

## Getting Started Guide

# Novell® Privileged User Manager

**2.2.1**

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# About This Guide

This *Getting Started Guide* explains the hardware requirements for the Privileged User Manager components, then explains how to install the components.

- ♦ [Chapter 1, “Novell Privileged User Manager Overview,” on page 9](#)
- ♦ [Chapter 2, “Installation Requirements,” on page 13](#)
- ♦ [Chapter 3, “Installing the Framework Manager,” on page 15](#)
- ♦ [Chapter 4, “Installing the Agents,” on page 27](#)
- ♦ [Chapter 5, “Upgrading from 2.2 to 2.2.1,” on page 35](#)

## Audience

This guide is intended for users who install and manage the Privileged User Manager product.

## 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](http://www.novell.com/documentation/feedback.html) and enter your comments there.

## Documentation Updates

For the most recent version of the *Getting Started Guide*, visit the [Privileged User Manager Web Site \(http://www.novell.com/documentation/privilegedusermanager22\)](http://www.novell.com/documentation/privilegedusermanager22).

## Additional Documentation

*Privileged User Manager Administration Guide* ([http://www.novell.com/documentation/privilegedusermanager22/npum\\_admin/data/bkyzr9y.html](http://www.novell.com/documentation/privilegedusermanager22/npum_admin/data/bkyzr9y.html))

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# Novell Privileged User Manager Overview

# 1

Novell® Privileged User Manager delivers a robust and scalable architecture, intuitive management console and reusable script and command libraries that enable administrators to reduce management overhead and infrastructure costs in your environment.

- [Section 1.1, “Product Overview,” on page 9](#)
- [Section 1.2, “Components,” on page 9](#)
- [Section 1.3, “What’s New in 2.2.1,” on page 10](#)

## 1.1 Product Overview

Many organizations needlessly expose their superuser or root account credentials to users who are required to run commands that need elevated privileges, and passwords are often not changed when administrative staff change jobs. This opens potential back doors into systems and increases the likelihood of a security breach.

Novell Privileged User Manager helps IT administrators manage the identity and access for superuser and root accounts by providing controlled superuser access to administrators, allowing them to perform jobs without needlessly exposing root account credentials. It also provides a centralized activity log across multiple platforms. The introduction of Novell Privileged User Manager enriches the Novell Identity and Access Management and Compliance Management solutions by adding auditing and tracking capabilities for privileged user activity across the organization.

Novell Privileged User Manager limits corporate susceptibility to unauthorized transactions and information access by helping organizations rapidly deploy superuser management and tracking across all UNIX\* and Linux\* environments. It reduces management overhead and infrastructure costs, controls and records which privileged users have access to what, and reduces costs and errors through demonstrable compliance audits.

Novell Privileged User Manager works by delegating privileged access, which is authorized via a centralized database. The end result is that a user is authorized to run the privileged command and all activity is logged. The centralized database provides for easier administration. Compared to competitive solutions in the marketplace, Novell Privileged User Manager is deployed more quickly, provides faster response time, better logging and auditing and improved administration, and leads to a more secure system and a fast return on investment.

## 1.2 Components

Privileged User Manager consists of a Framework Manager, where you manage and configure the system, and an agent, which is installed on each machine where you want to monitor and control superuser access.

**Figure 1-1** Framework Manager



From the Home page, you have access to six administrative consoles:

- ♦ **Compliance Auditor:** Proactive auditing tool that pulls events from the event logs for analysis, according to predefined rules. It pulls filtered audit events at hourly, daily, weekly or monthly intervals. This enables auditors to view prefiltered security transactions, play back recordings of user activity, and record notes for compliance purposes. In an era of increasing regulatory compliance requirements, the ability to supply demonstrable audit compliance at any time provides a more secure system and reduces audit risk.
- ♦ **Framework User Manager:** Manages users who log in to the Framework Manager through role-based grouping.
- ♦ **Hosts:** Centrally manages Privileged User Manager installation and updates, load-balancing, redundancy of resources, and host alerts.
- ♦ **Reporting:** Provides easy access and search capability for event logs and allows you review and color-code user keystroke activity through the Command Risk Analysis Engine.
- ♦ **Command Control:** Uses an intuitive graphical interface to manage security policies for privilege management.
- ♦ **Package Manager:** Lets you easily update any Privileged User Manager application.

## 1.3 What's New in 2.2.1

The following new features have been added to Privileged User Manager 2.2.1.

- ♦ [Section 1.3.1, “General Installation Updates,” on page 11](#)
- ♦ [Section 1.3.2, “Framework User Manager,” on page 11](#)
- ♦ [Section 1.3.3, “Command Control,” on page 11](#)
- ♦ [Section 1.3.4, “Compliance Auditor,” on page 11](#)
- ♦ [Section 1.3.5, “Reporting Console,” on page 12](#)
- ♦ [Section 1.3.6, “Package Manager,” on page 12](#)

### 1.3.1 General Installation Updates

- ♦ Framework Manager installations now include the Syslog Emitter, which allows events to be published to a syslog server that supports TCP. For more information, see “[Syslog Settings](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.
- ♦ Privileged User Manager can now be installed on Linux Mainframe zSeries 64-bit on SLES (SUSE® Linux Enterprise Server) versions 10 SP2 and 11 and Red Hat\* version 5.
- ♦ For upgrades from 2.2 to 2.2.1, please see [Chapter 5, “Upgrading from 2.2 to 2.2.1,” on page 35](#).
- ♦ A Sentinel collector is available for Privileged User Manager. To download the collector and instructions, see [Sentinel 6.1 Content](#) (<http://support.novell.com/products/sentinel/secure/sentinel61.html>).

