

Getting Started Guide

Novell® Privileged User Manager

2.2

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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 them.

- ♦ 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

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 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/index.html)

Documentation Conventions

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

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

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.

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,” 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. Privileged user management is a key component of any compliance solution. 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 super user 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* menu, 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, 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 alerting.
- ♦ **Reporting:** Provides ease access and search capability for event logs and allows you review and color-code user keystroke activity color-coded 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

Novell Privileged User Manager 2.2 is the first release of Privileged User Manager with Novell branding. Please contact Novell Support if you have any queries with regards to this release. Also, before upgrading or installing Novell Privileged User Manager 2.2, make sure that you have applied the recommended patches for each of your installed hosts.

General Installation Updates

- ♦ Framework Manager installations now include the following components:
 - ♦ Audit Manager
 - ♦ Reporting and Command Reporting Console
 - ♦ Compliance Auditor Manager and Console

- ♦ Command Control Manager, Console, and Agent
- ♦ Messaging Component
- ♦ Agent installations now include the Command Control Agent.
- ♦ For new installations, the default installation paths of the product have now changed to the following:

Windows: C:\Program Files\Novell\npum

UNIX/Linux: /opt/novell/npum/
- ♦ For upgrades from existing installations, a npum directory is created and symbolically linked to the existing unifi directory.

Framework Manager Updates

- ♦ Improved handling of the pidfile on AIX hosts to ensure the Novell Privileged User Manager services stop and start efficiently.
- ♦ Complete product branding to Novell Privileged User Manager
- ♦ Package updates are delivered as a .tar.gz file, which can be manually imported into new or existing Package Managers.
- ♦ The Access Manager Console has been renamed to Framework User Manager.

Licensing

- ♦ Privileged User Manager 2.2 no longer requires you to enter a serial number to generate the initial license request. Novell can now supply the license certificate directly after an installation.
- ♦ Existing customers running 2.1.x can still use the previous method of generating and supplying licenses.

Command Control

- ♦ Command Control Reports now has a *Save* option while being edited (click *Home > Command Control > Reports > Modify/New Report*).

Installation Requirements

2

- ♦ Section 2.1, “Software Prerequisites,” on page 13
- ♦ Section 2.2, “Supported Platforms,” on page 13
- ♦ Section 2.3, “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 60-day license for five agents, one of which is the manager.

2.2 Supported Platforms

- ♦ IBM® AIX® 4.2, 4.3.x, 5.x, and 6L
- ♦ HP-UX® (PA-RISC) 10.20, 11, 11iv1, 11iv2, and 11iv3
- ♦ HP-UX (Itanium®) 11iv1, 11iv2, and 11iv3
- ♦ Linux Kernel 2.4
- ♦ SUSE® Linux Enterprise Server 9, 10, and 11
- ♦ openSUSE®
- ♦ Red Hat® 9, RHEL v3, v4, and v5
- ♦ Red Hat Fedora®
- ♦ CentOS Linux
- ♦ Sun® Solaris® (SPARC®) 2.6, 2.7, 8, 9, and 10
- ♦ Sun Solaris (Intel®) 8, 9, and 10
- ♦ HP Tru64® UNIX 4.x, 5.x
- ♦ VMware® ESX 3.x

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

The Framework Manager can also be installed on Windows® 2000, 2003, and XP. There is no agent software for the Windows platforms.

2.3 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 21](#).
- 3 Install the Privileged User Manager license. See [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

By default, new installations are provided with a 60-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 22](#).
- 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.

Installing the Framework Manager

3

- ♦ [Section 3.1, “Installing a Framework Manager,” on page 15](#)
- ♦ [Section 3.2, “Accessing the Framework Console,” on page 21](#)
- ♦ [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#)
- ♦ [Section 3.4, “Setting Up a Package Manager,” on page 22](#)
- ♦ [Section 3.5, “Stopping and Restarting the Framework,” on page 23](#)
- ♦ [Section 3.6, “Removing the Framework Manager,” on page 25](#)

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 17](#)
- ♦ [Section 3.1.4, “Solaris Framework Manager Install,” on page 18](#)
- ♦ [Section 3.1.5, “Tru64 Framework Manager Install,” on page 19](#)
- ♦ [Section 3.1.6, “Windows Framework Manager Install,” on page 20](#)

