# Dell OpenManage™ Connection for HP OpenView NNM User's Guide Version 3.2

**NOTE:** The glossary provides the definitions of terms, abbreviations, and acronyms.

**NOTE:** You can obtain the latest version of this document from the Dell Support website at **support.dell.com**.

## Notes and Notices

**NOTE:** A NOTE indicates important information that helps you make better use of your computer.

**NOTICE**: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

*Initial release:  29 March 2006*

# Glossary

**Dell OpenManage™ Connection for HP OpenView NNM User's Guide Version 3.2**

The following list defines or identifies technical terms, abbreviations, and acronyms used in this document.

### BMC

Abbreviation for baseboard management controller. The BMC supports the industry-standard Intelligent Platform Management Interface (IPMI) specification, enabling the remote configuration, monitoring, and recovery of systems.

### BMU

Abbreviation for baseboard management controller management utility. The BMC Management Utility (BMU) allows remote, out-of-band LAN and/or serial port power control, event log access, and console redirection.

### Dell OpenManage Array Manager

A storage management tool that provides a common user interface for configuring and remotely managing all host-based redundant array of independent disks (RAID) controllers, allowing administrators to use a central console to manage multiple RAID controllers in a single system and across multiple systems.

### Dell OpenManage IT Assistant

A system management console program, installed on management stations, that provides configuration, monitoring, and management services for Dell™ PowerEdge™ systems, Dell Precision™ WorkStations, Dell OptiPlex™ computers, and Dell Latitude™ portable computers.

### Dell OpenManage Server Administrator

A one-to-one systems management solution that provides a consolidated and consistent way to monitor, configure, update, and manage Dell systems. Dell OpenManage instrumentation is also one of the prerequisites for using the Connection to discover managed systems.

### Dell PowerVault NAS Manager

A tool that allows configuration of Network Attached Storage (NAS) appliances through a Web-based user interface.

### DNS

Abbreviation for Domain Naming System.

### DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, DRAC II

Dell Remote Access Controller 5, Dell Remote Access Controller 4, Dell Remote Access Controller/Modular Chassis, Dell Remote Access Controller III, Dell Remote Access Controller III/XT, and Dell Remote Assistant Card II are systems management hardware and software solutions designed to provide remote management capabilities for PowerEdge systems.

### ERA, ERA/O, ERA/MC

Embedded Remote Access, Embedded Remote Access Optional (ERA/O), and Embedded Remote Access/Modular Chassis are systems management hardware and software solutions designed to provide remote management capabilities for PowerEdge systems.

### Event Management

An enterprise function for managing and monitoring events.

### GUI

Acronym for graphical user interface.

### IPMISH

Acronym for the Intelligent Platform Management Interface shell commands. These commands help to check power status and control the power to Dell systems.

### MIB

Acronym for management information base. The MIB is used to send detailed status/commands from or to an SNMP managed device.

### NAS

Acronym for network attached storage.

### NNM

Abbreviation for HP OpenView's network node management product.

### PET

Acronym for platform event trap. An alert, error, or system message from a server reporting an exception in a server, for example, a device failure or a threshold violation. PET is defined by the Alert Standard Format (ASF), an industry standard specification developed by the Distributed Management Task Force (DMTF) that defines methods for alerting and for remote system control, targeted for operating system absent environments.

### RAC

Acronym for remote access controller. RACs, such as DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/O, and ERA/MC, are remote access solutions

### readme file

A text file included with a software package or hardware product that contains information supplementing or updating the documentation for the software or hardware. Typically, readme files provide installation information, describe new product enhancements or corrections that have not yet been documented, and list known problems or other things you need to be aware of as you use the software or hardware.

### Storage Management Service

A storage management solution that is incorporated as part of Dell OpenManage Server Administrator to provide a common user interface for configuring and remotely managing storage components including RAID and non-RAID controllers and the attached channels, enclosures, and disks.

### SNMP

Abbreviation for Simple Network Management Protocol. SNMP, a popular network control and monitoring protocol, is part of the original TCP/IP protocol suite. SNMP provides the format in which vital information about different network devices, such as network servers or routers, can be sent to a management application.

### trap

An alert, error, or system message from a server reporting an exception in a server, for example, a device failure or a threshold violation.

