

HP Power Manager User Guide



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Intended audience

This document is for the person who installs and maintains power products. HP assumes you are qualified in the servicing of high-voltage equipment and trained in recognizing hazards in products with hazardous energy levels.

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Overview

Introduction

HP Power Manager enables you to monitor, manage, and control power environments through comprehensive control of individual HP UPSs. A familiar browser interface provides secure access to Management Servers anywhere on the network. You can control power failure settings and define UPS load segments to allow for maximum uptime of critical servers.

For a detailed list of supported UPSs, see the Supported Hardware matrix on the HP website (<http://www.hp.com/go/rackandpower>).

You can configure HP Power Manager to send alert traps to HP Systems Insight Manager and other SNMP management programs. The software can also run as a stand-alone power management system. This flexibility enables you to monitor, manage, and communicate with a UPS through a network port, USB port, or serial port with a single serial card (RS-232) or multiserver serial card (Six Port Card) installed. To facilitate day-to-day maintenance tasks, the software provides detailed system logs and system diagnostics, including UPS battery checks.

Use HP Power Manager to:

- Customize alerts
 - Send email notification messages.
 - Send broadcast notification messages.
 - Send SNMP traps.
 - Issue computer commands at power failure.
- Monitor, manager, and control UPSs
 - Manage a graceful shutdown of attached equipment during utility power failure.
 - Manage independent UPS load segments to provide separate power control of connected equipment.
 - Prioritize the timing of equipment shutdown and reboot connected equipment by load segment.
 - Delay restart by load segment after a power outage to sequence the startup of system components.
 - Shut down and reboot any UPS and attached equipment, based on a user-specified schedule
 - Display text logs and graphical logs for analysis.
 - Monitor the status of UPSs and perform diagnostics.
 - Communicate with a UPS through a network port, USB port, or serial port with a single serial card (RS-232) or multiserver serial card (Six Port Card) installed.

Overview

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

During a utility power failure, the UPS switches to battery mode. An email alert can be issued to the system administrator, and a prioritized system shutdown begins based on user-defined settings for that specific UPS. After power is restored, the software can facilitate a prioritized power-up for connected equipment.

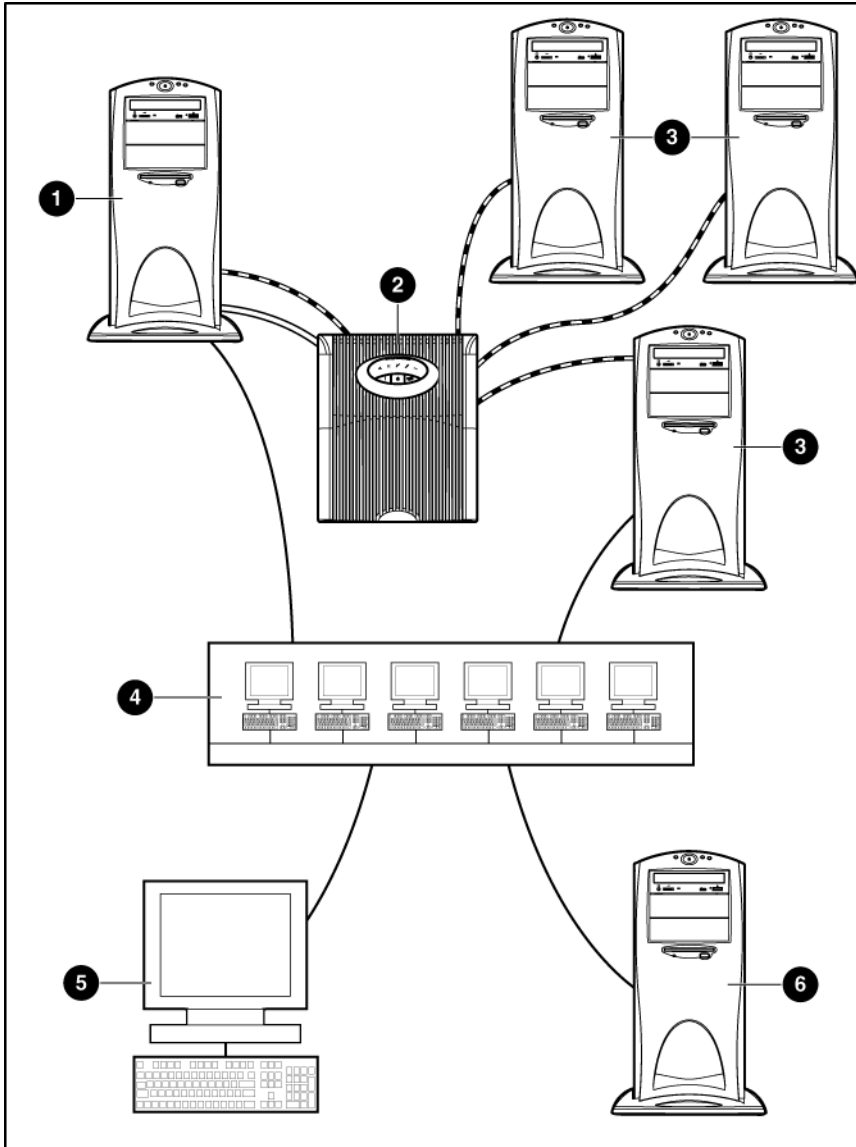
The UPS can be configured to extend runtimes for critical devices during utility power failures. For most UPSs, the receptacles on the rear panel can be divided into two or more groups, called load segments, which can be controlled independently. By shutting down a load segment that is connected to less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

Architecture

The architecture consists of two major components:

- Management Server

- Remote Agent



Item	Description
1	HPPM Management Server
2	A UPS port that is connected to the Management Server through a serial port, network port, or USB port
3	Remote Agent server
4	Intranet
5	A remote workstation browsing into the Management Server over the network
6	HP Systems Insight Manager receiving alert traps from HPPM (optional)

Management Server

One Management Server is needed for each UPS that is monitored, managed, and controlled by HPPM. The server can be connected to the UPS through a serial port, USB port, or network port. 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 SSL security
- Performing specified actions when alarms are set or cleared. The following unattended actions are supported:
 - Sending email notifications, broadcast messages, and SNMP traps
 - Executing system batch jobs during shutdown (on the Management Server or Remote Agent)
 - Performing operating system shutdown by notifying the Remote Agents when to shut down
 - Shutting down and restarting by load segment, if applicable
 - Performing a UPS shutdown
- Performing a graceful, remote shutdown of the local operating system after a specified delay
- Maintaining event logs, which 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:

NOTE: Depending on the specific UPS model, some variables might not be supported. The following list is only an example.

- Input voltage
- Input current
- Input frequency
- Output voltage
- Output current
- Output source
- Output load
- Output power
- UPS temperature
- Runtime remaining
- Battery status
- Battery voltage
- Battery capacity
- Self test summary

- 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, see "Browser requirements.")



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.

NOTE: For the latest supported operating systems, see the HP website (<http://www.hp.com/go/rackandpower>).

Remote Agent

The Management Server provides both status and shutdown information to the Remote Agent. The Remote Agent runs on a machine and allows the software to gracefully shut down the operating system of that server and run a script during power failure. Install the Remote Agent on any machine that is powered by the UPS and any machine that the software uses to initiate a command. However, it is not necessary to install the Remote Agent on the machine running the Management Server component.

NOTE: For the latest supported operating systems, see the HP website (<http://www.hp.com/go/rackandpower>).

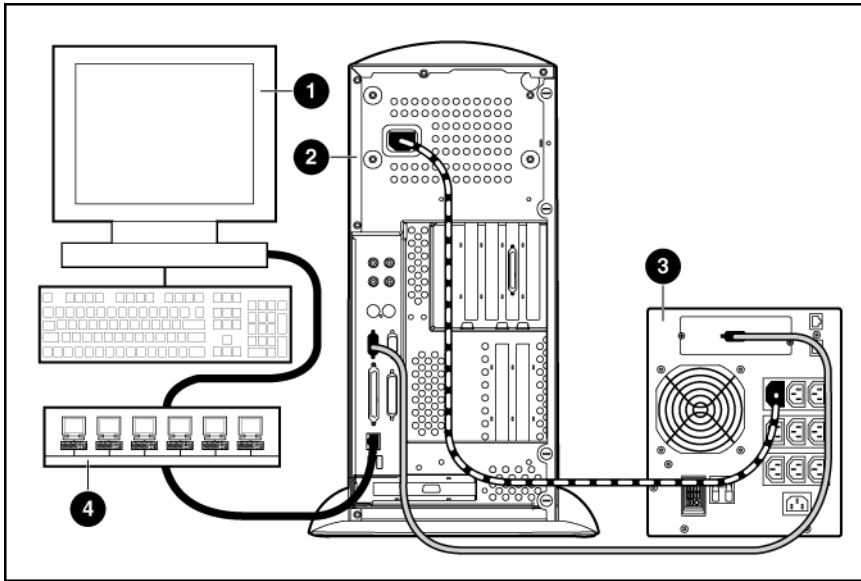
Supported hardware configurations

HP Power Manager requires that the Management Server and the computers running the Remote Agents are connected to the network. UPSs can be attached in any of the following configurations:

- Configuration A (on page 12)—A Management Server is serially attached to one UPS.
- Configuration B (on page 12)—Several Management Servers are serially attached to a Six Port Card on a single UPS.
- Configuration C (on page 13)—One Management Server is serially attached to a UPS and communicates to several Remote Agents over the network.
- Configuration D (on page 15)—A Management Server is attached to one UPS through the USB port.
- Configuration E (on page 15)—A Management Server communicates with one UPS over the network.

Configuration A

This figure 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.

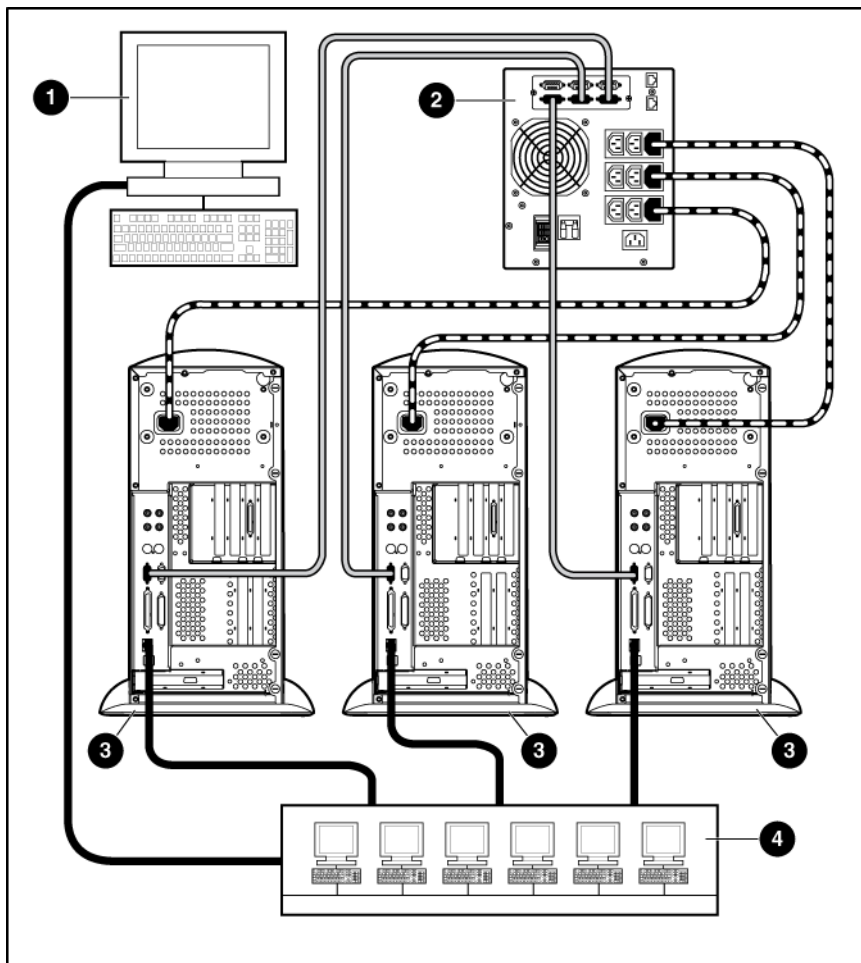


Item	Description
1	Remote workstation browsing into the Management Server over the network
2	HPPM Management Server
3	UPS
4	Network

Configuration B

In this figure, 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. The Six Port 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.

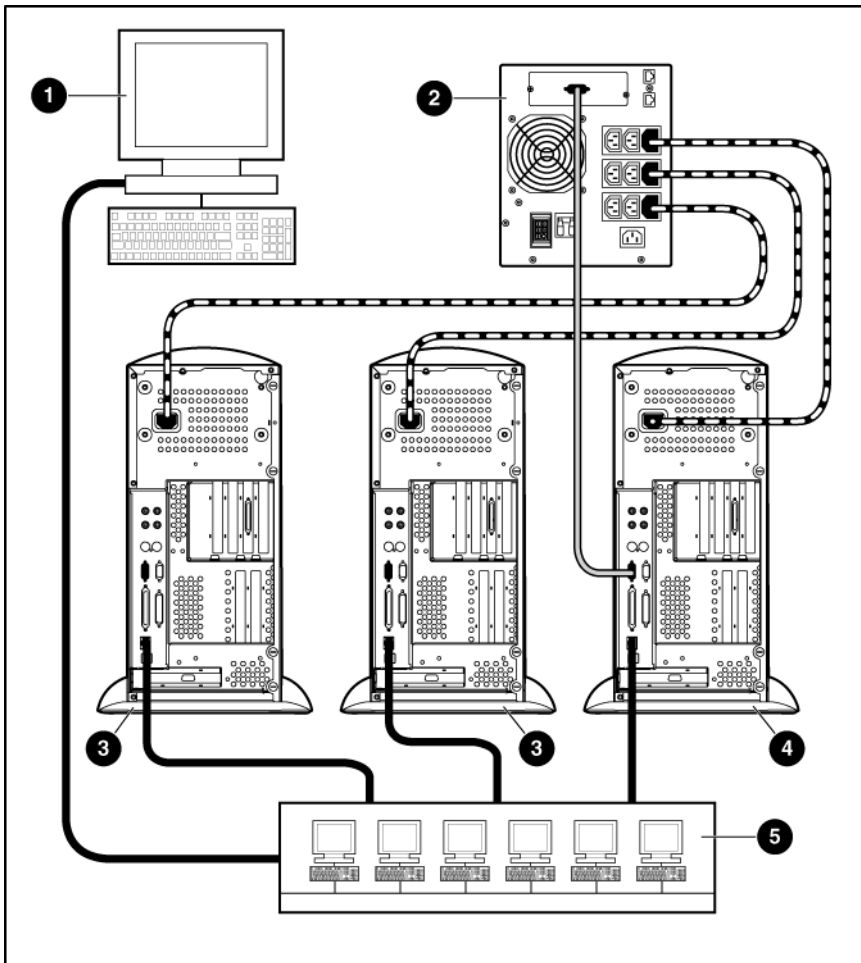


Item	Description
1	Remote workstation browsing into the Management Server over the network
2	UPS with Six Port Card installed
3	HPPM Management Servers
4	Network

Configuration C

In this figure, 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 or other configured shutdown events.

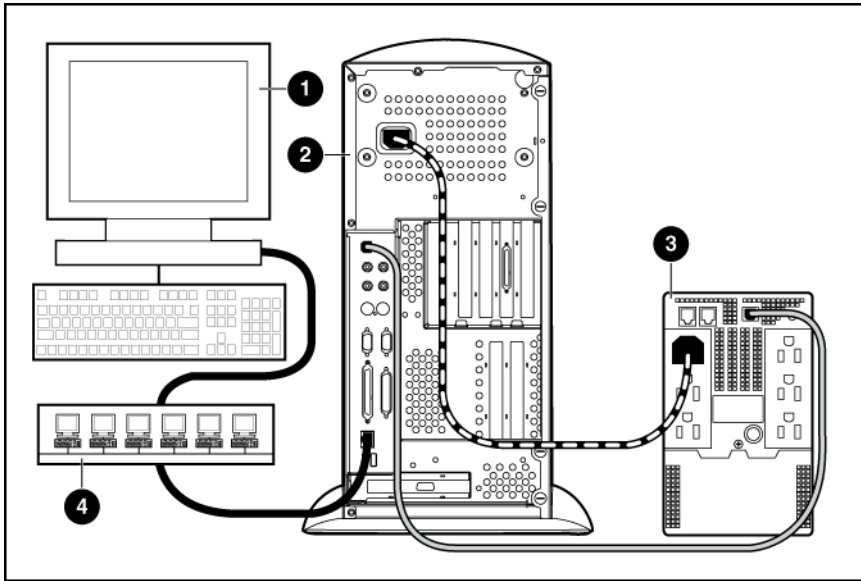
NOTE: Up to 15 Remote Agent servers can be managed by one Management Server.



Item	Description
1	Remote workstation browsing into the Management Server over the network
2	UPS
3	Remote Agent servers
4	HPPM Management Server
5	Network

Configuration D

This figure illustrates a UPS that is connected to the Management Server through a USB port. The Management Server is plugged into a load segment of the UPS and connected directly to the network. A remote workstation can browse into the Management Server over the network.

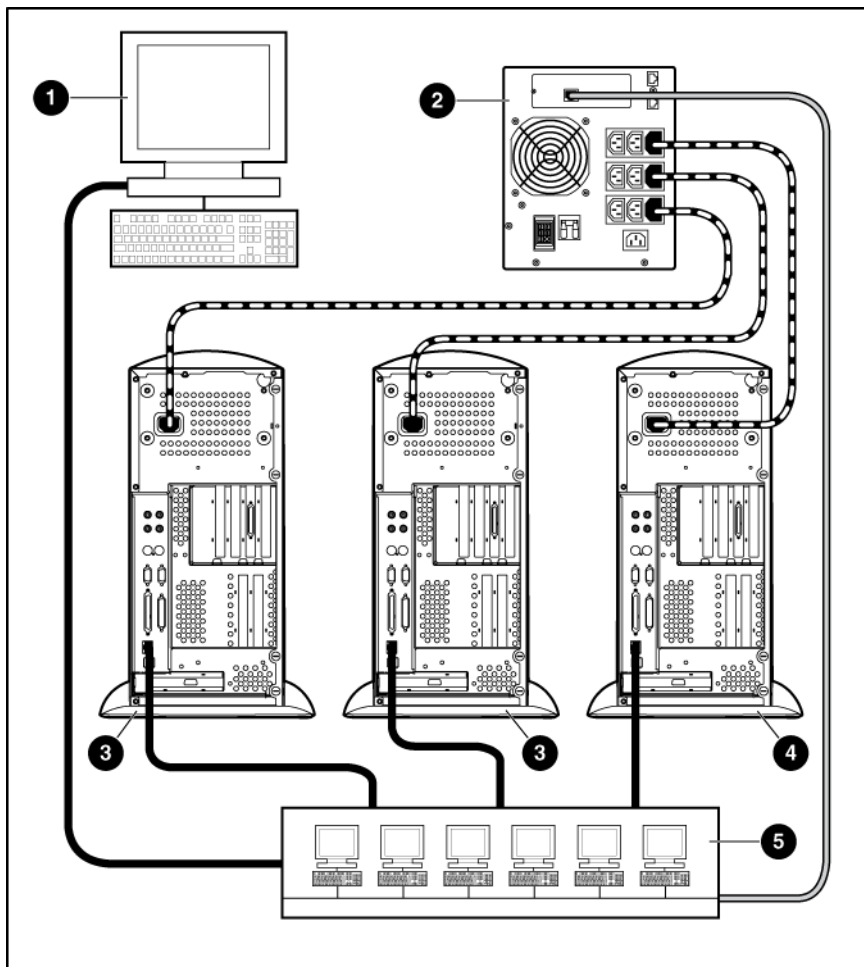


Item	Description
1	Remote workstation browsing into the Management Server over the network
2	HPPM Management Server
3	UPS
4	Network

Configuration E

In this figure, only one server is a Management Server and it communicates to the UPS over the network. This Management Server communicates to the Remote Agent servers over the network to begin a graceful shutdown in the event of a power failure or other configured shutdown events.

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



Item	Description
1	Remote workstation browsing into the Management Server over the network
2	UPS
3	Remote Agent servers
4	HPPM Management Server
5	Network

Process overview

To get HP Power Manager up and running in your environment:

1. Visit the HP website (<http://www.hp.com/go/rackandpower>) to download the latest version of HP Power Manager.
2. Connect all equipment powered by the UPS to the receptacles on the UPS rear panel. If the UPS has multiple load segments, note which load segment powers each device.

NOTE: By default, HP Power Manager associates the Management Server with load segment 1. If you connect the Management Server to a different load segment, you must change the default association when configuring HP Power Manager.

3. Power up the UPS and all attached equipment.
4. Be sure that the serial, USB, or network cable connecting the UPS to the Management Server is properly installed.
5. Install the Management Server software according to the instructions for your operating system. There must be one Management Server for each UPS.
6. Install the Remote Agent software according to the instructions for your operating system.
7. Browse in to the Management Server.
8. Manage the Remote Agents.
9. Configure the power fail settings.
10. Configure and customize optional settings:
 - Schedule shutdowns.
 - Set up additional user accounts.
 - Set up event notifications.
 - Set up additional shutdown events.
 - Integrate HP Power Manager with HP Systems Insight Manager.
 - Set up shutdown scripts (SDScripts).

Installation

System requirements

NOTE: For the latest system requirements, see the Supported Hardware matrix on the HP website (<http://www.hp.com/go/rackandpower>).

NOTE: For this release of HP Power Manager, only the Management Server component is available for upgrade. Use version 4.0 Remote Agents with the version 4.3 Management Server.

Management Server requirements

Hardware and software	Suggested minimum requirements
Hardware	500-MHz processor
Disk space	25 MB free disk space
System memory	128 MB of RAM

For a complete list of supported operating systems and web interface requirements, see the HP website (<http://www.hp.com/go/rackandpower>).

Remote Agent requirements

Hardware and software	Suggested minimum requirements
Hardware	200-MHz processor
Disk space	10 MB free disk space
System memory	64 MB of RAM

For a complete list of supported operating systems, see the HP website (<http://www.hp.com/go/rackandpower>).

Installation overview

Follow these guidelines when installing the HP Power Manager components:

- Management Server—Install the Management Server on the computer that is connected to the UPS serial port or USB port. In a networked configuration, you can install the Management Server on any computer on the network that is powered by the UPS. This Management Server will communicate with the UPS and manage other systems and devices connected to the UPS.

NOTE: Devices must be managed by a single Management Server.

- Remote Agent—Install the Remote Agent on any computer that is powered by the UPS.

For each component, there are three installation options:

- GUI installation—A series of dialog boxes and prompts guide you through the installation process.
- Non-GUI installation—A series of commands are necessary to complete the installation.
- Silent installation—A preconfigured initialization file is specified during installation. This file contains all the information a user is typically prompted to enter.

Silent installation is typically used by system administrators who have many installations that are configured identically and require minimal user interaction. During a silent installation you will:

- Install an HP Power Management Server or Remote Agent through the assisted installation method that is appropriate for the operating system.
- Configure the Management Server 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.
- Use the DevManBE.ini file that is generated in the directory of the application as a template in the Management Server silent install process.
Use the DevManRA.ini file that is generated in the directory of the application as a template in the Remote Agent silent install process.
- Change any items that should be unique, such as Device Name, Management Server Name, or Remote Agent Name, through the normal operation of the software.

The following table summarizes the available installation options for each operating system.

Operating system	GUI installation	Non-GUI installation	Silent installation	Local/remote installation
Windows®	Available	-	Available	-
Linux	-	Available	Available	-

Installing components on Windows operating systems

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



IMPORTANT: To ensure your system has the minimum requirements needed to run HPPM, refer to "System requirements (on page 18)."



IMPORTANT: The 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®.

NOTE: For this release of HP Power Manager, only the Management Server component is available for upgrade. Use version 4.0 Remote Agents with the version 4.3 Management Server.

Installing the Management Server using the GUI method

NOTE: Before installing the software, be sure that the serial, USB, or network cable connecting the UPS to the Management Server is properly installed.

1. If the Management Server is connected to the UPS through the USB port, verify that the UPS is detected by the operating system, and then click **OK**.



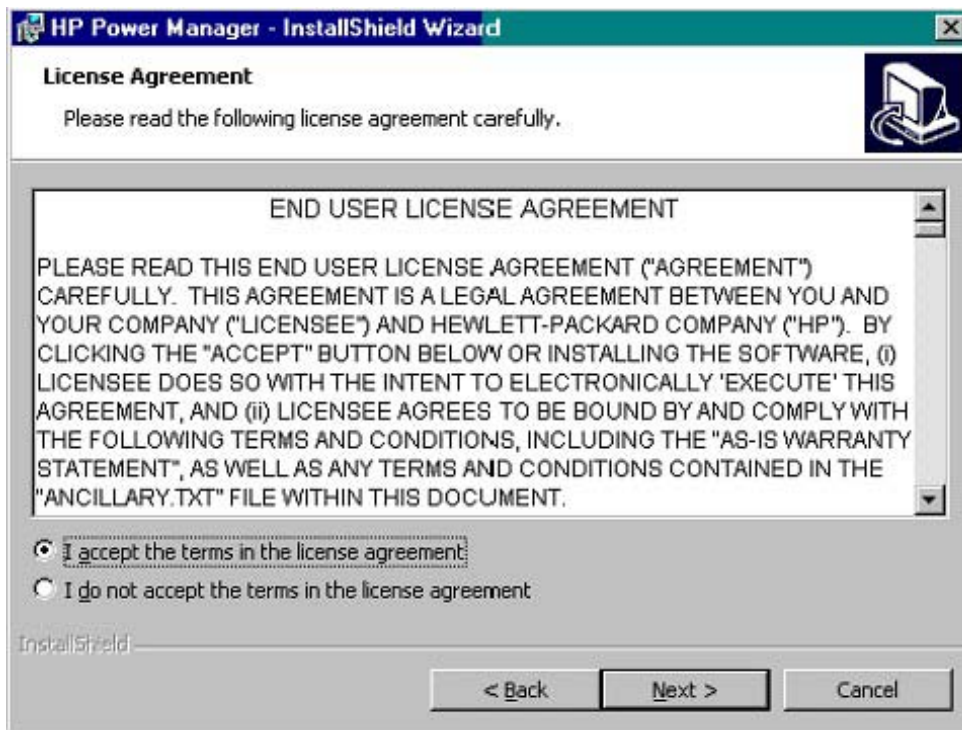
2. Insert the HP Infrastructure Management Pack CD (shipped with each UPS) into the CD-ROM drive of the computer. If the AutoPlay feature is enabled, the Welcome screen appears. If the AutoPlay feature is disabled, explore the CD, and then e-click AUTORUN.EXE in the root folder.
If the software has been downloaded from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions to unpack the files, and then locate and run SETUP.EXE.
3. Select **HP Power Manager** from the side menu.
4. Select **Management Server**.
The Welcome screen appears.