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 novell-npum-manager-X.X-aix-X.X-powerpc.bff.gz
```

- 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.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4550) [aix-5.1-powerpc]
Database Version 3.5.7
[admin 2.2.0 (Rev:14979,Bld:4550) ] module loaded
[audit 2.2.0 (Rev:14937,Bld:4550) ] module loaded
[auth 2.2.0 (Rev:14897,Bld:4550) ] module loaded
[cmdctrl 2.2.0 (Rev:14867,Bld:4550) ] module loaded
[distrib 2.2.0 (Rev:14601,Bld:4550) ] module loaded
[msggagnt 2.2.0 (Rev:14842,Bld:4550) ] module loaded
[pkgman 2.2.0 (Rev:14972,Bld:4550) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4550) ] module loaded
[registry 2.2.0 (Rev:14926,Bld:4550) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4550) ] module loaded
[secaudit 2.2.0 (Rev:14793,Bld:4550) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4550) ] module loaded
Service listening on 0.0.0.0:29120
Service listening on 0.0.0.0:443
Checking service registration for asia (asia)
valid from Mon Mar 09 16:34:59 2009 to Mon Apr 06 17:34:59 2009 (registry
offset 0 seconds)
```

- 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 21](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

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:
For HP/PA:

```
gunzip novell-npum-manager-X.X-hpux-X.X.hppa.depot.gz
```


For ITA:

```
gunzip novell-npum-manager-X.X-hpux-X.X.ita.depot.gz
```
- 2 After the HP-UX installation package is uncompressed, use the following command to install the manager:
For HP/PA:

```
swinstall -s /<directory of .deopt file>/novell-npum-manager-X.X-hpux-X.X.hppa.depot \*
```


For ITA:

```
swinstall -s /<directory of .deopt file>/novell-npum-manager-  
X.X-hpux-X.X.ita.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.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4552) [hpux-11.23-ia64]
Database Version 3.5.7
[admin 2.2.0 (Rev:14979,Bld:4552) ] module loaded
[audit 2.2.0 (Rev:14937,Bld:4552) ] module loaded
[auth 2.2.0 (Rev:14897,Bld:4552) ] module loaded
[cmdctrl 2.2.0 (Rev:14867,Bld:4552) ] module loaded
[distrib 2.2.0 (Rev:14601,Bld:4552) ] module loaded
[msggagnt 2.2.0 (Rev:14842,Bld:4552) ] module loaded
[pkgman 2.2.0 (Rev:14972,Bld:4552) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4552) ] module loaded
[registry 2.2.0 (Rev:14926,Bld:4552) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4552) ] module loaded
[secaudit 2.2.0 (Rev:14793,Bld:4552) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4552) ] module loaded
Service listening on 0.0.0.0:29120
Service listening on 0.0.0.0:443
Checking service registration for ice (ice)
valid from Mon Mar 09 16:31:49 2009 to Mon Apr 06 17:31:49 2009 (registry
offset 0 seconds)
```

- 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 21](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

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 Run the following command:

```
rpm -i novell-npum-manager-X.X-linux-X.X-intel.rpm
```

- 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.

You should see an output similar to the following:

```

=====
Version 2.2.0 (Rev:14967,Bld:4552) [linux-2.6-intel]
Database Version 3.5.7
[admin 2.2.0 (Rev:14979,Bld:4552) ] module loaded
[audit 2.2.0 (Rev:14937,Bld:4552) ] module loaded
[auth 2.2.0 (Rev:14897,Bld:4552) ] module loaded
[cmdctrl 2.2.0 (Rev:14867,Bld:4552) ] module loaded
[distrib 2.2.0 (Rev:14601,Bld:4552) ] module loaded
[msggagt 2.2.0 (Rev:14842,Bld:4552) ] module loaded
[pkgman 2.2.0 (Rev:14972,Bld:4552) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4552) ] module loaded
[registry 2.2.0 (Rev:14926,Bld:4552) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4552) ] module loaded
[secaudit 2.2.0 (Rev:14793,Bld:4552) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4552) ] module loaded
Service listening on 0.0.0.0:29120
Service listening on 0.0.0.0:443
Checking service registration for sled10 (sled10)
valid from Mon Mar 09 18:18:27 2009 to Mon Apr 06 19:18:27 2009 (registry
offset 0 seconds)

