Novell iManager

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About This Guide

This guide describes how to install Novell[®] iManager 2.6. It is intended for network administrators and includes the following sections:

- Chapter 1, "Installing iManager," on page 9
- Chapter 2, "Updating Role-Based Services," on page 29
- Chapter 3, "Accessing iManager," on page 31

Audience

This guide is intended for network administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most current version of the iManager 2.6 Installation guide, see the English version of the documentation at the iManager 2.6 Web site (http://www.novell.com/documentation/imanager26/ index.html).

Additional Documentation

- *iManager 2.6 Administrator Guide* (http://www.novell.com/documentation/imanager26)
- Apache HTTP server (http://httpd.apache.org)
- Tomcat servlet container (http://jakarta.apache.org/tomcat)
- Java* Web site (http://java.sun.com)
- Microsoft* Internet Information Services (http://www.microsoft.com/windowsserver2003/iis/ default.mspx)
- eDirectory[™] home page (http://www.novell.com/products/edirectory)
- eDirectory documentation (http://www.novell.com/documentation/edir88/index.html)
- Novell eDirectory Cool Solutions community (http://www.novell.com/coolsolutions/nds)
- Novell NetWare[®] documentation home page (http://www.novell.com/documentation/ netware.html).
- Novell Support (http://support.novell.com)

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In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux or UNIX, should use forward slashes as required by your software.

Installing iManager

Novell[®] iManager provides a global view of your network from one browser-based tool, allowing you to proactively assess and respond to changing network demands.

Using iManager, you can administer Novell eDirectory[™] and many Novell and third-party products, including Novell Open Enterprise Server, Identity Manager, Novell Audit, and BorderManager[®]. This centralized management system eliminates administrative redundancy and unnecessary overhead, saving you both time and money.

This section includes the following information:

- Section 1.1, "Server-Based and Client-Based Versions of iManager 2.6," on page 9
- Section 1.2, "Prerequisites," on page 11
- Section 1.3, "Self-Signed Certificates," on page 11
- Section 1.4, "Downloading and Installing Plug-ins During Installation," on page 12
- Section 1.5, "Installing a New Version of iManager," on page 12
- Section 1.6, "Silent Installation of iManager," on page 24

1.1 Server-Based and Client-Based Versions of iManager 2.6

The traditional server-based version of iManager 2.6, called simply iManager, is installed on a server that can access an eDirectory tree. The client-based version of iManager, called Mobile iManager, is installed on a client workstation rather than a server. Use the following guidelines to decide which version fits best in your environment, or whether your eDirectory management policies would benefit from installing both versions:

• If you have a single administrator who always manages eDirectory from the same client workstation, you can take advantage of Mobile iManager. Mobile iManager is fully self-contained and requires little setup. It automatically starts and stops the resources it needs when it loads or unloads. Mobile iManager installs and runs on various Linux or Windows client workstations, has no dependencies on server-based iManager, and it can coexist with any other versions of iManager installed on your network.

iManager plug-ins do not automatically synchronize between iManager instances. If you have multiple administrators and use customized plug-ins, Mobile iManager and these plug-ins must be installed on each administrator's client workstation.

• If you manage eDirectory from multiple client workstations, or have multiple administrators, install iManager Server so that it is available from any connected workstation. Additionally, customized plug-ins only need to be installed once per iManager Server.

1.1.1 Supported Platforms on iManager Server

iManager 2.6 supports the following server platforms:

Operating Systems

- NetWare[®] 6.5 SP3 or later
- Open Enterprise Server (NetWare)
- Windows
 - 2000 Server SP4
 - 2000 Advanced Server SP4
 - Server 2003 Standard
- Solaris* (SPARC* processors only)
 - Solaris 9
 - Solaris 10
- Linux
 - Red Hat* Advanced Server 3.0 32-bit Update 7 and 4.0 32-bit Update 2
 - SUSE[®] Linux Enterprise Server (SLES) 8
 - SLES 9 and 10 (both 32-bit and 64-bit)
 - Open Enterprise Server (Linux) SP1 or later
- HP-UX*
 - ◆ 11i

Application Servers

- Tomcat 4.1.30
- Tomcat 4.1.29 (for HP-UX only)

NOTE: Tomcat 5.0 and Java 1.5.*x* are not supported.

Web Servers

- Apache 2.0.49 for OES Linux
- Apache 2.0.52
- Internet Information Services (IIS) 5 and 6

Web Browsers

- IE 6 SP1 or later, or IE 7
- Firefox* 1.0.7, 1.5.*x*, or 2.*x*
- Mozilla* 1.7.6 or later

IMPORTANT: IE 7 and Firefox 2.*x* are officially supported only with iManager 2.6 SP3. However, there might still be plug-in specific issues related to these newer Web browser. For information about Web browser support for a specific product's iManager plug-in, please check that product's documentation.

Although you might be able to access iManager via a Web browser not listed, we do not guarantee full functionality.

iManager 2.6 does not support access through an iChain[®] server with a path-based multihoming accelerator, and with Remove Sub Path from URL enabled.

Directory Services

- eDirectory 8.7.3
- eDirectory 8.8

1.1.2 Supported Platforms on Mobile iManager

Mobile iManager supports the following desktop platforms:

Linux

- SUSE Linux Enterprise Desktop (SLED)
- SUSE Linux Professional 9.1, 9.2, 9.3
- Red Hat Enterprise Linux Work Station 3, 4
- Novell Linux Desktop (NLD) 9 SP3

Windows

- Windows XP Professional SP2
- Windows 2000 Professional SP4

1.2 Prerequisites

You must satisfy the following prerequisites in order to install and use either iManager or Mobile iManager. These prerequisites apply to all server platforms. Additional platform-specific prerequisites are listed by platform in Section 1.5, "Installing a New Version of iManager," on page 12.

- eDirectory Management: iManager 2.6 can manage any server running Novell eDirectory 8.6.2 or later.
- Admin-Equivalent Rights: You must have admin-equivalent rights for the creation of a Role-Based Services (RBS) collection in the eDirectory tree, and to run the iManager RBS Configuration Wizard.
- □ File System Rights: You must have root access for Linux, Solaris, and HP-UX servers; admin access for NetWare servers; or Administrator access for Windows servers.

