

HP Insight Integration for Tivoli, Revision 4.2

User Guide



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Contents

| | |
|---|----|
| 1 About this guide | |
| Audience assumptions | 6 |
| Where to go for additional help | 6 |
| 2 Product overview | |
| Product description..... | 7 |
| Changes in revision 4.2..... | 7 |
| Product features | 7 |
| Availability..... | 8 |
| Preinstallation requirements | 8 |
| HP hardware support | 8 |
| HP ProLiant server configured as a TMR server..... | 8 |
| HP ProLiant server configured as a TEC server | 8 |
| ProLiant Managed Node and Endpoint configurations | 8 |
| HP Insight Management Agent platforms..... | 9 |
| Disk space and memory requirements..... | 9 |
| HP software requirements..... | 9 |
| HP Insight Management Agents | 9 |
| HP Systems Insight Manager..... | 9 |
| HP Remote Server Management..... | 10 |
| HP Storage Management Appliance..... | 10 |
| Tivoli Enterprise support and requirements..... | 10 |
| Tivoli patch requirements..... | 11 |
| Tivoli SNMP Adapter..... | 11 |
| Tivoli operating environments | 11 |
| Insight Integration groups and tasks..... | 12 |
| Insight Integration directories and files | 13 |
| 3 Installing the HP Insight Integration with the TEC | |
| Overview..... | 14 |
| TEC components and Insight Integration..... | 14 |
| Event adapters..... | 14 |
| Event Server | 14 |
| Event Console..... | 14 |
| Installation overview and prerequisites..... | 14 |
| Installing the HP Insight Integration for Tivoli..... | 15 |
| Confirming installation and product details..... | 17 |
| Assigning Tivoli administrator resources | 18 |
| Configuring a Tivoli SNMP Adapter | 20 |
| Preinstallation considerations..... | 20 |
| Configuring a Tivoli non-TME SNMP Adapter | 20 |
| Configuring a Tivoli ACF SNMP Adapter | 22 |
| Configuring the TEC Event Server..... | 30 |
| Manually configuring the HP Insight Integration for Tivoli | 34 |
| Manually updating the Tivoli SNMP Adapter on a Managed Node..... | 34 |
| Manually copying existing SNMP Adapter files to another Managed Node..... | 35 |
| Manually configuring the Event Server rule base | 35 |
| Installation logs..... | 36 |
| Configuring the HP browser tasks..... | 36 |
| Uninstalling the HP Insight Integration for Tivoli | 37 |
| 4 Using the HP Insight Integration for Tivoli | |
| Introduction..... | 38 |
| Managing HP events in the Tivoli Enterprise Console | 38 |
| Viewing HP events | 38 |

| | |
|---|----|
| Event correlation | 39 |
| Launching HP web-based management tools..... | 40 |
| Launching from the Tivoli Desktop | 41 |
| Launching from the TEC console..... | 42 |
| 5 Integrating HP asset information with Tivoli Inventory | |
| Overview | 46 |
| Assumptions and requirements..... | 46 |
| Initiate Inventory Collection task | 46 |
| Configuring and running the Initiate Inventory Collection task | 47 |
| Integrating HP data into the Tivoli Inventory Database | 49 |
| Insight Integration scripts..... | 49 |
| Extending the Tivoli Inventory Database | 49 |
| Creating HP specific views | 50 |
| Create an HP query library and HP queries | 50 |
| Creating and customizing the inventory profile..... | 51 |
| Displaying HP inventory information | 52 |
| 6 Technical support | |
| Before you contact HP | 55 |
| HP contact information | 55 |
| Appendix A: Troubleshooting and known issues | |
| Troubleshooting | 56 |
| Verifying the installation status of the Insight Integration | 56 |
| SNMP must be installed before installing Insight Management Agents..... | 56 |
| Test SNMP trap operations..... | 56 |
| Simulating an Insight SNMP trap..... | 56 |
| Advanced troubleshooting and debugging | 56 |
| Installation log | 56 |
| Installation and operational errors | 56 |
| Obtaining configuration information..... | 57 |
| Appendix B: HP SNMP events | |
| CR3500 RAID controller (CPQCR.MIB) | 58 |
| Common cluster management (SVRCLU.MIB) | 59 |
| Standard equipment (CPQSTDEQ.MIB)..... | 60 |
| Systems information (CPQSINFO.MIB)..... | 60 |
| Intelligent drive array (CPQIDA.MIB) | 62 |
| SCSI device information (CPQSCSI.MIB)..... | 65 |
| Server health features (CPQHLTH.MIB)..... | 67 |
| Storage systems information (CPQSTSYS.MIB) | 70 |
| Remote Insight board information (CPQSM2.MIB) | 73 |
| Threshold management (CPQTHRSH.MIB) | 74 |
| Host system information (CPQHOST.MIB)..... | 75 |
| Uninterruptible power supply (CPQUPS.MIB) | 75 |
| Recovery server information (CPQRECOV.MIB)..... | 76 |
| Manageable IDE drives (CPQIDE.MIB)..... | 76 |
| Cluster systems information (CPQCLUS.MIB)..... | 76 |
| Fibre Channel Array information (CPQFCA.MIB)..... | 77 |
| Network Interface Card information (CPQNIC.MIB) | 79 |
| Operating system management (CPQWINOS.MIB) | 80 |
| Rack and power management (CPQRPM.MIB) | 80 |
| Rack enclosure information (CPQRACK.MIB) | 87 |
| Console management controller (CPQCMC.MIB) | 89 |
| Switch Traps (CIMTRAPS.MIB) | 93 |
| Service Incident Information (CPQSERVICE.MIB) | 94 |
| Power Device SNMP Management Card (CPQPOWER.MIB) | 95 |
| StorageWorks Enterprise Array Manager (HS_AGENT.MIB)..... | 95 |

| | |
|--|----|
| Storage Area Networks Management Appliance (CPQSANAPP.MIB) | 96 |
| StorageWorks Command Console (CPQSWCC.MIB) | 96 |
| Blade Type-2 traps (BT2TRAPS.MIB) | 97 |
| Blade Type-4 traps (BT4TRAPS.MIB) | 99 |
| HP SIM forwarded trap (HPOV-NNM.MIB)..... | 99 |

Appendix C: Insight SNMP rules

| | |
|---|-----|
| Common cluster management (SVRCLU.MIB) | 100 |
| Standard equipment (CPQSTDEQ.MIB)..... | 100 |
| Systems information (CPQSINFO.MIB)..... | 100 |
| Intelligent drive array (CPQIDA.MIB) | 101 |
| SCSI device information (CPQSCSI.MIB)..... | 104 |
| Server health features (CPQHLTH.MIB)..... | 106 |
| Storage systems information (CPQSTSYS.MIB) | 107 |
| Remote Insight board information (CPQSM2.MIB) | 111 |
| Threshold management (CPQTHRSH.MIB)..... | 111 |
| Host system information (CPQHOST.MIB)..... | 111 |
| Uninterruptible power supply (CPQUPS.MIB) | 112 |
| Recovery server information (CPQRECOV.MIB)..... | 112 |
| Manageable IDE drives (CPQIDE.MIB)..... | 112 |
| Cluster systems information (CPQCLUS.MIB)..... | 113 |
| Fibre Channel array information (CPQFCA.MIB) | 113 |
| Network interface card information (CPQNIC.MIB) | 115 |
| Operating system management (CPQWINOS.MIB)..... | 115 |
| Rack and power management (CPQRPM.MIB)..... | 116 |
| Rack enclosure information (CPQRACK.MIB) | 119 |
| Console management controller (CPQCMC.MIB) | 120 |
| CR3500 RAID controller (CPQCR.MIB) | 123 |
| HP Storage Management Appliance (CPQSANAPP.MIB) | 124 |
| StorageWorks Command Console (CPQSWCC.MIB) | 125 |
| Switch traps (CIMTRAPS.MIB) | 125 |
| StorageWorks Enterprise Array Manager (HS_AGENT.MIB)..... | 126 |
| Blade Type-2 traps (BT2TRAPS.MIB) | 126 |
| Blade Type-4 traps (BT4TRAPS.MIB) | 127 |
| Service incident information (CPQSERVICE.MIB) | 128 |
| Power Device SNMP Management Card (CPQPOWER.MIB)..... | 129 |
| HP OpenView – Network Node Manager (HPOV-NNM.MIB)..... | 129 |

Index

1 About this guide

Audience assumptions

This guide is for systems administrators who use the HP Insight Integration for Tivoli, HP System Management Homepage, HP Remote Management processors and HP Systems Insight Manager applications to manage the operation of HP ProLiant, AlphaServer, and Integrity Superdome systems within a Tivoli environment.

The HP Insight Integration for Tivoli has been developed to integrate into an existing Tivoli Managed Region.

Readers of this guide should be familiar with the configuration and operation of Tivoli Enterprise, HP Systems Insight Manager, HP Remote Light-Out or Integrated Lights-Out management processors and HP Insight Management Agents. They should also have a working knowledge of the operating environments to be used with the Insight Integration module, Tivoli Enterprise, and HP Systems Insight Manager.

Where to go for additional help

In addition to this guide, the following information sources are available:

- Management Integration Support website at <http://h18000.www1.hp.com/products/servers/management/integrationmodule-support.html>
- ProLiant Essentials Software website at <http://www.hp.com/servers/proliant/manage>
- *Tivoli Framework User's Guide*
- *Tivoli Enterprise Console User's Guide*
- *Tivoli Inventory User's Guide*

2 Product overview

Product description

For companies that implement HP servers and Tivoli enterprise management as key elements of their IT infrastructure, the HP Insight Integration for Tivoli is a comprehensive solution that simplifies systems management by integrating SNMP event and status indications for HP ProLiant, AlphaServer, and Integrity Superdome servers into the Tivoli Enterprise Console (TEC), along with tasks that enable in-depth hardware data collection for ProLiant servers and integrated links to HP management tools.

The Insight Integration builds on HP hardware instrumentation and Insight Management Agent technology, which work with native Tivoli services to provide comprehensive infrastructure management for Tivoli across a wide range of operating system platforms. This functionality enables you to manage HP server and storage hardware, in addition to other enterprise resources, from within a common Tivoli environment. Supported operating platforms for host and managed systems include HP-UX, Sun Solaris, IBM AIX, Microsoft® Windows® 2000, Microsoft Windows 2003, Novell NetWare, Linux, HP Tru64 UNIX®, and HP OpenVMS.

The HP Insight Integration for Tivoli includes SNMP Adapter definitions for over 950 individual notifications, in addition to Basic Recorder of Objects in C (BAROC) event class definitions and rules to correlate over 550 SNMP events. These definitions, classes, and rules integrate closely with the TEC application, allowing HP SNMP events to be identified, processed, translated, and clearly displayed in the TEC console. The predefined HP rules can be easily customized to suit individual Tivoli Management Environment (TME) requirements.

Revision 4.2 of the HP Insight Integration for Tivoli also provides tasks and predefined database schemas that enable detailed hardware data collection for HP ProLiant servers which can be displayed and queried by the inventory tools delivered with Tivoli Configuration Manager. Additional data for managed HP servers is also available via the HP System Management Homepage, HP Systems Insight Manager, and HP Lights-Out management tools using integrated browser-based tasks.

Changes in revision 4.2

- Tivoli Class Definition Statement Files (.CDS) and BAROC class definitions updated to support HP Insight Management Agents 7.70 for ProLiant, AlphaServer and Integrity Superdome servers
- Expanded rules for Tivoli event servers (over 550) with automated correlation. Can be customized to meet individual requirements
- Support to receive VMM events forwarded by HP SIM as SNMP event.
- Support for CMC events defined in CPQRPM.MIB file.
- Support to obtain and view ATA and SAS hardware data from HP ProLiant servers in Tivoli Inventory.

Product features

- Designed for use with the TEC 3.7.x, 3.8, and 3.9
- Installs into all tier-1 Tivoli platforms (HP-UX, AIX, Solaris, and Windows) running Tivoli Framework 3.7.x through 4.1.1
- Provides custom tasks to configure the Tivoli SNMP Adapter and Tivoli Event Server to receive and translate HP SNMP notifications as TEC events
- Contains more than 950 SNMP trap definitions for HP ProLiant, AlphaServer, and Integrity Superdome servers and HP storage platforms
- Translates and displays SNMP events from all Tivoli Managed Nodes and Endpoints that have Insight Management Agents installed, including Microsoft Windows NT®, Windows 2000, Windows 2003, NetWare, Linux, Tru64, and Open VMS
- Provides predefined event class definitions and rules that identify correlate over 550 HP SNMP events
- Includes integrated tasks to launch HP Systems Insight Manager, HP System Management Homepage, HP Lights-Out management and the HP Storage Management Appliance from the Tivoli Desktop and the TEC
- Provides support to receive VMM events that are forwarded as SNMP event from HP SIM
- Offers predefined tasks and database schemas for Microsoft SQL and Oracle® that enable HP ProLiant hardware asset data to be collected, stored, queried, and displayed by Tivoli Configuration Manager inventory tools
- Includes comprehensive documentation

Availability

HP Insight Integration for Tivoli is easy to obtain by registering and downloading from <http://www.hp.com/servers/integration>.

Preinstallation requirements

Before installing the HP Insight Integration for Tivoli, be sure that you have read and understood the installation information provided in this chapter. You must also meet these additional installation requirements:

- To access the complete functionality provided with Insight Integration, the target Tivoli environment must be fully configured and operational before installation.
- The Tivoli Framework/Desktop and the TEC are the only required Tivoli components.
- Tivoli Configuration Manager is required to utilize the HP inventory collection tasks.
- Verify that the correct levels of the Tivoli Framework, the TEC, and related patches have been installed. A listing of the Tivoli software requirements can be found in the “Tivoli Enterprise support and requirements” section.
- The Tivoli software versions and patches installed on Gateway and Managed Node devices must match those installed on the associated TMR server.
- SNMP services must be installed and configured on all HP managed systems.
- A Tivoli administrator login is needed to perform many of the features provided with Insight Integration. For information on administrator login and access rights, see the *Tivoli Framework User’s Guide*.

HP hardware support

The Insight Integration has been developed to install and operate on HP ProLiant, AlphaServer, and Integrity Superdome servers, configured as Tivoli TMR and Managed Node systems on supported UNIX and Windows platforms, including HP-UX, Windows 2000, and Solaris, and as Tivoli Endpoint devices on platforms that support Tivoli and HP Insight Management Agents, including Windows 2000, Windows 2003, Windows NT, NetWare, and Linux. For a more complete listing of Endpoint platform support, see the “HP Insight Management Agent platforms” section.

The following sections provide examples of the minimum configuration requirements for HP ProLiant servers configured as Tivoli TMR and TEC servers and as Tivoli Managed Nodes or Endpoint systems.

HP ProLiant server configured as a TMR server

HP recommends the following minimum configuration:

- Windows 2000 with SP4 or greater
- 128 MB RAM
- TCP/IP installed and configured
- Tivoli Framework 3.7.1 or later
- Oracle, Sybase, Microsoft SQL Server, Informix, or DB2 Relational Database Management Systems (RDBMS)

HP ProLiant server configured as a TEC server

HP recommends the following minimum configuration:

- Windows 2000 with SP4 or greater
- 512 MB RAM and 512 MB free drive space, without RDBMS Interface Module (RIM) and event database
- 1 GB RAM and 4 GB RAM free drive space (with RIM and event database on the same server)
- TCP/IP installed and configured
- Tivoli Framework 3.7.1 or later
- Tivoli Enterprise Console 3.7.1 or later and Event Server with the SNMP event adapter installed on a node in the environment
- Oracle, Sybase, Microsoft SQL Server, Informix, or DB2 RDBMS for the TEC database

ProLiant Managed Node and Endpoint configurations

HP recommends the following minimum configuration:

- 64 MB RAM
- Windows NT 4.0 SP6a

- Novell NetWare 4.x
- SNMP service installed and configured



NOTE: Under Windows 2000, the SNMP service is set to READ ONLY by default. Be sure that SNMP is configured for READ/WRITE to enable proper operations.

- TCP/IP installed and configured
- Insight Management Agents 5.50 or later
- Tivoli Managed Nodes
 - Tivoli Framework 3.7.1 or later
- Tivoli Endpoints with the Tivoli Management Agent installed

HP Insight Management Agent platforms

The following lists all platforms supported by Insight Management Agents and Insight Integration as managed Tivoli Endpoint systems:

- Windows 2000
- Windows NT 4.0 SP6
- Windows 2003
- NetWare 5.x or later
- HP Tru64 UNIX 4.0F and later
- HP OpenVMS 7.1 and later
- UnixWare 7 or later and Open UNIX 8
- Linux
 - Red Hat
 - SUSE
 - UnitedLinux 1.0
- OS/2 Warp Version 4

Disk space and memory requirements

To install the HP Insight Integration for Tivoli, Revision 4.2, a minimum requirement of 6 MB of free hard disk space is required for a combined TMR/TEC or individual TMR and TEC server configurations.

No set memory is required. The Tivoli environment and the number of nodes being managed within the TMR determine the actual amount of memory required.

HP software requirements

The following HP software is needed to implement the full functionality of the HP Insight Integration for Tivoli.

HP Insight Management Agents

Insight Management Agents are the foundation of the HP Insight Integration for Tivoli and are required on every HP server to be managed. They monitor hardware instrumentation and subsystem status and generate SNMP events.

The HP Insight Integration for Tivoli, Revision 4.2 includes hardware support and SNMP event instrumentation up to Insight Management Agents 7.70. HP recommends that Insight Management Agents 5.50 be used as a minimum.

To view data instrumented by HP Insight Management Agents on an individual server, the Insight Integration for Tivoli includes a task to launch the System Management Homepage from the Tivoli Desktop and TEC.

Insight Management Agents for HP servers are included with HP Support Packs included with the Foundation Pack and SmartStart CDs shipped with HP ProLiant and Integrity servers, and can be downloaded from <http://www.hp.com/servers/manage>.

HP Systems Insight Manager

HP Systems Insight Manager is a web-based application that provides unified lifecycle management for HP servers, storage, and other managed infrastructure resources from HP and third-party manufacturers. HP Systems Insight Manager can be used to maximize system uptime; reduce total cost of ownership; and provide powerful systems lifecycle monitoring, inventory, and control.

The HP Insight Integration for Tivoli includes a task to launch the HP Systems Insight Manager application from the Tivoli Desktop and TEC.

HP Insight Integration for Tivoli also supports VMM events that are forwarded as an SNMP event from HP Systems Insight Manager. All VMM events that are received by HP-SIM can be forwarded to the TEC as an SNMP event that is subsequently displayed as event 58916872 on the TEC.

HP Systems Insight Manager is not required to implement the HP Insight Integration for Tivoli, but it enables more advanced infrastructure lifecycle management from within the Tivoli environment.

HP Systems Insight Manager can be found on the Management CD included with the ProLiant Essentials Foundation Pack shipped with every ProLiant server and can be downloaded from <http://www.hp.com/servers/manage>.



NOTE: The download file size for HP Systems Insight Manager is approximately 520 MB.

HP Remote Server Management

HP ProLiant servers and selected HP Integrity servers include an Integrated Lights-Out (iLO) management processor, or can utilize a Remote Lights-Out Edition (RiLOE) plug-in option. HP management processors virtualize system controls to enable routine system administration, maintenance and troubleshooting over a network regardless of the server's state of operation. Administrators can access HP iLO and RiLOE management processors using standard browser applications or command line options.

The HP Insight Integration for Tivoli includes a task to launch the browser-based interface of HP iLO and RiLOE management processors from the Tivoli Desktop and TEC.

HP iLO and RiLOE management processors must be configured before use with the HP Insight Integration for Tivoli.

HP Storage Management Appliance

The HP Storage Management Appliance is a centralized monitoring and management solution for storage area networks (SAN). Connected directly to the network fabric, it performs advanced independent management functions between computers and storage devices.

The HP Insight Integration for Tivoli includes a task to launch the agents associated with the HP Storage Management Appliance from the Tivoli Desktop and TEC.

The HP Storage Management Appliance is not required to implement the HP Insight Integration for Tivoli, but it provides advanced SAN management from within the broader Tivoli enterprise environment.

Tivoli Enterprise support and requirements

The HP Insight Integration for Tivoli has been developed to work with the following applications:

- Tivoli Enterprise Management Framework/Desktop (required)
- Tivoli Enterprise Console
- Tivoli Inventory in Tivoli Configuration Manager

The HP Insight Integration for Tivoli, Revision 4.2 has been developed and tested with the following:

- Tivoli Framework/Desktop 3.7.x, 4.1, and 4.1.1
- Tivoli Enterprise Console 3.7.x, 3.8, and 3.9
- Inventory tools in Tivoli Configuration Manager 4.2

Tivoli patch requirements

The following minimum Tivoli patch levels are required to implement the HP integration. However, HP recommends that the latest available patches from IBM be applied for proper functioning.

Tivoli Framework 3.7.x

- Tivoli Framework 3.7.1—TMF-00097
- Tivoli Framework 3.7.1—TMF-00099

Tivoli Enterprise Console 3.7.x

- Tivoli Enterprise Console 3.7.1—TEC-FP04

Tivoli Framework 4.1

- Tivoli Framework 4.1—TMF-0013

Tivoli Enterprise Console 3.8

- Tivoli Enterprise Console 3.8, Fixpack 1

Tivoli Framework 4.1.1

- Tivoli Framework 4.1.1—TMF-0060

Tivoli Enterprise Console 3.9

- Tivoli Enterprise Console 3.9—TEC-FP04

Tivoli SNMP Adapter

The HP Insight Integration for Tivoli has been developed to integrate over 950 SNMP traps generated by HP Insight Management Agents into the TEC and includes event translation and automated event correlation. The Tivoli SNMP Adapter is needed to help provide this capability.

At least one system on the network must have a Tivoli SNMP Adapter installed and configured to forward the HP SNMP traps to the TEC. All managed HP servers must be configured to forward SNMP traps to the Managed Node or Endpoint device containing the Tivoli SNMP Adapter.

Both Tivoli non-TME and TME Adapter Configuration Facility (ACF) SNMP Adapters are supported by the HP Insight Integration for Tivoli.

For more details on how to configure the Tivoli SNMP Adapter to receive HP SNMP events, see the chapter “Installing the HP Insight Integration with the TEC.”

Tivoli operating environments

The HP Insight Integration for Tivoli is designed to integrate into the following Tivoli platforms.



NOTE: Includes all operating systems supported by the respective Tivoli Framework and TEC versions.

Tivoli Enterprise TMR Server and Managed Nodes

The following operating systems are Tivoli tier-1 platforms:

- HP-UX 11i
- AIX 5.2 and greater
- Solaris 8, 9, and 10
- Windows 2000
- Windows 2003

Tivoli Endpoints

The following platforms are supported as Endpoint systems:

- Windows 2000
- Windows 2003
- Windows NT 4.0 SP6
- NetWare 5.x or later

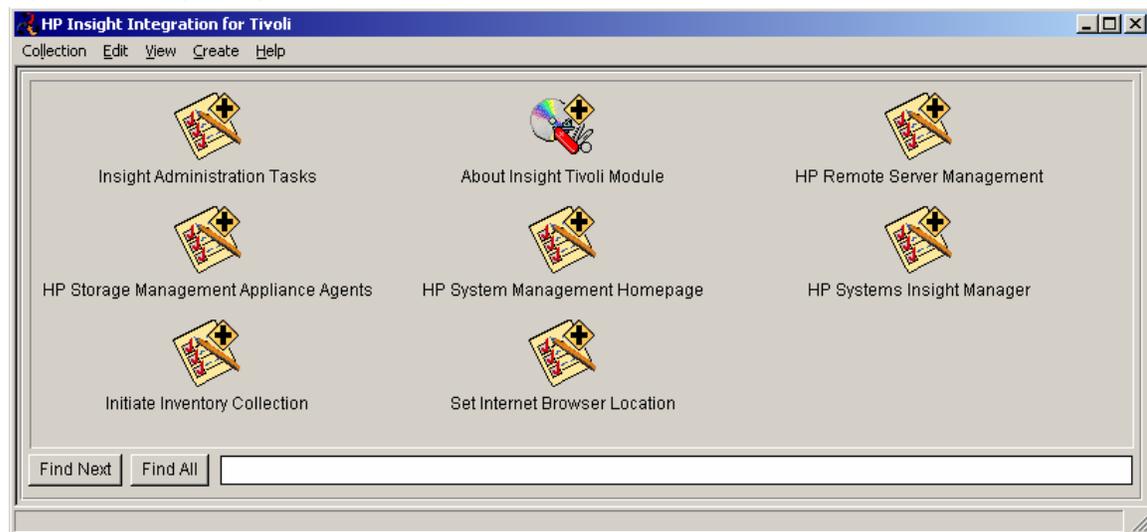
- HP Tru64 UNIX 4.0F and later
- HP OpenVMS 7.1 and later
- UnixWare 7 or later and Open UNIX 8
- Linux
 - Red Hat
 - SUSE
 - UnitedLinux 1.0
- OS/2 Warp Version 4

Insight Integration groups and tasks

The HP Insight Integration for Tivoli provides the following groups and tasks for configuration and operations with the Tivoli environment, as shown in Figure 1.

Further details on using each task are provided in the chapters “Installing the HP Insight Integration with the TEC” and “Using the HP Insight Integration for Tivoli.”

Figure 1 HP Insight Integration for Tivoli



- **Insight Administration Tasks**—Predefined tasks for configuring the TEC SNMP Adapter and the TEC Event Server with HP Insight event definitions, classes, rules, and filters.
- **About Insight Tivoli Module**—Displays revision details for the installed HP Insight Integration for Tivoli.
- **HP System Management Homepage**—Embedded task to launch the System Management Homepage on a specified HP server. Provides in-depth hardware configuration and subsystem status data instrumented by HP Insight Management Agents.
- **HP Systems Insight Manager**—Embedded task to launch the browser-based HP Systems Insight Manager application for unified management of HP servers, storage, and other infrastructure hardware resources.
- **HP Remote Server Management**—Embedded task to launch the browser interface for the HP Lights-Out management processor on a specified HP server. Provides multiple ways to configure, update, and operate servers remotely, irrespective of system status or operating system platform.
- **HP Storage Management Appliance Agents**—Embedded task to launch the HP Storage Management Appliance for advanced storage management and administration.
- **Initiate Inventory Collection**—Embedded task to execute the HP Inventory Collector (COLLECT.EXE) on specified nodes. This task creates and saves HP hardware asset data to a specified location using a .MIF file format. The Inventory tools provided with the Tivoli Configuration Manager can be used to import HP .MIF files into an existing Tivoli inventory database.
- **Set Internet Browser Location**—A predefined task to configure the Insight Integration browser environment, enabling HP web-based management tools to be launched from the Tivoli Desktop and Event Console.

Insight Integration directories and files

The HP Insight Integration for Tivoli is provided as a compressed file for both UNIX- and Windows-based Tivoli platforms (INSTEC42.zip and INSTEC42.tar). The compressed file expands to the following default location, /hpq.

The expanded integration consists of the directories and files listed in Table 1.

Table 1 Integration directories and files

| Directory | Contents |
|-----------------|--|
| /hpq | Root location for the expanded Insight Integration files |
| /hpq/Docs | User documentation and release notes |
| /hpq/Plus | File packages and scripts used to install HP Insight Integration for Tivoli on the Tivoli Desktop and the TEC host systems |
| /hpq/Plus/Utils | Predefined scripts for uninstalling the HP Insight Integration for Tivoli |
| /hpq/Plus/Cfg | HP Insight Integration for Tivoli configuration files |
| /hpq/TEC | Files (.cds, .oid, .rls, .baroc), release notes, and scripts for performing a manual installation of the HP Insight Integration for Tivoli |
| /hpq/Inventory | Files (.sql, .sh) for creating HP specific schemas and queries, plus the HP Inventory Collector utility (collect.exe) |
| /hpq/MIBs | Contains information about HP SNMP MIB files associated with the HP Insight Integration for Tivoli |

3 Installing the HP Insight Integration with the TEC

Overview

This section describes the primary elements and operations of the TEC, as well as the requirements and procedures used to install the HP Insight Integration for Tivoli into an existing TME.

TEC components and Insight Integration

Operation of the TEC relies on the following three major components:

- Event adapters
- Event Server
- Event Console

Event adapters

Tivoli event adapters gather data from managed resources in the TME. Event adapters allow the TEC to retrieve events from a variety of sources, including the Windows Event Log, SNMP messages, log files, and other management platforms such as Tivoli NetView or HP OpenView.

The Insight Integration for Tivoli provides predefined event object definitions and classes (.cds and .oid files) for over 950 events that integrate with both non-TME and TME ACF SNMP Adapters. This functionality enables events generated by HP Insight Management Agents to be translated, prioritized, and clearly displayed in the TEC. Detailed configuration procedures for both adapters are described in this chapter.

Event Server

The Event Server is a central system that arbitrates all SNMP events in the distributed environment and delivers updates to the TEC. It creates an entry in the Tivoli database for each incoming event and evaluates each one against a set of rules to determine how to respond. Using an event rule base, administrators can automate common tasks and actions based on incoming events.

The HP Insight Integration for Tivoli provides a comprehensive set of over 950 predefined BAROC event class definitions and over 200 rules. These classes and rules enable automated processing and correlation of SNMP events generated by HP Insight Management Agents and can be easily customized to suit individual TME requirements. Detailed configuration procedures are described in this chapter.

Event Console

The Event Console is a graphical user interface that displays incoming events received at the Event Server. Multiple Event Consoles can be configured within a single TME as required.

System administrators can use the Event Console to retrieve, filter, and correlate incoming events or to escalate SNMP traps to other Event Consoles for further processing.

This chapter describes how to display SNMP events for HP servers and storage platforms using a variety of TEC versions, which enables you to simplify IT operations procedures by viewing and managing events for your hardware infrastructure, operating systems, and application platforms from within a common TEC interface.

Installation overview and prerequisites

The following process provides an overview of the major steps and suggested sequence for installing the HP Insight Integration for Tivoli.

1. Confirm the full installation and operation of the target TME, including the TMR server and associated Tivoli Gateways.
2. Ensure that TEC has been installed and the required revision and patch levels have been applied (see the “Tivoli Enterprise support and requirements” section of the “Product overview” chapter).
3. Confirm that the Tivoli SNMP Adapter, TEC Event Server, and TEC components have been configured in preparation for the Insight Integration installation.
4. Verify that SNMP services have been installed and are operational on all HP servers to be managed.
5. Download HP Insight Integration from <http://www.hp.com/servers/integration>.
6. Expand the downloaded Insight Integration on the target TMR server where the Tivoli Desktop is located.

7. Confirm that you have administrator-level authority in the TME before installing Insight Integration for TEC.
8. Install the Link Binaries to the target TMR, TEC servers, and associated gateways.
9. From the Tivoli Desktop, install Insight Integration files on the target TMR, TEC servers, and associated gateways.
10. Assign Tivoli administration resources and roles to permit correct access and operations of Insight Integration.
11. Configure the Tivoli SNMP Adapters to include HP Insight SNMP event definitions and classes.
12. Configure the TEC Event Server with the HP Insight BAROC files and rules.
13. Configure the Tivoli Event Console to display the HP Insight SNMP events.
14. Configure Insight Integration tasks that enable access to the System Management Homepage, Systems Insight Manager, interface of HP iLO and RILOE management processor, and the agents associated with the HP Storage Management Appliance (if applicable) from the Tivoli Desktop and TEC console, as appropriate.

Installing the HP Insight Integration for Tivoli

The HP Insight Integration for Tivoli allows for scripted and manual installation. The following section describes the individual steps to complete a fully scripted installation of the files provided with the HP Insight Integration for Tivoli into an existing TME.



NOTE: The text and graphics provided are based on a Tivoli Management Framework 3.7.1 configuration. Some menu item names might differ for other Tivoli Framework platforms, but the general procedures remain the same. For additional details and guidance, refer to your Tivoli documentation. For manual installation procedures, see the “Manually configuring the HP Insight Integration for Tivoli” section.

15. Confirm that the target Tivoli environment has been correctly configured and is operational and that the correct applications and patch levels have been installed (see the “Tivoli Enterprise support and requirements” section of the “Product Overview” chapter).
16. Download the HP Insight Integration for Tivoli from <http://www.hp.com/servers/integration>.
17. Expand the downloaded Insight Integration file (INSTECA2.zip or INSTECA2.tar) on the target TMR server with administrator authority.
18. Select **Desktop>Install>Install Product**. The Install Product screen appears.

Figure 2 Install Product menu selection

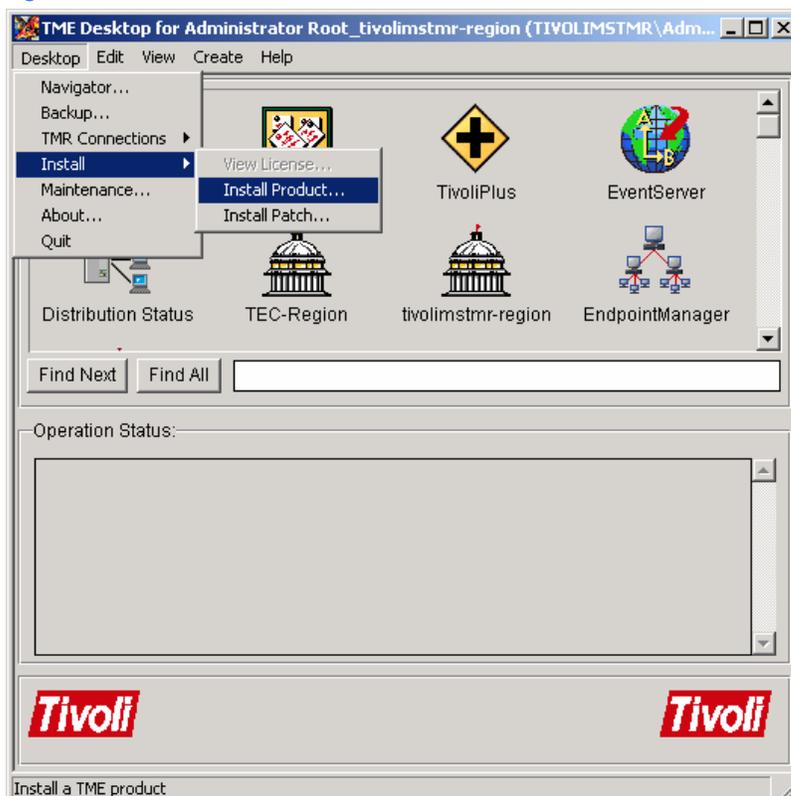
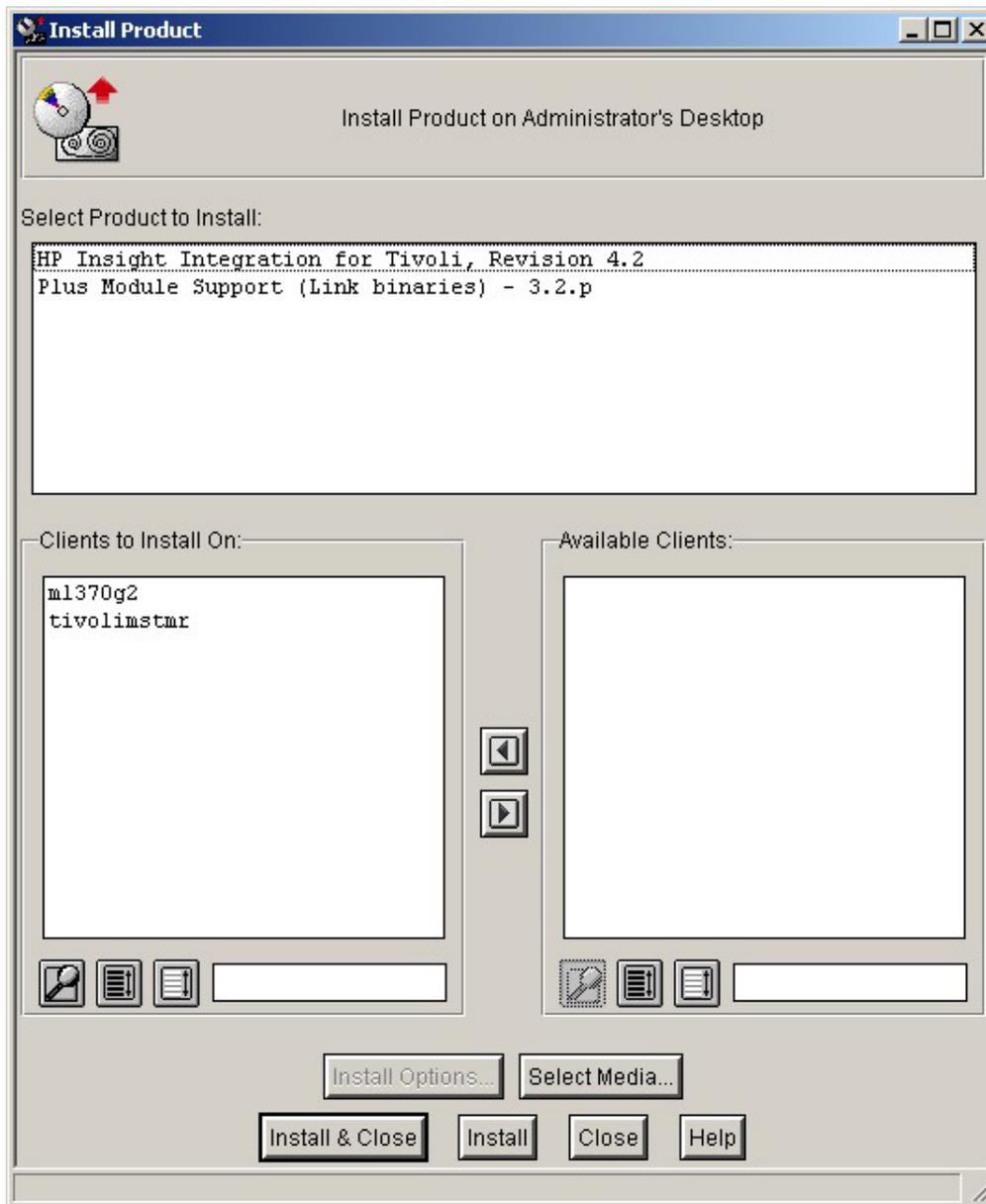


Figure 3 Install Product window



19. To set the media location to the location where the Insight Integration files were expanded in step 17, click **Select Media**, and locate the media. By default, the media is located in the /hpq/Plus directory and is identified by the presence of a contents.lst file. After the media location is found, click **Set Media>Close**.
20. Select **Plus Module Support (Link binaries)** from the Select Product to Install list. If this option is not listed, select a media location as described in step 5.



NOTE: The installation process described presumes that the Plus Module Support Link Binaries are not already present. If Plus Module support Link Binaries already exist on the TMR, then use the **Install Patch** option under the **Desktop/Install** option (Figure 2), instead of the **Install Product** selection.

21. Populate the **Clients to Install On** list with the designated target systems. Use the left and right arrow buttons to move machine names from **Available Clients** to **Clients to Install On**. Install the Insight Integration in sequence to the following systems:
 - TMR server
 - TEC server
 - Associated gateways
22. Click **Install**. The Product Install window appears, which logs the installation as it runs, initially listing the tasks that take place during the installation. Click **Continue Install** to begin the installation, or click **Cancel** to abort the installation.

23. After the installation is complete, click **Close** to complete the installation of the Plus Module Support (Link binaries) product.
24. Select **HP Insight Integration for Tivoli, Revision 4.2** from the Select Product to Install list. If it is not listed, click the **Select Media** button, and locate the media (by default the media is located in the /hpq/Plus directory and is identified by the presence of a contents.lst file). After the media location is found, select **Set Media>Close**.
25. Populate the **Clients to Install On** list with the designated target systems. Use the left and right arrow buttons to move machine names from **Available Clients** to **Clients to Install On**. Install the Insight Integration in sequence to the following systems:
 - TMR server
 - TEC server
 - Associated gateways
26. Click **Install**. The Product Install window appears which logs the installation as it runs, initially listing the tasks that take place during the installation. Click **Continue Install** to begin the installation, or click **Cancel** to abort the installation.
27. After the installation is complete, click **Close** to complete the installation.



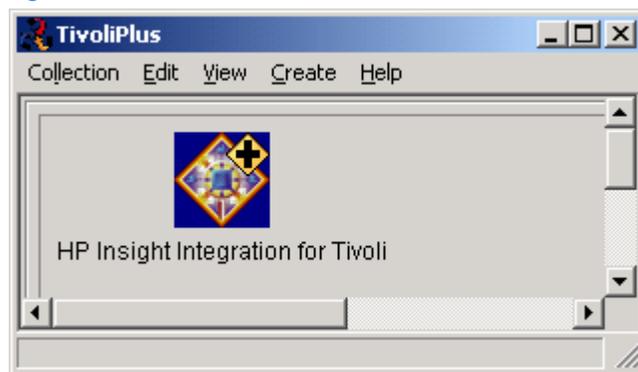
NOTE: The approximate time to install the HP Insight Integration for Tivoli is 10 to 15 minutes, depending on the overall TME configuration.

Confirming installation and product details

Use the following procedure to confirm the installation of the HP Insight Integration for Tivoli, Revision 4.2.

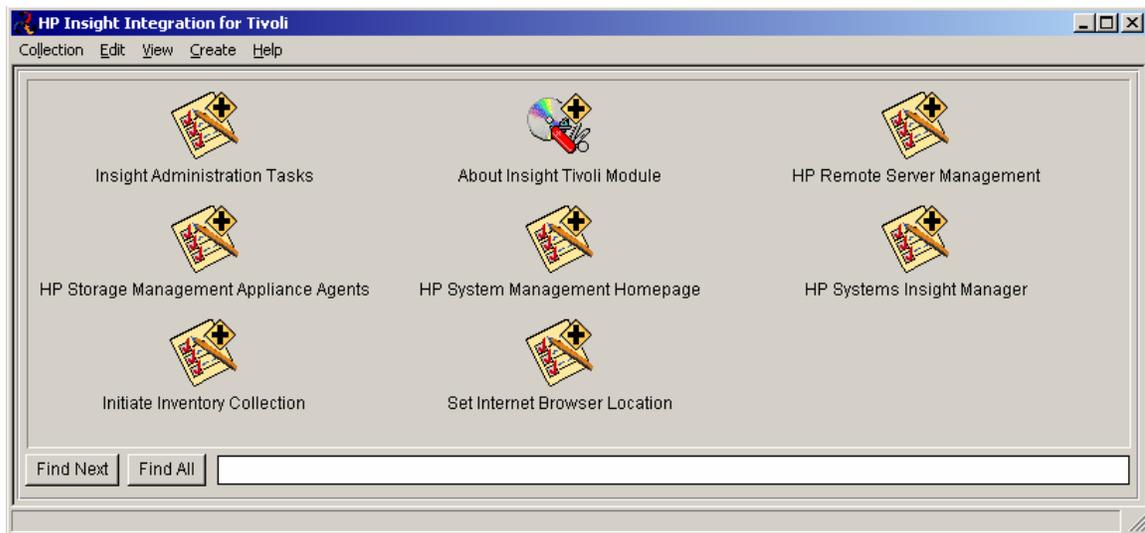
1. From the Tivoli Desktop, select **TivoliPlus>Open**, or double-click the **TivoliPlus** icon. The TivoliPlus window displays.

Figure 4 TivoliPlus



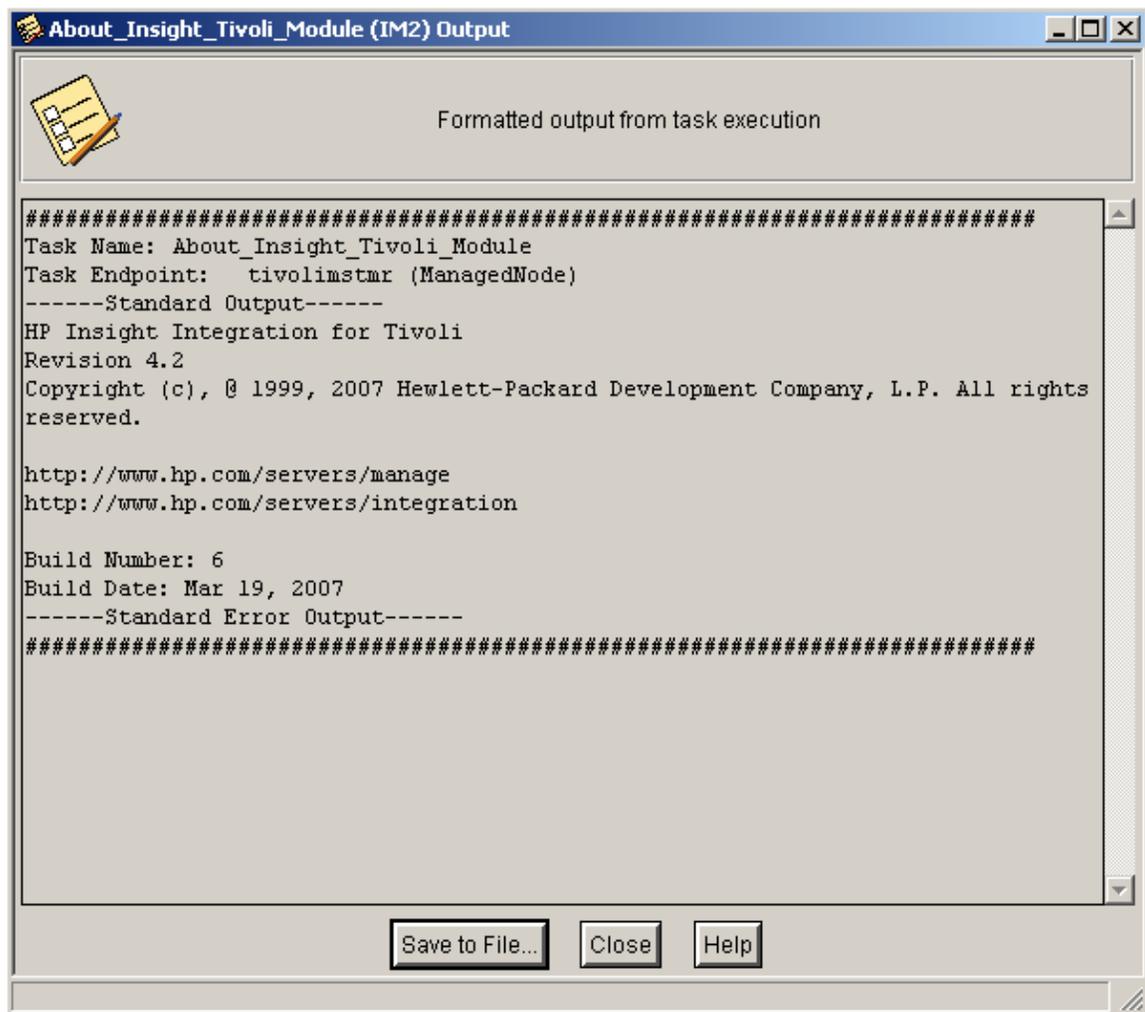
2. Right-click **HP Insight Integration for Tivoli** and select **Open**, or double-click the icon to display the HP Insight Integration for Tivoli window.

Figure 5 HP Insight Integration for Tivoli



3. Right-click **About Insight Tivoli Module** and select **Run**, or double-click the icon to display the product revision details.

Figure 6 Product revision details



Assigning Tivoli administrator resources

Having completed the installation of the HP Insight Integration for Tivoli files, assign administrator resources to enable correct access and operations by performing the following procedure:

1. Right-click the **Administrators** icon on the Tivoli Desktop and select **Open**, or double-click the icon to display the Administrators window.
2. Right-click the administrator that you want to assign access rights for Insight Integration, and then select **Edit Resource Roles** to display the Set Resource Roles window.