```

- 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 21](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

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:

For SPARC:

```
gunzip novell-npum-manager-X.X-solaris-X.X-sparc.pkg.gz
```

For Intel:

```
gunzip novell-npum-manager-X.X-solaris-X.X-intel.pkg.gz
```

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

For SPARC:

```
pkgadd - d /<directory of .pkg file>/novell-npum-manager-X.X-
solaris-X.X-sparc.pkg
```

For Intel:

```
pkgadd - d /<directory of .pkg file>/novell-npum-manager-X.X-
solaris-X.X-intel.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.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4552) [solaris-2.10-sparc]
Database Version 3.5.7
[admin 2.2.0 (Rev:14979,Bld:4552) ] module loaded
[audit 2.2.0 (Rev:14937,Bld:4552) ] module loaded
[auth 2.2.0 (Rev:14897,Bld:4552) ] module loaded
[cmdctrl 2.2.0 (Rev:14867,Bld:4552) ] module loaded
[distrib 2.2.0 (Rev:14601,Bld:4552) ] module loaded
[msggagnt 2.2.0 (Rev:14842,Bld:4552) ] module loaded
[pkgman 2.2.0 (Rev:14972,Bld:4552) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4552) ] module loaded
[registry 2.2.0 (Rev:14926,Bld:4552) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4552) ] module loaded
[secaudit 2.2.0 (Rev:14793,Bld:4552) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4552) ] module loaded
Service listening on 0.0.0.0:29120
Service listening on 0.0.0.0:443
Checking service registration for snow (snow)
valid from Mon Mar 09 17:24:28 2009 to Mon Apr 06 18:24:28 2009 (registry
offset 0 seconds)
```

- 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 21](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

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 novell-npum-manager-X.X-tru64-X.X-alpha.tar.gz
tar -xvf novell-npum-manager-X.X-tru64-X.X-alpha.tar
```

- 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.

You should see an output similar to the following:

```

=====
Version 2.2.0 (Rev:14967,Bld:4551) [tru64-5.1-alpha]
Database Version 3.5.7
[admin 2.2.0 (Rev:14979,Bld:4551) ] module loaded
[audit 2.2.0 (Rev:14937,Bld:4551) ] module loaded
[auth 2.2.0 (Rev:14897,Bld:4551) ] module loaded
[cmdctrl 2.2.0 (Rev:14867,Bld:4551) ] module loaded
[distrib 2.2.0 (Rev:14601,Bld:4551) ] module loaded
[msggagt 2.2.0 (Rev:0,Bld:4551) ] module loaded
[pkgman 2.2.0 (Rev:14972,Bld:4551) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4551) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4551) ] module loaded
[registry 2.2.0 (Rev:14926,Bld:4551) ] module loaded
[secaudit 2.2.0 (Rev:0,Bld:4551) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4551) ] module loaded
Service listening on 0.0.0.0:29120
Service listening on 0.0.0.0:443
Checking service registration for trudy.4tfi.com (trudy.4tfi.com)
valid from Mon Mar 09 16:42:59 2009 to Mon Apr 06 17:42:59 2009 (registry off
set 0 seconds)

```

- 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 21](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

3.1.6 Windows Framework Manager Install

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

```
novell-npum-manager-X.X-windows-5.0-intel.exe
```

- 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.

You should see an output similar to the following:

```

=====
Version 2.2.0 (Rev:14967,Bld:4554) [windows-5.0-intel]
Database Version 3.5.7
Parent (1508) starting child
=====
Version 2.2.0 (Rev:14967,Bld:4554) [windows-5.0-intel]
Database Version 3.5.7
Child (1520) main thread starting
[admin 2.2.0 (Rev:14979,Bld:4554) ] module loaded
[audit 2.2.0 (Rev:14937,Bld:4554) ] module loaded
[auth 2.2.0 (Rev:14897,Bld:4554) ] module loaded
[cmdctrl 2.2.0 (Rev:14867,Bld:4554) ] module loaded
[distrib 2.2.0 (Rev:14601,Bld:4554) ] module loaded
[msggagt 2.2.0 (Rev:14842,Bld:4554) ] module loaded
[pkgman 2.2.0 (Rev:14972,Bld:4554) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4554) ] module loaded
[registry 2.2.0 (Rev:14926,Bld:4554) ] module loaded

```