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# Installing and Uninstalling the Connection

**Dell OpenManage™ Connection for HP OpenView NNM User's Guide Version 3.2**

- Installing the Connection
- Upgrading the Connection
- Uninstalling the Connection

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## Installing the Connection

The following sections describe the requirements for the management station or remote console running Dell OpenManage Connection for HP OpenView NNM (hereafter referred to as the Connection).

**NOTE:** Dell OpenManage instrumentation is not installed by the Connection. On any managed system, you must install Dell OpenManage instrumentation separately.

## Management Station or Remote Console Requirements

### HP OpenView NNM

Supports only the Microsoft® Windows® operating system versions of HP OpenView NNM versions 6.4 and later.

### Separately Launched Management Consoles

If you are going to install Dell OpenManage Array Manager, Dell OpenManage IT Assistant, and baseboard management controller (BMC) management consoles, ensure that you install the versions supported by the Connection. See also the corresponding product documentation for the specific management consoles.

### Web Browser Support to Launch Web-Based Managed System Applications

Supported Web browsers are the same as those for Dell OpenManage Server Administrator and RAC products. See the product documentation for more information.

## Installation Procedure

Read the installation requirements to ensure that your system meets or exceeds the minimum requirements. See installation prerequisites.

**NOTE:** Dell recommends that you exit HP OpenView NNM before installing the Connection.

**NOTE:** If you have a 2.x or older version of the Connection installed, you must uninstall it before installing the Connection 3.2. However, if you have version 3.0 and later installed on the management station, you can install 3.1 and later as an upgrade without uninstalling the previous version of the Connection.

To install the Connection on the management station, perform the following steps:

1. From the Dell Support website (**support.dell.com**), download and extract the **Dell OpenManage Connection for HP OpenView NNM** installation software.

2. Run **setup.exe** from the directory that you specified for downloading and extracting the installation software.

   **NOTE:** The installation directory is the same as that for HP OpenView NNM.

   The **Dell OpenManage Connection** window appears.

3. Click **Next** to continue the installation process.

   Clicking **Cancel** allows you to exit the installation process.

4. Read the Dell Software License Agreement. Click **Yes** to continue.

5. Click **Next** to continue the installation process.

6. Click **OK** to confirm the message recommending that you close all HP OpenView NNM applications before continuing with the installation program.

   The installation begins, and a message indicates when the installation process has completed.

7. Click **Finish** to complete the installation process.

   You must reboot the system before using the Connection.

**NOTE:** After you complete the installation of the Connection on a management station, you must assign a value to the SNMP **set-community-name** field in the **snmpd.conf** file. Ensure that you configure the **set-community-name** field on the Connection through the **Option→ SNMP Configuration** menu item. This configuration allows the SNMP SetRequests and GetRequests with this community name to operate properly.

To assign a value, modify the file **\OpenView\NNM\conf\snmpagent\snmpd.conf** by removing the comment from the **set-community-name** field near the bottom of the **snmpd.conf** file and by entering a new value.

The **set-community-name** field must match the **get-community-name** field. Both names are case-sensitive.

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# Upgrading the Connection

To upgrade version 3.0 and later of the Connection to version 3.2 on the management station, perform the following steps:

1. From the Dell Support website (**support.dell.com**), download and extract the **Dell OpenManage Connection for HP OpenView NNM** upgrade software.

2. Run **setup.exe** from the directory that you specified for downloading and extracting the upgrade software.

   **NOTE:** The installation directory is the same as that for HP OpenView NNM.

   The **Dell OpenManage Connection** window appears.

3. Click **Next** to continue the upgrade process.

   Clicking **Cancel** allows you to exit the upgrade process.

4. Click **OK** to confirm the message recommending that you close all HP OpenView NNM applications before continuing with the upgrade program.

   The upgrade process begins, and a message indicates when the upgrade process has completed.

5. Click **Finish** to complete the upgrade process.

6. Reboot the system before using the Connection.

**NOTE:** Upgrade is supported only from the Connection version 3.0 or later.

# Uninstalling the Connection

**NOTE:** Dell recommends that you exit HP OpenView NNM before uninstalling the Connection.

To uninstall the Connection from a management station, perform the following steps:

1. Click the **Start** button, and then select **Programs→ Dell OpenManage Connection→ Uninstall Connection**.

   A **Dell OpenManage Connection** window appears.

