Installing HP Insight Management Agents on Integrity Servers Running Linux

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This document provides instructions for downloading and configuring HP Insight Management Agents on Integrity servers running Linux. As of this publication, these agents work with Red Hat Enterprise Linux AS v.3 and SUSE LINUX Enterprise Server (SLES) 9. HP plans to support other Linux distributions in future releases.
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This document provides instructions for downloading and configuring HP Insight Management Agents on Integrity servers running Linux. As of this publication, these agents work with Red Hat Enterprise Linux AS v.3 and SUSE LINUX Enterprise Server (SLES) 9. HP plans to support other Linux distributions in future releases.

For a detailed list of agents and the operating systems and updates on which they are supported, please see the [http://www.software.hp.com](http://www.software.hp.com) Web site. Select the Linux link from the homepage, then select the HP Insight Management Agents for Linux on Integrity Servers link to see the agent/operating system matrix.

____________________ Important! ____________________

Please read the Release Notes in Chapter 6 prior to installing and configuring the HP Insight Management Agents on Integrity servers running Linux. The Release Notes contain important information pertaining to the current release of the management agents.
Overview of HP Insight Management Agents, System Management Homepage, and HP Manageability Tools

The HP Insight Management Agents provide system status information that you can monitor using HP’s manageability tools - HP Systems Insight Manager (SIM) or Insight Manager 7 (IM7). The System Management Homepage is software that provides an interface between the management agents and the manageability tools, organizing information from HP Insight Management Agents for display in a Web page.

You can install and configure HP Insight Management Agents on your Integrity server after installing a supported Linux operating system — either Red Hat Enterprise Linux AS v.3 or SUSE LINUX Enterprise Server (SLES) 9. See the Preface for directions about accessing the operating system support matrix.

______________________ Note: ______________________

This manual contains only installation and configuration information. For information about using the manageability agents with the manageability tools, please see HP SIM or IM7 documentation at the products’ Web sites:

- HP SIM — http://www.hp.com/go/hpsim
- IM7 — http://www.hp.com/servers/IM7

____________________ Important! ______________________

If your server came with HP Insight Management Agents pre-installed, please see Chapter 3 for instructions on reconfiguring your system information.

1.1 HP Manageability Tools

HP Manageability Tools are used to monitor the system status information that is provided by HP Insight Management Agents. There are currently two versions of manageability tools: HP Systems Insight Manager, and HP Insight Manager 7 (IM7).
HP recommends migrating to HP Systems Insight Manager if you are currently using HP Insight Manager 7 (IM7).

1.1.1 HP Systems Insight Manager

HP Systems Insight Manager (SIM) is a multi-OS application for managing ProLiant, Integrity, and HP 9000 systems running HP Insight Management Agents in a Windows, Linux, or HP-UX environment. It delivers the capabilities required to manage all HP platforms from a central management server (CMS) and can be extended to provide custom device management.

See the following Web site for more information:

http://www.hp.com/go/hpsim

1.1.2 HP Insight Manager 7 (IM7)

HP Insight Manager 7 (IM7) is a Web-based tool designed to manage platforms running HP Insight Management Agents. The IM7 CMS must be an IA-32 system running Windows NT 4.0 or Windows 2000. With the IA-32 Windows system functioning as the CMS, IM7 monitors HP Insight Management Agents installed on both IA-32 and Itanium 2-based platforms.

You can download IM7 for IA-32 Windows systems from the following Web site:

http://www.hp.com/servers/IM7

1.2 HP Insight Management Agents

The HP Insight Management Agents package is made up of multiple components that monitor various aspects of system health and inventory. These components and their functions are:

- Foundation agents — installed software inventory, system utilization info, alarm thresholds
- Server agents — system inventory CPUs, PCI, memory, cellular information, LED states
- NIC agents — network statistics, error monitoring, configuration reporting
- Storage agents — storage statistics, error monitoring, configuration reporting

HP Insight Management Agents are based on the Simple Network Management Protocol (SNMP). Once the agents are installed on your Integrity server, you can remotely monitor configuration information and system status on that server from any SNMP browser. A CMS using IM7 or HP Systems Insight Manager gathers and organizes the
raw agent information from the browser for display in reports, allowing you to monitor system use and to troubleshoot problems.

You do not need thorough comprehension of SNMP to use HP’s manageability tools or HP Insight Management Agents; however, more details on the SNMP protocol are available at the following Web site:

http://www.net-snmp.net.

