

maximo enterprise suite

Maximo 6

Installation Guide July 2006

Navigator

MS SQL Server

mro software™

make it *all* count

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About This Guide

This section briefly summarizes this document and how it can help you as a Maximo user. It also provides information on other MRO resources available to you, such as additional documentation and support.

Why Read This Guide?

To install the Navigator application on your Maximo® system using a Microsoft SQL Server database.

Who Should Read This Guide?

- ▼ The Maximo System Administrator (the person who has the Maximo password).
- ▼ A Database Administrator (DBA) who has access to the System Administrator password to install Navigator.
- ▼ A Web Administrator to configure portions of the Navigator and modify the configuration of the Maximo system.

How to Use This Guide

The first chapter of this guide provides an overview of the installation procedure. The next chapter provides a series of procedures necessary for properly installing and uninstalling Navigator. The appendices provide additional support information.

Notation Conventions

This guide uses the following typographical conventions:

- ▼ **Bold** type indicates elements of the user interface (display) including the following elements:
 - Buttons
 - Field names
- ▼ *Italic* type is used to indicate documentation titles, and for emphasis.

This guide uses the following term: “Navigator” is the new name for this application. Previously, Navigator was known as “Illustrated Parts Catalog (IPC).” Some parts of the installation still refer to the application as IPC.

Chapter Contents

The following table provides a description of each chapter in this guide.

Chapter Name	Chapter Contents
Navigator Installation Overview	An overview of what you need to know and what to expect when installing the Navigator application.
Navigator Install	The procedures necessary to prepare, install, and test the Navigator application.
Navigator Uninstall	The procedure necessary to uninstall the database components for the Navigator application.

Related Documentation

In addition to this document, you can find information regarding the Navigator application in the following documents:

Document	Description
<i>Maximo Navigator System Administrator's Guide</i>	Describes how to create, edit, and maintain the Navigator application on a Maximo system.
<i>Maximo Navigator Installation Guide, Oracle</i>	Describes how to install and setup the Navigator application on a Maximo system using an Oracle database.
<i>Maximo Navigator Online Help</i>	The primary source of information for using the Navigator application.
<i>Maximo User's Guide</i>	Contains a chapter that provides an overview of the Navigator application.

Support

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<http://www.mro.com>

MRO Software, Inc. users with a valid Annual Customer Support Plan (ACSP) can obtain product support online at

<http://support.mro.com>.

The Support Web site includes information about product releases, software patches, and documentation updates. To find the most current version of a document, refer to the Support Web site's Knowledge Base.

Installation Overview

This installation guide provides guidelines on how to install the Navigator software. It also includes instructions on generating SQL Server databases that Navigator requires.

NOTE “Navigator” is the new name for this application. Previously, Navigator was known as “Illustrated Parts Catalog (IPC).” Some parts of the installation still refer to the application as IPC.

CAUTION This installation guide is only for new installations of Navigator and not for updating existing Navigator installations.

The Maximo Enterprise Suite must be installed and working before Navigator can be installed. Refer to the Maximo installation documentation.

Navigator installation requires personnel with the following three roles:

- ▼ The Maximo System Administrator (the person who has the Maximo password).
- ▼ A Database Administrator (DBA) who has access to the System Administrator password to install Navigator.
- ▼ A Web Administrator to configure portions of the Navigator and modify the configuration of the Maximo system.

Each installation procedure in this guide identifies a role who should perform it.

TIP MRO Software highly recommends that you follow the procedures in order listed in this guide. This will ensure that Navigator is installed, tested, and verified against the demo database before you begin operation against your production database.

Installation Outline

The following is a general outline for installing and testing Navigator. Instructions for each step are provided on the specified pages.

NOTE There are two types of installation procedures: for demo systems and for production systems. Demo systems are for testing Navigator against the demo database before operating your production system. The procedures for preparing for your production system are essentially the same as they are for the demo database. See “Production Installation Notes” on page A-1 for notes to explain the differences.

Step	Task	Resource
Install Navigator.	Prepare the Control Center workstation.	page 2-1
	Run the installation program.	page 2-4
	Install on a network.	page 2-9
	Set up the Control Center applications.	page 2-10
	Import data.	page 2-11
Run the Maximo Upload Installation.		page 2-13
Install the Navigator Application Server Components.		page 2-17
Test and validate.	Run the Maximo Upload Application.	page 2-22
	Access Navigator.	page 2-27

Requirements for the Control Center Workstation

- ▼ Microsoft Windows® NT 4.0/2000/XP
- ▼ Pentium® II processor or above
- ▼ 266 MHz or faster
- ▼ 512k Cache or greater
- ▼ 64MB RAM or greater
- ▼ 5.1 GB Hard Drive or greater
- ▼ CD-ROM drive
- ▼ Network interface card
- ▼ Network access to a shared drive
- ▼ Microsoft SQL Server® 2000 Client or above
Ensure OSQL is available from the command line
- ▼ High-resolution monitor, 17" to 21"

Install Procedure

2

There are two types of installation procedures: for demo systems and for production systems. Demo systems are for testing Navigator against the demo database before operating your production system. The procedures for preparing for your production system are essentially the same as they are for the demo database. For notes to explain the differences, see Appendix A, "Production Installation Notes," on page A-1.

Preparing the Control Center Workstation

NOTE This procedure must be performed by a Maximo System Administrator.

NOTE If your production system is going to have more than one Control Center workstation, make sure to map image locations using the same drive letter for all PCs. For example, if the drive letter is "i", the directory should be **i:\manuals** on all PCs.

The Control Center Workstation is where you access the Navigator system administration applications. Additional Control Center Workstations may be created later.

After the various components of Navigator are installed from this workstation, the links to Navigator content are available to all Maximo users.

Installation copies approximately 60MB of programs and data to the workstation. MRO recommends that this be installed on a local drive rather than on a network drive so you can validate the process. You can re-install it later to a network drive accessible to other administrators. See "Installing Navigator on a Network" on page 2-9.

Make a note of the following IDs for the Maximo installation where you intend to add the Navigator application:

▼ Site ID: _____

▼ Organization ID: _____

▼ Item Set ID: _____

▼ Company Set ID: _____

Preparing for Microsoft SQL Database Creation

NOTE This procedure must be performed by a Microsoft SQL DBA.

NOTE Please note the following when preparing for the Microsoft SQL database creation:

- ▼ Images used in Navigator are *not* stored in the database, so you do not need to account for their required disk space when setting up the database size.
- ▼ The Navigator Demo database should be integrated with the Maximo Demo database and the Navigator Production database should be integrated with the Maximo Production database. Install the Maximo Demo database now if necessary.
- ▼ The Navigator database must be in the same SQL Server installation as the Maximo database.
- ▼ SQL Server Prerequisites: If you are installing SQL Server 2000, the database must be configured for SQL Server 7 compatibility, which is done at the time you create the database.

To prepare for the database creation, complete the following steps:

- 1 Determine and record the version of SQL Server client to install.

-
- 2 Create a Navigator database with autoextend and unlimited disk space turned on.
 - 3 Create a Navigator log-in ID for the Navigator database, selecting SQL Server Authentication.

NOTE Use related names for Navigator schemas and tablespaces. For example, to set up a Navigator database interfacing with a MAXDEMO system, a production database, and a test copy of the production database, you could use the following:

- NAVDEMO, NAVPROD, and NAVTEST as schema owners
 - NAVDEMO_DATA, NAVPROD_DATA, and NAVTEST_DATA as tablespace names
- 4 Enable your Navigator log-in ID to be used to install the Navigator application. Start Query Analyzer using the *.sa.* log-in ID. Set your database to the Navigator database and run the following commands (replacing *.IPCUSER.* with your Navigator log-in ID):
 - ▼ `*sp_changedbowner IPCUSER`
 - ▼ `*go`
 - 5 Add the maximo user to the Navigator database.

6 Using Enterprise Manager, grant the following roles to the maximo user you just added:

- ▼ *db_datareader
- ▼ *db_datawriter

7 Record the SQL Server Navigator user IDs and passwords for the production database and the demo database.

- ▼ SQL Server user ID and password for Navigator production:

- ▼ SQL Server user ID and password for Navigator demo:

8 Define and record an SQL Server Maximo user IDs for the production and the demo versions of Navigator.

- ▼ SQL Server Maximo user ID for Navigator production:

- ▼ SQL Server Maximo user ID for Navigator demo:

9 Close all Windows programs.

Running the Navigator Installation Program

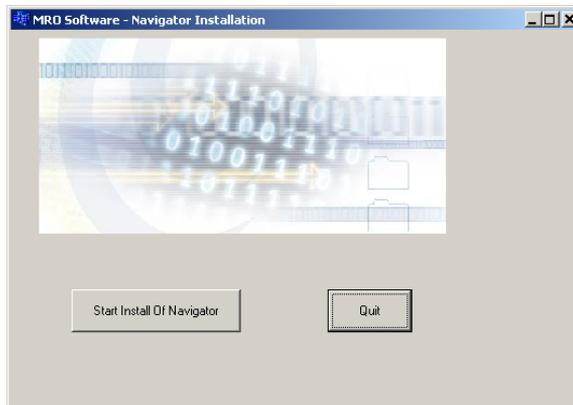
NOTE This procedure must be performed by a Maximo System Administrator.

TIP If this is not a new installation, you must first remove existing database instances. See Chapter 3, "Uninstalling the Navigator Database," on page 3-1.

To run the Navigator installation program, complete the following steps:

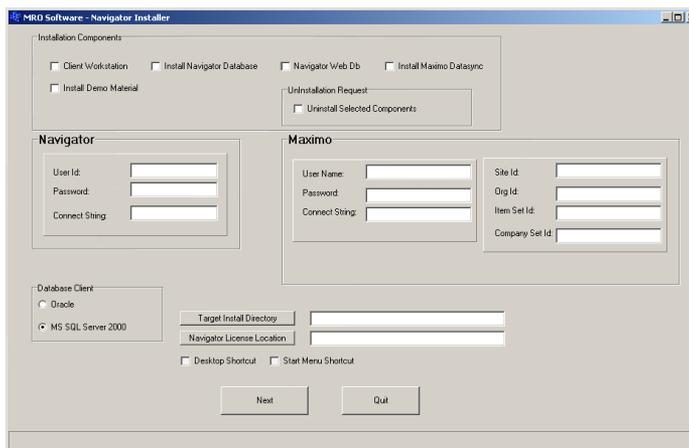
- 1 Close all Windows programs.
- 2 Insert the Navigator Installation disc into the CD-ROM drive.
- 3 On the Windows taskbar, click **Start**, and then click **Run**. The Run dialog box opens.
- 4 Click **Browse**, double-click the CD-ROM drive (usually drive D:), double-click the **Navigator** folder and double-click **NavigatorInstall.exe**. The Navigator Installation introduction dialog box opens:

Navigator Installation Introduction Dialog Box



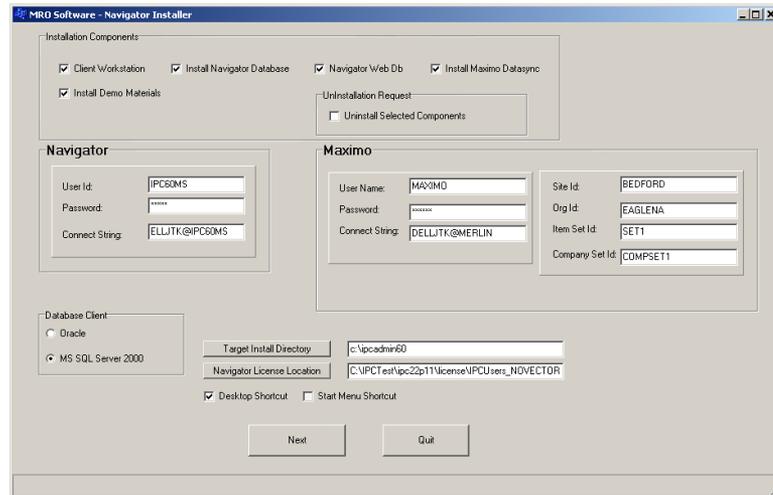
- 5 Click **Start Install of Navigator**. The Navigator Installer dialog box opens:

Navigator Installer Dialog Box



6 Fill in the fields in the dialog box. Use the figure below as an example.

Navigator Installer Dialog Box: Example Data



Installation Components Area:

- ▼ **Client Workstation:** Select to install the Control Center client, which provides access to Navigator administration applications.
- ▼ **Install Navigator Database:** Select to populate Navigator database tables.
- ▼ **Navigator Web Db:** Select to populate the Navigator Web server database, which allow access to Navigator data through the Maximo client.
- ▼ **Install Maximo Datasync:** Select to synchronize data between Navigator and Maximo.
- ▼ **Install Demo System and Materials:** Select to install a *demo system* that works with the MAXDEMO system. When installing your production system, you do not select this check box.
- ▼ **Uninstall Selected Components:** Do not select for installation.

Navigator Area:

- ▼ Type the User ID and Password for the Navigator set up by your DBA for the database. For example, *NavigatorUser* and *NavigatorUser*. (See the values recorded on “Preparing for Microsoft SQL Database Creation” on page 2-2.)
- ▼ Type the Connect String for the Navigator database in the following format: `SERVER@DATABASE`. You can see your Server Name under the SQL Server group in Enterprise Manager. For example, `MKT23_PC@IPCTESTDB` or `MKT23_PC\DEMO@IPCTESTDB`

Maximo Area:

- ▼ Type the Maximo User Name and Password for the Maximo system. For example, *MAXDEMO* and *MAXDEMO*. (See the values recorded on “Preparing for Microsoft SQL Database Creation” on page 2-2.)

- ▼ Type the Connect String for the Maximo database in the following format: SERVER@DATABASE. You can see your Server Name under the SQL Server group in Enterprise Manager. For example, MKT23_PC@MAXDEMO or MKT23_PC\DEMO@MAXDEMO
- ▼ Type the **Site ID, Organization ID, Item Set ID, and Company Set ID** that were set up by your Maximo Administrator. (See the values recorded on “Preparing the Control Center Workstation” on page 2-1.)

Database Client Area:

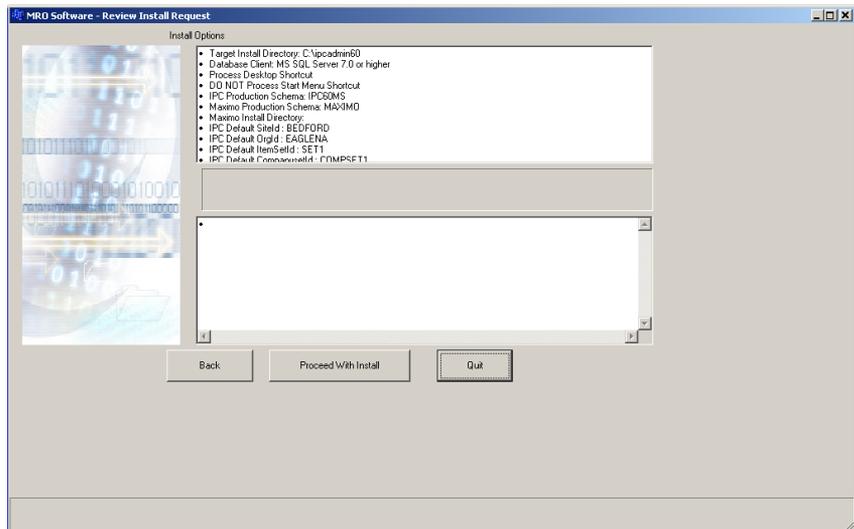
Select **MS SQL Server 2000**.

Bottom Area:

- ▼ Click **Target Install Directory** to create a folder where the Control Center files will be installed. For example, C:\Navigator. The program inserts this path in the field next to the button.
- ▼ Click **Navigator License Location** to locate the file that has the Navigator client license. This is on a floppy disk. For example, A:\IPCUsers.lic. The program inserts this path in the field next to the button.
- ▼ Select the **Desktop Shortcut** check box to install Navigator shortcuts on the Windows desktop.
- ▼ Select the **Start Menu Shortcut** check box to install Navigator shortcuts on the Windows Start menu.

7 Click **Next**. The Review Install Request dialog box opens:

Review Install Request Dialog Box



-
- 8 Review the options in the **Install Options** field. If you would like to make a change, click **Back**. Otherwise, click **Proceed with Install**. The program begins running the install scripts and lists progress in the lower field.

As the program does this, it checks for errors, and then a dialog box opens to indicate that files are being copied to the install folders.

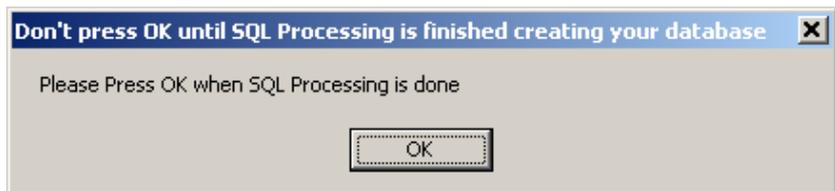
- NOTE** If there is an error (such as an incorrect database connect string), the install process stops. Click **Back** to go to the previous dialog box and a message opens on the status bar identifying the error. When you fix the problem, again click **Proceed with Install**.

The following dialog box opens:



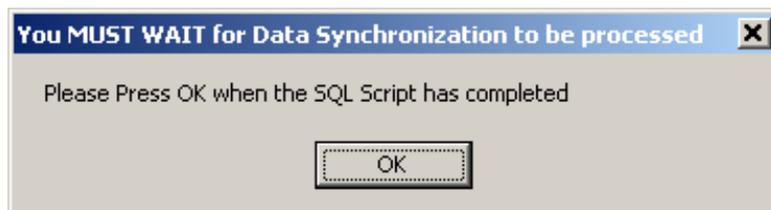
- 9 The SQL Server OSQL program starts and runs a set of install scripts for the Navigator database. After the scripts are complete, Notepad opens showing the results. Close Notepad and the SQL Server OSQL program closes automatically.

- 10 Click **OK**. The following dialog box opens:



- 11 The SQL Server OSQL program starts and runs a set of install scripts for the Navigator Web database. After the scripts are complete, Notepad opens showing the results. Close Notepad and the SQL Server OSQL program closes automatically.

- 12 Click **OK**. The following dialog box opens:



13 The SQL Server OSQL program starts automatically and runs the DataSync install scripts. After the scripts are complete, Notepad opens showing the results. Close Notepad and the SQL Server OSQL program closes automatically.

14 Click **OK**. The following dialog box opens:



15 The install is now complete. Click **OK**.

16 Click **Quit**.

If **Desktop Shortcut** was selected in Step 6 on page 2-5, the following shortcut icons appear on the desktop:

- ▼ For Navigator demo installation:
 - Navigator Admin Demo
 - SecUtil Demo
 - PUP Demo

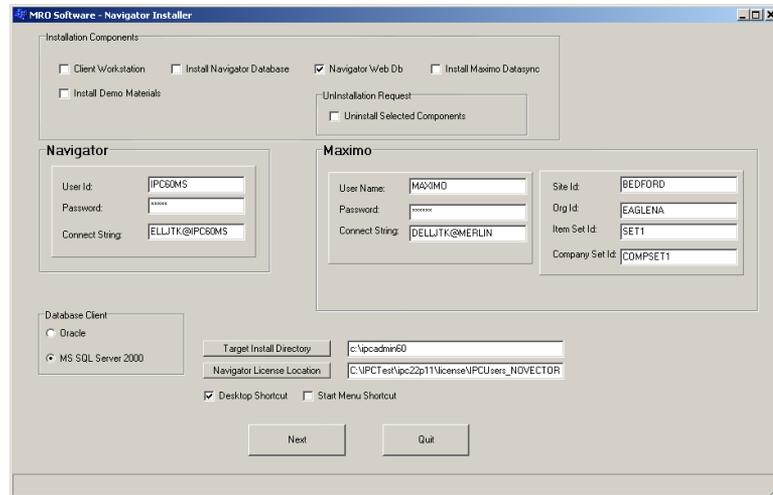
- ▼ For Navigator production installation:
 - Navigator Admin
 - SecUtil
 - PUP

Installing Navigator on a Network

Navigator may need to be installed to place it on a network drive and make it available to additional workstations.

The Installation program lets you specify that no databases or Datasync are installed. Do this by clearing the **Install Navigator Database** and **Install Datasync** fields. See the following figure:

Navigator Installer Dialog Box



By doing this, the installation program only installs the program code in the defined location and adjusts the path parameters in the configuration files.

If the program code is to be accessible to multiple workstations, those workstations must use the same drive mapping (for example, M:\Navigator) to ensure the configuration files work properly.

Follow the instructions for installing the application with the **Install Navigator Database** and **Install Datasync** boxes cleared. See “Running the Navigator Installation Program” on page 2-4.

Setting Up Navigator Administration

NOTE This procedure must be performed by a Maximo System Administrator.

The Database Password File utility (secutil.exe) records the SQL Server User ID and password for Navigator. This information is stored in an encrypted file.

To set up SQL Server user IDs, passwords, and connect strings, complete the following steps:

- 1 Double-click the **SecUtil** shortcut on the desktop.
- 2 Click **Yes** for creating a new password data file. The utility logon dialog box opens.
- 3 Type *water* for the username and *ford* for the password in the appropriate fields. (These are case sensitive.)
- 4 Click **OK**. The Edit User dialog box opens. **ADMINISTRATOR** is the default. This may be modified.

NOTE Use the same Navigator User ID (username), Password, and Connect String that you used when installing the Navigator application. See “Preparing for Microsoft SQL Database Creation” on page 2-2.

- 5 Type the following information. (Each are case sensitive.)
 - ▼ Navigator User ID in the **Username** field.
 - ▼ Navigator Password in the **Password** field.
 - ▼ Navigator Password again in the **Confirm Password** field to confirm it.
 - ▼ Navigator Connect String in the **Connect String** field.
- 6 Click **Add**. The user appears in the Users list.
- 7 Select the **Navigator User** and click **Set Default** to set it as the default.
- 8 Click **Exit** to close the application.

Installing Demo Data

NOTE These procedures must be performed by a Maximo System Administrator.

TIP For more instructions on using the Import Manuals, TOCs, and Indexes application, refer to the *Navigator System Administrator's Guide*.

The following instructions let you import data into the demo database to make sure everything is installed properly. Data is imported using the Control Center applications: Importing Manuals, TOCs and Index.

Starting the Importing Manuals, TOCs, and Index Navigator Application

To start the Importing Manuals, Table of Contents, and Index applications, complete the following steps:

- 1 Start the Control Center by double-clicking the **Navigator Admin** shortcut on the desktop.

NOTE If a Control Center shortcut was installed on the Start menu, you can click the Windows **Start** button, and then click **Navigator Admin**.

- 2 On the main window, click **Importing Manuals, TOCs and Index**.

- 3 In the Security dialog box, type the following User ID and password:

- ▼ **User ID:** ADMIN
- ▼ **Password:** ADMIN

NOTE This User ID and Password are for Navigator only. They have nothing to do with other Maximo or database User IDs and Passwords.

- 4 Click **OK**. The application starts.

NOTE Two initial User IDs and passwords are loaded into Navigator:

- User ID **ADMIN** with a password of **ADMIN**.
- User ID **LOGOUT** with a password of **LOGOUT**.

You should modify the passwords as soon as possible using the Security application in the Navigator Control Center. You can also use this application to create User IDs and Passwords for System Administrators.

Importing Manuals

To import manuals, complete the following steps:

- 1 Click **Import Manuals**. The Import Manuals window opens.
- 2 From the **Manuals Available** drop-down list, select *MROI9999*.
- 3 Click **OK**. When the import is complete, a message box opens showing how many manuals were successfully imported.
- 4 Click **OK**. If any errors occurred during the import, another message box opens stating this and asking you to check your log file.

Importing Tables of Contents

To import tables of contents, complete the following steps:

- 1 Click **Import Table of Contents**. The Import TOCs window opens.
- 2 From the **TOCs Available** drop-down list, select *MROI9999*.
- 3 Click **OK**. When the import is complete, a message box opens showing this.
- 4 Click **OK**. If any errors occurred during the import, another message box opens showing this and asking you to check your log file.

Importing a Selection Index

To import a selection index, complete the following steps:

- 1 Click **Import Selection Index**. The Import Selection Index window opens.
- 2 From the **Indices Available** drop-down list, select *SELINDEX*.
- 3 Click **OK**. When the import is complete, a message box opens showing this.
- 4 Click **OK**. If any errors occurred during the import, another message box opens showing this and asking you to check your log file.

Running the Maximo Upload Installation

NOTE You must have knowledge of the Maximo installation paths to perform this procedure.

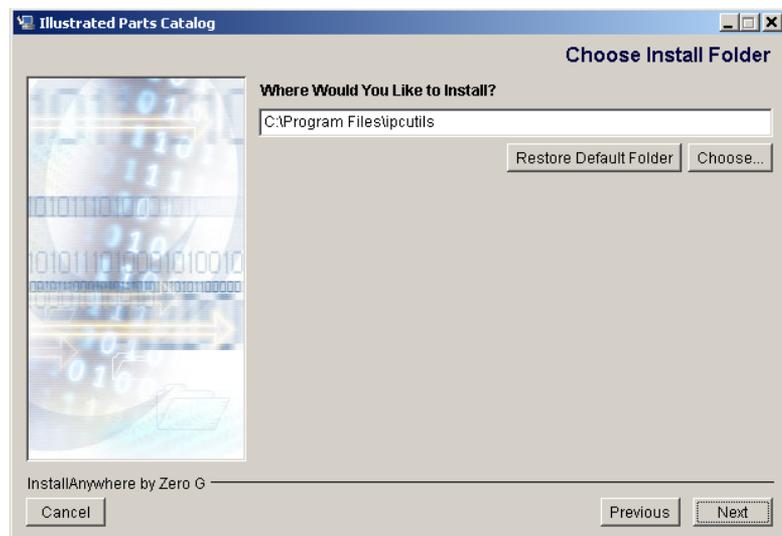
The Maximo Upload utility can be installed on either the Maximo Application Server or the Control Center Workstation. If Maximo Upload is installed on the Control Center Workstation, the workstation must have one of the following configurations:

- ▼ Network drive access to the application server
- ▼ A copy of the Maximo files from the application server copied locally to it

To run the Maximo Upload installation, complete the following steps:

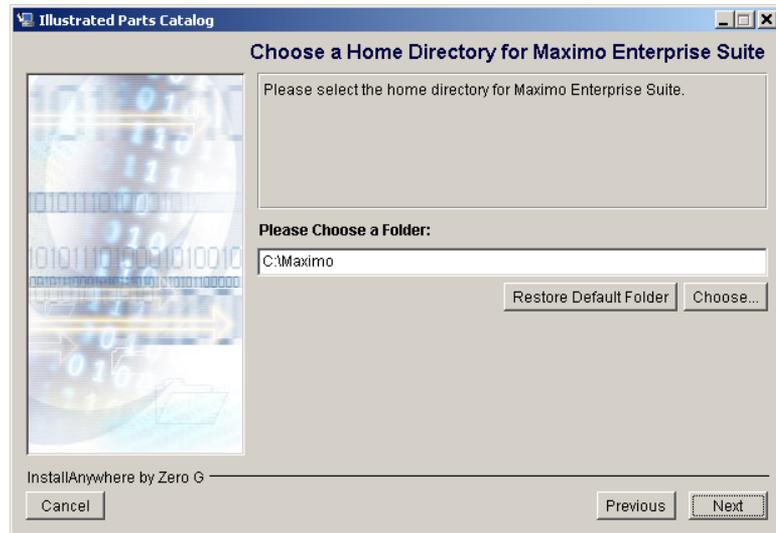
- 1 Close all Windows programs.
- 2 Insert the Navigator Installation disc into the CD-ROM drive and start the installation program.
- 3 Locate the **navigatorutils.exe** file in the root of the Navigator Installation disc and double-click it to open it.
- 4 Click **Next**. The Choose Install Folder dialog box opens:

Choose Install Folder Dialog Box



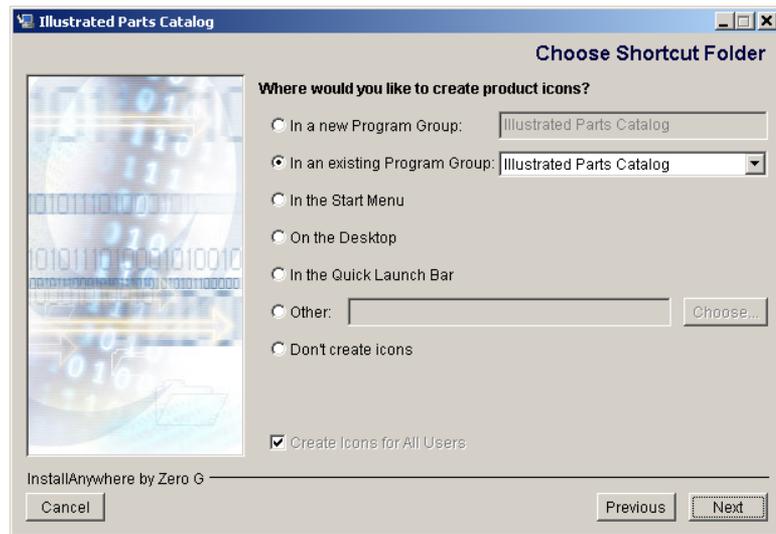
- 5 Select the folder where you would like to install Maximo Upload and click **Next**. The Choose a Home Directory dialog box opens:

Choose a Home Directory Dialog Box



- 6 Select the folder where Maximo is installed and click **Next**. The Shortcuts dialog box opens:

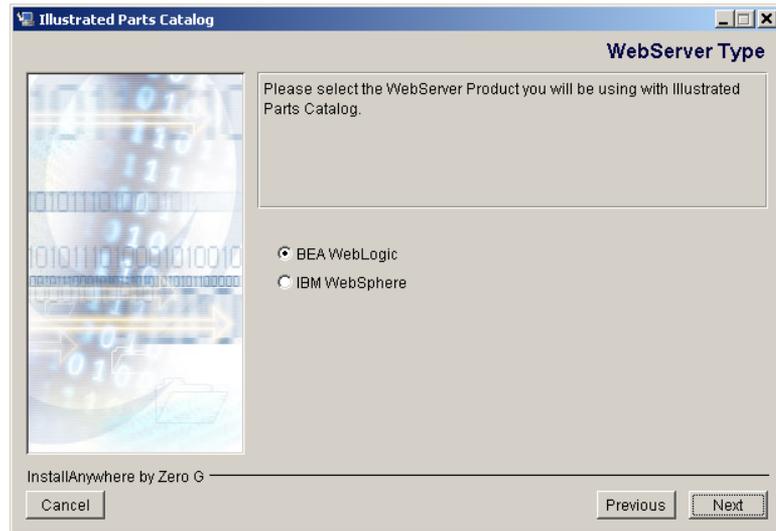
Shortcuts Dialog Box



- 7 Select where you want to create shortcuts for Maximo Upload and click **Next**. The Web Server dialog box opens:

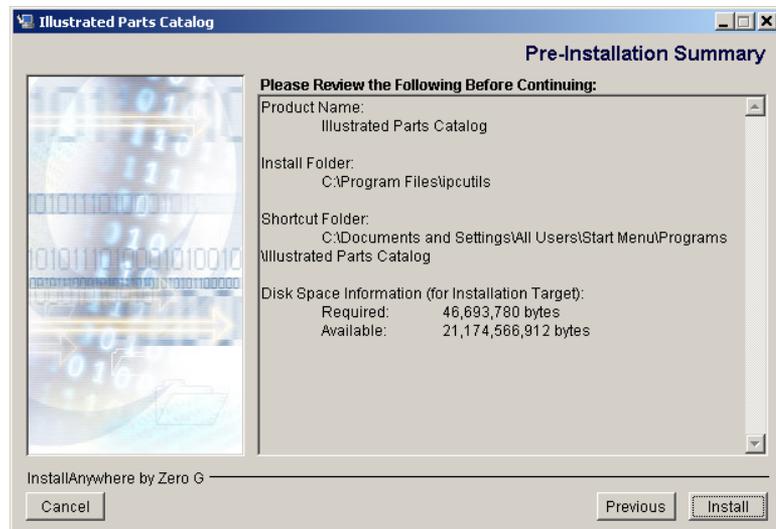
TIP You can select the **Create Icons for All Users** check box if you want to install a shortcut for all Windows users on the computer, not just the current user.

Web Server Dialog Box



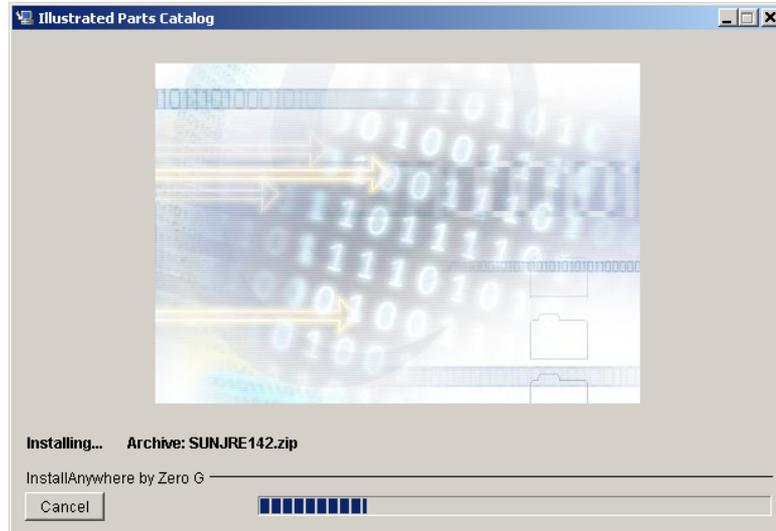
- 8 Select the Web Server type for Navigator and click **Next**. The Pre-Installation Summary dialog box opens:

Pre-Installation Summary Dialog Box



- 9 Review selections and if everything is set up correctly, click **Install**. (Otherwise, click **Previous** and make corrections.) The program installs Maximo Upload.

Maximo Upload Installation Dialog Box



- 10 When the installation is complete, click **Done** to quit the installation program.
- 11 Link the newly installed applications to the Control Center.
 - a Locate the **ipcsys.ini** file in the Navigator\INI folder.
 - b Open the file in a text editor (such as Notepad) and locate the [MAXIMO] section.

For Maximo Upload, locate the **ACTIVATE MAXIMO** line and type the path to the executable. For example,

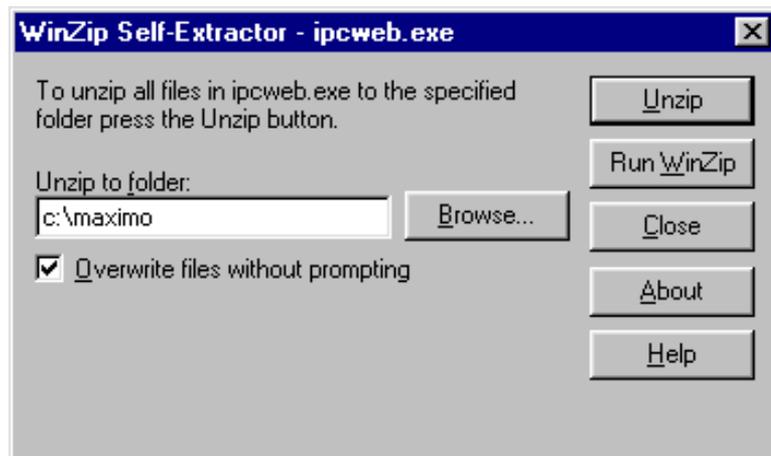
```
ACTIVATE MAXIMO=C:\program  
files\navigatorutils\MaximoUpload.exe
```

Installing Navigator Application Server Components

NOTE This procedure must be performed by a Web Administrator and the Maximo System Administrator. They must have knowledge of the Maximo installation paths to perform this procedure.

Installing Navigator application server components integrates Navigator with the Maximo application server. To install these components, complete the following steps:

- 1 Locate the **navigatorweb.exe** file in the root of the Navigator Installation disc and double-click it to open it. The WinZip Self-Extractor dialog box opens:



- 2 Click **Browse** and select the Maximo root folder,
for example: c:\Maximo
- 3 Click **UnZip**. The program extracts the files and a message box opens when it is done.
- 4 Click **OK**, then **Close**.
- 5 Edit the **ipconfig.properties** file with your other configuration changes. (Information for each setting is included in the file.) The file is located in following folder: <drive letter>:<Maximo_installation_location>\applications\maximo\properties\
for example: c:\Maximo\applications\maximo\properties\

- 6 Select and configure a method for serving Navigator image files. You can do this either by using the Navigator servlet or with a Web server.

NOTE Using the Navigator servlet is the simpler method, but it is not as flexible or as efficient as using a Web server.

- ▼ **Navigator Servlet.** The application server (where Navigator is running) must have the same drive mapping for the images as the Control Center Workstation does. So if the Control Center Workstation is putting all images under “d:\manuals\”, then the application server must have them under “d:\manuals\” (either mapped or mirrored). To use this method, set “use_local_path=true” in the **ipconfig.properties** file. There is no need to configure the **drivemap.xml** file.
- ▼ **Web Server.** Set “use_local_path=false” and configure the **drivemap.xml**. This process may vary from Web server to Web server. For sample configurations and associated information, see “Mapping Image Locations” on page B-1.

Demo data is installed with the Control Center code. A Manuals folder is installed in the Navigator folder that contains images for the MROI9999 manual.

- 7 Execute the **ipcmessageloader.bat** file located in this folder:
<drive letter>:<Maximo_installation_location>\tools\maximo\

for example: c:\Maximo\tools\maximo\

- 8 Run the “**buildmaximoea.cmd**” script to build the “.ear” file in the following folder:
<drive letter>:<Maximo_installation_location>\deployment\

for example: c:\Maximo\deployment\

- 9 Re-deploy the **maximo.ear** file.

CAUTION As with Maximo, if you make any changes to Navigator or its configuration, you must reload the “.ear” file and redeploy it.

- 10 Locate the **navigatorhelp_en.exe** file at the root of the Navigator Installation disk and double-click to open it.

- 11 After the installer launches, select the Maximo root folder and click **Next**.

- 12 Run the “**buildhelpa.cmd**” script in the deployment folder:
<drive_letter><maximo_installation_location>\deployment\

for example: c:\Maximo\deployment\

- 13 Re-deploy the **maximohelp.ear** file.

14 Log-in as a Maximo administrator (MAXADMIN role) and go to the Application Designer application. Click **Import Application Definition** on the toolbar. A dialog box opens and prompts for a filename. Select the **ipc.xml** file located in the following folder: <drive letter>:\Maximo_installation_location>\resources\presentations\

for example: c:\Maximo\resources\presentations

15 Click **OK**. A confirmation message box opens stating in the message status area that the file was successfully imported.

16 By default only users with the MAXADMIN role have access to Navigator. To give other users access, you must go to the Security Groups application, select the group(s) you want to have access to Navigator, and give them **READ** access.

NOTE For more information on setting security, refer to the Maximo Online Help.

Modifying Field Lengths

You may need to modify database table field lengths depending on how you are setting up Navigator. Please note:

- ▼ To ensure the upload of data from Navigator to the Asset application works correctly, increase the size of the MODELNUM field (object INVENTORY, attribute MODELNUM) size to 60.
- ▼ If you use the Maximo Database Configuration tool to modify certain column sizes in Maximo, then some fields in the Navigator database, and some in the Maximo database may need to be modified using standard DBA tools. See the tables on the following page.

NOTE These tasks must be performed by a Maximo System Administrator.

NOTE After changing any column lengths in Navigator you must re-compile any invalid database objects. (For example, triggers, views, packages, procedures, functions)

Modifying Field Lengths

Assets

Column Size Installed	Maximo Table.Column	Navigator Table.Column	Column Size Installed	Maximum Size
12	Asset.Assetnum	Asset.Asset_Number	15	60
		AssetManual.Asset_Num	15	60
		AnnotAsset.Asset_Number	15	60
		AssetMaximoUploadHistory .Asset_Number	15	60
		Datasyncerrors.Assetnum	60	60
		Datasyncreport.Assetnum	60	60
		Max_MM2_Interface.Assetnum*	60	60
100	Asset.Description	Asset.Asset_Desc	100	250
12	Asset.Location	Asset.Location	40	60

Locations

Column Size Installed	Maximo Table.Column	Navigator Table.Column	Column Size Installed	Maximum Size
12	Locations.Location	IpcLocation.Location	15	60
		IpcLocationManual.Location	15	60
		AnnotIpcLocation.Location	15	60
		IpcLocMaxUpLoadHistory.Location	15	60
		Datasyncerrors.IpcLocation	60	60
		Datasyncreport.IpcLocation	60	60
		Max_MM2_Interface.Location*	60	60
100	Locations.Description	IpcLocation.Description	250	250
16	Locations.Type	IpcLocation.Type	60	60

Items

Column Size Installed	Maximo Table.Column	Navigator Table.Column	Column Size Installed	Maximum Size
30	Item.Itemnum	Altpart.Alt_Num	60	60
		Item_Category.Itemnum*	30	60
100	Item.Description	Altpart.Alt_Description	250	250
8	Inventory.ModelNum	Part.Part_Number	60	60

**Other Database Field Sizes
You May Alter in Navigator**

You may also increase the size of the hotspot label columns in Navigator. No Navigator applications should be running when changes are made to Navigator column sizes. Navigator automatically compensates when restarted, allowing users to enter longer fields.

To increase the size of the hotspot columns in Navigator, use the database tool to increase the following *table.columns* to the needed length:

- ▼ Altpart_annot.label
- ▼ Annotasset.label
- ▼ Annotation.label
- ▼ Annottable.label
- ▼ Annot_coord.label
- ▼ Cmnannot.label
- ▼ Note.label
- ▼ Partannot.label

NOTE If you increase the length of *Asset.Asset_Number* you should also increase the length of the hotspot labels to be the same size if you use goto asset hotspots. This enables you to use the asset number as your label on your Navigator document.

Testing and Validating

Test and validate your system by running the Maximo Upload application and using the Navigator user interface.

Running the Maximo Upload Application

NOTE This procedure must be performed by a Maximo System Administrator.

The Maximo Upload application loads the Maximo database with part number information and associates part information to asset numbers.

To run the Maximo Upload application, complete the following steps:

- 1 On the Control Center main menu, click **Maximo Upload** or from the Options menu, click **Maximo Upload**. The Login window opens for the Maximo Upload application.

Maximo Upload Login

The screenshot shows a 'Login' dialog box with the following fields and options:

- Navigator Host: [Text Field]
- Navigator Port: [Text Field]
- Navigator Instance: [Text Field]
- Navigator User Id: [Text Field]
- Navigator Password: [Text Field]
- MAXIMO Host: [Text Field]
- MAXIMO User Id: [Text Field]
- MAXIMO Password: [Text Field]
- Location: [Text Field]
- Autogen: [Text Field]
- Almost No Updates: [Text Field]
- Issue Unit: [Text Field]
- Database Vendor: Oracle MS SQL

Buttons: OK, Cancel

-
- 2 Type the information for logging in to the Maximo Upload application and select the database vendor type (MS SQL) of your system. Use the following figure as a guide.

Maximo Upload Login: Example

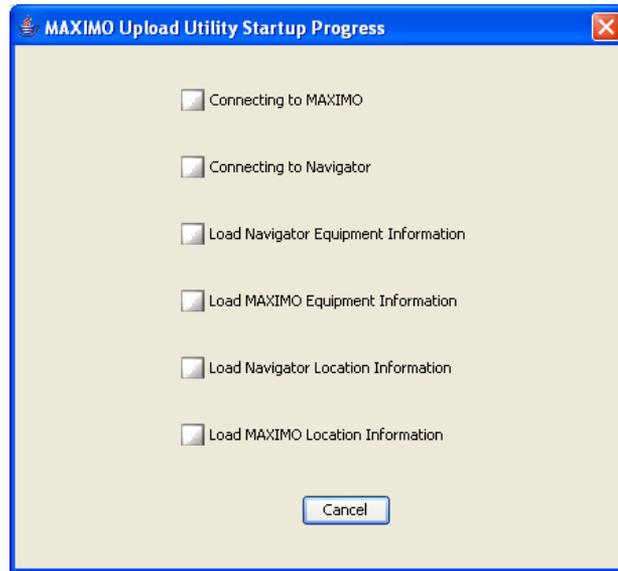
Navigator Host:	dellflatjtk
Navigator Port:	1433
Navigator Instance:	IPC60MS
Navigator User Id:	IPC60MS
Navigator Password:	*****
MAXIMO Host:	DELLFLATJTK/MXServer-139-sqs
MAXIMO User Id:	wilson
MAXIMO Password:	*****
Location:	central
Autogen:	
Almost No Updates:	false
Issue Unit:	each
Database Vendor:	<input type="radio"/> Oracle <input checked="" type="radio"/> MS SQL

OK Cancel

- NOTE**
- ▼ The Navigator connect information is for the Navigator database. The Maximo connect information is to connect to the Maximo application server (MXServer).
 - ▼ For the **Autogen** field, whatever you type in the field will be appended to any item description that is created during the load process.
 - ▼ For the **MAXIMO Host** field, include the name of the MXServer (which can be found in the maximo.properties file, parameter mxe.name=) if different than MXServer in the MAXIMO Host field (for example dellflatjtk/MXServer-139-sqs).
 - ▼ You cannot use “maximo” as a Maximo User ID.

- 3 Click **OK**. If there are no errors, the Login dialog box closes and the Maximo Upload Utility Startup Progress dialog box opens.

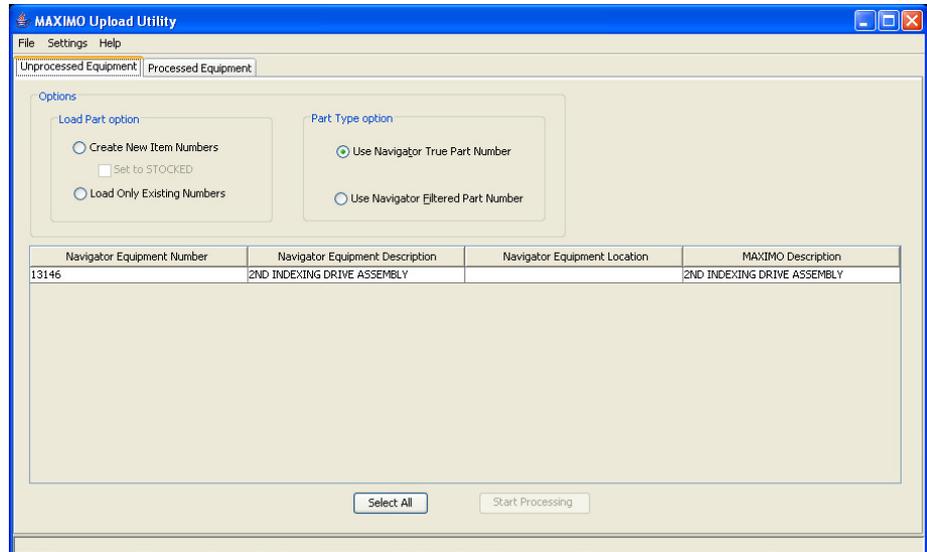
Maximo Upload Utility Startup Progress Dialog Box



- 4 Wait for the Maximo Upload application to start. Check marks appear in the check boxes as the application completes each task. When complete, the Maximo Upload Utility window opens.

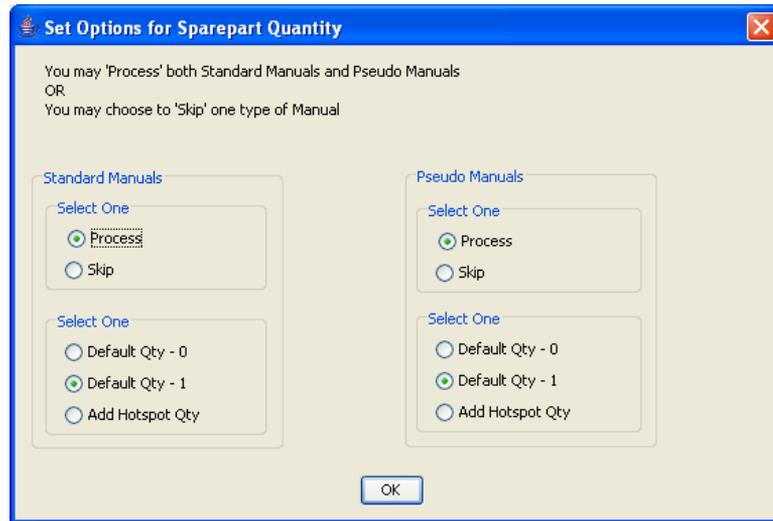
NOTE You can click **Cancel** at any time to exit the application.

Maximo Upload Utility Window



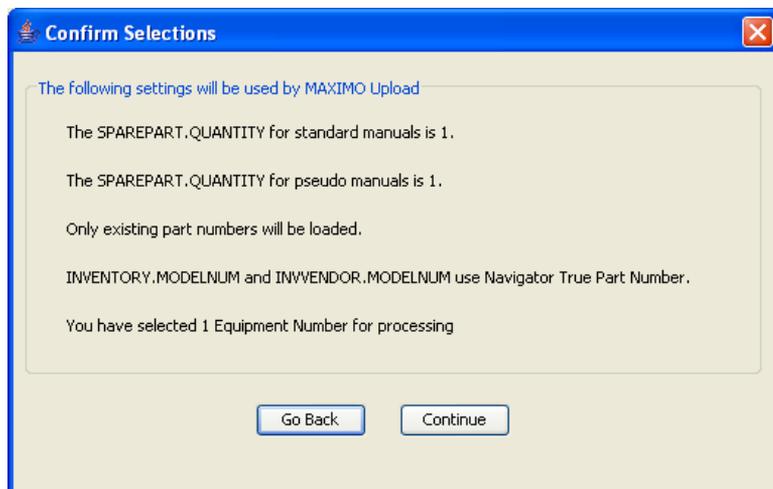
- From the **Settings** menu, select **Set Options for Part Quantity**. The Set Options for Sparepart Quantity dialog box opens.

Set Options for Sparepart Quantity Dialog Box



- For Standard and Pseudo Manuals, select whether to process or skip and then define the quantity for each.
 - A Standard Manual is a copy of a real manual for an asset.
 - A Pseudo Manual is a parts list for an asset.
- Click **OK**.
- Select the **Create New Item Numbers** option under **Load Part Option**.
- Click **Select All**.
- Click **Start Processing**. A confirmation dialog box opens.

Confirm Selections Dialog Box



- 11** If the information is not correct, click **Go Back**. If the information is correct, click **Continue**. Upload information displays while the Navigator part information for the selected asset is loaded into the Maximo database.
- 12** When complete, click **Finished**.
- 13** To quit the Maximo Upload Application, select **Exit** from the File menu.
- 14** To quit the Navigator Control Center, select **Exit** from the File menu.

Accessing Navigator from the Maximo Start Center

NOTE This procedure must be performed by a Maximo System Administrator (a member of the MAXADMIN group).

Navigator appears as “Navigator” on the **Go To** menu, which can be accessed from the Start Center. To access Navigator from the Start Center, complete the following steps:

- 1 Start Maximo and log-in.
- 2 From the Go To menu on the Maximo navigation bar, point to **Navigator** and click **Navigator**.

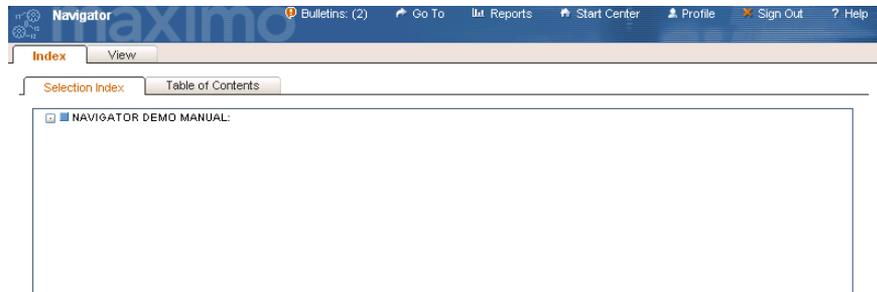
Go To Menu



Navigator starts and the Navigator dialog box opens showing the Selection Index.

NOTE The Navigation Bar remains the same except for the Navigator icon and “Navigator” name appearing at the left.

Selection Index



TIP If you cannot access Navigator, please verify that your log-in ID has “READ” access to Navigator in the Security Groups application. Refer to the Maximo Security Groups online help for more information.

- 3 Click **Navigator Demo Manual** to display the Table of Contents for the manual.
- 4 Click the GoTo (red) hotspot to display a drawing and its associated Bill of Material.

- To display the Navigator Online Help, from the Help menu on the Navigation Bar, click **Navigator Help**. The Navigator Online Help opens in a separate window.

Identifying Assets and Location with Navigator

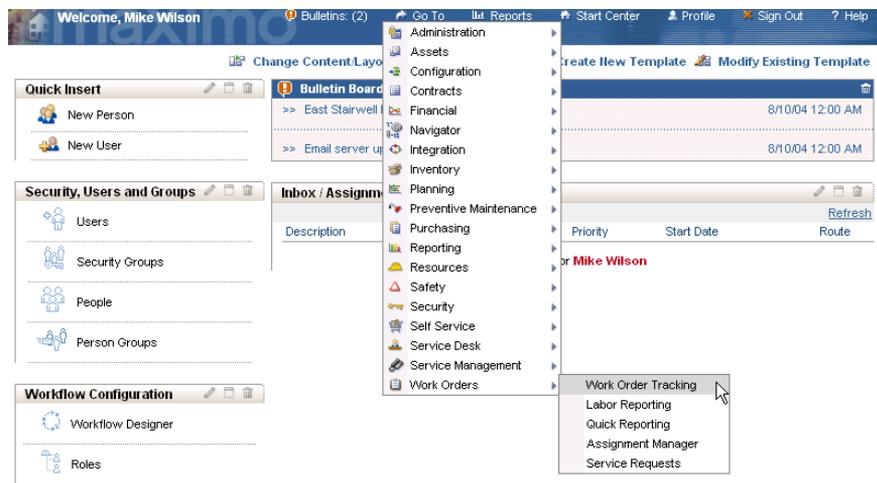
NOTE This procedure must be performed by a Maximo System Administrator (a member of the MAXADMIN group).

TIP Navigator can be accessed from a variety of Maximo applications to allow you to find and return assets and locations to asset and location fields.

