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HP Power Manager 3.0 User Guide

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About This Guide

This guide provides information about HP Power Manager (HPPM) 3.0 including installation, configuration, operation, and troubleshooting.

Intended Audience

This guide is intended for individuals requiring information about the management of HP Uninterruptible Power Systems (UPSs).

Symbols in Text

These symbols may be found in the text of this guide. They have the following meanings.

**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

**IMPORTANT:** Text set off in this manner presents clarifying information or specific instructions.

**NOTE:** Text set off in this manner presents commentary, sidelights, or interesting points of information.

Text Conventions

This document uses the following conventions:

- *Italic type* indicates complete titles of manuals or variables. Variables include information that varies in system output, in command lines, and in command parameters in text.
- **Bold type** is used for emphasis of selected onscreen elements (menu options, command names, dialog box names, and so on) and keyboard keys.
- *Monospace typeface* indicates code examples, screen displays, and user input.
- *Sans serif typeface* is used for uniform resource locators (URLs).
Related Documents

For additional information on the topics covered in this guide, refer to the following documents:

- Product user guides
- Product installation instructions
- *HP Power Products Glossary*

These documents are located on the Power Products Documentation CD or at www.hp.com/products/ups.

Getting Help

If you have a problem and have exhausted the information in this guide, you can get further information and other help in the following locations.

Technical Support

In North America, call the HP Technical Support Phone Center at 1-800-652-6672. This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored. Outside North America, call the nearest HP Technical Support Phone Center. For telephone numbers of worldwide Technical Support Centers, go to www.hp.com.

Have the following information available before you call:

- 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
- Power management software type and version

HP Website

For information on this product as well as the latest drivers, firmware updates, and service packs, go to www.hp.com/products/ups.
Authorized Reseller

For the name of your nearest authorized reseller:

- In the United States, call 1-800-345-1518.
- In Canada, call 1-800-263-5868.
- Elsewhere, see the HP website for locations and telephone numbers.

Reader’s Comments

To comment on this guide, send an e-mail to ServerDocumentation@hp.com.
Introduction

HP Power Manager (HPPM) is software that enables users to monitor, manage, and control power environments through comprehensive control of individual HP Uninterruptible Power Systems (UPSs). A familiar browser interface provides secure remote access to Management Servers anywhere on the network. HPPM allows users to schedule system shutdowns, control power failure settings, and define UPS load segments to allow for maximum uptime of critical servers.

Use HPPM to monitor, manage, and control:

- HP Tower UPSs: UPS T700, UPS T1000 XR, UPS T1500 XR, UPS T2200 XR
- HP Rack UPSs: UPS R1500 XR, UPS R3000 XR, UPS R6000, UPS R12000 XR

HPPM software can be configured to send alert traps to Insight Manager 7 or other SNMP-management programs or run as a stand-alone power management system. This flexibility allows you to monitor, manage, and control the power environments of HP Six Port Card and single, serially attached UPSs, regardless of the system management method. To facilitate day-to-day maintenance tasks, the software provides detailed system logs and system diagnostics, including UPS battery checks.
Use HPPM to:

- Customize alerts
  - Send e-mail notification messages
  - Send broadcast notification messages
  - Send SNMP traps
  - Issue computer commands at power failure

- Monitor, manage, and control UPSs
  - Manage a graceful shutdown of attached equipment during utility power failures
  - Manage independent UPS load segments to provide separate power control of connected equipment
  - Prioritize the timing of equipment shutdowns and reboot connected equipment by load segment
  - Delay restart by load segment after a power outage to sequence the startup of system components
  - Display logs for analysis
  - Monitor the status of UPSs and perform diagnostics
  - Communicate with single serial cards (RS-232) and multi-server serial cards (Six Port Card)

**HPPM Overview**

HPPM is a Web-based application that lets administrators manage an HP UPS from a browser-based management console. Administrators can monitor, manage, and control each UPS both locally and remotely.

During a utility power failure, the UPS switches to battery mode. HPPM can issue an e-mail alert to the system administrator and begin a prioritized system shutdown based on user-defined settings for that specific UPS. After power is restored, HPPM can facilitate a prioritized power up for connected equipment.

The UPS can be configured to extend runtimes for critical devices during utility power failures. For most UPSs, the receptacles on the rear panel can be divided into two or more groups, called load segments, which can be controlled independently. By shutting down a load segment that is connected to less critical equipment, the runtime for more critical equipment is extended, providing additional protection.
HPPM Architecture

HPPM consists of two major components:

- Management Server
- Remote Agent

![HPPM architecture diagram](image)

**Figure 1-1: HPPM architecture**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HPPM Management Server</td>
</tr>
<tr>
<td>2</td>
<td>A UPS that is serially attached to and managed by the Management Server</td>
</tr>
<tr>
<td>3</td>
<td>Remote Agent Server</td>
</tr>
<tr>
<td>4</td>
<td>Intranet</td>
</tr>
<tr>
<td>5</td>
<td>A remote workstation browsing into the Management Server over the network</td>
</tr>
<tr>
<td>6</td>
<td>Insight Manager 7 receiving alert traps from HPPM (optional)</td>
</tr>
</tbody>
</table>
Management Server

One Management Server is needed for each UPS that is monitored, managed, and controlled by HPPM. This server must be serially connected to the UPS. Specific features of the Management Server include:

- Controlling security and authentication, such as:
  - Supporting multiple users and associating each login with specific device access (access categories are regular user and administrator)
  - Providing the option of Secure Socket Layer (SSL) security
- Performing specified actions when alarms are set or cleared. The following unattended actions are supported:
  - Sending e-mail notifications, broadcast messages, and SNMP traps
  - Executing system batch jobs during shutdown (on Management Server or Remote Agent)
  - Performing operating system shutdown
  - Shutting down and restarting by load segment, if applicable
  - Performing UPS shutdown
- Performing a graceful, remote shutdown of the local operating system after a specified delay

**NOTE:** System hibernation (if supported by the operating system) is used to allow the system to be restored to its same state when the power returns.

- Maintaining event logs. Logs include the following types:
  - UPS event log, which contains UPS-related events, such as the UPS going on battery
  - Application event log, which contains application-related events, such as failed logins or settings changes
- Logging data variables. The following data values are logged:
  - Input voltage
  - Output voltage
  - Output load
  - UPS temperature
  - Battery voltage
  - Output power
  - Battery capacity
- Providing shutdown information to the Remote Agent
- Providing content for the user interface using an embedded Web server. The user interface is accessed using a supported Web browser. For more information on supported browsers, refer to the section, “Browser Requirements,” in Chapter 2.
The Management Server runs on the following operating systems:

- Microsoft® Windows NT® 4.0 Server with Service Pack 6
- Microsoft Windows® 2000 Server with Service Pack 3
- RedHat Linux 7.3, 8.0

**IMPORTANT:** Power protection for the Management Server is essential. The Management Server is the central point of control of the power management environment. If the Management Server goes down, the ability to gracefully shut down attached servers is lost.

**Remote Agent**

The Management Server provides both status and shutdown information to the Remote Agent. The Remote Agent runs on a server and allows HPPM to gracefully shut down the operating system of that server and issue computer commands during power failure. Install the Remote Agent on any server that is powered by the UPS and on any server that HPPM uses to initiate a command.

The Remote Agent runs on the following operating systems:

- Microsoft Windows NT 4.0 Server with Service Pack 6
- Microsoft Windows 2000 Server with Service Pack 3
- RedHat Linux 7.3, 8.0
- Novell NetWare 5.1 with Support Pack 5
- Novell NetWare 6.0 with Support Pack 2

**Supported Hardware Configurations**

HPPM requires that the Management Server be connected to the network. UPSs can be attached in any of the following configurations:

- Configuration A—One UPS is serially attached to a Management Server.
- Configuration B—Several Management Servers are serially attached to a Six Port Card on a single UPS.
- Configuration C—One Management Server is serially attached to a UPS and communicates to several Remote Agents over the network.
Configuration A

Figure 1-2 illustrates a UPS serially attached to a Management Server that is plugged into a load segment of the UPS. The Management Server is connected directly to the network. A remote workstation can browse into the Management Server over the network.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remote workstation and Management Server</td>
</tr>
<tr>
<td>2</td>
<td>UPS</td>
</tr>
</tbody>
</table>
Configuration B

In Figure 1-3, each server is a Management Server and is serially attached to the UPS through a Six Port Card. The Six Port Card makes each server operate as if it is the only Management Server attached to the UPS. This option card supports up to three attached servers, and these servers do not communicate with each other.

NOTE: Attached Remote Agents are not tested or supported in this configuration.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remote workstation browsing into the Management Server over the network</td>
</tr>
<tr>
<td>2</td>
<td>UPS with Six Port Card installed</td>
</tr>
<tr>
<td>3</td>
<td>HPPM Management Servers</td>
</tr>
<tr>
<td>4</td>
<td>Network</td>
</tr>
</tbody>
</table>
Configuration C

In Figure 1-4, only one server is a Management Server and is serially attached to the UPS. This Management Server communicates to the Remote Agent servers over the network to begin a graceful shutdown in the event of a power failure.

**NOTE:** Up to 15 Remote Agent servers can be managed by one Management Server.

![Figure 1-4: Configuration C](image)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remote workstation browsing into the Management Server over the network</td>
</tr>
<tr>
<td>2</td>
<td>UPS</td>
</tr>
<tr>
<td>3</td>
<td>Remote Agent Servers</td>
</tr>
<tr>
<td>4</td>
<td>HPPM Management Server</td>
</tr>
<tr>
<td>5</td>
<td>Network</td>
</tr>
</tbody>
</table>
System Requirements

Table 2-1 lists the minimum HPPM hardware and software requirements.

Table 2-1: HPPM Minimum System Requirements

<table>
<thead>
<tr>
<th>HPPM Component</th>
<th>Hardware and Software</th>
<th>Suggested Minimum Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Server</td>
<td>Hardware</td>
<td>500-MHz Pentium® computer</td>
</tr>
<tr>
<td></td>
<td>Disk space</td>
<td>25-MB free disk space</td>
</tr>
<tr>
<td></td>
<td>System memory</td>
<td>128 MB of RAM</td>
</tr>
<tr>
<td></td>
<td>Operating system</td>
<td>• Microsoft Windows NT 4.0 Server with Service Pack 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Microsoft Windows 2000 Server with Service Pack 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• RedHat Linux 7.3, 8.0</td>
</tr>
<tr>
<td></td>
<td>Server software</td>
<td>• A supported operating system with a static IP address (recommended), TCP/IP installed and configured</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• SNMP services installed and active (optional)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Microsoft Internet Explorer 6.0 or Netscape Navigator 7.0</td>
</tr>
<tr>
<td>Remote Agent</td>
<td>Hardware</td>
<td>200-MHz Pentium computer</td>
</tr>
<tr>
<td></td>
<td>Disk space</td>
<td>10-MB free disk space</td>
</tr>
<tr>
<td></td>
<td>System memory</td>
<td>64 MB of RAM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(180 MB for NetWare 6.0)</td>
</tr>
<tr>
<td></td>
<td>Operating system</td>
<td>• Microsoft Windows NT 4.0 Server with Service Pack 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Microsoft Windows 2000 Server with Service Pack 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• RedHat Linux 7.3, 8.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Novell NetWare 5.1 with Support Pack 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Novell NetWare 6.0 with Support Pack 2</td>
</tr>
</tbody>
</table>
Browser Requirements

Table 2-2 lists the minimum HPPM browser requirements.

