HP Smart Update Manager User Guide
Version 7.1.0

Abstract

This document describes how to use HP SUM to apply firmware updates to HP ProLiant and HP Integrity servers, and apply software updates to HP ProLiant servers. This document is intended for individuals who understand the configuration and operations of Microsoft Windows, Windows Server, Linux, smart components, HP-UX, VMware, and the risk of data loss from performing updates.

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1 Introduction

HP SUM overview

HP SUM is a technology included in many HP products for installing and updating firmware and software on HP ProLiant servers, and firmware on HP Integrity servers.

HP SUM provides a web-based GUI, command-line interface, and an interactive command-line interface for:

- Deployment of firmware for single or one-to-many HP ProLiant and HP Integrity servers and network-based targets such as iLO, OA, and VC Ethernet and Fibre Channel modules.
- Deployment of software for single or one-to-many HP ProLiant servers (supported in Windows and Linux environments).

  NOTE: HP SUM does not support deploying updates from a Linux host to a Windows node.

HP SUM has an integrated hardware and software discovery engine that finds the installed hardware and current versions of firmware and software in use on nodes you identify. HP SUM installs updates in the correct order and ensures that all dependencies are met before deploying an update. HP SUM prevents an installation if there are version-based dependencies that it cannot resolve.

Key features of HP SUM include:

- Dependency checking, which ensures appropriate installation order and component readiness
- Automatic and wizard-like Guided Update process
- Web browser-based application
- Create custom baselines and ISOs
- Intelligent deployment of only required updates
- Simultaneous firmware and software deployment for multiple remote nodes in GUI, text-based console, and CLI modes
- Improved deployment performance
- Local online deployment of HP ProLiant servers and enclosures
- Remote (one-to-many) online deployment of HP ProLiant and HP Integrity servers and enclosures
- Local offline firmware deployments with HP Service Pack for ProLiant deliverables
- Remote offline deployment when used with the SmartStart Scripting Toolkit (HP ProLiant G7 and earlier servers), Scripting Toolkit (HP ProLiant Gen8 and later) servers, iLO Virtual Media, or PXE booted media
- GUI, interactive CLI, or CLI scripts with extensive logging
- Remote CLI deployment
- Support for updating firmware on network-based targets such as the OA, iLO through the Network Management Port, VC Ethernet and Fibre Channel switches, and 3Gb/6Gb SAS BL Switch interconnects on HP ProLiant servers
- Support for deploying firmware updates to supported Integrity servers and Superdome 2 enclosures
- Support for updating VC modules on Integrity servers

> **NOTE:** HP SUM does not support third-party controllers. This includes flashing hard drives behind these controllers.

- Remote online deployment of I/O Card firmware on HP ProLiant and HP Integrity targets running HP-UX

About the graphical user interface

HP SUM is a web browser-based application. When you launch HP SUM in GUI mode, the system uses the default web browser. The screenshot below shows the major sections of the screen.

> **NOTE:** Do not use the **Back** button in your browser window.

Item	Description
1	Main menu - This menu provides links to all HP SUM screens.
2	• Activity list - Status updates appear briefly, and the activity icon displays the status of recent activities. Click the **Activities** icon, to open the Activity panel. • Login information - Displays the currently logged-in user, and offers a logout function. • Help panel - Opens the help pane.
3	Screen name - Displays the name of the screen.
4	Screen filters - Filters screen objects.
5	Screen list - Displays a list of items on this screen.
6	Baseline or Node name - This lists the baseline or node that you selected in the screen list. This example shows the name of the selected baseline.
7	Informational highlight - This bar highlights information that you might need to perform or know about for the selected item. Click to expand this box if there is more information.
8	Item details - This area provides full details about the selected item.
9	Actions - Lists the available actions. **NOTE:** Screen options vary based on the screen you are viewing.

Status icon descriptions

HP SUM uses icons to represent the current status of resources and alerts and to control the display.

Table 1 Status icons

Large icon	Small icon	Description
⊖	●	Critical Failed/Interrupted
⚠	⚠	Warning
✓	■	OK Successful
◇	◇	Disabled
◈	◈	Unknown
⟳	⟳	An `In progress` rotating icon indicates a change is being applied or a task is running.