1.3 System Management Homepage

System Management Homepage is software that provides an interface between the HP Insight Management Agents and HP’s manageability tools. The System Management Homepage software organizes data from HP Insight Management Agents installed on a server into easy-to-read tables, which it displays in a Web interface. For more information on System Management Homepage, see the following Web page:

Follow the directions in this section to download, install, and configure HP Insight Management Agents.

2.1 Concepts and Terms to Understand When Installing and Configuring HP Insight Management Agents

1. **SNMP Operations** - HP Insight Management Agents are based on the SNMP protocol, which includes GET, SET, and TRAP operations, which are defined below. In conjunction with the HP Insight Management Agents, HP Systems Insight Manager and IM7 automate SNMP operations in an intuitive interface that does not require you to have a detailed understanding of SNMP.

   Although you can use HP’s manageability tools and HP Insight Management Agents without detailed comprehension of SNMP, you may find the background information listed in this item helpful in understanding the operations performed by your HP manageability software, particularly in regard to the relevance of community strings, which are explained in the items that follow. For detailed information about SNMP, see the [http://www.net-snmp.net](http://www.net-snmp.net) Web page.

   a. **GET** operations retrieve information from the system on which you installed HP Insight Management Agents.

   b. **SET** operations change values on the system installed with HP Insight Management Agents.

   c. **TRAP** operations are initiated from the system installed with HP insight Management Agents to note that a problem or issue needing attention has occurred.

2. **Community String** - During agent configuration, you are prompted to set values for community strings, which function somewhat like passwords. A community string must be known to both the system running the HP Insight Management Agents and the system serving as the CMS to grant access. A read-only community string allows the user who knows its value to retrieve SNMP data. A read/write community string allows the user who knows its value to both retrieve and modify SNMP data.
3. **Trap Destination** - A trap destination is a machine to which you want a server’s status indicators sent for further analysis. For example, HP Systems Insight Manager’s CMS could be the trap destination for a server installed with HP Insight Management Agents. You are prompted to specify a trap destination during agent configuration. Each trap destination will have a corresponding trap community string.

### 2.2 Downloading HP Insight Management Agent Packages

1. From the [http://www.hp.com](http://www.hp.com) Web site, click the **Driver Downloads** link.

2. Under the “Support for your products” heading on the *Software and Driver Downloads* page, do the following:
   
   a. Make sure the **Download drivers and software** radio button is selected.
   
   b. Type the word, “Integrity” followed by your server number (for example, rx7620) in the **for product** text box.
   
   c. Press the **Enter** key on your keyboard.

3. Click on the appropriate operating system from the displayed list on the **Specify Operating System** page.

4. On the *Download Drivers and Software* page, scroll down to the “System Management Agents” heading on the page, and click on the **Download** link next to HP Insight Management Agents for Linux on Integrity Servers to immediately obtain a tar archive of all necessary files. Or, you can click on HP Insight Management Agents for Linux on Integrity Servers to go to a page where you can view more information about the management agents before downloading the tar archive.

**Note:**

2.3 Installing HP Insight Management Agent Packages

This section describes how to install the HP Insight Management Agent Packages on Red Hat Enterprise Linux AS v.3 and SUSE LINUX Enterprise Server 9.

1. Login as root on the server where you downloaded the tar package in Step 4 of the previous instruction set.
2. Untar the archive of files you obtained from HP:
   a. Type `tar -xvf hpima-2.2.tar` and press Enter. This step creates an `hpima` 2.2 directory into which the archive of files in unpacked.
   b. Type `cd hpima-2.2` and press Enter.
3. Type `. /INSTALL` and press Enter to execute a script that:
   a. Examines your SNMP package, replacing the SNMP stack as necessary.
   b. Installs `hpmgmtbase` IPMI drivers.
   c. Installs `hpima` (the HP Insight Management Agents).

A screen explaining these functions appears and prompts you to press `y`, then the Enter key, to proceed. To exit without installing, press any other key.

____________________ Note: ____________________
The HP Insight Management Agent packages require Open IPMI (Intelligent Platform Management Interface) to obtain hardware information about the systems they are installed on. The package you installed in Step 3 provides Open IPMI. See http://devel-oper.intel.com/design/servers/ipmi/index.htm for more information about IPMI if desired.