### 1.3.2 Framework User Manager

- ♦ **Help Desk Role:** You can select from a predefined set of attributes to create a help desk group that can only manage user password problems such as forgotten passwords and locked accounts because of too many bad login attempts. For more information, see “[Configuring a Help Desk Group](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.
- ♦ **LDAP Authentication:** You can configure Framework Manager users so that they obtain their authentication credentials from an LDAP server. For more information, see “[Modify User: Native Maps](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.

### 1.3.3 Command Control

- ♦ **Backup and Restore:** You can create a backup of the Command Control database and restore the backup at a future date. For more information, see “[Backing Up and Restoring](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.
- ♦ **Keystroke Error Reporting:** The Command Control agent now sends an appropriate message rather than “session not terminated” when an error occurs with the keystroke file. The following messages can now be sent to the audit manager for display:

```
File does not exist  
Remote host does not exist  
Run user does not exist  
Executing binary does not exist  
Run process missing
```

- ♦ **usrun -t Option:** Provides a test command option that tests the specified command against the rule structure. A yes or no is printed to the screen, indicating whether the command would be accepted or not. For more information, see “[Using usrun with a Command](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*

### 1.3.4 Compliance Auditor

- ♦ **Archive:** You can archive records, store them offline, and restore them. For more information, see “[Archiving Records](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.
- ♦ **Export and Import:** You can export and import audit rules, audit report settings, and access control levels.

- ♦ **Keystroke Size:** The log size of the keystroke file is now visible from the main page of the Compliance Auditor console. For more information, see “[Compliance Auditor Records](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.
- ♦ **Keystroke Session Termination:** When viewing a keystroke session that was not properly terminated, you can now terminate the session.

### 1.3.5 Reporting Console

- ♦ **Read and Update Roles for Record Viewing:** You can assign roles to reports. This restricts viewing and the updating the reports to the users who have been assigned the appropriate roles. For more information, see “[Modifying General Report Information](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*
- ♦ **Session End Time:** When viewing Command Control reports, you can see the session end time. You can also filter on this value. For more information, see “[Filtering the Viewable Records](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.
- ♦ **Syslog Support:** You can configure Privileged User Manager to send audit events as syslog messages to a syslog server (either a Sentinel™ server or newer syslog servers that support TCP). For more information, see “[Syslog Settings](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.

A Privileged User Manager collector is also available in the [Sentinel Log Manager](http://www.novell.com/products/sentinel-log-manager/) (<http://www.novell.com/products/sentinel-log-manager/>) and as a Sentinel download (see [Sentinel 6.1 Content](http://support.novell.com/products/sentinel/secure/sentinel61.html) (<http://support.novell.com/products/sentinel/secure/sentinel61.html>)).

- ♦ **Report Filters:** You can define report filters by using drop-down menus based on audit information that is collected by Privileged User Manager. For more information, see “[Filtering the Viewable Records](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.

### 1.3.6 Package Manager

- ♦ **Improved Backup Checks:** The distribution agent now checks the version of the current package backup. If you try to update the current package with the same version, a warning message is displayed and the package is not updated.

# Installation Requirements

# 2

- ♦ Section 2.1, “Software Prerequisites,” on page 13
- ♦ Section 2.2, “System Requirements,” on page 13
- ♦ Section 2.3, “Supported Platforms,” on page 13
- ♦ Section 2.4, “Procedural Overview,” on page 14

## 2.1 Software Prerequisites

- ♦ Novell® Privileged User Manager installation software. Log in to the [Novell Customer Center](http://www.novell.com/center) (<http://www.novell.com/center>) and follow the link that allows you to download the software.
- ♦ Adobe® Flash® Player.
- ♦ Novell Privileged User Manager license. Log in to the [Novell Customer Center](http://www.novell.com/center) (<http://www.novell.com/center>) and download the license.

---

**NOTE:** By default, new installations are provided with a 90-day license for five agents, one of which is the manager.

---

## 2.2 System Requirements

A PUM agent should have the following system requirements:

- ♦ CPU - 300 MHz (RISC), 1GHz (CISC)
- ♦ Memory - 50 MB additional memory
- ♦ Hard Disk - 100 MB additional memory

A PUM manager should have the following system requirements:

- ♦ CPU - 1 GHz or more (RISC), 2 GHz or more (CISC)
- ♦ Memory - 250 MB additional memory
- ♦ Hard Disk - 150 MB additional memory and additional memory for Audit Storage

---

**TIP:** Approximate additional memory calculation for Audit Storage = (250 KB) X (number of PUM users) X (number of sessions per day (usually 8 sessions)).