<table>
<thead>
<tr>
<th>Software</th>
<th>Browser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web browser on a client</td>
<td>Microsoft Operating Systems:</td>
</tr>
<tr>
<td></td>
<td>• Microsoft Internet Explorer 6.0</td>
</tr>
<tr>
<td></td>
<td>• Netscape 7.0</td>
</tr>
<tr>
<td>Linux Operating System:</td>
<td>• Netscape 7.0</td>
</tr>
</tbody>
</table>

Monitor resolution Minimum supported resolution of 1024 x 768, 16-bit high color (maximize browser window for optimal display)

Note: Browsing requires the use of Macromedia Flash Player 6.0, which is included in the HPPM Management Server installation. If you do not have Flash Player installed, you are prompted to install it. Click the link and follow the installation prompts.

Netscape Settings

When using SSL with Netscape, a browser session with the HPPM Management Server might hang. To resolve the problem, make the following change to the Netscape settings:

1. From the folder into which Netscape was installed, under the defaults directory, open the pref subdirectory.
2. Using a text editor, open the file all.js.
3. Change the entry:
   
   pref("network.http.max-connections-per-server", 8)

   to read

   pref("network.http.max-connections-per-server", 1)
4. Save the file and restart Netscape.

Installation Overview

A graphical or command line installer is used for installing HPPM on Windows operating systems. A script is used for installing HPPM on Linux operating systems. You have the option to install either the Management Server or the Remote Agent. Follow these guidelines when installing the components:

- Management Server—Install the Management Server on the computer that is serially attached to the UPS and responsible for managing other systems and devices connected to the UPS.
- Remote Agent—Install the Remote Agent on any computer that is powered by the UPS.
For each component of HPPM, there are three installation options:

- Graphical user interface (GUI) installation—A series of dialog boxes and prompts guide you through the installation process.
- Command line installation—A series of commands are necessary to complete the installation.
- Silent installation—Specify a preconfigured initialization file during installation. This file is placed into the proper directory, and you are not prompted for any information.

Silent installation is typically used by system administrators that have many installations that are configured identically and require minimal user interaction. To use this method in HPPM:

a. Install an HP Power Management Server or Remote Agent through the assisted installation method that is appropriate for the operating system.

b. Configure the server or agent exactly as the final replicated systems should be configured. Use the exact same UPS model and thoroughly test the configuration, including any alarm or notification events.

c. Use the .INI file that is generated in the directory of the application as a template in the Silent install process.

d. Change any items that should be unique, such as Device Name, Management Server Name, or Remote Agent Name, through the normal operation of HPPM.

A user setup program is launched automatically when the installation is complete.

Table 2-3 summarizes the available installation options for each operating system.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>GUI Installation</th>
<th>Command Line Installation</th>
<th>Silent Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows NT 4.0 Server</td>
<td>Available</td>
<td>-</td>
<td>Available</td>
</tr>
<tr>
<td>Microsoft Windows 2000 Server</td>
<td>Available</td>
<td>-</td>
<td>Available</td>
</tr>
<tr>
<td>RedHat Linux 7.3, 8.0</td>
<td>-</td>
<td>Available</td>
<td>Available</td>
</tr>
<tr>
<td>Novell NetWare 5.1, 6.0</td>
<td>-</td>
<td>Available</td>
<td>-</td>
</tr>
</tbody>
</table>
Installing Components on Windows Operating Systems

The Management Server and Remote Agent can be installed using the GUI installation method on any supported Windows operating system.

**IMPORTANT:** The HPPM Management Server and Remote Agent components cannot be installed on the same computer.

**NOTE:** You might need to reboot after installing the Remote Agent on Windows.

The Management Server and Remote Agent can be installed using the silent installation option on any supported Windows operating system.

Installing the Management Server Using the GUI Installation Method

To install the Management Server on a Windows system using the GUI Installation method:

1. Insert the Rack and Power Management Pack CD (shipped with each UPS) into the CD-ROM drive of the computer. If the AutoPlay feature is enabled, the Welcome screen is displayed.

   If the AutoPlay feature is disabled, explore the CD and double-click `AUTORUN.EXE` in the root folder. Follow the onscreen prompts to install.

   If the HPPM software has been downloaded from the HP website, follow the instructions to unpack the files, then locate and run `SETUP.EXE` for the **Windows Management Server**. The Welcome screen is displayed.
2. Read the introduction and click Next.

The License Agreement screen is displayed.
3. Read the license agreement, select **I accept the terms in the license agreement**, and click **Next**.

The **Customer Information** screen is displayed.
4. Verify or change the customer information, choose whether to install for all users or only the current user, and click **Next**.

The **Destination Folder** screen is displayed.
5. Click Next to install the Management Server in the default folder that is displayed below the Install HP Power Manager to: field. To specify a different folder, click Change, navigate to the appropriate folder, and click Next.

The Ready to Install the Program screen is displayed.
6. Click **Install**. The wizard installs the software and launches a separate configuration process.
7. Click **Next** to use the standard HTTP protocol and port for Web browser access to the Management Server.

To use the SSL on the standard port, select **Use SSL to connect to Manager**. To use a non-standard port for browser access, change the value in the **Web Server Port** field.

Be sure that the port you specify is not already being used.

Click **Next**.

**IMPORTANT:** The common Web server port is Port 80. The default port for SSL is 443. Be sure that no other Web servers are currently running on these ports or on the port that you select. The port you select must be unique and you should make note of the port number for future reference.
8. Select the serial (COM) port that the computer uses to communicate with the UPS. Click Next.
9. Information about the discovered UPS is displayed.

If the information is correct, select **Use this device**. Click **Finish** to close the configurator and return to the install wizard.

If the information is incorrect, or no UPS was detected, click **Back** to check your selections.
10. Click **Finish** to exit the install wizard. The HPPM Management Server starts automatically.

**NOTE:** An icon in the Windows system tray shows the status of the Management Server. It might take a few moments for the icon to change. A green check mark displays if the Management Server is communicating with the UPS without errors. If there are problems, the icon displays a red “X.” Hover over the icon with the mouse pointer, and a tool tip displays a status message.

Right-click the system tray icon to display a context menu from which the Management Server service can be stopped or started. In this menu, you can also configure communication settings using the **Configure** option or launch a browser session using the **Connect** option.
Installing the Remote Agent Using the GUI Installation Method

To install the Remote Agent on a Windows system using the GUI Installation method:

1. Insert the Rack and Power Management Pack CD into the CD-ROM drive of the computer. If the AutoPlay feature is enabled, the installation menu automatically starts.

   If the AutoPlay feature is disabled, explore the CD and double-click AUTORUN.EXE in the HPPM Windows Remote Agent folder.

   If the HPPM software has been downloaded from the HP website, follow the instructions to unpack the files, then locate and run SETUP.EXE for the Windows Remote Agent.

   The Welcome screen is displayed.

2. Read the introduction and click Next.

   The License Agreement screen is displayed.
3. Read the license agreement, select **I accept the terms in the license agreement**, and click **Next**.

The **Customer Information** screen is displayed.
4. Verify or change the customer information, choose whether to install for all users or only the current user, and click Next.

![Customer Information Screen]

The **Destination Folder** screen is displayed.
5. Click **Next** to install the Remote Agent in the default folder that is displayed below the **Install HP Power Manager Remote Agent to:** field. To specify a different folder, click **Change**, navigate to the appropriate folder, and click **Next**.

The **Ready to Install the Program** screen is displayed.
6. Click **Install**. The wizard installs the software and launches a separate configuration process.
7. For the most security, enter the host name or IP address of the Management Server. This allows only that particular Management Server to execute commands and operating system shutdowns on the computer running the Remote Agent.

If security is not a concern, you can leave this field blank.

Click Finish to close the configurator and return to the install wizard. If the information is incorrect, or no UPS was detected, click Back to check your selections.
8. Click **Finish** to exit the install wizard. The HPPM Remote Agent starts automatically.

![InstallShield Wizard Completed](image)

**NOTE:** An icon in the Windows system tray shows the status of the Remote Agent. It might take a few moments for the icon to change. A green check mark displays if the Management Server is communicating with the UPS without errors. If there are problems, the icon displays a red “X.” Hover over the icon with the mouse pointer, and a tool tip displays status message.

Right-click the system tray icon to display a context menu from which the Remote Agent service can be stopped or started. In this menu, you can also configure communication settings using the **Configure** option or launch a browser session using the **Connect** option.
Installing the Management Server Using the Silent Installation Method

To install the Management Server on a Windows system using the silent installation method:

1. Perform a standard installation and make any necessary changes to the settings, such as event notifications, communications port, and so on.
2. Copy the DevManBE.ini file into the same directory as the SETUP.EXE and SINSTALL.CMD files.
3. Run sinstall to install silently.

**NOTE:** If you are installing to a drive other than the C: drive, pass the letter of the drive (without the colon) to which the software is installed as a parameter when running SINSTALL.CMD. For example, if HPPM is to be installed to the F: drive, the silent installer is invoked as follows:

```
SINSTALL F  
```

Installing the Remote Agent Using the Silent Installation Method

To install the Remote Agent on a Windows system using the silent installation method:

1. Perform a standard installation and make any necessary changes to the Management Server.
2. Copy the DevManRA.ini file to the same directory as the SETUP.EXE and SINSTALL.CMD files.
3. Run sinstall to install silently.

Installing Components on Linux Operating Systems

The Management Server and Remote Agent can be installed using an installation script on any supported Linux operating system.

**NOTE:** The Management Server and Remote Agent components cannot be installed on the same computer.

The Management Server and Remote Agent can also be installed using the silent installation option on any supported Linux operating system.
Installing the Management Server Using the Installation Script

NOTE: The HPPM Linux package (PowerManager-3.0-4.1586.i586.rpm) requires that the compat-libstdc++7.3-2.96.110.i386.rpm file install.

To install the Management Server on a Linux system using the installation script:

1. Insert the Rack and Power Management Pack CD into the CD-ROM drive of the computer. From the console or a terminal window, go to the HPPM/Linux/Manager subdirectory. Execute the following installation script:

./Install

If the HPPM software has been downloaded from the HP website, follow the instructions to unpack the files. Locate the Linux Management Server installation script (Install) and execute it as previously indicated.

The script installs the Management Server component and requests information to configure the application. Default values or valid options are shown in brackets following each prompt.

2. The script displays: Do you wish to use SSL to communicate with HP Power Manager?

To use the standard HTTP protocol for Web browser access to the Management Server, enter N. To use the Secure Sockets Layer (SSL), enter y.