2. Click **OK** to continue the uninstallation process.

   Clicking **Cancel** allows you to exit the uninstallation process.

3. Click **OK** to confirm the message recommending that you close all HP OpenView NNM applications before continuing with the uninstallation program.

   A message indicates that the uninstallation process is complete.

4. Click **Finish** to complete the uninstallation process.

**NOTE:** Uninstalling the Connection version 3.2 does not roll back to any previous version of the Connection. Uninstalling the Connection will completely remove all versions of the application.

**NOTE:** If you installed the Connection version 3.0 or 3.1 before installing the Dell OpenManage management station components and then you later upgraded to version 3.2, during uninstall of the Connection, the *Dell* key will be removed from the HKEY_LOCAL_MACHINE\Software registry path.

# Introduction

**Dell OpenManage™ Connection for HP OpenView NNM User's Guide Version 3.2**

- ● Overview
- ● Other Documents You Might Need
- ● Obtaining Technical Assistance

## Overview

This guide is intended for users who manage the Dell OpenManage Connection for HP OpenView NNM (hereafter referred to as the Connection).

The Connection is a systems management plug-in that extends the management of Dell™ PowerEdge™ systems and Dell PowerVault™ storage systems to users of the HP OpenView NNM enterprise management product. It allows users to:

- l Integrate the management of Dell systems to make them easier to manage

- l Monitor Dell systems with Dell agents to provide system health status information, which can be collected from a widely-dispersed enterprise network and made available in real-time to a single HP OpenView NNM console

- l Launch and use systems management software applications such as Dell OpenManage Server Administrator, Dell OpenManage Array Manager, Dell Remote Access Controller (DRAC), and Dell OpenManage IT Assistant

The Connection also allows systems management professionals to take corrective action on Dell systems when a Dell-specific alert is received at the enterprise. These alerts include, but are not limited to, temperature, fan speed, and chassis intrusion.

See "What's New for the Connection Version 3.2?" for a description of the new features of the Connection version 3.2.

## Other Documents You Might Need

Besides this *User's Guide*, you can find the following guides either on the Dell Support website at **support.dell.com** or on the documentation CD:

- l The *Dell OpenManage Server Administrator's User's Guide* provides information about server instrumentation.

- l The *Dell OpenManage Server Administrator SNMP Reference Guide* documents the Dell SNMP MIB. The Dell SNMP MIB defines variables that extend the standard MIB to cover the capabilities of Dell systems management agents.

- l The *Dell OpenManage Server Administrator Messages Reference Guide* lists the messages that are displayed in your Server Administrator home page Alert log or on your operating system's event viewer. This guide explains the text, severity, and cause of each Instrumentation Service Alert message that the Server Administrator issues.

- l The *Dell OpenManage Array Manager User's Guide* is a comprehensive reference guide for configuring and managing local and remote storage attached to a system. This guide also includes information about Array Manager-specific events.

- l The *Dell OpenManage Server Administrator Storage Management User's Guide* provides information about configuring and managing local and remote storage attached to a system. This guide also includes information about Storage Management-specific events.

- l The *Dell OpenManage IT Assistant User's Guide* provides information about IT Assistant. This guide also contains information about accessing a RAC product through IT Assistant.

- l The *Dell OpenManage Baseboard Management Controller Utilities User's Guide* provides additional information about using Server Administrator to configure and manage your system's baseboard management controller (BMC).

- l The *Dell Remote Access Controller Installation and Setup Guide* provides complete information about installing and configuring a DRAC III, DRAC III/XT, or an embedded remote access/optional (ERA/O) controller, configuring an ERA controller, and using a RAC to remotely access an inoperable system.

- l The *Dell Remote Access Controller 4 User's Guide* provides complete information about installing and configuring a DRAC 4 controller and using a RAC to remotely access an inoperable system.

- l The *Dell Remote Access Controller 5 User's Guide* provides complete information about installing and configuring a DRAC 5 controller and using a RAC to remotely access an inoperable system.

- l The *Dell Remote Access Controller/Modular Chassis User's Guide* provides complete information about configuring and using the DRAC/MC to remotely manage and monitor your modular system and its shared resources through a network.

