HP OpenView Network Node Manager Smart Plug-ins

Network Node Manager and Performance Insight Integration Module User's Guide

Software Version: 3.0

HP-UX, Solaris, and Windows® operating systems

Manufacturing Part Number: None

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Support

Please visit the HP OpenView support web site at:

http://www.hp.com/managementsoftware/support

This web site provides contact information and details about the products, services, and support that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by using the support site to:

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Revisions

This manual's title page contains the following identifying information:

- Version number, which indicates the software version.
- Print date, which changes each time the document is updated.

To check for recent updates or to verify that you are using the most recent edition, visit the following URL:

`http://ovweb.external.hp.com/lpe/doc_serv/`

Table 1 indicates changes made to this document since the last released edition.

Table 1 Changes in this document version

Chapter	Changes
Chapter 2, Installing the Integration Module	Provided description of Patch Levels and Port Numbers in the Pre-Installation Steps section. Updated Installing Integration Components on OVPI. Added sections on Installing the Service Pack on a UNIX System and Windows System. Updated Installing Integration Components on OVPI.

1 Introducing the NNM and OVPI Integration Module

Overview

The NNM and OVPI Integration Module creates tight linkages between HP OpenView Network Node Manager (NNM) and HP OpenView Performance Insight (OVPI). By joining fault management with performance management, the Integration Module enhances problem diagnostic capabilities.

Features and Benefits

The following list outlines the features of the NNM and OVPI Integration Module and its benefits to you:

- It provides additional performance data from NNM, which contributes to faster and easier resolution of network-based service level problems.
- It shares and synchronizes detailed topology information between NNM and OVPI databases to better enable NNM and OVPI to monitor and manage your environment.
- It can forward OVPI threshold traps to a specified NNM management station (or set of NNM management stations).
- It enables you to launch OVPI reports directly from an NNM map or the NNM alarm browser. Reports display information pertinent to the node or alarm from which the action is invoked.
- It can integrate other NNM Smart Plug-in and OpenView Performance Insight products, such as the NNM Event Report Pack, to further enhance the management and monitoring of networks.

Configuration Points

NNM Node Synchronization with OVPI

To take full advantage of the integration, NNM and OVPI should be managing the same devices. The Node (or Device List) Synchronization feature transfers information about some or all of the devices that NNM manages to OVPI so that OVPI can then perform type discovery and data collection on those devices.

The initial node synchronization takes place during installation of the node synchronization package on OVPI, and then runs automatically each day to ensure that NNM and OVPI stay synchronized. For more information about NNM Node Synchronization with OVPI, refer to “Configuring NNM Node Synchronization” on page 23.

NNM Trap Destination for OVPI Threshold Traps

When OVPI report packs containing threshold packages are installed, such as MPLS VPN, OVPI can generate threshold traps specific to that package. The OVPI thresholds feature forwards OVPI-generated threshold traps to designated NNM management stations to display in the alarm browser. NNM places these threshold traps in the OVPI Threshold Alarms category of the NNM alarm browser.

During the installation of the Integration Module, a default trap destination is defined. You must modify this default configuration to point to the NNM management stations that will receive the threshold traps. For more information about modifying the default configuration, refer to “Configuring an NNM Trap Destination for OVPI Threshold Traps” on page 26.

Launching OVPI Reports from NNM

The NNM and OVPI Integration Module provides you with the capability to launch performance reports about nodes in NNM. Reports display information pertinent to the node or alarm from which the action is invoked.

You can launch OVPI performance reports from the following NNM user interfaces:

- From the NNM alarms browser. See “Launching Reports from the Native NNM Alarm Browser” on page 35.
- From Dynamic Views. See “Launching Reports from NNM Dynamic Views” on page 39.
- From NNM maps. See “Launching Reports from an NNM Map” on page 41.

Use the OVPI Report Launchpad window to view a list of reports based on the node information from a selected device or alarm. Then select and launch the desired report from the Report Launchpad window.

Sources of Additional Information

The following documents are sources for additional information:

- NNM: *Creating and Using Registration Files*
- NNM: *Managing Your Network*
- OVPI: *Administration Guide*
- OVPI: *Guide to Building and Viewing Reports*
- OVPI: *Installation Guide*
- OVPI Reporting Solutions: *Interface Reporting Report Pack User Guide*
- OVPI Reporting Solutions: *Threshold and Event Generation Module User Guide*

2 Installing the Integration Module

Pre-Installation Steps

IMPORTANT You must install the NNM integration components on the NNM server *before* installing the OVPI integration components on the OVPI server. The reason is that OVPI synchronizes the device list by accessing components on the NNM management station.

Verify Patch Levels

Before installing the Integration Module, verify that you have installed the following software and all its prerequisites and patches:

- OV Performance Insight:
  - OVPI 5.1
  - The latest Service Pack
- Network Node Manager:
  - NNM 7.5
  - The latest consolidated patch

Service Packs and patches are available at:
http://support.openview.hp.com

Gather Port Numbers

The default port used by OVPI Application Server and NNM HTTPd is 80. If the default port number is being used by another component the installer presents an alternative value. Note the port number for later use. The port number can be found in the following files:

- For OVPI Application Server: `$DPIPE_HOME/data/config.prp`
- For NNM HTTPd: `$OV_CONF/ovweb.conf`

If you encounter problems while performing the installation, see “Troubleshooting” on page 46, as well as the latest *NNM and OVPI Integration Module Release Notes* for assistance.

Installing the Integration Module on NNM

Install on a UNIX Operating System

To install the NNM and OVPI Integration Module on an NNM management station with a UNIX® operating system, you must follow these steps:

1. Log on to the NNM management station as user `root`.
2. Download the following NNM OVPI Integration patches from the website http://support.openview.hp.com:
   - For HP-UX operating systems: PHSS_34612
   - For Solaris operating systems: PSOV_03446
3. To install the patch, refer to the patch text and perform the steps listed in the Installation Instructions section.
4. To run the `install.ovpl` script, perform the steps listed in the Special Installation Instructions section. `install.ovpl` script does the configuration for the NNM and OVPI Integration module. For more information about the `install.ovpl` script refer to “The install.ovpl Script” on page 50
5. When prompted, enter the fully-qualified name of the OVPI server and the port number of the OVPI web server.

Install on a Windows Operating System

To install the NNM and OVPI Integration Module on an NNM management station with a Windows® operating system, you must follow these steps:

1. Log on to the NNM management station as user `Administrator`.
2. Download the NNM OVPI Integration Windows OS patch—NNM_01124 from the website: http://support.openview.hp.com.
3. To install the patch, refer to the patch text and perform the steps listed in the Installation Instructions section.