1.3 Self-Signed Certificates

iManager includes a temporary, self-signed certificate that you use when installing iManager on any platform except NetWare. It has an expiration date of one year.

This is not intended to be a long-term implementation. It is a temporary solution to get your system up and running so you can use iManager securely immediately after installation. You must obtain a

valid certificate from a Certificate Authority and replace the temporary one as soon as possible. OpenSSL does not recommend using self-signed certificates except for testing purposes.

For more information about replacing iManager's self-signed certificate, see TID 3092268 (http://www.novell.com/support/

search.do?cmd=displayKC&docType=kc&externalId=3092268&sliceId=SAL_Public&dialogID=1 1700715&stateId=0%200%2011708111).

1.4 Downloading and Installing Plug-ins During Installation

During the iManager 2.6 install, a message appears displaying a URL that refers to an XML descriptor file of available plug-ins. The default location of the Novell descriptor file is (http://www.novell.com/products/consoles/imanager/iman mod desc.xml).

You can change this URL to a different location if your iManager install is having trouble reaching the default descriptor file URL. See "Plug-In Module Installation" in the *iManager 2.6 Administration Guide* for information on customizing iManager's plug-in download and install process.

For a clean install, the "typical" plug-ins are preselected. For an upgrade, only plug-ins that need to be updated are preselected. You can override the default selections and add new plug-ins to download but it is recommended that you do not deselect any plug-in that was preselected to be updated from a previous version of iManager.

1.5 Installing a New Version of iManager

Novell iManager 2.6 can be installed on the platforms listed below. In general, you should apply the latest Service Packs for your platform and meet the prerequisites listed in "Prerequisites" on page 10, before installing iManager.

- Section 1.5.1, "iManager Server on Linux," on page 12
- Section 1.5.2, "iManager Server on NetWare 6.5," on page 15
- Section 1.5.3, "iManager Server on Solaris," on page 17
- Section 1.5.4, "iManager Server on HP-UX," on page 18
- Section 1.5.5, "iManager Server on Windows," on page 20
- Section 1.5.6, "Mobile iManager on Linux Clients," on page 22
- Section 1.5.7, "Mobile iManager on Windows Clients," on page 23

Upgrades from iManager 2.0.*x* and 2.5 are supported by the installation program. When you run the iManager 2.6 installation program on a server that is running 2.0.*x* or 2.5, the existing directory structures are backed up to the *TOMCAT_HOME* directory. This assures the preservation of any custom content previously created.

1.5.1 iManager Server on Linux

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

In addition to the general prerequisites listed in Section 1.2, "Prerequisites," on page 11, the following prerequisites also apply to iManager on Linux:

- Required Linux Packages: If any of the following packages are not installed, you must obtain them from the vendor of your Linux distribution and install them before installing iManager. They should be on your installation CDs.
 - compat (SUSE)
 - compat-libstdc++-33 (Red Hat AS 4.0)
 - compat-libstdc++ 7.3 (Red Hat AS 3.0)
- Previous Versions of iManager: If you have installed iManager 1.5.x on the server, you must uninstall this version before proceeding to install iManager 2.6. If you have installed iManager 2.x, you do not need to uninstall it. The iManager 2.6 installation can overwrite the files. The uninstall process does not remove custom-created content. For more information, see Chapter 4, "Uninstalling iManager 2.6," on page 33.
- Deprocessor: Pentium* III 600MHz or higher processor
- Disk Space: 200 MB hard-disk space for a local installation
- □ Memory: 512 MB RAM (1024 MB recommended)
- □ Port Setup: Be aware of possible port conflicts. Tomcat is installed with the iManager installation program, which determines whether the default ports are in use. If they are in use, the install prompts you for different ports for Tomcat to run on. By default, Tomcat uses ports 8080, 8443, and 9009.

IMPORTANT: On Linux, iManager is supported only with the version of Tomcat that is installed with iManager. Apache is not installed.

iManager installs the following products during installation:

- Tomcat 4.1.30
- Sun* J2SDK 1.4.2.05
- Novell International Cryptographic Infrastructure (NICI) 2.6.8

Procedure

- 1 At the Novell download site (http://download.novell.com), search for iManager products, select iManager 2.6, then download iMan 26 linux.tgz to a directory on your server.
- **2** Use the following command to extract to the iManager folder:

```
tar -zxvf iMan_26_linux.tgz
```

3 Open a shell and change to the *extracted_directory*/iManager/installs/ linux directory.

This path is relative to the directory where you copied or extracted the iManager files.

4 Enter one of the following commands while logged in as root or root-equivalent.

For a console install, enter the following command:

```
./iManagerInstallLinux.bin
```

For a GUI install, enter the following command:

./iManagerInstallLinux.bin -i gui

After a successful install, the installer generates a configuration file (/var/log/ installer.properties) with values based upon the questions asked during the install. This file can then be modified and used for a silent install. See Section 1.6, "Silent Installation of iManager," on page 24.

- **5** On the opening iManager splash screen, select a language, then click *OK*.
- 6 Accept the license agreement and click OK.
- 7 To download and install plug-ins, click *Yes*, then select the plug-ins to install.
 - For a console install, enter a comma-separated list of the plug-in numbers to download.
 - For a GUI install, select the check boxes. Default selections are already made.

If desired, you can specify an alternative URL. For more information, see Section 1.4, "Downloading and Installing Plug-ins During Installation," on page 12. When using an alternative URL for downloading plug-ins, it is solely your responsibility to verify the URL contents, and verify that the plug-in is appropriate for your use.

If the message No plug-ins found or server not available appears in the plug-in download area, either or both of the following conditions exist: There are no updated plug-ins available on the Novell download site, or connecting to the Novell Descriptor File (http://www.novell.com/products/consoles/imanager/iman_mod_desc.xml) was not successful. Verify your Internet connection.

8 To install plug-ins from a local directory, click *Yes* and specify the directory path that contains the plug-in (.npm) files.