- l The *Dell Embedded Remote Access Controller/MC User's Guide* provides complete information about this systems management hardware and software solution designed to provide remote management capabilities for the server modules and shared resources in your Dell PowerEdge™ 1655MC system.

- l The *Dell OpenManage Remote Assistant Card II User's Guide* provides information about installing and configuring a DRAC II.

- l The Dell PowerVault Network Attached Storage (NAS) system documentation provides information about using the NAS manager to configure NAS appliances.

## Obtaining Technical Assistance

If at any time you do not understand a procedure described in this guide or if your product does not perform as expected, help tools are available to assist you. For more information about these help tools, see "Getting Help" in your system's *Installation and Troubleshooting Guide* or the *Hardware Owner's Manual*.

Additionally, Dell Enterprise Training and Certification is available; see **www.dell.com/training** for more information. This service may not be offered in all locations.

# What's New for the Connection 3.2?
**Dell OpenManage™ Connection for HP OpenView NNM User's Guide Version 3.2**

● Before You Begin
● Connection Installation Prerequisites
● New Features of the Connection 3.2
● Systems Management Software Supported

Dell OpenManage Connection for HP OpenView NNM is hereafter referred to as the Connection.

## Before You Begin

l Read the installation requirements to ensure that your system meets or exceeds the minimum requirements. See installation prerequisites.

l Read the Connection readme file, which contains the latest information about software, firmware, and driver versions, in addition to information about known issues. The file is posted to the Systems Management documentation page on the Dell Support website at **support.dell.com**.

## Connection Installation Prerequisites

The following are system prerequisites for installing the Connection:

l Microsoft® Windows® operating system versions supported by HP OpenView NNM versions 6.4 and later

l HP OpenView NNM version 6.4–7.5

l A minimum of 400 MB of free hard-drive space

## New Features of the Connection 3.2

l Added support for Dell OpenManage Server Administrator version 5.0.

l Added support for Dell OpenManage Server Administrator Storage Management Service version 2.0.

l Added support for Dell OpenManage Array Manager version 3.4 - 3.7.

l Added support for Dell OpenManage IT Assistant Management Console version 7.0 and later.

l Added support for management of DRAC 5 through the RAC Web console.

l Added support for the Platform Event Traps (PET) from the baseboard management controller (BMC). The PET alerts are embedded with the host name of the system generating the defect.

l Added support for running the Intelligent Platform Management Interface shell (IPMISH) commands on Dell systems that have BMCs.

## Systems Management Software Supported

**Table 1. Systems Management Software Supported**

| Agent | Versions Supported |
|---|---|
| Server Administrator | 1.6–5.0 |
| Storage Management | 1.0–2.0 |
| Array Manager | 3.4–3.7 |
| DRAC II | 2.4–2.5 |
| RAC (DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA/MC, ERA, ERA/O, and DRAC II)<br><br>ERA/MC and DRAC/MC: Support for events only | All firmware versions |
| **Console** | **Versions Supported** |
| DRAC II | 2.4–2.5 |
| RAC Web Console | All firmware versions |
| Array Manager | 3.4–3.7 |
| IT Assistant Management Console | 6.5–7.2 |
| Baseboard management controller Management Utility (BMU) | 2.0 |

# Using the Connection

**Dell OpenManage™ Connection for HP OpenView NNM User's Guide Version** 3.2

- Overview
- Discovering Dell Systems
- Managing Dell Systems
- Event Management
- Using the IPMI Shell Commands
- Troubleshooting
- Frequently Asked Questions

## Overview

To enhance the management capabilities that you can perform on Dell™ systems, Dell OpenManage Connection for HP OpenView NNM (hereafter referred to as the Connection) integrates a suite of systems management applications.

## Discovering Dell Systems

HP OpenView discovers systems by constant polling using the SNMP, and displays them in the HP OpenView NNM submap as icons. For more information on HP's discovery of systems, see the HP OpenView NNM documentation.

When systems are discovered, the Connection then queries the object ID (OID) specific to Dell instrumentation on each discovered system. If the Connection recognizes the value returned by the OID, the Connection re-classifies the system as a Dell system (See Figure 1).