To identify assets and locations with Navigator, complete the following steps:

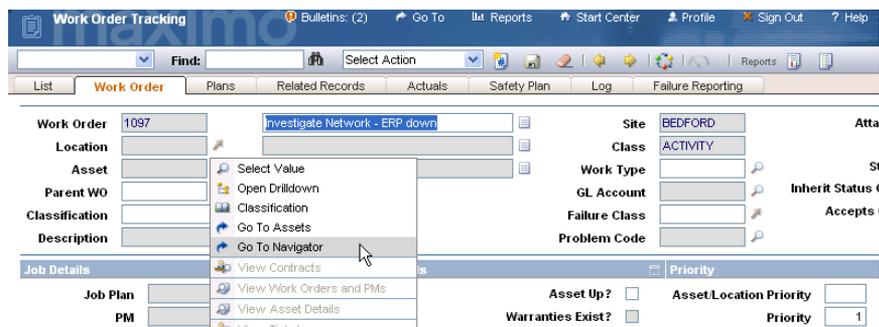
- Start Maximo and log-in.
- From the Go To menu on the Maximo navigation bar, point to **Work Orders** and click **Work Order Tracking**.

Go To Menu



- Create a new Work Order.
- On the Work Order tab, click the Detail menu icon next to the **Asset** field.

Work Order Tracking Application



- From the Asset menu, click **Go To Navigator**. The Navigation Bar changes color, the Navigator icon and “Navigator” name appear at the left, and the Return and Return with Values links appear on the right.

TIP If a message box opens asking whether to trust MRO Software Inc. to install an applet, click **Yes**.

- Navigate to a page that has asset hotspots. A page that has asset hotspots has the **Clicking Asset/Location Hotspot will** drop-down list at the bottom of the window.

View Window



- The **Clicking Asset/Location Hotspot will** drop-down list determines the function of clicking a hotspot. When Navigator is in application linking mode, the default action is to return to the Maximo application with the value of the hotspot you click. So if you click an asset hotspot, Maximo returns to Work Order Tracking application with the asset number in its **Asset** field.

NOTE If there is already a value in the **Asset** or **Location** field of the application, Navigator checks to see if it has any manuals for that asset or location.

- If manuals exist, Navigator displays the Table of Contents tab with the manuals already selected.
- If no manuals exist, Navigator displays the Selection Index tab.

Uninstall Procedure

3

If an instance of Navigator exists on the Control Center Workstation, you must first uninstall it before installing a new instance.

This procedure uninstalls only the database portions of Navigator. It does not uninstall Navigator files from the hard drive.

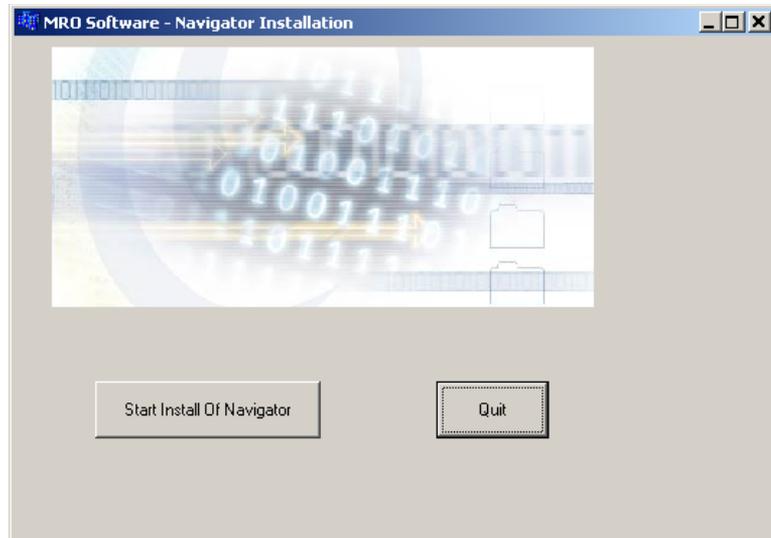
Uninstall Procedure

NOTE This procedure must be performed by a Maximo System Administrator.

To uninstall Navigator, complete the following steps:

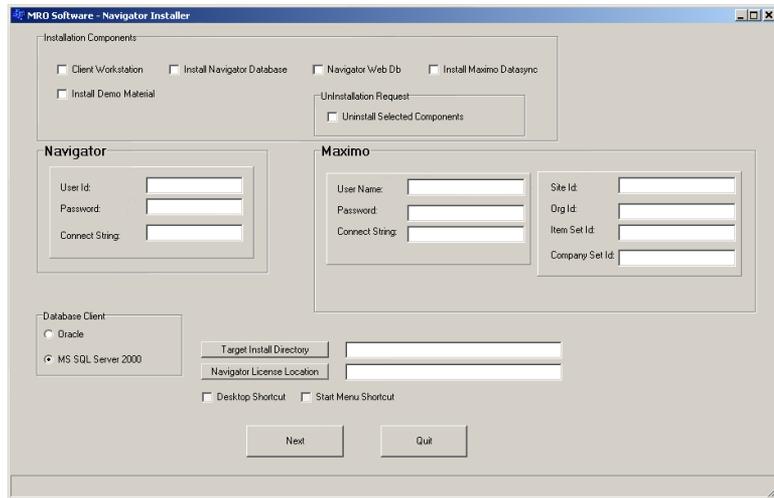
- 1** Close all Windows programs.
- 2** Insert the Navigator Installation disc into the CD-ROM drive and start the installation program.
- 3** On the Windows taskbar, click **Start**, and then click **Run**. The Run dialog box opens.
- 4** Click **Browse**, double-click the CD-ROM drive (usually drive D:), double-click the **Navigator** folder and double-click **NavigatorInstall.exe**. The Navigator Installation introduction dialog box opens:

Navigator Installation Introduction Dialog Box



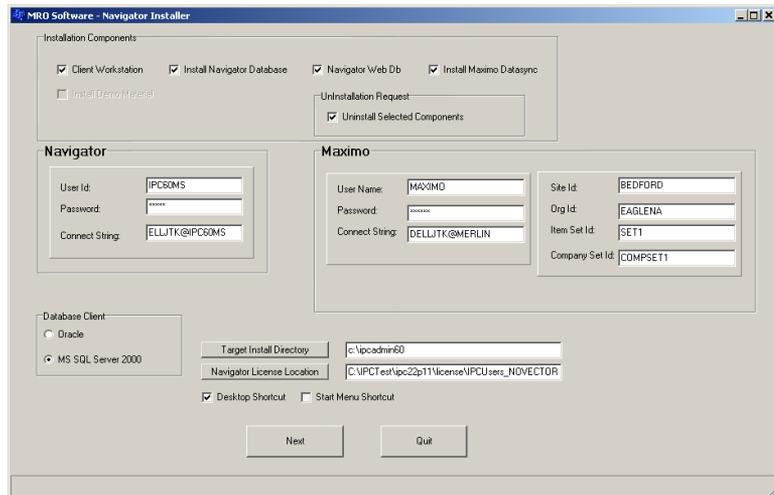
- 5 Click **Start Install of Navigator**. The Navigator Installer dialog box opens:

Navigator Installer Dialog Box



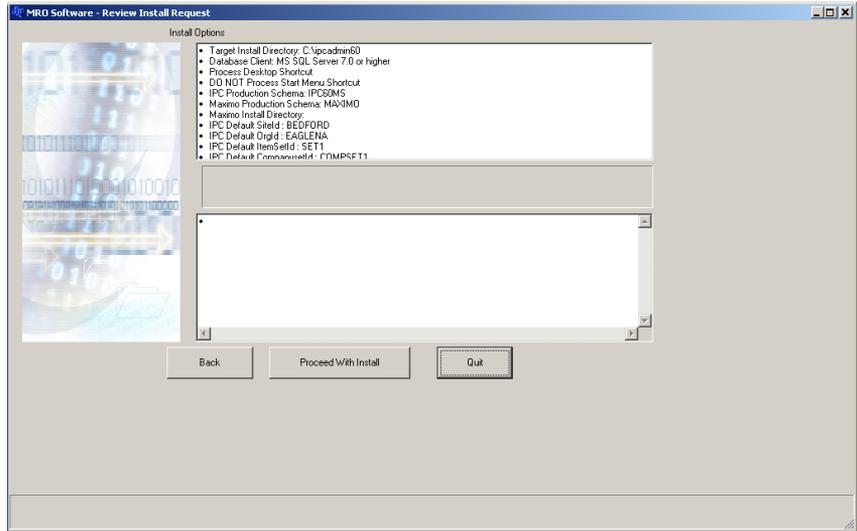
- 6 Select the **Uninstall Selected Components** check box. Fill in the Navigator and Maximo areas with information for your installed system. See the information you collected in “Preparing the Control Center Workstation” on page 2-1 and “Preparing for Microsoft SQL Database Creation” on page 2-2.

Navigator Installer Dialog Box: Example Data



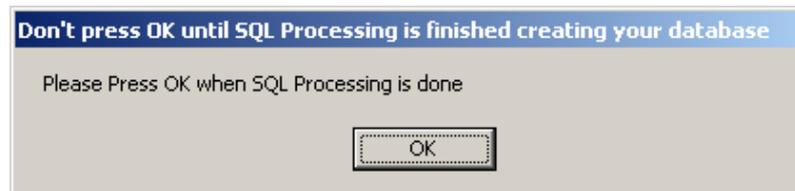
7 Click **Next**. The Review Install Request dialog box opens:

Review Install Request Dialog Box



8 Review the options in the **Install Options** field. If you would like to make a change, click **Back**. Otherwise, click **Proceed with Uninstall**.

The program begins running the uninstall scripts and lists progress in the lower field. The following dialog box opens:



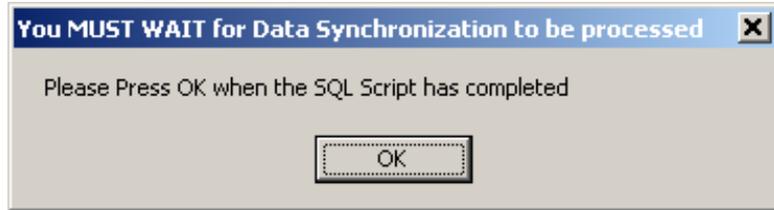
9 The SQL Server OSQL program starts and runs a set of uninstall scripts for the Navigator database. After the scripts are complete, Notepad opens showing the results. Close Notepad and the SQL Server OSQL program closes automatically.

10 Click **OK**. The following dialog box opens:



11 The SQL Server OSQL program starts and runs a set of uninstall scripts for the Navigator Web database. After the scripts are complete, Notepad opens showing the results. Close Notepad and the SQL Server OSQL program closes automatically.

12 Click **OK**. The following dialog box opens:



13 The SQL Server OSQL program starts automatically and runs the DataSync uninstall scripts. After the scripts are complete, Notepad opens showing the results. Close Notepad and the SQL Server OSQL program closes automatically.

14 Click **OK**. The following dialog box opens:



15 Click **OK**. The following dialog box opens:

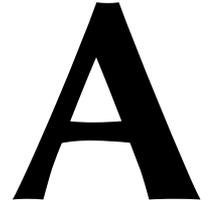


16 Go to Windows Explorer and delete the install folder, and go to the Windows desktop and delete the shortcuts.

17 Click **OK**.

18 The uninstall is now complete. Click **Quit**.

Production Installation Notes



Install the Production Control Center the same way the Demo Control Center except for the following differences:

- ▼ Use a different target installation directory and the User ID associated with your production Maximo and Navigator systems.
- ▼ Do not install the demo manuals into your production database.
- ▼ Configure the INI entries for Maximo Upload specifically for the Production system.
- ▼ Synchronize asset, item, and location information between the appropriate tables in MAXIMO to the appropriate tables in NAV using available database tools.

If you are running multiple instances of Navigator with Maximo, you can run only a single instance of Navigator within a single Maximo install directory. If you want to run multiple versions or copies of Maximo with Navigator on the same server, you must create separate install directories each containing both Maximo and Navigator and run each server separately.

NOTE If you have any question regarding the installation of your Production Control Center, contact MRO Software. See “Support” on page vii.

Mapping Image Locations

B

In Navigator, paths to images are stored in the location table. Only the path to the images is kept in the table. The actual filename for the document is kept in the **mm2_document** table.

Location Table Example

ID	Server	Drive	Path
BA030005	NULLSERVER	D:	\manuals\BA030005\
KOMA0001	NULLSERVER	D:	\manuals\KOMA0001\
NB020003	NULLSERVER	E:	\docs\NB020003\

Each document in Navigator references an individual location, which is used to assemble the full path to the document. That is, “location.drive + location.path + mm2_document.filename”.

In the web environment, images must be retrieved from a Web server. In addition, due to java/browser security, the image *must* come from the same Web server that served up the imaging applet (the Web server that is serving up Maximo). Because web servers require a URL for a file and the Control Center still uses filenames, the drivemap.xml file must be used to map the relationship.

CAUTION Paths under web servers are case sensitive, while some operating systems such as Windows are not case sensitive. This can cause problems because many utilities and applications often ignore, alter, or misreport the actual case of the file. The case of the directory must match exactly what is in the location. While the directory path “\manuals\BA030005” is the same as “\manuals\ba030005” for any Windows application, they are not the same when mapped as a URL.

There are two basic steps to configuring a Web server to serve up Navigator images. The first step is to create contexts or aliases (different web servers use different terminology) to the images. For the example location table shown above, two different contexts should be created, one for each drive.

Carefully consider how much of the drive you want to make public. If the drive contains only the images, consider mapping to the drive root. If drive has other files that you do not want to make public, then you should map to one level down. For example: d:\manuals (Why just one level is explained later.)

An example configuration is shown as follows. The two options map the entire drives to the context (using jakarta tomcat syntax):

Option 1

```
<Context path="/ImagesD" docBase="d:\" debug="0" reloadable="false"
>
</Context>
<Context path="/ImagesE" docBase="e:\" debug="0" reloadable="false"
>
</Context>
```

Option 2 (Preferable if you do not want to map the whole drive.)

```
<Context path="/ImagesD" docBase="d:\manuals" debug="0"
reloadable="false" >
</Context>
<Context path="/ImagesE" docBase="e:\docs" debug="0"
reloadable="false" >
</Context>
```

The next step is to configure the drivemap.xml file to provide the proper translation between what is in the Navigator location table and what the URL should be. Each context or alias that you create will probably need an entry in the file. The basic structure of the file is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE IPCFileLocationMappings SYSTEM "drivemap.dtd">
<IPCFileLocationMappings>
  <filemapping>
    <ipcdrive></ipcdrive>
    <webbaseurl></webbaseurl>
    <strippathroot></strippathroot>
    <description></description>
  </filemapping>
  < filemapping>
  .
  .
  </filemapping>
</IPCFileLocationMappings>
```

The **IPCFileLocationsMappings** tag encloses the document. For each file mapping, you need to create a **filemapping** block. **Ipcdrive**, **webbaseurl**, and **strippathroot** are required for each one. The description is optional. Consider the following notes:

- ▼ The **ipcdrive** corresponds to the drive column in the location table.
- ▼ The **webbaseurl** is what the base part of the URL should be (including the "http://" and the server name).

If you would like to have the hostname and port number configured dynamically at runtime, substitute %host% for the host and %port% for the port number in the URL. For example, "http://%host%:%port%/images". Note that the host and port number are the hostname and port number that the application server is listening to. If you are mapping the images through a different port, you must hard code the port.

- ▼ **Strippathroot** can be either "true" or "false". If it is set to true, it removes the first part of the directory from the path for the location before it uses it. For example, if the path in the location table is "\manuals\BA020003\" and strippath=true, then the actual path that will be used is just

“\BA020003\”. (Note that this setting only strips a single directory from the path, which is why you should map your manual directory only one level down.)

Description can be anything. See the example files at the end of this section for the previous context options.

The drivemap.xml file is read only once when Navigator starts, which is at the first attempt to open a Navigator page (not a base Maximo page). When it starts, it parses the drivemap file and verifies that all drives in the location table have an entry in the drivemap table. If a drive is not mapped, an error is displayed in the Maximo java console window.

There is a setting in the ipconfig.properties files called “display_locations”. When set to “true” it displays what the URL will be for all of the locations that are mapped. This can be useful for debugging if the imager viewer cannot find the image.

See the next page for examples. (The examples assume that the name of the Maximo server is maxserver1, running on port 80):

**Example 1
(for Option 1)**

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE IPCFileLocationMappings SYSTEM "drivemap.dtd">
<IPCFileLocationMappings>
<filemapping>
<ipcdrive>d:</ipcdrive>
<webbaseurl>http://maxserver1/ImagesD/</webbaseurl>
<strippathroot>>false</strippathroot>
<description>Drive Mapping For the D drive</description>
</filemapping>
<filemapping>
<ipcdrive>e:</ipcdrive>
<webbaseurl>http://maxserver1/ImagesE/</webbaseurl>
<strippathroot>>false</strippathroot>
<description>Drive Mapping For the E drive</description>
</filemapping>
</IPCFileLocationMappings>
```

The three example locations would map to

```
"http://maxserver1/ImagesD/manuals/BA030005/"
"http://maxserver1/ImagesD/manuals/KOMA0001/"
"http://maxserver1/ImagesE/docs/NB020003/"
```

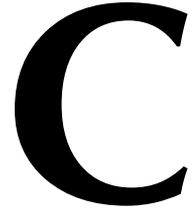
**Example 2
(Option 2)**

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE IPCFileLocationMappings SYSTEM "drivemap.dtd">
<IPCFileLocationMappings>
<filemapping>
<ipcdrive>d:</ipcdrive>
<webbaseurl>http://maxserver1/ImagesD/</webbaseurl>
<strippathroot>true</strippathroot>
<description>Drive Mapping For the D drive</description>
</filemapping>
<filemapping>
<ipcdrive>e:</ipcdrive>
<webbaseurl>http://maxserver1/ImagesE/</webbaseurl>
<strippathroot>true</strippathroot>
<description>Drive Mapping For the E drive</description>
</filemapping>
</IPCFileLocationMappings>
```

The three example locations would map to

```
"http://maxserver1/ImagesD/BA030005/"
"http://maxserver1/ImagesD/KOMA0001/"
"http://maxserver1/ImagesE/NB020003/"
```

NOTE Both options are valid ways to map locations. You can determine your preferred method of mapping images.



Installing on UNIX Systems

Installing Navigator on UNIX operating systems is similar to installing on Microsoft Windows systems. The key difference is that you cannot use Navigator as the image server.

Therefore, during “Installing Navigator Application Server Components” on page 2-17, set the “`use_local_path`” setting for the **`ipconfig.properties`** file to equal false (`use_local_path=false`). You must then configure a Web server to serve the images. After that, you must edit the `drivemap.xml` file to properly map the images from the Windows drive letter to the Web server’s URL. (See “Mapping Image Locations” on page B-1.)

Another consideration is directory sharing between the UNIX server and the PC(s) running the Control Center applications. Because the Control Center applications run under Windows and use Windows filenames, it is necessary to share the image directories on the UNIX server with the Windows PC(s) using a SMB service (such as SAMBA) or NFS (and use a PCNFS client on the Windows machines). Proper setup of this environment can make working with the Navigator images/manuals much simpler.

Here is a sample setup:

- 1 Decide on a directory for the images on the UNIX Server. For example, **`/usr/local/ipc/manuals`**
- 2 Create an alias (or context) on the Web server that points to **`/usr/local/ipc/`**
(Note that it stops a level higher.) Call this alias:
`/ipcmanuals/`
- 3 Create a file export (in NFS or SAMBA) to export the **`/usr/local/ipc/`** directory.
- 4 Map that export to a drive letter on the PC(s). Make sure that it is the same drive letter for all PCs. For example, if the drive letter is “i”, the directory should be. **`i:\manuals`** on all PCs.

5 Edit the **drivemap.xml** file to create the cross-mapping, for example:

```
..
<IPCFileLocationMappings>
<filemapping>
<ipcdrive>i:</ipcdrive>
<webbaseurl>http://myserver/ipcmanuals/</webbaseurl>
<strippathroot>>false</strippathroot>
<description>Primary Image Location</description>
</filemapping>
</IPCFileLocationMappings>
..
```

When you add a new manual (for example, “AA000001”) on a PC, it is added under the **i:\manuals** directory so all of the images for the manual are in this directory: **i:\manuals\AA000001**

The Web server serves up the images as the URL **http://myserver/ipcmanuals/AA000001/...**

The Navigator application server uses the **drivemap.xml** file to translate **i:\manuals\AA000001** to **http://myserver/ipcmanuals/AA000001**

CAUTION UNIX file systems and web servers are case sensitive. Windows, while it can maintain case-sensitivity, is usually case-insensitive with respect to file and directory usage.

Many utilities and even parts of Windows itself may alter or mis-report the case of the file or directory. (Windows Explorer often does this.) While the Control Center applications maintain the proper case, other utilities may not. If you experience problems with some images not displaying, double-check the case that is in the database (location and mm2_document tables) with what Web server is actually serving.

A helpful tool is to temporarily set the “display_locations” setting in the **ipconfig.properties** file to equal “true”. When Navigator is restarted, Navigator displays all of the file locations that it finds in the database and what their Web server mapping should be.

NOTE On some UNIX systems you may have to add the option “-Djava.rmi.server.hostname=<server hostname>” to the application server’s java startup line. Otherwise you may have trouble connecting to Maximo from the Maximo Upload application.

Customizing Notes

D

This appendix provides a table and procedure for assisting you customize Maximo for the Navigator application.

Identifying Custom Controls

Navigator uses a number of custom controls to drive the applet on the Document window. These controls all start with “ipc” as the prefix. Some of the controls perform a very specific purpose and should not be edited in any way. Others can be modified to customize the display and functionality of Navigator. Because the applet itself obscures most of the controls in the Application Designer, you should export Navigator as an application in the designer, make any edits, and re-import the application back into the system. This section is a list of the Navigator controls and their editable properties.

CAUTION Some controls may have properties that are not described. Properties that are not described must not be edited.

Control	Description
<code>ipcdocbomframe</code>	Provides the outer frame for the Document window. Do not edit.
<code>ipcbompanel</code>	Controls the BOM panel in the applet. Do not edit.
<code>ipcbomattr</code>	<p>Provides each attribute on the Bill of Material (BOM). You can add/delete/modify these to customize the BOM. (Note: The <code>datasrc</code> for <code>ipcbomattr</code> is the <code>ipcbom</code> database object.)</p> <ul style="list-style-type: none">▼ label — Label to use as the column heading. The <code>dataattribute</code>'s title is used by default if the label is blank.▼ dataattribute — Attribute to reference (required).▼ type — Indicates column is a special column. Valid option is “<code>hslabel</code>”. (Note: There must always be exactly one label column.)▼ linkattribute — Attribute to use for a link type row. If the row type is a <i>goto</i> type row (references a document, asset, or location), the <code>linkattribute</code> is used. Otherwise, the <code>dataattribute</code> is used.▼ allgotoshow — Flag for whether the column should be displayed if the page contains nothing but <i>goto</i> hotspots.<ul style="list-style-type: none">■ If not included, the column always displays.■ If set to <i>true</i>, the column only displays if all of the hotspots are of type <i>goto</i>.■ If set to <i>false</i>, the column only displays if all of the hotspots are not of type <i>goto</i>.

Control	Description
ipcannotcoord	Provides the hotspot locations to the applet. Do not edit.
ipcimageapplet	<p>Controls the actual applet itself.</p> <ul style="list-style-type: none"> ▼ usesignedapplet — Set to <i>true</i> if you want to use the signed version of the imaging applet; set to <i>false</i> to use the unsigned version. Using the unsigned version requires the user to grant the plugin permission to print every session. ▼ classid — Classid used by the java plugin. ▼ codebase — Codebase used by the java plugin. ▼ type — Type parameter used by the java plugin.
ipcactions	Controls the options that are available when there are asset or location hotspots on the image. You may add/delete/modify these as necessary, and you may have to edit some of the options if you are running custom applications.
ipcassetlocoption	<p>Provides an individual option to display.</p> <ul style="list-style-type: none"> ▼ type — Indicates whether this option should be shown when Navigator is running as a standalone application (<i>type="app"</i>) or when returning assets or locations when application linking (<i>type="return"</i>). Do not add any options that create new records or leave Navigator when using <i>type="return"</i>. ▼ mxevent — Event used to handle the action. Default Navigator provides the following actions: <ul style="list-style-type: none"> ■ clickgoto — Handles most standard functionality, such as showing manuals for an asset or location, jumping to other documents, etc. ■ gotoappl — Handles switching to an application if an asset or location is clicked. ■ createwo — Creates a workorder and switches to the specified workorder application ■ createsr — Creates a Service Request and switches to the application. ■ createincident — Creates an Incident and switches to the application. ■ createproblem — Creates a Problem and switches to the application.

Control	Description
ipcassetlocoption (continued)	<ul style="list-style-type: none"> ▼ label — Label to display for the function ▼ gotoapp — Application to switch to after the function is completed. For the <i>gotoappl</i> event only, you must specify two applications (the asset application and the location application) separated by a comma. For example: asset,location ▼ default — Set to <i>true</i> if this should be the default action. There should be only one default option for all of the “app” type options and one for all of the “return” type options.
ipcextrahsinfo	<p>Handles the fetching of extra information on an asset or location hotspot (when the user right-clicks on the hotspot).</p> <ul style="list-style-type: none"> ▼ mbo — The mbo to handle the lookup. ▼ maxchars — The maximum number of characters to send back.
ipcextrahsline	<p>Provides a single line of information to be sent back.</p> <ul style="list-style-type: none"> ▼ dataattribute — The primary attribute to display. ▼ descdataattribute — The secondary attribute to display (usually used to display descriptions). ▼ getttitle — Set to <i>true</i> if you want the title for the attribute to be displayed. ▼ label — You can override the title by setting the label property.
ipcbomoption	<p>Provides options that are accessible when right-clicking the BOM Panel.</p> <ul style="list-style-type: none"> ▼ mxevent — Event used to handle the action. ▼ label — Label to use as the column heading.

Customizing for Cloned Applications and Industry Solutions

To customize for cloned applications and industry solutions, complete the following steps:

- 1 Go to the Application Designer application.
- 2 Select Navigator as your current editing application.
- 3 On the toolbar, click **Edit Dialogs**.

A dialog box opens showing the different dialogs for Navigator.

- 4 Select the “showseparts” dialog box.

The Show Selected Parts dialog box opens.

- 5 On the toolbar, click **Create Work Order** and then click **Control Properties**

A dialog box opens showing the properties for the button

- 6 Change the Value property to be the application ID that you want to go to after the work order is created.
- 7 Close the dialog boxes and save the application.

Printing History

Edition	Date	Release
1	June 2005	MXES 6.0 Patch 1
2	September 2005	MXES 6.0 Patch 2
3	June 2006	MXES 6.1

maximo enterprise suite

Maximo 6

Installation Guide July 2006

Maximo Project Manager

mro software™

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About This Guide

This guide lists the hardware and software requirements to install Maximo Project Manager and describes how to install the software.

This guide does not contain information on how to install other applications necessary to run Maximo Project Manager, such as Maximo Release 6, or Microsoft® Project 2003. For details on installation procedures for other applications, refer to the documentation that accompanies those products.

Audience

The *Maximo Project Manager Installation Guide* is intended for planners, forecasters, and other managers who want to use Microsoft Project to work with business data from the MAXIMO database.

Related Documentation

Your documentation set includes this guide and the *Maximo Project Manager User's Guide* which provides information on how to use the application.

Maximo Project Manager also contains help that provides detailed instructions on how to use the application. Use the *Maximo Project Manager User's Guide* and the online help to assist you in mastering the use of this application. For information on Maximo's Work Order Tracking and Preventive Maintenance applications, see the *Maximo User's Guide*.

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Installing Maximo Project Manager

Overview

Maximo Project Manager integrates Maximo with Microsoft Project 2003, enabling you to use Microsoft Project scheduling data with your Maximo work order and preventive maintenance data.

The following information describes the software and hardware requirements to successfully install Maximo Project Manager.

Hardware Configurations

Recommended hardware configurations for Maximo Project Manager are the same as those for the Maximo Release 6 client work station. Refer to the *Maximo Installation Guide, Release 6* for details.

Disk Space

Maximo Project Manager Release 6 requires approximately 120 MB of disk space.

Software Configurations

Platforms

Maximo Project Manager Release 6 is designed to run on the following platforms:

Application Server Platforms	Client Desktop Platforms
▼ Microsoft Windows 2000 Professional	▼ Microsoft Windows 2000
▼ Microsoft Server 2003	▼ *Microsoft Windows XP

NOTE * If you are running Microsoft Windows XP on your client desktop with a BEA Weblogic application server, you will need to apply a BEA Weblogic patch on your Maximo application server in order to run Maximo. For instructions, see the max_project_readme.txt file, located at the root level of your CD-ROM directory.

Other Requirements

Before installing Maximo Project Manager Release 6, you must have already installed the following applications:

- ▼ Maximo Release 6
- ▼ Maximo 6.0 Patch 03 or higher
- ▼ The Maximo Application Server (a component of Maximo Release 6)
- ▼ Microsoft Project 2003 (client desktop only)

NOTE For recommendations for optimizing Maximo Project Manager's performance and details about customizing the MaximoProject.ini file, see the *Maximo Project Manager User's Guide*.

For configuration and other information about Microsoft Project, refer to the Microsoft Project documentation.

For specific software requirements for running Maximo Release 6 and the Maximo Application Server, refer to your *Maximo Installation Guide, Release 6*.

Installation of Maximo Project Manager Release 6

Program Folder

The installation program creates one new folder for the client desktop.

Default Client Folder	Default Server Folder
C:\MaxProjectClient	C:\<maximo home directory>
	Example: C:\maximo

Before You Begin

- ▼ Verify that the Maximo application-specific business components, which are included with Maximo Release 6, are installed. If they are not, you must install them before installing Maximo Project Manager. The installation program is on the Maximo Release 6 Application CD. Follow the instructions in the *Maximo Installation Guide, Release 6* or the *Installation/Upgrade Guide*, which are on the Release 6 On-line Documentation CD.
- ▼ Before installing Maximo Project Manager, you must have access to, and know the name and/or IP address of, the machine where the Maximo Application Server resides.
- ▼ You must know the name of your Maximo application server.
- ▼ You must know if your Maximo application server uses a non-standard mxr.registry.port entry (not 1099) in the maximo.properties file.

Installing Maximo Project Manager

Exit all other Windows programs before installing Maximo Project Manager. You may leave Windows Explorer open.

There are three parts to the installation of Maximo Project Manager:

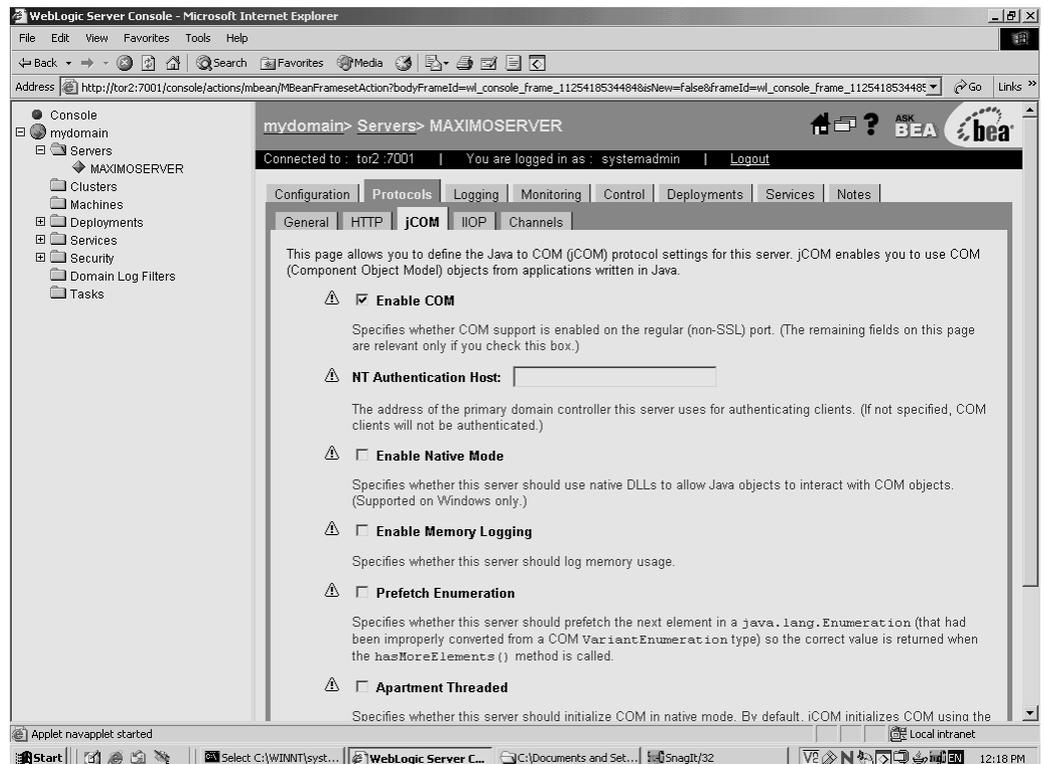
- ▼ Application Server setup (WebLogic only)
- ▼ Maximo Project Manager server installation
- ▼ Maximo Project Manager client installation

If you are installing on WebSphere, skip to “Maximo Project Manager Server Installation” on page 6.

Application Server Setup (WebLogic Users Only)

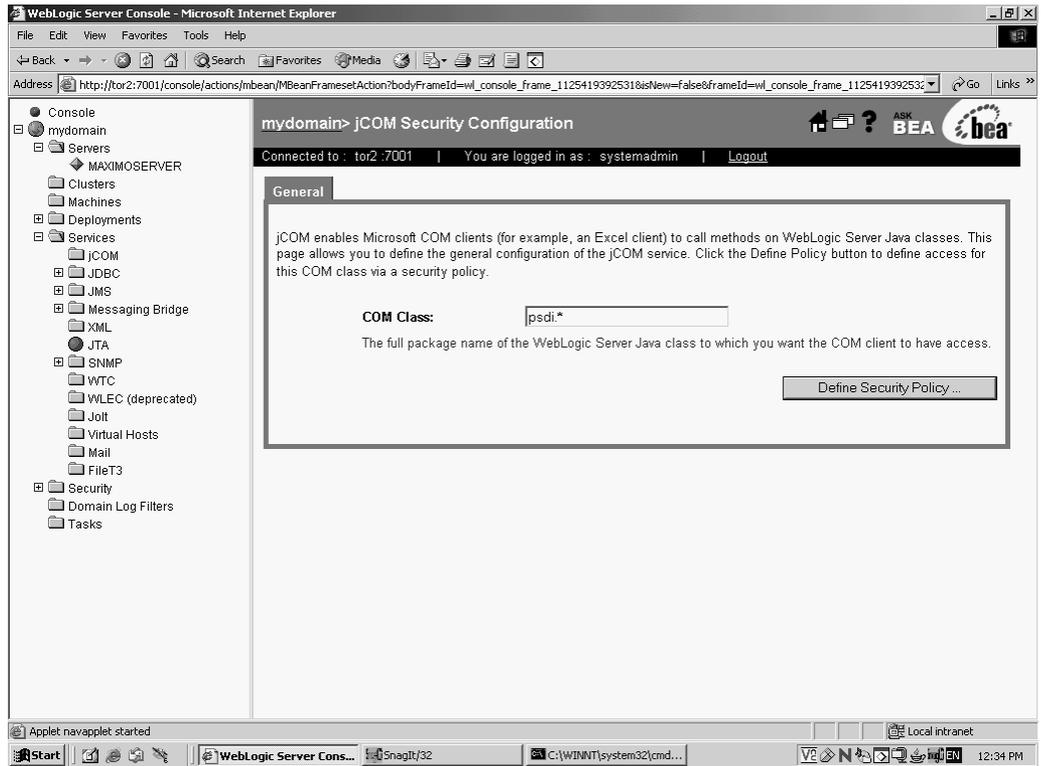
This section applies to BEA WebLogic users only. If you are using WebSphere, skip to “Maximo Project Manager Server Installation” on page 6.

- 1 Start WebLogic if it isn't already running.
- 2 Log in to the BEA WebLogic console.
- 3 In the console, click Servers, then select your Maximo server. Click the Protocols tab, and then the JCOM subtab. Select the **Enable COM** check box, and click **Apply**.

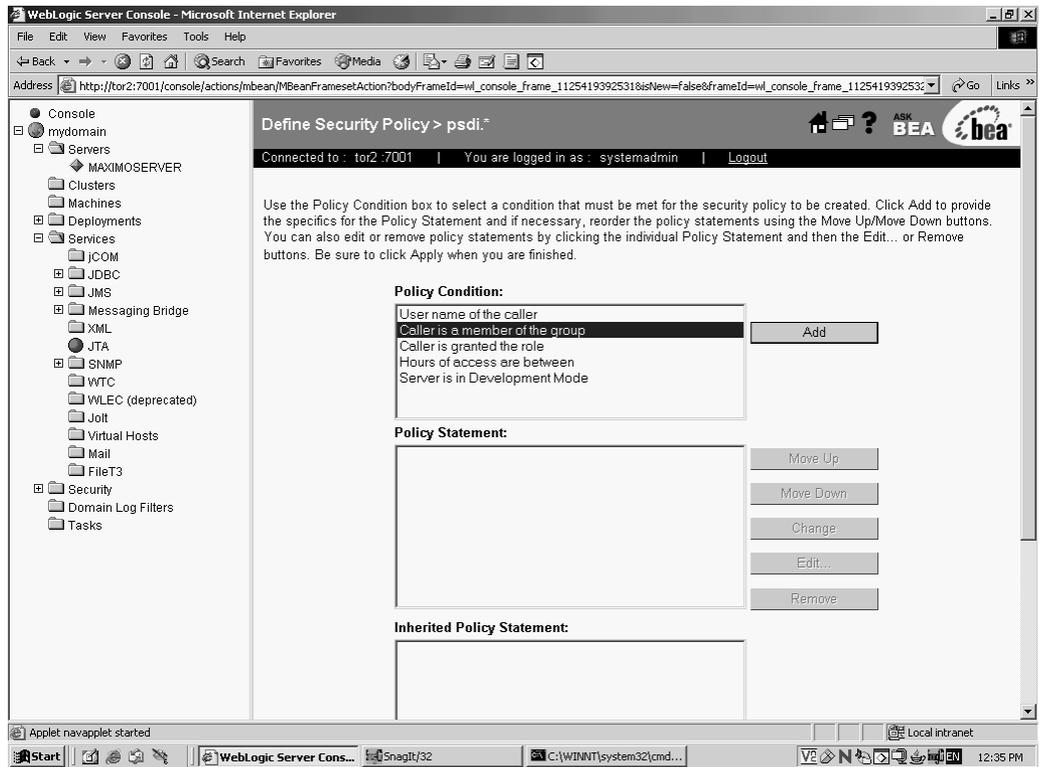


4 In the left pane of the window, Select **Services > JCOM**.

5 Type: **psdi.*** in the **COM Class** field, and click **Define Security Policy**.

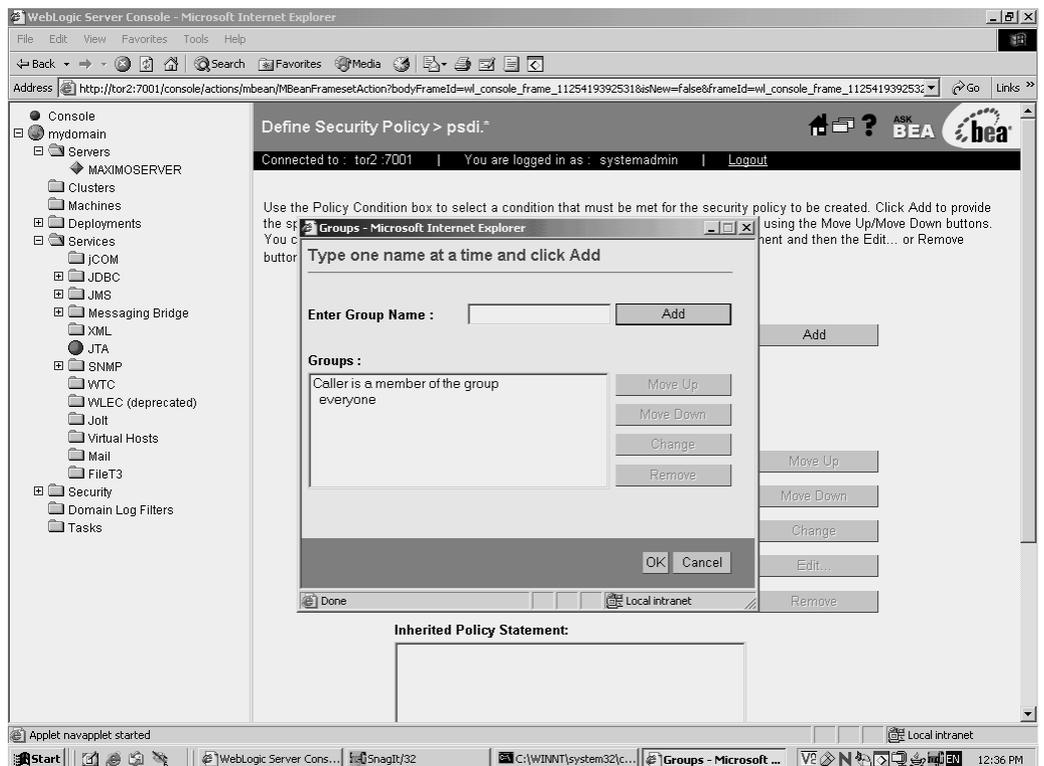


6 Select Caller is a member of the group from the Policy Condition list. Click Add.



The Groups dialog box opens.

7 In the Enter Group Name field, type: everyone (case-sensitive, all lowercase). Click Add.



- 8 Click **OK** to close the dialog box, then scroll down and click **Apply** in the lower-right corner of the screen.
- 9 Logout of the BEA console.
- 10 Shutdown and restart your Maximo application server. You must restart your server for the changes to take effect.

Maximo Project Manager Server Installation

You will now install the portion of Maximo Project Manager that resides on the machine where Maximo is installed.

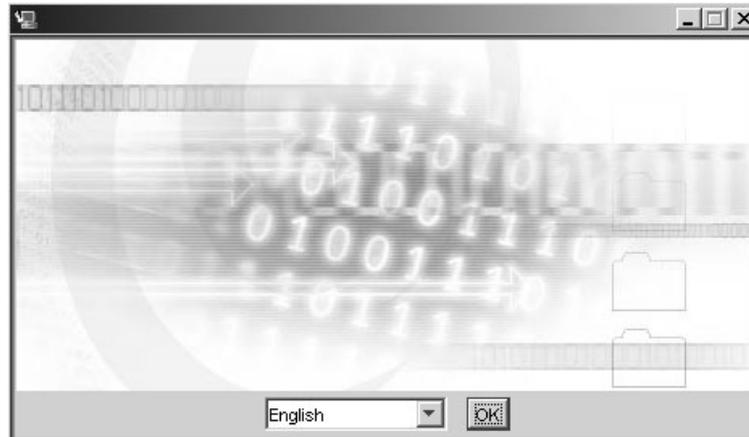
- 1 Insert the Maximo Project Manager CD into the CD-ROM drive.
- 2 Click **Start** and select **Run**.
- 3 Type: **d:\maxproject.exe** (where d is your CD-ROM drive) and select **OK** or press **Enter**.

or,

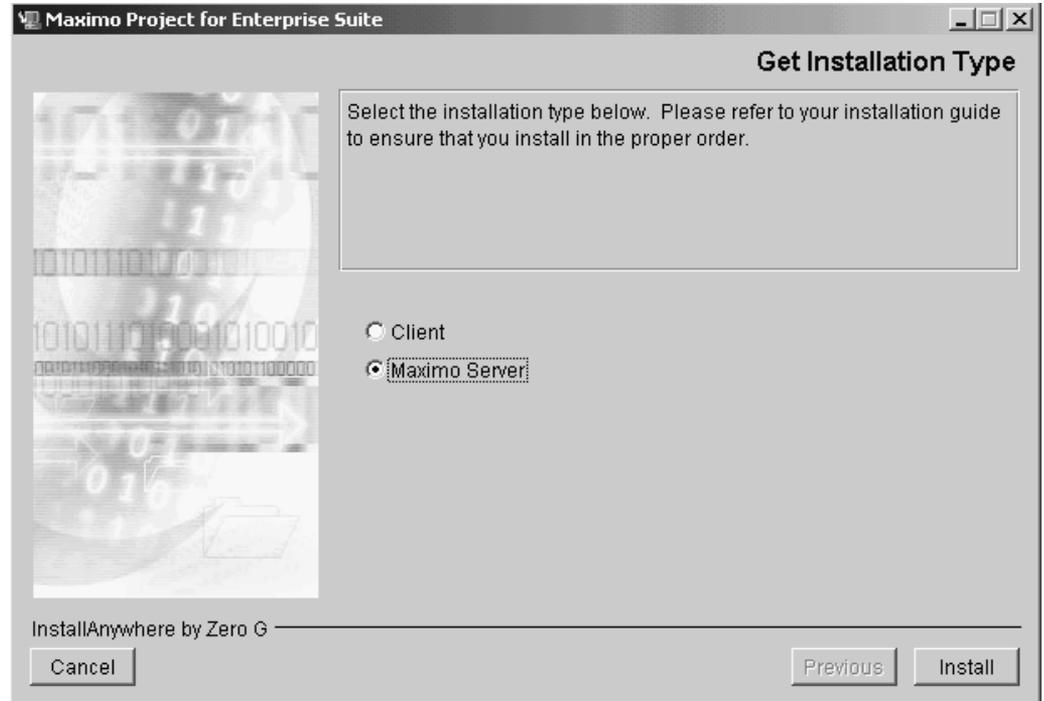
Using Windows Explorer, open your CD-ROM drive folder and double-click **maxproject.exe**.

The installation program displays a series of screens and dialog boxes. Follow the instructions on the screen.

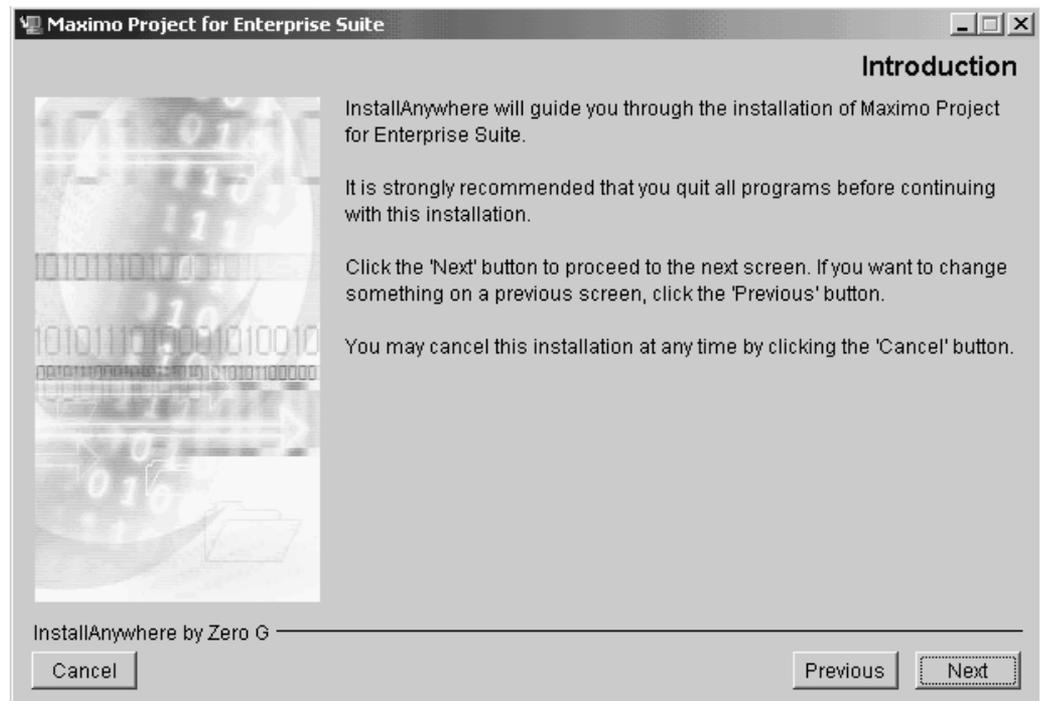
- 4 In the opening panel, select the language you wish to install from the drop-down menu. Click **OK**.



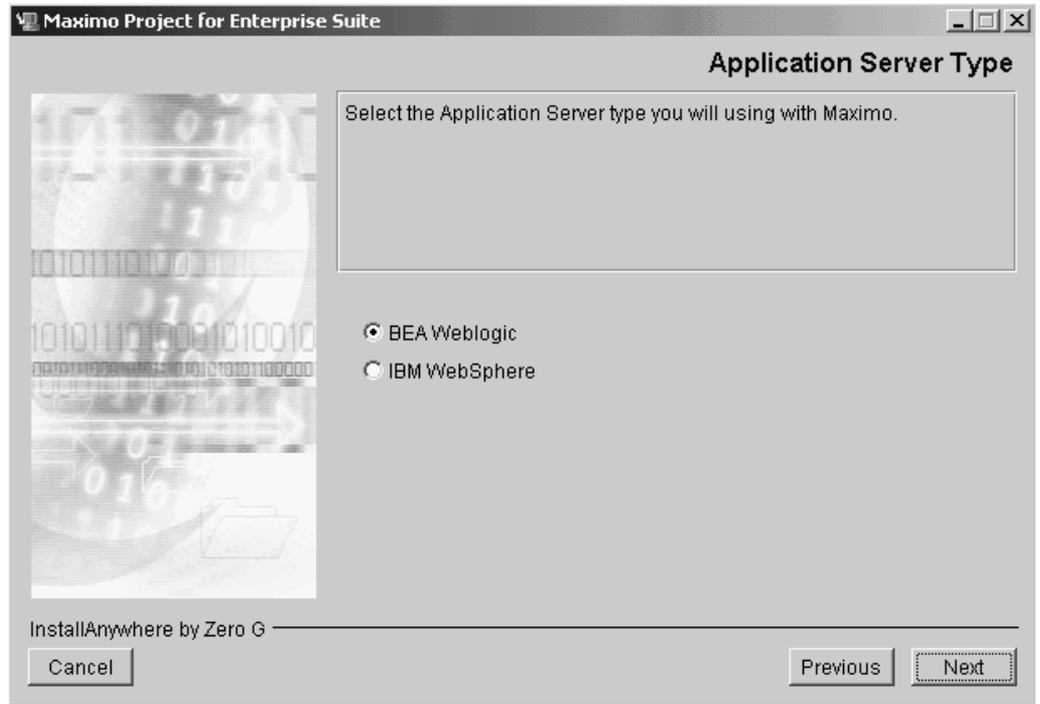
- 5 Select the **Maximo Server** option and click **Install**.



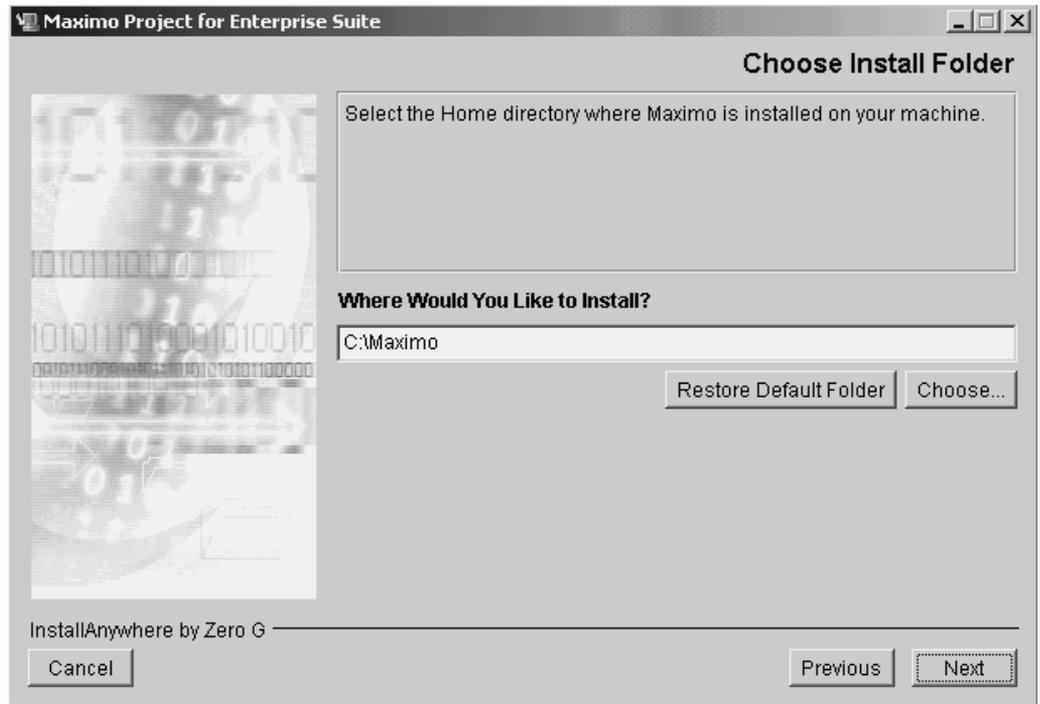
- 6 The Introduction screen displays. Click **Next**.



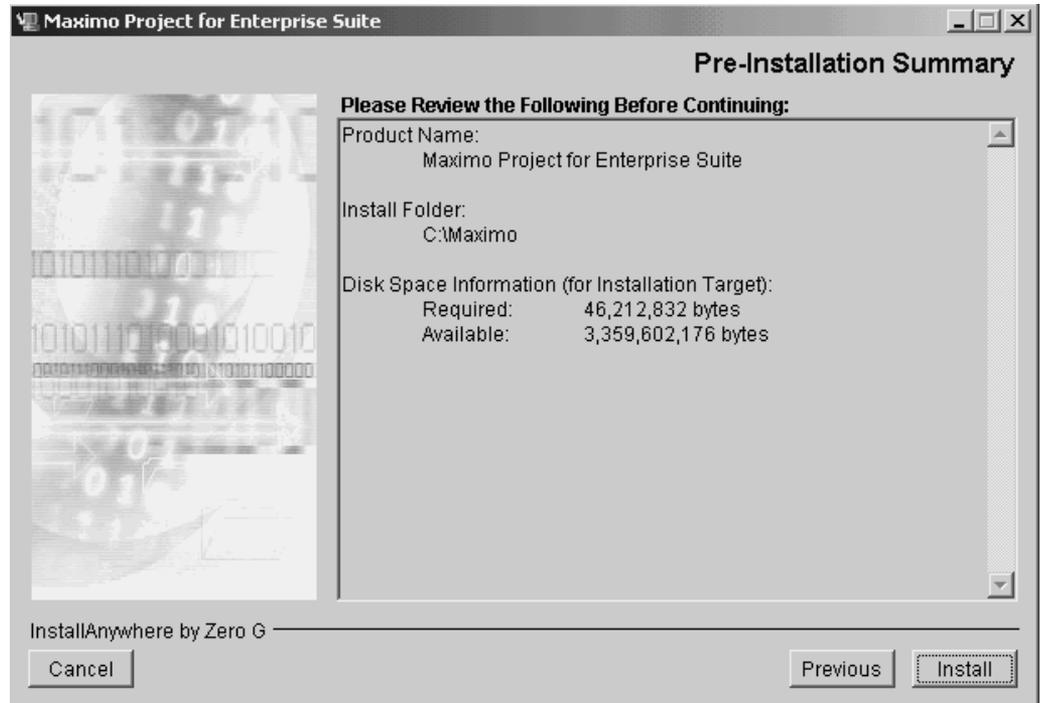
- 7 In the Application Server Type dialog box, select the option for the application server type you are using. Click **Next**.



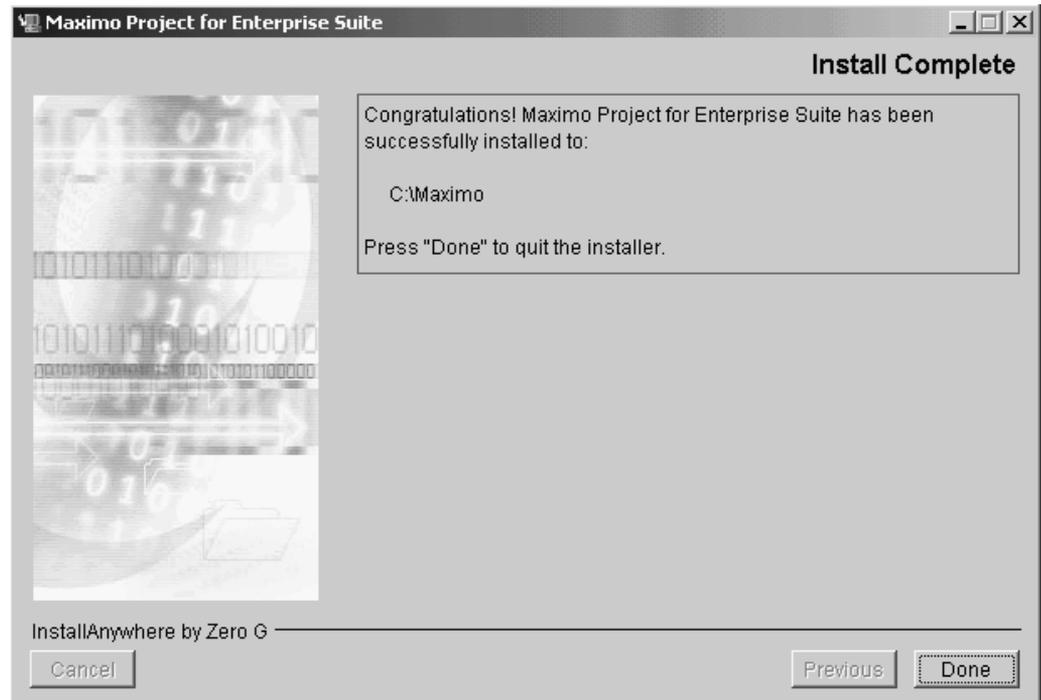
- 8 In the Choose Install Folder dialog box, specify the location where the Maximo Project Manager server files will be installed. Click **Next**.



- 9 In the Pre-Installation Summary dialog box, click **Install**.



- 10 Once the install is complete, click **Done**.



11 Update your database by running **updatedb.bat** from the <maximo>\tools\maximo directory.

NOTE If your base language is not English, use the **-n** option when you run updatedb.bat. For example, if your base language is Italian, use **updatedb -nit**.

12 ****If English is your base language, skip this step and proceed to step 13.**

Otherwise, run the importlang.bat file for your base language. For information on running importlang.bat, see “Running the importlang.bat Utility” in Appendix A.

13 ****Linux users only: If you are not running Maximo on Linux, skip this step and proceed to step 14.**

To run Maximo Project Manager while connecting to a Maximo instance installed on Linux, modify the hosts file on your Linux server.

To modify the hosts file:

- a** Open the hosts file from the following directory: **/etc/hosts**
- b** Modify the hosts file so that the hostname and the IP address are no longer on the same line.

Example:

Original host entry:

```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1 LINSRV1 localhost.localdomain localhost
```

New host entry:

```
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1 localhost.localdomain localhost
172.22.12.54 LINSRV1 (IP and Name of the Linux server)
```

14 Rebuild and deploy the Maximo .EAR files. For more information, see the *Maximo Installation Guide, Release 6*.

15 Shutdown and restart your Maximo application server. You must restart your server for the changes to take effect.

Maximo Project Manager Client Installation

You will now install the client portion of Maximo Project Manager. Verify that Microsoft Project 2003 is installed on the client desktop.

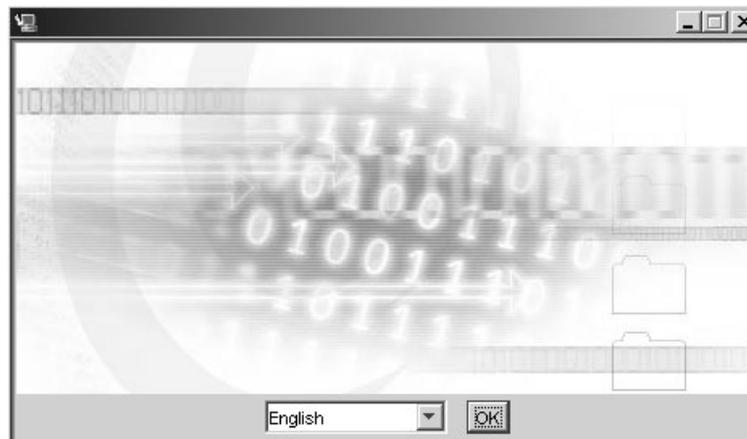
- 1 Start the Maximo server if it is not already running.
- 2 Insert the Maximo Project Manager CD into the CD-ROM drive.
- 3 Click **Start** and select **Run**.
- 4 Type: **d:\maxproject.exe** (where d is your CD-ROM drive) and select **OK** or press **Enter**.

or,

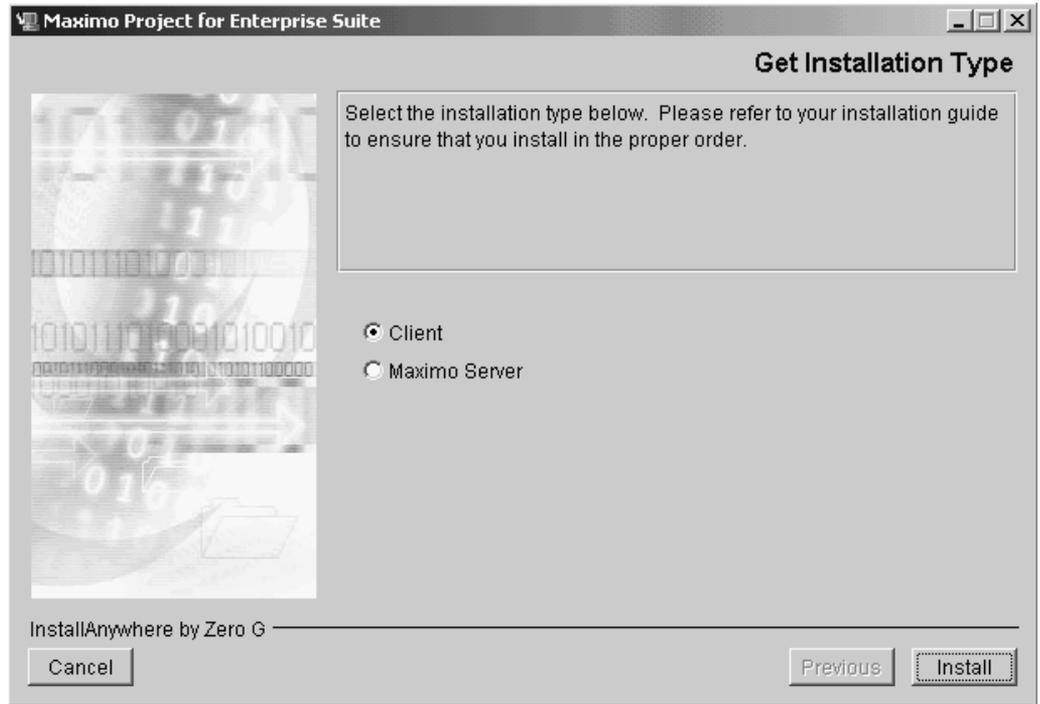
Using Windows Explorer, open your CD-ROM drive folder and double-click **maxproject.exe**.

The installation program displays a series of screens and dialog boxes. Follow the instructions on the screen.

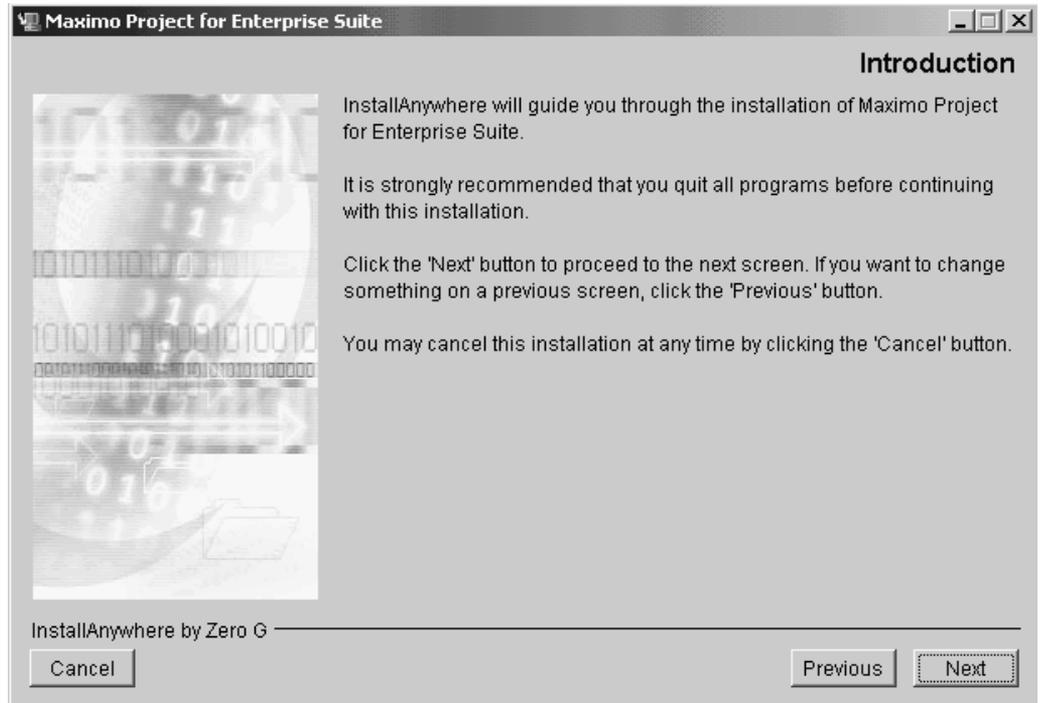
- 5 In the opening panel, select the language you wish to install from the drop-down menu. Click **OK**.



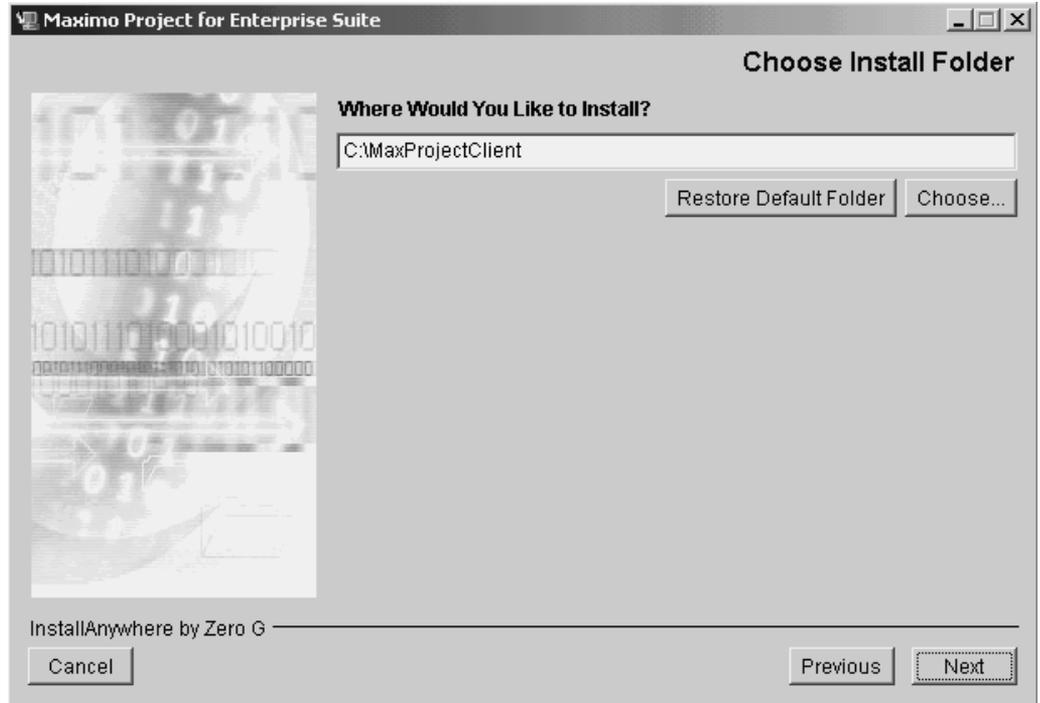
- 6 In the Get Installation Type dialog box, select the **Client** option. Click **Install**.



- 7 The Introduction screen displays. Click **Next**.



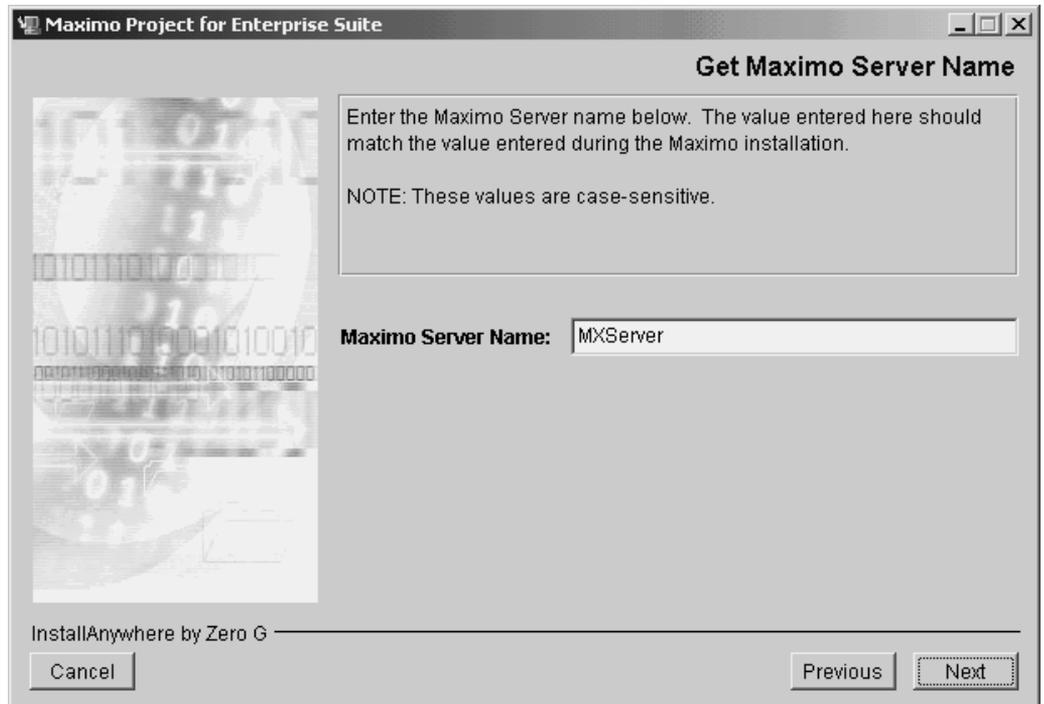
- In the Choose Install Folder dialog box, specify a location and click **Next**.



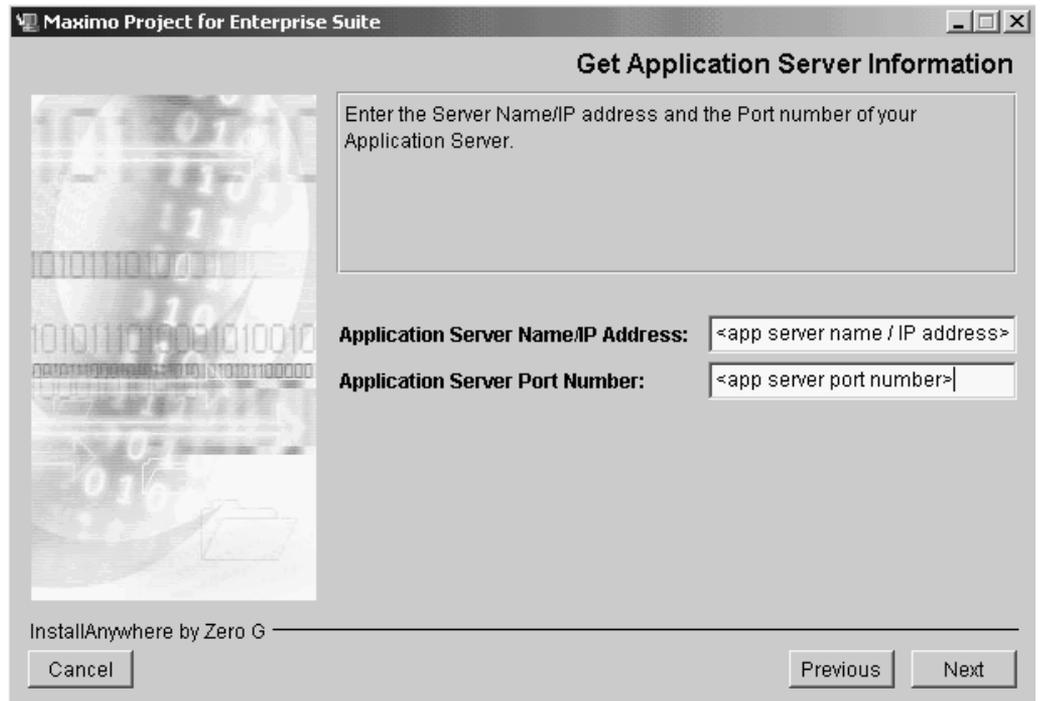
- In the Get Maximo Project Information dialog box, enter the Maximo user name and password for the user who will be using Maximo Project Manager. Enter the **Server RMI Port Number** if your Maximo application server uses a non-standard mx.e.registry.port entry (not 1099) in the maximo.properties file. Click **Next**.



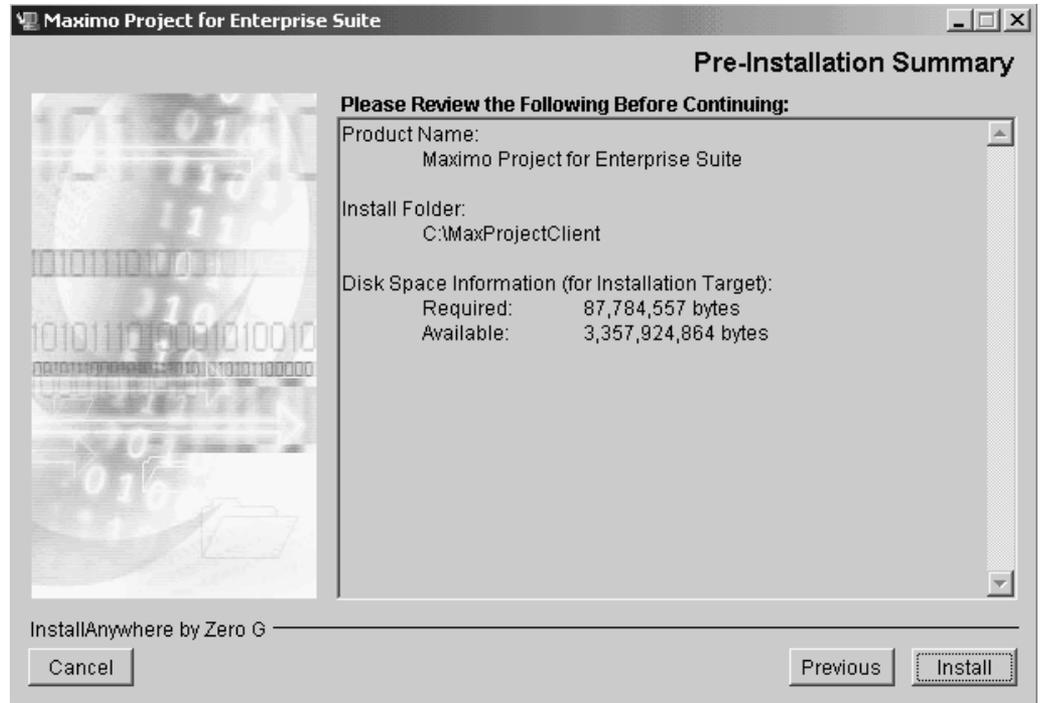
- 10 In the Get Maximo Server Name dialog box, enter your Maximo server name. Click **Next**.



- 11 In the Get Application Server Information dialog box, enter the Server Name/IP address and the port number of your application server. Click **Next**.

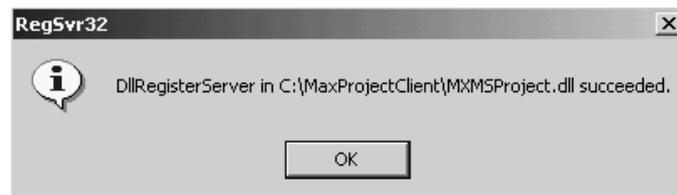


12 In the Pre-Installation Summary dialog box, click **Install**.



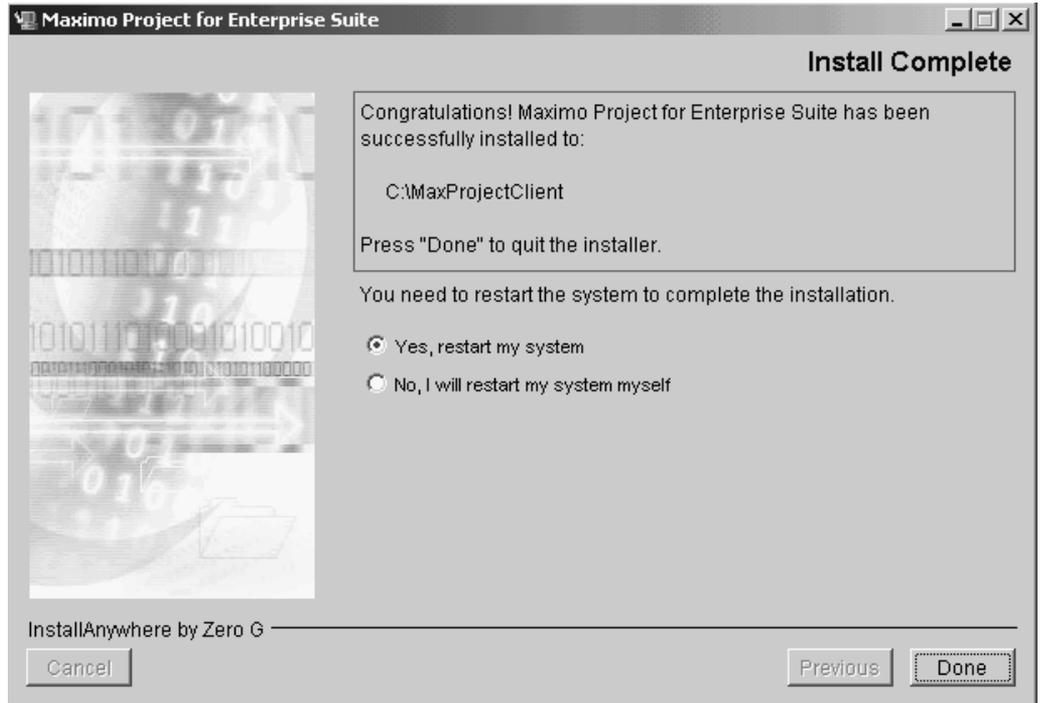
CAUTION If you get a message asking if you wish to overwrite an existing file with an older file, keep the newer file.

13 When you receive a message that indicates that the MXMSProject.dll has been successfully installed, click **OK**.



14 Once the install is complete, click **Done**.

Depending on your operating system, you may be prompted to restart.



15 Start the Maximo server if it is not already running.

16 In Maximo's Work Order application, create a query that will return a work order.

17 Open Microsoft Project.

The **Maximo Project** dialog box opens.

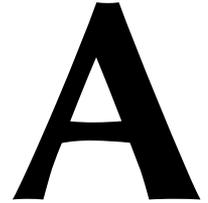
18 Click **Load Maximo Work Order**.

19 Enter the user name and password for your Maximo server.

20 Select the query you created in Maximo, then click **Launch**.

The work order is loaded into Microsoft Project.

Multi-Language Setup



If you are installing Maximo Project Manager in an environment where you have multiple languages enabled for Maximo, you will need to run the `importlang.bat` utility for Maximo Project Manager, the same way you did for Maximo. You will need to run the utility once for each additional language (besides your base language) that you have enabled.

About the `importlang.bat` Utility

`Importlang.bat` populates the corresponding multi language table of the MAXIMO database with data from the .XML file. The usage of the `importlang.bat` batch file is as follows:

```
-infile <path and filename of projectlang<langcode>.xml file>  
  
-propfile <path to maximo.properties file>  
  
-l <language code>
```

Example

The most common usage of the `importlang.bat` utility for Maximo Project Manager is as follows:

```
importlang.bat -infile  
C:\maximo\tools\maximo\<langcode>\project\  
projectlang<langcode>.xml -l FR
```

NOTE Your language code will differ, depending on what language you are importing. For example, FR means French.

Running the `importlang.bat` Utility

For each secondary language that you are enabling, you will need to do the following:

- 1 Install the Maximo Server portion of the installation program on your Maximo application server.
- 2 Run the `importlang.bat` file included in the installation program for that language.

Example

In your Maximo environment, you have English established as your base language, but also have users that access Maximo in French and Chinese.

You install Maximo Project Manager in English (both the server and client portions). You then insert the French Maximo Project Manager CD, install only the server portion, and run the importlang.bat file for French. Then, you insert the Chinese Maximo Project Manager Installation CD, install only the server portion, and run the importlang.bat file for Chinese.

CAUTION When you re-install the server portion of Maximo Project Manager, your projectlang<langcode>.xml file will be overwritten with the version on the CD. If you have made any customizations to the projectlang<langcode>.xml file that you do not want erased, select **No** when the installation program asks you if you want to overwrite the existing file.

maximo enterprise suite

Installation Guide

August 2006

Maximo
Release 6.1

Microsoft Windows | BEA WebLogic

mro software™

make it *all* count

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Maximo® Discovery	Maximo® Fusion	Maximo® Mobile Calibration
Maximo® Enterprise IT/SP		

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About This Guide

This section briefly summarizes this document and how it can help you as a Maximo Release 6 user. It also provides information on other MRO resources available to you, such as additional documentation and support.

Why Read This Guide?

This guide explains how to install the Maximo Release 6 system.

Who Should Read This Guide?

The guide is intended for the following people:

- ▼ Implementation analysts
- ▼ Support personnel
- ▼ System administrators

How to Use This Guide

This guide explains prerequisites and procedures for installing the Maximo Release 6 system. Review all the installation steps in this guide before you begin the installation process.

Notation Conventions

The following notations have special meaning:

Notation	Description
Bold text	Denotes a button, check box, or field on a screen
▼ Bulleted procedures	Instructions that you can perform in any sequence
CAUTION	Precedes information that, if ignored, can result in loss of data
NOTE	Precedes information of special importance

Notation	Description
1	Numbered procedures
>	Denotes a navigation path through menu items. For example, File > Open

Chapter Contents

The following table briefly describes each chapter in this document. Read the chapters in the order they appear and perform the tasks in sequence as written.

Chapter Name	Chapter Contents
Chapter 1: Introducing Maximo Release 6	Provides an overview of concepts and installation tasks.
Chapter 2: Installing BEA WebLogic 8.1.4.0	Describes how to install the BEA WebLogic® Server™ application Server.
Chapter 3: Installing the Actuate Application	Describes how to install the Actuate 8 iServer application.
Chapter 4: Installing Maximo Release 6	Describes how to install Maximo Release 6 and complete certain post installation tasks.
Chapter 5: Installing the Language Utilities	Explains how to install language-specific Help files and database scripts.
Chapter 6: Installing Maximo Keys	Explains how to access applications that you are entitled to use determined by your Maximo license purchase.
Chapter 7: Creating the Maximo Schema	Explains how to prepare an Oracle instance and a SQL Server 2000 database on the server to hold your data.
Chapter 8: Deploying EAR Files	Outlines how to deploy the EAR files using BEA WebLogic console.
Chapter 9: Installing the Actuate Encyclopedia for Maximo	Describes how to install the Encyclopedia, which is a collection of Maximo-specific reports, user profiles, and user permissions. Also explains how to import the Actuate Encyclopedia for Maximo.
Chapter 10: Logging Into Maximo Start Center	Describes how to invoke the Maximo Start Center.
Appendix A: Server System Administration	Explains how to create, start, and stop the Maximo application server as a MS Windows Service.
Appendix B: Configuring the JMS Option for Maximo Enterprise Adapter	Explains how to define JMS components such as Queues for the MEA application.

Chapter Name	Chapter Contents
Appendix C: Enabling JMS Connection Factory for MAXIMO Enterprise Adapter	Describes how to define transaction configurations for the JMS Connection Factory.
Appendix D: Adding Additional Maximo Keys	Explains how to configure additional Maximo package files that you may have purchased.
Appendix E: Enabling Reports to run	Explains how to enable additional Actuate functionalities to run Reports properly.

Related Documentation

You can find more information regarding the Maximo Enterprise Adapter for SAP R/3 in the following documents:

Document	Description
Maximo online help	Provides step by step procedures for every action in Maximo.
<i>Maximo System Administrator's Guide</i>	Explains how to customize the system, manage the database, set up accounting features of the general ledger, and use Maximo utilities.
<i>Maximo User's Guide</i>	Provides an overview of Maximo features, and describes relationships among modules.

Support

MRO Software, Inc. users with a valid Annual Customer Support Plan (ACSP) can obtain product support online at <http://support.mro.com>.

The Support Web site includes information about product releases, software patches, and documentation updates. To find the most current version of a document, refer to the Support Web site's Knowledge Base.

Introducing Maximo Release 6

1

Maximo Release 6 is a comprehensive suite of products all built on a single, common platform. It combines enhanced Enterprise Asset Management functionality with new service management capabilities that together improve the effectiveness of asset management strategies.

Maximo® Enterprise Suite includes advanced IT asset management, service management, and a full-featured service desk, all based on the IT Infrastructure Library (ITIL) guidelines. Each product can be implemented separately as a stand-alone solution or readily deployed together. The solution enhances asset management and ensures service performance of production, facility, transportation and IT assets.



Maximo Release 6 consists of multiple software servers that you can either install on separate server machines or the same physical server. MRO Software recommends the following dedicated servers: Application Server, Actuate Report Server and Database Server.

Overview of Installation

Use this guide to install Maximo Release 6. During this process you will complete the following tasks in the order that they appear:

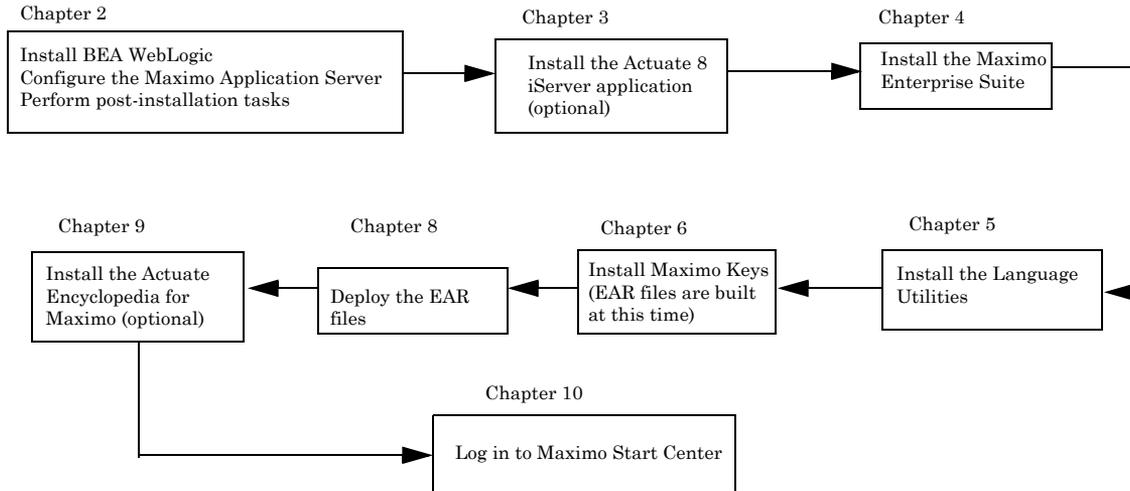
- 1 Install BEA WebLogic application server.
- 2 Install the Actuate application server.
- 3 Install the Maximo Release 6 system.
- 4 Install the language utilities program.
- 5 Install the Maximo Keys (or packages).
- 6 Create the Maximo schema.
- 7 Deploy the Enterprise Application Archive (EAR) files.

8 Install the Actuate Encyclopedia for Maximo.

9 Log in to the Maximo Start Center.

The following diagram illustrates the software components and the order in which you must install these components to obtain a successful Maximo system installation:

Installation Flow



Internet Connectivity

The installation of Maximo and its various components require a valid and active connection to the Internet. MRO Software *strongly* recommends that you allow the online update of the MAXIMO Application Server to be completed.

Overview of Concepts

Maximo application refers to an instance of Maximo. Enterprise Application Archive (EAR) files define what constitutes a Maximo application. You can have multiple Maximo applications, in other words, multiple deployed EAR files on one application server.

An EAR file represents a Java 2 Enterprise Edition (J2EE) application that you deploy in an application server. EAR files are standard Java archive files and have the file extension **.ear**.

An EAR file can consist of:

- ▼ Web Application Archive (WAR) files that contain for example, JSP or HTML pages
- ▼ Java Enterprise Application (JAR) files that contain class files and other programming code modules

- ▼ Enterprise Java Bean (EJB) files that contain class files

MRO Software uses the term *application server* to refer to a J2EE container that provides the infrastructure to run business applications such as Maximo. BEA WebLogic is a commercial application server supported by Maximo.

When you install Maximo, you create a *new* application server (in the container sense) for the Maximo application iteration within BEA WebLogic. MRO Software refers to an application server running Maximo as the *Application Server* (initial capital letters).

Context is the name through which you access a specific web application, such as Maximo deployed on an Application Server. Maximo Release 6 has the following contexts:

- ▼ /maximo — Maximo user interface
- ▼ /mbo — Maximo business objects
- ▼ /maximohelp — Maximo help
- ▼ /acweb — Actuate
- ▼ /meaweb — Maximo Enterprise Adapter

You access Maximo from the browser using the /maximo context.

For example, `http://<host name>:<port number>/maximo`. The character string `maximo` that appears after the port number, is the Maximo context.

How Does Maximo Run in an Application Server?

The following points summarize how Maximo is set up to run in an application server:

- ▼ The EAR files are created from the contents placed on your local drive as part of the installation process
- ▼ The Maximo application consists of the following EAR files:
 - ▼ `maximo.ear` – for the Maximo application
 - ▼ `maximohelp.ear` – for the Maximo Help application
 - ▼ `acweb.ear` – for the MRO Actuate Active Portal Integration application
- ▼ In order to run Maximo, you must deploy the Maximo application EAR files in the application server.
- ▼ When Maximo application EAR files are deployed in the Application Server, the server maintains a copy of the EAR files internally.
- ▼ The Maximo installation builds the EAR files based on the information you provided during the installation. Any configuration changes *require* you to rebuild and redeploy the EAR files.

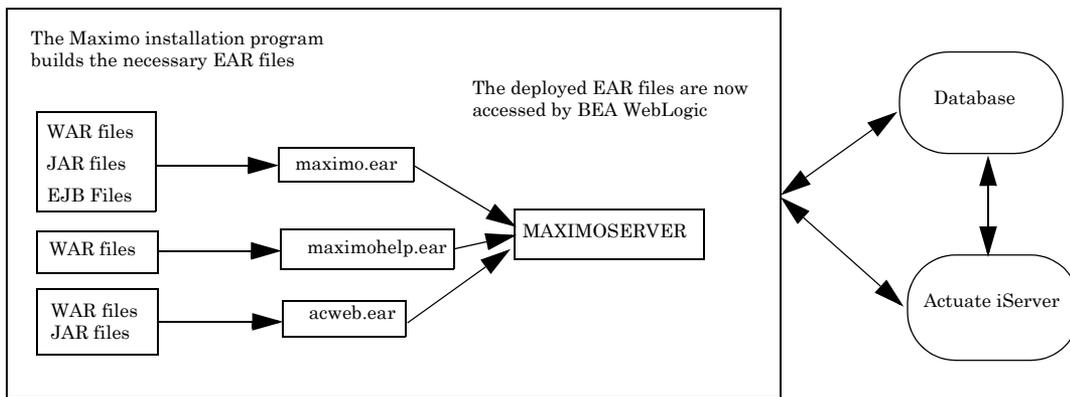
Single Maximo Application Deployed in a Single Application Server

You use your application server software to *deploy* the EAR files that the Maximo installation program builds. All three EAR files—maximo.ear, maximohelp.ear, acweb.ear, — comprise a single Maximo application (MAXIMOSERVER).

After you deploy the EAR files, a copy of each EAR file is saved in the application server software folder structure. The application server uses this copy when running and does not access the EAR files from the Maximo root folder.

The following diagram depicts the Application Server MAXIMOSERVER running Maximo in BEA WebLogic on a single physical machine.

Application Server MAXIMOSERVER running Maximo in BEA WebLogic on a single physical machine



JSP Technology

Maximo applications use JSP technology. An application server, such as the BEA WebLogic server, is used for accepting HTTP requests from client programs (web browsers) and for responding in HTML content.

When a client requests a JSP page, the application server processes the JSP page, and the web server sends the result of the JSP page in HTML content back to the client. Refer to the <http://java.sun.com/products/jsp/index.html> link for more information about JSP Technology.

XML Technology

Maximo applications uses XML files to render the layout and creation of the user interface.

EJB Technology

EJB technology enables rapid and simplified development of distributed, transactional, secure and portable applications based on Java technology.

Additional Information

If you have an active Annual Customer Service Plan (ACSP) agreement with MRO Software, you can access the Support Online Web site: <http://support.mro.com>

The Support Web site includes information on product releases, software patches, and documentation updates. To find the most current version of a document, refer to the Support Web site's Knowledge Base. To create a Support Online user account, you will need your MRO Software product serial number.

Maximo Components

The following section describes the server components in a typical Maximo environment.

Application Server

Maximo is built using J2EE (Java 2 Enterprise Edition) technology, which requires using a commercial application server. Maximo uses BEA WebLogic 8.1.4 as its application server.

The Application Server consists of Maximo Applications using JavaServer Pages (JSP), XML, and Maximo application specific business components.

The Maximo Application also installs the Active Portal, which enables you to use the Web to access reports in your Encyclopedia volume and the Management Console. This web-based capability further enables you to deploy and test reports on an Encyclopedia volume. You access reports by using a Web browser (Internet Explorer) to access the Encyclopedia volume through Active Portal.

Actuate Server

As part of Maximo, Actuate is offered as the embedded reporting tool. Actuate's Information Delivery Solution enables you to create, manage, and deliver interactive, actionable content.

However, it is your option whether or not to use Actuate as your Maximo Reporting tool. As you perform the Maximo installation (Chapter 4), if you do not choose to use Actuate, you simply skip the Actuate references and continue completing the Maximo installation program.

If you do choose to use Actuate, MRO Software recommends that you install the Actuate iServer on a separate server on the network. It generates and manages report documents and provides:

- ▼ A server-based system to generate, manage, and deliver interactive, actionable electronic reports
- ▼ Information in multiple formats including DHTML, PDF, XLS
- ▼ Open security folder integration to leverage existing e-business platform security service

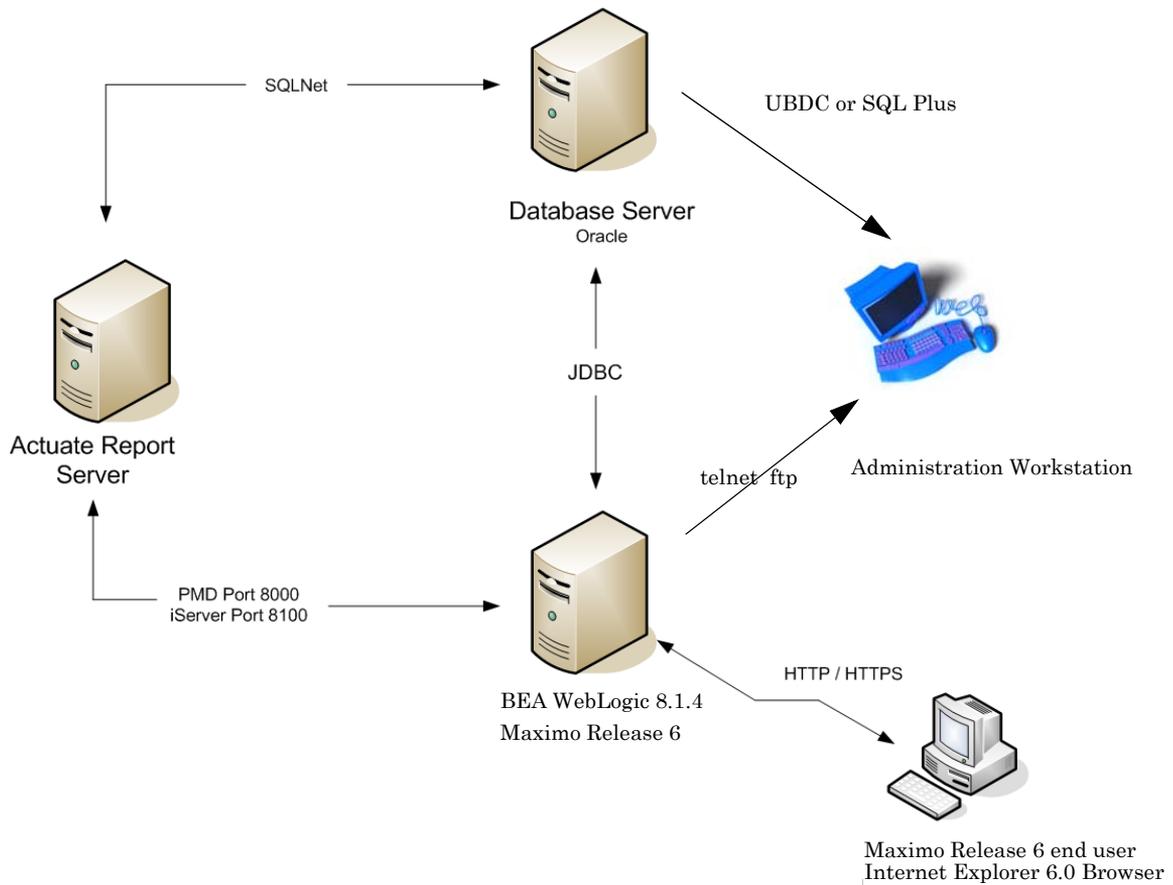
Database Server

Maximo Release 6.0 for BEA WebLogic supports:

- ▼ Oracle 9.2.0.6 (9i), or 10.1.0.3 (Standard or Enterprise Edition)
- ▼ Microsoft SQL Server 2000 SP3

Typical Maximo Configuration Diagram

The following diagram depicts a typical Maximo configuration.



Hardware and Software Considerations

For best performance, MRO Software recommends the following configuration:

- ▼ Dedicated Application Server
- ▼ Dedicated Actuate Server
- ▼ Dedicated Database Server

The following factors affect server configuration requirements:

- ▼ Maximo applications deployed
- ▼ Number of connecting client workstations
- ▼ Desired performance level

Table 1 lists hardware and software recommendations (server and workstation)

Dedicated Servers	Hardware	Software
Application Server: where you install BEA WebLogic® Server™	<ul style="list-style-type: none"> ▼ 2–4 dedicated, Intel® Pentium® processors ▼ 2GB RAM per processor ▼ 1.5GB of disk space 	<ul style="list-style-type: none"> ▼ Microsoft Windows 2000 Server® ▼ Microsoft Server 2003® ▼ BEA WebLogic 8.1.4
Database Server:	<ul style="list-style-type: none"> ▼ Refer to vendor specifications 	<ul style="list-style-type: none"> ▼ 9.2.0.6, 10.1.0.3, or 10.2.0.1 server software (either Oracle Standard or Enterprise) ▼ MS SQL Server 2000 SP3
Actuate iServer: the server you plan to use for generating reports	<ul style="list-style-type: none"> ▼ 1–2 dedicated, Intel® Pentium® processor ▼ 1GB RAM per processor ▼ 610MB of disk space 	<ul style="list-style-type: none"> ▼ Microsoft Windows 2000 Server ▼ Microsoft Server 2003 ▼ Actuate 8 iServer ▼ Database client software: <ul style="list-style-type: none"> ▼ Oracle Client Software (Oracle JDBC drivers, SQL*Plus, Oracle Networking) ▼ MS SQL Server 2000 Client (ODBC)
Administrative Workstation where you install Maximo Used for application building, workflow designer, Application designer, and other high-level functions	<ul style="list-style-type: none"> ▼ Intel® Pentium® processor ▼ 512 MB RAM ▼ SVGA 1024 x 768 resolution; if used for Application Designer 1280 x 1024 resolution 	<ul style="list-style-type: none"> ▼ Microsoft Windows 2000/XP Professional ▼ Internet Explorer 6.0® ▼ Maximo Release 6
Client Workstation	<ul style="list-style-type: none"> ▼ Intel® Pentium® processors ▼ 512 MB RAM ▼ SVGA 1024 x 768 resolution 	<ul style="list-style-type: none"> ▼ Microsoft Windows 2000/XP Professional ▼ Internet Explorer 6.0

For additional tuning and configuration information, refer to the *Maximo System Administrator's Guide*.

Third-Party Product Updates

MRO Software supports Maximo with later product updates as they are released by third-party vendors. Our policy is to validate products with the latest third-party product updates at time of release certification. MRO Software has certified the following third-party product updates:

- ▼ Windows 2000 Server/Advanced Server Service Pack 4
- ▼ Windows XP Professional Service Pack 2
- ▼ Windows 2000 Professional Service Pack 4
- ▼ Internet Explorer 6.0: Service Pack 1
- ▼ BEA WebLogic 8.1.4
- ▼ Oracle 10.2.0.1 (Oracle Standard or Enterprise)
- ▼ Oracle 10.1.0.3 (Oracle Standard or Enterprise)
- ▼ Oracle 9.2.0.6 (Oracle Standard or Enterprise)
- ▼ Microsoft SQL Server 2000: SP3

Java Virtual Machine (JVM)

The Maximo Release 6 automatic update program used in the product installation, *requires* that a **Java Virtual Machine (JVM)** to be installed and present on the Maximo server. If no JVM is present, the install appears to start and the load scroll bar climbs to 100% but the install does not launch. A tested JVM can be downloaded from http://java.sun.com/products/archive/j2se/1.4.2_07/index.html. Once the JVM is installed, continue with the automatic update process.

Installing BEA WebLogic

2

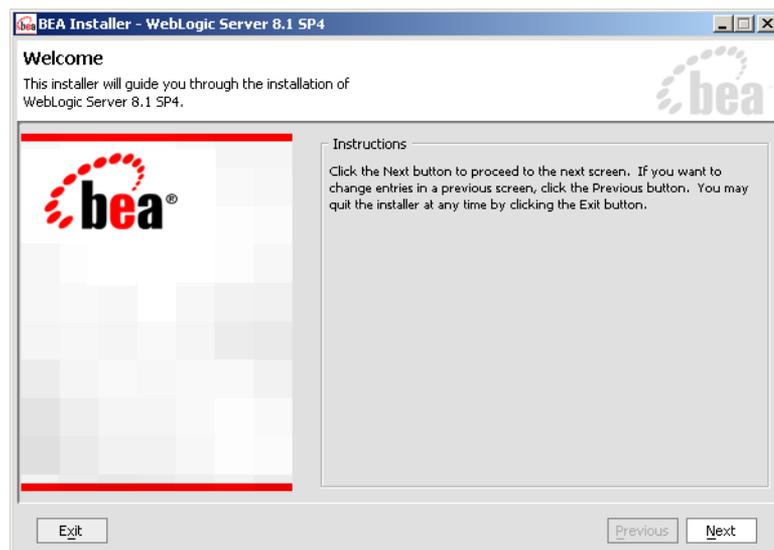
This chapter explains how to perform the following tasks:

- ▼ Install BEA WebLogic 8.1.4.0
- ▼ Configure the Maximo Application Server
- ▼ Install the BEA WebLogic License Update program
- ▼ Post Installation tasks

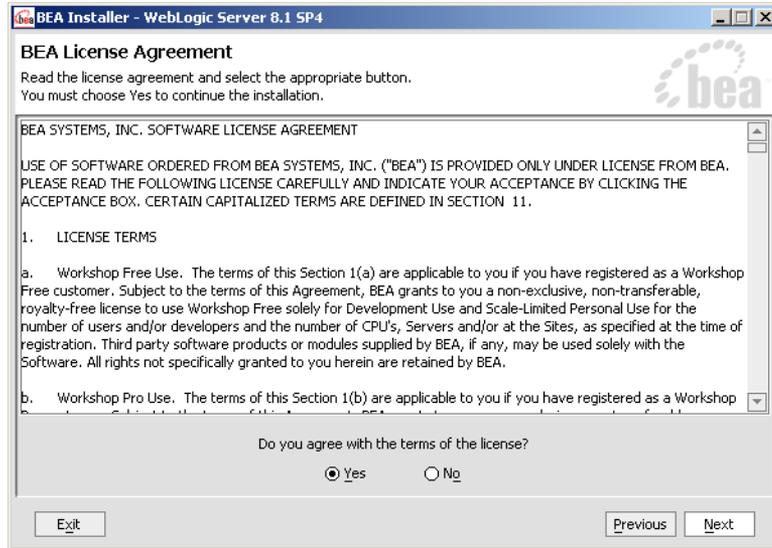
Installing BEA WebLogic 8.1.4.0

Complete the following steps to install BEA WebLogic 8.1.4.0. For best performance, MRO Software recommends installing BEA WebLogic Server on a dedicated application server.

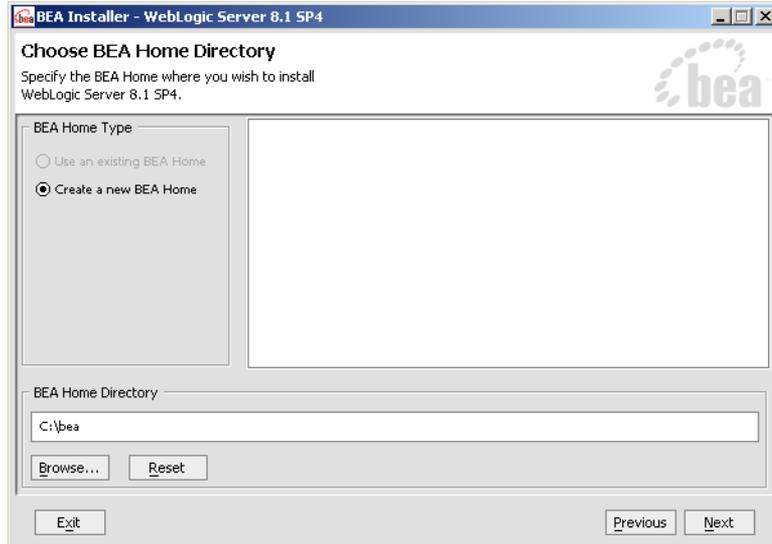
- 1 Insert the BEA WebLogic Application CD-ROM in your CD drive and from the root CD directory, double click **server814_win32.exe**.
- 2 The Preparing the installer dialog box opens, followed by the Welcome dialog box. Click **Next**.



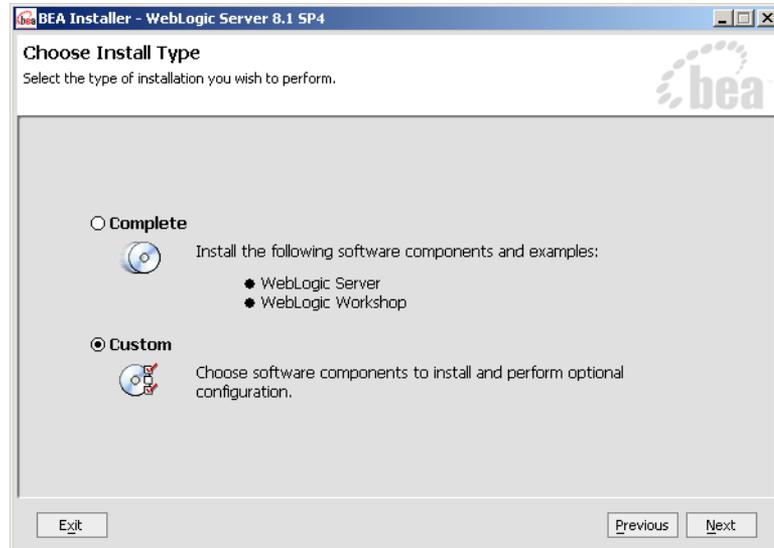
3 Select **Yes** and click **Next**.



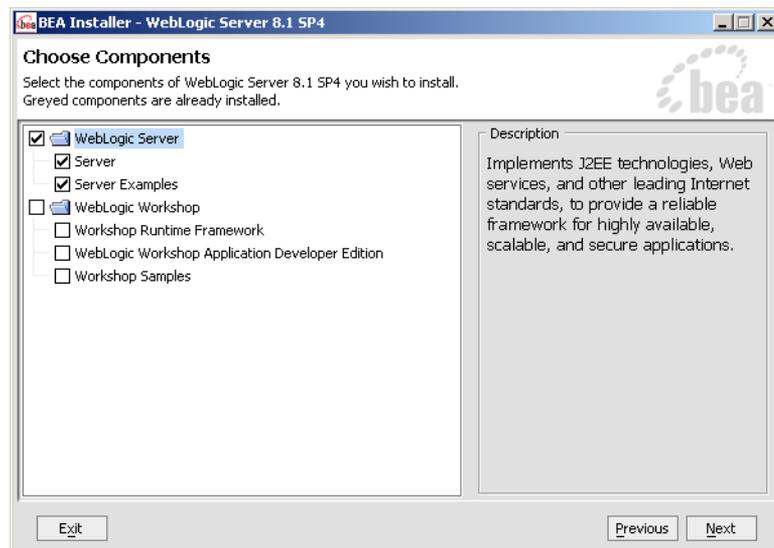
4 Select **Create a new BEA Home** option and accept the default BEA Home Directory (c:\bea). Click **Next**



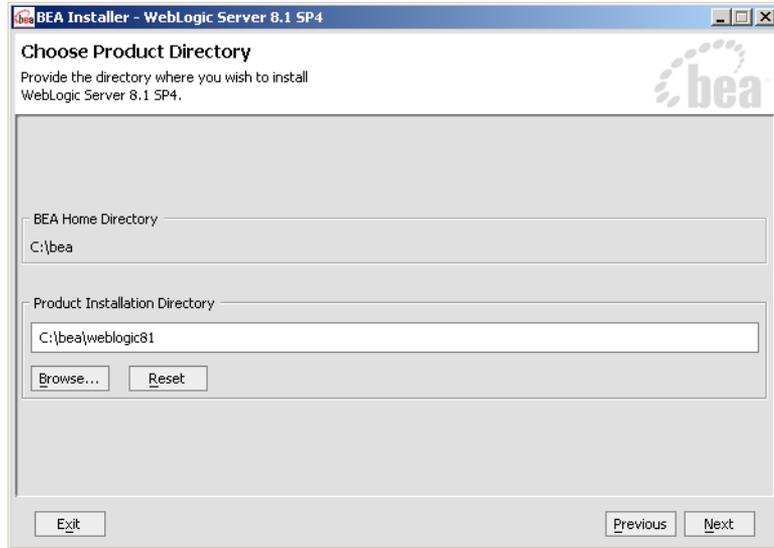
- 5 Select **Custom**, as the Install Type and click **Next**.



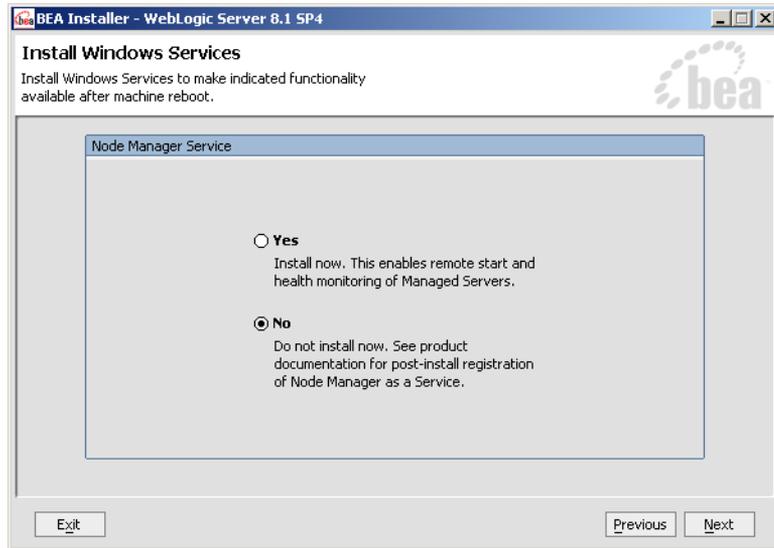
- 6 Select only **WebLogic Server** (includes Server and Server examples) and deselect WebLogic Workshop. Click **Next**.



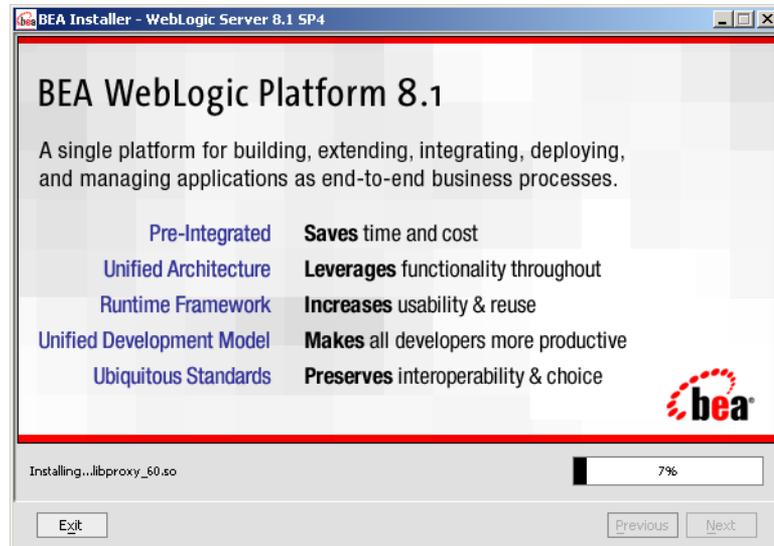
- 7 Accept the default (c:\bea\weblogic81) installation location and click **Next**.



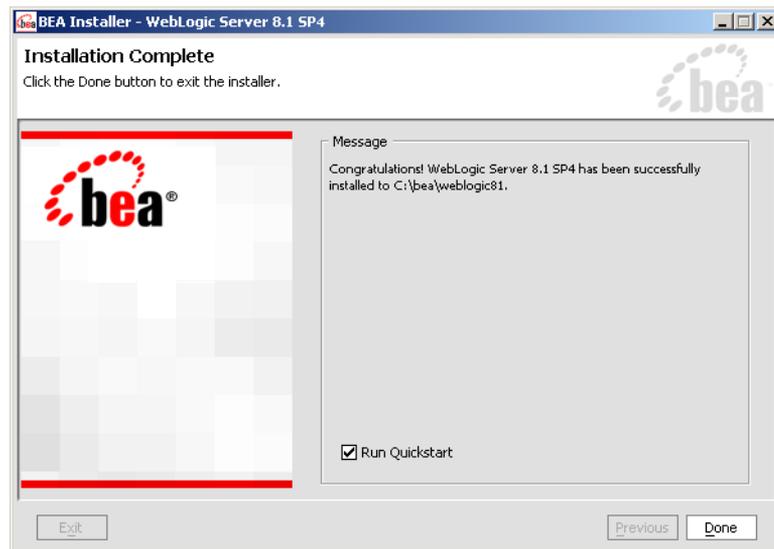
- 8 Select **No** to install the Node Manager as a Service and click **Next**.



Allow the installation progress bar to complete.



9 Check the **Run Quickstart** check-box. Click **Done**.



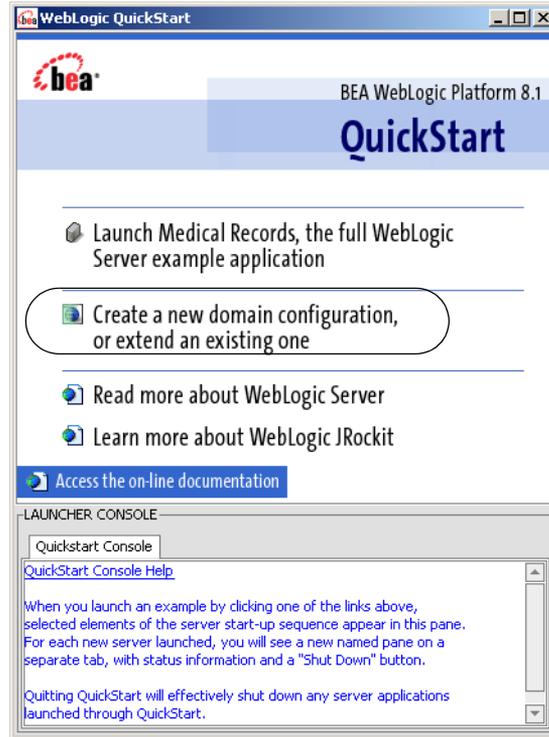
In a few seconds the QuickStart window opens. Continue with the next section to configure the Maximo Application Server.

Configuring the Maximo Application Server

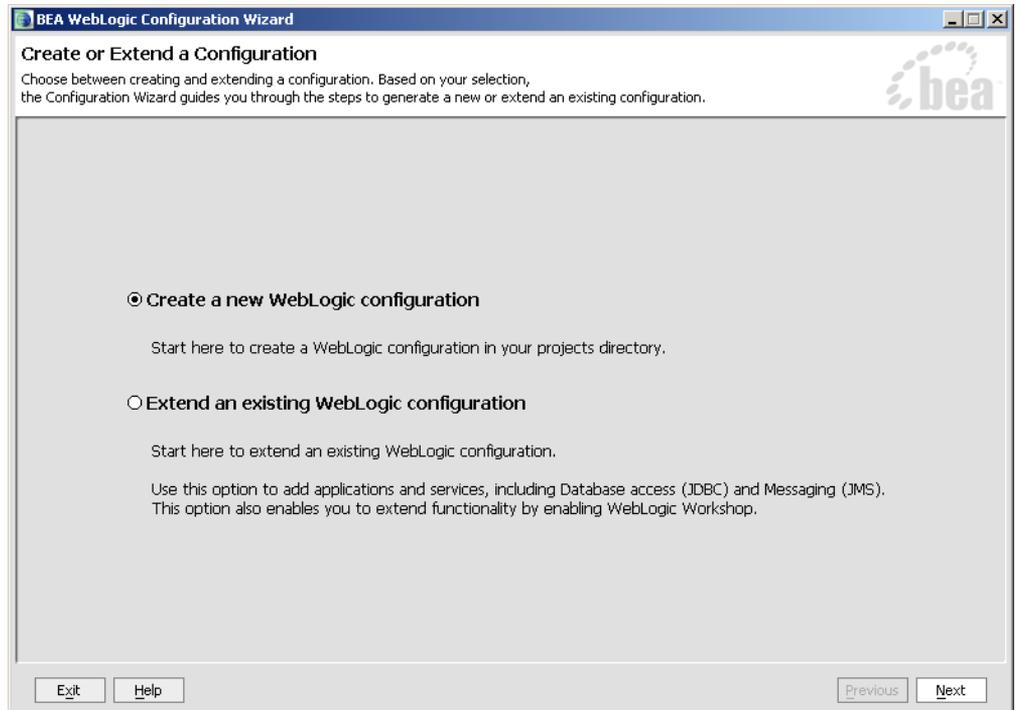
You can also invoke the Configuration Wizard from the Windows Start menu: Start > All Programs > BEA WebLogic Platform 8.1 > Configuration Wizard.

Complete the following steps.

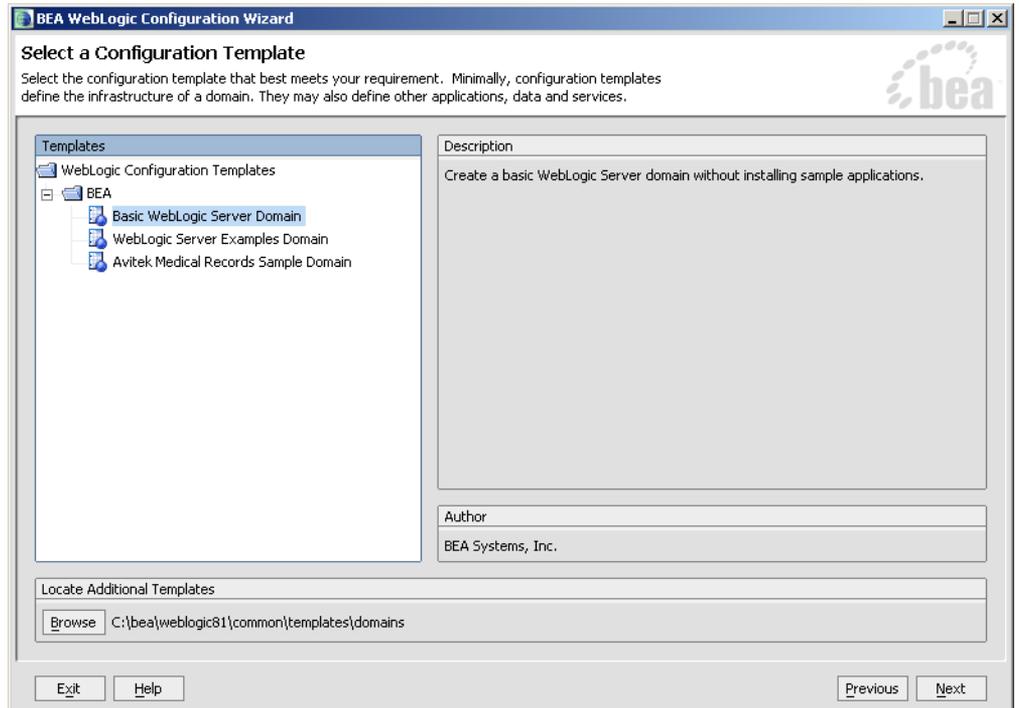
- 1 Click the **Create a new domain configuration** link.



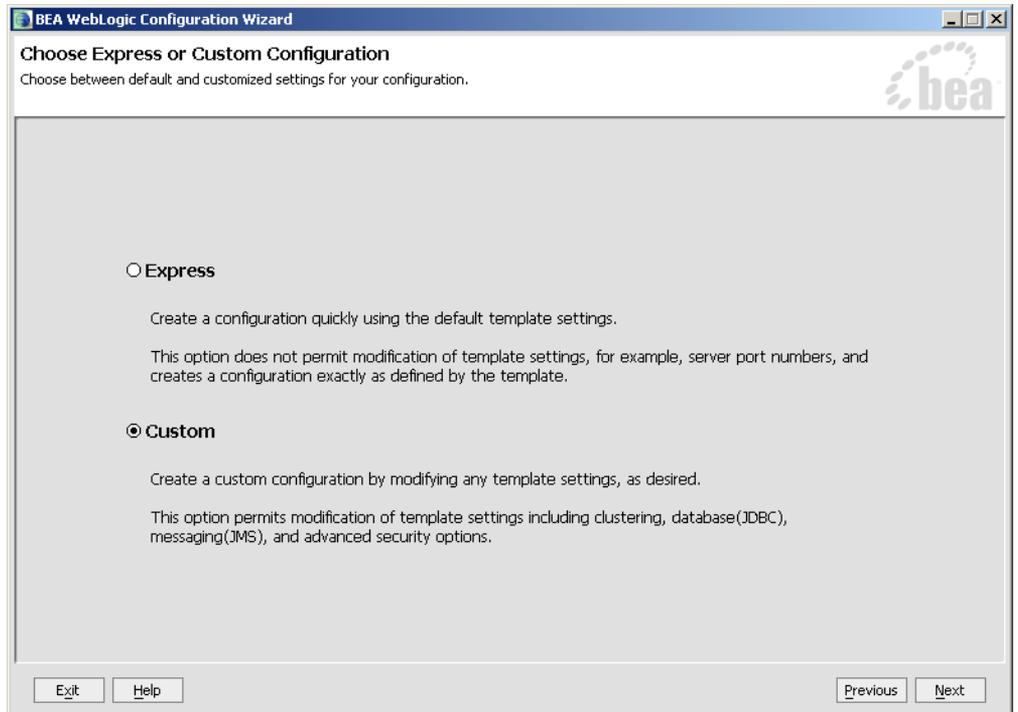
2 Select **Create a new WebLogic configuration** and click **Next**.



3 From the Configuration Template window, select only **Basic WebLogic Server Domain** and click **Next**.



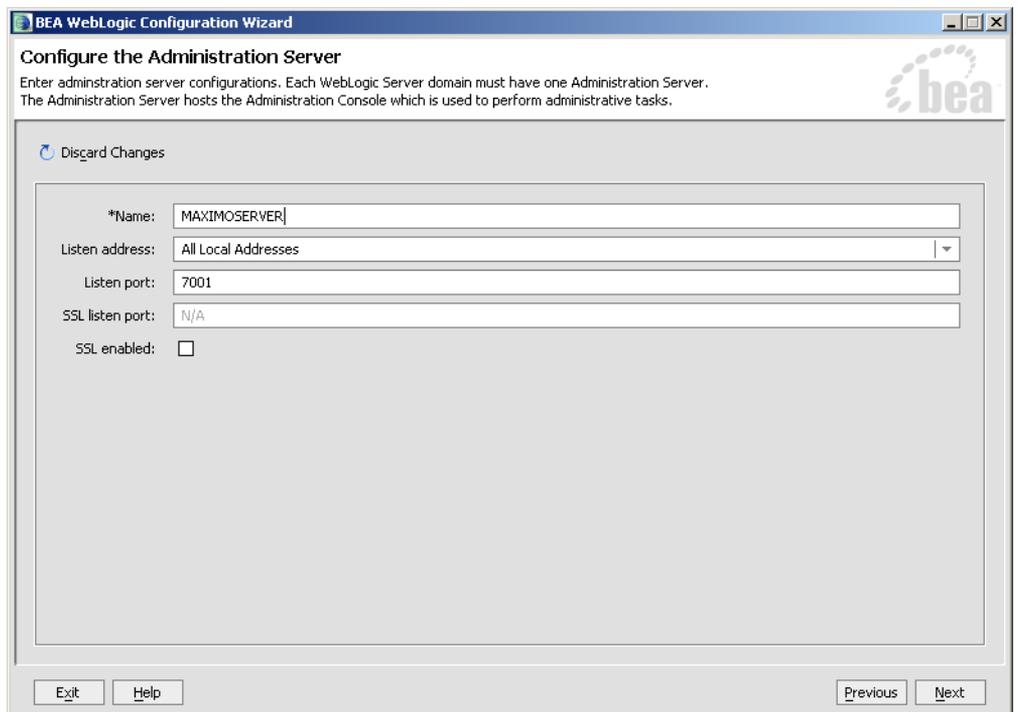
4 Select **Custom** and click **Next**.



5 Type **MAXIMOSERVER** in the Name field and accept all other default values and click **Next**.

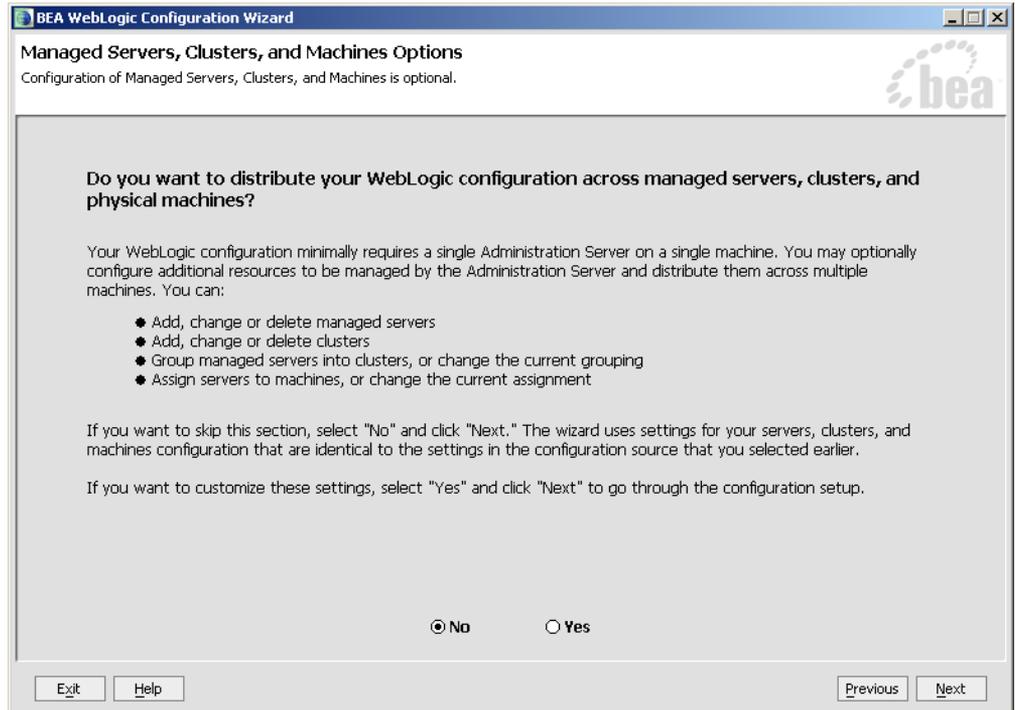
By default, the Listen Port number is 7001. You can specify a different port number or accept the default value.

Record this port number on page 4-1. You will need it during Maximo installation.

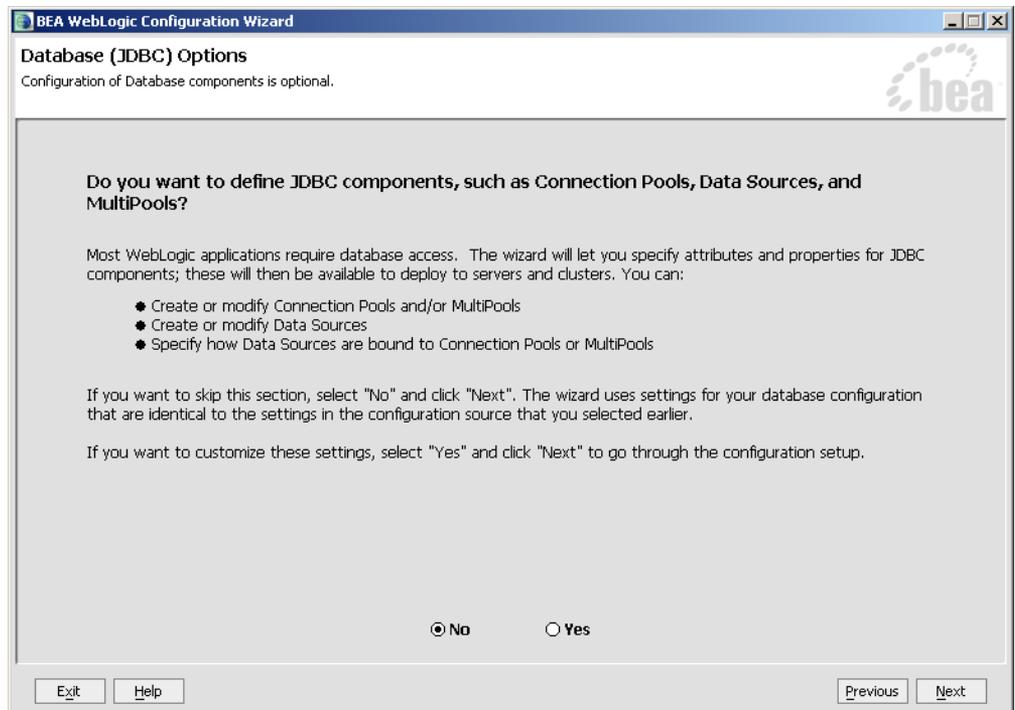


6 Select **No** in the Managed Servers dialog box and click **Next**.

Refer to the Maximo System Administrator's guide if you want to distribute your WebLogic configuration across managed servers.



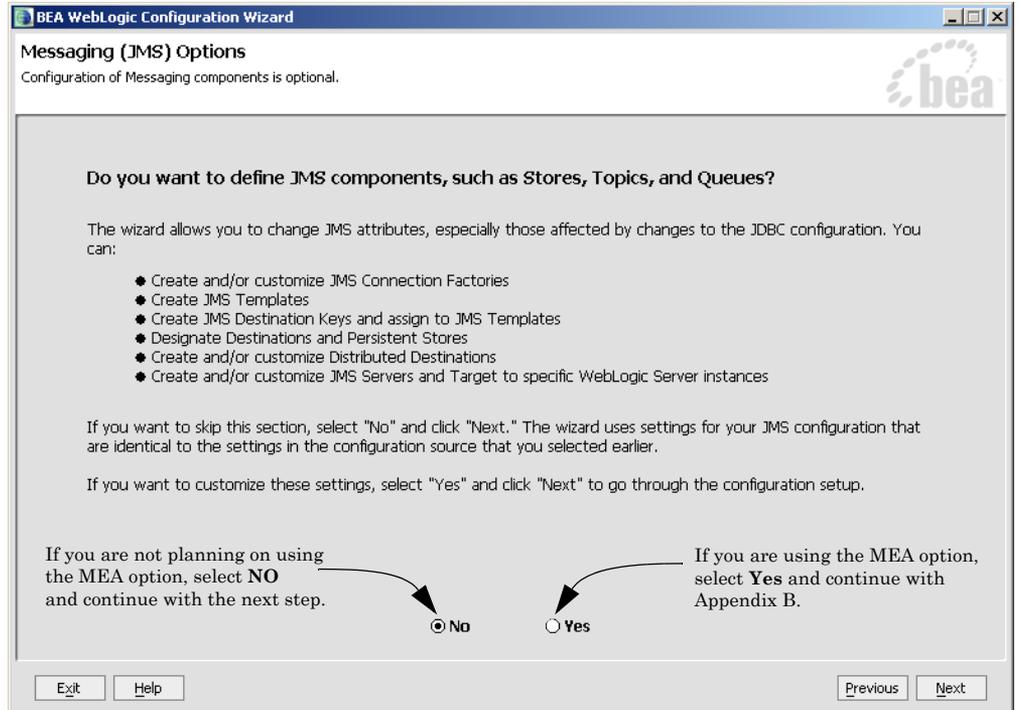
7 Select **No** in the Database (JDBC) Options dialog box and click **Next**.



8 Consider the following options before continuing with this step:

If you have received the Maximo Enterprise Adapter Packaging Key and plan to implement the Maximo Enterprise Adapter, you need to define the required Java Message Service (JMS) Options at this time. Select **Yes**, click **Next**, and continue with “Configuring JMS Options for Maximo Enterprise Adapter”, on page B-1. Details on the Maximo Enterprise Adapter can be found within the Maximo Enterprise Adapter System Administrator's Guide.

However, If you have not received the Maximo Enterprise Adapter Packaging Key or are *not* planning to implement the Maximo Enterprise Adapter, select **No** and click **Next** to continue with the next step.



- 9 Specify a username and a password. The username and password must be 8 characters long. Click **Next**.

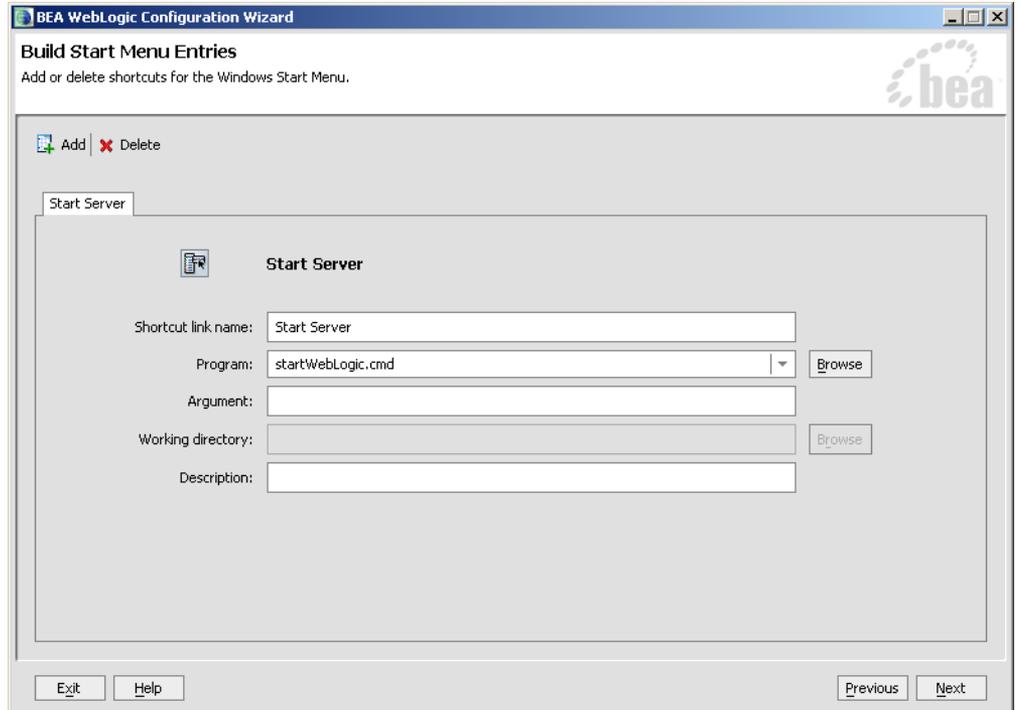
The screenshot shows the 'Configure Administrative Username and Password' step of the BEA WebLogic Configuration Wizard. The window title is 'BEA WebLogic Configuration Wizard'. The main heading is 'Configure Administrative Username and Password'. Below the heading, it says 'Create a user automatically assigned to the Administrative Role. This user is the default administrator used to start development mode servers.' There is a 'Discard Changes' link. The form contains four input fields: '*User name:' with the value '12345678', '*User password:' with '*****', '*Confirm user password:' with '*****', and 'Description:' with 'The default administration user'. At the bottom, there are radio buttons for 'No' (selected) and 'Yes'. Navigation buttons 'Exit', 'Help', 'Previous', and 'Next' are at the bottom.

- 10 Select **Yes** to create a Start Menu, and **No** to install the server (MAXIMOSERVER) as a Windows Service. Click **Next**.

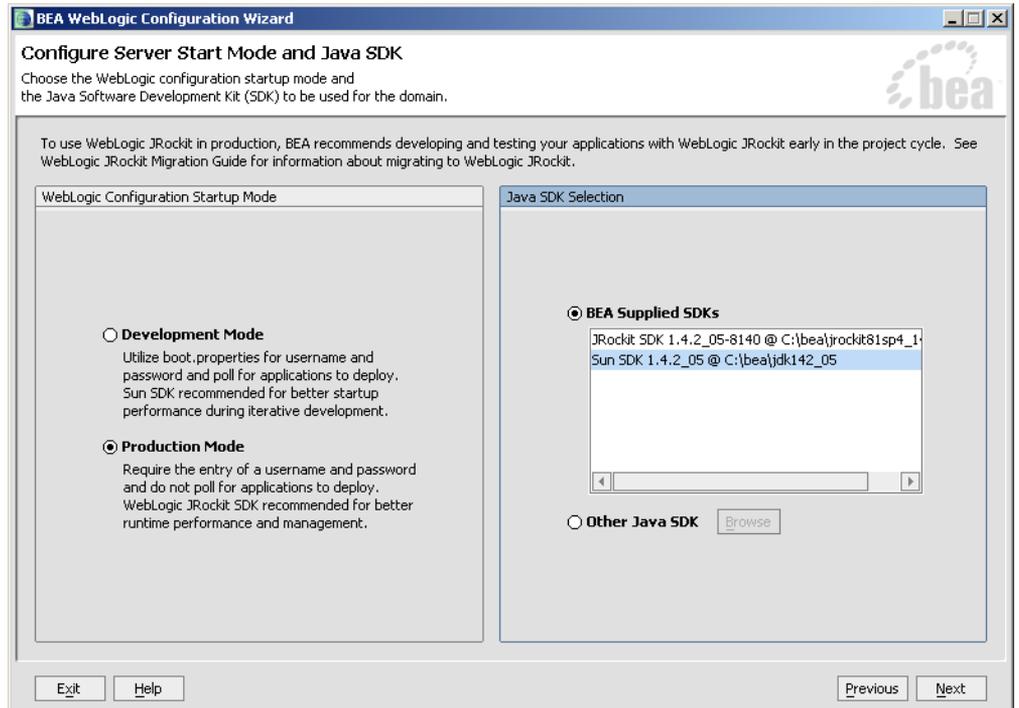
See Appendix A about creating and running MAXIMOSERVER as a Windows Service.

The screenshot shows the 'Configure Windows Options' step of the BEA WebLogic Configuration Wizard. The window title is 'BEA WebLogic Configuration Wizard'. The main heading is 'Configure Windows Options'. Below the heading, it says 'Choose whether or not to add a Windows Start Menu Shortcut and install the server as a Windows service.' There are two panels. The left panel is titled 'Create Start Menu' and has two radio button options: 'Yes' (selected) with the description 'Add a shortcut in the Start Menu.' and 'No' with the description 'Do not add a shortcut in the Start Menu.' The right panel is titled 'Install Administrative Server as a Windows Service' and has two radio button options: 'Yes' with the description 'I have administrative privileges and want to register my administrative server as a service.' and 'No' (selected) with the description 'Do not register my administrative server as a service now. See product documentation for post-install registration of a server as a service.' Navigation buttons 'Exit', 'Help', 'Previous', and 'Next' are at the bottom.

11 Accept the default values that appear in the Build Start Menu Entries and click **Next**.

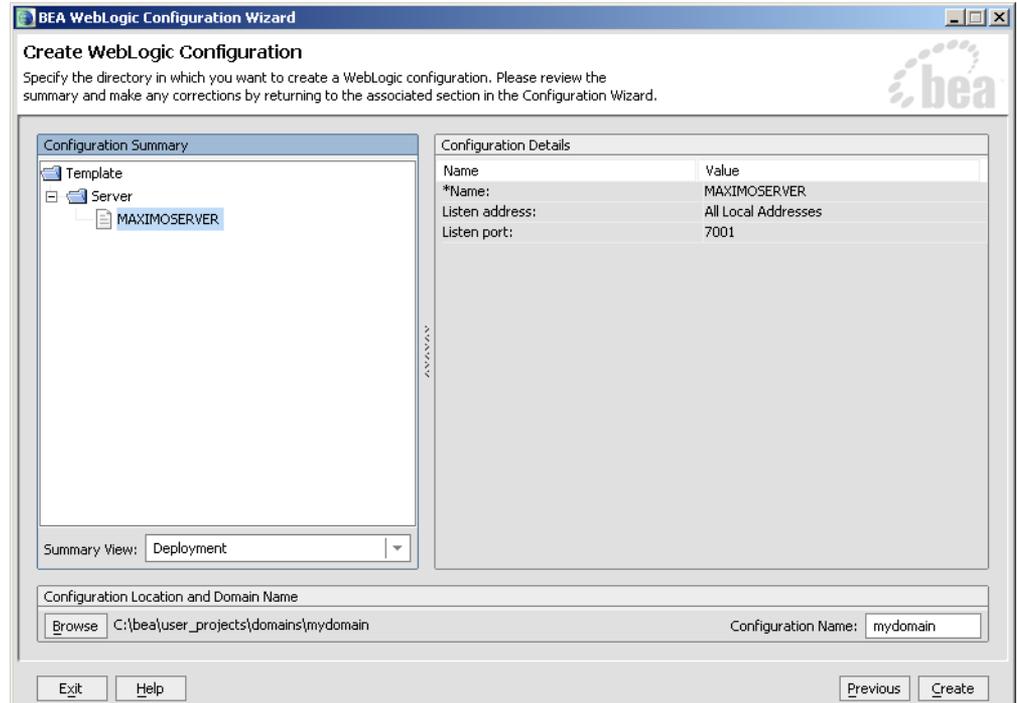


12 Select **Production Mode** and the **Sun SDK 1.4.2_05** and click **Next**.

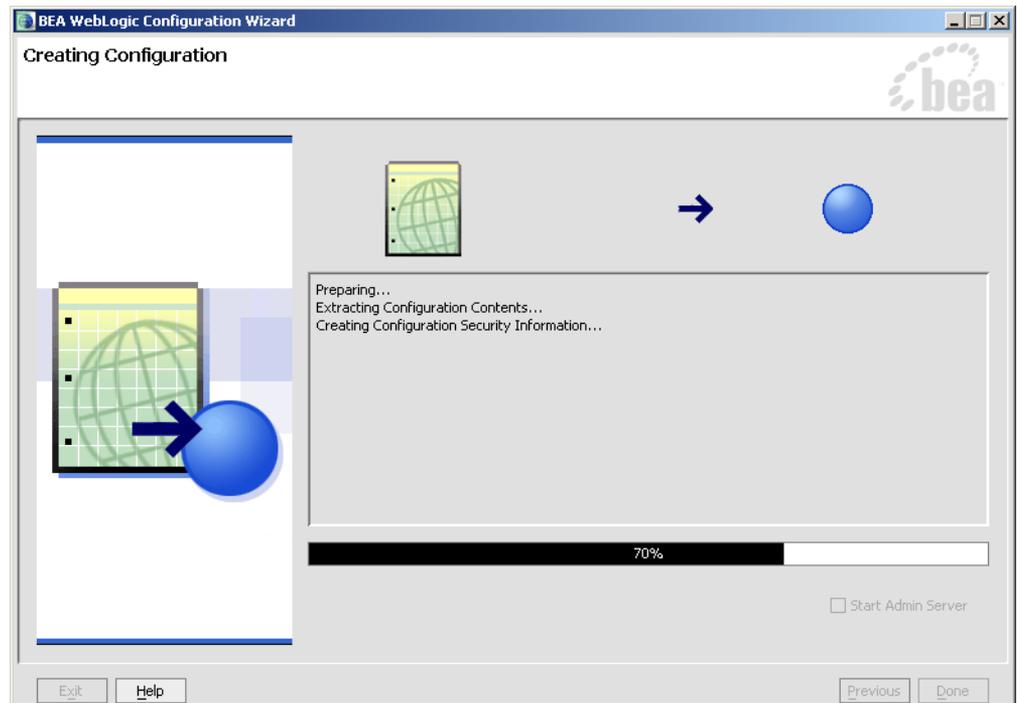


13 Select **MAXIMOSERVER** as your template and click **Create**.

You can specify a different configuration name instead of the default *mydomain*. However, this name *cannot* be the same as the Application Server name (MAXIMOSERVER).



14 Once the program has completed configuring MAXIMOSERVER, click **Done**. Do *not* check the Start Admin Server check-box at this time.



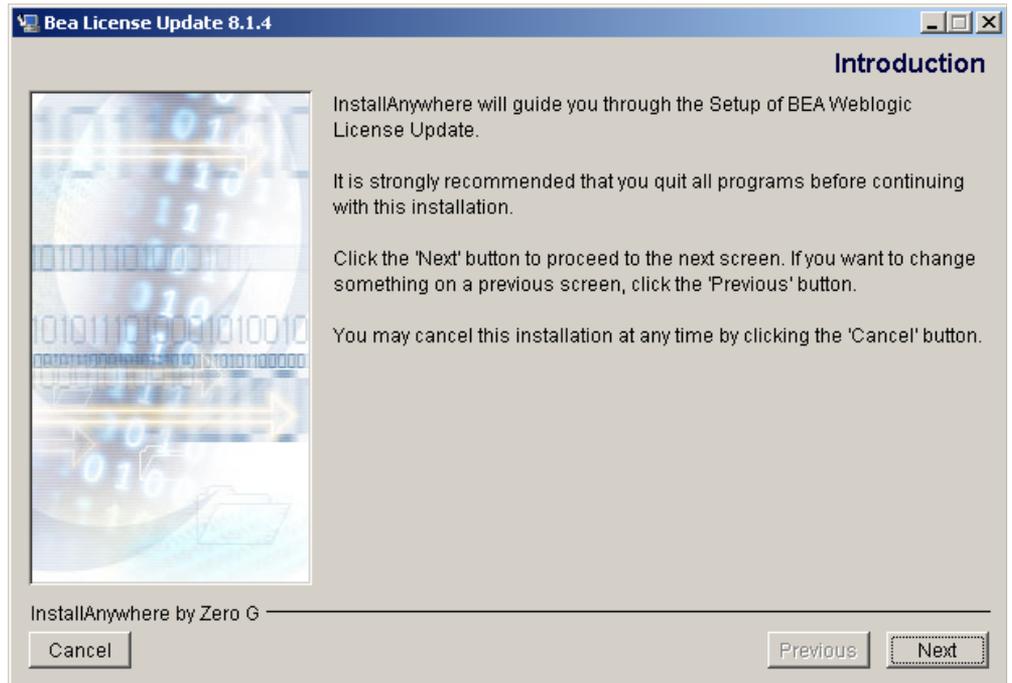
15 Close the QuickStart window.

Congratulations, you have installed and configured your Maximo Application Server. Continue with the next section to install the BEA WebLogic License Update program.

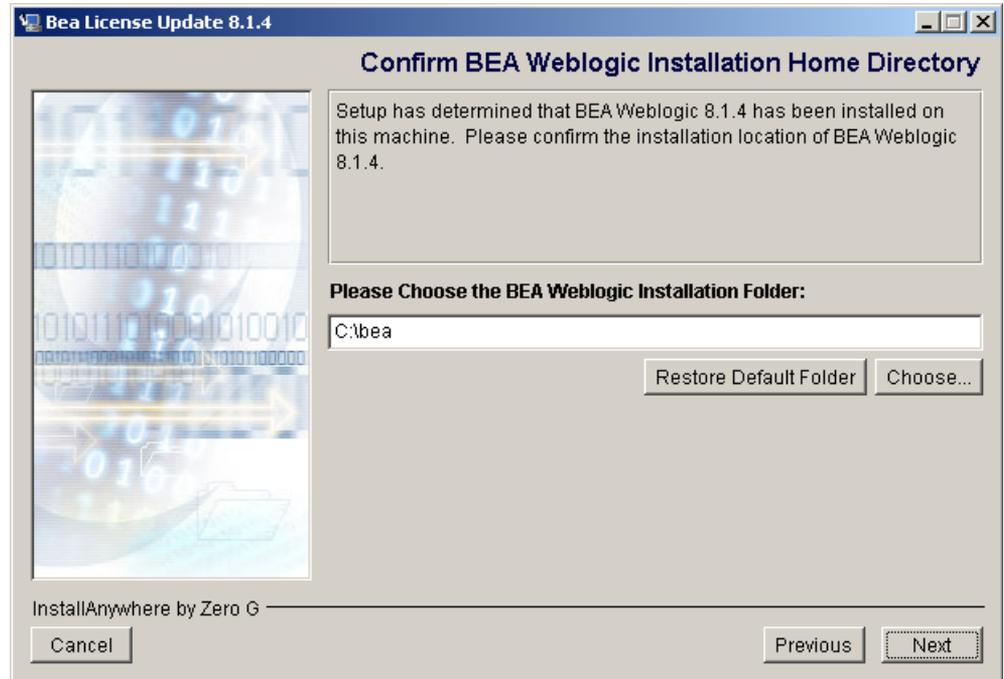
Installing the License Update Program

This program creates a valid license file so you can run Maximo with BEA WebLogic 8.1.4.0. To do so, complete the following steps:

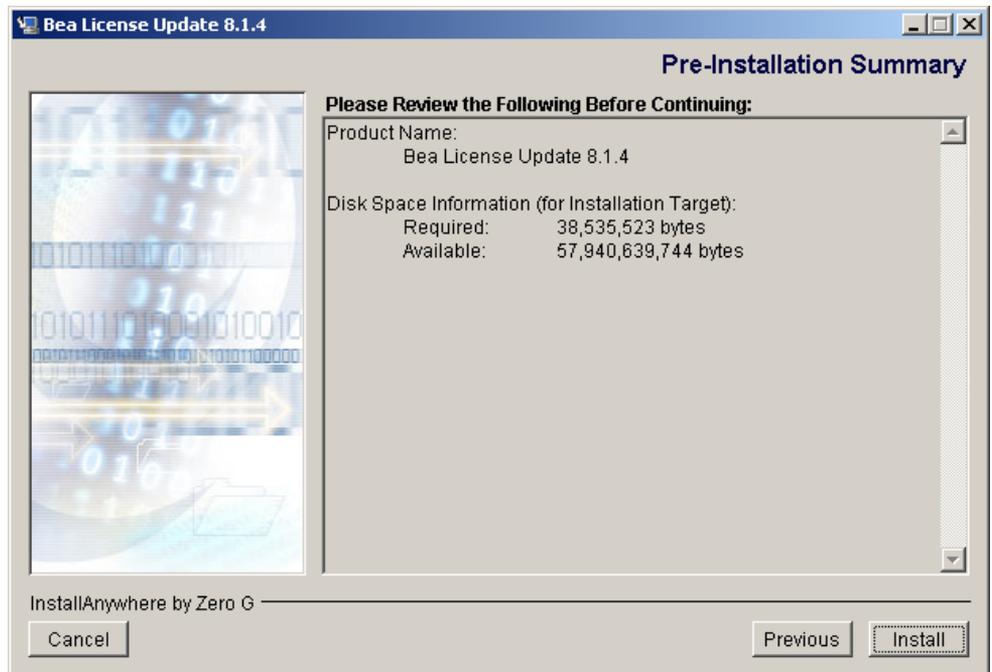
- 1 From the BEA WebLogic 8.1.4.0 CD root directory, double click **BEA814LicUpd56.exe**.
- 2 Click **Next** in the Introduction dialog box.



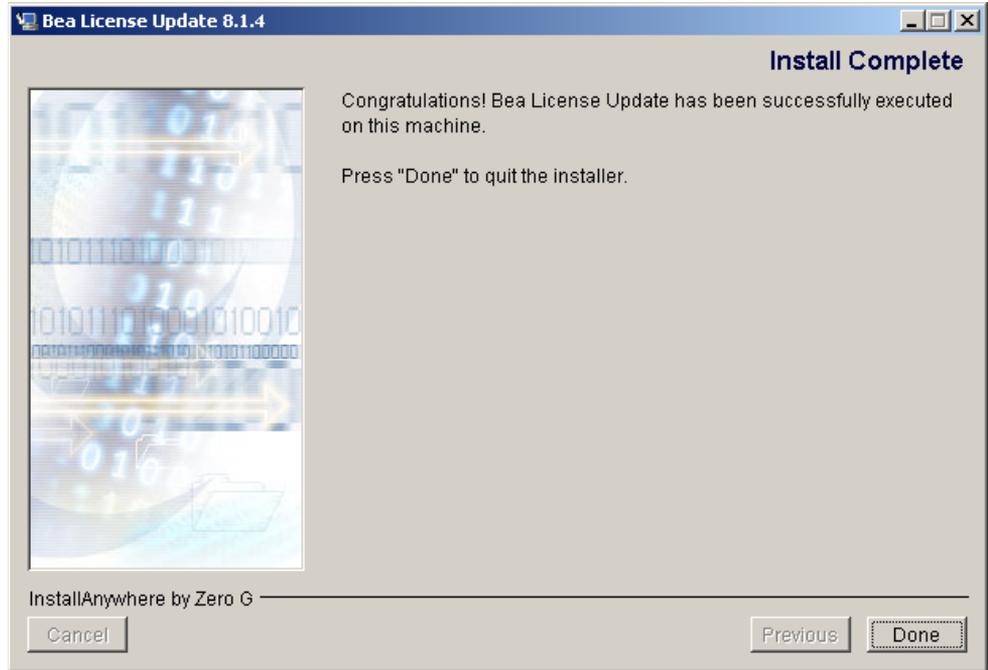
- 3 Accept the default WebLogic installation folder (c:\bea) and click **Next**.



- 4 Click **Install** in the Pre-Installation summary dialog box.



5 Click **Done** in the Install Complete dialog box.



Post Installation tasks

Complete the following tasks:

- ▼ Edit the `commEnv.cmd` file (Oracle Only)
- ▼ Increase the Java heap parameters.
- ▼ Verify settings by running `startWeblogic.cmd`.
- ▼ Include user name and password to start the MAXIMOSERVER automatically.

Edit the `commEnv` File (Oracle Only)

You must use the Oracle thin drivers from the Maximo installation to connect to Oracle 9i and 10g databases. In this section, you edit the `commEnv.cmd` file in the `/bea` folder, where you installed BEA WebLogic. later, in “Post Installation Tasks”, on page 4-14., after installing Maximo, you will copy the **oraclethin.jar** file from the `\lib` folder in Maximo to the `\lib` folder in BEA. Complete the following steps:

- 1 Using Windows Explorer navigate to:

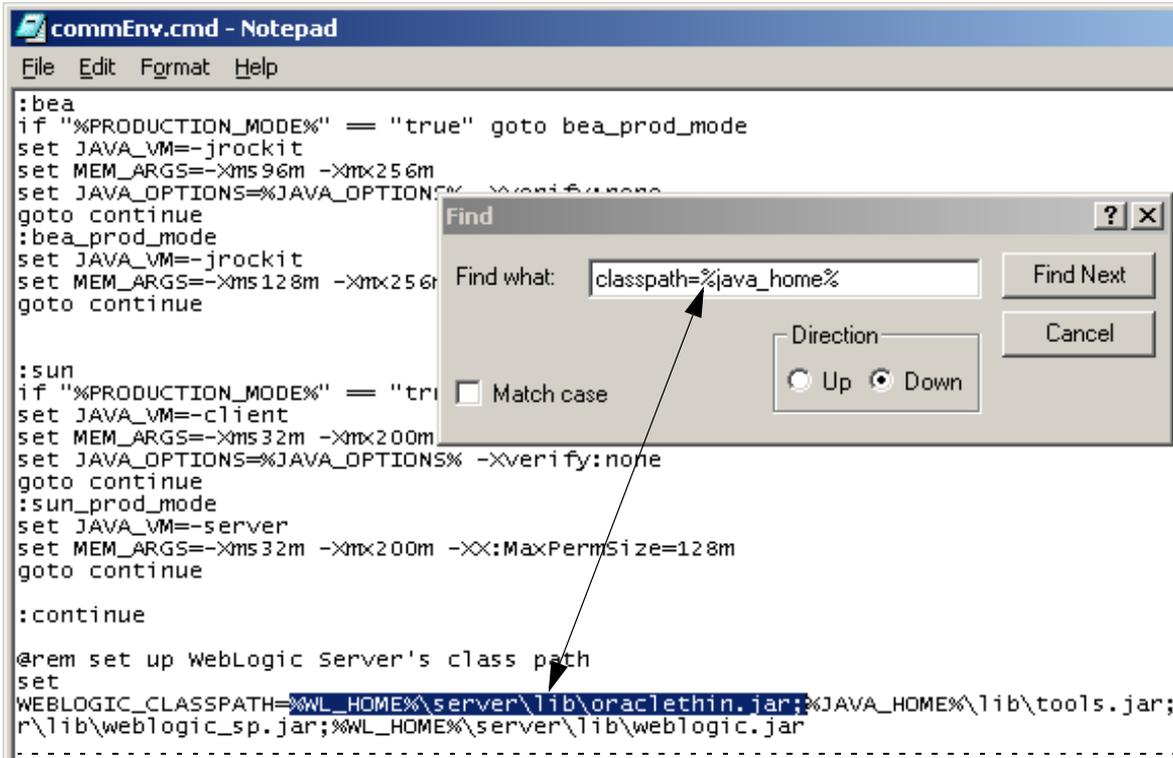
```
<drive_letter>:\<bea_installation_location>\weblogic81\common\bin
```

For example: `C:\bea\weblogic81\common\bin`

- 2 Right-click and edit (do not double-click) the **commEnv.cmd** file as follows:
- 3 Using your text editor, search for **classpath=%java_home%**
- 4 Type the following after the equal (=) sign:

```
%WL_HOME%\server\lib\oraclethin.jar;
```

commEnv.cmd File



This command is case-sensitive

- 5 Save and close the file.

Increasing the Java Heap Parameters

Complete the following steps to set the Java Heap parameters to improve performance.

- 1 Using Windows Explorer navigate to:
 - <BEA_installation_drive>\bea\user_projects\domains\mydomain
- 2 Open and edit the **startweblogic.cmd** file as follows:
 - a Place your cursor at the end of the file
 - b Search *up* for **set server_name**
 - c Enter the following parameter exactly as stated below under the **SERVER_NAME** parameter:

```
set MEM_ARGS=-Xms512m -Xmx1024m -XX:MaxPermSize=256m
```

These parameters are case sensitive. Ensure to include the minus (-) sign before each parameter and to include the *m* after each value.

startWeblogic.cmd File

```

startWeblogic.cmd - Notepad
File Edit Format Help
set PRODUCTION_MODE=true

set JAVA_VENDOR=Sun

set JAVA_HOME=C:\bea\jdk142_
for %%i in ("%JAVA_HOME%") (
@REM Call commEnv here AFTER
environmental settings.

call "%WL_HOME%\common\bin\c

@REM Set SERVER_NAME to the name of the server you wish to start up.

set SERVER_NAME=MAXIMOSERVER

set MEM_ARGS=-Xms512m -Xmx1024m -XX:MaxPermSize=256m

set
CLASSPATH=%WEBLOGIC_CLASSPATH%;%POINTBASE_CLASSPATH%;%JAVA_HOME%\jre\lib\
rt.jar;%WL_HOME%\server\lib\webservices.jar;%CLASSPATH%

@REM Call webLogic Server

echo .
echo CLASSPATH=%CLASSPATH%
echo .
echo PATH=%PATH%
echo .
echo *****
echo * To start webLogic Server, use a username and *
echo * password assigned to an admin-level user. For *
echo * server administration, use the WebLogic Server *
echo * console at http://[hostname]:[port]\console *
echo *****

%JAVA_HOME%\bin\java %JAVA_VM% %MEM_ARGS% %JAVA_OPTIONS%

```

- 3 Save and close the file.

Verify Settings by Running startWebLogic.cmd

To ensure that the edits that you made to the above mentioned WebLogic files were accurate, complete the following steps:

- 1 From a command prompt, change directory path to:


```
<BEA_installation_drive>\bea\user_projects\domains\mydomain
```
- 2 Type **startWebLogic.cmd** and press Enter.
- 3 When prompted, type the username and password that you specified in Step 9 on page 2-11.

Once the phrase:

```
"<server started in RUNNING Mode>"
```

displays, the WebLogic Server is running.

Starting the Server Without Being Prompted for Username and Password

If you are working in Production mode and do not want to be prompted for the WebLogic user name and password, create a **boot.properties** file. This will store the username and password in an encrypted format.

Place the following two lines in a text file:

```
username=<specify an existing username>
```

```
password=<specify an existing password>
```

The username and password values must match an existing user account in the Authentication provider for the default security realm, and must belong to a role that has permission to start and stop a server.

These are the same values that you specified in Step 9 on page 2-11.

If you save the file as **boot.properties** and locate it in the *mydomain* folder (for example: c:\bea\user_projects\domains\mydomain), the server automatically uses this file during its subsequent startup cycles.

The first time you use this file to start a server, the server reads the file and then overwrites it with an encrypted version of the username and password. For more information, refer to BEA's document web site at:

<http://e-docs.bea.com/wls/docs81/ConsoleHelp/startstop.html#BootIdentityFiles>

Installing The Actuate Application

3

If you are using Actuate for reporting in Maximo, this chapter explains how to install the Actuate 8 iServer application. If you are not going to use Actuate, skip to Chapter 4.

Pre-Installation Procedures

The following sections describe the pre-installation procedures.

Oracle Connectivity

You must install the following Oracle Client Software on your Actuate Server before installing Actuate:

- ▼ Oracle JDBC Drivers
- ▼ SQL*Plus
- ▼ Oracle Networking (in Oracle 9i or 10g)

You must setup and test Oracle Networking connectivity to the Maximo database.

You must also create a TNS name for your Maximo connect string as you will need this information in Step 10 on page 4-5.

Please review Oracle installation documentation for further details. Oracle documentation is available online at <http://otn.oracle.com/documentation/content.html>.

MS SQL Server Connectivity

If your Actuate application connects to Microsoft SQL Server, you must install Microsoft SQL Server client software before installing Actuate.

You must also create a DNS name for your Maximo connect string as you will need this information in Step 10 on page 4-5.

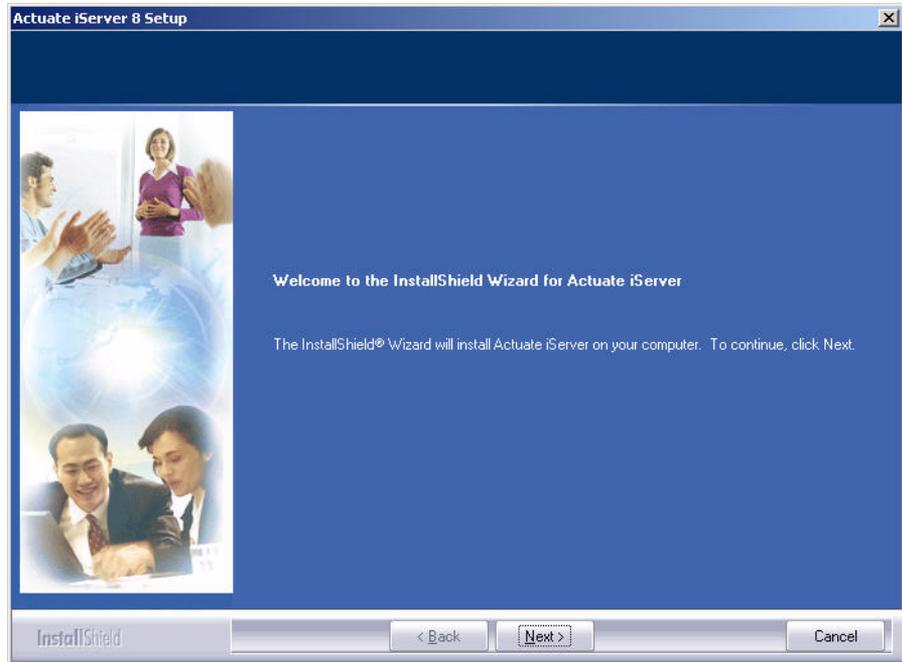
Install the following products:

- ▼ Microsoft SQL Server ODBC Drivers
- ▼ SQL Server Client Network Utility.

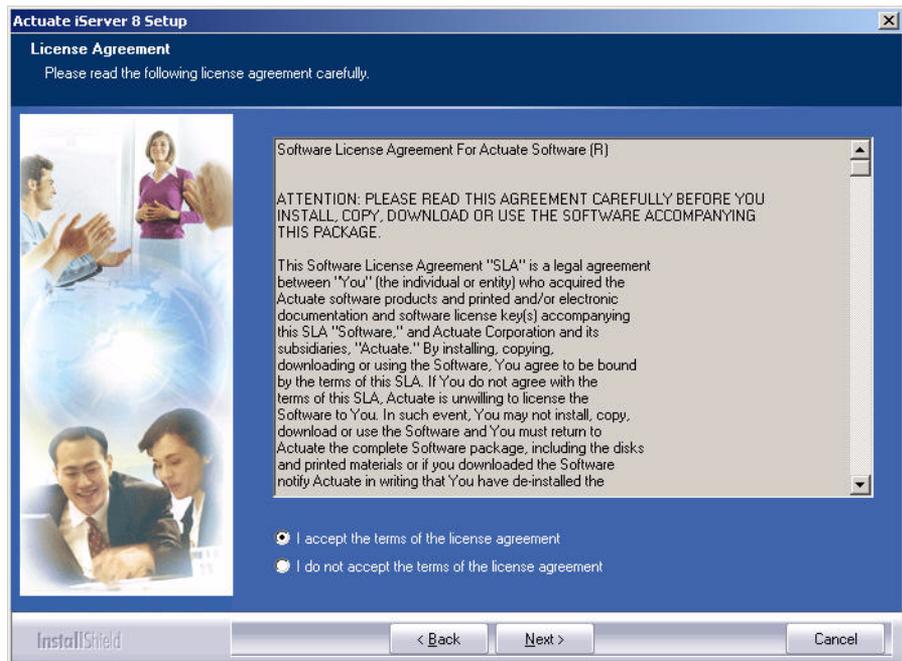
Installing Actuate8 iServer

This section describes how to install Actuate 8 iServer. For best performance, MRO Software recommends installing Actuate iServer on a dedicated server.

- 1 Log in to Windows as a user with Administrative rights.
- 2 Insert the Actuate 8 iServer for Windows CD-ROM into the CD drive. From the \iserver folder on your CD double-click the **setup.exe**.
- 3 Click **Next** in the Welcome dialog box.



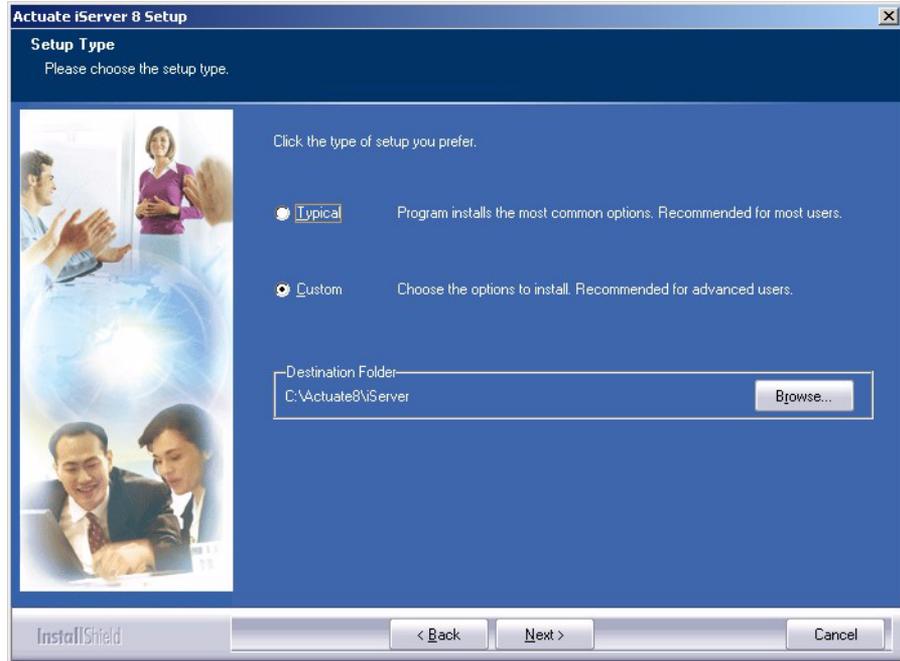
- 4 Accept the terms of the License Agreement and click **Next**.



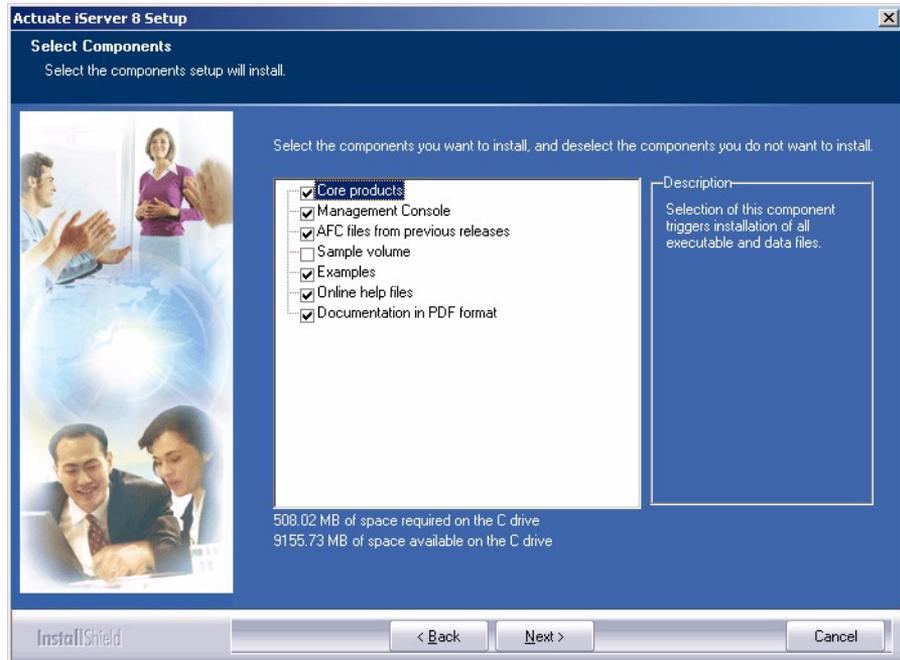
- 5 Select **Custom** and read the following warning before clicking **Next**.

WARNING

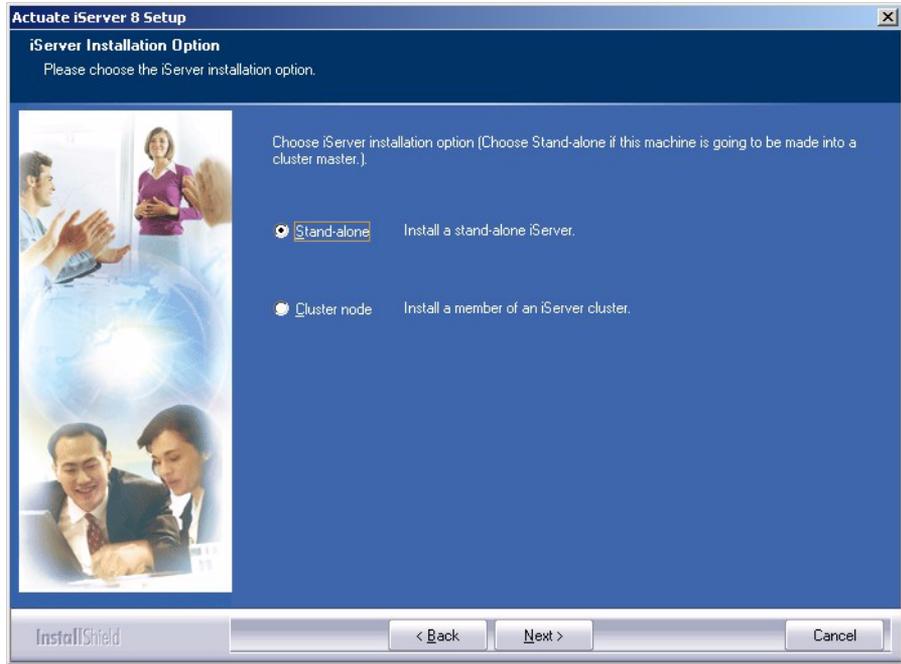
Default value for the Destination Folder is **\Program Files\Actuate8\iserver**; however, you must ensure that the Destination Folder path does not have any *spaces* in the path name. For example **c:\Actuate8\iserver**. Click **Browse** to select the new path.



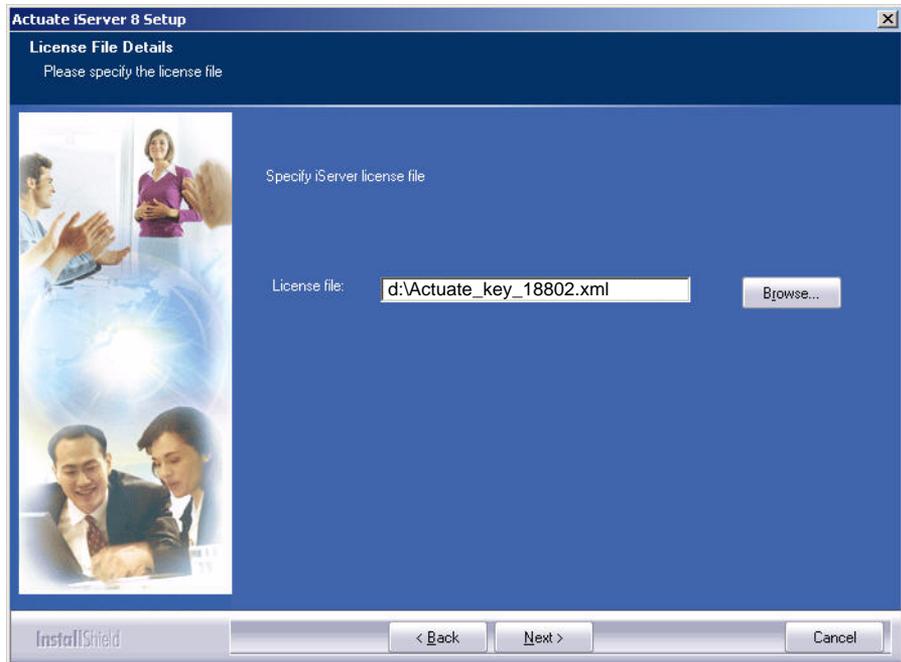
- 6 Select all components *except* Sample Volume and click **Next**.



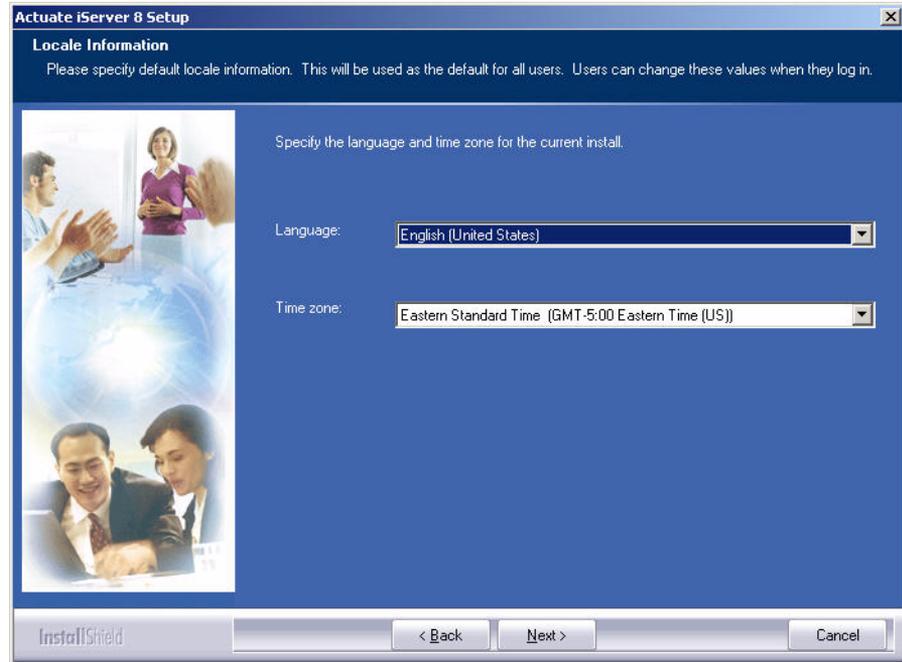
7 Select **Stand-alone** and click **Next**.



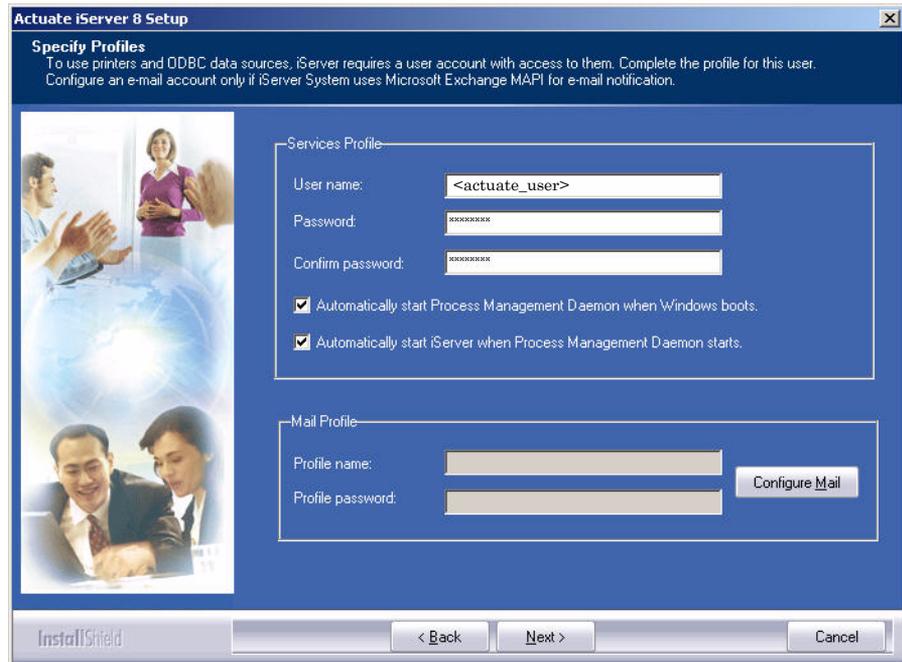
8 Click the browse button and navigate to the location of the xml file, in this example: **Actuate_key_18802.xml**. This file resides under the root CD folder on your *Actuate Release 8 iServer for Windows* CD-ROM. Click **Next**.



- 9 Accept the default values that appear in your Locale Information dialog box and click **Next**.



- 10 Enter a user that is in the *Administrator Group* and ensure that both check-boxes in the Services Profile frame are *checked*. Click **Next**.

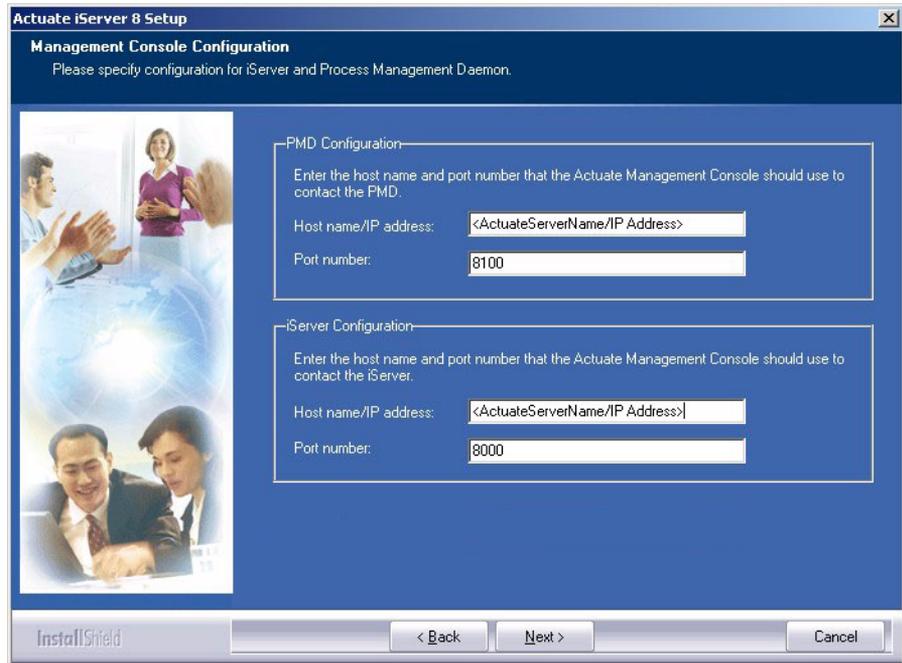


- 11 Enter the following values in the Server Configuration dialog box.

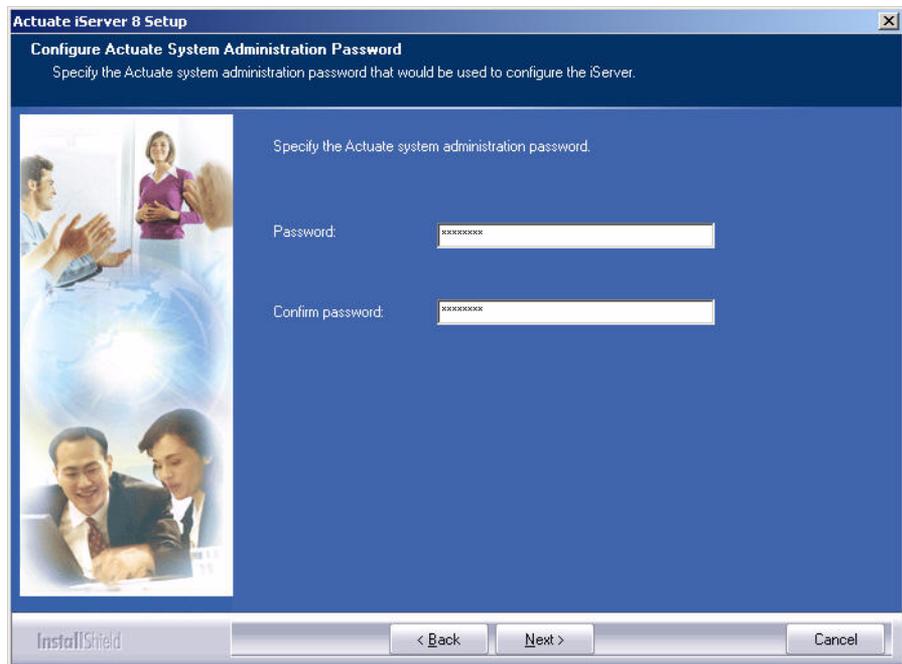
PMD Configuration. The Process Management Daemon enables you to perform Administrative tasks within iServer, but does not connect to the Maximo Encyclopedia Volume.

- a The host name or the IP address of the machine where you are installing Actuate iServer.

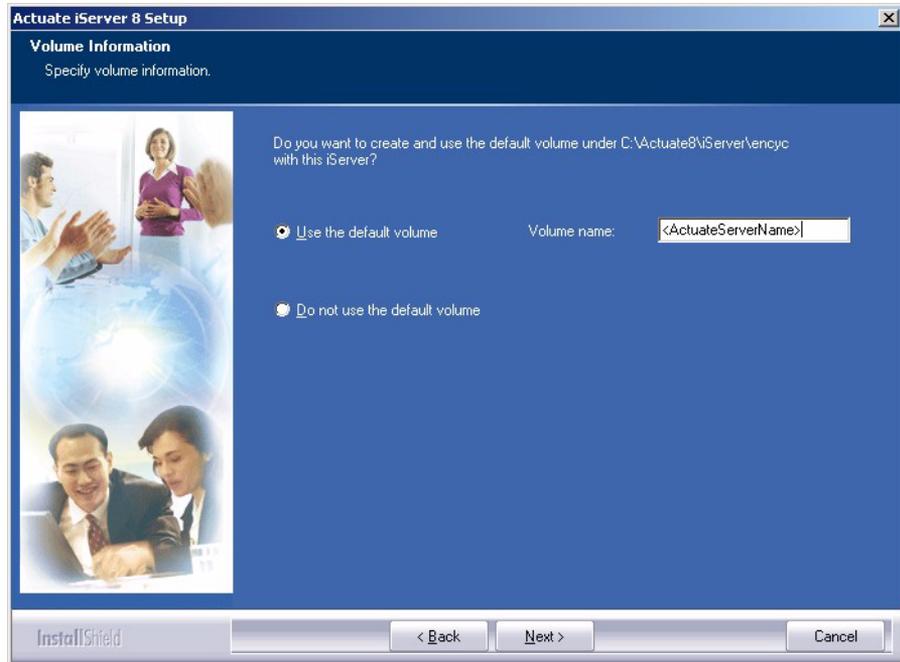
- b Accept the default port number 8100.
- c **iServer Configuration.** The iServer Configuration enables you to connect to the Maximo Encyclopedia Volume.
- d The host name or the IP address of the machine where you are installing Actuate iServer (same as above).
- e Accept the default port number 8000.
- f Click **Next**.



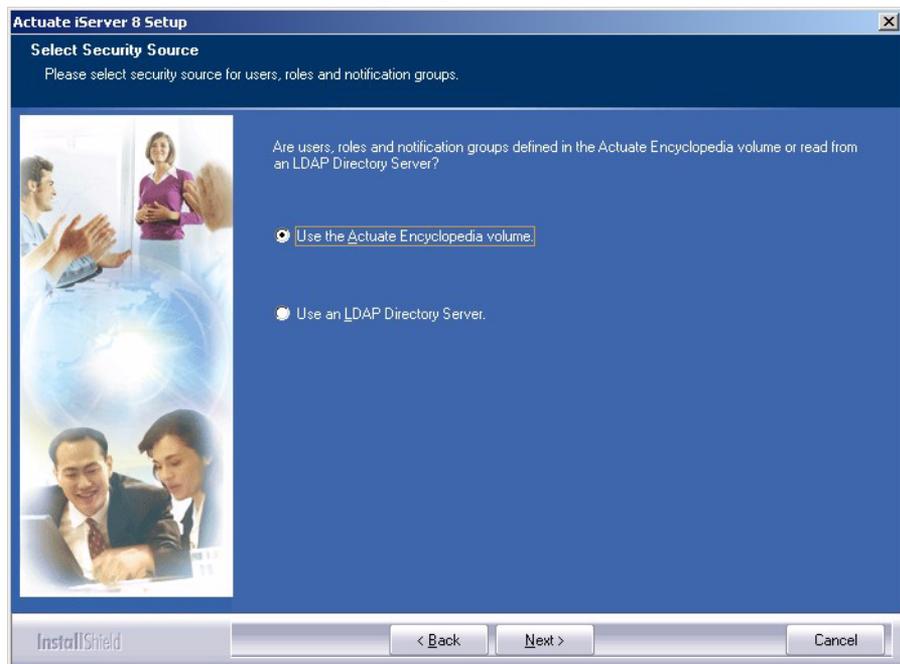
12 Specify a password for your Actuate administrator and click Next.



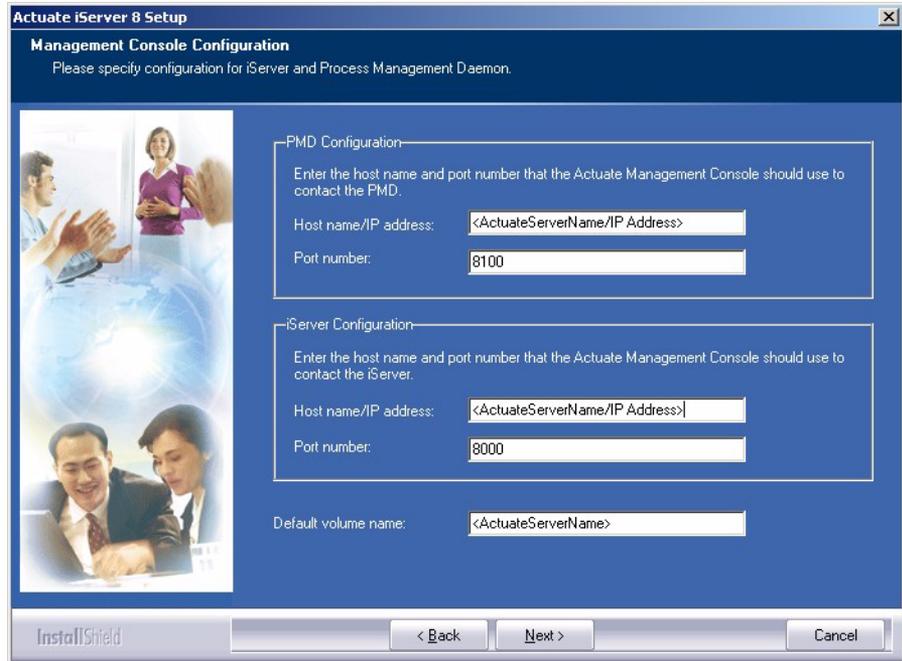
- 13 Select **Use the default volume** and type the computer name or IP address. Click **Next**.



- 14 Select **Use the Actuate Encyclopedia volume** and click **Next**.

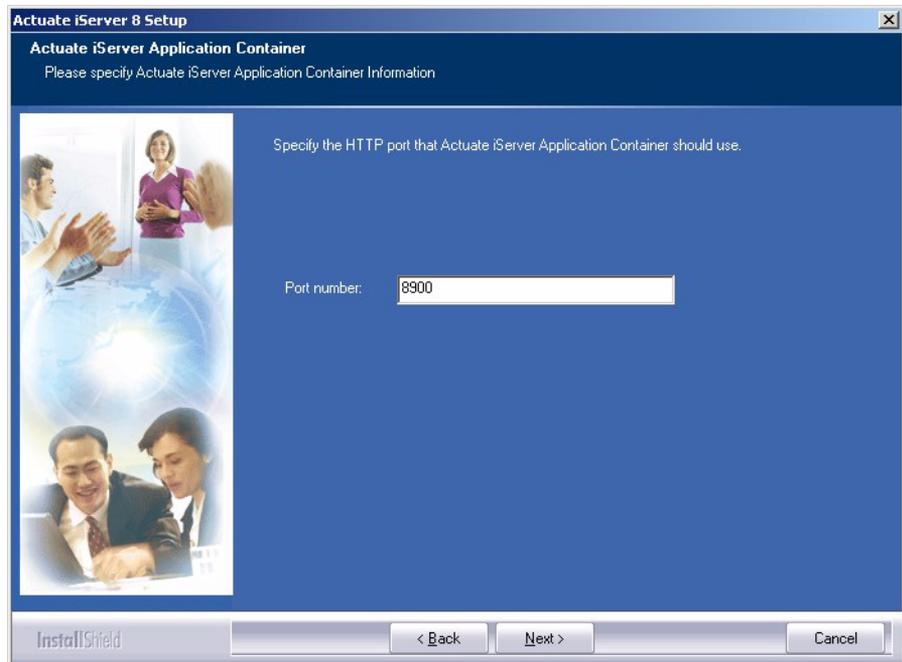


- 15 Enter the computer name where requested and accept the default port numbers. Click **Next**.



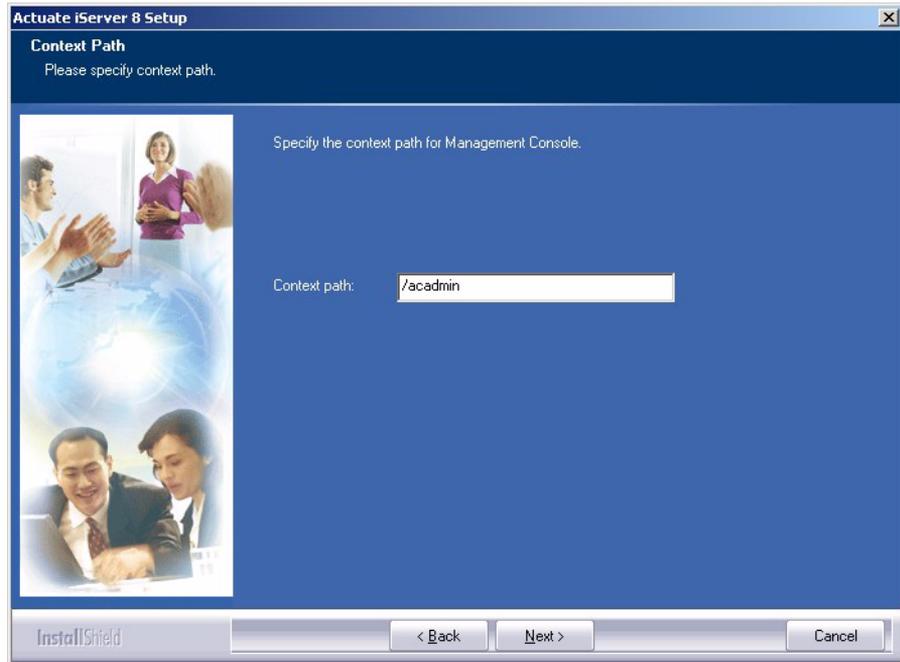
- 16 Accept the default HTTP port number (8900), or specify another port number and click **Next**.

You open the Actuate Administrative console via a browser, using this port number. For example: `http://<actuate_computer>:8900/acadmin`.



- 17 Accept the default context path (/acadmin) or specify another context name and click **Next**. You open the Actuate Administrative Console via a browser, using this context.

For example: `http://<actuate_computer>:8900/acadmin`



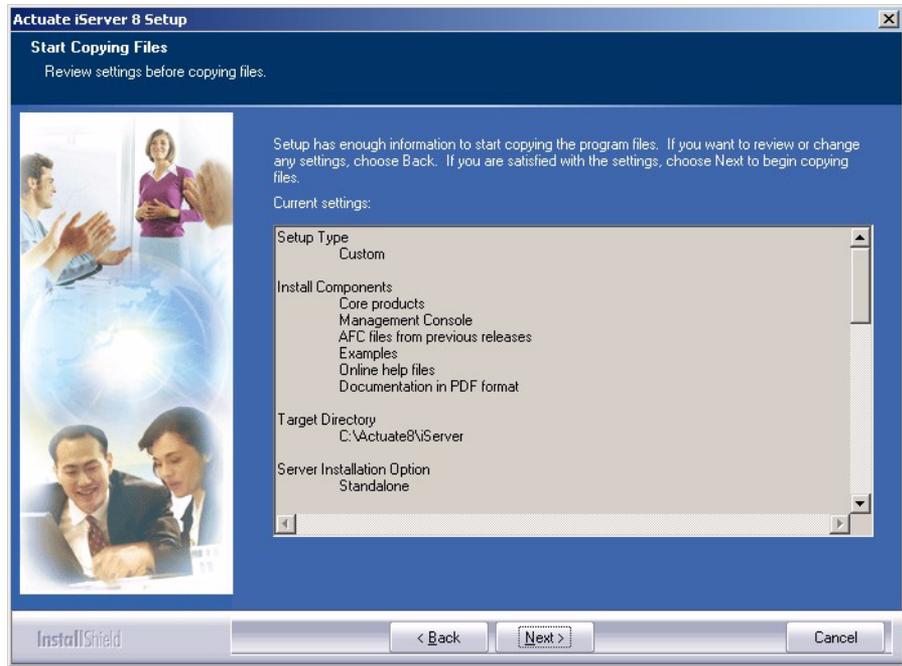
Record the port number and the context path that you created. You will need these to access the Web-based Actuate Administrative Console Step 12 on page 9-10.

The above two steps enable system administrators to access, generate, and manage reports using Actuate's web-based console.

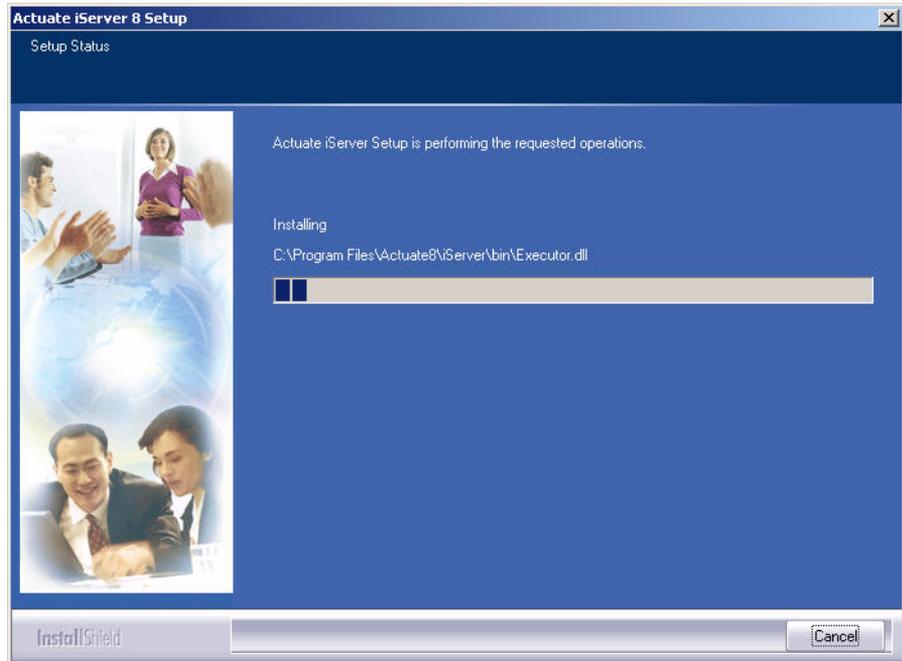
- 18 Accept the default values for the program folder and click **Next**.



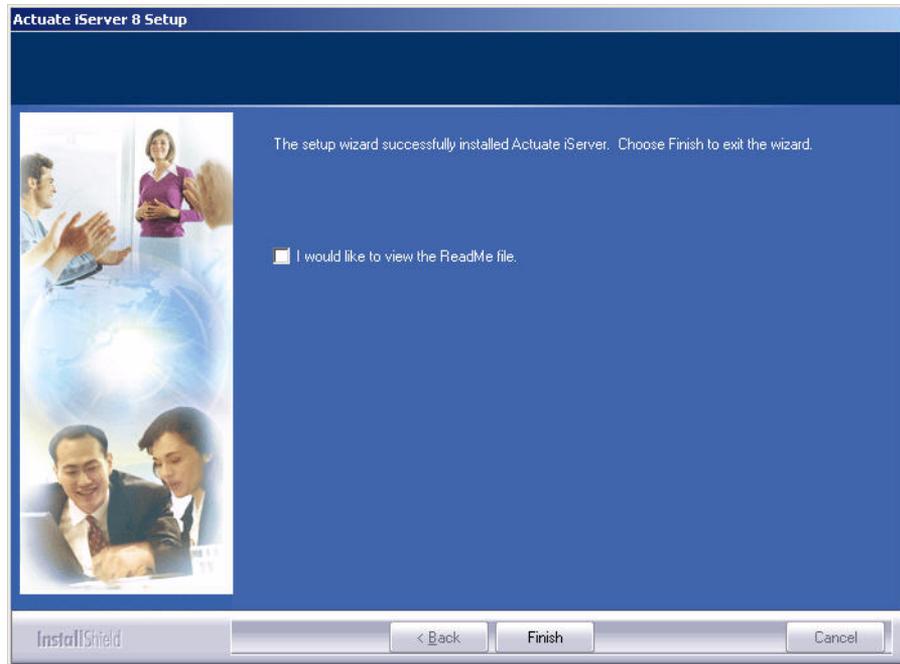
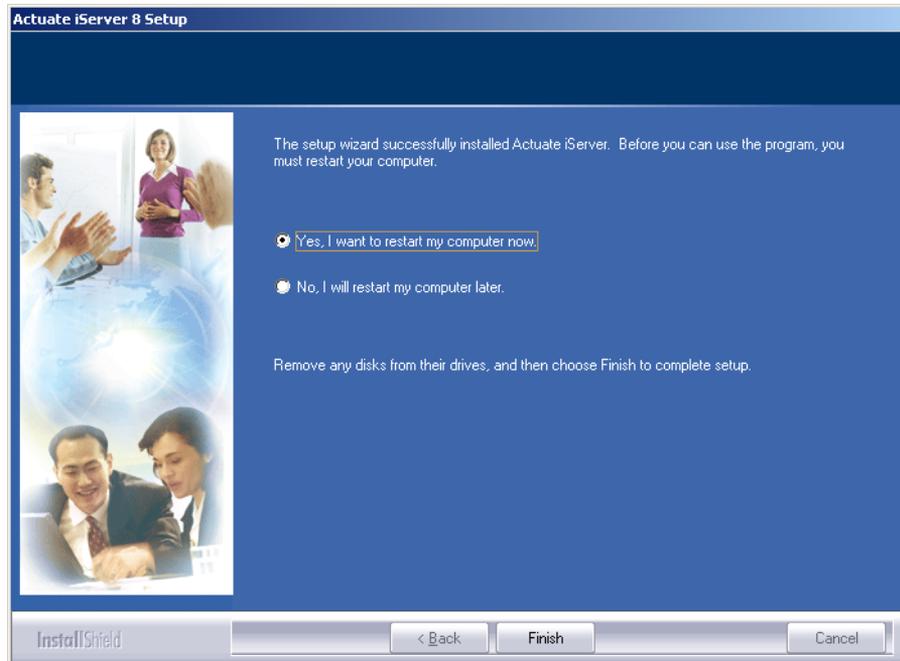
19 Click **Next** in the Summary dialog box.



20 Allow for the installation program to copy all the files.



21 Close the setup.txt file.

22 Uncheck the ReadMe check-box and click **Finish**.**23** Restart the computer.

You are now ready to install Maximo Release 6.

Installing The Maximo Release 6 Application

4

This chapter explains how to install the Maximo Release 6 application.

Complete the following worksheet by recording certain names and values that will help you during installation. The page and step numbers in the right column of the worksheet indicate where you need the requested information.

Record the information here...	Use the information here...
Maximo-related	
Serial number	Step 7 on page 4-3
Maximo install folder	Step 8 on page 4-4
SMTP host name	Step 11 on page 4-5
Work flow administrator email	Step 12 on page 4-6
Maximo administrator email	Step 12 on page 4-6
Application server name	Step 13 on page 4-6
Listen Port number	Step 13 on page 4-6
Database-related	
Database server name	Step 10 on page 4-5
Database port number	Step 10 on page 4-5
Database Name	Step 10 on page 4-5
Database/Schema owner	Step 10 on page 4-5
Database owner name and password	Step 10 on page 4-5
Actuate-related	
Actuate iServer name	Step 16 on page 4-7
iServer port number	Step 16 on page 4-7
TNS (Oracle) or DNS (MS SQL Server) on the Actuate iServer	Step 16 on page 4-7

Starting the Maximo Installation Program

You install Maximo onto a Windows workstation designated as the Maximo Release 6 Administration Workstation. This is where the Enterprise Archive (EAR) files are built and subsequently deployed to the application server.

You use the Administration Workstation to install program patches, product upgrades, or just running Configure Database and similar utilities in which case you must stop the application server from running.

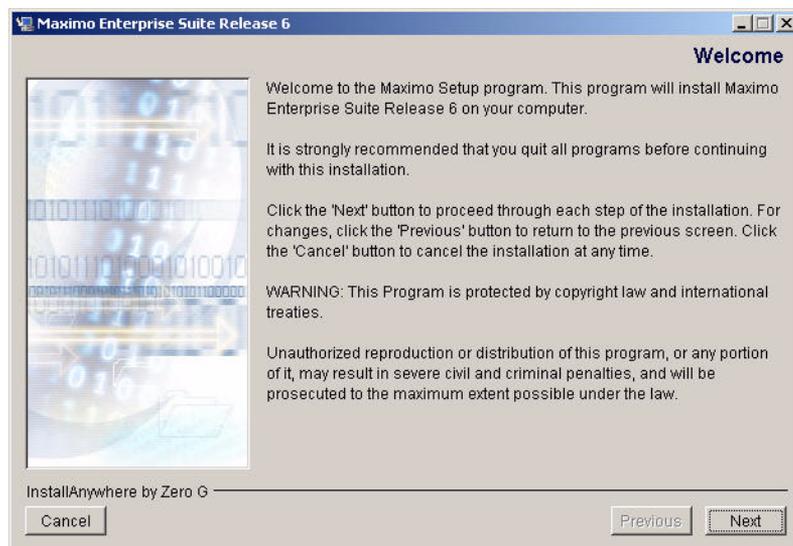
To install the Maximo Application, complete the following steps:

- 1 Log in to Windows as Administrator or as a user with administrative rights.
- 2 Insert the Maximo Release 6 installation CD-ROM into the CD drive.
- 3 From the root CD drive, double-click **maximo60.exe**.
- 4 Select the appropriate language from the drop-down list. If your language is not available from the list, select English; if it is Japanese or Chinese, see Note 2 below. Click **OK**.

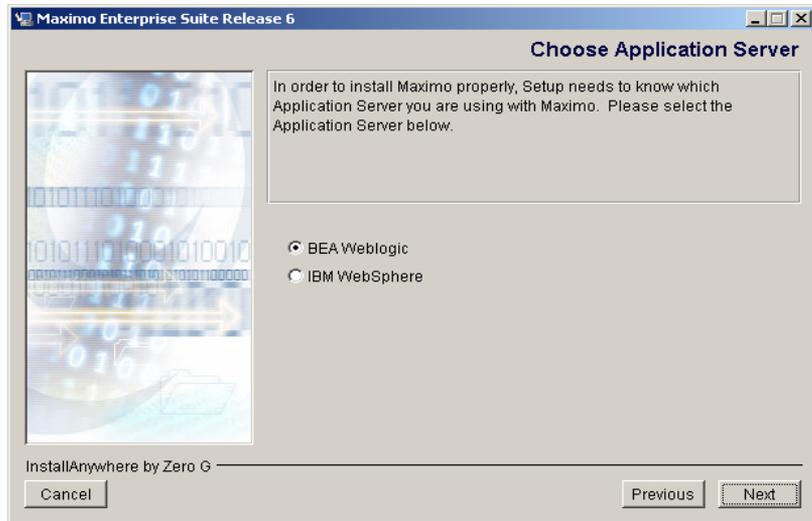
NOTE 1 Selecting a language only changes the installation screens into that language but does not affect the underlying files that gets installed.

NOTE 2 The installation screens are translated into: Spanish, Portuguese, Japanese, and Simplified Chinese. In order to see Japanese or Chinese you must have those fonts installed on your system.

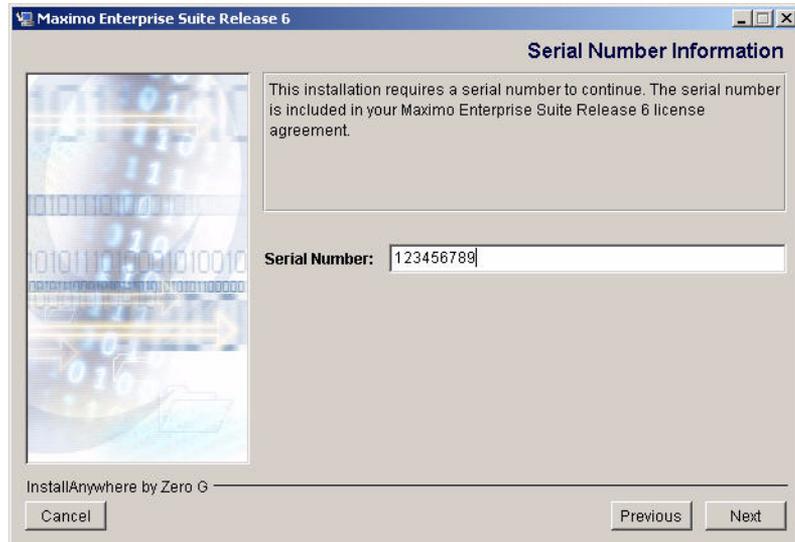
- 5 Click **Next** in the Welcome dialog box.



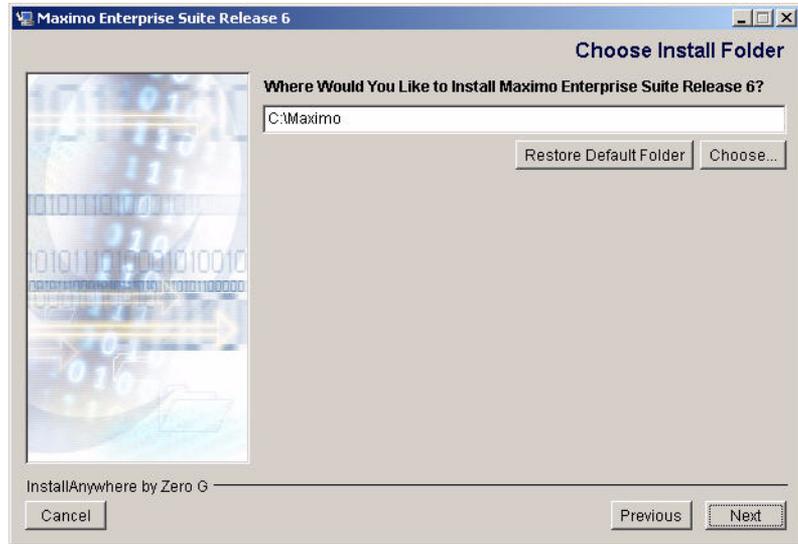
- 6 Select the appropriate application server, in this case, BEA WebLogic.



- 7 Enter the serial number included in your Maximo license agreement and click **Next**.



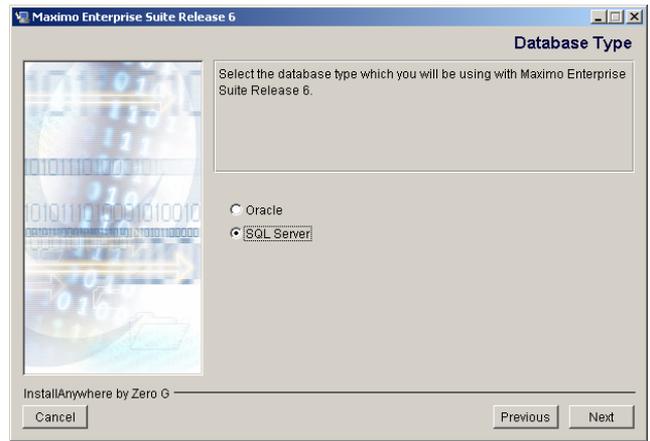
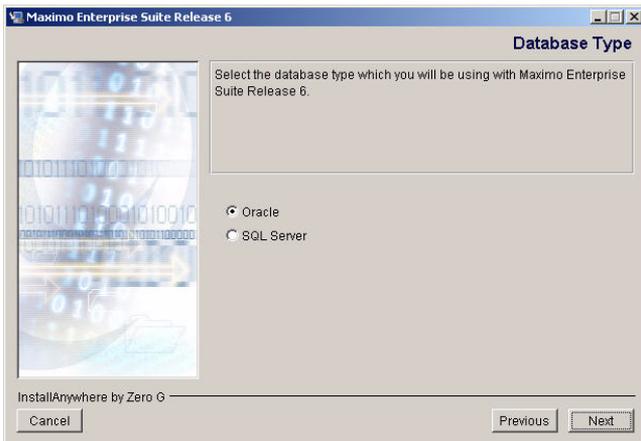
- 8 Enter the name of the folder where the installation program will install Maximo. The default value is C:\Maximo. Click **Next**.



- 9 Select the appropriate database and click **Next**.

If you are connecting to an Oracle database...

If you are connecting to a SQL Server Database...



10 Depending on your database type, enter the following database-related information, and click **Next**.

If you are connecting to an Oracle database...

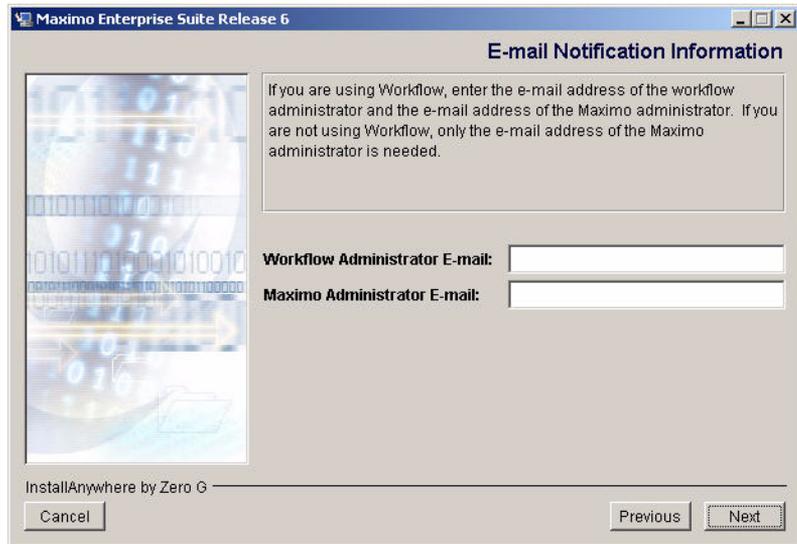
If you are connecting to a SQL Server Database...

	Oracle	SQL Server
Database server name	Enter the Oracle host name	Enter the SQL Server host name
Port number	1521 (Default)	1433 (default)
Database name	Enter the Oracle system identifier	Enter the SQL Server database name
Database owner	Maximo (default)	Maximo (default)
Database owner's password	Maximo (default)	Maximo (default)

11 Enter the host name of the machine running the SMTP server. Click **Next**.

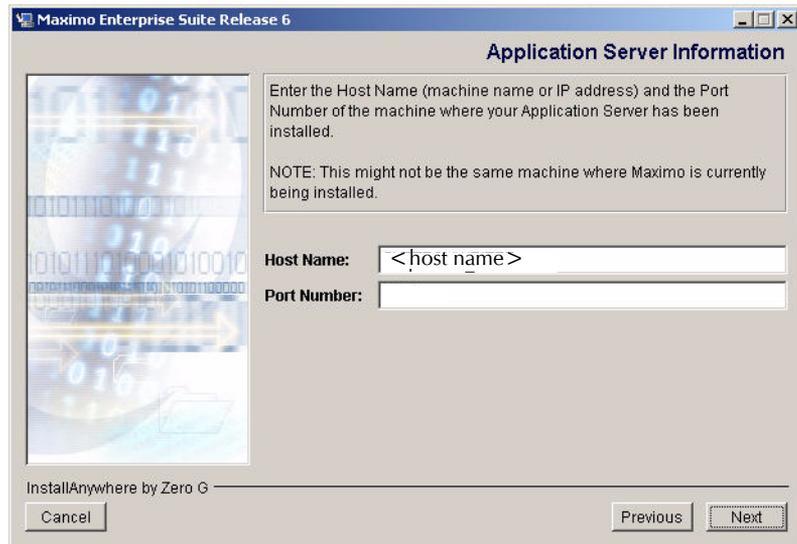
You must enter this in order to run reports. Contact your Network Administrator if you don't know the host name of the machine running the SMTP server.

- 12 Enter the following e-mail notification information.
 - a If you are using Workflow, enter the e-mail address of the Workflow Administrator, otherwise, leave it blank.
 - b Enter the e-mail address of the Maximo administrator.
 - c Click **Next**.

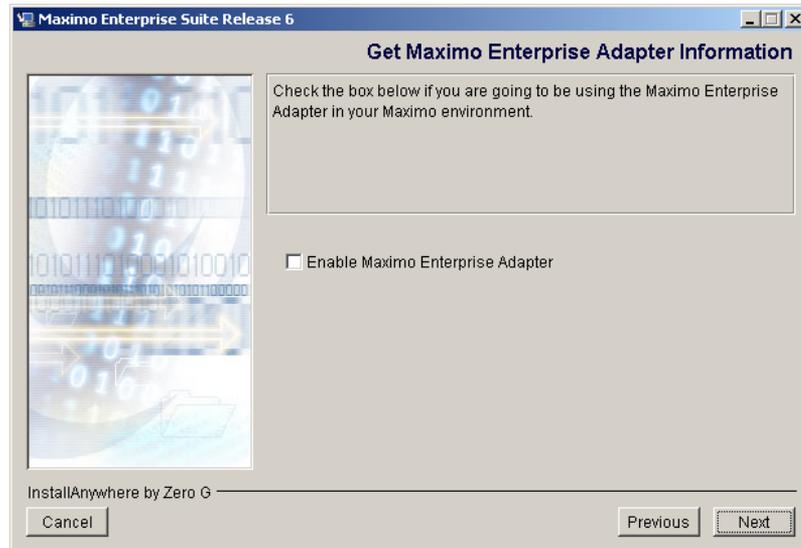


- 13 Enter the host name or IP address and the port number of the machine where your BEA WebLogic Server is installed. Click **Next**.

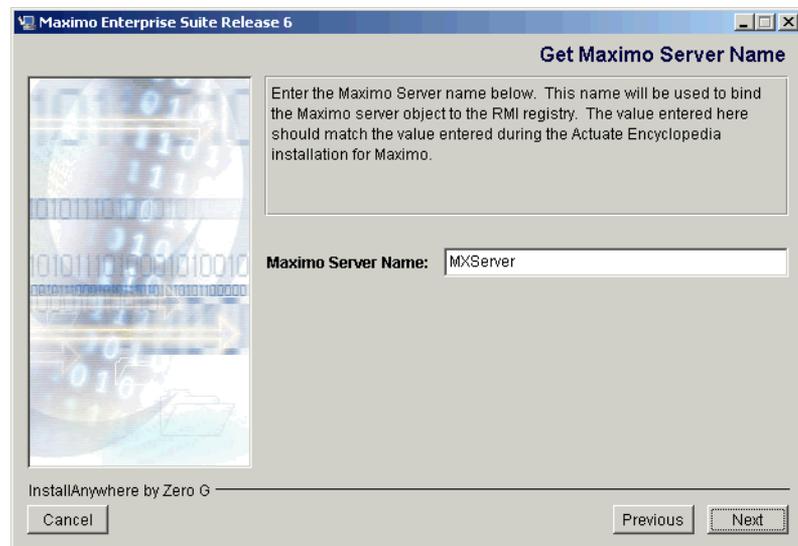
Use the port number that you specified in Step 5 on page 2-8 (default 7001).



- 14 If you have purchased the Maximo Enterprise Adapter Key, then check the Enable Maximo Enterprise Adapter check-box, otherwise accept default (unchecked) and click **Next**.



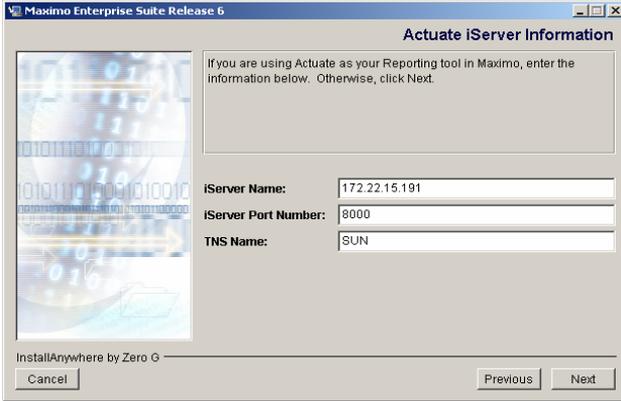
- 15 Accept the default Maximo Server name (MXServer) and click **Next**.



- 16 If you are using Actuate as your Reporting tool in Maximo Release 6, specify the following information; otherwise, click Next through the following three steps and complete installing the product.
- a iServer Name: enter the Actuate iServer IP address or server name.
 - b iServer Port Number: accept default, **8000**.
 - c Enter the database name.

d Click **Next**.

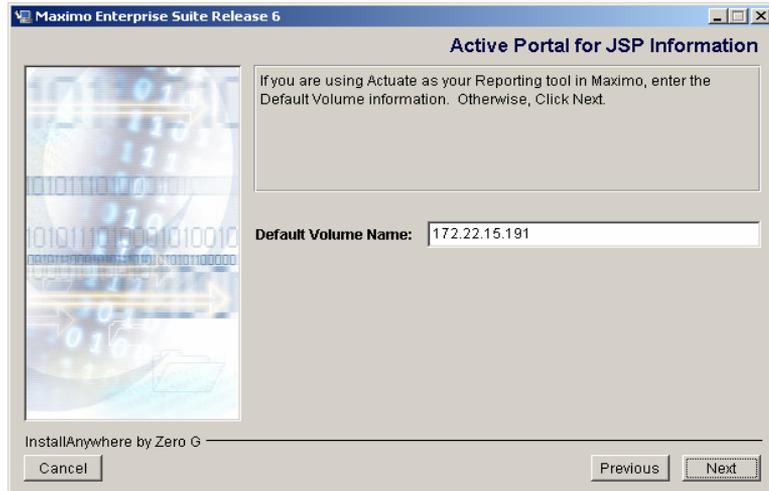
If you are connecting to an Oracle database...



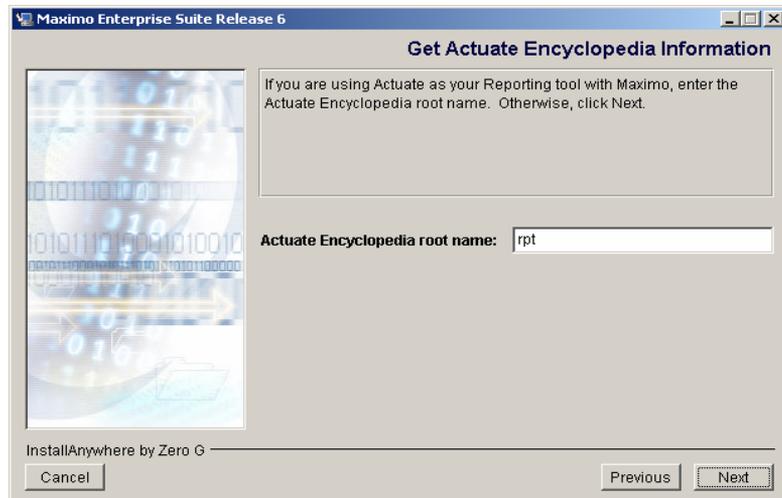
If you are connecting to a SQL Server Database...



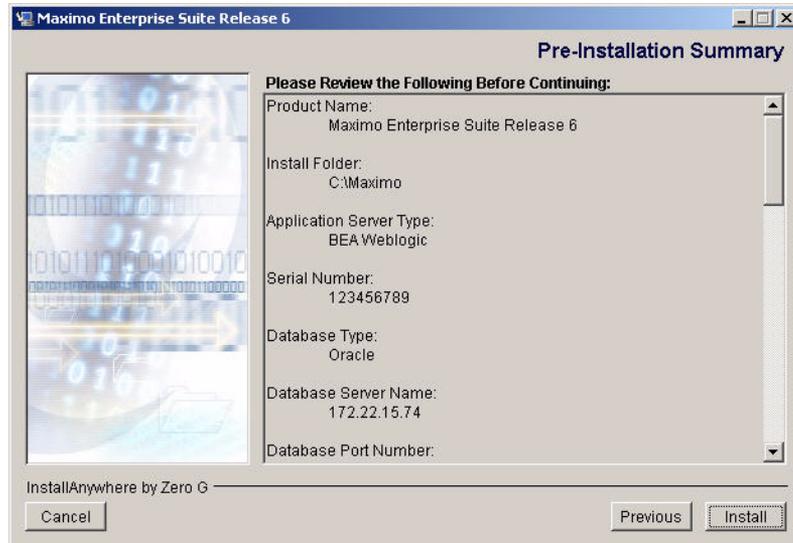
17 Enter the host name of the Actuate iServer. Click **Next**.



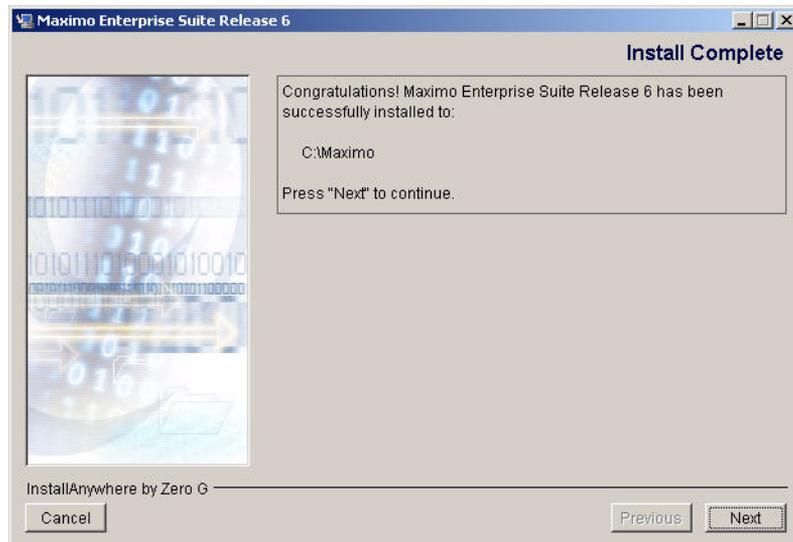
18 Accept the default value that appears in the Actuate Encyclopedia root name text box (rpt) and click **Next**.



19 Click **Install** in the Pre-Installation Summary dialog box.



20 Once the installation is complete, click **Next** in the Install Complete dialog box.

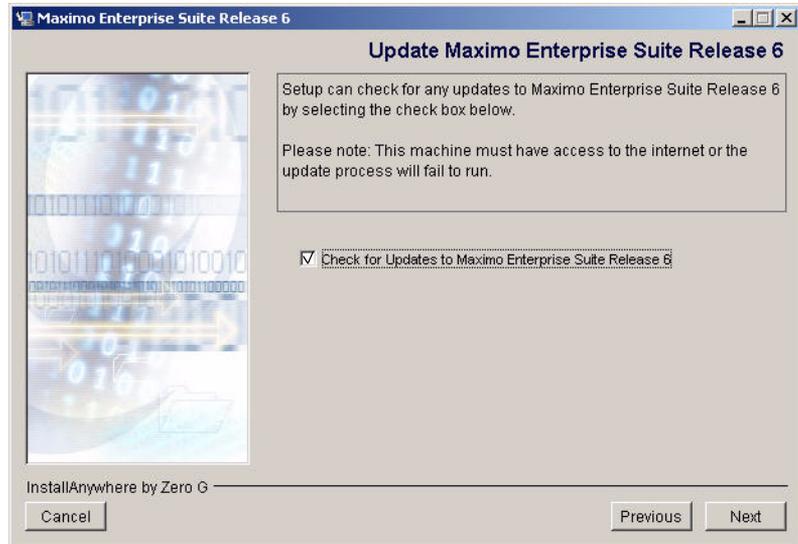


CAUTION Ensure that you have installed the required JVM as stated in Chapter 1.

21 Check the Update check-box and click **Next**.

NOTE Since the release of the Maximo 6.0 product media, product upgrades are available. These product upgrades contain both code enhancements and support for additional platforms.

MRO Software *strongly* recommends that you allow the update process to complete.



- a Click **Next** in the Welcome dialog box.



Allow for the updates to complete.



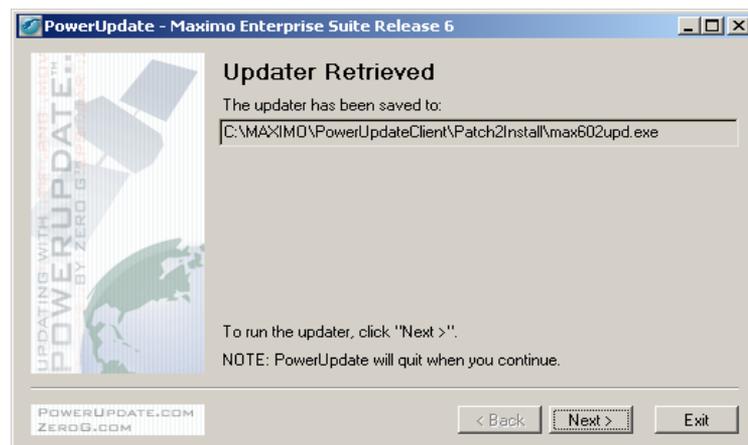
- b Click **Next** in the Update Available dialog box.



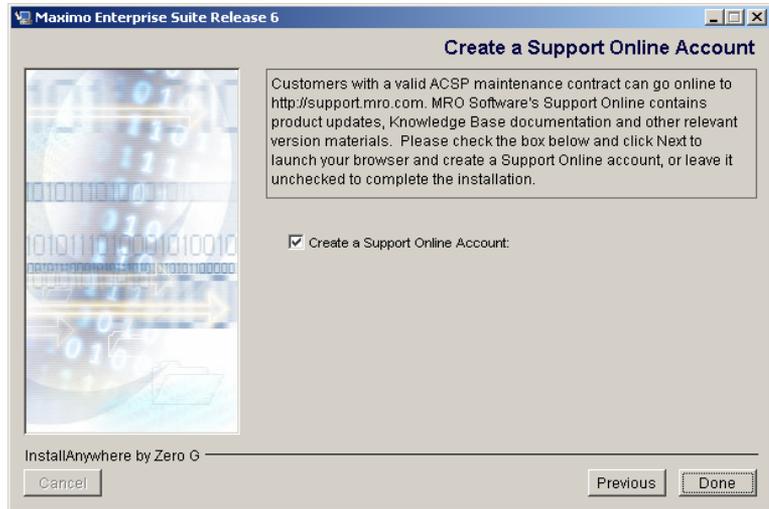
Once the update program retrieves all the necessary files, the following dialog box opens.



- c Click **Next** in the Updater Retrieved dialog box.

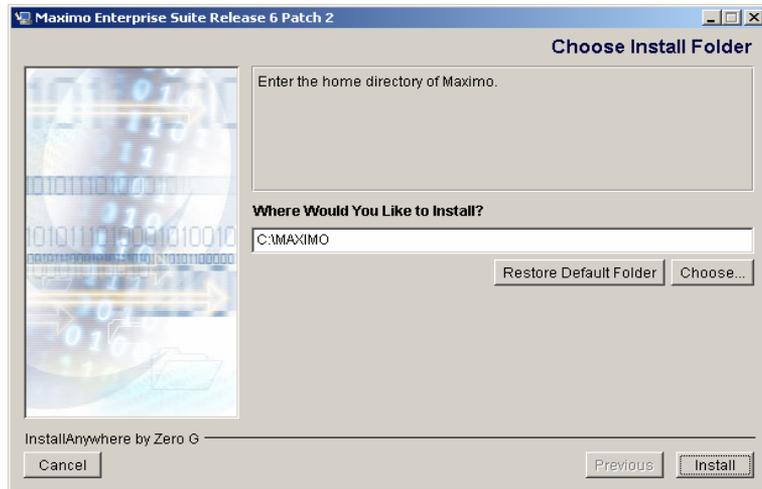


- d Check Create a Support Online Account and click **Done**.

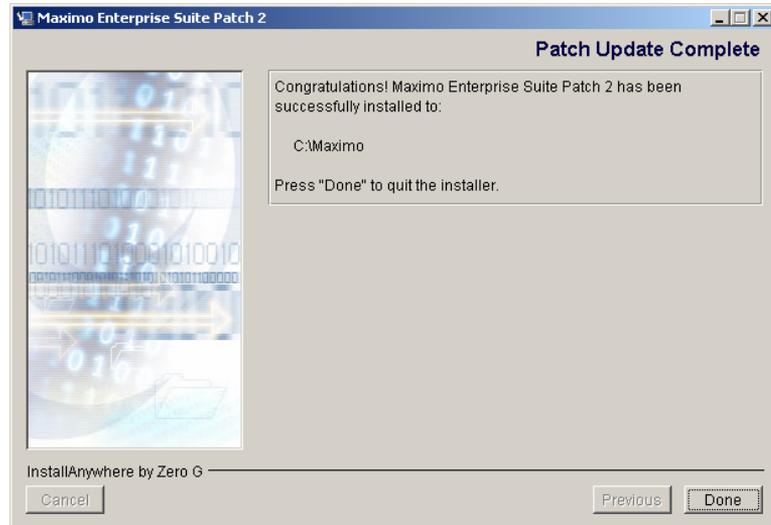


- e From the MRO Software Support Online page, click **Sign up** and follow the online instructions

22 Choose the Maximo installation location (default c:\MAXIMO) and click **Install**.



23 Click Done.



24 Remove the CD-ROM from its drive.

Post Installation Tasks

In this section you perform two general tasks:

- ▼ Copy the `oraclethin.jar` file from the Maximo folder to the BEA folder.
- ▼ Enable the Application Designer and the new Help files.

How to Include the `oraclethin.jar` File

Earlier in Chapter 2, you edited the `commEnv` file in WebLogic. Now that you have installed Maximo, you *must* copy the **`oraclethin.jar`** file to the `/lib` folder in BEA. Complete the following steps:

- 1 Navigate to:
`<drive_letter>:\<Maximo_installation_location>\applications\maximo\lib`

for example: `c:\maximo\applications\maximo\lib`

- 2 Copy the **`oraclethin.jar`** file to:
`<drive_letter>:\bea_installation_location\weblogic81\server\lib`

for example: `c:\bea\weblogic81\server\lib`

How to enable the Application Designer

You must now manually enable the Application Designer and the new Help files to take advantage of the new updates that you downloaded. Complete the following steps.

- 1 Enable the Application Designer by running **`pkginstall.bat`** from the `<maximo>\tools\maximo` directory.
- 2 To update your online help files download the **`en.zip`** file from product support online (<http://support.mro.com>) Knowledge Base website to the Maximo application server.
 - a Unzip the `en.zip` file.
 - b Copy the `en` folder to the following location:
`<maximo>\applications\maximohelp\helpweb\webmodule`

Installing The Language Utilities

5

This program installs language-specific Help files and database scripts. You install the Language Utilities after installing Maximo Release 6 application.

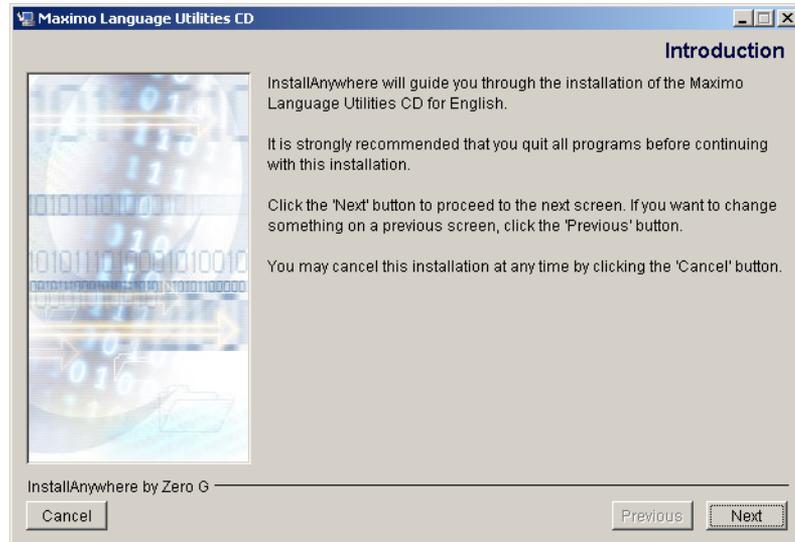
- 1 Insert the Maximo Language Utilities CD-ROM into the CD drive.
- 2 From the root CD drive, double-click **maxlangen.exe** (or maxlang.exe).
- 3 Select the appropriate language from the drop-down list. If your language is not available from the list, select English; if it is Japanese or Chinese, see Note 2 below. Click **OK**.

NOTE 1 Selecting a language only changes the installation screens into that language but does not affect the underlying files that gets installed.

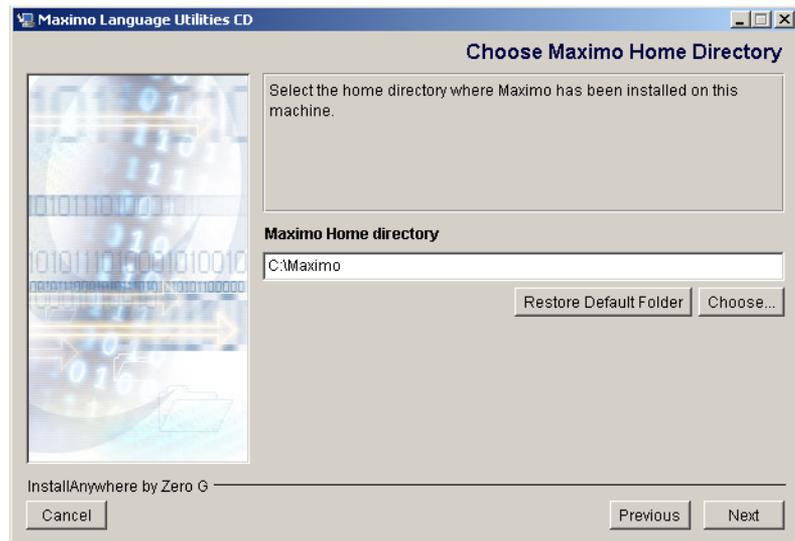
NOTE 2 The installation screens are translated into: Spanish, Portuguese, Japanese, and Simplified Chinese. In order to see Japanese or Chinese you must have those fonts installed on your system.



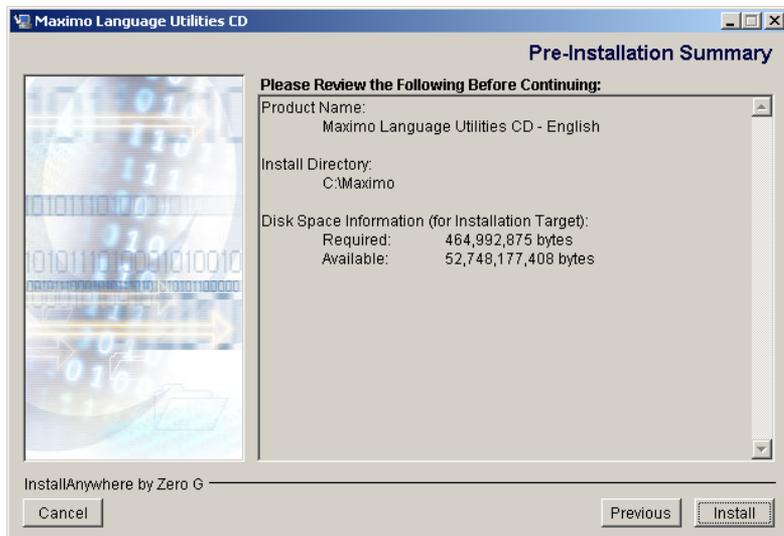
- 4 Click **Next** in the Introduction dialog box.



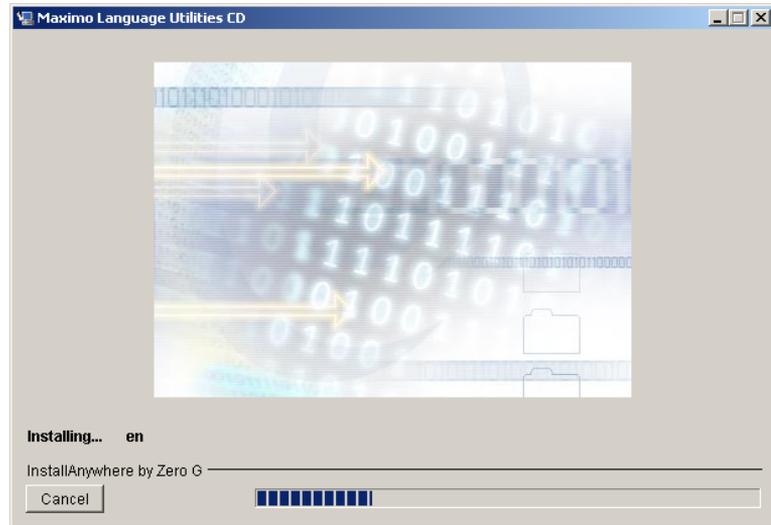
- 5 Verify that the default value (c:\Maximo) is the **Maximo** Home Directory and click **Next**.



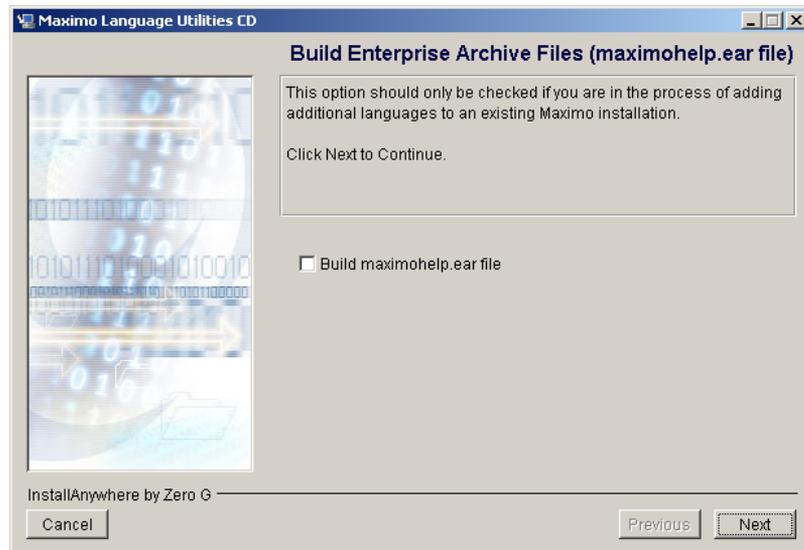
- 6 Click **Install** in the Pre-Installation Summary dialog box.



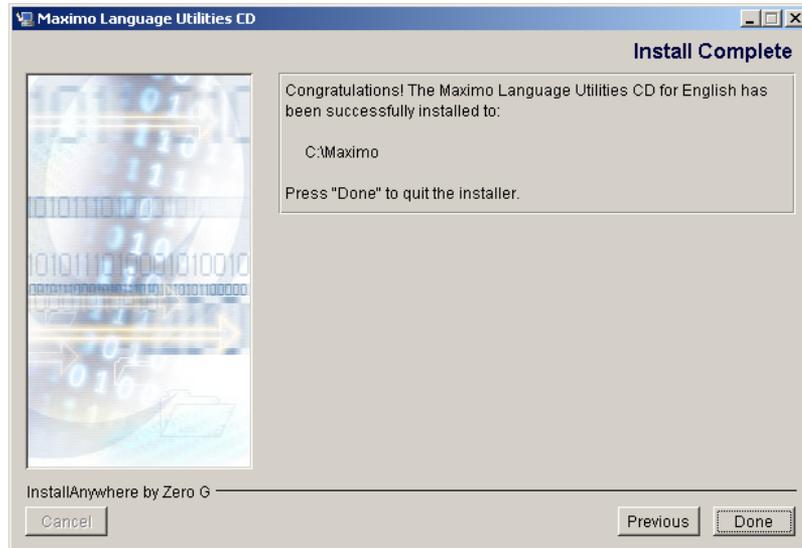
Allow the installation progress bar to complete.



- 7 If you are performing the steps in this Chapter because you are adding additional languages to an existing Maximo installation, check the *Build maximohelp.ear file* check-box and click Next, otherwise accept default (unchecked) and click Next.



8 Click Done.



You are now ready to install the Maximo Keys program.

Installing The Maximo Keys

6

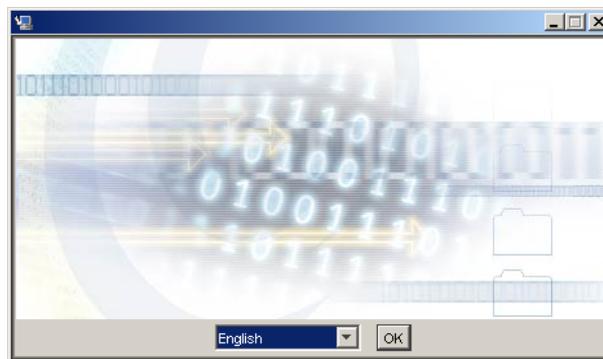
Maximo keys enable access to applications that you are entitled to use determined by your Maximo license purchase.

The EAR files are built at this time. Complete the following steps:

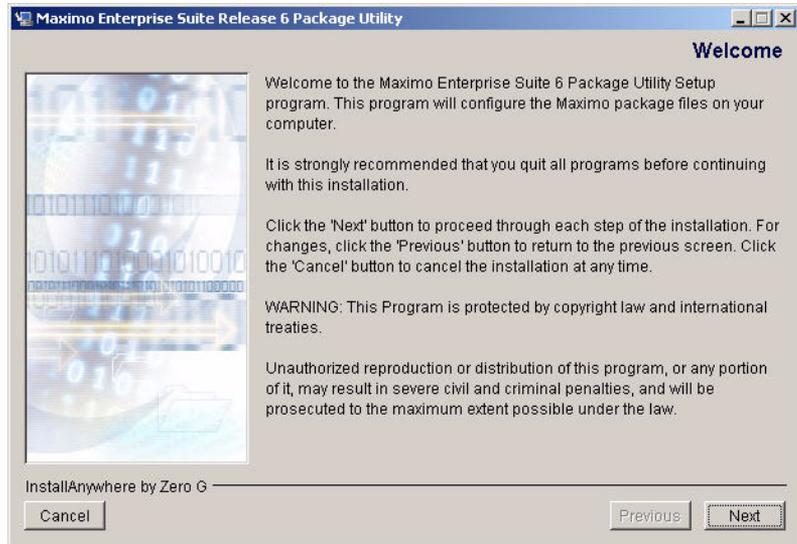
- 1 Insert the Maximo Key CD-ROM into the CD drive.
- 2 From the root CD drive, double-click **setup.exe**.
- 3 Select the appropriate language from the drop-down list. If your language is not available from the list, select English; if it is Japanese or Chinese, see Note 2 below. Click **OK**.

NOTE 1 Selecting a language only changes the installation screens into that language but does not affect the underlying files that gets installed.

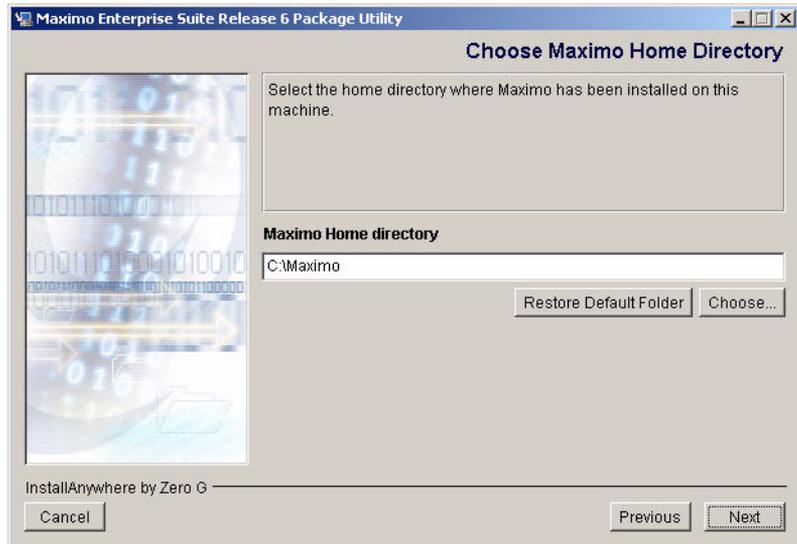
NOTE 2 The installation screens are translated into: Spanish, Portuguese, Japanese, and Simplified Chinese. In order to see Japanese or Chinese you must have those fonts installed on your system.



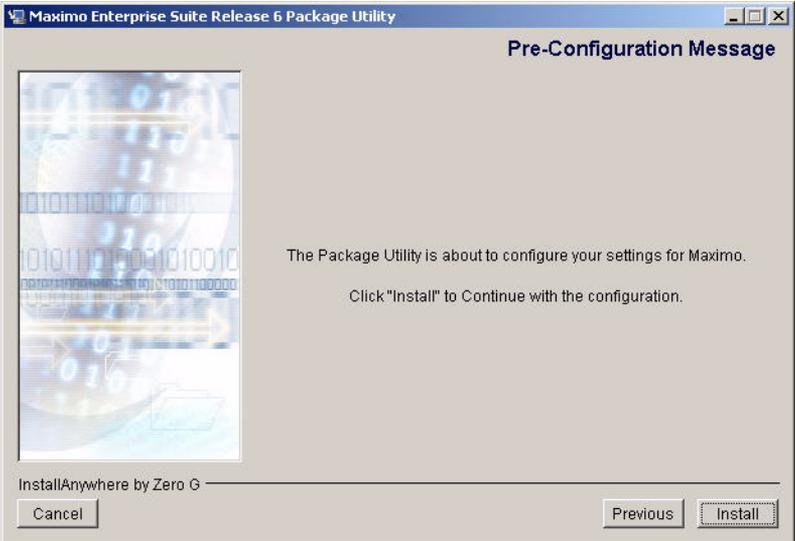
4 Click **Next** in the Welcome dialog box.



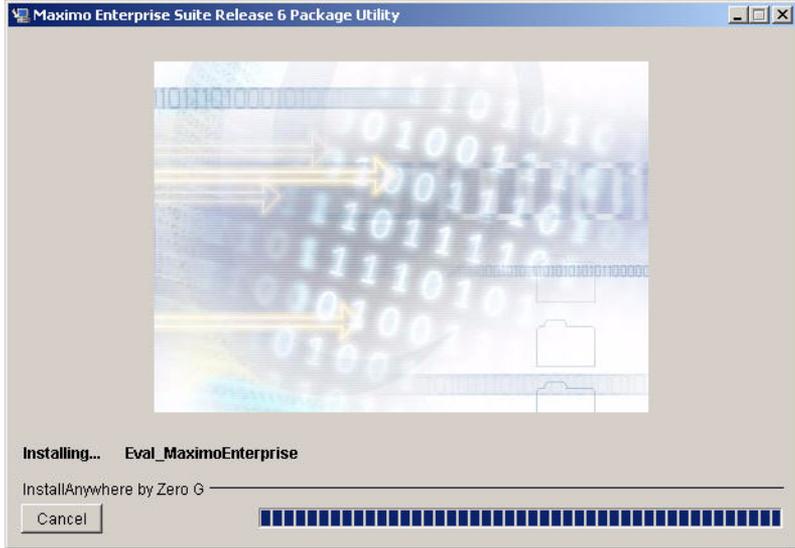
5 Verify that the default value (c:\Maximo) is the **Maximo** Home Directory and click **Next**.



6 Click **Install** in the Pre-Configuration Message box.

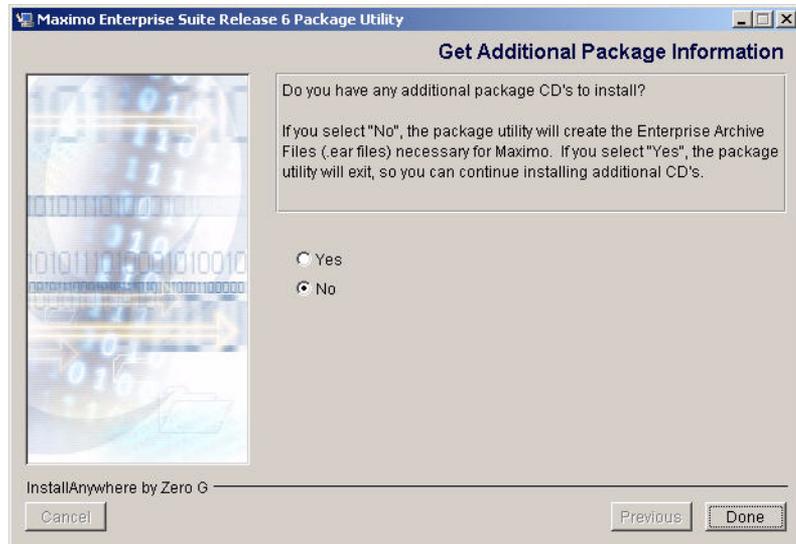


Allow the installation progress bar to complete.



7 If you are installing additional packages, you *must* at this time select **Yes** and the program will exit allowing you to add the other Packages (or Keys). See "Adding Additional Maximo Keys", on page D-1.

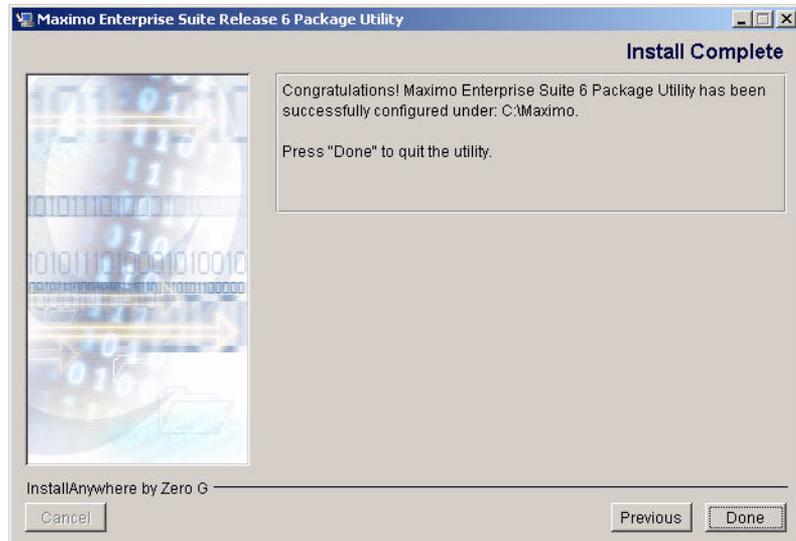
Once all packages are installed select **No** and click **Done**.



Three message boxes appear indicating that the EAR files are being built:



8 Click **Done**.



Creating the Maximo Schema

7

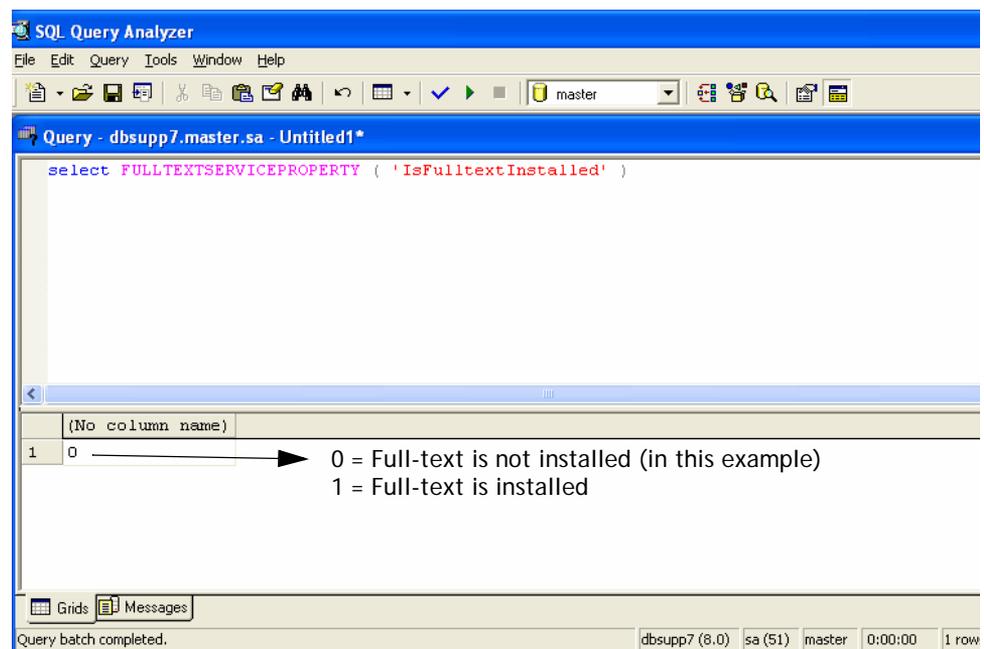
In this chapter, you prepare an Oracle instance or a Microsoft SQL Server instance on the server to hold your data. The following commands are guidelines for configuration changes. For more details on these commands, refer to your Oracle or SQL Server documentation. The parameters are only suggestions; you might need to adjust them depending on server disk space and site requirements.

Preparing Microsoft SQL Server Instance

Full-text Search is a settings that you must install during the installation of Microsoft SQL Server 2000. To determine if Full-text Search is installed on your existing MS SQL Server database, perform the following steps:

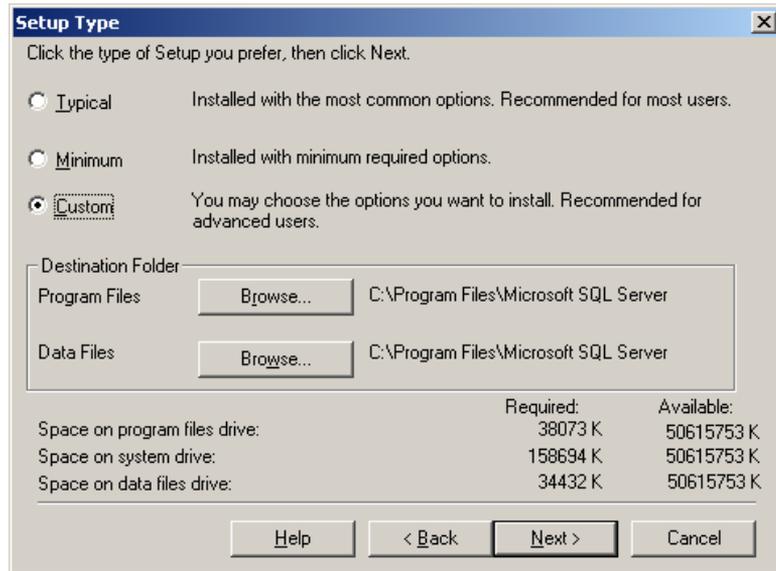
- 1 Open SQL Query Analyzer from the Tools menu.
- 2 Type the following command:

```
select FULLTEXTSERVICEPROPERTY ('IsFulltextInstalled')
```

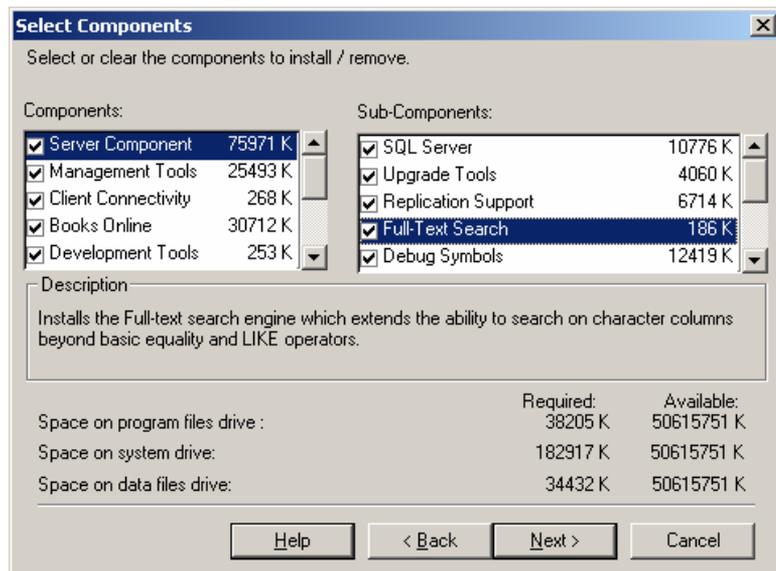


In the event that you did not install Full-text Search (the resulting value is zero), you must do so at this time. The following steps provide a general guideline describing how you can change this and other settings after having installed SQL Server.

- 1 Insert the Microsoft SQL Server 2000 CD-ROM onto the server where you had it installed originally.
- 2 Navigate through the installation dialog boxes and from the Setup Type dialog box, select **Custom**.



- 3 Ensure to check the **Full-Text Search** option.

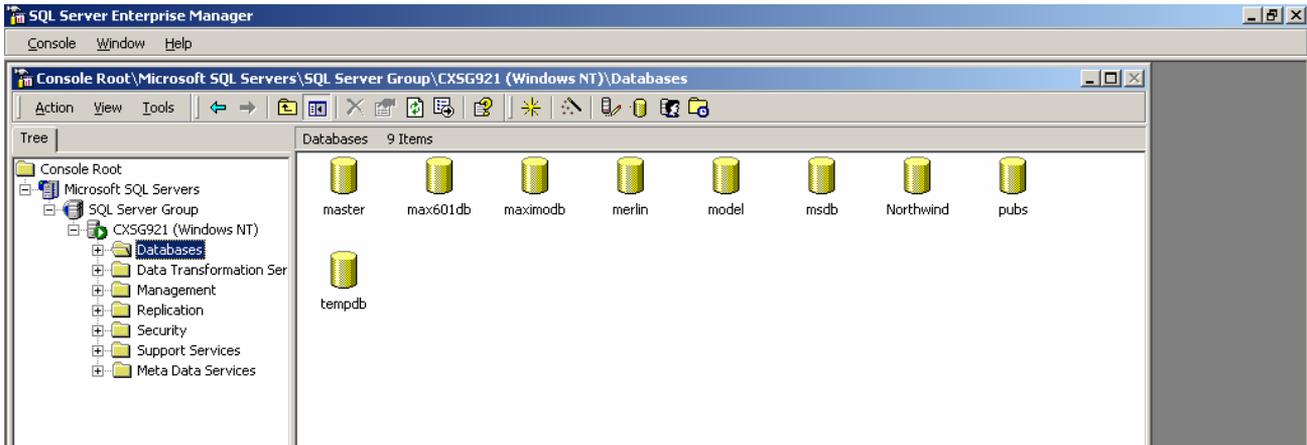


- 4 Step through the remainder of the steps and Finish the installation process by selecting to restart the server.

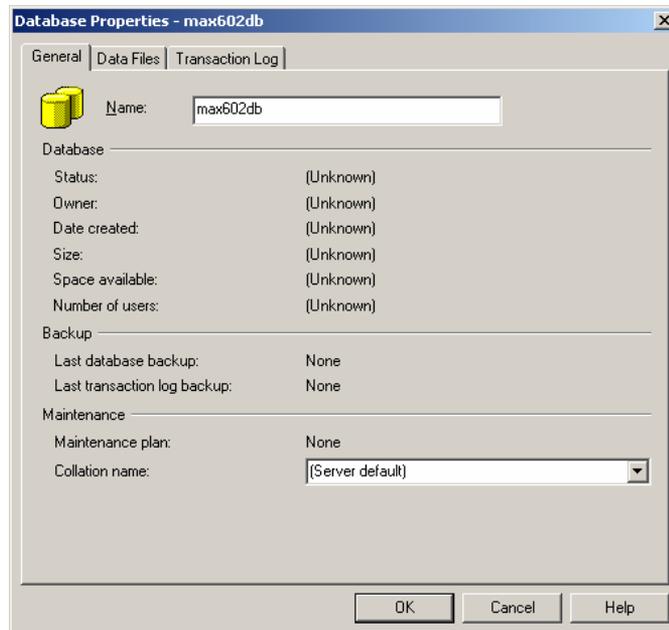
Setting up a SQL Server Database for Maximo

Complete the following steps to create a SQL Server Database.

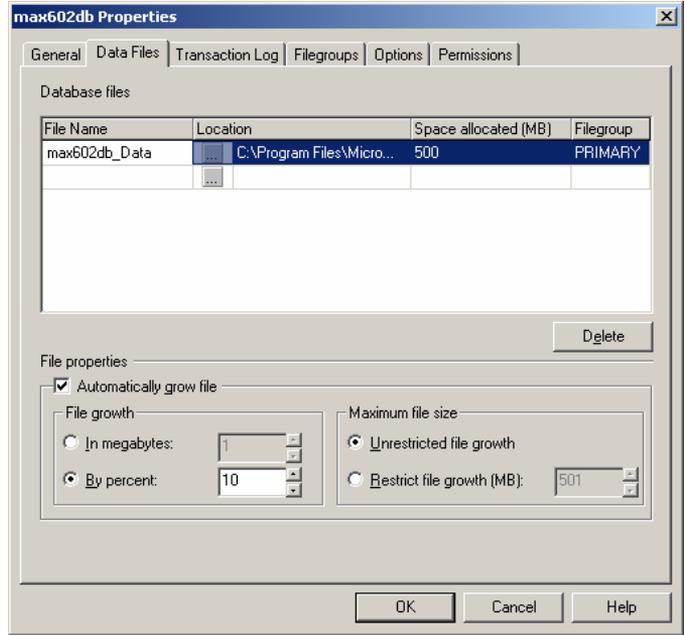
- 1 Open SQL Server Enterprise Manager (from Program Files >> Microsoft SQL Server).
- 2 Right Click the **Databases** folder from the tree view, and select New Database.



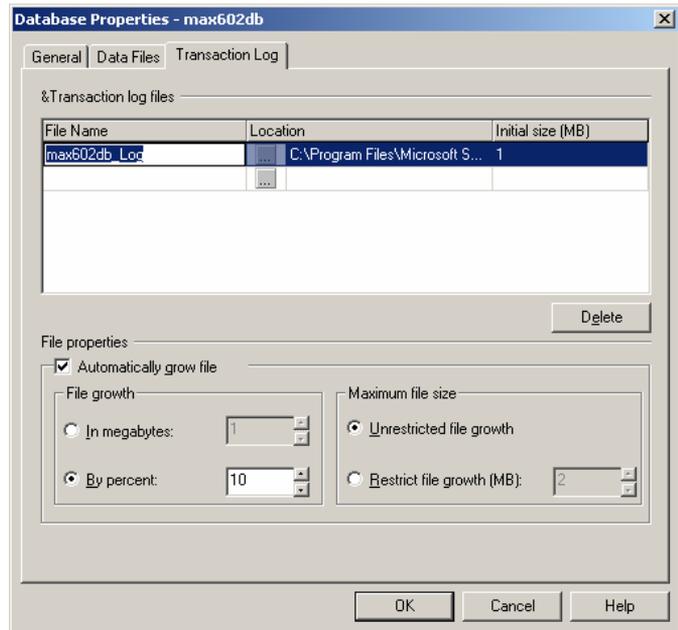
- 3 In the Database Properties dialog box, in the General tab, specify a unique database name (for example max602db).



- 4 From the Data Files tab, change the Space allocated size to **500** (MB) and check the **Automatically grow file** check box.

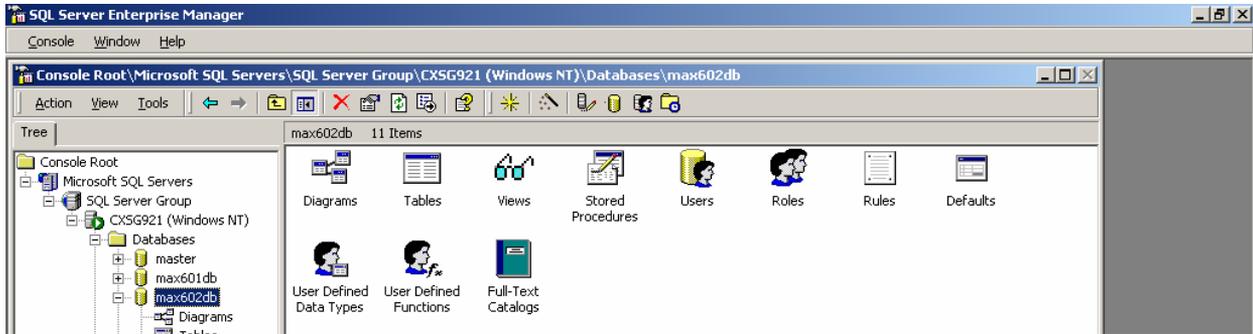


- 5 If you prefer, from the Transaction Log tab modify the settings to accommodate your production environment.

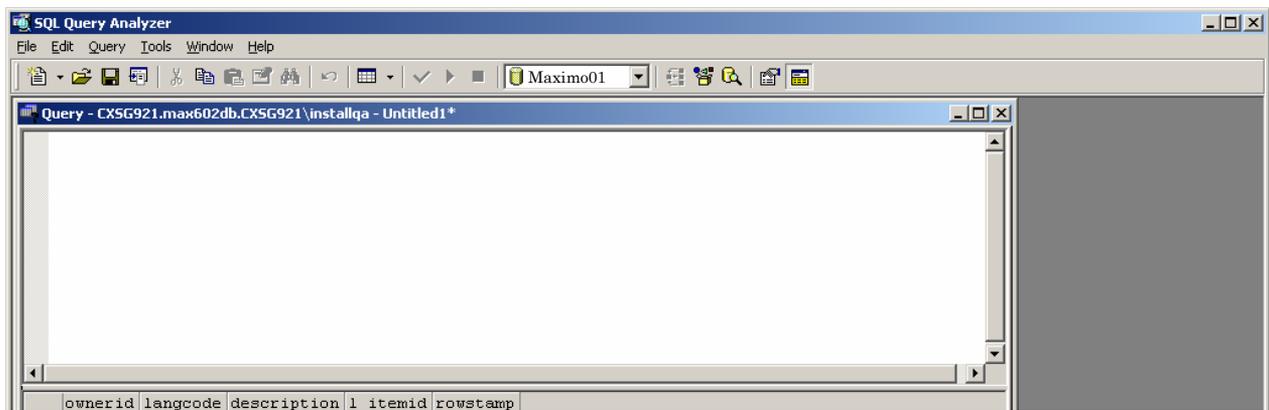


- 6 Click **OK**.

7 From the Tools menu, select SQL Server Analyzer



8 Select the correct database name from the drop-down menu. This is the value you entered in Step 3 on page 7-3.



9 Run the following scripts:

- a To create the *MAXIMO* user, run the following script:

```
sp_addlogin MAXIMO,MAXIMO
go
```

If the maximo account is already present in the SQL Server installation, then you will get an error message “login MAXIMO already exists.” You can ignore this error message.

- b Change **maximo** to be the database owner by running the following script:

```
sp_changedbowner MAXIMO
go
```

- c If you intend to use the Users app to add native database logins and users, then run the following script:

```
sp_addsrvrolemember MAXIMO, securityadmin
go
```

10 You can now run the maxinst script from the <Maximo_home>\tools\Maximo folder from the machine where you installed Maximo.

See “Create the Maximo Database Objects”, on page 7-10.

Preparing Oracle Instance

In this section, you perform the following tasks:

- ▼ Verify the Oracle instance requirements.
- ▼ Create Maximo Tablespace(s).
- ▼ Create the Maximo user.
- ▼ Create the Maximo database objects.

Database Character Set

Maximo supports multiple languages within a single schema. The Oracle instance must be created with the character set that will support all the languages which you will be using. For example, English, French, German, Spanish, Dutch, Portuguese, and Italian all use the Oracle character set WE8ISO8859P1.

If you plan to use a mix of languages that cannot all use a single character set, such as English, Chinese, and Polish, then you must create the database with the Unicode character set AL32UTF8. The AL32UTF8 character set is the only Unicode character set that can be used with MAXIMO.

If you create the database with AL32UTF8 or any multi-byte character set you must also set the initialization parameter `nls_length_semantics=CHAR`.

Verifying the Oracle Instance Requirements

The Oracle instance for Maximo must have Oracle Text installed. Maximo uses Oracle Text for indexes on description fields. You can verify that Oracle Text is installed by checking for the CTXSYS userid.

From SQL Plus, run the following command:

```
select username from dba_users where username = 'CTXSYS';
```

If Oracle Text is installed, this command will return the name CTXSYS.

NOTE The instance for Maximo will need at least 100MB of temporary tablespace and 100MB of undo tablespace.

If Oracle Text is not installed, refer to Oracle installation documentation for more detail.

Oracle Initialization Parameters

MRO does not provide detailed performance settings for MAXIMO because there are an infinite number of combinations of data sizes, user counts, module usages, add-on module usages, system configurations, and customizations possible in an Maximo Release 6 system. MRO Software recommends that you take advantage of all the features of Oracle 9.2 and 10g tuning, such as:

- ▼ Use locally managed tablespaces for MAXIMO tables and indexes.
- ▼ Use the new method of PGA management by setting `WORKAREA_SIZE_POLICY=AUTO` and `PGA_AGGREGATE_TARGET=memory value`.
- ▼ Use the new method of SGA management by setting `SGA_TARGET = memory value`.
- ▼ Control I/O cache via `DB_CACHE_SIZE` instead of `DB_BLOCK_BUFFERS`.
- ▼ Reduce library latch contention by setting `CURSOR_SHARING=SIMILAR` or `FORCE`.
- ▼ Make sure `OPTIMIZER_FEATURES_ENABLE` is set to your current Oracle version and not an older one.
- ▼ `OPEN_CURSORS = 1000` estimated; you may need more.
- ▼ `DBMS_JOBS_PROCESSES = 2` required for job that updates Oracle Text indexes.

Beyond the above, sizing for SGA, PGA, and so forth, is best determined by using Oracle Enterprise Manager or a Third-party database monitoring and administration tool to analyze the database under load and make tuning recommendations.

CAUTION If you have created the database with AL32UTF8 or any multi-byte character set, you must also set the initialization parameter `nls_length_semantics=CHAR`.

Creating Maximo Tablespace(s)

Complete the following steps to create the Maximo tablespaces. Maximo Release 6 offers a multi-schema option. This feature enables the application tables to be owned by a user other than Maximo, permitting multiple Maximo schemas to reside in a single Oracle instance.

Maximo tablespaces should be locally managed and not dictionary managed. These instructions will create a locally managed tablespace by default.

If you do not include a schema owner, the default is Maximo. The expected size of your database determines the size of a Maximo tablespace.

- ▼ If you plan to install the MAXDEMO schema, create a Maximo tablespace of size 600MB.

- ▼ If you plan to create an empty Maximo schema, use the estimated size of the database. Refer to Table 7-1: Database Size Guidelines.

To permit growth, you can add another datafile later or use the AUTOEXTEND option of the CREATE TABLESPACE command.

Use related names for Maximo schemas and tablespaces. For example, to set up a MAXDEMO database, a production database, and a test copy of the production database, you might choose MAXDEMO, MAXPROD, and MAXTEST as schema owners and MAXDEMO_DATA, MAXPROD_DATA, MAXPROD_INDEX, MAXTEST_DATA, and MAXTEST_INDEX as tablespace names (MAXDEMO has only one tablespace name as splitting a small demo database has no real advantage). Use the following guidelines to estimate initial tablespace size:

Size of Database	Tablespace Estimate (MB)	
	Initial	Maximum
Small (1–2 users)	500	2000
Medium (20–100 users)	1000	5000
Large (100+ users)	5000+	20000+

To create a tablespace, use the following command:

```
CREATE TABLESPACE <tablespace_name> DATAFILE '<file_name>' SIZE
<file_size> AUTOEXTEND ON MAXSIZE <maximum>;
```

where:

- ▼ <tablespace_name> is the Maximo tablespace's name.
- ▼ <file_name> is the data file's name.
- ▼ <file_size> is the datafile's initial size from table.
- ▼ MAXSIZE <maximum> is the maximum size allotted to the data file from the above table.

You can express both filesize and maximum as a number of megabytes when you follow it with the letter *M* (for example, 1000M). You can customize the storage parameters for the particular database.

The file name is the full path of the server. It includes the local drive of the server and path location to the data file, and should be placed inside single quotes. For example: 'C:\oracle\oradata\maximo\MAXIMO01.DBF'

Creating the Maximo User

This section describes how to modify **createMaximoES.sql** file. The multi-schema feature enables the application tables to be owned by a user other than MAXIMO, thus permitting multiple schemas to reside in a single Oracle instance.

To use different schema or tablespace names, you must edit the following parameters in createMaximoES.sql.

- ▼ schema — the schema (userid) to own the tables (same value that you specified in Step 10 on page 4-5)
- ▼ data_ts — the name of the table space to hold the Maximo tables (and indexes if the optional index table space is not used)
- ▼ index_ts — the name of the table space to hold the Maximo tables

An example of createMaximoES.sql is shown below:

The diagram shows a block of SQL code with several annotations. Arrows point from labels to specific parts of the code: 'schema name' points to 'maximo' in 'create user maximo'; 'password' points to 'maximo;' in 'identified by (maximo;)'; 'data_ts tablespace' points to 'maximo' in 'alter user maximo default tablespace maximo'; and 'replace with your temporary tablespace name' points to 'temp;' in 'alter user maximo temporary tablespace temp;'. The code includes various grant statements and a comment about database access.