---

## 2.3 Supported Platforms

The Framework Manager software and Framework Agent software have been tested on the following platforms:

- ♦ IBM® AIX® 32-bit and 64-bit on versions 5.3 and 6.1
- ♦ HP-UX® (PA-RISC) 32-bit and 64-bit on versions 11.11 and 11.23
- ♦ HP-UX (Itanium®) 64-bit on version 11.23
- ♦ SUSE® Linux Enterprise Server (SLES) 32-bit and 64-bit on versions 10 SP1, SP2, SP3 and 11

- ♦ Red Hat\* 32-bit and 64-bit on versions 4.0 x86 and 5.0 x86
- ♦ Linux Mainframe zSeries 64-bit on SLES versions 10 SP2 and 11 and Red Hat version 5
- ♦ Sun\* Solaris\* (SPARC\*) 32-bit and 64-bit on versions 8, 9, and 10
- ♦ Sun Solaris (Intel\*) 32-bit and 64-bit on versions 8, 9, and 10
- ♦ HP Tru64\* UNIX 64-bit on 5.1a and 5.1b
- ♦ VMware\* ESX Server 64-bit on 3.0 and 3.5
- ♦ Xen\* Hypervisor version 3.2 and 3.3
- ♦ Open Enterprise Server 2 SP1 and SP2 (32-bit and 64-bit)

The Framework Manager can also be installed on Windows\* 2003 Server 32-bit or 64-bit. There is no agent software for the Windows platforms.

Ensure that your operating system is running the vendor's latest maintenance patches.

### Third Party Tested Platforms

The agent can be installed on the following Linux platform:

- ♦ Univention Corporate Server (UCS) 2.3

## 2.4 Procedural Overview

The following steps are required to install Privileged User Manager:

- 1 Install a Framework Manager. See [Chapter 3, “Installing the Framework Manager,” on page 15](#).
- 2 When the installation has completed, access and log in to the console. See [Section 3.2, “Accessing the Framework Console,” on page 19](#).
- 3 Install the Privileged User Manager license. See [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

By default, new installations are provided with a 90-day license for five agents, one of which is the manager. You need to install your license before the default license expires.

- 4 Set up a Package Manager so you can install additional packages on the agents and push package updates to your framework components. See [Section 3.4, “Setting Up a Package Manager,” on page 20](#).
- 5 Install and register a Framework Agent on the computers that you want to manage. See [Chapter 4, “Installing the Agents,” on page 27](#).  
When you have installed and registered the Framework agents, you have completed the installation of the Framework.
- 6 For configuration information, see the [Novell Privileged User Manager 2.2.1 Administration guide](#).

# Installing the Framework Manager

# 3

- ♦ Section 3.1, “Installing a Framework Manager,” on page 15
- ♦ Section 3.2, “Accessing the Framework Console,” on page 19
- ♦ Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20
- ♦ Section 3.4, “Setting Up a Package Manager,” on page 20
- ♦ Section 3.5, “Stopping and Restarting the Framework,” on page 21
- ♦ Section 3.6, “Removing the Framework Manager,” on page 23

## 3.1 Installing a Framework Manager

Currently, the Framework Manager is available for installation on the platforms listed below. Refer to [Chapter 2, “Installation Requirements,” on page 13](#) for more information regarding supported versions.

For detailed installation instructions for your platform, select from the list below:

- ♦ Section 3.1.1, “AIX Framework Manager Install,” on page 15
- ♦ Section 3.1.2, “HP-UX Framework Manager Install,” on page 16
- ♦ Section 3.1.3, “Linux Framework Manager Install,” on page 16
- ♦ Section 3.1.4, “Solaris Framework Manager Install,” on page 17
- ♦ Section 3.1.5, “Tru64 Framework Manager Install,” on page 18
- ♦ Section 3.1.6, “Windows Framework Manager Install,” on page 18

### 3.1.1 AIX Framework Manager Install

The AIX installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell/npum`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell/npum`.

To install the AIX manager:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the AIX installation package is uncompressed, use one of the following methods to perform the installation.

- ♦ The AIX smitty program.
- ♦ The following command:

```
installp -acgNQqW -d <directory of .bff file> novellnpum
```

- 3 After installation is complete, check that the service is running by viewing the log file. The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the manager installed correctly, services should be listening on 0.0.0.0:29120 and 0.0.0.0:443.
- 4 If you have been supplied with a license, log in to the Framework Console and install the license.

For information, refer to [Section 3.2, “Accessing the Framework Console,” on page 19](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

### 3.1.2 HP-UX Framework Manager Install

The HP-UX installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell/npum`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell/npum`.

To install the HP-UX manager:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the HP-UX installation package is uncompressed, use the following command to install the manager:

```
swinstall -s /<directory of .depot file>/<filename>.depot \*
```

- 3 After installation is complete, check that the service is running by viewing the log file. The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the manager installed correctly, services should be listening on 0.0.0.0:29120 and 0.0.0.0:443.
- 4 If you have been supplied with a license, log in to the Framework Console and install the license.