3. The script displays: Please enter a port to use for web communications.

To use the standard TCP/IP port (80 for HTTP, 443 for SSL) with the selected protocol for Web browser access to the Management Server, press the Enter key. To use a non-standard port for browser access, enter a valid numerical value for the port number.
4. The script displays: Please select a serial port to search for a UPS device on.

   If the serial cable from the UPS is connected to serial port/dev/ttyS0 on the computer, press the **Enter** key. If it is connected to another serial port, enter the number corresponding to that serial port from the displayed list.

   If a UPS is discovered, the type of communications protocol and baud rate is displayed. If no UPS is detected, check to be sure the cable is connected securely from the serial port to the UPS, and that the correct port was selected before trying again.

5. The script displays: Would you like to start HP Power Manager?

   To start the HPPM Management Server, enter **Y**. If you do not want to start the Management Server now, enter **n**.

### Installing the Remote Agent Using the Installation Script

To install the Remote Agent on a Linux system using the installation script:

1. Insert the Rack and Power Management Pack CD into the CD-ROM drive of the computer. From the console or a terminal window, go to the **HPPM/Linux/Agent** subdirectory. Execute the following installation script:

   ```
   ./InstallRA
   ```

   If the HPPM software has been downloaded from the HP website, follow the instructions to unpack the files. Locate the Linux Remote Agent installation script (**InstallRA**) and execute it as previously indicated.

   The script installs the Remote Agent component and requests information to configure the application. Default values or valid options are shown in brackets following each prompt.

2. The script displays: Please enter a server to allow connections from.

   For the most security, enter the host name or IP address of the Management Server. This allows only that particular Management Server to execute commands and operating system shutdowns on the computer running the Remote Agent. If security is not a concern, leave this line blank and press the **Enter** key.
3. The script displays: Would you like to start HP Power Manager?
   To start the HPPM Remote Agent, enter y. If you do not want to start the Remote Agent now, enter n.

Installing the Management Server Using the Silent Installation Method

**NOTE:** The HPPM Linux package (PowerManager-3.0-4.i586.rpm) requires that the compat-libstdc++7.3-2.96.110.i386.rpm file install.

To install the Management Server on a Linux system using the silent installation method:

1. Perform a standard installation.
2. Run `/etc/rc.d/init.d/DevMan setup` and make any necessary changes to the settings, such as event notifications, communications port, and so on.
3. Copy the `DevManBE.ini` file, located at `/usr/local/DevMan`, into the same directory as Install.
4. Run `./Install /s DevManBE.ini` to install silently.

Installing the Remote Agent Using the Silent Installation Method

To install the Remote Agent on a Linux system using the silent installation method:

1. Perform a standard installation.
2. Run `/etc/rc.d/init.d/DevMan setup` and make any necessary changes to the Management Server.
3. Copy the `DevManRA.ini` file, located at `/usr/local/DevMan`, to the same directory as InstallRA.
4. Run `./InstallRA /s DevManRA.ini` to install silently.
Installing Components on NetWare Operating Systems

The Remote Agent can be installed using an installation module or the silent installation option on any supported NetWare operating system.

Installing the Remote Agent Using the Installation Module

To install the Remote Agent on a NetWare system using the installation module:

1. Insert the Rack and Power Management Pack CD into the CD-ROM drive of a computer running NetWare client software. From the HPPM/NetWare/Agent subdirectory of the CD, copy the contents into a directory on the NetWare server.

From the NetWare system console, load the installation module (INSTALL.NLM) using the full installation path. For example, if the files were copied into a folder called HP on the SYS: volume, the module would be loaded as follows:

SYS:HP/INSTALL

If the HPPM software has been downloaded from the HP website, follow the instructions to unpack the files. Copy the files to the NetWare server and load the installation module as previously indicated. The module displays information about the installation process.
2. Press the **Enter** key to continue the installation. The license agreement screen is displayed.

3. Press the **Enter** key to accept the license agreement.
4. The module displays: Enter the IP address of the Management Server.
   For the most security, enter the host name or IP address of the Management Server. This feature allows only that particular Management Server to execute commands and operating system shutdowns on the computer running the Remote Agent. If security is not a concern, leave this line blank and press the Enter key.

5. The module displays: Is this correct?
   Press the Enter key to verify the choice.
   The installation module updates startup files with configuration information.

6. The module displays: The installation is complete.
   Press the Enter key to close the installation module.

Uninstalling Components from Windows Systems

To remove HPPM from a Windows system:
1. Click Start>Settings>Control Panel.
2. Click Add/Remove Programs.
3. Select HP Power Manager and click Remove. The uninstall wizard is launched.
4. Follow the prompts in the uninstall wizard to uninstall the software.

NOTE: Some files might remain following the uninstallation and can be removed manually.

Uninstalling Components from Linux Systems

To remove HPPM from a Linux system, execute the uninstall script (Uninstall).

NOTE: Some files might remain following the uninstallation and can be removed manually.

Uninstalling Components from NetWare Systems

To remove HPPM from a NetWare system, navigate to the directory into which HPPM was installed, and load INSTALL.NLM with the -u option:

For example: SYS:HPPM/Install –u

NOTE: Some files might remain following the uninstallation and can be removed manually.
Accessing HPPM

You can access HPPM in the following ways:

- Remotely through a Web browser
- Locally from the system tray icon in Windows

Web Browser

To access HPPM through a Web browser:

1. Launch a supported browser. The browser window is displayed.
2. In the **Address** field (Microsoft Internet Explorer) or the **Location** field (Netscape Navigator), enter an IP address. Follow the examples below, where `hostname` is the IP address or the machine name of the computer on which the Management Server software component is installed.
   - If you installed the software to use the default port numbers of 80 (standard HTTP) or 443 (SSL), then enter one of the following:
     - `http://hostname`
     - `https://hostname`
   - If you installed the software to use a specific port number that is different from the defaults, then use the following example with the port number you selected.
     - `http://hostname:1234/`
     - `https://hostname:1234/`

**NOTE:** If you are using a proxy server, you may need to add the server hosting HPPM to the **No Proxy** list of servers in the Internet settings for your browser. Refer to the browser help for more information about changing the configuration.
System Tray Icon

To access HPPM through the system tray in Windows:

1. Right-click the HPPM system tray icon on a computer with one of the HPPM components installed to display a context menu.

2. Select Connect to access HPPM.

Regarding the Browser Security Alert

NOTE: The information in this section is only applicable if SSL is chosen during software installation.

Secure browsing to HPPM requires the use of SSL. SSL is a protocol layer that lies between HTTP and TCP. It provides secure communication between a server and a client and is designed to provide privacy and message integrity. SSL is commonly used in Web-based transactions to authenticate the Web server, which indisputably identifies the server to the browser. SSL also provides an encrypted channel of communication between the server and the browser. This ensures integrity of the data between the Web server and the browser, so that data can neither be viewed nor modified while in transit. HPPM uses a system generated and unique key.

An integral part of SSL is a security certificate, which identifies the HPPM Management Server. If your browser displays a security alert when browsing to HPPM, it can be for one of several reasons:

- The certificate is untrusted, meaning it was signed by a certifying authority that is unknown to your browser.
- The certificate has expired or is not yet valid. This can occur if you issue your own certificate and it has expired.
- The name on the certificate does not match the name of the site in the browser address field.
Establishing a Secure Session

The first time you browse to HPPM, the Secure Session screen is displayed. To ensure a secure connection to HPPM, verify that you are browsing to the desired Management Server.

1. Click View Certificate.
2. Verify that the name in the Issued To field is the name of your Management Server.
3. Perform any other steps necessary to verify the identity of the Management Server.

CAUTION: If you are not sure this is the desired Management Server, do not proceed. Importing a certificate from an unauthorized server relays your login credentials to that unauthorized server. Exit the certificate window and contact the HPPM administrator.

After verifying the Management Server, do one of the following:

- Import the certificate and proceed.
  a. Click View Certificate. The certificate is displayed.
  b. Click Install Certificate. The Certificate Import Wizard runs.
  c. Click Next. The Certificate Store screen is displayed.
  d. Select Automatically select the certificate store based on the type of certificate and click Next.
  e. Click Finish. A message is displayed asking for verification of the root store.
  f. Click Yes.

- Proceed without importing the certificate by clicking Yes on the Security Alert window. You continue to receive the Security Alert each time you log in until you import the certificate. Your data is still encrypted.

- Exit and import the certificate into your browser from a file provided by the administrator.
  a. Click No on the Security Alert window.
  b. Obtain an exported HPPM server certificate file from the administrator.

NOTE: If using Internet Explorer, you can manually import the file into the browser by clicking Tools>Internet Options>Content>Certificates>Import.
Access and Navigation

Logging into HPPM

Before using HPPM, you must log in with a user name and password. The first time you log in, enter admin as the user name, and enter admin as the password. Click **Submit Login** to log in. After you are logged in, you can change your password. For more information, refer to the section, “My Account Menu Option,” in Chapter 6.

**NOTE:** Passwords are case-sensitive.

![Login Fields](image)

After a successful login, the HPPM Overview screen under the **Home** tab is displayed. For more information on the Overview screen, refer to the section, “Overview Menu Option,” in Chapter 4.

Navigating HPPM

The HPPM interface is divided into three frames:

- **Top frame**—Contains customizable company information (company logo, name, product name), **Home**, Logs, Setup, and Help tabs, as well as a **Logout** hyperlink.
  - Click the **HP logo** to access the HP website.
  - Click the **Home** tab to see the menu options for configuring and operating the software. For more information, refer to the section, “Home Tab” in Chapter 4.
  - Click the **Logs** tab to see the menu options for displaying UPS data logs. For more information, refer to the section, “Logs Tab” in Chapter 5.
  - Click the **Setup** tab to see the menu options for setting up and modifying user accounts. For more information, refer to the section, “Setup Tab” in Chapter 6.
  - Click the **Help** tab to access the software help section. For more information, refer to the section, “Help Tab” in Chapter 6.
  - Click the **Logout** hyperlink to log out of HPPM.

**NOTE:** An indicator in the upper right-hand corner of the screen displays information about the UPS, such as the number of active alarms or whether or not the UPS is connected.
- **Left navigation frame**—Contains a list of menu options on the left side of the screen. The menu is dynamic, and the menu options change depending on the tab selected and on your access rights.

- **Main frame**—Contains the various screens of HPPM based on the menu option selected. The screens are discussed in detail later in this guide.

**NOTE:** The Overview screen is displayed in the main frame the first time you log in to HPPM.
Before HPPM can manage attached devices, the settings must be properly configured. To view a list of menu options for configuring HPPM settings, click the Home tab in the top frame of the HPPM interface. The available menu options are displayed in the left navigation frame.