The default path is */extracted location/*iManager/installs/plug-ins, but you can specify any valid mount point here.

9 Click *Yes* to configure iManager with an existing Apache Web server. Click *No* to run iManager only through Tomcat.

The iManager 2.6 install on Linux no longer installs the Apache Web server. However, if you are upgrading from a previous version of iManager, you can use the Web server installed previously.

If you select *Yes*, iManager 2.6 is configured to use a previously installed Apache Web server, if one exists on your server. Type the directory path that contains the httpd.conf file for the Apache HTTP Server. This server must be configured for SSL communication before iManager can configure to it. If SSL communication is not configured on the Apache server, you can continue the install to configure iManager to run only through Apache Tomcat only, or you can stop the installation.

10 Specify the ports on which you want Tomcat to run.

The defaults are 8080 for HTTP and 8443 for HTTPS.

If you are configuring without an Apache HTTP server, you must run iManager 2.6 via the Tomcat ports. For example, https://server IP:8443/iManager.html.

11 Type the authorized user's full context and the tree he or she will manage, then click Next.

This information is not used to authenticate to eDirectory during installation and the information is not validated in any way. Make sure you use the syntax required by the iManager login page (see "Accessing iManager" on page 31.)

Providing an Authorized User at this time during the install is optional, but leaving these fields blank causes iManager to allow all users the ability to install plug-ins and make changes to iManager server settings (not recommended long-term.) Specify an authorized user post-install

from the *Configure* > *iManager Server* > *Configure iManager* > *Security* page in iManager. For more information, see "Authorized Users" in the *iManager 2.6 Administration Guide*.

- **12** Read the Preinstallation summary page, then click *Install*. Information on this page includes the following:
 - Plug-ins to be copied rom the local directory specified during the install.
 - Existing plug-ins that are currently installed with a previous version of iManager, for which there are no newer versions available on the Novell download site.
 - Plug-ins not currently installed with a previous verions of iManager, for which there are newer versions available on the Novell download site.

During installation, iManager files are installed, plug-ins are downloaded, and configuration changes occur. Installation can take several minutes.

After the installation completes, wait several seconds for the Getting Started page to appear. To access iManager, see Chapter 3, "Accessing iManager," on page 31.

If you have installed a previous version of iManager and created RBS or custom content, you need to update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

WARNING: When re-installing iManager on Linux, make sure to go through the uninstall routine (see "Uninstalling iManager 2.6" on page 33) before re-running the install routine. Running the install without first uninstalling the previous installation can cause the Tomcat configuration to become corrupt and be unable to start.

1.5.2 iManager Server on NetWare 6.5

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

In addition to the general prerequisites listed in Section 1.2, "Prerequisites," on page 11, the following prerequisites also apply to iManager on NetWare 6.5:

- Previous versions of iManager: If you installed a previous version of iManager, you do not need to uninstall it. The iManager installation can overwrite the files. The uninstall process does not remove custom-created content.
- Deprocessor: Pentium III 600 MHz or higher processor
- Disk Space: 200 MB hard disk space for a local installation
- □ Memory: 512 MB RAM required (1 GB recommended)

NOTE: The following Novell software products should not be installed on a server where you will be installing iManager:

- Novell Virtual Office 1.3 or prior
- exteNd Director[™] 4.1.1 or prior

Procedure

IMPORTANT: To install plug-ins from a local directory during the installation routine, copy the plug-in files (.npm) to the

extracted_install_directory\products\imanager\packages directory prior to running the iManager install on NetWare. Only one directory level is searched for .npm files. The installation program does not install plug-ins in subdirectories.

- 1 At the Novell download site (http://download.novell.com), search for iManager products, select iManager 2.6, then download and extract iMan_26_NW65_Standalone.zip to the SYS volume.
- 2 In the NetWare 6.5 GUI, click the *Novell* button, then click *Install* > *Add*.
- **3** Browse to the extracted location, select the product.ni file, then click *OK*.
- **4** Accept the license agreement and click *OK*.
- **5** Select the plug-ins to download and install.

If desired, you can type an alternative URL. For more information, see Section 1.4, "Downloading and Installing Plug-ins During Installation," on page 12. When using an alternative URL for downloading plug-ins, it is solely your responsibility to verify the URL contents, and verify that the plug-in is appropriate for your use.

If the message No plug-ins found or server not available appears in the plug-in download area, either or both of the following conditions exist: There are no updated plug-ins available on the Novell download site, or connecting to the Novell Descriptor File (http://www.novell.com/products/consoles/imanager/iman_mod_desc.xml) was not successful. Verify your Internet connection.

- **6** Read the Pre-installation summary page and click *Install*. Information on this page includes the following:
 - New plug-ins that were not installed with a previous version of iManager. These plug-ins are located in the

extracted_install_directory\products\imanager\packages
directory.

- Existing plug-ins that were installed with a previous version of iManager and that do not have a newer version of the plug-in available on the Novell download site.
- Updated plug-ins that were installed with a previous version of iManager and that do have newer version of the plug-in available on the Novell download site.
- New download plug-ins that were not installed with a previous version of iManager and are not contained in the *extracted_install_directory*products\imanager\packages directory.

During installation, iManager files are installed, plug-ins are downloaded, and configuration changes occur. Installation can take several minutes.

After the installation completes, wait several seconds for iManager to initialize before you access iManager. See Chapter 3, "Accessing iManager," on page 31.

If your server has previous versions of iManager installed and you created RBS or custom content, you must update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

1.5.3 iManager Server on Solaris

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

In addition to the general prerequisites listed in Section 1.2, "Prerequisites," on page 11, the following prerequisites also apply to iManager on Solaris:

- □ Solaris Patch: Install Solaris Patch 112438, if it is not already installed.
- Required Solaris Libraries: Solaris GUI libraries must be installed. The iManager installer for Solaris requires Solaris GUI libraries to function. It does not support command line or headless installation.

WARNING: Do not use the -i console (non-GUI) install option to install iManager 2.6 on Solaris. The only installation method supported for Solaris is a graphical (GUI) install. However, this does not preclude using a Silent Installation of iManager as long as the GUI libraries are installed.

