business logic to multiple servers in the environment. Through ARPC users can define one or a group of database managment system (DBMS) stored procedures to be run on a set of DBMS servers. ARPC guarantees that the stored procedures are run on each server, and that the procedures are run in the same order on each server.

APIs

The APIs that are currently available to users are the Workflow API, the Document Enablement API, the Mail API, the Structures API, and the Job Scheduler API. These APIs are delivered as part of SmartStream Builder and give the user the ability to write programs that can interact with the workflow, document enablement, mail, structures, and job scheduling engines.

Decision Support Services (DSS)

The SmartStream Decision Support Services include a set of 16-bit reporting tools and a reporting manager.

Reporting Tools

SmartStream Reporting Tools includes the following 16-bit components:

Analyzer

Using Analyzer, you can explore, evaluate, graphically display, and distribute your corporate information quickly and efficiently. For example, a manager can use Analyzer to review and analyze actual expense amounts versus budget amounts or perform a sales analysis.

Management Reporter

Using Management Reporter, you can create, preview, and produce financial reports from report specifications.

Reporter

With Reporter, you can

- Create online and printed reports based on data stored in your enteprise's database tables or on queries built using SmartStream Query
- Refine the report's appearance in Microsoft Access Designer
- Distribute the report to coworkers or managers in an electronically viewable format using your electronic mail system.

Query

With Query, you can

- Build a SQL query that selects data from your enterprise's database tables
- Apply criteria, calculations, and parameters to focus the result set extracted further
- Distribute the output through your electronic mail system to coworkers and managers.
- Build your query using SmartStream Query's SQL Text feature if you are familiar with SQL. Otherwise, you can use Query's QBE grid to build the query.

Report Series

Using Report Series you can run a collection of analyzers, queries, reports, or SQL files automatically as a single job at a specific time (immediately, daily, weekly, or monthly) and distribute the results to a person or group of people through your electronic mail system.

Structures

With Structures, you can build hierarchical models and associate them with your business data to

- Report, analyze, control, or secure the data
- Validate the data that SmartStream Financials enters and provide a cross-system referential check for SmartStream Human Resources.

Using the Group Maintenance tool in Structures, you can define types of object groups.

Navigator

Through Navigator, you can open and run any Reporting Tool object without having to use the particular Reporting Tool. In this way, you can use Navigator as a launch pad for the other Reporting Tools. You can also use Navigator to

- Run a selected object
- Transfer ownership for any object you created
- Rename, refresh, and delete selected objects.

Reporting Manager

SmartStream Reporting Manager is a suite of administrative tools made up of the following components:

Locations and Data Sources

Using Locations and Data Sources, you can define user-friendly names for your enterprise's servers and databases and determine user access privileges at the server and database level.

Business Views

With Business Views you can define views of the data in your Information Warehouse (or any other collection of data), secure the data, and facilitate end-user access.

Reporting Policy Controls

With Reporting Policy Controls, you can define and update information about amount classes, currencies, ledger entities, and elements of the accounting key.

Third-Party Products

SmartStream requires several third-party products. These are the major products:

Run-Time Environments

SmartStream uses the following third-party run-time environments:

PowerBuilder

The SmartStream executable and several other programs delivered as part of SmartStream are built using PowerBuilder.

Microsoft Foundation Class Library

The Microsoft Foundation Class libraries are used by interactive components of SmartStream that are built outside of the application architecture.

Visual Basic

The DSS Reporting Tools, SmartStream Budget, Consolidations, Structures, and Formulas use the Visual Basic run-time environment.

Sybase or Microsoft SQL Server

SmartStream stores all relational data in a Sybase or Microsoft SQL Server database management system.

Sybase Open Client or Microsoft SQL Client

Provides the programming interface and network transport to allow SmartStream to access the database.

Microsoft Access

Microsoft Access is used as a reporting engine for the SmartStream Reference Tool, the 16-bit DSS Reporting Tools, and the SmartStream applications.

Open Database Connectivity (ODBC)

ODBC provides an interface between the database and the tools based on Visual Basic and Microsoft Access or Microsoft Excel.

Database Organization

Two important features of the SmartStream architecture are the organization of database objects (tables, stored procedures, triggers, and views) into **table families** and the use of a **distribution catalog** for storing these database objects.

SmartStream Table Families

All database objects in SmartStream are organized into table families. A table family is a group of related tables, stored procedures, triggers, and views that are treated as a single unit.

The following table lists the SmartStream table families and the databases in which they reside:

Application	File Server Family	Database	Description
Platform	Ctlgddl	DBSctlg	Catalog
	Ctlgmast		
	Ctlgsrv		
	Ctlg		
	Ctlgall		
	Wijt	DBSwact	Workflow and Activity Security
	Wact		
	Wijtwact		
	Osst	DBSosst	Structures
	Osxp	DBSosxp	Structures Extract
	Pscb	DBSpscb	Job Scheduler
	Piqdlite	DBSpiqd	Connect
	Arpc	DBSarpc	Asynchronous RPC
	Supc	DBSCOMMON	Product Support Common
	Supt	DBSCOMMON	Product Support
	Avnm	DBSCOMMON	Next Available Number
	Mesm	DBSCOMMON	Message Master
	Lang	DBSCOMMON	Message Master Lang
	Apra	DBSCOMMON	Language
	Cfrm	DBScfrm	Common Formula
	Cmat	DBSCOMMON	Common Amount Class Type
	Wsa1	DBSwsam	Sample Registration 1
	Wsa2	DBSwsam	Sample Registration 2

Application	File Server Family	Database	Description
	Demo	DBSdemo	Demonstration
Common	Cscommon	DBSCOMMON	Common Deliverables
	Eurolite	DBSeuro	Euro Basic
	Purg	DBSpurg	Archive/Purge
	Cand	DBScand	Archive/Purge Candidates
	Bank	DBSbank	Bank
	Cmre	DBScmre	Rate Entity
	Entp	DBSentp	Enterprise Policy
	Pclh	DBSpclh	Periodic Calendar
	Vend	DBSvend	Vendor Payables
	Vmst	DBSvmst	Vendor Master
	Vpur	DBSvpur	Vendor Purchasing
	Dbis	DBSdbis	D&B Information Services
	Udak	DBSCOMMON	User Defined Acct Key
Ledger	Glep	DBSglep	General Ledger
	Jepc	DBSjepc	Ledger Journals
Assets	Fast	DBSfast	Fixed Assets
	Fwrk	DBSfwrk	Assets Work
Consolidations	Cons	DBScons	Consolidations
Allocate	Allc	DBSallc	Allocations
Budget	Bdgt	DBSbdgt	Budget
Payables	Prqt	DBSprqt	Payment Request
	Pymt	DBSpymt	Payments
Receivables	Rrcv	DBSrrcv	Receivables
	Cred	DBScred	Credit Management
Unit of Measure	Uomm	DBSuomm	Unit of Measure
Projects	Pjcm	DBSpjcm	Projects Common
	Proj	DBSproj	Projects
	Pjal	DBSpjal	Project Allocations
	Pwrk	DBSpwrk	Project Work
Procurement Common	Mfgi	DBSmfgi	Mfg Common
	Cntl	DBScntl	Mfg Common Control
	Dclm	DBSdclm	Day Calendar

Application	File Server Family	Database	Description
	Hist	DBShist	History Options
	Otpm	DBSotpm	Order Type Master
	Plmm	DBSplmm	Plant Tables
	Rsmm	DBSrsmm	Reason Master
	Udef	DBSudef	Udak Definition
Items	Pmam	DBSpmam	Part Master
	Pplm	DBSpplm	Part Plant
Receiving	Ropm	DBSropm	Routing Operation
Background Load	Mabl	DBSmabl	Mfg Bulk Load
Supplies Mgmt Cost	Cost	DBScost	Cost Management
Supplies Management	Iplm	DBSiplm	Inventory
	Rcth	DBSrcth	Transaction History
	Strm	DBSstrm	Stockroom
Purchasing	Puen	DBSpuen	Purchase Order
	Pcde	DBSpcde	
	Reqm	DBSreqm	
	Poan	DBSpoan	Purchase Order Annals
Personnel	Hrpn	DBShrpn	Personnel & Benefits
	Hrac	DBShrac	HR – Access
	hapm	DBShapm	SmartStream Map
Payroll	Hrpy	DBShrpy	Payroll
	Hrpa	DBShrpa	Payroll Archive
Connect	Piqd	DBSpiqd	SmartStream Connect
Euro	Euro	DBSeuro	Euro Extension Module
	Eurr	DBSeuro	Euro Extension Module
Funds Control	Fund	DBSfund	Funds Control
Billing	Bill	DBSbill	Billing
SmartStream Builder	Sbctlg	DBSctlg	SmartStream Builder Catalog
	Sbwact	DBSwact	SmartStream Builder Activities
	Psb1	DBSpsb1	SmartStream Builder

When you install SmartStream, you install a copy of each table family on a single database server. SmartStream then allows the data in the tables within the family to

be modified using single-server transaction management and to be joined with each other.

Referential integrity between tables is maintained through the use of triggers, application logic, or both. Triggers and stored procedures reference tables that reside within a single table family.

Some databases have objects created in them by more than one table family; for example, the DBSwact database has objects created in it by the wact, wijt, and wijtwact table families. If you license SmartStream Builder, table family psb1 also places objects into DBSwact. All applications including SmartStream Builder place data into SmartStream (Platform) table families.

The SmartStream Distribution Catalog

The SmartStream Distribution Catalog (tbl_svr_dbxrefc1) is the repository of all SmartStream database objects. This catalog information is stored in the DBSctlg database.

The Distribution Catalog provides an address book for SmartStream application table families so that applications can function independently of where the table family's objects actually reside.

Most SmartStream applications access the database using stored procedures. By taking advantage of the Remote Procedure Call (RPC) function, the DBMS can use the SmartStream distribution catalog to find a stored procedure and run it even when the client application (SmartStream) is not directly connected to the server where the stored procedure resides. The stored procedure is prefaced at runtime with the server, database, and stored procedure owner. The DBMS then routes the stored procedure to the named server and database.

This eliminates the need to hard code the physical server and database names into SmartStream and eliminates the necessity of code changes when the applications are implemented.

The Distribution Catalog itself is in the ctlg table family. All SmartStream interactive, reporting, and batch programs read the server and database of the ctlg table family from .ini files. After these programs find a copy of the ctlg table family, they can use it to find any other SmartStream family.

Description of Tables in the Distribution Catalog

This section describes the tables in the SmartStream Distribution Catalog database.

Table Family Master

The Table Family Master (tfam) defines each table family used by SmartStream.

Table Family/Server/Database Cross-Reference

The Table Family/Server/Database Cross-Reference table (tsdx) serves as a directory of table families.

Table Master

The Table Master table (tblm) defines all tables and views used by SmartStream applications. Columns in this table include the

- Name of the table
- Table family each table belongs to
- Type (table or view)
- Application that the table belongs to.

Note: Although rare, a table family can be composed of tables from different applications.

Stored Procedure, Trigger, and View Tables

The stored procedure, trigger, and view tables identify stored procedures and triggers and cross-references them to the table or tables they reference.

These tables are used by the SmartStream Reference Tool, which allows you to display database information.

The following list identifies all of the tables in this category:

- Stored Procedure Table Cross-Reference (sptx)
- Stored Procedure Cross-Reference (spfx)
- Trigger Table Cross-Reference (trtx)
- Trigger Cross-Reference (trfx)
- View Table Cross-Reference (vwtx)

Application Users and Groups

The Application Users and Groups table (apus) associates security groups or users with the application or applications they use.

By associating the applications with a user or security group, the database administration process is able to identify the server and database that a user or security group needs access to. This identification is accomplished through a series of SQL table joins that access the tsdx table. (The tsdx table is described earlier in this section.)

This makes the job of your DBMS system administrator somewhat easier when it is necessary to create and drop server login IDs, add and drop database users, add and drop DBMS groups, or add a new server to your SmartStream environment.

2 SmartStream Security

Chapter Contents

2-1 Introduction
2-2 Technical Details

Introduction

SmartStream security is based on a combination of its interaction with the DBMS and its own security schemes that limit access to activity windows and table data.

Users view data that resides on DBMS database tables using SmartStream activity windows. Any updates a user makes to that data using a window are propagated to the appropriate table or tables through stored procedures.

For more information about SmartStream security and how SmartStream interacts with the DBMS, see Users and Security Groups.

Technical Details

SmartStream security uses a combination of activity windows and database tables to determine what tasks a user can perform when using SmartStream. All of the SmartStream security-related database tables are in the DBSwact database.

For example, a security administrator, using the Activity Security window, enters information that determines what activities a user can access, whether or not the user can maintain or just view data using those activities, what days of the week the user can access those activities, and so forth. This information is stored in the user_security table.

The following sections explain, from a database perspective, how SmartStream security works.

Security Administrators

SmartStream security uses the concept of a security administrator. A security administrator is a user who is assigned responsibility for administering a set of activities. Therefore, before being set up as a security administrator, the user must have a valid SmartStream user ID on the user_master_1 table.

SmartStream is delivered with the prepackaged user DBS. This user can, among other things, create SmartStream security administrators. User DBS assigns the activities to a security administrator, who is then responsible for assigning these activities to other users. SmartStream administrator data is stored in the admn_act_list_1 table.

When a user who is a security administrator accesses the Activity Security window, the window displays the list of activities that are in the admn_act_list_1 table for the security administrator's user ID. The security administrator can then assign these activities to SmartStream users and security groups.

Activity Security

Activity security information for a user is stored in the user_security table. Activity security information for a security group is stored in the group_security table. The information stored in these tables is based on the information a security administrator enters using the Activity Security window.

When a user attempts to use an activity, SmartStream looks in the user_security and group_security tables to determine what tasks the user can perform using the activity.

Creating an Activity List

The following table describes the process that occurs when a user creates an activity list.

Stage	Description
1	A user creates an Activity List in SmartStream. This information is stored in the user_act_list_1 table.
2	A list of all activities available to the user is displayed. This list consists of all activities the user has explicit access to in user_security plus all activities the user's group has security for in group_security that the user has not been explicitly denied security for in user_security.
3	The user chooses the activities from the All Available Activities list to include in this Activity List. This information is stored in the user_act_list_1 table.

Accessing an Activity

The following table describes the process that occurs when a user opens an activity from an activity list.

Stage	Description
1	The user accesses a particular activity from an Activity List. SmartStream looks in the group_security table to determine if the security group the user belongs to has security to access this activity.
2	SmartStream looks in the user_security table for this user ID to determine if the user has security to access this activity.
3	If the activity appears in both the group_security table for the user's security group ID and the user_security table for the user ID, the information in the user_security table is used.
4	SmartStream retrieves additional information about this user's security for this activity, such as access privilege (update, delete, insert, view), what security entity values this user can access data for, and so forth. This information is taken from the group_security or user_security table, depending on the results of the search in stages 2 and 3.
5	The user uses the activity according to the security defined.

Data Security

Security processing for data security is similar to activity security processing. However, when a user attempts to use an activity, the activity_data_control table is checked to see if the activity has data controls.

Note: The check of the activity_data_control table is not explained in the previous section about activity security processing for purposes of simplification. Activities without data controls are not found on the activity_data_control table; therefore, processing continues as described in that section.