Figure 7 Administrators window

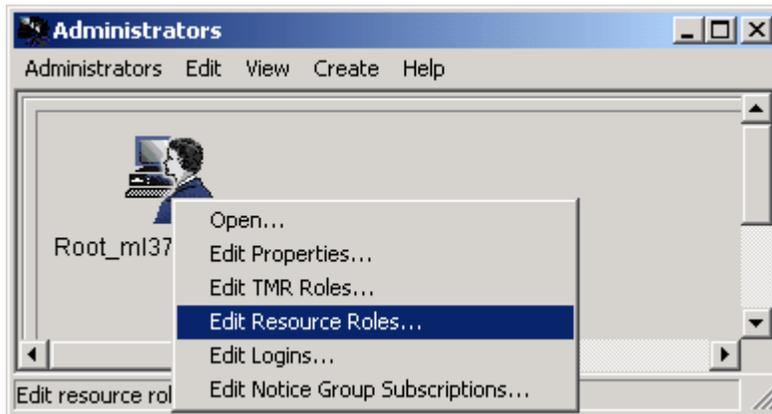
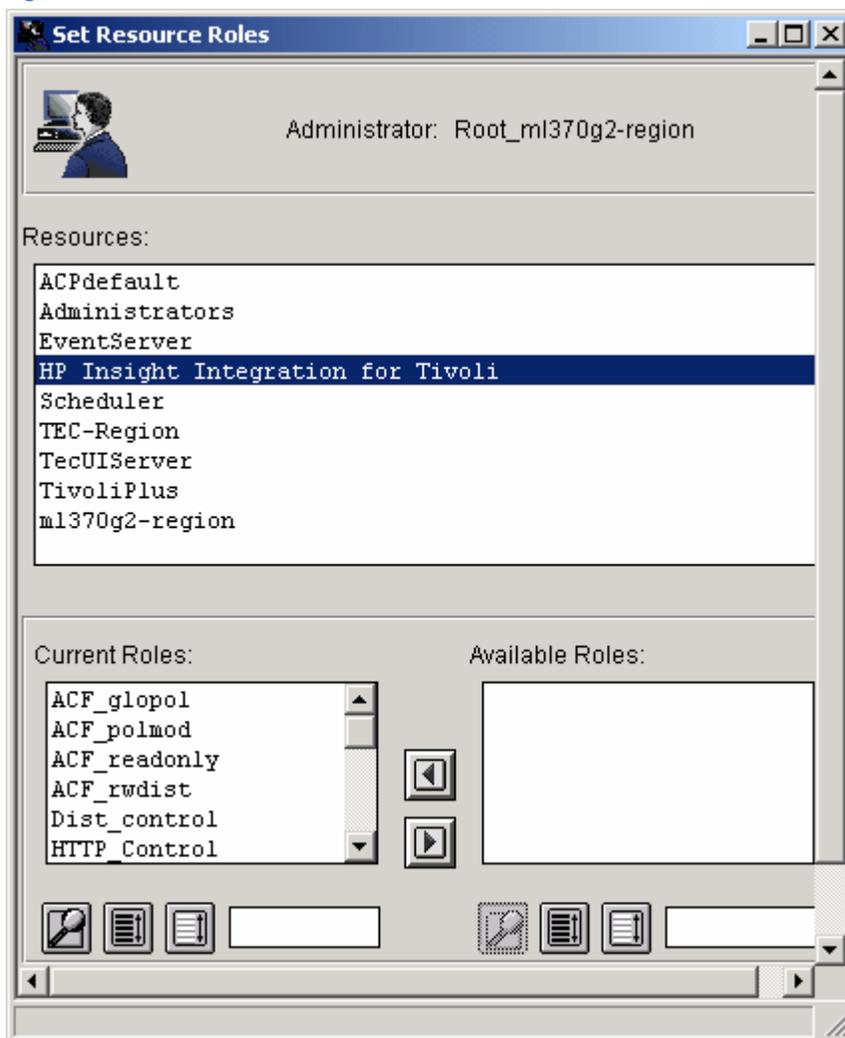


Figure 8 Set Resource Roles window



3. Be sure that **HP Insight Integration for Tivoli** is included under the Resources list.
4. Select **Change and Close** to complete the selection. Close and reopen the desktop to confirm application of the new settings.

Configuring a Tivoli SNMP Adapter

The HP Insight Integration for Tivoli provides a scripted task, *Configure SNMP Adapter*, to simplify the integration of Insight SNMP events with Tivoli Non-TME and Tivoli TME ACF adapters.

The *Configure SNMP Adapter* task is used to copy the Insight SNMP event definition file (*ins_evt.cds*) and the Insight object identifier file (*ins_evt.oid*) to defined target systems and amends the existing *tecad_snmp.cds* and *tecad_snmp.oid* files. This task allows the Tivoli SNMP Adapters to identify and interpret traps generated by the Insight Management Agents. The shell script *Config_snmp.sh* is used to complete this task.



NOTE: The TME must include at least one SNMP Adapter. This user documentation includes instructions for configuring both non-TME and TME ACF SNMP Adapters. For additional details on configuring Tivoli SNMP Adapters, see your Tivoli documentation.

Preinstallation considerations

To ensure a successful integration with the TEC, note the following:

- HP recommends running the *Configure SNMP Adapter* task provided with the Insight Integration before the setting up the TEC Event Server.
- The Tivoli non-TME or TME ACF adapters must be installed on the target systems before running the *Configure SNMP Adapter* task provided with the Insight Integration.
- The SNMP service on all HP Managed Nodes and Endpoints must be configured to send SNMP traps to the Tivoli SNMP Adapter.
- The TEC application must be fully installed and operational before running the *Configure SNMP Adapter* task provided with Insight Integration.



NOTE: The port number that TEC uses to receive events is usually 5529 for Windows-based systems and 0 for UNIX environments.

The *Configure SNMP Adapter* task supports Tivoli tier-1 platforms (HP-UX, AIX, Solaris, and Windows) and defines events from all environments supported by Insight Management Agents. For a list of supported operating platforms, see the “Product overview” chapter.

Incoming events correspond to standard HP SNMP traps covering the following hardware platforms and subsystems:

- System hardware health, power supply, and environmental status
- Fibre Channel, IDE, ATA, SCSI, SAS, and Drive Array (RAID) subsystems
- StorageWorks and SANWorks storage configurations
- Clustered and Standby Recovery Server configurations
- Predefined and user-defined hardware threshold settings
- Hardware prefailure monitors
- Network interface controllers
- Remote Insight Lights-Out Edition (RiLOE) and Insight Lights-Out (iLO) technology
- Management Agent services
- VMM events forwarded as SNMP event from HP SIM

Each of the defined events has been assigned severity and correlation conditions, which can be customized to suit individual requirements.

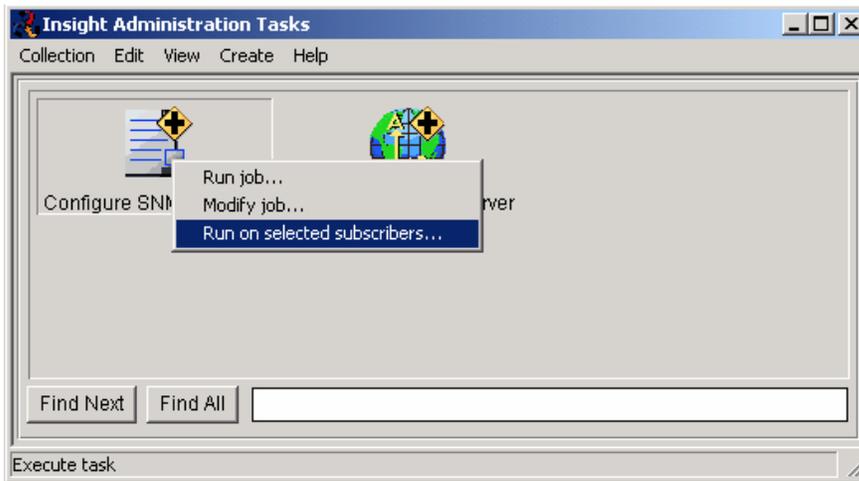
Configuring a Tivoli non-TME SNMP Adapter

1. Confirm that the TME is configured and operating correctly before attempting to configure the SNMP Adapter (TMR server, Tivoli Gateways, and the TEC application).
2. Confirm that a Tivoli non-TME Adapter is installed on at least one Managed Node or Endpoint within the TME.
3. Confirm that the adapter class definition file provided with the Insight Integration, *ins_evt.cds*, has been copied to the */etc* directory of the system hosting the Tivoli non-TME adapter.
4. From the HP Insight Integration for Tivoli window on the Tivoli Desktop (Figure 5), double-click **Insight Administration Tasks**, and right-click the **Configure SNMP Adapter** icon.
5. Select **Run on selected subscribers**. The Execute Task window displays.



NOTE: This example is based on a default Tivoli installation. To make changes to an existing configuration select the **Modify job** option.

Figure 9 Insight Administration Tasks window

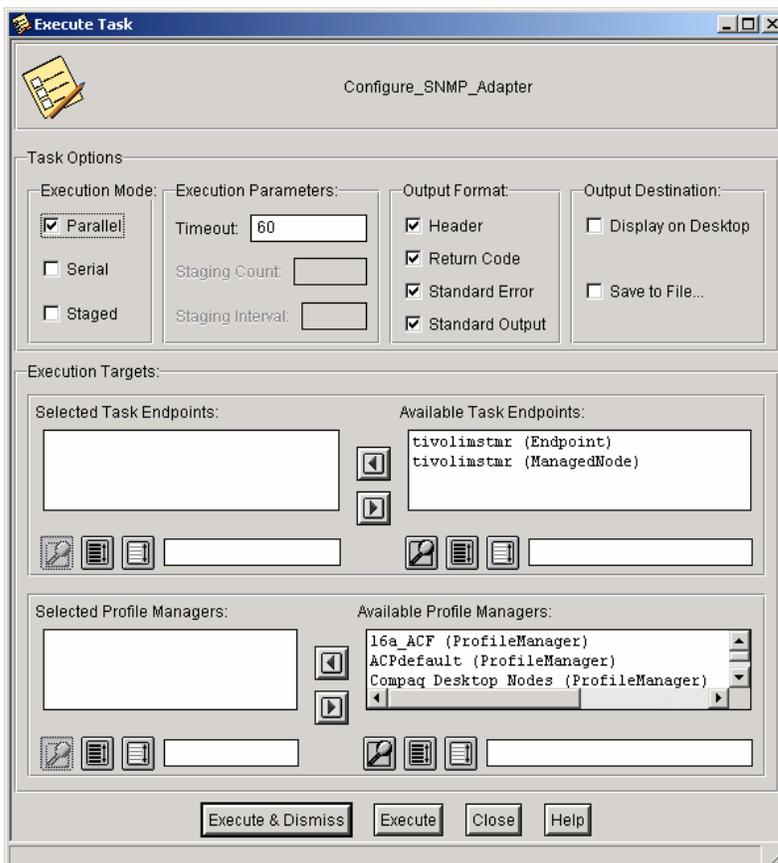


6. Use the arrow buttons to select the target systems that contain the Tivoli non-TME Adapter from the list of available options. Be sure that the selected targets are included in the selection windows on the left.



NOTE: The TME requires only a single non-TME SNMP Adapter for use with the TEC. Configure the SNMP services on HP Managed Nodes and Endpoints to send traps to the Tivoli SNMP Adapter.

Figure 10 Execute Task window

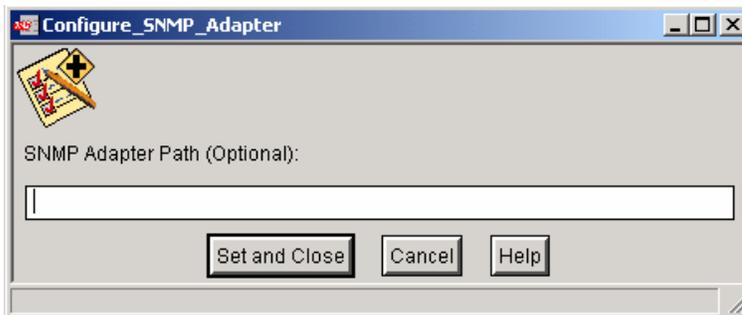


7. When the target selections are complete, click **Execute** or **Execute & Dismiss** to display the Configure_SNMP_Adapter window.



NOTE: Clicking either **Execute** or **Execute & Dismiss** displays the Configure_SNMP_Adapter window. However, clicking **Execute** displays the Execute Task window after closing the Configure_SNMP_Adapter window, allowing for further configuration, while clicking **Execute & Dismiss** displays the Configure Administrative Tasks window.

Figure 11 Configure_SNMP_Adapter window



The Configure SNMP Adapter window provides the option to enter a specific path for the Tivoli non-TME SNMP Adapter. If the path is left blank, the default location is used.



NOTE: For non-TME adapters, the default UNIX configuration path is `usr/tecad`. For Windows platforms, the default path is `C:\tecsnmp`.

8. Select **Set and Close** to complete the configuration process and initiate the `Config_snmp.sh` script. This script amends the existing `tecad_snmp.cds` and `tecad_snmp.oid` files on the target systems with the Insight SNMP event classes and definitions and initiates the TEC SNMP Adapter.

Configuring a Tivoli ACF SNMP Adapter

The Tivoli ACF allows for easier remote deployment and configuration of an SNMP Adapter. One advantage of using ACF with the Insight Integration is the deployment of the HP event definitions file (`ins_evt.cds`). The `ins_evt.cds` file contains the HP SNMP to Tivoli event mappings and HP trap definitions.

When using a non-TME adapter, the HP event definition file is copied to the target location as part of the Configure SNMP Adapter task supplied with the Insight Integration. When using the ACF method, the HP event definition file is copied to the target location during the creation of the adapter. This method ensures that the `ins_evt.cds` file is always in the correct location before running the Configure SNMP Adapter task provided with the Insight Integration.



NOTE: Although the ACF is supported on both Tivoli Managed Nodes and Endpoints, the ACF SNMP Adapter is supported only on Endpoint (TMA) systems and cannot be configured on Tivoli Managed Nodes.

Overview

1. Configure the Tivoli environment (TMR server, gateways, TEC).
2. Install the ACF on the TMR server and gateways.
3. Configure the TMA Endpoints.
4. Install the HP Insight Integration for Tivoli. See the “Installing the HP Insight Integration for Tivoli” section for installation instructions.
5. Create a dataless ACF profile manager and Adapter Configuration Profile (ACP).
6. Populate the newly created profile with the target Endpoints.
7. Edit the profile to configure the adapter type. The profile must include the `tecad_snmp` entry, location and port definitions for the Event Server, and location of the HP event definitions file (`ins_evt.cds`).
8. Distribute the profile to deploy the ACF Adapter to the target Endpoints.
9. Modify the **Configure SNMP Adapter** task provided with the Insight Integration to set the profile as a subscriber.
10. Run the **Configure SNMP Adapter** job provided with Insight Integration to amend the `tecad_snmp.cds` and `tecad_snmp.oid` files with the HP event classes and definitions.

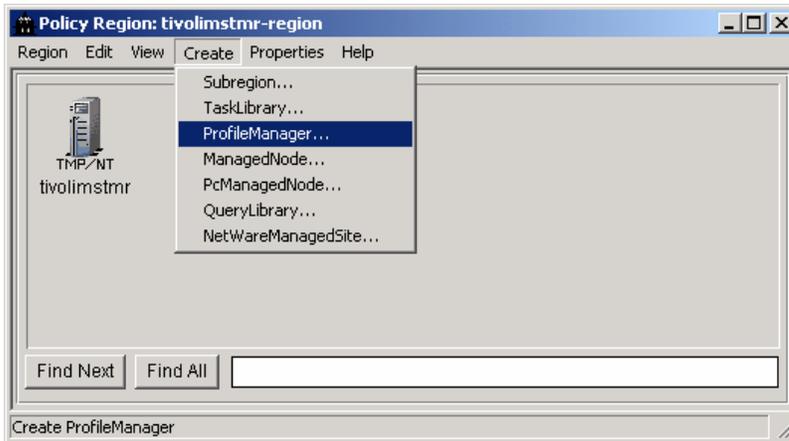


NOTE: The ACF Adapter is supported only on Tivoli Endpoint systems.

Deploying and configuring an ACF SNMP Adapter

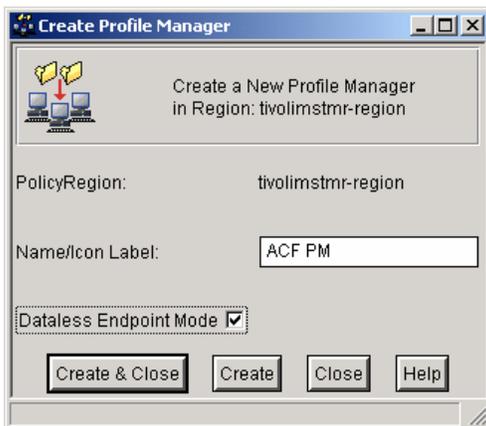
1. Confirm that the TME is configured and operating correctly before attempting to configure the SNMP Adapter (TMR server, Tivoli Gateways, and the TEC application).
2. Confirm that the ACF is installed on the TMR server and associated Tivoli Gateways.
3. On the Tivoli Desktop, double-click the **<hostname>-region** icon to select the target policy region, where **<hostname>** refers to the name of your TMR host. The Policy Region window appears.

Figure 12 Policy Region window



4. On the menu bar, click **Create**, and select **ProfileManager**. The Create Profile Manager window appears.

Figure 13 Create Profile Manager window



5. Enter a name in the **Name/Icon Label** textbox to accurately identify the new profile manager, and select the **Dataless Endpoint Mode** checkbox.
6. Click **Create and Close** to complete the profile manager creation.

- In the Policy Region window, click **Properties>Managed Resources**. The Set Managed Resources window appears.

Figure 14 Policy Region window

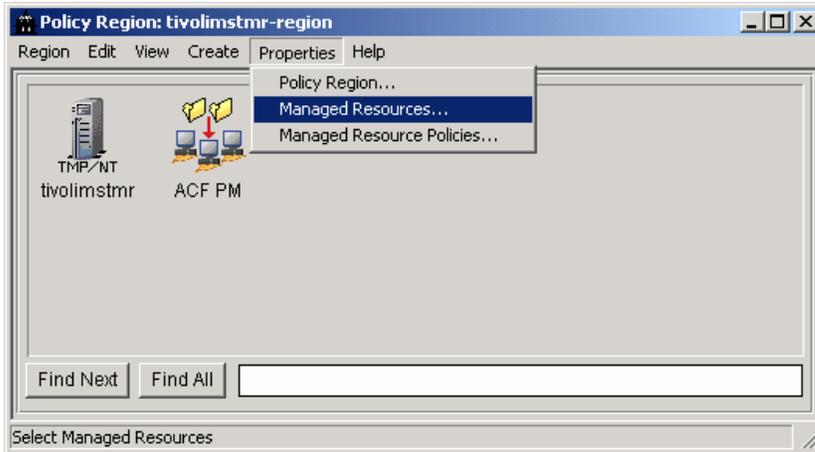
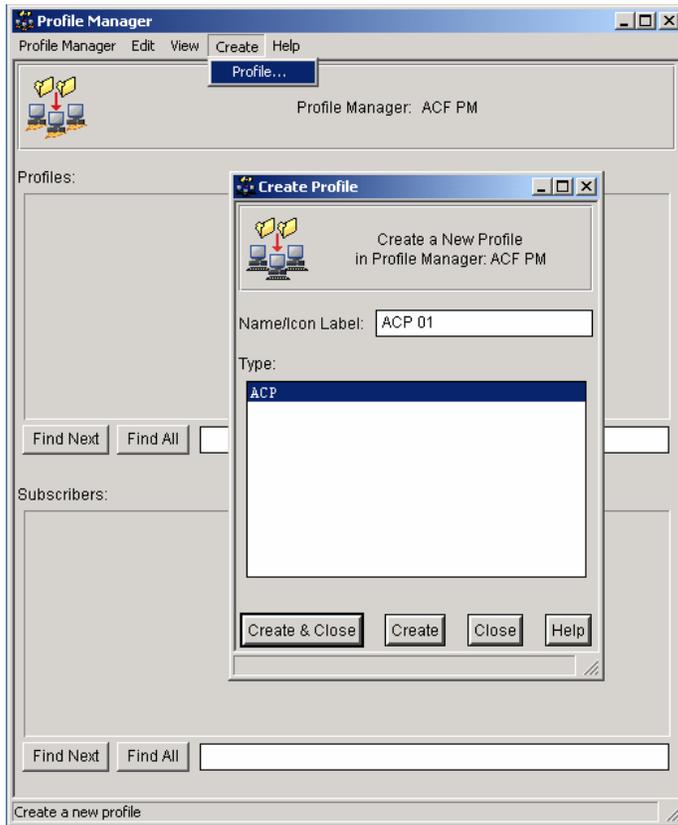


Figure 15 Set Managed Resources window



- Using the left and right arrows, ensure that the Policy Region includes **ACP** under the Current Resources section.
- Click **Set & Close** to confirm the settings.
- In the Profile Manager window, double-click the profile manager icon previously created.
- In the Profile Manager window, select **Create** from the menu bar, and select **Profile**.

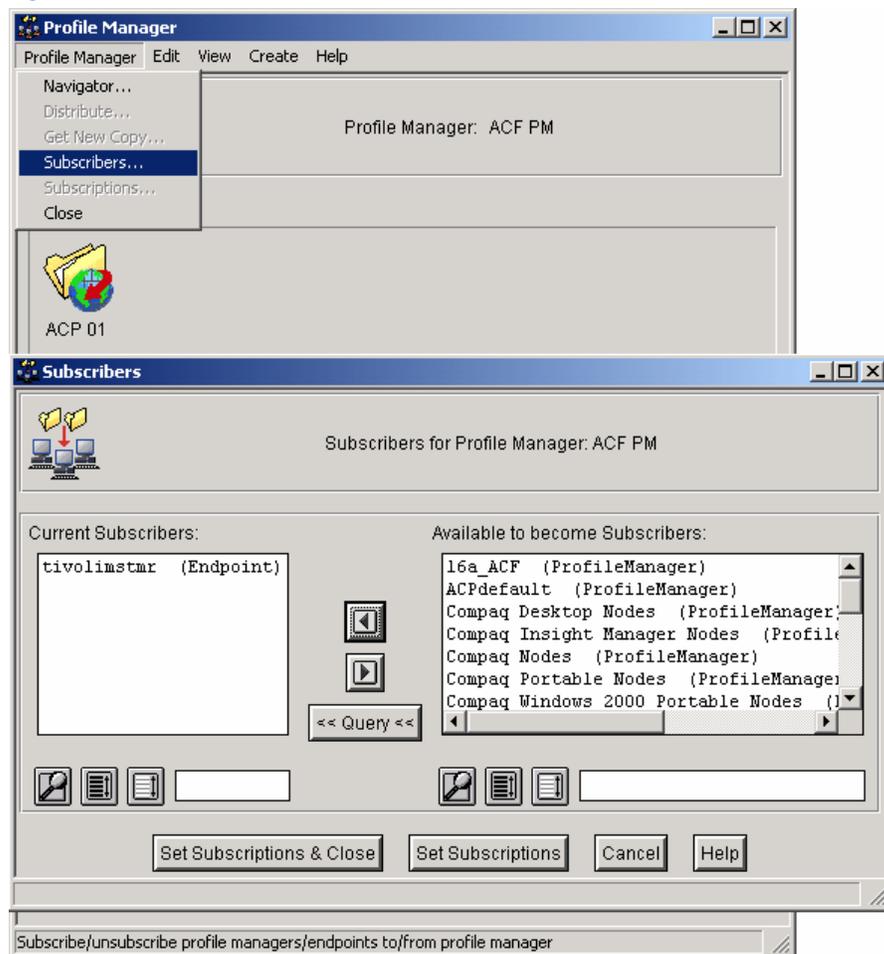
Figure 16 Create Profile window



12. Enter a name in the **Name/Icon Label** textbox to accurately identify the new profile.
13. Select **ACP** from the Type window. Click **Create & Close** to complete the profile creation.

14. From the Profile Manager window, select **Profile Manager>Subscribers**. The Subscribers window appears.

Figure 17 Subscribers window



15. Using the arrow buttons, select the required subscribers for the profile manager. Subscribers can be individual Endpoints or another subscription profile.

 **NOTE:** The TME requires only a single SNMP Adapter for use with the TEC. Configure the SNMP services on HP Managed Nodes and Endpoints to send traps to the Tivoli SNMP Adapter.

16. Click **Set Subscriptions & Close** to save the subscription profile.

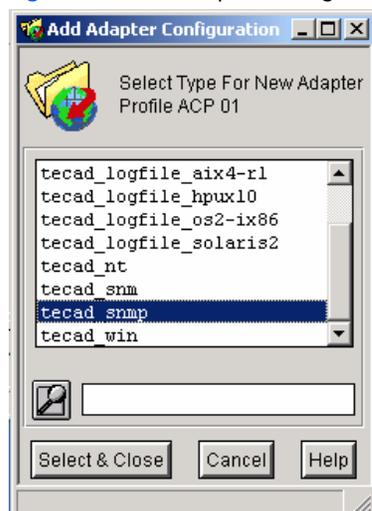
17. In the Profile Manager window, right-click the previously created profile, and select **Edit Profile**.

Figure 18 Profile Manager window



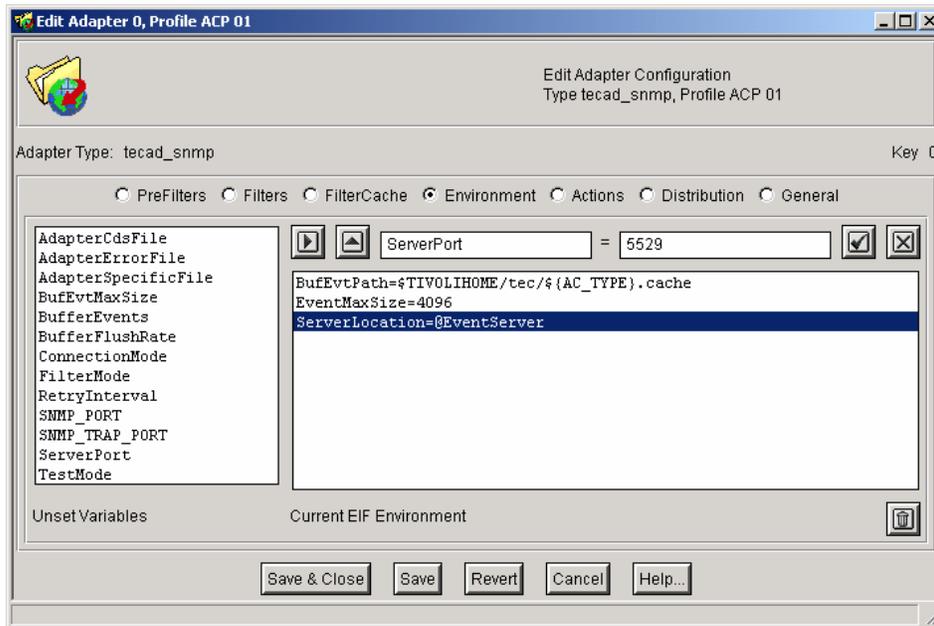
18. After the Adapter Configuration Profile window appears, click **Add Entry** to display the Add Adapter Configuration window.

Figure 19 Add Adapter Configuration window



19. Select **tecad_snmp**, and click **Select & Close** to save the adapter type configuration. The Edit Adapter window appears, enabling you to edit the adapter configuration.

Figure 20 Edit Adapter window



20. Select the **Environment** option.

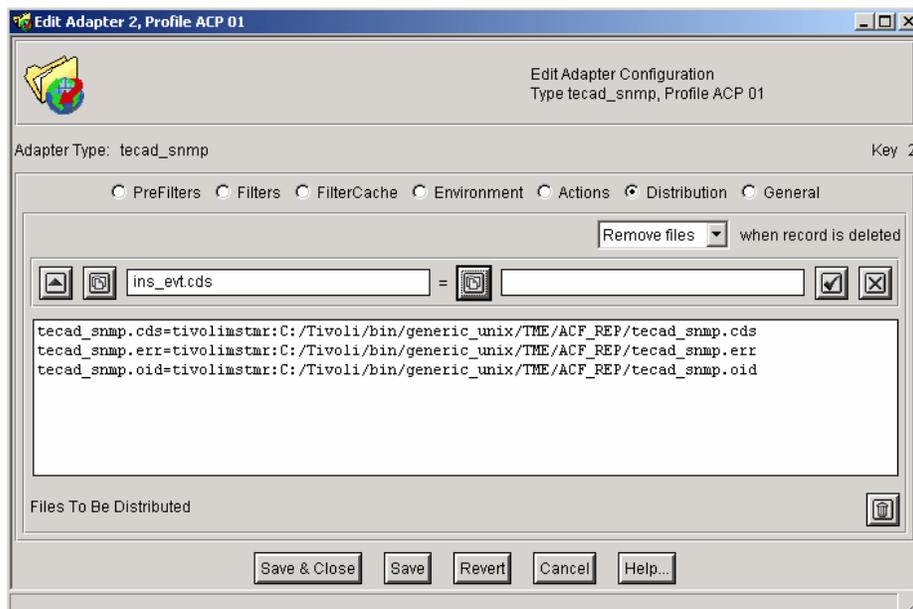
21. Double-click the **ServerLocation** variable, and enter the name of the Event Server in the textbox to the right of the equal sign. Click the check icon, located to the right of the textbox, to confirm the setting.

22. Double-click the **ServerPort** item, and enter the port number in the textbox to the right of the equal sign. Click the check icon to confirm the setting.

 **NOTE:** The port number that TEC uses to receive events is usually 5529 for Windows-based systems and 0 for UNIX configurations.

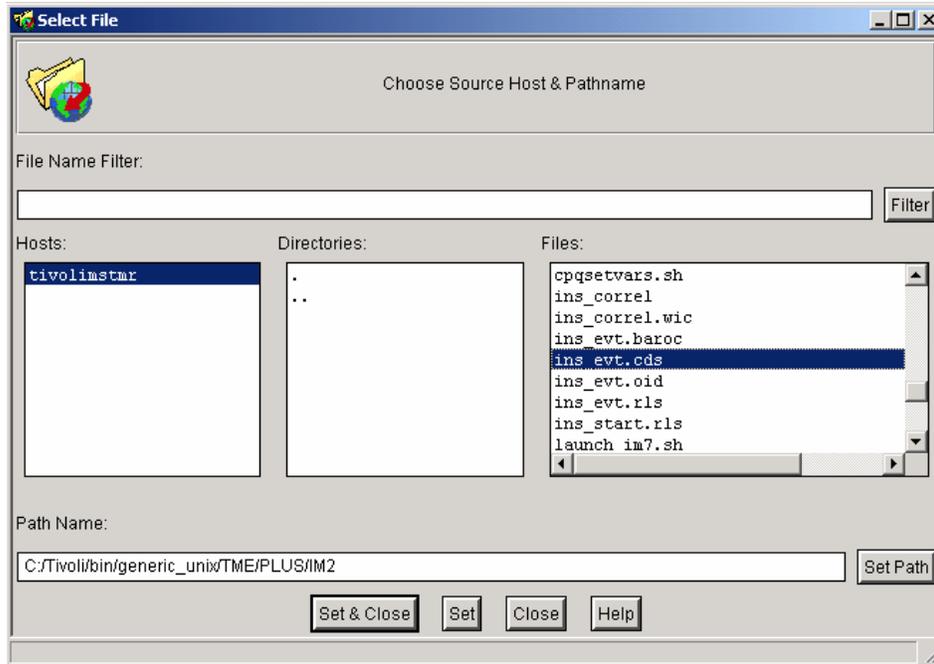
23. Select the **Distribution** option to display the Edit Adapter window.

Figure 21 Edit Adapter window



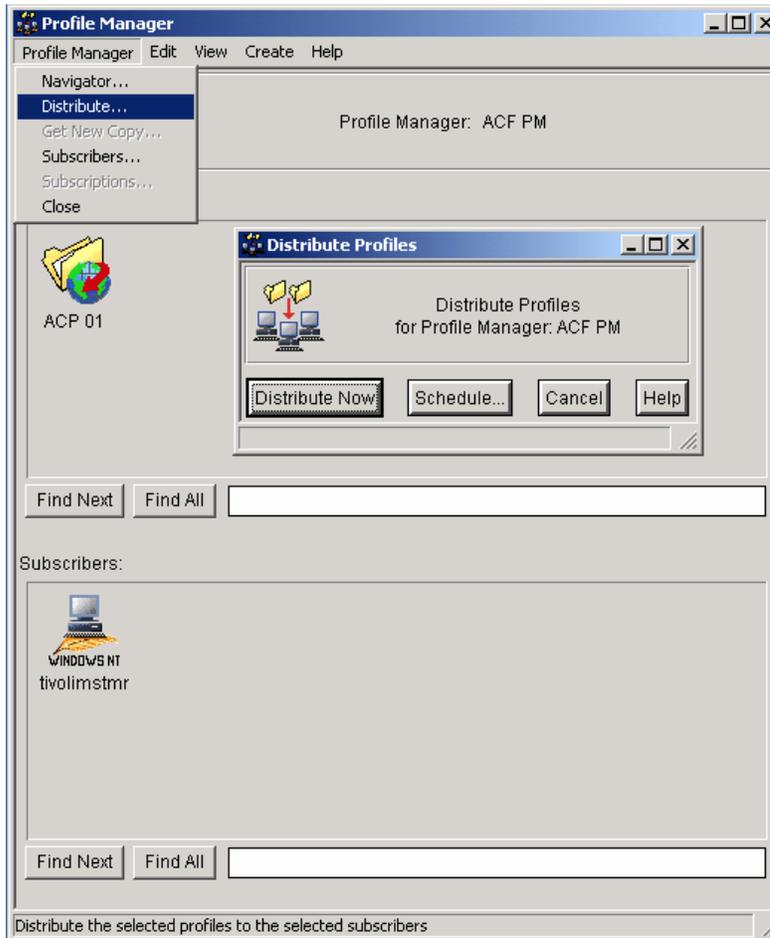
24. In the textbox to the left of the equal sign, enter the file name `ins_evt.cds`, and click the browse icon to the immediate right of the equal sign to display the Select File window.

Figure 22 Select File window



25. Browse to and select the `ins_evt.cds` file. The default location is `/Tivoli/bin/generic_unix/TME/PLUS/IM2` on the TMR server for both Windows and UNIX versions of the HP Insight Integration for Tivoli.
26. Click **Set & Close** to confirm the selection.
27. At the Edit Adapter window, select the checkbox to the right to confirm the settings.
28. Click **Save & Close** to save the configuration settings.
29. In the Profile Manager window, click **Profile Manager>Distribute**. This action distributes the ACF Adapter to the subscribers defined in step 15. Alternatively, drag the **Profile** icon from the Profile Manager window, and drop it onto the icon displayed in the Subscribers area. This action completes the creation and deployment of the ACF adapter.

Figure 23 Distribute Profiles window



30. Use the **Configure SNMP Adapter** task provided with the Insight Integration to amend the Insight event classes and trap definitions (ins_evt.cds and ins_evt.oid) to the Tivoli environment. Follow the steps in the “Configuring a Tivoli non-TME SNMP Adapter” section.

Configuring the TEC Event Server

The configuration of the TEC Event Server can either be performed manually or using the scripted task provided with the Insight Integration. This section describes the scripted procedures for installation. Manual configuration is detailed in the “Manually configuring the HP Insight Integration for Tivoli” section.

The Insight Integration task, Setup TEC Event Server, automatically adds the HP BAROC event class definitions and rules into the target TEC Event Server rule base. This task allows events generated by HP Insight Management Agents to be correctly interpreted and processed. During the setup process, you can elect to use an existing rule base or create a new one by cloning an existing rule base and adding the HP rules.

Preinstallation considerations

- The TEC application must be fully installed and operational before performing the Insight Integration tasks, including implementing and configuring SNMP services.
- The TEC requires that a database, such as Oracle, Sybase, MSSQL, Informix, or DB2 RDBMS, be installed and available.
- A working Tivoli Event Console must already be present.
- A TEC SNMP Adapter must be configured to accept HP SNMP events.



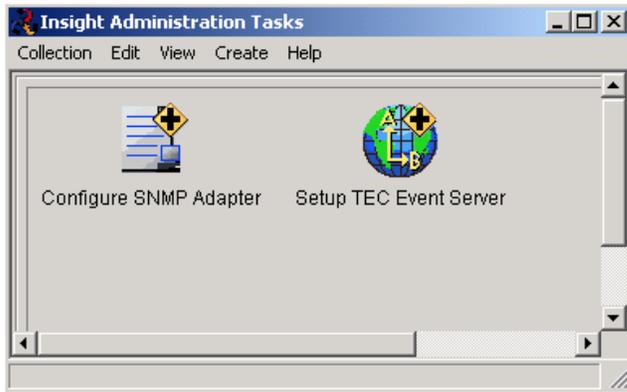
NOTE: For details on configuring the Tivoli SNMP Adapter, see “Configuring a Tivoli SNMP Adapter.”

- All HP Managed Nodes and Endpoints must be configured to send SNMP traps to a designated TEC SNMP Adapter.

Creating the HP rule base

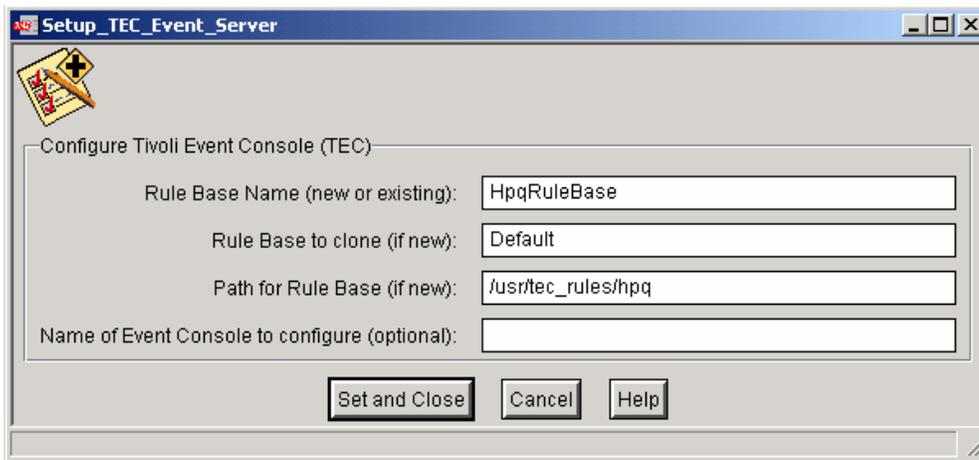
1. From the HP Insight Integration for Tivoli window, double-click **Insight Administration Tasks**. The Insight Administration Tasks window appears.

Figure 24 Insight Administration tasks



2. Double-click **Setup TEC Event Server**. Alternatively, right-click **Setup TEC Event Server** and select **Run Job**. The Setup_TEC_Event_Server window appears.

Figure 25 Setup_TEC_Event_Server_window



3. In the Rule Base Name field, enter the name of an existing rule base or the name of a new rule base. By default, the Insight Integration creates the new rule base (HpqRuleBase) if the specified name does not match an existing rule base.
4. In the Rule Base to Clone field, enter the name of an existing rule base to clone. The system ignores this field if an existing rule base is entered in the first field.



NOTE: If you are creating a new rule base, enter `Default` (case sensitive) in the Rule Base to Clone field. The rule base to clone should be the current active rule base.

5. In the Path for Rule Base field, enter the path to the new rule base. This field is ignored if an existing rule base was entered in the first field.



NOTE: If you are creating a new rule base, enter the path to store the files created by the setup task.

The Name of Event Console to Configure field can normally be left blank. The current active Event Console is used. In a TEC 3.7, 3.8, or 3.9 environment, leave this field blank. Event consoles for these versions are designed to be configured manually.

6. Click **Set and Close** to confirm the values and complete the configuration.

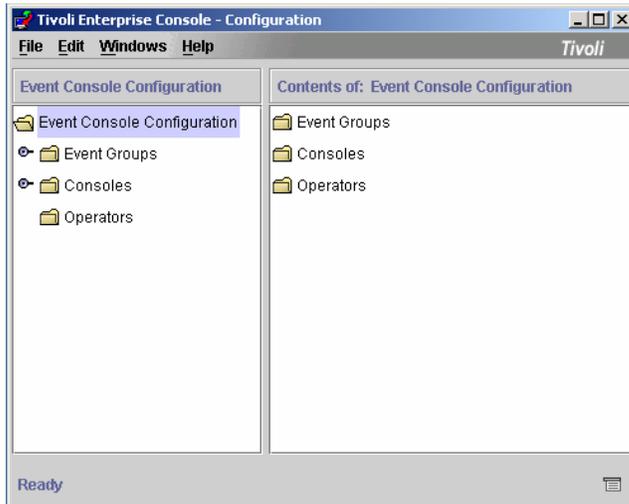
Configuring the Tivoli Event Console (version 3.7, 3.8, and 3.9)

Before HP events can be viewed properly within the Tivoli Event Console (version 3.7 and greater), the console component must be configured to assign the required event groups and access permissions.

The following procedures describe how to set up a new event group just for HP events and assign them to a console. For an existing configuration, you can choose to not create a new group and to amend an existing group. By default, all HP SNMP events display in the Event Console. For further details on Event Console configuration, see the *Tivoli Enterprise Console User's Guide*.

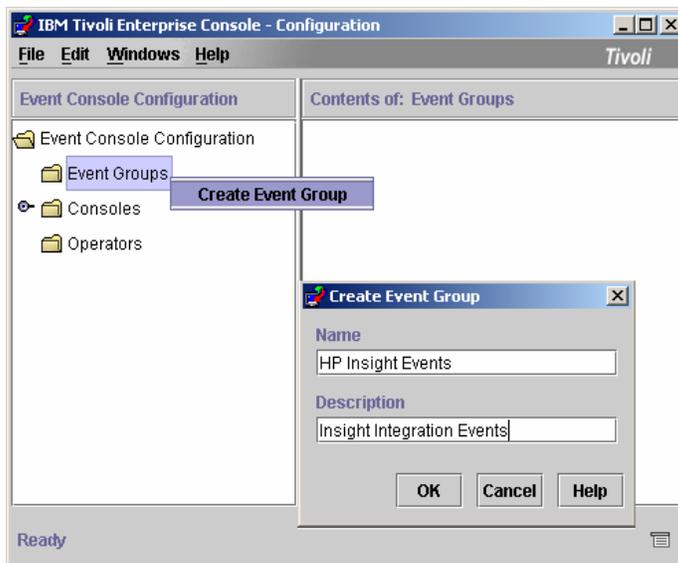
1. From a command line in the Tivoli environment, issue the `tec_console` command to open the Tivoli Enterprise Console - Configuration window.

Figure 26 Tivoli Enterprise Console - Configuration window



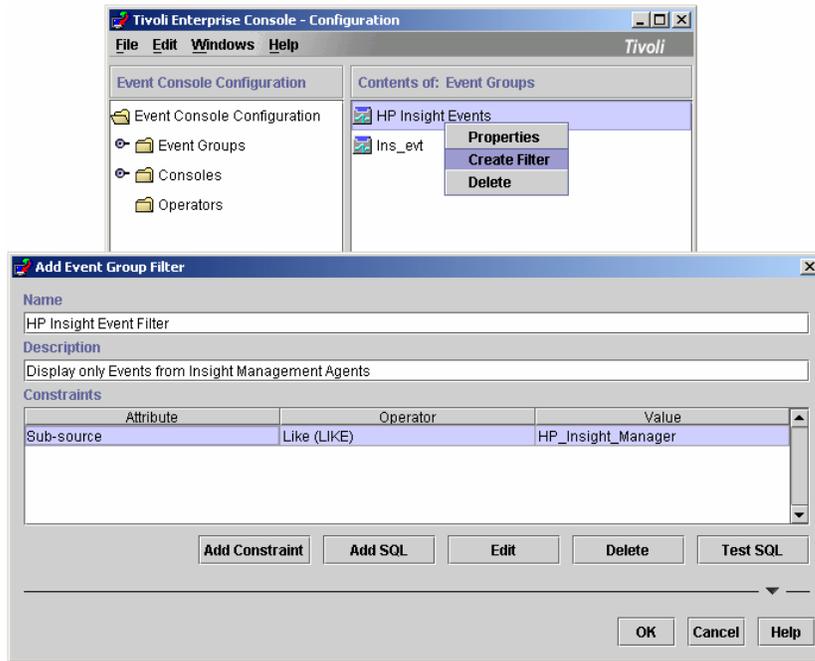
2. Right-click **Event Groups** and select **Create Event Group**.

Figure 27 Create Event Group window



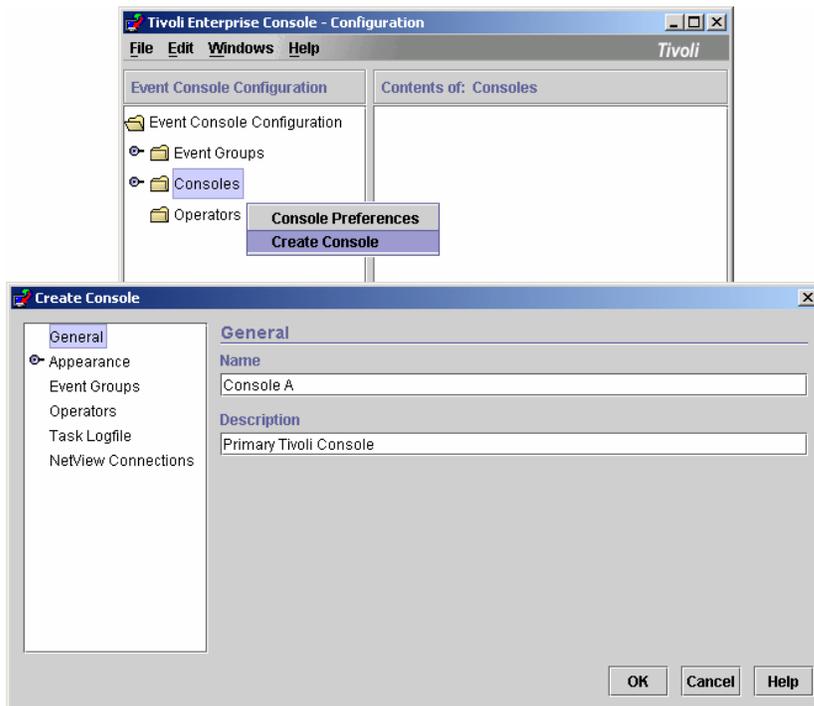
3. Enter a distinguishing name and description to easily identify the new event group (in this example, "HP Insight Events" is used). Click **OK** to save the event group. You can assign a filter to this event group that only displays events generated by Insight Management Agents. If you do not want a filter, proceed to step 9.
4. Right-click the newly created event group and select **Create Filter**. The Add Event Group Filter window appears.

Figure 28 Add Event Group Filter window



5. Create a corresponding name and description for the filter (in this example, “HP Insight Event Filter” is used).
6. Click **Add Constraint**.
7. In the Attribute listings, select the **Sub-source** value, and enter HP_Insight_Manager in the Value field.
8. Click **OK** to save the constraint settings.
9. Configure the console so that events monitored by the newly created event group display. For this example, a new console is created, but normally, under production environments, an existing console entry is amended.
10. Right-click the **Console** folder in the Tivoli Enterprise Console - Configuration window, and select **Create Console**. The Create Console window appears.

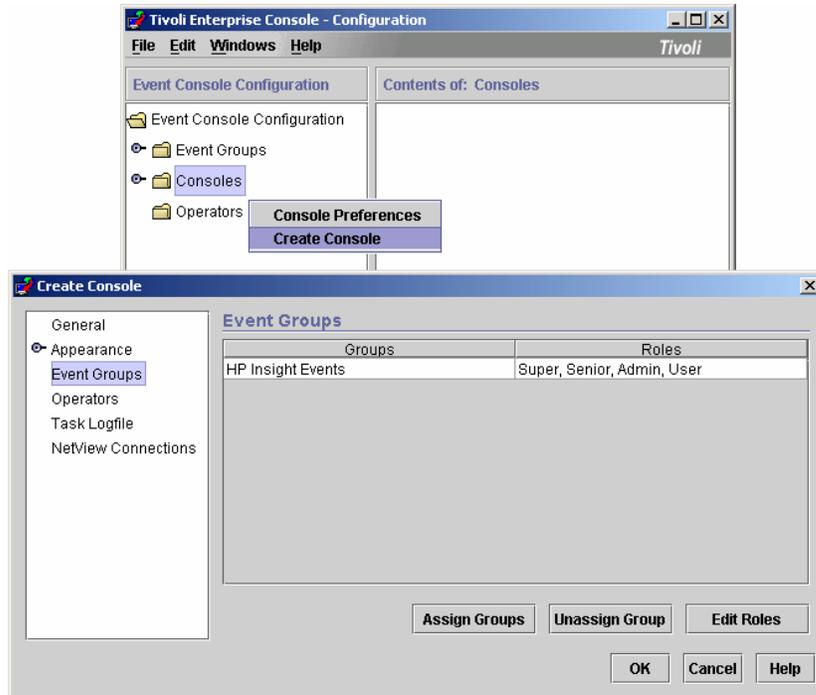
Figure 29 Create Console window



11. Click the **General** tab, and assign the console name and description (in this example, the name “Console A” is used).
12. Click the **Appearance** tab, and select the type and format used to display events.

- Click the **Event Groups** tab, and use the **Assign Groups** button to select the event groups and roles associated with the console (in this example, “HP Insight Events” group is used).