- Previous versions of iManager: If you have installed iManager 1.5.x on the server, you must uninstall this version before proceeding to install iManager 2.6. If you have installed iManager 2.5 or 2.6, you do not need to uninstall it; the iManager 2.6 installation can overwrite the files. The uninstall process does not remove custom-created content. For more information, see Chapter 4, "Uninstalling iManager 2.6," on page 33.
- Port Setup: Be aware of possible port conflicts. Apache, Tomcat, and the JVM* (as part of the Sun JRE), are installed with the iManager installation program. The iManager installation program checks to see if ports 80 and 443 are in use. (For example, eDirectory uses port 80 by default with its HTTP stack.) If they are in use, the install automatically assigns alternative ports and allows you to change them.
- Disk Space: 400 MB minimum
- □ Memory: Minimum 512 MB RAM (1024 MB recommended)

iManager installs the following products during installation:

- Tomcat 4.1.30
- Apache 2.0.52
- Sun JRE 1.4.2.06
- Novell International Cryptographic Infrastructure (NICI) 2.6.8

Procedure

- 1 At the Novell download site (http://download.novell.com), search for iManager products, select iManager 2.6, then download iMan_26_sol.tzg.
- 2 Extract iMan_26_sol.tzg using the following command: gzip -dc iMan_26_sol.tgz | tar xvf -
- **3** Open a shell and go to *your_install_directory*/installs/unix directory. This path is relative to the directory where you copied or extracted the iManager files.
- **4** Enter the following command:

```
./iManagerInstallSolaris.bin
```

- **5** On the opening iManager 2.6 splash screen, select a language, then click *OK*.
- 6 On the introduction page, click OK.
- 7 Accept the license agreement, then click OK.
- 8 Read the Detection Summary page, then click Next.

The Detection Summary page lists what is installed and what is about to be installed. If necessary, you can add to the list of installed software in case the installer does not detect everything that is loaded.

9 Select the plug-ins to download and install, then click Next.

If desired, you can specify an alternative URL. For more information, see Section 1.4, "Downloading and Installing Plug-ins During Installation," on page 12. When using an alternative URL for downloading plug-ins, it is solely your responsibility to verify the URL contents, and verify that the plug-in is appropriate for your use.

If the message No plug-ins found or server not available appears in the plug-in download area, either or both of the following conditions exist: There are no updated plug-ins available on the Novell download site, or connecting to the Novell Descriptor File (http://www.novell.com/products/consoles/imanager/iman_mod_desc.xml) was not successful. Verify your Internet connection.

10 To install plug-ins from a local directory, browse to and select the desired plug-ins (.npm), then click *Next*.

This lets you to install previously downloaded or custom plug-ins during the installation.

11 On the Authorized User Information page, type the authorized user's full context and the tree he or she will manage, then click *Next*.

This information is not used to authenticate to eDirectory during installation and the information is not validated in any way. Make sure you use the syntax required by the iManager login page (see "Accessing iManager" on page 31.)

Providing an Authorized User at this time during the install is optional, but leaving these fields blank causes iManager to allow all users the ability to install plug-ins and make changes to iManager server settings (not recommended long-term.) Specify an authorized user post-install from the *Configure* > *iManager* Server > *Configure* iManager > Security page in iManager. For more information, see "Authorized Users" in the *iManager* 2.6 Administration Guide.

12 Read the Preinstallation summary page that gives the summation of what will occur during the installation, then click *Install*.

During installation, iManager files are installed, plug-ins are downloaded, and configuration changes occur. Installation can take several minutes.

After the installation completes, you might need to wait several seconds for iManager to initialize before you can access iManager. To access iManager after the install completes, see Chapter 3, "Accessing iManager," on page 31.

If you have installed a previous version of iManager and created RBS or custom content, you need to update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

1.5.4 iManager Server on HP-UX

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

In addition to the general prerequisites listed in Section 1.2, "Prerequisites," on page 11, the following prerequisites also apply to iManager on HP-UX:

- □ **Required Patches:** Confirm that HP-UX is updated with patch PHSS_26560. You can download this patch from the HP IT Resource Center Web site (http://www.itrc.hp.com).
- □ Required HP-UX Packages: The following HP-UX packages must be installed before installing iManager on HP-UX. If necessary, you can locate these packages with an Internet search.
 - gettext-0.12
 - libiconv-1.9
 - Java 2 SDK for HP-UX version 1.4.1.x as a minimum (1.4.2.x is recommended)

NOTE: Novell has tested iManager 2.6 only with the package versions noted here. Newer versions of these packages might or might not function properly with iManger 2.6.

- Previous versions of iManager: If you have installed a previous version of iManager, you do not need to uninstall it. The iManager 2.6 installation can overwrite the files. The uninstall process does not remove custom-created content.
- □ **Processor:** PA-RISC 2.0 processor
- □ **Disk Space:** 400 MB of disk space. Make sure there is at least 50 MB free space on the HP-UX root partition so that the installer functions properly. Otherwise, the iManager installation might fail.

Procedure

1 Install the HP-UX Web Server Suite version 2.11 from the HP Software Depot Web site (http:// www.software.hp.com/cgi-bin/swdepot_parser.cgi/cgi/ displayProductInfo.pl?productNumber=HPUXWSSUITE).

The suite contains the official versions of Apache and Tomcat that are supported for HP-UX.

- **2** Select the download with all components:
 - HP-UX Apache-based Web Server
 - HP-UX Tomcat-based Servlet Engine
 - HP-UX Webmin-based Admin
- **3** Install Java 1.4.2_04 1.4.2_08 from the HP Java for HP-UX Web site (http://www.hp.com/go/java), and update Java class path to find this version of Java.
- 4 Add the JAVA_HOME environment variable to Tomcat's /opt/hpws/tomcat/bin/ setenv.sh. For example: JAVA_HOME=/opt/java
- 5 Install a new certificate for Apache and then copy it to /opt/hpws/apache/conf/ ssl.crt/ and /opt/hpws/apache/conf/ssl.key/.