2.4 Configuring HP Insight Management Agent Packages

During the installation process of the HP Insight Management Agent packages, an automated search for SNMP configuration files on your system is performed. Depending on the data found in the configuration files, a series of prompts requests you to either supply missing information or gives you the opportunity to change current settings. Please see “Section 2.4.1” below for explanations of the types of information you’ll be prompted for.

____________________ Note: ____________________
If you want to reconfigure agents that have already been installed, please see Chapter 3.
As you input the information requested in the user interface, note that most installation prompts interpret a blank response as no change to the current setting or else use an appropriate default value. Prompts that require user input do not allow you to proceed until you supply the requested information.

2.4.1 Installation Prompt Types

1. **localhost** - The localhost is the server you install the HP Insight Management Agents on. System Management Homepage requires the data you input at the “localhost” prompts to operate. See Section 1.3 for more information on this software.

2. **Remote Management Station(s)** - The Remote Management Station(s) installation prompts request you to provide community string data for a single remote server, which is typically the HP Systems Insight Manager Console. Community string data can also be used by any other application. Please see Section 2.1 for a definition of community strings.

2.4.2 Completing Agent Configuration

When you have supplied the information solicited by the prompts, the SNMP daemon starts as do the HP Insight Management Agent packages.

______________________  Note:  ______________________

If you do not specify a trap destination during configuration, each peer daemon will log a complaint in /var/opt/hpima/agents.log. Although the agents run, no traps are sent. Please see Section 2.1 for a definition of a trap destination.

If you remove the HP Insight Management Agents Package, the previous SNMP daemon configuration will be restored.

The data you provided at the installation prompts along with the information collected from the SNMP configuration files is stored in /etc/snmp/snmpd.conf. If you are familiar with manual configuration of SNMP agents, you may edit this file and restart the SNMP daemon.

The following output is generated when you finish answering the prompts:

===================================================================
The following file(s) contained the prior snmpd configuration:
/etc/snmp/snmpd.conf
They have been saved and will be restored when hpima is removed.

New configuration is stored in /etc/snmp/snmpd.conf
===================================================================

2-4 Installing and Configuring HP Insight Management Agents
(Re)starting the SNMP daemon, configured to support the HP Insight Management Agents

Start SNMP AgentX Intermediary 'hpimaX': [ OK ]
Start Foundation Peer Daemon 'hpimafdtnpeerd': [ OK ]
Start Foundation Host Agent 'hpimahostd': [ OK ]
Start Foundation Threshold Agent 'hpimathreshd': [ OK ]
Start Server Peer Daemon 'hpimasvrpeerd': [ OK ]
Start Server Health Agent 'hpimahhealthd': [ OK ]
Start Server Standard Equipment Agent 'hpimastdegd': [ OK ]
Start Storage Peer Daemon 'hpimastorpeerd': [ OK ]
Start Storage Event Agent 'hpimaeventd': [ OK ]
Start Storage Intelligent Disk Array Agent 'hpimaidad': [ OK ]
Start Storage SCSI Agent 'hpimascsid': [ OK ]
Start Storage Fibre Channel Agent 'hpimafcad': [ OK ]
Start NIC Peer Daemon 'hpimanicpeerd': [ OK ]
Start NIC Agent 'hpimanicd': [ OK ]
Start Event E0 Trap Generator 'hpimaE0traps': [ OK ]

HP Insight Management Agents are enabled.
The hpima RPM has installed successfully.

To verify HP Insight Management agent status, type service hpima status and press Enter.
Reconfiguring HP Insight Management Agents

If your system came with pre-installed HP Insight Management Agents, you need to reconfigure them to customize settings that require user-specific information, such as IP addresses and community strings.

To reconfigure the HP Insight Management agents, type `/etc/init.d/hpima reconfigure` and press the Enter key.

Next, go to Section 2.4, and follow the instructions to customize your settings.

You can run the `/etc/init.d/hpima reconfigure` command at any time to reconfigure agents previously installed.
Installing and Configuring HP System Management Homepage

Follow the directions in this section to download, install, and configure HP System Management Homepage (HPSMH).

4.1 Downloading the HP System Management Homepage

1. From the http://www.hp.com Web site, click the Driver Downloads link.
2. Under the “Support for your products” heading on the Software and Driver Downloads page, do the following:
   a. Make sure the Download drivers and software radio button is selected.
   b. Type the word, “Integrity” followed by your server number (for example, rx7620) in the for product text box.
   c. Press the Enter key on your keyboard.
3. Click on the appropriate operating system from the displayed list on the Specify Operating System page.
4. On the Download Drivers and Software page, scroll down to the “System Management Agents” heading on the page, and click on the Download link next to HP System Management Homepage for Linux on Integrity Servers to immediately obtain a tar archive of all necessary files. Or, you can click on HP System Management Homepage for Linux on Integrity Servers to go to a page where you can view more information about the management agents before downloading the tar archive.

