HP OpenView Network Node Manager

Quick Start Installation Guide

For HP-UX operating systems

Manufacturing Part Number : T2490-90035
May 2006
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Support

Please visit the HP OpenView web site at:

http://openview.hp.com/

There you will find contact information and details about the products, services, and support that HP OpenView offers.

You can go directly to the HP OpenView support web site at:

http://support.openview.hp.com/

The support site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information
1 Installing the Software

This guide will help you install HP OpenView Network Node Manager on an HP-UX system.

NOTE

Installation procedures for NNM Starter Edition and NNM Advanced Edition are the same. Throughout this document, references to “NNM” should be taken to include either edition.

There are several tasks to complete during the installation process:

- Match your system’s setup to the NNM minimum requirements.
- Complete any necessary pre-installation steps.
- Install the NNM software.
- Run the NNM software.
- Obtain a permanent license password for your NNM software.
- Configure NNM to access the HP OpenView Web interface.

Once you have successfully installed NNM, refer to the last section in this guide, for “where-to-go-next” information on configuring and using your NNM product.

IMPORTANT

The NNM CD-ROMs use the “Rock Ridge” format, and HP-UX 11.0 and HP-UX 11.11 systems require a system patch in order to read them correctly. (HP-UX 11.23 does not need a patch.)

The CD-ROMs may appear to mount correctly on an unpatched HP-UX 11.0 or HP UX 11.11 system. However, software installation will fail, because the system can not find certain files on the CD ROM.

Note that the issue causes problems in reading the CD-ROM. It has nothing to do with the NNM installation process and could easily arise when reading other CD-ROMs.

To avoid any problems, you should patch the system where the NNM CD-ROMs will be mounted, as described below. Note that this is not necessarily the system where NNM is to be installed.

To obtain and apply the patch, follow these steps:
1. Visit http://www4.itrc.hp.com/service/index.html and follow the “patch database” link to download the appropriate patch for your system:

   HP-UX 11.0:    **PHKL_28060** - s700_800 11.00 Y2k; Rock Ridge extension for ISO-9660
   HP-UX 11.11:    **PHKL_28025** - s700_800 11.11 Rock Ridge extension for ISO-9660

2. Apply the patch on the system where the CD-ROM will be mounted as follows:

   a. Unpack the patch using this command:
      
   sh patchname

   b. Apply the patch using this command:
      
   swinstall -s patchname.depot

   A system reboot is necessary after the patch is applied.
Task 1: Checking System Requirements

Before starting, you or your system administrator should check that your system meets the minimum hardware and software requirements.

Refer to the Release Notes for system requirements information. You can access the Release Notes from the CD. The Release Notes are in the README.html file.

Before installing this product, you should read the Release Notes for information about supported configurations. To access the Release Notes, follow these instructions:

1. Login with root privileges to the system where you plan to install the product.
2. Insert the disk labeled “cd 1 of 2” into your CD drive.
3. Enter: /etc/mount /dev/dsk/device_name /cdrom where device_name is the specific name of your CD drive.
4. Point your web browser to /cdrom/README.html
5. From the left pane of the Release Notes click on Supported Configurations.
Task 2: Completing Pre-Installation Steps

To ensure that all products installed on your system run compatibly and efficiently with NNM, there are several preparatory steps you need to do before you actually install the NNM Advanced Edition or NNM Starter Edition product.

General Configuration

1. If your system has other HP OpenView products installed on it, refer to the HP OpenView Network Node Manager Migration Guide. This guide describes which HP OpenView products are compatible with the version of NNM that you are now installing.

2. If you have an older version of NNM already installed on your system, refer to the HP OpenView Network Node Manager Migration Guide before proceeding. That guide describes how to migrate from your current NNM version to the NNM version you just purchased.

3. Install any needed patches as listed in the Release Notes. You can access the Release Notes from the CD. The Release Notes are in the README.html file.

   From the left pane of the Release Notes, double-click on Supported Configurations.

4. Set the DISPLAY environment variable to the appropriate value.

   Also, run the xhost command to allow connection from the system running NNM to the system displaying NNM.

5. Install the products and/or patches described in the remainder of this section. Some of these products must be installed before you install NNM, while others are optional or not relevant to your network’s environment.