The certificate that is installed with Apache on HP-UX does not have the correct information for your server. You can install a self-signed certificate or a certificate that you purchase from a trusted authority. The Webmin administration tool can generate keys, certificates, and certificate requests for Apache. Webmin is installed with the HP-UX Web Server Suite. For more information, see the HP-UX Web Server Suite documentation, which is accessible from your HP-UX Apache installation (http://ip_address). Specific information on using Webmin to generate keys, certificates, and certificate requests is at http://ip_address/hp_docs/faq/ #security11.

IMPORTANT: Make sure you use the correct DNS name or IP address for the common name when you create a new certificate.

- 6 At the Novell download Web site (http://download.novell.com), search for iManager products, select iManager 2.6, and then download iMan_26_hp.tgz to a directory on the HP-UX server.
- 7 Extract the iMan_26_hp.tgz file. For example: gzip -dc iMan_26_hp.tgz | tar xvf -
- **8** Log out or close the terminal session to load your PATH settings.
- **9** Use one of the following commands to install iManager at the location to which you extracted the install files:

For a regular install, enter one of the following commands:

```
./iManagerInstallHPUX.bin
```

or

sh iManagerInstallHPUX.bin

For a text-only install, enter the following command:

```
./iManagerInstallHPUX.bin -i console
```

IMPORTANT: The iManager installer detects the HP-UX Web Server Suite. Do not change the install path for iManager.

During installation, iManager files are installed, plug-ins are downloaded, and configuration changes occur. Installation can take several minutes.

After the installation completes, you might need to wait several seconds for iManager to initialize before you can access iManager. To access iManager after the install completes, see Chapter 3, "Accessing iManager," on page 31.

If you have installed a previous version of iManager and created RBS or custom content, you need to update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

1.5.5 iManager Server on Windows

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

In addition to the general prerequisites listed in Section 1.2, "Prerequisites," on page 11, the following prerequisites also apply to iManager on Windows:

- □ **Previous versions of iManager:** Previous versions do not need to be uninstalled. If iManager 2.6 detects version 1.5.*x*, it uninstalls it before proceeding. If iManager detects version 2.0.*x*, it overwrites the files. The uninstall process does not remove custom-created content.
- □ Web Services: Windows servers can use either Apache and Tomcat, or Windows Internet Information Services (IIS) and Tomcat. The iManager installation program determines which

Web services are already installed. If the Windows server is using IIS and you want to use Apache and Tomcat, you must remove IIS before installing Apache and Tomcat with the iManager installation program. The iManager installation program does not configure IIS to use SSL.

- Deprocessor: Pentium III 600 MHz or higher processor
- Disk Space: 500 MB minimum for a local installation
- □ Memory: 512 MB of RAM (1024 MB recommended)

iManager can install the following products during installation:

- Tomcat 4.1.30
- Apache 2.0.52
- Sun JRE 1.4.2.06
- Novell International Cryptographic Infrastructure (NICI) 2.6.8

Procedure

For information about running iManager Server on the same machine as Novell eDirectory, see "Running eDirectory and iManager on the Same Machine (Windows only)" in the *iManager 2.6* Administration Guide.

- 1 At the Novell download site (http://download.novell.com), search for iManager products, select iManager 2.6, then download it to a destination directory on your server.
- 2 Extract the file into the iManager folder.
- **3** Log in with Administrator privileges to install iManager.
- 4 Find and run

destination_directory\iManager\installs\win\iManagerInstall.exe

You can view the debug output of the installation program by holding down the Ctrl key immediately after launching the installer. Continue to hold down the key until a console window appears. For more information on debugging, see "Troubleshooting" in the *iManager* 2.6 Administration Guide.

- **5** On the opening iManager splash screen, select a language and click *OK*.
- 6 On the introduction page, click OK.
- 7 Accept the license agreement, then click OK.
- 8 Read the Detection Summary page, then click OK.

The Detection Summary pages tells what is installed and what is about to be installed. If necessary, you can add to the list of installed software in case the installer does not detect everything that is loaded.

9 Select the plug-ins to download and install, then click Next.

If desired, you can type an alternative URL. For more information, see Section 1.4, "Downloading and Installing Plug-ins During Installation," on page 12. When using an alternative URL for downloading plug-ins, it is solely your responsibility to verify the URL contents, and verify that the plug-in is appropriate for your use.

If the message No plug-ins found or server not available appears in the plug-in download area, either or both of the following conditions exist: There are no updated plug-ins available on the Novell download site, or connecting to the Novell Descriptor File

(http://www.novell.com/products/consoles/imanager/iman_mod_desc.xml) was not successful. Verify your Internet connection.

10 To install plug-ins from a local directory, browse to and select the desired plug-ins (.npm), then click *Next*.

This lets you to install previously downloaded or custom plug-ins during the installation.

11 On the Authorized User Information page, type the authorized user's full context and the tree he or she will manage, then click *Next*.

This information is not used to authenticate to eDirectory during installation and the information is not validated in any way. Make sure you use the syntax required by the iManager login page (see "Accessing iManager" on page 31.)

Providing an Authorized User at this time during the install is optional, but leaving these fields blank causes iManager to allow all users the ability to install plug-ins and make changes to iManager server settings (not recommended long-term.) Specify an authorized user post-install from the *Configure > iManager Server > Configure iManager > Security* page in iManager. For more information, see "Authorized Users" in the *iManager 2.6 Administration Guide*.

12 Read the Pre-installation summary page, then click *Install*.

During installation, iManager files are installed, plug-ins are downloaded, and configuration changes occur. Installation can take several minutes.

After the installation completes, a browser window appears displaying the Gettting Started page. Wait for iManager to initialize before attempting access.

To access iManager, click the first link on the Getting Started page, then log in. For more information, see Chapter 3, "Accessing iManager," on page 31.

IMPORTANT: If you are using IIS and if you have multiple Web sites running on the server, see the Page Not Found Error for additional information.