4. To run the `install.ovpl` script, perform the steps listed in the Special Installation Instructions section. `install.ovpl` script does the configuration for the NNM and OVPI Integration module. For more information about the `install.ovpl` script refer to “The install.ovpl Script” on page 50
5. When prompted, enter the fully-qualified name of the OVPI server and the port number of the OVPI web server.

Installing Integration Components on OVPI

IMPORTANT You must install the NNM integration components on the NNM server before installing the OVPI integration components on the OVPI server.

NOTE The core components of OVPI and NNM integration module **NodeSync.jar** and **SyncNodeList.pl** are now shipped with OVPI product (both Service Pack and product releases). The Device Sync Report pack makes use of these integration components. Previously installed components of OVPI and NNM integration modules will be overwritten by the Service Pack (OVPI 5.1 Service Pack 4) installation.

IMPORTANT If you have previously installed Device Sync Report Pack, and you are updating OVPI service pack with version OVPI 5.1 Service Pack 4, uninstalling the Device Sync will remove the following components:
{DPIPE_HOME}/lib/NodeSync.jar
{DPIPE_HOME}/scripts/SyncNodeList.pl.
Back up the above files and copy them back to the same location after uninstalling the Device Sync Report Pack. The above mentioned components will not be part of the future Report Pack release.

For the Integration Module to function properly, the following packages must be installed and configured on the OVPI server:

- Install the Service Pack.
- Installing the NNM and OVPI integration components.

Install the Service Pack

This section describes the prerequisite installation tasks you need to perform before you install this service pack and the procedure to install this Service Pack.

Service Pack 4 contains all bug fixes from version 5.1. To view the previous list of bug fixes, refer to the Release Notes for version 5.1 Service Pack 3.

Before you install this Service Pack, make sure that you perform the following prerequisite tasks:

1. Notify users that the OVPI software will be temporarily unavailable while you install the Service Pack.
2. Back up the directory into which you installed OVPI before you install the Service Pack.
3. Use binary mode when you FTP the Service Pack.
4. Install OVPI 5.1 Service Pack 4 only once on each system.
5. Stop OVPI Timer and wait for all OVPI processes to stop. To stop OVPI Timer, do one of the following depending on your operating system.

   Solaris: Run the command: **`/etc/init.d/ovpi_timer stop`**

   HP-UX: Run the command: **`/sbin/init.d/ovpi_timer stop`**.

   Windows: Follow the steps below.

   a. From the Windows taskbar, click the Start button, point to Settings, and choose Control Panel. The Control Panel window appears.

   b. Double-click Administrative Tools, and then double-click Services. The Services window opens.

   c. Right -click the service (OVPI Timer).

   d. Select Stop from the shortcut menu. The Status column indicates if the selected service was successfully stopped.

The Service Pack will stop the necessary daemons (UNIX) or services (Windows) before it installs. It will then restart those daemons or services.

NOTE There is no utility to uninstall this Service Pack. If for some reason you need to remove the Service Pack, you will have to revert to the backup you made of the OVPI directory before you began the Service Pack installation.

Installing the Service Pack on a UNIX System

Before you install the Service Pack, make sure that you complete the prerequisite tasks described in the section above:

To install Service Pack 4 on UNIX:

1. Log on as root.
2. If the database is installed, ensure that it is running.
3. Change directory to the location of the service pack file.
4. To install the service pack, at the command line, type one of the following commands, depending on the type of your operating system:

   For HP-UX: **`sh ovpi51_sp4_hpux.sh`**

   For Solaris: **`sh ovpi51_sp4_solaris.sh`**

Installing the Service Pack on a Windows System

Before you install the Service Pack, make sure that you complete the prerequisite tasks described in the previous section.

To install Service Pack 4 on Windows:

1. Ensure that you have proper administrative privileges.
2. If the database is installed, ensure that it is running.
3. Double-click **ovpi51_sp4_windows.exe**. The Welcome page appears
4. Click **Extract.**
5. You must reboot your Windows system before you can use OVPI.

Installing the NNM and OVPI integration components

The following packages must be installed on the OVPI server:

- NNM Device Sync package, which is part of the Integration Module package. See “Configuring NNM Node Synchronization” on page 23.
- Thresholds package. See the Threshold and Event Generation Module User Guide.
- Interface Reporting ifEntry Sync Interfaces package (optional). See the Interface Reporting ifEntry Datapipe User Guide.

To install the NNM and OVPI integration components on an OVPI server, follow these steps:

1. Insert or mount the CD media into the CD-ROM drive.
2. Run the installation script:

   UNIX:
   From the CD’s top-level directory, as user `root`, execute:
   `./setup`

   Windows:
   The installation script should automatically start for you. If not, go to the CD’s top-level directory, and then double-click **setup.bat**.
3. Follow the online instructions to install the NNM and OVPI integration components. The following table lists the options you will need to select from the installation menu:

Option	Description
List of product types to install	Choose to install **OV Performance Insight Report Packs**.

   This step extracts the OVPI Report Pack packages onto your system. When extraction is complete, the `Install Wizard` window opens ready for you to install the desired OVPI Report Packs.
4. In the `OVPI Package Manager Wizard` window, click **Next**.
5. Select the **Install** radio button and click **Next**.
6. Perform the following from the `OVPI Report Deployment` window:

   a. Check **Deploy Reports**.

b. Enter user name and password. Unless configured differently during installation of OVPI, the user name is `trendadm` and the password is `trendadm`.

c. Click **Next**.

7. In the `OVPI Package Selection` window, select the following packages for installation, and then click **Next**.

   - `NNM_Device_Sync`
   - `Thresholds`
   - `IRifEntry_Sync_Interfaces`

8. In the `OVPI Type Discover` window, do the following:

   a. Check **Run OVPI Type Discover** if you want OVPI to start type discovery now. Note that this process may take awhile. If you want OVPI to perform this at its next scheduled time (default: daily), do not select **Run OVPI Type Discover**.

   b. Click **Next**.

9. Click **Install**.

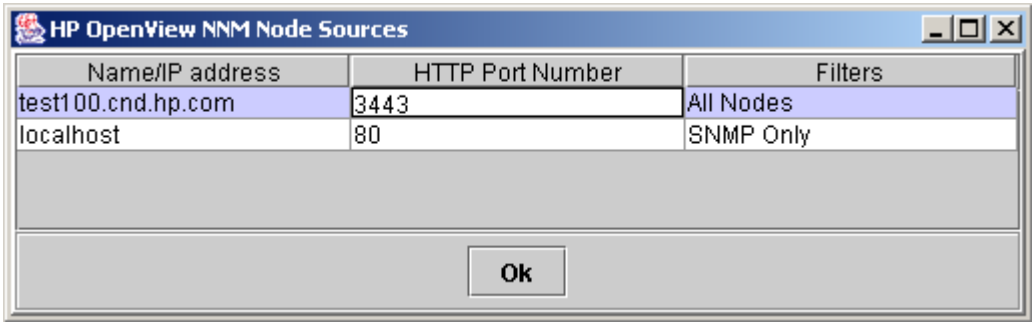
10. At the end of the installation process, an `HP OpenView NNM Node Sources` configuration window opens and prompts you to identify the NNM management stations to be used as sources for status information.