5. Read the introduction, and then click **Next**.



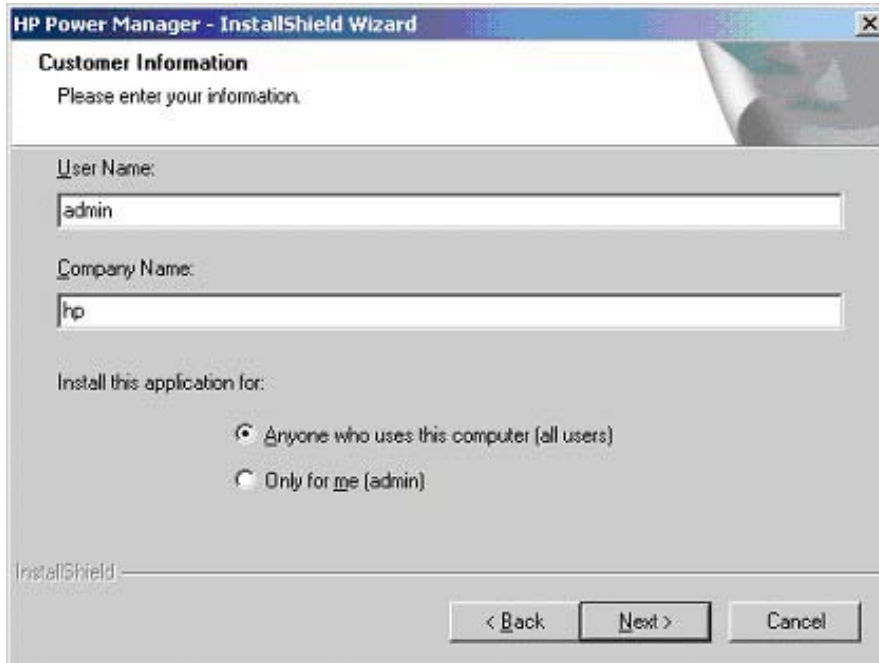
The License Agreement screen appears.

6. Read the license agreement, select **I accept the terms in the license agreement**, and then click **Next**.



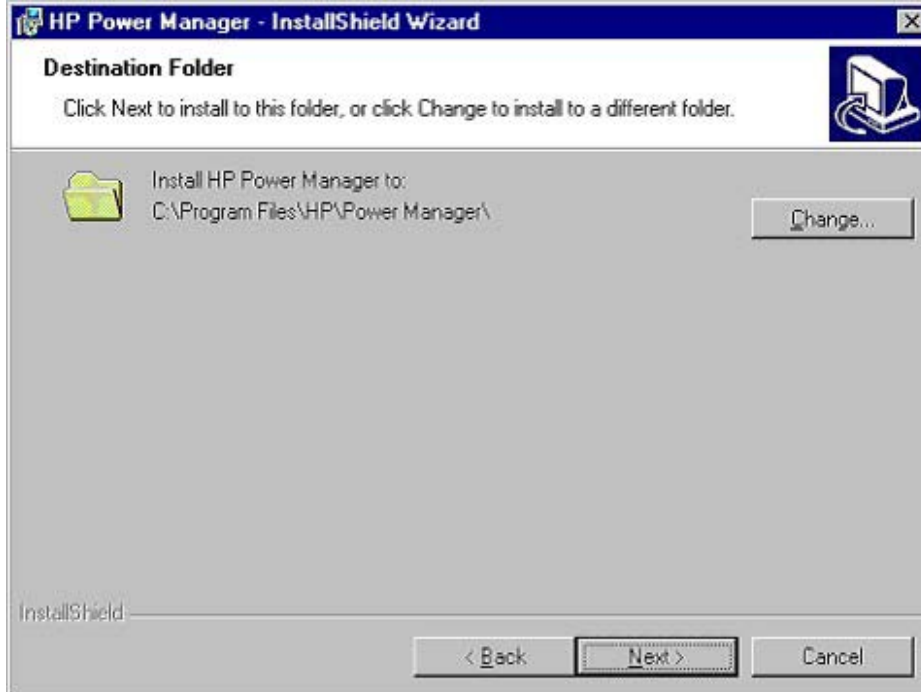
The Customer Information screen appears.

7. Verify or change the customer information, select whether to install for all users or only the current user, and then click **Next**.



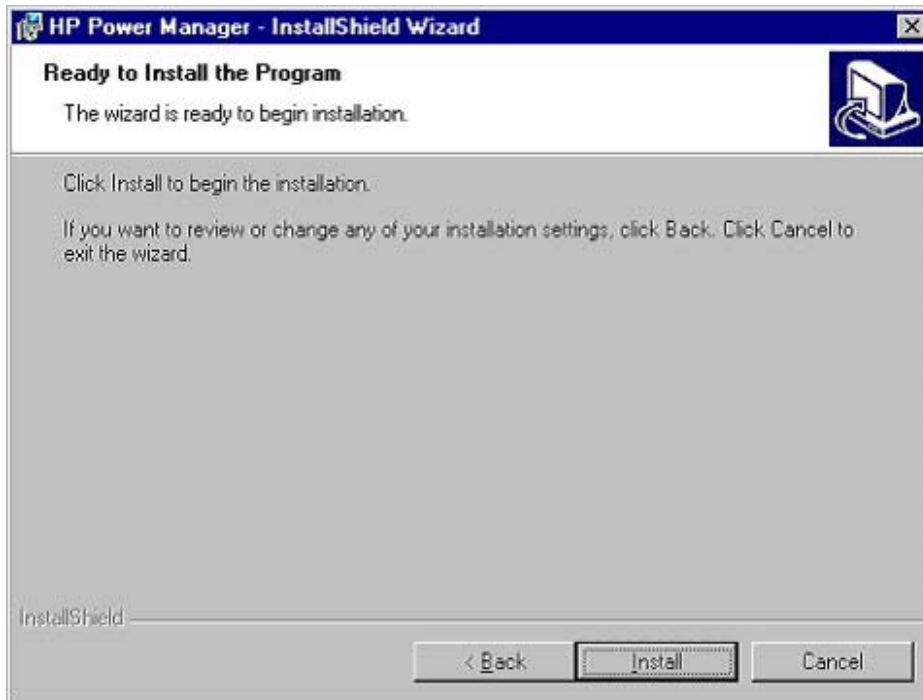
The Destination Folder screen appears.

8. Click **Next** to install the Management Server in the default folder, which is displayed below the Install HP Power Manager to: field. To specify a different folder, click **Change**, navigate to the appropriate folder, and then click **Next**.



The Ready to Install the Program screen appears.

9. Click **Install**. The wizard installs the software.



10. Click **Finish** to close the installation wizard, and then continue with the configuration process ("Configuring the Management Server" on page 23).



Configuring the Management Server

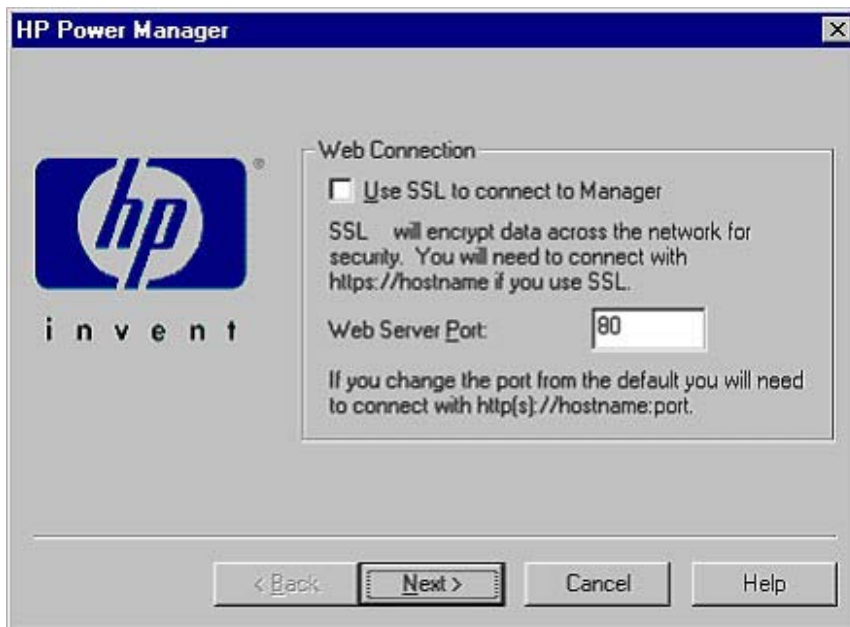
NOTE: It might take a moment for the configuration screen to appear. If there are open windows on the desktop, you might need to minimize the windows to view the configuration screen.

1. Click **Next** to use the standard HTTP protocol and port for Web browser access to the Management Server.
2. To use 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.
3. Verify the port you specify is not already being used.
4. Click **Next**.

For more information about security considerations, refer to "Security considerations overview (on page 109)."

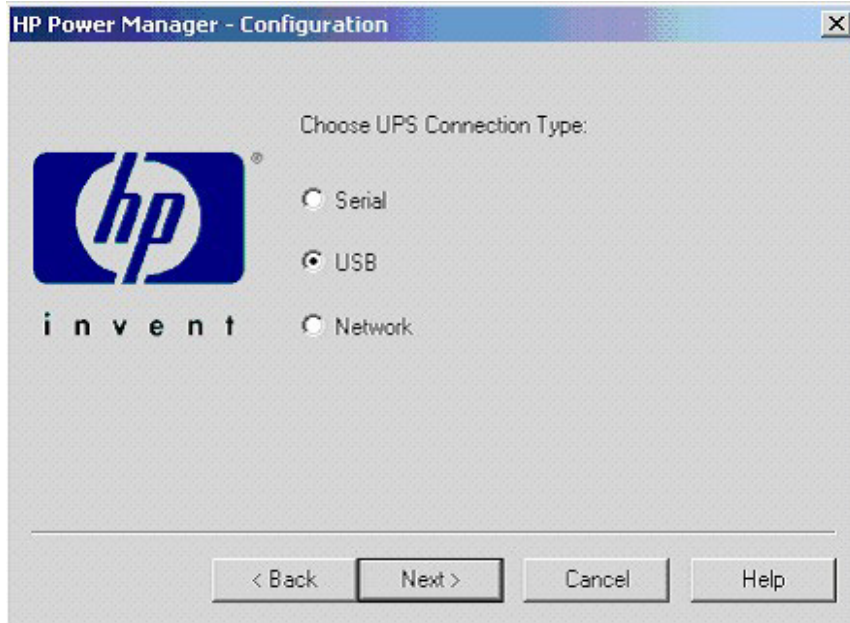


IMPORTANT: The common Web server port is port 80. The default port for SSL is 443. Verify no other Web servers are currently running on these ports or the port that you select. Make note of the port number for future reference. For port configuration limitations, refer to "Cannot access HPPM after installation."



NOTE: To reconfigure the Web connection or communications port or to change to a different UPS, refer to "Reconfiguring components on Windows operating systems (on page 37)."

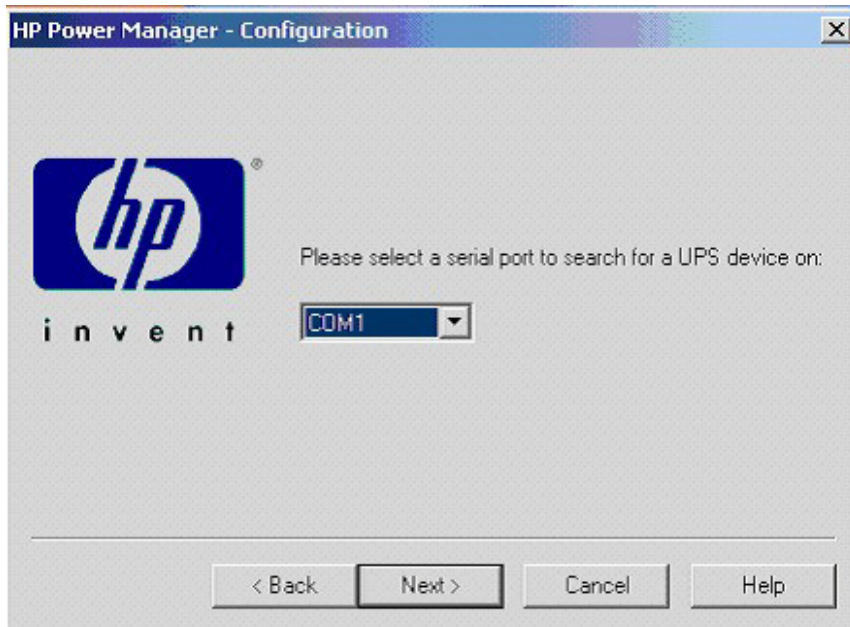
5. Select the type of connection (Serial, USB, or Network) that is used to attach the UPS to the Management Server.



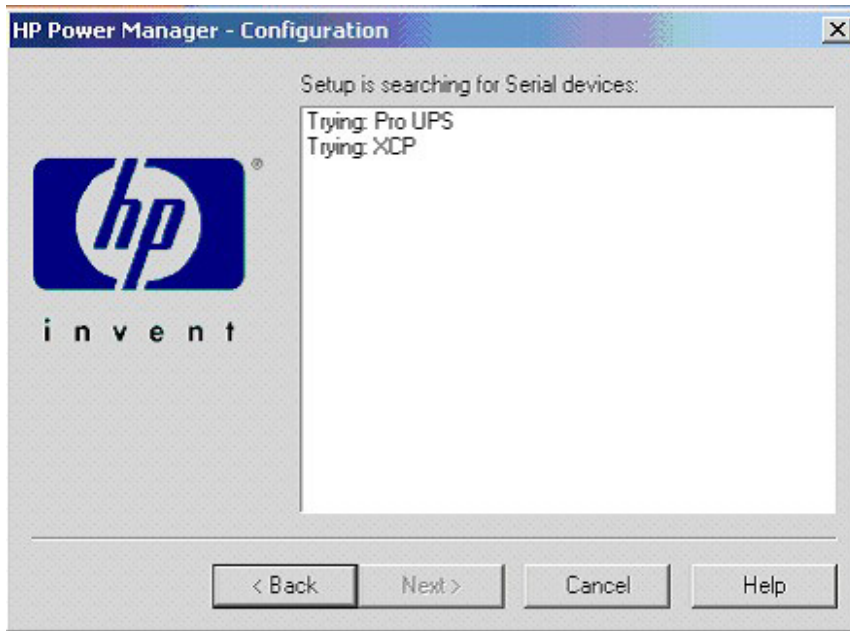
6. Click **Next**. The next several screens in the configuration program vary, depending on the type of connection you selected.

Configuring a serial port connected UPS

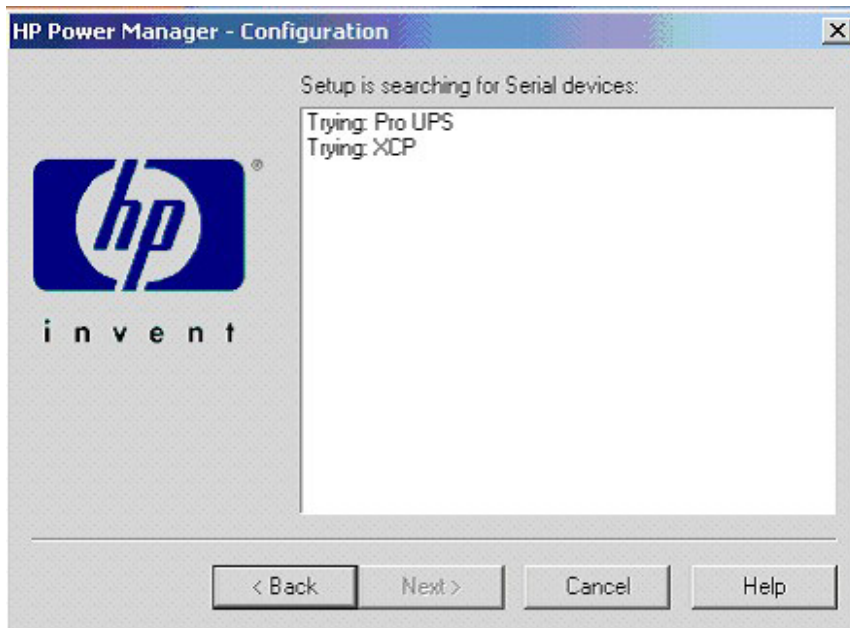
1. Select the serial (COM) port that the computer uses to communicate with the UPS. Click **Next**.





The configuration program searches for the serial port connected UPS.

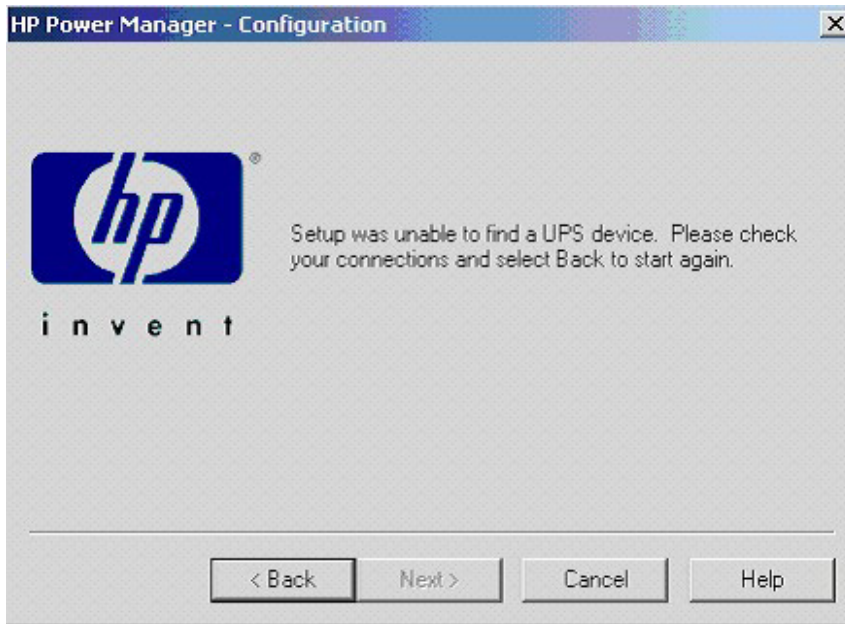


2. After the configurator detects the UPS, click **Finish**.



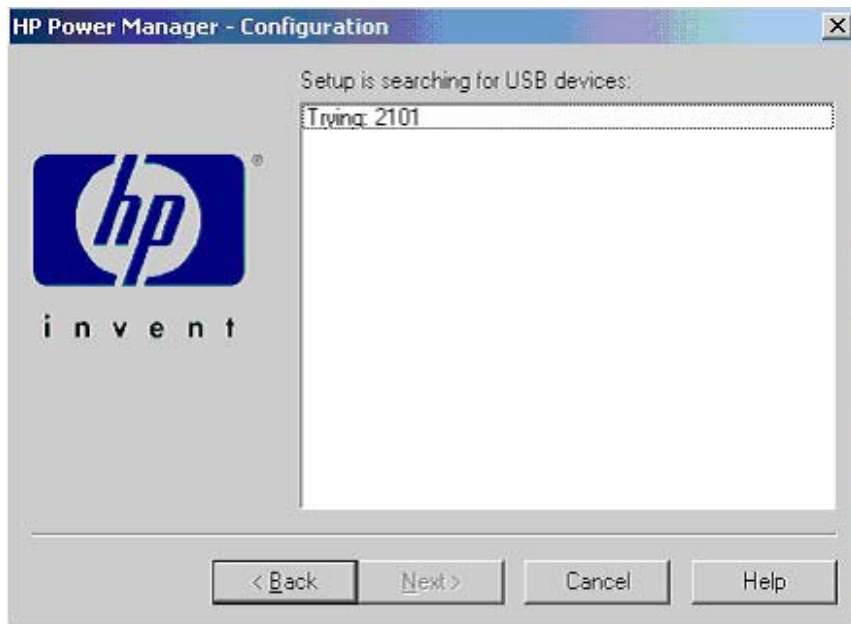
NOTE: An icon in the Windows® system tray shows the status of HPPM. It might take a few moments for the icon to change. A green check mark  displays if the Management Server is communicating with the UPS without errors. If the service has stopped, a blue hexagon icon  displays. Hover over the icon with the mouse pointer, and a tool tip displays a status message. For more information about the system tray icon status messages, see "System tray icon (on page 54)."

If the configurator fails to detect the UPS, click **Back** to check your selections.

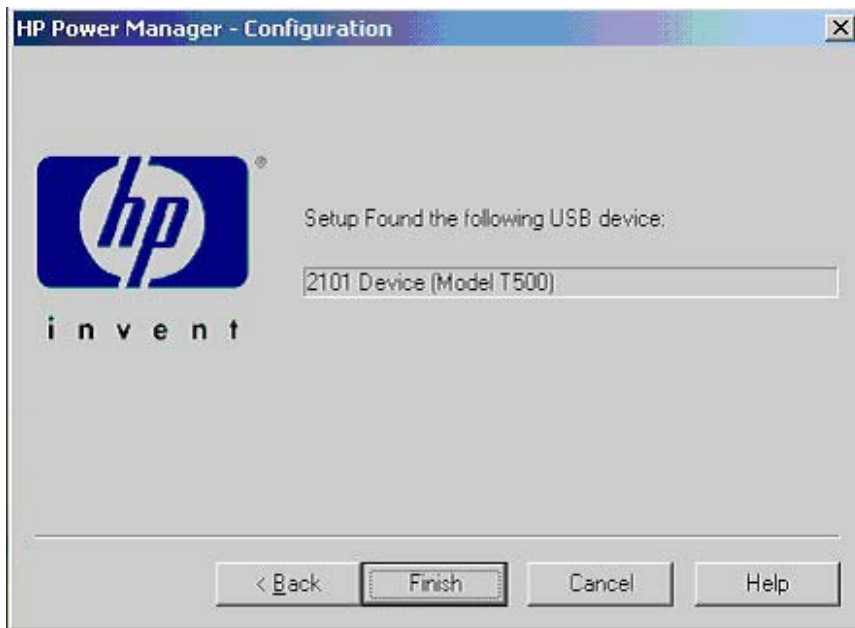




Configuring a USB port connected UPS

The configuration program automatically searches for a USB port connected UPS.

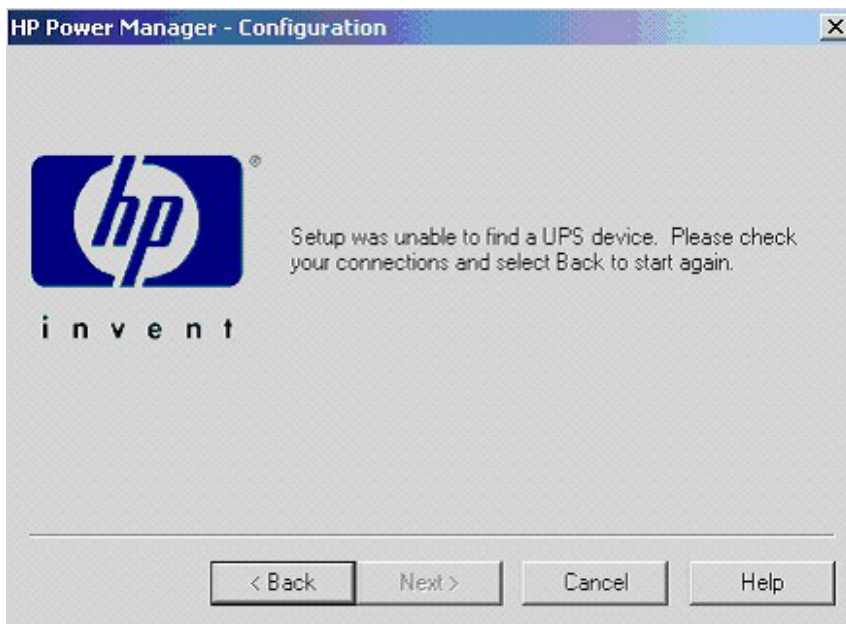


After the configurator detects the UPS, click **Finish**.



NOTE: An icon in the Windows® system tray shows the status of HPPM. 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 the service has stopped, a blue hexagon icon  displays. Hover over the icon with the mouse pointer, and a tool tip displays a status message. For more information about the system tray icon status messages, see "System tray icon (on page 54)."

If the configurator fails to detect the UPS, click **Back** to check your selections.