   • DHCP setup...depends on your network environment
   • Web browser installation...required
   • DCE Software for the NNM Syslog integration...optional
   • CDE Help file installation...required
DHCP Setup

Users of the Dynamic Host Configuration Protocol (DHCP) need to ensure that their NNM management station is assigned the same IP address each time it runs NNM.

You can specify a range of IP addresses that your network is configured to assign dynamically for mobile devices. NNM keeps the map clean and the Alarm Browser list free of unnecessary messages about devices within this address range as they are repeatedly attached and detached from your network. See Managing Your Network with HP OpenView Network Node Manager for more information.

Web Browser Installation

Many important NNM features are web-based, and require a web browser to be installed on the same system where NNM is installed. Furthermore, the Java-based graphical interfaces require a Java plug-in (JPI) for the browser.

Refer to the Release Notes for supported web browsers and JPI installation information. You can access the Release Notes from the CD. The Release Notes are in the README.html file.

From the left pane of the Release Notes, double-click on Supported Configurations.

To install the browser, follow the instructions that came with it. Be sure to configure any web proxies according to the browser’s instructions.

CDE Help Installation

The NNM installation program will check for these files and, if they are missing, give you instructions on how to obtain them.

Software Requirements for the Syslog Integration

The information in this section is important only if you intend to install the NNM Syslog integration functionality.

For more information on the NNM Syslog integration functionality, see the NNM Syslog Integration white paper.
Part of the configuration process for the Syslog integration includes installing an HP OpenView Operations (OVO) agent on the NNM management station. The embedded OVO agent requires two software components to be installed first:

- DCE RPC
- DCE-KT-Tools.

See the NNM Release Notes for more information on required software versions, and how to obtain the software.

You can access the NNM Release Notes from the CD. The Release Notes are in the README.html file. From the left pane of the Release Notes, double-click on Supported Configurations.
Task 3: Installing Network Node Manager

NOTE

During installation, you will be asked if you want to start NNM’s automated discovery. You may want to consider installing your permanent license password before letting discovery proceed for the first time.

Read “Before Installing Your Permanent License Password” on page 23 for important considerations. If you are upgrading from NNM 6.41 or earlier, read Upgrade Installations below, instead.

This section describes the ways you can install your NNM product:

- On a local HP-UX system (the most common type of installation).
- From a different HP-UX machine that has a CD-ROM drive (if your system does not).
- On a local HP-UX system to act as a management console connected to a management server (the console has HP OpenView Windows processes installed on it, while the server has NNM common databases and background processes on it).

NOTE

NNM requires specific fonts. After you have installed NNM, you can see which fonts are required by viewing the appropriate app-defaults files. The app-defaults files are located in /usr/lib/X11/app-defaults.

Upgrade Installations

If you are not upgrading from NNM 6.41 or earlier, skip this section.

Upgrades from NNM version 6.41 and earlier require a new license password; you cannot reuse the older license passwords. This creates a special situation for upgrade installations.

Read this section thoroughly to assure a smooth upgrade.
Before Installing Anything

If you are currently managing more nodes than your new permanent license will support, you should unmanage non-essential nodes down to the limit of your new license before installing either your new license password or the NNM software.

Otherwise, when your new permanent license password takes effect, NNM will automatically unmanage nodes of its choosing to achieve the license limit. The resulting management domain may not be ideal, and require additional effort to manage or unmanage nodes.

To determine how many nodes you are currently managing, run the following command:

$OV_BIN/ovtopodump -l

From the output of this command, use the MANAGED NODES value to see if your new license will cover the number of nodes you are actually managing.

If you need to make adjustments, see Managing Your Network with NNM for techniques to expand or limit your management domain, either automatically or interactively.

Before Installing the NNM Software

After you are sure that the node limit of your new license is adequate for your management domain, HP strongly recommends that you obtain and install your new license password before you install this software.

In the absence of a new permanent license password, NNM will start up with a temporary “Instant-On” license that has no upper limit on managed nodes.

CAUTION

During the time an unlimited temporary license is in effect, NNM could potentially discover and manage more nodes than your permanent license will ultimately permit, and thus inadvertently expand your management domain beyond its final extent.