```

create user maximo identified by maximo;
alter user maximo default tablespace maximo quota unlimited on maximo;
alter user maximo temporary tablespace temp;
grant create trigger to maximo;
grant create session to maximo;
grant create sequence to maximo;
grant create synonym to maximo;
grant create table to maximo;
grant create view to maximo;
grant create procedure to maximo;
grant alter session to maximo;
grant execute on ctxsys.ctx_ddl to maximo;

--To allow Maximo to give Database Access to Maximo Users in Sig. Security, run these:
--grant create user to MAXIMO;
--grant drop user to MAXIMO;
--grant create session to MAXIMO with ADMIN OPTION;
--grant alter user to MAXIMO;

```

NOTE Ensure that the **alter user schema temporary tablespace temp** line reflects your temporary tablespace name.

Add the following line if you use a separate index tablespace:

```
alter user <schema> quota unlimited on <index_ts>;
```

To create the Maximo user, complete the following steps:

- 1 Open SQL Plus.
- 2 Login as system administrator.
- 3 At the prompt, type:

```
@"<drive_letter>:\<Maximo_installation_location>\tools\Maximo\en\createMaximoES.sql";
```

- 4 Press **Enter**.
- 5 Exit SQL Plus.

Create the Maximo Database Objects

You create the Maximo database after creating the Maximo user. Complete the following steps:

- 1 Open a command prompt.
- 2 Change directory path to: `\maximo\tools\maximo`
- 3 At the prompt, type **maxinst**

By default, Maxinst will look in the maximo.properties file (In this example, `c:\Maximo\applications\maximo\properties`) for connectivity information to the database. It will connect using JDBC connection and start the process of creating a Maxdemo database. If you would like to create an empty database, use the **-imaximo** flag.

For example, at the command prompt, instead of just maxinst, type: **maxinst -imaximo**

The following depicts the various flags that you can use with maxinst.

Flag	Description
-a	database alias Database alias. If not specified, uses mxe.db.url property.
-c	language code Directory name of input file (for example en for English).
-d	log file directory If using the -l parameter, it will output logfile to the Maximo directory. Typically: tools > maximo > log.
-e	none Causes Sql to be executed. Required. Already present in maxinst.bat.
-f	file name Filename for properties file. If not specified, uses maximo.properties.
-i	file name Filename of input file (without path or extension). The default filename is Unlcvt if the -i param is not provided.
-k	prop. file directory Directory for properties file.
-l	none Outputs a detailed log file. Strongly recommended. Already in maxinst.bat.
-o	file name If using the -l parameter, the filename for the logfile. If not specified, logfile is "Maxinst" + timestamp + ".log".
-p	password Password for database connection. If not specified, uses mxe.db.password property, or "MAXIMO".
-s	index storage area Oracle: tablespace for index storage (defaults to default tablespace for schema owner) SQL Server: filegroup for index storage (defaults to PRIMARY).
-t	table storage area Oracle: tablespace for table storage (defaults to default tablespace for schema owner) SQL Server: filegroup for table storage (defaults to PRIMARY).
-u	user name Username for database connection. If not specified, uses mxe.db.user property, or "MAXIMO".

CAUTION -S and -T PARAMETERS: Maxinst does not provide a default value for tablespace.

The -S and the -T PARAMETERS are required. You must *always* specify the data and index tablespace names. There is no default value.

CAUTION If MAXINST fails for any reason, you must drop and re-create the MAXIMO schema before re-running MAXINST.

NOTE Each flag *must* be followed by the parameters without a space, for example: -uMAXIMO.

8

Deploying the EAR Files

You are now ready to deploy the EAR files via the BEA WebLogic Console. Deploying the EAR files starts the Maximo Application Server. If MAXIMOSERVER is not running, start it from a command prompt.

You also need to install a Java Virtual Machine (JVM) in order to view the BEA WebLogic Console. Newer versions of Windows may not ship with JVM.

- 1 From a command prompt, change directory path to:

```
<drive_letter>:\<BEA_installation_location>\user_projects\domains\mydomain
```

- 2 Type **startWebLogic.cmd** and press Enter.
- 3 When prompted, type the username and password that you specified in Step 9 on page 2-11.

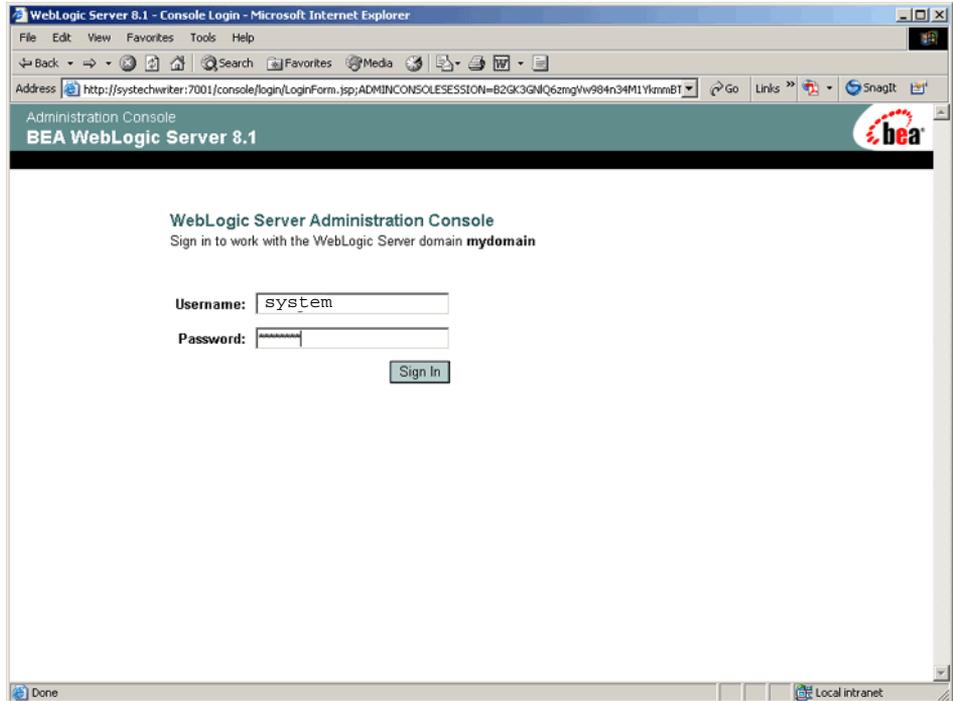
Once the phrase:

```
"<server started in RUNNING Mode>"
```

displays, the WebLogic Server is running.

- 4 Start the MAXIMOSERVER Admin Console by typing the following URL in your browser's address bar: **http://<host name>:7001/console**

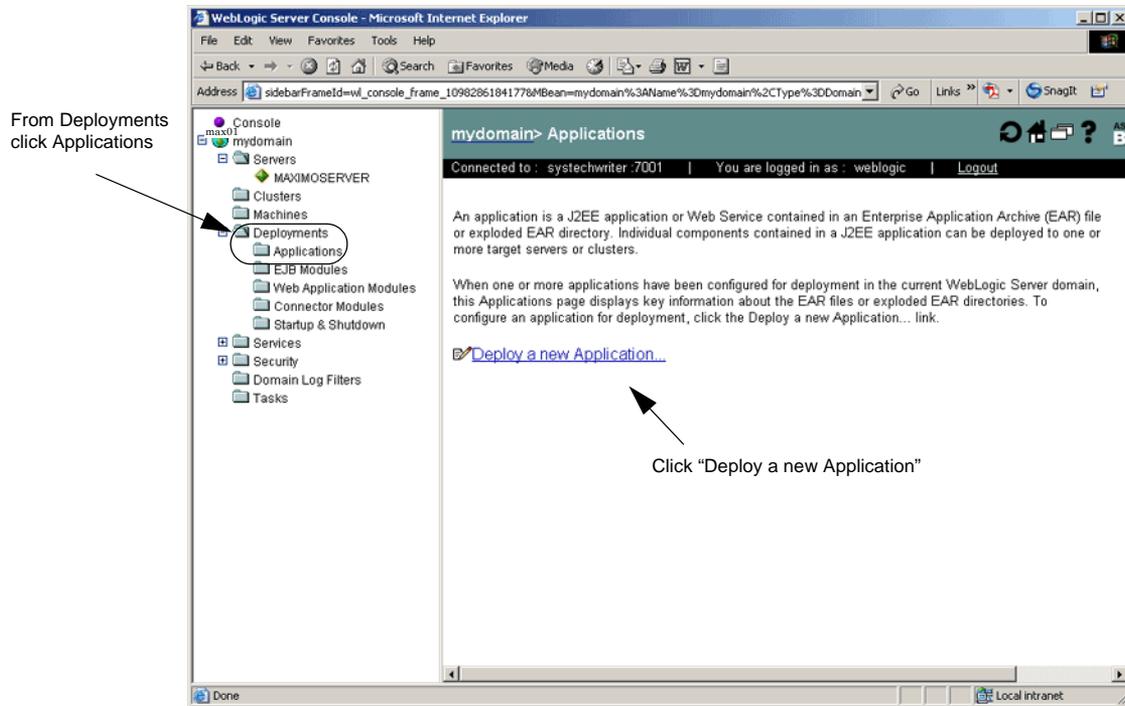
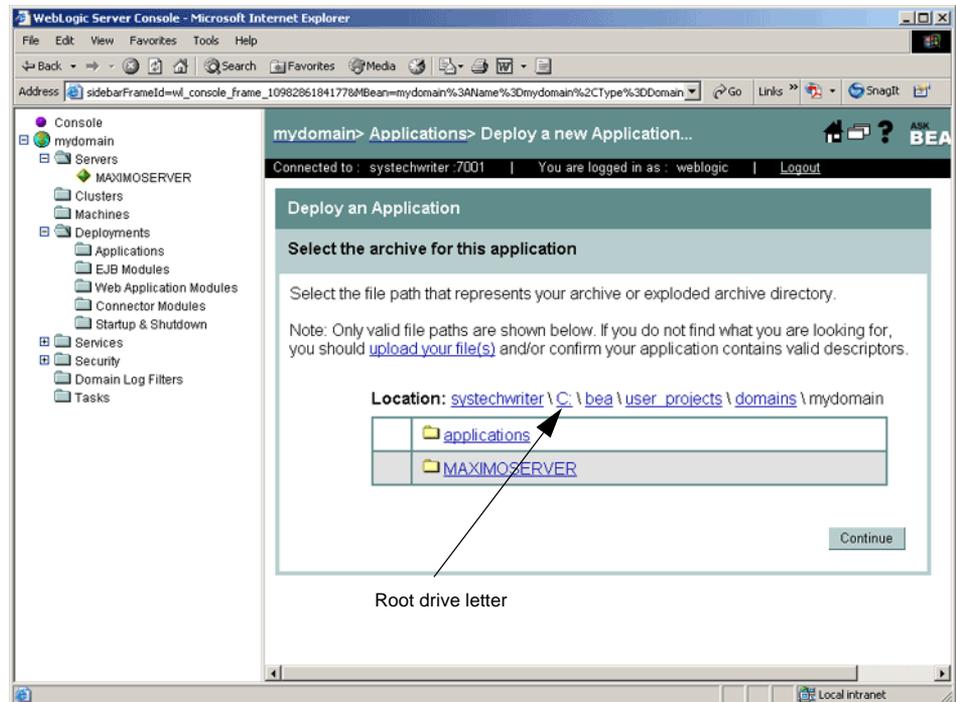
- 5 Replace the default **Username** and **Password** with the values you specified in Step 9 on page 2-11. Click **Sign In**.



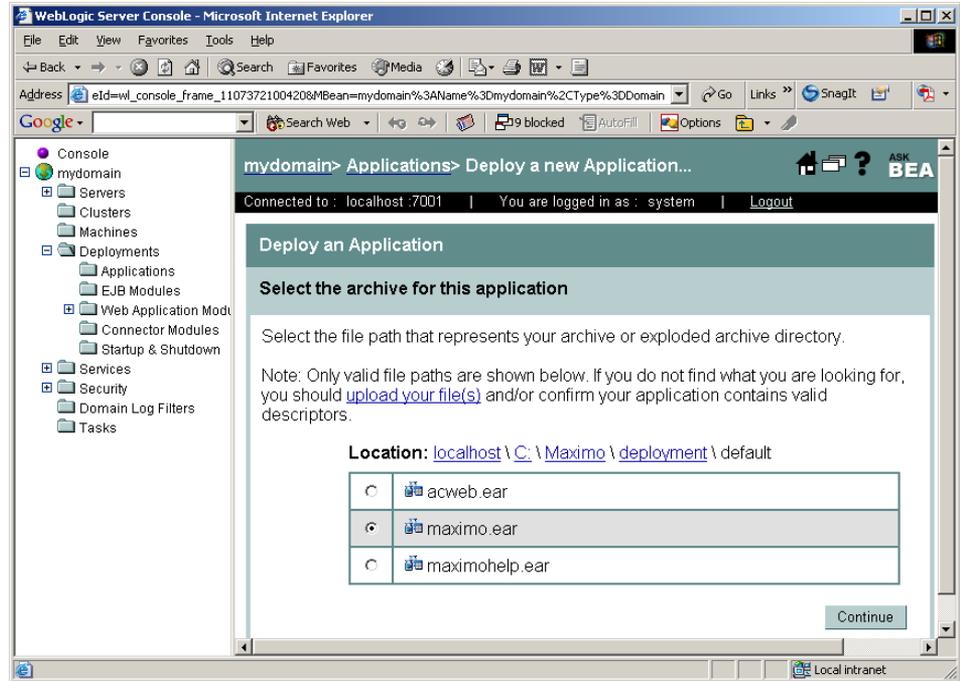
MEA Only

If you are a Maximo Enterprise Adapter customer, and you have set up the JMS queues during the WebLogic configuration (Appendix B), you must now enable the JMS connection factory before deploying the EAR files. Please refer to “Enabling JMS Connection Factory for Maximo Enterprise Adapter”, on page C-1 at this time and return to Step 1 on page 8-1 after completing the steps outlined in Appendix C.

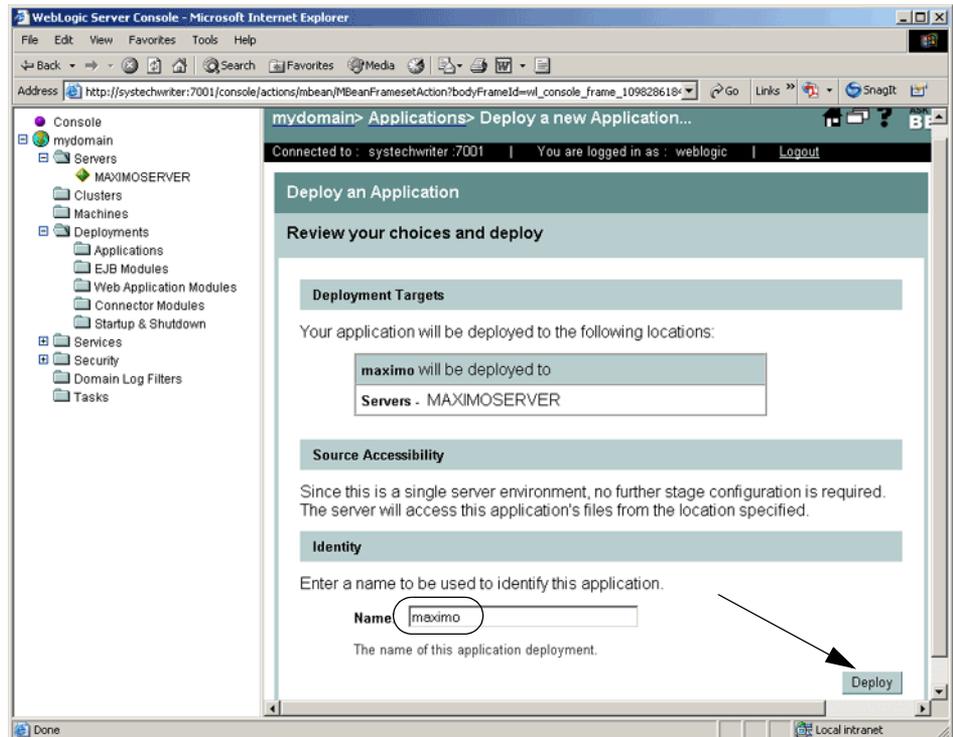
- 6 Click **Deployments** from the tree view in the left pane, and then click **Applications**.

7 From the main window, click **Deploy a new Application**.8 Click the root drive where you have installed Maximo (in this example, c:\) and navigate to c:\Maximo\deployment\default and click **Continue**.

- 9 Click the radio button next to the application **maximo.ear** and click **Continue**.

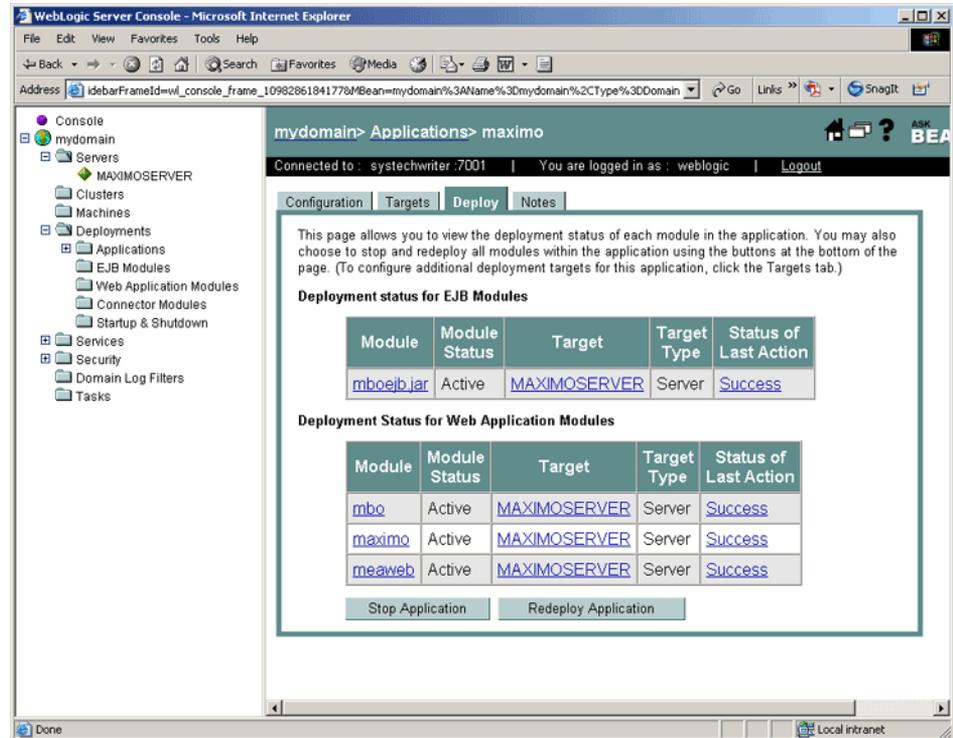


- 10 In the Review your choices and deploy window, type **maximo** in the Name field (unless it appears by default) and click **Deploy**.



This may take several minutes. Do not click **Deploy** again.

- 11 Allow enough time to pass for the EJB modules and the Web Application modules to indicate **Success** as Status of Last Action.



- 12 Repeat Steps 6 through 11 to deploy **maximohelp.ear**. If you are using Actuate, repeat Steps 6 through 11 to deploy the **acweb.ear** file.

As you choose the **maximohelp.ear** and **acweb.ear** files to deploy, accept the default value (**maximohelp** and **acweb** respectively) that appear as application names in Step 10 on page 8-4.

Installing The Actuate Encyclopedia for Maximo

9

If you installed Actuate in Chapter 3, then complete the steps outlined in this chapter to install the Actuate Encyclopedia for Maximo. The reason that you are installing an Actuate-related component at this time, is that, only now you can access the Actuate Administrative Console, after having deployed the acweb.ear file in the previous chapter.

The Encyclopedia is a collection of Maximo-specific reports, user roles, and user permissions that are copied during installation and placed in the Actuate8/iServer/encyc folder.

You must install the Actuate Encyclopedia for Maximo on the same machine where you installed the Actuate iServer. Before you install the Actuate Encyclopedia for Maximo, ensure:

- ▼ To remove corrupted characters from the acserverconfig.xml file. This applies *only* to Chinese, Japanese, and Korean languages.
- ▼ That the Actuate iServer application is running.
- ▼ That the MAXIMOSERVER application server is running.

Removing Corrupt Characters from the acserverconfig.xml File

NOTE This section applies only to Chinese, Japanese, and Korean installations.

If you are installing for Chinese, Japanese, or Korean languages, the acserverconfig.xml file (located in the Actuate iServer directory) is saved improperly by the Actuate installation program. The file name is appended with corrupted characters and a question mark at the beginning of the file. The result is that the Actuate iServer is unable to read the file or to startup properly. Complete the following steps to remedy this issue:

- 1 Shut down the Actuate application server.
- 2 Using a text editor, open the **acserverconfig.xml** file located in the <Actuate_iServer_root>\iServer\etc folder.
- 3 Note the corrupted character and a question mark at the beginning of the file. Remove them and save the file.
- 4 Re-start the Actuate application server.

Starting the Actuate iServer for Maximo

By default the Actuate iServer starts automatically when your system reboots. If you did not choose to start the Actuate iServer automatically, use the Services panel to start the service. Complete the following steps:

- 1 From the Control Panel >> Administrative Tools, click **Services**.
- 2 Right-click the **Actuate Process Management Daemon 8** service name.
- 3 Click **Start**.

The Process Management Daemon (PMD) starts automatically after the Actuate iServer installation. The PMD starts the Report Server services. You can also start the PMD from the command line.

- 1 From a command prompt change directory to the C:\ drive (or your root Actuate installation folder).
- 2 To start the PMD, type:

```
net start "Actuate Process Management Daemon 8"
```

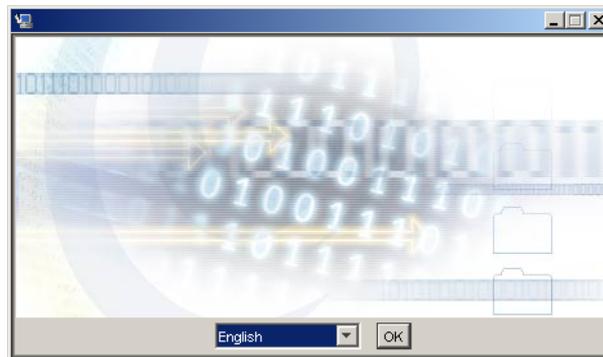
Installing the Actuate Integration for Maximo

You are now ready to install the Actuate Integration for Maximo. Complete the following steps:

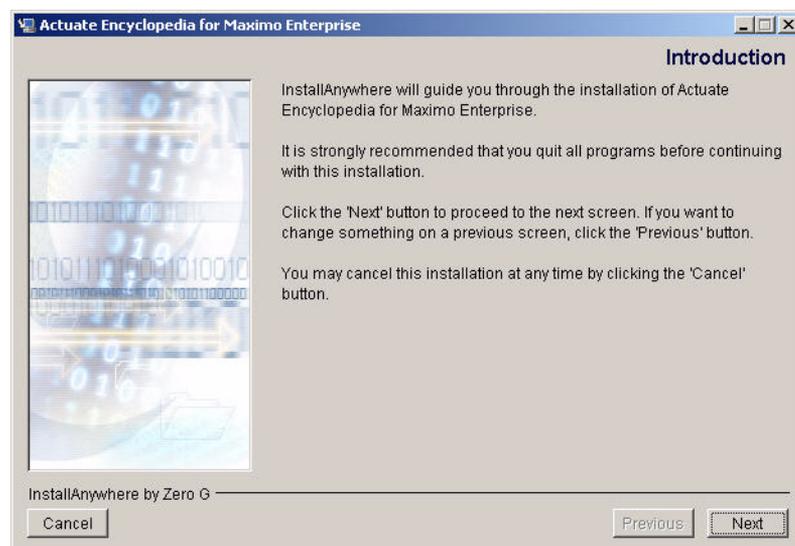
- 1 Insert the Actuate Reporting Release 8 English Encyclopedia for Windows CD-ROM into the CD drive.
- 2 From the root CD drive, double-click **actuate.exe**.
- 3 Select the appropriate language from the drop-down list. If your language is not available from the list, select English; if it is Japanese or Chinese, see Note 2 below. Click **OK**.

NOTE 1 Selecting a language only changes the installation screens into that language but does not affect the underlying files that gets installed.

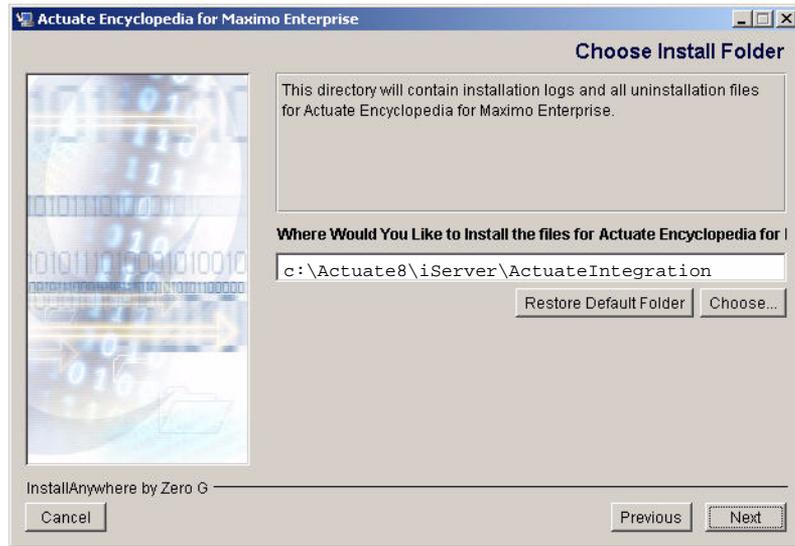
NOTE 2 The installation screens are translated into: Spanish, Portuguese, Japanese, and Simplified Chinese. In order to see Japanese or Chinese you must have those fonts installed on your system.



- 4 Click **Next** in the Introduction dialog box.



- 5 Accept the default installation location (c:\Actuate8\iServer\ActuateIntegration) or select another location. Click **Next**.

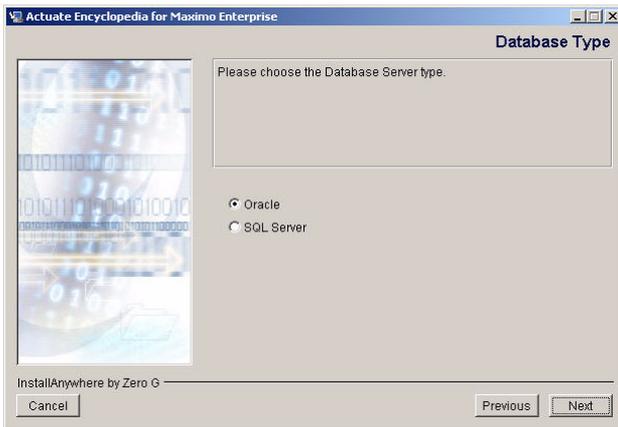


- 6 Enter the required information. Ensure that the Administrator's password is the same password you specified on Step 12 on page 3-6. Click **Next**.

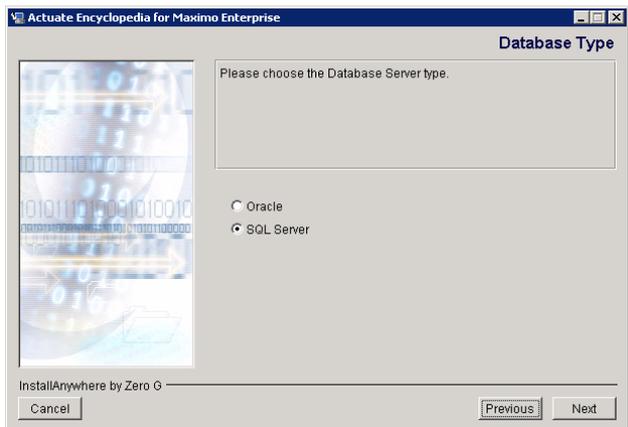


7 Select the appropriate database and click **Next**.

If you are connecting to an Oracle database...

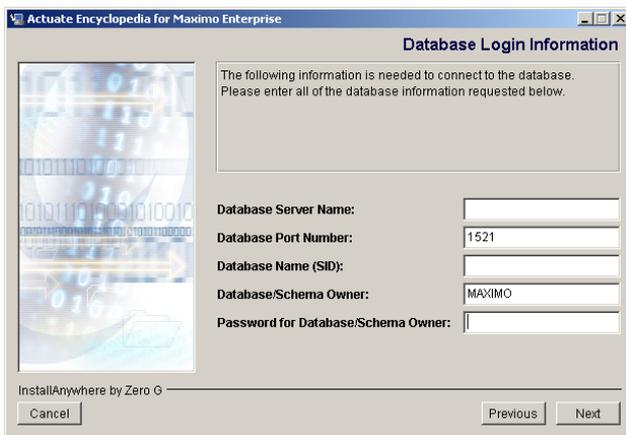


If you are connecting to a SQL Server Database...

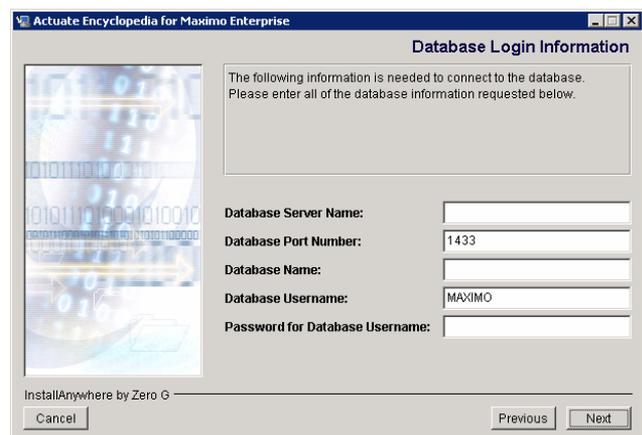


8 Depending on your database type, enter the following database-related information, and click **Next**.

If you are connecting to an Oracle database...

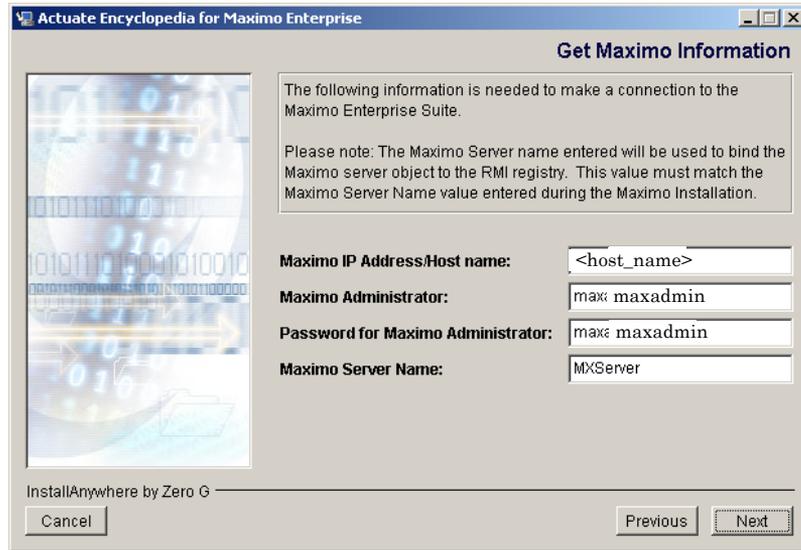


If you are connecting to a SQL Server Database...



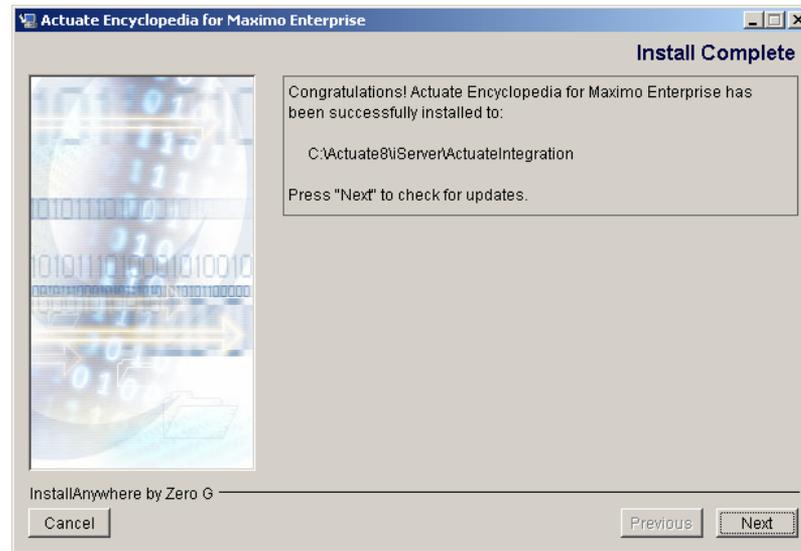
	Oracle	SQL Server
Database server name	Enter the Oracle host name	Enter the SQL Server host name
Port number	1521 (Default)	1433 (default)
Database name	Enter the Oracle system identifier	Enter the SQL Server database name
Database owner	Maximo (default)	Maximo (default)
Database owner's password	Maximo (default)	Maximo (default)

- 9 Enter the necessary information to connect to Maximo. Ensure that the Maximo Server Name is the same value as that in Step 13 on page 4-6 and click **Next**.

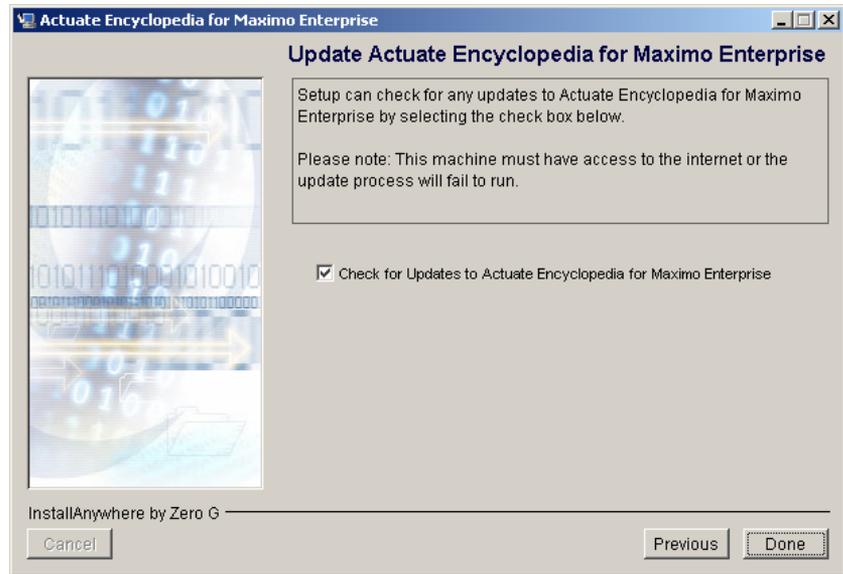


- 10 Click **Install**.

- 11 Click **Next** to check for Actuate Updates.



12 Check the check box in the Update dialog box and click **Done**.

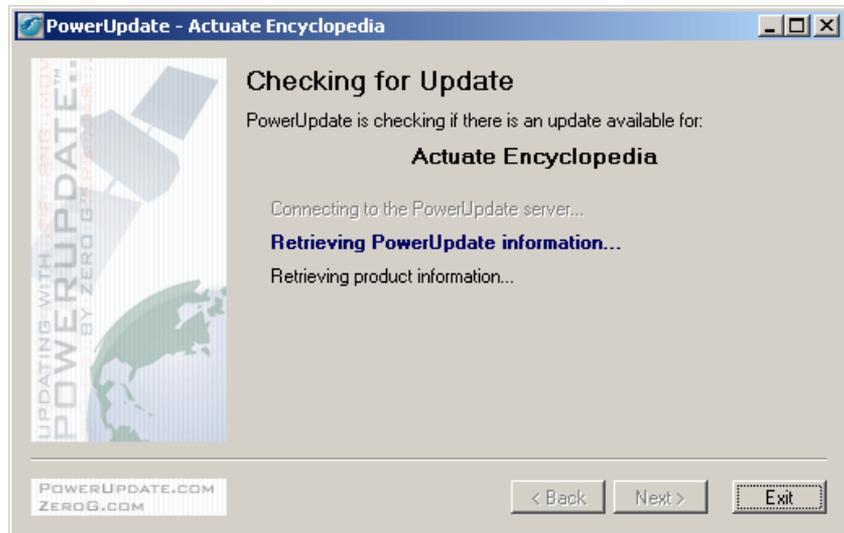


The PowerUpdate wizard opens. The computer where you are performing this installation from *must* be connected to the Internet.

13 Click **Next** in the Welcome to PowerUpdate dialog box.



The PowerUpdate program checks for available updates at this time.

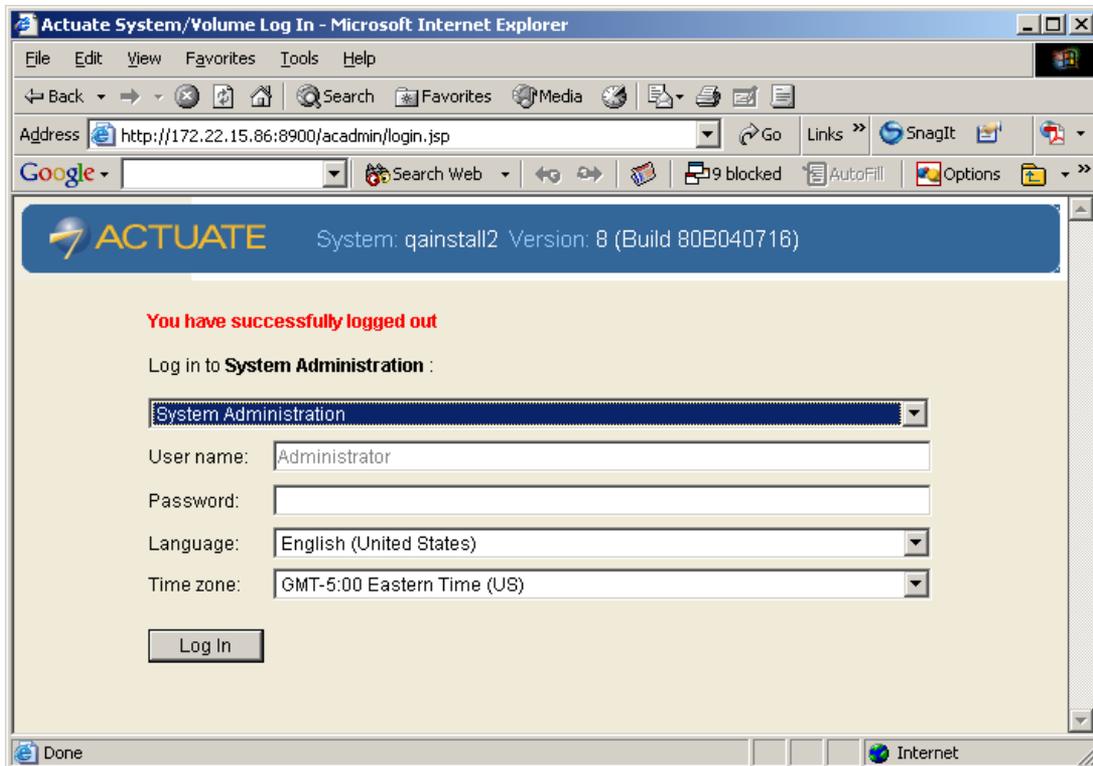


- 14** There are no updates available for this release of the Actuate Encyclopedia. Click **Done**.

Importing the Encyclopedia

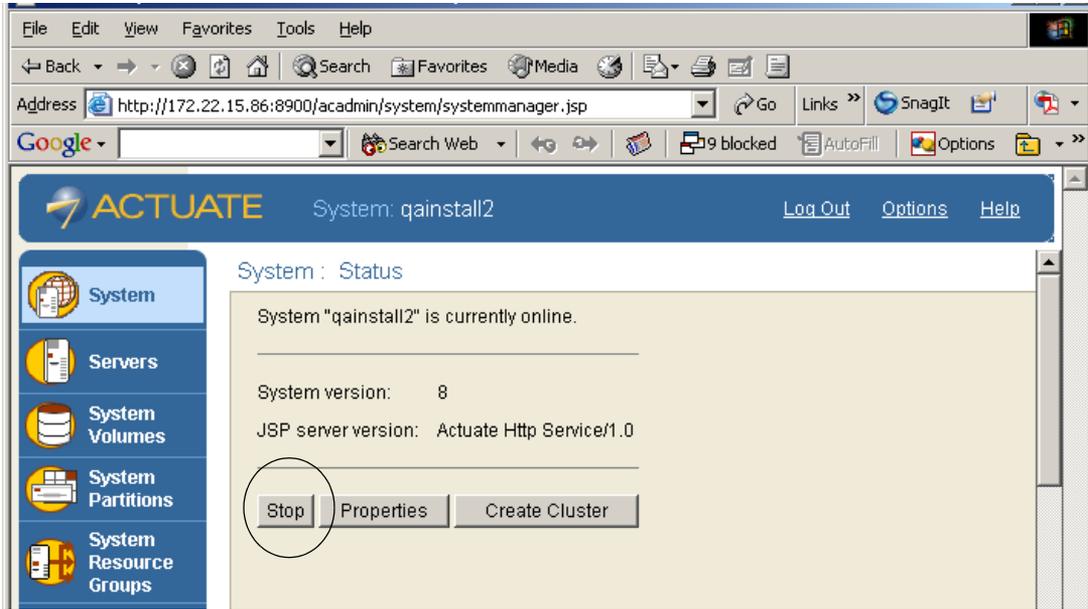
Ensure that the Maximo Application Server is running while you are importing the encyclopedia. If at any point, the Maximo Application Server is re-started, the Actuate service *must* be restarted too.

- 1 Login to the Actuate Admin Console (http://<host_name>:8900/acadmin) from the machine where you have installed the Actuate iServer.
- 2 Change the Volume Name drop down to **System Administration**.



- 3 Login as Administrator.
- 4 Select the **System** tab (if not selected by default already).

5 Click the **Stop** button on the System tab.



6 Click **OK** in the ensuing message box. Wait 1 to 2 minutes for the Stop to take effect.

7 Using Windows Explorer, navigate to your Actuate installation location:
<drive_letter>:\Actuate8\iServer.

8 Delete the **encyc** folder found under the \Actuate8\iServer folder.

9 Open a command prompt and change path to Actuate's bin directory. For example: C:\actuate8\iServer\bin

10 Execute the **acimport.bat** script, and pass in the path to the full Encyclopedia files.
For example: **acimport.bat c:\actuate8\iServer\oracle_export**

11 After importing the Encyclopedia, go back to the Actuate Admin Console and **Start** the Volume.

12 To launch the Encyclopedia:

a Ensure that the Maximo Application Server is running.

b Open a browser and enter the following URL in the address box:

http://<actuate_server_name>:8900/acadmin

c Log in to Actuate Console as a Maximo user (not the user *administrator*).

Logging Into Maximo Start Center

10

The final step in installing the Maximo system, is opening the Maximo Start Center window.

Ensure that the Maximo Application Server is running.

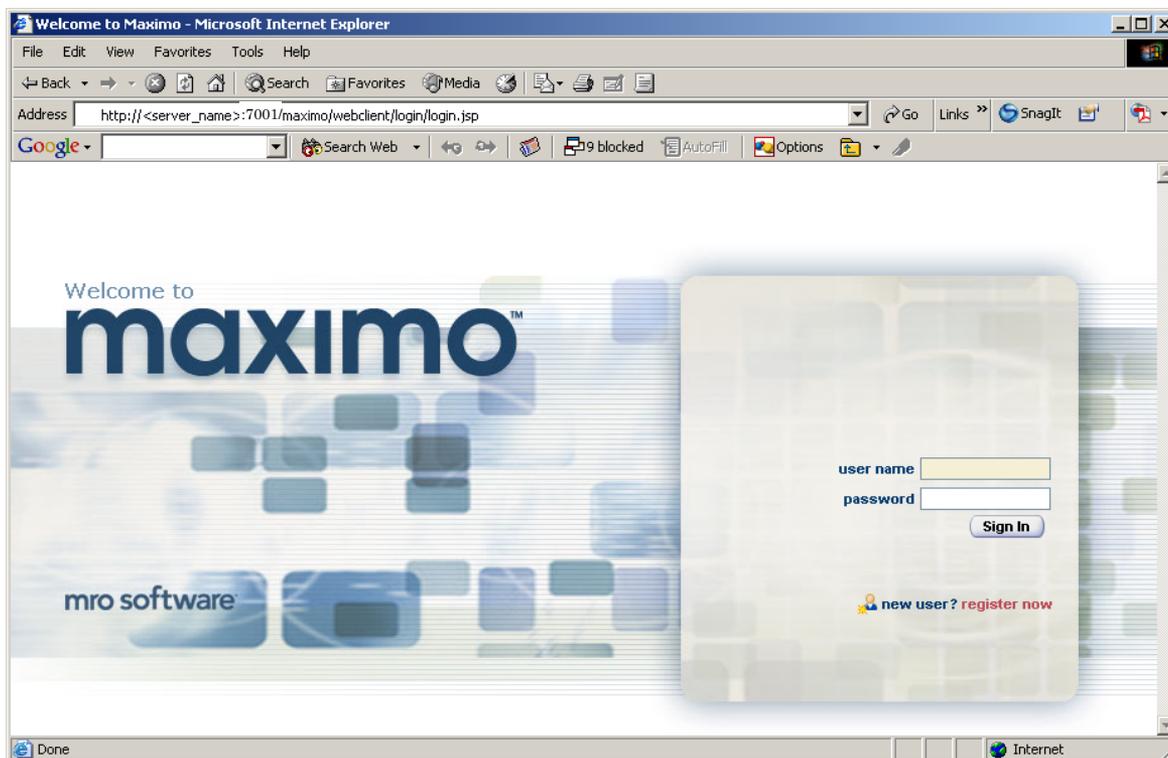
- 1 To open Maximo login page, launch Internet Explorer and in the URL address bar type: `http://<host_name>:<port_number>/maximo`

where

- ▼ `<host_name>` is the machine name or IP address of the application server
- ▼ `<port_number>` is the value that you specified on Step 5 on page 2-8.

NOTE The context path (maximo) is case-sensitive.

The Maximo login page opens.

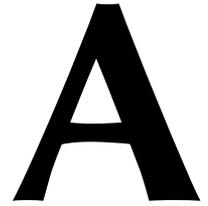


- 2 Login as **maxadmin** for both username and password. Newly installed Maximo databases contain maxadmin as a user ID with unlimited system access. You cannot use Maximo or SYSADM.

Maximo Enterprise Adapter Users

If you have obtained the Maximo Enterprise Adapter Key, you must complete additional integration steps that are detailed in Chapter 6 of the *Maximo Enterprise Adapter System Administration Guide*.

System Server Administration



This appendix describes how to start and stop the MAXIMOSERVER, whether you are running it as a Windows service, or from a command prompt.

Creating a Windows Service for the MAXIMOSERVER Server

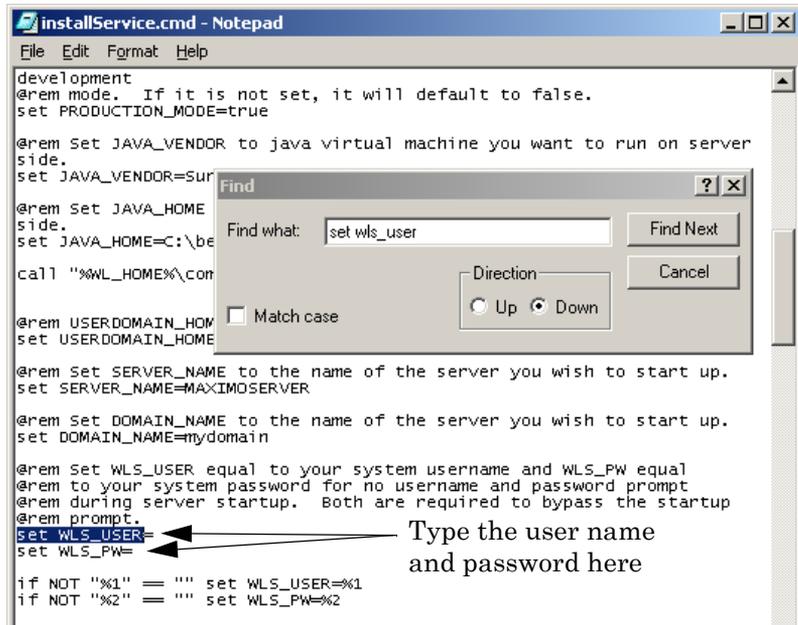
Before you create a Windows Service for the MAXIMOSERVER, you must edit the `installService` file to include user name, password, and modify the memory heap size. Complete the following steps:

NOTE If you have already installed the server as a Windows Service, you must remove the service by running **`uninstallservice.cmd`** from the `\mydomain` folder.

To edit the `installService.cmd` file, complete following steps:

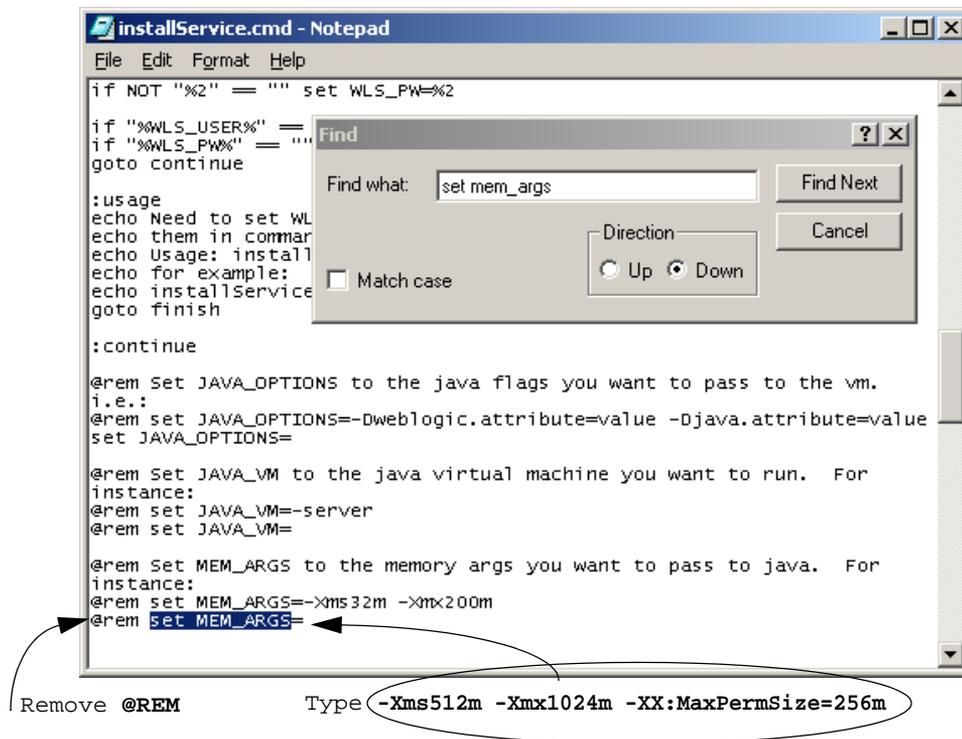
- 1** Using Windows Explorer navigate to:
`<bea_installation_drive>\bea_installation_location>\user_projects\domains\mydomain.`
- 2** Right-click and edit (do not open by double-clicking) the **`installService.cmd`** file.
 - a** Using your text editor Find tool, search for **`set wls_user`** *twice*.

- b Type the user name and password after the equal (=) sign after WLS_USER= and WLS_PW= respectively. This is the same username and password you specified in Step 9 on page 2-11.



- c Search for *set mem_args* three times.
- d Remove the **REM** (remark) from the front of the command **set MEM_ARGS**.
- e Type the following parameters (appears in bold) after the equal sign:
set MEM_ARGS=-Xms512m -Xmx1024m -XX:MaxPermSize=256m

These parameters are case sensitive. Ensure to include the minus (-) sign before each parameter and to include the *m* after each value.



f Save and close the file.

- 3 From a command prompt, change directory path to:
 <BEA_installation_drive>\bea\user_projects\domains\mydomain
- 4 At the prompt, type: **installService** and press **Enter**.

Starting and Stopping the MAXIMOSERVER Server

This section describes the following topics:

- ▼ Starting the MAXIMOSERVER as a Windows Service
- ▼ Stopping the MAXIMOSERVER as a Windows Service
- ▼ Removing the MAXIMOSERVER as a Windows Service
- ▼ Starting the MAXIMOSERVER from a command prompt
- ▼ Stopping the MAXIMOSERVER Server from a command prompt

Starting and Stopping the MAXIMOSERVER Service

You start the MAXIMOSERVER running as a Windows Service, by completing the following steps:

- 1 From your Start menu, select Settings >> Control Panel >> Administrative Tools >> **Services**.
- 2 Right-click **beasvc mydomain_MAXIMOSERVER**
- 3 To start, select **Start** from the ensuing menu.
- 4 To stop, select **Stop** from the ensuing menu.

Removing the Application Server as a Service

To remove the MAXIMOSERVER server as a Windows Service, perform the following steps:

- 1 From a command prompt, change path to:

`<BEA_installation_drive>\bea\user_projects\mydomain\`
- 2 Run the uninstall script by typing the following command and then press Enter.