**Home Tab**

Menu options listed under the Home tab include:

- Overview
- Alarms
- Identification
- Parameters
- Attached Devices
- Power Fail
- Shutdown Events
- Event Settings
- Manual Control
- Settings
Overview Menu Option

Click **Overview** in the left navigation frame to display the **Overview** screen. This screen displays overall views of the UPS status and contains the following tabs:

- Meter Display
- UPS Animation
- Alarms ($x$)

**NOTE:** The variable $x$ indicates the number of active alarms. For example, **Alarms (2)** means that the UPS has two active alarms.

Meter Display Tab

![Overview Screen Diagram]
Under the **Meter Display** tab, the status of the UPS is shown in graphical and text format. Input Voltage, Output Voltage, and Output Load information is displayed graphically on the left side of the screen, with the colors on the meter representing the current state of the UPS.

### Table 4-1: Meter Colors

<table>
<thead>
<tr>
<th>Color</th>
<th>Device Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Normal</td>
</tr>
<tr>
<td>Yellow</td>
<td>Warning</td>
</tr>
<tr>
<td>Red</td>
<td>Critical</td>
</tr>
</tbody>
</table>

Battery, Input, and Output parameters are listed as text on the right side of the screen. A status icon indicates the current state of each parameter.

### Table 4-2: Status Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Parameter Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Normal" /></td>
<td>Normal</td>
</tr>
<tr>
<td><img src="image" alt="Warning" /></td>
<td>Warning</td>
</tr>
<tr>
<td><img src="image" alt="Critical" /></td>
<td>Critical</td>
</tr>
</tbody>
</table>
UPS Animation Tab

The **UPS Animation** tab provides an animated view of the flow of power into and out of the UPS. Battery, Input, and Output parameters are listed as text on the right side of the screen. A status icon next to each parameter indicates the current state of the parameter (Normal, Warning, or Critical).

The animation graphic changes based on the current UPS status. The following screen is an example of the UPS on utility power.
If the UPS goes into Battery, Bypass, Buck, or Boost modes, the graphic on the left side of the screen changes to one of the following animations.
# Alarms Tab

The **Alarms** \((x)\) tab displays a list of active alarms for the UPS, where \(x\) is the current number of active alarms. Click an alarm to see a description of the alarm. If there are no active alarms, the screen indicates **No Active Alarms**. A status icon next to each alarm indicates the severity of the alarm (⚠️ Warning or 😷 Critical).

![Alarms Tab Example](image)

<table>
<thead>
<tr>
<th>Meter Display</th>
<th>UPS Animation</th>
<th>Alarms (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Yellow Alarm Icon] (Input voltage is out of range)</td>
<td>02/10/03 07:20:56</td>
<td></td>
</tr>
<tr>
<td>![Red Alarm Icon] (The UPS is on battery)</td>
<td>02/10/03 07:20:56</td>
<td></td>
</tr>
</tbody>
</table>
Alarms Menu Option

Click **Alarms** in the left navigation frame to display the **Alarms** screen. This screen lists all possible alarms (active and normal). The active alarms are listed at the top of the screen with the date and time on which the alarm most recently occurred. Click an active alarm to see a description of the alarm. A status icon next to each alarm indicates the current state of the alarm (ormal, Warning, or Critical).
Identification Menu Option

Click **Identification** in the left navigation frame to display the **Identification** screen. This screen displays specific device and contact information.

![Identification Table]

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baud Rate</td>
<td>9600</td>
</tr>
<tr>
<td>Communications</td>
<td>1.00</td>
</tr>
<tr>
<td>Contact</td>
<td>TCB</td>
</tr>
<tr>
<td>Contact Email</td>
<td><a href="mailto:tbnqgs@dev.net">tbnqgs@dev.net</a></td>
</tr>
<tr>
<td>Contact Phone</td>
<td>555-5555</td>
</tr>
<tr>
<td>Device Name</td>
<td>T2200XR On Table 1</td>
</tr>
<tr>
<td>Inverter Version</td>
<td>1.00</td>
</tr>
<tr>
<td>Model</td>
<td>T2200 XR</td>
</tr>
<tr>
<td>Part Number</td>
<td>204451-001</td>
</tr>
<tr>
<td>Protocol</td>
<td>XCP</td>
</tr>
<tr>
<td>Serial Number</td>
<td>UU332A0921</td>
</tr>
</tbody>
</table>

You can enter or change the contact information and device name on the **Settings** screen. For more information, refer to the section, “Settings Menu Option,” in this chapter. Only users with administrator rights can enter this information.
Parameters Menu Option

Click **Parameters** in the left navigation frame to display the **UPS Parameters** screen. This screen displays the available UPS parameter values. A status icon next to each parameter indicates the current state of the parameter (Unchecked Normal, Check Mark Warning, or Exclamation Critical).

### UPS Parameters

<table>
<thead>
<tr>
<th>Section</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Battery</strong></td>
<td>Battery Capacity</td>
<td>93%</td>
</tr>
<tr>
<td></td>
<td>Battery Installed Date</td>
<td>04.09.2003</td>
</tr>
<tr>
<td></td>
<td>Battery Status</td>
<td>OK</td>
</tr>
<tr>
<td></td>
<td>Battery Voltage</td>
<td>60 V</td>
</tr>
<tr>
<td></td>
<td>Run Time Remaining</td>
<td>65 Min</td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td>High Voltage Transfer Point</td>
<td>144 V</td>
</tr>
<tr>
<td></td>
<td>Low Voltage Transfer Point</td>
<td>84 V</td>
</tr>
<tr>
<td><strong>Environment</strong></td>
<td>Temperature</td>
<td>51 C</td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>Input Frequency</td>
<td>60.1 Hz</td>
</tr>
<tr>
<td></td>
<td>Input Voltage</td>
<td>122 V</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>Output Current</td>
<td>0 A</td>
</tr>
<tr>
<td></td>
<td>Output Frequency</td>
<td>60.1 Hz</td>
</tr>
<tr>
<td></td>
<td>Output Load</td>
<td>0 %</td>
</tr>
<tr>
<td></td>
<td>Output Power</td>
<td>0 W</td>
</tr>
<tr>
<td></td>
<td>Output Source</td>
<td>Utility Power</td>
</tr>
<tr>
<td></td>
<td>Output Voltage</td>
<td>122 V</td>
</tr>
</tbody>
</table>

**Self-Test**

- Last Self-Test Date: **00/00/0000**
- Test Results Summary: **No Test**

![Status Icons](image)
Attached Devices Menu Option

NOTE: The link to this screen is not displayed if you do not have administrative rights.

Click Attached Devices in the left navigation frame to display the Attached Devices screen.

NOTE: Depending on the specific UPS model, load segments may or may not be supported. The screen shown is only an example.

This screen allows you to:
- View attached devices and load segment power status
- Control load segments (turn Off, On, or Cycle power)
- Add or delete attached devices
- Edit attached device configuration

The estimated UPS runtime is displayed at the top of the screen. The total time required to shut down the entire UPS is recalculated when attached devices are added, deleted, or modified. This time is determined by totaling the time required to shut down each device on the UPS.
Controlling a Load Segment

To control a load segment, do one of the following:

- Click Off to shut down a load segment.
- Click On to turn on a load segment.
- Click Cycle to gracefully shut down and turn on a load segment.

**NOTE:** Off and On are not available for the load segment to which the Management Server is attached.

Adding an Attached Device

To add an attached device:

1. Click Add New Device on the Attached Devices screen. The Add Device screen is displayed.

   ![Add Device Screen](image)

2. Enter the device name or description in the **Device Description/Name** field.

3. Select the type of device (Remote Agent or Other Device) in the **Device Type** drop-down box.

   **NOTE:** Select the Other Device option for any unmanaged device, such as a router or hub. Unmanaged devices are either on or off and are not shut down gracefully.

4. If output power is supplied by controllable load segments, select the load segment to which the device is attached in the **Load Segment** drop-down box.

   **NOTE:** If output power is not supplied by load segments, the Load Segment drop-down box does not display on the screen.

5. If the device type is Remote Agent, enter the host name or IP address in the **Host Name or IP Address** field.
6. If the device type is **Remote Agent** or **Management Server**, enter the estimated time required to shut down the server in the **Shut Down OS** field.

7. If a command procedure is to be run at shutdown (such as running a script to back up files to tape or to shutdown the database):
   - Enter the name of the command procedure in the **Command Procedure to Run at Shutdown** field.
   - Enter the estimated time required to complete the procedure in the **Execute Command** field.

8. Click **Save Changes** to save the information.

### Editing or Deleting an Attached Device

To edit information for an attached device:

1. Click the link for the device you want to edit on the **Attached Devices** screen. The **Edit/Delete Device** screen is displayed.

2. Enter the device name or description in the **Device Description/Name** field.

3. If output power is supplied by controllable load segments, select the load segment to which the device is attached in the **Load Segment** drop-down box.

   **NOTE:** If output power is not supplied by load segments, the **Load Segment** drop-down box does not display on the screen.

4. If the device type is **Remote Agent**, enter the host name or IP address in the **Host Name or IP Address** field.

5. If the device type is **Remote Agent** or **Management Server**, enter the estimated time required to shut down the server in the **Shut Down OS** field.
6. If a command procedure is to be run at shutdown:
   — Enter the name of the command procedure in the **Command Procedure to Run at Shutdown** field.
   — Enter the estimated time required to complete the procedure in the **Execute Command** field.

7. Click **Save Changes** to save the information or click **Delete Device** to delete the device.

**NOTE:** The **Delete Device** button only displays for devices other than the Management Server.
Power Fail Menu Option

NOTE: The link to this screen is not displayed if you do not have administrative rights.

Click **Power Fail** in the left navigation frame to display the **Power Fail Settings** screen. This screen allows you to configure how the system should shut down attached devices in the event of a power failure.

NOTE: Depending on the specific UPS model, load segments may or may not be supported. The screen shown is only an example.
Configuring the Shutdown Delay for the Management Server Load Segment

To configure the shutdown delay for the Management Server load segment:

1. Configure the *Initiate Shutdown* options.
   a. Select *After Delay (in Minutes)* to specify a time delay before the load segment shuts down. Enter the amount of time that HPPM should wait before initiating the shutdown.

   **NOTE:** The shutdown delay for the Management Server load segment must be as long as or longer than the shutdown delay for all other load segments.

   b. Select *At Runtime Limit (maximize runtime)* to maximize the UPS runtime before shutdown. HPPM initiates the load segment shutdown when the value in the *UPS Runtime* field reaches zero.

   c. Select *Never (on low battery)* to shut down the Management Server load segment when a specified amount of time elapses after the UPS gives a low battery warning. Enter the elapsed time in the *Shutdown on low battery?* field as described in step 3.

2. Enter the amount of time to wait before restarting the Management Server load segment in the *Restart Delay (Seconds)* field.

3. Select *After x Minutes* and enter the amount of time to wait before shutting down when the UPS is on low battery. Use this option when selecting *Never (on low battery)*.

4. If you want to edit Management Server information, click the link in the *Attached Devices* column.

   The *Edit/Delete Device* screen is displayed. For more information, refer to the section, “Editing or Deleting an Attached Device,” in this chapter.