Configuring a network port connected UPS

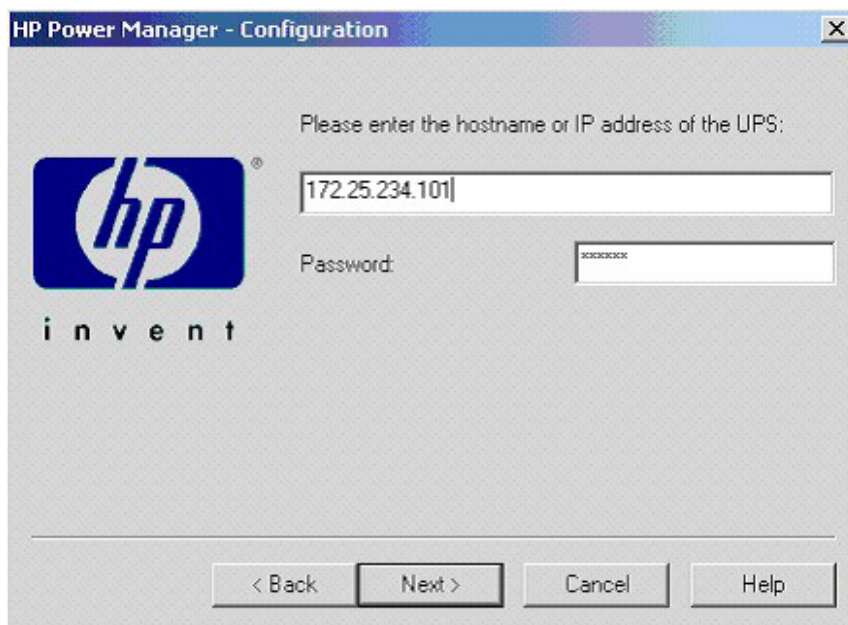
1. Be sure that the UPS has an SNMP/Serial Port Card (part number 192189-B21) installed and configured.

2. Enter the host name or IP address of the network port connected UPS in the Hostname field.
3. Enter the password that is configured in the UPS network adapter in the Password field. The password is case-sensitive. The default adapter password is MustB6.



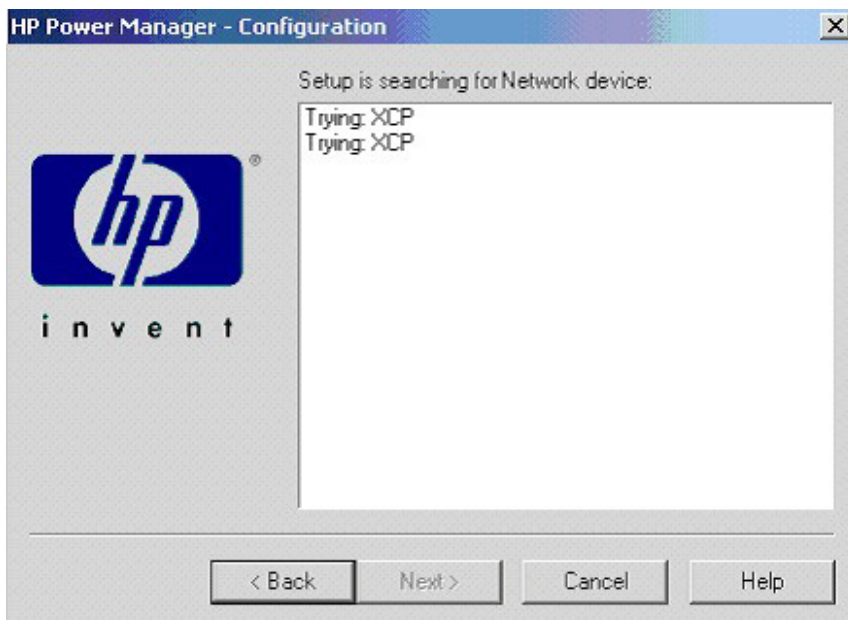
IMPORTANT: The password you enter must match the password configured in the UPS network adapter. If you want to change the password, first configure the adapter with the new password, and then enter the new password during the Management Server configuration process. For more information about configuring the adapter, see the CD that came with the adapter.

4. Click **Next**.



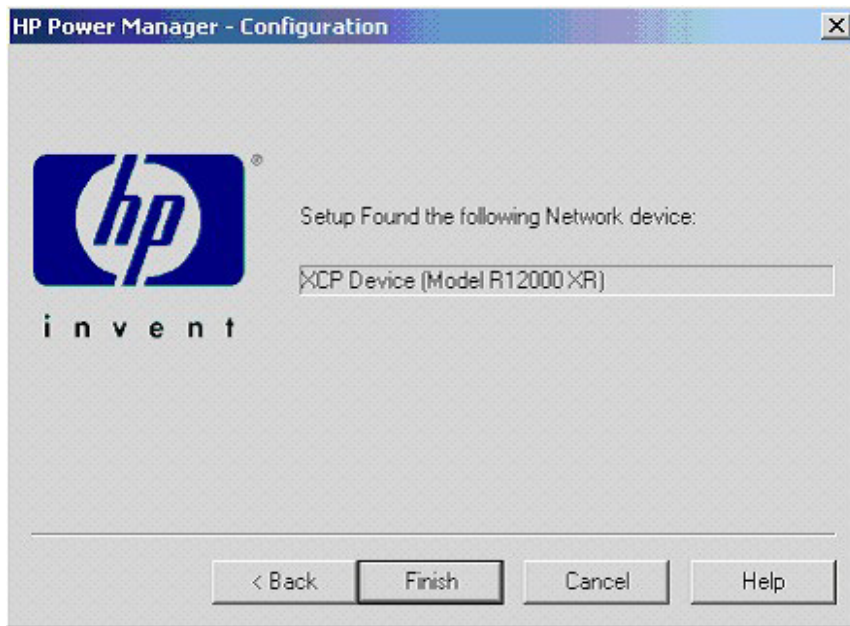
The screenshot shows the 'HP Power Manager - Configuration' dialog box. On the left is the HP logo and the word 'invent'. The main area contains the text 'Please enter the hostname or IP address of the UPS:' followed by a text input field containing '172.25.234.101'. Below this is a 'Password:' label and a password input field with masked characters. At the bottom are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.



The configuration program searches for the network port connected UPS.



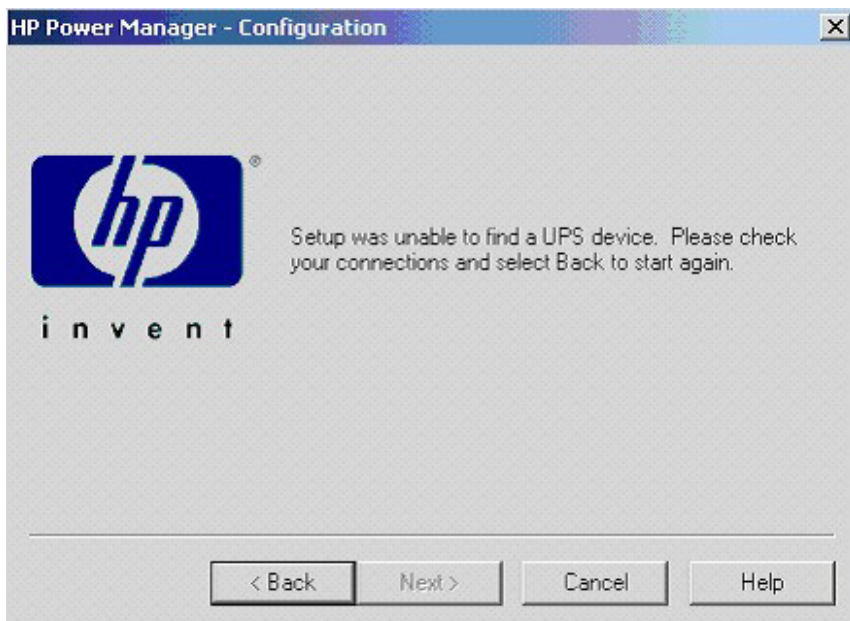
The screenshot shows the 'HP Power Manager - Configuration' dialog box in a search state. On the left is the HP logo and the word 'invent'. The main area contains the text 'Setup is searching for Network device:' followed by a text area showing 'Trying: XCP' on two lines. At the bottom are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

5. After the configurator detects the UPS, click **Finish**.



NOTE: An icon in the Windows® system tray shows the status of HPPM. 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 the service has stopped, a blue hexagon icon  displays. Hover over the icon with the mouse pointer, and a tool tip displays a status message. For more information about the system tray icon status messages, see "System tray icon (on page 54)."

If the configurator fails to detect the UPS, click **Back** to check your selections.



Installing the Remote Agent using the GUI method

1. Insert the HP Infrastructure 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 then double-click AUTORUN.EXE in the root folder.

If the software has been downloaded from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions to unpack the files, and then locate and run SETUP.EXE.

2. Select **HP Power Manager** from the side menu.
3. Select **Remote Agent**.

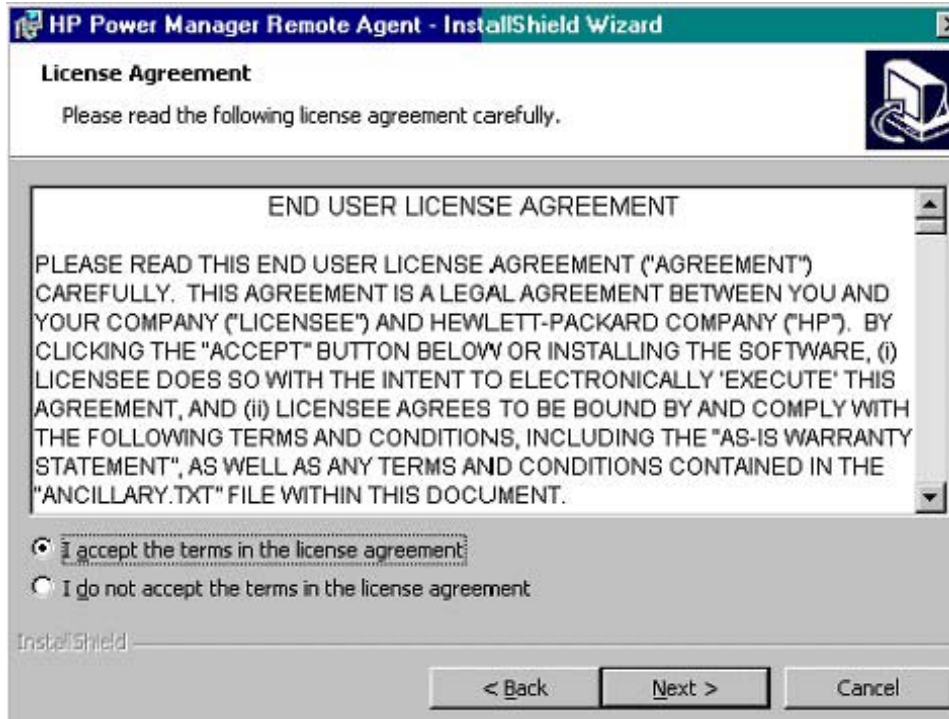
The Welcome screen appears.

4. Read the introduction, and then click **Next**.



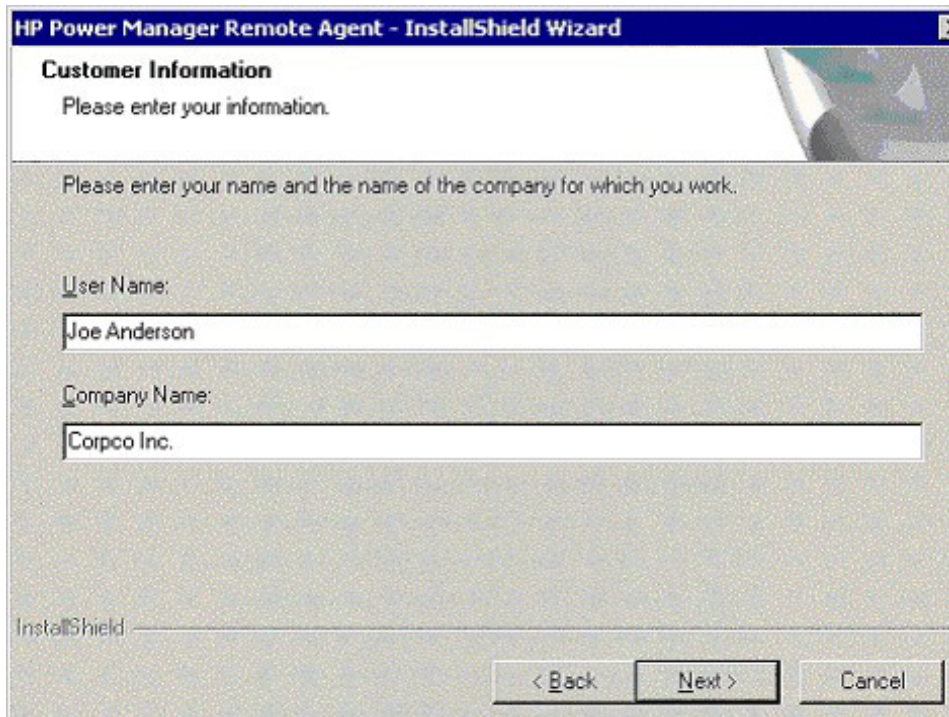
The License Agreement screen appears.

5. Read the license agreement, select **I accept the terms in the license agreement**, and then click **Next**.



The Customer Information screen appears.

6. Verify or change the customer information, select whether to install for all users or only the current user, and then click **Next**.



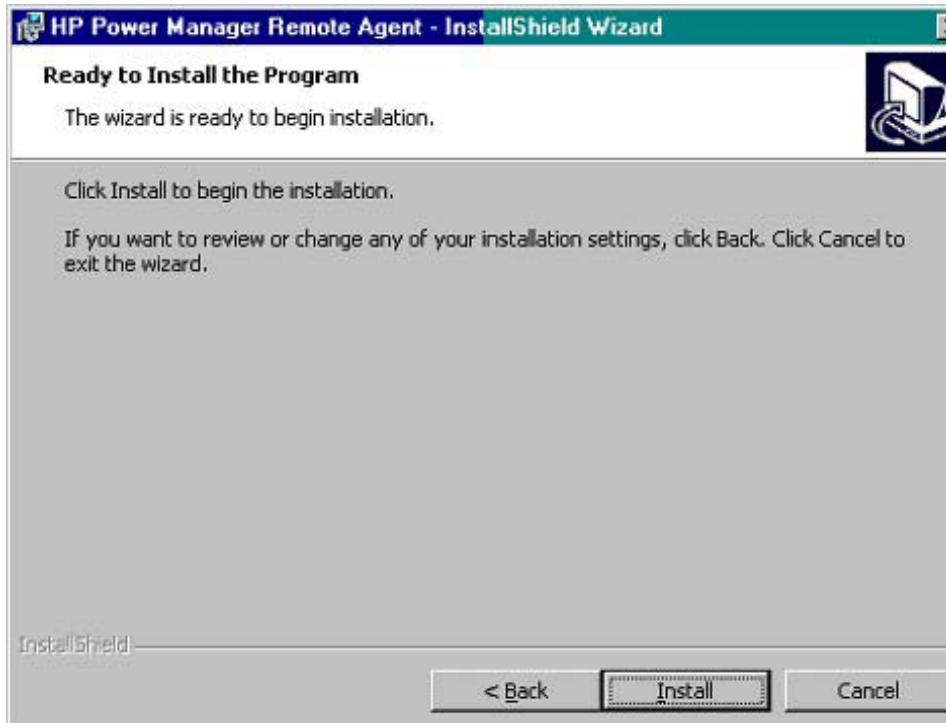
The Destination Folder screen appears.

7. Click **Next** to install the Remote Agent 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 then click **Next**.

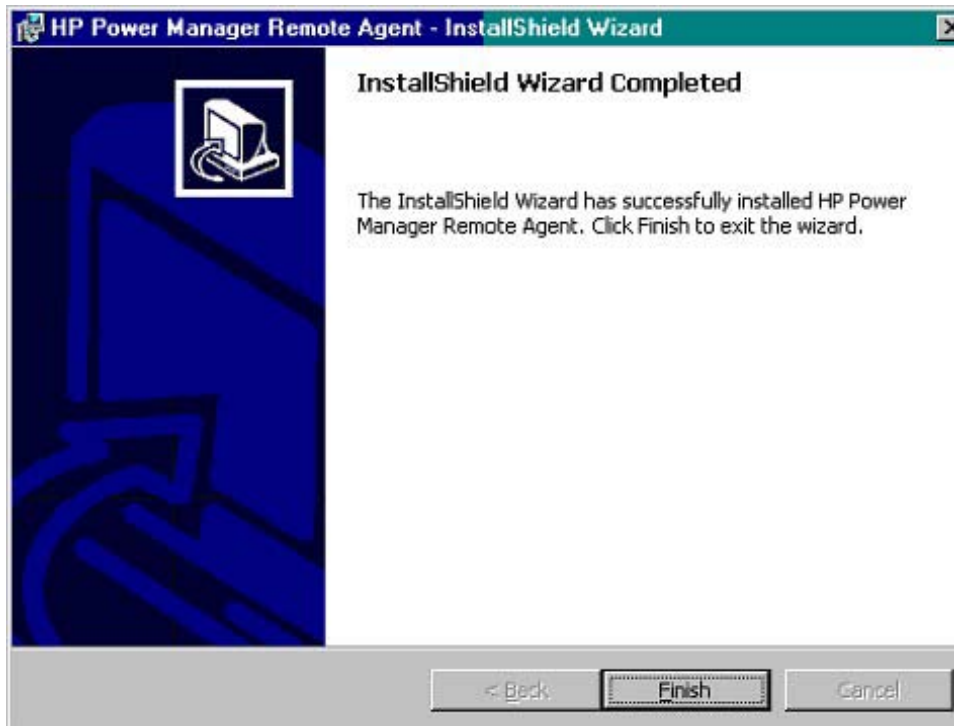


The Ready to Install the Program screen appears.

8. Click **Install**. The wizard installs the software.



9. Click **Finish** to close the installation wizard, and then continue with the configuration process.

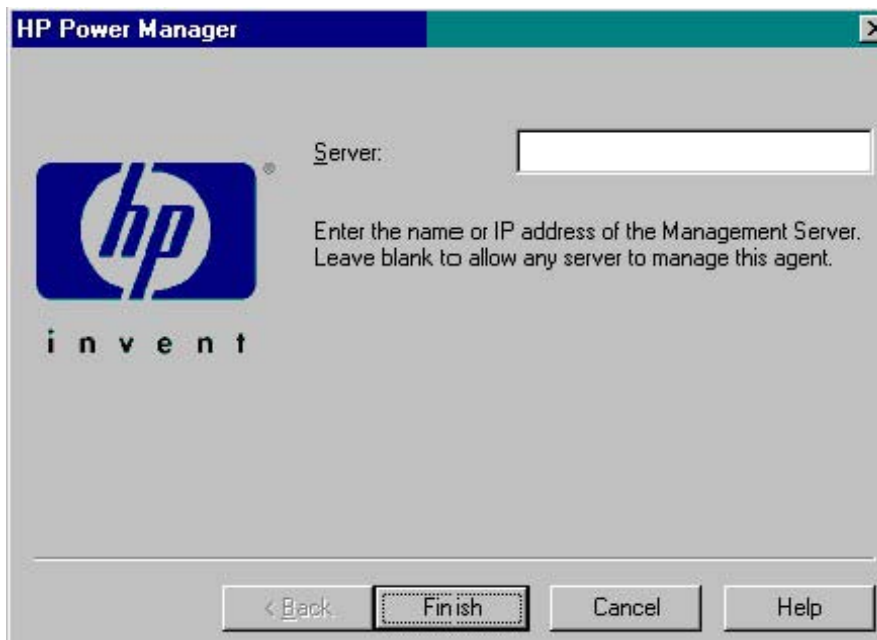




NOTE: It might take a moment for the configuration screen to appear. If there are open windows on the desktop, you might need to minimize the windows to view the configuration screen.

10. For the most security, enter the host name or valid IP address of the Management Server. This setting ensures that only the Management Server you specify can execute commands and operating system shutdowns on the computer running the Remote Agent.

If security is not a concern, leave this field as is.

11. Click **Finish**.



NOTE: An icon in the Windows® system tray shows the status of HPPM. 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 the service has stopped, a blue hexagon icon  displays. Hover over the icon with the mouse pointer, and a tool tip displays a status message. For more information about the system tray icon status messages, see "System tray icon (on page 54)."

NOTE: To reconfigure the Web connection or communications port or to change to a different UPS, refer to "Reconfiguring components on Windows operating systems (on page 37)."

Installing the Management Server using the silent installation method

NOTE: Before installing the software, be sure that the serial, USB, or network cable connecting the UPS to the Management Server is properly installed.

Silent installation is typically used by system administrators who have many installations that are configured identically and require minimal user interaction. During a silent installation you will:

- Install a Management Server through the assisted installation method that is appropriate for the operating system.
- Configure the Management Server 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.

NOTE: Configuring the Management Server includes attaching devices and configuring the power fail settings, event shutdown settings, and event settings.

- Use the DevManBE.ini file that is generated in the directory of the application as a template in the Management Server silent install process.

NOTE: To prevent more than one Management Server from managing the same devices or agents, a unique DevManBE.ini file is needed for each Management Server.

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

To install the Management Server using the silent installation method:

1. Create a temporary directory.
2. Copy the following files into the temporary directory you created using the assisted install method:
 - DevManBE.ini—During an assisted install, this file is located in the same folder in which HP Power Manager is installed.
 - Setup.exe—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - Setup.iss—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).

- o SetupBE.exe—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
3. From the directory that contains all four files, run `Setup.exe /s /f DevManBE.ini` to install silently.

If the .ini file is not located in the same folder as the Setup file, run `Setup.exe /s /f <path> DevManBE.ini`, where <path> is the DevManBE.ini file location.

NOTE: If you are installing to a location other than the default path (szDir=C:\Program Files\HP\Power Manager), edit the destination path in the Setup.iss file.

The following command line parameters can be specified and are applicable for both interactive and silent modes.

/s	Performs a silent install or upgrade.
/r	Reboots the computer at completion of setup. This option is supported only on Windows® and only for a silent install or upgrade.
/f DevManBE.ini	Specifies a configuration .ini file used for both upgrades and clean installs. When this option is specified, the device detection and configuration step is omitted. If this option is specified for the upgrade, it overwrites any saved .ini file settings. This parameter is required for silent installations but is optional for upgrading.

Installing the Remote Agent using the silent installation method

Silent installation is typically used by system administrators who have many installations that are configured identically and require minimal user interaction. During a silent installation you will:

- Install a Remote Agent through the assisted installation method that is appropriate for the operating system.
- Configure the Remote Agent exactly as the final replicated systems should be configured.

NOTE: You must configure the IP address of the Management Server in one of two ways:

- Leave the IP address field blank to use the same DevManRA.ini file for all of your Remote Agent installs. This enables the Remote Agent to accept commands from any Management Server that discovers the Remote Agent.
 - Create a DevManRA.ini file for each site. This points each UPS to the correct Management Server and is the more secure option.
-

- Use the DevManRA.ini file that is generated in the directory of the application as a template in the Remote Agent silent install process.
- Change any items that should be unique, such as Device Name, Management Server Name, or Remote Agent Name, through the normal operation of the software.

To install the Remote Agent using the silent installation method:

1. Create a temporary directory.
2. Copy the following files into the temporary directory you just created:

- DevManRA.ini—During an assisted install, this file is located in the same folder in which HP Power Manager is installed.
 - Setup.exe—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - Setup.iss—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - SetupRA.exe—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
3. From the directory that contains all four files, run `Setup.exe /s /f DevManRA.ini` to install silently.
- If the .ini file is not located in the same folder as the Setup file, run `Setup.exe /s /f <path> DevManRA.ini`, where <path> is the DevManRA.ini file location.

The following command line parameters can be specified and are applicable for both interactive and silent modes.

/s	Performs a silent install or upgrade.
/r	Reboots the computer at completion of setup. This option is supported only on Windows® and only for a silent install or upgrade.
/f DevManRA.ini	Specifies a configuration .ini file used for both upgrades and clean installs. When this option is specified, the device detection and configuration step is omitted. If this option is specified for the upgrade, it overwrites any saved .ini file settings. This parameter is required for silent installations but is optional for upgrading.

Reconfiguring components on Windows operating systems

- To reconfigure the Management Server Web connection settings, change the communications port selection.
- To change to a different UPS:
 - Right-click the system tray icon on the Management Server to display a context menu from which the Management Server service can be stopped or started. In this menu, you can also configure new settings using the Configure option or launch a browser session using the Connect option.
 - or-
 - Select **HP Power Manager Configure** from the HP Power Manager option in the Start Programs menu on the Management Server.
- To change the IP address that the Remote Agent uses for the Management Server, right-click the system tray icon on the Remote Agent computer to display a context menu.

Upgrading Management Server components on Windows operating systems

1. Insert the HP Infrastructure Management Pack CD (shipped with each UPS) into the CD-ROM drive of the computer. If the AutoPlay feature is enabled, the Welcome screen appears. If the AutoPlay feature is disabled, explore the CD, and then double-click AUTORUN.EXE in the root folder.
If the software has been downloaded from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions to unpack the files, and then locate and run SETUP.EXE.
2. Select **HP Power Manager** from the side menu.
3. Select **Management Server**. The Setup dialog box appears.
4. Click **Upgrade**.

NOTE: Upgrading does not delete any previous HPPM custom settings. All HPPM custom settings are saved.