In that case, when your permanent license takes effect, NNM will automatically unmanage nodes of its choosing to achieve the licensed level. The result would probably not match your original management domain, and it would require additional effort to restore it.
To avoid the issue just described, you must do one of the following:

- HP recommends that you install your new NNM license password before installing the software, following the steps in “Before Installing Anything” on page 16, “Obtaining Your License Password” on page 17, and “Pre-installing Your License Password” on page 18. This approach avoids any potential inconvenience.

  If you decide to pre-install the NNM 7.x license password, you should plan to install the new software immediately afterward. Continuing to run NNM 6.x after installing your NNM 7.x license password can cause NNM to fail.

- If you decide not to pre-install your new license password, HP strongly recommends that you turn off automatic discovery before installing the new software. This prevents NNM from discovering a larger than intended management domain. After installing the new license password, you can restore automatic discovery.

  Follow these steps to turn off automatic discovery before software installation:

  1. With root privileges, run the following command:

     $OV_BIN/xnmpolling

  2. Under IP Discovery, uncheck the Discover New IP Nodes box to disable automatic discovery.

     You can then safely install your new NNM software and let it run with the temporary license. It will not automatically extend discovery beyond your current management domain.

     Eventually, after installing your permanent license password, you can run xnmpolling as above, and checkmark the Discover New IP Nodes box to re-enable automatic discovery.

**Obtaining Your License Password**

If you already have your new license password, save it exactly as it was given to you, including punctuation, into a text file (for example, /tmp/my_pass.txt). Then install the password as described in “Pre-installing Your License Password” on page 18.

If you do not have your license password yet, you will have to obtain one. To request a permanent license password, follow the instructions in the NNM upgrade letter you received with the software. That document
Installing the Software
Task 3: Installing Network Node Manager

provides the information you need to access the password migration service at http://webware.hp.com. You will need the IP address of the computer you are upgrading.

After following the password migration instructions at http://webware.hp.com, save the license password to a text file, exactly as it was given to you, including punctuation.

Pre-installing Your License Password
Install your new license password on an NNM 6.4x system as follows. With root privileges, execute the following command:

```bash
$OV_BIN/ovnnmInstallLic license_file
```

For example:

```bash
$OV_BIN/ovnnmInstallLic /tmp/my_pass.txt
```

NOTE
Versions of NNM prior to NNM 7.0 cannot display a license password for NNM 7.0 and above. You can install the license as shown above, but until you install the new software, you cannot display it in the conventional way. If necessary, you can view the license information in

```bash
$OV_CONF/.license
```

Installing NNM on a Local System

NOTE
If you already have NNM 7.5 installed, go to step 10.

The following procedure will help you install the NNM product on your local system. Each CD in your media pack is installed separately.

1. Log in as root to the system where you will install NNM.
2. If you are upgrading from a previous version of NNM, make sure no HP OpenView processes are running.
3. Insert the NNM 7.5 CD 1 of 2 from your NNM media pack into the CD_ROM drive.
4. Mount the CD-ROM drive by typing:
Installing the Software

Task 3: Installing Network Node Manager

1. /etc/mount /dev/dsk/device_name /cdrom
   where device_name is the specific name of your CD drive.

5. Use the cd command to change to the /cdrom directory.

6. Start the installation program by typing:

   ./install

7. An installation program will appear on the screen. It will display messages about the various NNM components being installed. The program will also occasionally prompt you to answer specific questions about the type of NNM installation you want.

   Should an error occur, a message will appear on the screen that describes the error and ways to fix it. Should a fatal error occur, the installation program will stop, terminate itself, and display a message on the screen that describes the problem. At this point, you must fix the error, then re-run the installation program in order to install NNM.

8. Unmount the cdrom directory by typing:

   cd /
   umount /cdrom

9. Repeat steps 3 through 8 for the NNM 7.5 CD 2 of 2 in your media pack.

10. To upgrade from NNM 7.5 to 7.51, repeat steps 2 through 8 for the NNM 7.51 Update CD in your media pack.

Installing NNM from a Remote System with a CD-ROM Drive

If your system (target system) does not have a CD-ROM drive attached, you can use another system (source system) with a CD-ROM drive to install NNM on your system.

The following example explains the steps you must take for each CD in your media pack.
NOTE

If NNM 7.5 is already installed on your system, you only need to install the NNM 7.51 Update CD.