    For information about how to enter data in the `HP OpenView NNM Node Sources` configuration window, see “Configuring NNM Node Synchronization” on page 23.

Configuring NNM Node Synchronization

Use the `HP OpenView NNM Node Sources` window (shown in Figure 2-1 on page 24) as follows to identify the NNM management stations to be used as sources for device and interface status information:

Figure 2-1 NNM Node Sources Window



1. Replace the default information with the correct information for your environment. For a description of each column in the `Node Sources` window, see Table 2-1, “Columns of the Node Sources Window.”

Table 2-1 Columns of the Node Sources Window

Column Title	Description
Name or IP Address	The name or IP address of the NNM management station.
HTTP Port Number	The HTTP port number that the NNM management station uses. On UNIX operating systems, the port number should be `3443`. On Windows operating systems, the port number should be `80` (default value).

Table 2-1 Columns of the Node Sources Window (Continued)

Column Title	Description
Filters	• SNMP Only *Default value*. Only nodes that exist in the NNM topology and respond to SNMP are included in the Node Synchronization list. • Non SNMP Only Only nodes that exist in the NNM topology and do **NOT** respond to SNMP are included in the Node Synchronization list. • All Nodes All nodes that exist in the NNM topology are included in the Node Synchronization list, independent of their ability to respond to SNMP. • .1.2.3.4.5.6 (Sys Object ID format) A Sys Object ID may be specified in numerical dot notation. With this option, only nodes with a matching Sys Object ID are included in the Node Synchronization list. • isIP (OVW Object Database Capability field) An OVW object database capability field may be used as a filter. In this case, only the field name is provided and only nodes that have the associated OVW object database capability set will be included in the Node Synchronization list. For more information about the use of OVW object database capability fields, see the *HP OpenView Window's Developers Guide*.

2. To configure multiple NNM management stations, right-click, and then select **Add**. Supply the required information for each additional NNM management station.

Post-Installation Steps

After the installation of the NNM and OVPI Integration Module, you must perform the following configuration steps before OVPI threshold alarms can populate the NNM alarm browser and OVPI reports can be generated from NNM nodes:

- Specify the NNM management station to be used as the trap destination for OVPI threshold traps.

  For information about how to enter data in the `SNMP Trap Destinations List` configuration window, see "Configuring an NNM Trap Destination for OVPI Threshold Traps" on page 26.

- Install other Report Packs of interest to you. For example, to monitor MPLS threshold violation traps, install the suite of MPLS report packs and datapipes, including the MPLS VPN Report Pack and the MPLS Thresholds Report Pack. For more information about the OVPI Report Packs, see the individual Report Pack user guides.

Configuring an NNM Trap Destination for OVPI Threshold Traps

During the installation of the OVPI Threshold package, a trap destination for OVPI-generated threshold traps is defined. By default, the OVPI Threshold package sends traps to the `localhost`.

Configure an NNM Trap Destination on UNIX

To modify the default trap destination on an OVPI server running a UNIX operating system, do the following steps:

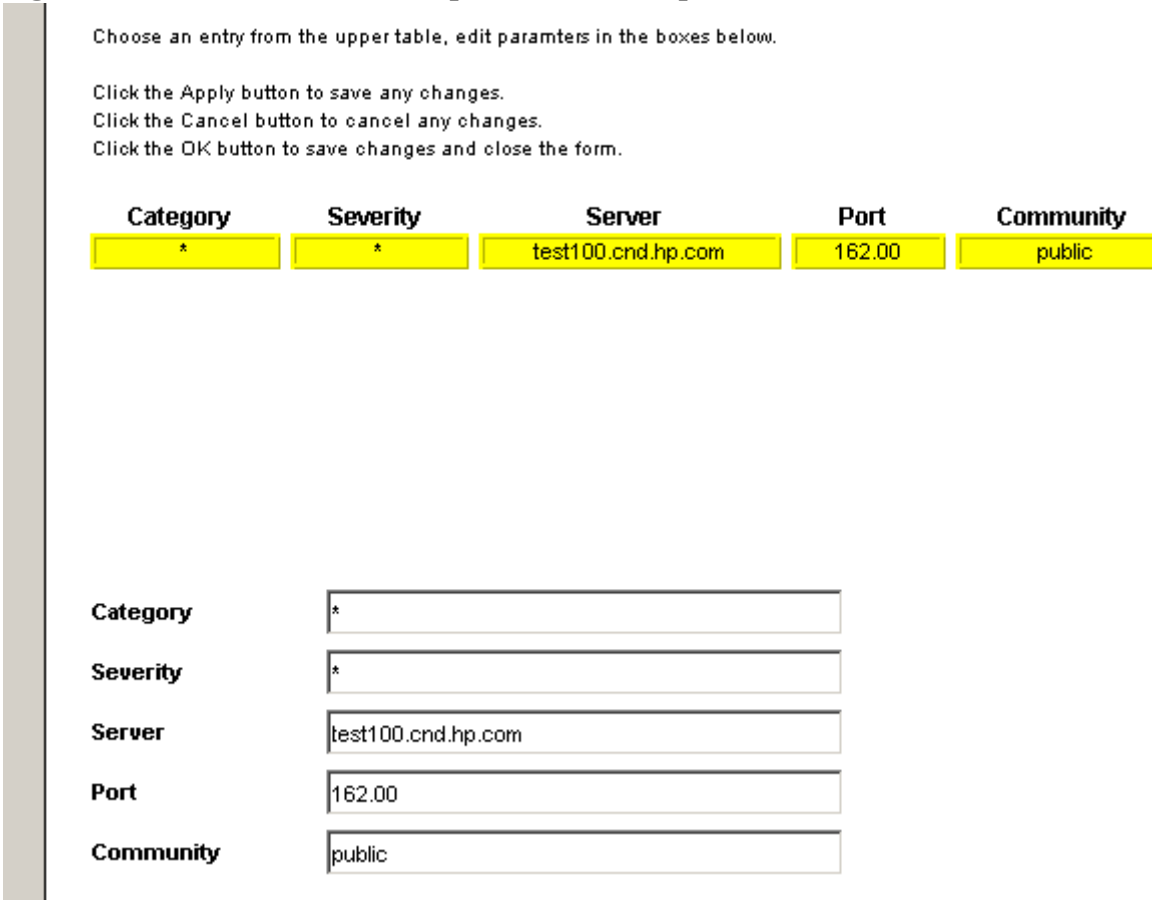
1. As user `trendadm`, start the OVPI administrator utility: **`$DPIPE_HOME/bin/piadmin`**
2. Click **Objects** in the left-hand pane.
3. Double-click `Update SNMP Trap Destination`. The `Thresholds` window opens.
4. Set the OVPI trap destination to the IP hostname and SNMP port number of the NNM management station to which the traps are to be forwarded, as shown in Figure 2-2 on page 28.