**Figure 1. Example of Display of Dell and Non-Dell Systems on the HP OpenView NNM Submap**
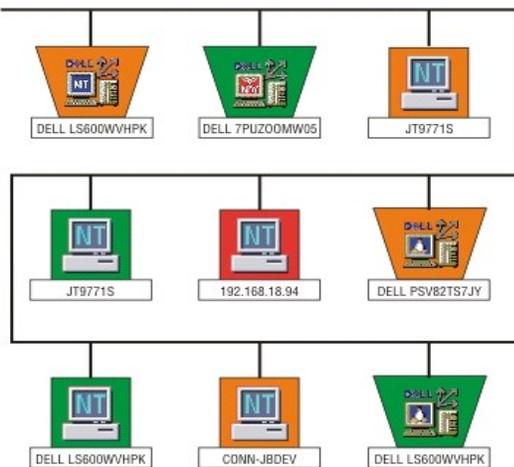


The Connection also allows you to discover systems manually.

To discover a system manually, select the **Tools** menu from the HP OpenView menu bar. In the **Dell** submenu, you can select:

- **Discover Selected** — Runs the discovery process against a selected system to determine if it is a Dell managed system. If the system is discovered to be a Dell system, the appropriate Dell icon (as shown in Table 1) is displayed for that system. Otherwise, a generic HP OpenView NNM icon is displayed.

- **Discover All** — Runs the discovery process against all potential Dell managed systems. If the system is discovered to be a Dell system, the appropriate Dell icon is shown for that system. Otherwise, a generic HP OpenView NNM icon is shown.

**Table 1. Icons Displayed in HP OpenView NNM Submap to Represent Dell Systems**

| | |
|---|---|
| Dell system running the Microsoft® Windows® operating system | |
| Dell system running the Novell® NetWare® operating system | |
| Dell system running the Red Hat® Linux and SUSE® LINUX Enterprise Server operating systems | |

# Managing Dell Systems

When discovered, Dell systems can be managed using the various Dell systems management applications such as Dell OpenManage Server Administrator Web Console, Dell OpenManage IT Assistant, Dell OpenManage Array Manager console, and RAC Web console. Dell systems management launch points are identified with unique icons in the HP OpenView NNM submap. See Table 2. For more information on each of the related systems management applications, refer to the product documentation.

The various systems management applications can be launched by double-clicking the launch point.

The Connection launches the applications shown in Table 4. The application icons shown in the table appear in the HP OpenView NNM submap.

**Table 2. Console Applications: Additional Information**

| Agent | Versions Supported | Applications Launched | HP OpenView NNM Submap Icon |
|---|---|---|---|
| Server Administrator (includes the Storage Management Service, if installed) | Server Administrator 1.6–5.0 | Server Administrator Web console (Web-based from managed system). | |
| Array Manager | Array Manager 3.4–3.7 | Array Manager console (must be installed separately); see the note below this table. | |
| RACs | DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/O, ERA/MC, and DRAC II (The Connection supports DRAC/MC and ERA/MC events only.) | Launches RAC console (Web-based from RAC). | |
| DRAC II | DRAC II 2.4–2.5 | DRAC II Web Console must be installed separately; see the note below this table. | |
| Network Attached Storage (NAS) (through Server Administrator) | | NAS Manager 735N, 750N, 755N, or 775N system (Web-based from managed system). | |

**NOTE:** Dell strongly recommends that you use the same versions of agents and consoles for Array Manager and DRAC II on the managed system and the management station. If doing so is not possible, use the latest version on the management station.

During re-classification of Dell systems, the Connection updates the asset tag, service tag, and baseboard management controller (BMC) IP address fields with appropriate values.

Beginning with the Connection version 3.2, you can also issue Intelligent Platform Management Interface Shell (IPMISH) commands on Dell systems installed with BMC Management Utility (BMU) version 2.0.