______________________  Note:  ______________________

The http://www.hp.com Web site provides the latest product updates.

4.2 Installing the HP System Management Homepage

1. Login as root on the server where you downloaded the tar package in Step 4 of the previous instruction set.
2. Untar the archive of files you obtained from HP:
   
a. Type `tar -xvf hpsmh-2.0.tar` and press Enter. This step creates an `hpsmh-2.0` directory into which the archive of files in unpacked.

   b. Type `cd hpsmh-2.0` and press Enter.

3. Type `./INSTALL` and press Enter to execute a script that:
   
a. Installs the HPSMH web reporting infrastructure.

b. Determines that the HP Insight Management Agent (HPIMA) package is installed.

   c. Installs `hpima-webapp` package, which enables the HPIMA to plug into the HPSMH (HP System Management Homepage) and start up the web UI (user interface).

   A screen explaining these functions appears and prompts you to press `y`, then the Enter key, to proceed. To exit without installing, press any other key.

4.3 Configuring the HP System Management Homepage

After installing the HP System Management Homepage, you should correctly configure it for your system.

For details and explanations of your configuration options, see the “Configuration” section in the Installation Guide that is supplied in the HPSMH tar archive that you downloaded and unpacked.
This section provides instructions for troubleshooting basic agent installation and configuration issues. The information here assumes the following:

1. The agents are not responding to inquiries from HP Systems Insight Manager or IM7.
2. You are a Linux system administrator with root privilege.
3. No errors were issued during agent installation and initial configuration.
4. The net-snmp-utils RPM, part of the agent installation tar archive, has been installed on the managed system.
5. Capitalization of commands and options is correctly followed.
6. You are running in terminal windows so you have multiple command lines available.
7. You understand that shutting down the firewall to troubleshoot creates a security breach, and you assume all risks inherent with that procedure.

5.1 Important Information About Firewalls and Troubleshooting

Some Linux distributions automatically configure firewall software during installation, usually using iptables which are the standard Linux kernel’s method of providing firewall support. Such a firewall configuration may block remote management stations from contacting the SNMP daemon, making it difficult to troubleshoot HP Insight Management Agents.

To execute the troubleshooting steps in this document, you must shut down firewall software on the managed server using the steps below. The Section 5.3 assume you only have the standard Linux firewall capabilities of iptables. Consult your system administrator to determine if this is correct.
5.1.1 How To Shut Down iptables

____________________ WARNING! __________________

Inform your network administrator before you stop a running firewall, even momentarily. Disabling the firewall creates a potential security breach whose threat you must weigh against the benefits of live troubleshooting.

1. Type /etc/init.d/iptables status and press Enter to see if the firewall software is installed and running.
   • If you see the message No such file or directory, then standard firewall software is not installed and you can proceed to Section 5.2.
   • If you see the message Firewall is stopped, proceed to Section 5.2.
   • If you see output indicating the firewall is running, go to Step 2.
2. If the firewall is running, type /etc/init.d/iptables stop and press Enter to stop the firewall. You can then proceed to Section 5.2.

5.2 First Steps to Take

Most errors are due to mismatched community strings entered during agent configuration on the managed server. Follow the steps below that include confirming the community string settings before performing more advanced troubleshooting.

1. Examine the SNMP daemon configuration file /etc/snmp/snmpd.conf. The first set of directives should be delimited by the comment lines below (the date should reflect your installation time).

____________________ Note: __________________

Any remote-host-names you configured during initial installation appear in this file. Record these remote-host-names for later use, in Section 5.3.

#----- 29 Jun 2004: HP Insight Management Agents
:
:
:
# ----- 29 Jun 2004: end modifications

   a. Find the directives for local host community strings.
      Text contained within the “< >” symbols indicates parameters you set during agent configuration. In the example below, <ROlocal> and <RWlocal>
are used as a generic representations of the names you set for the read-only and read-write community strings, respectively. The names in your file will appear as you configured them when you installed the HP Insight Management Agents.

rocommunity <ROlocal> 127.0.0.1
rwcommunity <RWlocal> 127.0.0.1

Ensure the values of <ROlocal> and <RWlocal> are what you thought you set for local host community strings when you configured or reconfigured your agents. Each must have a unique string value. If you need to change them, see the instructions in Chapter 3.