Configure an NNM Trap Destination on Windows

To modify the default NNM trap destination on an OVPI server running a Windows operating system, do the following steps:

1. As user `Administrator`, start the OVPI administrator utility by selecting **Start:Programs->HP OpenView->Performance Insight->Management Console**.
2. Click the **Objects** icon in the left-hand pane.
3. From the General Tasks pane, double-click `Update SNMP Trap Destination`. The `Thresholds` window opens.
4. From the Thresholds window, as shown in Figure 2-2 on page 28, enter the hostname and SNMP port number of the NNM management station to which the traps are to be forwarded in the `Server` and `Port` text entry boxes, respectively.
5. Click **Apply** for the changes to take affect.

Figure 2-2 Thresholds: Update SNMP Trap Destination Window



Configure Multiple NNM Trap Destinations

Typically, you need only one NNM management station to accept OVPI-generated threshold traps, however, multiple NNM management stations can be configured.

To configure multiple trap destinations for OVPI-generated threshold traps, do the following steps:

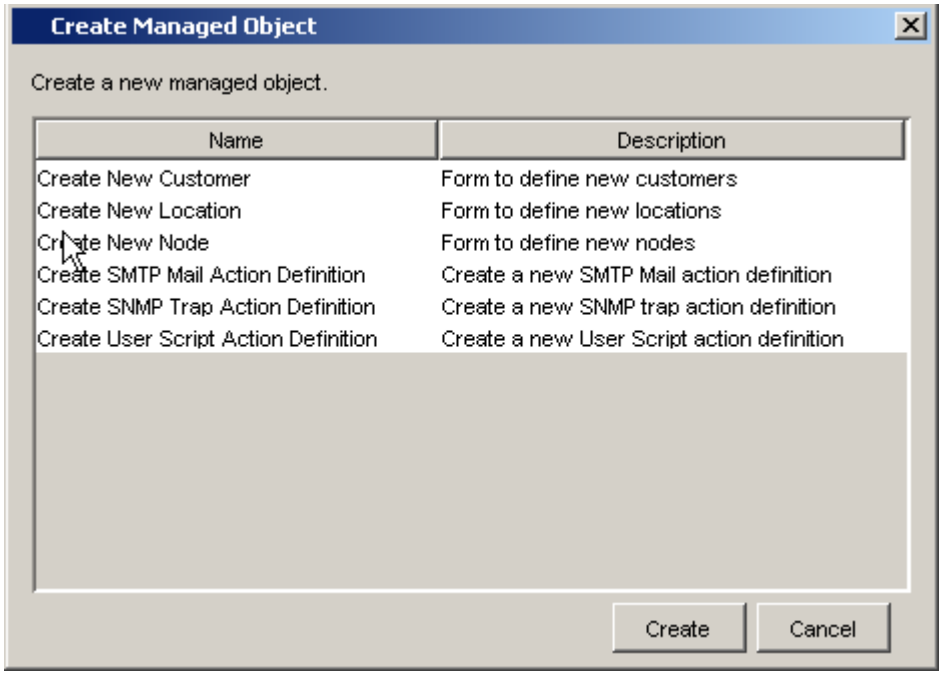
1. Start the OVPI administrator utility by executing the following command:

   UNIX (as user `trendadm`): **`$DPIPE_HOME/bin/piadmin`**

Windows: **Start:Programs->HP OpenView->Performance Insight->Management Console**

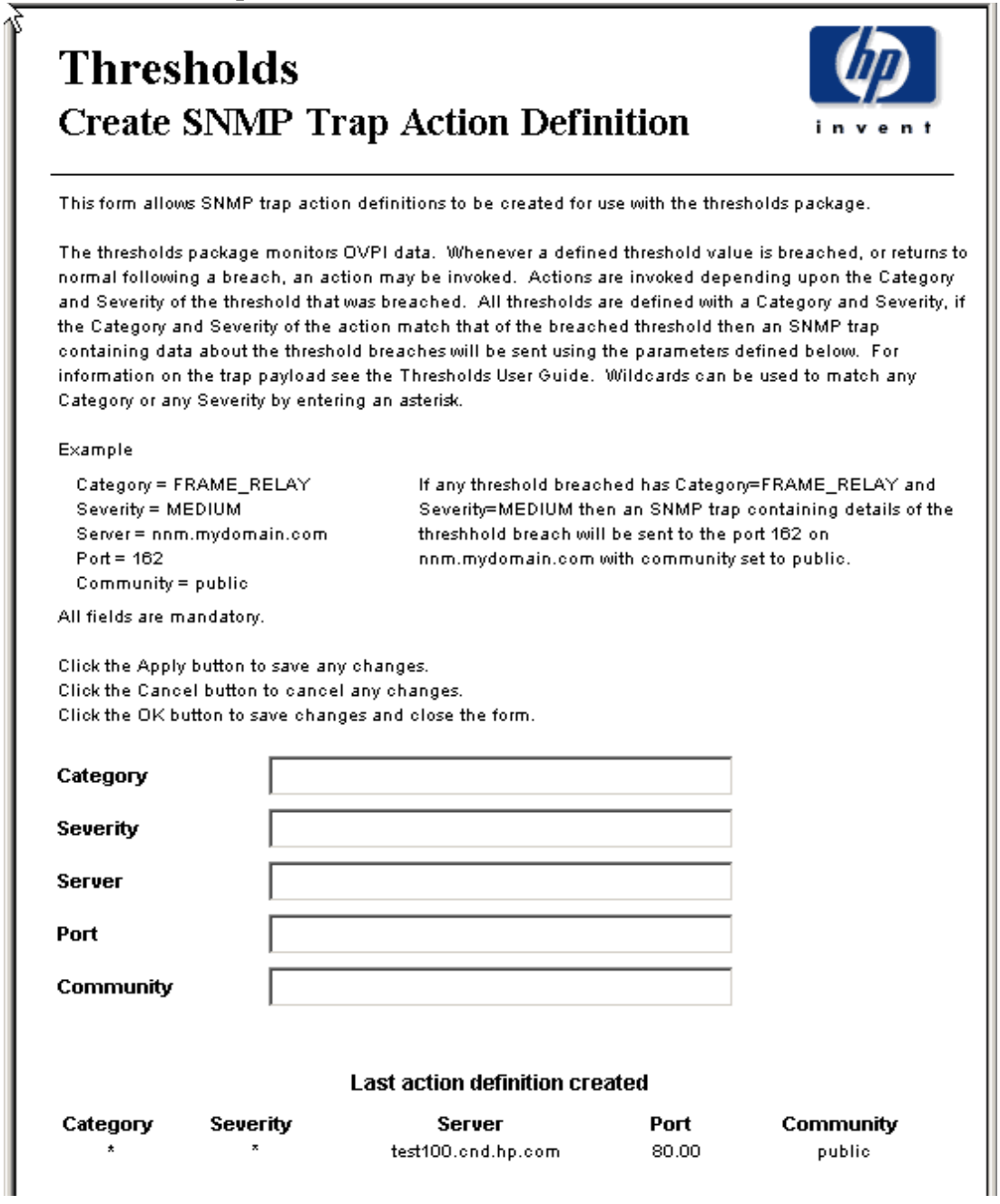
2. Click the **Objects** icon in the left-hand pane.
3. Click **File:New** to open the `Create a New Managed Object` window as shown in Figure 2-3.