If you have installed a previous version of iManager and created RBS or custom content, you need to update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

1.5.6 Mobile iManager on Linux Clients

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

In addition to the general prerequisites listed in Section 1.2, "Prerequisites," on page 11, the following prerequisites also apply to iManager Workstation on Linux Clients:

- Required Linux Packages: If any of the following packages are not installed, you must obtain them from the vendor of your Linux distribution and install them before installing iManager. They should be on your installation CDs.
 - GTK2
 - GLIBC 2.3
- □ Processor: Pentium III 600 MHz or higher processor
- **Disk Space:** 200 MB minimum
- □ Memory Requirements: 256 MB RAM (512 MB recommended)

IMPORTANT: Do not run Mobile iManager from a path that contains spaces.

iManager includes or installs the following products:

- Tomcat 4.1.30
- Sun J2SDK 1.4.2.05
- Novell International Cryptographic Infrastructure (NICI) 2.6.8

Procedure

- 1 At the Novell download site (http://download.novell.com), search for iManager products, select iManager 2.6, then download iMan_26_Mobile_iManager_linux.tar.bz2 to a directory on your server.
- **2** Extract the file using the following command:

```
tar -xjvf iMan 26 Mobile iManager linux.tar.bz2
```

3 Install the Novell International Cryptography Infrastructure (NICI) software located in the NICI/Linux directory of the expanded iMan_26_Mobile_iManager_linux.tar directory. To do this, execute the following command from the NICI directory: rpm -Uvh nici.i386.rpm

You must be logged in as root to install or upgrade NICI.

On desktops where NICI is not installed, this command installs NICI. On desktops where NICI is already installed, this command upgrades NICI.

4 Go to the imanager/bin directory.

cd ./imanager/bin

- **5** Execute the startup script.
 - ./iManager.sh
- 6 When the iManager login screen appears, specify a username, password, and eDirectory tree.

To access iManager, see Chapter 3, "Accessing iManager," on page 31.

If you have installed a previous version of iManager and created RBS or custom content, you need to update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

1.5.7 Mobile iManager on Windows Clients

To prepare for the installation, review the following checklist of prerequisites.

Prerequisites

- ❑ Additional Configuration: If you configure Internet Explorer to use a proxy server for your LAN, then you must also select the *Tools* > *Internet Options* > *Connections* > *LAN Settings* > *Bypass Proxy Server for Local Addresses* option.
- Deprecessor: Pentium III 600 MHz or higher processor
- Disk Space: 200 MB minimum
- □ Memory: 256 MB of RAM (512 MB recommended)
- Do not run Mobile iManager from a path with spaces in it.

- □ If you are running a Novell Client[™] earlier than version 4.91, make sure that the NMAS[™] client is already installed on the workstation before launching Mobile iManager.
- Installing Mobile iManager to C:\temp is not supported. If you do this, the plug-ins won't install. Install Mobile iManager in C:\temp or some other permanent directory, rather than c:\temp\imanager.
- □ The first time you run Mobile iManager on a Windows workstation, you must do so as a user that is a member of the workstation's Administrators group.

iManager includes or installs the following products:

- Tomcat 4.1.30
- Sun JRE 1.4.2.06
- Novell International Cryptographic Infrastructure (NICI) 2.6.8

Procedure

- 1 At the Novell download site (http://download.novell.com), search for iManager products, select iManager 2.6, then download iMan 26 Mobile iManager win.zip.
- 2 Using any ZIP program, extract the iMan_26_Mobile_iManager_win.zip file to a folder close to the system root with no more than 15 characters in the pathname.
- **3** Browse to the imanager\bin folder.
- 4 To execute the script, double-click the iManager.bat file.
- **5** When the iManager login page appears, enter your username, password, and tree.

To access iManager, see Chapter 3, "Accessing iManager," on page 31.

If you have installed a previous version of iManager and created RBS or custom content, you must update the modules. See Chapter 2, "Updating Role-Based Services," on page 29.

1.6 Silent Installation of iManager

iManager provides a silent (non-interactive) installation option that doesn't display a user interface and poses no questions to the user. In place of user input, InstallAnywhere* uses information from a predefined properties file.

NetWare does not support a silent install.

Solaris GUI libraries must be installed for iManager's silent install option as well as its normal installation option. The iManager installer for Solaris does not support command line (text-based) or headless installation.

There are two silent installation options:

- Section 1.6.1, "Standard Silent Install," on page 25
- Section 1.6.2, "Customized Silent Install," on page 25

1.6.1 Standard Silent Install

To perform a standard silent install on Linux, Windows, Solaris, or HP-UX, accepting all default values:

- **1** Open a console window and go to the directory containing the iManager file you downloaded.
- **2** On the command line, enter the following for Linux, Solaris, or HP-UX:

```
./iManagerInstall<platform>.bin -i silent
```

```
or enter the following for Windows:
```

```
iManagerInstall.exe -i silent
```

1.6.2 Customized Silent Install

The customized silent install uses an installer.properties file to provide the desired installation options to the install program. An installer.properties file can include the following entries:

CONFIGIMAN_DIRECTORY= (Optional) Specifies a directory tree in which the authorized user object is located. The CONFIGIMAN_USER_CONTEXT entry specifies the authorized user object.

CONFIGIMAN_USER_CONTEXT= (Optional) Specifies an authorized user for iManager. The authorized user can manage the iManager environment, including installing plug-ins and changing iManager server settings. If you leave this entry blank, all users can perform these authorized user activities. For more information, see "Authorized Users" in the *iManager 2.6 Administration Guide*.

TOMCAT_HTTP= Specifies the Tomcat HTTP port for use by iManager. The default value is 8080.

TOMCAT_SSL= Specifies the Tomcat HTTPS port for use by iManager. The default value is 8443.

TOMCAT_JK= Specifies the MOD_JK connector port Apache uses to send requests to Tomcat. The default value is 9009.

APACHE_CONF_DIR= (Optional) Specifies the path to an existing Apache httpd.conf file. Use this entry when installing iManager into an existing Apache environment.

PLUGIN_INSTALL_MODE= Specifies the plug-in installation mode. Options include the following:

- (Default) NET: Specifies that plug-ins are installed from the network.
- DISK: Specifies that plug-ins are installed from a local disk.
- BOTH: Specifies that plug-ins are installed from both disk and network.
- SKIP: Specifies that plug-ins are not installed.