The following table describes the processing that occurs when users access an activity that has associated data controls.

Stage	Description
1	A user accesses an activity. After all of the activity security processing (described earlier) occurs, the activity_data_control table is checked to see if data controls are defined for the activity.
2	SmartStream reads the data_ctrl table to determine if the data control type is maintenance or view.
3	The data_ctrl table is read to determine if the key data the user entered falls between any of the maintenance or view data control ranges defined for this user or the user's security group. If user and security group data control range information are both found, the user information is used.
4	If no maintenance or view data control range information is found for the user or the user's security group, an error message is returned and the user cannot access any data using the activity.
5	If maintenance or view data control range information is found for either the user or the user's security group, the user can maintain or view the data (whichever is allowed). **Note:** If the data control type for the user and activity is maintenance, the user can perform maintenance based only on the access type (insert, update, delete, view) on the user_security or group_security table.

For more information about SmartStream security and how SmartStream interacts with the DBMS, see Overview of Security.

3 Database Issues

Chapter Contents

3-1 SmartStream-Delivered Databases
3-3 Database Connectivity
3-9 Monitoring Space Utilization
3-11 Database Server Performance Recommendations
3-18 Backup and Recovery
3-20 SmartStream Reference Tool

SmartStream-Delivered Databases

The following databases are delivered to all SmartStream sites:

- DBSarpc
- DBScfrm
- DBSCOMMON
- DBSctlg
- DBSosxp
- DBSosst
- DBSpiqd
- DBSpscb
- DBSwact
- DBSwasm

DBSCOMMON, DBSwact, and DBSctlg, are briefly described in this section. Use the SmartStream Reference Tool for detailed information about the tables contained in these databases and for information about DBSpiqd, the SmartStream Connect database; DBSosst, the Structures database; DBSpscb, the Job Scheduler database; and DBSarpc, the asynchronous remote procedure call database.

You can also use the SmartStream Reference Tool for information about databases that are specific to SmartStream business processes.

DBSCOMMON

The DBSCOMMON database contains information that is common to all SmartStream applications. This database contains information about SmartStream error messages, next available number processing, and language and country codes.

Table Families

The DBSCOMMON database contains the following table families:

Table Family	Description
avnm	Next available number processing
lang	Language and country codes
mesm	SmartStream error messages
supc	Product Support Common.

DBSctlg

The DBSctlg database consists of a set of tables that make up the SmartStream Distribution Catalog. It contains information about the location of applications, table families, and stored procedures on servers and databases, as well as the master tables for applications, tables, and table families.

Table Families

The DBSctlg database contains only one table family, ctlg. This table family contains information about the SmartStream Distribution Catalog.

DBSwact

The DBSwact database contains information related to security and workflow processing, that is, information about workgroups, To Do messages, steps, events, and the message queue. This database also contains information related to the SmartStream desktop (drawers, folders, documents) and agents.

Table Families

The DBSwact database contains the following table families:

Table Family	Description
wijt	The SmartStream desktop and the workflow message master tables
wact	Workflow and security

Database Connectivity

This section discusses how SmartStream client applications connect to database servers. Topics include

- Overview
- Database APIs and Services
- Network library drivers.

Overview

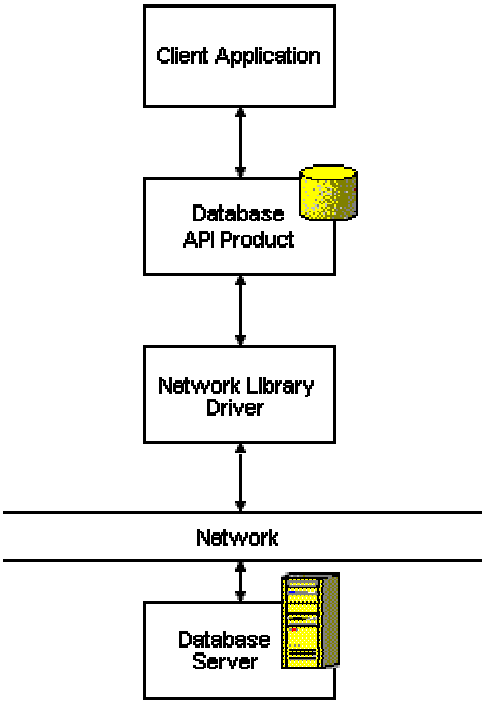
SmartStream data is maintained in Sybase Adaptive Server Enterprise or Microsoft SQL Server databases, which SmartStream users can access and manipulate on their client workstations.

SmartStream client applications access this data as follows:

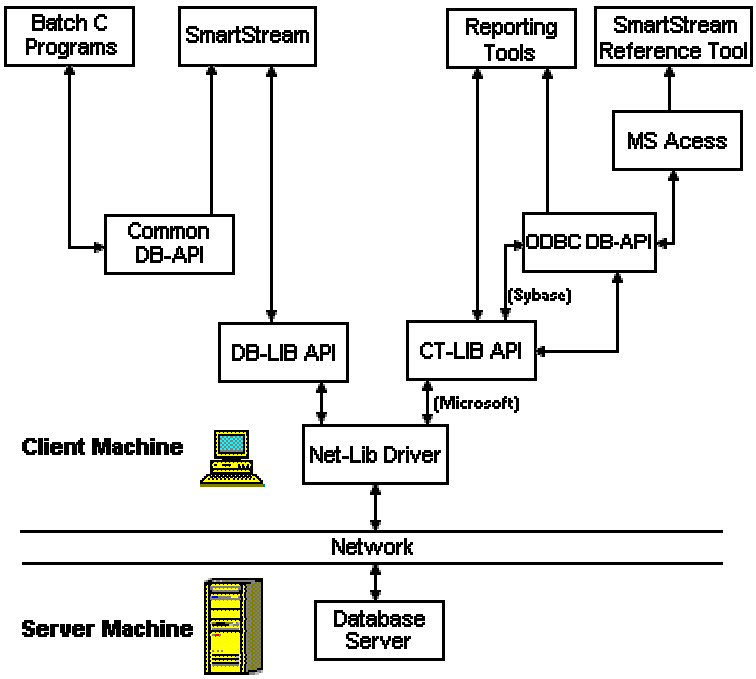
Step	Action
1	The SmartStream client application passes a request to a database API.
2	The database API passes the request to a network communications library.
3	The network communications library passes the request to the server.

Note: The SmartStream client application for Microsoft SQL Server uses the Microsoft Distributed Transaction Coordinator (DTC) for two-phase commit transactions.

This implementation is illustrated in the following figure:



All SmartStream client applications use one or more database API products, as well as a network library product. The following diagram shows how an application accesses a database on a database server:



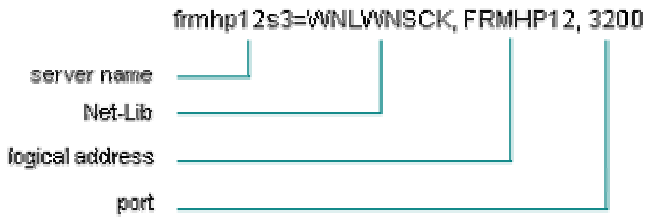
Database APIs and Services

SmartStream clients use several database API products and services to communicate with the network libraries, as shown in the following table:

API or Service	Vendor	For further information, see the…
DB-Library	Sybase	Sybase Open Client DB-Library/C Reference Manual.
DB-Library	Microsoft	MS SQL Server Online.
CT-Library	Sybase	Open Client Client-Library/C Reference Manual.
Common Database	Geac	DBAPI Programming Guide.
ODBC	Microsoft	ODBC API Reference ODBC API Help (installed with MS Visual C/C++).
Distributed Transaction Coordinator	Microsoft	MS SQL Server Online.

DB-LIB and CT-LIB (Server Name Lookup)

For Microsoft SQL Server DB-LIB, the server name is located in the SQL Server section of the win.ini file. Each line in this section defines a server name, the network library to use, the logical IP address, and the port, as shown in the following example:



For Sybase DB-LIB or CT-LIB, the server name is located in the sql.ini file located in the INI directory where Sybase Open Client is installed. Each line in this section defines a server name. the network library to use, the IP address, and the port, as described earlier.

Common Database API

The SmartStream installation places the .dll files necessary to use the Common DBAPI (pdbapi32.dll and pdblib32.dll) in the SmartStream installation directory on the client machine.

ODBC API

The SmartStream Reporting Tools, the SmartStream Reference Tool, and some batch programs require ODBC. The files needed for running ODBC are installed during the SmartStream installation process. See the SmartStream *Installation Guide* for details.

Distributed Transaction Coordinator Service

Microsoft SQL Server uses the Microsoft Distributed Transaction Coordinator to manage two-phase commit transactions. DTC runs as a service on the client workstation. See the SmartStream *Installation Guide* for details.

Network Library Drivers

All SmartStream client applications use a network communications product, or network library, to initiate a link to the server. The client begins the communication by specifying a database server, user ID, and password.

Sybase

This is the supported SmartStream network library (Net-Lib) product for Sybase:

- WNLWNSCK (Windows Sockets)

For more information, see to the Net-Library Drivers portion of the Open Client/Server Installation Guide.

Microsoft SQL Server

This is the supported SmartStream network library (Net-Lib) product for Microsoft SQL Server:

- DBMSSOC3.DLL (Windows Sockets)

Troubleshooting Database Connectivity Problems

This section discusses troubleshooting information for both Sybase Adaptive Server Enterprise and Microsoft SQL Server.

Sybase Adaptive Server Enterprise

If SmartStream displays "Cannot Locate WSYBDB.DLL" at startup, it means you are not running the supported version of Open Client. This may happen because you are still running an older version of Open Client, or the directory where Open Client is installed is not specified in your path.

To troubleshoot, you need to remove any previous versions of Open Client, make sure your system variables are set for the supported version of Open Client and make sure the right .dll files are loaded into memory.

Remove Previous Versions of Open Client

First, remove any previous versions of the Open Client .dll file: libsybdb.dll. Be sure to search for and remove the .dll files from the following directories:

- The current directory
- The Windows directory
- The Windows\System directory
- Any other directory listed before the Open Client directory in your path

Check Your System Variables

Check your system variables by typing **set** at a command prompt. The listing should include the variable, Sybase, which contains the path to the Open Client installation directory.

If the Sybase variable is not found, the wsybset.bat file has not been run. This file resides in the *open_client\bin* directory. If necessary, exit Windows and run wsybset.bat.

Verify .dll Files

The following table describes how to verify whether the necessary .dll files are running:

Step	Action
1	Start wisql.exe.
2	After the window is displayed, start the Sybase application, wdllvers.exe, which displays a list of .dll files loaded in memory.

Step	Action
3	Set the view to display only Sybase .dll files. You should see ▪ At least one of the Open Client Net-Lib .dll files (see Network Library Drivers for a complete list.) ▪ Several .dll files that are loaded because you are running wisql.exe. These include the Open Client .dll files: wcomnlib.dll, wcslib.dll, wintllib.dll, wtcllib.dll, and wctlib.dll. ▪ The Open Client .dll files, wsybdb.dll and libsybdb.dll, if you are running SmartStream. ▪ The Open Client .dll file, wctlib.dll, if you are running Microsoft Access.
4	Make sure the .dll files are loaded from the Open Client directory. You can click on any .dll file to display version information.

Monitoring Space Utilization

This section provides information about SmartStream database tables and space utilization. Use this information to maintain your SmartStream tables to make sure system resources are available for SmartStream client/server processing.

SmartStream tables, the database transaction log, and files downloaded using SmartStream Connect use space on servers in your SmartStream environment. To make the best use of this space, make sure that only current information resides in the tables and files.

message_queue_1 Table

SmartStream Workflow is used to log activities that take place within the SmartStream online and scheduled processes. It is also used to notify users about the tasks they need to complete next in their daily work assignments. These workflow messages are written to the message_queue_1 table in the DBSwact database. If your site uses workflow extensively, you must monitor the disk space used by this table frequently.

When you run a SmartStream business process that uses workflow extensively, a large number of To Do task and To Do informational messages are written to this table. As these messages accumulate, they can slow the response time in several areas of your SmartStream environment. One of the first signs that these workflow messages need to be purged is a longer than usual SmartStream login time.

Besides monitoring the amount of space being used by this table, you may want to

- Provide extra space to prevent the database from filling up.
- Remove workflow messages based on the criteria you specify.

  See Answerlink Solution **27083** for the instructions and scripts to purge workflow messages. Be sure to read and follow the directions because these scripts must be run in a specific order for maximum effectiveness.
- Disable To Do activities that are not necessary in your business implementation.

  Many of these workflow messages are the result of To Do informational messages (message ID **pam0120**). For more information about disabling workflow, see The Role of the Workflow Administrator in the Workflow chapter of the *SmartStream Administration* guide.

message_queue_hist_1 Table

The amount of space used by the message_queue_hist_1 table is directly related to how many messages are written to the message_queue_1 table and how frequently the Track Task History option is used.

Note: The Track Task History option is set on the Assignment tab of the Workflow Workbench. See the SmartStream Administrator's Help for details.

Monitor the space used by this table frequently, particularly if workflow is used extensively and the Track History option is used.

Use the Task History window to purge information from this table to prevent it from growing too large.

Job Scheduler Log

Depending on the number of Job Scheduler jobs you run, the Scheduler log can fill up very fast. Your site should establish guidelines to determine how often you need to clear the Scheduler log.

You can clear the Scheduler log using either of the following methods:

Action	Description
Use the Clear Scheduler Log action on the Clear Scheduler Log window	Enter a date in the Windows default short date format. You can also enter a time in the Windows default time format. All entries made to the Scheduler log before the date and time you enter are cleared.
Run the Clear Scheduler Log program (pscc0040)	Using the Clear Scheduler Log program you can automatically clear the Scheduler log periodically. Use the Job Scheduler to run the program as a step of a scheduled job. Enter a day offset value and optionally a time in the Parameters field for the step. The day offset value is the number of days before the date the program runs for which you want to retain log messages. The program clears the Schedule log of all messages dated earlier than the date you run the pscc0040 program minus the day offset value. You must have Delete access to the Scheduler Log (All Users) activity to run this program.

For more information about the Job Scheduler log, see Maintaining the Job Scheduler in the Job Scheduler Administration chapter of the *SmartStream Administration* guide.

Database Server Performance Recommendations

This section discusses some general DBMS performance recommendations. For more detailed information, see your DBMS documentation.

Use trunc. log on chkpt. Option

The following SmartStream databases are delivered with the DBMS database option trunc. log on chkpt. (truncate log on checkpoint) enabled.

- DBSarpc
- DBSCOMMON
- DBSctlg
- DBSdemo
- DBSosst
- DBSosxp
- DBSpiqd
- DBSpscb
- DBSwact
- DBSwsam

When the trunc. log on chkpt. option is enabled, the transaction log for the database truncates (committed transactions are deleted) every time the checkpoint process occurs (approximately once a minute, but a specific interval between checkpoints can be set).

Note: When the database owner (dbo) runs the checkpoint process manually, the transaction log does not truncate.

You should perform regular dumps (for example, daily) of the databases so that you can recover past transactions. However, if you have a media crash between dumps, you lose all transactions performed between the dumps.