Figure 2-3 Create a New Managed Object Window



4. From the list, select `Create SNMP Trap Action Definition`.
5. Click **Create** to display the `Thresholds:Create SNMP Trap Action Definition` form. See Figure 2-4, “Trap Action Destination Form.”
6. Enter the host name and SNMP port number of the NNM management station to which OVPI traps are to be forwarded.

Figure 2-4 Trap Action Destination Form



Thresholds

Create SNMP Trap Action Definition

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This form allows SNMP trap action definitions to be created for use with the thresholds package.

The thresholds package monitors OVPI data. Whenever a defined threshold value is breached, or returns to normal following a breach, an action may be invoked. Actions are invoked depending upon the Category and Severity of the threshold that was breached. All thresholds are defined with a Category and Severity, if the Category and Severity of the action match that of the breached threshold then an SNMP trap containing data about the threshold breaches will be sent using the parameters defined below. For information on the trap payload see the Thresholds User Guide. Wildcards can be used to match any Category or any Severity by entering an asterisk.

Example

Category = FRAME_RELAY
Severity = MEDIUM
Server = nnm.mydomain.com
Port = 162
Community = public

If any threshold breached has Category=FRAME_RELAY and Severity=MEDIUM then an SNMP trap containing details of the threshhold breach will be sent to the port 162 on nnm.mydomain.com with community set to public.

All fields are mandatory.

Click the Apply button to save any changes.
Click the Cancel button to cancel any changes.
Click the OK button to save changes and close the form.

Category

Severity

Server

Port

Community

Last action definition created

Category	Severity	Server	Port	Community
*	*	test100.cnd.hp.com	80.00	public

Uninstalling the NNM and OVPI Integration Module

This section describes the procedure for uninstalling the NNM and OVPI Integration Module from the NNM management station and the OVPI server.

To uninstall the integration components from the OVPI server, follow these steps:

1. Using the Package Manager Wizard, uninstall the `NNM_Device_Sync` package.
2. Using the Package Manager Wizard, uninstall the `Thresholds` package.

   Alternatively, you can edit the Update SNMP Trap Destination form to unassign NNM management stations as threshold trap destinations as described in “Configuring an NNM Trap Destination for OVPI Threshold Traps” on page 26.

To uninstall the integration components from the NNM management station, enter the following commands from a command line:

1. *UNIX*: **`cd $OV_NEWCONFIG/OVPI_INTEGRATION`**
   Windows: **`cd %OV_NEWCONFIG%\conf\OVPI_INTEGRATION`**
2. **`uninstall.ovpl`**

3 Launching Device-Specific Reports

The NNM and OVPI Integration Module supports the launching of OVPI performance reports from several NNM user interfaces, including:

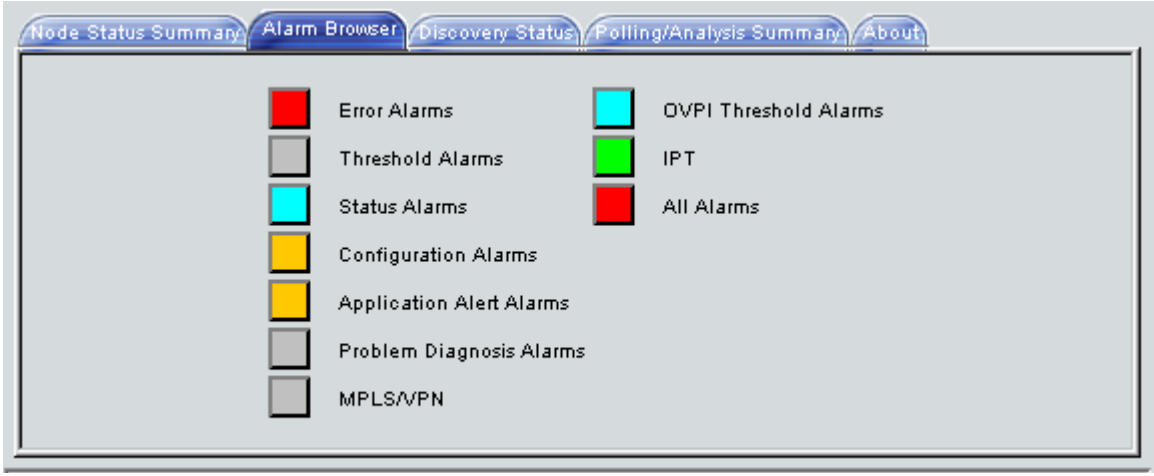
- native NNM alarm browser
- NNM Extended Topology dynamic view
- NNM submap (**ovw**)

A launched report contains information specific to the node that was selected (if launching from a map or view) or the node that caused the alarm (if launching from the alarm browser).

Launching Reports from the Native NNM Alarm Browser

A key feature of the NNM and OVPI Integration Module is the creation of an alarm category, `OVPI Threshold Alarms`, in the `Alarm Categories` window of the NNM alarm browser. See Figure 3-1, “OVPI Threshold Alarm Category of the NNM Alarm Browser.”

Figure 3-1 OVPI Threshold Alarm Category of the NNM Alarm Browser



You can view alarms received by the NNM management station by double-clicking the `OVPI Threshold Alarms` category to open the `OVPI Threshold Alarms Browser`.