PLUGIN_DIRECTORY= (Conditional) Specifies the directory from which plug-ins are installed when PLUGIN_INSTALL_MODE is set to DISK or BOTH. All plug-ins in this directory are installed as part of the installation routine.

PLUGIN_INSTALL_URL= (Conditional) Specifies the URL from which to download plug-ins when PLUGIN_INSTALL_MODE is set to NET or BOTH. Leave this entry blank to use the default URL, which is http://www.novell.com/products/consoles/imanager/iman_mod_desc.xml.

LAUNCH_BROWSER= Specifies whether the install should launch a Web browser at the end of the installation routine and display iManager's Getting Started page. The default value is TRUE.

PLUGIN_MODULE_ID_x= (Conditional) Specifies the ID of a plug-in module to install as part of the installation routine when PLUGIN_INSTALL_MODE is set to NET or BOTH. The ID is listed in the \META-INF\MANIFEST.MF file, located in the NPM's folder.

The value of x in PLUGIN_MODULE_ID_x should be incremented for each unique plug-in entry specified in installer.properties. If no modules are specified, the most commonly installed modules, tagged as typical in the iman_mod_desc.xml files on the download Web site, are installed.

PLUGIN_VERSION= (Conditional) Specifies the version of the plug-in specified in PLUGIN_MODULE_ID, to install as part of the installation routine. This entry is only used when PLUGIN_INSTALL_MODE is set to NET or BOTH.

The version is listed in the \META-INF\MANIFEST.MF file, located in the NPM's folder. If no version is defined for a module, then any module that matches the NPM name is installed.

To perform a customized silent install on Linux, Windows, Solaris, or HP-UX, which provides more control over which modules are installed:

1 Create an installer.properties file in, or copy an existing file to, the same directory that contains the installer executable file.

The installer properties file should look something like the following: CONFIGIMAN DIRECTORY= CONFIGIMAN USER CONTEXT= TOMCAT HTTP=8080 TOMCAT SSL=8443 TOMCAT JK=9009 APACHE CONF DIR= PLUGIN INSTALL MODE=NET PLUGIN DIRECTORY= PLUGIN INSTALL URL=http://www.novell.com/products/consoles/ imanager/iman mod desc.xml LAUNCH BROWSER=TRUE PLUGIN MODULE ID 2=pwdpolicy PLUGIN VERSION 2=10.1.20060705 PLUGIN_MODULE_ID_3=LDAPConfiguration PLUGIN VERSION 3=2.5.20061108 PLUGIN MODULE ID 5=eDirExtended PLUGIN VERSION 5=2.6.20061128 PLUGIN MODULE ID 6=eDirectoryRepairAndLogfile PLUGIN VERSION 6=2.5.20061103 PLUGIN MODULE ID 7=eDirectoryMerge PLUGIN VERSION 7=2.5.20061103 PLUGIN MODULE ID 12=eDirectoryBackupAndRestore PLUGIN VERSION 12=2.5.20050908

2 Launch the silent install with the following command:

./iManagerInstallplatform.bin -i silent -f
pathto_properties_file

Updating Role-Based Services

If you currently have a version of NovellTM iManager installed on a server, you need to either upgrade or migrate to iManager 2.6, depending on whether you are running iManager 2.0.x or 1.5.x. This section explains the following procedures:

- Section 2.1, "Migrating Role-Based Services," on page 29
- Section 2.2, "Updating from iManager 2.x," on page 30

2.1 Migrating Role-Based Services

Making the move from iManager 1.5.x is more accurately described as a migration than an update. You must migrate Role-Based Services (RBS) objects and tasks.

After you install iManager 2.6 on your server or Mobile iManager (see Chapter 1, "Installing iManager," on page 9), the RBS objects in your eDirectory[™] tree must be migrated to the iManager 2.6 format. Do this by using the new RBS Configuration task in iManager 2.6.

To access the migration task:

- 1 Create a 2.6 collection so that you can migrate the 1.5.x collections to it. For more information, see in the *iManager 2.6 Administration Guide*.
- 2 In the iManager Configure view, click *Role Based Services* > *RBS Configuration*.

If no collections are listed on the 2.x Collections tabbed page, click *New* > *Collection and Setup*, then follow the online instructions.

3 Click the *1.x Collections* tab.

The 1.x Collections page displays all of your 1.5.x collections that can be migrated to 2.6.

- 4 Select the collection you want to migrate, then click *Migrate* at the top of the table.
- **5** Select the 2.*x* collection you want to migrate to, then click *Start*.

After the migration is complete, the 1.*x* collection is still intact in your eDirectory tree. If you have no further use for it, you can delete it from within iManager 2.6.

6 (Optional) To delete a 1.x collection, click the *1.x Collections* tab, select the collection you want to delete, then click *Delete* at the top of the table.

The RBS migration wizard does not migrate custom tasks created in iManager 1.x to version 2.6 tasks. You have two options for moving your 1.5.x custom tasks into iManager 2.6:

- You can re-create them by using the Plug-in Studio in iManager 2.6. In the Configure view, click *Role Based Services > Plug-in Studio > New*.
- You can use the Custom Task Migration utility to migrate your 1.5.x tasks to 2.6 tasks.

The Custom Task Migration utility can be downloaded from the Novell Support Web site (http://support.novell.com/cgi-bin/search/searchtid.cgi?/2969968.htm). A Readme file inside the download explains how to use it. If you have no custom tasks or content, you do not need to run the Custom Task Migration utility.

2.2 Updating from iManager 2.x

The first time you use iManager 2.6 to log in to an eDirectory tree that already contains an RBS collection, it is possible that not all of the roles and tasks are displayed. This is working as expected because some of the plug-ins require updates so that iManager 2.6 can fully utilize them. The RBS Configuration task lists which RBS modules are out of date. We recommend that you update your RBS modules to the latest version so that you can see and use all of the installed modules on iManager 2.0.2, 2.5, and 2.6.

Be aware that you might have multiple roles with the same name. When they updated their plug-ins for iManager 2.5, some plug-in developers changed task IDs or module names but retained the same display names, thus causing the roles to appear to be duplicated when, in fact, one instance is from one version and the other is from a newer version.