Disabling trunc. log on chkpt. Option

While the databases previously mentioned are delivered with trunc. log on chkpt. enabled, you should disable it so you can recover all transactions in the event of a media failure. If you do so, be aware that

- Transaction logs can grow to large sizes when trunc. log on chkpt. is disabled
- The amount of space that SmartStream allocates to transaction logs should be increased (see SmartStream-Delivered Databases).

When trunc. log on chkpt. is disabled, perform regular dumps of the transaction logs (for example, daily) to prevent the logs from growing so large that you run out of

space in the database. Then, you can dump the databases less frequently (for example, weekly) and, in the event of a media crash, still be able to recover transactions performed between database dumps from the transaction logs.

Install Devices into Raw Partitions (UNIX Operating System Users Only)

A raw partition is an area of disk that does not contain a UNIX file system.

Except for tempdb, which should be installed on a file system device, you should install master and other devices into raw partitions and make sure the user ID **SYBASE** is the owner of the device files.

Dsync On Option

When you install the supported version of Sybase Adaptive Server, by default the **dsync** option is set on for all devices, including database device files. The **dsync** option is used with the **disk init** and **disk reinit** commands. It ensures that Sybase Adaptive Server can recover data from devices on file systems. However, because dsync can cause a degradation in performance for device files that are updated frequently, it is suggested that you install server data and log devices into raw partitions.

Place Databases and Transaction Logs on Separate Physical Devices

Allocate partitions on separate physical devices for databases and their transaction logs.

By placing a database and its transaction log on separate physical devices, you can have up-to-the-minute recoverability when a media crash occurs on the device containing the database (if trunc. log on chkpt. is disabled). In this case, you can load the most recent dump of the database and apply transactions that were lost in the crash from the log.

Fine-Tune the DBMS Configuration

This section discusses the following DBMS configuration issues:

- Configuration variables
- Memory
- Procedure and data caches

These recommendations are for a 200-user connection system. They assumes the system has at least 40 MB of memory. You can display the DBMS configuration at your enterprise by running the sp_configure system stored procedure.

For more detailed information, see the system administration guide from your DBMS vendor and the SmartStream *Installation Guide*.

Configuration Variables

This section discusses several configuration variables.

User Connections

The user connections variable is the maximum number of users that can be simultaneously connected to DBMS. Do not confuse this variable with the maximum number of processes allowed. That value is based on the user connections variable, as well as other system activity.

We recommend that you allow for at least two times as many user connections as you have users. For example, if you have 200 users, type 400 as the value of the user connections variable.

Memory

The memory variable sets the size of available memory in 2-KB units. The DBMS default is 4096 2-KB units (or roughly 8 MB). While this is the DBMS default, we recommend a minimum of 64 MB of memory for DBMS.

If your system contains a great deal more in available memory than the DBMS default or the SmartStream recommended minimum (such as the system in the sample configuration, which assumes 40 megabytes), you should allocate that memory to DBMS, after operating system and other system memory needs are met.

The more memory available to DBMS, the more resources it has for internal buffers and caches. This reduces the number of times the server has to access the database device for static information and compiled procedures.

To ensure that your memory variable is set properly, monitor your database activity regularly. Excessive paging can indicate that you need to allocate more memory to the database server. It can also indicate that too much memory is allocated to the database server, thereby starving the operating system on the machine where the database server is running. For more information about monitoring database activity, see the system administration guide from your DBMS vendor.

The amount of memory left over after DBMS memory needs are met is divided between the procedure cache and the data cache. These caches are discussed next.

Procedure and Data Caches

The procedure cache variable is the percentage of memory allocated to the procedure cache after DBMS memory needs are met. The procedure cache is the area of memory where the most recently used stored procedures are stored.

The data cache is the area of memory where the most recently used data pages or index pages are stored. If DBMS can find information (a procedure, or an index page, or data page) in these caches, it is not necessary for it to read it from the disk, which is a slower source of I/O.

The DBMS default run value is 20, which means 20 percent of the available memory is used for the procedure cache, with the remaining 80 percent being allocated to the data cache.

The optimum value for this variable differs from application to application. However, because SmartStream applications (such as SmartStream Financials) are stored-procedure-intensive, we recommend you increase the value of this variable to 35 if using the minimum configuration of 64 MB.

Also, if your site runs a lot of different procedures and ad hoc queries, that is another reason to increase this value.

Maintain Table Indexes

SmartStream is delivered with both clustered and nonclustered indexes for application tables. In most cases, a clustered index is also used to enforce table uniqueness. Indexes can have a profound effect on system performance and online response time; therefore, you should develop a strategy for regular index maintenance.

Update Statistics for All Tables (Sybase Environments Only)

The most common index maintenance commands are

- UPDATE STATISTICS
- sp_recompile

The update statistics command provides the DBMS with information about the distribution of key values in the indexes. This information enables the DBMS to make the best possible decisions about which indexes to use when it processes a query.

Run these commands for a database table in sequence. This causes the query optimizer to reevaluate the use of the table indexes in queries and stored procedures the next time they are run.

Tables that have a large amount of data added or deleted need to have their statistics updated more frequently than more static tables. You may want to update statistics for the larger, high-activity tables every other night or before reporting, or you may choose to update statistics for all tables weekly, depending on the requirements of your SmartStream environment.

Recreating Indexes

Running the index maintenance commands discussed earlier updates indexes to increase processing efficiency; it does not recreate them. Recreating an index usually involves dropping the index and creating it again. This process can be quite time consuming, and it requires free space equal to 125 percent of the largest table in the database to recreate the index after it is dropped. Usually you need to recreate an index only when an update changes the structure of the index or the index becomes fragmented and is taking up a large amount of space in the database.

Add Indexes As Needed

It is also important to monitor index usage to determine whether your SmartStream environment requires additional indexes to increase processing efficiency. Although Geac does not recommended that you delete or change delivered indexes unless Customer Support instructs you to do so, it might be very advantageous for you to add some custom indexes to your SmartStream environment.

Considerations

These custom indexes are not carried forward by the Geac migration process from one release to another.

Also, every index added to a table requires both additional space and update time, so make sure that the new indexes are effective in increasing processing efficiency. A good index can cause a process that formerly ran for hours to run in minutes, or even seconds.

DBSpath.ini File and Performance

The DBSpath.ini file is dynamically generated when a SmartStream client is installed. It is necessary to change this file manually only when you add your own custom objects using SmartStream Builder. It can be advantageous, however, to change the path to include the PowerBuilder Library (.pbl) objects most used by a specific SmartStream user earlier in the search path. Changing the path is especially beneficial when all products are installed on a user's machine, but that user generally uses only one application during daily activities.

The following example shows a typical DBSpath.ini file. To change the order in which SmartStream searches for windows, complete the instructions in the comments section of this file. Be sure to back up your original file before you begin.

```
;*****************************************************************
;*
;*  The first word in each subpath line's parameters must be either:
;*     LOCAL  - installed on your hard drive
;*     REMOTE - installed on a network drive in your search path
;*     UNUSED - not installed
;*
;*  Subpaths will be arranged in the final search path in this order:
;*     All LOCAL subpaths, from top to bottom of this file.
;*     All REMOTE subpaths, from top to bottom of this file.
;*     All UNUSED subpaths, from top to bottom of this file.
;*
;*  Libraries NOT FOUND, will be removed from the search list.
;*
;*  If UseCurrentList=0 OR CurrentList = "" a new list will be built
;*          and stored in CurrentList OTHERWISE the contents of
;*          CurrentList will be used in the SetLibraryList() function
;*
;*  Note: prr and pmm are non-existent PBDs.   These entries are
;*  required for CurrentList to be updated by SmartStream correctly.
;*
;*****************************************************************
[LibrarySearchList]
UseCurrentList=1
CurrentList=
plti.pbd,plt.pbd,pcfi.pbd,pcf.pbd,pam.pbd,pcd.pbd,psc.pbd,psp.pbd,psa.pbd,pst.pbd,p
sb.pbd,piqi.pbd,piq.pbd,ccfi.pbd,ccf.pbd,ccli.pbd,ccl.pbd,cepi.pbd,cep.pbd,cvni.pbd,cv
n.pbd,fbki.pbd,fbk.pbd,fcmi.pbd,fcm.pbd,udak.pbd,cdbi.pbd,cdb.pbd,fgli.pbd,fgl.pbd,fj
```

ei.pbd,fje.pbd,fali.pbd,fal.pbd,ffai.pbd,ffa1.pbd,ffa2.pbd,fcoi.pbd,fco.pbd,fapi.pbd,fap1.pbd,fap2.pbd,fpyi.pbd,fpy.pbd,fari.pbd,far1.pbd,far2.pbd,far3.pbd,fcri.pbd,fcr.pbd,bbdi.pbd,bbd.pbd,hpn1.pbd,hpn1i.pbd,hpn2.pbd,hpn2i.pbd,hpn3.pbd,hpn3i.pbd,hpn4.pbd,hpn5.pbd,hpn6.pbd,hpn7.pbd,hpn8.pbd,hpn9.pbd,hapm.pbd,hapmi.pbd,hpy1.pbd,hpy2.pbd,hpy3.pbd,hpy3i.pbd,hpy4.pbd,hpy5.pbd,hpy1i.pbd,hpy2i.pbd,hbn1.pbd,hbn2.pbd,hbni.pbd,mpci.pbd,mpc.pbd,mpoi.pbd,mpo.pbd,mrqi.pbd,mrq.pbd,mbli.pbd,mbl.pbd,mdsi.pbd,mds.pbd,mbmi.pbd,mbm.pbd,mcdi.pbd,mcd.pbd,fpji.pbd,fpj.pbd,fpci.pbd,fpc.pbd,fpai.pbd,fpa.pbd,mcmi.pbd,mcm.pbd,mimi.pbd,mim.pbd,ffc.pbd,ffci.pbd

[Subpaths]

SMART_Architecture = LOCAL, plti, plt, pcfi, pcf, pam, pcd,wmpbuo
SMART_Scheduler = LOCAL, psc
SMART_Structures = LOCAL, cos
SMART_Support = LOCAL, psp
SMART_SampleApp = LOCAL, psa
SMART_Catalog = LOCAL, pst
SMART_Streambuilder = LOCAL, psb
SMART_Connect = LOCAL, piqi, piq
SMART_Rpttools = LOCAL, prr
SMART_Mgmtrpt = LOCAL, pmm

COM_Common = LOCAL, ccfi, ccf
COM_Calendar = LOCAL, ccli, ccl
COM_Enterprise = LOCAL, cepi, cep
COM_Vendor = LOCAL, cvni, cvn
COM_Bank = LOCAL, fbki, fbk
COM_Currency = LOCAL, fcmi, fcm
COM_UDAK = LOCAL, udak
COM_DBIS_Info = LOCAL, cdbi, cdb

FIN_Ledger = LOCAL, fgli, fgl
FIN_Journals = LOCAL, fjei, fje
FIN_Allocations = LOCAL, fali, fal
FIN_Assets = LOCAL, ffai, ffa1, ffa2
FIN_Consolidations = LOCAL, fcoi, fco
FIN_Payables = LOCAL, fapi, fap1, fap2
FIN_Payments = LOCAL, fpyi, fpy
FIN_Receivables = LOCAL, fari, far1, far2, far3
FIN_Credit = LOCAL, fcri, fcr
FIN_Budget = LOCAL, bbdi, bbd

HR_Personnel = LOCAL, hpn1, hpn1i, hpn2, hpn2i, hpn3,hpn3i, hpn4, hpn5, hpn6, hpn7, hpn8, hpn9, hapm,hapmi

HR_Payroll = LOCAL, hpy1, hpy2, hpy3, hpy3i, hpy4, hpy5, hpy1i, hpy2i

HR_Benefits = LOCAL, hbn1, hbn2, hbni

Backup and Recovery

Perform database backup and recovery using the backup and recovery mechanisms provided by your DBMS.

Backup Considerations

One of the most important database administration tasks is the regular backup of SmartStream. Consider the following information when developing your backup strategy.

Database Consistency Checks

As part of your regular backup routine, be sure to run the appropriate database consistency checks (DBCC) before making backups. Consistency check tools are provided by the database vendor (Sybase or Microsoft) and help ensure that backups do not contain corrupt data or database objects. Failure to run these checks can lead to unrecoverable backups and poor performance.

At a minimum, run database consistency checks using the following commands.

- DBCC CHECKDB
- DBCC CHECKCATALOG
- DBCC CHECKALLOC (Sybase environments only)
- DBCC NEWALLOC (Microsoft SQL Server environments only)

Your database vendor may have additional requirements or recommendations.

Warning: Resolve any errors reported as a result of running these commands before continuing with the backup. Failure to do so can result in creating corrupt or unrecoverable backups. These commands also identify corrupt database pointer errors that can lead to poor performance in your environment.

Be sure to perform periodic testing of the backup process by attempting to restore the backup tapes to a test server.

According to the database vendors, you should run these DBCC commands only when no other processes are running.

Maintaining Synchronization

SmartStream is made up of several different components, including the database server, file server, SmartStream clients, Mail Gateway and one or more SmartStream Job Servers. All of these pieces are integrated and must be kept synchronized.

The most important components to keep synchronized are the database server environment and the SmartStream file server image. The database server contains all of your data and the file server contains the image of the database components used in updating SmartStream through delivered service packs and individual solutions. The database server environment and the file server image must be kept

at the same release level for the update and patch process to update SmartStream effectively.

Because delivered fixes do not include a way to back out or uninstall the changes, be sure to back up both the database server and the file server image before applying any patches or updates to SmartStream.

Maintaining Data Integrity

Almost all databases within SmartStream are connected in one way or another. Data is split among many tables in several databases. To ensure data integrity, it is recommended that you back up **all** databases at the same time.

Recovery Considerations

A DBMS provides the following types of recovery:

- One that is done automatically every time the DBMS restarts
- One that must be performed manually

Automatic Recovery

The automatic recovery mechanism protects you from system failures. All transactions completed before a system crash are written to the database device (committed), while transactions not completed before a system crash are deleted (rolled back).

Manual Recovery

The manual recovery mechanism is the only means of recovering from a media crash. This mechanism is accomplished using the **dump** and **load** commands. The **dump** command backs up databases or transaction logs to tape or other dump media. The **load** command loads the database from the dump media to the database device.

SmartStream databases are delivered with the Truncate Log on Checkpoint option enabled primarily to facilitate SmartStream installation. You should disable this option, however, if you decide to do transaction dumps as part of your backup and recovery strategy.

Maintaining Data Integrity

After a crash, **all** databases must be restored at the same time to guarantee integrity of the data.

Warning: Restoring individual databases or tables after a crash can result in data corruption and long-term negative consequences.

For detailed information about how to use database backup and recovery mechanisms, see the documentation for your DBMS.

4 Mail Agents and Document Enablement

Chapter Contents

4-1 SmartStream Mail
4-5 Agents
4-10 Document Enablement

SmartStream Mail

SmartStream users can send and receive mail through an interface to their native mail systems. Through the use of a profile in the Microsoft Messaging System, SmartStream supports mail systems that are compliant with the Microsoft Messaging Application Programming Interface (MAPI) only.

SmartStream users can receive mail notification of the tasks that are assigned to them. For more information, see Mail-Enabled To Do Tasks in the *SmartStream Administration* guide.