## Dell Submenus

The Connection integrates a **Dell** submenu into the HP OpenView NNM menu bar under the **Tools** menu. The **Dell** submenu contains the following commands:

- **Dell OpenManage IT Assistant** — Launches IT Assistant

- **Dell OpenManage Array Manager** — Launches Array Manager

- **DRAC II Web Console** — Launches the DRAC II Web Console

- **Dell Support Website** — Provides the commands that launch your browser and take you to **support.dell.com**

- **IPMISH Launch** — Runs the IIPMI shell commands on Dell systems that have an assigned BMC IP address

- **Discover Selected** — Discovers the selected systems on the network

- **Discover All** — Discovers all systems on the network

## Dell OpenManage Server Administrator

Server Administrator provides a comprehensive, one-to-one systems management solution from an integrated, Web browser-based GUI (the Server Administrator home page). Server Administrator is designed for system administrators to both locally and remotely manage systems and attached storage systems on a network.

The Dell OpenManage Server Administrator Storage Management Service provides storage management information in an integrated graphical view. The Storage Management Service enables you to view the status of local and remote storage attached to a monitored system. The Storage Management Service obtains logical and physical information about attached storage devices from the monitored system. For more information, see the *Dell OpenManage Server Administrator's User's Guide* and the *Dell OpenManage Server Administrator Storage Management User's Guide*.

The Connection integration points:

- Discovery and status polling of the Server Administrator agent

- Trap collection and formatting of Server Administrator (and its Storage Management Service) events through the HP OpenView NNM Alarm Browser

l   Application launch of the Server Administrator Web browser-based GUI through the HP OpenView NNM submap

## Dell OpenManage IT Assistant

IT Assistant console allows Dell-instrumented systems to communicate, regarding the status of critical system components and other managed system information. You can launch the out-of-context IT Assistant Web console through the Connection user interface.

**NOTE:** You must install IT Assistant separately.

The Connection integration points:

l   Discovery and status polling

l   Trap collection and formatting of events through the HP OpenView NNM Alarm Browser

l   Application launch of IT Assistant through the HP OpenView NNM submap

**NOTE:** To manage systems with IT Assistant, you must discover the systems separately by using the IT Assistant interface.

For more information, see the *Dell OpenManage IT Assistant User's Guide*.

## Dell OpenManage Array Manager

Array Manager instrumentation and the Array Manager console provide a comprehensive solution to storage management in an integrated graphical view. Through a common interface, Array Manager allows you to configure and manage local and remote storage attached to a system while the system is online and continuing to process requests. For more information, see the *Dell OpenManage Array Manager User's Guide*.

The Connection integration points:

l   Discovery and status polling of the Array Manager agent through the HP OpenView NNM Alarm Browser

l   Trap collection and formatting of the Array Manager event through the HP OpenView NNM Alarm Browser

l   Application launch of the Array Manager Console through the HP OpenView NNM submap

**NOTE:** You must install Array Manager separately.

**NOTE:** The Array Manager integration does not format traps related to the Dell PowerVault™ 660F storage systems.

## Remote Access Controllers

The Remote Access Controllers (RACs) allow you to remotely manage and monitor your system even when the system is down. The DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/O, and ERA/MC are systems management hardware and software solutions designed to provide remote management capabilities for Dell PowerEdge™ systems. For more information, see the various RAC product User's Guide*s*.

The Connection integration points:

l   Discovery and status polling through the Server Administrator agent (does not include discovery and status polling for ERA/MC)

l   Trap collection and formatting through the HP OpenView NNM Alarm Browser

l   Application launch of the DRAC Web console through the HP OpenView NNM submap (does not include launching ERA/MC and DRAC/MC)

## DRAC II

The DRAC II Web Console supports console redirection and out-of-band status retrieval and management operations for certain PowerEdge systems through a Web-based management application.

The Connection integration points:

l   Discovery and status polling of the DRAC II agent

l   Trap collection and formatting of DRAC II events through the HP OpenView NNM Alarm Browser (in-band and out-of-band events)

l   Application launch of the DRAC II Web Console through the HP OpenView NNM submap

**NOTE:** You must install the DRAC II Web Console separately.

## Dell PowerVault NAS Manager

The Network Attached Storage (NAS) Manager allows you to configure NAS appliances from an integrated, Web browser-based application. The Connection provides a launch point to the application for Dell-instrumented NAS systems.

**NOTE:** The Connection discovers only the PowerVault NAS systems, and not the NAS systems that have been converted from the PowerEdge systems.

## Event Management

The Connection proactively polls each managed system to gather the health status information of each component, and it changes the color of the component icon (indicated in the NNM submap as Dell OpenManage icons) to indicate the status of the component.