Figure 30 Event Groups



- Click the **Operators** tab, and assign current operators from the list of available operators.
- Finish configuring the remaining tabs based on your specific organization requirements, and click **OK** to save the console.

Manually configuring the HP Insight Integration for Tivoli

The HP Insight Integration for Tivoli was developed for easy installation using predefined scripts and tasks. To provide maximum flexibility with existing Tivoli environments and to meet individual customer needs, some elements of Insight Integration can be configured manually.

The following sections describe how to manually configure the following elements of the TEC application to receive and display HP SNMP events:

- Tivoli SNMP Adapter
- Tivoli Event Server

Manually updating the Tivoli SNMP Adapter on a Managed Node

The following process can be used to manually update an existing SNMP Adapter to receive the HP event definitions and classes provided with the HP Insight Integration for Tivoli, Revision 4.2. The event definitions support Insight Management Agents up to version 7.70.

- Shut down the TECSNMPAdapter service.
- Make a copy of the existing `tecad_snmp.cds` and `tecad_snmp.oid` files, and store them in a separate location. This precaution enables you to restore the original configuration if needed.
- Open the existing `tecad_snmp.cds` file for editing. By default, the file for non-TME adapters is located in the `/tecsnmp/etc` directory. For the ACF adapter, this file is located in `$LCFDIR /TME/TEC/adapters/etc`, where `$LCFDIR` represents the Endpoint directory environment.
- If a previous version of the Compaq Insight Manager Integration for Tivoli Enterprise is installed, remove all existing entries that begin with “CIM_”.
- If a previous version of the Insight Integration for TEC is installed, remove all existing entries that begin with “IM_”.
- Append all entries from the `ins_evt.cds` file located in `hpq/TEC` to the original `tecad_snmp.cds`.
- Save the updated `tecad_snmp.cds` file.
- Open the `tecad_snmp.oid` file for editing.

9. If a previous version of the Compaq Insight Manager Insight Integration for Tivoli or Insight Integration for TEC was installed, remove all existing entries that begin with "cpq".
10. Add all entries from the file ins_evt.oid file located in hpaq/TEC to the original tecad_snmp.oid.
11. Be sure that the object identifier (OID) entries are in numerical order.
12. Save the tecad_snmp.oid file.
13. Restart the TECSNMPAdapter service.

Manually copying existing SNMP Adapter files to another Managed Node

When there are multiple systems in a TME that require a configured SNMP Adapter, instead of running the HP configuration task on each target Managed Node or Endpoint, the associated .cds and .oid files can be configured once and copied to each target system.

The following process presumes that the Configure SNMP Adapter task supplied with the Insight Integration has already been run on the TMR server and that the updated tecad_snmp.cds and tecad_snmp.oid files have already been created.

1. Be sure that the target Managed Node or Endpoint is installed with a Tivoli non-TME adapter. By default, the non-TME adapter installation creates the following directories:

- C:\Tecsnp\etc
- C:\Tecsnp\bin



NOTE: A UNIX configuration uses the /etc/Tivoli/tecad reference.

2. On the target Managed Node, stop the TECSNMPAdapter service.
3. Make backup copies of the current tecad_snmp.cds and tecad_snmp.oid files. This precaution preserves the working configuration, and the adapter can be easily restored if required.
4. Replace the existing tecad_snmp.cds and tecad_snmp.oid files in the C:\Tecsnp\etc directory with the files already created using the Configure SNMP Adapter task provided with the Insight Integration.
5. Restart the TECSNMPAdapter service to complete the process and initiate the newly updated event classes and definitions on the Managed Node.

Manually configuring the Event Server rule base

The following section describes how to configure the Tivoli Event Server manually using command line.

Configuring the TEC rule base from a command line

The HP Insight Integration for Tivoli includes the file Tec37_cliconfig, located in the hpaq/TEC directory that is provided to help manually configure the TEC rule base from a command line. This file details the steps required to configure the Event Server manually and can be edited and used as deployment scripts.



IMPORTANT: This file must be edited to set environment-specific conditions before being used as deployment scripts, and it must be run from the command line of a configured Tivoli environment where the TEC server is hosted. This file includes details on setting the environment settings.

Configuring TEC Rule Base from the Tivoli Desktop

To install manually from the Tivoli Desktop, use the files located in the /hpaq/TEC directory and the following processes to install the HP rule set, event group classes, and filters provided with Insight Integration into an existing TEC server.

The rules provided with HP Insight Integration for Tivoli revision 4.2 support event definitions delivered with HP Insight Management Agents up to version 7.70.



NOTE: If the TEC Event Server has already been installed with event classes and rules provided with Compaq Insight Manager for Tivoli Enterprise (revision 1.5 or 1.60) or previous versions of Insight Integration, these files must be removed before installing HP Insight Integration for Tivoli, revision 4.2.

1. Create a directory and copy the compiled TEC fact file ins_correl.wic to the default location, /usr/tec_rules/factfile. If the location is changed, the corresponding entry in the ins_start.rls file must also be changed to match the location.
2. Close the TEC Event Server.

3. Right-click the Event Server icon, and select Rule Bases.
4. Click Create, and select the Rule Base option from the menu bar.
5. Name the new rule base, and set the file path location.
6. Right-click the active rule base, and select Copy.
7. Select the name of the new rule base in the Destination Rule Base text box.
8. Select the Copy Rules and Copy Classes check boxes.
9. Click Copy and Close.
10. Right-click the new rule base, and select Import.
11. Select the Insert After option from the Rule Sets section.
12. Select the Import Rule Set check box.
13. Select the last .RLS file entry in the Position to Insert Imported Rule Set text box.
14. For every .RLS file in the hpq/TEC directory:
 - a. Enter the location and name of the file in Directory Path.
 - b. Click Import.
15. Select the Insert After option in the Class Definitions section.
16. Select the Import Class Definitions check box.
17. Confirm the tecad_snmp.baroc file is present. If not, import the file.
18. Select the last .BAROC file entry in the Position to insert import class file text box.
19. For every .BAROC file in the hpq/TEC directory:
 - a. Enter the location and name of the file in Directory Path.
 - b. Click Import.
 - c. Click Close.
20. Right-click the new rule base, and select Compile.
21. Select the Trace Rules check box.
22. Click Compile.
23. Ensure there were no errors during the compile.
24. Click Close.
25. Right-click on the new rule base, and select Load.
26. Select the Load, but activate only when server restarts radio button.
27. Click Load and Close.

Restart the TEC Event Server to complete the process and initiate the Event Server with the new HP rule base.

Installation logs

The HP Insight Installation for Tivoli creates the IM2_PLUS.LOG file that contains detailed information about the overall installation status.

When the installation is complete, the IM2_PLUS.LOG file is created in the directory Tivoli\db\host_name.db\tmp, where the *host_name* entry references the name of the TMR server on which the Insight Integration has been installed. Review this log file to help confirm a successful installation and identify any potential installation problems.

The Insight Integration also creates a debug log. See the “Troubleshooting” section in Appendix A for details on configuring and using the debug features.

Configuring the HP browser tasks

The HP Insight Integration for Tivoli includes tasks to launch selected HP web-based management tools (HP Systems Insight Manager, HP System Management Homepage, HP Remote Server Management and HP Storage Management Appliance Agents) from the Tivoli Desktop and Tivoli Event Console (version 3.7, 3.8, and 3.9). To enable these tasks, configure the browser environment for the Insight Integration as follows:

1. At the HP Insight Integration for Tivoli window, double-click **Set Internet Browser Location**. The Configure_Internet_Browser window appears.

Figure 31 HP Insight Integration for Tivoli

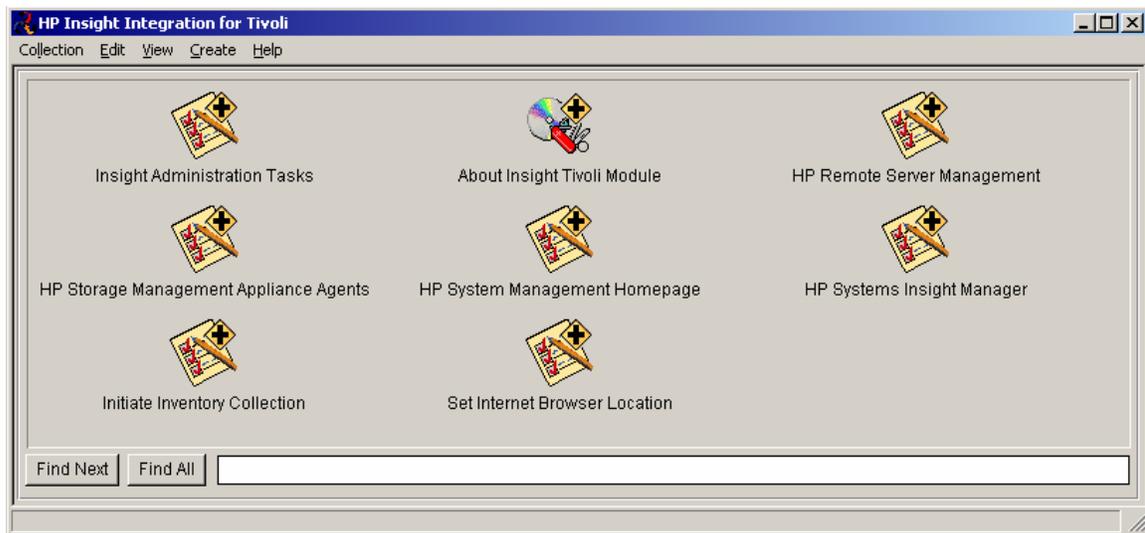
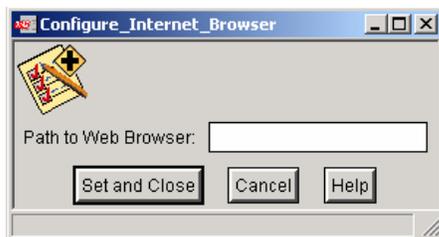


Figure 32 Configure_Internet_Browser window



2. In the Path to Web Browser field, enter the location of your browser executable, and then click **Set and Close** to complete the process.

Uninstalling the HP Insight Integration for Tivoli

If you must uninstall the HP Insight Integration for Tivoli, a predefined script is provided in the Hpqq/Plus/Utils directory of Insight Integration files to simplify the process.

To uninstall a scripted or manual installation of the HP Insight Integration for Tivoli, Revision 4.2, run the `ins_cleanmod.sh` script from a command line. The script `ins_cleanmod_v30.sh` uninstalls the Insight Integration for TEC, Revision 3.0. These scripts are located in the Hpqq/Plus/Utils directory of the Insight Integration files and remove all installed components.

After the uninstallation process is complete, verify that the HP entries from `tecad_snmp.cds` and `tecad_snmp.oid` files have been removed. Alternatively, remove them manually as detailed in the section "Manually configuring the HP Insight Integration for Tivoli."



NOTE: These files are scripts and not executables. You must run these uninstall scripts from a command line in the configured Tivoli environment, using an interpreter such as Bash.exe or Sh.exe. An example would be `sh ins_cleanmod.sh`.

4 Using the HP Insight Integration for Tivoli

Introduction

The integration of HP SNMP events into the TEC provides valuable hardware status and event information that helps simplify the systems management environment, enabling you to proactively manage ProLiant hardware with other enterprise resources from within a common TEC environment.

The HP Insight Integration for Tivoli includes BAROC event class definitions and rules to correlate over 550 SNMP events. These classes and rules integrate closely with the TEC application, allowing SNMP events to be identified, processed, translated, and clearly displayed in the TEC using the native Tivoli services. Although predefined to correlate a wide variety of common hardware event conditions, the rules can be easily customized to suit individual TME requirements.

The following sections in this chapter illustrate practical uses of this functionality to proactively identify potential problems, plus procedures for gathering additional in-depth hardware data using HP management tools such as HP Systems Insight Manager and the HP System Management Homepage.

Managing HP events in the Tivoli Enterprise Console

The HP Insight Integration for Tivoli provides a comprehensive set of BAROC event class definitions and rules to correlate over 550 events. These classes and rules enable SNMP events generated by Insight Management Agents to be correctly identified, processed, and displayed by the TEC in a translated format and help automate the correlation of common system conditions.

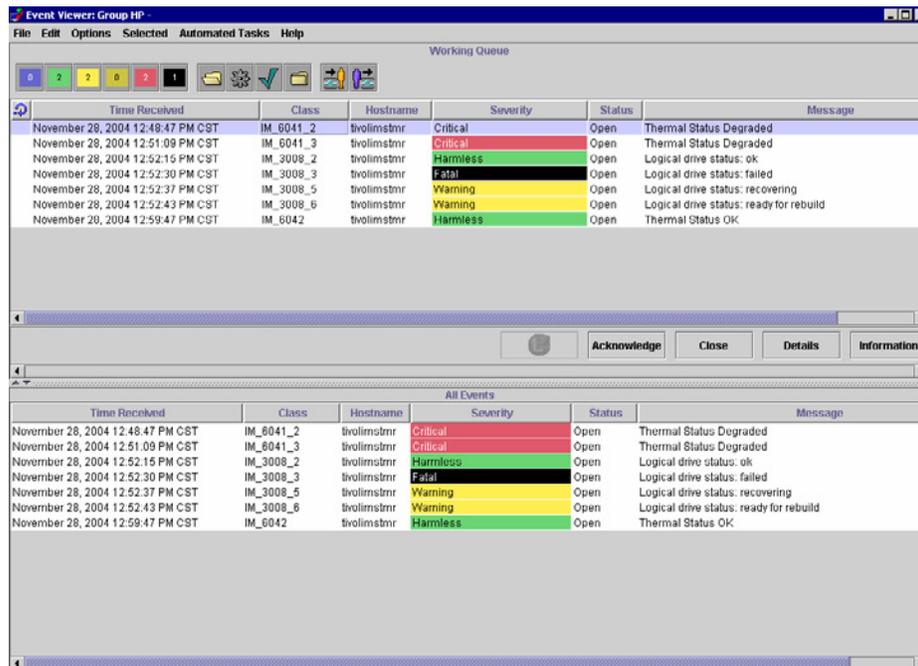
The following sections describe how HP SNMP events are displayed and managed in the TEC.

Viewing HP events

HP SNMP events are presented in the TEC using translated message text and corresponding color-coded severity level indicators. This interface enables you to quickly identify root cause and prioritize based on the level of criticality.

The example in Figure 33 shows a TEC 3.7 Event Console with a highlighted event indicating a Critical alert on the system Tivolimstmr that relates to a Thermal Status Degraded condition.

Figure 33 Tivoli Enterprise Console

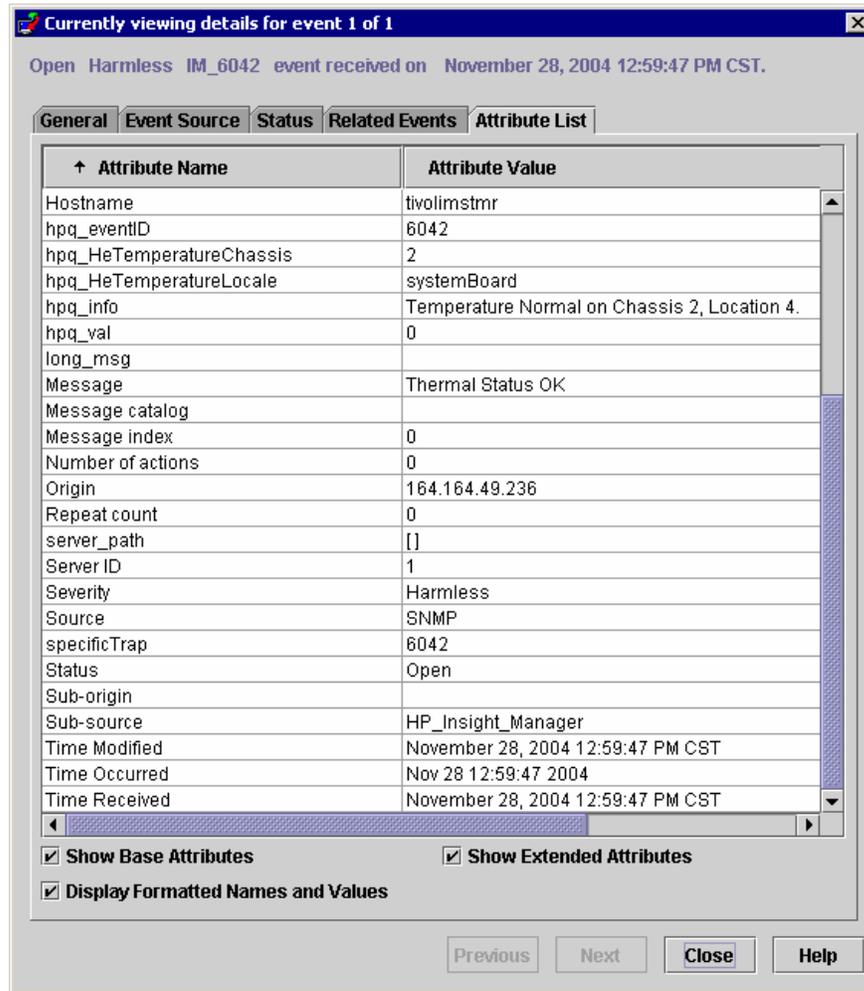


To obtain additional information, click the highlighted event to display the events details window shown in Figure 34.

Under the Attributes List tab, further event details can be quickly identified as follows:

- Under the hpq_info entry in the Attribute Name column, the corresponding data in the Attribute Value column provides a more detailed explanation of the event.
- Under the Message entry in the Attribute Name column, the corresponding data in the Attribute Value column verifies the status level.
- Under the specific Trap entry in the Attribute Name column, the corresponding data in the Attribute Value column provides the SNMP event ID.
- Under the Sub-source entry in the Attribute Name column, the corresponding data in the Attribute Value column indicates that Management Agents generated the event.

Figure 34 Event attribute details

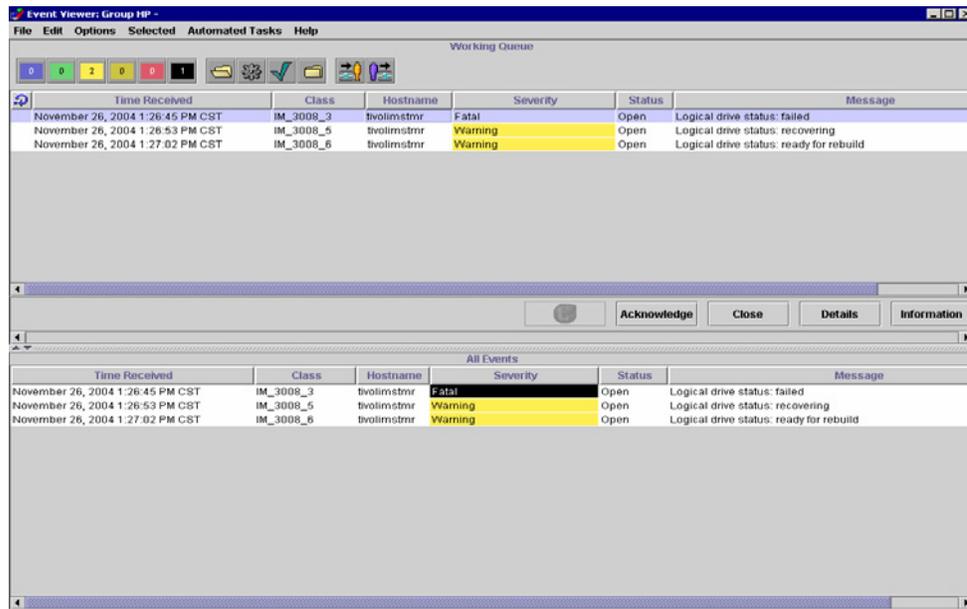


Event correlation

The HP Insight Integration for Tivoli provides rules to correlate over 550 SNMP events. These rules enable automated processing and correlation of HP SNMP events generated by HP Insight Management Agents and can be easily customized to suit individual TME requirements. A full list of HP event rules is provided in Appendix B of this user guide.

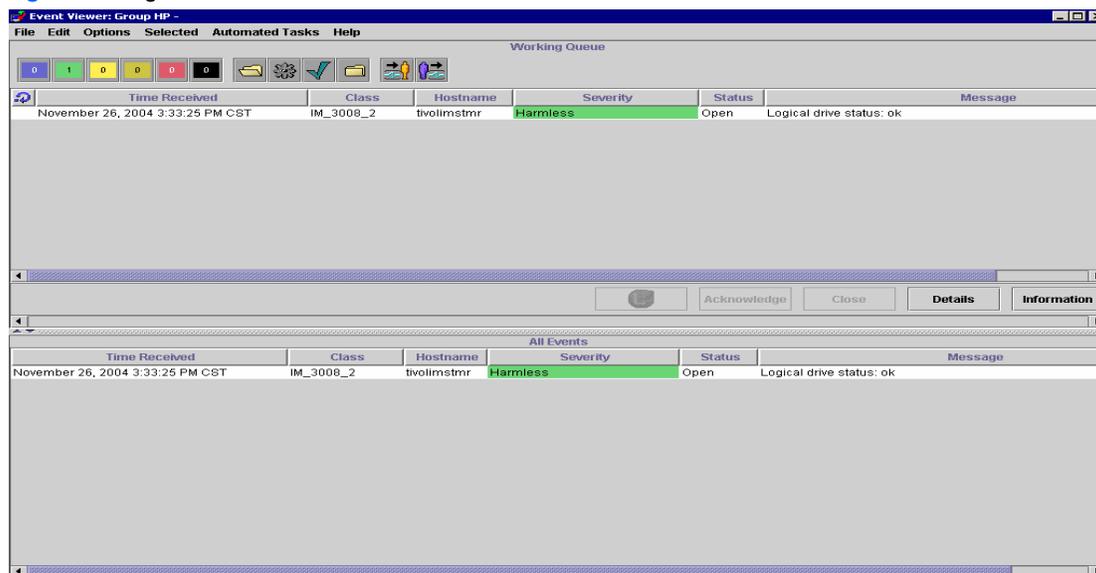
- As an example of this functionality, Figure 35 displays a TEC 3.7 console with a Fatal event on the system Tivolimstmr. The event data indicated a failed hard drive in a RAID array and two Warning events for the related logical drive.

Figure 35 Fatal and warning events



- When the failed drive is replaced, the automatic recovery process associated with the RAID array hardware commences, and HP Insight Management Agents generate additional events, indicating that the logical drive is rebuilding.
- When the rebuild is complete, a final event is generated, indicating that the Logical drive status is OK and the HP rules automatically close the preceding events related to the drive failure.

Figure 36 Logical drive status



Launching HP web-based management tools

The HP Insight Integration for Tivoli installs several tasks to invoke selected HP web-based management tools from the Tivoli Desktop and the TEC. This feature enables you to directly access addition hardware configuration information, status data, and lifecycle management tools for ProLiant servers and storage platforms from within the Tivoli environment.

These tools include HP Systems Insight Manager, the HP System Management Homepage, HP Remote Server Management and the agents associated with the HP Storage Management Appliance.

The procedures for launching the HP browser tasks from both the Tivoli Desktop and TEC are described in the following sections.



NOTE: To enable the HP browser tasks, first configure the browser environment for the Insight Integration environment. See “Configuring the HP browser tasks” in the “Installing the HP Insight Integration with TEC” chapter.

Launching from the Tivoli Desktop

The HP Insight Integration for Tivoli installs four tasks on the Tivoli Desktop to launch HP Systems Insight Manager, HP System Management Homepage, HP Remote Server Management and the agents associated with the Storage Management Appliance.

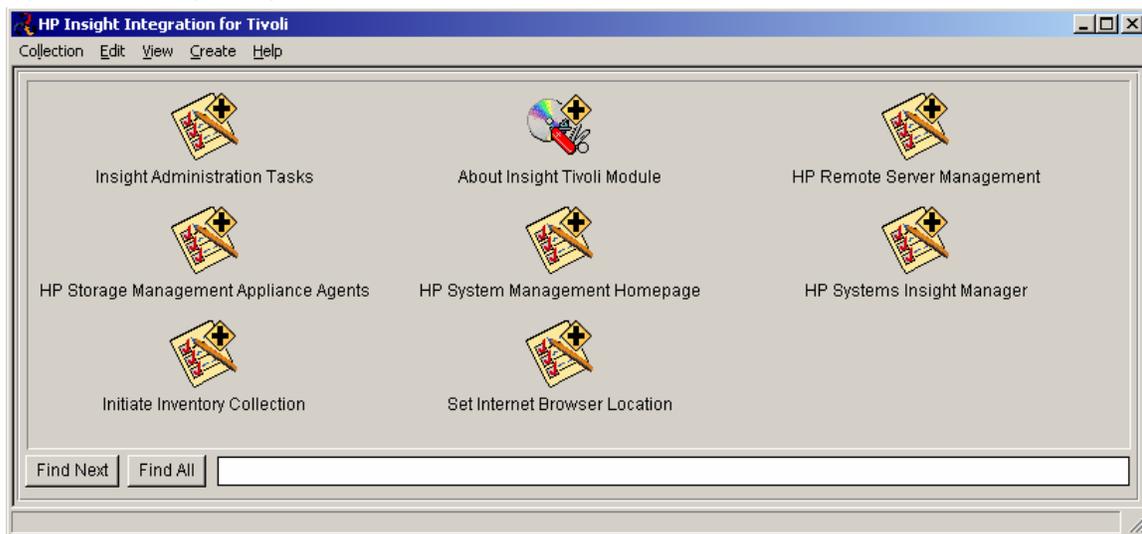
To use each of these tasks, you must input the name or IP address of the target server. When the task executes, it invokes the chosen browser application and links to the target device. The tasks amend the appropriate secure access port for each management tool as follows:

- HP Systems Insight Manager—Port 50000
- HP System Management Homepage—Port 2381
- Storage Management Appliance—Port 2381

Insight Integration provides tasks separate from the four tasks on the Tivoli Desktop that initiate the HP Inventory Collection task, which is described in the “Integrating HP Asset Information with Tivoli Inventory” chapter.

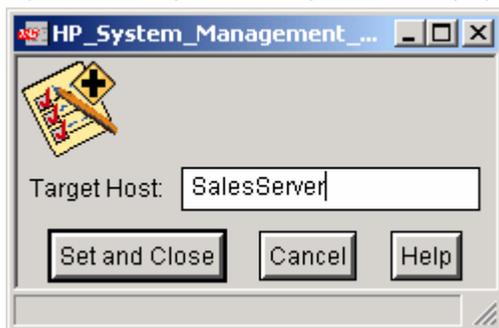
The following example demonstrates how to launch and display the System Management Homepage of the HP Insight Management Agents on the device named “SalesServer.”

Figure 37 HP Insight Integration for Tivoli



1. From the HP Insight Integration for Tivoli window, double-click the **HP System Management Homepage** task. The HP_System_Management_Homepage window appears.

Figure 38 HP_System_Management_Homepage window



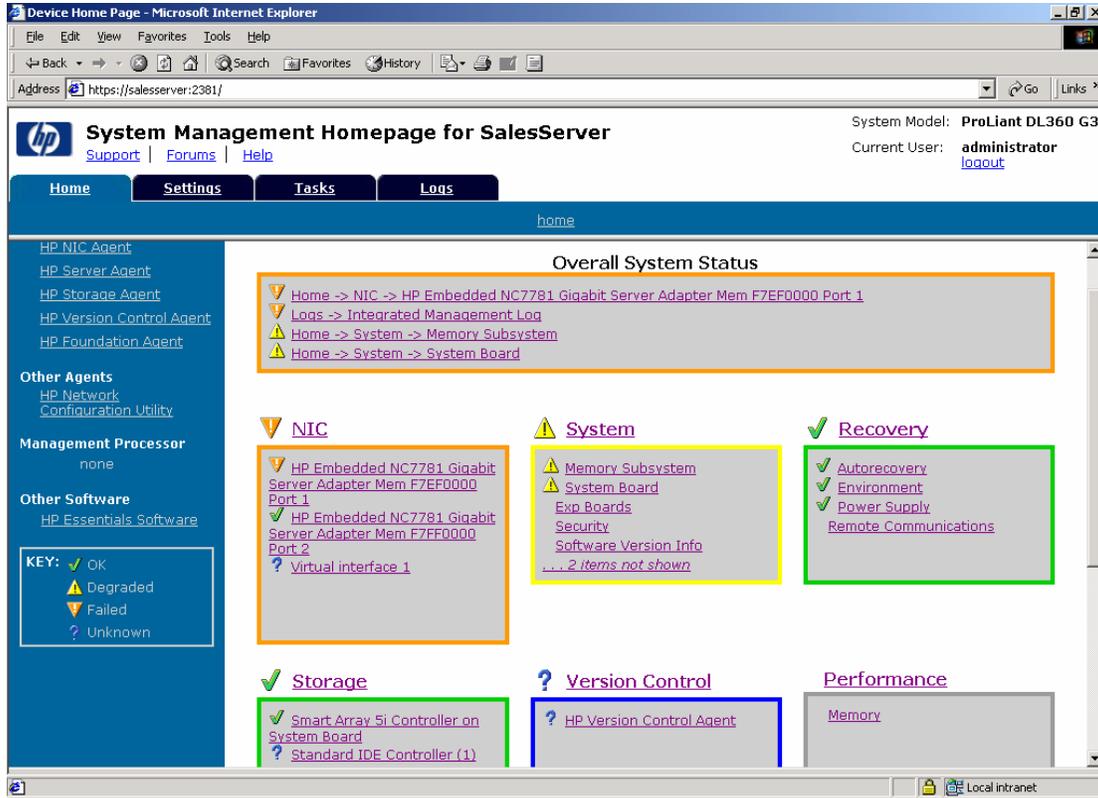
2. In the Target Host field, enter the name of the target system. In this example, the name is “SalesServer.”
3. Click **Set and Close** to complete task. This action invokes the browser application and amends the secure port address 2381 to the specific server name or IP address.

The System Management Homepage for the SalesServer device appears, showing the summary data provided by HP Insight Management Agents and other plug-in tools.



NOTE: The IP address associated with HP Remote Insight or Integrated Lights-Out Edition management processors must be included in the **Target Host** field when using the HP Remote Server Management task.

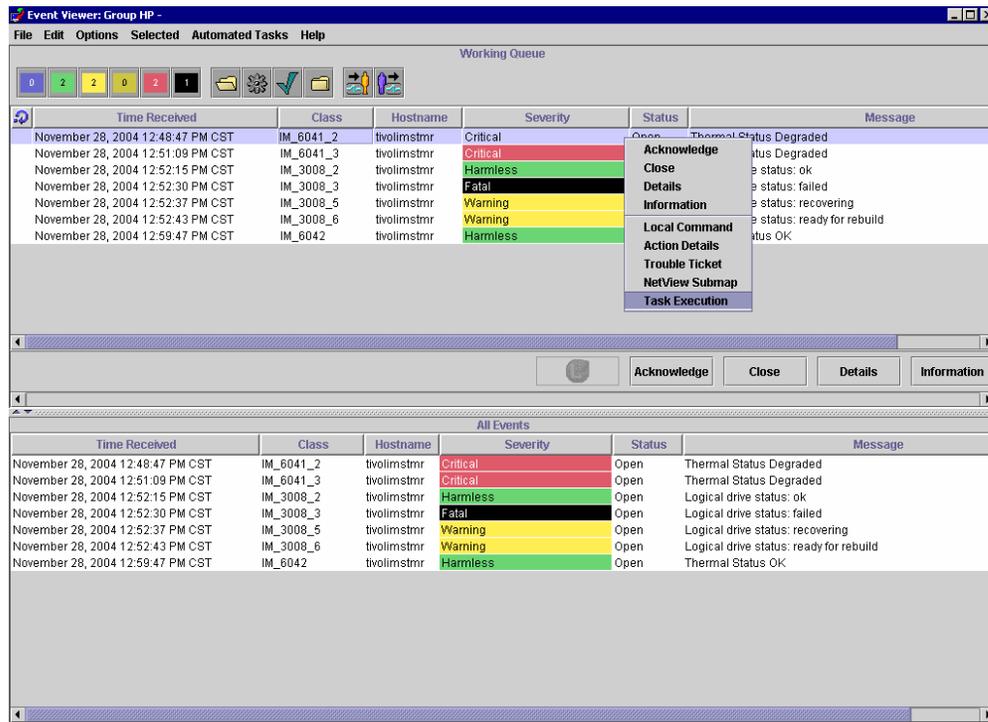
Figure 39 System Management Homepage for SalesServer



Launching from the TEC console

1. From a selected event in the TEC console, right-click the event entry to display the dropdown list.

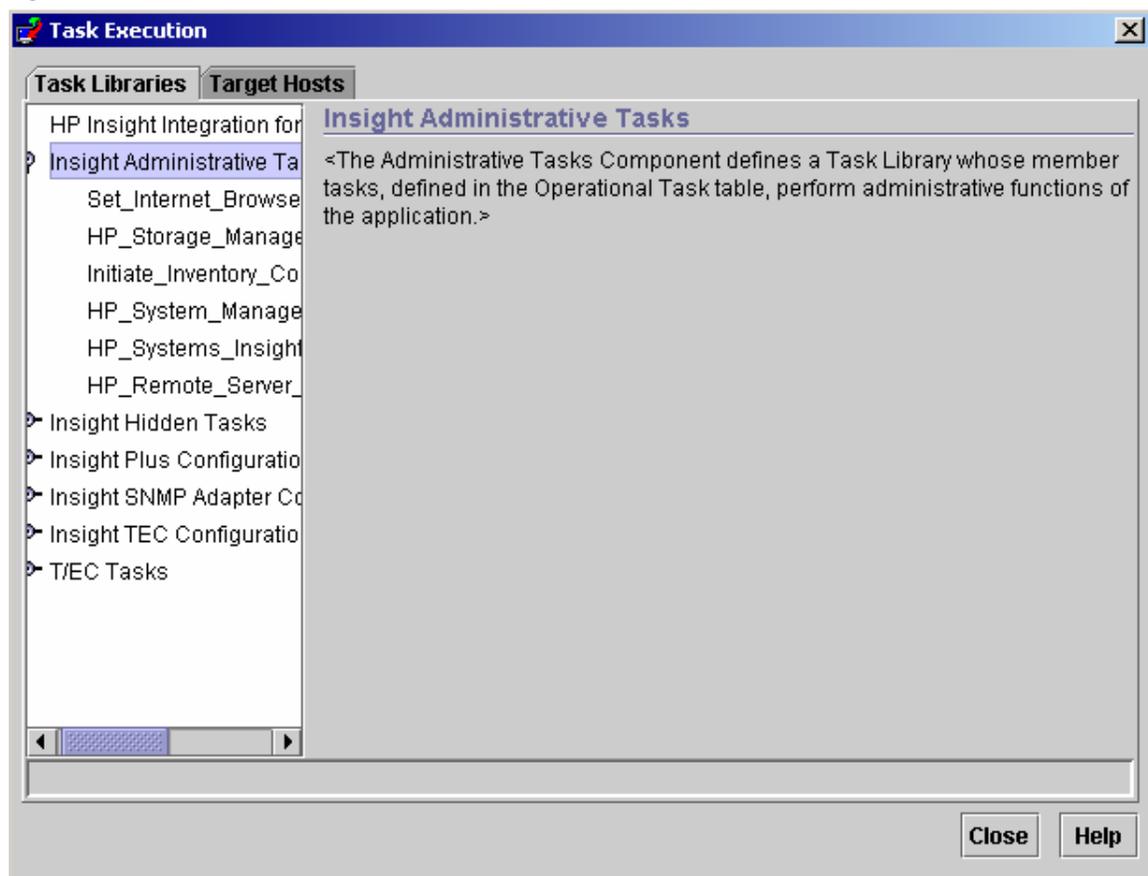
Figure 40 TEC Task Execution



2. Select **Task Execution** to display the Task Execution window.

The Task Libraries tab lists the available executable tasks, which includes several tasks associated with the HP Insight Integration for Tivoli. The Target Hosts tab lists the available hosts on which the tasks can be executed.

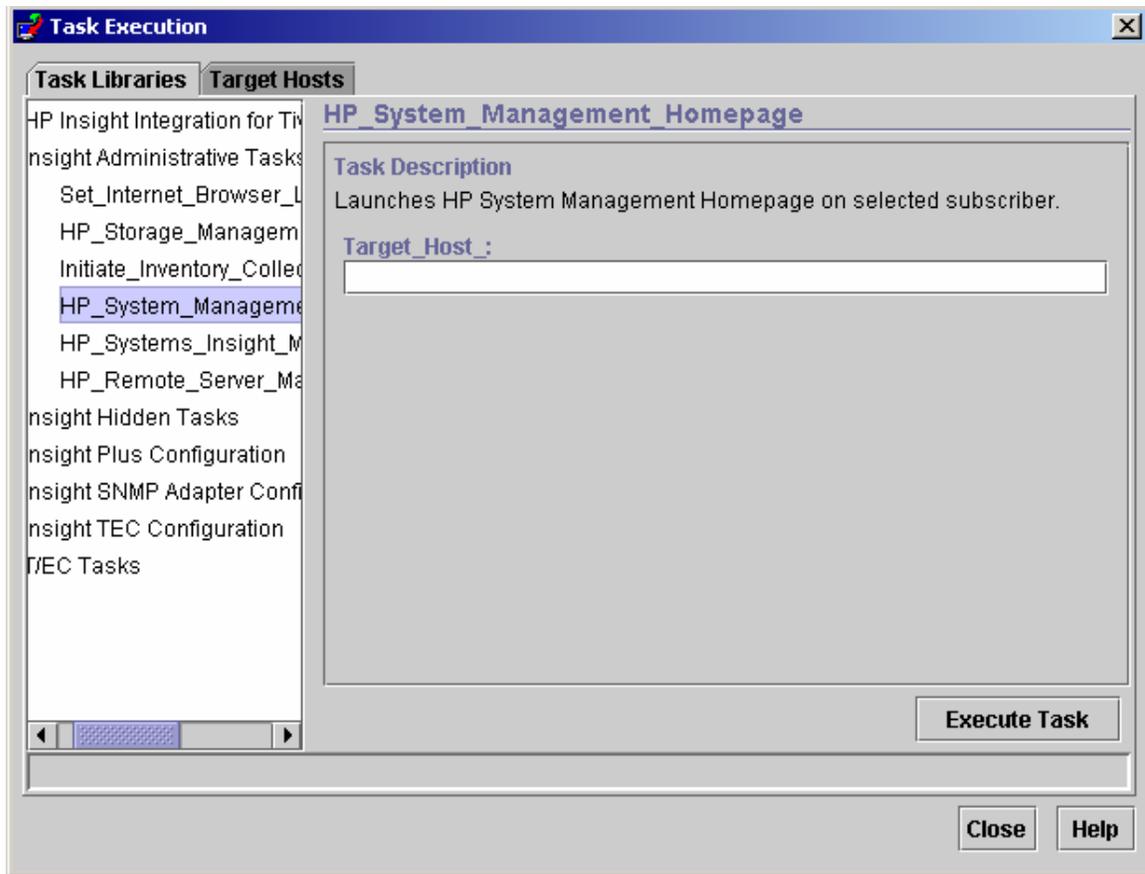
Figure 41 Task Execution window



3. Select **HP_System_Management_Homepage** under the Task Libraries tab.

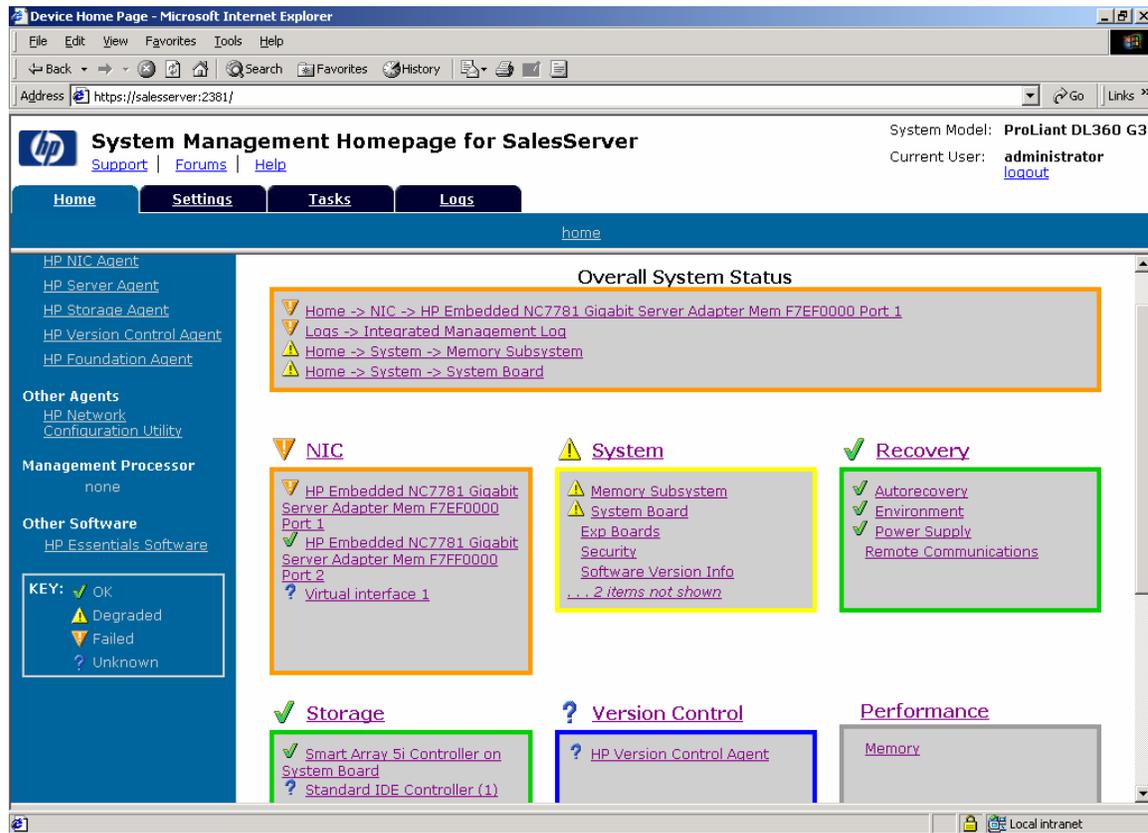
4. In the Target_Host field, enter the name of the target server or related IP address.

Figure 42 Launching the HP System Management Homepage task



5. Click **Execute Task** to complete task. This action invokes the browser application and amends the secure port address 2381 to the specific server name or IP address. The System Management Homepage for the SalesServer device displays, showing data provided by HP Insight Management Agents and other plug-in tools.

Figure 43 System Management Homepage for SalesServer



5 Integrating HP asset information with Tivoli Inventory

Overview

The HP Insight Integration for Tivoli includes a task and predefined database schemas that enable detailed hardware data for HP ProLiant servers to be collected, displayed and queried by the inventory tools delivered with Tivoli Configuration Manager.

The HP Inventory Collection task is designed to run the HP Inventory Collector (Collect.exe) on user-selected nodes and then save the output of each system to a local .MIF file on the target systems. The resultant .MIF file can be imported into other applications such as Tivoli Inventory.



NOTE: The HP Inventory Collector is supported only on Microsoft Windows operating systems.

This chapter provides information on the HP Inventory Collection task and demonstrates how to configure a more comprehensive, automated hardware inventory data collection process of HP ProLiant hardware into Tivoli Inventory. For those Tivoli environments in which hardware inventory management is of extra importance, this data can be used to produce detailed reports of HP hardware using the Tivoli Inventory Query Facility and build additional Tivoli Subscription and Software Distribution lists.

You can accomplish this level of integration by performing the following steps:

1. Adding HP specific tables to the existing Tivoli Inventory Database
2. Adding HP specific views to the existing Tivoli Inventory Database
3. Creating an HP query library and HP queries
4. Customizing an inventory profile to run the HP Inventory Collector (Collect.exe) to gather and save HP inventory data in an .MIF file

Assumptions and requirements

The information provided in this chapter is for system administrators who use the HP Insight Management Agents and HP Systems Insight Manager to manage the operation and asset management of HP systems within the TME.

Before attempting to implement this solution, you must be familiar with the configuration and operation of the Tivoli Management Framework, Tivoli Inventory (part of the Tivoli Configuration Manager), HP Systems Insight Manager, HP Insight Management Agents, and all associated documentation.

The following Tivoli software must be installed before attempting to configure any part of the solution detailed here:

- Tivoli Management Framework 3.7.1 or later
- Tivoli Inventory 4.2 or later

It is also assumed that Tivoli Policy Regions, Profile Managers, Profiles, and associated resource rights have been created or assigned in the appropriate locale to match the Logical Architecture standards of the environment.

The HP Inventory Collector (Collect.exe) 7.10 or later is also required. This utility works with HP Insight Management Agents to gather in-depth asset information for HP ProLiant servers and is supplied with the HP Insight Integration for Tivoli, Revision 4.2 in the hpq\Inventory directory.

The HP Inventory Collection utility will gather several hundred hardware asset attributes. The actual amount of data gathered is dependent on the type of system being scanned and the number of configured options.

Initiate Inventory Collection task

The HP Insight Integration for Tivoli includes the task “Initiate Inventory Collection,” which runs the HP Inventory Collector (Collect.exe) to gather hardware asset data on selected subscribers and save the output in an .MIF format suitable for import into the Tivoli Inventory database. The resultant .MIF file is saved in a specified location on selected subscribers.



NOTE: Importing the collected HP data into the Tivoli Inventory Database is a separate process to the Initiate Inventory Collection task and is described later in this chapter.



NOTE: The required SNMP services and HP Insight Management Agents must be installed and configured on all HP systems designated to be managed with this task.

HP recommends using Insight Management Agents 5.50 or later as a minimum.

The Initiate Inventory Collection task provided with the HP Insight Integration for Tivoli runs the following executable and can be used with the variables listed in Table 2:

```
Collect.exe /f <path>\hp.mif /tpem
```

Table 2 Initiate Inventory Collection task command line variables

| Command line variable | Description |
|-----------------------|---|
| /f | Instructs the output to be saved as single file. Without this parameter, each Management Information Base (MIB) collection is saved as a separate file. |
| Path | Specifies the location for the resultant .MIF file provided by the user. |
| hp.mif | Specifies the name of the resultant .MIF file. |
| /tpem | Defines the format of the output fields. This switch translates spaces in the attribute and group names to underscores and removes several unnecessary statements in the .MIF output file. This process makes the MIF file format suitable for importing into Microsoft SQL Server, Sybase, and Oracle databases. |

The resultant .MIF file contains hardware asset data and is saved locally on each target system as HP.MIF in the path specified by the user. If no path is specified, the file is saved in \Tivoli\db\Host_name.db, where Host_name refers to the name of the target system.

The output HP.MIF file is provided in a format that can be imported into Microsoft SQL, Sybase, and Oracle database applications.



IMPORTANT: The Inventory Collector utility (Collect.exe) is provided with the HP Insight Integration download image and is located by default in the \hpq\Inventory directory. See the “Product overview” chapter for details on the contents of the download image and the associated directory contents.

Updates to the HP Inventory Collector utility are provided on the download page for the HP Insight Integration for Tivoli at <http://h18000.www1.hp.com/products/servers/management/tivoli-enterprise.html>.