__________________ Note: __________________

The rocommunity string, if it exists, must come before rwcommunity community string in the file.

b. Find the directives for remote host community strings:

rocommunity <ROremote> <remote-host-name>
rwcommunity <RWremote> <remote-host-name>

You should see a pair of lines for both the <ROremote> and the <RWremote> management stations you specified during agent installation. Ensure the community string values of <ROremote> and <RWremote> are what you specified during agent configuration. Also remember that the community string value of <ROremote> must be different from <RWremote> for a single remote host. These community strings may be reused on other remote hosts.

__________________ Note: __________________

The rocommunity string, if it exists, must come before rwcommunity community string in the file.

c. Verify that the community strings and host names match what you think you configured them to be, and that they also match the settings in your management console software (HP Systems Insight Manager or IM7). If they do not match, follow the directions in Chapter 3.
5.3 Advanced Troubleshooting Steps

If you verified your community strings and host names as outlined above, then follow these steps:

1. Shut down the agents and SNMP daemon:
   a. Type `/etc/init.d/hpima stop` and press Enter.
   b. Type `/etc/init.d/snmpd stop` and press Enter.

2. Type `ping localhost` and press Enter to test connectivity to the local host. If the command fails, there is a problem with your network configuration which you must investigate and repair before continuing with agent troubleshooting.

3. For each `<remote-host-name>` in `/etc/snmp/snmpd.conf` (described in Section 5.2), type `ping <remote-host-name>` and press Enter to test connectivity to the remote management station.
   If the command fails, there is a problem with your core network configuration or your network in general, which you must investigate and repair before continuing with agent troubleshooting.

4. Open a new window, type `snmpd -f -L -Cc /opt/hp/hpima/etc/snmpd.conf.open`, and press Enter to start the SNMP daemon that uses a simple configuration file that comes with HP Insight Management Agents.
   The configuration file in the command uses the read-only community string “public” for ANY host on your network. It is insecure but useful for troubleshooting.
   a. You should see the output below, which verifies that SNMP has AgentX functionality. Without it, the HP Insight Management Agents cannot communicate through SNMP.

```
Turning on AgentX master support.
NET-SNMP version 5.0.9
```

b. Wait at least ten seconds to ensure the daemon continues to run. Note that Step 5 below may cause output to appear in this window. Examine the output for errors if the operations in Step 5 fail.

5. Type `snmpget -Oqs -v1 -c public localhost sysDescr.0` on the system installed with the HP Insight Management Agents and press Enter to test local SNMP functionality, where “public” is the name you set up for your read-only community string.
a. Note the output from this command, which should be a one-line response.
b. Type `uname -a` and press Enter.
c. Compare the output of `uname -a` with the output you noted. The responses should largely match. If they do not, you have a malfunctioning SNMP package. Remove the HP Insight Management Agents and reinstall.

6. Check to see if your network is passing SNMP packets.
   a. Login on any of the remote hosts in your `snmpd.conf` file and execute a simple SNMP GET command.

   The command and syntax will vary widely depending on the remote host’s operating system (Windows, Unix, Linux). For example, from a Linux host, you could run `snmpget -Oqs -v1 -c public managedhost sysDescr.0`, where `managedhost` is the DNS name or IP address of your managed client.

   b. If this command fails, especially if there is no output in the logging window, it indicates your network is not passing SNMP packets. You must repair your networking issues before continuing with agent troubleshooting.

7. The HP Insight Management Agents depend on a running SNMP daemon. To check and troubleshoot the daemon status on the managed host, restart the SNMP daemon with the real configuration file:
   a. Type `/etc/init.d/snmpd restart` and press Enter.
   b. The logging window should say the previous daemon is stopped. Close that window. Wait at least ten seconds, then type `/etc/init.d/snmpd status` and press Enter to check SNMP daemon status.
   c. You should see output such as `snmpd (pid xxxxx) is running...`
      If snmpd is not running, see information in the `snmpd(1M)` man page and turn on “logging to a file” as instructed. Use information in the man page to get the SNMP daemon to run.