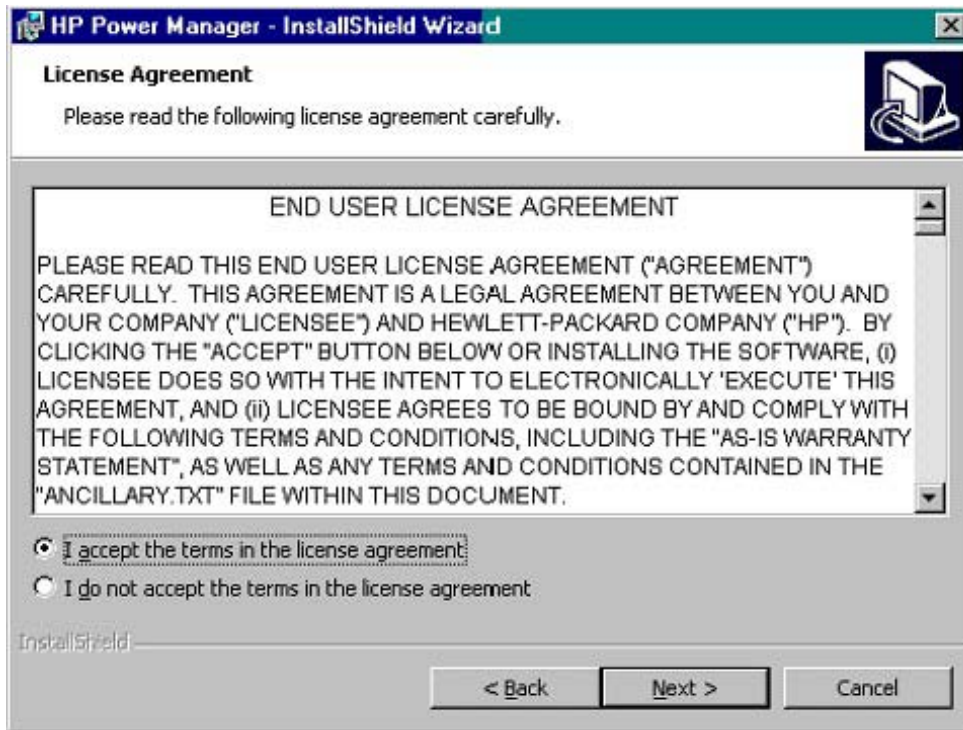
The Welcome screen appears.

5. Read the introduction, and then click **Next**.



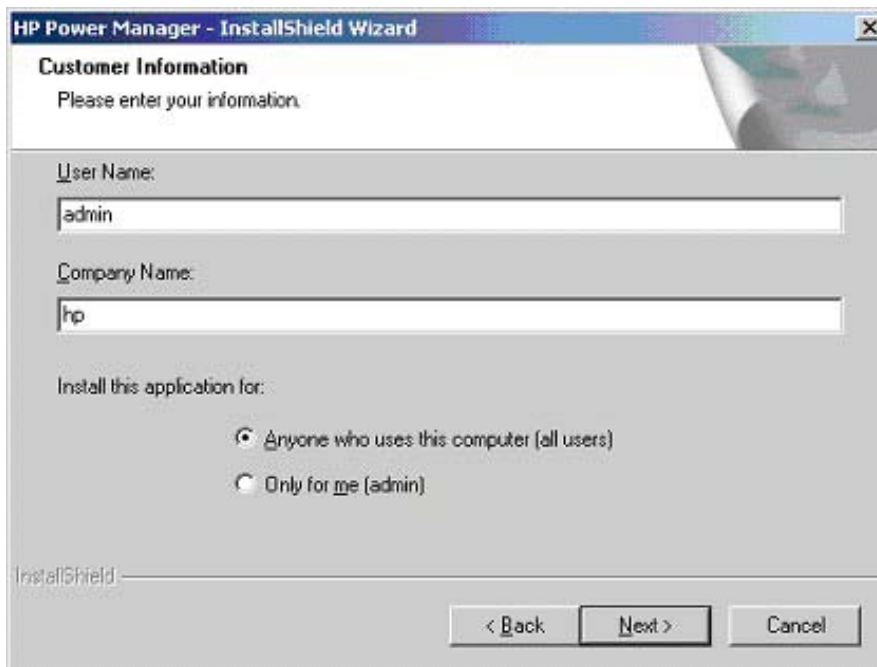
The License Agreement screen appears.

6. Read the license agreement, select **I accept the terms in the license agreement**, and then click **Next**.



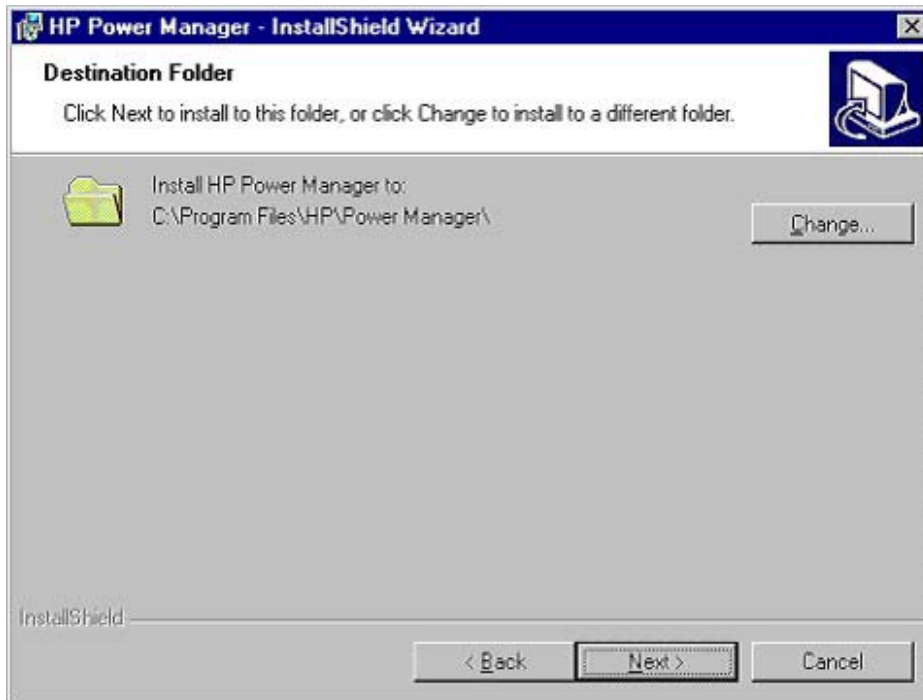
The Customer Information screen appears.

7. Verify or change the customer information, select whether to install for all users or only the current user, and then click **Next**.



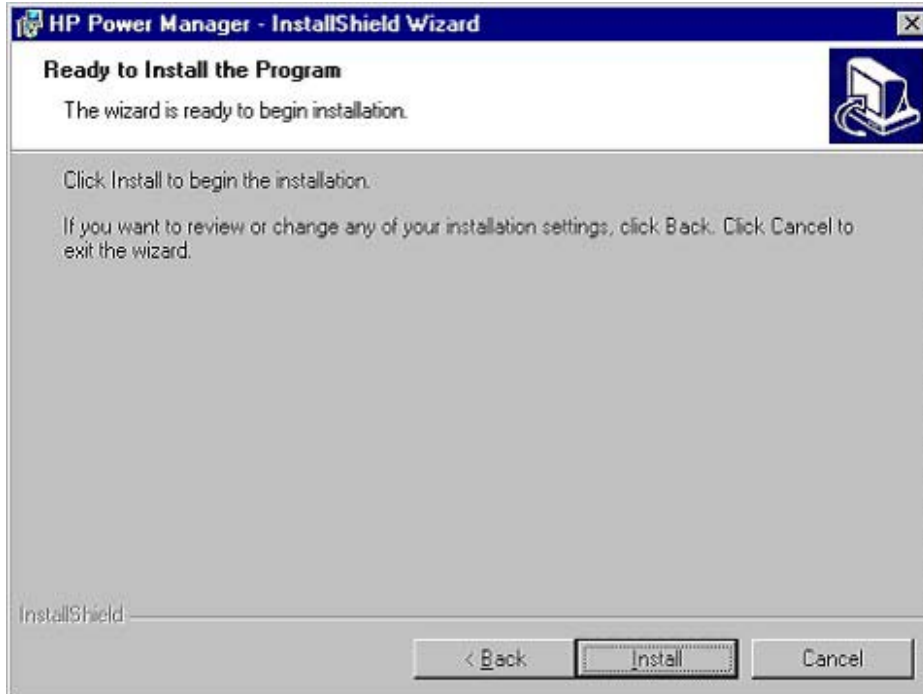
The Destination Folder screen appears.

- Click **Next** to install the Management Server in the default folder, which is displayed below the Install HP Power Manager to: field. To specify a different folder, click **Change**, navigate to the appropriate folder, and then click **Next**.



The Ready to Install the Program screen appears.

- Click **Install**. The wizard installs the software.



10. Click **Finish** to close the installation wizard, and then continue with the configuration process ("Configuring the Management Server" on page 23).



Upgrading Remote Agent components on Windows operating systems

1. Insert the HP Infrastructure 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 then double-click AUTORUN.EXE in the root folder.

If the software has been downloaded from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions to unpack the files, and then locate and run SETUP.EXE.

2. Select **HP Power Manager** from the side menu.
3. Select **Remote Agent**. The Setup dialog box appears.
4. Click **Upgrade**.

NOTE: Upgrading does not delete any previous HPPM custom settings. All HPPM custom settings are saved.



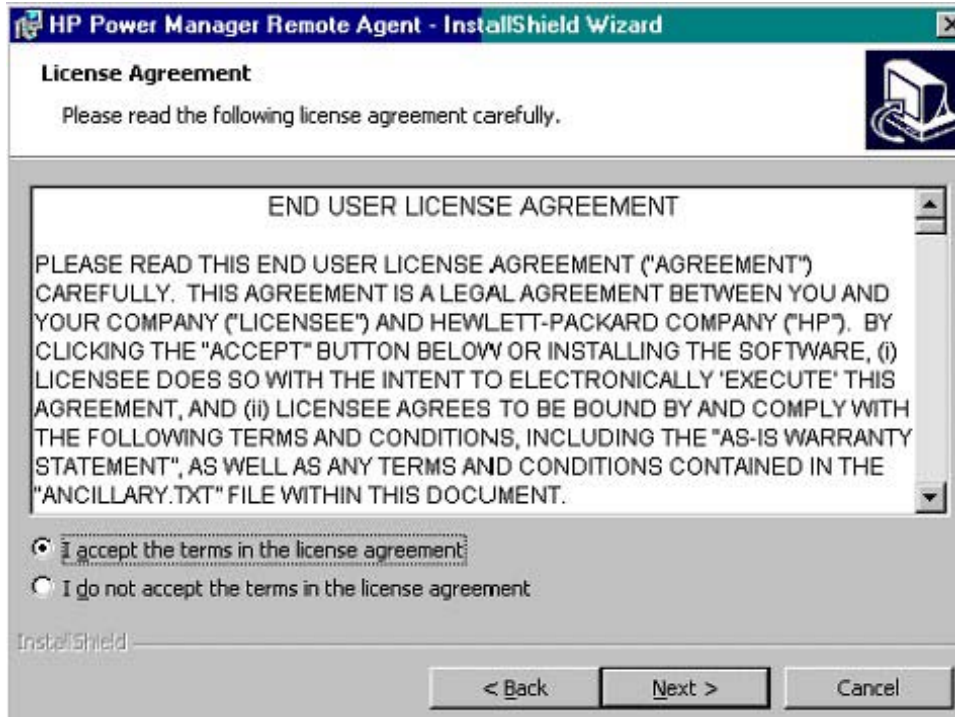
The Welcome screen appears.

5. Read the introduction, and then click **Next**.



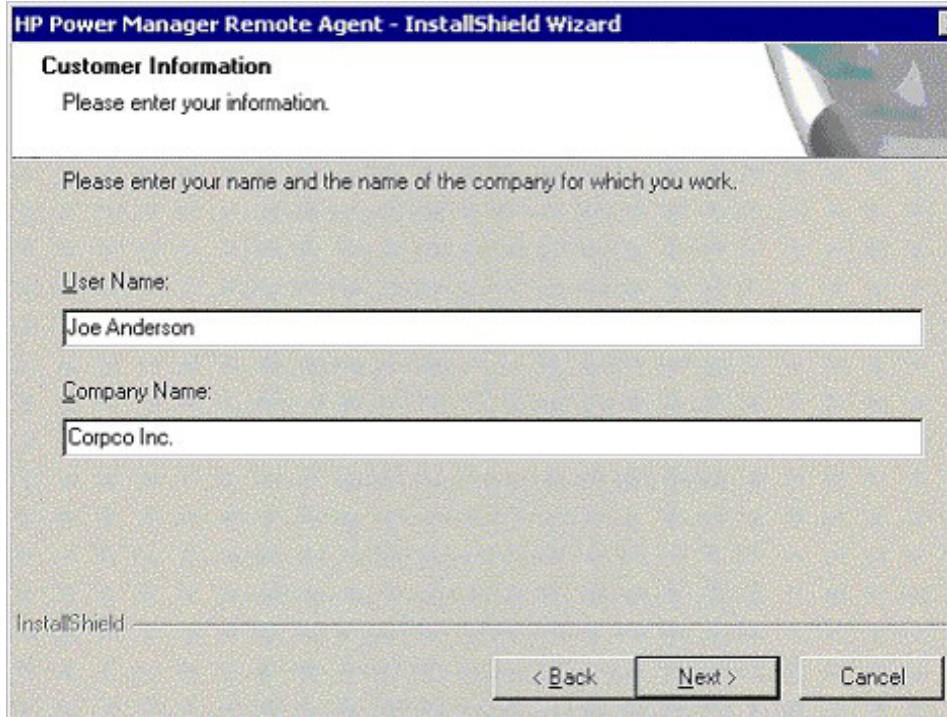
The License Agreement screen appears.

6. Read the license agreement, select **I accept the terms in the license agreement**, and then click **Next**.



The Customer Information screen appears.

7. Verify or change the customer information, select whether to install for all users or only the current user, and then click **Next**.



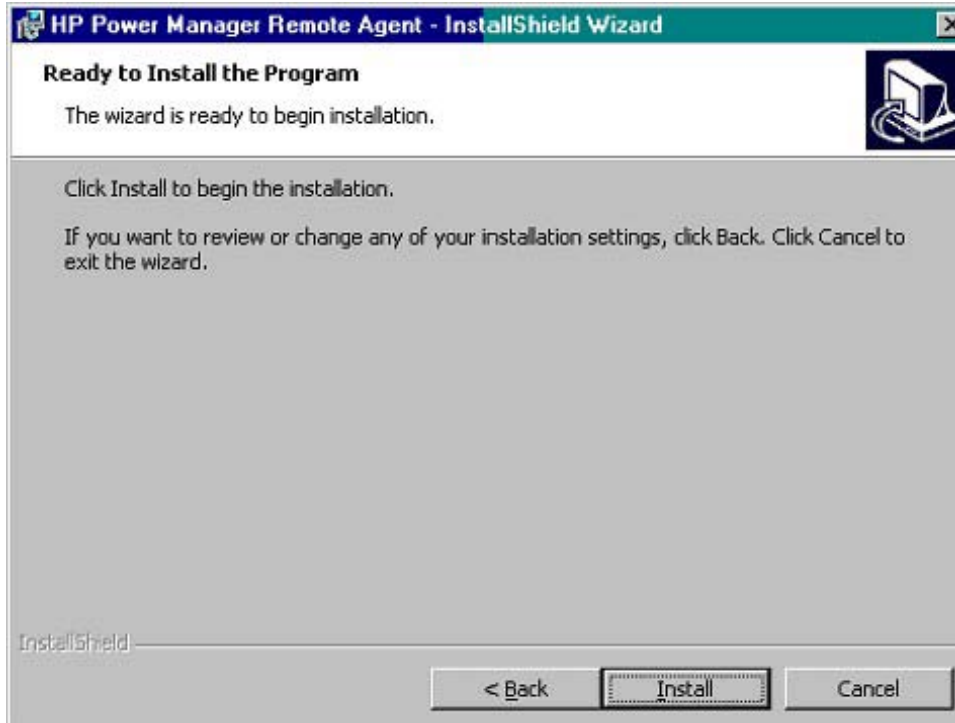
The Destination Folder screen appears.

8. Click **Next** to install the Remote Agent 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 then click **Next**.

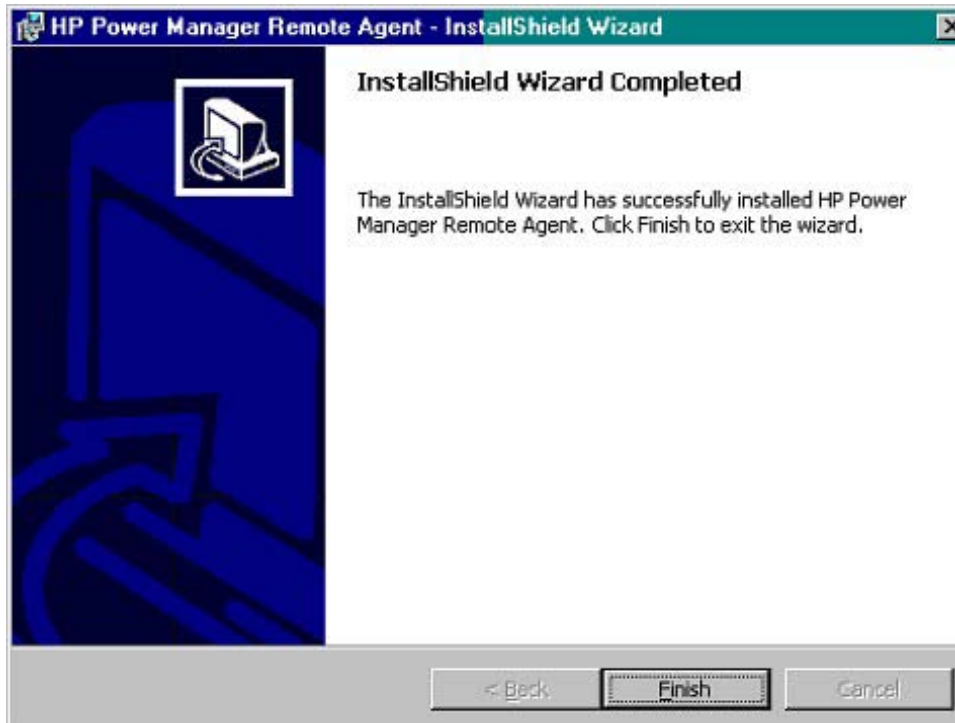


The Ready to Install the Program screen appears.

9. Click **Install**. The wizard installs the software.

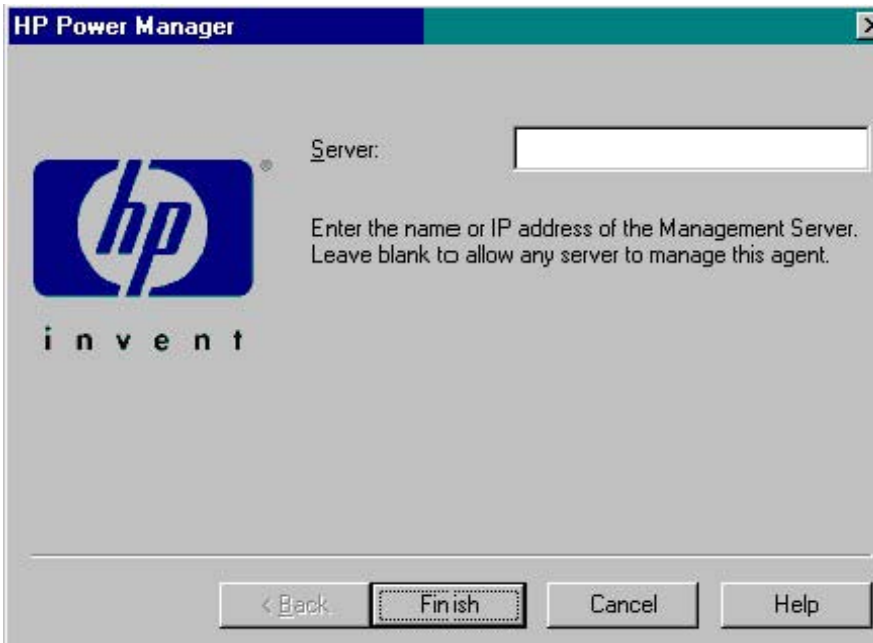




10. Click **Finish** to close the installation wizard, and then continue with the configuration process.



NOTE: It might take a moment for the configuration screen to appear. If there are open windows on the desktop, you might need to minimize the windows to view the configuration screen.

11. For the most security, enter the host name or valid IP address of the Management Server. This setting ensures that only the Management Server you specify can execute commands and operating system shutdowns on the computer running the Remote Agent.
If security is not a concern, leave this field as is.
12. Click **Finish**.



NOTE: An icon in the Windows® system tray shows the status of HPPM. 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 the service has stopped, a blue hexagon icon  displays. Hover over the icon with the mouse pointer, and a tool tip displays a status message. For more information about the system tray icon status messages, see "System tray icon (on page 54)."

NOTE: To reconfigure the Web connection or communications port or to change to a different UPS, refer to "Reconfiguring components on Windows operating systems (on page 37)."

Installing components on Linux operating systems

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



IMPORTANT: To ensure your system has the minimum requirements needed to run HPPM, refer to "System requirements (on page 18)."

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

NOTE: For this release of HP Power Manager, only the Management Server component is available for upgrade. Use version 4.0 Remote Agents with the version 4.3 Management Server.

Installing the Management Server using the installation script



IMPORTANT: To ensure your system has the minimum requirements needed to run HPPM, refer to "System requirements (on page 18)."

NOTE: Before installing the software, be sure that the serial, USB, or network cable connecting the UPS to the Management Server is properly installed.

1. HPPM can be installed two ways:

- If installing the software from the HP EIS Management Pack CD, insert the 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:

```
./Setup
```

- If downloading the software from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions on the website to unpack the files. Locate the Linux Management Server installation script (Setup). Execute the following script:

```
./Setup
```

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.

The installer launches a separate configuration program.

The script displays: `Do you accept the terms of the license agreement?`

2. Enter `yes`.

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

3. To use the unsecured HTTP protocol for Web browser access to the Management Server, enter `n`. To use secured HTTPS, enter `y`.

For more information about security considerations, see "Security considerations overview (on page 109)."

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

4. To use standard TCP/IP port (80 for HTTP, 443 for HTTPS) with the selected protocol for Web browser access to the Management Server, press the **Enter** key. To use a nonstandard port for browser access, enter a valid numerical value for the port number.

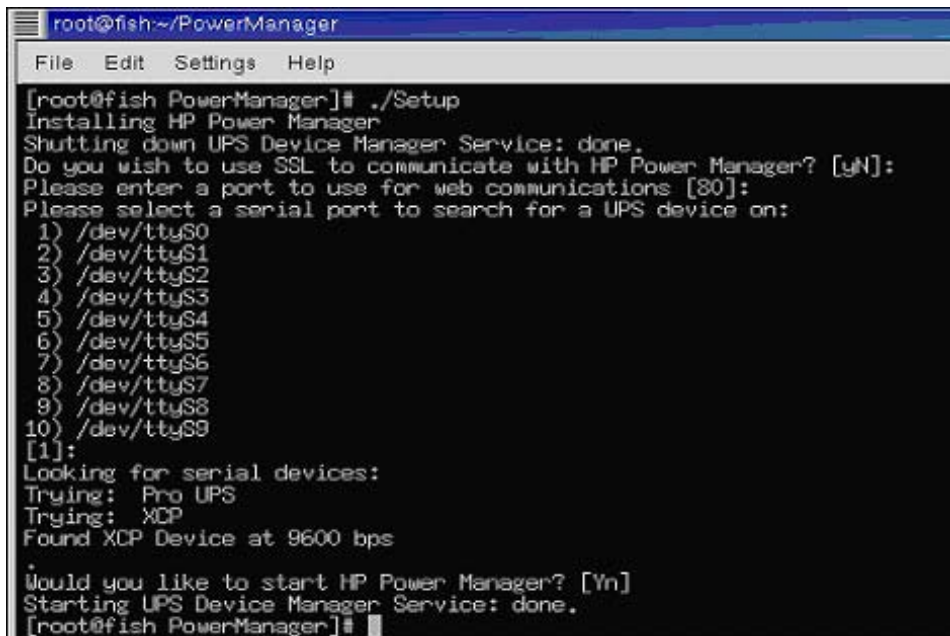
The script displays: `Is your UPS connected to a network?`

5. If your UPS is not connected to a network, enter `n` and configure the serial port.

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 a different 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, verify that the cable is connected securely from the serial port to the UPS and that the correct port was selected before trying again.



```
root@fish~/PowerManager
File Edit Settings Help
[root@fish PowerManager]# ./Setup
Installing HP Power Manager
Shutting down UPS Device Manager Service: done.
Do you wish to use SSL to communicate with HP Power Manager? [yN]:
Please enter a port to use for web communications [80]:
Please select a serial port to search for a UPS device on:
1) /dev/ttyS0
2) /dev/ttyS1
3) /dev/ttyS2
4) /dev/ttyS3
5) /dev/ttyS4
6) /dev/ttyS5
7) /dev/ttyS6
8) /dev/ttyS7
9) /dev/ttyS8
10) /dev/ttyS9
[1]:
Looking for serial devices:
Trying: Pro UPS
Trying: XCP
Found XCP Device at 9600 bps
.
Would you like to start HP Power Manager? [Yn]
Starting UPS Device Manager Service: done.
[root@fish PowerManager]# █
```

6. If your UPS is connected to a network, enter `y` and configure the network settings.
The script displays: Please enter the hostname or IP address for your UPS.
 - a. Enter the host name or IP address for the UPS.