For information, refer to [Section 3.2, “Accessing the Framework Console,” on page 19](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

### 3.1.3 Linux Framework Manager Install

Linux hosts use the RPM packaging system for installation, upgrade, and removal.



By default, the installation program installs the software into `/opt/novell/npum`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell/npum`.

To install the Linux manager:

- 1 Copy the installation package to a temporary location and use the following command to install the file:

```
rpm -i <filename>.rpm
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After installation is complete, check that the service is running by viewing the log file. The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the manager installed correctly, services should be listening on 0.0.0.0:29120 and 0.0.0.0:443.
- 3 If you have been supplied with a license, log in to the Framework Console and install the license.

For information, refer to [Section 3.2, “Accessing the Framework Console,” on page 19](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

### 3.1.4 Solaris Framework Manager Install

The Solaris installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell/npum`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell/npum`.

To install the Solaris manager:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the Solaris installation package is uncompressed, use the following command to install the manager:

```
pkgadd -d /<directory of .pkg file>/<filename>.pkg
```

- 3 After installation is complete, check that the service is running by viewing the log file. The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was accepted. If the manager installed correctly, services should be listening on 0.0.0.0:29120 and 0.0.0.0:443.

- 4 If you have been supplied with a license, log in to the Framework Console and install the license.

For information, refer to [Section 3.2, “Accessing the Framework Console,” on page 19](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

### 3.1.5 Tru64 Framework Manager Install

The Tru64 installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell/npum`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell/npum`.

To install the Tru64 manager:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
tar -xvf <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the Tru64 installation package is uncompressed, use the following command to install the manager:

```
setld -l NOVELLNPUM/
```

- 3 After installation is complete, check that the service is running by viewing the log file. The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the manager installed correctly, services should be listening on 0.0.0.0:29120 and 0.0.0.0:443.
- 4 If you have been supplied with a license, log in to the Framework Console and install the license.

For information, refer to [Section 3.2, “Accessing the Framework Console,” on page 19](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

### 3.1.6 Windows Framework Manager Install

- 1 Run the following install executable to start the installation:

```
<filename>.exe
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 Follow the steps in the install wizard.

The Framework Manager service can be installed on any part of the normal file system. It defaults to the `C:\Program Files\Novell\npum` folder.

3 After installation is complete, check that the service is running by viewing the log file. The log file is located in `C:\Program Files\Novell\npum\logs\unifid.log`, if the default install location was used. If the manager installed correctly, services should be listening on `0.0.0.0:29120` and `0.0.0.0:443`.

4 If you have been supplied with a license, log in to the Framework Console and install the license.

For information, refer to [Section 3.2, “Accessing the Framework Console,” on page 19](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

## 3.2 Accessing the Framework Console

1 Open a Web browser on your chosen platform.

2 In the address bar, enter the URL for the Framework Console as follows:

`https://<hostname>`

Replace `<hostname>` with one of the following:

- The DNS name of the server where the Framework Manager is installed.
- The DNS name of a server that has the Administration Agent package installed.

3 If you are presented with a security alert, verify the details and select *Yes* to continue.

4 If your browser is not already equipped with Adobe Flash Player, the browser attempts to install it. Verify the details and select *Install* to continue.

A reboot or browser restart might be required.

5 Log in to the Framework Console.

After you enter the URL for the Framework Console, the initial logon screen is displayed in the browser window. You must authenticate to the system by using a username and password defined on the system.

6 (Conditional) If this is the first time to log in to the console, specify the username `admin` and password `novell`, then click *Logon*.

7 (Conditional) If this is the first time to log in to the Framework Console, you are prompted to change the default password.

Your new password should be a minimum of six characters. If the new password is acceptable to the system, you are logged in to the console.

---

**IMPORTANT:** To navigate in the Framework Console, do not use your browser’s Forward or Back buttons; use the trail at the top of each page, such as:

*Home / Compliance Auditor*

Click *Home* to return to main console menu.

---

8 Continue with [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 20](#).

## 3.3 Installing a Novell Privileged User Manager License

Log in to the [Novell Customer Center \(http://www.novell.com/center\)](http://www.novell.com/center) and download your license file. Use the following steps to install it:

- 1 Log in to the Framework Console.
- 2 From the *Task Pane*, click *About Framework*.
- 3 Click *Register Framework*.
- 4 Copy the supplied license and paste it into the text area.
- 5 Click *Finish* > *Close*.

Your license details can be viewed by selecting the *About Framework* option from the *Task Pane*.

- 6 Continue with one of the following:
  - ♦ [Section 3.4, “Setting Up a Package Manager,” on page 20](#)
  - ♦ [Chapter 4, “Installing the Agents,” on page 27](#)

## 3.4 Setting Up a Package Manager

The Package Manager allows you to push updates to hosts and to install additional packages on the hosts for load balancing and failover. To use the Novell Update Server as the Package Manager, see “[Configuring the Package Manager](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.