For more information about the supported versions of these systems, visit the AnswerLink Bulletin Board. Under SmartStream, Release Information, and the number of the appropriate release, review the Supported Technical Environments topic.

How Mail is Sent from SmartStream Clients

The following table describes the process of how mail is sent from the SmartStream client to any user of the mail system:

Stage	Description
1	SmartStream logs on to the native mail system by calling sstMailLogon in PMAIL32.DLL.
2	sstMailSendDialog calls a dialog provided by the native mail system to allow the user to compose and address a mail message.
3	sstMailSendDialog sends the mail to the post office, which delivers it to the intended recipient.
4	The recipient uses the native mail system to read the new mail.

The SmartStream Mail Gateway

The SmartStream Mail Gateway is responsible for mailing workflow steps and informational To Do messages to SmartStream users who have been enabled for Workflow To Do mailing. For more information, see Sending Workflow To Do Messages.

The SmartStream Mail Gateway is also designed to process messages from SmartStream products, such as the Master Scheduler, and send them by electronic mail to a list of recipients.

The following sections describe how these tasks are performed under supported Windows and UNIX operating systems.

Supported Windows Operating Systems

The following table shows how SmartStream products process mail under supported Windows operating systems:

Stage	Process
1	The SmartStream product stores the message recipients and text in memory.
2	A file is constructed to pass to the Mail Gateway that represents a Mail message.
3	The SmartStream product copies the mail message to the shared LAN directory where the Mail Gateway program is running.
4	The Mail Gateway reads the files, constructs a mail message, and sends the message to the intended recipients through the native mail system.

UNIX Operating System

The following table shows how SmartStream products process mail under a UNIX operating system:

Stage	Process
1	The SmartStream product stores the message recipients and text in memory.
2	A file is constructed to pass to the Mail Gateway that represents a Mail message.
3	An FTP connection is made to the Mail Gateway machine. This message file is transferred to the Mail Gateway.
4	The Mail Gateway reads the files, constructs a mail message, and sends the message to the intended recipients through the native mail system.

Note: If an error occurs during the function call and the mail is not delivered, a message is sent to the administrator and to the calling program.

Mail Gateway Error Conditions

If the Mail Gateway program is not running, the mail is delivered the next time the Mail Gateway is started.

If the Mail Gateway cannot deliver the message to the intended recipients because of an addressing error (for example, the recipient or the domain cannot be found), the message is sent to the mail administrator.

Trouble Logging On to Mail Gateway

The desktop server entry in the dbs.ini file must correspond to the server entry in the dbserver.ini file. If your dbserver.ini file points to a server that is not running or does not exist you cannot log on to the Mail Gateway.

The logon window gives you three opportunities to enter the correct server information and choose OK. After three incorrect entries, the logon window closes and an error is written to the mailgate.log file.

Sending Workflow To Do Messages

The Mail Gateway performs the following procedure to send Informational To Do messages and Next Step messages to SmartStream users.

Stage	Process
1	The SmartStream workflow engine stores the To Do message to be sent in the mail_message table. The Mail Gateway scans the mail_message table (a table in the wijt family).
2	For each row found in the table, a To Do message (optionally with a Next Step attachment) file is assembled at the Mail Gateway machine.
3	The message is sent by the native mail system to the SmartStream user specified in the mail_message table.
4	When the message arrives, the user can read the Informational To Do message or click the attachment (if present) to open SmartStream and go directly to the Task List.

Agents

An agent is a semiautonomous process you can use to organize your work. Agents act as electronic assistants, performing repetitive tasks on your behalf. The following list shows the tasks that agents can perform:

- Processing your incoming mail
- Processing To Do tasks:
  - Reassign a Workgroup To Do task to a member of the group
  - Return a previously assigned To Do task back to a workgroup
  - Set priority (change from High, Medium, or Low)
  - Move to another To Do folder
  - Delete To Do tasks that are processed or unprocessed
- Running applications or stored procedures
- Generating and distributing reports

Agents are Browser objects containing one or more user-defined rules you add using the Rule Editor. Each agent acts on the contents of the Agent Works on ... List that you specify when you add the rules.

When you add an agent, the rules you define contain conditions and actions. The agent acts automatically when the specified conditions are met. After you set the agent to make decisions and then run it, you do not need to perform any other actions.

You can schedule agents to run at

- Any time (at specific times, on events, biweekly, daily, monthly, for one day, quarterly, weekly, and so forth) with specific start and stop times or to run at
- Specific intervals (for example, every 30 minutes).

User/Agent Interaction

The agent is responsible for carrying out the work that you specify. Use agents to generate and distribute SmartStream analysis reports and reassign To Do tasks.

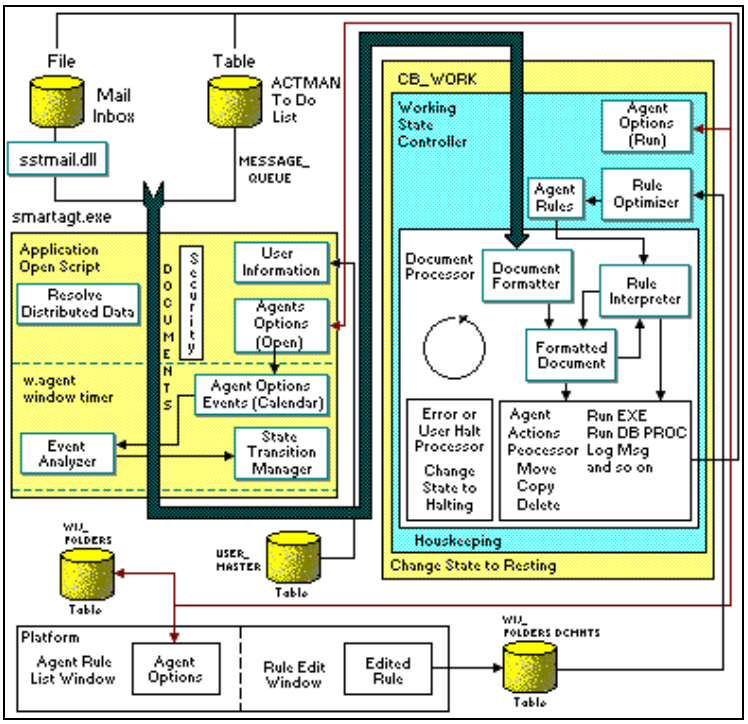
An example of an agent is one that is programmed to reassign a user's tasks to the workgroup after the user leaves the company.

The following table describes the agent process:

Stage	Process
1	Choose an agent from the Browser.
2	Run the agent from the SmartStream toolbar or by choosing Run Agent from the Agents menu.
3	The Agent window is displayed. This window contains the agent name; schedule information; current status details; an execution log; and Activate Agent, Start Work Now, and Inactivate Agent buttons.
4	When you choose Start Work Now, the agent is run immediately and begins working (regardless of its next scheduled time). After the agent completes this initial work interval, it returns to its schedule.
5	The agent begins to evaluate the schedule to determine whether to begin work. When the schedule conditions are satisfied, the agent begins working.
6	The agent rules are read and the Agent Works on ... List is accessed. The rules are applied to the first document in the Agent Works on ... List. The agent reads a document from the Agent Works on ... List and applies all rules to the document. Rules are applied in the order they appear in the Rule Editor. Stages 6 and 7 repeat until all documents in the Agent Works on ... List have been processed.
7	The agent stops working and goes into a resting state until the next scheduled work time.

Internal Processes

The following graphic illustrates the internal processes that occur when an agent is run. The text that follows is meant to help describe the processes shown in the graphic.



How Agents Are Stored

Agents are stored as a series of documents, where each agent rule is defined as a single document stored in the WIJ_FOLDERDCMTS table. (Rules are created in SmartStream using the Rule List and Rule Editor windows.)

The agent name, the name and location of the Agent Works on List, and other options are stored in a column called Agent_settings in the WIJ_FOLDERS table.

When the Agent is First Started

Agent options are read from the WIJ_FOLDERS table when the Agent is first started, and they are read again every time the agent enters the working state.

Agent States

An agent can be in one of four possible states:

State	Description
Inactive	The agent has started, but has not started scanning for events.
Resting	Agent has started and is waiting for an event to occur and put the agent into a working state.
Working	The agent is processing the Agent Works On List (Mail System Inbox and To Do lists), one document at a time. When the list is completed, the agent returns to the resting state.

State	Description
Halting	Under certain conditions, an agent in the Working state goes directly to the Inactive state. These conditions include ▪ Event conditions (such as database connection failures) ▪ User intervention (the user chooses Inactivate Agent) ▪ Agent actions (the agent issues the Deactivate action).

Data Agents Work On

The data that agents work on are mail documents and To Do lists.

When the Agent Is First Loaded

When ssagt32.exe (the agent executable) is loaded, it first performs the following tasks within the SmartStream architecture:

- Validates the user
- Sets agent options and defaults
- Initializes global variables
- Validates user access rights to the Agent Works on List

Agent Processing

When the Agent goes from the resting state to the working state, the Agent options are checked and the Agent's rules are read from the WIJ_FOLDERDCMTS table in the order they are to be performed. The working Agent then processes each document in the Works On ... List until it finishes the list. After each document is read, each rule is applied to the document. When the condition specified in the applied rule is met, the specified actions are performed. After a document is processed, a check is made to see if it has been marked for deletion.

All message deletions are deferred until all rules have been applied. After all the documents in the Works On... List have been processed, the Agent deletes any attachments that it loaded into windows temp directory, determines whether any errors have occurred, logs the results, and finally goes back to the resting state ready for the next event occurrence.

How Agent Options Are Set

The main window of an Agent, the SmartStream Agent window, is always open (although it may be minimized) and displays the details about the event the agent is sensitive to, the current time, and the status of the agent. The window contains a button that opens a window to set scheduled events (the current version of agents is only sensitive to scheduled calendar events) and a button to set agents options. Finally, the window contains three buttons (Activate Agent, Start Work Now, Inactivate Agent) that the user can use to control an Agent manually. The script of the Timer event of this window scans for event occurrences and manages the Agent's state transitions.

Troubleshooting Agents

Column Code Values Window

Agents cannot evaluate items in a To Do List based on values derived from the Column Code Values window. This window shows values of Yes and No for actual values of 1 and 0. If you code an agent to evaluate this field, use 1 or 0 as a test value.

Trigger Event Action Command

When you are adding or editing a rule for an Agent and you set the Action command to Trigger Event, you can click the parameters Paster button to display the Trigger Event dialog box. The Owner Assign To option does not work in this dialog box. You must set the Assign To option to Default.

Document Enablement

Through document enablement users can access documents stored in the network file system and external document management systems and attach them to SmartStream activities. Document enablement uses OLE automation technology as a general mechanism to access document management systems.

SmartStream developers must explicitly turn on document enablement for any activity using it. Document enablement is activated in some Sample Application windows and key windows in SmartStream Human Resources and Financials applications. With document enablement, users can associate a scanned resume image with a personnel record or back up spreadsheets with requisitions. After the association is made, the linked documents can be carried through a workflow message from one activity to another.

The linked documents are never stored in the underlying SmartStream database. Instead, SmartStream associates links to these documents with instances of activities and stores the links in the database. Users activate these links to interact with the document management system and use the tools provided to view and edit the documents. Where a document is stored determines how security is enforced. The document management system enforces security for attachments associated with it, and SmartStream enforces the security for file network attachments.

SmartStream application architecture is extended to allow every activity to enable document attachments in a consistent way. This is accomplished through an Attachments option on the SmartStream toolbar and File menu. Using the Attachments option users attach documents to a record in an activity window.

The doc_attachment Table

For each attachment, a row is written to the SmartStream doc_attachment table. Each row keeps pointer information about where the actual document is stored.

The doc_attachment table has two keys:

- table_id
- activity_key

The **table_id** is the unique key that the SmartStream application architecture uses to identify a table. Similarly, the **activity_key** identifies each SmartStream activity, including user-defined activities created with SmartStream Builder. When an activity is deleted from SmartStream, the application architecture automatically deletes the row in the doc_attachment table.

Security

Security is provided by both SmartStream and the document management system. SmartStream provides activity security. If the user can read that activity, the document can be displayed. With the proper security access, the user can delete an attachment to a document, but not necessarily the actual document. The user must use the document management system to add or delete actual documents and must have the proper security access.

The administrator uses the dbserver.ini file to determine

- Whether document enablement is supported
- What document management systems can be used
- What restrictions are placed on the use of the network file system. For example, the administrator can
  - Allow access to all available file systems
  - Restrict access to only specified network file systems
  - Allow no file system access.

For more information about the .ini file settings, see the SmartStream Initialization Files chapter.

Setting Up Document Enablement

To set up document enablement, you must complete the following tasks:

- If you are using the Panagon integrated document management system from FileNET, ensure that it is installed and registered in the Windows registry for each user. Also, remove the leading semicolon (;) on the Provider2 line in the dbserver.ini file.
- Enable document attachments on selected activity windows.

To verify that document enablement is properly set up, display a record on any activity window where the document attachment function is enabled. Then, use either the Attachments option on the File menu or the Attachments toolbar button to open the Document Attachments dialog box.

5 Entity Validation

Chapter Contents

5-1 Overview of Entity Validation
5-2 Entity-Related Windows and Fields
5-3 Column Validation Table
5-4 Entity Validation Process
5-5 Security Entity Validation
5-7 Step Entity Validation

Overview of Entity Validation

SmartStream and its related business applications use the concept of entities in the following areas:

- Security
- Workflow

An entity essentially defines a cross-section of data. These cross-sections can be defined at two levels in the case of security entities. Next Step (workflow) entities are defined at one level. The use of entities is predefined by SmartStream business applications. They are not user defined. The actual values of these entities are defined by your enterprise.

For example, SmartStream Supplies Management uses a security entity 1 of **site**. In some functional areas of Supplies Management, a security entity 2 of **stockroom** is also used. The values for site (and stockroom, if applicable) are user defined. For example, if your enterprise has sites in Boston and Chicago, Boston and Chicago would be your enterprise's values for the security entity of site.

For more information about security entities, see Securing Activities.

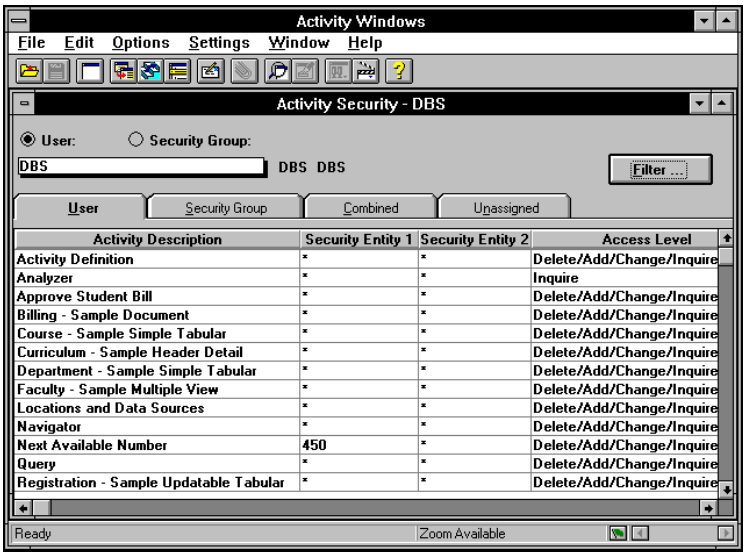
Entity-Related Windows and Fields

This section describes how appropriate entity values are displayed in lists and how entity values are validated when a user enters a new entity value or selects an entity value from a list.