- b. At the prompt, enter the password for the network adapter installed in the UPS. The password is case-sensitive. The default adapter password is MustB6.

```
RPVWARE1 - Video Session Viewer
Do you accept the terms of the license agreement? [yes/no]  yes
Installing HP Power Manager
Shutting down UPS Device Manager Service:
done.
Do you wish to use SSL to communicate with HP Power Manager? [yN]: n
Please enter a port to use for web communications [80]: 100
Is your UPS connected to a network? [yN]: y
Please enter the hostname or ip address for your UPS: 172.25.234.47
Password:[*****]:
Looking for network devices:
Trying: XCP
Failed to find device, please check your connections and try again.
Please enter the hostname or ip address for your UPS: 172.25.234.45
Password:[*****]:
Looking for network devices:
Trying: XCP
Found XCP Device (Model HP R3000 XR).

Starting UPS Device Manager Service:
EXE : DevManBE
done.
[root@rpvware1 aa]# chmod 777 Uninstall
```

Installing the Remote Agent using the installation script



IMPORTANT: To ensure your system has the minimum requirements needed to run HPPM, refer to "System requirements (on page 18)."

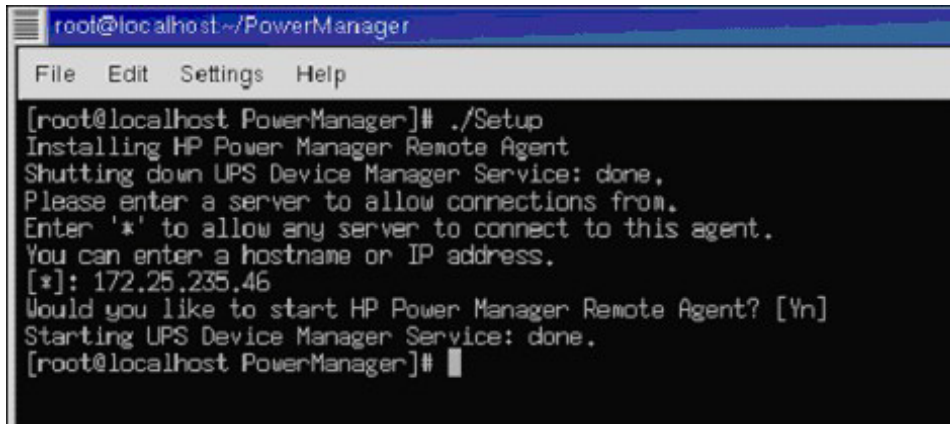
1. HPPM can be installed two ways:
 - o If installing the software from the HP EIS Management Pack CD, insert the CD into the CD-ROM drive of the computer. From the console or a terminal window, go to the HPPM/...Linux/Agent subdirectory. Execute the following installation script:
`./SetupRA`
 - o If downloading the software from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions on the website to unpack the files. Locate the Linux Remote Agent installation script (Setup). Execute the following script:
`./SetupRA`

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.

The installer launches a separate configuration program.

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

2. For the most security, enter the host name or IP address of the Management Server. This configuration ensures only that particular Management Server executes commands and operating system shutdowns on the computer running the Remote Agent.
If security is not a concern, enter an asterisk and press the **Enter** key.



```
root@localhost:~/PowerManager
File Edit Settings Help
[root@localhost PowerManager]# ./Setup
Installing HP Power Manager Remote Agent
Shutting down UPS Device Manager Service: done.
Please enter a server to allow connections from.
Enter '*' to allow any server to connect to this agent.
You can enter a hostname or IP address.
[*]: 172.25.235.46
Would you like to start HP Power Manager Remote Agent? [Yn]
Starting UPS Device Manager Service: done.
[root@localhost PowerManager]#
```

Installing the Management Server using the silent installation method



IMPORTANT: To ensure your system has the minimum requirements needed to run HPPM, refer to "System requirements (on page 18)."

NOTE: Before installing the software, be sure that the serial, USB, or network cable connecting the UPS to the Management Server is properly installed.

Silent installation is typically used by system administrators who have many installations that are configured identically and require minimal user interaction. During a silent installation you will:

- Install a Management Server through the assisted installation method that is appropriate for the operating system.
- Configure the Management Server 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.

NOTE: Configuring the Management Server includes attaching devices and configuring the power fail settings, event shutdown settings, and event settings.

- Use the DevManBE.ini file that is generated in the directory of the application as a template in the Management Server silent install process.

NOTE: To prevent more than one Management Server from managing the same devices or agents, a unique DevManBE.ini file is needed for each Management Server.

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

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

1. Create a temporary directory.
2. Copy the following files into the temporary directory you just created:

- DevManBE.ini—During an assisted install, this file is located in the same folder in which HP Power Manager is installed.
 - EULA.txt—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - Setup—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - Uninstall—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - PowerManager-4.3-x.i586.rpm—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
3. From the directory that contains all five files, run `./Setup -s -f <path> DevManBE.ini` to install silently.
- Replace `<path>` with the `DevManBE.ini` file location.

The following command line parameters can be specified and are applicable for both interactive and silent modes.

<code>-s</code>	Performs a silent install or upgrade.
<code>-r</code>	Reboots the computer at completion of setup. This option is supported only on Windows® and only for a silent install or upgrade.
<code>-log</code>	Creates an installation log (<code>/user/local/DevMan/setup.log</code>). Default is disabled for interactive mode and enabled for silent mode. This option is supported only on Linux. The installation log is created automatically for Windows® during silent installations in <code>\%systemdrive%\setup.log</code> .
<code>-f DevManBE.ini</code>	Specifies a configuration <code>.ini</code> file used for both upgrades and clean installs. When this option is specified, the device detection and configuration step is omitted. If this option is specified for the upgrade, it overwrites any saved <code>.ini</code> file settings. This parameter is required for silent installations but is optional for upgrading.

Installing the Remote Agent using the silent installation method



IMPORTANT: To ensure your system has the minimum requirements needed to run HPPM, refer to "System requirements (on page 18)."

Silent installation is typically used by system administrators who have many installations that are configured identically and require minimal user interaction. During a silent installation you will:

- Install a Remote Agent through the assisted installation method that is appropriate for the operating system.

- Configure the Remote Agent exactly as the final replicated systems should be configured.

NOTE: You must configure the IP address of the Management Server in one of two ways:

- Leave the IP address field blank to use the same DevManRA.ini file for all of your Remote Agent installs. This enables the Remote Agent to accept commands from any Management Server that discovers the Remote Agent.
 - Create a DevManRA.ini file for each site. This points each UPS to the correct Management Server and is the more secure option.
-

- Use the DevManRA.ini file that is generated in the directory of the application as a template in the Remote Agent silent install process.
- Change any items that should be unique, such as Device Name, Management Server Name, or Remote Agent Name, through the normal operation of the software.

To install the Remote Agent using the silent installation method:

1. Create a temporary directory.
2. Copy the following files into the temporary directory you just created:
 - DevManRA.ini—During an assisted install, this file is located in the same folder in which HP Power Manager is installed.
 - EULA.txt—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - SetupRA—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - Uninstall—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
 - PowerManagerRA-4.0-10.i586.rpm—This file is included with the installation files on the HP Infrastructure Management Pack CD and the software download package on the HP website (<http://www.hp.com/go/rackandpower>).
3. From the directory that contains all five files, run `./Setup -s -f <path> DevManRA.ini` to install silently.

Replace `<path>` with the `DevManRA.ini` file location.

The following command line parameters can be specified and are applicable for both interactive and silent modes.

-s	Performs a silent install or upgrade.
-r	Reboots the computer at completion of setup. This option is supported only on Windows® and only for a silent install or upgrade.
-log	Creates an installation log (<code>/user/local/DevMan/setup.log</code>). Default is disabled for interactive mode and enabled for silent mode. This option is supported only on Linux. The installation log is created automatically for Windows® during silent installations in <code>\%systemdrive%\setup.log</code> .

<code>-f DevManRA.ini</code>	Specifies a configuration .ini file used for both upgrades and clean installs. When this option is specified, the device detection and configuration step is omitted. If this option is specified for the upgrade, it overwrites any saved .ini file settings. This parameter is required for silent installations but is optional for upgrading.
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Reconfiguring Management Server components on Linux operating systems

To configure the Web connection, SSL, or communications port for Red Hat Linux, run
`/etc/init.d/DevMan setup`

To configure the Web connection, SSL, or communications port for SUSE Linux Enterprise Server, run
`/etc/init.d/DevMan setup`

Reconfiguring Remote Agent components on Linux operating systems

To configure the Management Server IP address or host name for Red Hat Linux, run
`/etc/init.d/DevMan setup`

To configure the Management Server IP address or host name for SUSE Linux Enterprise Server, run
`/etc/init.d/DevMan setup`

Upgrading Management Server components on Linux operating systems

Upgrade HPPM using one of the following methods:

- If upgrading the software from CD, insert the 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:

```
./Setup -s
```

No output appears in the terminal.

- If downloading the software from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions on the website to unpack the files. Locate the Linux Management Server installation script (Setup). Execute the following script:

```
./Setup -s
```

No output appears in the terminal.

The script installs the newest version of the Management Server, keeping all old settings intact.

Upgrading Remote Agent components on Linux operating systems

Upgrade HPPM using one of the following methods:

- If upgrading the software from CD, insert the 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:

```
./SetupRA -s
```

No output appears in the terminal.

- If downloading the software from the HP website (<http://www.hp.com/go/rackandpower>), follow the instructions on the website to unpack the files. Locate the Linux Remote Agent installation script (SetupRA). Execute the following script:

```
./SetupRA -s
```

No output appears in the terminal.

The script installs the newest version of the Remote Agent, keeping all old settings intact.

Uninstalling components from Windows® systems

1. Click **Start>Settings>Control Panel**.
2. Open **Add/Remove Programs**.
3. Select **HP Power Manager** or **HP Power Manager Remote Agent**, and click **Change/Remove**.
The uninstall wizard launches.
Select **Remove Choice**, and click **Next**.
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

Execute the uninstall script (`./Uninstall`).

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

Access and navigation

Accessing the software

You can access the software:

- Remotely through a Web browser (on page 54)
- Locally from the system tray icon (on page 54) in Windows®

Web browser

To access the Management Server software through a Web browser:

1. Launch a supported browser. The browser window appears.
2. In the Address field (Microsoft Internet Explorer) or the Location field (Mozilla), enter an IP address. Use the following examples, 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), 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, 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 might need to add the server hosting the software 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 the software through the system tray in Windows®:

1. Right-click the software system tray icon on a computer with one of the software components installed to display a context menu.
2. Click **Connect** to access the software.

NOTE: If the  icon appears, the Connect option is unavailable because the service is unavailable.

Icon	Status
	Software service/daemon is running. The agent and Management Server are communicating. UPS status is normal.
	Software service/daemon is not running.
	UPS issues a warning alarm.
	Software is not configured, the UPS is not connected, or the agent and Management Server are not communicating. UPS issues a critical alarm.

Browser security alert

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

Secure browsing requires the use of SSL. SSL is a protocol layer that lies between HTTP and TCP that 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. The encrypted channel 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 Management Server. If your browser displays a security alert when browsing to the software, 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 condition 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.

For more information about security considerations, see "Security considerations overview (on page 109)."

Establishing a secure session for Internet Explorer

The first time you browse to the software, the Secure Session screen appears. To ensure a secure connection, 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 software administrator.

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

- Import the certificate and proceed.
 - a. Click **View Certificate**. The certificate appears.
 - b. Click **Install Certificate**. The Certificate Import wizard runs.
 - c. Click **Next**. The **Certificate Store** screen appears.
 - d. Select **Automatically select the certificate store based on the type of certificate**, and click **Next**.
 - e. Click **Finish**. A message appears, asking for verification of the root store.
 - f. Click **Yes**.
- Proceed without importing the certificate by clicking **Yes** at 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** at the Security Alert window.
 - b. Obtain an exported software 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**.

Secure session for Linux Firefox

The first time you browse to the management module, the Secure Session screen appears. To ensure a secure connection, verify that you are browsing to the desired management module:

1. Click **Examine Certificate**.
2. Verify that the name in the Issued To field is the name or IP address of your management module.
3. Perform any other steps necessary to verify the identity of the management module.
4. After verifying the management module, do one of the following:
 - a. Click either **Accept this certificate permanently** or **Accept this certificate temporarily for this session**.
 - b. Click **OK**.

NOTE: If using Linux Firefox, you can manually import the file into the browser by clicking **Edit>Preferences>Advanced>Encryption>View Certificates>Authorities>Import**.

Logging in

Before using this software, 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 "My Account menu option (on page 89)."

NOTE: Passwords are case-sensitive.

HP Power Manager

Login Name

Password

After a successful login, the Overview screen under the Home tab appears. For more information on the Overview screen, refer to "Overview menu option (on page 59)."

Navigating

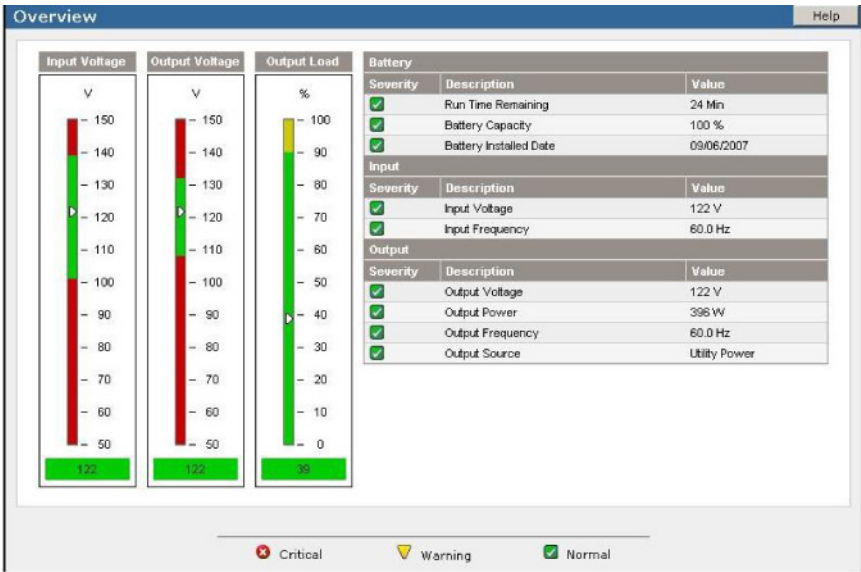
The software interface is divided into three frames:

- **Top frame**—Contains the HP logo, 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, see "Home tab (on page 59)."
 - Click the **Logs** tab to see the menu options for displaying UPS data logs. For more information, see "Logs tab (on page 82)."
 - Click the **Setup** tab to see the menu options for setting up and modifying user accounts. For more information, see "Setup tab (on page 89)."
 - Click the **Help** tab to access the software help section. For more information, see "Help tab (on page 91)."
 - Click the **Logout** hyperlink to log out of the software.

NOTE: An indicator in the upper right corner of the screen displays information about the UPS, such as the number of active alarms or whether 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 your access rights.
- **Main frame**—Contains the various software screens based on the menu option selected.

NOTE: The Overview screen appears in the main frame the first time you log in to the software. The screen might vary, depending on the UPS model connected.



Configuration and operation

Home tab

Menu options listed under the Home tab include:

- Overview menu option (on page 59)
- Alarms menu option (on page 61)
- Identification menu option (on page 61)
- Parameters menu option (on page 62)
- Attached Devices menu option (on page 63)
- Power Fail menu option (on page 68)
- Shutdown Events menu option (on page 71)
- Scheduled Shutdown menu option (on page 72)
- Event Settings menu option (on page 74)
- Manual Control menu option (on page 79)
- Settings menu option (on page 80)

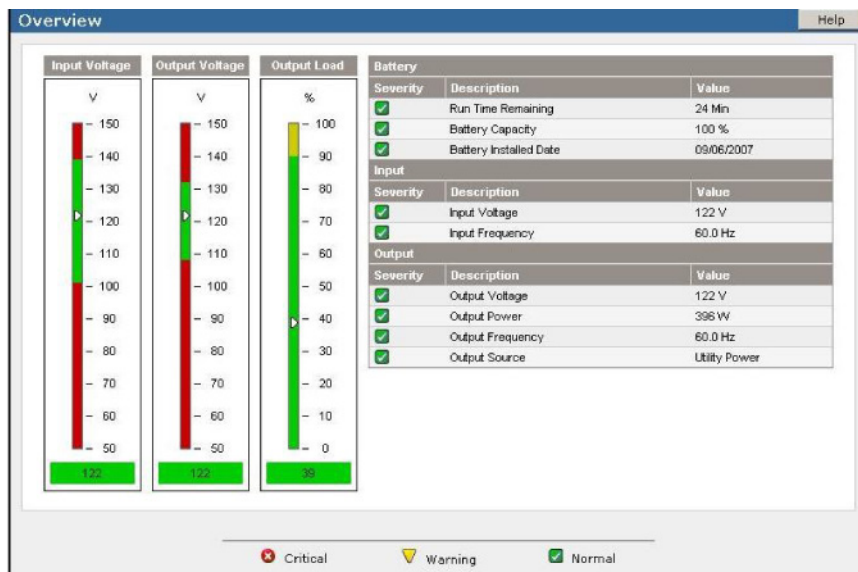
Overview menu option

NOTE: HPPM 4.3 does not require a flash player to be installed, except when viewing the UPS Data Graph menu option.

Click **Overview** in the left navigation frame to display the Overview screen. This screen displays overall views of the UPS status.

Meter Display screen

NOTE: Depending on the specific UPS model, this screen might vary. The screen shown is only an example.



On the Meter Display screen, 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 color on the meter representing the current state of the UPS.

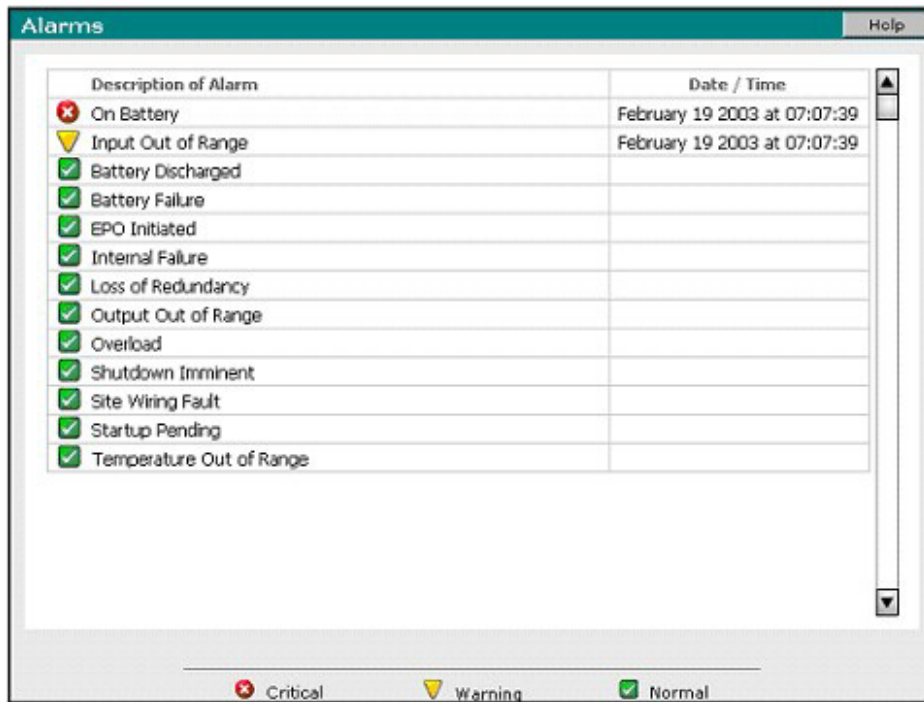
Color	Device Status
Green	Normal
Yellow	Warning
Red	Critical

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

Icon	Parameter Status
	Normal
	Warning
	Critical

Alarms menu option

Click **Alarms** in the left navigation frame to display the Alarms screen. This screen lists all possible alarms (active and normal) specific for each UPS model. The active alarms are listed at the top of the screen with the date and time at 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 (Normal, 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.

NOTE: Depending on the specific UPS model, this screen might vary. The screen shown is only an example.

You can enter or change the contact information and device name on the Settings screen. For more information, refer to "Settings menu option (on page 80)." Only users with administrator rights can enter this information.

Identification		Help
Baud Rate	9600	
Communications Version	1.00	
Contact	TCB	
Contact Email	tbriggs@dev.net	
Contact Phone	555-5555	
Device Name	T2200XR On Table 1	
Inverter Version	1.00	
Model	T2200 XR	
Part Number	204451-001	
Protocol	XCP	
Serial Number	UU332A0921	

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 (Normal, Warning, or Critical).

NOTE: Depending on the specific UPS model, this screen might vary. The screen shown is only an example.

UPS Parameters		Help
Battery		
<input checked="" type="checkbox"/>	Battery Capacity	93 %
<input checked="" type="checkbox"/>	Battery Installed Date	04/09/2003
<input checked="" type="checkbox"/>	Battery Status	OK
<input checked="" type="checkbox"/>	Battery Voltage	50 V
<input checked="" type="checkbox"/>	Run Time Remaining	65 Min
Configuration		
<input checked="" type="checkbox"/>	High Voltage Transfer Point	144 V
<input checked="" type="checkbox"/>	Low Voltage Transfer Point	84 V
Environment		
<input checked="" type="checkbox"/>	Temperature	51 C
Input		
<input checked="" type="checkbox"/>	Input Frequency	60.1 Hz
<input checked="" type="checkbox"/>	Input Voltage	122 V
Output		
<input checked="" type="checkbox"/>	Output Current	0 A
<input checked="" type="checkbox"/>	Output Frequency	60.1 Hz
<input checked="" type="checkbox"/>	Output Load	0 %
<input checked="" type="checkbox"/>	Output Power	0 W
<input checked="" type="checkbox"/>	Output Source	Utility Power
<input checked="" type="checkbox"/>	Output Voltage	122 V
Self-Test		
<input checked="" type="checkbox"/>	Last Self-Test Date	00/00/0000
<input checked="" type="checkbox"/>	Test Results Summary	No Test
<input checked="" type="checkbox"/> Critical <input type="checkbox"/> Warning <input checked="" type="checkbox"/> Normal		

Battery self-test results summary

- **In Progress**—The battery self-test is in progress.
- **Passed**—The battery self-test has completed successfully.
- **Test Aborted**—The battery self-test was not performed at this time because of one of the following:
 - The UPS is already On Battery.
 - The battery is not presently charged.
 - In some implementations, the battery self-test is scheduled and begins when the batteries are fully charged.
- **Test Failed**—A bad battery is detected, or the battery self-test failed.
- **Test Scheduled**—The battery self-test was not performed at this time but will be performed when the system has the proper conditions.
- **Battery Disconnect**—All batteries have been disconnected.
- **Battery Not Installed**—No batteries were connected to the system at last power up.
- **Unknown**—Unable to determine the status of the last test.

NOTE: Battery self-test results are cleared after the UPS is reset.

Attached Devices menu option

NOTE: The link to this screen does not appear 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, some features might not be supported. The screen shown is only an example.

Attached Devices Add New Device Refresh Page Help

UPS Runtime: 93 Min

	Entire UPS	<input type="button" value="Cycle"/>	Total time to shut down Entire UPS: 3 Min		
	Load 1	Command Procedure	Estimated Time Required To		Total Time
			Execute Command	Shut Down OS	
	Houston Office Management Server	✓	1 Min	2 Min	3 Min
		<input type="button" value="Cycle"/>	Total time to shut down Load Segment 1:		3 Min
	Load 2	Command Procedure	Estimated Time Required To		Total Time
			Execute Command	Shut Down OS	
	Houston Office Remote Agent 1		0 Min	0 Min	0 Min
		<input type="button" value="Off"/> <input type="button" value="On"/> <input type="button" value="Cycle"/>	Total time to shut down Load Segment 2:		0 Min
	Load 3	Command Procedure	Estimated Time Required To		Total Time
			Execute Command	Shut Down OS	
	MSA 1000		0 Min	0 Min	0 Min
		<input type="button" value="Off"/> <input type="button" value="On"/> <input type="button" value="Cycle"/>	Total time to shut down Load Segment 3:		0 Min

Icon	Status
	Agent is communicating with the Management Server, and the versions are compatible.
	Agent version is not compatible. Upgrade agent.
	Agent is not communicating with the Management Server. For more information, see "Red status icon displays."

This screen enables you to:

- View attached devices and load segment power status
- Control load segments ("[Controlling a load segment](#)" on page 64) (turn off, on, or cycle power)
- Add ("[Adding an attached device](#)" on page 65) or delete attached devices ("[Editing or deleting an attached device](#)" on page 66)
- Edit an attached device ("[Editing or deleting an attached device](#)" on page 66)

The estimated UPS runtime appears 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 the single largest time necessary to shut down a device attached to the UPS.

Controlling a load segment

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

- Click **Off** to shut down a load segment, which allows for the graceful shutdown of attached devices.
- 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

1. Click **Add New Device** on the Attached Devices screen. The Add Device screen appears.

NOTE: Depending on the specific UPS model, some features might not be supported. The screen shown is only an example.

Computer Device Information		Estimated Time Required To	
Host Name or IP Address	<input type="text"/>	Shut Down OS	<input type="text" value="1"/> Min
<input type="checkbox"/> Run Command Procedure (SDScript)?		Execute Command	<input type="text" value="1"/> Min

2. Enter the device name or description in the Device Description field.
3. Select the type of device in the Device Type dropdown box:
 - o Remote Agent—Select **Remote Agent** when attaching a HPPM Remote Agent to a UPS load segment.
 - o Storage Device—Select **Storage Device** when attaching a shared hard disk storage device to a UPS load segment. Storage devices have the longest runtime so servers accessing this device can save data before shutting down.
 - o Other Device—Select **Other Device** 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 segments to which the device is attached in the Load Segment dropdown box.
5. If the device type is Remote Agent, enter the host name or IP address in the Host Name or IP Address field.
6. Enter the estimated time required to shut down the server in the Shut Down OS field.
7. To configure the command procedure SDScript to run at shutdown:
 - a. Select **Run Command Procedure (SDScript)?** at shutdown.
 - b. Edit the SDScript file or create a new SDScript file. A sample SDScript file is landed in the root folder for every Management Server and Remote Agent. The name of the SDScript file must be `SDScript.CMD`, and this file must remain in the root folder.