NOTE: Because different installations of iManager might have a different number of plug-ins locally installed, you might see discrepancies in the module report for any given collection from *Role Based Services* > *RBS Configuration*. In order for the numbers to match between iManager installations, make sure that the same subset of plug-ins is installed on each iManager instance in the tree.

To check whether you have outdated RBS objects:

1 Select the Configure view, then click *Role Based Services* > *RBS Configuration* task.

The table on the 2.x Collections tabbed page displays any out-of-date modules.

2 To update them, select the number in the *Out-Of-Date* column for the Collection you want to update.

The list of outdated modules is displayed.

3 Select the module you want to update, then click *Update* at the top of the table.

NOTE: When updating to iManager 2.6, or re-installing iManager 2.6, existing plug-ins are not updated automatically. To update plug-ins manually, launch iManager and browse to *Configure* > *Plug-in Installation* > *Available Novell Plug-in Modules*. For more information, see "Plug-In Module Installation" in the *iManager 2.6 Administration Guide*.

Accessing iManager

Novell[®] iManager is accessed via a Web browser. This section includes the following procedures:

- Section 3.1, "Accessing iManager," on page 31
- Section 3.2, "Starting Mobile iManager on a Linux Client," on page 31
- Section 3.3, "Creating a Mobile iManager Desktop Launcher on a Linux Client," on page 31
- Section 3.4, "Starting Mobile iManager on the Windows Client," on page 32

3.1 Accessing iManager

1 In a supported Web browser, enter the following in the Address (URL) field: http://server IP address/iManager.html

For example: http://127.0.0.1/iManager.html

You might be redirected to an HTTPS secure page.

IMPORTANT: URLs are case sensitive.

If iManager is not running on standard ports, specify the port it is running on. For example, if you are using Linux without Apache, the URL is http://server_IP_:port/imanager.html or https://server_IP_:port/iManager.html.

2 Log in using your username, password, and eDirectory[™] tree name.

Specify your username with context, but excluding a leading dot (for example: admin.novell.) You can also substitute the IP address of an eDirectory server for the tree name, if desired.

3.2 Starting Mobile iManager on a Linux Client

- 1 From the bin directory of the expanded iMan_26_Mobile_iManager_linux.tar directory, run./imanager.sh.
- **2** Log in using your username, password, and eDirectory tree name.

3.3 Creating a Mobile iManager Desktop Launcher on a Linux Client

To create a desktop launcher for Mobile iManager on a Linux desktop, you must edit the iManager.sh script.

For example, if you extracted the Mobile iManager.bz2 file to the /opt/novell directory, locate the iManager.sh script in the /opt/novell/imanager/bin directory and add the following line at the beginning of the script, just below the #!/bin/sh line:

```
cd /opt/novell/imanager/bin
```

3.4 Starting Mobile iManager on the Windows Client

- 1 From the unzipped iMan_26_Mobile_iManager_win directory, run the \bin\imanager.bat.
- **2** Log in using your username, password, and eDirectory tree name.

Uninstalling iManager 2.6

This section explains how to uninstall iManager on the following platforms:

- Section 4.1, "Linux," on page 33
- Section 4.2, "NetWare 6.5," on page 33
- Section 4.3, "Solaris," on page 34
- Section 4.4, "HP-UX," on page 34
- Section 4.5, "Windows," on page 34
- Section 4.6, "Mobile iManager," on page 34

IMPORTANT: As a precaution, before uninstalling iManager, back up any custom content or other special iManager files that you want to preserve. Custom content is usually contained in the webapps\packages\custom.npm.

There is no specific sequence in which iManager or the associated third-party components must be uninstalled.

There are, of course, ramifications to uninstalling any of these components. For example, if you uninstall either the Web server or the servlet container, you cannot run iManager. Also, on all platforms except NetWare[®], the uninstall removes only files that it installed in the first place. If there are files that were created by the application (for example, the log files and auto-generated configuration files that are created while Tomcat runs), these are not deleted by the uninstall because it did not install them.

Likewise, if you have created new files or modified existing files within the directory structure that was originally laid down during the install, these files are not removed by the uninstall. This is a safeguard so that data is not unintentionally deleted when a product is uninstalled.

Uninstalling iManager does not affect any of the RBS configurations that you have set in your tree. The uninstall procedure does not remove log files or custom content.

4.1 Linux

Root access is required for uninstalling iManager 2.6 on the Linux platform.

1 Open a shell and execute the following command:

/var/opt/novell/iManager/nps/UninstallerData/UninstalliManager

4.2 NetWare 6.5

- **1** In the NetWare[®] GUI, click *Novell* > *Install*.
- 2 From the installed products list, select *iManager 2.6*, then click *Remove*.

4.3 Solaris

Root access is required for uninstalling.

1 Open a shell and execute the uninstall command from the folder to which you extracted the iManager 2.6 installation files. For example:

/home/user1/iManager/installs/unix/uninstall

2 Enter the option for the products that you want to uninstall.

4.4 HP-UX

Root access is required for uninstalling.

1 Open a shell and execute the following command:

```
/opt/hpws/tomcat/webapps/UninstallerData/UninstalliManager
```

2 Click Uninstall.

4.5 Windows

iManager can be uninstalled from Windows by using the Add or Remove Programs applet in the Control Panel. If the iManager installation installed Apache, Tomcat, or NICI, they are listed separately in Add or Remove Programs. If you are no longer using them, you can uninstall each program separately, in any order, using the Add or Remove Programs applet.

IMPORTANT: If eDirectory[™] is installed on the same server as iManager, NICI might be required to continue to run eDirectory.

When you remove iManager 2.6, only some files in the file system are removed. You are asked if you want to remove all iManager files. If you select Yes, all iManager files are removed, including all custom content. However, the 2.6 RBS objects are not removed from the eDirectory tree, and the schema remains in the same state.

4.6 Mobile iManager

To uninstall iManager Workstation, delete the directory where you extracted the files. NICI can be removed through Add or Remove Programs in the Control Panel on Windows or with the rpm command on Linux.