Configuring and running the Initiate Inventory Collection task

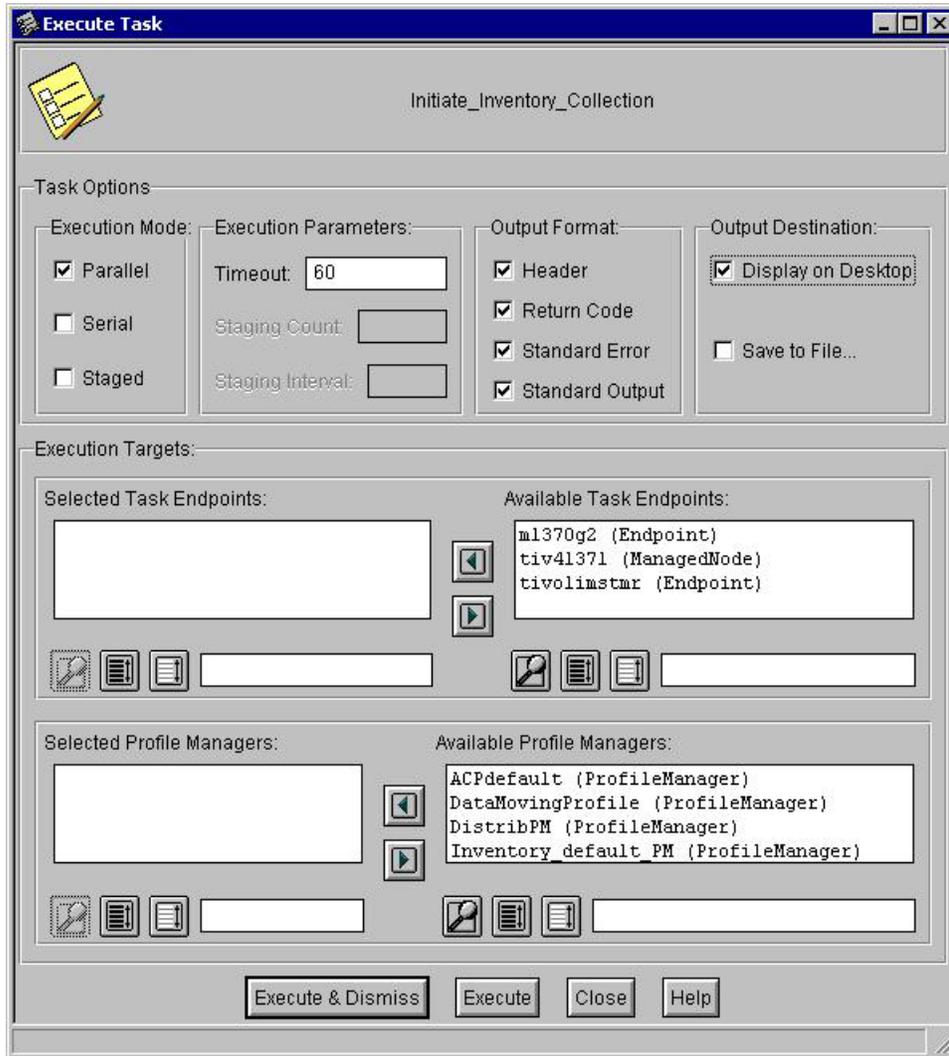
1. From the HP Insight Integration for Tivoli window, right-click the **Initiate Inventory Collection** icon.

Figure 44 Initiate Inventory Collection icon



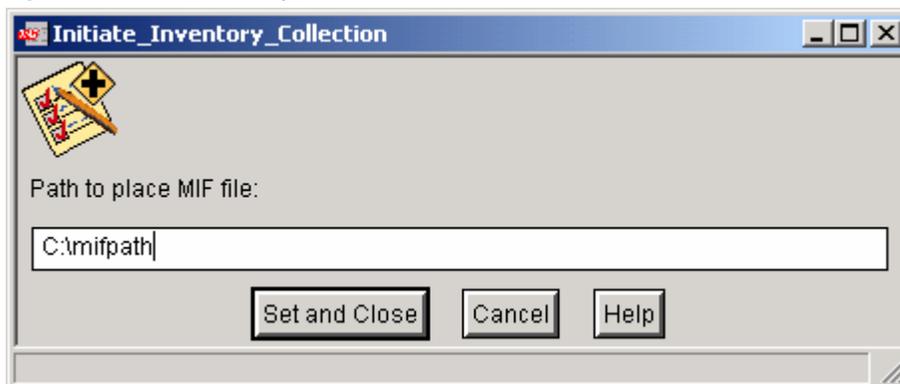
2. Select **Run on selected Subscribers**. The Execute Task window appears.

Figure 45 Execute Task window



3. In the Output Destination area, select the **Display on Desktop** checkbox.
4. Using the arrow buttons, select the required targets from the Available Task Endpoint list, and enter them into the Selected Task Endpoint window.
5. Click **Execute & Dismiss**. The window to specify the location of the .MIF file appears.

Figure 46 Initiate_Inventory_Collection window



6. In the Path to place MIF file field, enter the path where the .MIF file should be placed. If no path is specified, the file is saved in \Tivoli\db\Host_name.db, where Host_name refers to the name of the target system.
7. Click **Set and Close** to complete the configuration and execute the task.

Integrating HP data into the Tivoli Inventory Database

Insight Integration scripts

The following scripts referenced in this document enable the creation of HP Inventory Tables and Views for Microsoft SQL Server and Oracle databases. These scripts are included with the HP Insight Integration for Tivoli, Revision 4.2 and are located in the `hpq\Inventory` directory.



NOTE: The scripts provided with the HP Insight Integration for Tivoli should work equally well for other database vendors supported by the Tivoli Inventory product, such as Sybase, and can be used as examples.

- Microsoft SQL Server
 - `hp_mssql_schema.sql`
 - `hp_mssql_views.sql`
- Oracle
 - `hp_oracle_schema.sql`
 - `hp_oracle_views.sql`

The following script will create the Tivoli Query Library and HP specific queries referenced in this document. The script is included with the HP Insight Integration for Tivoli and is located in the `\hpq\Inventory` directory.

- `hptiv_queries.sh`

The following scripts will create the HP-specific history tables and queries:

- `h_hp_mssql_schema.sql`
- `h_hp_mssql_views.sql`
- `h_hp_oracle_schema.sql`
- `h_hp_oracle_views.sql`
- `h_hptiv_queries.sh`

Extending the Tivoli Inventory Database

Tivoli Inventory generates hardware and software .MIF files during an associated hardware or software scan. The information in these .MIF files is stored in predefined tables within the configuration repository of the database schema in the RDBMS. HP provides predefined scripts that will automatically extend an associated Tivoli Inventory Database with the necessary HP tables in Microsoft SQL and Oracle environments.

If the use of custom .MIF files is planned, they must meet certain requirements that include creating tables and columns in the Tivoli Inventory configuration repository to store the custom information.

When creating a custom table in the Tivoli Inventory configuration repository, follow these guidelines:

- Do not modify existing tables in the Tivoli Inventory configuration repository.
- The table name must be identical to the .MIF group name you will be using.
- The column names must be identical to the attributes you will be using.
- In each custom table, create a primary key that includes the following columns:
 - `HARDWARE_SYSTEM_ID`
 - `CONFIG_CHANGE_TYPE`

These guidelines enable tracking the configuration change history of the table by relating it to the `CONFIG_CHANGE_HISTORY` table. In each custom table, include the `CONFIG_CHANGE_TIME` column. This column does not have to be part of the primary key.

The primary key must also include any .MIF attribute that you designate as a key, for example, the CPU Number and PCI Slot number require additional primary keys.

HP database scripts

The following scripts will automatically extend the Tivoli Inventory Database and add the necessary tables for a Microsoft SQL Server or Oracle implementation. These scripts are included with the HP Insight Integration for Tivoli and are located in the `\hpq\Inventory` directory.

```
hp_oracle_schema.sql
hp_mssql_schema.sql
```

The following scripts will create the history tables for the HP specific tables for Microsoft SQL and Oracle implementations:

```
h_hp_oracle_schema.sql
```

```
h_hp_mssql_schema.sql
```

Run the scripts that apply for the configured Tivoli Inventory Database using the appropriate ISQL or SQL Plus database client. Ensure that the table permissions are set to run the script using the same Database ID configured for Tivoli. The ID configuration information can be determined by running the `wgetrim` command on the TMR Server.

Creating HP specific views

If Tivoli Inventory is used to gather custom information, the predefined views provided with the HP integration will not enable the Tivoli Inventory configuration repository to be queried for the custom HP specific information. It will be necessary to create additional database views. Creating a new view requires running a database script to add the new views to the Tivoli Inventory configuration repository.

When creating a new view, note the following guidelines:

- Do not edit any predefined views.
- If the new view is to be used to query the Tivoli Inventory configuration repository and then return the results to a subscription list, ensure that the new view contains the following columns: `TME_OBJECT_ID` and `TME_OBJECT_LABEL`. This type of query can be used for Managed Nodes, Endpoints, PC Managed Nodes, or any other managed site that meets the query criteria.

The following scripts provide examples of custom view creation and are included with the HP Insight Integration for Tivoli in the `\hpq\Inventory` directory.

```
hp_oracle_views.sql
```

```
hp_mssql_views.sql
```

For HP specific views for historical data, use the following scripts:

```
h_hp_oracle_views.sql
```

```
h_hp_mssql_views.sql
```

Run the scripts that apply for the configured Tivoli Inventory Database using the appropriate ISQL or SQL Plus database client. Ensure that the table permissions are set to run the script using the same Database ID configured for Tivoli. The ID configuration information can be determined by running the `wgetrim` command on the TMR Server.

These scripts create new views with HP specific information. They also demonstrate how the views can contain both Tivoli collected inventory information in addition to HP Extended information.



NOTE: These sample views reflect only a relatively small number of the available HP Collected Attributes. For a working Tivoli Management Environment, it is likely that additional views will need to be created to meet individual requirements.

Create an HP query library and HP queries

To help in the creation of an HP query library and associated HP queries, the following reference script is provided with the HP Insight Integration for Tivoli and is located in the `hpq\Inventory` directory.

```
hptiv_queries.sh
```

This script creates a new query library and new queries in a Tivoli Policy Region, specified at the time of execution. These queries use the additional views that were created in previous sections of this chapter (“Extending the Tivoli Inventory Database” and “Creating HP specific views”). The queries created by this script are:

- HP CPU Information
- HP DRIVE ARRAY information
- HP FCA Information
- HP IDE Information
- HP Inventory
- HP SCSI Information
- HP Slot Information
- HP Software Versions
- HP SAS Information

- HP ATA Disk Information



NOTE: This script provides an example of how to create queries to leverage the HP specific inventory content. Additional Views/Queries might need to be created to meet individual requirements and TME environments. Additional views can be created through the Tivoli Desktop or a command line interface. For further details on creating queries, see the *Tivoli Inventory User's Manual*.

Queries can be run to view system-specific data by right-clicking its object, selecting **Execute Query**, and then selecting the query library and the specific query.

Queries can also be executed through many other methods, such as referencing building subscription and distribution lists or by displaying the content for all systems that match the query criteria. See the *Tivoli Inventory User's Manual* for further information.



NOTE: A corresponding HP specific query library and associated HP queries to retrieve historical data can be created with the help of the `h_hptiv_queries.sh` script. Additional queries can be created based on requirements.

Ensure that the correct configuration repository has been specified by right-clicking the query name and selecting the **Edit Query** option.

Creating and customizing the inventory profile

Creating a Tivoli inventory profile, or customizing an existing one, represents the final step in the integration of HP asset data into Tivoli Inventory. A profile can be configured to perform the following tasks automatically upon distribution:

1. Execute the HP Inventory Collector (Collect.exe) on the selected target system.
2. Create the HP .MIF file.
3. Acquire the populated HP .MIF file.

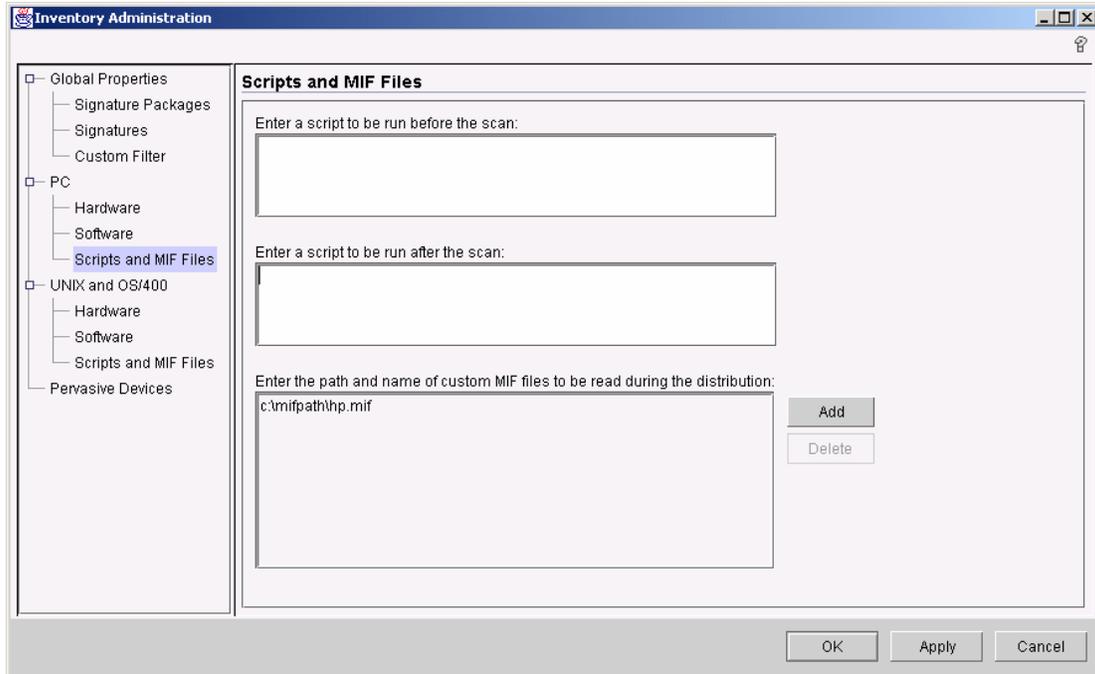
The HP .MIF file can be created by executing Collect.exe through the Tivoli Desktop option or command line. The Collect.exe utility can also be executed locally on the target system. The path in which the file resides must be the same as the .MIF file path specified in the profile.



NOTE: To execute Collect.exe through a command line, use the `run_clicollect.bat` batch command. This batch program is delivered with the HP Insight Integration for Tivoli in the `hpq\Inventory` directory and must be placed in the same directory as Collect.exe. The path in which to create and save the HP .MIF file must be specified in the `MIFPath` variable.

- a. On the Tivoli Desktop, right-click the Inventory Profile, and select **Properties**. The Inventory Administration window appears.

Figure 47 Inventory Administration window



- b. Select **Scripts and .MIF files** in the navigation pane.
- c. Enter the path and name of file to be read.



NOTE: The syntax used for the Collect.exe utility is as follows:

Collect.exe /tpem /f <output dir>\<mif filename>

- d. Click **OK**.

Displaying HP inventory information

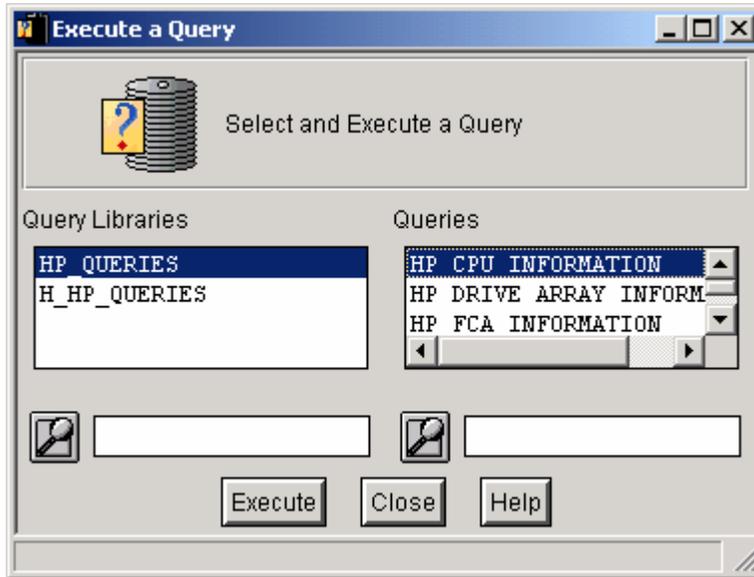
The following section demonstrates the output results of the HP queries.

Running the queries

1. From the Profile Manager on the Tivoli Desktop, expand the list of subscribers to display individual systems.

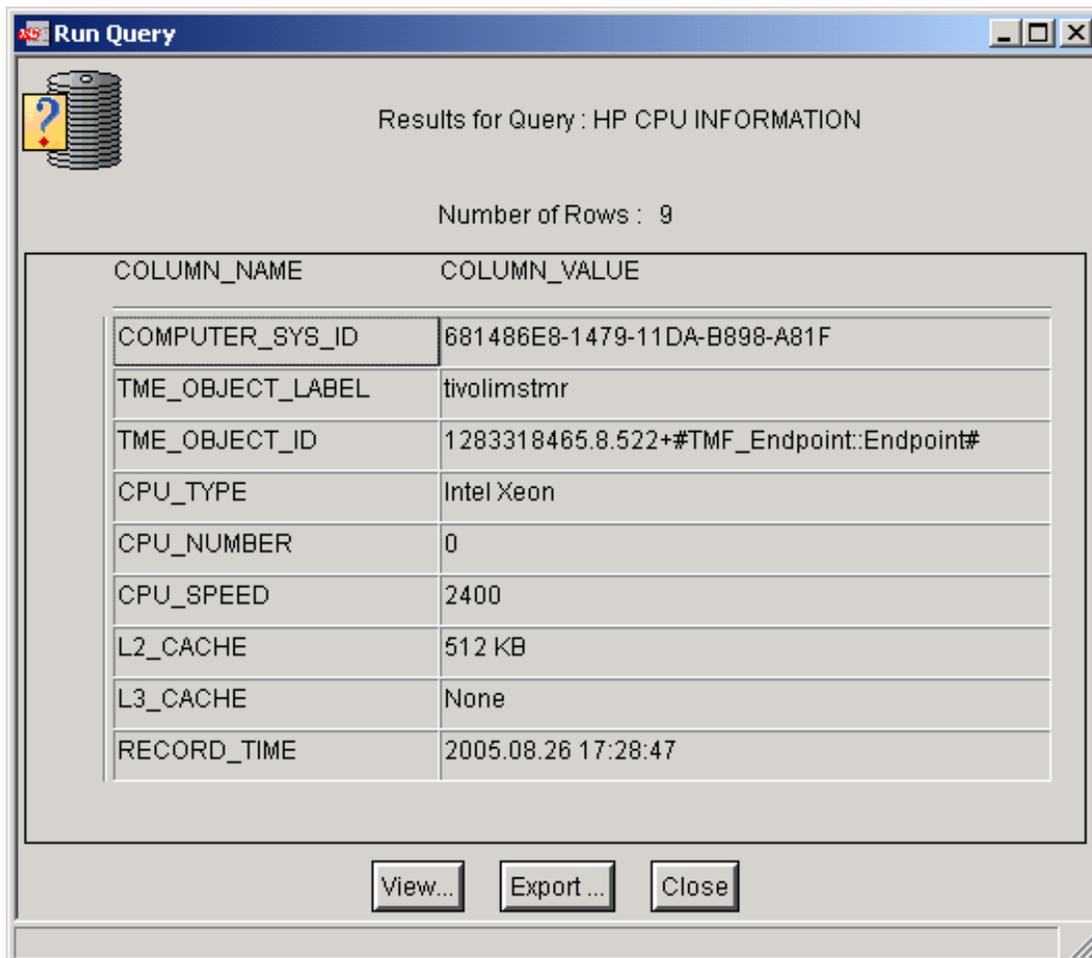
- Right-click a target system, and click **Execute Query** to display the Execute a Query window.

Figure 48 Execute a Query window



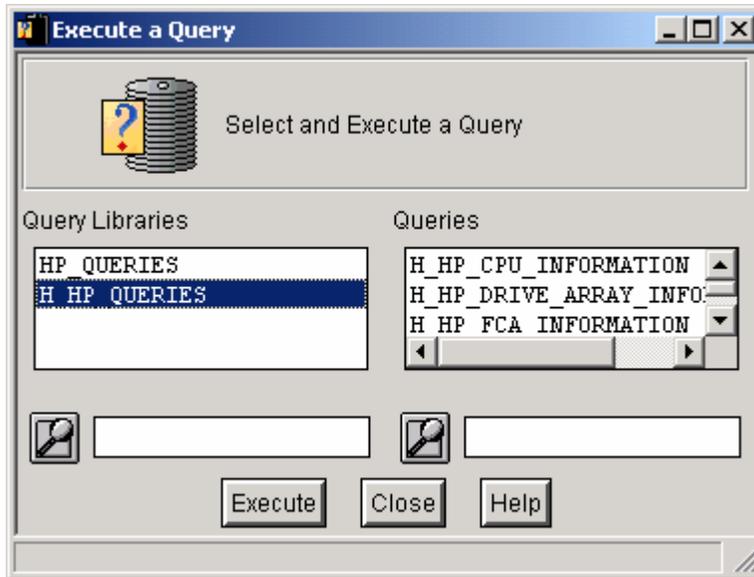
- Select **HP_QUERIES** from the Query Libraries list, and select **HP CPU INFORMATION** from the Queries list.
- Click the **Execute** command button to run the query. Query results containing HP CPU data for the chosen target system display.
- Click the **Close** button to close the query results window.

Figure 49 Query results



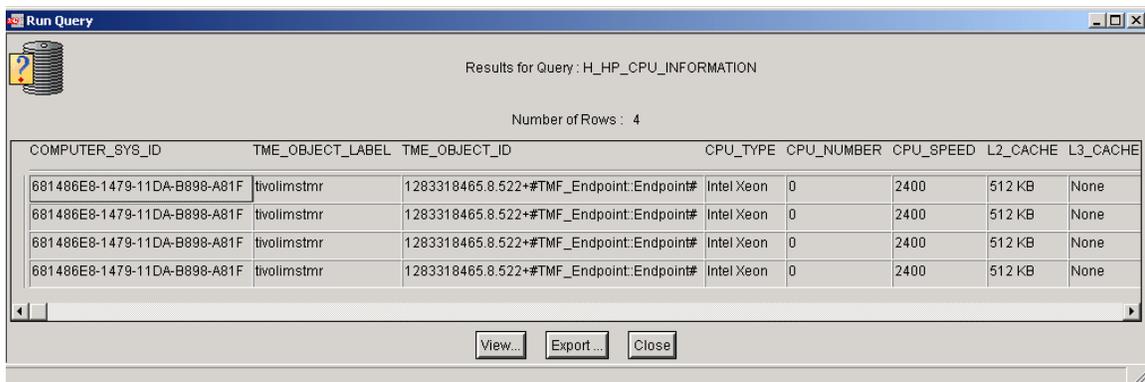
6. Selecting **H_HP_QUERIES** from the Query Libraries list for the same CPU query selection displays historical information for current and past inventory collections. HP CPU data from the historical tables display.

Figure 50 Execute a Query window for H_HP_QUERIES



7. Click the **Close** button to close the query results window.

Figure 51 Query results window for H_HP_CPU_INFORMATION



6 Technical support

Before you contact HP

Be sure to have the following information available before you call HP:

- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

If you are having problems installing or configuring the HP Insight Integration for Tivoli, HP Customer Support can offer further assistance. Before calling HP Customer Support:

- Review the prerequisites and installation steps listed in the chapters “Product overview” and “Installing the HP Insight Integration with the TEC.”
- See the “Troubleshooting” section or review the FAQ information on the HP website at <http://www.hp.com/servers/integration>.
- If you need to contact HP, provide the following details to help resolve your problem quickly and accurately:
 - Details of the physical Tivoli environment.
 - Any error information (Save an output file or screen shot).
 - Copies of the following output files:
 - List of installed Tivoli applications, revisions numbers, and patches (See the `wlsinst -ah` command detailed in the “Obtaining configuration information” section in this chapter.)
 - Installation log file IM2_PLUS.LOG
 - Output from any other diagnostic or informational program (See the “Advanced troubleshooting and debugging” section in Appendix A)

HP contact information

For the name of the nearest HP authorized reseller:

- In the United States, see http://www.hp.com/service_locator.
- In Canada, see <http://www.hp.com>.
- In other locations, see the HP website (<http://www.hp.com>).

For HP technical support:

- In North America:
 - Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored.
 - If you have purchased a Care Pack (service upgrade), call 1-800-633-3600. For more information about Care Packs, see the HP website (<http://www.hp.com>).
- Outside North America, call the nearest HP Technical Support Phone Center. For telephone numbers for worldwide Technical Support Centers, see the HP website (<http://www.hp.com>).

Appendix A: Troubleshooting and known issues

Troubleshooting

The following sections contain information for troubleshooting issues relating to installing and operating the HP Insight Integration for Tivoli.

Verifying the installation status of the Insight Integration

To determine if the HP Insight Integration for Tivoli has installed successfully, look at the installation log file IM2_PLUS.log.

The log file is saved to Tivoli\db*Host_Name*.db\tmp, where *Host_Name* refers to the name of the TMR where the HP Insight Integration for Tivoli has been installed. The file contains detailed information that can be used to confirm the status of the installation.

SNMP must be installed before installing Insight Management Agents

If SNMP Network Services are not available when HP Insight Management Agents are installed, then the SNMP portions of the Insight Management Agents are not implemented. Install SNMP (and configure the community, access attributes, and trap destination), and then reinstall the Insight Management Agents.

The installation of Insight Management Agents does not usually require that the system be rebooted. However, the SNMP services must be stopped and restarted to affect the change. The restart process is automatic on some platforms (for example, Windows 2000 and Windows 2003).

Test SNMP trap operations

To verify that the Tivoli SNMP Adapter is installed and forwarding events correctly to TEC (port 5529 for Windows and port 0 for UNIX), run the following generic trap from any Managed Node:

```
wsnmptrap -h hostname 1.0 1 100
```

In this example, *hostname* is the name or IP address of the system running the Tivoli SNMP Adapter. If this trap is not displayed in the TEC SNMP event group, the problem is not with the Insight Integration module, but with the SNMP Adapter, TEC, or networking components.

Simulating an Insight SNMP trap

This example command can be executed from the TMR or Managed Node to simulate an Insight SNMP trap. It is received and displayed in the SNMP event group of the TEC. Note that there are spaces before "1.3.6..." on the lines following `wsnmptrap`. Replace *hostname* with the IP address of the Managed Node running the configured Tivoli SNMP Adapter.

The following command invokes the SNMP trap Logical Drive Status:OK IM_3008:

```
wsnmptrap -h hostname 1.3.6.1.4.1.232 6 3008\  
1.3.6.1.2.1.1.5 OctetString "hpqSNMPTest"\  
1.3.6.1.4.1.232.11.2.11.1 Integer 0\  
1.3.6.1.4.1.232.3.2.3.1.1.4 Integer 2
```

Advanced troubleshooting and debugging

Installation log

HP Insight Installation for Tivoli creates the IM2_PLUS.log in the Tivoli\db*Host_Name*.db\tmp location, where the *Host_Name* entry references the name of the TMR where the HP Insight Integration for Tivoli has been installed. It contains detailed information that can be used to confirm the status of the installation.

Installation and operational errors

Many of the installation and operational functions of the HP Insight Integration create debug output if the following directories are present:

- Managed Nodes: /tmp/debug (UNIX) and %DBDIR%\tmp\.plusdebug (Windows NT and later)
- Endpoints: /tmp/debug (UNIX) and C:\Program Files\Tivoli\lcf\dat\1\.plusdebug (Windows NT and later)

When debugging is enabled, the following log files are saved. These files are always created during the installation of the Insight Integration but are not saved unless the appropriate debug directories are already created.

- `IM_ALIDB_after.error`
- `IM_ALIDB_after.output`

Obtaining configuration information

The following commands output additional information about the Tivoli environment and might prove useful when trying to troubleshoot any installation or operational problems:

- `wlsinst -ah`—Lists applications and patches installed on all TMRs and Managed Nodes
- `wgetrim tec`—Lists information regarding the tec RDBMS interface module (RIM) object
- `wgetrim inventory`—Lists information regarding the Inventory RIM object
- `wlookup -ar Gateway`—Displays the defined gateways
- `odadmin odlist`—Displays connections from TMR to Managed Nodes
- `odadmin`—Displays directory names

Appendix B: HP SNMP events

The following table lists all of the HP SNMP definitions delivered with the HP Insight Integration for Tivoli, Revision 4.2. The events are organized according to MIB type and object identifier.

CR3500 RAID controller (CPQCR.MIB)

Table 3 CR3500 RAID Controller (CPQCR.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------------|-----------|--|--------------|
| cpqCrController1FailureTrap (1) | IM_1 | This event occurs when the primary controller in the subsystem has failed. | Fatal |
| cpqCrController1InformationTrap (2) | IM_2 | This event occurs when the primary controller in the subsystem has recovered. | Harmless |
| cpqCrController2FailureTrap (3) | IM_3 | This event occurs when the secondary controller in the subsystem has failed. | Fatal |
| cpqCrController2InformationTrap (4) | IM_4 | This event occurs when the secondary controller in the subsystem has recovered. | Harmless |
| cpqCrLogDriveInformationTrap (5) | IM_5 | This event occurs when a RAIDset has become optimal. | Harmless |
| cpqCrLogDriveFailureTrap (6) | IM_6 | This event occurs when a RAIDset has failed. | Fatal |
| cpqCrLogDriveReconstructTrap (7) | IM_7 | This event occurs when a RAIDset has started the reconstruction process. | Warning |
| cpqCrLogDriveReducedTrap (8) | IM_8 | This event occurs when a RAIDset has become degraded. | Critical |
| cpqCrLogDriveInitializingTrap (9) | IM_9 | This event occurs when a RAIDset is initializing. | Warning |
| cpqCrDiskInformationTrap (10) | IM_10 | This event occurs when a disk drive has recovered. | Harmless |
| cpqCrDiskFailureTrap (11) | IM_11 | This event occurs when a disk drive has failed. | Fatal |
| cpqCrDiskReconstructTrap (12) | IM_12 | This event occurs when a disk member of a logical drive has begun the reconstruction process and will be available for use when reconstruction is complete. | Warning |
| cpqCrDiskAvailableTrap (13) | IM_13 | This event occurs when a disk drive has been physically added or set to the Available state. | Harmless |
| cpqCrDiskSpareTrap (14) | IM_14 | This event occurs when a disk drive has been set to Spare status from Available and can be used in a RAID 1, RAID 1+0 or RAID 5 logical disk should a member device fail in one of those RAIDsets. | Harmless |
| cpqCrEMUNormalTrap (15) | IM_15 | This event occurs when the overall condition of the primary enclosure has returned to normal. | Harmless |
| cpqCrEMUFanFailureTrap (16) | IM_16 | This event occurs when one of the cooling fans in the primary enclosure has failed. | Fatal |
| cpqCrEMUFanInformationTrap (17) | IM_17 | This event occurs when the cooling fan in the primary enclosure has recovered. | Harmless |
| cpqCrEMUPowerSupplyFailureTrap (18) | IM_18 | This event occurs when one of the power supplies in the primary enclosure has failed. | Fatal |

Table 3 CR3500 RAID Controller (CPQCR.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-----------|--|--------------|
| cpqCrEMUPowerSupplyInformationTrap (19) | IM_19 | This event occurs when the power supply in the primary enclosure has recovered. | Harmless |
| cpqCrExpCabFanFailureTrap (20) | IM_20 | This event occurs when one of the cooling fans in the expansion cabinet has failed. | Fatal |
| cpqCrExpCabFanInformationTrap (21) | IM_21 | This event occurs when the cooling fan in the expansion cabinet has returned to a normal state. | Harmless |
| cpqCrExpCabPowerSupplyFailureTrap (22) | IM_22 | This event occurs when one of the power supplies in the expansion cabinet has failed. | Fatal |
| cpqCrEMUTemperatureWarningTrap (23) | IM_23 | This event occurs when the temperature in the primary enclosure has triggered a warning condition detected by the controller. | Warning |
| cpqCrEMUTemperatureCriticalTrap (24) | IM_24 | This event occurs when the temperature in the primary enclosure has triggered a critical condition detected by the controller. | Critical |
| cpqCrEMUTemperatureInformationTrap (25) | IM_25 | This event occurs when the temperature in the primary enclosure has returned to normal. | Harmless |
| cpqCrExpCabTemperatureWarningTrap (26) | IM_26 | This event occurs when the temperature in the expansion cabinet has triggered a warning condition detected by the controller. | Warning |
| cpqCrExpCabTemperatureCriticalTrap (27) | IM_27 | This event occurs when the temperature in the expansion cabinet has triggered a critical condition detected by the controller. | Critical |
| cpqCrExpCabTemperatureInformationTrap (28) | IM_28 | This event occurs when the temperature in the expansion cabinet has returned to normal. | Harmless |
| cpqCrExpCabPowerSupplyInformationTrap (29) | IM_29 | This event occurs when the power supply in the expansion cabinet has recovered. | Harmless |
| cpqCrPhyDiskInformationTrap (30) | IM_30 | This event occurs when a disk drive has recovered. | Harmless |
| cpqCrPhyDiskFailureTrap (31) | IM_31 | This event occurs when a disk drive has failed. | Fatal |
| cpqCrPhyDiskReconstructTrap (32) | IM_32 | This event occurs when a disk member of a logical drive has begun the reconstruction process and will be available for use when reconstruction is complete. | Warning |
| cpqCrPhyDiskAvailableTrap (33) | IM_33 | This event occurs when a disk drive has been physically added or set to the Available state. | Harmless |
| cpqCrPhyDiskSpareTrap (34) | IM_34 | This event occurs when a disk drive has been set to Spare status from Available and can be used in a RAID 1, RAID 0+1 or RAID 5 logical disk should a member device fail in one of those RAIDsets. | Harmless |

Common cluster management (SVRCLU.MIB)

Table 4 Common cluster management (SVRCLU.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------|-----------|-------------|--------------|
|--------------|-----------|-------------|--------------|

Table 4 Common cluster management (SVRCLU.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---------------------------|-----------|---|--------------|
| svrCluMemberAdded (100) | IM_100 | This event occurs when a cluster member is added. | Harmless |
| svrCluMemberDeleted (101) | IM_101 | This event occurs when a cluster member is deleted. | Warning |

Standard equipment (CPQSTDEQ.MIB)

Table 5 Standard equipment (CPQSTDEQ.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------------|-----------|--|--------------|
| cpqSeCpuThresholdPassed (1001) | IM_1001 | This event occurs when an internal CPU error threshold has been passed on a particular CPU, causing it to go degraded. | Warning |
| cpqSePCCardThermalDegraded (1002) | IM_1002 | This event occurs when the PC Card Slot Thermal Sensor threshold has been exceeded for safe operations thereby causing degraded operations. | Critical |
| cpqSePCCardThermalFailure (1003) | IM_1003 | This event occurs when the PC Card Slot Thermal Sensor threshold has been exceeded for degraded operations, thereby causing failed operations. | Fatal |
| cpqSePCCardThermalSafe (1004) | IM_1004 | This event occurs when the PC Card Slot Thermal Sensor threshold has been crossed, which restored the thermal status to normal operations. | Harmless |
| cpqSe2CpuThresholdPassed (1005) | IM_1005 | This event occurs when an internal CPU error threshold has been passed on a particular CPU causing it to go degraded. | Warning |
| CpqSeCpuStatusChange (1006) | — | This event occurs when the CPU status changes. | — |
| cpqSeCpuStatus:ok | IM_1006_2 | — | Harmless |
| cpqSeCpuStatus:degraded | IM_1006_3 | — | Critical |
| cpqSeCpuStatus:failed | IM_1006_4 | — | Fatal |
| cpqSeCpuStatus:disabled | IM_1006_5 | — | Warning |
| CpqSeCpuPowerPodstatusChange (1007) | — | This event occurs when the CPU Power Pod status changes. | — |
| cpqSeCpuPowerpodStatus:NotFailed | IM_1007_1 | — | Harmless |
| cpqSeCpuPowerpodStatus:Failed | IM_1007_2 | — | Fatal |
| cpqSeUSBStorageDeviceAttached | IM_1008 | This event occurs when a USB device is inserted. | Harmless |
| cpqSeUSBStorageDeviceRemoved | IM_1009 | This event occurs when a USB device is removed. | Harmless |

Systems information (CPQSINFO.MIB)

Table 6 Systems information (CPQSINFO.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------|-----------|---|--------------|
| cpqSiHoodRemoved (2001) | IM_2001 | This event occurs when hood status has been set to removed. | Critical |

Table 6 Systems information (CPQSINFO.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-----------|--|--------------|
| cpqSiMonitorConditionOK (2002) | IM_2002 | This event occurs when the Fault reporting features have returned to within their normal operating range for the monitor. | Harmless |
| cpqSiMonitorConditionDegraded (2003) | IM_2003 | This event occurs when the monitor's condition is degraded because the internal temperature is exceeding normal operating limits. | Warning |
| cpqSiMonitorConditionFailed (2004) | IM_2004 | This event occurs when the monitor's condition has been set to Failed because an operational feature is exceeding normal operating limits. | Critical |
| cpqSiCorrMemErrStatusDegraded (2005) | IM_2005 | This event occurs when the Correctable memory error count has exceeded the threshold for the memory module. | Warning |
| cpqSiCorrMemErrStatusOk (2006) | IM_2006 | This event occurs when the Correctable memory error count is now below the threshold for the memory module. | Harmless |
| cpqSiMemConfigChange (2007) | IM_2007 | This event occurs when a memory configuration change has occurred. | Harmless |
| cpqSiHotPlugSlotBoardRemoved (2008) | IM_2008 | This event occurs when a Hot Plug Slot Board has been removed from the specified chassis and slot. | Warning |
| cpqSiHotPlugSlotBoardInserted (2009) | IM_2009 | This event occurs when a Hot Plug Slot Board has been inserted into the specified chassis and slot. | Harmless |
| cpqSiHotPlugSlotPowerUpFailed (2010) | — | This event occurs when a Hot Plug Slot Board has failed to power-up in the specified chassis and slot. | — |
| cpqSiHotPlugSlotErrorStatus: noError | IM_2010_1 | — | Harmless |
| cpqSiHotPlugSlotErrorStatus: generalError | IM_2010_2 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: wrongRevision | IM_2010_3 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: wrongBoard | IM_2010_4 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: cannotConfig | IM_2010_5 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: powerFault | IM_2010_6 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: unexpectedPowerLoss | IM_2010_7 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: wrongSpeed | IM_2010_8 | — | Critical |
| cpqSiHotPlugSlotErrorStatus: functionalFailure | IM_2010_9 | — | Critical |
| cpqSiSysBatteryFailure (2011) | IM_2011 | This event occurs when the battery indicated by cpqSiSysBatteryIndex has failed and must be replaced. | Critical |
| cpqSiSysBatteryChargingDegraded (2012) | IM_2012 | This event occurs when Significant battery degradation has occurred and the battery can no longer be fully recharged. | Critical |
| cpqSiSysBatteryCalibrationError (2013) | IM_2013 | This event occurs when Calibration is needed with battery and the battery cannot correctly indicate capacity. | Critical |

Intelligent drive array (CPQIDA.MIB)

Table 7 Intelligent drive array (CPQIDA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|------------|--|--------------|
| cpqDa3LogDrvStatusChange (3008) | — | This event occurs when the status of a drive array logical drive changes. | — |
| CpqDaLogDrvStatus:ok | IM_3008_2 | — | Harmless |
| CpqDaLogDrvStatus:failed | IM_3008_3 | — | Fatal |
| CpqDaLogDrvStatus:recovering | IM_3008_4 | — | Warning |
| CpqDaLogDrvStatus:unconfigured | IM_3008_5 | — | Warning |
| CpqDaLogDrvStatus:readyForRebuild | IM_3008_6 | — | Warning |
| CpqDaLogDrvStatus:rebuilding | IM_3008_7 | — | Warning |
| CpqDaLogDrvStatus:wrongDrive | IM_3008_8 | — | Warning |
| CpqDaLogDrvStatus:badConnect | IM_3008_9 | — | Critical |
| CpqDaLogDrvStatus:overheating | IM_3008_10 | — | Critical |
| CpqDaLogDrvStatus:shutdown | IM_3008_11 | — | Critical |
| CpqDaLogDrvStatus:expanding | IM_3008_12 | — | Warning |
| CpqDaLogDrvStatus:notAvailable | IM_3008_13 | — | Warning |
| CpqDaLogDrvStatus:queuedForExp | IM_3008_14 | — | Warning |
| CpqDaCntrlrActive (3016) | IM_3016 | This event occurs when a backup array controller in a duplexed pair has switched over to the active role. | Warning |
| cpqDa4SpareStatusChange (3017) | — | This event occurs when the status of a drive array spare drive changes. | — |
| CpqDaSpareStatus:invalid | IM_3017_02 | — | Warning |
| CpqDaSpareStatus:failed | IM_3017_03 | — | Fatal |
| CpqDaSpareStatus:inactive | IM_3017_04 | — | Harmless |
| CpqDaSpareStatus:building | IM_3017_05 | — | Warning |
| CpqDaSpareStatus:active | IM_3017_06 | — | Warning |
| cpqDaTapeLibraryDoorStatusChange (3021) | — | This event occurs when the door status of a tape library changes. | — |
| CpqDaTapeLibraryDoorStatus:notSupported | IM_3021_2 | — | Warning |
| CpqDaTapeLibraryDoorStatus:closed | IM_3021_3 | — | Harmless |
| CpqDaTapeLibraryDoorStatus:open | IM_3021_4 | — | Warning |
| cpqDaTapeDriveCleaningRequired (3023) | IM_3023 | This event occurs when a tape drive that must have a cleaning tape inserted and run. | Critical |
| cpqDaTapeDriveCleanTapeReplace (3024) | IM_3024 | This event occurs when an autoloader tape unit has a cleaning tape that has been fully used and therefore must be replaced with a new cleaning tape. | Fatal |
| cpqDa5AccelStatusChange (3025) | — | This event occurs when the status of an array accelerator cache board changes | — |
| CpqDa5AccelStatus:invalid | IM_3025_2 | — | Warning |
| CpqDa5AccelStatus:enabled | IM_3025_3 | — | Harmless |
| CpqDa5AccelStatus:tmpDisabled | IM_3025_4 | — | Critical |
| CpqDa5AccelStatus:permDisabled | IM_3025_5 | — | Critical |

Table 7 Intelligent drive array (CPQIDA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------------------------------|-----------|--|--------------|
| cpqDa5AccelBadDataTrap (3026) | IM_3026 | This event occurs when an array accelerator cache board has lost battery power. | Critical |
| cpqDa5AccelBatteryFailed (3027) | IM_3027 | This event occurs when a battery associated with the array accelerator cache board has failed. | Fatal |
| cpqDa5CntlrStatusChange (3028) | — | This event occurs when the status of a drive array controller changes. | — |
| CpqDaCntlrBoardStatus:ok | IM_3028_2 | — | Harmless |
| CpqDaCntlrBoardStatus:generalFailure | IM_3028_3 | — | Fatal |
| CpqDaCntlrBoardStatus:cableProblem | IM_3028_4 | — | Critical |
| CpqDaCntlrBoardStatus:poweredOff | IM_3028_5 | — | Critical |
| cpqDa5PhyDrvStatusChange (3029) | — | This event occurs when the status of a drive array physical drive changes. | — |
| CpqDaPhyDrvStatus:ok | IM_3029_2 | — | Harmless |
| CpqDaPhyDrvStatus:failed | IM_3029_3 | — | Fatal |
| CpqDaPhyDrvStatus:predictiveFailure | IM_3029_4 | — | Critical |
| cpqDa5PhyDrvThreshPassedTrap (3030) | IM_3030 | This event occurs when a factory threshold associated with one of the physical drive objects on a drive array has been exceeded. | Critical |
| cpqDa2TapeLibraryStatusChange (3031) | — | This event occurs when the status of a tape library changes. | — |
| CpqDaTapeLibraryStatus:ok | IM_3031_2 | — | Harmless |
| CpqDaTapeLibraryStatus:degraded | IM_3031_3 | — | Critical |
| CpqDaTapeLibraryStatus:failed | IM_3031_4 | — | Fatal |
| CpqDaTapeLibraryStatus:offline | IM_3031_5 | — | Warning |
| cpqDa2TapeDriveStatusChange (3032) | — | This event occurs when the status of a tape drive changes. | — |
| CpqDaTapeDrvStatus:ok | IM_3032_2 | — | Harmless |
| CpqDaTapeDrvStatus:degraded | IM_3032_3 | — | Critical |
| CpqDaTapeDrvStatus:failed | IM_3032_4 | — | Fatal |
| CpqDaTapeDrvStatus:offline | IM_3032_5 | — | Critical |
| CpqDaTapeDrvStatus:missingWasOk | IM_3032_6 | — | Warning |
| CpqDaTapeDrvStatus:missingWasOffline | IM_3032_7 | — | Warning |
| cpqDa6CntlrStatusChange (3033) | — | This event occurs when the status of a drive array controller changes. | — |
| CpqDaCntlrBoardStatus:ok | IM_3033_2 | — | Harmless |
| CpqDaCntlrBoardStatus:generalFailure | IM_3033_3 | — | Fatal |
| CpqDaCntlrBoardStatus:cableProblem | IM_3033_4 | — | Critical |
| CpqDaCntlrBoardStatus:poweredOff | IM_3033_5 | — | Critical |
| cpqDa6LogDrvStatusChange (3034) | — | This event occurs when the status of a drive array logical drive changes. | — |
| CpqDaLogDrvStatus:ok | IM_3034_2 | — | Harmless |
| CpqDaLogDrvStatus:failed | IM_3034_3 | — | Fatal |
| CpqDaLogDrvStatus:recovering | IM_3034_4 | — | Warning |

Table 7 Intelligent drive array (CPQIDA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------|--|--------------|
| CpqDaLogDrvStatus:unconfigured | IM_3034_5 | — | Warning |
| CpqDaLogDrvStatus:readyForRebuild | IM_3034_6 | — | Warning |
| CpqDaLogDrvStatus:rebuilding | IM_3034_7 | — | Warning |
| CpqDaLogDrvStatus:wrongDrive | IM_3034_8 | — | Warning |
| CpqDaLogDrvStatus:badConnect | IM_3034_9 | — | Critical |
| CpqDaLogDrvStatus:overheating | IM_3034_10 | — | Critical |
| CpqDaLogDrvStatus:shutdown | IM_3034_11 | — | Critical |
| CpqDaLogDrvStatus:expanding | IM_3034_12 | — | Warning |
| CpqDaLogDrvStatus:notAvailable | IM_3034_13 | — | Warning |
| CpqDaLogDrvStatus:queuedForExp | IM_3034_14 | — | Warning |
| cpqDa6SpareStatusChange (3035) | — | This event occurs when the status of a drive array spare drive changes. | — |
| CpqDaSpareStatus:invalid | IM_3035_2 | — | Warning |
| CpqDaSpareStatus:failed | IM_3035_3 | — | Fatal |
| CpqDaSpareStatus:inactive | IM_3035_4 | — | Harmless |
| CpqDaSpareStatus:building | IM_3035_5 | — | Warning |
| CpqDaSpareStatus:active | IM_3035_6 | — | Warning |
| cpqDa6PhyDrvStatusChange (3036) | — | This event occurs when the status of a drive array physical drive changes. | — |
| CpqDaPhyDrvStatus:ok | IM_3036_2 | — | Harmless |
| CpqDaPhyDrvStatus:failed | IM_3036_3 | — | Fatal |
| CpqDaPhyDrvStatus:predictiveFailure | IM_3036_4 | — | Critical |
| cpqDa6PhyDrvThreshPassedTrap (3037) | IM_3037 | This event occurs when a factory threshold associated with one of the physical drive objects on a drive array has been exceeded. | Critical |
| cpqDa6AccelStatusChange (3038) | — | This event occurs when the status of an array accelerator cache board changes. | — |
| CpqDa5AccelStatus:invalid | IM_3038_2 | — | Warning |
| CpqDa5AccelStatus:enabled | IM_3038_3 | — | Harmless |
| CpqDa5AccelStatus:tmpDisabled | IM_3038_4 | — | Critical |
| CpqDa5AccelStatus:permDisabled | IM_3038_5 | — | Critical |
| cpqDa6AccelBadDataTrap (3039) | IM_3039 | This event occurs when an array accelerator cache board has lost battery power. | Critical |
| cpqDa6AccelBatteryFailed (3040) | IM_3040 | This event occurs when a battery associated with the array accelerator cache board has failed. | Critical |
| cpqDa6TapeLibraryStatusChange (3041) | — | This event occurs when the status of a tape library changes. | — |
| CpqDaTapeLibraryStatus:ok | IM_3041_2 | — | Harmless |
| CpqDaTapeLibraryStatus:degraded | IM_3041_3 | — | Critical |
| CpqDaTapeLibraryStatus:failed | IM_3041_4 | — | Fatal |
| CpqDaTapeLibraryStatus:offline | IM_3041_5 | — | Warning |
| cpqDa6TapeLibraryDoorStatusChange (3042) | — | This event occurs when the door status of a tape library changes. | — |