5. If you want to change the shutdown time for the Management Server, click the link in the *Required Shutdown Time* column.

   The *Attached Devices* screen is displayed. For more information, refer to the section, “Adding an Attached Device,” in this chapter.

6. Click *Save Changes* to save the information.
Configuring Shutdown for All Other Load Segments

To configure load segment shutdown for other attached devices:

1. Select **After Delay (in Minutes)** to specify a time delay before the attached device shuts down. Enter the amount of time for the delay.

2. Select **When Management Server Shuts Down** to shut down the attached device load segment at the same time the Management Server shuts down.

3. Enter the amount of time to wait before restarting the attached device in the **Restart Delay (Seconds)** field.

4. If you want to edit the device information, click the link in the **Attached Devices** column.
   - The **Edit/Delete Device** screen is displayed. For more information, refer to the section, “Editing or Deleting an Attached Device,” in this chapter.

5. If you want to change the shutdown time for the device, click the link in the **Required Shutdown Time** column.
   - The **Attached Devices** screen is displayed. For more information, refer to the section, “Adding an Attached Device,” in this chapter.

6. Click **Save Changes** to save the information.
Shutdown Events Menu Option

Click **Shutdown Events** in the left navigation frame to display the **Shutdown Events** screen. In addition to the typical events (such as power fail events) causing shutdowns, this screen allows you to configure other events for shutdown.

When a shutdown event occurs, HPPM gracefully shuts down all attached devices and UPS load segments.

**NOTE:** The list of events on this screen may vary depending on the UPS.

To specify an event for shutdown:

1. Select **Shutdown?** for the event.
2. Enter the number of minutes to wait between the time the event occurs and the time the device shuts down in the **Delay (Minutes)** field.
3. Click **Save Changes** to save the information.

![Shutdown Events Table]

<table>
<thead>
<tr>
<th>Event</th>
<th>Shutdown?</th>
<th>Delay (Minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Discharged</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Battery Failure</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Battery Low</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Input Out of Range</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Internal Failure</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Overload</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Shutdown Imminent</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Site Wiring Fault</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Temperature Out of Range</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

[Save Changes Button]
Event Settings Menu Option

**NOTE:** The link to this screen is not displayed if you do not have administrative rights.

Click **Event Settings** in the left navigation frame. The screen that displays contains the **Event Notifications** and **Event Categories** tables.

### Event Notifications

<table>
<thead>
<tr>
<th></th>
<th>Critical</th>
<th>Warning</th>
<th>Information</th>
<th>User Defined 1</th>
<th>User Defined 2</th>
</tr>
</thead>
</table>
| **EMail**| ✓ admin@dev.net  
            foxy@dev.net | ✓ admin@dev.net  
            foxy@dev.net | ✓ admin@dev.net  
            foxy@dev.net |                 |                |
| **SNMP** | 172.25.238.106  
            172.25.238.238  
            172.25.235.119  
            172.25.235.25 |            |             |                 |                |
| **Broadcast** | ✓ 172.25.235.42  
                  172.25.235.77  
                  172.25.238.119  
                  172.25.238.25 |            |             |                 |                |

The **Event Notifications** table allows you to define the event notifications (EMail, SNMP, or Broadcast) HPPM takes for each event by category (Critical, Warning, Information, User Defined 1, or User Defined 2).

**NOTE:** It is up to you to define the severity of each event according to your environment.

### Event Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Defined 1</td>
<td>User Defined 1</td>
<td>Critical</td>
</tr>
<tr>
<td>User Defined 2</td>
<td>User Defined 2</td>
<td>Warning</td>
</tr>
</tbody>
</table>

The **Event Categories** table allows you to create up to two additional event categories, which can be used to define the event notifications. (The added categories are displayed as column headings on the **Event Notifications** table and on the **Event Severities** screen.)
Creating User-Defined Event Categories

Creating user-defined categories allows you to categorize alarms so that specific alerts are sent to a certain groups of people. To create a user-defined event category:

1. In the **Event Categories** table on the main screen, enter the name of the new category in the **Name** field.
2. Select the SNMP severity level of the new category in the **Severity** drop-down box.
3. Click **Save Changes** to save the added information. The added category is displayed as a column heading on the **Event Notifications** table and on the **Event Severities** screen.

<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
<th>Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>User Defined 1</td>
<td>User Defined 1</td>
<td>Critical</td>
</tr>
<tr>
<td>User Defined 2</td>
<td>User Defined 2</td>
<td>Warning</td>
</tr>
</tbody>
</table>

Categorizing Individual Events by Severity

To designate a category for an event:

1. In the **Event Notifications** table on the main screen, click any of the category column heading links (Critical, Warning, Information, User Defined 1, or User Defined 2).

<table>
<thead>
<tr>
<th>Critical</th>
<th>Warning</th>
<th>Information</th>
<th>User Defined 1</th>
<th>User Defined 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   The **Event Severities** screen is displayed with the events listed in the **Event** column.
2. Select the radio button for the category into which each event should be placed.
3. Click **Save Changes** to save the information.

### Event Severities

<table>
<thead>
<tr>
<th>Event</th>
<th>Critical</th>
<th>Warning</th>
<th>Information</th>
<th>User Defined 1</th>
<th>User Defined 2</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Out of Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Out of Range</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overload</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shutdown Imminent</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Failure</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Low</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery Discharged</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On Battery</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Failure</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Wiring Fault</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual Load Dumped</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Selecting Notification Actions for Events by Category

You can specify an event notification by clicking one of the event notification links (EMail, SNMP, or Broadcast) on the left side of the **Event Notifications** table on the main screen.

#### Setting Up E-mail Notifications

To set up the software to send an e-mail notification in response to an event in a specific category:

1. Click the **EMail** link on the **Event Notifications** table on the main screen. The **EMail Setup** screen is displayed.
2. Enter the mail server IP address or host name in the **SMTP Server** field.
3. Enter the e-mail address that HPPM marks messages as being sent from in the **SMTP From Address** field.
4. Select the **Enabled** checkbox to indicate that e-mail notifications are sent for events in each category (Critical, Warning, Information, User Defined 1, and User Defined 2).
5. Enter up to six e-mail addresses in the **EMail Address(es)** field for the persons who should receive e-mail notifications of events that occur in each category.
6. Enter the amount of time to delay before the e-mail is sent in the **Delay (seconds)** field.

**NOTE:** If the event clears before the delay time has expired, then the e-mail is not sent.

7. Click **Save Changes** to save the information.

### Setting Up SNMP Trap Notifications

To set up the software to send an SNMP trap notification in response to an event in a specific category:

1. Click the **SNMP** link on the **Event Notifications** table on the main screen. The **SNMP Setup** screen is displayed.

2. Enter the SNMP trap community string in the **Trap Community String** field (*public* is the default string).

3. Select the **Enabled** checkbox to indicate that SNMP trap notifications are sent for events in each category (Critical, Warning, Information, User Defined 1, and User Defined 2).
4. Enter up to six trap recipients in the **SNMP Address(es)** field for the persons who should receive SNMP trap notifications of events that occur in each category.

5. Enter the amount of time to delay before the trap is sent in the **Delay (seconds)** field.

   **NOTE:** If the event clears before the delay time has expired, then the SNMP trap is not sent.

6. Click **Save Changes** to save the information.

   **NOTE:** For more information on using SNMP to send traps to Insight Manager 7, refer to Appendix B of this guide.

```
<table>
<thead>
<tr>
<th>Enabled</th>
<th>Event</th>
<th>SNMP Address(es)</th>
<th>Delay (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>Critical</td>
<td>172.25.234.88</td>
<td>10</td>
</tr>
<tr>
<td>✔️</td>
<td>Warning</td>
<td>172.25.234.88</td>
<td>10</td>
</tr>
<tr>
<td>□</td>
<td>Information</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>□</td>
<td>User Defined 1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>□</td>
<td>User Defined 2</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
```
Setting Up Broadcasts

To set up the software to send a broadcast notification in response to an event in a specific category:

1. Click the Broadcast link on the Event Notifications table on the main screen. The Broadcast Setup screen is displayed.

2. Select the Enabled checkbox to indicate that broadcast notifications are sent for events in each category (Critical, Warning, Information, User Defined 1, and User Defined 2).

3. Enter up to six broadcast recipients in the Broadcast Address(es) field for the persons who should receive broadcast notifications of events that occur in each category. The broadcast recipient can be an IP address, user name, computer name, or messaging name.

   **NOTE:** If the recipient is a computer name that contains spaces, then the name must be enclosed in quotation marks.

4. Enter the amount of time to delay before the broadcast is sent in the Delay (seconds) field.

   **NOTE:** If the event clears before the delay time has expired, then the broadcast is not sent.

5. Click Save Changes to save the information.

**IMPORTANT:** Any computer running Linux that is sending or receiving broadcasts must have the Samba packages installed, configured, and running. If the computer running Linux is to receive broadcasts, Samba must be told how to display the received message by adding a message command statement to the Global Settings section of the smb.conf file, such as the following:

```bash
message command = /bin/csh -c 'cat %s | wall; rm %s' &
```

This statement tells Samba to route the broadcast message to the wall command, which displays the message on the system (either in a terminal window, at the console, or in a pop-up message, depending on the display environment), then delete the message. The Samba processes must be restarted after editing the smb.conf file to enable the changes. For more information, refer to the Samba documentation at www.samba.org.

In addition, for a Linux Management Server to send broadcasts to either Windows or Linux systems (or both), entries must be added to the /etc/hosts file on the Management Server for each host name to which it broadcasts.

For example, to broadcast from a Linux Management Server to a Windows workstation named “george” at IP address 143.85.41.121, add the following line to the hosts file:

```
143.85.41.121    george
```
### Broadcast Setup

<table>
<thead>
<tr>
<th>Enabled</th>
<th>Event</th>
<th>Broadcast Hostname(s)/IP Address(es)</th>
<th>Delay (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>Critical</td>
<td>buba</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>192.168.123.135</td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>Warning</td>
<td>buba</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>192.168.123.121</td>
<td></td>
</tr>
<tr>
<td>✔</td>
<td>Information</td>
<td>Skylock</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>User Defined 1</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>User Defined 2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Manual Control Menu Option

**NOTE:** The link to this screen is not displayed if you do not have administrative rights, or if the UPS does not support any control commands.

Click **Manual Control** in the left navigation frame. The screen that displays contains the **Select Command** and **Execute Command** boxes. These boxes allow you to select and execute UPS commands manually.

**NOTE:** The available list of controls is dependent on the controls supported by the specific UPS. The screen shown is only an example.

### Select Command

![Select Command](image)

### Execute Battery Test

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration In Seconds</td>
<td></td>
<td>Enter a number from 1 to 255.</td>
</tr>
</tbody>
</table>

![Execute Command](image)
Executing the Battery Test Command

To run a manual test on the UPS battery:

1. Select **Battery Test** in the **Select Command** box. The **Execute Battery Test** box is displayed.

2. Enter the amount of time that the device runs on battery while running the test in the **Duration In Seconds** field.

3. Click **Execute Command** to execute the control command and start the test. The results of the test are on the **UPS Parameters** screen in the **Test Results Summary** field and a log entry is created in the Application Log. For more information on this screen, refer to the section, “Parameters Menu Option,” in this chapter.
Settings Menu Option

NOTE: The link to this screen is not displayed if you do not have administrative rights.