To use a local host as a Package Manager:

- 1 Create a directory such as `framework` on the Framework Manager in the `/tmp` directory.  
This directory is called `framework` in the rest of these instructions.
- 2 Copy the `novell-npum-packages-2.2.1.gz` from the Package Manager directory on the CD to the machine.
- 3 Extract the file to the `framework` directory.

For UNIX and Linux platforms, use the following commands:

```
gunzip novell-npum-packages-2.2.1.tar.gz
tar -xvf novell-npum-packages-2.2.1.tar
```

For Windows platforms, use WinZip to extract the file.

- 4 Use the following command to publish the packages to the Package Manager.

Replace `<admin>` with the name of your admin user.

For Linux and UNIX platforms:

```
/opt/novell/npum/sbin/unifi -u <admin> distrib publish -d /tmp/framework
```

For Windows platforms:

```
c:\Program Files\novell\npum\bin\unifi -u <admin> distrib publish -d
c:\tmp\framework
```

- 5 When prompted, enter the password for the admin user.

- 6 (Optional) To view available packages, log in to the Framework Manager, then click *Package Manager*.
- 7 Delete the `framework` directory.

## 3.5 Stopping and Restarting the Framework

The Framework services and processes start automatically after installation and system reboot, so there is normally no need to stop and restart them. If you need to stop and restart the services and processes manually, follow the instructions below for your platform:

- ♦ [Section 3.5.1, “AIX,” on page 21](#)
- ♦ [Section 3.5.2, “HP-UX,” on page 21](#)
- ♦ [Section 3.5.3, “Linux,” on page 21](#)
- ♦ [Section 3.5.4, “Solaris,” on page 22](#)
- ♦ [Section 3.5.5, “Tru64,” on page 23](#)
- ♦ [Section 3.5.6, “Windows,” on page 23](#)

### 3.5.1 AIX

To stop the Framework process:

```
stopsrc -s npum
```

To start the Framework process:

```
startsrc -s npum
```

### 3.5.2 HP-UX

To stop the Framework process:

```
/sbin/init.d/npum stop
```

To start the Framework process:

```
/sbin/init.d/npum start
```

To check the status:

```
/sbin/init.d/npum status
```

### 3.5.3 Linux

The following instructions apply to all distributions.

To stop the Framework process:

```
/etc/init.d/npum stop
```

To start the Framework process:

```
/etc/init.d/npum start
```

To check the status:

```
/etc/init.d/npum status
```

Alternatively, you can use the following instructions for all distributions except SUSE®.

To stop the Framework process:

```
service npum stop
```

To start the Framework process:

```
service npum start
```

To check the status:

```
service npum status
```

### 3.5.4 Solaris

The following instructions apply to all supported distributions.

To stop the Framework process:

```
/etc/init.d/npum stop
```

To start the Framework process:

```
/etc/init.d/npum start
```

To check the status:

```
/etc/init.d/npum status
```

Solaris 10 also uses the SMF (Service Management facility). Example commands are:

```
svcs | grep npum
```

```
legacy_run Apr_21 lrc:/etc/rc3_d/S99npum
```

```
online Apr_21 svc:/application/security/npum:default
```

Then, to enable the Framework process:

```
svcadm enable npum
```

To disable the Framework process:

```
svcadm disable npum
```

To restart the Framework process:

```
svcadm restart npum
```

To clear the Framework process:

```
svcadm clear npum
```

Please refer to your Solaris documentation for full SMF instructions.

### 3.5.5 Tru64

To stop the Framework process:

```
/sbin/init.d/npum stop
```

To start the Framework process:

```
/sbin/init.d/npum start
```

To check the status:

```
/sbin/init.d/npum status
```

### 3.5.6 Windows

To stop the Framework service:

- 1 Select the *Start* button.
- 2 Select *Control Panel*.
- 3 Select *Administrative Tools*.
- 4 Select *Services*.
- 5 Select the *Framework Manager* service.
- 6 Select *Stop*.

To start the Framework service, follow the above instructions and select *Start*.

## 3.6 Removing the Framework Manager

- ♦ [Section 3.6.1, “AIX Manager Uninstall,” on page 23](#)
- ♦ [Section 3.6.2, “HP-UX Manager Uninstall,” on page 24](#)
- ♦ [Section 3.6.3, “Linux Manager Uninstall,” on page 24](#)
- ♦ [Section 3.6.4, “Solaris Manager Uninstall,” on page 24](#)
- ♦ [Section 3.6.5, “Tru64 Manager Uninstall,” on page 24](#)
- ♦ [Section 3.6.6, “Windows Manager Uninstall,” on page 24](#)

### 3.6.1 AIX Manager Uninstall

- 1 Use one of the following methods:

- ♦ The AIX smitty program.
- ♦ The following command:

```
installp -u novellnpum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

## 3.6.2 HP-UX Manager Uninstall

- 1 Enter the following command:

```
swremove novell-npum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

## 3.6.3 Linux Manager Uninstall

- 1 Enter the following command:

```
rpm - e novell-npum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

## 3.6.4 Solaris Manager Uninstall

- 1 Enter the following command:

```
pkgrm novell-npum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

## 3.6.5 Tru64 Manager Uninstall

- 1 Enter the following command:

```
setld -d NOVELLNPUMALLXXX
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

## 3.6.6 Windows Manager Uninstall

- 1 Select the *Start* button from the Windows task bar.
- 2 Select *All Programs*.



**3** Select *Framework Manager*.

**4** Select *Uninstall*.

---

**IMPORTANT:** This action cannot be undone.

---



# Installing the Agents

# 4

- ♦ [Section 4.1, “Agent Installation Overview,” on page 27](#)
- ♦ [Section 4.2, “Creating a Host Name for Each Agent,” on page 27](#)
- ♦ [Section 4.3, “Opening Firewall Ports,” on page 28](#)
- ♦ [Section 4.4, “Installing and Registering a Framework Agent,” on page 28](#)
- ♦ [Section 4.5, “Removing the Agent Components,” on page 33](#)

## 4.1 Agent Installation Overview

For each computer that you want to manage with the Framework console, you need to do the following:

- ♦ [Section 4.2, “Creating a Host Name for Each Agent,” on page 27](#)
- ♦ [Section 4.4, “Installing and Registering a Framework Agent,” on page 28](#)

## 4.2 Creating a Host Name for Each Agent

Hosts can be organized and grouped into domains.

- 1 Log in to the Framework Manager console.
- 2 In the *Navigation Pane*, click *Hosts*.  
The *Navigation Pane* displays the current hierarchy for your Framework.
- 3 (Conditional) If you want to add a subdomain, click *Hosts* in the *Navigation Pane*.
  - 3a Click *Add Domain* in the *Task Pane*.
  - 3b Specify a domain name.
  - 3c Click *Finish*.
- 4 Select the required domain from the *Navigation Pane*.
- 5 Click *Add Hosts* from the *Task Pane*.
- 6 Specify the agent names for the hosts. You can type the names one at a time using one name per line, or paste a list of names.  
When you add a host to the Framework, the name does not need to relate to the existing DNS name used to locate the host on your network.
- 7 Click *Next*.  
A list of agent names is displayed.
- 8 Click *Finish*.  
The status of the host is unregistered until the agent is installed and registered.
- 9 Continue with [Section 4.4, “Installing and Registering a Framework Agent,” on page 28](#).

## 4.3 Opening Firewall Ports

Port 29120 is used for all communications among the Framework managers and the agents. Port 29120 is also used for communications among the Framework agents.

If firewalls separate your Privileged User Manager machines, this port must be opened to traffic in both directions for Novell Privileged User Manager to work properly.

The port is specified when the agent is registered with the Framework Manager. If you need to specify a different port because an application is already using port 29120, this new port needs to be opened in the firewall for communication.

## 4.4 Installing and Registering a Framework Agent

Currently the Framework Agent is available for installation on the platforms listed below. Refer to [Section 2.3, “Supported Platforms,” on page 13](#) for more information regarding supported versions.

For detailed installation instructions for your platform, select from the list below:

- ♦ [Section 4.4.1, “AIX Agent Install,” on page 28](#)
- ♦ [Section 4.4.2, “HP-UX Agent Install,” on page 29](#)
- ♦ [Section 4.4.3, “Linux Agent Install,” on page 30](#)
- ♦ [Section 4.4.4, “Solaris Agent Install,” on page 31](#)
- ♦ [Section 4.4.5, “Tru64 Agent Install,” on page 32](#)

---

**NOTE:** Agents must be registered with the Framework Manager after installation.

---

### 4.4.1 AIX Agent Install

The AIX installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell`.

To install the AIX agent:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the AIX installation package is uncompressed, use one of the following methods to perform the installation.

- ♦ The AIX smitty program
- ♦ The following command:

```
installp -acgNQqWx -d <directory of .bff file> novellnpxm
```

- 3 When installation is complete, check that the service is running by viewing the log file.  
The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the agent installed correctly, it should be listening on 0.0.0.0:29120.

- 4 Use the following command to register the agent with the Framework Manager. This command must be issued from the machine where the agent is installed.

```
/opt/novell/npum/sbin/unifi regclnt register
```

Four items of information are required:

**The registration server hostname:** The hostname or IP address of the Framework Manager.

**The registration server port:** Accept the default unless another application is using this port. After the host is registered, this port cannot be modified.

**The name or IP address of this host:** The DNS name or IP address by which any other agent in the Framework can resolve the location of this machine on your network.

**The name of this agent:** The name of the agent when it was created in the Framework Console (refer to “[Creating a Host Name for Each Agent](#)” on page 27).

---

**NOTE:** When the above details have been provided, a valid username and password for the Framework Manager are required to complete the registration of the agent.

---

- 5 Verify that the registration has been successful by viewing the host details on the Framework Console.

## 4.4.2 HP-UX Agent Install

The HP-UX installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell`.

To install the HP-UX agent:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
```

See the “[Novell Privileged User Manager Readme](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the HP-UX installation package is uncompressed, use the following command to install the agent:

```
swinstall -s /<directory of .depot file>/<filename>.depot \*
```

- 3 After installation is complete, check that the service is running by viewing the log file.