On the source system where the CD-ROM drive is located, do the following:

1. Log in as root.
2. Insert your NNM CD into the CD-ROM drive.
3. Mount the CD-ROM disk by typing:
   
   ```
   /etc/mount /dev/dsk/device_name /cdrom
   ```

   where `device_name` is the specific name of your CD drive

4. Export the CD-ROM file system so that the target workstation can NFS mount it by following steps a and b below:

   In the examples below, `marion` is the name of the source workstation where the CD-ROM drive is physically mounted, and `marvin` is the name of the target workstation.

   a. Add the following line to the file, `/etc/exports`:

   ```
   /cdrom -ro,root=marvin
   ```

   b. Export the file system with the following command:

   ```
   /usr/sbin/exportfs -a
   ```

On the target system where you want to install the NNM product, do the following:

1. If you are upgrading from a previous version of NNM, make sure that no HP OpenView processes are running.
2. NFS mount the CD-ROM file system (at `/cdrom`, for example). Execute the commands:

   ```
   mkdir /cdrom
   ```

   ```
   mount marion:/cdrom /cdrom
   ```

3. To go to the directory where you mounted the CD-ROM file system, execute this command:

   ```
   cd /cdrom
   ```
4. To install your NNM product, execute this command:

   ./install

5. An installation program will appear on the screen. It will display messages about the various NNM components being installed. The program will also occasionally prompt you to answer specific questions about the type of NNM installation you want.

   Should an error occur, a message will appear on the screen that describes the error and ways to fix it. Should a fatal error occur, the installation program will stop, terminate itself, and display a message on the screen that describes the problem. At this point, you must fix the error, then re-run the installation program in order to install NNM.

6. Unmount the cdrom directory by typing:

   cd /
   umount /cdrom

---

**NOTE**

For each CD in your media pack, repeat steps 2 through 4 on the source system and steps 2 through 6 on the target system.

---

**Installing NNM on a Local System as a Management Console**

For this type of installation, refer to the printed manual, *A Guide to Distribution and Scalability for Network Node Manager*. This guide contains planning guidelines as well as installation procedures for setting up a management console/server-based network.
Task 4: Running Network Node Manager

NOTE
You may want to consider installing your permanent license password before starting NNM for the first time. See “Before Installing Your Permanent License Password” on page 23 for important considerations.

In this task, you will verify that NNM was installed and runs correctly within its native graphical user interface (GUI), HP OpenView Windows.

1. If NNM is not currently running, start it up. As root, type
   
   /opt/OV/bin/ovstart -c

2. Make sure the NNM background processes have started. As root, type
   
   /opt/OV/bin/ovstatus -c

   You should see on the screen several lists of the processes (such as netmon, ovtopmd, and pmd) that are running.

3. Start the HP OpenView Windows GUI. Type
   
   /opt/OV/bin/ovw

   You will see the HP OpenView welcome banner, followed by an NNM Root submap window with a default map in it.

4. Each time you start the NNM GUI, it will encourage you to register your NNM product if you have not already done so. You have 60 days from the date of installation to complete this registration process (described in “Task 5: Registering Your Network Node Manager Product” on page 23).

5. Note that many NNM features are web-based. To use these features, see “Task 6: Configuring Network Node Manager for the Web” on page 25 for instructions on how to configure NNM to run within the HP OpenView Web environment.

6. If you have purchased NNM Advanced Edition, at some point you will probably want to enable the Extended Topology functionality included with that product. See the Using Extended Topology manual for guidelines on how to proceed.
Task 5: Registering Your Network Node Manager Product

Your NNM product includes a temporary “Instant-On” license password. This lets you use the product for 60 days after you install it. Once you have installed NNM, you should obtain and install a permanent license password as soon as possible.

A permanent license password is required if you want to run NNM on a management station or collection station. No additional license password is needed to run NNM on a remote console. See the Guide to Scalability and Distribution for details about remote consoles.

Before Installing Your Permanent License Password

In the absence of a permanent license password, NNM starts up with temporary “Instant-On” license that has no upper limit on managed nodes.

If you have been running NNM using the Instant-On license, you may be managing more nodes than your permanent license will support. You should unmanage non-essential nodes down to the limit of your permanent license before installing your new license password.