The following table lists the different entity types, the activity window that the lists are displayed on, and the lists where entities values are displayed and validated.

Entity Type	Activity Window	Lists
Security	Activity Security	Security Entity 1 and Security Entity 2 (see note)
Step (workflow)	Workflow Workbench (Add Entity dialog box)	Step entity (see note)

Note: The list label changes dynamically based on the entity. For example, when a user first accesses the Activity Security window, the security entity labels are Security Entity 1 and Security Entity 2, as illustrated in the following figure:



Column Validation Table

The entity validation process relies on the Column Validation table to identify where a table family resides and which stored procedure to run to list or validate entity values.

The layout of the Column Validation table is illustrated in the following table:

Column Name	Part of Composite Key?
Activity	Yes
Validation Entity	Yes
Column ID	Yes
Table Family ID	
Validation Procedure	
Item Browse	
List Procedure	
Validation Message ID	

Some common values for the Activity column are described in the following table:

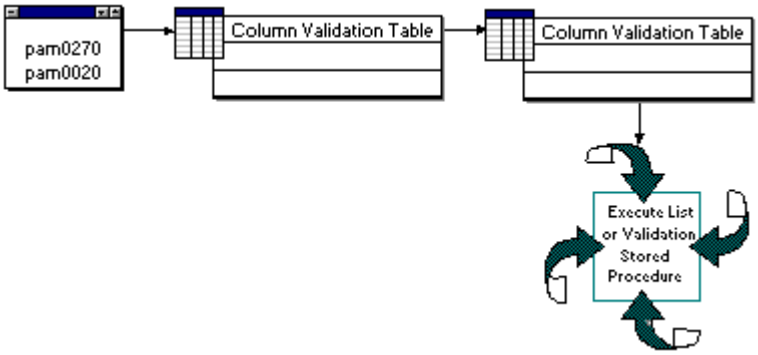
If the activity is...	Then the validation entity is...
pam0020	* (the default value)
pam0270	* (the default value), or the activity selected in the list area.

Column ID is the identifier of the column (as defined on the Column Master table) used as the entity. For example, on the Next Available Number window, security entity 1 is **message ID**. The column ID for message ID in the Column Master table is 450. Therefore, in the previous figure, 450 is the value for Security Entity 1.

Entity Validation Process

This section provides an overview of how entity values are displayed in lists and how new entity values are validated. The sections following this one describe how each type of entity value (security and step) is displayed and validated.

The following figure illustrates the entity validation process. The table following the figure provides detailed information about the process shown in the figure.

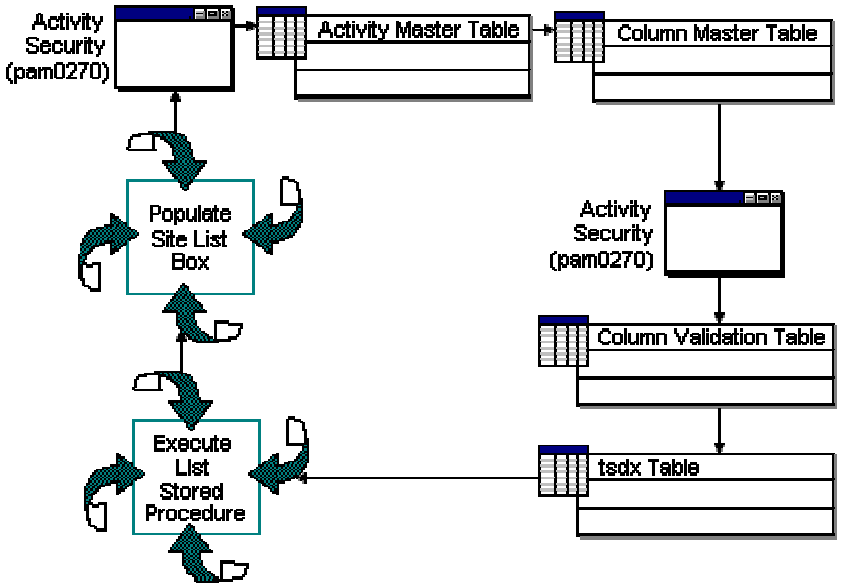


Stage	Description
1	A user accesses an activity that contains an entity-related list. These activities and their related functions are as follows: **Activity** — **Function** Activity Security (pam0270) — Security Workflow Workbench (pam0220) — Workflow
2	Based on the activity selected, the Column Validation table is read for the key values.
3	Using the Table Family ID from the Column Validation table, the Table Family/Server/ Database Cross-Reference table (tsdx) is read to find the location (server, database, database owner) of the table family for the specific key values.
4	Using the location (server, database, database owner) information from Stage 3, the appropriate stored procedure for the key values (List Procedure to display values in a list, Validation Procedure to validate a new value) is run for the table family.

Security Entity Validation

Security entity lists appear on the Activity Security window. When an activity that uses a security entity or entities is selected, the appropriate values are displayed in the security entity lists.

The following figure illustrates the process that displays values in the security entity lists. The table that follows the figure provides detailed information about the process shown in the figure.



The example used in the following table assumes that the user has chosen the mbm0330 (Site Planning Profile) activity in the list area on the Activity Security window. This activity has a security entity 1 of site (Column ID 650).

Stage	Description
1	A user selects the mbm0330 activity on the Activity Security window.
2	The Activity Master table is read for the mbm0330 activity to determine if levels of security are defined for this activity and, if so, what the Column ID of the entity is. The mbm0330 activity has one level of security, and the security entity is site (Column ID 650).
3	The Column Master table is read to determine the label and length for column ID 650. This read returns a label of Site and a length of 40 characters.
4	Using the label and length information from Stage 3, the Security Entity 1 field on the Activity Security window is dynamically formatted.

Stage	Description
5	The Column Validation table is read using key values of pam0270 for Activity, mmr0705 (Open Work Order) for Validation Entity, and 650 for Column ID. A value for Table Family (pplm) and List Procedure (msp_sel_plmm_enterprise) for this key is found.
6	Using the Table Family ID of pplm from Stage 5, the Table Family/Server/Database Cross-Reference table (tsdx) is read to find the location (server, database, database owner) of the table family.
7	Using the server, database, database owner information in Stage 6, the List Procedure msp_sel_plmm_enterprise is run for table family pplm.
8	The answer set returned from Stage 7 is displayed in the Site list.

Validation

If a new value for site is being validated (instead of displaying values in the Site list as described in the previous table), the process is the same, except that the value for Validation Procedure is read in Stage 5. This procedure is then run in Stage 7.

Two Levels of Security

If an activity has two levels of security (two security entities), stages 2 through 8 are repeated for Security Entity 2.

For more information about activity security, see Securing Activities and Assigning Activity Security to Security Groups and Users.

Step Entity Validation

Step entities are displayed on the assignment tree of the Assignment tab on the Workflow Workbench window.

The following table describes the process that displays values in the assignment tree. The example used in this table assumes that the user has an assignment that includes the psascheins event (Class Scheduled - Register Students) on the Workflow Workbench Assignment tab. This event uses a step entity of campus (Column ID 13329).

Stage	Description
1	A user selects an assignment on the assignment tree that includes the psascheins event.
2	The Event Master table is read for the psascheins event to determine if a step entity is defined for this event and, if so, what the column ID of the entity is. The psascheins event has a step entity of campus (Column ID 13329).
3	The Column Master table is read to determine the label and length for Column ID 13329. A label of Location and a length of 40 characters is found.
4	Using the label and length information from Stage 3, the step entity field is dynamically formatted when the user selects an entity on the assignment tree and chooses New.
5	The Column Validation table is read using key values of * for activity, * for validation entity, and 13329 for column ID. A value for table family for this key is found. The value is wsa2.
6	Using the table family ID of wsat from Stage 5, the Table Family/Server/Database Cross-Reference table (tsdx) is read to find the location (server, database, database owner) of the table family.
7	Using the server, database, and database owner information in Stage 6, the List Procedure is run for table family wsa2.
8	The answer set returned from Stage 7 is displayed on the Add Entity dialog box.

6 Asynchronous RPC Facility

Chapter Contents

6-1 Understanding the Asynchronous RPC Facility
6-2 Asynchronous RPC Facility Instance

Understanding the Asynchronous RPC Facility

The Asynchronous RPC facility allows a DBMS transaction to be queued for execution on the databse server. The facility allows a SmartStream application to

- Issue multiple Asynchronous RPC requests as a single transaction.
- Issue a single Asynchronous RPC request and a local stored procedure as a single transaction.
- Reliably queue updates to data on the database server even if it is down.

The following table describes how the Asynchronous RPC facility works.

Stage	Description
1	A SmartStream application updates the database and issues an Asynchronous RPC request for running a transaction. The request contains the server name, the database name, the stored procedure name, and as many as 64 parameters.
2	The Asynchronous RPC facility inserts the request with the key into the Asynchronous RPC Request table.
3	The Asynchronous RPC Master Server program recognizes the request in the table and starts the Asynchronous RPC Remote Processing program. The processing program processes the request in the order issued.
4	The Asynchronous RPC Remote Processing program reads remote configuration parameters on the ARPC Configuration table.
5	The Asynchronous RPC Remote Processing program reads the request.
6	The Asynchronous RPC Remote Processing program uses two-phase commit logic to run the request on the server and delete it from the request table.

Asynchronous RPC Facility Instance

An instance of the Asynchronous RPC facility must be configured on the database server in your SmartStream environment. It has the following components:

- An instance of the Asynchronous RPC family of database server tables
- The Asynchronous RPC Master Server program
- The Asynchronous RPC Remote Processing program. This program is automatically started by the Master Server program as needed.

Note: The SmartStream and product installation procedures automatically install an instance of the Asynchronous RPC table family on the database server in your SmartStream environment.

Overview of the Asynchronous RPC Master Server Program

The Asynchronous RPC Master Server program runs Asynchronous RPC requests on the database server and updates the Asynchronous RPC tables. It also starts and monitors the Asynchronous RPC Remote Processing program when ARPC requests are pending.

To run ARPC in a single server environment, the following files must be located in the master ARPC directory:

- pscc0050.exe
- pscc0051.exe

This table describes Asynchronous RPC Master Server program processing:

Stage	Description
1	Reads configuration information from the Asynchronous RPC Configuration table and from the dbsched.ini file (ARPC server, DBMS server, database, user ID, and password).
2	Starts the Asynchronous RPC Remote Processing program when ARPC requests are pending.
3	Runs all Asynchronous RPC requests and updates the Asynchronous RPC request table.
4	Sleeps for the Polling time specified in the Asynchronous RPC Configuration table after all requests are processed.

7 UNIX Shell Scripts

Chapter Contents

7-1 UNIX Shell Scripts
7-2 pscsched.beg
7-4 pscpoll.beg
7-6 pscarpc.beg

UNIX Shell Scripts

The following sections provide the text of the UNIX shell scripts delivered with SmartStream that you can use to start and stop the Master Scheduler (pscc0010), Poll (pscc0020), and ARPC Master Server (pscc0050) programs.

Review and edit these scripts for use in your production environment. They cannot be used as installed. At a minimum, you must remove the Exit.

The following list provides the name and purpose of each script:

- pscsched.beg - starts the Master Scheduler program
- pscpoll.beg - starts the Poll program
- pscarpc.beg - starts the Master Server program.

Each .beg script contains code that generates a script to end the process (Master Scheduler, Poll, or ARPC Master Server). These kill scripts are automatically named pscsched.kil, pscpoll.kil, and pscarpc.kil, respectively.

pscsched.beg

The following script starts the Master Scheduler program and generates a kill script named pscsched.kil:

```
#!/bin/sh

# Master Scheduler Run Script
# Copyright (c) 1993-2002 Geac Enterprise Solutions,Inc.
# All Rights Reserved
# Author: Geac SmartStream
#
# 3/29/02
#
# Modify this script prior to running it, as it is
installed it is not # usable!!!
#
#echo
#echo  Modify this script before running it.
#echo
      exit
#
# Purpose : To initiate the Master Scheduler (pscc0010) in
the background, and impervious to hang-up signals.

 #
# The output (if any) will be sent to mastsched.log and
errors are sent to mastsched.err.  Both files should be
checked when there is a problem.
#
# The PID (process ID) of the scheduler is saved and a kill
script is # created in the current directory for an easy
way to kill this instance ofthe scheduler.

#           Environment Variables

# DBSLANG = language code and dialect code.  This affects
the language of # the messages send to the system
administrator. EN = english (with no dialect)
DBSLANG=EN;
export DBSLANG;

# DBSDEBS, a value of 1 means put diagnostic information to
the screen
DBSDEBS=1;
export DBSDEBS;

# DBSDEBF, a value of 1 means put the debug information
into a file
DBSDEBF=1;
```

```
export DBSDEBF;

# DBSDEBL is the diagnostic level for the master scheduler.
#0 : no screen output
#1 : displays initial data, log messages, mail text and bad
queries.
#2 : displays additional messages.
#3 : reports every interaction through the main loop
DBSDEBL=1;
export DBSDEBL;

# Start it, with nohup so it won't exit when the terminal
session ends and  redirect the stdout and stderr to files

      nohup pscc0010 >mastsched.log 2>mastsched.err &
#

# Build a script to kill this instance

echo Use the pscsched.kil command to kill this instance.
echo "#Script to kill instance of master scheduler" >
pscsched.kil
echo "echo Searching for the Master Scheduler with PID
$!">>pscsched.kil
echo "echo">>pscsched.kil
echo "ps -p $! | grep pscc0020 > /dev/null">>pscsched.kil
echo "if [ \$? -ne 0 ] ">>pscsched.kil
echo "then echo PID $! is not the process id for the Master
Scheduler.  The">>pscsched.kil
echo "echo Master Scheduler started when this script was
created">>pscsched.kil

echo "echo has since terminated.  If the Master Scheduler
is currently">>pscsched.kil
echo "echo running, you should refer to the SmartStream
Guide to">>pscsched.kil
echo "echo Server Services manual for instructions on
stopping">>pscsched.kil
echo "echo the Master Scheduler from the command
line.">>pscsched.kil
echo "else echo Stopping the Master Scheduler
now">>pscsched.kil
echo "kill $! ">>pscsched.kil
echo "fi;rm pscsched.kil">>pscsched.kil

# Make sure it's executable
            chmod +x pscsched.kil
            continue
echo
```