The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the agent installed correctly, it should be listening on 0.0.0.0:29120.

- 4 Use the following command to register the agent with the Framework Manager. This command must be issued from the machine where the agent is installed.

```
/opt/novell/npum/sbin/unifi regclnt register
```

Four items of information are required:

**The registration server hostname:** The hostname or IP address of the Framework Manager.

**The registration server port:** Accept the default unless another application is using this port. After the host is registered, this port cannot be modified.

**The name or IP address of this host:** The DNS name or IP address by which any other agent in the Framework can resolve the location of this machine on your network.

**The name of this agent:** The name of the agent when it was created in the Framework Console (refer to “[Creating a Host Name for Each Agent](#)” on page 27).

---

**NOTE:** When the above details have been provided, a valid username and password for the Framework Manager are required to complete the registration of the agent.

---

- 5 Verify that the registration has been successful by viewing the host details on the Framework Console.

### 4.4.3 Linux Agent Install

Linux hosts use the RPM packaging system for installation, upgrade, and removal.

By default, the installation program installs the software into `/opt/novell`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell`.

To install the Linux agent:

- 1 Copy the installation package to a temporary location and use the following command to install the file:

```
rpm -i <filename>.rpm
```

See the “[Novell Privileged User Manager Readme](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After installation is complete, check that the service is running by viewing the log file.

The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the agent installed correctly, it should be listening on 0.0.0.0:29120.

- 3 Use the following command to register the agent with the Framework Manager. This command must be issued from the machine where the agent is installed.

```
/opt/novell/npum/sbin/unifi regclnt register
```

Four items of information are required:

**The registration server hostname:** The hostname or IP address of the Framework Manager.

**The registration server port:** Accept the default unless another application is using this port. After the host is registered, this port cannot be modified.

**The name or IP address of this host:** The DNS name or IP address by which any other agent in the Framework can resolve the location of this machine on your network.

**The name of this agent:** The name of the agent when it was created in the Framework Console (refer to “[Creating a Host Name for Each Agent](#)” on page 27).

---

**NOTE:** When the above details have been provided, a valid username and password for the Framework Manager are required to complete the registration of the agent.

---

- 4 Verify that the registration has been successful by viewing the host details on the Framework Console.

#### 4.4.4 Solaris Agent Install

The Solaris installation package is compressed through gzip. In order to install the package, you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell`.

To install the Solaris agent:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the Solaris installation package is uncompressed, use the following command to install the agent:

```
pkgadd -d /<directory of .pkg file>/<filename>.pkg
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 3 After installation is complete, check that the service is running by viewing the log file.  
The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the agent installed correctly, it should be listening on 0.0.0.0:29120.
- 4 Use the following command to register the agent with the Framework Manager. This command must be issued from the machine where the agent is installed.

```
/opt/novell/npum/sbin/unifi regclnt register
```

Four items of information are required:

**The registration server hostname:** The hostname or IP address of the Framework Manager.

**The registration server port:** Accept the default unless another application is using this port. After the host is registered, this port cannot be modified.

**The name or IP address of this host:** The DNS name or IP address by which any other agent in the Framework can resolve the location of this machine on your network.

**The name of this agent:** The name of the agent when it was created in the Framework Console (refer to “Creating a Host Name for Each Agent” on page 27).

---

**NOTE:** When the above details have been provided, a valid username and password for the Framework Manager are required to complete the registration of the agent.

---

- 5 Verify that the registration has been successful by viewing the host details on the Framework Console.

## 4.4.5 Tru64 Agent Install

The Tru64 installation package is compressed through gunzip. In order to install the package you must unzip the package through gunzip.

By default, the installation program installs the software into `/opt/novell`. To change this, create a directory in the required part of the file system and create a symbolic link to `/opt/novell`.

To install the Tru64 agent:

- 1 Copy the installation package to a temporary location and use the following command to extract the installation files:

```
gunzip <filename>
tar -xvf <filename>
```

See the “Novell Privileged User Manager Readme” ([http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager\\_readme.html](http://www.novell.com/documentation/privilegedusermanager22/readme/privilegedusermanager_readme.html)) for the actual filename.

- 2 After the Tru64 installation package is uncompressed, use the following command to install the agent:

```
setld -l NOVELLNPM/
```

- 3 After installation is complete, check that the service is running by viewing the log file.

The log file is located in `/opt/novell/npum/logs/unifid.log`, if the default install location was used. If the agent installed correctly, it should be listening on 0.0.0.0:29120.

- 4 Use the following command to register the agent with the Framework Manager. This command must be issued from the machine where the agent is installed.