Otherwise, when your permanent license password takes effect, NNM will automatically unmanage nodes of its choosing to achieve the license limit. The resulting management domain may not be ideal, and require additional effort to manage or unmanage nodes.

To determine how many nodes you are currently managing, run the following command:

```
$OV_BIN/ovtopodump -l
```

From the output of this command, use the MANAGED NODES value to see if your permanent license will cover the number of nodes you are actually managing.

If you need to make adjustments, see Managing Your Network with NNM for techniques to expand or limit your management domain, either automatically or interactively.
Installing the Software
Task 5: Registering Your Network Node Manager Product

Obtaining and Installing a Permanent License Password

IMPORTANT

If you are upgrading from NNM 6.41, do not follow the procedure described here. See “Upgrade Installations” on page 15 for special instructions.

To request a permanent license password, you need the following:

- The Entitlement Certificate, which contains the HP product number and order number.
- The IP address of the server.
- Your company or organization information.

With that information in hand, proceed as follows:

1. Launch NNM’s License Password dialog in one of the following ways:
   - Execute the \$OV_BIN/ovnmPassword command from the command line.
   - Restart NNM (ovw).
   - Select Options:License Password from the NNM menu.

2. From the License Password dialog, click the Request License button to request your permanent license password.

3. Follow the on-screen instructions. When you are done, your new license password will have been installed.
Task 6: Configuring Network Node Manager for the Web

In this task, you will configure NNM so that you can access it via the Java-based HP OpenView Launcher interfaces. This lets you use certain web-enabled NNM features at remote workstations.

Note that these steps are not related to or required for you to use Home Base or the Dynamic Views features of NNM.

Running NNM on the Web

1. If necessary, install a web browser.
2. Make sure the NNM background processes are running. As root, type at a command prompt

   /opt/OV/bin/ovstart -c

3. Start the NNM graphical interface by entering the following:

   /opt/OV/bin/ovw

4. If necessary, start your web browser.
5. To access NNM via the HP OpenView Launcher GUI, use either method below:

   - If NNM is running on your system, select the Tools:HP OpenView Launcher item from the NNM menu bar. The Launcher window will appear.

   - If NNM is running on a system other than yours, open up a web browser on your system. In the browser's Location field, specify one of the following URLs (where hostname is the full domain name of your web server, such as mymachine.myco.com).

     - For a system running a UNIX® operating systems:
       
       http://hostname:3443/OvCgi/ovlaunch.exe

     - For a system running a Windows operating system:
       
       http://hostname/OvCgi/ovlaunch.exe
Uninstalling Network Node Manager

If you need to remove Network Node Manager or HP OpenView Customer Views for NNM from your computer, follow these steps.

1. Stop any HP OpenView processes by executing $OV_BIN/ovstop.
2. Run the remove script: $OV_BIN/remove.nnm.
Where to go Next...

Once you have installed and licensed your NNM product, you will want to configure it to best meet your needs. Refer to *Managing Your Network with HP OpenView Network Node Manager* for guidance about configuring NNM. The following table lists several sources that can help you get started using NNM. A more comprehensive list of information sources is provided in Chapter 3 of the printed manual, *Managing Your Network with HP OpenView Network Node Manager*.

<table>
<thead>
<tr>
<th>Type of Information</th>
<th>Specific Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hewlett-Packard Support</td>
<td>Go to the HP OpenView web site at the following URL: <a href="http://openview.hp.com">http://openview.hp.com</a></td>
</tr>
<tr>
<td>User Documentation</td>
<td>These are available in printed format, online format, or both.</td>
</tr>
<tr>
<td></td>
<td>- For document descriptions, refer to Chapter 3 of the printed manual, <em>Managing Your Network with HP OpenView Network Node Manager</em>.</td>
</tr>
<tr>
<td></td>
<td>- To access these documents online, in the NNM menu bar select the Help:Online Manuals item.</td>
</tr>
<tr>
<td>Other Online Documentation</td>
<td>- Online Help System: In the NNM menu bar, select the Help:Online Help item.</td>
</tr>
<tr>
<td></td>
<td>- Release Notes: These are in the /opt/OV/www/htdocs/$LANG/ReleaseNotes directory.</td>
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