IMPORTANT: SDScript command execution can be a very powerful tool and should be tested thoroughly before being used for the first time in response to a power event. Not all programs and applications are suitable to be executed as a process, especially programs that do not create their own environments. Command execution behavior varies by operating system, and, in general, commands to be executed should be put into a batch file or shell script depending on the operating system that will be executing the commands. Using an SDScript gives you more control over the circumstances in which commands are executed and allows the commands to run in a copy of the environment.

When selecting commands to be executed in the SDScript file, choose programs and processes that do not require user input or interaction. Since the commands can be executed at any time, it is difficult to predict if a user will be available to interact with any programs that are launched. Verify that specified drive mappings, user specific directories, and programs that require special rights are accessible by the SDScript file.

Most operating systems have a method for spawning new processes. In Windows operating systems, commands can be preceded with `START`, and in most Linux/Unix systems, `sh` can be used. When designing your SDScript file, determine which commands require a separate process and which commands can be run one after another in the same process. Refer to the documentation that came with your operating system for more information on batch files or script files.

NOTE: HP Power Manager cannot run an SDScript on a server unless the server has a Remote Agent installed. The SDScript file that will be run must reside on the server on which the command will be executed.

NOTE: HP Power Manager shuts down the operating system gracefully. Use the SDScript file for other tasks, such as backing up files to tape or shutting down a database.

- c. Enter the estimated time required to complete the procedure in the Execute Command field.
8. Click **Save Changes** to save the information.

The newly added device displays under the specific load segment. The status icon in front of the device link indicates the attached device agent is communicating with the Management Server, and the versions are compatible. For a detailed description of the agent status, refer to "System tray icon (on page 54)."

Editing or deleting an attached device

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

Device Description	Device Type	Load Segment	Version
Falstaff	Remote Agent	3	4.0 (Build 3)

Computer Device Information		Estimated Time Required To	
Host Name or IP Address	172.25.234.64	Shut Down OS	1 Min
<input type="checkbox"/> Run Command Procedure (SDScript)?		Execute Command	1 Min

Save Changes Delete Device

2. Edit the device name or description in the Device Description field.
3. If the device is not a Management Server, select the type of device in the Device Type dropdown box:
 - o Remote Agent—Select **Remote Agent** when attaching a HPPM Remote Agent to a UPS load segment.
 - o Storage Device—Select **Storage Device** when attaching a shared hard disk storage device to a UPS load segment. Storage devices have the longest runtime so servers accessing this device can save data before shutting down.
 - o Other Device—Select **Other Device** 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 dropdown box.
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. To configure the command procedure SDScript to run at shut down:
 - a. Select **Run Command Procedure (SDScript)?** at shutdown.
 - b. Edit the SDScript file or create a new SDScript file. A sample SDScript file is landed in the root folder for every Management Server and Remote Agent. The name of the SDScript file must be SDScript.CMD, and this file must remain in the root folder.



IMPORTANT: SDScript command execution can be a very powerful tool and should be tested thoroughly before being used for the first time in response to a power event. Not all programs and applications are suitable to be executed as a process, especially programs that do not create their own environments. Command execution behavior varies by operating system, and, in general, commands to be executed should be put into a batch file or shell script depending on the operating system that will be executing the commands. Using an SDScript gives you more control over the circumstances in which commands are executed and allows the commands to run in a copy of the environment.

When selecting commands to be executed in the SDScript file, choose programs and processes that do not require user input or interaction. Since the commands can be executed at any time, it is difficult to predict if a user will be available to interact with any programs that are launched. Verify that specified drive mappings, user specific directories, and programs that require special rights are accessible by the SDScript file.

Most operating systems have a method for spawning new processes. In Windows operating systems, commands can be preceded with `START`, and in most Linux/Unix systems, `sh` can be used. When designing your SDScript file, determine which commands require a separate process and which commands can be run one after another in the same process. Refer to the documentation that came with your operating system for more information on batch files or script files.

NOTE: HP Power Manager cannot run an SDScript on a server unless the server has a Remote Agent installed. The SDScript file that will be run must reside on the server on which the command will be executed.

NOTE: HP Power Manager shuts down the operating system gracefully. Use the SDScript file for other tasks, such as backing up files to tape or shutting down a database.

- c. Enter the estimated time required to complete the procedure in the Execute Command field.
- 8. Click **Save Changes** to save the information, or click **Delete Device** to delete the device.

The device displays under the specific load segment, and any changes that have been made are reflected on the Attached Devices screen. The status icon in front of the device link indicates the attached device agent is communicating with the Management Server, and the versions are compatible. For detailed descriptions of the agent status, refer to "System tray icon (on page 54)."

NOTE: The Delete Device button only displays for devices other than the Management Server.

NOTE: Depending on the specific UPS model, some features might not be supported. The screen shown is only an example.

Power Fail menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

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

NOTE: Depending on the specific UPS model, some features might not be supported. The screen shown is only an example.

The screenshot shows the 'Power Fail Settings' window with a 'Help' button in the top right. The window is divided into two main sections for 'Attached Devices'.

Section 1: Shutdown Settings

AttachedDevices	Shutdown Settings				Restart Settings
Load	Devices	Conserve Battery Power		Maximize Runtime	Advanced
Load 1	Houston Office Management Server	Shutdown Delay (Minutes) <input type="text" value="9"/>	Required OS Shutdown Time (After Delay) 3 Min	Run Until Battery Depletion <input type="radio"/>	Settings... Delay (Seconds) <input type="text" value="2"/>

Section 2: Shutdown Settings

AttachedDevices	Shutdown Settings			Restart Settings	
Load	Devices	Shed Load	Maximize Runtime	Delay (Seconds)	
Load 2	Houston Office Remote Agent 1	Shutdown Delay (Minutes) <input type="radio" value="10"/>	Required OS Shutdown Time (After Delay) 0 Min	Shutdown With Management Server <input checked="" type="radio"/>	<input type="text" value="0"/>
Load 3	MSA 1000	<input type="radio" value="5"/>	0 Min	<input checked="" type="radio"/>	<input type="text" value="3"/>

At the bottom of the window are buttons for 'Save Changes' and 'Refresh Page'.

Configuring the shutdown delay for the Management Server load segment

1. Click the Management Server link in the Attached Devices column to edit the Management Server information on the Edit/Delete Device screen ("Editing or deleting an attached device" on page 66).



IMPORTANT: The Management Server is defaulted to load segment 1. Verify the Management Server load segment, and edit the device if necessary.

2. Configure the shutdown settings for the Management Server using one of the three options in the Shutdown Settings column.
 - Conserve Battery Power—Select the radio button in the Shutdown Delay column, and enter the number of minutes after power fails that HPPM should wait before starting to shut down the Management Server load segment. The total time needed to gracefully shut down the Management Server is equal to the shutdown delay plus the number of minutes required to shutdown the Management Server operating system. The number of minutes required to shutdown the Management Server can be updated on the Edit/Delete Device screen ("[Editing or deleting an attached device](#)" on page 66) by clicking the Required OS Shutdown Time (After Delay) link.

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.

 - Maximize Runtime—Select the radio button in the Run Until Battery Depletion column to maximize UPS runtime. HPPM initiates load segment shutdown when the UPS issues a low battery alarm.

CAUTION: Selecting this option might result in an ungraceful shutdown. The amount of remaining runtime cannot be accurately predicted after a low battery warning is issued.

 - Advanced—Select the radio button in the Advanced column, and click the Settings button to configure advanced power fail settings.
3. Enter the amount of time HPPM should wait before restarting the Management Server in the Restart Settings column. This option allows utility power to stabilize and disks in shared storage configurations to spin up before the server restarts.
4. Click **Refresh Page** to cancel changes and restore the page settings to the last saved configuration.
5. Click **Save Changes** to save the information.
6. Click **Power Fail** in the left navigation frame to view saved settings.

Configuring Advanced Power Fail settings

1. Click the **Settings** button in the Advanced section of the Power Fail Settings screen ("[Power Fail menu option](#)" on page 68) to display the Advanced Power Fail Settings screen.

The screenshot shows a dialog box titled "Advanced Power Fail Settings" with a "Help" button in the top right corner. The dialog is divided into two main sections:

- On Battery Shutdown:** This section contains three radio buttons. The first one, "Begin shutdown after a delay of 9 minutes.", is selected. The other two are "Shut down based on UPS reported runtime remaining." and "Do not automatically shutdown."
- Low Battery Shutdown:** This section contains two radio buttons. The first one, "Begin shutdown after a delay of 0 seconds.", is selected. The other is "Do not automatically shutdown."

At the bottom of the dialog is a "Save Changes" button.

2. Select one radio button in the On Battery Shutdown field and one radio button in the Low Battery Shutdown field. The following matrix describes the possible combinations.

	Low Battery Shutdown—Begin shutdown after a delay selected	Low Battery Shutdown—Do not automatically shutdown selected
On Battery Shutdown Begin shutdown after a delay selected	HPPM initiates system shutdowns after the specified delay when the UPS begins to operate on battery power, unless the UPS issues a low battery alarm before the shutdowns are initiated. If a low battery alarm occurs during the delay countdown, HPPM ignores the on battery settings and observes the low battery shutdown delay setting.	HPPM initiates system shutdowns after the specified delay when the UPS begins to operate on battery power. If a low battery alarm occurs during the delay countdown, HPPM ignores the low battery alarm and continues to observe the on battery shutdown delay setting. ¹
On Battery Shutdown Shutdown based on UPS reported runtime remaining selected	HPPM initiates system shutdowns when the UPS runtime reaches zero, unless the UPS issues a low battery alarm before the shutdowns are initiated. If a low battery alarm occurs during the runtime countdown, HPPM ignores the runtime remaining and observes the low battery shutdown delay setting.	HPPM initiates system shutdowns when the UPS runtime reaches zero. If a low battery alarm occurs during the runtime countdown, HPPM ignores the low battery alarm and continues to observe the runtime countdown. ¹
On Battery Shutdown Do not automatically shutdown selected	HPPM initiates system shutdowns when the UPS issues a low battery alarm. HPPM observes the low battery shutdown delay setting.	HPPM does not initiate any type of system shutdown. Power is maintained until the battery is depleted. ²

¹ Selecting this option might result in an ungraceful shutdown. The amount of remaining runtime cannot be accurately predicted after a low battery warning is issued.

² Running batteries to depletion can cause an ungraceful shutdown if a second power failure occurs before the batteries have fully charged.

3. Click **Save Changes** to save the advanced settings. The Power Fail Settings screen displays.
4. Click **Save Changes** on the Power Fail Settings screen to apply the saved advanced settings.

Configuring shutdown for all other load segments

1. Click the device link in the Attached Devices column to edit the device information on the Edit/Delete Device screen ("[Editing or deleting an attached device](#)" on page 66).
2. Configure the Shutdown Settings for each device using one of the two options in the Shutdown Settings column.
 - o **Shed Load**—Use the Shed Load option to prioritize load segment shutdown. Select the radio button in the Shutdown Delay column, and enter the number of minutes after power fails that HPPM should wait before starting to shut down the load segment. Enter a shorter delay for load segments that power less critical equipment to preserve UPS battery power for other load segments. The total time needed to gracefully shut down the load segment is equal to the shutdown delay plus the number of minutes required to shut down the operating system. The number of minutes required to shut down the operating system can be updated on the Edit/Delete Device screen ("[Editing or deleting an attached device](#)" on page 66) by clicking the Required OS Shutdown Time (After Delay) link.

NOTE: A load segment that has a storage device attached shuts down with the Management Server. The Shed Load option is not available for this load segment.

- Maximize Runtime—Select the radio button in the Shutdown With Management Server column to maximize UPS runtime. HPPM initiates load segment shutdown at the time the Management Server shuts down.
- 3. Enter the amount of time to wait before restarting the attached device in the Restart Settings column. This option allows utility power to stabilize and disks in shared storage configurations to spin up before the server restarts.
- 4. Click **Refresh Page** to cancel changes and restore the page settings to the last saved configuration.
- 5. Click **Save Changes** to save the information.
- 6. Click **Power Fail** in the left navigation frame to view saved settings.

Shutdown Events menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

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 enables you to configure other events for shutdown.

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

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.

NOTE: Depending on the specific UPS model, this screen might vary. The screen shown is only an example.

Shutdown Events		Help
Event	Shutdown?	Delay (Minutes)
Battery Discharged	<input type="checkbox"/>	0
Battery Failure	<input checked="" type="checkbox"/>	3
Fan Failure	<input type="checkbox"/>	0
Input Out of Range	<input checked="" type="checkbox"/>	5
Internal Failure	<input type="checkbox"/>	0
Overload	<input type="checkbox"/>	0
Shutdown Imminent	<input type="checkbox"/>	0
Site Wiring Fault	<input type="checkbox"/>	0
Temperature Out of Range	<input type="checkbox"/>	0

Save Changes

NOTE: If the event clears before the delay time has expired, the shutdown is not executed.

Scheduled Shutdown menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

Click **Scheduled Shutdown** in the left navigation frame to display the Scheduled Shutdown screen.

Scheduled Shutdown		Add New Scheduled Shutdown	Delete Selection(s)	Help
Event Affects	Frequency	Shutdown	Restart	Delete
Entire UPS	One Time	Saturday October 16 2004 at 01:30 AM	Saturday October 16 2004 at 02:00 AM	<input type="checkbox"/>
Entire UPS	Daily	07:00 PM	07:30 PM	<input type="checkbox"/>
Entire UPS	Weekly	Saturday at 06:00 AM	Saturday at 06:30 AM	<input type="checkbox"/>

This screen enables you to:

- View a summary of the set times at which the entire UPS shuts down and restarts
- Schedule a one-time shutdown ("[Configuring a one-time scheduled shutdown event](#)" on page 72)
- Schedule a daily shutdown ("[Configuring a daily scheduled shutdown event](#)" on page 73)
- Schedule a weekly shutdown ("[Configuring a weekly scheduled shutdown event](#)" on page 73)
- Delete a scheduled shutdown ("[Deleting a scheduled shutdown event](#)" on page 74)

Configuring a one-time scheduled shutdown event

1. Click **Add New Scheduled Shutdown** on the Scheduled Shutdown screen.
The Scheduled Shutdown screen appears.

2. In the Frequency field, select the **One Time** radio button to schedule a single shutdown event.
3. Enter the shutdown date and time in the Shutdown field.
4. Enter the restart date and time in the Restart field.
5. Click **Add**.

The screenshot shows the 'Scheduled Shutdown' dialog box. On the left, under 'Frequency', the 'One Time' radio button is selected. The 'Shutdown' section has 'Date' and 'Time' fields, both with '1' and ':00' respectively. The 'Restart' section also has 'Date' and 'Time' fields, both with '1' and ':00' respectively. An 'Add' button is at the bottom.

Configuring a daily scheduled shutdown event

1. Click **Add New Scheduled Shutdown** on the Scheduled Shutdown screen.
The Scheduled Shutdown screen appears.
2. In the Frequency field, select the **Daily** radio button to schedule a daily shutdown event.
3. Enter the shutdown time in the Shutdown field.
4. Enter the restart day and time in the Restart field.
5. Click **Add**.

The screenshot shows the 'Scheduled Shutdown' dialog box. Under 'Frequency', the 'Daily' radio button is selected. The 'Shutdown' section has a 'Time' field with '1' and ':00'. The 'Restart' section has a 'Day' dropdown set to 'Same Day' and a 'Time' field with '1' and ':00'. An 'Add' button is at the bottom.

Configuring a weekly scheduled shutdown event

1. Click **Add New Scheduled Shutdown** on the Scheduled Shutdown screen.
The Scheduled Shutdown screen appears.
2. In the Frequency field, select the **Weekly** radio button to schedule a weekly shutdown event.
3. Enter the shutdown day and time in the Shutdown field.
4. Enter the restart day and time in the Restart field.
5. Click **Add**.

The screenshot shows the 'Scheduled Shutdown' dialog box. Under 'Frequency', the 'Weekly' radio button is selected. The 'Shutdown' section has a 'Day Of Week' dropdown set to 'Monday' and a 'Time' field with '1' and ':00'. The 'Restart' section also has a 'Day Of Week' dropdown set to 'Monday' and a 'Time' field with '1' and ':00'. An 'Add' button is at the bottom.

Deleting a scheduled shutdown event

1. Select the checkbox in the Delete column of the Scheduled Shutdown screen for the shutdown event you want to delete.
2. Click **Delete Selection(s)**.

Event Settings menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

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

The screenshot shows two configuration screens. The top screen, titled 'Event Notifications', has a 'Help' button and a table with columns for 'Critical', 'Warning', 'Information', 'User Defined 1', and 'User Defined 2'. The rows are 'EMail', 'SNMP', and 'Broadcast'. The 'EMail' row has checkmarks and email addresses in all three columns. The 'SNMP' and 'Broadcast' rows have checkmarks and IP addresses in the 'Critical' column. The bottom screen, titled 'Event Categories', has a table with columns for 'Category', 'Name', and 'Severity'. It shows two rows: 'User Defined 1' with 'User Defined 1' in the Name field and 'Critical' in the Severity dropdown, and 'User Defined 2' with 'User Defined 2' in the Name field and 'Warning' in the Severity dropdown. A 'Save Changes' button is at the bottom.

	Critical	Warning	Information	User Defined 1	User Defined 2
EMail	✓ admin@dev.net foxy@dev.net	✓ admin@dev.net foxy@dev.net	✓ admin@dev.net foxy@dev.net		
SNMP	✓ 172.25.235.106 172.25.235.210 172.25.235.110 172.25.235.25				
Broadcast	✓ 172.25.235.43 172.25.235.77 172.25.235.110 172.25.235.25				

Category	Name	Severity
User Defined 1	User Defined 1	Critical
User Defined 2	User Defined 2	Warning

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

NOTE: You must define the severity of each event according to your environment.

The Event Categories table enables 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 event Severities screen.

Creating user-defined event categories

Creating user-defined categories enables you to categorize alarms so that specific alerts are sent to 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 dropdown box.

3. Click **Save Changes** to save the added information. The added category appears as a column heading on the Event Notification table and Event Severities screen.

Event Categories		
Category	Name	Severity
User Defined 1	<input type="text" value="User Defined 1"/>	Critical
User Defined 2	<input type="text" value="User Defined 2"/>	Warning

Categorizing individual events by severity

To designate a category for an event:

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

Event Notifications						Help
	Critical	Warning	Information	User Defined 1	User Defined 2	
EMail						
SNMP						
Broadcast						

The **Event Severities** screen appears 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							Help
Event	Critical	Warning	Information	User Defined 1	User Defined 2	None	
Temperature Out of Range	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Input Out of Range	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Overload	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Shutdown Imminent	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Battery Failure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Battery Low	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Battery Discharged	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
On Battery	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Internal Failure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Site Wiring Fault	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Manual Load Dumped	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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 email notifications

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

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

7. Click **Save Changes** to save the information.
8. Click **Send Test Message** to send a test email.

EMail Server Setup			
SMTP Server		172.25.234.42	
SMTP From Address		T3000XR@dev.net	
Enabled	Event	EMail Address(es)	Delay (seconds)
<input checked="" type="checkbox"/>	Critical	dc@dev.net	5
<input checked="" type="checkbox"/>	Warning	dc@dev.net	10
<input checked="" type="checkbox"/>	Information	dc@dev.net	10
<input type="checkbox"/>	User Defined 1		10
<input type="checkbox"/>	User Defined 2		10

Setting up SNMP trap notifications

1. Click the **SNMP** link on the Event Notifications table in the main screen.
The **SNMP Setup** screen appears.
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 computers that 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 event notification is not sent.

6. Click **Save Changes** to save the information.
7. Click **Send Test Message** to send a test SNMP trap.

For more information on using SNMP to send traps to HP SIM, see "Using HPPM with HP Systems Insight Manager (on page 106)."

Enabled	Event	SNMP Address(es)	Delay (seconds)
<input checked="" type="checkbox"/>	Critical	172.25.234.44	10
<input checked="" type="checkbox"/>	Warning	172.25.234.44	10
<input checked="" type="checkbox"/>	Information	172.25.234.44	10
<input type="checkbox"/>	User Defined 1		10
<input type="checkbox"/>	User Defined 2		10

Setting up broadcasts

1. Click the **Broadcast** link on the Event Notifications table in the main screen.
The Broadcast Setup screen appears.
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, the name must be enclosed in quotation marks.

- 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 event notification is not sent.

- Click **Save Changes** to save the information.
- Click **Send Test Message** to send a test broadcast.



IMPORTANT: Any computer running Windows® and sending or receiving broadcasts must have the Messenger service enabled. The Messenger service can be accessed from the Services option in the Administrative Tools section of the Control Panel. The Messenger service is turned off by default in Windows® Server 2003.



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 set 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:

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

This statement sets 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 deletes 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 on the Samba website (<http://www.samba.org>).

In addition, for a Linux Management Server to send broadcast 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 to the hosts file:

```
143.85.41.121 george
```

Enabled	Event	Broadcast Hostname(s)/IP Address(es)	Delay (seconds)
<input checked="" type="checkbox"/>	Critical	172.25.234.115	10
<input checked="" type="checkbox"/>	Warning	172.25.234.115	10
<input checked="" type="checkbox"/>	Information	172.25.234.115	10
<input type="checkbox"/>	User Defined 1		10
<input type="checkbox"/>	User Defined 2		10

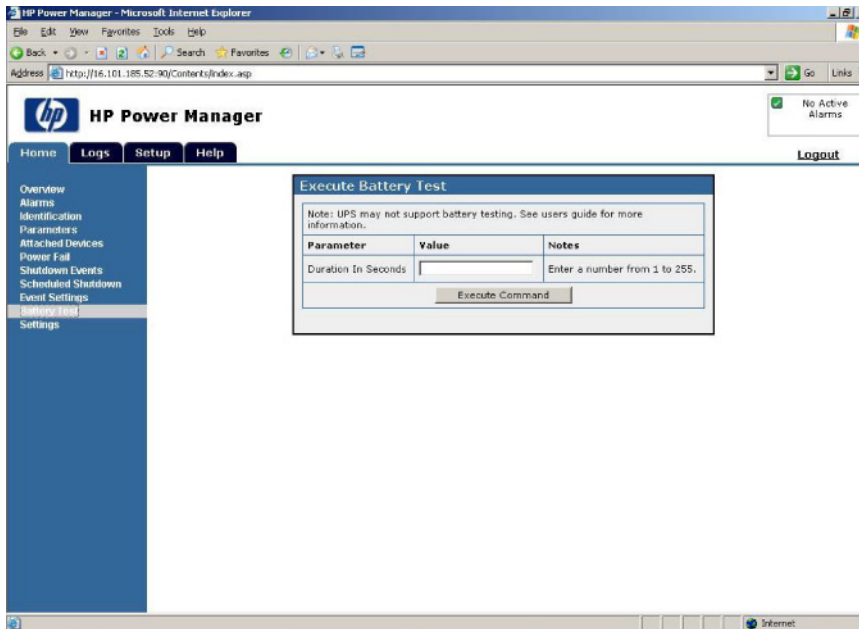
Save Changes Send Test Message

Manual Control menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.


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

NOTE: Depending on the specific UPS model, some features might not be supported. The screen shown is only an example.



Executing the Battery Test command

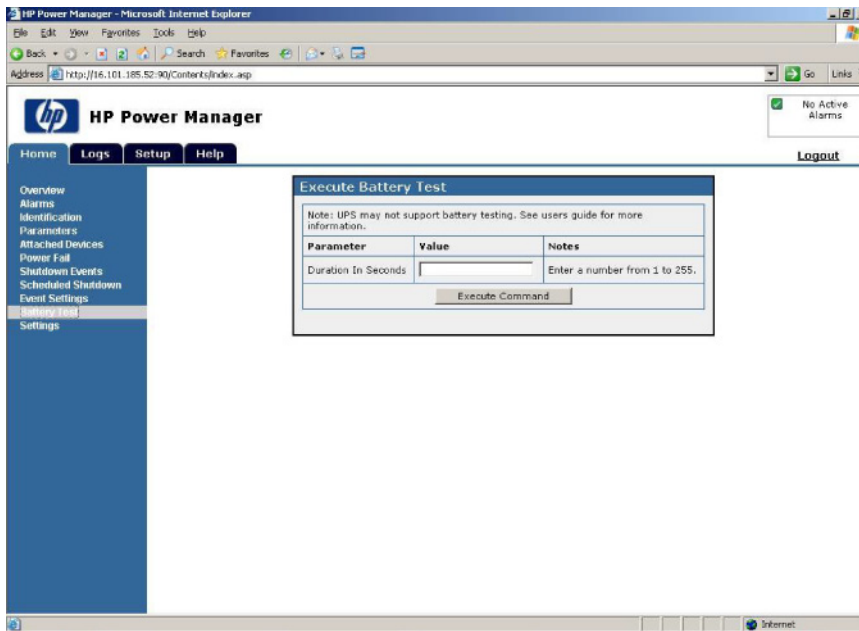
1. Select **Battery Test** from the left navigation pane. The Execute Battery Test screen appears.
2. Enter the amount of time that the device runs on battery during the test in the Duration In Seconds field. HP recommends that this setting does not exceed 30 seconds.

 **CAUTION:** Selecting this option might result in an ungraceful shutdown.

3. Click **Execute Command** to execute the control command and start the test. The results of the test display on the UPS Parameters screen ("[Parameters menu option](#)" on page 62) in the Test Results Summary field, and a log entry is created in the Applications Log ("[Application menu option](#)" on page 87).