Table 7 Intelligent drive array (CPQIDA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|--|--------------|
| CpqDaTapeLibraryDoorStatus:notSupported | IM_3042_2 | — | Warning |
| CpqDaTapeLibraryDoorStatus:closed | IM_3042_3 | — | Harmless |
| CpqDaTapeLibraryDoorStatus:open | IM_3042_4 | — | Warning |
| cpqDa6TapeDriveStatusChange (3043) | — | This event occurs when the status of a tape drive changes. | — |
| CpqDaTapeDrvStatus:ok | IM_3043_2 | — | Harmless |
| CpqDaTapeDrvStatus:degraded | IM_3043_3 | — | Critical |
| CpqDaTapeDrvStatus:failed | IM_3043_4 | — | Fatal |
| CpqDaTapeDrvStatus:offline | IM_3043_5 | — | Critical |
| CpqDaTapeDrvStatus:missingWasOk | IM_3043_6 | — | Warning |
| CpqDaTapeDrvStatus:missingWasOffline | IM_3043_7 | — | Warning |
| cpqDa6TapeDriveCleaningRequired (3044) | IM_3044 | This event occurs when a tape drive must have a cleaning tape inserted and run. | Critical |
| cpqDa6TapeDriveCleanTapeReplace (3045) | IM_3045 | This event occurs when an autoloader tape unit has a cleaning tape that has been fully used and therefore must be replaced with a new cleaning tape. | Fatal |
| cpqDa7PhyDrvStatusChange (3046) | — | This event occurs when the status of a drive array physical drive changes. | — |
| CpqDaPhyDrvStatus:ok | IM_3046_2 | — | Harmless |
| CpqDaPhyDrvStatus:failed | IM_3046_3 | — | Fatal |
| CpqDaPhyDrvStatus:predictiveFailure | IM_3046_4 | — | Critical |
| cpqDa7SpareStatusChange (3047) | — | This event occurs when the status of a drive array spare drive changes. | — |
| CpqDaSpareStatus:invalid | IM_3047_2 | — | Warning |
| CpqDaSpareStatus:failed | IM_3047_3 | — | Fatal |
| CpqDaSpareStatus:inactive | IM_3047_4 | — | Harmless |
| CpqDaSpareStatus:building | IM_3047_5 | — | Warning |
| CpqDaSpareStatus:active | IM_3047_6 | — | Warning |

SCSI device information (CPQSCSI.MIB)

Table 8 SCSI device information (CPQSCSI.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---------------------------------------|-----------|--|--------------|
| cpqScsi3CntlrStatusChange (5005) | — | This event occurs when the status of a SCSI controller changes. | — |
| CpqScsiCntlrStatus:ok | IM_5005_2 | — | Harmless |
| CpqScsiCntlrStatus:failed | IM_5005_3 | — | Fatal |
| cpqTape3PhyDrvCleaningRequired (5008) | IM_5008 | This event occurs when a tape drive must have a cleaning tape inserted and run. | Critical |
| cpqTape3PhyDrvCleanTapeReplace (5009) | IM_5009 | This event occurs when an autoloader tape unit has a cleaning tape that has been fully used and therefore must be replaced with a new cleaning tape. | Critical |

Table 8 SCSI device information (CPQSCSI.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|------------|---|--------------|
| cpqTape3LibraryDoorOpen (5013) | IM_5013 | This event occurs when the door on an autoloader is open and therefore the unit is not operational. | Critical |
| cpqTape3LibraryDoorClosed (5014) | IM_5014 | This event occurs when the door on an autoloader has closed. | Harmless |
| cpqScsiCdLibraryStatusChange (5015) | — | This event occurs when the status of a CD library device changes. | — |
| CpqCdLibraryStatus:ok | IM_5015_2 | — | Harmless |
| CpqCdLibraryStatus:failed | IM_5015_3 | — | Critical |
| CpqCdLibraryStatus:offline | IM_5015_4 | — | Harmless |
| cpqTapeLibraryStatusChange (5018) | — | This event occurs when the status of a tape library changes. | — |
| CpqTapeLibraryState:ok | IM_5018_2 | — | Harmless |
| CpqTapeLibraryState:degraded | IM_5018_3 | — | Warning |
| CpqTapeLibraryState:failed | IM_5018_4 | — | Fatal |
| CpqTapeLibraryState:offline | IM_5018_5 | — | Critical |
| cpqTape5PhyDrvStatusChange (5019) | — | This event occurs when the status of a tape drive changes. | — |
| CpqTapePhyDrvStatus:ok | IM_5019_2 | — | Harmless |
| CpqTapePhyDrvStatus:failed | IM_5019_4 | — | Fatal |
| CpqTapePhyDrvStatus:offline | IM_5019_5 | — | Warning |
| CpqTapePhyDrvStatus:missingWasOk | IM_5019_6 | — | Warning |
| CpqTapePhyDrvStatus:missingWasFailed | IM_5019_7 | — | Critical |
| CpqTapePhyDrvStatus:missingWasOffline | IM_5019_8 | — | Warning |
| cpqScsi5PhyDrvStatusChange (5020) | — | This event occurs when the status of a SCSI physical drive changes. | — |
| CpqScsiPhyDrvStatus:ok | IM_5020_2 | — | Harmless |
| CpqScsiPhyDrvStatus:failed | IM_5020_3 | — | Fatal |
| CpqScsiPhyDrvStatus:notConfigured | IM_5020_4 | — | Warning |
| CpqScsiPhyDrvStatus:badCable | IM_5020_5 | — | Warning |
| CpqScsiPhyDrvStatus:missingWasOk | IM_5020_6 | — | Warning |
| CpqScsiPhyDrvStatus:missingWasFailed | IM_5020_7 | — | Critical |
| CpqScsiPhyDrvStatus:predictiveFailure | IM_5020_8 | — | Warning |
| CpqScsiPhyDrvStatus:missingWas PredictiveFailure | IM_5020_9 | — | Warning |
| CpqScsiPhyDrvStatus:offline | IM_5020_10 | — | Warning |
| CpqScsiPhyDrvStatus:missingwasOffline | IM_5020_11 | — | Warning |
| CpqScsiPhyDrvStatus:hardError | IM_5020_12 | — | Critical |
| cpqScsi3LogDrvStatusChange (5021) | — | This event occurs when the status of a SCSI logical drive changes. | — |
| cpqScsiLogDrvStatus:ok | IM_5021_2 | — | Harmless |
| cpqScsiLogDrvStatus:failed | IM_5021_3 | — | Fatal |
| cpqScsiLogDrvStatus:unconfigured | IM_5021_4 | — | Warning |
| cpqScsiLogDrvStatus:recovering | IM_5021_5 | — | Warning |

Table 8 SCSI device information (CPQSCSI.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------|--|--------------|
| cpqScsiLogDrvStatus: readyForRebuild | IM_5021_6 | — | Warning |
| cpqScsiLogDrvStatus: rebuilding | IM_5021_7 | — | Warning |
| cpqScsiLogDrvStatus: wrongDrive | IM_5021_8 | — | Warning |
| cpqScsiLogDrvStatus: badConnect | IM_5021_9 | — | Critical |
| cpqScsiLogDrvStatus: degraded | IM_5021_10 | — | Warning |
| cpqScsiLogDrvStatus: disabled | IM_5021_11 | — | Critical |
| cpqSasPhyDrvStatusChange (5022) | | This event occurs when the status of a SAS or SATA physical drive changes. | |
| CpqSasPhyDrvStatus:ok | IM_5022_2 | — | Harmless |
| CpqSasPhyDrvStatus:predictiveFailure | IM_5022_3 | — | Warning |
| CpqSasPhyDrvStatus:offline | IM_5022_4 | — | Warning |
| CpqSasPhyDrvStatus:failed | IM_5022_5 | — | Fatal |
| CpqSasPhyDrvStatus:missingWasOk | IM_5022_6 | — | Warning |
| CpqSasPhyDrvStatus: missingWas PredictiveFailure | IM_5022_7 | — | Warning |
| CpqSasPhyDrvStatus: missingWasOffline | IM_5022_8 | — | Warning |
| CpqSasPhyDrvStatus:missingWasFailed | IM_5022_9 | — | Critical |
| cpqSasLogDrvStatusChange (5023) | — | This event occurs when the status of a SAS or SATA logical drive changes. | — |
| CpqSasLogDrvStatus:ok | IM_5023_2 | — | Harmless |
| CpqSasLogDrvStatus:degraded | IM_5023_3 | — | Warning |
| CpqSasLogDrvStatus:rebuilding | IM_5023_4 | — | Warning |
| CpqSasLogDrvStatus:failed | IM_5023_5 | — | Fatal |
| CpqSas2TapeDrvStatusChange (5025) | — | This event occurs when the status of a SAS tape drive changes. | — |
| cpqSasTapeDrvStatus: ok | IM_5025_2 | — | Harmless |
| cpqSasTapeDrvStatus: offline | IM_5025_3 | — | Fatal |

Server health features (CPQHLTH.MIB)

Table 9 Server health features (CPQHLTH.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqHe3CorrectableMemoryLogDisabled (6016) | — | This event occurs when the frequency of correctable memory errors is so high that the error tracking logic has been temporarily disabled. | — |
| cpqHeCorrMemLogStatus:notSupported | IM_6016_2 | — | Warning |
| cpqHeCorrMemLogStatus:disabled | IM_6016_3 | — | Critical |
| cpqHeCorrMemLogStatus:enabled | IM_6016_4 | — | Harmless |
| cpqHe3ThermalTempFailed (6017) | IM_6017 | This event occurs when the temperature status has been set to failed. | Fatal |
| cpqHe3ThermalTempDegraded (6018) | — | This event occurs when the server's temperature is outside of the normal operating range. | — |

Table 9 Server health features (CPQHLTH.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-----------|--|--------------|
| cpqHeThermalDegradedAction:continue | IM_6018_2 | — | Critical |
| cpqHeThermalDegradedAction:shutdown | IM_6018_3 | — | Critical |
| cpqHe3ThermalTempOk (6019) | IM_6019 | This event occurs when the server's temperature has returned to the normal operating range. | Harmless |
| cpqHe3ThermalSystemFanFailed (6020) | — | This event occurs when a required system fan is not operating normally. | — |
| cpqHeThermalDegradedAction:continue | IM_6020_2 | — | Critical |
| cpqHeThermalDegradedAction:shutdown | IM_6020_3 | — | Critical |
| cpqHe3ThermalSystemFanDegraded (6021) | IM_6021 | This event occurs when an optional system fan is not operating normally. | Critical |
| cpqHe3ThermalSystemFanOk (6022) | IM_6022 | This event occurs when any of the previously non-operational system fans have returned to normal operation. | Harmless |
| cpqHe3ThermalCpuFanFailed (6023) | IM_6023 | This event occurs when a processor fan is not operating normally. | Fatal |
| cpqHe3ThermalCpuFanOk (6024) | IM_6024 | This event occurs when any of the previously non-operational processor fans have returned to normal operation. | Harmless |
| cpqHe3AsrConfirmation (6025) | IM_6025 | This event occurs when the server has previously been shutdown by the Automatic Server Recovery (ASR) feature and has just become operational again. | Warning |
| cpqHe3ThermalConfirmation (6026) | IM_6026 | This event occurs when the server has previously been shutdown because a thermal anomaly on the server and has just become operational again. | Warning |
| cpqHe3PostError (6027) | IM_6027 | This event occurs when Power On Self-Test (POST) errors occurred during the server restart process. | Warning |
| cpqHe3FltTolPwrSupplyDegraded (6028) | IM_6028 | This event occurs when the fault tolerant power supply subsystem condition has been set to degraded. | Critical |
| cpqHe3CorrMemReplaceMemModule (6029) | IM_6029 | This event occurs when a correctable memory log entry indicates a memory module must be replaced. | Warning |
| cpqHe3FltTolPowerRedundancyLost (6032) | IM_6032 | This event occurs when the fault tolerant power supplies have lost redundancy for the specified chassis. | Critical |
| cpqHe3FltTolPowerSupplyInserted (6033) | IM_6033 | This event occurs when a fault tolerant power supply has been inserted into the specified chassis and bay location. | Harmless |
| cpqHe3FltTolPowerSupplyRemoved (6034) | IM_6034 | This event occurs when a fault tolerant power supply has been removed from the specified chassis and bay location. | Warning |
| cpqHe3FltTolFanDegraded (6035) | IM_6035 | This event occurs when the fault tolerant fan condition has been set to degraded for the specified chassis and fan. | Critical |
| cpqHe3FltTolFanFailed (6036) | IM_6036 | This event occurs when the fault tolerant fan condition has been set to failed for the specified chassis and fan. | Critical |

Table 9 Server health features (CPQHLTH.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqHe3FltTolFanRedundancyLost (6037) | IM_6037 | This event occurs when the fault tolerant fans have lost redundancy for the specified chassis. | Critical |
| cpqHe3FltTolFanInserted (6038) | IM_6038 | This event occurs when a fault tolerant fan has been inserted into the specified chassis and fan location. | Harmless |
| cpqHe3FltTolFanRemoved (6039) | IM_6039 | This event occurs when a fault tolerant fan has been removed from the specified chassis and fan location. | Critical |
| cpqHe3TemperatureFailed (6040) | IM_6040 | This event occurs when the temperature status has been set to failed in the specified chassis and location. | Fatal |
| cpqHe3TemperatureDegraded (6041) | — | This event occurs when the temperature status has been set to degraded in the specified chassis and location. | — |
| cpqHeThermalDegradedAction:continue | IM_6041_2 | — | Critical |
| cpqHeThermalDegradedAction:shutdown | IM_6041_3 | — | Critical |
| cpqHe3TemperatureOk (6042) | IM_6042 | This event occurs when the temperature status has been set to ok in the specified chassis and location. | Harmless |
| cpqHe3PowerConverterDegraded (6043) | IM_6043 | This event occurs when the DC-DC power converter condition has been set to degraded for the specified chassis, slot and socket. | Critical |
| cpqHe3PowerConverterFailed (6044) | IM_6044 | This event occurs when the DC-DC power converter condition has been set to failed for the specified chassis, slot and socket. | Fatal |
| cpqHe3PowerConverterRedundancyLost (6045) | IM_6045 | This event occurs when the DC-DC power converters have lost redundancy for the specified chassis. | Critical |
| cpqHe3CacheAccelParityError (6046) | IM_6046 | This event occurs when a cache accelerator parity error indicates a cache module must be replaced. | Critical |
| cpqHeResilientMemOnlineSpareEngaged (6047) | IM_6047 | This event occurs when the Advanced Memory Protection subsystem has detected a memory fault and online spare memory has been activated. | Critical |
| cpqHe4FltTolPowerSupplyOk (6048) | IM_6048 | This event occurs when the fault tolerant power supply condition has returned to the OK state for the specified chassis and bay location. | Harmless |
| cpqHe4FltTolPowerSupplyDegraded (6049) | IM_6049 | This event occurs when the fault tolerant power supply condition has been set to degraded for the specified chassis and bay location. | Critical |
| cpqHe4FltTolPowerSupplyFailed (6050) | IM_6050 | This event occurs when the fault tolerant power supply condition has been set to failed for the specified chassis and bay location. | Critical |
| cpqHeResilientMemMirroredMemoryEngaged (6051) | IM_6051 | This event occurs when the Advanced Memory Protection subsystem has detected a memory fault and Mirrored memory has been activated. | Critical |

Table 9 Server health features (CPQHLTH.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqHeResilientAdvancedECCMemoryEngaged (6052) | IM_6052 | This event occurs when the Advanced Memory Protection subsystem has detected a memory fault and Advanced ECC has been activated. | Critical |
| cpqHeResilientMemXorMemoryEngaged (6053) | IM_6053 | This event occurs when the Advanced Memory Protection subsystem has detected a memory fault and XOR engine memory has been activated. | Critical |
| cpqHe3FltTolPowerRedundancyRestored (6054) | IM_6054 | This event occurs when the fault tolerant power Supplies have returned to a redundant state for the specified chassis. | Harmless |
| cpqHe3FltTolFanRedundancyRestored (6055) | IM_6055 | This event occurs when the fault tolerant fans have returned to a redundant state for the specified chassis. | Harmless |
| cpqHe4CorrMemReplaceMemModule (6056) | IM_6056 | This event occurs when the correctable memory errors have been corrected, but the memory module should be replaced. | Critical |
| cpqHeResMemBoardRemoved (6057) | IM_6057 | This event occurs when an Advanced Memory Protection subsystem board or cartridge has been removed from the system. | Harmless |
| cpqHeResMemBoardInserted (6058) | IM_6058 | This event occurs when an Advanced Memory Protection subsystem board or cartridge has been inserted into the system. | Harmless |
| cpqHeResMemBoardBusError (6059) | IM_6059 | This event occurs when an Advanced Memory Protection subsystem board or cartridge bus error has been detected. | Fatal |
| cpqHeEventOccurred (6060) | IM_6060 | This event occurs when an event has occurred. | Harmless |
| CpqHeManagementProcInReset (6061) | IM_6061 | This event occurs when the management processor is currently being reset. | Warning |
| CpqHeManagementProcReady (6062) | IM_6062 | This event occurs when the management processor has successfully reset and is now available again. | Harmless |
| CpqHeManagementProcFailedReset (6063) | IM_6063 | This event occurs when the management processor was not successfully reset and is not operational. | Fatal |

Storage systems information (CPQSTSYS.MIB)

Table 10 Storage systems information (CPQSTSYS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|------------------------------|-----------|---|--------------|
| cpqSs3FanStatusChange (8008) | — | This event occurs when the fan status of a storage system changes. | — |
| CpqSsBoxFanStatus:ok | IM_8008_2 | — | Harmless |
| CpqSsBoxFanStatus:failed | IM_8008_3 | — | Critical |
| CpqSsBoxFanStatus:noFan | IM_8008_4 | — | Warning |
| CpqSsBoxFanStatus:degraded | IM_8008_5 | — | Critical |
| cpqSs3TempFailed (8009) | IM_8009 | This event occurs when the temperature status has been set to failed. | Fatal |

Table 10 Storage systems information (CPQSTS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqSs3TempDegraded (8010) | IM_8010 | This event occurs when the temperature status has been set to degraded. | Critical |
| cpqSs3TempOk (8011) | IM_8011 | This event occurs when the temperature status has been set to OK. | Harmless |
| cpqSs3SidePanelInPlace (8012) | IM_8012 | This event occurs when the storage system side panel is in place. | Harmless |
| cpqSs3SidePanelRemoved (8013) | IM_8013 | This event occurs when the storage system side panel is removed. | Critical |
| cpqSs4PwrSupplyDegraded (8015) | — | This event occurs when a storage system power supply status has been set to degraded. | — |
| CpqSsBoxFltTolPwrSupplyStatus:ok | IM_8015_2 | — | Harmless |
| CpqSsBoxFltTolPwrSupplyStatus:degraded | IM_8015_3 | — | Critical |
| CpqSsBoxFltTolPwrSupplyStatus:failed | IM_8015_4 | — | Fatal |
| CpqSsBoxFltTolPwrSupplyStatus:noFltTolPower | IM_8015_5 | — | Warning |
| cpqSsExPowerSupplyUpsStatusChange (8018) | — | This event occurs when the status of an uninterruptible power supply (UPS) attached to a storage system power supply changes. | — |
| CpqSsPowerSupplyUpsStatus:noUps | IM_8018_2 | — | Warning |
| CpqSsPowerSupplyUpsStatus:ok | IM_8018_3 | — | Harmless |
| CpqSsPowerSupplyUpsStatus:powerFailed | IM_8018_4 | — | Critical |
| CpqSsPowerSupplyUpsStatus:batteryLow | IM_8018_5 | — | Warning |
| cpqSsExTempSensorStatusChange (8019) | — | This event occurs when the status of a storage system temperature sensor changes. | — |
| CpqSsTempSensorStatus:ok | IM_8019_2 | — | Harmless |
| CpqSsTempSensorStatus:degraded | IM_8019_3 | — | Critical |
| CpqSsTempSensorStatus:failed | IM_8019_4 | — | Fatal |
| cpqSsEx2FanStatusChange (8020) | — | This event occurs when the fan module status of a storage system changes. | — |
| CpqSsFanModuleStatus:notInstalled | IM_8020_2 | — | Critical |
| CpqSsFanModuleStatus:ok | IM_8020_3 | — | Harmless |
| CpqSsFanModuleStatus:degraded | IM_8020_4 | — | Critical |
| CpqSsFanModuleStatus:failed | IM_8020_5 | — | Fatal |
| cpqSsEx2PowerSupplyStatusChange (8021) | — | This event occurs when the power supply status of a storage system changes. | — |
| CpqSsPowerSupplyStatus:notInstalled | IM_8021_2 | — | Critical |
| CpqSsPowerSupplyStatus:ok | IM_8021_3 | — | Harmless |
| CpqSsPowerSupplyStatus:failed | IM_8021_4 | — | Fatal |
| CpqSsPowerSupplyStatus:degraded | IM_8021_5 | — | Warning |
| cpqSsExBackplaneFanStatusChange (8022) | — | This event occurs when the fan status of a storage system changes. | — |
| CpqSsBackplaneFanStatus:notInstalled | IM_8022_2 | — | Warning |
| CpqSsBackplaneFanStatus:ok | IM_8022_3 | — | Harmless |
| CpqSsBackplaneFanStatus:degraded | IM_8022_4 | — | Critical |

Table 10 Storage systems information (CPQSTSYS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------|---|--------------|
| CpqSsBackplaneFanStatus:failed | IM_8022_5 | — | Fatal |
| CpqSsBackplaneFanStatus:notSupported | IM_8022_6 | — | Harmless |
| CpqSsBackplaneFanStatus:degraded-Fan 1 Failed | IM_8022_7 | — | Critical |
| CpqSsBackplaneFanStatus:degraded-Fan2Failed | IM_8022_8 | — | Critical |
| cpqSsExBackplaneTempStatusChange (8023) | — | This event occurs when the status of the temperature in a storage system changes. | — |
| CpqSsBackplaneTempStatus:noTemp | IM_8023_2 | — | Warning |
| CpqSsBackplaneTempStatus:ok | IM_8023_3 | — | Harmless |
| CpqSsBackplaneTempStatus:degraded | IM_8023_4 | — | Critical |
| CpqSsBackplaneTempStatus:failed | IM_8023_5 | — | Fatal |
| CpqSsBackplaneTempStatus:notSupported | IM_8023_6 | — | Harmless |
| cpqSsExBackplanePowerSupplyStatusChange (8024) | — | This event occurs when the power supply status of a storage system changes. | — |
| CpqSsBackplaneFtpsStatus:noFltTolPower | IM_8024_2 | — | Warning |
| CpqSsBackplaneFtpsStatus:ok | IM_8024_3 | — | Harmless |
| CpqSsBackplaneFtpsStatus:degraded | IM_8024_4 | — | Critical |
| CpqSsBackplaneFtpsStatus:failed | IM_8024_5 | — | Fatal |
| CpqSsBackplaneFtpsStatus:notSupported | IM_8024_6 | — | Harmless |
| CpqSsBackplaneFtpsStatus:noFltTolPower-Bay 1 Missing | IM_8024_7 | — | Warning |
| CpqSsBackplaneFtpsStatus:noFltTolPower-Bay2Missing | IM_8024_8 | — | Warning |
| cpqSsExRecoveryServerStatusChange (8025) | — | This event occurs when the recovery server option status of a storage system changes. | — |
| CpqSsChassisRsoStatus:notSupported | IM_8025_2 | — | Warning |
| CpqSsChassisRsoStatus:notConfigured | IM_8025_3 | — | Warning |
| CpqSsChassisRsoStatus:disabled | IM_8025_4 | — | Critical |
| CpqSsChassisRsoStatus:daemonDownDisabled | IM_8025_5 | — | Critical |
| CpqSsChassisRsoStatus:ok | IM_8025_6 | — | Harmless |
| CpqSsChassisRsoStatus:daemonDownActive | IM_8025_7 | — | Warning |
| CpqSsChassisRsoStatus:noSecondary | IM_8025_8 | — | Warning |
| CpqSsChassisRsoStatus:daemonDownNoSecondary | IM_8025_9 | — | Critical |
| CpqSsChassisRsoStatus:linkDown | IM_8025_10 | — | Warning |
| CpqSsChassisRsoStatus:daemonDownLinkDown | IM_8025_11 | — | Warning |
| CpqSsChassisRsoStatus:secondaryRunningAuto | IM_8025_12 | — | Warning |
| CpqSsChassisRsoStatus:secondaryRunningUser | IM_8025_13 | — | Critical |
| CpqSsChassisRsoStatus:evTimeoutError | IM_8025_14 | — | Critical |

Table 10 Storage systems information (CPQSTSYS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqSs5FanStatusChange (8026) | — | This event occurs when the fan status of a storage system changes. | — |
| CpqSsBoxFanStatus:ok | IM_8026_2 | — | Harmless |
| CpqSsBoxFanStatus:failed | IM_8026_3 | — | Critical |
| CpqSsBoxFanStatus:noFan | IM_8026_4 | — | Warning |
| CpqSsBoxFanStatus:degraded | IM_8026_5 | — | Critical |
| cpqSs5TempStatusChange (8027) | — | This event occurs when the temperature status of a storage system changes. | — |
| cpqSsBoxTempStatus:ok | IM_8027_2 | — | Harmless |
| cpqSsBoxTempStatus:degraded | IM_8027_3 | — | Critical |
| cpqSsBoxTempStatus:failed | IM_8027_4 | — | Fatal |
| cpqSsBoxTempStatus:noTemp | IM_8027_5 | — | Warning |
| cpqSs5PwrSupplyStatusChange (8028) | — | This event occurs when the power supply status of a storage system changes. | — |
| CpqSsBoxFltTolPwrSupplyStatus:ok | IM_8028_2 | — | Harmless |
| CpqSsBoxFltTolPwrSupplyStatus:degraded | IM_8028_3 | — | Critical |
| CpqSsBoxFltTolPwrSupplyStatus:failed | IM_8028_4 | — | Fatal |
| CpqSsBoxFltTolPwrSupplyStatus:noFltTolPower | IM_8028_5 | — | Warning |
| cpqSs6FanStatusChange (8029) | — | This event occurs when the fan status of a storage system changes. | — |
| CpqSsBoxFanStatus:ok | IM_8029_2 | — | Harmless |
| CpqSsBoxFanStatus:failed | IM_8029_3 | — | Critical |
| CpqSsBoxFanStatus:noFan | IM_8029_4 | — | Warning |
| CpqSsBoxFanStatus:degraded | IM_8029_5 | — | Critical |
| cpqSs6TempStatusChange (8030) | — | This event occurs when the temperature status of a storage system changes. | — |
| cpqSsBoxTempStatus:ok | IM_8030_2 | — | Harmless |
| cpqSsBoxTempStatus:degraded | IM_8030_3 | — | Critical |
| cpqSsBoxTempStatus:failed | IM_8030_4 | — | Fatal |
| cpqSsBoxTempStatus:noTemp | IM_8030_5 | — | Warning |
| cpqSs6PwrSupplyStatusChange (8031) | — | This event occurs when the power supply status of a storage system changes. | — |
| CpqSsBoxFltTolPwrSupplyStatus:ok | IM_8031_2 | — | Harmless |
| CpqSsBoxFltTolPwrSupplyStatus:degraded | IM_8031_3 | — | Critical |
| CpqSsBoxFltTolPwrSupplyStatus:failed | IM_8031_4 | — | Fatal |
| CpqSsBoxFltTolPwrSupplyStatus:noFltTolPower | IM_8031_5 | — | Warning |

Remote Insight board information (CPQSM2.MIB)

Table 11 Remote Insight board information (CPQSM2.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------|-----------|-------------|--------------|
|--------------|-----------|-------------|--------------|

Table 11 Remote Insight board information (CPQSM2.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|--|--------------|
| cpqSm2ServerReset (9001) | IM_9001 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected a server reset. | Warning |
| cpqSm2ServerPowerOutage (9002) | IM_9002 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected server power failure. | Fatal |
| cpqSm2UnauthorizedLoginAttempts (9003) | IM_9003 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected unauthorized login attempts. | Warning |
| cpqSm2BatteryFailed (9004) | IM_9004 | This event occurs when the Remote Insight battery has failed and must be replaced. | Critical |
| cpqSm2SelfTestError (9005) | IM_9005 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected a Remote Insight self test error. | Critical |
| cpqSm2InterfaceError (9006) | IM_9006 | This event occurs when the host OS has detected an error in the Remote Insight/ Integrated Lights-Out interface and the firmware is not responding. | Critical |
| cpqSm2BatteryDisconnected (9007) | IM_9007 | This event occurs when the Remote Insight battery cable has been disconnected. | Critical |
| cpqSm2KeyboardCableDisconnected (9008) | IM_9008 | This event occurs when the Remote Insight keyboard cable has been disconnected. | Critical |
| cpqSm2MouseCableDisconnected (9009) | IM_9009 | This event occurs when the Remote Insight mouse cable has been disconnected. | Critical |
| cpqSm2ExternalPowerCableDisconnected (9010) | IM_9010 | This event occurs when the Remote Insight external power cable has been disconnected. | Critical |
| cpqSm2LogsFull (9011) | IM_9011 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected the logs are full. | Warning |
| cpqSm2SecurityOverrideEngaged (9012) | IM_9012 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected the security override jumper has been toggled to the engaged position. | Warning |
| cpqSm2SecurityOverrideDisengaged (9013) | IM_9013 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected the security override jumper has been toggled to the disengaged position. | Warning |
| cpqSm2ServerFatalError (9014) | IM_9014 | This event occurs when the Remote Insight/ Integrated Lights-Out firmware has detected a server fatal error. | Fatal |

Threshold management (CPQTHRSH.MIB)

Table 12 Threshold management (CPQTHRSH.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-----------------------------------|-----------|--|--------------|
| cpqMeRisingAlarmExtended (10005) | IM_10005 | This event occurs when an alarm entry has crossed its rising threshold. | Fatal |
| cpqMeFallingAlarmExtended (10006) | IM_10006 | This event occurs when an alarm entry has crossed its falling threshold. | Fatal |

Table 12 Threshold management (CPQTHRSRSH.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqMeCriticalRisingAlarmExtended (10007) | IM_10007 | This event occurs when an alarm entry has crossed its Critical rising threshold. | Fatal |
| cpqMeCriticalFallingAlarmExtended (10008) | IM_10008 | This event occurs when an alarm entry has crossed its Critical falling threshold. | Fatal |

Host system information (CPQHOST.MIB)

Table 13 Host system information (CPQHOST.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|--|--------------|
| cpqHo2GenericTrap (11003) | IM_11003 | This is a generic trap. | Critical |
| cpqHo2AppErrorTrap (11004) | IM_11004 | This event occurs when an application has generated an exception. | Critical |
| cpqHoProcessEventTrap (11011) | IM_11011 | This event occurs when a monitored process has either started or stopped running. | Critical |
| cpqHoCriticalSoftwareUpdateTrap (11014) | IM_11014 | This event occurs when the user has to be notified of a critical software update. | Critical |
| CpqHoCrashDumpNotEnabledTrap (11015) | IM_11015 | This event occurs when the user has to be notified that the Crash Dump is not enabled. | Warning |
| CpqHoBootPagingFileTooSmallTrap (11016) | IM_11016 | This event occurs when the boot paging file or the target volume of the memory dump file is too small. | Warning |

Uninterruptible power supply (CPQUPS.MIB)

Table 14 Uninterruptible power supply (CPQUPS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------------|-----------|--|--------------|
| cpqUps2LineFailed (12006) | IM_12006 | This event occurs when the UPS reports that the AC line power has failed. | Critical |
| cpqUps2LineOk (12007) | IM_12007 | This event occurs when the UPS reports that the AC line power has returned. | Harmless |
| cpqUps2Shutdown (12008) | IM_12008 | This event occurs when the UPS software is initiating a graceful server shutdown. | Critical |
| cpqUps2Confirmation (12009) | IM_12009 | This event occurs when this server has previously been shutdown because a power anomaly and has just become operational again. | Harmless |
| cpqUps2BatteryLow (12010) | IM_12010 | This event occurs when the UPS battery is low and the server will soon lose power. | Critical |
| cpqUpsOverload (12011) | IM_12011 | This event occurs when the UPS has entered an overload condition. | Critical |
| cpqUpsPendingBatteryFailure (12012) | IM_12012 | This event occurs when the UPS battery is about to fail. | Critical |
| cpqUpsGenericCritical (12013) | IM_12013 | This is a generic UPS critical alarm. | Critical |
| cpqUpsGenericInfo (12014) | IM_12014 | This is a generic UPS informational alarm. | Harmless |

Recovery server information (CPQRECOV.MIB)

Table 15 Recovery server information (CPQRECOV.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|----------------------------------|-----------|---|--------------|
| cpqRsPartnerFailed (13001) | IM_13001 | This event occurs when the partner server of the Recovery server has failed. | Fatal |
| cpqRsStandbyCableFailure (13002) | IM_13002 | This event occurs when the local serial interconnect is not connected or has failed. | Fatal |
| cpqRsStandbyFailure (13003) | IM_13003 | This event occurs when the standby server has failed or the standby serial interconnect is not connected. | Fatal |
| cpqRsOnlineCableFailure (13004) | IM_13004 | This event occurs when the On-Line Recovery Server serial interconnect has failed. | Critical |
| cpqRsFailoverFailed (13005) | IM_13005 | This event occurs when an attempt to take on the operations of the partner server was attempted and failed. | Fatal |

Manageable IDE drives (CPQIDE.MIB)

Table 16 Manageable IDE drives (CPQIDE.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------|---|--------------|
| cpqIdeDriveDegraded (14001) | IM_14001 | This event occurs when the IDE drive status has been set to degraded. | Critical |
| cpqIdeDriveOk (14002) | IM_14002 | This event occurs when the IDE drive status has been set to ok. | Harmless |
| cpqIdeDriveUltraAtaDegraded (14003) | IM_14003 | This event occurs when an IDE drive detects an excessive number of Ultra ATA data transmission errors between the hard drive and the processor. | Critical |
| cpqIdeAtaDiskStatusChange (14004) | — | This event occurs when the status of an ATA disk drive changes. | — |
| CpqIdeAtaDiskStatus:ok | IM_14004_2 | — | Harmless |
| CpqIdeAtaDiskStatus:smartError | IM_14004_3 | — | Critical |
| CpqIdeAtaDiskStatus:failed | IM_14004_4 | — | Fatal |
| cpqIdeLogicalDriveStatusChange (14005) | — | This event occurs when the status of an IDE logical drive changes. | — |
| CpqIdeLogicalDriveStatus:ok | IM_14005_2 | — | Harmless |
| CpqIdeLogicalDriveStatus:degraded | IM_14005_3 | — | Critical |
| CpqIdeLogicalDriveStatus:rebuilding | IM_14005_4 | — | Warning |
| CpqIdeLogicalDriveStatus:failed | IM_14005_5 | — | Fatal |

Cluster systems information (CPQCLUS.MIB)

Table 17 Cluster systems information (CPQCLUS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------------------------|-----------|---|--------------|
| cpqClusterNodeDegraded (15003) | IM_15003 | This event occurs when the condition of a node in the cluster becomes degraded. | Critical |

Table 17 Cluster systems information (CPQCLUS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|------------------------------------|-----------|---|--------------|
| cpqClusterNodeFailed (15004) | IM_15004 | This event occurs when the condition of a node in the cluster becomes failed. | Fatal |
| cpqClusterResourceDegraded (15005) | IM_15005 | This event occurs when the condition of a cluster resource becomes degraded. | Critical |
| cpqClusterResourceFailed (15006) | IM_15006 | This event occurs when the condition of a cluster resource becomes failed. | Fatal |
| cpqClusterNetworkDegraded (15007) | IM_15007 | This event occurs when the condition of a cluster network becomes degraded. | Critical |
| cpqClusterNetworkFailed (15008) | IM_15008 | This event occurs when the condition of a cluster network becomes failed. | Fatal |

Fibre Channel Array information (CPQFCA.MIB)

Table 18 Fibre Channel Array information (CPQFCA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---------------------------------------|-------------|---|--------------|
| cpqFcaLogDrvStatusChange(16001) | — | This event occurs when the status of an external array logical drive changes. | — |
| CpqFcaLogDrvStatus:ok | IM_16001_02 | | Harmless |
| CpqFcaLogDrvStatus:failed | IM_16001_03 | — | Fatal |
| CpqFcaLogDrvStatus:unconfigured | IM_16001_04 | — | Warning |
| CpqFcaLogDrvStatus:recovering | IM_16001_05 | — | Warning |
| CpqFcaLogDrvStatus:readyForRebuild | IM_16001_06 | — | Warning |
| CpqFcaLogDrvStatus:rebuilding | IM_16001_07 | — | Warning |
| CpqFcaLogDrvStatus:wrongDrive | IM_16001_08 | — | Critical |
| CpqFcaLogDrvStatus:badConnect | IM_16001_09 | — | Critical |
| CpqFcaLogDrvStatus:overheating | IM_16001_10 | — | Critical |
| CpqFcaLogDrvStatus:shutdown | IM_16001_11 | — | Critical |
| CpqFcaLogDrvStatus:expanding | IM_16001_12 | — | Warning |
| CpqFcaLogDrvStatus:notAvailable | IM_16001_13 | — | Warning |
| CpqFcaLogDrvStatus:queuedForExpansion | IM_16001_14 | — | Warning |
| CpqFcaLogDrvStatus:hardError | IM_16001_15 | — | Critical |
| cpqFcaSpareStatusChange (16002) | — | This event occurs when the status of an external array spare drive changes. | — |
| CpqFcaSpareStatusChange:inactive | IM_16002_02 | — | Harmless |
| CpqFcaSpareStatusChange:failed | IM_16002_03 | — | Fatal |
| CpqFcaSpareStatusChange:building | IM_16002_04 | — | Warning |
| CpqFcaSpareStatusChange:active | IM_16002_05 | — | Harmless |
| cpqFcTapeCntlrStatusChange (16008) | — | This event occurs when the status of a Fiber Channel tape controller changes. | — |
| CpqFcTapeCntlrStatus:ok | IM_16008_02 | — | Harmless |
| CpqFcTapeCntlrStatus:offline | IM_16008_03 | — | Critical |
| cpqFcaCntlrActive (16014) | IM_16014 | This event occurs when the backup array controller in a duplexed pair has switched over to the active role. | Harmless |

Table 18 Fibre Channel Array information (CPQFCA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-------------|--|--------------|
| cpqFca2PhyDrvStatusChange (16016) | — | This event occurs when the status of a physical drive changes. | — |
| CpqFcaPhyDrvStatus:unconfigured | IM_16016_2 | — | Warning |
| CpqFcaPhyDrvStatus:ok | IM_16016_3 | — | Harmless |
| CpqFcaPhyDrvStatus:threshExceeded | IM_16016_4 | — | Critical |
| CpqFcaPhyDrvStatus:predictiveFailure | IM_16016_5 | — | Critical |
| CpqFcaPhyDrvStatus:failed | IM_16016_6 | — | Fatal |
| cpqFca2AccelStatusChange (16017) | — | This event occurs when the status of an array accelerator cache board changes. | — |
| CpqFcaAccelStatus:invalid | IM_16017_2 | — | Warning |
| CpqFcaAccelStatus:enable | IM_16017_3 | — | Harmless |
| CpqFcaAccelStatus:tmpDisabled | IM_16017_4 | — | Warning |
| CpqFcaAccelStatus:permDisabled | IM_16017_5 | — | Critical |
| cpqFca2AccelBadDataTrap (16018) | IM_16018 | This event occurs when an array accelerator cache board has lost battery power. | Critical |
| cpqFca2AccelBatteryFailed (16019) | IM_16019 | This event occurs when a battery associated with the array accelerator cache board has failed. | Critical |
| cpqFca2CntlrStatusChange (16020) | — | This event occurs when the status of an external array controller changes. | — |
| CpqFcaCntlrStatus:ok | IM_16020_2 | — | Harmless |
| CpqFcaCntlrStatus:failed | IM_16020_3 | — | Fatal |
| CpqFcaCntlrStatus:offline | IM_16020_4 | — | Critical |
| CpqFcaCntlrStatus:redundantPathOffline | IM_16020_5 | — | Warning |
| cpqFca2HostCntlrStatusChange (16021) | — | This event occurs when the status of a Fibre Channel host controller changes. | — |
| CpqFcaHostCntlrStatus:ok | IM_16021_2 | — | Harmless |
| CpqFcaHostCntlrStatus:failed | IM_16021_3 | — | Fatal |
| CpqFcaHostCntlrStatus:shutdown | IM_16021_4 | — | Warning |
| CpqFcaHostCntlrStatus:loopDegraded | IM_16021_5 | — | Critical |
| CpqFcaHostCntlrStatus:loopFailed | IM_16021_6 | — | Fatal |
| cpqExtArrayLogDrvStatusChange (16022) | — | This event occurs when the status of an external array logical drive changes. | — |
| CpqFcaLogDrvStatus:ok | IM_16022_2 | — | Harmless |
| CpqFcaLogDrvStatus:failed | IM_16022_3 | — | Fatal |
| CpqFcaLogDrvStatus:unconfigured | IM_16022_4 | — | Warning |
| CpqFcaLogDrvStatus:recovering | IM_16022_5 | — | Warning |
| CpqFcaLogDrvStatus:readyForRebuild | IM_16022_6 | — | Warning |
| CpqFcaLogDrvStatus:rebuilding | IM_16022_7 | — | Warning |
| CpqFcaLogDrvStatus:wrongDrive | IM_16022_8 | — | Critical |
| CpqFcaLogDrvStatus:badConnect | IM_16022_9 | — | Critical |
| CpqFcaLogDrvStatus:overheating | IM_16022_10 | — | Critical |
| CpqFcaLogDrvStatus:shutdown | IM_16022_11 | — | Critical |
| CpqFcaLogDrvStatus:expanding | IM_16022_12 | — | Warning |

Table 18 Fibre Channel Array information (CPQFCA.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-------------|--|--------------|
| CpqFcaLogDrvStatus:notAvailable | IM_16022_13 | — | Warning |
| CpqFcaLogDrvStatus:queuedForExpansion | IM_16022_14 | — | Warning |
| CpqFcaLogDrvStatus:hardError | IM_16022_15 | — | Critical |
| cpqExtTapeDriveStatusChange (16023) | — | This event occurs when the status of an external tape drive changes. | — |
| CpqFcTapeDriveStatus:ok | IM_16023_2 | — | Harmless |
| CpqFcTapeDriveStatus:degraded | IM_16023_3 | — | Critical |
| CpqFcTapeDriveStatus:failed | IM_16023_4 | — | Fatal |
| CpqFcTapeDriveStatus:offline | IM_16023_5 | — | Warning |
| CpqFcTapeDriveStatus:missingWasOk | IM_16023_6 | — | Harmless |
| CpqFcTapeDriveStatus:missingWasOffline | IM_16023_7 | — | Critical |
| cpqExtTapeDriveCleaningRequired (16024) | IM_16024 | This event occurs when a tape drive must have a cleaning tape inserted and run. | Warning |
| cpqExtTapeDriveCleanTapeReplace (16025) | IM_16025 | This event occurs when an autoloader tape unit has a cleaning tape that has been fully used and therefore must be replaced with a new cleaning tape. | Warning |
| cpqExtTapeLibraryStatusChange (16026) | — | This event occurs when the status of an external tape library changes. | — |
| CpqFcTapeLibraryStatus:ok | IM_16026_2 | — | Harmless |
| CpqFcTapeLibraryStatus:degraded | IM_16026_3 | — | Critical |
| CpqFcTapeLibraryStatus:failed | IM_16026_4 | — | Fatal |
| CpqFcTapeLibraryStatus:offline | IM_16026_5 | — | Warning |
| cpqExtTapeLibraryDoorStatusChange (16027) | — | This event occurs when the door status of an external tape library changes. | — |
| cpqFcTapeLibraryDoorStatus:notSupported | IM_16027_2 | — | Warning |
| cpqFcTapeLibraryDoorStatus:closed | IM_16027_3 | — | Harmless |
| cpqFcTapeLibraryDoorStatus:open | IM_16027_4 | — | Harmless |
| cpqFca3HostCntlrStatusChange (16028) | — | This event occurs when the status of a Fibre Channel host controller changes. | — |
| CpqFcaHostCntlrStatus:ok | IM_16028_2 | — | Harmless |
| CpqFcaHostCntlrStatus:failed | IM_16028_3 | — | Fatal |
| CpqFcaHostCntlrStatus:shutdown | IM_16028_4 | — | Warning |
| CpqFcaHostCntlrStatus:loopDegraded | IM_16028_5 | — | Critical |
| CpqFcaHostCntlrStatus:loopFailed | IM_16028_6 | — | Fatal |

Network Interface Card information (CPQNIC.MIB)

Table 19 Network Interface Card information (CPQNIC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------------|-----------|--|--------------|
| cpqNic2ConnectivityRestored (18005) | IM_18005 | This event occurs when the physical adapter in a single adapter configuration returns to the OK condition or at least one physical adapter in a logical adapter group returns to the OK condition. | Harmless |

Table 19 Network Interface Card information (CPQNIC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|--|--------------|
| cpqNic2ConnectivityLost (18006) | IM_18006 | This event occurs when the adapter in a single adapter configuration fails or when the last adapter in a redundant configuration fails. | Fatal |
| cpqNic2RedundancyIncreased (18007) | IM_18007 | This event occurs when a previously failed physical adapter in a connected logical adapter group returns to the OK condition. | Harmless |
| cpqNic2RedundancyReduced (18008) | IM_18008 | This event occurs when a physical adapter in a logical adapter group changes to the Failed condition, but at least one physical adapter remains in the OK condition. | Critical |
| cpqNicVirusLikeActivityDetected (18009) | IM_18009 | This event occurs when the Virus Throttle Filter Driver detects virus-like activity. | Critical |
| cpqNicVirusLikeActivityStopped (18010) | IM_18010 | This event occurs when the Virus Throttle Filter Driver no longer detects virus-like activity. | Harmless |

Operating system management (CPQWINOS.MIB)

Table 20 Operating system management (CPQWINOS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-----------|--|--------------|
| cpqOsCpuTimeDegraded (19001) | IM_19001 | This event occurs when the Processor Time performance property is set to degraded. | Critical |
| cpqOsCpuTimeFailed (19002) | IM_19002 | This event occurs when the Processor Time performance property is set to critical. | Critical |
| cpqOsCacheCopyReadHitsDegraded (19003) | IM_19003 | This event occurs when the Cache CopyReadHits performance property is set to degraded. | Critical |
| cpqOsCacheCopyReadHitsFailed (19004) | IM_19004 | This event occurs when the Cache CopyReadHits performance property is set to critical. | Critical |
| cpqOsPageFileUsageDegraded (19005) | IM_19005 | This event occurs when the PagingFile Usage performance property is set to degraded. | Critical |
| cpqOsPageFileUsageFailed (19006) | IM_19006 | This event occurs when the PagingFile Usage performance property is set to critical. | Critical |
| cpqOsLogicalDiskBusyTimeDegraded (19007) | IM_19007 | This event occurs when the LogicalDisk BusyTime performance property is set to degraded. | Critical |
| cpqOsLogicalDiskBusyTimeFailed (19008) | IM_19008 | This event occurs when the LogicalDisk BusyTime performance property is set to critical. | Critical |

Rack and power management (CPQRPM.MIB)

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------|-----------|-------------|--------------|
|--------------|-----------|-------------|--------------|

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------------|------------------|---|---------------------|
| cpqRPMTrapDeviceConnected (1) | IM_RPM_1 | This event occurs when Device is connected. | Harmless |
| cpqRPMTrapConnectionLost (2) | IM_RPM_2 | This event occurs when Connection is Lost. | Fatal |
| cpqRPMTrapLookupFailed (3) | IM_RPM_3 | This event occurs when CRPM failed to find an IP address for the device hostname. | Fatal |
| cpqRPMTrapConnectionFailed (4) | IM_RPM_4 | This event occurs when CRPM failed to connect to a drive. | Fatal |
| cpqRPMTrapDeviceSettingsChanged (5) | IM_RPM_5 | This event occurs when Device settings have been changed by a user. | Warning |
| cpqRPMTrapCMCTemp1BelowMin(10001) | IM_RPM_1000 1 | This event occurs when a CMC device reports temperature 1 is below minimum threshold. | Critical |
| cpqRPMTrapCMCTemp1AboveWarn(10002) | IM_RPM_1000 2 | This event occurs when a CMC device reports temperature 1 is above warning threshold. | Warning |
| cpqRPMTrapCMCTemp1AboveMax(10003) | IM_RPM_1000 3 | This event occurs when a CMC device reports temperature 1 is above maximum threshold. | Critical |
| cpqRPMTrapCMCTemp1Normal(10004) | IM_RPM_1000 4 | This event occurs when a CMC device reports temperature 1 has returned to normal. | Harmless |
| cpqRPMTrapCMCTemp2BelowMin(10005) | IM_RPM_1000 5 | This event occurs when a CMC device reports temperature 2 is below minimum threshold. | Critical |
| cpqRPMTrapCMCTemp2AboveWarn(10006) | IM_RPM_1000 6 | This event occurs when a CMC device reports temperature 2 is above warning threshold. | Warning |
| cpqRPMTrapCMCTemp2AboveMax(10007) | IM_RPM_1000 7 | This event occurs when a CMC device reports temperature 2 is above maximum threshold. | Critical |
| cpqRPMTrapCMCTemp2Normal(10008) | IM_RPM_1000 8 | This event occurs when a CMC device reports temperature 2 has returned to normal. | Harmless |
| CpqRPMTrapCMCVoltUnder(10011) | IM_RPM_1001 1 | This event occurs when a CMC device reports voltage is below minimum threshold. | Critical |
| CpqRPMTrapCMCVoltOver(10012) | IM_RPM_1001 2 | This event occurs when a CMC device reports voltage is above maximum threshold. | Critical |
| CpqRPMTrapCMCVoltNormal(10013) | IM_RPM_1001 3 | This event occurs when a CMC device reports voltage has returned to normal. | Harmless |
| CpqRPMTrapCMCHmdtUnder(10021) | IM_RPM_1002 1 | This event occurs when a CMC device reports humidity is below minimum threshold. | Critical |
| CpqRPMTrapCMCHmdtOver(10022) | IM_RPM_1002 2 | This event occurs when a CMC device reports humidity is above maximum threshold. | Critical |