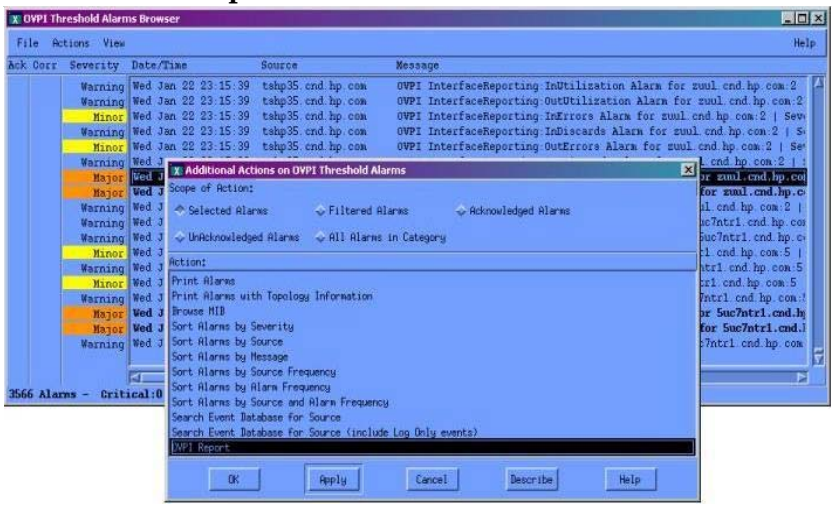
NOTE Launching OVPI performance reports from an OVPI threshold alarm is available only from the native NNM alarm browser. In Dynamic Views, you can view threshold traps in the OVPI Threshold Alarms Browser, however, menus for launching OVPI reports are not available.

To launch an OVPI performance report from an alarm in the Threshold Alarms Browser, do the following steps:

1. Select an alarm in the alarm browser.

2. Click **Actions:Additional Actions**, and then select **OVPI Report**. Figure 3-2, “OVPI Report from Threshold Alarm Browser,” depicts the OVPI Threshold Alarm Browser containing OVPI threshold alarms and also shows the `OVPI Report` action selected.

Figure 3-2 OVPI Report from Threshold Alarm Browser



The OVPI report launch action is defined for all OVPI threshold alarms. The MIB definition for the OVPI threshold event can be found at:

UNIX: `$OV_NEWCONFIG/OVPI_INTEGRATION/hp-ovpi.mib`
Windows: `<install_dir>\conf\OVPI_INTEGRATION\hp-ovpi.mib`

3. The result of launching the OVPI Report action depends on how the node that caused the alarm is configured.

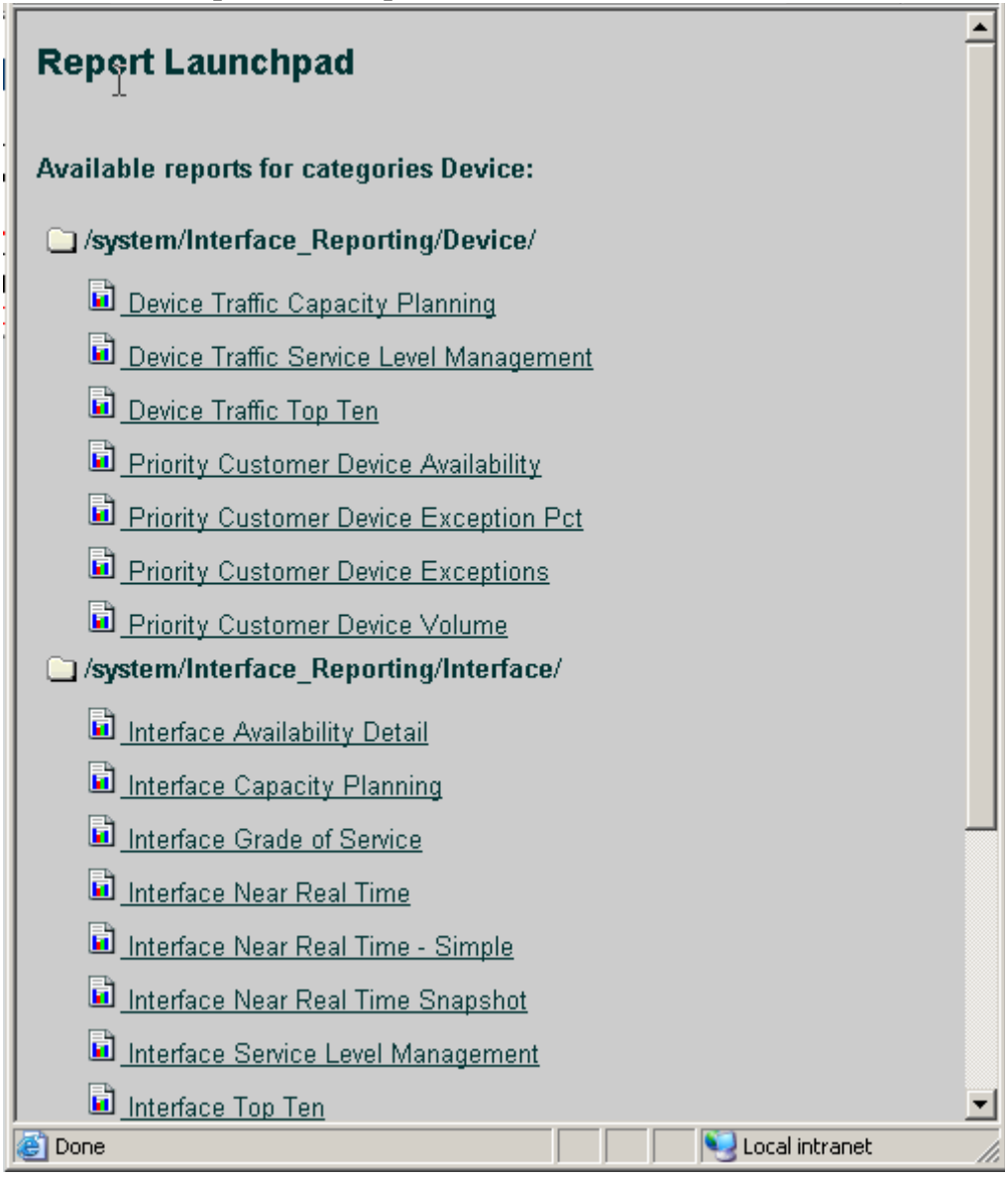
   - Launching an OVPI report for a node that has an assigned OVPI OID causes the report specific to that OID to launch.