Whenever there is a status change, for example, *Server Fan failed*, the managed system sends a notification to the management station on which the Connection is installed. The Connection formats this event into user-readable format and displays it in the Alarm Browser.

Whenever a *critical* or *warning* event is generated, the color of the component icon changes accordingly to red or yellow. This status color information is then propagated to the icon of the parent system.

For Platform Event Trap (PET) events, the Dell instrumentation embeds the host name into the event, so that it is appended to the event message, enabling the user to determine which system has generated the alert.

## Importing Adaptec CI/O Events Into HP OpenView NNM

**NOTE:** The Connection version 3.1 and later does not support Adaptec CI/O events by default. If you are still using the Adaptec CI/O management softwar placed into the installation directory.

To receive formatted messages for Adaptec CI/O events in the HP OpenView NNM Alarm Browser, perform the following steps:

1. Close all HP OpenView NNM windows.

2. Open a command prompt.

3. Run the following command:

   *HPINSTALLDIR*\bin\xnmevents –replace *HPINSTALLDIR*\conf\c\CIOevents.cfg

   where *HPINSTALLDIR* is the default installation path for HP OpenView NNM.

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## Using the IPMI Shell Commands

The Connection version 3.2 and later has the capability to execute Intelligent Platform Management Interface (IPMI) shell commands on Dell systems that have an assigned BMC IP address. The IPMI shell (IPMISH) commands help you to check the power status and allow control of power to your Dell systems.

**NOTE:** To launch the IPMISH, you must install the BMU version 2.0 on your management station. Use the *Dell Systems Management Consoles* CD to install BMU.

To execute the IPMISH commands, perform the following steps:

1. In the Connection user interface, select **Tools→ Dell→ IPMISH Launch**.
2. Select the IPMISH command you want to execute.

**NOTE:** To be able to execute IPMISH commands, you must ensure that the BMC user name, BMC password, and the BMC encryption key (KG key) (available only on some PowerEdge systems) is the same for all managed systems. You can locate these parameters in *<install path>*/**HP OpenView/registration/C/DCSTATUS.arf**.

You can execute the following IPMISH commands from the Connection user interface:

**Table 3. IPMISH Commands**

| Menu | Description |
|---|---|
| Check Power Status | Checks the overall power status of the system. |
| Power On Server | Turns on the system power. This option is available only if the system's power is turned off. |
| Power Off Server - graceful | Shuts down the operating system first, then turns off the system's power. |
| Power Off Server - force | Turns off the system's power without shutting down the operating system. |
| Power Cycle Server | Turns off the power, and after a delay, turns it on again. |
| Power Reset | Turns off the system's power and turns it on again. |
| Turn On LED identification | Turns on the **Identify** LED of the selected system for 255 seconds. |
| Turn Off LED Identification | Turns off the **Identify** LED of the selected system. |

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## Troubleshooting

### Dell Agents Not Discovered

If you cannot locate Dell agents in HP OpenView NNM, ensure that:

l Viable network connectivity to the managed system exists by eliciting a **ping** response.

l The Dell instrumentation is installed properly on the managed system.

l SNMP is configured on the managed system.

l The SNMP community name and security (read/write community names) are set properly on the managed system and that they correspond with that of the HP OpenView NNM management station.

l The Connection has been properly installed on the HP OpenView NNM management station.

The system should now appear in the HP OpenView NNM environment. To confirm the presence of the system, you can also perform a discovery with IT Assistant.

## Not Receiving Alerts

If alerts are not being received by the management station, ensure that:

- l  Viable network connectivity exists with the managed system sending the event by eliciting a **ping** response.
- l  The Dell instrumentation is properly installed on the managed system.
- l  The SNMP agent and trap service are started.
- l  The Dell instrumentation services are started.
- l  SNMP is configured on the managed system to send traps to the management station's IP address.
- l  The SNMP community name and security (read/write community names) are set properly on the managed system and that they correspond with that of the HP OpenView NNM management station.
- l  The Connection has been properly installed on the HP OpenView NNM management station.
- l  The RAC has been properly configured to send out-of-band events.