Click the Settings menu option in the left navigation frame to display the Settings screen. This screen allows you to enter contact information (such as name, e-mail, and phone number) and values for settable UPS parameters. The information entered on this screen is displayed on the Identification screen. For more information, refer to the section, “Identification Menu Option,” in this chapter.

To enter contact information and UPS settings:
1. Enter or select the date on which the battery was installed in the Battery Installed Date field.
2. Enter the name of the contact person in the Contact field.
3. Enter the e-mail address of the contact person in the Contact Email field.
4. Enter the phone number of the contact person in the Contact Phone field.
5. Enter the name of the UPS in the Device Name field.
6. Click Save Changes to save the information.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Installed Date</td>
<td>03/17/2003</td>
<td>Enter a new date or select the calendar icon to pick a date.</td>
</tr>
<tr>
<td>Contact</td>
<td></td>
<td>Enter a new Contact in the box provided.</td>
</tr>
<tr>
<td>Contact Email</td>
<td></td>
<td>Enter a new Contact Email in the box provided.</td>
</tr>
<tr>
<td>Contact Phone</td>
<td></td>
<td>Enter a new Contact Phone in the box provided.</td>
</tr>
<tr>
<td>Device Name</td>
<td></td>
<td>Enter a new Device Name in the box provided.</td>
</tr>
</tbody>
</table>
After the HPPM settings are properly configured and devices are being managed, you can access and export several types of logs. These logs provide various types of data on UPS events, as well as more general application events.

**Logs Tab**

Menu options listed under the **Logs** tab include:

- UPS Summary
- UPS Detailed
- UPS Data
- Application

**UPS Summary Menu Option**

Click **UPS Summary** in the left navigation frame to display the **UPS Summary** screen. This screen displays a graphical view of the events that have occurred on the UPS for a selected time period. A status icon on the left side of each event indicates the current state of the event (⚠️ Warning or 🚨 Critical). The number on the right side indicates the number of times the alarm has been reported in the time period (for example, the Battery Low alarm has occurred 10 times in the last 24 hours).
To change the time period displayed, click one of the following buttons:

- **Last 24 Hours**
- **Last Week**
- **Last Month**
- **Last Year**

**NOTE:** The time period ends the moment you click the button. For example, if you click **Last 24 Hours**, the software counts back 24 hours from the time you clicked the button and displays the events that occurred during that time period.

Click an event name to display more information about the selected event and recommended actions to take.
UPS Detailed Menu Option

Click **UPS Detailed** in the left navigation frame to display the **UPS Detailed** screen. This screen displays a log of the events that have occurred on the UPS, such as the UPS switching to battery power. The following information is displayed for each event:

- **Severity**—An icon indicating the severity or status of the alarm (_CRITICAL, WARNING, INFORMATION, or CLEARED).
- **Description**—The name of the event. Click the event name to display more information, such as a detailed description and recommended actions to take.
- **Date/Time**—The date and time at which the event occurred.

**NOTE:** The log can be sorted by clicking any of the column headings.

Click **Clear Logs** to clear the log files or click **Refresh Page** to update the screen with current log information.

<table>
<thead>
<tr>
<th>Severity</th>
<th>Description</th>
<th>Date / Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergency Power Off is not active.</td>
<td>January 01 2008 at 15:59</td>
</tr>
<tr>
<td></td>
<td>Emergency Power Off activated</td>
<td>January 01 2008 at 15:59</td>
</tr>
<tr>
<td></td>
<td>Utility power has been restored.</td>
<td>January 01 2008 at 14:18</td>
</tr>
<tr>
<td></td>
<td>Input voltage is normal.</td>
<td>January 01 2008 at 14:18</td>
</tr>
<tr>
<td></td>
<td>The UPS is on battery.</td>
<td>January 01 2008 at 14:18</td>
</tr>
<tr>
<td></td>
<td>Input voltage is out of range.</td>
<td>January 01 2008 at 14:18</td>
</tr>
<tr>
<td></td>
<td>Emergency Power Off is not active.</td>
<td>January 01 2008 at 14:08</td>
</tr>
<tr>
<td></td>
<td>Emergency Power Off activated</td>
<td>January 01 2008 at 14:08</td>
</tr>
<tr>
<td></td>
<td>Emergency Power Off is not active.</td>
<td>January 01 2008 at 14:07</td>
</tr>
<tr>
<td></td>
<td>Emergency Power Off is not active.</td>
<td>January 01 2008 at 14:06</td>
</tr>
<tr>
<td></td>
<td>Emergency Power Off is not active.</td>
<td>January 01 2008 at 13:59</td>
</tr>
<tr>
<td></td>
<td>Utility power has been restored.</td>
<td>January 01 2008 at 09:41</td>
</tr>
<tr>
<td></td>
<td>Input voltage is normal.</td>
<td>January 01 2008 at 09:41</td>
</tr>
<tr>
<td></td>
<td>The UPS is on battery.</td>
<td>January 01 2008 at 09:41</td>
</tr>
<tr>
<td></td>
<td>Input voltage is out of range.</td>
<td>January 01 2008 at 09:41</td>
</tr>
</tbody>
</table>
Exporting a UPS Event Log

To export the UPS event log to a file:

1. Click **Export Logs** at the bottom of the **UPS Detailed** screen. The **Event Log Export** screen is displayed.

2. Enter the date range of the data in the **Export data from** and **to** fields.

3. Select either **Comma-Separated** or **Tab Delimited**.

4. Do one of the following:
   - To save the file to the Management Server, select **Save to File** and enter the name of the file.
   - To download the document to a specified location, select **Download Document**.

5. Click **Do Export** to export the file or click **Cancel** to cancel the operation.
**Data Logs**

**UPS Data Menu Option**

Click **UPS Data** in the left navigation frame to display the **UPS Logs** screen. This screen displays a log of all UPS data that has been recorded, such as Input Voltage, Temperature, and Battery Capacity.

1. Select the frequency of obtaining device data in the **Log Interval**: dropdown box. (For example, an interval of 10 minutes means that new data is retrieved from the device every ten minutes.)

2. Click **Save Settings** to save the updated log interval time, click **Clear Logs** to clear the log files, or click **Refresh Page** to update the screen with current log information.

<table>
<thead>
<tr>
<th>Date / Time</th>
<th>Input Voltage</th>
<th>Output Voltage</th>
<th>Output Load</th>
<th>Temperature</th>
<th>Battery Voltage</th>
<th>Output Power</th>
<th>Battery Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 04 2003 at 17:12:07</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 17:02:07</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 16:52:07</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 16:42:07</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 16:32:07</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 16:22:06</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 16:12:06</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 16:02:06</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 15:52:06</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 15:42:06</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 15:32:06</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
<tr>
<td>February 04 2003 at 15:22:05</td>
<td>123.0 V</td>
<td>123.0 V</td>
<td>0.0 %</td>
<td>48 °C</td>
<td>51.0 V</td>
<td>0.0 W</td>
<td>93 %</td>
</tr>
</tbody>
</table>
Exporting a UPS Data Log

To export the UPS data log to a file:

1. Click **Export Logs** at the top of the **UPS Logs** screen. The **Data Log Export** screen is displayed.

2. Enter the date range of the data in the **Export data from** and **to** fields.

3. Select either **Comma-Separated** or **Tab Delimited**.

4. Do one of the following:
   - To save the file to the Management Server, select **Save to File** and enter the name of the file.
   - To download the document to a specified location, select **Download Document**.

5. Click **Do Export** to export the file or click **Cancel** to cancel the operation.
Application Menu Option

Click Application in the left navigation frame to display the Application Logs screen. This screen displays a log of all application events that have occurred, such as a user logging in. The following information is displayed for each application event:

- **User**—The login name of the user who performed the action
- **Description**—A description of the application event
- **Date/Time**—The date and time at which the event occurred

**NOTE:** The log can be sorted by clicking any of the column headings.

Click Clear Logs to clear the log files or click Refresh Page to update the screen with current log information.

<table>
<thead>
<tr>
<th>User</th>
<th>Description</th>
<th>Date / Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin [177.0.0.1]</td>
<td>Data Log Configuration Changed</td>
<td>March 17 2003 at 15:20</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Event Log deleted</td>
<td>March 17 2003 at 14:43</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Event Log deleted</td>
<td>March 17 2003 at 14:43</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>User logged in</td>
<td>March 17 2003 at 14:43</td>
</tr>
<tr>
<td>administrator [127.0.0.1]</td>
<td>User failed to login</td>
<td>March 17 2003 at 14:43</td>
</tr>
<tr>
<td>administrator [127.0.0.1]</td>
<td>User failed to login</td>
<td>March 17 2003 at 14:42</td>
</tr>
<tr>
<td>Herb [172.25.234.50]</td>
<td>User failed to login</td>
<td>January 31 2003 at 10:15</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Contact changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:03</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Device Name changed from 722000 to 722000 on Table 2</td>
<td>January 31 2003 at 10:03</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Device Name changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Battery Installed Date changed from 1/16/2009 to 1/17/2009</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Contact Phone changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Contact Email changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Contact changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Device Name changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>Device Name changed from [blank value] to [blank value]</td>
<td>January 31 2003 at 10:02</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>User logged in</td>
<td>January 31 2003 at 09:22</td>
</tr>
<tr>
<td>Ralph [179.0.0.1]</td>
<td>User logged in</td>
<td>January 31 2003 at 09:20</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>User Accounts Configuration Changed</td>
<td>January 31 2003 at 09:20</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>User logged in</td>
<td>January 31 2003 at 09:18</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>User failed to login</td>
<td>January 31 2003 at 09:18</td>
</tr>
<tr>
<td>Ralph [179.0.0.1]</td>
<td>User failed to login</td>
<td>January 31 2003 at 09:18</td>
</tr>
<tr>
<td>Bruce [179.0.0.1]</td>
<td>User failed to login</td>
<td>January 31 2003 at 09:17</td>
</tr>
<tr>
<td>admin [177.0.0.1]</td>
<td>User failed to login</td>
<td>January 31 2003 at 09:17</td>
</tr>
<tr>
<td>user [127.0.0.1]</td>
<td>User failed to login</td>
<td>January 31 2003 at 09:17</td>
</tr>
<tr>
<td>Management Server started</td>
<td>Management Server started</td>
<td>January 31 2003 at 09:15</td>
</tr>
</tbody>
</table>
Exporting an Application Log

To export the application log to a file:

1. Click **Export Logs** at the bottom of the **Application Logs** screen. The **Application Log Export** screen is displayed.

2. Enter the date range of the data in the **Export data from** and **to** fields.

3. Select either **Comma-Separated** or **Tab Delimited**.

4. Do one of the following:
   - To save the file to the Management Server, select **Save to File** and enter the name of the file.
   - To download the document to a specified location, select **Download Document**.