     The `OvpiRptLaunch.conf` configuration file contains the assignments of OVPI reports to OVPI OIDs, and is located at:

     UNIX: `$OV_NEWCONFIG/OvpiRptLauncher.conf`
     Windows: `<install_dir>\conf\OvpiRptLauncher.conf`

- Launching an OVPI report for a node that does not have an OVPI OID causes the `Report Launchpad` window to launch, as shown in Figure 3-3, “The Report Launchpad Window.”

Figure 3-3 The Report Launchpad Window



NOTE The report launch menu lists items for nodes that are known to NNM as Routers, Bridges, Hubs, or Connectors.

4. From the `Report Launchpad` window, select the desired report to launch.

   A launched report contains information specific to the node that caused the alarm.

Launching Reports from NNM Dynamic Views

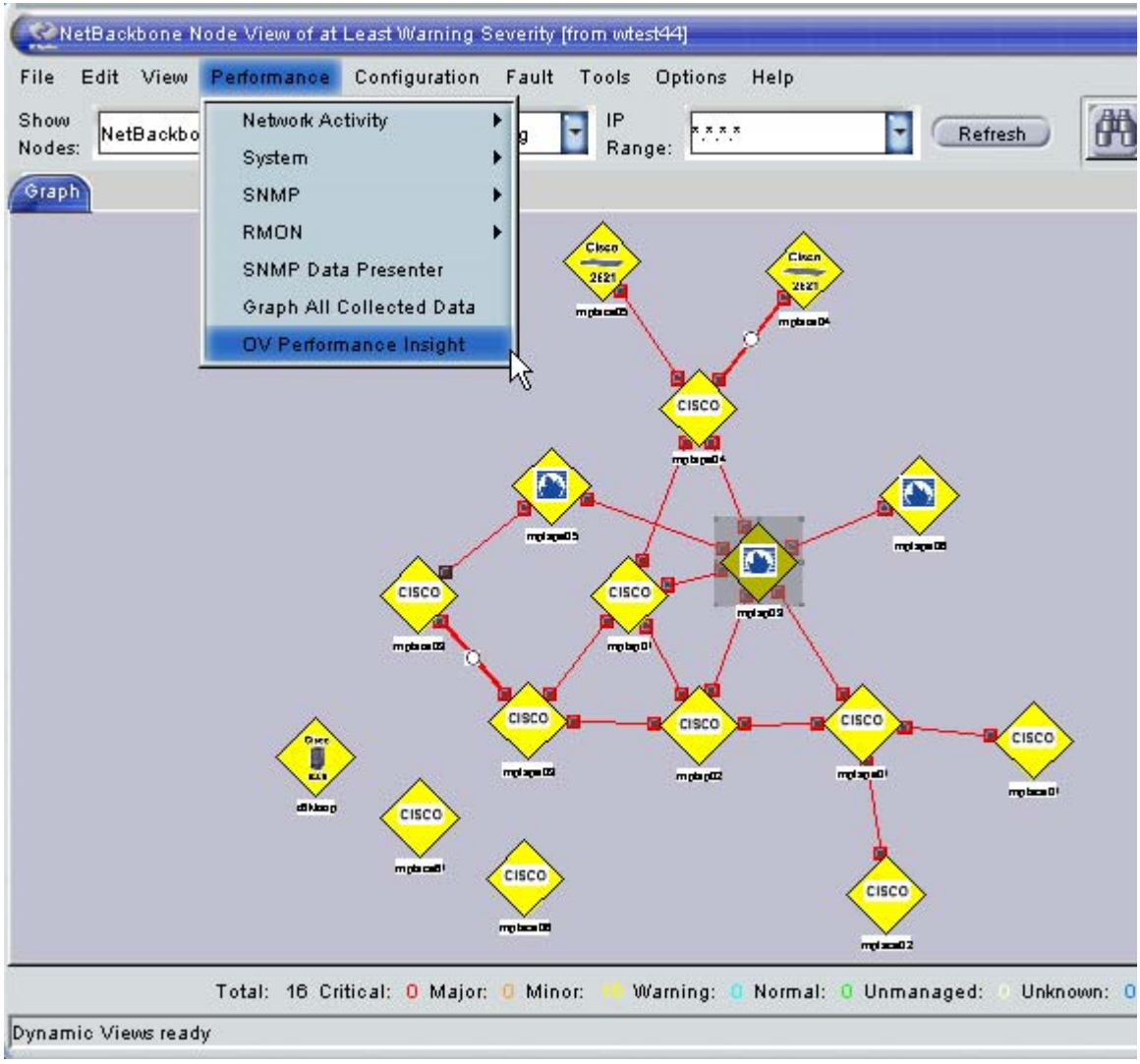
To launch a performance report from an NNM Extended Topology dynamic view, do the following:

1. Select a node.
2. Use either the `Performance` menu or the `OVPI Launch Pad` shortcut menu (right-click on the node):
   - Click **Performance: OV Performance Insight**, as illustrated in Figure 3-4, “Launching OVPI Reports from Dynamic Views.”

     The `Report Launchpad` window opens, as shown in Figure 3-3, “The Report Launchpad Window,” on page 37.
   - Right-click, and select **OVPI Launch Pad**.
3. Select the desired report to launch.

   The launched report contains information specific to the node that was selected.

Figure 3-4 Launching OVPI Reports from Dynamic Views

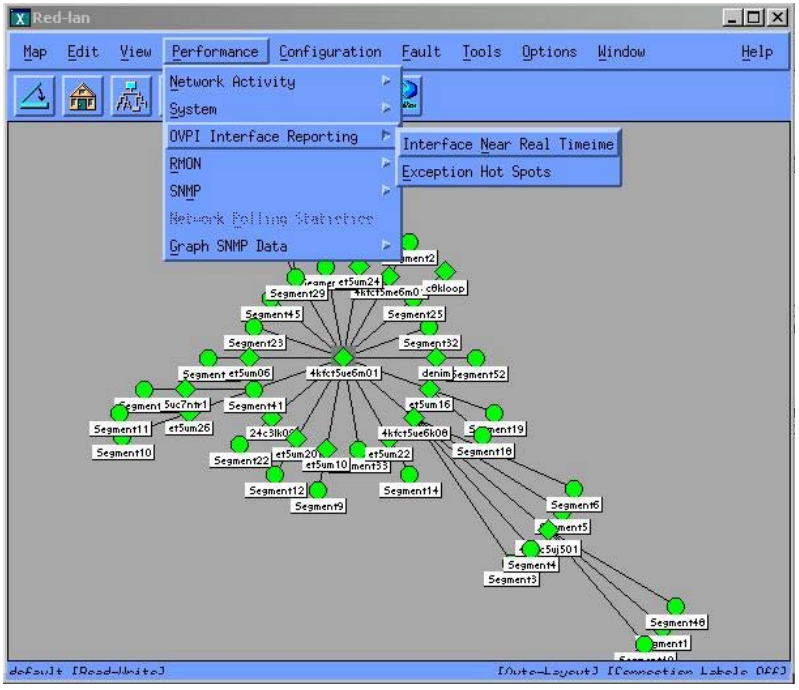


Launching Reports from an NNM Map

To launch an OVPI performance report from an NNM map, do the following:

1. Select a node in the NNM map.
2. Use either the `Performance` menu or the report launcher shortcut menu (right-click on the node):
   - Click **Performance: OVPI Report Launcher** as shown in Figure 3-5, "Launching OVPI Reports from NNM Maps."
   - Right-click, and then select **OVPI Report Launcher**.