8. If while running Red Hat Enterprise Linux 3, the values for PCI I/O slot numbers appear invalid (for example, PCI devices are not mapped to the physical slot in which they are installed), then check the `/var/log/hp/hpima` file. If you
see the output. Warning: hpima version 2.1 does not support multi-domain PCI, you must reset your ACPI configuration value. See the “Issues and Known Problems” section of the HP Support Note for Red Hat Enterprise Linux AS v.3 for the Itanium Processor on HP Integrity Servers for instructions on resetting the ACPI configuration value to single-pci-domain. You should have received this document with your Red Hat Enterprise Linux AS v.3 purchase from HP. It is also available at the following web site:

www.docs.hp.com/linux.

9. Remove the agent log file /var/log/hp/hpima (if it exists) to clear old messages.

10. Type /etc/init.d/hpima start to start the agents.

   a. Wait at least one minute, then type /etc/init.d/hpima status and press Enter to check agent status.

   b. You should see the following output:

   hpimaX (pid xxxxx) is running...
   hpimafdtnepeerd (pid xxxxx) is running...
   hpimahostd (pid xxxxx) is running...
   hpimathreshd (pid xxxxx) is running...
   hpimasvrpeerd (pid xxxxx) is running...
   hpimahealthd (pid xxxxx) is running...
   hpimastdeqd (pid xxxxx) is running...
   hpimastorpeerd (pid xxxxx) is running...
   hpimaeventd (pid xxxxx) is running...
   hpimaidad (pid xxxxx) is running...
   hpimascsid (pid xxxxx) is running...
   hpimafcad (pid xxxxx) is running...
   hpimanicpeerd (pid xxxxx) is running...
   hpimanicd (pid xxxxx) is running...
   hpimaE0traps (pid xxxxx) is running...

   c. If any of the programs listed above are not running, examine the /var/log/hp/hpima file for errors.

11. Type snmpget -Oqs -v1 -c <ROlocal> localhost sysDescr.0 and press Enter to test basic SNMP functionality with the real community strings.

    ________________  Note:  ________________

    The first option in the command is the letter “O” while the final argument ends in “dot zero.”

    a. Note the output from this command, which should be a one-line response.
b. Type `uname -a` and press Enter.

c. Compare the output of `uname -a` with the output you noted. The responses should largely match. If they do not match, your community string is not properly configured. See Section 5.2 for troubleshooting information.

12. Repeat the preceding step using the `<RWlocal>` community string.

13. Type `snmpget -Oqs -v1 -c ROlocal -mALL localhost cpqHoMibRevMajor.0` to retrieve an agent data value from the managed system.

____________________ Note: ____________________

- `mALL` is a new option.

____________________

You should see the following output: `cpqHoMibRevMajor.0 1`

14. Repeat the previous step with the `<RWlocal>` community string.
This section contains important information about known issues for this release of the HP Insight Management Agents that may affect the installation, configuration, or use of the agents.

6.1 Storage Agents May Report Incorrect Information on rx8620 and Superdome Systems

For users with rx8620 or superdome systems, the Storage SNMP Agents can incorrectly report bay and chassis information when the systems are configured to use multiple PCI domains.

There is a workaround for this situation, which is to configure the partition to use the single PCI domain ACPI configuration. To do this, proceed as follows:

1. Boot to the EFI shell.
2. Set the PCI domain:
   
   ```
   Shell> acpiconfig single-pci-domain
   single-pci-domain settings have been enabled.
   ```

   A reset is required for the settings to take effect.

3. Reset the system:
   
   ```
   Shell> reset
   ```

6.2 Storage Agents Do Not Display Serial Number and Firmware Version on SCSI Controller Cards

The Storage SNMP Agents do not display the SCSI controller OIDs for the serial number and firmware.

You can obtain this information yourself, as follows:

- Check the SCSI controller card for the serial number, which is labeled on the card.
- Watch for the firmware version during system initialization. When the SCSI controller card is initialized, the firmware version is displayed.
6.3 Storage Agents Do Not Support Fibre Channel Tape Drives and Libraries

The Storage SNMP Agents do not support fibre channel tape drives and libraries. Neither information nor traps is provided.

There is currently no workaround for this problem.

6.4 Fibre Channel Ports Without Active Link Are Not Visible to Storage Agents

On Red Hat Enterprise Linux AS v.3 Update 3 and SUSE LINUX Enterprise Server (SLES) 9, for qlogic driver versions below version 8.00.02b1, the qlogic fibre channel adapters are not visible when they are not connected to an active link.

To solve this problem, upgrade to qlogic driver version 8.00.02b1 or higher.