5. Click **Do Export** to export the file or click **Cancel** to cancel the operation.

![Application Log Export](image)
Account Setup and Help

For security purposes, HPPM provides each user with a login account that is associated with specific device access. Administrators are allowed to manage and change this information when needed.

An online help system is also available to all HPPM users.

Setup Tab

Menu options listed under the Setup tab include:

- My Account
- User Accounts

My Account Menu Option

Click My Account in the left navigation frame to display the My Account screen. This screen allows you to change your login password.

To change a password:
1. Enter your password in the Password field.
2. Enter your password again in the Verify Password field.
3. Click Save Changes to save the new password.
User Accounts Menu Option

NOTE: The link to this screen is not displayed if you do not have administrative rights.

Click User Accounts in the left navigation frame to access the User Accounts screen. This screen allows administrators to manage user accounts.

Adding a User Account

To add a new user account:

1. Enter the user’s login name in the Name field.
2. Enter the user’s password in the Password field.
3. Enter the password again in the Verify Password field.
4. If the new user is given administrator rights, select the Administrator checkbox.
5. Click Save Changes to save the new user account information.
Modifying a User Account

If you have administrator rights, you can change a user’s login name or password. You can also add or remove administrator rights to the user’s account.

Changing a User Login Name

To change a user’s login name:
1. Enter the changed name in the **Name** field.
2. Enter the user’s password in the **Password** field.
3. Enter the password again in the **Verify Password** field.
4. If the user has administrator rights added or removed, select or deselect the **Administrator** checkbox.
5. Click **Save Changes** to save the updated user account information.

Changing a User Password

To change a user’s password:
1. Enter the user’s login name in the **Name** field.
2. To change the password:
   a. Enter the changed password in the **Password** field.
   b. Enter the password again in the **Verify Password** field.
3. If the user has administrator rights added or removed, select or deselect the **Administrator** checkbox.
4. Click **Save Changes** to save the updated user account information.

Deleting a User Account

To delete a user account:
1. Select the **Delete** checkbox for the user account that is to be removed.
2. Click **Delete Selected Users** to delete the user account. The account is removed and is no longer displayed on the **User Accounts** screen.
Help Tab

Menu options listed under the Help tab include:

- About
- Info & Updates
- Contents

About Menu Option

Click About in the left navigation frame to display the About HP Power Manager screen. This screen displays information about the company and product.

NOTE: This screen is customized for HP.

The screen contains a link to http://www.hp.com/products/UPS, as well as the following hyperlinked logos:

- HP Invent—Connects to http://www.hp.com
- Macromedia Shockwave/Flash—Connects to http://www.macromedia.com
- GoAhead—Connects to http://www.goahead.com
Info & Updates Menu Option

Click **Info & Updates** in the left navigation frame to access the **Info & Updates** screen. This screen displays UPS information, online registration, and links to HP.
Contents Menu Option

Click Contents in the left navigation frame to display the Contents screen. This screen provides a list of links to help topics.
Table 7-1 lists troubleshooting items that can occur during HPPM installation or operation.

<table>
<thead>
<tr>
<th>Issue or Symptom</th>
<th>Possible Cause</th>
<th>Suggested Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>You cannot access HPPM after installation.</td>
<td>You exited the system tray icon in Windows and need to restart the HPPM icon.</td>
<td>From the Start menu, select Programs&gt;HP Power Manager&gt;HP Power Manager Status.</td>
</tr>
<tr>
<td>You need the SNMP MIB file for HPPM.</td>
<td>The file is named CPQRPM.MIB and should be version 1.5 or greater. The file can be found on the HP Rack and Management Pack CD and in the install folder of the HPPM Management Server. This MIB is shared with other HP power management applications such as HP Rack and Power Manager.</td>
<td></td>
</tr>
<tr>
<td>You chose an HTTP port number other than the default (80) during installation.</td>
<td>Be sure to include this port number when browsing to HPPM. For example, if you chose port 1234 during installation, then you would enter the following in your browser for HPPM access: <a href="http://hostname:1234">http://hostname:1234</a>.</td>
<td>Note: hostname can be either a machine name or an IP address. Do one of the following:</td>
</tr>
<tr>
<td>Other Web servers or Web-based applications are running on the same port.</td>
<td></td>
<td>• Make sure that no other Web servers or Web-based applications are running on the same port.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Try using another port during installation or reconfiguration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For a list of the Well Known Port Numbers that could be in use, refer to <a href="http://www.iana.org">www.iana.org</a>. The Well Known Ports can be found at <a href="http://www.iana.org/assignments/port-numbers">http://www.iana.org/assignments/port-numbers</a>.</td>
</tr>
</tbody>
</table>

continued
### Table 7-1: Troubleshooting continued

<table>
<thead>
<tr>
<th>Issue or Symptom</th>
<th>Possible Cause</th>
<th>Suggested Action</th>
</tr>
</thead>
</table>
| You cannot access HPPM after installation (continued). | The Management Server software might not be running. | Start the Management Server software:  
For Linux, run `/etc/rc.d/init.d/DevMan start`.  
For Windows, right-click the icon in the system tray and select **Start Service**, or select **Programs** > **HP Power Manager** > **Configure HP Power Manager** from the Start Menu. |
| You chose SSL during installation. | Be sure to use HTTPS instead of HTTP in your browser to access HPPM.  
For example, `https://hostname:1234` would establish a secure socket layer link to HPPM running on port 1234. |
| Selecting **Exit** from the system tray menu only removes the HPPM icon from the system tray. | Restart the system tray icon by selecting **Programs** > **HP Power Manager** > **HP Power Manager Status** from the Start Menu. Right-click the system tray icon and select **Stop Service** from the context menu. |
| You are not able to reboot the machine. | The system hangs when the InstallShield wizard for the Remote Agent is left open and minimized during the attempted reboot. | Manually power off the machine. |
| When you are preparing to install silently, the DevManRA.ini or DevManBE.ini files cannot be located. | The `DevManRA.ini` and `DevManBE.ini` files are automatically created in the top-level program directory. | For Linux, both files can be found at `/usr/local/DevMan`.  
For Windows, if installed to the default location, the files are located at `/Program Files/HP/Power Manager on the Management Server, and at `/Program Files/HP/Power Manager Remote Agent` on the Remote Agent. |
| You are unable to start service for Linux or the error message: **Segmentation fault/usr/local/DevMan** displays. | The server name and IP address are incorrect. | Update the server name and IP address on `/etc/hosts`. |
| Linux shows a page with garbage characters and cannot install the Flash Player utility. | This is a function of the browser. | Save the Flash Player setup file to the local drive and run it from there. |

**continued**
<table>
<thead>
<tr>
<th>Issue or Symptom</th>
<th>Possible Cause</th>
<th>Suggested Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>You are unable to browse into HPPM.</td>
<td>The Netscape default settings are incorrect.</td>
<td>Open the <code>all.js</code> file in the <code>netscape/defaults/pref</code> folder and change the lines as indicated in the section, “Netscape Settings,” in Chapter 2 of this guide.</td>
</tr>
<tr>
<td>You are unable to start service for Linux.</td>
<td>Files are missing.</td>
<td>The HPPM Linux package (PowerManager-3.0-4.i586.rpm) requires the file <code>compat-libstdc++7.3-2.96.110.i386.rpm</code> to install.</td>
</tr>
<tr>
<td>You are not able to discover a UPS during initial or subsequent configurations.</td>
<td>The UPS is not connected to the correct communications port.</td>
<td>Verify that the UPS is connected to the correct communications port (COM1, COM2, etc.).</td>
</tr>
<tr>
<td></td>
<td>Other software or processes are accessing the communications port to which the UPS is attached.</td>
<td>Verify that no other software or processes are accessing the communications port to which the UPS is attached.</td>
</tr>
<tr>
<td></td>
<td>You are using the wrong communications cable.</td>
<td>Verify that you are using the communications cable that came with the UPS.</td>
</tr>
<tr>
<td></td>
<td>Resources for the communications port are shared with other devices.</td>
<td>Verify that resources for the selected communications port (such as I/O port or IRQ) are not shared with other devices.</td>
</tr>
<tr>
<td></td>
<td>The wrong communications port is connected.</td>
<td>Try a different communications port.</td>
</tr>
<tr>
<td>Broadcasts from HP Power Manager are not displaying on the expected recipient.</td>
<td>The broadcast setup under HP Power Manager is incorrect.</td>
<td>For broadcast messages from Linux to Windows, the Netbios name of the recipient must be used. Also, refer to the configuration information regarding Linux broadcasts in Chapter 4 of this guide.</td>
</tr>
</tbody>
</table>
### Table 7-1: Troubleshooting continued

<table>
<thead>
<tr>
<th>Issue or Symptom</th>
<th>Possible Cause</th>
<th>Suggested Action</th>
</tr>
</thead>
</table>
| After adding a Remote Agent on the **Attached Devices** screen, a red status icon continues to display for that Remote Agent. | The Remote Agent software might not be running. | Start the Remote Agent software:  
- For Linux, run `sudo /etc/rc.d/init.d/DevMan start`.  
- For Windows, right-click the icon in the system tray and select **Start Service**.  
- For Netware, load the agent from the directory to which it was installed, such as `SYS:HPPM/DEVMANRA.NLM`, using forward slashes to separate directories. |
| | The Remote Agent might not be configured to allow management from the address of the Management Server. | Configure the Remote Agent to allow management by the Management Server:  
- For Linux, run `sudo /etc/rc.d/init.d/DevMan setup`.  
- For Windows, right-click the icon in the system tray and select **Configure**, or select **Programs>HP Power Manager>Configure HP Power Manager** from the Start Menu.  
- For Netware, uninstall and reinstall the Remote Agent according to instructions in Chapter 2 of this guide. |
| After changing UPS hardware or serial connection, the Management Server shows **No Device** or **UPS Not Connected**. | The Management Server cannot communicate with the UPS due to the change. | Reconfigure the UPS with the new settings:  
- For Linux, run `sudo /etc/rc.d/init.d/DevMan setup`.  
- For Windows, right-click the icon in the system tray and select **Configure**. |
| Low battery. | The battery is low on voltage. | Allow the battery to recharge for 24 hours. Rack and Power Manager sends a low battery warning approximately two to five minutes before UPS shutdown. This warning is approximate, and the actual time to shutdown can vary significantly.  
Replace the battery. Refer to the documentation that came with the UPS. |
**Table 7-1: Troubleshooting continued**

<table>
<thead>
<tr>
<th>Issue or Symptom</th>
<th>Possible Cause</th>
<th>Suggested Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>On battery.</td>
<td>The UPS system is operating on battery power.</td>
<td>The UPS continues to run on battery power until the battery is completely discharged (or until utility power is restored), unless the shutdown parameters specify to turn off both the system and the UPS.</td>
</tr>
<tr>
<td>On buck.</td>
<td>The input voltage is too high for the UPS. The UPS bucks the voltage down to acceptable limits.</td>
<td>For information on Buck mode, refer to the UPS documentation.</td>
</tr>
<tr>
<td>On boost.</td>
<td>The input voltage is too low for the UPS. The UPS boosts the voltage up to acceptable limits.</td>
<td>For information on Boost mode, refer to the UPS documentation.</td>
</tr>
<tr>
<td>Overload.</td>
<td>The device load has exceeded the UPS power rating.</td>
<td>Verify all equipment is drawing within the rated requirements. If necessary, reduce the equipment connected to the UPS. The UPS might need to be reset.</td>
</tr>
<tr>
<td>The UPS is in Bypass mode.</td>
<td>The load is being powered by utility power. However, utility power continues to be passively filtered by the UPS. Battery protection is not available while in Bypass mode.</td>
<td>Refer to the UPS front panel for alarm indications. If the UPS does not return to normal operation soon, refer to the UPS documentation for troubleshooting information.</td>
</tr>
<tr>
<td>Diagnostic test completed.</td>
<td>The diagnostic test of the UPS has completed.</td>
<td>View the results of the diagnostic test on the <strong>Logs and Reports</strong> screen.</td>
</tr>
<tr>
<td>No power.</td>
<td>A power failure occurred.</td>
<td>Verify that the UPS is connected to a working outlet and that the UPS is powered up.</td>
</tr>
</tbody>
</table>
HPPM lets you execute a command, send an e-mail, send a broadcast notification, and send SNMP traps to specified recipients if a certain alert situation prevails.