Figure 3-5 Launching OVPI Reports from NNM Maps



When you launch a report, NNM notifies OVPI of the device name. OVPI, in return, launches a Report Launchpad window that displays a list of appropriate reports for that device.

3. From the `Report Launchpad` window, select the desired report to launch. See Figure 3-3, “The Report Launchpad Window.”
4. The launched report contains information specific to the node that was selected.

4 Verifying the Installation

This section describes the process for checking if your system is configured properly.

Verifying NNM Node Synchronization

To verify devices have been imported into OVPI from NNM through the NNM node synchronization, follow these steps:

1. Start the OVPI administrator utility:
   UNIX: **`$DPIPE_HOME/bin/piadmin`**
   Windows: click **Start:Programs->HP OpenView->Performance Insight->Management Console**; or execute
   `%DPIPE_HOME%\bin\piadmin`
2. Select `Polling Policies`.
3. Click **Edit:Nodes** to open the `Nodes` window.

The `Nodes` window displays all nodes known to OVPI for data collection, and should contain nodes imported from NNM.

Verifying Report Launching

To verify that OVPI reports can be launched from NNM, try one of the following report launching utilities:

1. Verify that you can launch a report from the NNM alarm browser by selecting an OVPI threshold alarm and launching a report with the **Actions:Additional Actions** menu.
2. Verify that you can launch a report from a view in Dynamic Views by selecting a node in the view and using the **Performance:OVPI Launch Pad** menu to launch an OVPI performance report.
3. Verify that you can launch a report from an NNM map by selecting a node and using the **Performance** menu to launch an OVPI report.

Troubleshooting

Node Synchronization Is Not Working

If no NNM devices are being imported into OVPI from NNM via NNM Device Synchronization, follow these steps:

1. Verify that the NNM management station from which device information is to be imported is running and accepting requests on the port specified during the installation of the `NNM_Device_Sync` package.

   To verify NNM management station is accepting requests via its assigned port, enter the following URL in a web browser:

   `http://<hostname>:<port>/OvCgi/nodeList.ovpl`

   where *hostname* is the fully-qualified name of the NNM management station, and *port* is the HTTP port number assigned to the NNM management station during installation of the `NNM_Device_Sync` package. For NNM management stations running UNIX, the port number should be 3443. For NNM management stations running Windows, the port number should be 80.

   Note that the output appearing in the web browser is encrypted.

2. Verify that the Trend timer process is running. If it is not, restart it.
3. Verify that there is an entry for `SyncNodeList` in the `trendtimer.sched` file located at:

   UNIX: `$DPIPE_HOME/lib/`

   Windows: `%DPIPE_HOME%\lib`

   If no entry exists, device synchronization is not taking place. The cause for the missing entry is most likely a failure during installation.

4. Check `$TREND_LOG/trend.log` for errors.
5. Check web server log for error:

   UNIX: `/var/opt/OV/log/httpd_error_log`

   Windows: System Events

Launched Reports Contain No Data

If this condition occurs, verify that the NNM device synchronization components are functioning by using the procedures described in “Node Synchronization Is Not Working” on page 46.

NNM Device Sync Installation Fails

Common installation failures include the following:

- All NNM node sources specified by the user are not reachable
- The NNM and OVPI Integration Module was not installed on those NNM management stations.
- The wrong HTTP port number was specified for the NNM management station during the installation of the `NNM_Device_Sync` package.

Details of the failure can be found in the `$DPIPE_HOME/log/trend.log` file.

NNM Device Sync Fails for Some of the NNM Node Sources

This may occur if the NNM node is not reachable, or if the NNM and OVPI Integration Module is not installed on that NNM management station for which the NNM Device Sync failed. The details of the failure can be found in the `$DPIPE_HOME/log/trend.log` file.

Unable to open NNM Event reports on Windows

NOTE This problem occurs only when NNM is running on a Windows operating system.

When using the NNM and OVPI Integration Module in conjunction with the OpenView Performance Insight NNM Event Report Pack, NNM may not be able to access its version of Perl. As a result, NNM Event reports may not be generated properly.

On the NNM management station, modify the Windows `PATH` environment variable so that the path to NNM's copy of Perl is listed first. When NNM is installed in its default location, the following must be added to the beginning of the Windows `PATH` environment variable:

```
C:\Program Files\HP OpenView\bin\Perl\bin
```

Additional Troubleshooting Resources

For additional troubleshooting information, refer to the latest *NNM and OVPI Integration Module Release Notes* available on the web at `http://ovweb.external.hp.com/lpe/doc_serv` under the **NNM and OVPI Integration Module** product category.

5 Reference

The install.ovpl Script

The Perl install script, `install.ovpl`, first installs the HPOvIco3.01.00.1 (OpenView Interconnect) package on the NNM management station. The script then modifies Application Registration Files (ARF) with the node name and port information of the OVPI server. It then places these files in the correct location on the NNM management station. This configuration enables node-specific launching of OVPI reports from the NNM management station.

The script prompts you for the hostname of the OVPI server and the port number on which that server receives HTTP requests. See Table 5-1 on page 50 for a complete list of command line options for `install.ovpl`. For the standard installation, run the script without any options.

NOTE Run this script with the version of Perl shipped with NNM.

Table 5-1 Command Line Options for install.ovpl

install.ovpl option	Description
No options *<default>*	If no options are specified, `install.ovpl` updates every ARF file and browser action file in the `OVPI_INTEGRATION` directory and places those files in their appropriate locations.
`-force all`	By default, `install.ovpl` does not replace ARF files on repeated invocations to guard against accidentally overwriting already configured versions. The use of the force option with the all argument causes `install.ovpl` to reconfigure and re-place the ARF files located in the `OVPI_INTEGRATION` directory. This option is useful when modifying every ARF to point to a different OVPI server, or if the HTTP port number on the OVPI server has changed.
-force *<file.arf>*	Using the *<file.arf>* argument with the force option causes install.ovpl to configure and place the specified ARF file only. This option is useful when launching different reports on different OVPI servers.

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