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------------|---|---------------------|
| CpqRPMTrapCMCHmdtNormal(10023) | IM_RPM_1002 3 | This event occurs when a CMC device reports humidity has returned to normal. | Harmless |
| cpqRPMTrapCMCSmokeDetected(10031) | IM_RPM_1003 1 | This event occurs when a CMC device reports smoke is detected. | Critical |
| cpqRPMTrapCMCSmokeCleared(10032) | IM_RPM_1003 2 | This event occurs when a CMC device reports smoke is cleared. | Harmless |
| cpqRPMTrapCMCSockDetected(10041) | IM_RPM_1004 1 | This event occurs when a CMC device reports shock is detected. | Critical |
| CpqRPMTrapCMCSockCleared(10042) | IM_RPM_1004 2 | This event occurs when a CMC device reports shock is cleared. | Harmless |
| cpqRPMTrapCMCAux1Alarm(10051) | IM_RPM_1005 1 | This event occurs when a CMC device has entered an alarm condition for auxiliary input 1. | Warning |
| cpqRPMTrapCMCAux1Cleared(10052) | IM_RPM_1005 2 | This event occurs when a CMC device reports auxiliary input 1 alarm is cleared. | Harmless |
| cpqRPMTrapCMCAux2Alarm(10053) | IM_RPM_1005 3 | This event occurs when a CMC device has entered an alarm condition for auxiliary input 2. | Warning |
| cpqRPMTrapCMCAux2Cleared(10054) | IM_RPM_1005 4 | This event occurs when a CMC device reports auxiliary input 2 alarm is cleared. | Harmless |
| cpqRPMTrapCMCInput1Opened(10101) | IM_RPM_1010 1 | This event occurs when a CMC device reports input 1 has been opened. | Warning |
| cpqRPMTrapCMCInput1Closed(10102) | IM_RPM_1010 2 | This event occurs when a CMC device reports input 1 has been closed. | Harmless |
| cpqRPMTrapCMCInput2Opened(10103) | IM_RPM_1010 3 | This event occurs when a CMC device reports input 2 has been opened. | Warning |
| cpqRPMTrapCMCInput2Closed(10104) | IM_RPM_1010 4 | This event occurs when a CMC device reports input 2 has been closed. | Harmless |
| cpqRPMTrapCMCInput3Opened(10105) | IM_RPM_1010 5 | This event occurs when a CMC device reports input 3 has been opened. | Warning |
| cpqRPMTrapCMCInput3Closed(10106) | IM_RPM_1010 6 | This event occurs when a CMC device reports input 3 has been closed. | Harmless |
| cpqRPMTrapCMCInput4Opened(10107) | IM_RPM_1010 7 | This event occurs when a CMC device reports input 4 has been opened. | Warning |
| cpqRPMTrapCMCInput4Closed(10108) | IM_RPM_1010 8 | This event occurs when a CMC device reports input 4 has been closed. | Harmless |
| cpqRPMTrapCMCLockset1Unlocked(10111) | IM_RPM_1011 1 | This event occurs when a CMC device reports lockset 1 has been unlocked. | Harmless |
| cpqRPMTrapCMCLockset1FailedToLock(10112) | IM_RPM_1011 2 | This event occurs when a CMC device reports lockset 1 has failed to lock. | Critical |
| cpqRPMTrapCMCLockset1Error(10113) | IM_RPM_1011 3 | This event occurs when a CMC device reports an error with lockset 1. | Critical |
| cpqRPMTrapCMCLockset1Locked(10114) | IM_RPM_1011 4 | This event occurs when a CMC device reports lockset 1 has been locked. | Harmless |
| cpqRPMTrapCMCLockset2Unlocked(10116) | IM_RPM_1011 6 | This event occurs when a CMC device reports lockset 2 has been unlocked. | Harmless |

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|--------------|---|--------------|
| cpqRPMTrapCMCLockset2FailedToLock(10117) | IM_RPM_10117 | This event occurs when a CMC device reports lockset 2 has failed to lock. | Critical |
| cpqRPMTrapCMCLockset2Error(10118) | IM_RPM_10118 | This event occurs when a CMC device reports an error with lockset 2. | Critical |
| cpqRPMTrapCMCLockset2Locked(10119) | IM_RPM_10119 | This event occurs when a CMC device reports lockset 2 has been locked. | Harmless |
| cpqRPMTrapCMCLockset1Normal(10134) | IM_RPM_10134 | This event occurs when a CMC device reports lockset 1 is normal. | Harmless |
| cpqRPMTrapCMCLockset2Normal(10135) | IM_RPM_10135 | This event occurs when a CMC device reports lockset 2 is normal. | Harmless |
| cpqRPMTrapUPSInputVoltageBelowMin (20001) | IM_20001 | This event occurs when a UPS device is reporting input voltage below minimum threshold. | Critical |
| cpqRPMTrapUPSInputVoltageAboveMax (20002) | IM_20002 | This event occurs when a UPS device is reporting input voltage above maximum threshold. | Critical |
| cpqRPMTrapUPSInputVoltageNormal (20003) | IM_20003 | This event occurs when a UPS device is reporting input voltage is normal. | Harmless |
| cpqRPMTrapUPSOutputVoltageBelowMin (20011) | IM_20011 | This event occurs when a UPS device is reporting output voltage is below minimum threshold. | Warning |
| cpqRPMTrapUPSOutputVoltageAboveMax (20012) | IM_20012 | This event occurs when a UPS device is reporting output voltage above maximum threshold. | Warning |
| cpqRPMTrapUPSOutputOverload (20014) | IM_20014 | This event occurs when a UPS device is reporting an overload condition. | Critical |
| cpqRPMTrapUPSOutputOverloadCleared (20015) | IM_20015 | This event occurs when a UPS device is reporting an overload condition has been cleared. | Harmless |
| cpqRPMTrapUPSBatteryDepleted (20022) | IM_20022 | This event occurs when a UPS device is a depleted battery. | Critical |
| cpqRPMTrapUPSBatteryLevelNormal (20023) | IM_20023 | This event occurs when a UPS device is reporting battery level is normal. | Harmless |
| cpqRPMTrapUPSOnBypass (20032) | IM_20032 | This event occurs when a UPS device is being bypassed. | Warning |
| cpqRPMTrapUPSTemperatureLow (20101) | IM_20101 | This event occurs when a UPS device is reporting temperature below minimum threshold. | Critical |
| cpqRPMTrapUPSTemperatureHigh (20102) | IM_20102 | This event occurs when a UPS device is reporting temperature above maximum threshold. | Critical |
| cpqRPMTrapUPSTemperatureNormal (20103) | IM_20103 | This event occurs when a UPS device is reporting temperature is normal. | Harmless |
| cpqRPMTrapUPSInternalFailure (20111) | IM_20111 | This event occurs when a UPS device is reporting a general UPS failure. | Fatal |
| cpqRPMTrapUPSInternalFailureCleared (20112) | IM_20112 | This event occurs when a UPS device is reporting a general UPS failure has been cleared. | Harmless |
| cpqRPMTrapUPSBatteryFailure (20121) | IM_20121 | This event occurs when a UPS device is reporting a battery failure. | Fatal |

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|------------------|---|---------------------|
| cpqRPMTrapUPSBatteryFailureCleared (20122) | IM_20122 | This event occurs when a UPS device is reporting a battery failure has been cleared. | Harmless |
| cpqRPMTrapUPSDiagnosticTestFailed (20131) | IM_20131 | This event occurs when a UPS device is reporting a diagnostic test failed. | Critical |
| cpqRPMTrapUPSDiagnosticTestSucceeded (20132) | IM_20132 | This event occurs when a UPS device is reporting a diagnostic test succeeded. | Harmless |
| cpqRPMTrapUPSInputUnderOverFreq (20141) | IM_20141 | This event occurs when measured input frequency is outside of either the upper or lower frequency limit specification for normal operation. | Harmless |
| cpqRPMTrapUPSInputUnderOverFreqCleared (20142) | IM_20142 | This event occurs when a UPS device is reporting measured input frequency is normal. | Harmless |
| cppqRPMtrapUPSStartedOnBattery (20151) | IM_20151 | This event occurs when a UPS device has been started while on battery power. AC input power is not present. | Harmless |
| cppqRPMtrapUPSStartedOnBatteryCleared (20152) | IM_20152 | This event occurs when a UPS device is reporting utility power has been restored. | Harmless |
| cpqRPMTrapUPSByypassNotAvailable (20161) | IM_20161 | This event occurs when a UPS device is reporting bypass not available. | Warning |
| cpqRPMTrapUPSByypassNotAvailableCleared (20162) | IM_20162 | This event occurs when a UPS device is reporting bypass not available has been cleared. | Harmless |
| cpqRPMTrapUPSUtilityFail (20171) | IM_20171 | This event occurs when the utility input power is not within predetermined limits. | Critical |
| cpqRPMTrapUPSUtilityFailCleared (20172) | IM_20172 | This event occurs when the utility input power is within predetermined limits. | Harmless |
| cpqRPMTrapUPSUtilityNotPresent (20181) | IM_20181 | This event occurs when the utility input is not present. The detected voltage is zero in this case. | Harmless |
| cpqRPMTrapUPSUtilityNotPresentCleared (20182) | IM_20182 | This event occurs when the utility input is present. | Harmless |
| cpqRPMTrapUPSByypassManualTurnedOn (20191) | IM_20191 | This event occurs when the bypass has been given a manual turn on command. | Warning |
| cpqRPMTrapUPSByypassManualTurnedOff (20192) | IM_20192 | This event occurs when the bypass has been given a manual turn off command. | Harmless |
| cpqRPMTrapUPSSiteWiringFault (20201) | IM_20201 | This event occurs when a UPS device is reporting a fault in input wiring, other than Phase Rotation. | Critical |
| cpqRPMTrapUPSSiteWiringNormal (20202) | IM_20202 | This event occurs when a UPS device is reporting a site wiring fault has been cleared. | Harmless |
| cpqRPMtrapUPSTemperatureOutOfRange (21007) | IM_21007 | This event occurs when a UPS device is reporting temperature is out of range. | Fatal |

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqRPMtrapUPSTemperatureOutOfRangeCleared (21008) | IM_21008 | This event occurs when a UPS device is reporting temperature is normal. | Harmless |
| cpqRPMTrapUPSShutdownPending (21011) | IM_21011 | This event occurs when a UPS device is reporting a shutdown pending condition. | Critical |
| cpqRPMTrapUPSShutdownPendingCleared (21012) | IM_21012 | This event occurs when a UPS device is reporting a shutdown pending condition has been cleared. | Harmless |
| cpqRPMTrapUPSShutdownImminent (21013) | IM_21013 | This event occurs when a UPS device is reporting a shutdown imminent condition. | Fatal |
| cpqRPMTrapUPSShutdownImminentCleared (21014) | IM_21014 | This event occurs when a UPS device is reporting a shutdown imminent condition has been cleared. | Harmless |
| cpqRPMtrapUPSOutputoutofRange (21019) | IM_21019 | This event occurs when a UPS device is reporting output voltage is out of range. | Fatal |
| cpqRPMTrapUPSOutputVoltageNormal (21020) | IM_21020 | This event occurs when a UPS device is reporting output voltage is normal. | Harmless |
| cpqRPMtrapUPSInputOutofRange (21021) | IM_21021 | This event occurs when a UPS device is reporting input voltage is out of range. | Critical |
| cpqRPMtrapUPSInputOutofRangeCleared (21022) | IM_21022 | This event occurs when a UPS device is reporting input voltage is normal. | Harmless |
| cpqRPMTrapUPSLossOfRedundancy (21023) | IM_21023 | This event occurs when a UPS device is reporting a loss of redundancy. | Critical |
| cpqRPMTrapUPSLossOfRedundancyCleared (21024) | IM_21024 | This event occurs when a UPS device is reporting a loss of redundancy cleared or configuration has changed from N+1 to Capacity. | Harmless |
| cpqRPMTrapUPSOnBuck (21029) | IM_21029 | This event occurs when a UPS device is reporting an On Buck condition. | Warning |
| cpqRPMTrapUPSOnBoost (21031) | IM_21031 | This event occurs when a UPS device is reporting an On Boost condition. | Warning |
| cpqRPMTrapUPSManualLoadDumped (21033) | IM_21033 | This event occurs when the UPS has been powered off with user interaction. | Critical |
| cpqRPMTrapUPSManualLoadDumpedCleared (21034) | IM_21034 | This event occurs when a UPS device is reporting UPS output has been restored. | Harmless |
| cpqRPMTrapUPSFanFailure (21035) | IM_21035 | This event occurs when a UPS device is reporting a fan failure has occurred. | Fatal |
| cpqRPMTrapUPSFanFailureCleared (21036) | IM_21036 | This event occurs when a UPS device is reporting a fan failure has been cleared. | Harmless |
| cpqRPMTrapUPSEPOInitiated (21037) | IM_21037 | This event occurs when a UPS device is reporting an Emergency Power Off (EPO) command has been received to shutdown the UPS immediately with out delay. This command may come from a local control panel or from a remote source. | Fatal |

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------------|--|---------------------|
| cpqRPMTrapUPSCheckBreaker (21041) | IM_21041 | This event occurs when a UPS device is reporting an output Breaker or Relay has failed or may be stuck open or closed with this alarm. | Critical |
| cpqRPMTrapUPSCheckBreakerCleared (21042) | IM_21042 | This event occurs when a UPS device is reporting all Breakers are functioning normally. | Harmless |
| cpqRPMTrapUPSCabinetDoorOpen (21045) | IM_21045 | This event occurs when a UPS device is reporting a cover panel has been removed while utility power is present. | Fatal |
| cpqRPMTrapUPSCabinetDoorOpenCleared (21046) | IM_21046 | This event occurs when a UPS device is reporting a cover panel has been replaced. | Harmless |
| cpqRPMtrapUPSByPassOnAuto (21047) | IM_21047 | This event occurs when a UPS device is operating in auto bypass mode. | Critical |
| cpqRPMtrapUPSByPassOnAutoCleared (21048) | IM_21048 | This event occurs when a UPS device is reporting it is no longer on auto bypass. | Harmless |
| cpqRPMTrapUPS BatteriesDisconnected (21053) | IM_21053 | This event occurs when a UPS device is reporting batteries are not connected to the UPS. | Critical |
| cpqRPMTrapUPS BatteriesDisconnectedCleared (21054) | IM_21054 | This event occurs when a UPS device is reporting all UPS batteries have been reconnected. | Harmless |
| cpqRPMTrapUPS BatteryLow (21055) | IM_21055 | This event occurs when a UPS device is reporting low battery. | Fatal |
| cpqRPMTrapUPS BatteryLowCleared (21056) | IM_21056 | This event occurs when a UPS device is reporting low battery has been cleared. | Harmless |
| cpqRPMTrapUPS BatteryDischarged (21057) | IM_21057 | This event occurs when a UPS device is reporting batteries are completely discharged. | Critical |
| cpqRPMTrapUPS BatteryDischargedCleared (21058) | IM_21058 | This event occurs when a UPS device is reporting all UPS batteries have been charged. | Harmless |
| cpqRPMtrapUPSByPassONManual (21059) | IM_21059 | This event occurs when a UPS device is operating in manual bypass mode. | Critical |
| cpqRPMtrapUPSByPassOffManual (21060) | IM_21060 | This event occurs when a UPS device is reporting it is no longer in manual bypass mode. | Harmless |
| cpqRPMTrapUPSOnBattery (21063) | IM_21063 | This event occurs when a UPS device is reporting on battery condition. | Critical |
| cpqRPMTrapUPSOnUtilityPower (21064) | IM_21064 | This event occurs when a UPS device is reporting on utility power condition. | Harmless |
| cpqRPMTrapUPSDCStartOccurred (29998) | IM_29998 | This event occurs when the UPS has been started on battery when AC input power is not present. | Harmless |
| cpqRPMTrapUPSDCStartOccurredCleared (29999) | IM_29999 | This event occurs when the UPS has been started on utility while AC input power is present. | Harmless |

Table 21 Rack and power management (CPQRPM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------------------|-----------|---|--------------|
| CpqRPMTestTrap(50001) | IM_50001 | This event occurs when a trap to test SNMP setup is sent. | Harmless |
| cpqPMTrapCritical (1) | IM_PM_1 | This event occurs when a critical alarm has occurred. | Fatal |
| cpqPMTrapWarning (2) | IM_PM_2 | This event occurs when a warning alarm has occurred. | Warning |
| cpqPMTrapInformation (3) | IM_PM_3 | This event occurs when an information alarm has occurred. | Harmless |
| cpqPMTrapCleared (4) | IM_PM_4 | This event occurs when an alarm has cleared. | Harmless |

Rack enclosure information (CPQRACK.MIB)

Table 22 Rack enclosure information (CPQRACK.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------------------------------|-----------|---|--------------|
| cpqRackNameChanged (22001) | IM_22001 | This event occurs when the rack name has changed. | Harmless |
| cpqRackEnclosureNameChanged (22002) | IM_22002 | This event occurs when the enclosure name has changed. | Harmless |
| cpqRackEnclosureRemoved (22003) | IM_22003 | This event occurs when an enclosure has been removed from the rack. | Harmless |
| cpqRackEnclosureInserted (22004) | IM_22004 | This event occurs when an enclosure has been inserted into the rack. | Harmless |
| cpqRackEnclosureTempFailed (22005) | IM_22005 | This event occurs when the enclosure temperature status has been set to failed. | Fatal |
| cpqRackEnclosureTempDegraded (22006) | IM_22006 | This event occurs when the enclosure temperature status has been set to degraded. | Critical |
| cpqRackEnclosureTempOk (22007) | IM_22007 | This event occurs when the enclosure temperature status has been set to ok. | Harmless |
| cpqRackEnclosureFanFailed (22008) | IM_22008 | This event occurs when the enclosure fan status has been set to failed. | Fatal |
| cpqRackEnclosureFanDegraded (22009) | IM_22009 | This event occurs when the enclosure fan status has been set to degraded. | Critical |
| cpqRackEnclosureFanOk (22010) | IM_22010 | This event occurs when the enclosure fan status has been set to ok. | Harmless |
| cpqRackEnclosureFanRemoved (22011) | IM_22011 | This event occurs when the enclosure fan has been removed. | Warning |
| cpqRackEnclosureFanInserted (22012) | IM_22012 | This event occurs when the enclosure fan has been inserted. | Harmless |
| cpqRackPowerSupplyFailed (22013) | IM_22013 | This event occurs when the power supply status has been set to failed. | Fatal |
| cpqRackPowerSupplyDegraded (22014) | IM_22014 | This event occurs when the power supply status has been set to degraded. | Critical |
| cpqRackPowerSupplyOk (22015) | IM_22015 | This event occurs when the power supply status has been set to ok. | Harmless |
| cpqRackPowerSupplyRemoved (22016) | IM_22016 | This event occurs when the power supply has been removed. | Warning |

Table 22 Rack enclosure information (CPQRACK.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|------------|--|--------------|
| cpqRackPowerSupplyInserted (22017) | IM_22017 | This event occurs when the power supply has been inserted. | Harmless |
| cpqRackPowerSubsystemNotRedundant (22018) | IM_22018 | This event occurs when the rack power subsystem is no longer in a redundant state. | Critical |
| cpqRackPowerSubsystemLineVoltageProblem (22019) | | This event occurs when the rack power supply detected an input line voltage problem. | |
| CpqRackPowerSupplyInputLineStatus:noError | IM_22019_1 | — | Harmless |
| CpqRackPowerSupplyInputLineStatus:lineOverVoltage | IM_22019_2 | — | Critical |
| CpqRackPowerSupplyInputLineStatus:lineUnderVoltage | IM_22019_3 | — | Critical |
| CpqRackPowerSupplyInputLineStatus:lineHit | IM_22019_4 | — | Critical |
| CpqRackPowerSupplyInputLineStatus:brownout | IM_22019_5 | — | Critical |
| CpqRackPowerSupplyInputLineStatus:linePowerLoss | IM_22019_6 | — | Fatal |
| cpqRackPowerSubsystemOverloadCondition (22020) | IM_22020 | This event occurs when the rack power subsystem overload condition. | Critical |
| cpqRackPowerShedAutoShutdown (22021) | IM_22021 | This event occurs when the server blade was shutdown because a lack of power. | Fatal |
| cpqRackServerPowerOnFailedNotRedundant (22022) | IM_22022 | This event occurs when there is not enough power to power on the server blade and maintain redundancy for the other blades in the enclosure. | Critical |
| cpqRackServerPowerOnFailedNotEnoughPower (22023) | IM_22023 | This event occurs when there is not enough power to power on the server blade. | Fatal |
| cpqRackServerPowerOnFailedEnclosureNotFound (22024) | IM_22024 | This event occurs when there is not enough power to power on the server blade (server enclosure microcontroller was not found). | Fatal |
| cpqRackServerPowerOnFailedPowerChassisNotFound (22025) | IM_22025 | This event occurs when there is not enough power to power on the server blade (power enclosure microcontroller was not found). | Fatal |
| cpqRackServerPowerOnManualOverride (22026) | IM_22026 | This event occurs when the server blade was powered on by a manual override. | Critical |
| cpqRackFuseOpen (22027) | IM_22027 | This event occurs when the fuse has been tripped. | Critical |
| cpqRackServerBladeRemoved (22028) | IM_22028 | This event occurs when the server blade has been removed from the enclosure. | Critical |
| cpqRackServerBladeInserted (22029) | IM_22029 | This event occurs when the server blade has been inserted into the enclosure. | Critical |
| cpqRackPowerChassisNotLoadBalanced (22030) | IM_22030 | This event occurs when the power subsystem is out of balance for this power enclosure. | Critical |
| cpqRackPowerChassisDcPowerProblem (22031) | IM_22031 | This event occurs when there is a power subsystem DC power problem for this power enclosure. | Critical |
| cpqRackPowerChassisAcFacilityPowerExceeded (22032) | IM_22032 | This event occurs when the Power subsystem AC facility input power exceeded for this power enclosure. | Critical |

Table 22 Rack enclosure information (CPQRACK.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|-----------|---|--------------|
| cpqRackPowerUnknownPowerConsumption (22033) | IM_22033 | This event occurs when there is an unknown power consumer drawing power. | Critical |
| cpqRackPowerChassisLoadBalancingWireMissing (22034) | IM_22034 | This event occurs when the power subsystem load balancing wire is missing. | Critical |
| cpqRackPowerChassisTooManyPowerChassis (22035) | IM_22035 | This event occurs when the maximum number of power enclosures has been exceeded. | Critical |
| cpqRackPowerChassisConfigError (22036) | IM_22036 | This event occurs when the power subsystem has been improperly configured. | Critical |
| cpqRackEnclosureManagerDegraded (22037) | IM_22037 | This event occurs when the Onboard Administrator status has been set to degraded. | Critical |
| cpqRackEnclosureManagerOk (22038) | IM_22038 | This event occurs when the Onboard Administrator status has been set to OK. | Harmless |
| cpqRackEnclosureManagerRemoved (22039) | IM_22039 | This event occurs when the Onboard Administrator has been removed. | Warning |
| cpqRackEnclosureManagerInserted (22040) | IM_22040 | This event occurs when the Onboard Administrator has been inserted. | Harmless |
| cpqRackManagerPrimaryRole (22041) | IM_22041 | This event occurs when the Onboard Administrator has taken the role of primary. | Critical |
| cpqRackServerBladeEKeyingFailed (22042) | IM_22042 | This event occurs when the server blade e-keying has failed. | Critical |
| cpqRackServerBladeEKeyingOK (22043) | IM_22043 | This event occurs when the server blade e-keying is OK. | Harmless |
| cpqRackNetConnectorRemoved (22044) | IM_22044 | This event occurs when the interconnect has been removed from the enclosure. | Critical |
| cpqRackNetConnectorInserted (22045) | IM_22045 | This event occurs when the interconnect has been inserted into the enclosure. | Critical |
| cpqRackNetConnectorFailed (22046) | IM_22046 | This event occurs when the interconnect status has been set to failed. | Fatal |
| cpqRackNetConnectorDegraded (22047) | IM_22047 | This event occurs when the interconnect status has been set to degraded. | Critical |
| cpqRackNetConnectorOk (22048) | IM_22048 | This event occurs when the interconnect status has been set to OK. | Harmless |

Console management controller (CPQCMC.MIB)

Table 23 Console management controller (CPQCMC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|----------------------------|-------------|---|--------------|
| cpqCmcalarmTemp1 (153001) | — | This event occurs when the temperature at rack sensor 1 is outside the specified threshold. | — |
| CpqCmcStatusTemp1:normal | IM_153001_2 | — | Harmless |
| CpqCmcStatusTemp1:warning | IM_153001_3 | — | Warning |
| CpqCmcStatusTemp1:overMax | IM_153001_4 | — | Critical |
| CpqCmcStatusTemp1:underMin | IM_153001_5 | — | Critical |
| CpqCmcStatusTemp1:noSensor | IM_153001_6 | — | Critical |
| CpqCmcStatusTemp1:error | IM_153001_7 | — | Fatal |

Table 23 Console management controller (CPQCMC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------|-------------|---|--------------|
| cpqCmcalarmTemp2 (153002) | — | This event occurs when the temperature at rack sensor 2 is outside the specified threshold. | — |
| CpqCmcStatusTemp2:normal | IM_153002_2 | — | Harmless |
| CpqCmcStatusTemp2:warning | IM_153002_3 | — | Warning |
| CpqCmcStatusTemp2:overMax | IM_153002_4 | — | Critical |
| CpqCmcStatusTemp2:underMin | IM_153002_5 | — | Critical |
| CpqCmcStatusTemp2:noSensor | IM_153002_6 | — | Critical |
| CpqCmcStatusTemp2:error | IM_153002_7 | — | Fatal |
| cpqCmcalarmFan1 (153003) | — | This event occurs when the state of Fan 1 changes. | — |
| cpqCmcStatusFan1:autoOff | IM_153003_2 | — | Harmless |
| cpqCmcStatusFan1:autoOn | IM_153003_3 | — | Harmless |
| cpqCmcStatusFan1>manualOff | IM_153003_4 | — | Harmless |
| cpqCmcStatusFan1>manualOn | IM_153003_5 | — | Harmless |
| cpqCmcStatusFan1:smokeOff | IM_153003_6 | — | Critical |
| cpqCmcStatusFan1:doorOff | IM_153003_7 | — | Warning |
| cpqCmcStatusFan1:noFan | IM_153003_8 | — | Critical |
| cpqCmcStatusFan1:error | IM_153003_9 | — | Fatal |
| cpqCmcalarmFan2 (153004) | — | This event occurs when the state of Fan 2 changes. | — |
| cpqCmcStatusFan2:autoOff | IM_153004_2 | — | Harmless |
| cpqCmcStatusFan2:autoOn | IM_153004_3 | — | Harmless |
| cpqCmcStatusFan2>manualOff | IM_153004_4 | — | Harmless |
| cpqCmcStatusFan2>manualOn | IM_153004_5 | — | Harmless |
| cpqCmcStatusFan2:smokeOff | IM_153004_6 | — | Critical |
| cpqCmcStatusFan2:doorOff | IM_153004_7 | — | Warning |
| cpqCmcStatusFan2:noFan | IM_153004_8 | — | Critical |
| cpqCmcStatusFan2:error | IM_153004_9 | — | Fatal |
| cpqCmcalarmVoltage (153005) | — | This event occurs when the AC voltage of the rack is outside the specified threshold. | — |
| cpqCmcStatusVoltage:normal | IM_153005_2 | — | Harmless |
| cpqCmcStatusVoltage:overMax | IM_153005_3 | — | Critical |
| cpqCmcStatusVoltage:underMin | IM_153005_4 | — | Critical |
| cpqCmcStatusVoltage:noVoltage | IM_153005_5 | — | Warning |
| cpqCmcalarmHumidity (153006) | — | This event occurs when the humidity of the rack is outside the specified threshold. | — |
| CpqCmcStatusHumidity:normal | IM_153006_2 | — | Harmless |
| CpqCmcStatusHumidity:overMax | IM_153006_3 | — | Critical |
| CpqCmcStatusHumidity:underMin | IM_153006_4 | — | Critical |
| CpqCmcStatusHumidity:noSensor | IM_153006_5 | — | Warning |
| CpqCmcStatusHumidity:error | IM_153006_6 | — | Fatal |

Table 23 Console management controller (CPQCMC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|--------------|--|--------------|
| cpqCmcalarmInput1 (153007) | — | This event occurs when the door or side panel of the rack has been opened (access point #1). | — |
| cpqCmcStatusInput1:closed | IM_153007_2 | — | Harmless |
| cpqCmcStatusInput1:open | IM_153007_3 | — | Warning |
| cpqCmcStatusInput1:noSensor | IM_153007_4 | — | Warning |
| cpqCmcalarmInput2 (153008) | — | This event occurs when the door or side panel of the rack has been opened (access point #2). | — |
| cpqCmcStatusInput2:closed | IM_153008_2 | — | Harmless |
| cpqCmcStatusInput2:open | IM_153008_3 | — | Warning |
| cpqCmcStatusInput2:noSensor | IM_153008_4 | — | Warning |
| cpqCmcalarmInput3 (153009) | — | This event occurs when the door or side panel of the rack has been opened (access point #3). | — |
| cpqCmcStatusInput3:closed | IM_153009_2 | — | Harmless |
| cpqCmcStatusInput3:open | IM_153009_3 | — | Warning |
| cpqCmcStatusInput3:noSensor | IM_153009_4 | — | Warning |
| cpqCmcalarmInput4 (153010) | — | This event occurs when the door or side panel of the rack has been opened (access point #4). | — |
| cpqCmcStatusInput4:closed | IM_153010_2 | — | Harmless |
| cpqCmcStatusInput4:open | IM_153010_3 | — | Warning |
| cpqCmcStatusInput4:noSensor | IM_153010_4 | — | Warning |
| cpqCmcalarmLock1 (153011) | — | This event occurs when there is a rack door lock #1 alarm. | — |
| CpqCmcStatusLock1Lock:locked | IM_153011_2 | — | Harmless |
| CpqCmcStatusLock1Lock:unlockedAuto | IM_153011_3 | — | Warning |
| CpqCmcStatusLock1Lock:unlockedTime | IM_153011_4 | — | Warning |
| CpqCmcStatusLock1Lock:unlockedSmoke | IM_153011_5 | — | Critical |
| CpqCmcStatusLock1Lock:unlockedKey | IM_153011_6 | — | Harmless |
| CpqCmcStatusLock1Lock:unlockedPwrFail | IM_153011_7 | — | Critical |
| CpqCmcStatusLock1Lock:unlockedBattLow | IM_153011_8 | — | Critical |
| CpqCmcStatusLock1Lock:unlockedNetFail | IM_153011_9 | — | Critical |
| CpqCmcStatusLock1Lock:unlockedConnFail | IM_153011_10 | — | Critical |
| CpqCmcStatusLock1Lock:readyToLock | IM_153011_11 | — | Harmless |
| CpqCmcStatusLock1Lock:alarm | IM_153011_12 | — | Warning |
| CpqCmcStatusLock1Lock:configError | IM_153011_13 | — | Warning |
| CpqCmcStatusLock1Lock:notAvail | IM_153011_14 | — | Warning |
| cpqCmcalarmLock2 (153012) | — | This event occurs when there is a rack door lock #2 alarm. | — |

Table 23 Console management controller (CPQCMC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|--------------|--|--------------|
| CpqCmcStatusLock2Lock:locked | IM_153012_2 | — | Harmless |
| CpqCmcStatusLock2Lock:unlockedAuto | IM_153012_3 | — | Warning |
| CpqCmcStatusLock2Lock:unlockedTime | IM_153012_4 | — | Warning |
| CpqCmcStatusLock2Lock:unlockedSmoke | IM_153012_5 | — | Critical |
| CpqCmcStatusLock2Lock:unlockedKey | IM_153012_6 | — | Harmless |
| CpqCmcStatusLock2Lock:unlockedPwrFail | IM_153012_7 | — | Critical |
| CpqCmcStatusLock2Lock:unlockedBattLow | IM_153012_8 | — | Critical |
| CpqCmcStatusLock2Lock:unlockedNetFail | IM_153012_9 | — | Critical |
| CpqCmcStatusLock2Lock:unlockedConnFail | IM_153012_10 | — | Critical |
| CpqCmcStatusLock2Lock:readyToLock | IM_153012_11 | — | Harmless |
| CpqCmcStatusLock2Lock:alarm | IM_153012_12 | — | Warning |
| CpqCmcStatusLock2Lock:configError | IM_153012_13 | — | Warning |
| CpqCmcStatusLock2Lock:notAvail | IM_153012_14 | — | Warning |
| cpqCmcalarmSmoke (153013) | — | This event occurs when the rack smoke detector has detected smoke. | — |
| CpqCmcStatusSmoke:cleared | IM_153013_2 | — | Harmless |
| CpqCmcStatusSmoke:present | IM_153013_3 | — | Critical |
| CpqCmcStatusSmoke:noSensor | IM_153013_4 | — | Warning |
| cpqCmcalarmShock (153014) | — | This event occurs when the rack shock detector has detected a vibration to the rack. | — |
| CpqCmcStatusShock:cleared | IM_153014_2 | — | Harmless |
| CpqCmcStatusShock:present | IM_153014_3 | — | Critical |
| CpqCmcStatusShock:noSensor | IM_153014_4 | — | Warning |
| cpqCmcalarmAux1 (153015) | — | This event occurs when the rack auxiliary alarm input #1 has been triggered. | — |
| CpqCmcStatusAux1:ok | IM_153015_2 | — | Harmless |
| CpqCmcStatusAux1:alarm | IM_153015_3 | — | Critical |
| CpqCmcStatusAux1:noSensor | IM_153015_4 | — | Warning |
| cpqCmcalarmAux2 (153016) | — | This event occurs when the rack auxiliary alarm input #2 has been triggered. | — |
| CpqCmcStatusAux2:ok | IM_153016_2 | — | Harmless |
| CpqCmcStatusAux2:alarm | IM_153016_3 | — | Critical |
| CpqCmcStatusAux2:noSensor | IM_153016_4 | — | Warning |
| cpqCmcalarm1 (153017) | — | This event occurs when there is Alarm 1, set from Network management. | — |
| CpqCmcStatusAlarm1:ok | IM_153017_2 | — | Harmless |
| CpqCmcStatusAlarm1:alarm | IM_153017_3 | — | Critical |
| cpqCmcalarm2 (153018) | — | This event occurs when there is Alarm 2, set from Network management. | — |

Table 23 Console management controller (CPQCMC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|----------------------------------|-------------|--|--------------|
| CpqCmcStatusAlarm2:ok | IM_153018_2 | — | Harmless |
| CpqCmcStatusAlarm2:alarm | IM_153018_3 | — | Critical |
| cpqCmcalarmLock1Dev (153019) | — | This event occurs when the rack door locking device #1 has failed. | — |
| CpqCmcStatusLock1Dev:ok | IM_153019_2 | — | Harmless |
| CpqCmcStatusLock1Dev:powerFail | IM_153019_3 | — | Critical |
| CpqCmcStatusLock1Dev:lowBattery | IM_153019_4 | — | Warning |
| CpqCmcStatusLock1Dev:replaceBatt | IM_153019_5 | — | Critical |
| CpqCmcStatusLock1Dev:missingBatt | IM_153019_6 | — | Warning |
| CpqCmcStatusLock1Dev:noConnect | IM_153019_7 | — | Warning |
| CpqCmcStatusLock1Dev:notAvail | IM_153019_8 | — | Warning |
| cpqCmcalarmLock2Dev (153020) | — | This event occurs when the rack door locking device #2 has failed. | — |
| CpqCmcStatusLock2Dev:ok | IM_153020_2 | — | Harmless |
| CpqCmcStatusLock2Dev:powerFail | IM_153020_3 | — | Critical |
| CpqCmcStatusLock2Dev:lowBattery | IM_153020_4 | — | Warning |
| CpqCmcStatusLock2Dev:replaceBatt | IM_153020_5 | — | Critical |
| CpqCmcStatusLock2Dev:missingBatt | IM_153020_6 | — | Warning |
| CpqCmcStatusLock2Dev:noConnect | IM_153020_7 | — | Warning |
| CpqCmcStatusLock2Dev:notAvail | IM_153020_8 | — | Warning |
| cpqCmcSetupChanged (153100) | IM_153100 | This event occurs when the setup of console management controller has changed. | Harmless |

Switch Traps (CIMTRAPS.MIB)

Table 24 CIM traps (CIMTRAPS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--------------------------------------|-----------|--|--------------|
| switchFirmwareTransferred(161001) | IM_161001 | This event occurs when the firmware image successfully transferred. | Harmless |
| switchConfigFileTransferred (161002) | IM_161002 | This event occurs when the configuration file successfully transferred. | Harmless |
| switchTFTPTransferSucceeded (161003) | IM_161003 | This event occurs when the TFTP transfer completed successfully. | Harmless |
| switchTFTPTransferFailed (161004) | IM_161004 | This event occurs when the switch has failed a TFTP transfer. | Warning |
| switchFileInvalid (161005) | IM_161005 | This event occurs when an invalid firmware or configuration image is downloaded. | Warning |
| switchFanFailed (161006) | IM_161006 | This event occurs when the condition of switch fan has failed. | Fatal |
| switchFanOk (161007) | IM_161007 | This event occurs when switch fan has returned to normal operation. | Harmless |
| switchTempSensorDegraded (161008) | IM_161008 | This event occurs when the switch temperature sensor indicates high temperature. | Critical |

Table 24 CIM traps (CIMTRAPS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---------------------------------------|-----------|---|--------------|
| switchTempSensorFailed (161009) | IM_161009 | This event occurs when the switch temperature sensor indicates an over temperature. | Fatal |
| switchTempSensorOk (161010) | IM_161010 | This event occurs when the switch temperature sensor indicates normal temperature. | Harmless |
| switchPostSuccess (161011) | IM_161011 | This event occurs when the switch has successfully completed POST. | Warning |
| switchLoginFailure (161012) | IM_161012 | This event occurs when the switch has rejected login attempt. | Warning |
| switchLocationChange (161013) | IM_161013 | This event occurs when the switch location has changed; trap will be sent on next boot. | Harmless |
| switchCubeTypeChange (161014) | IM_161014 | This event occurs when the cube type is changed by customer since last boot. | Harmless |
| switchSNTPServiceUnavailable (161015) | IM_161015 | This event occurs when the SNTP server was configured, but no SNTP servers were found. | Warning |

Service Incident Information (CPQSERVICE.MIB)

Table 25 Service Incident Information traps (CPQSERVICE.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-------------|---|--------------|
| cpqServiceInformation (164001) | — | This event occurs whenever a service incident is logged or updated. | — |
| cpqServiceIncidentStatus:intransit | IM_164001_2 | — | Warning |
| cpqServiceIncidentStatus:delivered | IM_164001_3 | — | Harmless |
| cpqServiceIncidentStatus:undelivered | IM_164001_4 | — | Critical |
| cpqServiceIncidentStatus:assigned | IM_164001_5 | — | Harmless |
| cpqServiceIncidentStatus:closed | IM_164001_6 | — | Harmless |
| cpqServiceIncidentStatus:submitted_to_ISEE | IM_164001_7 | — | Harmless |
| cpq2ServiceInformation (164002) | — | This event occurs whenever a service incident is logged or updated. | — |
| cpqServiceIncidentStatus:intransit | IM_164002_2 | — | Warning |
| cpqServiceIncidentStatus:delivered | IM_164002_3 | — | Harmless |
| cpqServiceIncidentStatus:undelivered | IM_164002_4 | — | Critical |
| cpqServiceIncidentStatus:assigned | IM_164002_5 | — | Harmless |
| cpqServiceIncidentStatus:closed | IM_164002_6 | — | Harmless |
| cpqServiceIncidentStatus:submitted_to_ISEE | IM_164002_7 | — | Harmless |
| cpqService3Information (164003) | — | This event occurs whenever a service incident is logged or updated. | — |
| cpqServiceIncidentStatus:intransit | IM_164003_2 | — | Warning |
| cpqServiceIncidentStatus:delivered | IM_164003_3 | — | Harmless |
| cpqServiceIncidentStatus:undelivered | IM_164003_4 | — | Critical |
| cpqServiceIncidentStatus:assigned | IM_164003_5 | — | Harmless |
| cpqServiceIncidentStatus:closed | IM_164003_6 | — | Harmless |

Table 25 Service Incident Information traps (CPQSERVICE.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|--|-------------|-------------|--------------|
| cpqServiceIncidentStatus:submitted_to_ISEE | IM_164003_7 | — | Harmless |

Power Device SNMP Management Card (CPQPOWER.MIB)

Table 26 Power Device traps (CPQPOWER.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|----------------------------------|-----------|---|--------------|
| trapCritical (Pwr_1) | IM_Pwr_1 | This event occurs when a critical alarm has occurred. | Fatal |
| trapWarning (Pwr_2) | IM_Pwr_2 | This event occurs when a warning alarm has occurred. | Warning |
| trapInformation (Pwr_3) | IM_Pwr_3 | This event occurs when an informational alarm has occurred. | Harmless |
| trapCleared (Pwr_4) | IM_Pwr_4 | This event occurs when an alarm has been cleared. | Harmless |
| trapTest (Pwr_5) | IM_Pwr_5 | This event occurs when a test trap is sent to a trap receiver to check proper reception of traps. | Harmless |
| deviceTrapInitialization (Pwr_6) | IM_Pwr_6 | This event occurs when a power device is initialized. | Harmless |

StorageWorks Enterprise Array Manager (HS_AGENT.MIB)

Table 27 StorageWorks Enterprise Array Manager (HS_AGENT.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-----------------------------------|-------------|---|--------------|
| diskFailureTrap (1) | IM_Steam_1 | This event occurs when a disk drive has failed. | Critical |
| diskInformationTrap (2) | IM_Steam_2 | This event occurs when a disk drive has recovered. | Harmless |
| powerSupplyFailureTrap (3) | IM_Steam_3 | This event occurs when the power supply in the specified location has failed. | Critical |
| powerSupplyInformationTrap (4) | IM_Steam_4 | This event occurs when the power supply in the specified location has gone from bad to good. | Harmless |
| fanFailureTrap (5) | IM_Steam_5 | This event occurs when the fan in the specified location has failed. | Critical |
| fanInformationTrap (6) | IM_Steam_6 | This event occurs when the fan in the specified location has recovered. | Harmless |
| cacheBatteryFailureTrap (7) | IM_Steam_7 | This event occurs when the cache battery in specified location has failed. | Critical |
| cacheBatteryLowTrap (8) | IM_Steam_8 | This event occurs when the cache battery in specified location has LOW state. | Warning |
| cacheBatteryInformationTrap (9) | IM_Steam_9 | This event occurs when the cache battery in specified location has good state. | Harmless |
| temperatureOverThresholdTrap (10) | IM_Steam_10 | This event occurs when the temperature sensor in the specified location has exceeded WARNING threshold limit. | Critical |

Table 27 StorageWorks Enterprise Array Manager (HS_AGENT.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-----------------------------------|-------------|--|--------------|
| temperatureInformationTrap (11) | IM_Steam_11 | This event occurs when the temperature sensor in the specified location indicates below WARNING threshold limit. | Harmless |
| communicationFailureTrap (12) | IM_Steam_12 | This event occurs when communication with the subsystem has failed. | Critical |
| communicationInformationTrap (13) | IM_Steam_13 | This event occurs when communication with the subsystem has recovered. | Harmless |
| controllerFailureTrap (14) | IM_Steam_14 | This event occurs when the secondary controller in the subsystem has failed. | Critical |
| controllerInformationTrap (15) | IM_Steam_15 | This event occurs when the secondary controller in the subsystem has recovered. | Harmless |
| lunFailureTrap (16) | IM_Steam_16 | This event occurs when the LUN has failed and is off-line. | Critical |
| lunReconstructTrap (17) | IM_Steam_17 | This event occurs when the LUN has started the reconstruction process but is available for normal use. | Warning |
| lunReducedTrap (18) | IM_Steam_18 | This event occurs when A LUN has become degraded because a member disk device failure. | Critical |
| lunInformationTrap (19) | IM_Steam_19 | This event occurs when A LUN has become optimal because a successful completion of the reconstruction process. | Harmless |
| externalInputFailureTrap (20) | IM_Steam_20 | This event occurs when the user-defined external input to the EMU indicates a failure. | Critical |
| externalInputInformationTrap (21) | IM_Steam_21 | This event occurs when the user-defined external input to the EMU indicates a recovery. | Harmless |
| cacheBatteryStateUnknownTrap (22) | IM_Steam_22 | This event occurs when the cache battery in specified location has an unknown state. | Warning |

Storage Area Networks Management Appliance (CPQSANAPP.MIB)

Table 28 Storage Area Networks Management Appliance (CPQSANAPP.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-----------------------|-----------|--|--------------|
| swFailureTrap (1) | IM_SanW_1 | This event occurs when a failure event is detected. | Critical |
| swWarningTrap (2) | IM_SanW_2 | This event occurs when a Warning event is detected. | Warning |
| swInformationTrap (4) | IM_SanW_4 | This event occurs when an Information event is detected. | Harmless |

StorageWorks Command Console (CPQSWCC.MIB)

Table 29 StorageWorks Command Console (CPQSWCC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|------------------------------------|--------------|---|--------------|
| cpqSwccFibreDeviceStatusChange (1) | — | This event occurs when the state on one of the managed Fibre Channel devices changes. | — |
| cpqSwccFibreDevState:ok | IM_Fibre_1_2 | — | Harmless |
| cpqSwccFibreDevState:degraded | IM_Fibre_1_3 | — | Critical |

Table 29 StorageWorks Command Console (CPQSWCC.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|---|--------------|---|--------------|
| cpqSwccFibreDevState:failed | IM_Fibre_1_4 | — | Fatal |
| cpqSwccTapeControllerStatusChange (2) | — | This event occurs when the state on one of the managed Fibre Channel tape controller devices changes. | — |
| cpqSwccFibreDevState:ok | IM_Tape_2_2 | — | Harmless |
| cpqSwccFibreDevState:degraded | IM_Tape_2_3 | — | Critical |
| cpqSwccFibreDevState:failed | IM_Tape_2_4 | — | Fatal |
| cpqSwccEmuDevDeviceStatusChange (1) | — | This event occurs when the state on one of the managed devices changes. | — |
| cpqSwccEmuDevState:ok | IM_Emu_1_2 | — | Harmless |
| cpqSwccEmuDevState:degraded | IM_Emu_1_3 | — | Critical |
| cpqSwccEmuDevState:failed | IM_Emu_1_4 | — | Fatal |
| cpqSwccKzpccPhyDeviceEventTrap (1) | — | This event occurs when some event has happened to a physical device on a KZPCC controller. | — |
| cpqSwccKzpccEventSeverity:informational | IM_Kzpcc_1_1 | — | Harmless |
| cpqSwccKzpccEventSeverity:warning | IM_Kzpcc_1_2 | — | Warning |
| cpqSwccKzpccEventSeverity:error | IM_Kzpcc_1_3 | — | Fatal |
| cpqSwccKzpccVirtualDeviceEventTrap (2) | — | This event occurs when some event has happened to a virtual device (logical drive) on a controller. | — |
| cpqSwccKzpccEventSeverity:informational | IM_Kzpcc_2_1 | — | Harmless |
| cpqSwccKzpccEventSeverity:warning | IM_Kzpcc_2_2 | — | Critical |
| cpqSwccKzpccEventSeverity:error | IM_Kzpcc_2_3 | — | Fatal |
| cpqSwccKzpccSubsystemEventTrap (3) | — | This event occurs when some event has happened to a KZPCC controller. | — |
| cpqSwccKzpccEventSeverity:informational | IM_Kzpcc_3_1 | — | Harmless |
| cpqSwccKzpccEventSeverity:warning | IM_Kzpcc_3_2 | — | Critical |
| cpqSwccKzpccEventSeverity:error | IM_Kzpcc_3_3 | — | Fatal |

Blade Type-2 traps (BT2TRAPS.MIB)

Table 30 Blade Type-2 traps (BT2TRAPS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|------------------------------------|-----------|--|--------------|
| bt2SwPrimaryPowerSupplyFailure (1) | IM_BT2_1 | This event occurs when the primary power supply failed. | Fatal |
| bt2SwDefGwUp(2) | IM_BT2_2 | This event occurs when the default gateway is alive. | Harmless |
| bt2SwDefGwDown(3) | IM_BT2_3 | This event occurs when the default gateway is down. | Harmless |
| bt2SwDefGwInService(4) | IM_BT2_4 | This event occurs when the default gateway is up and in service. | Harmless |
| bt2SwDefGwNotInService(5) | IM_BT2_5 | This event occurs when the default gateway is alive but not in service. | Harmless |
| bt2SwVrrpNewMaster (16) | IM_BT2_16 | This event occurs when the sending agent has transitioned to 'Master' state. | Harmless |

Table 30 Blade Type-2 traps (BT2TRAPS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|-------------------------------|-----------|---|--------------|
| bt2SwVrrpNewBackup(17) | IM_BT2_17 | This event occurs when the sending agent has transitioned to 'Backup' state. | Harmless |
| bt2SwVrrpAuthFailure(18) | IM_BT2_18 | This event occurs when there is an authentication failure. | Critical |
| bt2SwLoginFailure(19) | IM_BT2_19 | This event occurs when there is a login failure. | Critical |
| bt2SwTempExceedThreshold (22) | IM_BT2_22 | This event occurs when the switch temperature has exceeded maximum safety limits. | Fatal |
| bt2SwRackLocationChange(26) | IM_BT2_26 | This event occurs when the rack location has been changed. | Harmless |
| bt2SwApplyComplete(27) | IM_BT2_27 | This event occurs when a new configuration has been applied. | Harmless |
| bt2SwSaveComplete(28) | IM_BT2_28 | This event occurs when the new configuration has been saved. | Harmless |
| bt2SwFwDownloadSuccess(29) | IM_BT2_29 | This event occurs when the firmware has been downloaded. | Harmless |
| bt2SwFwDownloadFailure(30) | IM_BT2_30 | This event occurs when the firmware downloaded failed. | Warning |
| bt2SwTempReturnThreshold(31) | IM_BT2_31 | This event occurs when the switch temperature has returned below maximum safety limits. | Harmless |
| bt2SwFanFailure(32) | IM_BT2_32 | This event occurs when a fan failure has been detected. | Critical |
| bt2SwFanFailureFixed(33) | IM_BT2_33 | This event occurs when the fan failure has been fixed. | Harmless |
| bt2SwUdfolIMFailure(34) | IM_BT2_34 | This event occurs when an LiM link is down. | Critical |
| bt2SwUdfolIMUP(35) | IM_BT2_35 | This event occurs when an LiM link is up. | Harmless |
| bt2SwUdfoglobalEna(36) | IM_BT2_36 | This event occurs when the Global UFD is enabled. | Harmless |
| bt2SwUdfoglobalDis(37) | IM_BT2_37 | This event occurs when the Global UFD is disabled. | Harmless |
| bt2SwUdfoltdAutoEna(38) | IM_BT2_38 | This event occurs when an LiD link is Auto Enabled. | Harmless |
| bt2SwUdfoltdAutoDis(39) | IM_BT2_39 | This event occurs when an LiD link is Auto Disabled. | Harmless |
| bt2SwCubeInserted(40) | IM_BT2_40 | This event occurs when a cube is inserted. | Harmless |
| bt2SwCubeRemoved(41) | IM_BT2_41 | This event occurs when a cube is removed. | Harmless |
| bt2SwStgNewRoot(42) | IM_BT2_42 | This event occurs when the bridge has become the new root of the STG. | Harmless |
| bt2SwCistNewRoot(43) | IM_BT2_43 | This event occurs when the bridge has become the new root of the CIST. | Harmless |
| bt2SwStgTopologyChanged(44) | IM_BT2_44 | This event occurs when there is a STG topology change. | Harmless |
| bt2SwCistTopologyChanged(45) | IM_BT2_45 | This event occurs when there is a CIST topology change. | Harmless |

Blade Type-4 traps (BT4TRAPS.MIB)

Table 31 Blade Type-4 traps (BT4TRAPS.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|----------------------------|-----------|--|--------------|
| bt4SwDefGwUp(2) | IM_BT4_2 | This event occurs when the default gateway is alive. | Harmless |
| bt4SwDefGwDown(3) | IM_BT4_3 | This event occurs when the default gateway is down. | Harmless |
| bt4SwDefGwInService(4) | IM_BT4_4 | This event occurs when the default gateway is up and in service. | Harmless |
| bt4SwDefGwNotInService(5) | IM_BT4_5 | This event occurs when the default gateway is alive but not in service. | Harmless |
| bt4SwLoginFailure(19) | IM_BT4_19 | This event occurs when a valid username/password combination is not entered. | Critical |
| bt4SwApplyComplete(27) | IM_BT4_27 | This event occurs when a new configuration has been applied. | Harmless |
| bt4SwSaveComplete(28) | IM_BT4_28 | This event occurs when a new configuration has been saved. | Harmless |
| bt4SwFwDownloadSucess(29) | IM_BT4_29 | This event occurs when the firmware has been downloaded. | Harmless |
| bt4SwFwDownloadFailure(30) | IM_BT4_30 | This event occurs when the firmware download fails. | Warning |
| bt4SwUdfolLtMFailure(34) | IM_BT4_34 | This event occurs when an LtM link is down. | Critical |
| bt4SwUdfolLtMUP(35) | IM_BT4_35 | This event occurs when an LtM link is up. | Harmless |
| bt4SwUdfGlobalEna(36) | IM_BT4_36 | This event occurs when the Global UFD is enabled. | Harmless |
| bt4SwUdfGlobalDis(37) | IM_BT4_37 | This event occurs when the Global UFD is disabled. | Harmless |
| bt4SwUdfolLtDAutoEna(38) | IM_BT4_38 | This event occurs when an LtD link is Auto Enabled. | Harmless |
| bt4SwUdfolLtDAutoDis(39) | IM_BT4_39 | This event occurs when an LtD link is Auto Disabled. | Harmless |
| bt4SwCubeInserted(40) | IM_BT4_40 | This event occurs when a cube is inserted. | Harmless |
| bt4SwCubeRemoved(41) | IM_BT4_41 | This event occurs when a cube is removed. | Harmless |

HP SIM forwarded trap (HPOV-NNM.MIB)

Table 32 HP SIM forwarded trap (HPOV-NNM.MIB)

| Tivoli types | TEC class | Description | TEC priority |
|----------------------------|------------------|---|--------------|
| hpOVMessageTrap (58916872) | IM_hpOV_58916872 | This event occurs when events are forwarded as SNMP trap from HP SIM. | Warning |

Appendix C: Insight SNMP rules

The following table lists all of the HP rules delivered with the HP Insight Integration for Tivoli, Revision 4.2 that relate to specific SNMP events. The rules and corresponding events are organized by MIB type and object identifier.