pscpoll.beg

The following script starts the Poll program and generates a kill script named pscpoll.kil:

```
#!/bin/sh

# Poll Run Script
# Copyright (c) 1993-2002 Geac Enterprise Solutions,Inc.
# All Rights Reserved
# Author: Geac SmartStream
#
# 3/29/02
#
# Modify this script prior to running it, as it is
installed it is not  usable!!!
#
#echo
#echo  Modify this script before running it.
#echo
      exit
#
# Purpose : To initiate the Poll program (pscc0020) in the
background, and impervious to hang-up signals.
#
# The output (if any) will be sent to poll.log and errors
are sent
# to poll.err.  Both files should be checked when there is
a problem.
#
# The PID (process ID) of the Poll program is saved and a
kill script is
# created in the current directory for an easy way to kill
this instance of
# the Poll program.

#
#           Environment Variables
# DBSLANG = language code and dialect code.  This affects
the language of the messages send to the system
administrator. EN = english (with no dialect)

DBSLANG=EN;
export DBSLANG;

# DBSDEBS, a value of 1 means put diagnostic information to
the screen
DBSDEBS=1;
export DBSDEBS;
```

```
# DBSDEBF, a value of 1 means put the debug information
into a file
DBSDEBF=1;
export DBSDEBF;

# Start it, with nohup so it won't exit when the terminal
session ends and redirect the stdout and stderr to files
            nohup pscc0020 >poll.log 2>poll.err &


#
# Build a script to kill this instance

echo Use the pscpoll.kil command to kill this instance.
echo "#Script to kill instance of poll" > pscpoll.kil
echo "echo Searching for Poll with PID $!">>pscpoll.kil
echo "echo">>pscpoll.kil
echo "ps -p $! | grep pscc0020 > /dev/null">>pscpoll.kil
echo "if [ \$? -ne 0 ] ">>pscpoll.kil
echo "then echo PID $! is not the process id for Poll.
The">>pscpoll.kil
echo "echo Poll program started when this script was
created">>pscpoll.kil
echo "echo has since terminated.  If a Poll program is
still">>pscpoll.kil
echo "echo running, you should refer to the SmartStream
Guide to">>pscpoll.kil
echo "echo Server Services manual for instructions on
stopping">>pscpoll.kil
echo "echo Poll from the command line">>pscpoll.kil
echo "else echo Stopping Poll now.">>pscpoll.kil
echo "kill $! ">>pscpoll.kil
echo "fi;rm pscpoll.kil">>pscpoll.kil

# Make sure it's executable
            chmod +x pscpoll.kil
            continue
echo
```

pscarpc.beg

The following script starts the ARPC Master Server program and generates a kill script named pscarpc.kil:

```
#!/bin/sh

# Asynchronous RPC Master Program Run Script
# Copyright (c) 1993-2002 Geac Enterprise Solutions,Inc.
# All Rights Reserved
# Author: Geac SmartStream
#
# 3/29/02
#
# Modify this script prior to running it, as it is
installed it is not usable!!!
#
echo
echo  Modify this script before running it.
echo
      exit
#
# Purpose : To initiate the Asynchronous RPC Master program
(pscc0050) in the background, and impervious to hang-up
signals.
#
# The output (if any) will be sent to arpc.log and errors
are sent
# to arpc.err.  Both files should be checked when there is
a problem.
#
# The PID (process ID) of the ARPC Master program is saved
and a kill script is created in the current directory for
an easy way to kill this instance of  the ARPC master
program.
#

#           Environment Variables
#
# DBSLANG = language code and dialect code.  This affects
the language of  the messages sent to the log file. EN =
english (with no dialect)
DBSLANG=EN;
export DBSLANG;

# Start it, with nohup so it won't exit when the terminal
session ends and redirect the stdout and stderr to files

            nohup pscc0050 >arpc.log 2>arpc.err &
#
```

```
# Build a script to kill this instance

echo Use the pscarpc.kil command to kill this instance.
echo "#Script to kill instance of ARPC Master program" >
pscarpc.kil
echo "echo Searching for the ARPC Master program with PID
$!">>pscarpc.kil
echo "echo">>pscarpc.kil
echo "ps -p $! | grep pscc0050 > /dev/null">>pscarpc.kil
echo "if [ \$? -ne 0 ] ">>pscarpc.kil
echo "then echo PID $! is not the process id for the ARPC
Master program">>pscsched.kil
echo "echo The ARPC Master started when this script was
created">>pscarpc.kil
echo "echo has since terminated.  If an ARPC Master is
currently">>pscsched.kil
echo "echo running, you should refer to the SmartStream
Guide to">>pscarpc.kil


echo "echo Server Services manual for instructions on
stopping">>pscarpc.kil
echo "echo the ARPC Master program from the command
line.">>pscarpc.kil
echo "else echo Stopping the ARPC Master program
now.">>pscarpc.kil
echo "kill $! ">>pscarpc.kil
echo "fi;rm pscarpc.kil">>pscsched.kil

# Make sure it's executable
            chmod +x pscarpc.kil
            continue
echo
```

8 SmartStream Initialization Files

Chapter Contents

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dbs.ini Settings

The dbs.ini file contains most of the option settings in SmartStream. All of these options are customized using SmartStream preferences unless otherwise noted. This file is broken into sections, each of which is discussed separately. Because your dbs.ini file reflects only those options that you choose when you installed SmartStream, all of the following entries may not appear in it.

- [DBS_PREFERENCES] Section
- [SmartStream] Section
- [DBSApps] Section
- [Consolidations] Section
- [Application] Section
- [Report] Section
- [OpenView] Section
- [DocAttach] Section
- [Reporting Tools] Section
- [Navigator] Section
- [Query] Section

- [Reporter] Section
- [Analyzer] Section
- [Series] Section
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- [Structures] Section
- [Database] Section
- [Business Views] Section
- [Locations and Data Sources] Section
- [Parameters] Section
- [Reporting Policy Controls] Section
- [Connect] Section
- [Job_Scheduler] Section
- [Mail] Section
- [CommonFormulas] Section
- [MAIL Gateway] Section
- [Projects] Section
- [DynamicFont] Section

[DBS_PREFERENCES] Section

The [DBS_PREFERENCES] section contains options related to the SmartStream Preferences window.

Caution: These options should **never** be changed.

plt0301_w_preference_browser,pplssprf,SmartStream, General

Indicates that the SmartStream General preferences are available from the SmartStream Preferences window.

plt0302_w_preference_workflow,pplwkflw,SmartStream,Workflow

Indicates that the SmartStream Workflow preferences are available from the SmartStream Preferences window.

plt0304_w_preference_mail,pplinbx,SmartStream,Mail

Indicates that the SmartStream Mail preferences are available from the SmartStream Preferences window.

piq0300_preferences,piqprfnc,SmartStream,Connect

Indicates that the SmartStream Connect preferences are available from the SmartStream Preferences window.

psc0300_preferences,pscmstsc,Job,Scheduler

Indicates that the Job Scheduler preferences are available from the SmartStream Preferences window.

far2001_preferences,ccfrecei,Receivables

Indicates that the Receivables application preferences are available from the SmartStream Preferences window.

mcd0002_preferences,ccfmanu,Procurement,Common

Indicates that the Procurement Common application preferences are available from the SmartStream Preferences window.

[SmartStream] Section

The [SmartStream] section is used to indicate the user options that were set using the SmartStream Preferences window, the physical location of the software, and other settings.

Option	Description
SmartStream=C:\SSTRMXX	Indicates the location of the client installation.
UserID=PXD	Indicates the user's DBMS ID.
DBSERVER_INI=C:\SSTRMXX\DBSERVER.INI	Indicates the location of the dbserver.ini file. This file is used to store server logon IDs and other server information. This is often one dbserver.ini file shared by all the users of a network.
WiJitLogPath=C:\SSTRMXX\TEMP\	Indicates where the user desktop image file is stored. The default name of the file is *userid.txt*.
AgentLogPath=C:\SSTRMXX\TEMP\	Indicates where the agent process log file is stored.
AllAgentStartupOverride=0	Indicates that any SmartAgents checked to autostart in the Agent Options will automatically start when the user logs on to SmartStream. These SmartAgents continue to run when the user logs out of SmartStream. If a SmartAgent is already running, it continues to run. Changing AllAgentStartupOverride to 1 affects only SmartAgents that are not running. 1 = Do not automatically start any agents. 0 = Automatically start agents.
OpenSSTray=0	Indicates that the tray is open. You cannot change this option.

Workflow Options

Option	Description
AMNotify=0	Indicates whether the Notify Me of New Tasks option to receive a message box or a beep when new tasks are in your New To Do List has been selected. 1 = Notify me of new tasks. 0 = Do not notify me of new tasks.
AMNotifyOfOwnMsg=0	Indicates whether the Suppress Task Notification option to receive a message box or beep tones or both when the task is generated by the user has been selected. 1 = Suppress task notification. 0 = Do not suppress task notification.
AMNotifyWindow=0	Indicates whether the Notify with Message Box option to receive a message box when you have new tasks in your New To Do List has been selected. 1 = Notify me with message box. 0 = Do not notify me with message box.
AMNotifyTone=0	Indicates whether the Notify option to receive a beep or beeps when you have new tasks in your New To Do List has been selected. Use the Notify me with Beeps spin box to set the number of beeps. 1 = Notify me with beep or beeps. 0 = Do not notify me with beep or beeps.
AMNotifyInterval=30	Indicates in minutes how often SmartStream checks for new tasks.
AMGetNextMsg=0	Indicates whether to move directly to the next task in the workflow after saving and updating a task. 1 = Get next task. 0 = Do not get next task.
AMDeleteMsg=0	Indicates whether to delete all tasks from your New To Do List after they have been completed. 1 = Delete all tasks after completion. 0 = Do not delete all tasks after completion.
Todolist=0	Indicates whether to refresh task counts at regular intervals. Use the Refresh Task Counts Every Minutes spin box to set the number of minutes between each refresh. 1 = Refresh task counts at regular intervals. 0 = Do not refresh task counts at regular intervals.
Todolist_Interval=15	Indicates the number of minutes between each refresh of the New To Do List. This option is active only if the Refresh Task Counts Every option has been selected.

Option	Description
RefreshTodoOnActivate=1	Indicates whether the To Do Window is refreshed when it is activated. 1 = Refresh the To Do Window. 0 = Do not refresh the To Do Window.

Display Options

Option	Description
SStrmMaximized=0	Indicates whether to open the SmartStream frame in a maximized state. 1 = Open in a maximized state. 0 = Do not open in a maximized state.
SStrmToolBarShown=1	Indicates whether to show or hide the SmartStream toolbar. The user changes this option by choosing View from the SmartStream menu. 1 = Show toolbar. 0 = Hide toolbar.
SStrmToolBarAlignment=2	Indicates the position of the SmartStream toolbar.
AppCascade=1	Indicates whether to cascade windows when you log on. 1 = Cascade windows. 0 = Do not cascade windows.
OpenApplFrame=0	Indicates whether to open the activity window at start up. This takes you longer to log on to SmartStream, but it significantly cuts down the time it takes for the first opening of the activity window from SmartStream. 1 = Open activity window at startup. 0 = Do not open activity window at startup.
ShowToolbarText=0	Indicates whether to display text next to the toolbar icon. ShowToolbarText = 0 Do not show Toolbar text. ShowToolbarText = 1 Show Toolbar text.
BrowserTreeHasLines=1	Shows lines linking items in the Browser. 1 = Show lines. 0 = Do not show lines.
StartSmartBarOnSSLogon=1	Indicates whether to display Quick Launcher when you log on. 1 = Quick Launcher on. 0 = Quick Launcher off.

Option	Description
ConfirmClear=1	Indicates whether SmartStream displays a message box when you clear the active window that asks whether you are sure that you want to clear the window. ConfirmClear=0 Do not confirm clear of the active window ConfirmClear=1 Confirm the clear of the active window

Mail Options

Option	Description
LogOnMail=0	Indicates when the mail logon window is displayed. 1 = Log on to mail at SmartStream logon time. 0 = Log on when a mail function is requested.

Printer Options

Option	Description
PostScriptPrinterPort=LPT3	Indicates the printer port used for printing PostScript Query&Reporter reports. **Note:** You must associate the .qra postscript report files with the program prpc2010.exe to print PostScript reports.

File Locations

Option	Description
UpdateDirectory= [nw-drive]:\install\sstrmxx\patch	Indicates the location of the directory on the network file server that SmartStream was installed from.
ClientRFDIR=[nw-drive]:\install\patch	Indicates the drive, path, and directory of the client refresh directory. The files in this directory are scanned during the startup procedure and the client's files are refreshed if necessary.
DBSPATH_INI=C:\SSTRMXX\dbspath.ini	Indicates the drive, path and directory of the dbspath.ini file.
CUSTOM_INI=	Indicates the drive, path and directory of the custom.ini file.
DesktopServer=	Indicates the name of the server where the user's desktop resides.
CTLGDB=	Indicates the database on the desktop server where the ctlg table family resides.

[DBSApps] Section

The DBSApps section of the dbs.ini file identifies the SmartStream applications installed on the client. If an application is installed, the corresponding section of the dbs.ini file is read. Each application's installation adds and maintains these sections. This section is used for refreshing SmartStream clients with patches. The Client Refresh process examines this section to determine which \patch\ss subdirectories on the file server to copy newer files from, and then it copies the files to the local \sstream installation.

Option	Description
ALLOCATE=0	Indicates whether Allocations is installed. 1 = Installed 0 = Not installed
ASSETS=0	Indicates whether SmartStream Asset Management is installed. 1= Installed 0 = Not installed
BENEFITS=0	Indicates whether Benefits is installed. 1= Installed 0 = Not installed
BILLING=0	Indicates whether SmartStream Billing is installed. 1= Installed 0 = Not installed
BUDGET=0	Indicates whether SmartStream Budget is installed. 1= Installed 0 = Not installed
COMMON=0	Indicates whether components shared by two or more SmartStream applications (for example, bank, currency, and vendor) are installed. 1 = Installed 0 = Not installed
CONNECT=0	Indicates whether SmartStream Connect is installed. 1 = Installed 0 = Not installed
CONSOLID=0	Indicates whether Consolidations is installed. 1=Installed 0=Not installed
EURO=0	Indicates whether SmartStream Euro Currency is installed. 1= Installed 0 = Not installed

Option	Description
FUND=0	Indicates whether SmartStream Funds Control is installed. 1= Installed 0 = Not installed
LEDGER=0	Indicates whether or not SmartStream Ledger is installed. 1= Installed 0 = Not installed
MANAGEMENTREPORTER=0	Indicates whether Management Reporter is installed. 1= Installed 0 = Not installed
PAYABLES=0	Indicates whether SmartStream Payables is installed. 1 = Installed 0 = Not installed
PAYROLL=0	Indicates whether Payroll is installed. 1 = Installed 0 = Not installed
PERSONEL=0	Indicates whether Personnel is installed. 1 = Installed 0 = Not installed
PROJALLO=0	Indicates whether SmartStream Projects Allocation is installed. 1= Installed 0 = Not installed
PROJCOMM=0	Indicates whether SmartStream Projects Common is installed. 1= Installed 0 = Not installed
PROJECTS=0	Indicates whether SmartStream Projects is installed. 1= Installed 0 = Not installed
PURCHASE=0	Indicates whether SmartStream Purchasing is installed. 1= Installed 0 = Not installed
RECEIVBL=0	Indicates whether SmartStream Receivables is installed. 1 = Installed 0 = Not installed

Option	Description
SUPPLIES=0	Indicates whether Supplies Management is installed. 1=Installed 0=Not installed

[Consolidations]

The Consolidations section is used to store settings for Consolidations.

Default_Curr_Code=USD

Indicates the default currency for consolidation entities. The default that you enter here is displayed on the Structure Point Properties window.