```
[secaudit 2.2.0 (Rev:14793,Bld:4554) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4554) ] module loaded
Service listening on 0.0.0.0:29120
Service listening on 0.0.0.0:443
Checking service registration for wanda (wanda)
valid from Tue Mar 10 11:12:34 2009 to Tue Apr 07 12:12:34 2009 (registry
offset 0 seconds)
```

- 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 21](#), and then [Section 3.3, “Installing a Novell Privileged User Manager License,” on page 22](#).

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 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, for example:

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 22](#).

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 [Section 3.4, “Setting Up a Package Manager,”](#) on page 22

3.4 Setting Up a Package Manager

To use the Package Manager, you need to configure your Framework Manager to act as a local 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.

- 1 Create a directory such as `framework` on the Framework Manager.
This directory is called `framework` in the rest of these instructions.
- 2 Copy the `novell-npum-packages-2.2.0.tar.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-2.2.0.tar.gz
tar -xvf novell-npum-packages-2.2.0.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
framework
```

For Windows platforms:

```
c:\Program Files\novell\npum\bin\unifi -u <admin> distrib
publish -d 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 23](#)
- ♦ [Section 3.5.2, “HP-UX,” on page 23](#)
- ♦ [Section 3.5.3, “Linux,” on page 23](#)
- ♦ [Section 3.5.4, “Solaris,” on page 24](#)
- ♦ [Section 3.5.5, “Tru64,” on page 24](#)
- ♦ [Section 3.5.6, “Windows,” on page 25](#)

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 25](#)
- ♦ [Section 3.6.2, “HP-UX Manager Uninstall,” on page 25](#)
- ♦ [Section 3.6.3, “Linux Manager Uninstall,” on page 26](#)
- ♦ [Section 3.6.4, “Solaris Manager Uninstall,” on page 26](#)
- ♦ [Section 3.6.5, “Tru64 Manager Uninstall,” on page 26](#)
- ♦ [Section 3.6.6, “Windows Manager Uninstall,” on page 26](#)

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` 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` 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` 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` 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` 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

- ♦ [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, “Installing and Registering a Framework Agent,” on page 28](#)
- ♦ [Section 4.4, “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 4.3, “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 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 new top-level domain, click *Hosts* from the *Navigation Pane*. If you want to add a new subdomain to an existing domain, select the required domain.
 - 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 4.3, “Installing and Registering a Framework Agent,” on page 28](#).

4.3 Installing and Registering a Framework Agent

Currently the Framework Agent is available for installation on the platforms listed below. Refer to [Section 2.2, “Supported Platforms,” on page 13](#) for more information regarding supported versions.

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

- ♦ [Section 4.3.1, “AIX Agent Install,” on page 28](#)
- ♦ [Section 4.3.2, “HP-UX Agent Install,” on page 29](#)
- ♦ [Section 4.3.3, “Linux Agent Install,” on page 30](#)
- ♦ [Section 4.3.4, “Solaris Agent Install,” on page 31](#)
- ♦ [Section 4.3.5, “Tru64 Agent Install,” on page 32](#)

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

4.3.1 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 novell-npum-agent-X.X-aix-X.X-powerpc.bff.gz
```

- 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> novellnpum
```

- 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.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4554) [aix-5.1-powerpc]
Database Version 3.5.7
[distrib 2.2.0 (Rev:14601,Bld:4554) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4554) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4554) ] module loaded
```

```
[strfwd 2.2.0 (Rev:14872,Bld:4554) ] module loaded
Service listening on 0.0.0.0:29120
Checking service registration for asia (asia)
valid from Tue Mar 10 16:01:02 2009 to Tue Apr 07 17:01:02 2009 (registry
offset 0 seconds)
```

- 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.

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](#)).

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.

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.