2 Downloading, installing, and launching HP SUM

Downloading HP SUM

You can download HP SUM from the HP website or from the HP Software Delivery Repository. These downloads do not include firmware, software, or drivers. You can obtain software and firmware from the HP SPP, Integrity Firmware Bundles, or download the latest components from hp.com using HP SUM baseline functionality.

Downloading HP SUM from the HP website

1. Launch a web browser.
2. Go to http://www.hp.com/go/hpsum/download.
3. Click the file that you want to download:

   - **HP Smart Update Manager ISO** – The HP SUM ISO contains HP SUM and a bootable ISO environment. Firmware and Software components can be added to create a customized baseline.
   - **HP Smart Update Manager RPM** – HP SUM RPM is a native package for Linux and is also available on the Software Delivery Repository at http://downloads.linux.hp.com/SDR/project/hpsum/.
   - **HP Smart Update Manager zip** – The HP SUM zip contains the files for running HP SUM on supported Windows and Linux operating systems.

   NOTE: These downloads do not include software or firmware updates. Software and/or firmware updates can be obtained from the HP Service Pack for ProLiant, Integrity Firmware Bundles, or download the latest components from hp.com using HP SUM baseline functionality.

HP SUM applications

Use the following applications to run HP SUM, collect logs, migrate nodes, and clear the cache:

Filename	Description
hpsum	The HP SUM application. How HP SUM runs depends on the variables you pass. By default, HP SUM opens in the GUI version. If you type hpsum /s, HP SUM runs in the CLI mode. If you type hpsum and one of the interactive CLI commands, HP SUM opens in interactive CLI mode.
clean-cache	Removes the files in the temp directory associated with HP SUM that contain cached information about nodes and baselines. Logs are still maintained.
gatherlogs	Collects all logs for HP SUM. Useful in debugging troubleshooting issues for HP SUM.
hpsum_migration	Migrates node location and name from earlier versions of HP SUM to the current version of HP SUM.
port-targets	Migrates node location and name from HP SUM 5.x to the current version of HP SUM.

Downloading HP SUM from the SDR website

You can download HP SUM as an RPM from the HP Software Delivery Repository at http://downloads.linux.hp.com/SDR/project/hpsum/. The SDR contains a version of the HP SUM RPM for each supported operating system and architecture type. Instructions on how to set up your **yum** configuration are available on the SDR website.

You can use **yum** commands to search for and download HP SUM to your system. You can also use a web browser to navigate the HP SDR and download the rpm.

Use the following commands to search, download, or install HP SUM from the SDR:

Action	Command example
Search for HP SUM with yum	`yum search hpsum`
Install HP SUM with yum	`yum install hpsum`
Download HP SUM from the SDR with a web browser, and then install the RPM	`rpm -Uvh hpsum-6.0.1-14.rhel-6x86_64.rpm`

For more information on using the HP SDR, see the Getting Started and FAQ sections on the HP Software Delivery Repository website at http://downloads.linux.hp.com/SDR/index.html.

For more information on using HP SUM with the SDR, see Linux best practices using *HP Service Pack for ProLiant (SPP) and Software Delivery Repository (SDR)* at http://h20564.www2.hp.com/portal/site/hpsc/public/kb/docDisplay/?docId=c03479393.

Migrating nodes from 6.x to 7.x

Nodes added with HP SUM 6.x must be upgraded before using them in HP SUM 7.x. Use the script `hpsum_migration` to perform the migration at any time.

1. From the HP SUM directory, launch `hpsum_migration.bat` (Windows) or `hpsum_migration.sh` (Linux).
2. HP SUM displays a list of earlier HP SUM versions. Select the versions you want to migrate to HP SUM 7.x.

The migration utility automatically starts the process of migrating the nodes.

Deploying HP SUM

HP SUM and SPP Boot environment change

Beginning with HP SUM 6.2.0 and HP SPP 2014.02.0, the HP USB Key Utility no longer supports multi-boot setups on a single device. HP SUM and SPP ISOs contain signed parts to work with the UEFI bootloader. This change no longer allows for multi-boot setups on a single device, such as a USB key.