[Application] Section

The Application section is used to store activity window settings.

Option	Description
AppsMaximized=0	Indicates whether to maximize the application frame window automatically at startup. This option is changed when you maximize or restore the application window size during a session. 1 = Maximize. 0 = Do not maximize.
ToolBarShown=1	Indicates whether to display the Application toolbar. You can change this option on the menu. 1 = Show toolbar 0 = Hide toolbar.
DoubleClick=0	Indicates the action that occurs when you double-click a field on an application window. This option is changed by choosing the menu settings double-click option. 3 = Comment 2 = Zoom 1 = Paste Field 0 = Browse.

Option	Description
CalendarDay=1	Indicates the day of the week that appears as the first day of the week in the SmartStream Financial Periodic Calendar. 1= Sunday 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday
CalendarView=1	Indicates how to display the SmartStream Financial Periodic Calendar. 1 = Calendar format 2 = Tabular format
ToolBarAlignment=2	Not currently used.

[Report] Section

The Report section is used to store settings for Decision Support Services (DSS) activities.

Option	Description
CEPFRMTMDA=C:\SSTRMXX\CEPFRMT.MDA	Indicates the location of Microsoft Access files for the Common Formatting Module.
FAPBALMDB=Install	Indicates the location of Microsoft Access files for Payables balancing reports.
FBKACTMDB=C:\SSTRMXX\FBKACT.MDB	Indicates the location of Microsoft Access files for Bank activity reports.
FPYREGSMDB=	Indicates the location of Microsoft Access files for payment registers.
FGLMDB=	Indicates the location of Microsoft Access files for Ledger and Currency.
PRPLaunch=C:\SSTRMXX\PRPLAUN.EXE	Indicates the location of the executable that starts up Microsoft Access for SmartStream Manufacturing reports.
PRPERROR=d:\SSTRMXX\PRPERROR.MDA=rw	Indicates the location of Microsoft Access library files.
FPJMDB=C:\SSTRMXX\FPJ.MDB	Indicates the location of the Microsoft Access files for Projects.

[OpenView] Section

The OpenView section is used to store settings for the Hewlett Packard OpenView tool.

Option	Description
TRAPon=	Indicates if the trap daemon is running. 0 = Not running 1 = Running
ManagerAddress=NULL	Indicates the internet protocol address for the Manager Host.
CommunityName=NULL	Indicates the domain name for the managed network.

[DocAttach] Section

The DocAttach section is used to store settings for document enablement.

Option	Description
LastUsedProvider=	System-maintained resource that identifies the provider and displays this provider in the document vendor drop-down list.
LastUsedType=	System-maintained resource that displays the provider type (file network or document vendor) on the client. The default is 0. 0 = File system 1 = Document vendor
FileSaveDirectory=	System-maintained resource that specifies the default shareable network directory where attachments are placed. The default is set to Null.
FileNetwork=	Indicates which files are accessible. The default is 1. 0 (optional) = No network files are accessible. 1 (default) = All files in the network directory are accessible. 2 (optional) = All attached files are copied to the directory specified in the FileLocation option.
FileLocation=	Usually maintained in the dbserver.ini file. Administrators can add these settings to each user's dbs.ini file to allow the user to access files on different networks and locations. However, doing so overrides the settings in the dbserver.ini file.

[Reporting Tools] Section

The Reporting Tools section is used to store settings common to all reporting tools.

Option	Description
LastUsedLoc=	Indicates the last location used.
Driver=SQLServer	Indicates the version of ODBC that supports SmartStream Reporting Tools.
LogReportTemplate=c:\sstrm*xx*\rpttools\rlgu0001.rpt	Indicates the path where the Crystal report template is located.
ProcessPointsWithNoMailID=Y	Indicates permission to mail structures with point IDs.
PointDisplay=0	Indicates point name, point description, or name:description; that is, how point information is displayed in Analyzer.
DeadLetter=c:\sstrm*xx*\rpttools\deadmail	Indicates the path to Job Scheduler.
Launcher=c:\sstrm*xx*\rpttools\rsce0002.exe	Indicates the path of the Job Scheduler.
TempPath=c:\sstrm*xx*\rpttools\temp	Used by migration and structures to determine the location of the log files.
Log=Y	Indicates whether Logging is available.
UseEffectiveDate=N	Allows the choice of effective-dated structures in the Structure Browser.
DefaultSecurity=0	Indicates the default security that is created as new objects are created 0 = public (security is granted to DBS, sa, owner, and PUBLIC) 1 = secured (security is granted only to DBS, sa, and the owner)
Application=prp	Indicates the default application code used when creating new objects
Category=1	Indicates the default category ID used when creating new objects.
Calendar Paster=c:\sstrm*xx*\PRPC5132.EXE	Indicates the path to the Report Series calendar paster.
RptgPath=	Indicates the location of the SmartStream Reporting Tools executables and libraries.

[Navigator] Section

The Navigator section is used to store settings for the Navigator.

InstallPath=c:\sstrm*xx*\rpttools\rnvm0001.exe

Indicates where the Navigator executables are installed.

DefaultGroupID=

DefaultTab=

Indicates which tab (Query, Report, and so on) was last used.

SortInfo=-1

Indicates last sort order.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes).

WinState=

Indicates the last state of a window. The next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

HelpFile=c:\sstrm*xx*\rpttools\pqr1.hlp

The Help file associated with Navigator.

FilterInfo=

Indicates the last used filter.

[Query] Section

The Query section is used to store settings for the Query tool.

InstallPath=c:\sstrm*xx*\rpttools\rqyd0001.exe

Where the Query executables are installed.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes).

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes).

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

MRU1=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU2=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU3=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU4=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

LastLocation=none

Indicates the last location of a Query build.

QueryTimeout=120

Not currently used.

ColWidth=12

Indicates default QBE column width in Query Designer.

OLEServerPath=c:\sstrm*xx*\rpttools\rcmq1000.exe

Indicates whether to generate a table even if no results are returned.

ObjApplication

Not currently used.

ObjCategory

Not currently used.

NoResults=Y

Indicates whether to create an output table even if no results are returned (Y or N).

HelpFile=c:\sstrm*xx*\rpttools\pqr1.hlp

The Help file associated with Query.

[Reporter] Section

The Reporter section is used to store settings for the Reporter tool.

InstallPath=c:\sstrm*xx*\rpttools\rrpd0001.exe

Where the Reporter executables are installed.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes).

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. The next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

MRU1=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU2=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU3=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU4=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

HeaderDefault=

Indicates print default for Reporter Frameworks.

FooterDefault=

Indicates print default for Reporter Frameworks.

HDefaultFont=Times New Roman

Indicates print default for Reporter Frameworks.

FDefaultFont=Times New Roman

Indicates print default for Reporter Frameworks.

HDefaultSize=10

Indicates print default for Reporter Frameworks.

FDefaultSize=10

Indicates print default for Reporter Frameworks.

HDefaultAlign=Left

Indicates print default for Reporter Frameworks.

FDefaultAlign=Center

Indicates print default for Reporter Frameworks.

HDefaultBold=1

Indicates print default for Reporter Frameworks.

FDefaultBold=1

Indicates print default for Reporter Frameworks.

HDefaultItalic=1

Indicates print default for Reporter Frameworks.

FDefaultItalic=1

Indicates print default for Reporter Frameworks.

HDefaultUnder=0

Indicates print default for Reporter Frameworks.

FDefaultUnder=0

Indicates print default for Reporter Frameworks.

FontLargest=75

Indicates print default for Reporter Frameworks.

FontSmallest=6

Indicates print default for Reporter Frameworks.

PageFontSize=10

Indicates print default for Reporter Frameworks.

Objdeforient=SetPortrait

Indicates print default for Reporter Frameworks.

ObjDefScale=100

Indicates print default for Reporter Frameworks.

ObjDefPages=None

Indicates print default for Reporter Frameworks.

DefaultSummaryAlign=Right

Indicates print default for Reporter Frameworks.

CountryInch=1

Indicates print default for Reporter Frameworks.

Font=Arial

Indicates print default for Reporter Frameworks.

Size=8.25

Indicates print default for Reporter Frameworks.

Orientation=Portrait

Indicates print default for Reporter Frameworks.

QueryBuild=REPORTING

RunExePath=c:\sstrm*xx*\rpttools\rrpopen.exe

ObjApplication=

ObjCategory=

RunMode=0

RunStatus=0

HelpFile=c:\sstrm*xx*\rpttools\pqr1.hlp

Indicates the path to the Help file associated with Reporter.

Design=0

[Analyzer] Section

InstallPath=c:\sstrm*xx*\rpttools\rand0001.exe

Where the Analyzer executables are installed.

RunExePath=c:\sstrm*xx*\rpttools\ranr0001.exe

Indicates the Anaylzer run executable.

PowerPlayExplorer=C:\Cognos\BI96

Indicates the location of Cognos PowerPlay Explorer.

PowerPlayXFormer=C:\Cognos\BI96

Indicates the location of Cognos PowerPlay Transformer.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. The next time a window is opened the window opens in this state.

0 = normal

2 = maximized

MRU1=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU2=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU3=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU4=

Indicates the most recently used Group ID and Object ID. Number and name are displayed at the bottom of the File menu.

Rollup=SUM

Indicates the Analyzer rollup option setting.

The default is SUM

Scale=0

Indicates the Analyzer scale option setting.

The default is 0.

Decimal=0

Indicates the Analyzer decimal option setting.

The default is 0.

Missing=na

Indicates the Analyzer Missing option setting.

The default is na.

Timing=After

Indicates the Analyzer timing option setting.

The default is After.

DeleteFilesOnError=N

Controls whether to delete files automatically when you create a report series and errors occur.

N = Do not delete files when errors occur.

Y = Delete files when errors occur.

SortByPointCount=Y

Indicates an alternative method of running that may result in faster execution.

ShowDDCols=11111

Indicates the display of columns in the designer.

0 = not display

1= display

ShowAmtCols=111111111

Indicates the display of columns in the designer.

0 = not display

1= display

Group ID=none

Not currently used.

RunStatus=0

Indicates when an Anaylzer is run through Report Series. Analyzer run process uses this entry to communicate to Report Series whether the run was successful.

HelpFile=c:\sstrm*xx*\rpttools\pqr2.hlp

The Help file associated with Analyzer.

AnsiToOEM=N

Allows the use of International Character Sets in an Analyzer specification (Y or N).

UseBlankPoints=Y

Allows the use of a summary point that has a blank point as a descendent in an Analyzer specification (Y or N).

[Series] Section

InstallPath=c:\sstrm*xx*\rpttools\rrsd0001.exe

Where the Report Series executables are installed.

DefaultGroupID=

The default group to be used in the group drop-down list

SecurityProfile=

Default security profile used to schedule a report series

ClassName=

Default class name used to schedule a report series

MailPackagePath=

Indicates the path to the Reporting Tools temporary directory where mail package files are written temporarily.

ObjApplication=Query&Reporter

ObjCategory=Report Series

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

MRU1=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU2=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU3=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU4=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

HelpFile=c:\sstrm*xx*\rpttools\pqr1.hlp

The Help file associated with Report Series.

MailOption=0

Indicates the default mail option.

0 = individual

1 = package and mail

2 = package without mail

MailIncomplete=1

Indicates the default mail option for incomplete packages.

0 = mail

1 = do not mail

[MR] Section

InstallPath=c:\sstrm*xx*\rpttools\rmrd0001.exe

Where the Management Reporter executables are installed.

RunExePath=

Indicates the install path of the run executable.

DefaultGroupID=1

Identifies a group to default into common dialog boxes and Management Reporter dialog boxes containing group selection. Valid values correspond to values in group_id column on the rob_object_group table.

DefaultPolicyID=1

Identifies the policy to use (that determines the default balance table) to open Management Reporter.

1=DSS
2=Ledger
3=Budget
4=Consolidations

DefaultContainer=1

Identifies default container type for report run.

1=Access
2=Excel

ABTable=ldr_acct_bal_formula

Indicates the balance table used for Average Balances.

MinGDI=30

Indicates the minimum GDI resources needed to run Management Reporter.

MinUSER=30

Indicates the minimum USER resources needed to run Management Reporter.

MinMemory=4096

Indicates the minimum memory in kilobytes needed to run Management Reporter.

MaxConnection=5

Identifies the maximum number of possible server connections for this client.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

MRU1=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU2=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU3=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU4=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

HelpFile=c:\sstrm*xx*\rpttools\pmr1.hlp

The Help file associated with Management Reporter.

[Structures] Section

The Structures section is used to store settings for the Structures tool.

InstallPath=c:\sstrm*xx*\rpttools

Where the Structures executables are installed.

Last Exported File

The name of the last .prl, .def or .lss file you exported.

Last Imported File

The name of the last .prl, .def or .lss file you imported.

Last Group Name

Indicates the last group name from which you opened a structure.

MRU1=

Indicates the most recently used structure.

MRU2=

Indicates the most recently used structure.

MRU3=

Indicates the most recently used structure.

MRU4=

Indicates the most recently used structure.

HelpFile=c:\sstrm*xx*\psrc1000.hlp

HelpFile=c:\sstrm*xx*\psrc4000.hlp

HelpFile=c:\sstrm*xx*\psrc7000.hlp

The Help files associated with Structures.

[Database] Section

MaxConnection=20

[Business Views] Section

InstallPath=

Where the Business Views executables are installed.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

MRU1=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU2=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU3=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

MRU4=

Indicates the most recently used group ID and object ID. Number and name are displayed at the bottom of the File menu.

PreviewCount=10

InstallPath=

HelpFile=c:\sstrm*xx*\rpttools\pqr3.hlp

The Help file associated with Business Views.

[Locations And Data Sources] Section

InstallPath=c:\sstrm*xx*\rpttools\rdsm0001.EXE

Where the Locations and Data Sources executables are installed.

ShowPhysical=1

Indicates the last used UI setting.

ShowProperties=1

Indicates the last used UI setting.

Driver=SQLServer

The ODBC driver for which defined servers appear in the list of available servers. The odbc.ini is scanned for entries for this driver. All entries for this driver appear in the server list.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

HelpFile=c:\sstrm*xx*\rpttools\pqr3.hlp

The Help file associated with Locations and Data Sources.

[Parameters] Section

InstallPath=c:\sstrm*xx*\rpttools\rpad0001.exe

Where the Parameters executables are installed.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

LimitValues=0

Allows users to enter where clauses when selecting values. This option is available when the Limit Values with SQL entry is checked under the Parameters menu item.

HelpFile=

Indicates the path to the Parameters Help file.

[Reporting Policy Controls] Section

InstallPath=c:\sstrm*xx*\rpttools\rpcu0001.EXE

Where the Reporting Policy Controls executables are installed.

ShowToolbar=1

Indicates whether to display the toolbar.

The default is 1 (Yes)

ShowStatusbar=1

Indicates whether to display the status bar.

The default is 1 (Yes)

ShowToolTips=1

Indicates whether to display Tool Tips.

The default is 1 (Yes)

WinState=

Indicates the last state of a window. Next time a window is opened the window opens in this state.

0 = normal

1 = minimized

2 = maximized

HelpFile=c:\sstrm*xx*\rpttools\ppcp1.hlp

The Help file associated with Reporting Policy Controls.