## Server Administrator or RAC Web Console Not Launching

If you cannot launch Server Administrator or the RAC Web Console, ensure that:

- l  The Dell instrumentation services are started on the managed system.
- l  The managed systems have been discovered as Dell managed systems on the HP OpenView NNM submap.
- l  Proxy information for the Web browser has been set correctly.
- l  The RAC has a network connection and it is properly configured.

## IPMISH Command Displays Connection Timeout Error

If you get the *connection timeout error* while running an IPMISH command, perform the following steps:

1. In the HP OpenView NNM submap, select the server icon on which you are performing the IPMISH command.
2. Right-click the server icon and select **Object Properties**.
3. In the **Object Properties** dialog box, double-click **Dell Status Manager**.
4. In the **Attributes** dialog box, compare the **Dell BMC IP** attribute with the BMC IP Address configured on the server.

If the IP addresses are different:

1. Ensure that the server is up and running.
2. In the HP OpenView NNM submap, select the server icon and update the discovered attributes by clicking **Tools → Dell → Discover Selected.**

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# Frequently Asked Questions

## Network Configuration

**I'm using a Microsoft Windows Internetworking Name Server (WINS) to resolve all of my names. I can ping my systems by using Novell NetWare and the IP addresses of the systems but not by using their names. How do I correct this?**

Configure the systems running NetWare in the WINS Static IP map.

## System Discovery

**Why does my system appear as a DRAC card in the Connection submap?**

A DRAC already exists on the network and two possible problems exist:

- l  DRAC is using the same IP address as your system. To correct this problem, change the IP address for DRAC.
- l  Your system has a secondary network adapter or internal network IP address that is the same as your DRAC, and either the DRAC is not plugged into the network or the management station is unable to **ping** it. To correct this problem, verify that the DRAC is plugged into the network and that the management station can **ping** it.

## Miscellaneous

**Why are the Dell icons not appearing in the HP OpenView NNM Web-based application?**

The Connection only supports the HP OpenView NNM submap.

**I changed the asset tag on my system, but it is not appearing in the HP OpenView NNM submap. Why?**

If the asset tag is changed for a Dell system after it has been discovered on the HP OpenView NNM submap, navigate to the **NNM Tools→ Dell** menu and click **Discover Selected** to reflect the updated asset tag on the HP OpenView NNM submap.

**Why does the Connection run so slowly, both on discovery and mapping?**

Verify the IP configuration and Domain Naming System (DNS) configuration on your management station using the following procedure. If any of the steps fail, then you might have a network configuration problem. For example, the configured IP address for the DNS might be incorrect.

When one of the steps fails, you can stop at that point and correct the network configuration or you can perform the remaining steps for additional information.

The output is specific to your network environment and is similar to the following example.

From an MS-DOS® command prompt, perform the following steps:

1. Run the **ipconfig** command. Verify that the information displayed for your system is correct as follows:

   ```
   C:\WINNT>ipconfig
   Windows NT IP Configuration
   Ethernet adapter E100B1:
   IP Address. . . . . . . . . : 200.166.3.116
   Subnet Mask . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . : 200.166.3.1
   ```

2. Run the **nslookup** command on the IP address value from step 1. Verify that the information displayed for your system is correct as follows:

   ```
   C:\WINNT>nslookup 200.166.3.116
   Server: dellsys.us.dell.com
   Address: 200.166.78.254
   Name: mysystem.us.dell.com
   Address: 200.166.3.116
   ```

3. Run the **nslookup** command on the management station host name. Verify that the information displayed for your system is correct as follows:

   ```
   C:\WINNT>nslookup mysystem
   Server: dellsys.us.dell.com
   Address: 200.166.78.254
   Name: mysystem.US.DELL.COM
   Address: 200.166.3.116
   ```

4. Run the **rnetstat** command on the management station. Verify that the information displayed for your system is correct as follows:

   ```
   C:\WINNT>rnetstat -I
   Interface IP address Network Mask Network Address Link Address
   MS 127.0.0.1 255.0.0.0 127.0.0.0 <none>
   Intel 200.166.3.116 255.255.255.0 200.166.3.0 Intel-BD7C9A
   ```

**Why am I unable to view the traps from a managed system?**

Verify that the IP address of the HP OpenView management station is set as the trap destination in the SNMP service properties of the managed system.

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