 **IMPORTANT:** Do not run a battery test while the UPS is On Battery.

NOTE: Depending on the specific UPS model, some features might not be supported. The screen shown is only an example.



Settings menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

Click the **Settings** menu option in the left navigation frame to display the Settings screen. This screen enables you to enter contact information (such as name, email, and phone number) and values for settable UPS parameters. The information entered on this screen appears on the Identifications and UPS Parameters screens. For more information, refer to "Identification menu option (on page 61)" and "Parameters menu option (on page 62)."

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 email 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.

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

Settings		Help
Variable	Value	Notes
Battery Installed Date	<input type="text" value="03/17/2003"/>	Enter a new date or select the calendar icon to pick a date.
Contact	<input type="text"/>	Enter a new Contact in the box provided.
Contact Email	<input type="text"/>	Enter a new Contact Email in the box provided.
Contact Phone	<input type="text"/>	Enter a new Contact Phone in the box provided.
Device Name	<input type="text"/>	Enter a new Device Name in the box provided.

Data logs

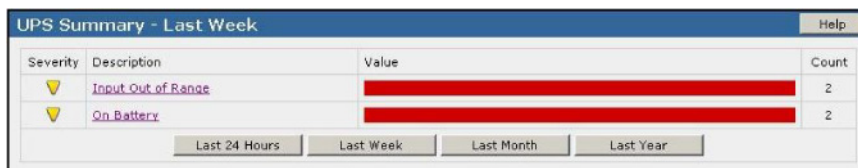
Logs tab

Menu options listed under the Logs tab include:

- UPS Summary menu option (on page 82)
- UPS Detailed menu option (on page 82)
- UPS Data menu option (on page 84)
- UPS Data Graph menu option (on page 86)
- Application menu option (on page 87)

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 period. A status icon in the Severity column indicates the current state of the event (Warning or Critical). The number in the Count column indicates the number of times the alarm has been reported during the period (for example, the Battery Low alarm has occurred 10 times in the last 24 hours).



The screenshot shows a window titled "UPS Summary - Last Week" with a "Help" button in the top right corner. Below the title bar is a table with four columns: Severity, Description, Value, and Count. There are two rows of data. The first row has a yellow warning icon in the Severity column, "Input Out of Range" in the Description column, a red bar in the Value column, and "2" in the Count column. The second row has a yellow warning icon in the Severity column, "On Battery" in the Description column, a red bar in the Value column, and "2" in the Count column. Below the table are four buttons: "Last 24 Hours", "Last Week", "Last Month", and "Last Year".

Severity	Description	Value	Count
Warning	Input Out of Range		2
Warning	On Battery		2

To change the period displayed, click one of the following buttons:

- Last 24 hours
- Last Week
- Last Month
- Last Year

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**—The date at which the event occurred
- **Time**—The time at which the event occurred

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

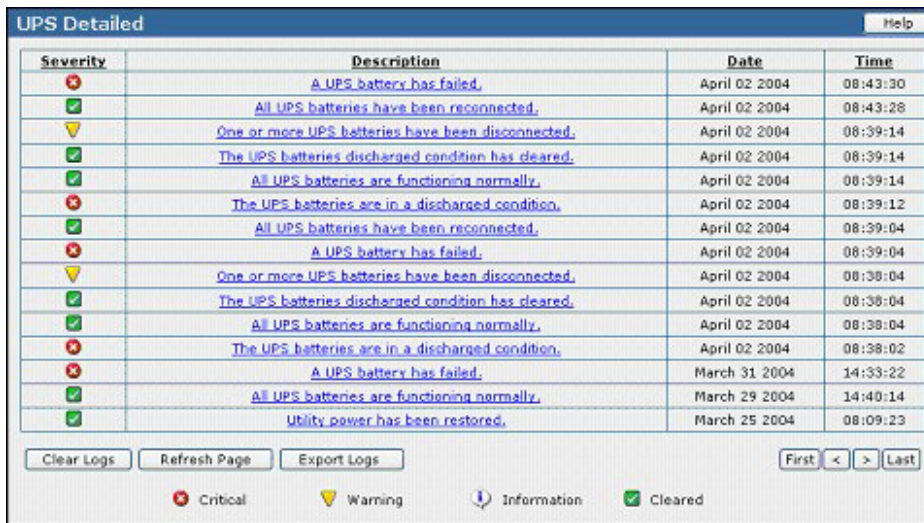
On the UPS Detailed screen:

- Click **Clear Logs** to clear the log files.
- Click **Refresh Page** to update the screen with current log information.
- Click **Export Logs** to export the event log ("[Exporting a UPS Event Log](#)" on page 83).

To navigate through the log entries:

- Click **First** to go to the first entry in the log.
- Click << to scroll back 10 pages in the log.
- Click < to scroll to the previous page in the log.
- Click > to scroll to the next page in the log.
- Click >> to scroll ahead 10 pages in the log.
- Click **Last** to go to the last entry in the log.

NOTE: The << and >> buttons do not appear until the log has accumulated 10 pages of entries.



Severity	Description	Date	Time
Critical	A UPS battery has failed.	April 02 2004	08:43:30
Cleared	All UPS batteries have been reconnected.	April 02 2004	08:43:28
Warning	One or more UPS batteries have been disconnected.	April 02 2004	08:39:14
Cleared	The UPS batteries discharged condition has cleared.	April 02 2004	08:39:14
Cleared	All UPS batteries are functioning normally.	April 02 2004	08:39:14
Critical	The UPS batteries are in a discharged condition.	April 02 2004	08:39:12
Cleared	All UPS batteries have been reconnected.	April 02 2004	08:39:04
Critical	A UPS battery has failed.	April 02 2004	08:39:04
Warning	One or more UPS batteries have been disconnected.	April 02 2004	08:38:04
Cleared	The UPS batteries discharged condition has cleared.	April 02 2004	08:38:04
Cleared	All UPS batteries are functioning normally.	April 02 2004	08:38:04
Critical	The UPS batteries are in a discharged condition.	April 02 2004	08:38:02
Critical	A UPS battery has failed.	March 31 2004	14:33:22
Cleared	All UPS batteries are functioning normally.	March 29 2004	14:40:14
Cleared	Utility power has been restored.	March 25 2004	08:09:23

Exporting a UPS Event Log

1. Click **Export Logs** at the bottom of the UPS Detailed screen.
The Event Log Export screen appears.
2. Enter the date range of the data in the Export data from and to fields.
3. Select **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. The file is saved in the HPPM Install folder. This file is overwritten every time a log file is saved with the same name. To save multiple log files, use a different name for each 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.

NOTE: HPPM exports Japanese logs into different character encoding types, depending on the operating system.

UPS Data menu option

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

- Click **Log Settings** to change the logging interval.
- Click **Clear Logs** to clear the log files.
- Click **Refresh Page** to update the screen with current log information.
- Click **Export Logs** to export the data log ("[Exporting a UPS data log](#)" on page 85).

To navigate through the log entries:

- Click **First** to go to the first entry in the log.
- Click << to scroll back 10 pages in the log.
- Click < to scroll to the previous page in the log.
- Click > to scroll to the next page in the log.
- Click >> to scroll ahead 10 pages in the log.
- Click **Last** to go to the last entry in the log.

NOTE: The << and >> buttons do not appear until the log has accumulated 10 pages of entries.

NOTE: Depending on the specific UPS model, some features might not be supported. The screen shown is only an example.

UPS Data														Help
Log Interval: 30 min														
Date	Time	Temperature	Battery Status	Run Time Remaining	Battery Capacity	Battery Voltage	Input Frequency	Input Voltage	Input Current	Output Source	Output Frequency	Output Current	Output Power	Test Results Summary
December 01 2004	05:36:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	206 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	05:06:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	205 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	07:36:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	205 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	07:06:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	205 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	06:36:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	205 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	06:06:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	206 V	5 A	Utility Power	59.8 Hz	5 A	880 W	No Test
December 01 2004	05:36:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	206 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	05:06:47	38 C	OK	15 Min	99 %	129 V	59.8 Hz	206 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	04:36:47	38 C	OK	15 Min	99 %	129 V	59.8 Hz	206 V	5 A	Utility Power	60.0 Hz	5 A	880 W	No Test
December 01 2004	04:06:47	38 C	OK	15 Min	99 %	129 V	60.0 Hz	206 V	5 A	Utility Power	59.8 Hz	5 A	880 W	No Test

Log Settings Clear Logs Refresh Page Export Logs > >> Last

Changing UPS data log settings

1. Click **Log Setting** at the bottom of the UPS Data screen.

The Log Settings screen appears.

NOTE: Only users with administrative rights can edit the information on this screen.

2. Select the log interval in minutes using the dropdown box in the Log interval row. The lower the log interval, the more frequently disk space is used.
3. Select the checkbox for each parameter you want to display in the log.
4. Click **Save Changes** to save the changes.

Log Settings		Help
Variable	Value	Notes
Log interval	30 min	Enter a logging interval
Log Parameters	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <p>Battery</p> <p><input checked="" type="checkbox"/> Battery Capacity</p> <p><input checked="" type="checkbox"/> Battery Status</p> <p><input checked="" type="checkbox"/> Battery Voltage</p> <p><input checked="" type="checkbox"/> Run Time Remaining</p> </div> <div style="width: 33%;"> <p>Environment</p> <p><input checked="" type="checkbox"/> Temperature</p> </div> <div style="width: 33%;"> <p>Input</p> <p><input checked="" type="checkbox"/> Input Current</p> <p><input checked="" type="checkbox"/> Input Frequency</p> <p><input checked="" type="checkbox"/> Input Voltage</p> </div> </div> <div style="display: flex; flex-wrap: wrap; margin-top: 10px;"> <div style="width: 33%;"> <p>Output</p> <p><input checked="" type="checkbox"/> Output Current</p> <p><input checked="" type="checkbox"/> Output Frequency</p> <p><input type="checkbox"/> Output Load</p> <p><input checked="" type="checkbox"/> Output Power</p> <p><input checked="" type="checkbox"/> Output Source</p> <p><input type="checkbox"/> Output Voltage</p> </div> <div style="width: 33%;"> <p>Self-Test</p> <p><input checked="" type="checkbox"/> Test Results Summary</p> </div> </div>	

Save Changes

Exporting a UPS data log

1. Click **Export Logs** at the top of the UPS Logs screen.

The Data Log Export screen appears.

2. Enter the date range of the data in the Export data from and to fields.
3. Select **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. The file is saved in the HPPM Install folder. This file is overwritten every time a log file is saved with the same name. To save multiple log files, use a different name for each 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.

NOTE: HPPM exports Japanese logs into different character encoding types, depending on the operating system.

UPS Data Graph menu option

NOTE: HPPM 4.3 does not require a flash player to be installed, except when viewing the UPS Data Graph menu option.

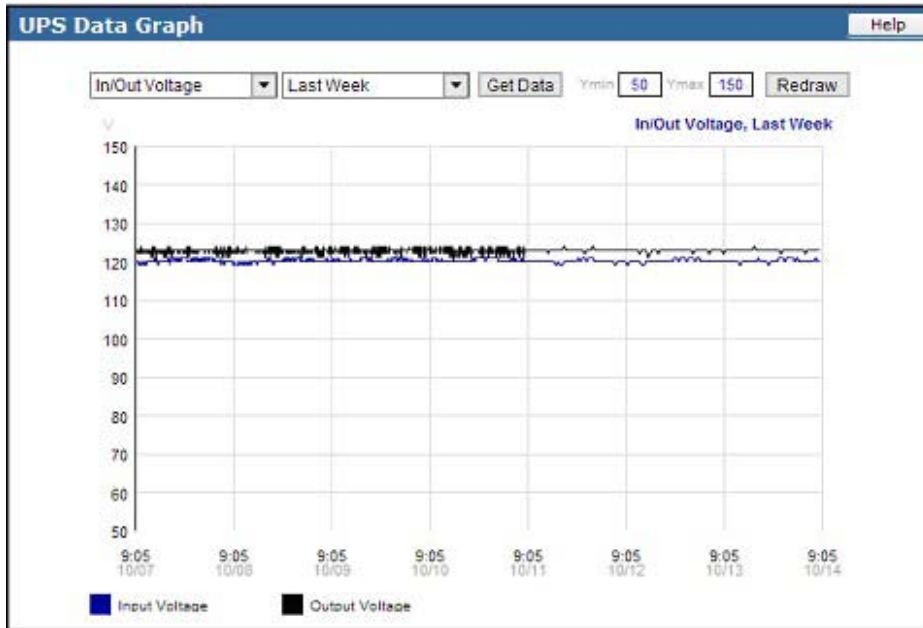
Click **UPS Data Graph** in the left navigation frame to display the UPS Data Graph screen. This screen enables you to create line graphs of logged numerical UPS data. To create a graph:

1. Select the parameter you want to graph in the first dropdown box.
2. Select the amount of data you want to graph in the second dropdown box, starting with the present and going back in time.
3. Click **Get Data**. The graph appears.

To adjust the Y axis of the graph:

1. Enter the appropriate values in the Ymin and Ymax fields.

2. Click **Redraw**.



Application menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

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**—The date at which the event occurred
- **Time**—The time at which the event occurred

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

On the Application Logs screen:

- Click **Clear Logs** to clear the log files.
- Click **Refresh Page** to update the screen with current log information.
- Click **Export Logs** to export the application log ("[Exporting an application log](#)" on page 88).

To navigate through the log entries:

- Click **First** to go to the first entry in the log.
- Click << to scroll back 10 pages in the log.
- Click < to scroll to the previous page in the log.
- Click > to scroll to the next page in the log.

- Click >> to scroll ahead 10 pages in the log.
- Click **Last** to go to the last entry in the log.

NOTE: The << and >> buttons do not appear until the log has accumulated 10 pages of entries.

User	Description	Date	Time
admin [172.25.234.115]	User logged in	November 30 2004	15:22:59
admin [172.25.234.115]	User failed to login	November 30 2004	15:22:45
admin [172.25.234.115]	User failed to login	November 30 2004	15:21:15
admin [172.25.234.115]	User failed to login	November 30 2004	15:20:45
compaq [172.25.234.254]	User logged out	November 30 2004	10:14:07
compaq [172.25.234.254]	User logged in	November 30 2004	09:43:58
compaq [172.25.234.254]	User logged out	November 30 2004	09:07:27
compaq [172.25.234.254]	User logged in	November 30 2004	08:32:34
admin [172.25.234.254]	User failed to login	November 30 2004	08:32:28
compaq [172.25.234.254]	User logged out	November 30 2004	08:32:24
compaq [172.25.234.254]	User logged in	November 30 2004	07:53:15
admin [172.25.234.254]	User failed to login	November 30 2004	07:53:07
	Management Server started version 4.0 (Build 3)	November 29 2004	17:06:33
	Management Server started version 4.0 (Build 3)	November 29 2004	17:06:33
admin [172.25.234.244]	Sent test EMail notification	November 24 2004	10:53:54
admin [172.25.234.244]	User logged in	November 24 2004	10:47:44
admin [172.25.234.244]	User logged out	November 24 2004	10:33:30
compaq [172.25.234.254]	User logged out	November 24 2004	10:17:19
admin [172.25.234.244]	User logged in	November 24 2004	10:02:09
compaq [172.25.234.244]	User logged out	November 24 2004	10:01:57

Exporting an application log

1. Click **Export Logs** at the bottom of the Application Logs screen.
The Application Log Export screen appears.
2. Enter the date range of the data in the Export data from and to fields.
3. Select **Comma-Separated** or **Tab Delimited**.
4. Do one of the following:
 - o To save the file to the Management Server, select **Save to File**, and enter the name of the file. The file is saved in the HPPM Install folder. This file is overwritten every time a log file is saved with the same name. To save multiple log files, use a different name for each file.
 - o 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.

NOTE: HPPM exports Japanese logs into different character encoding types, depending on the operating system.

Account setup and help

Setup tab

Menu options listed under the Setup tab include:


- My Account menu option (on page 89)
- User Accounts menu option (on page 89)

My Account menu option

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

To change your password:

1. Enter the new password in the Password field.
2. Enter the new password again in the Verify Password field.
3. Click **Save Changes** to save the new password.



The screenshot shows a web interface titled "My Account" with a "Help" button in the top right corner. Below the title bar, there is a form with the following elements:

- A label "Login Name: admin" above a text input field.
- A "Password" label next to a text input field.
- A "Verify Password" label next to another text input field.
- A "Save Changes" button centered below the input fields.

User Accounts menu option

NOTE: The link to this screen does not appear if you do not have administrative rights.

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

Delete	Name	Password	Verify Password	Administrator
<input type="checkbox"/>	admin			<input checked="" type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/>				<input type="checkbox"/>

Save Changes Delete Selected Users

Adding a 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 user's 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

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

1. Enter the user's login name in the Name field.
2. Change the password:
 - a. Enter the new password in the Password field.
 - b. Enter the new 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

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 no longer appears on the User Accounts screen.

Help tab

Menu options listed under the Help tab include:

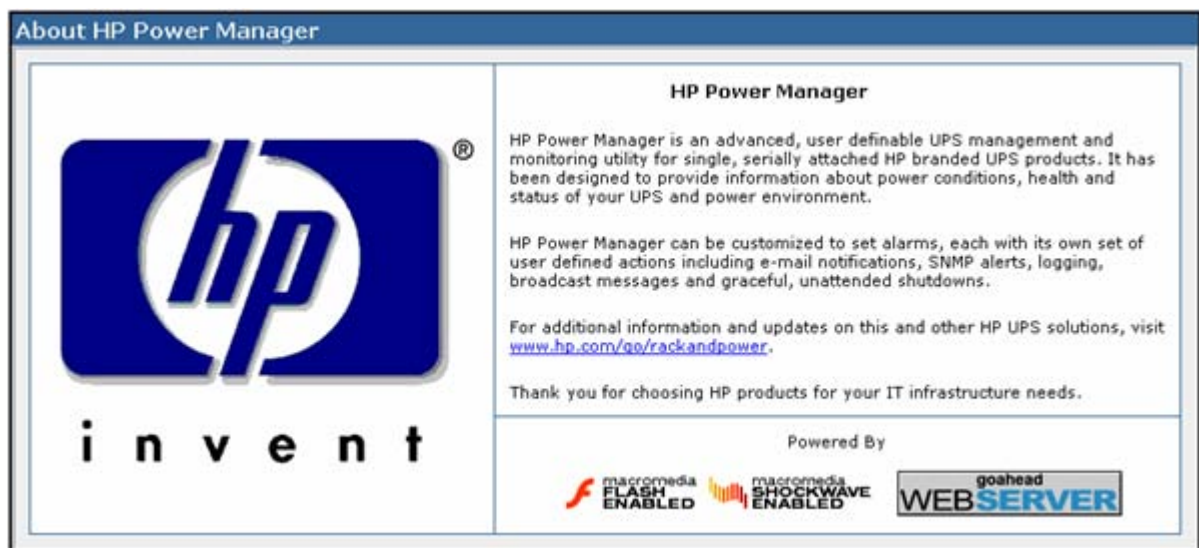
- About menu option (on page 91)
- Contents menu option ("Contents and Info & Updates menu options" on page 91)
- Info & Updates menu option ("Contents and Info & Updates menu options" on page 91)

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.

The screen contains a link to the HP website (<http://www.hp.com/go/rackandpower>), as well as the following hyperlinked logos:

- HP Invent (<http://www.hp.com>)
- Macromedia Shockwave/Flash (<http://www.macromedia.com>)
- GoAhead (<http://www.goahead.com>)



Contents and Info & Updates menu options

Click **Contents** in the left navigation frame to display the Contents screen.

Click **Info & Updates** in the left navigation frame to access information and updates on the HP website.

This screen provides a list of the links to help topics.

hp HP Power Manager

Home Logs Setup **Help**

About
Info & Updates

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Troubleshooting

Add New Device option does not allow cancelling the action

Possible Cause: A Cancel button is not displayed after selecting Add New Device from the Attached Devices screen.

Action: Do not press the Save Changes button after entering new device information. Any information entered before pressing the Save Changes button is not saved.

Attached device did not shut down gracefully

Action: Be sure the shutdown settings do not exceed the UPS runtime.

Battery test complete not displayed

Action: View the results of the battery test on the Logs and Reports screen.

Battery Test did not run

Possible Cause: The UPS is On Battery.

Action: The UPS must be in a certain state before the battery test runs. For more information, refer to the section, "Parameters menu option (on page 62)."

Battery Test result displays No Test

Possible Cause: The UPS does not support battery testing.

Action: No action is required.

For more information, see the UPS user guide.

Broadcast messages are not displaying

Possible Cause:

- The broadcast setup under HPPM is incorrect.
- The Messenger service is not enabled.

Action:

- For broadcast messages from Linux to Windows®, the Netbios name of the recipient must be used. Also, refer to "Setting up broadcasts (on page 77)."
- Enable the Messenger service. The messenger service is accessed from the Services option in the Administrative Tools section of the Control Panel.

Broadcast Messages are not sent in Windows 2008

Possible Cause: The Messenger Service is not provided as part of the standard operating system.

Cannot access HPPM after installation

Possible Cause:

- The Management Server software might not be running.
- An HTTP port number other than the default (80) was selected during installation.
- Other Web servers or Web-based applications are running on the same port.
- You chose SSL during installation.

Action:

- To start the Management Server:
For Windows®, right-click the icon in the system tray, and select **Start Service**, or from the Start Menu, select **Programs>HP Power Manager>HP Power Manager Status**.
For Linux, run `/etc/init.d/DevMan start`.
- Be sure to include this port number when browsing to HPPM. For example, if you chose port 1234 during installation, enter the following in your browser for HPPM access:
`http://hostname:1234`
where *hostname* is either a machine name or an IP address.
- Do one of the following:
 - Be sure that no other Web servers or Web-based applications are running on the same port.
 - Try using another port during installation or reconfiguration.
- Be sure to use HTTPS instead of HTTP in your browser to access HPPM. For example, `https://hostname:1234` would establish an SSL link to HPPM running on port 1234.

Data log is not correct

Symptom: After changing to a different UPS, the data log is not correct.

Action: Clear all logs before changing to a different UPS.

Dependency error on IA64 Linux system

Symptom: The following dependency error is encountered while installing HPPM on an IA64 system running a Linux operating system:

`Installing HP Power Manager Remote Agent error: Failed dependencies:`

ld-linux.so.2 is needed by PowerManagerRA-4.x-xx.i586
libc.so.6 is needed by PowerManagerRA-4.x-xx.i586
libdl.so.2 is needed by PowerManagerRA-4.x-xx.i586
libm.so.6 is needed by PowerManagerRA-4.x-xx.i586
libpthread.so.0 is needed by PowerManagerRA-4.x-xx.i586
libz.so.1 is needed by PowerManagerRA-4.x-xx.i586
libc.so.6(GLIBC_2.0) is needed by PowerManagerRA-4.x-xx.i586
libc.so.6(GLIBC_2.1) is needed by PowerManagerRA-4.x-xx.i586
libc.so.6(GLIBC_2.1.3) is needed by PowerManagerRA-4.x-xx.i586
libc.so.6(GLIBC_2.2) is needed by PowerManagerRA-4.x-xx.i586
libdl.so.2(GLIBC_2.0) is needed by PowerManagerRA-4.x-xx.i586
libdl.so.2(GLIBC_2.1) is needed by PowerManagerRA-4.x-xx.i586
libm.so.6(GLIBC_2.0) is needed by PowerManagerRA-4.x-xx.i586
libpthread.so.0(GLIBC_2.0) is needed by PowerManagerRA-4.x-xx.i586

Action: Forcefully install the following 32-bit rpms:

1. Glibc
2. zlib
3. ia32

Testing information: The following rpms were tested on RedHat version 5.4 and 5.5 and SLES 11 Update1 SP1:

- zlib-1.2.1.2-1.2.i386.rpm
- glibc-2.3.4-2.36.i686.rpm
- ia32el-1.3-2.ia64.rpm

HPPM sends invalid links in email notifications on Linux platforms

Possible Cause: The Linux OS host information was not properly updated, so the following invalid link is displayed in HPPM generated emails:

`http://hostname`

Action:

1. Navigate to /etc and open the file named host with a text editor.
2. Update the information in the file to reflect updated IP address, Email, and User information. For example:
`172.25.234.200, root@dev.net, root`
3. Reboot the computer.

Input frequency shows zero

Symptom: During a battery test the input frequency shows zero, but the input frequency shows a regular line voltage.

Possible Cause: When executing a battery test, the parameters might show incorrect information.

Action: Verify the parameters after the battery test is complete.

InstallShield error code -6001 appears during setup

Symptom: During installation or upgrade, the following error message appears:



Possible Cause: A previous installation of any product using InstallShield might have corrupted some of the InstallShield runtime files.

Action: InstallShield installers copy DLL files to a local folder on your machine at C:\Program Files\Common Files\InstallShield\Professional\RunTime\0701. Delete or rename the 0701 folder and retry the installation. The installer recreates the 0701 folder and includes the necessary setup files.

For more information, search the InstallShield knowledge base (<http://www.installshield.com/kb>).

Invalid IP address

Possible Cause: IP addresses are not checked for validity.

Action: Verify that the IP address entered is valid.

Links in traps and emails do not work correctly for Linux

Action: Update the `/etc/hosts` file with the correct host name or IP address.

Low battery warning is displayed

Action: Plug the UPS into an AC grounded outlet for at least 24 hours to charge the batteries, and then test the batteries. Replace the batteries if necessary.

Management Server shows no device or UPS not connected

Symptom: After changing the UPS hardware, the Management Server shows `No Device` or `UPS Not Connected`.

Possible Cause: The Management Server cannot communicate with the UPS because of the change.

Action:

- Reconfigure the UPS with new settings:
 - For Windows®, right-click the icon in the system tray, and select **Configure**.
 - For Linux, run `/etc/init.d/DevMan setup`.
- Be sure that the connection is the same as previously installed.