4.3.2 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:

For HP/PA:

```
gunzip novell-npum-agent-X.X-hpux-X.X.hppa.depot.gz
```

For ITA:

```
gunzip novell-npum-agent-X.X-hpux-X.X.ita.depot.gz
```

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

For HP/PA:

```
swinstall -s /<directory of .deopt file>/novell-npum-agent-X.X-
hpux-X.X.hppa.depot \*
```

For ITA:

```
swinstall -s /<directory of .deopt file>/novell-npum-agent-X.X-
hpux-X.X.ita.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.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4555) [hpux-11.23-hppa]
Database Version 3.5.7
[distrib 2.2.0 (Rev:14601,Bld:4555) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4555) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4555) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4555) ] module loaded
Service listening on 0.0.0.0:29120
Checking service registration for haven (haven)
valid from Tue Mar 10 15:02:52 2009 to Tue Apr 07 16:02:52 2009 (registry
offset 0 seconds)
```

- 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.

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](#)).

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.

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.

4.3.3 Linux Agent Install

Red Hat 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 Run the following command:

```
rpm -i novell-npum-agent-X.X-linux-X.X-intel.rpm
```

- 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.

```

=====
Version 2.2.0 (Rev:14967,Bld:4555) [linux-2.6-intel]
Database Version 3.5.7
[distrib 2.2.0 (Rev:14601,Bld:4555) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4555) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4555) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4555) ] module loaded
Service listening on 0.0.0.0:29120
Checking service registration for sled10 (sled10)
valid from Tue Mar 10 18:02:53 2009 to Tue Apr 07 19:02:53 2009 (registry
offset 0 seconds)

```

- 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.

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](#)).

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.

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.

4.3.4 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:

For SPARC:

```
gunzip novell-npum-agent-X.X-solaris-X.X-sparc.pkg.gz
```

For Intel:

```
gunzip novell-npum-agent-X.X-solaris-X.X-intel.pkg.gz
```

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

For SPARC:

```
pkgadd - d /<directory of .pkg file>/novell-npum-agent-X.X-  
solaris-X.X-sparc.pkg
```

For Intel:

```
pkgadd - d /<directory of .pkg file>/novell-npum-agent-X.X-  
solaris-X.X-intel.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 used.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4555)  [solaris-2.9-sparc]
Database Version 3.5.7
[distrib 2.2.0 (Rev:14601,Bld:4555) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4555) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4555) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4555) ] module loaded
Service listening on 0.0.0.0:29120
Checking service registration for sally (sally)
valid from Tue Mar 10 16:03:34 2009 to Tue Apr 07 17:03:34 2009 (registry
offset 0 seconds)
```

- 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.

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](#)).

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.

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.

4.3.5 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 novell-npum-agent-X.X-tru64-X.X-alpha.tar.gz
tar -xvf novell-npum -agent-X.X-tru64-X.X-alpha.tar
```

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

```
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.

You should see an output similar to the following:

```
=====
Version 2.2.0 (Rev:14967,Bld:4555) [tru64-4.0-alpha]
Database Version 3.4.2
[distrib 2.2.0 (Rev:14601,Bld:4555) ] module loaded
[regclnt 2.2.0 (Rev:14845,Bld:4555) ] module loaded
[rexec 2.2.0 (Rev:14949,Bld:4555) ] module loaded
[strfwd 2.2.0 (Rev:14872,Bld:4555) ] module loaded
Service listening on 0.0.0.0:29120
Checking service registration for trinity (trinity)
valid from Tue Mar 10 16:13:39 2009 to Tue Apr 07 17:13:39 2009 (registry off
set 0 seconds)
```

- 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.

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](#)).

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.

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 Removing the Agent Components

- ♦ [Section 4.4.1, “AIX Agent Uninstall,” on page 34](#)
- ♦ [Section 4.4.2, “HP-UX Agent Uninstall,” on page 34](#)
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4.4.1 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` directory.

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

4.4.2 HP-UX Agent Uninstall

- 1 Enter the following command:

```
swremove novell-npum
```

IMPORTANT: This action cannot be undone.

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

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

4.4.3 Linux Agent Uninstall

- 1 Enter the following command:

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

IMPORTANT: This action cannot be undone.

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

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

4.4.4 Solaris Agent Uninstall

- 1 Enter the following command:

```
pkgrm novell-npum
```

IMPORTANT: This action cannot be undone.

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

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

4.4.5 Tru64 Agent Uninstall

If required you can uninstall the agent from your system using the following steps:

- 1 Enter the following command:

```
setld -d NOVELLNPUMXXX
```

IMPORTANT: This action cannot be undone.

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

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