```
uninstallService.cmd
```

Starting the Application Server From a Command Prompt

You start the MAXIMOSERVER Application Server from a command prompt.

- 1 Open a Command Prompt.
- 2 In the Command prompt, change directory path to:

`<BEA_installation_drive>\bea\user_projects\mydomain\`
- 3 At the prompt type **startweblogic** and press Enter.
- 4 When prompted, type the username and password that you specified in Chapter 2.

Once the phrase:

```
<server started in RUNNING Mode>"
```

displays, the WebLogic Server is running.

Stopping the MAXIMOSERVER Server

You stop the MAXIMOSERVER from running as follows:

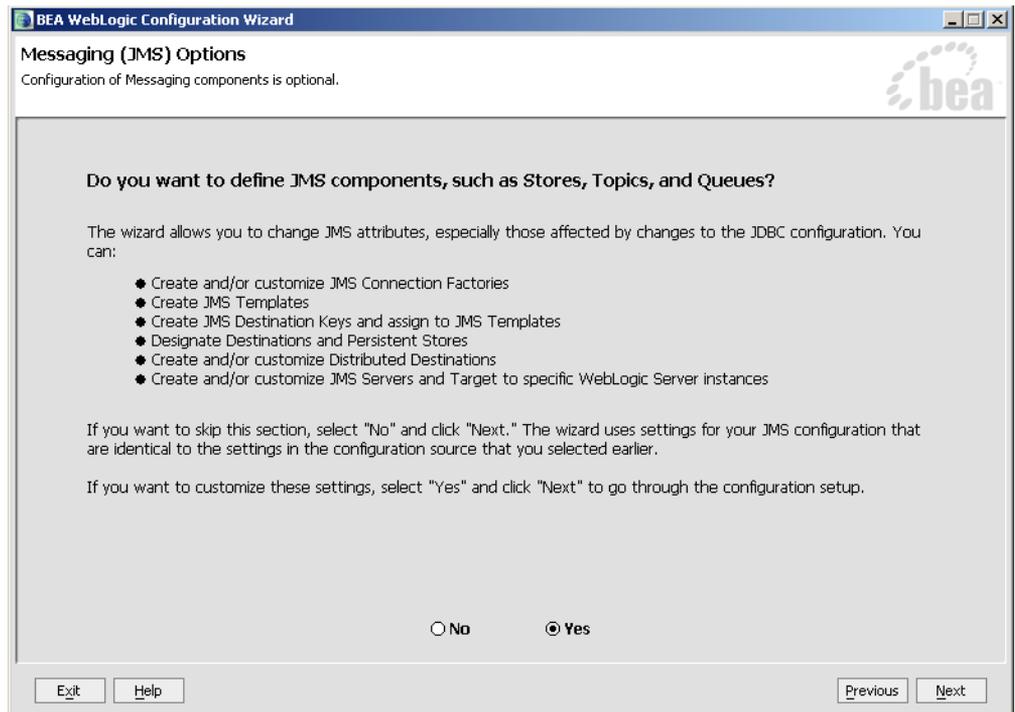
- 1 In the same Command Prompt Window that MAXIMOSERVER server is running, press **<Ctrl> + C**.
- 2 Type **Y**, and press Enter.
- 3 Close the Window.

Configuring JMS Options for Maximo Enterprise Adapter

B

In the event that you selected **Yes** in Step 8 on page 2-10, complete the steps outlined in this Appendix and return to Chapter 2, Step 9 on page 2-11 to complete your BEA WebLogic installation and configuration.

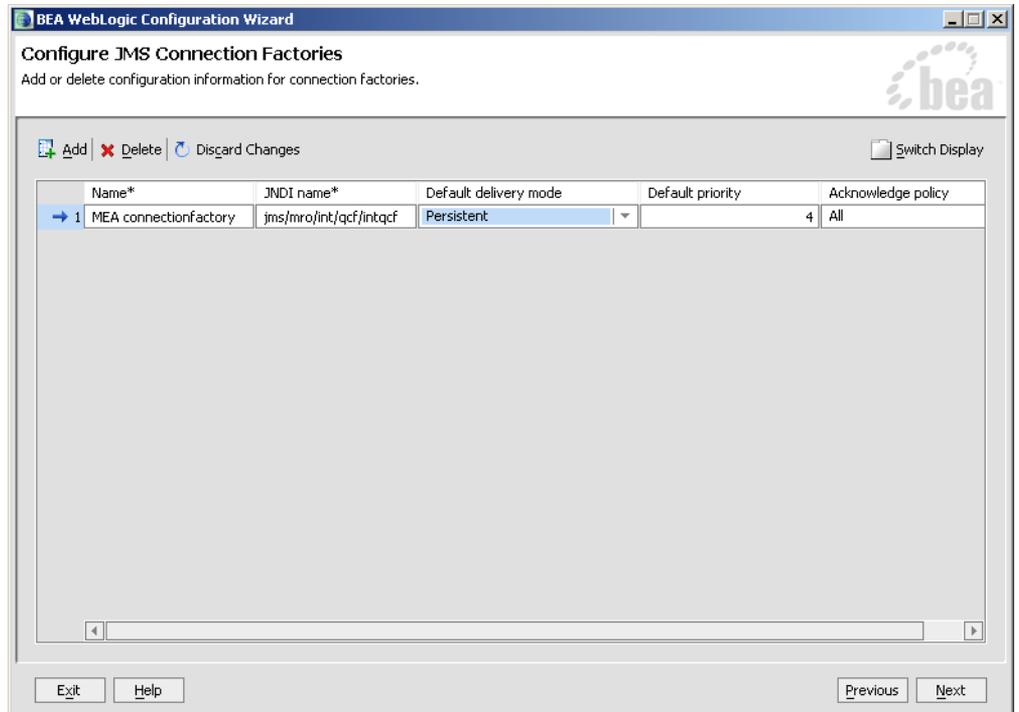
1 Select **Yes** to define JMS components and click **Next**.



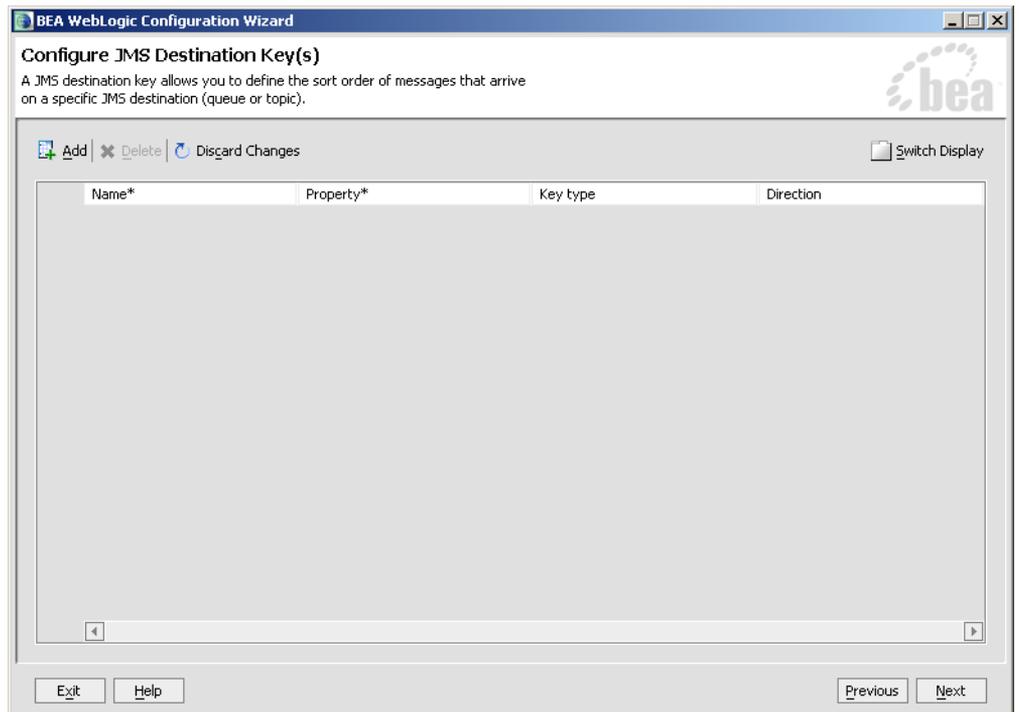
2 In the Configure JMS Connections Factories window:

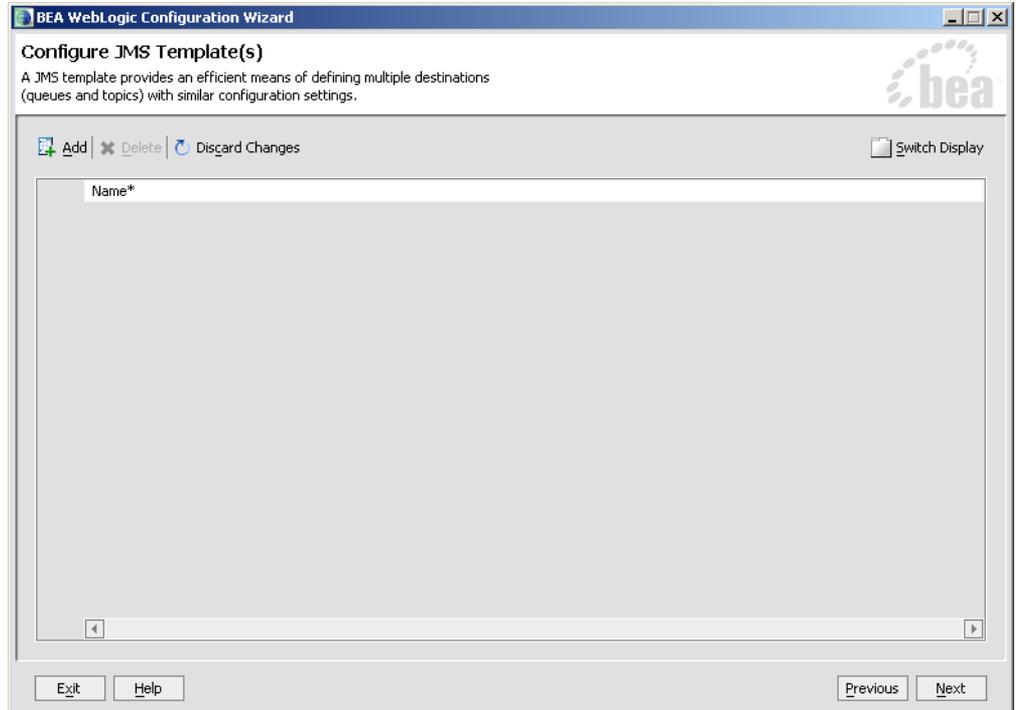
- a Click **Add**
- b In the Name field type: **MEA connectionfactory**
- c In the JNDI name field type: **jms/mro/int/qcf/intqcf**
- d In the Default delivery mode: select **Persistent**
- e Accept the default values that appear in the Default priority field (4) and the Acknowledge policy field (All)

f Click Next.



3 In the Configure JMS Destination Key(s) window, click Next.



4 In the Configure JMS Template(s) click **Next**.

5 In the Configure JMS Files Stores window, you must add three JMS file stores:

The directory names mentioned in this step (jmsstore) are arbitrary and can be any directory located on your file system. MRO Software recommends that you create a folder named **jmsstore** in the root of the BEA installation location before continuing with this step.

a Click **Add** to type or select the following values:

- ▼ Name: **mxintsqinfile**
- ▼ Directory:
<drive_letter>:\<bea_installation_location>\jmsstore
- ▼ Synchronous write policy: **Disabled**

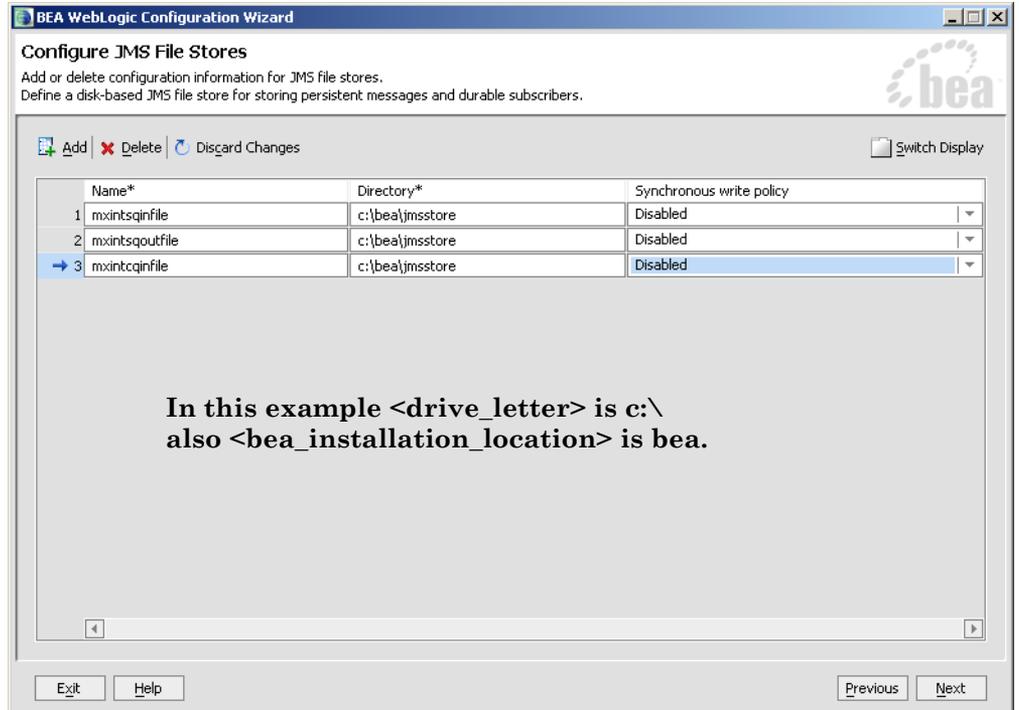
b Click **Add** to type or select the following values:

- ▼ Name: **mxintsqoutfile**
- ▼ Directory:
<drive_letter>:\<bea_installation_location>\jmsstore
- ▼ Synchronous write policy: **Disabled**

c Click **Add** to type or select the following values:

- ▼ Name: **mxintcqinfile**
- ▼ Directory:
<drive_letter>:\<bea_installation_location>\jmsstore

▼ Synchronous write policy: **Disabled**.



d Click **Next**.

Refer to Chapter 2 Step 4 on page 2-2 for the exact BEA installation location.

6 In the Configure JMS Servers window, you must add three JMS Servers:

a Click **Add** to type or select the following values:

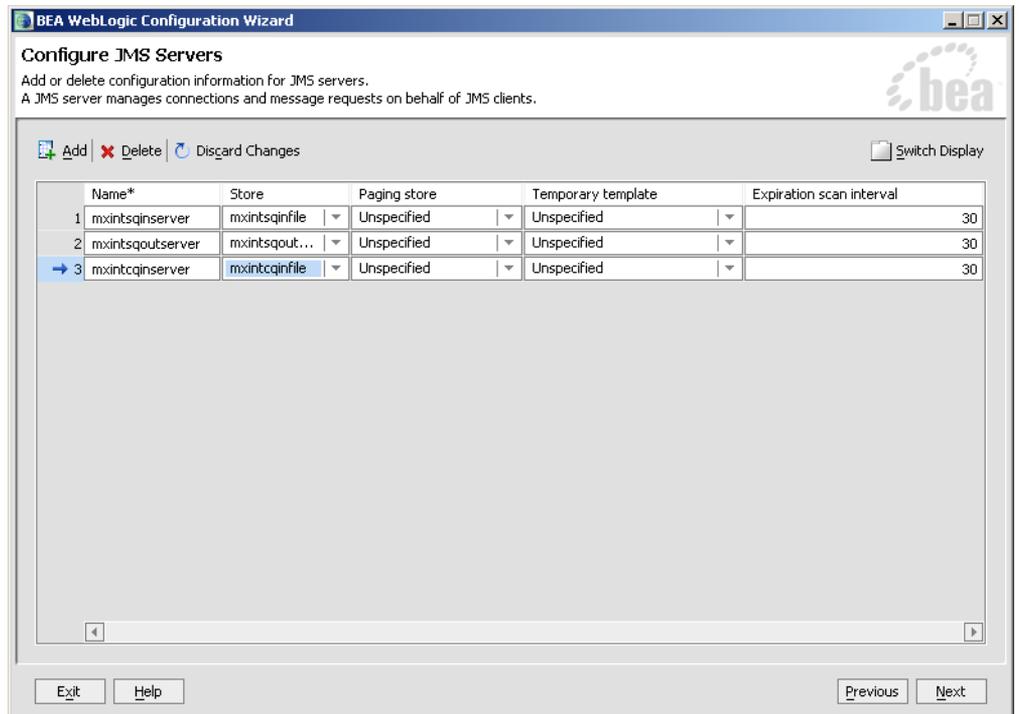
- ▼ Name: **mxintsqinserver**
- ▼ Store: **mxintsqinfile**
- ▼ Paging store: Unspecified (default)
- ▼ Temporary template: Unspecified (default)
- ▼ Expiration scan interval 30 (default)

b Click **Add** to type or select the following values:

- ▼ Name: **mxintsqoutserver**
- ▼ Store: **mxintsqoutfile**
- ▼ Paging store: Unspecified (default)
- ▼ Temporary template: Unspecified (default)
- ▼ Expiration scan interval 30 (default)

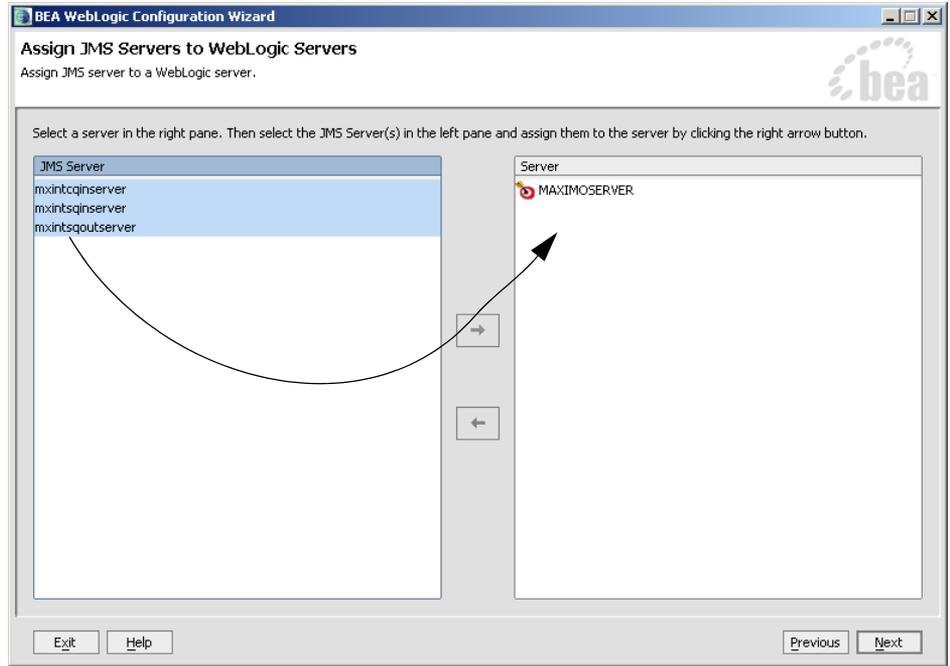
c Click **Add** to type or select the following values:

- ▼ Name: **mxintcqinserver**
- ▼ Store: **mxintcqinfile**
- ▼ Paging store: Unspecified (default)
- ▼ Temporary template: Unspecified (default)
- ▼ Expiration scan interval 30 (default)

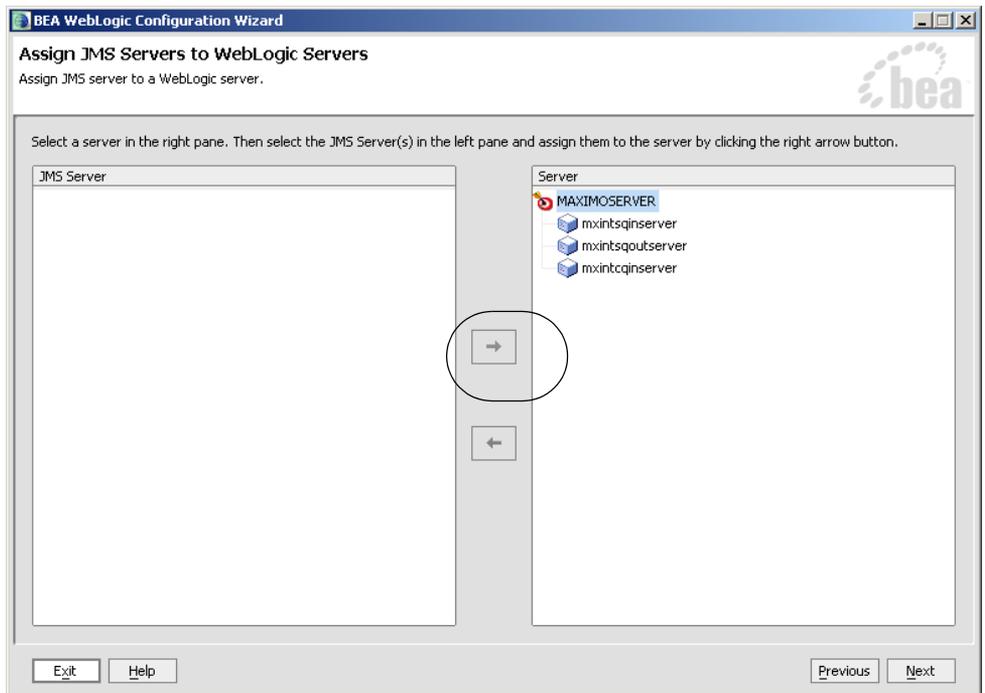


d Click **Next**

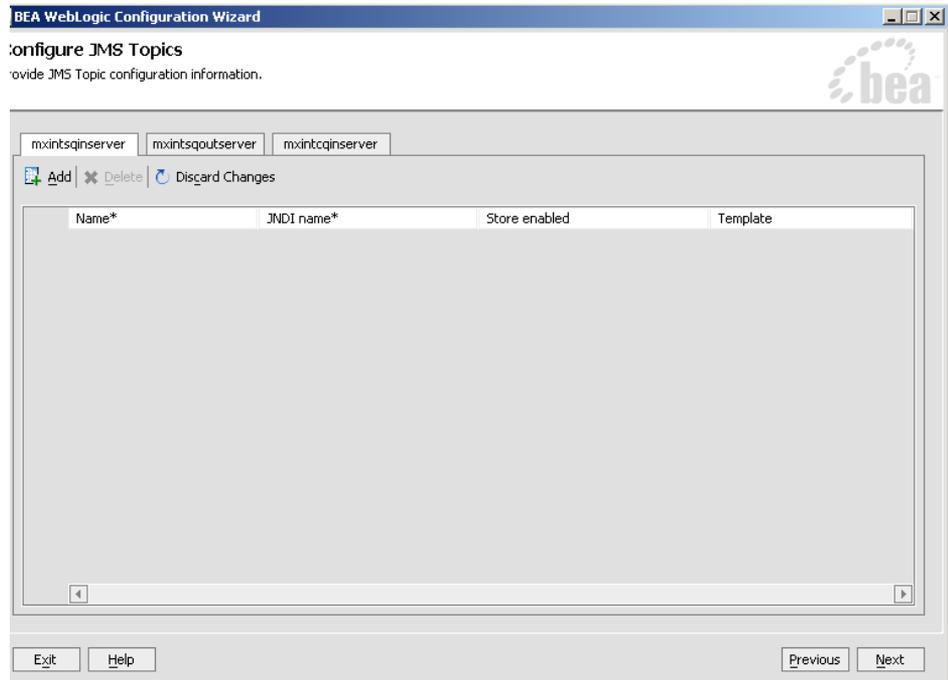
7 Select all JMS Servers.



8 Click the right arrow button to assign the JMS Servers to MAXIMOSERVER. Click Next.



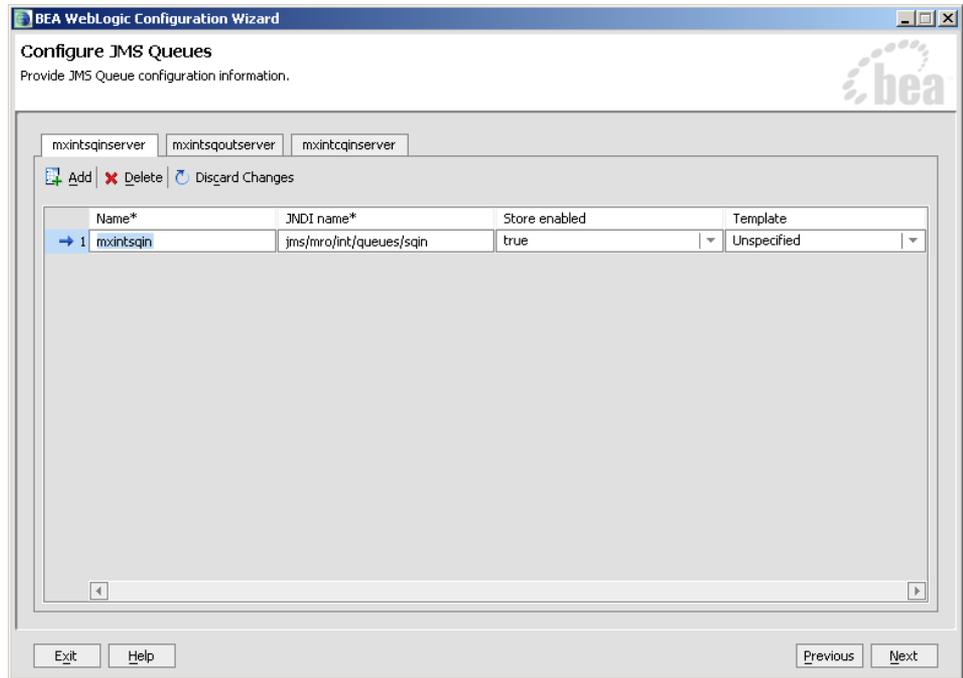
9 In the Configure JMS Topics window, click **Next**.



10 In the Configure JMS Queues window, you must configure all three JMS Servers.

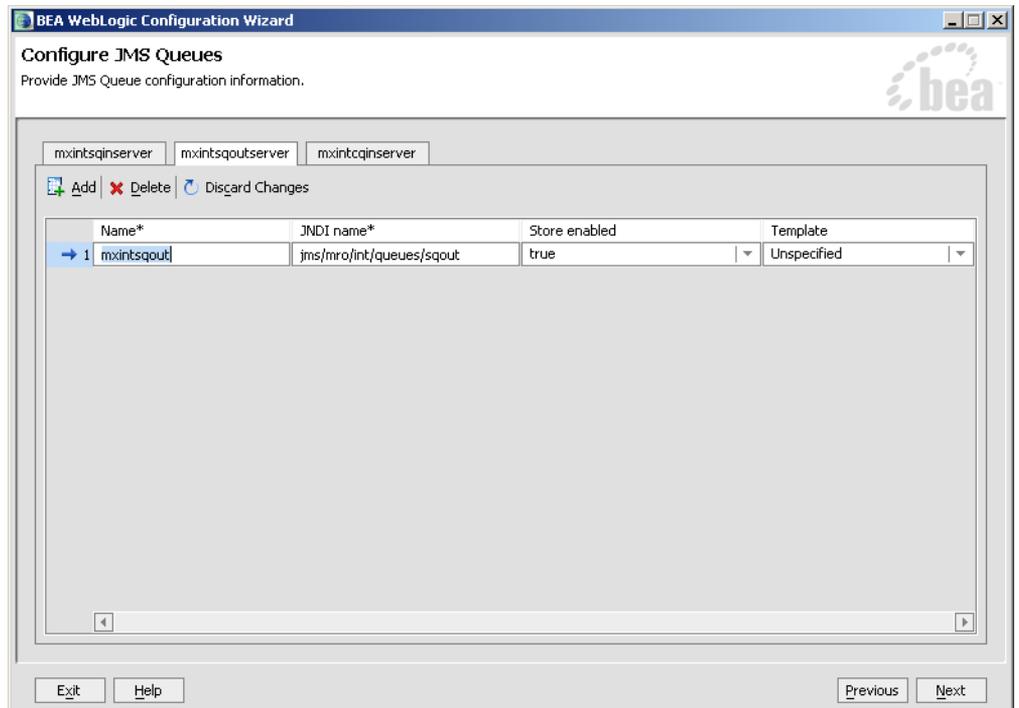
- a Select the **mxintsqinserver** tab (open by default) click **Add** and enter the following values:
 - ▼ Name: **mxintsqin**
 - ▼ JNDI name: **jms/mro/int/queues/sqin**
 - ▼ Store enabled: **true**

▼ Template: Unspecified (default).

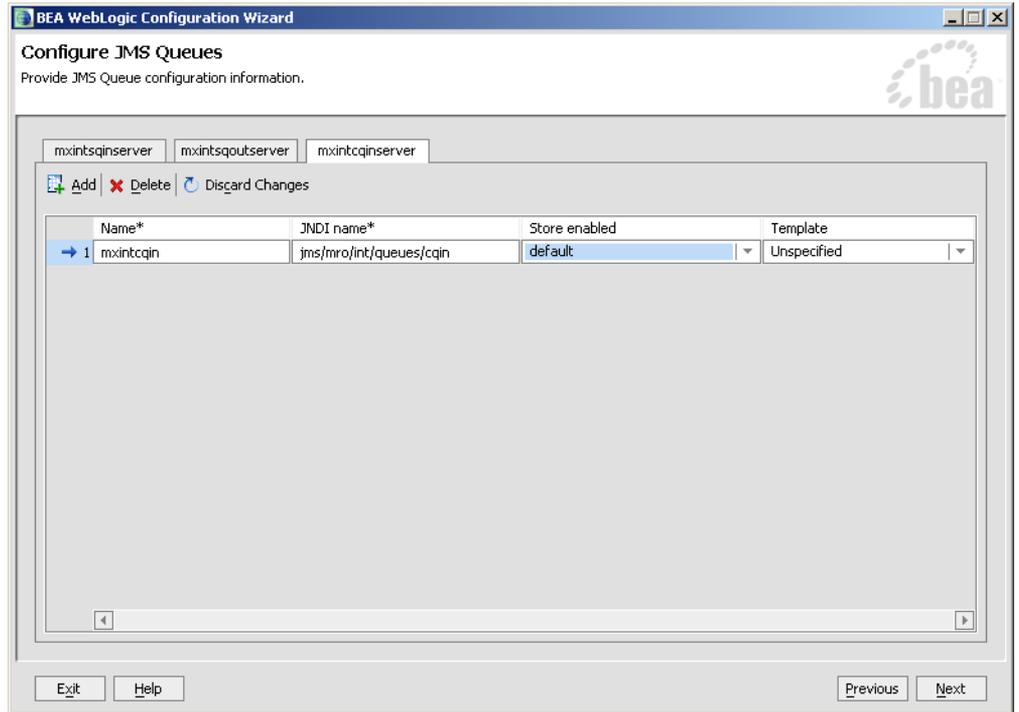


b Select the **mxintcsqoutserver** tab click **Add** and enter the following values:

- ▼ Name: **mxintcsqout**
- ▼ JNDI name: **jms/mro/int/queues/sqout**
- ▼ Store enabled: **true**
- ▼ Template: Unspecified (default)



- c Select the **mxintcqinserver** tab click **Add** and enter the following values:
 - ▼ Name: **mxintcqin**
 - ▼ JNDI name: **jms/mro/int/queues/cqin**
 - ▼ Store enabled: **default**
 - ▼ Template: Unspecified (default)

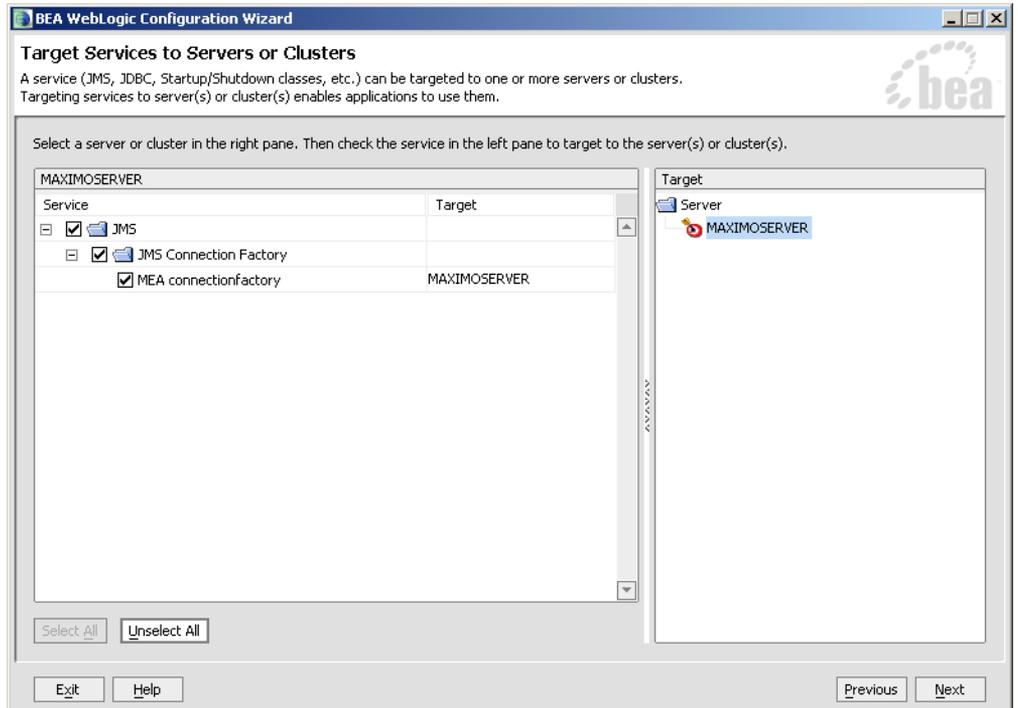


- d Click **Next**.

11 In the Applications and Services Targeting Options, select **Yes** and click **Next**.

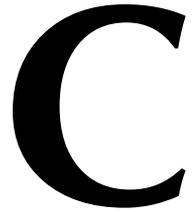


12 In the Target Services to Servers or Clusters check *all* services and select (highlight) the MAXIMOSERVER from the left pane. Click **Next**.



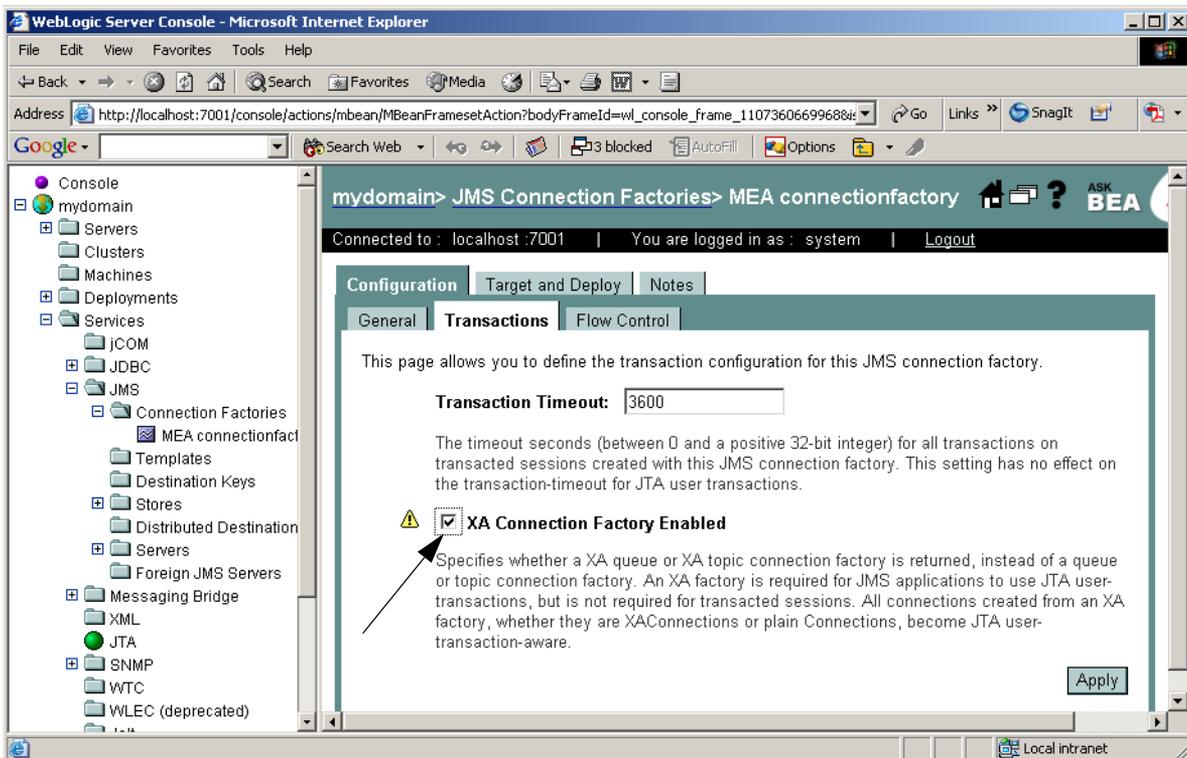
13 Refer back to Chapter 2 and continue with Step 9 on page 2-11.

Enabling JMS Connection Factory for Maximo Enterprise Adapter



Complete the steps outlined in this Appendix and return to Step 1 on page 8-1 to complete your BEA WebLogic installation and configuration.

- 1 After logging into the BEA WebLogic Console, expand the **Services** link in the left pane.
- 2 Click and expand the **JMS** link.
- 3 Click **Connection Factories**.
- 4 Click **MEA connectionfactory**.
- 5 Select the **Transactions** tab from the right pane.
- 6 Check the **XA Connection Factory Enabled** check-box and click **Apply**.



- 7 Close the browser.
- 8 Stop the MAXIMOSERVER application server from the command prompt by pressing **Ctrl + C**.

-
- 9 Refer back to “Deploying the EAR Files” on page 8-1, to restart the MAXIMOSERVER Application Server.

Adding Additional Maximo Keys

D

Ensure that Maximo is not running. At this time you must install the additional Maximo Keys program you received. The EAR files are built at this time. Complete the following steps.

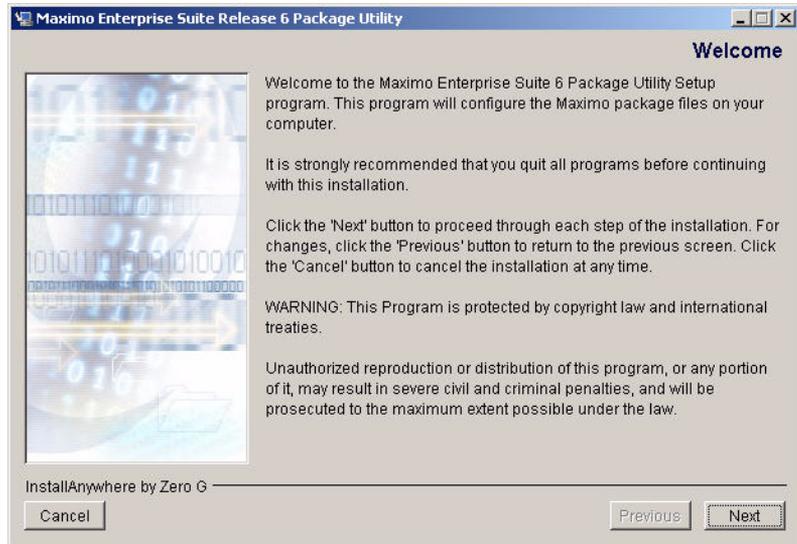
- 1 Insert the Maximo Keys CD-ROM into the CD drive.
- 2 From the root CD drive, double-click **setup.exe**.
- 3 Select the appropriate language from the drop-down list. If your language is not available from the list, select English; if it is Japanese or Chinese, see Note 2 below. Click **OK**.

NOTE 1 Selecting a language only changes the installation screens into that language but does not affect the underlying files that gets installed.

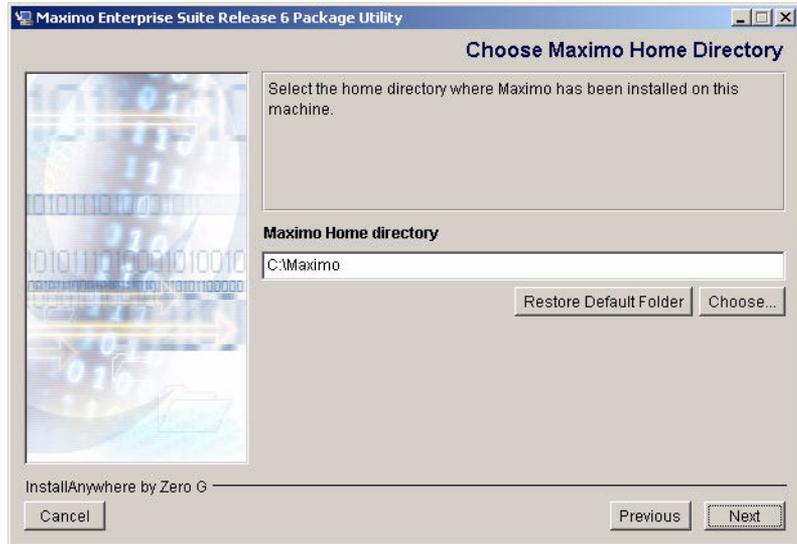
NOTE 2 The installation screens are translated into: Spanish, Portuguese, Japanese, and Simplified Chinese. In order to see Japanese or Chinese you must have those fonts installed on your system.



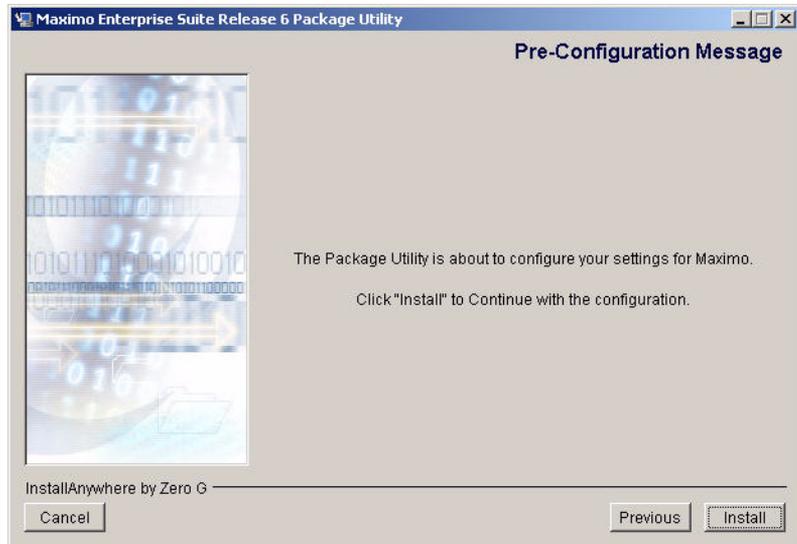
4 Click **Next** in the Welcome dialog box.



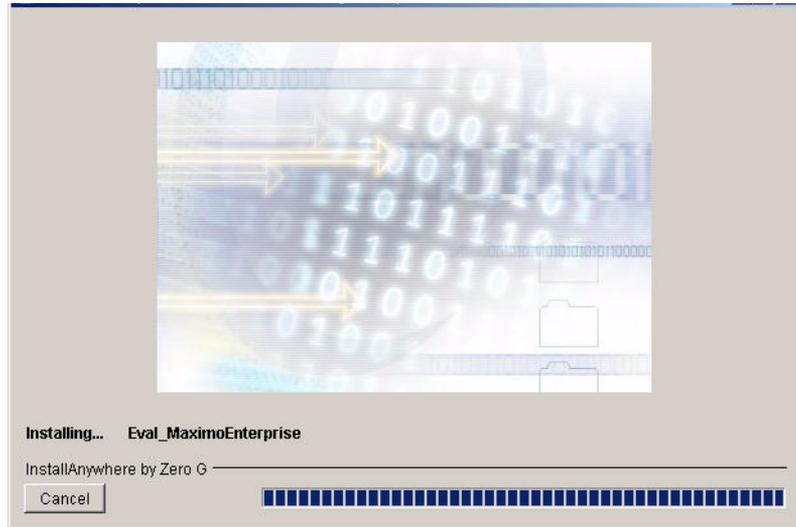
5 Verify that the default value (c:\Maximo) is the **Maximo** Home Directory and click **Next**.



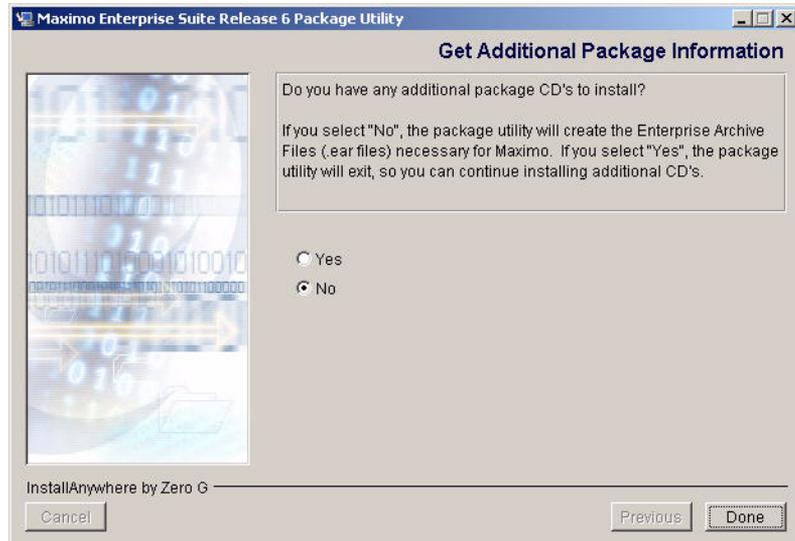
6 Click **Install** in the Pre-Configuration Message box.



Allow the installation progress bar to complete.



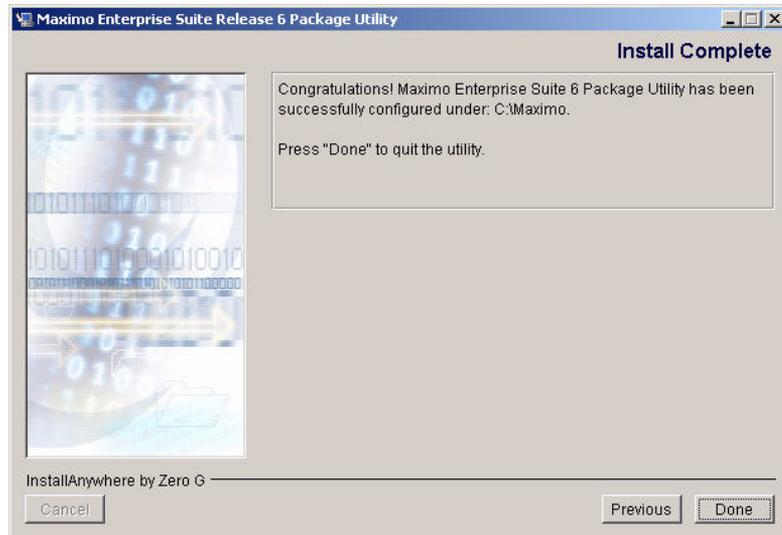
- 7 If you are installing additional Keys (Packages), select *Yes* and the program exits. You must now insert other Key CD-ROM(s) that you may have obtained, otherwise select *No* and click **Done**.



Three message boxes appear indicating that the EAR files are being built:



- 8 Click **Done** in the Install Complete dialog box.



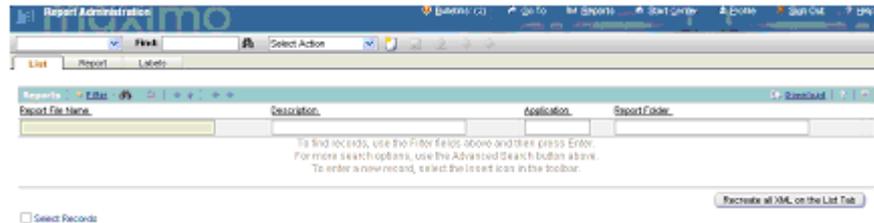
Each time that EAR files are re-built, MRO Software recommends, that you delete the temporary BEA files. Complete the following steps:

- 9 Navigate to `c:\bea\user_projects\domains\mydomain\MAXIMOSERVER` directory.
- 10 Delete all files and folders under this directory except for the Upload folder. *Do not* delete the upload folder.

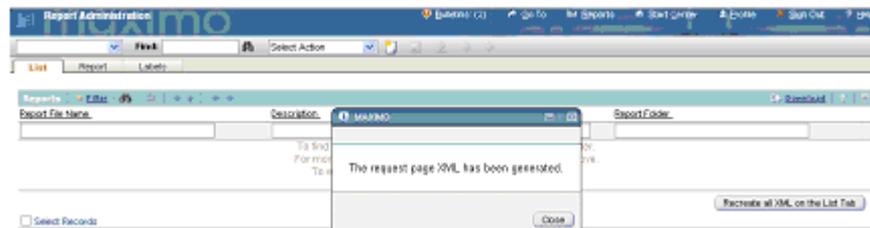
Enabling Reports to Run

As the Actuate Reports administrator, you must set up additional Actuate functionality to run Reports properly. Complete the following steps:

- 1 To enable reports to execute, sign into maximo as a user with Admin Privileges.
- 2 Select the **Report Administration Application**.
- 3 Click **Recreate all XML** on the List tab.



- 4 Wait until the message **The request page XML has been generated** displays.



You can now run Reports properly.