A list of all message texts and a description of each alarm is provided in Table A-1.

Table A-1: HPPM Alarm Messages

<table>
<thead>
<tr>
<th>Alarm Text</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Discharged</td>
<td>The battery is not fully charged.</td>
</tr>
<tr>
<td></td>
<td>The battery has been discharged to its maximum discharged state.</td>
</tr>
<tr>
<td></td>
<td>The UPS was on battery for long enough to exhaust the battery capacity and has shut down.</td>
</tr>
<tr>
<td>Batteries Disconnected</td>
<td>The UPS detects that at least one of the batteries is not connected. Backup power is either gone or considerably reduced.</td>
</tr>
<tr>
<td>Battery Failure</td>
<td>The battery contactor/breaker is open.</td>
</tr>
<tr>
<td></td>
<td>The battery voltage has exceeded a predetermined limit. Operating with this alarm set can cause permanent battery or system damage.</td>
</tr>
<tr>
<td></td>
<td>A battery problem has been detected.</td>
</tr>
<tr>
<td></td>
<td>A battery test has been executed, and the battery failed the test.</td>
</tr>
<tr>
<td></td>
<td>The charger circuit has detected possible bad batteries or an open circuit in connections to the batteries.</td>
</tr>
<tr>
<td>Battery Low</td>
<td>The battery voltage level has dropped below the predetermined “low battery warning” level.</td>
</tr>
<tr>
<td>Bypass Failure</td>
<td>The bypass input voltage is not available for transfer. This might be due to over or under voltage, over or under frequency, out of phase lock, or other reasons.</td>
</tr>
<tr>
<td>Bypass ON Auto</td>
<td>The UPS is on bypass, and the critical load does not have power protection.</td>
</tr>
<tr>
<td>Bypass ON Manual</td>
<td>A user has flipped a switch (for example, Maintenance Bypass) that bypasses the UPS.</td>
</tr>
<tr>
<td>Check Breaker</td>
<td>The inverter output contactor/breaker is open.</td>
</tr>
<tr>
<td></td>
<td>The rectifier/charger input breaker is open.</td>
</tr>
</tbody>
</table>
### Table A-1: HPPM Alarm Messages

<table>
<thead>
<tr>
<th>Alarm Text</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics Module Failure</td>
<td>For an “n+1” parallel system, one of the power modules has failed.</td>
</tr>
<tr>
<td>EPO Initiated</td>
<td>The UPS has shut down due to the activation of the remote EPO signal.</td>
</tr>
<tr>
<td>Input Out of Range</td>
<td>Input (Utility) fault: Measured input voltage has exceeded the upper voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>Input (Utility) fault: Measured input voltage is less than the lower voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>Input (Utility) fault: Measured input frequency is outside either the upper or lower frequency limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>Rectifier fault: Measured rectifier input current exceeds the upper current limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>The utility input power is not within predetermined limits. This is possibly due to over voltage, under voltage, over frequency, under frequency, or over current.</td>
</tr>
<tr>
<td></td>
<td>The utility input is not present, and detected voltage is zero.</td>
</tr>
<tr>
<td>Internal Failure</td>
<td>An attempt to automatically recalibrate the UPS has failed.</td>
</tr>
<tr>
<td></td>
<td>Charger fault: The battery charger has failed.</td>
</tr>
<tr>
<td></td>
<td>DC Link fault: Measured DC link voltage has exceeded the upper voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>At least one fan in the UPS has failed.</td>
</tr>
<tr>
<td></td>
<td>At least one fuse in the UPS has failed and must be replaced.</td>
</tr>
<tr>
<td></td>
<td>Inverter fault: Measured inverter output voltage has exceeded the upper voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>Inverter fault: Measured inverter output voltage is less than the lower voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>The inverter module has failed its power up self-test or its continuous self-test.</td>
</tr>
<tr>
<td></td>
<td>Inverter fault: The inverter has failed.</td>
</tr>
<tr>
<td></td>
<td>The inverter output has failed, and cannot support the load. The reasons for this alarm are, for example: inverter over or under voltage, over or under frequency, distorted waveform, and output out-of window.</td>
</tr>
<tr>
<td></td>
<td>Inverter fault: The measured inverter output current exceeds the upper current limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>The inverter output voltage sensor has not been calibrated.</td>
</tr>
<tr>
<td></td>
<td>For a parallel system, this module has detected that the sync bus is not active.</td>
</tr>
<tr>
<td>Alarm Text</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Internal Failure, continued</td>
<td>A test of the device EEPROM has detected a checksum failure. The device either has not been programmed or contains suspicious data.</td>
</tr>
<tr>
<td></td>
<td>A test of the device ROM has detected a checksum or CRC error. The device’s operating code is suspicious and should be replaced or reflashed.</td>
</tr>
<tr>
<td></td>
<td>In a multi-module system or internally to a UPS with multiple controllers, the firmware versions in place are not compatible with each other.</td>
</tr>
<tr>
<td>Manual Load Dumped</td>
<td>The load power is off. This alarm is used to record the date and time of an emergency power off (EPO) event.</td>
</tr>
<tr>
<td>On Battery</td>
<td>The UPS is using the battery to power the load.</td>
</tr>
<tr>
<td>Output Out of Range</td>
<td>Measured output voltage has exceeded the upper voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>Measured output voltage is less than the lower voltage limit specification for normal operation.</td>
</tr>
<tr>
<td></td>
<td>Measured output frequency is outside the upper or lower frequency limit specification for normal operation.</td>
</tr>
<tr>
<td>Overload</td>
<td>Overload alarms are sent based on the individual UPS model overload protection specifications that are available in the UPS documentation.</td>
</tr>
<tr>
<td></td>
<td>The load on the UPS output phase exceeds its rated current or power by more than a small margin over 100%. The inverter can only sustain this overload for a short time without shutting down due to overheating.</td>
</tr>
<tr>
<td>Shutdown Imminent</td>
<td>The UPS has entered a state where it might abruptly shut down without further notice. It might continue to operate indefinitely, even with this alarm being asserted.</td>
</tr>
<tr>
<td>Shutdown Pending</td>
<td>A condition in the UPS will lead to the loss of power to the loads in less than the Low Battery Time, unless the condition is cleared or removed.</td>
</tr>
<tr>
<td>Site Wiring Fault</td>
<td>There is a fault in the input wiring, other than Phase Rotation (for example, Ground/Neutral reversed).</td>
</tr>
<tr>
<td>Temperature Out of Range</td>
<td>An ambient temperature probe has detected that the temperature is above its upper limit.</td>
</tr>
<tr>
<td></td>
<td>A heatsink at an unspecified location in the UPS has failed.</td>
</tr>
<tr>
<td></td>
<td>An input or output transformer used by the UPS has exceeded its upper temperature limit.</td>
</tr>
<tr>
<td>UPS Started On Battery</td>
<td>The UPS has been started on battery when AC input power is not present. This alarm is used to record the date and time of this event.</td>
</tr>
</tbody>
</table>
Using HPPM with Insight Manager 7

HPPM software can be configured to send alert traps to Insight Manager 7, as well as other SNMP management applications. To send event alert traps to Insight Manager 7:

- Configure Insight Manager 7 to receive a trap from HPPM.
- Configure HPPM to send the appropriate event alert traps.

If HPPM is installed using the default HTTP on Port 80, a link to the software is displayed on the device home page in Insight Manager 7 SP2 for the computer with HPPM.

If the defaults are not used, a new entry can be made to the `additionalwsdisc.props` file located in the `CONFIG` directory in the `Insight Manager 7` install directory to correctly discover and identify HPPM running on any computer. Beginning with the SP2 release, Insight Manager 7 is installed in the `C:\Program Files\HP\Insight Manager 7` directory by default. For more information on editing the `additionalwsdisc.props` file, refer to the `additionalwsdisc.txt` file located in the same directory.

**Example B-1: ADDITIONALWSDISC.PROPS file with HPPM Entry**

```plaintext
# Additional Web Server Discovery Properties
# NOTE: See "additionalWsDisc_README.txt" for a description of entries in this file and how to add or remove additional web server ports used for discovery and identification.

# The following are actual web server ports enabled by default.
# To remove them from the discovery process, comment out the line with a '#' or remove it. You will need to restart the Insight Manager 7 service for the changes to take effect. In addition you will need to run the Device Identification task to find any new ports that were defined.

# 411=Director Agent, ,true,false, ,http
# 3201=Compaq TaskSmart, ,true,false, ,https
# 8008=Default Home Page, ,true,false, ,http
# 1311=Server Administrator, ,true,false, ,https
# 1234=HP Power Manager, ,true,false, ,https

The last entry allows Insight Manager 7 to detect HPPM installations that are running on Port 1234 and that are using HTTPS (Secure Socket Layer Protocol).
Configuring Insight Manager 7

Verify that the HPPM MIB (CPQRPM.MIB) is registered in Insight Manager 7:

1. Upload the HPPM MIB. The HPPM MIB (CPQRPM.MIB) can be found on the HP Rack and Power Management Pack CD and in the install folder of the HPPM Management Server.
2. Register the HPPM MIB.

NOTE: For additional information on uploading and registering a MIB in Insight Manager 7, refer to the HP Insight Manager Technical Reference Guide located on the HP Management CD.

Configuring HPPM

To configure HPPM to send traps to Insight Manager 7:

1. Add the Insight Manager 7 server as an SNMP Trap recipient.
2. Configure HPPM to send alert notifications to Insight Manager 7 as SNMP traps.
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