Common cluster management (SVRCLU.MIB)

Table 33 Common cluster management (SVRCLU.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---------------------|-----------|-----------|------------|---------------------|
| SvrCluMemberAdded | 100 | — | — | — |
| SvrCluMemberDeleted | 101 | — | — | — |

Standard equipment (CPQSTDEQ.MIB)

Table 34 Standard equipment (CPQSTDEQ.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|----------------------------------|-----------|-----------|------------|---------------------|
| CpqSeCpuThresholdPassed | 1001 | — | — | — |
| CpqSePCCardThermalDegraded | 1002 | — | 1004 | — |
| CpqSePCCardThermalFailure | 1003 | — | 1004 | — |
| CpqSePCCardThermalSafe | 1004 | — | — | — |
| CpqSe2CpuThresholdPassed | 1005 | — | — | — |
| CpqSeCpuStatusChange | 1006 | — | — | — |
| CpqSeCpuStatus:ok | _2 | — | — | — |
| CpqSeCpuStatus:Degraded | _3 | — | 1006_2 | — |
| CpqSeCpuStatus:Failed | _4 | — | 1006_2 | — |
| CpqSeCpuStatus:Disabled | _5 | — | 1006_2 | — |
| CpqSeCpuPowerPodstatusChange | 1007 | — | — | — |
| CpqSeCpuPowerPodstatus:Notfailed | _1 | — | — | — |
| CpqSeCpuPowerPodstatus:Failed | _2 | — | 1007_1 | — |
| CpqSeUSBStorageDeviceAttached | 1008 | — | 1009 | * |
| CpqSeUSBStorageDeviceRemoved | 1009 | — | — | * |

Systems information (CPQSINFO.MIB)

Table 35 Standard equipment (CPQSINFO.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-------------------------------|-----------|-----------|------------|---------------------|
| CpqSiHoodRemoved | 2001 | — | — | — |
| CpqSiMonitorConditionOK | 2002 | — | — | — |
| CpqSiMonitorConditionDegraded | 2003 | — | 2002 | — |
| CpqSiMonitorConditionFailed | 2004 | — | 2002 | — |
| CpqSiCorrMemErrStatusDegraded | 2005 | — | 2006 | — |
| CpqSiCorrMemErrStatusOK | 2006 | — | — | — |

Table 35 Standard equipment (CPQSINFO.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqSiMemConfigChange | 2007 | — | — | — |
| CpqSiHotPlugSlotBoardRemoved | 2008 | — | 2009 | — |
| CpqSiHotPlugSlotBoardInserted | 2009 | — | — | — |
| CpqSiHotPlugSlotPowerUpFailed | 2010 | — | — | — |
| cpqSiHotPlugSlotErrorStatus: noError | _1 | — | — | — |
| cpqSiHotPlugSlotErrorStatus: generalError | _2 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: wrongRevision | _3 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: wrongBoard | _4 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: cannotConfig | _5 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: powerFault | _6 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: unexpectedPowerLoss | _7 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: wrongSpeed | _8 | — | 2010_1 | — |
| cpqSiHotPlugSlotErrorStatus: functionalFailure | _9 | — | 2010_1 | — |
| CpqSiSysBatteryFailure | 2011 | — | — | — |
| CpqSiSysBatteryChargingDegraded | 2012 | — | — | — |
| CpqSiSysBatteryCalibrationError | 2013 | — | — | — |

Intelligent drive array (CPQIDA.MIB)

Table 36 Intelligent drive array (CPQIDA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------------|-----------|-----------|------------|---------------------|
| CpqDa3LogDrvStatusChange | 3008 | — | 3008 | — |
| CpqDaLogDrvStatus:ok | _2 | — | — | — |
| CpqDaLogDrvStatus:failed | _3 | — | 3008_2 | — |
| CpqDaLogDrvStatus:recovering | _5 | — | 3008_2 | — |
| CpqDaLogDrvStatus:readyForRebuild | _6 | — | 3008_2 | — |
| CpqDaLogDrvStatus:rebuilding | _7 | — | 3008_2 | — |
| CpqDaLogDrvStatus:wrongDrive | _8 | — | 3008_2 | — |
| CpqDaLogDrvStatus:badConnect | _9 | — | 3008_2 | — |
| CpqDaLogDrvStatus:overheating | _10 | — | 3008_2 | — |
| CpqDaLogDrvStatus:shutdown | _11 | — | 3008_2 | — |
| CpqDaLogDrvStatus:expanding | _12 | — | — | — |
| CpqDaLogDrvStatus:notAvailable | _13 | — | — | — |
| CpqDaLogDrvStatus:queuedForExp | _14 | — | — | — |
| CpqDaCntlrActive | 3016 | — | — | — |
| CpqDa4SpareStatusChange | 3017 | — | 3017 | — |
| CpqDaSpareStatus:failed | _3 | — | 3017_6 | — |
| CpqDaSpareStatus:inactive | _4 | — | 3017_6 | — |

Table 36 Intelligent drive array (CPQIDA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| CpqDaSpareStatus:building | _5 | — | 3017_6 | — |
| CpqDaSpareStatus:active | _6 | — | — | — |
| CpqDaTapeLibraryDoorStatusChange | 3021 | — | — | — |
| CpqDaTapeLibraryDoorStatus:notSupported | _2 | — | — | — |
| CpqDaTapeLibraryDoorStatus:closed | _3 | — | — | — |
| CpqDaTapeLibraryDoorStatus:open | _4 | — | — | — |
| CpqDaTapeDriveCleaningRequired | 3023 | — | — | — |
| CpqDaTapeDriveCleanTapeReplace | 3024 | — | — | — |
| CpqDa5AccelStatusChange | 3025 | — | — | — |
| CpqDa5AccelStatus:invalid | _2 | — | — | — |
| CpqDa5AccelStatus:enabled | _3 | — | — | — |
| CpqDa5AccelStatus:tmpDisabled | _4 | — | 3025_3 | — |
| CpqDa5AccelStatus:permDisabled | _5 | — | 3025_3 | — |
| CpqDa5AccelBadDataTrap | 3026 | — | — | — |
| CpqDa5AccelBatteryFailed | 3027 | — | — | — |
| CpqDa5CntlrStatusChange | 3028 | — | — | — |
| CpqDaCntlrBoardStatus:ok | _2 | — | — | — |
| CpqDaCntlrBoardStatus:generalFailure | _3 | — | 3028_2 | — |
| CpqDaCntlrBoardStatus:cableProblem | _4 | — | 3028_2 | — |
| CpqDaCntlrBoardStatus:poweredOff | _5 | — | 3028_2 | — |
| CpqDa5PhyDrvStatusChange | 3029 | — | — | — |
| CpqDaPhyDrvStatus:ok | _2 | — | — | — |
| CpqDaPhyDrvStatus:failed | _3 | — | 3029_2 | — |
| CpqDaPhyDrvStatus:predictiveFailure | _4 | — | 3029_2 | — |
| CpqDa5PhyDrvThreshPassedTrap | 3030 | — | — | — |
| CpqDa2TapeLibraryStatusChange | 3031 | — | — | — |
| CpqDaTapeLibraryStatus:ok | _2 | — | — | — |
| CpqDaTapeLibraryStatus:degraded | _3 | — | 3031_2 | — |
| CpqDaTapeLibraryStatus:failed | _4 | — | 3031_2 | — |
| CpqDaTapeLibraryStatus:offline | _5 | — | 3031_2 | — |
| CpqDa2TapeDriveStatusChange | 3032 | — | — | — |
| CpqDaTapeDrvStatus:ok | _2 | — | — | — |
| CpqDaTapeDrvStatus:degraded | _3 | — | 3032_2 | — |
| CpqDaTapeDrvStatus:failed | _4 | — | 3032_2 | — |
| CpqDaTapeDrvStatus:offline | _5 | — | 3032_2 | — |
| CpqDaTapeDrvStatus:missingWasOk | _6 | — | 3032_2 | — |
| CpqDaTapeDrvStatus:missingWasOffline | _7 | — | 3032_2 | — |
| CpqDa6CntlrStatusChange | 3033 | — | — | — |
| CpqDaCntlrBoardStatus:ok | _2 | — | — | — |
| CpqDaCntlrBoardStatus:generalFailure | _3 | — | 3033_2 | — |

Table 36 Intelligent drive array (CPQIDA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-------------------------------------|-----------|-----------|------------|---------------------|
| CpqDaCntlrBoardStatus:cableProblem | _4 | — | 3033_2 | — |
| CpqDaCntlrBoardStatus:poweredOff | _5 | — | 3033_2 | — |
| CpqDa6LogDrvStatusChange | 3034 | — | — | — |
| CpqDaLogDrvStatus:ok | _2 | — | — | — |
| CpqDaLogDrvStatus:failed | _3 | — | 3034_2 | — |
| CpqDaLogDrvStatus:recovering | _4 | — | 3034_2 | — |
| CpqDaLogDrvStatus:unconfigured | _5 | — | 3034_2 | — |
| CpqDaLogDrvStatus:readyForRebuild | _6 | — | 3034_2 | — |
| CpqDaLogDrvStatus:rebuilding | _7 | — | 3034_2 | — |
| CpqDaLogDrvStatus:wrongDrive | _8 | — | 3034_2 | — |
| CpqDaLogDrvStatus:badConnect | _9 | — | 3034_2 | — |
| CpqDaLogDrvStatus:overheating | _10 | — | 3034_2 | — |
| CpqDaLogDrvStatus:shutdown | _11 | — | 3034_2 | — |
| CpqDaLogDrvStatus:expanding | _12 | — | 3034_2 | — |
| CpqDaLogDrvStatus:notAvailable | _13 | — | 3034_2 | — |
| CpqDaLogDrvStatus:queuedForExp | _14 | — | 3034_2 | — |
| CpqDa6SpareStatusChange | 3035 | — | — | — |
| CpqDaSpareStatus:invalid | _2 | — | — | — |
| CpqDaSpareStatus:failed | _3 | — | 3035_2 | — |
| CpqDaSpareStatus:inactive | _4 | — | 3035_2 | — |
| CpqDaSpareStatus:building | _5 | — | 3035_2 | — |
| CpqDaSpareStatus:active | _6 | — | 3035_2 | — |
| CpqDa6PhyDrvStatusChange | 3036 | — | — | — |
| CpqDaPhyDrvStatus:ok | _2 | — | — | — |
| CpqDaPhyDrvStatus:failed | _3 | — | 3036_2 | — |
| CpqDaPhyDrvStatus:predictiveFailure | _4 | — | 3036_2 | — |
| CpqDa6PhyDrvThreshPassedTrap | 3037 | — | — | — |
| CpqDa6AccelStatusChange | 3038 | — | — | — |
| CpqDa5AccelStatus:invalid | _2 | — | — | — |
| CpqDa5AccelStatus:enabled | _3 | — | 3038_2 | — |
| CpqDa5AccelStatus:tmpDisabled | _4 | — | 3038_2 | — |
| CpqDa5AccelStatus:permDisabled | _5 | — | 3038_2 | — |
| CpqDa6AccelBadDataTrap | 3039 | — | — | — |
| CpqDa6AccelBatteryFailed | 3040 | — | — | — |
| CpqDa6TapeLibraryStatusChange | 3041 | — | — | — |
| CpqDaTapeLibraryStatus:ok | _2 | — | — | — |
| CpqDaTapeLibraryStatus:degraded | _3 | — | 3041_2 | — |
| CpqDaTapeLibraryStatus:failed | _4 | — | 3041_2 | — |
| CpqDaTapeLibraryStatus:offline | _5 | — | 3041_2 | — |
| CpqDa6TapeLibraryDoorStatusChange | 3042 | — | — | — |

Table 36 Intelligent drive array (CPQIDA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| CpqDaTapeLibraryDoorStatus:notSupported | _2 | — | — | — |
| CpqDaTapeLibraryDoorStatus:closed | _3 | — | — | — |
| CpqDaTapeLibraryDoorStatus:open | _4 | — | — | — |
| CpqDa6TapeDriveStatusChange | 3043 | — | — | — |
| CpqDaTapeDrvStatus:ok | _2 | — | — | — |
| CpqDaTapeDrvStatus:degraded | _3 | — | 3043_2 | — |
| CpqDaTapeDrvStatus:failed | _4 | — | 3043_2 | — |
| CpqDaTapeDrvStatus:offline | _5 | — | 3043_2 | — |
| CpqDaTapeDrvStatus:missingWasOk | _6 | — | 3043_2 | — |
| CpqDaTapeDrvStatus:missingWasOffline | _7 | — | 3043_2 | — |
| CpqDa6TapeDriveCleaningRequired | 3044 | — | — | — |
| CpqDa6TapeDriveCleanTapeReplace | 3045 | — | — | — |
| CpqDa7PhyDrvStatusChange | 3046 | — | — | — |
| CpqDaPhyDrvStatus:ok | _2 | — | — | — |
| CpqDaPhyDrvStatus:failed | _3 | — | 3046_2 | — |
| CpqDaPhyDrvStatus:predictiveFailure | _4 | — | 3046_2 | — |
| CpqDa7SpareStatusChange | 3047 | — | — | — |
| CpqDaSpareStatus:invalid | _2 | — | — | — |
| CpqDaSpareStatus:failed | _3 | — | 3047_2 | — |
| CpqDaSpareStatus:inactive | _4 | — | 3047_2 | — |
| CpqDaSpareStatus:building | _5 | — | 3047_2 | — |
| CpqDaSpareStatus:active | _6 | — | 3047_2 | — |

SCSI device information (CPQSCSI.MIB)

Table 37 SCSI device information (CPQSCSI.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------------|-----------|-----------|------------|---------------------|
| CpqScsi3CntlrStatusChange | 5005 | — | 5005 | — |
| CpqScsiCntlrStatus:ok | _2 | — | — | — |
| CpqScsiCntlrStatus:failed | _3 | — | 5005_2 | — |
| CpqTape3PhyDrvCleaningRequired | 5008 | — | — | — |
| CpqTape3PhyDrvCleanTapeReplace | 5009 | — | — | — |
| CpqTape3LibraryDoorOpen | 5013 | — | 5014 | — |
| CpqTape3LibraryDoorClosed | 5014 | — | — | — |
| CpqScsiCdLibraryStatusChange | 5015 | — | 5015 | — |
| CpqCdLibraryStatus:ok | _2 | — | — | — |
| CpqCdLibraryStatus:failed | _3 | — | 5015_2 | — |
| CpqCdLibraryStatus:offline | _4 | — | 5015_2 | — |
| CpqTapeLibraryStatusChange | 5018 | — | — | — |
| CpqTapeLibraryState:ok | _2 | — | — | — |

Table 37 SCSI device information (CPQSCSI.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqTapeLibraryState:degraded | _3 | — | 5018_2 | — |
| CpqTapeLibraryState:failed | _4 | — | 5018_2 | — |
| CpqTapeLibraryState:offline | _5 | — | 5018_2 | — |
| CpqTape5PhyDrvStatusChange | 5019 | — | — | — |
| CpqTapePhyDrvStatus:ok | _2 | — | — | — |
| CpqTapePhyDrvStatus:failed | _4 | — | 5019_2 | — |
| CpqTapePhyDrvStatus:offline | _5 | — | 5019_2 | — |
| CpqTapePhyDrvStatus:missingWasOk | _6 | — | 5019_2 | — |
| CpqTapePhyDrvStatus:missingWasFailed | _7 | — | 5019_2 | — |
| CpqTapePhyDrvStatus:missingWasOffline | _8 | — | 5019_2 | — |
| cpqScsi5PhyDrvStatusChange | 5020 | — | — | — |
| CpqScsiPhyDrvStatus:ok | _2 | — | — | — |
| CpqScsiPhyDrvStatus:failed | _3 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:notConfigured | _4 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:badCable | _5 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:missingWasOk | _6 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:missingWasFailed | _7 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:predictiveFailure | _8 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:missingWas PredictiveFailure | _9 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:offline | _10 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:missingwasOffline | _11 | — | 5020_2 | — |
| CpqScsiPhyDrvStatus:hardError | _12 | — | 5020_2 | — |
| CpqScsi3LogDrvStatusChange | 5021 | — | — | — |
| cpqScsiLogDrvStatus:ok | _2 | — | — | — |
| cpqScsiLogDrvStatus:failed | _3 | — | 5021_2 | — |
| cpqScsiLogDrvStatus:unconfigured | _4 | — | 5021_2 | — |
| cpqScsiLogDrvStatus:recovering | _5 | — | 5021_2 | — |
| cpqScsiLogDrvStatus: readyForRebuild | _6 | — | 5021_2 | — |
| cpqScsiLogDrvStatus: rebuilding | _7 | — | 5021_2 | — |
| cpqScsiLogDrvStatus: wrongDrive | _8 | — | 5021_2 | — |
| cpqScsiLogDrvStatus: badConnect | _9 | — | 5021_2 | — |
| cpqScsiLogDrvStatus: degraded | _10 | — | 5021_2 | — |
| cpqScsiLogDrvStatus: disabled | _11 | — | 5021_2 | — |
| CpqSasPhyDrvStatusChange | 5022 | — | — | — |
| CpqSasPhyDrvStatus:ok | _2 | — | — | — |
| CpqSasPhyDrvStatus:predictiveFailure | _3 | — | 5022_2 | — |
| CpqSasPhyDrvStatus:offline | _4 | — | 5022_2 | — |
| CpqSasPhyDrvStatus:failed | _5 | — | 5022_2 | — |
| CpqSasPhyDrvStatus:missingWasOk | _6 | — | 5022_2 | — |

Table 37 SCSI device information (CPQSCSI.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqSasPhyDrvStatus: missingWas PredictiveFailure | _7 | — | 5022_2 | — |
| CpqSasPhyDrvStatus: missingWasOffline | _8 | — | 5022_2 | — |
| CpqSasPhyDrvStatus:missingWasFailed | _9 | — | 5022_2 | — |
| CpqSasLogDrvStatusChange | 5023 | — | — | — |
| CpqSasLogDrvStatus:ok | _2 | — | — | — |
| CpqSasLogDrvStatus:degraded | _3 | — | 5023_2 | — |
| CpqSasLogDrvStatus:rebuilding | _4 | — | 5023_2 | — |
| CpqSasLogDrvStatus:failed | _5 | — | 5023_2 | — |
| CpqSas2TapeDrvStatusChange | 5025 | — | — | * |
| CpqSasTapeDrvStatus:ok | _2 | — | — | * |
| CpqSasTapeDrvStatus:offline | _3 | — | 5025_2 | * |

Server health features (CPQHLTH.MIB)

Table 38 Server health features (CPQHLTH.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-------------------------------------|-----------|--------------|------------|---------------------|
| CpqHe3CorrectableMemoryLogDisabled | 6016 | — | — | — |
| cpqHeCorrMemLogStatus:notSupported | _2 | — | 6016_4 | — |
| cpqHeCorrMemLogStatus:disabled | _3 | — | 6016_4 | — |
| cpqHeCorrMemLogStatus:enabled | _4 | — | — | — |
| CpqHe3ThermalTempFailed | 6017 | — | 6019, 6026 | — |
| CpqHe3ThermalTempDegraded | 6018 | — | — | — |
| cpqHeThermalDegradedAction:continue | _2 | — | 6019 | — |
| cpqHeThermalDegradedAction:shutdown | _3 | — | 6019 | — |
| CpqHe3ThermalTempOk | 6019 | — | — | — |
| CpqHe3ThermalSystemFanFailed | 6020 | — | — | — |
| cpqHeThermalDegradedAction:continue | _2 | — | 6022 | — |
| cpqHeThermalDegradedAction:shutdown | _3 | — | 6022 | — |
| CpqHe3ThermalSystemFanDegraded | 6021 | — | 6022, 6026 | — |
| CpqHe3ThermalSystemFanOk | 6022 | — | — | — |
| CpqHe3ThermalCPUFanFailed | 6023 | — | 6024, 6026 | — |
| CpqHe3ThermalCPUFanOk | 6024 | — | — | — |
| CpqHe3AsrConfirmation | 6025 | — | — | — |
| CpqHe3ThermalConfirmation | 6026 | — | — | — |
| CpqHe3PostError | 6027 | — | — | — |
| CpqHe3FltTolPwrSupplyDegraded | 6028 | — | 6033 | — |
| CpqHe3CorrMemReplaceMemModule | 6029 | — | — | — |
| CpqHe3FltTolPowerRedundancyLost | 6032 | 6031 or 6034 | 6033 | — |
| CpqHe3FltTolPowerRedundancyLost | 6032 | — | 6054 | — |

Table 38 Server health features (CPQHLTH.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|--------------|------------|---------------------|
| CpqHe3FltTolPowerSupplyInserted | 6033 | — | — | — |
| CpqHe3FltTolPowerSupplyRemoved | 6034 | — | 6033 | — |
| CpqHe3FltTolFanDegraded | 6035 | — | 6038 | — |
| CpqHe3FltTolFanFailed | 6036 | — | 6038 | — |
| CpqHe3FltTolFanRedundancyLost | 6037 | 6036 or 6039 | 6038 | — |
| CpqHe3FltTolFanInserted | 6038 | — | — | — |
| CpqHe3FltTolFanRemoved | 6039 | — | 6038 | — |
| CpqHe3TemperatureFailed | 6040 | — | 6042 | — |
| CpqHe3TemperatureDegraded | 6041 | — | 6042 | — |
| CpqHe3TemperatureOk | 6042 | — | — | — |
| CpqHe3PowerConverterDegraded | 6043 | — | — | — |
| CpqHe3PowerConverterFailed | 6044 | — | — | — |
| CpqHe3PowerConverterReduncancyLost | 6045 | 6044 | — | — |
| CpqHe3CacheAccelParityError | 6046 | — | — | — |
| cpqHeResilientMemOnlineSpareEngaged | 6047 | — | — | — |
| cpqHe4FltTolPowerSupplyOk | 6048 | — | — | — |
| cpqHe4FltTolPowerSupplyDegraded | 6049 | — | 6048 | — |
| cpqHe4FltTolPowerSupplyFailed | 6050 | — | 6048 | — |
| cpqHeResilientMemMirroredMemoryEngaged | 6051 | — | — | — |
| cpqHeResilientAdvancedECCMemoryEngaged | 6052 | — | — | — |
| cpqHeResilientMemXorMemoryEngaged | 6053 | — | — | — |
| cpqHe3FltTolPowerRedundancyRestored | 6054 | — | — | — |
| cpqHe3FltTolFanRedundancyRestored | 6055 | — | — | — |
| cpqHe4CorrMemReplaceMemModule | 6056 | — | — | — |
| cpqHeResMemBoardRemoved | 6057 | — | — | — |
| cpqHeResMemBoardInserted | 6058 | — | — | — |
| cpqHeResMemBoardBusError | 6059 | — | — | — |
| cpqHeEventOccurred | 6060 | — | — | — |
| CpqHeManagementProclnReset | 6061 | — | 6062 | — |
| CpqHeManagementProcReady | 6062 | — | — | — |
| CpqHeManagementProcFailedReset | 6063 | — | 6062 | — |

Storage systems information (CPQSTSYS.MIB)

Table 39 Storage systems information (CPQSTSYS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------|-----------|-----------|------------|---------------------|
| CpqSs3FanStatusChange | 8008 | — | 8008 | — |
| CpqSsBoxFanStatus:ok | _2 | — | — | — |
| CpqSsBoxFanStatus:failed | _3 | — | 8008_2 | — |
| CpqSsBoxFanStatus:noFan | _4 | — | — | — |

Table 39 Storage systems information (CPQSTSYS.MIB)

| Trap name | OID (IML) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| CpqSsBoxFanStatus:degraded | _5 | — | 8008_2 | — |
| CpqSs3TempFailed | 8009 | — | 8011 | — |
| CpqSs3TempDegraded | 8010 | — | 8011 | — |
| CpqSs3TempOk | 8011 | — | — | — |
| CpqSs3SidePanelInPlace | 8012 | — | — | — |
| CpqSs3SidePanelInRemoved | 8013 | — | 8012 | — |
| CpqSs4PwrSupplyDegraded | 8015 | — | 8015 | — |
| CpqSsBoxFltTolPwrSupplyStatus:ok | _2 | — | — | — |
| CpqSsBoxFltTolPwrSupplyStatus:degraded | _3 | — | 8015_2 | — |
| CpqSsBoxFltTolPwrSupplyStatus:failed | _4 | — | 8015_2 | — |
| CpqSsBoxFltTolPwrSupplyStatus:noFltTolPower | _5 | — | — | — |
| CpqSsExPowerSupplyUpsStatusChange | 8018 | — | 8018 | — |
| CpqSsPowerSupplyUpsStatus:noUps | _2 | — | — | — |
| CpqSsPowerSupplyUpsStatus:ok | _3 | — | — | — |
| CpqSsPowerSupplyUpsStatus:powerFailed | _4 | — | 8018_3 | — |
| CpqSsPowerSupplyUpsStatus:batteryLow | _5 | — | 8018_3 | — |
| CpqSsExTempSensorStatusChange | 8019 | — | 8019 | — |
| CpqSsTempSensorStatus:ok | _2 | — | — | — |
| CpqSsTempSensorStatus:degraded | _3 | — | 8019_2 | — |
| CpqSsTempSensorStatus:failed | _4 | — | 8019_2 | — |
| CpqSsEx2FanStatusChange | 8020 | — | — | — |
| CpqSsFanModuleStatus:notInstalled | _2 | — | — | — |
| CpqSsFanModuleStatus:ok | _3 | — | — | — |
| CpqSsFanModuleStatus:degraded | _4 | — | 8020_3 | — |
| CpqSsFanModuleStatus:failed | _5 | — | 8020_3 | — |
| CpqSsEx2PowerSupplyStatusChange | 8021 | — | — | — |
| CpqSsPowerSupplyStatus:notInstalled | _2 | — | — | — |
| CpqSsPowerSupplyStatus:ok | _3 | — | — | — |
| CpqSsPowerSupplyStatus:failed | _4 | — | 8021_3 | — |
| CpqSsExBackplaneFanStatusChange | 8022 | — | — | — |
| CpqSsBackplaneFanStatus:notInstalled | _2 | — | 8022_3 | — |
| CpqSsBackplaneFanStatus:ok | _3 | — | — | — |
| CpqSsBackplaneFanStatus:degraded | _4 | — | 8022_3 | — |
| CpqSsBackplaneFanStatus:failed | _5 | — | 8022_3 | — |
| CpqSsBackplaneFanStatus:notSupported | _6 | — | 8022_3 | — |
| CpqSsBackplaneFanStatus:degraded-Fan 1 failed | _7 | — | 8022_3 | * |
| CpqSsBackplaneFanStatus:degraded-Fan 2Failed | _8 | — | 8022_3 | * |
| CpqSsExBackplaneTempStatusChange | 8023 | — | — | — |
| CpqSsBackplaneTempStatus:noTemp | _2 | — | 8023_3 | — |

Table 39 Storage systems information (CPQSTSYS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqSsBackplaneTempStatus:ok | _3 | — | — | — |
| CpqSsBackplaneTempStatus:degraded | _4 | — | 8023_3 | — |
| CpqSsBackplaneTempStatus:failed | _5 | — | 8023_3 | — |
| CpqSsBackplaneTempStatus:notSupported | _6 | — | 8023_3 | — |
| CpqSsExBackplanePowerSupplyStatusChange | 8024 | — | — | — |
| CpqSsBackplaneFtpsStatus:noFltTolPower | _2 | — | 8024_3 | — |
| CpqSsBackplaneFtpsStatus:ok | _3 | — | — | — |
| CpqSsBackplaneFtpsStatus:degraded | _4 | — | 8024_3 | — |
| CpqSsBackplaneFtpsStatus:failed | _5 | — | 8024_3 | — |
| CpqSsBackplaneFtpsStatus:notSupported | _6 | — | 8024_3 | — |
| CpqSsBackplaneFtpsStatus:noFltTolPower-Bay1Missing | _7 | — | 8024_3 | * |
| CpqSsBackplaneFtpsStatus:noFltTolPower-Bay2Missing | _8 | — | 8024_3 | * |
| CpqSsExRecoveryServerStatusChange | 8025 | — | — | — |
| CpqSsChassisRsoStatus:notSupported | _2 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:notConfigured | _3 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:disabled | _4 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:daemonDownDisabled | _5 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:ok | _6 | — | — | — |
| CpqSsChassisRsoStatus:daemonDownActive | _7 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:noSecondary | _8 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:daemonDownNoSecondary | _9 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:linkDown | _10 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:daemonDownLinkDown | _11 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:secondaryRunningAuto | _12 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:secondaryRunningUser | _13 | — | 8025_6 | — |
| CpqSsChassisRsoStatus:evTimeoutError | _14 | — | 8025_6 | — |
| CpqSs5FanStatusChange | 8026 | — | — | — |
| CpqSsBoxFanStatus:ok | _2 | — | — | — |
| CpqSsBoxFanStatus:failed | _3 | — | 8026_2 | — |
| CpqSsBoxFanStatus:noFan | _4 | — | 8026_2 | — |
| CpqSsBoxFanStatus:degraded | _5 | — | 8026_2 | — |
| CpqSs5TempStatusChange | 8027 | — | — | — |
| cpqSsBoxTempStatus:ok | _2 | — | — | — |
| cpqSsBoxTempStatus:degraded | _3 | — | 8027_2 | — |
| cpqSsBoxTempStatus:failed | _4 | — | 8027_2 | — |
| cpqSsBoxTempStatus:noTemp | _5 | — | 8027_2 | — |

Table 39 Storage systems information (CPQSTSYS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| CpqSs5PwrSupplyStatusChange | 8028 | — | — | — |
| CpqSsBoxFltTolPwrSupplyStatus:ok | _2 | — | — | — |
| CpqSsBoxFltTolPwrSupplyStatus:degraded | _3 | — | 8028_2 | — |
| CpqSsBoxFltTolPwrSupplyStatus:failed | _4 | — | 8028_2 | — |
| CpqSsBoxFltTolPwrSupplyStatus:noFltTolPower | _5 | — | 8028_2 | — |
| cpqSs6FanStatusChange | 8029 | — | — | — |
| CpqSsBoxFanStatus:ok | _2 | — | — | — |
| CpqSsBoxFanStatus:failed | _3 | — | 8029_2 | — |
| CpqSsBoxFanStatus:noFan | _4 | — | 8029_2 | — |
| CpqSsBoxFanStatus:degraded | _5 | — | 8029_2 | — |
| cpqSs6TempStatusChange | 8030 | — | — | — |
| cpqSsBoxTempStatus:ok | _2 | — | — | — |
| cpqSsBoxTempStatus:degraded | _3 | — | 8030_2 | — |
| cpqSsBoxTempStatus:failed | _4 | — | 8030_2 | — |
| cpqSsBoxTempStatus:noTemp | _5 | — | 8030_2 | — |
| cpqSs6PwrSupplyStatusChange | 8031 | — | — | — |
| CpqSsBoxFltTolPwrSupplyStatus:ok | _2 | — | — | — |
| CpqSsBoxFltTolPwrSupplyStatus:degraded | _3 | — | 8031_2 | — |
| CpqSsBoxFltTolPwrSupplyStatus:failed | _4 | — | 8031_2 | — |
| CpqSsBoxFltTolPwrSupplyStatus:noFltTolPower | _5 | — | 8031_2 | — |

Remote Insight board information (CPQSM2.MIB)

Table 40 Remote Insight board information (CPQSM2.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------------------|-----------|-----------|------------|---------------------|
| CpqSm2ServerReset | 9001 | — | — | — |
| CpqSm2ServerPowerOutage | 9002 | — | — | — |
| CpqSm2UnauthorizedLoginAttempts | 9003 | — | — | — |
| CpqSm2BatteryFailed | 9004 | — | — | — |
| CpqSm2SelfTestError | 9005 | — | — | — |
| CpqSm2InterfaceError | 9006 | — | — | — |
| CpqSm2BatteryDisconnected | 9007 | — | — | — |
| CpqSm2KeyboardCableDisconnected | 9008 | — | — | — |
| CpqSm2MouseCableDisconnected | 9009 | — | — | — |
| CpqSm2ExternalPowerCableDisconnected | 9010 | — | — | — |
| CpqSm2LogsFull | 9011 | — | — | — |
| CpqSm2SecurityOverrideEngaged | 9012 | — | — | — |
| CpqSm2SecurityOverrideDisengaged | 9013 | — | — | — |
| CpqSm2ServerFatalError | 9014 | — | — | * |

Threshold management (CPQTHRSH.MIB)

Table 41 Threshold management (CPQTHRSH.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------------|-----------|-----------|------------|---------------------|
| CpqMeRisingAlarmExtended | 10005 | — | — | — |
| CpqMeFallingAlarmExtended | 10006 | — | — | — |
| CpqMeCriticalRisingAlarmExtended | 10007 | — | — | — |
| CpqMeCriticalFallingAlarmExtended | 10008 | — | — | — |

Host system information (CPQHOST.MIB)

Table 42 Host system information (CPQHOST.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---------------------------------|-----------|-----------|------------|---------------------|
| CpqHo2GenericTrap | 11003 | — | — | — |
| CpqHo2AppErrorTrap | 11004 | — | — | — |
| CpqHoProcessEventTrap | 11011 | — | — | — |
| CpqHoCriticalSoftwareUpdateTrap | 11014 | — | — | — |
| CpqHoCrashDumpNotEnabledTrap | 11015 | — | — | — |
| CpqHoBootPagingFileTooSmallTrap | 11016 | — | — | — |

Uninterruptible power supply (CPQUPS.MIB)

Table 43 Uninterruptible power supply (CPQUPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------|-----------|-----------|------------|---------------------|
| CpqUps2LineFailed | 12006 | — | 12007 | — |
| CpqUps2LineOk | 12007 | — | — | — |
| CpqUps2Shutdown | 12008 | — | 12009 | — |
| CpqUps2Confirmation | 12009 | — | — | — |
| CpqUps2BatteryLow | 12010 | — | — | — |
| CpqUpsOverload | 12011 | — | — | — |
| CpqUpsPendingBatteryFailure | 12012 | — | — | — |
| CpqUpsGenericCritical | 12013 | — | — | — |
| CpqUpsGenericInfo | 12014 | — | — | — |

Recovery server information (CPQRECOV.MIB)

Table 44 Recovery server information (CPQRECOV.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------|-----------|-----------|------------|---------------------|
| CpqRsPartnerFailed | 13001 | — | — | — |
| CpqRsStandbyCableFailure | 13002 | — | — | — |
| CpqRsStandbyFailure | 13003 | — | — | — |
| CpqRsOnlineCableFailure | 13004 | — | — | — |
| CpqRsFailoverFailed | 13005 | — | — | — |

Manageable IDE drives (CPQIDE.MIB)

Table 45 Manageable IDE drives (CPQIDE.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-------------------------------------|-----------|-----------|------------|---------------------|
| CpqIdeDriveDegraded | 14001 | — | 14002 | — |
| CpqIdeDriveOk | 14002 | — | — | — |
| CpqIdeDriveUltraAtaDegraded | 14003 | — | 14002 | — |
| CpqIdeAtaDiskStatusChange | 14004 | — | — | — |
| CpqIdeAtaDiskStatus:ok | _2 | — | — | — |
| CpqIdeAtaDiskStatus:smartError | _3 | — | 14004_2 | — |
| CpqIdeAtaDiskStatus:failed | _4 | — | 14004_2 | — |
| CpqIdeLogicalDriveStatusChange | 14005 | — | — | — |
| CpqIdeLogicalDriveStatus:ok | _2 | — | — | — |
| CpqIdeLogicalDriveStatus:degraded | _3 | — | 14005_2 | — |
| CpqIdeLogicalDriveStatus:rebuilding | _4 | — | 14005_2 | — |
| CpqIdeLogicalDriveStatus:failed | _5 | — | 14005_2 | — |

Cluster systems information (CPQCLUS.MIB)

Table 46 Cluster systems information (CPQCLUS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|----------------------------|-----------|-----------|------------|---------------------|
| CpqClusterNodeDegraded | 15003 | — | — | — |
| CpqClusterNodeFailed | 15004 | — | — | — |
| CpqClusterResourceDegraded | 15005 | — | — | — |
| CpqClusterResourceFailed | 15006 | — | — | — |
| CpqClusterNetworkDegraded | 15007 | — | — | — |
| CpqClusterNetworkFailed | 15008 | — | — | — |

Fibre Channel array information (CPQFCA.MIB)

Table 47 Fibre Channel array information (CPQFCA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---------------------------------------|-----------|-----------|------------|---------------------|
| CpqFcaLogDrvStatusChange | 16001 | — | 16001 | — |
| CpqFcaLogDrvStatus:ok | _2 | — | — | — |
| CpqFcaLogDrvStatus:failed | _3 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:unconfigured | _4 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:recovering | _5 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:readyForRebuild | _6 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:rebuilding | _7 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:wrongDrive | _8 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:badConnect | _9 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:overheating | _10 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:shutdown | _11 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:expanding | _12 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:notAvailable | _13 | — | 16001_2 | — |
| CpqFcaLogDrvStatus:queuedForExpansion | _14 | — | 16001_2 | — |
| CpqFcaSpareStatusChange | 16002 | — | 16002 | — |
| CpqFcaSpareStatusChange:inactive | _2 | — | 16002_2 | — |
| CpqFcaSpareStatusChange:failed | _3 | — | 16002_5 | — |
| CpqFcaSpareStatusChange:building | _4 | — | — | — |
| CpqFcaSpareStatusChange:active | _5 | — | — | — |
| CpqFcTapeCntlrStatusChange | 16008 | — | 16008 | — |
| CpqFcTapeCntlrStatus:ok | _2 | — | — | — |
| CpqFcTapeCntlrStatus:offline | _3 | — | 16008_2 | — |
| CpqFcCntlrActive | 16014 | — | — | — |
| CpqFca2PhyDrvStatusChange | 16016 | — | — | — |
| CpqFcaPhyDrvStatus:unconfigured | _2 | — | — | — |
| CpqFcaPhyDrvStatus:ok | _3 | — | — | — |
| CpqFcaPhyDrvStatus:threshExceeded | _4 | 16016_3 | — | — |

Table 47 Fibre Channel array information (CPQFCA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---------------------------------------|-----------|-----------|------------|---------------------|
| CpqFcaPhyDrvStatus:predictiveFailure | _5 | 16016_3 | — | — |
| CpqFcaPhyDrvStatus:failed | _6 | 16016_3 | — | — |
| CpqFca2AccelStatusChange | 16017 | — | — | — |
| CpqFcaAccelStatus:invalid | _2 | — | — | — |
| CpqFcaAccelStatus:enable | _3 | — | — | — |
| CpqFcaAccelStatus:tmpDisabled | _4 | — | — | — |
| CpqFcaAccelStatus:permDisabled | _5 | — | — | — |
| CpqFca2AccelBadDataTrap | 16018 | — | — | — |
| CpqFca2AccelBatteryFailed | 16019 | — | — | — |
| CpqFca2CntlrStatusChange | 16020 | — | — | — |
| CpqFcaCntlrStatus:ok | _2 | — | — | — |
| CpqFcaCntlrStatus:failed | _3 | — | 16020_2 | — |
| CpqFcaCntlrStatus:offline | _4 | — | 16020_2 | — |
| CpqFca2HostCntlrStatusChange | 16021 | — | — | — |
| CpqFcaHostCntlrStatus:ok | _2 | — | — | — |
| CpqFcaHostCntlrStatus:failed | _3 | — | 16021_2 | — |
| CpqFcaHostCntlrStatus:shutdown | _4 | — | 16021_2 | — |
| CpqFcaHostCntlrStatus:loopDegraded | _5 | — | 16021_2 | — |
| CpqFcaHostCntlrStatus:loopFailed | _6 | — | 16021_2 | — |
| CpqExtArrayLogDrvStatusChange | 16022 | — | — | — |
| CpqFcaLogDrvStatus:ok | _2 | — | — | — |
| CpqFcaLogDrvStatus:failed | _3 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:unconfigured | _4 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:recovering | _5 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:readyForRebuild | _6 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:rebuilding | _7 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:wrongDrive | _8 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:badConnect | _9 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:overheating | _10 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:shutdown | _11 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:expanding | _12 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:notAvailable | _13 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:queuedForExpansion | _14 | — | 16022_2 | — |
| CpqFcaLogDrvStatus:hardError | _15 | — | 16022_2 | — |
| CpqExtTapeDriveStatusChange | 16023 | — | — | — |
| CpqFcTapeDriveStatus:ok | _2 | — | — | — |
| CpqFcTapeDriveStatus:degraded | _3 | — | 16023_2 | — |
| CpqFcTapeDriveStatus:failed | _4 | — | 16023_2 | — |
| CpqFcTapeDriveStatus:offline | _5 | — | 16023_2 | — |
| CpqFcTapeDriveStatus:missingWasOk | _6 | — | 16023_2 | — |

Table 47 Fibre Channel array information (CPQFCA.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqFcTapeDriveStatus:missingWasOffline | _7 | — | 16023_2 | — |
| CpqExtTapeDriveCleaningRequired | 16024 | — | — | — |
| CpqExtTapeDriveCleanTapeReplace | 16025 | — | — | — |
| CpqExtTapeLibraryStatusChange | 16026 | — | — | — |
| CpqFcTapeLibraryStatus:ok | _2 | — | — | — |
| CpqFcTapeLibraryStatus:degraded | _3 | — | 16026_2 | — |
| CpqFcTapeLibraryStatus:failed | _4 | — | 16026_2 | — |
| CpqFcTapeLibraryStatus:offline | _5 | — | 16026_2 | — |
| CpqExtTapeLibraryDoorStatusChange | 16027 | — | — | — |
| CpqFca3HostCntlrStatusChange | 16028 | — | — | — |
| CpqFcaHostCntlrStatus:ok | _2 | — | — | — |
| CpqFcaHostCntlrStatus:failed | _3 | — | 16028_2 | — |
| CpqFcaHostCntlrStatus:shutdown | _4 | — | 16028_2 | — |
| CpqFcaHostCntlrStatus:loopDegraded | _5 | — | 16028_2 | — |
| CpqFcaHostCntlrStatus:loopFailed | _6 | — | 16028_2 | — |