[Connect] Section

The Connect section of the dbs.ini is used to store settings for the SmartStream Connect application.

CICS Transaction=MCOM

Indicates the full name of the default CICS region in which to process SmartStream Connect on the host. The default that you enter here is displayed on the SmartStream Connect Download Request, Host Job Submission, and Transaction Upload windows for every type of download request. This field contains up to 4 alphanumeric characters.

This option is changed using the SmartStream Preferences window.

Millennium Transaction=M2LL

Indicates the default Millennium transaction ID that runs M:VP and PC Link queries. This field is displayed on the SmartStream Connect Download Request window for M:VP Online Query and PC Link Query requests. This field contains up to 4 alphanumeric characters.

This option is changed using the SmartStream Preferences window.

Millennium Control Program=M2LLMDIO

Identifier for the default Millennium program. The default for this field is M2LLMDIO. Change the program name here if your installation has changed the name. This field is displayed on the SmartStream Connect Download Request window for M:VP Online Query and PC Link Query requests. This field contains up to 8 alphanumeric characters.

This option can be changed using the SmartStream Preferences window.

Millennium CQD Filename=M20000

Indicates the Millennium CQD database. The default for this field is M20000.

This option can be changed using the SmartStream Preferences window.

Upload Destination Filename=IQUPLD

Indicates the CICS filename on the host of the receiving IQUPLD file. This field is displayed on the SmartStream Connect Transaction Upload window.

Host Operating System=11

Indicates the target host's operating system.

Job Class=A

Indicates the class of job submitted to the host. This is optional and consists of 1 alphanumeric character.

[Job_Scheduler] Section

The Job_Scheduler section of the dbs.ini stores settings for the graphical user interface of the Job Scheduler.

Location=*

Indicates the path to the location of the graphical user interface for Job Scheduler.

[Mail] Section

The Mail section of the dbs.ini is used to store settings for mail communications. These settings tell pmail32.dll how to communicate with the mail system.

MailAPI=0

Indicates the application programming interface for SmartStream to use to connect to a mail system.

0 = MAPI Mail

Note: The setting **0 = MAPI Mail** is the only valid option.

MailDLL=MAPI32.DLL

Defines the name of the Windows .dll file to load to provide mail services. The filename extension is required. The only legal .dll file is mapi32.dll.

TraceFile=c:\sstrmxx\mailtrc.txt

Specifies the path of the trace (log) file and turns SSTMail logging function on and off. Comment out this line or set the path to an empty string to disable this feature. You can also set TraceFile=DBWIN to write the log to a debug window, such as the Microsoft DBWIN.EXE utility provided with Visual C++.

[CommonFormulas] Section

InstallPath=c:\sstrm*xx*\rpttools\cfm40.exe

Where the Formulas executables are installed.

LogPath=C:\SSTRMXX

Specifies where to create the Formulas log file. The installation default is the \sstrmxx directory.

LogFileTraceLevel=2

Specifies the level of tracing for Formulas messages. The installation default is 2. These are the valid values:

0 - No tracing

1 - Trace all unexpected errors

2 - Trace all unexpected and trapped errors (default)

3 - Trace all unexpected, trapped, and user errors

4 - Extension tracing including internal function calls.

ServerTimeOut=10

Indicates the amount of time, in seconds, the Formulas process waits while trying to connect to the database server before quitting.

[MAIL Gateway] Section

If the client device is used as the Mail Gateway device, the following entries should appear:

Mail Directory=c:\maildir

Indicates the location of the mail directory.

Log File=c:\windows\mailgate.log

Indicates where to store the log file (if used).

Check Mail Interval=15

Indicates in minutes the MAPI Gateway processing interval.

ChecktoDos=1

Indicates whether Mail Gateway logs on to the database to check for To Do tasks and messages to be mailed. These are the valid values:

0 - Do not check for workflow To Do messages

1 - Check for for workflow To Do messages

RunMinimized=0

Indicates whether to run Mail Gateway in a minimized screen. These are the valid values:

0 - Do not run Mail Gateway minimized

1 - Run Mail Gateway minimized

SilentLogon=1

Indicates whether to log on to Mail Gateway automatically without user intervention.

0 - Open the logon prompt to use to log on to Mail Gateway

1 - Log on to Mail Gateway automatically. Skip the logon prompt.

SSPassword=

The encryted SmartStream password.

MailHost=

The Internet address of the Simple Mail Transport Protocol (SMTP) mail server.

MailHostPort=

The port address of the SMTP mail server.

MailSenderName=

The mail recipient name of the sender for mail sent by Mail Gateway.

MailSenderAddress=

The internet e-mail address of the sender for mail sent by Mail Gateway.

AdminName=

The mail recipient name of the user who receives administrative mail.

AdminEmail=

The internet e-mail address of the user who receives administrative mail.

DeliveryNotificationLevel=

Controls the delivery of an e-mail message to the Mail Gateway administrator about the status of each e-mail message Mail Gateway processes.

0 - Use the Delivery Status Notification (DSN) settings defined for the enterprise mail server (default)

1 - Do not issue delivery status notifications

2 - Return a delivery status notification if delivery fails

4 - Return a delivery status notification if delivery succeeds

8 - Return a delivery status notification if delivery is delayed

14 - Return a delivery status notification in all cases

[Projects] Section

The Projects section is used to store settings for SmartStream Projects.

Project Entity=

The project entity selected on the last window displaying the Project Entity field.

[DynamicFont] Section

Contains options for displaying SmartStream windows in traditional Chinese.

Parameter	Description
DynamicFont=	Y= SmartStream windows are displayed in traditional Chinese N= SmartStream windows are not displayed in traditional Chinese
DynamicFontName=	The name of the font to use.
DynamicFontBold=	Y= Display characters in bold N = Do not display characters in bold
DynamicFontHeight=	The height of the font.

dbspath.ini Settings

The dbspath.ini file stores a list of SmartStream and related application objects (in the form of PowerBuilder .pbd files) that is used to enhance system performance.

Warning: SmartStream builds this list of objects dynamically when you start SmartStream. You should not change the order of the subpaths in this file. If you do so, you run the risk of degrading system performance.

PowerBuilder .pdb files that are specific to a SmartStream application are stored in that application's subpath. For example, the PowerBuilder .pdb for the Job Scheduler (psc) is listed in the SMART_Scheduler subpath.

Objects not stored in PowerBuilder .pdb files (for example, Query&Reporter objects, which are stored in a Microsoft Access .mdb) are not part of the dbspath.ini file.

Objects installed on the client workstation have a parameter in the subpath of LOCAL. Objects accessed by the client workstation, but installed on a network file server, have a parameter in the subpath of REMOTE. Objects not installed on the client workstation or a network file server have a parameter in the subpath of UNUSED.

dbsched.ini Settings

The dbsched.ini file provides information that the Master Scheduler and Poll programs use during start up and normal processing. This .ini file contains only one section: [Scheduler].

Use the Job Scheduler Preferences section of the Preferences window to create or edit entries in the dbsched.ini file.

[SCHEDULER] Section

The Scheduler section is used to store settings for the Master Scheduler and Poll programs.

Server=

Indicates the name of the DBMS where the tsdx table resides.

Database=

Indicates the name of the Job Scheduler database where the tsdx table resides.

UserID=HA\

Indicates the server and database login ID for the server and database that contain the tsdx table. This can be up to 30 alphanumeric characters long.

Password=HA\

Indicates the password for the DBMS User ID. This can be up to 30 alphanumeric characters long.

Location=*

Indicates which Job Scheduler location the Poll program belongs to.

Poll=

Indicates the name of the Poll program. This can be up to 8 alphanumeric characters.

HostName=HA\Vrxjhg

This cannot be changed.

patch_enable=Y

This entry does not appear in the dbsched.ini for a server running the UNIX operating system.

Indicates whether the poll refreshes the files in its directory when it starts.

Y = Refresh files.

N = Do not refresh files.

update_dir=c:\sstrmxx

Indicates the location of the update directory that poll uses to refresh files automatically. This entry does not appear in the dbsched.ini for a server running the UNIX operating system.

arpc_server=servername

Indicate the name of the ARPC server. This does not appear in your dbsched.ini for a Windows server.

dbserver.ini Settings

The dbserver.ini file is used to store server settings for SmartStream.

[DBSERVER] Section

The DBSERVER section of the dbserver.ini file is used to store server settings for SmartStream.

AllowTSDXOverride=1

Indicates which logon window the user sees:

0 = User ID and password only.

1 = FULL logon with database and server. Use 1 if you have more than one server (for example, test and production), that you can log on to.

Server=frmhp04s3

Indicates the primary SmartStream server name.

TSDXDB=DBSctlg

Indicates the primary SmartStream ctlg database.

Owner=dbo

The value **dbo** is required.

DBMS=

Indicates which DBMS is installed.

SYT = Sybase Adaptive Server Enterprise

MSS = Microsoft SQL Server

Hostname=HA\Vrxjhg

The value **HA\Vrxjhg** is required.

SyncMapiSybaseLogin=1

If set to 1, this forces the user's mail ID to be the same as the SmartStream ID. On the Mail Logon window, the user ID is preloaded and uneditable. Only the password can be changed.

Terminal Server=

Set to N for a standard SmartStream client installation. Set to Y for a Terminal Services client installation.

[DBSUpdateApps] Section

The DBSUpdateApps section of the dbserver.ini file is used to store settings SmartStream uses to distribute support patches to each client machine.

Patch_Enable=0

Indicates if the patch update process can run.

0 = Not enabled.

1 = Patch enabled.

If the patch process is enabled, SmartStream checks for updated files after logon. If updated files are found on the network, the refresh.exe program runs. It shuts down SmartStream, updates the files, then restarts SmartStream.

If you are using Terminal Services, do not run multiple sessions of SmartStream when applying patches. Start one instance of SmartStream, apply the patch, and then allow multiple instances of SmartStream to begin.

[DocAttach] Section

The DocAttach section of the dbserver.ini file is used to store settings SmartStream uses for document enablement.

FileNetwork=

Indicates whether SmartStream has access to the file network.

0 = Locked out. The attach dialog box has no ability to attach documents to the file network.

1 = Normal File Open. Provides unrestricted use of the file network by SmartStream.

2 = Restricted use of the network. This setting is used with the FileLocation resource, which specifies where documents can be attached from.

FileLocation=

If FileNetwork=2, this specifies the directory path from which users can copy attachments.

Provider1=

Indicates a vendor to add to the **Attach a document from** drop-down list of the Attachment window.

Provider2=

Indicates a vendor to add to the **Attach a document from** drop-down list of the Attachment window.

[Structures] Section

DBSosxp is the default database to which Open Structures exports tables. You can change the target export database by making the following entry in the [Structures] section of the dbserver.ini file:

ExportServer=*server_name*

Where *server_name* is the server to which you want to export.

ExportDatabase=*database_name*

Where *database_name* is the database to which you want to export.

Note: You must have create table permission for the target database and server.

[*Database Name*] Section

The Database Name section of the dbserver.ini file is used to store properties for Panagon documents used by the Panagon databases. Add this section for each of the Panagon databases, and replace *Database Name* with the name of the database, for example, [Sampledb].

Name=

The default for this property is the title of the document. However, you can add a custom property for the document name using the custom property feature provided by Panagon for adding new document properties. Set the value for this custom property for document name to

Name=idmDocCustom<Propert ID>

For example, Name=idmDocCustom4

Type=

This property has no default. Add a custom property for document type and set this value to

Type=idmDocCustom<Property ID>

For example, Type=idmDocCustom5

Description=

This property has no default. Add a custom property for document description and set this value to

Description=idmDocCustom<Property ID>

For example, Description=idmDocCustom6

Author

The default for this property is the document owner. However, you can add a custom property for the document author and set this value to

Author=idmDocCustom<Property ID>

For example, Author=idmDocCustom7

Date=

The default for this property is the date the document is checked into the Panagon repository. However, you can add a custom property for the document date and set this value to

Date=idmDocCustom<Property ID>

For example, Date=idmDocCustom8

win.ini Settings

The following line must appear in each user's win.ini to run SmartStream.

[DBS] Section

The DBS section is used to indicate the location of the dbs.ini and dbsched.ini files and to determine where the client accesses the SmartStream Library.

CurrentRelease=SS*xx*

Where *xx* is the number of the current release.

SS*xx*=c:\sstrmxx\dbs.ini

Where *xx* is the number of the current release. Indicates the location of the dbs.ini file.

DBSCHED_INI=C:\SSTRMXX\DBSCHED.INI

Indicates the location of the dbsched.ini file.

UseDocLinkLocal=0

Indicates that the client accesses the SmartStream Library through AnswerLink, the SmartStream Support Web site.

[SQLSERVER] Section

This section shows the location of the logical servers that you can access. For example, for Novell entries:

servername=WDBNOVTC,159.172.131.35,3000

msacc20.ini Settings

The following lines must appear in the user's msacc20.ini file to use SmartStream Reporting Tools.

[Libraries]

The Libraries section of the msacc20.ini file contains entries that specify the location of the .mda files for Microsoft Access reporting in SmartStream and loads these files into memory for report message processing:

C:\SSTRM*XX*\PRPERROR.MDA=RW

C:\SSSTRM*XX*\CEPFRMT.MDA=RO

[ODBC] Section

The ODBC section settings are used by Microsoft ODBC for interaction with SQL databases.

DisableAsync = 1

When using Microsoft Access 2.0, add this setting to run in synchronous mode. The default is asynchronous mode.

version.ini

This file contains SmartStream version information and is used only by the patch update process.

9 Product Code Naming Conventions

Chapter Contents

9-1 Product Code Naming Conventions

Product Code Naming Conventions

The following table shows the SmartStream convention for product naming. You can use this information to understand product-specific error codes and product activities.

Where Code	Meaning	Description and Values
s	Source Application Family	Use one of these values: **c** = Common Business **f** = Financials **h** = Human Resources **m** = Materials Management, Distribution **p** = Platform/Architecture **u** = User-defined **x** = Another software vendor's initial
aa	Application	A two-letter acronym that identifies the application code.

Application Codes

SmartStream application codes are listed in the following table:

Code	Product
aa	Workflow Administration (reserved for online Help files)
am	Workflow
ap	Payables

Code	Product
ar	Receivables
bk	Bank
bl	Billing
bn	Benefits
ca	Cost Accounting
cd	Common Data
cf	Common Functions: Application Architecture; Platform; Common (such as Address/Telephone)
cl	Calendars
cm	Currency Management
co	Consolidations
da	Database Administration
dc	Data Collection
dr	Distribution
en	Engineering
ep	Enterprise Policy
fa	Asset Management
fc	Forecasting
gl	General Ledger
hs	Health & Safety
iq	SmartStream Connect
je	Journals
lc	Lot Control
lr	Labor Relations
lt	SmartStream
os	Organizational Structures
pl	SmartStream
pm	Project Management
pn	Personnel
po	Purchasing
py	Payments (Financial) and Payroll (HR)
qc	Quality Control
qe	Quotes & Estimating
rq	Requisitions
sc	Scheduler

Code	Product
sp	Support
sr	User-Defined
st	System
tc	Time Collection and Reporting
ut	Utilities
vn	Vendors
wm	Warehouse Management
wt	Warranty Tracking