```
/opt/novell/npum/sbin/unifi regclnt register
```

Four items of information are required:

**The registration server hostname:** The hostname or IP address of the Framework Manager.

**The registration server port:** Accept the default unless another application is using this port. After the host is registered, this port cannot be modified.

**The name or IP address of this host:** The DNS name or IP address by which any other agent in the Framework can resolve the location of this machine on your network.

**The name of this agent:** The name of the agent when it was created in the Framework Console (refer to “[Creating a Host Name for Each Agent](#)” on page 27).

---

**NOTE:** When the above details have been provided, a valid username and password for the Framework Manager are required to complete the registration of the agent.

---

- 5 Verify that the registration has been successful by viewing the host details on the Framework Console.



## 4.5 Removing the Agent Components

- ♦ [Section 4.5.1, “AIX Agent Uninstall,” on page 33](#)
- ♦ [Section 4.5.2, “HP-UX Agent Uninstall,” on page 33](#)
- ♦ [Section 4.5.3, “Linux Agent Uninstall,” on page 33](#)
- ♦ [Section 4.5.4, “Solaris Agent Uninstall,” on page 33](#)
- ♦ [Section 4.5.5, “Tru64 Agent Uninstall,” on page 34](#)

### 4.5.1 AIX Agent Uninstall

- 1 Use one of the following methods:

- ♦ The AIX smitty program
- ♦ The following command:

```
installp -u novellnpum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

### 4.5.2 HP-UX Agent Uninstall

- 1 Enter the following command:

```
swremove novell-npum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

### 4.5.3 Linux Agent Uninstall

- 1 Enter the following command:

```
rpm -e novell-npum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

### 4.5.4 Solaris Agent Uninstall

- 1 Enter the following command:

```
pkgrm novell-npum
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

### 4.5.5 Tru64 Agent Uninstall

- 1 Enter the following command:

```
setld -d NOVELLNPUMXXX
```

---

**IMPORTANT:** This action cannot be undone.

---

- 2 Delete the `/opt/novell/npum` directory structure.

Deleting the directory structure removes the existing Framework Host settings from the server, allowing for clean re-installation.

# Upgrading from 2.2 to 2.2.1

# 5

The procedure for upgrading from one release to the next release is slightly different than applying patches to an existing release.

## 1 Publish the 2.2.1 packages to the Package Manager.

There are multiple ways to accomplish this.

- ♦ You can use the 2.2.1 CD and set up your Framework Manager machine to be a local Package Manager. For instructions, see [Section 3.4, “Setting Up a Package Manager,” on page 20](#).
- ♦ You can configure the Package Manager to use the Novel<sup>®</sup>1 Update Server through your Novell Customer Care account. For instructions, see “[Configuring the Package Manager](#)” in the *Novell Privileged User Manager 2.2.1 Administration guide*.

## 2 (Conditional) If you are using the Novell Update Server, add the packages you need:

**2a** Click *Package Manager* on the home page of the console, then click *Add Packages*.

**2b** Configure the *Package Filter* to display the packages you need.

**Version:** Select 2.2.

**Platform:** Select your platforms. Make sure you select *Cross Platform*, which displays the console packages that run on all platforms.

**Types:** Select at least *Console*, *Module*, and *Patch*.

**Components:** Select all of them: *Command Control*, *Framework*, and *Miscellaneous*.

**2c** Select all the packages that are listed. Make sure you select the *Framework Patch*.

**2d** Click *Next*, then click *Finish* when the packages have been successfully downloaded.

**2e** To ensure that all packages are up-to-date, click *Check for Updates*.

**2f** Select any packages that are listed.

**2g** Click *Next*, then click *Finish* when the packages have been successfully downloaded.

## 3 To upgrade your Framework Manager:

**3a** Click *Hosts* on the home page of the console.

**3b** Select the host that is your Framework Manager, use the arrow to display the packages, then select *Packages*.

**3c** Click *Update Packages* in the task pane.

The Framework Patch should be displayed. This package must be updated to 2.2.1 before you can update any other packages. If this package does not display, return to [Step 2](#) and add the Framework Patch for your platform.

**3d** Select the package, then click *Next*.

**3e** When the package has installed, click *Finish*.

**3f** Click *Update Packages* in the task pane.

**3g** Select the listed packages, then click *Next*.

- 3h** When the packages have installed, click *Finish*.
- 3i** Verify that all packages display a 2.2.1 version. If they don't, return to [Step 2](#) and add any missing packages.
- 4** To install new packages available in 2.2.1 on your Framework Manager:
  - 4a** Click *Hosts* on the home page of the console.
  - 4b** Select the host that is your Framework Manager, use the arrow to display the packages, then select *Packages*.
  - 4c** Click *Install Packages*.
  - 4d** Select the *Syslog Emitter*, then click *Next*.
  - 4e** When the package has installed, click *Finish*.
- 5** To upgrade your agents:
  - 5a** Click *Hosts* on the home page of the console.
  - 5b** Select the hosts that are agents or select the domain containing the agents.
  - 5c** Click *Update Packages* in the task pane.
  - 5d** Select the Framework Patch, then click *Next*.
  - 5e** Click *Update Packages* in the task pane.
  - 5f** Select the listed packages, then click *Next*.
  - 5g** When the packages have installed, click *Finish*.
  - 5h** Verify that all packages display a 2.2.1 version.