Network interface card information (CPQNIC.MIB)

Table 48 Network interface card information (CPQNIC.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---------------------------------|-----------|-----------|------------|---------------------|
| CpqNic2ConnectivityRestored | 18005 | — | — | — |
| CpqNic2ConnectivityLost | 18006 | — | 18005 | — |
| CpqNic2RedundancyIncreased | 18007 | — | 18008 | — |
| CpqNic2RedundancyReduced | 18008 | — | — | — |
| CpqNicVirusLikeActivityDetected | 18009 | — | — | — |
| CpqNicVirusLikeActivityStopped | 18010 | — | 18009 | — |

Operating system management (CPQWINOS.MIB)

Table 49 Operating system management (CPQWINOS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|----------------------------------|-----------|-----------|------------|---------------------|
| CpqOsCpuTimeDegraded | 19001 | — | — | — |
| CpqOsCpuTimeFailed | 19002 | — | — | — |
| CpqOsCacheCopyReadHitsDegraded | 19003 | — | — | — |
| CpqOsCacheCopyReadHitsFailed | 19004 | — | — | — |
| CpqOsPageFileUsageDegraded | 19005 | — | — | — |
| CpqOsPageFileUsageFailed | 19006 | — | — | — |
| CpqOsLogicalDiskBusyTimeDegraded | 19007 | — | — | — |
| CpqOsLogicalDiskBusyTimeFailed | 19008 | — | — | — |

Rack and power management (CPQRPM.MIB)

Table 50 Rack and power management (CPQRPM.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------------|-----------|-----------|------------|---------------------|
| cpqRPMTrapDeviceConnected | RPM_1 | — | — | — |
| cpqRPMTrapConnectionLost | RPM_2 | — | RPM_1 | — |
| cpqRPMTrapLookupFailed | RPM_3 | — | — | — |
| cpqRPMTrapConnectionFailed | RPM_4 | — | — | — |
| cpqRPMTrapDeviceSettingsChanged | RPM_5 | — | — | — |
| cpqRPMTrapCMCTemp1BelowMin | RPM_10001 | — | RPM_10004 | * |
| cpqRPMTrapCMCTemp1AboveWarn | RPM_10002 | — | RPM_10004 | * |
| cpqRPMTrapCMCTemp1AboveMax | RPM_10003 | — | RPM_10004 | * |
| cpqRPMTrapCMCTemp1Normal | RPM_10004 | — | — | * |
| cpqRPMTrapCMCTemp2BelowMin | RPM_10005 | — | RPM_10008 | * |
| cpqRPMTrapCMCTemp2AboveWarn | RPM_10006 | — | RPM_10008 | * |
| cpqRPMTrapCMCTemp2AboveMax | RPM_10007 | — | RPM_10008 | * |
| cpqRPMTrapCMCTemp2Normal | RPM_10008 | — | — | * |
| CpqRPMTrapCMCVoltUnder | RPM_10011 | — | RPM_10013 | * |
| CpqRPMTrapCMCVoltOver | RPM_10012 | — | RPM_10013 | * |
| CpqRPMTrapCMCVoltNormal | RPM_10013 | — | — | * |
| CpqRPMTrapCMCHmdtUnder | RPM_10021 | — | RPM_10023 | * |
| CpqRPMTrapCMCHmdtOver | RPM_10022 | — | RPM_10023 | * |
| CpqRPMTrapCMCHmdtNormal | RPM_10023 | — | — | * |
| cpqRPMTrapCMCSmokeDetected | RPM_10031 | — | RPM_10032 | * |
| cpqRPMTrapCMCSmokeCleared | RPM_10032 | — | — | * |
| cpqRPMTrapCMShockDetected | RPM_10041 | — | RPM_10042 | * |
| CpqRPMTrapCMShockCleared | RPM_10042 | — | — | * |
| cpqRPMTrapCMCAux1Alarm | RPM_10051 | — | RPM_10052 | * |
| cpqRPMTrapCMCAux1Cleared | RPM_10052 | — | — | * |
| cpqRPMTrapCMCAux2Alarm | RPM_10053 | — | RPM_10054 | * |
| cpqRPMTrapCMCAux2Cleared | RPM_10054 | — | — | * |
| cpqRPMTrapCMCInput1Opened | RPM_10101 | — | RPM_10102 | * |
| cpqRPMTrapCMCInput1Closed | RPM_10102 | — | — | * |
| cpqRPMTrapCMCInput2Opened | RPM_10103 | — | RPM_10104 | * |
| cpqRPMTrapCMCInput2Closed | RPM_10104 | — | — | * |
| cpqRPMTrapCMCInput3Opened | RPM_10105 | — | RPM_10106 | * |
| cpqRPMTrapCMCInput3Closed | RPM_10106 | — | — | * |
| cpqRPMTrapCMCInput4Opened | RPM_10107 | — | RPM_10108 | * |
| cpqRPMTrapCMCInput4Closed | RPM_10108 | — | — | * |
| cpqRPMTrapCMCLockset1Unlocked | RPM_10111 | — | RPM_10114 | * |
| cpqRPMTrapCMCLockset1FailedToLock | RPM_10112 | — | RPM_10114 | * |
| cpqRPMTrapCMCLockset1Error | RPM_10113 | — | RPM_10114 | * |
| cpqRPMTrapCMCLockset1Locked | RPM_10114 | — | — | * |

Table 50 Rack and power management (CPQRPM.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| cpqRPMTrapCMCLockset2Unlocked | RPM_10116 | — | RPM_10119 | * |
| cpqRPMTrapCMCLockset2FailedToLock | RPM_10117 | — | RPM_10119 | * |
| cpqRPMTrapCMCLockset2Error | RPM_10118 | — | RPM_10119 | * |
| cpqRPMTrapCMCLockset2Locked | RPM_10119 | — | — | * |
| cpqRPMTrapCMCLockset1Normal | RPM_10134 | — | — | * |
| cpqRPMTrapCMCLockset2Normal | RPM_10135 | — | — | * |
| cpqRPMTrapUPSInputVoltageBelowMin | 20001 | — | 20003 | — |
| cpqRPMTrapUPSInputVoltageAboveMax | 20002 | — | 20003 | — |
| cpqRPMTrapUPSInputVoltageNormal | 20003 | — | — | — |
| cpqRPMTrapUPSOutputVoltageBelowMin | 20011 | — | 21020 | — |
| cpqRPMTrapUPSOutputVoltageAboveMax | 20012 | — | 21020 | — |
| cpqRPMTrapUPSOutputOverload | 20014 | — | 20015 | — |
| cpqRPMTrapUPSOutputOverloadCleared | 20015 | — | — | — |
| cpqRPMTrapUPSBatteryDepleted | 20022 | — | 20022 | — |
| cpqRPMTrapUPSBatteryLevelNormal | 20023 | — | — | — |
| cpqRPMTrapUPSOnBypass | 20032 | — | — | — |
| cpqRPMTrapUPSTemperatureLow | 20101 | — | 20103 | — |
| cpqRPMTrapUPSTemperatureHigh | 20102 | — | 20103 | — |
| cpqRPMTrapUPSTemperatureNormal | 20103 | — | — | — |
| cpqRPMTrapUPSInternalFailure | 20111 | — | 20111 | — |
| cpqRPMTrapUPSInternalFailureCleared | 20112 | — | — | — |
| cpqRPMTrapUPSBatteryFailure | 20121 | — | 20122 | — |
| cpqRPMTrapUPSBatteryFailureCleared | 20122 | — | — | — |
| cpqRPMTrapUPSDiagnosticTestFailed | 20131 | — | 20132 | — |
| cpqRPMTrapUPSDiagnosticTestSucceeded | 20132 | — | — | — |
| cpqRPMTrapUPSInputUnderOverFreq | 20141 | — | 20142 | — |
| cpqRPMTrapUPSInputUnderOverFreqCleared | 20142 | — | — | — |
| cppqRPMtrapUPSStartedOnBattery | 20151 | — | 20152 | — |
| cppqRPMtrapUPSStartedOnBatteryCleared | 20152 | — | — | — |
| cpqRPMTrapUPSByypassNotAvailable | 20161 | — | 20162 | — |
| cpqRPMTrapUPSByypassNotAvailableCleared | 20162 | — | — | — |
| cpqRPMTrapUPSUtilityFail | 20171 | — | 20172 | — |
| cpqRPMTrapUPSUtilityFailCleared | 20172 | — | — | — |
| cpqRPMTrapUPSUtilityNotPresent | 20181 | — | 20182 | — |
| cpqRPMTrapUPSUtilityNotPresentCleared | 20182 | — | — | — |
| cpqRPMTrapUPSByypassManualTurnedOn | 20191 | — | 20192 | — |
| cpqRPMTrapUPSByypassManualTurnedOff | 20192 | — | — | — |
| cpqRPMTrapUPSSiteWiringFault | 20201 | — | 20202 | — |
| cpqRPMTrapUPSSiteWiringNormal | 20202 | — | — | — |
| cpqRPMtrapUPSTemperatureOutOfRange | 21007 | — | 21008 | — |

Table 50 Rack and power management (CPQRPM.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| cpqRPMtrapUPSTemperatureOutOfRangeCleared | 21008 | — | — | — |
| cpqRPMTrapUPSShutdownPending | 21011 | — | 21012 | — |
| cpqRPMTrapUPSShutdownPendingCleared | 21012 | — | — | — |
| cpqRPMTrapUPSShutdownImminent | 21013 | — | 21014 | — |
| cpqRPMTrapUPSShutdownImminentCleared | 21014 | — | — | — |
| cpqRPMtrapUPSOutputoutofRange | 21019 | — | 21020 | — |
| cpqRPMTrapUPSOutputVoltageNormal | 21020 | — | — | — |
| cpqRPMtrapUPSInputOutofRange | 21021 | — | 21022 | — |
| cpqRPMtrapUPSInputOutofRangeCleared | 21022 | — | — | — |
| cpqRPMTrapUPSLossOfRedundancy | 21023 | — | 21024 | — |
| cpqRPMTrapUPSLossOfRedundancyCleared | 21024 | — | — | — |
| cpqRPMTrapUPSOnBuck | 21029 | — | — | — |
| cpqRPMTrapUPSOnBoost | 21031 | — | — | — |
| cpqRPMTrapUPSManualLoadDumped | 21033 | — | 21034 | — |
| cpqRPMTrapUPSManualLoadDumpedCleared | 21034 | — | — | — |
| cpqRPMTrapUPSFanFailure | 21035 | — | 21036 | — |
| cpqRPMTrapUPSFanFailureCleared | 21036 | — | — | — |
| cpqRPMTrapUPSEPOInitiated | 21037 | — | — | — |
| cpqRPMTrapUPSCheckBreaker | 21041 | — | 21042 | — |
| cpqRPMTrapUPSCheckBreakerCleared | 21042 | — | — | — |
| cpqRPMTrapUPSCabinetDoorOpen | 21045 | — | 21046 | — |
| cpqRPMTrapUPSCabinetDoorOpenCleared | 21046 | — | — | — |
| cpqRPMtrapUPSBypassOnAuto | 21047 | — | 21048 | — |
| cpqRPMtrapUPSBypassOnAutoCleared | 21048 | — | — | — |
| cpqRPMTrapUPS Batteries Disconnected | 21053 | — | 21054 | — |
| cpqRPMTrapUPS Batteries DisconnectedCleared | 21054 | — | — | — |
| cpqRPMTrapUPS Battery Low | 21055 | — | 21056 | — |
| cpqRPMTrapUPS Battery LowCleared | 21056 | — | — | — |
| cpqRPMTrapUPS Battery Discharged | 21057 | — | 21058 | — |
| cpqRPMTrapUPS Battery DischargedCleared | 21058 | — | — | — |
| cpqRPMtrapUPSBypassONManual | 21059 | — | 21060 | — |
| cpqRPMtrapUPSBypassOffManual | 21060 | — | — | — |
| cpqRPMTrapUPSOnBattery | 21063 | — | 21064 | — |
| cpqRPMTrapUPSOnUtilityPower | 21064 | — | — | — |
| cpqRPMTrapUPSDCStartOccurred | 29998 | — | 29999 | — |
| cpqRPMTrapUPSDCStartOccurredCleared | 29999 | — | — | — |
| cpqRPMTestTrap | 50001 | — | — | * |
| cpqPMTrapCritical | PM_1 | — | — | — |
| cpqPMTrapWarning | PM_2 | — | — | — |
| cpqPMTrapInformation | PM_3 | — | — | — |

Table 50 Rack and power management (CPQRPM.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|------------------|-----------|-----------|------------|---------------------|
| cpqPMTripCleared | PM_4 | — | — | — |

Rack enclosure information (CPQRACK.MIB)

Table 51 Rack enclosure information (CPQRACK.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqRackNameChanged | 22001 | — | — | — |
| CpqRackEnclosureNameChanged | 22002 | — | — | — |
| CpqRackEnclosureRemoved | 22003 | — | 22004 | — |
| CpqRackEnclosureInserted | 22004 | — | — | — |
| CpqRackEnclosureTempFailed | 22005 | — | 22007 | — |
| CpqRackEnclosureTempDegraded | 22006 | — | 22007 | — |
| CpqRackEnclosureTempOk | 22007 | — | — | — |
| CpqRackEnclosureFanFailed | 22008 | — | 22010 | — |
| CpqRackEnclosureFanDegraded | 22009 | — | 22010 | — |
| CpqRackEnclosureFanOk | 22010 | — | — | — |
| CpqRackEnclosureFanRemoved | 22011 | — | 22012 | — |
| CpqRackEnclosureFanInserted | 22012 | — | — | — |
| CpqRackPowerSupplyFailed | 22013 | — | 22015 | — |
| CpqRackPowerSupplyDegraded | 22014 | — | 22015 | — |
| CpqRackPowerSupplyOk | 22015 | — | — | — |
| CpqRackPowerSupplyRemoved | 22016 | — | 22017 | — |
| CpqRackPowerSupplyInserted | 22017 | — | — | — |
| CpqRackPowerSubsystemNotRedundant | 22018 | — | — | — |
| CpqRackPowerSubsystemLineVoltageProblem | 22019 | — | — | — |
| CpqRackPowerSupplyInputLineStatus:noError | _1 | — | — | — |
| CpqRackPowerSupplyInputLineStatus: lineOverVoltage | _2 | — | 22019_1 | — |
| CpqRackPowerSupplyInputLineStatus: lineUnderVoltage | _3 | — | 22019_1 | — |
| CpqRackPowerSupplyInputLineStatus:lineHit | _4 | — | 22019_1 | — |
| CpqRackPowerSupplyInputLineStatus:brownout | _5 | — | 22019_1 | — |
| CpqRackPowerSupplyInputLineStatus: linePowerLoss | _6 | — | 22019_1 | — |
| CpqRackPowerSubsystemOverloadCondition | 22020 | — | — | — |
| CpqRackPowerShedAutoShutdown | 22021 | — | — | — |
| CpqRackServerPowerOnFailedNotRedundant | 22022 | — | — | — |
| CpqRackServerPowerOnFailedNotEnoughPower | 22023 | — | — | — |
| CpqRackServerPowerOnFailedEnclosure NotFound | 22024 | — | — | — |

Table 51 Rack enclosure information (CPQRACK.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqRackServerPowerOnFailedPowerChassisNotFound | 22025 | — | — | — |
| CpqRackServerPowerOnManualOverride | 22026 | — | — | — |
| CpqRackFuseOpen | 22027 | — | — | — |
| CpqRackServerBladeRemoved | 22028 | — | 22029 | — |
| CpqRackServerBladeInserted | 22029 | — | — | — |
| CpqRackPowerChassisNotLoadBalanced | 22030 | — | — | — |
| CpqRackPowerChassisDcPowerProblem | 22031 | — | — | — |
| CpqRackPowerChassisAcFacilityPowerExceeded | 22032 | — | — | — |
| CpqRackPowerUnknownPowerConsumption | 22033 | — | — | — |
| CpqRackPowerChassisLoadBalancingWireMissing | 22034 | — | — | — |
| CpqRackPowerChassisTooManyPowerChassis | 22035 | — | — | — |
| CpqRackPowerChassisConfigError | 22036 | — | — | — |
| cpqRackEnclosureManagerDegraded | 22037 | — | 22038 | * |
| cpqRackEnclosureManagerOk | 22038 | — | — | * |
| cpqRackEnclosureManagerRemoved | 22039 | — | 22040 | * |
| cpqRackEnclosureManagerInserted | 22040 | — | — | * |
| cpqRackManagerPrimaryRole | 22041 | — | — | * |
| cpqRackServerBladeEKeyingFailed | 22042 | — | 22043 | * |
| cpqRackServerBladeEKeyingOK | 22043 | — | — | * |
| cpqRackNetConnectorRemoved | 22044 | — | 22045 | * |
| cpqRackNetConnectorInserted | 22045 | — | — | * |
| cpqRackNetConnectorFailed | 22046 | — | 22048 | * |
| cpqRackNetConnectorDegraded | 22047 | — | 22048 | * |
| cpqRackNetConnectorOk | 22048 | — | — | * |

Console management controller (CPQCMC.MIB)

Table 52 Console management controller (CPQCMC.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|----------------------------|-----------|-----------|------------|---------------------|
| CpqCmcalarmTemp1 | 153001 | — | — | — |
| CpqCmcStatusTemp1:normal | _2 | — | — | — |
| CpqCmcStatusTemp1:warning | _3 | — | 153001_2 | — |
| CpqCmcStatusTemp1:overMax | _4 | — | 153001_2 | — |
| CpqCmcStatusTemp1:underMin | _5 | — | 153001_2 | — |
| CpqCmcStatusTemp1:noSensor | _6 | — | 153001_2 | — |
| CpqCmcStatusTemp1:error | _7 | — | 153001_2 | — |
| CpqCmcalarmTemp2 | 153002 | — | — | — |
| CpqCmcStatusTemp2:normal | _2 | — | — | — |

Table 52 Console management controller (CPQCMC.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---|-----------|-----------|------------|---------------------|
| CpqCmcStatusTemp2:warning | _3 | — | 153002_2 | — |
| CpqCmcStatusTemp2:overMax | _4 | — | 153002_2 | — |
| CpqCmcStatusTemp2:underMin | _5 | — | 153002_2 | — |
| CpqCmcStatusTemp2:noSensor | _6 | — | 153002_2 | — |
| CpqCmcStatusTemp2:error | _7 | — | 153002_2 | — |
| CpqCmcalarmFan1 | 153003 | — | — | — |
| CpqCmcalarmFan2 | 153004 | — | — | — |
| CpqCmcalarmVoltage | 153005 | — | — | — |
| CpqCmcalarmHumidity | 153006 | — | — | — |
| CpqCmcStatusHumidity:normal | _2 | — | — | — |
| CpqCmcStatusHumidity:overMax | _3 | — | 153006_2 | — |
| CpqCmcStatusHumidity:underMin | _4 | — | 153006_2 | — |
| CpqCmcStatusHumidity:noSensor | _5 | — | 153006_2 | — |
| CpqCmcStatusHumidity:error | _6 | — | 153006_2 | — |
| CpqCmcalarmInput1 | 153007 | — | — | — |
| CpqCmcalarmInput2 | 153008 | — | — | — |
| CpqCmcalarmInput3 | 153009 | — | — | — |
| CpqCmcalarmInput4 | 153010 | — | — | — |
| CpqCmcalarmLock1 | 153011 | — | — | — |
| CpqCmcStatusLock1 Lock:locked | _2 | — | — | — |
| CpqCmcStatusLock1 Lock:unlockedAuto | _3 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedTime | _4 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedSmoke | _5 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedKey | _6 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedPwrFail | _7 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedBattLow | _8 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedNetFail | _9 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:unlockedConnFail | _10 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:readyToLock | _11 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:alarm | _12 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:configError | _13 | — | 153011_2 | — |
| CpqCmcStatusLock1 Lock:notAvail | _14 | — | 153011_2 | — |
| CpqCmcalarmLock2 | 153012 | — | — | — |
| CpqCmcStatusLock2Lock:locked | _2 | — | — | — |
| CpqCmcStatusLock2Lock:unlockedAuto | _3 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:unlockedTime | _4 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:unlockedSmoke | _5 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:unlockedKey | _6 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:unlockedPwrFail | _7 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:unlockedBattLow | _8 | — | 153012_2 | — |

Table 52 Console management controller (CPQCMC.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| CpqCmcStatusLock2Lock:unlockedNetFail | _9 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:unlockedConnFail | _10 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:readyToLock | _11 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:alarm | _12 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:configError | _13 | — | 153012_2 | — |
| CpqCmcStatusLock2Lock:notAvail | _14 | — | 153012_2 | — |
| CpqCmcalarmSmoke | 153013 | — | — | — |
| CpqCmcStatusSmoke:cleared | _2 | — | — | — |
| CpqCmcStatusSmoke:present | _3 | — | 153013_2 | — |
| CpqCmcStatusSmoke:noSensor | _4 | — | 153013_2 | — |
| CpqCmcalarmShock | 153014 | — | — | — |
| CpqCmcStatusShock:cleared | _2 | — | — | — |
| CpqCmcStatusShock:present | _3 | — | 153014_2 | — |
| CpqCmcStatusShock:noSensor | _4 | — | 153014_2 | — |
| CpqCmcalarmAux1 | 153015 | — | — | — |
| CpqCmcStatusAux1:ok | _2 | — | — | — |
| CpqCmcStatusAux1:alarm | _3 | — | 153015_2 | — |
| CpqCmcStatusAux1:noSensor | _4 | — | 153015_2 | — |
| CpqCmcalarmAux2 | 153016 | — | — | — |
| CpqCmcStatusAux2:ok | _2 | — | — | — |
| CpqCmcStatusAux2:alarm | _3 | — | 153016_2 | — |
| CpqCmcStatusAux2:noSensor | _4 | — | 153016_2 | — |
| CpqCmcalarm1 | 153017 | — | — | — |
| CpqCmcStatusAlarm1:ok | _2 | — | — | — |
| CpqCmcStatusAlarm1:alarm | _3 | — | 153017_2 | — |
| CpqCmcalarm2 | 153018 | — | — | — |
| CpqCmcStatusAlarm2:ok | _2 | — | — | — |
| CpqCmcStatusAlarm2:alarm | _3 | — | 153018_2 | — |
| CpqCmcalarmLock1Dev | 153019 | — | — | — |
| CpqCmcStatusLock1Dev:ok | _2 | — | — | — |
| CpqCmcStatusLock1Dev:powerFail | _3 | — | 153019_2 | — |
| CpqCmcStatusLock1Dev:lowBattery | _4 | — | 153019_2 | — |
| CpqCmcStatusLock1Dev:replaceBatt | _5 | — | 153019_2 | — |
| CpqCmcStatusLock1Dev:missingBatt | _6 | — | 153019_2 | — |
| CpqCmcStatusLock1Dev:noConnect | _7 | — | 153019_2 | — |
| CpqCmcStatusLock1Dev:notAvail | _8 | — | 153019_2 | — |
| CpqCmcalarmLock2Dev | 153020 | — | — | — |
| CpqCmcStatusLock2Dev:ok | _2 | — | — | — |
| CpqCmcStatusLock2Dev:powerFail | _3 | — | 153020_2 | — |
| CpqCmcStatusLock2Dev:lowBattery | _4 | — | 153020_2 | — |

Table 52 Console management controller (CPQCMC.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|----------------------------------|-----------|-----------|------------|---------------------|
| CpqCmcStatusLock2Dev:replaceBatt | _5 | — | 153020_2 | — |
| CpqCmcStatusLock2Dev:missingBatt | _6 | — | 153020_2 | — |
| CpqCmcStatusLock2Dev:noConnect | _7 | — | 153020_2 | — |
| CpqCmcStatusLock2Dev:notAvail | _8 | — | 153020_2 | — |
| CpqCmcSetupChanged | 153100 | — | — | — |

CR3500 RAID controller (CPQCR.MIB)

Table 53 CR3500 RAID controller (CPQCR.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|---------------------------------------|-----------|-----------|------------|---------------------|
| CpqCrController1FailureTrap | 1 | — | 2 | — |
| CpqCrController1InformationTrap | 2 | — | — | — |
| CpqCrController2FailureTrap | 3 | — | 4 | — |
| CpqCrController2InformationTrap | 4 | — | — | — |
| CpqCrLogDriveInformationTrap | 5 | — | — | — |
| CpqCrLogDriveFailureTrap | 6 | — | 5 | — |
| CpqCrLogDriveReconstructTrap | 7 | — | 5 | — |
| CpqCrLogDriveReducedTrap | 8 | — | 5 | — |
| CpqCrLogDriveInitializingTrap | 9 | — | 5 | — |
| CpqCrDiskInformationTrap | 10 | — | — | — |
| CpqCrDiskFailureTrap | 11 | — | 10 | — |
| CpqCrDiskReconstructTrap | 12 | — | 14 | — |
| CpqCrDiskAvailableTrap | 13 | — | 14 | — |
| CpqCrDiskSpareTrap | 14 | — | — | — |
| CpqCrEMUNormalTrap | 15 | — | — | — |
| CpqCrEMUFanFailureTrap | 16 | — | 17 | — |
| CpqCrEMUFanInformationTrap | 17 | — | — | — |
| CpqCrEMUPowerSupplyFailureTrap | 18 | — | 19 | — |
| CpqCrEMUPowerSupplyInformationTrap | 19 | — | — | — |
| CpqCrExpCabFanFailureTrap | 20 | — | 21 | — |
| CpqCrExpCabFanInformationTrap | 21 | — | — | — |
| CpqCrExpCabPowerSupplyFailureTrap | 22 | — | 29 | — |
| CpqCrEMUTemperatureWarningTrap | 23 | — | 25 | — |
| CpqCrEMUTemperatureCriticalTrap | 24 | — | 25 | — |
| CpqCrEMUTemperatureInformationTrap | 25 | — | — | — |
| CpqCrExpCabTemperatureWarningTrap | 26 | — | 28 | — |
| CpqCrExpCabTemperatureCriticalTrap | 27 | — | 28 | — |
| CpqCrExpCabTemperatureInformationTrap | 28 | — | — | — |
| CpqCrExpCabPowerSupplyInformationTrap | 29 | — | — | — |
| CpqCrPhyDiskInformationTrap | 30 | — | — | — |

Table 53 CR3500 RAID controller (CPQCR.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------|-----------|-----------|------------|---------------------|
| CpqCrPhyDiskFailureTrap | 31 | — | 30 | — |
| CpqCrPhyDiskReconstructTrap | 32 | — | 33 | — |
| CpqCrPhyDiskAvailableTrap | 33 | — | — | — |
| CpqCrPhyDiskSpareTrap | 34 | — | — | — |

HP Storage Management Appliance (CPQSANAPP.MIB)

Table 54 HP Storage Management Appliance (CPQSANAPP.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------|-----------|-----------|------------|---------------------|
| swFailureTrap (1) | SanW_1 | — | SanW_4 | — |
| swWarningTrap (2) | SanW_2 | — | SanW_4 | — |
| swInformationTrap (4) | SanW_4 | — | — | — |

StorageWorks Command Console (CPQSWCC.MIB)

Table 55 StorageWorks Command Console (CPQSWCC.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------------|-----------------------------------|-----------|------------|---------------------|
| CpqSwccKzpcPhyDeviceEventTrap | Kzpc_1 | — | — | — |
| | _1 | — | — | — |
| | _2 | — | — | — |
| | _3 | — | — | — |
| CpqSwccKzpcVirtualDeviceEventTrap | Kzpc_2 | — | — | — |
| | _2 | — | — | — |
| | _3 | — | — | — |
| CpqSwccKzpcSubsystemEventTrap | Kzpc_3 | — | — | — |
| | _1 | — | — | — |
| | _2 | — | — | — |
| | _3 | — | — | — |
| CpqSwccFibreDeviceStatusChange | Fibre_1 | — | — | — |
| | _2 | — | — | — |
| | _3 | — | _2 | — |
| | _4 | — | _2 | — |
| | CpqSwccTapeControllerStatusChange | Tape_2 | — | — |
| CpqSwccEmuDevDeviceStatusChange | Emu_1 | — | — | — |
| | _2 | — | — | — |
| | _3 | — | _2 | — |
| | _4 | — | _2 | — |
| | CpqSwccEmuDevDeviceStatusChange | Emu_1 | — | — |

Switch traps (CIMTRAPS.MIB)

Table 56 CIM traps (CIMTRAPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------------------|-----------|-----------|------------|---------------------|
| switchFirmwareTransferred | 161001 | — | — | — |
| switchConfigFileTransferred | 161002 | — | — | — |
| switchTFTPTransferSucceeded | 161003 | — | — | — |
| switchTFTPTransferFailed | 161004 | — | 161003 | — |
| switchFileInvalid | 161005 | — | — | — |
| switchFanFailed | 161006 | — | 161007 | — |
| switchFanOk | 161007 | — | — | — |
| switchTempSensorDegraded | 161008 | — | 161010 | — |
| switchTempSensorFailed | 161009 | — | 161010 | — |

Table 56 CIM traps (CIMTRAPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|------------------------------|-----------|-----------|------------|---------------------|
| switchTempSensorOk | 161010 | — | — | — |
| switchPostSuccess | 161011 | — | — | — |
| switchLoginFailure | 161012 | — | — | — |
| switchLocationChange | 161013 | — | — | — |
| switchCubeTypeChange | 161014 | — | — | — |
| switchSNTPServiceUnavailable | 161015 | — | — | — |

StorageWorks Enterprise Array Manager (HS_AGENT.MIB)

Table 57 StorageWorks Enterprise Array Manager (HS_AGENT.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|------------------------------|-----------|-----------|------------|---------------------|
| diskFailureTrap | Steam_1 | — | Steam_2 | — |
| diskInformationTrap | Steam_2 | — | — | — |
| powerSupplyFailureTrap | Steam_3 | — | Steam_4 | — |
| powerSupplyInformationTrap | Steam_4 | — | — | — |
| fanFailureTrap | Steam_5 | — | Steam_6 | — |
| fanInformationTrap | Steam_6 | — | — | — |
| cacheBatteryFailureTrap | Steam_7 | — | Steam_9 | — |
| cacheBatteryLowTrap | Steam_8 | — | Steam_9 | — |
| cacheBatteryInformationTrap | Steam_9 | — | — | — |
| temperatureOverThresholdTrap | Steam_10 | — | — | — |
| temperatureInformationTrap | Steam_11 | — | — | — |
| communicationFailureTrap | Steam_12 | — | Steam_13 | — |
| communicationInformationTrap | Steam_13 | — | — | — |
| controllerFailureTrap | Steam_14 | — | Steam_15 | — |
| controllerInformationTrap | Steam_15 | — | — | — |
| lunFailureTrap | Steam_16 | — | Steam_19 | — |
| lunReconstructTrap | Steam_17 | — | Steam_19 | — |
| lunReducedTrap | Steam_18 | — | Steam_19 | — |
| lunInformationTrap | Steam_19 | — | — | — |
| externalInputFailureTrap | Steam_20 | — | Steam_21 | — |
| externalInputInformationTrap | Steam_21 | — | — | — |
| cacheBatteryStateUnknownTrap | Steam_22 | — | Steam_9 | — |

Blade Type-2 traps (BT2TRAPS.MIB)

Table 58 Blade Type-2 traps (BT2TRAPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------------|-----------|-----------|------------|---------------------|
| bt2SwPrimaryPowerSupplyFailure | BT2_1 | — | — | — |

Table 58 Blade Type-2 traps (BT2TRAPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------|-----------|-----------|------------|---------------------|
| bt2SwDefGwUp | BT2_2 | — | — | — |
| bt2SwDefGwDown | BT2_3 | — | BT2_2 | — |
| bt2SwDefGwInService | BT2_4 | — | — | — |
| bt2SwDefGwNotInService | BT2_5 | — | BT2_4 | — |
| bt2SwVrrpNewMaster | BT2_16 | — | — | — |
| bt2SwVrrpNewBackup | BT2_17 | — | — | — |
| bt2SwVrrpAuthFailure | BT2_18 | — | — | — |
| bt2SwLoginFailure | BT2_19 | — | — | — |
| bt2SwTempExceedThreshold | BT2_22 | — | BT2_31 | — |
| bt2SwRackLocationChange | BT2_26 | — | — | — |
| bt2SwApplyComplete | BT2_27 | — | — | — |
| bt2SwSaveComplete | BT2_28 | — | — | — |
| bt2SwFwDownloadSucess | BT2_29 | — | BT2_30 | — |
| bt2SwFwDownloadFailure | BT2_30 | — | — | — |
| bt2SwTempReturnThreshold | BT2_31 | — | — | — |
| bt2SwFanFailure | BT2_32 | — | BT2_33 | — |
| bt2SwFanFailureFixed | BT2_33 | — | — | — |
| bt2SwUdfoldtMFailure | BT2_34 | — | BT2_35 | — |
| bt2SwUdfoldtMUP | BT2_35 | — | — | — |
| bt2SwUdfoldGlobalEna | BT2_36 | — | — | — |
| bt2SwUdfoldGlobalDis | BT2_37 | — | BT2_36 | — |
| bt2SwUdfoldtdAutoEna | BT2_38 | — | — | — |
| bt2SwUdfoldtdAutoDis | BT2_39 | — | BT2_38 | — |
| bt2SwCubeInserted | BT2_40 | — | — | — |
| bt2SwCubeRemoved | BT2_41 | — | BT2_40 | — |
| bt2SwStgNewRoot | BT2_42 | — | — | * |
| bt2SwCistNewRoot | BT2_43 | — | — | * |
| bt2SwStgTopologyChanged | BT2_44 | — | — | * |
| bt2SwCistTopologyChanged | BT2_45 | — | — | * |

Blade Type-4 traps (BT4TRAPS.MIB)

Table 59 Blade Type-4 traps (BT4TRAPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|------------------------|-----------|-----------|------------|---------------------|
| bt4SwDefGwUp | BT4_2 | — | — | * |
| bt4SwDefGwDown | BT4_3 | — | BT4_2 | * |
| bt4SwDefGwInService | BT4_4 | — | — | * |
| bt4SwDefGwNotInService | BT4_5 | — | BT4_4 | * |
| bt4SwLoginFailure | BT4_19 | — | — | * |
| bt4SwApplyComplete | BT4_27 | — | — | * |

Table 59 Blade Type-4 traps (BT4TRAPS.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|------------------------|-----------|-----------|------------|---------------------|
| bt4SwSaveComplete | BT4_28 | — | — | * |
| bt4SwFwDownloadSucess | BT4_29 | — | — | * |
| bt4SwFwDownloadFailure | BT4_30 | — | BT4_29 | * |
| bt4SwUdfolMFailure | BT4_34 | — | BT4_35 | * |
| bt4SwUdfolMUP | BT4_35 | — | — | * |
| bt4SwUdfolGlobalEna | BT4_36 | — | — | * |
| bt4SwUdfolGlobalDis | BT4_37 | — | BT4_36 | * |
| bt4SwUdfolDAutoEna | BT4_38 | — | — | * |
| bt4SwUdfolDAutoDis | BT4_39 | — | BT4_38 | * |
| bt4SwCubeInserted | BT4_40 | — | — | * |
| bt4SwCubeRemoved | BT4_41 | — | BT4_40 | * |

Service incident information (CPQSERVICE.MIB)

Table 60 Service incident information (CPQSERVICE.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--|-----------|-----------|------------|---------------------|
| cpqServiceInformation | 164001 | — | — | — |
| cpqServiceIncidentStatus:intransit | _2 | — | 164001_3 | — |
| cpqServiceIncidentStatus:delivered | _3 | — | — | — |
| cpqServiceIncidentStatus:undelivered | _4 | — | 164001_3 | — |
| cpqServiceIncidentStatus:assigned | _5 | — | 164001_3 | — |
| cpqServiceIncidentStatus:closed | _6 | — | 164001_3 | — |
| cpqServiceIncidentStatus:submitted_to_ISEE | _7 | — | 164001_3 | — |
| cpqService2Information | 164002 | — | — | — |
| cpqServiceIncidentStatus:intransit | _2 | — | 164002_3 | — |
| cpqServiceIncidentStatus:delivered | _3 | — | — | — |
| cpqServiceIncidentStatus:undelivered | _4 | — | 164002_3 | — |
| cpqServiceIncidentStatus:assigned | _5 | — | 164002_3 | — |
| cpqServiceIncidentStatus:closed | _6 | — | 164002_3 | — |
| cpqServiceIncidentStatus:submitted_to_ISEE | _7 | — | 164002_3 | — |
| CpqService3Information | 164003 | — | — | * |
| cpqServiceIncidentStatus:intransit | _2 | — | 164003_3 | * |
| cpqServiceIncidentStatus:delivered | _3 | — | — | * |
| cpqServiceIncidentStatus:undelivered | _4 | — | 164003_3 | * |
| cpqServiceIncidentStatus:assigned | _5 | — | 164003_3 | * |
| cpqServiceIncidentStatus:closed | _6 | — | 164003_3 | * |
| cpqServiceIncidentStatus:submitted_to_ISEE | _7 | — | 164003_3 | * |

Power Device SNMP Management Card (CPQPOWER.MIB)

Table 61 Power Device (CPQPOWER.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|--------------------------|-----------|-----------|------------|---------------------|
| trapCritical | Pwr_1 | — | Pwr_4 | — |
| trapWarning | Pwr_2 | — | Pwr_4 | — |
| trapInformation | Pwr_3 | — | Pwr_4 | — |
| trapCleared | Pwr_4 | — | — | — |
| trapTest | Pwr_5 | — | — | — |
| deviceTrapInitialization | Pwr_6 | — | — | — |

HP OpenView – Network Node Manager (HPOV-NNM.MIB)

Table 62 HP OpenView (HPOV-NNM.MIB)

| Trap name | OID (IM_) | Caused by | Cleared by | New in Revision 4.2 |
|-----------------|---------------|-----------|------------|---------------------|
| hpOVMessageTrap | hpOV_58916872 | — | — | * |

Index

A

About Insight Tivoli Module, using, 18
ACF. See Adapter Configuration Facility
ACP. See Adapter Configuration Profile
adapter configuration, 20
Adapter Configuration Facility, 11;
 adapter, 20; installing, 22; using, 22
Adapter Configuration Profile, 22, 24
additional help, 6
Administration Tasks: icon, 12; using, 20
administrator: login procedures, 8;
 using TEC, 14
administrator resources, 18
advanced troubleshooting, 56
alerts, 38
assigning administrator resources, 18
audience assumptions, 6, 46
authorized reseller, 55
automated event correlation, 11, 14, 39

B

browser configuration, 36
browser settings, 12
browser task enabling, 41
BT2TRAPS.MIB, 97, 126, 128

C

CIMTRAPS.MIB, 93, 94, 125
command line options, Initiate Inventory Collection task, 47
commands, 57
configuration: adapter, 20; browser, 36; Event Server, 30; Event Server rule base, 35; Initiate Inventory Collection task, 47; Insight Integration, 34; Managed Node, 8; obtaining information, 57; SANWorks, 20; SNMP Adapter, 20; StorageWorks, 20; TEC rule base, 35; Tivoli Event Console, 32
Configure SNMP Adapter: identifying traps with, 20; script, 20; task, 20
console components, 14
CPQCLUS.MIB, 76, 113
CPQCMC.MIB, 89, 120
CPQCR.MIB, 58, 123
CPQFCA.MIB, 77, 113
CPQHLTH.MIB, 67, 106
CPQHOST.MIB, 75, 95, 111
CPQIDA.MIB, 62
CPQIDE.MIB, 76, 112

CPQNIC.MIB, 79, 115, 129
CPQRACK.MIB, 87, 119
CPQRECOV.MIB, 76, 112
CPQRPM.MIB, 80, 116
CPQSANAPP.MIB, 96, 124
CPQSCSI.MIB, 65, 104
CPQSIDA.MIB, 101
CPQSINFO.MIB, 60, 100
CPQSM2.MIB, 73, 111
CPQSTDEQ.MIB, 60, 100
CPQSTSYS.MIB, 70, 107
CPQSWCC.MIB, 96, 125
CPQTHRSH.MIB, 74, 111
CPQUPS.MIB, 75, 112, 128
CPQWINOS.MIB, 80, 115
creating the HP rule base, 31
critical alert, 38
customer support, 55

D

degraded condition, 38
deployment of the SMNP Adapter, 22, 23
desktop, 8
directory structure, 13
disk space requirements, 9
documentation audience, 6
download: HP Inventory Collector utility, 47; HP Systems Insight Manager, 9; Insight Integration, 8, 14, 15, 55; Insight Management Agents, 9
drive array subsystem, 20

E

editing profile, 22
enabling browser tasks, 41
Endpoints: configuration, 8;
 configuration requirements, 20;
 supported, 11
environment requirements, 7
errors: installation, 56; operational, 56
event adapter, 14
Event Console, 14
Event Server, 14; configuration, 30;
 manual configuration, 35; rule base, 35
events: correlation, 11, 14, 39; HP SNMP, 58; managing, 38; SNMP, 58; viewing, 38

F

features: HP Storage Management Appliance, 10; HP Systems Insight Manager, 9, 10; Insight Integration, 7; new, 7; product, 7

Fibre Channel, 20
file structure, 13
functional overview, 38
functionality, 7
functionality, new, 7

H

hardware: monitor, 20; support, 8
help resources, 6
historical query, 51
HP asset information: collecting, 46, 49; integrating into Tivoli Inventory Database, 46, 49
HP authorized reseller, 55
HP browser task, 36
HP database scripts, 49
HP Inventory Collection task, 46
HP Inventory Collector utility:
 download, 47; overview, 46;
 requirements, 46
HP inventory information, displaying, 52
HP queries: creating, 50; executing, 51; historical data, 51
HP query library, 50
HP rule base: creating, 31
HP SIM. See HP Systems Insight Manager
 See HP Systems Insight Manager
HP SNMP events, 58
HP Storage Management Appliance:
 agents, 12; enabling access to, 15;
 features, 10; icon, 12; launching, 7, 41; ports, 41
HP Systems Insight Manager:
 download, 9; enabling access to, 15; features, 9, 10; icon, 12; launching, 7, 12, 41; ports, 41; product description, 9, 10; support, 9, 10
HP views, 50
HP website, 55
HS_AGENT.MIB, 95, 126

I

icon overview, 12
iLO, 20
indicators, severity level, 38
Initiate Inventory Collection task:
 command line options, 47;
 configuration, 47; overview, 46;
 running, 47
Insight Integration: directory structure, 13; download, 8, 14, 15, 55; features, 7; file contents, 13; functional overview, 38; functionality, 7; installation overview, 14; installation status, 56;

manual configuration, 34;
operational overview, 14; scripts,
49; uninstalling, 37
Insight Management Agents:
download, 9; platforms supported,
9; requirements, 9
Insight SNMP rules, 100
installation: confirming, 17, 36; errors,
56; instructions, 14, 15; log, 56;
logs, 36, 56; Management Agents,
56; overview, 14; requirements, 8;
SNMP Adapter, 56; verifying status,
56
Internet Browser Location icon, 12
inventory profile: creating, 51;
customizing, 51

L

launching: HP Storage Management
Appliance, 41; HP Systems Insight
Manager, 41; Insight Management
Agents, 41; web-based management
tools, 40
logs, 36

M

Managed Node: configuration, 8;
manually adding adapter files, 35
Management Agents. *See* Insight
Management Agents; events, 14;
icon, 12; installing, 56; launching,
41; ports, 41
management tools. *See* web-based
management tools
managing events, 38
memory requirements, 9
monitoring: events, 33; hardware, 20

O

operating environments: overview, 11;
Tivoli Endpoints, 11; Tivoli Enterprise
TMR Server and Managed Nodes,
11

P

phone numbers, 55
ports: HP Storage Management
Appliance, 41; HP Systems Insight
Manager, 41; Management Agents,
41; UNIX, 20, 56; web-based
management tools, 41; Windows,
20, 56
preinstallation considerations, 30
preinstallation requirements, 8, 14, 20
product: description, 7; features, 7;
functionality, 7; installation details,
17; overview, 7
profile, editing, 22

ProLiant Managed Node
configuration, 8
ProLiant server configuration: TEC
server, 8; TMR server, 8

Q

queries: executing, 51, 52; historical
data, 51; output results, 52
query library, 49, 50

R

reference material, 6
Remote Insight board, 20
remote management, 20
requirements: disk space, 9;
Endpoints, 20; HP Inventory
Collector utility, 46; Insight
Management Agents, 9; installing
Management Agents, 56; memory,
9; preinstallation, 8, 14, 20;
software, 9; Tivoli components, 8;
Tivoli Enterprise, 10; Tivoli Inventory,
46; Tivoli Management Framework,
46; Tivoli patches, 11
RILOE, 20
rule base, configuration, 35
rules: Insight SNMP, 100
rules, SNMP, 100

S

SANWorks, 20
scripts: Configure SNMP Adapter, 20;
creating history queries, 49; creating
history tables, 49; creating HP
specific queries, 49; creating the
Tivoli Query Library, 49; HP
database, 49; HP query library, 50;
Insight Integration, 49; uninstalling,
37
settings: browser, 12; threshold, 20
SNMP Adapter: configuration, 20,
23; deployment, 23; deployment
instructions, 22; deployment
overview, 22; Endpoint, 11;
Managed Node, 11; updating
manually, 34
SNMP events: Blade Type-2 traps, 97,
126, 128; CIM traps, 93, 94, 125;
cluster systems information, 76, 113;
common cluster management, 59,
100; console management
controller, 89, 120; CR3500 RAID
controller, 58, 123; displaying, 14;
fibre channel array information,
113; Fibre Channel Array
information, 77; host system
information, 75, 95, 111; intelligent
drive array, 62, 101; manageable
IDE drives, 76, 112; NIC
information, 79, 115, 129;

operating system management, 80,
115; rack and power management,
80, 116; rack enclosure information,
87, 119; recovery server
information, 76, 112; Remote Insight
board information, 73, 111; SCSI
device information, 65, 104; server
health features, 67, 106; standard
equipment, 60, 100; Storage Area
Networks Management Appliance,
96, 124; storage systems
information, 70, 107; StorageWorks
Command Console, 125;
StorageWorks Enterprise Array
Manager, 126; systems information,
60, 100; threshold management,
74, 111; uninterruptible power
supply, 75, 112, 128
SNMP eventsStorageWorks Command
Console, 96
SNMP eventsStorageWorks Enterprise
Array Manager, 95
SNMP traps: operations test, 56;
simulating, 56; testing, 56
software requirements, 9
StorageWorks, 20
subsystems: drive array, 20; IDE, 20;
SCSI, 20
support: disk space, 9; Endpoint
configurations, 8; Endpoints, 11;
hardware, 8; HP, 55; HP ProLiant
Managed Nodes, 8; HP Systems
Insight Manager, 9, 10; Insight
Management Agent platforms, 9;
Insight Management Agents, 9;
memory, 9; software, 9; technical,
55; tier-1 platform, 11; Tivoli
Enterprise, 10; Tivoli patches, 11
SVRCLU.MIB, 59, 100
Systems Management Homepage: task
to launch, 7, 12

T

tasks: Configure SNMP Adapter, 20;
HP browser, configuring, 36; HP
Inventory Collection, 46; Initiate
Inventory Collection, 46
TEC. *See* Tivoli Event Console
TEC components: event adapters, 14;
Event Console, 14; Event Server, 14
TEC rule base, configuration, 35
TEC server, 8
technical support, 55
threshold, settings, 20
tier-1 platform support, 11
Tivole Event Console: configuration,
32
Tivoli administrator resources, 18
Tivoli desktop: launching from, 41;
location, 14; requirements, 8
Tivoli Enterprise Console, components,
14

Tivoli Enterprise support and requirements, 10
Tivoli Event Console: launching from, 42
Tivoli Inventory database: creating custom tables, 49
Tivoli Inventory Database: adding HP asset information, 46, 49; extending, 49, 50
Tivoli Module, icon, 12
Tivoli patch requirements, 11
TMR server, 8
traps, identifying and interpreting, 20
troubleshooting, 56

U

uninstalling: Insight Integration, 37; scripts, 37; scripts for, 13

V

views: guidelines for creating new, 50; HP specific, 50

W

web-based management tools:
 launching, 40; list, 40; ports, 41
website: HP, 55; HP Inventory Collector utility, 47; HP Systems Insight Manager, 9; Insight Integration, 8, 14, 15, 55; Insight Management Agents, 9; Management Integration Support, 6; ProLiant Essentials Software, 6; ProLiant Essentials Software website, 6
what's new in this version, 7