Manual Load Dumped alarm not working

Symptom: For the R3000 XR, turning off the UPS from the front panel does not result in a "Manual Load Dumped" alarm.

Possible Cause: The "Manual Load Dumped" alarm is not supported on this model.

Action: No action is required.

Network attached UPS not discovered

Action:

1. Be sure the network cable is properly connected.
2. Verify the password that is configured in the network option card installed in the UPS. The default password is `MustB6`. The password is case sensitive.
3. Verify that the IP address entered is the same as the IP address configured in the card.
4. Verify that the network settings are correct.

No power

Action: Verify that the UPS is connected to a working outlet and that the UPS is powered up.

On battery alarm

Action: 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.

On boost alarm

Possible Cause: The input voltage is too low for the UPS. The UPS boosts the voltage up to acceptable limits.

Action: For information on Boost mode, refer to the UPS documentation.

On buck alarm

Possible Cause: The input voltage is too high for the UPS. The UPS bucks the voltage down to acceptable limits.

Action: For information on Buck mode, refer to the UPS documentation.

Overload alarm

Possible Cause: The device load has exceeded the UPS power rating.

Action: 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.

R1500 - LS2 displays before LS1 with USB connection

Possible cause: If the Management Server is connected and configured to load segment 2, the Power Fails screen displays load segment 2 before load segment 1.

R1500 G2 - Runtime Limit is reached at 76% battery capacity

Symptom: The UPS shuts down at 76% battery capacity.

Action: No action is required.

Receiving a security error

Symptom: Security error: Domain Name mismatch message when trying to browse with SSL.

Possible Cause: The IP address or server name has changed.

Action: Stop the service, delete the certificate file, and restart the service.

Red status icon displays

Symptom: After adding a Remote Agent on the Attached Devices screen, a red status icon continues to display for that Remote Agent.

Possible Cause:

- The Remote Agent software is not running.
- The Remote Agent is not configured to allow management by the Management Server.
- The wrong Remote Agent is used, for example, the HP UPS Power Protection Agent.

Action:

- Start the Remote Agent software:
 - For Windows®, right-click the icon in the system tray, and then select **Start Service**.
 - For Linux, run `/etc/init.d/DevMan start`.
- Configure the Remote Agent to allow management by the Management Server:
 - For Windows®, right-click the icon in the system tray, and then select **Configure**, or select **Programs>HP Power Manager>Configure HP Power Manager** from the Start Menu.
 - For Linux, run `/etc/init.d/DevMan setup`.
- Use the correct HPPM Remote Agent.

Remote Agent and Management Server do not install on RedHat 4 and 5

Symptom: The following error appears when attempting to execute the `./SetupRA` agent:

```
bash: ./SetupRA: /bin/sh: bad interpreter: Permission denied
```

Action: Enter `g` in front of the command. For example: `sh ./SetupRA`

Save button does not appear on advanced power fail settings screen

Action: Be sure that the screen resolution is not set above 1024 x 768. If necessary, reduce the resolution to 1027 x 768.

Serial attached UPS not discovered by a ProLiant DL145 Management Server

Possible Cause: The serial port on the ProLiant DL145 has two functions. The serial port acts like a standard serial port and serves as an interface to the management processor within the server. The constant switching of the serial port between these two functions does not permit reliable serial communication between the Management Server and the UPS.

Action: Connect the UPS to the server using a USB cable or a network cable.

Servers running Windows Server® 2003 do not restart

Symptom: Servers running Windows Server® 2003 do not restart upon power restoration following a power fail shutdown.

Possible Cause: This is a known Windows Server® 2003 behavior on some servers.

Action: Refer to the Microsoft® Knowledge Base article 819760.

Shows shutdown events succeeding messages

Symptom: HPPM shows shutdown events succeeded message when entering a valid or an invalid entry for delay without selecting the **Shutdown** checkbox.

Possible Cause: Delay in application.

Action: Delay can be saved before the selecting the **Shutdown** checkbox.

Task Bar menu does not clear

Symptom: The task bar menu does not clear when clicking off the menu onto the Windows® desktop.

Possible Cause: This is a known Windows® behavior.

Action: Start another application or open a new window, and the issue disappears.

Unable to discover a UPS

Action:

- Verify that the UPS is connected to the correct communications port (COM1, COM2, and so on).
- Verify that no other software or processes are accessing the communications port to which the UPS is attached.
- Verify that you are using the communications cable that came with the UPS.
- Verify that resources for the selected communications port (such as I/O port or IRQ) are not shared with other devices.
- Try a different communications port.

Unable to locate the .INI files for a silent install

Possible Cause: The DevManRA.ini and DevManBE.ini files are automatically created in the top-level program directory.

Action:

- 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.
- For Linux, both files can be found at /usr/local/DevMan.

Unable to reboot the machine

Possible Cause: If the system hangs when the InstallShield wizard for the Remote Agent is left open and minimized during the attempted reboot.

Action: Manually power off the machine.

Unable to start the HPPM service for Linux

Symptom: The service for Linux does not start, or the error message `Segmentation fault /usr/local/DevMan` displays.

Possible Cause:

- The server name and IP address are incorrect.
- Files are missing.

Action:

- Update the server name and IP address on `/etc/hosts`.
- Install the file `compat-libstdc++` for your version of Linux.

UPS Data Graph does not display data

Possible Cause: The Ymin and Ymax fields are blank.

Action: Enter the appropriate values in the Ymin and Ymax fields, and then click **Redraw**.

UPS is not detected in RHEL5 when attached to serial ports other than COM 1

Possible Cause: The IRQ in the operating system and RBSU differ.

Action: Manually change the serial port parameters in the operating system using the following command with the same IRQ and base address that is assigned to the serial port in RBSU:

```
# setserial /dev/ttyS1 port 0x02f8, irq 3
```

This is the only way that communication will occur.

Utility alarm

Possible Cause: The utility input voltage is repeatedly outside the UPS operating range.

Action:

1. Check the HPPM log files to obtain specific error information.
2. Check the input voltage and reconfigure the UPS. For more information about configuring the UPS, see the UPS documentation.
-or-
Contact a qualified electrician to verify that the utility power is suitable for the UPS.
3. Rediscover the UPS so that HPPM reads the new nominal voltage and shows the correct limits on the graphs.

Windows silent upgrade error on x86_64, and x64 systems

Possible cause: On x86_64 and x64 systems, the GUI installation method places HPPM in the following directory: C:\Program Files (x86)\HP\Power Manager. When performing a silent upgrade, the setup.iss file attempts to place HPPM in the following directory: C:\Program Files\HP\Power Manager.

Action:

1. Open the setup.iss file with a text editor and modify the following line:
From: szDir=C:\Program Files\HP\Power Manager
To: szDir=C:\Program Files (x86)\HP\Power Manager
2. Perform the silent upgrade.

Alert messages

HPPM alert messages

This software enables you to execute a command and send an email, broadcast notification, and SNMP traps to specified recipients if a certain alert situation prevails.

The following table lists all message texts and a description of each alarm.

Alarm text	Description
Battery Discharged	<ul style="list-style-type: none">• The battery is not fully charged.• The battery has been discharged to its maximum discharged state.• The UPS was on battery for long enough to exhaust the battery capacity and has shut down.
Batteries Disconnected	The UPS detects that at least one of the batteries is not connected. Backup power is either gone or considerably reduced.
Battery Failure	<ul style="list-style-type: none">• The battery contactor/breaker is open.• The battery voltage has exceeded a predetermined limit. Operating with this alarm set can cause permanent battery or system damage.• A battery problem has been detected.• A battery test has been executed, and the battery failed the test.• The charger circuit has detected possible bad batteries or an open circuit in connections to the batteries.
Battery Low	The battery voltage level has dropped below the predetermined "low battery warning" level.
Bypass Failure	The bypass input voltage is not available for transfer. This condition might be caused by over or under voltage, over or under frequency, out of phase lock, or other reasons.
Bypass ON Auto	The UPS is on bypass, and the critical load does not have power protection.
Bypass ON Manual	A user has flipped a switch (for example, Maintenance Bypass) that bypasses the UPS.
Check Breaker	<ul style="list-style-type: none">• The inverter output contactor/breaker is open.• The rectifier/charger input breaker is open.
Electronics Module Failure	For an "n+1" parallel system, one of the power modules has failed.
EPO Initiated	The UPS has shut down because of the activation of the remote EPO signal.

Alarm text	Description
Input Out of Range	<ul style="list-style-type: none"> • Input (Utility) fault: Measured input voltage has exceeded the upper voltage limit specification for normal operation. • Input (Utility) fault: Measured input voltage is less than the lower voltage limit specification for normal operation. • Input (Utility) fault: Measured input frequency is outside the upper or lower frequency limit specification for normal operation. • Rectifier fault: Measured rectifier input current exceeds the upper current limit specification for normal operation. • The utility input power is not within predetermined limits. This is possibly caused by over voltage, under voltage, over frequency, under frequency, or over current. • The utility input is not present, and detected voltage is zero.
Internal Failure	<ul style="list-style-type: none"> • An attempt to automatically recalibrate the UPS has failed. • Charger fault: The battery charger has failed. • DC Link fault: Measured DC link voltage has exceeded the upper voltage limit specification for normal operation. • At least one fan in the UPS has failed. • At least one fuse in the UPS has failed and must be replaced. • Inverter fault: Measured inverter output voltage has exceeded the upper voltage limit specification for normal operation. • Inverter fault: Measured inverter output voltage is less than the lower voltage limit specification for normal operation. • The inverter module has failed its power up self-test or its continuous self-test. • Inverter fault: The inverter has failed. • 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. • Inverter fault: The measured inverter output current exceeds the upper current limit specification for normal operation. • The inverter output voltage sensor has not been calibrated. • For a parallel system, this module has detected that the sync bus is not active. • A test of the device EEPROM has detected a checksum failure. The device either has not been programmed or contains suspicious data. • 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. • In a multi-module system or internally to a UPS with multiple controllers, the firmware versions in place are not compatible with each other.
Manual Load Dumped	The load power is off. This alarm is used to record the date and time of an EPO event.
On Battery	The UPS is using the battery to power the load.
On Boost	The UPS detected a low input condition and is increasing input voltage to a nominal level.
On Buck	The UPS detected a high input condition and is reducing input voltage to a nominal level.

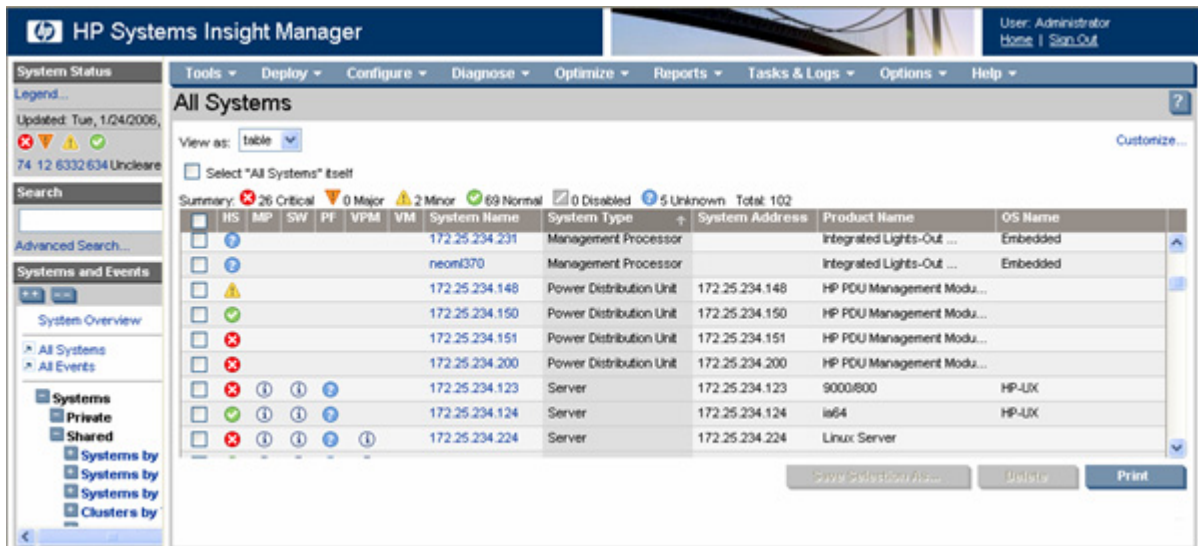
Alarm text	Description
Output Out of Range	<ul style="list-style-type: none"> • Measured output voltage has exceeded the upper voltage limit specification for normal operation. • Measured output voltage is less than the lower voltage limit specification for normal operation. • Measured output frequency is outside the upper or lower frequency limit specification for normal operation.
Overload	<ul style="list-style-type: none"> • Overload alarms are sent based on the individual UPS model overload protection specifications that are available in the UPS documentation. • 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 because of overheating.
Remote Agent Not Connected	A Remote Agent is not communicating with the Management Server to which it is associated.
Shutdown Imminent	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 issued.
Shutdown Pending	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.
Site Wiring Fault	There is a fault in the input wiring, other than Phase Rotation (for example, Ground/Neutral reversed).
Temperature Out of Range	<ul style="list-style-type: none"> • An ambient temperature probe has detected that the temperature is above its upper limit. • A heatsink at an unspecified location in the UPS has failed. • An input or output transformer used by the UPS has exceeded its upper temperature limit.
UPS Not Connected	The Management Server is unable to communicate with the UPS.
UPS Started On Battery	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.

Using HPPM with HP Systems Insight Manager

Systems Insight Manager overview

HPPM can plug into HP SIM. As a plug-in to HP SIM, you can:

- Discover HPPM Management Servers. As part of the discovery process, HP SIM can detect an installed Management Server. It can be launched from the HP SIM All Systems page.



- Receive SNMP traps from the HPPM Management Server. HPPM can send event-based traps to HP SIM that include a URL in the trap. This functionality enables administrators to easily launch HPPM in context. For example, if a UPS goes on battery power, the Management Server can send a trap to HP SIM with an attached hyperlink that routes users directly to the Device Overview page for that UPS.
- Conveniently launch HPPM from within HP SIM.
 - All Systems page—All discovered Management Servers appear on the All Systems page. Click the link in the System Name column to launch a browser session.
 - Event-based trap—A URL is included in each trap to link directly from HP SIM to the Device Overview screen for the specific device for which the trap was sent.

Discovering HP Power Manager

HP SIM automatically detects Management Servers as part of the device discovery process. If the HPPM software is installed using the default HTTP on port 80, an HPPM hyperlink is included on the HP SIM All Systems page for the system with the Management Server component installed. HPPM services should be installed and running before attempting discovery through HP SIM.

If the defaults are not used, a new entry can be made to the `additionalwsdisc.props` file, located in the `CONFIG` directory in the HP SIM install directory, to allow HP SIM to correctly discover and identify

HPPM running on any computer. For more information on editing the additionalwsdisc.props file, see the additionalwsdisc.txt file located in the same directory.

Example: ADDITIONALWSDISC.PROPS file with HPPM Entry

```
# -----  
# 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 HP SIM 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 HP SIM to detect HPPM installations that are running on port 1234 and using HTTPS  
(Secure Socket Layer protocol).
```

HP SIM services must be restarted to apply the change.

Configuring HP SIM to receive traps

Before HP SIM can receive traps, the correct MIB file (CPQRPM.MIB) must be compiled into HP SIM. By default, CPQRPM.MIB version 1.6 is registered. Unregister the version 1.6 MIB and register the version 1.7 MIB located in the MIB folder of the HP Infrastructure Management Pack CD.

To verify, unregister, and register an MIB:

1. From the HP\System Insight Manager\mibs folder, note the version of CPQRPM.MIB.
2. If the MIB is not version 1.7, run `MXMIB -D CPQRPM.MIB` from the HP\System Insight Manager folder to unregister the MIB.
3. Verify that the MIB is successfully unregistered by entering `HP\System Insight Manager>mxmib` at the command line. Verify that the old MIB is not listed.

4. Delete and replace or copy over CPQRPM.MIB with the correct version.
5. From the HP\System Insight Manager\mibs folder, run `mcompile cpqrpm.mib` from the command line to compile the new MIB. A new file named CPQRPM.CFG is created.
6. Register the new MIB by entering `mxmib -a cpqrpm.cfg` from the HP\System Insight Manager\mibs command line.
7. Verify that the new MIB is registered by entering `HP\System Insight Manager\mibs>mxmib` at the command line.

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

Configuring HPPM to send traps to HP SIM

On the Event Settings menu option (on page 74):

1. Use the Event Categories table to organize events for which HPPM sends alert notifications.
2. Click **SNMP** on the Event Notifications table and add the HP SIM server as an SNMP trap recipient.

HP Power Manager security considerations

Security considerations overview

HP Power Manager has browser accessibility.

To better ensure the security of HP Power Manager and the devices it manages, consider the following topics in accordance with your organization's security policies and the environment in which HP Power Manager will operate.

- Remote access to HP Power Manager requires a user account. Logging in requires the use of a user name and password, which should be kept properly secured.
- Each account can be given different access levels, providing different capabilities. Ensure that the appropriate access level is granted to users.
- Enforce a strong password policy for all users.
- For the most security, when configuring the Remote Agent, enter the host name or a valid IP address of the Management Server. This setting ensures that only the Management Server you specify can execute commands and operating system shutdowns on the computer running the Remote Agent.
- Browsing to HP Power Manager can be done using SSL, which encrypts the data between the browser and the Management Server. HP Power Manager is supported by a 128-bit encryption level. SSL also provides authentication of HP Power Manager by means of its digital certificate. Securely importing this certificate must be done to ensure the identification of the Management Server.
- Use a custom SSL certificate that is certified by a third-party SSL authority.
- Use non-standard ports for the HP Power Manager web interface.
- Keeping HPPM to an internal network is preferred.

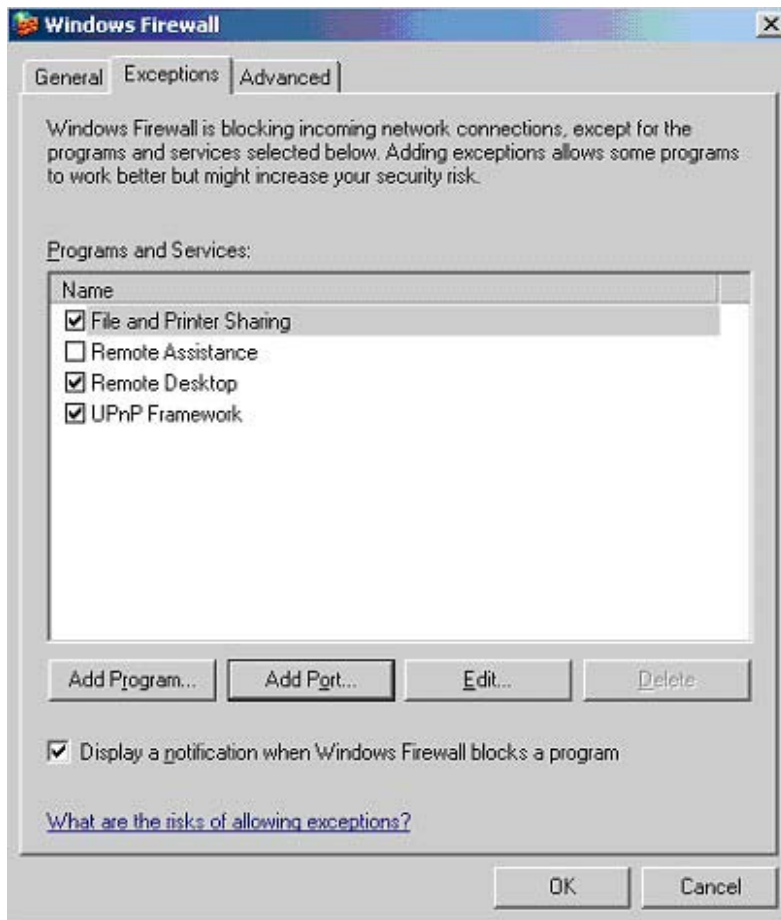
Configuring HP Power Manager with an enabled firewall

Configuring HP Power Manager with an enabled firewall

Enabled firewalls block most communication through unused IP ports. This prevents the Management Server and Remote Agents from using port 3573 to communicate. The following Windows firewall settings are necessary for the proper operation of HP Power Manager through port 3573.

1. Click **Start>Settings>Control Panel**.
2. Open **Network Connections**.
3. Click **Properties**.
4. Click the Advanced tab.
5. Select the **Internet Connections Firewall** checkbox.

The Windows Firewall screen appears.



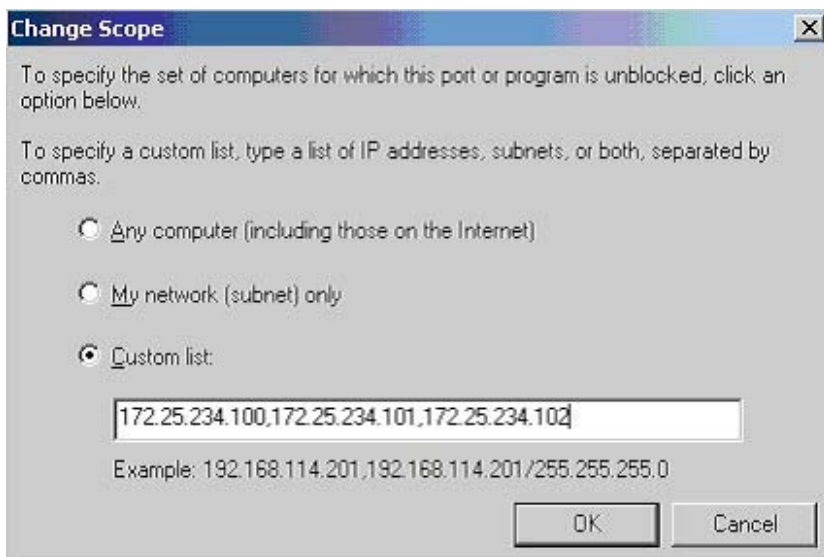
6. Click the Exception tab, and then click **Add Port**.

The Add a Port screen appears



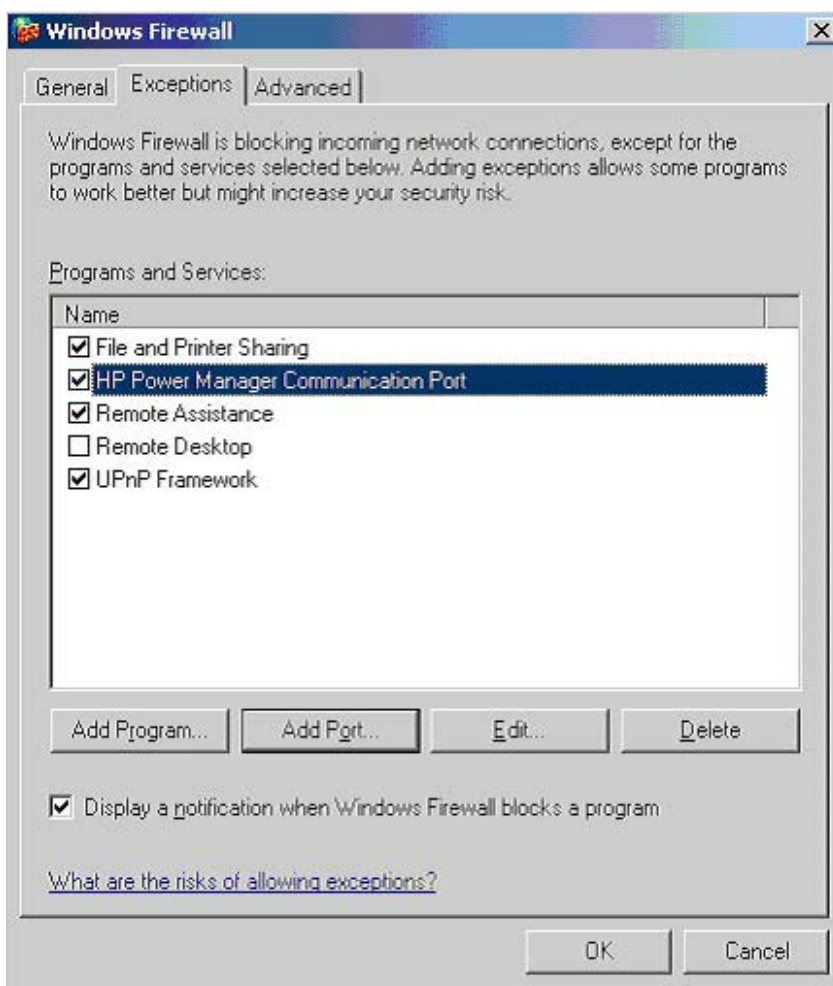
7. Enter the name for the new port in the Name: field.
8. Enter 3573 in the Port number: field.
9. Select the TCP radio button.

10. (optional) Click **Change scope** to add security settings to the port, and then click **OK**.



11. Click **OK** to finish adding the port.

The Windows Firewall screen appears and displays the newly added port.



Acronyms and abbreviations

CRC

cyclic redundant checks

DNS

domain name system

EEPROM

electrical erasable programmable read only memory

EPO

emergency power off

EULA

end user license agreement

GUI

graphical user interface

HPPM

Hewlett-Packard Power Manager

HTTPS

hypertext transfer protocol secure sockets

I/O

input/output

IP

Internet Protocol

IRQ

interrupt request

MIB

management information base

NIC

network interface controller

RAM

random access memory

RBSU

ROM-Based Setup Utility

SAM

system administration manager

SAN

storage area network

SIM

Systems Insight Manager

SNMP

Simple Network Management Protocol

SSL

Secure Sockets Layer

TCP

Transmission Control Protocol

UPS

uninterruptible power system

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