The following sections discuss deployment from HP SUM. For more information on planning an update, see the *HP Smart Update Best Practices Overview*, *HP Smart Update Best Practices Planning Guide*, or *HP Smart Update Best Practices Implementer Guide*, available on the HP website:

http://www.hp.com/go/hpsum/documentation.

NOTE: HP SUM does not support deploying updates from a Linux host to a remote Windows node. Run HP SUM on a Windows host to deploy updates to Windows nodes.

HP SUM modes

HP SUM supports local and remote deployments. HP SUM runs in Windows and Linux in online and offline mode. For more information about deployment modes, see "Deployment modes" (page 12).

Mode	Description
GUI mode	An easy-to-use browser-based graphical user interface that enables deployment and maintenance of system software and firmware components to multiple systems in a single session.
CLI mode	CLI mode enables you to script custom installations. This mode might not support all functions of the GUI and interactive CLI.
Interactive CLI	Interactive CLI mode allows you to script most of the commands which are available in the HP SUM GUI. Functionality available from the interactive CLI includes add nodes and baselines, deploy nodes, get component logs, and generating reports. For more information, see the *HP Smart Update Manager User Guide*, or issue the command `hpsum /h` from the directory where you saved HP SUM.

NOTE: Before deploying software updates to a server, be sure that a recent backup of the server is available in the event the deployment procedure fails.

For information on the minimum requirements to run HP SUM, see the *HP Smart Update Manager Release Notes* on the HP website:

http://www.hp.com/go/hpsum/documentation

NOTE: You cannot run HP SUM on an operating system running on a virtual machine. Run HP SUM on a system that is running a supported version of Windows or Linux.

Deployment modes

The following key terms apply when using HP SUM to deploy updates:

Term	Definition
Local	The installation runs on the physical hardware you are updating. For example, running a utility on a server to update the system ROM of the server.
Remote	The installation runs on one system, but updates other physical nodes. For example, updating the OA or HP Integrity server firmware across a network.
Online	The installation occurs while the host processor is running in the normal server environment. For example, if the server runs Microsoft Windows Server 2012, the update occurs under this environment. The update does not require you to boot to a special environment to update the firmware. You might need to reboot the node to activate the firmware.
Offline	In offline mode, the HP SUM boots a small Linux kernel and enables updates to occur on a single server. • Only updates the local system • Only uses a single baseline **NOTE:** Some features of HP SUM that require the regular local host operating systems are not supported in offline mode.

These terms can be used in combination to designate the type of environment required for updates to occur, such as local-online or remote-online.

Deploying firmware for HP ProLiant servers using the HP Service Pack for ProLiant

The SPP is a re-packaging of HP ProLiant system software and firmware for HP ProLiant BL/ML/DL/SL servers and their options, and BladeSystem enclosures including OA, VC, and 3 Gb SAS switches running supported Windows, Linux, VMware (supported firmware updates only) operating systems. The single SPP image contains a comprehensive collection of firmware and system software components including drivers, agents, tools, utilities, and firmware that is tested, managed, and deployed together as a single solution.

Each SPP release includes a version of HP SUM you can use to deploy the SPP components. You can download the latest version of HP SUM from the HP SUM website at http://www.hp.com/go/hpsum/download.

For a complete list of HP ProLiant systems and software supported by SPP, and updates available in an SPP release, see the *HP Service Pack for ProLiant Release Notes* on the HP website:

> http://www.hp.com/go/spp/documentation

Deploying HP Integrity firmware bundles with HP SUM

You can use HP SUM to deploy components delivered with the HP Integrity firmware bundles.

Deploying firmware to HP Integrity servers is done remotely and is the same as deploying other firmware, such as OA, with the following exceptions:

- Specify the IP address of the Monarch (primary) OA on Superdome 2, or the Monarch iLO 3 management processor on multi-blade servers.
- Specify the server IP address as the target to update I/O firmware on HP-UX servers. You can only update remote HP-UX targets.

For more information on HP Integrity firmware bundles, see the Manage HP Integrity Servers Firmware Updates website at http://www.hp.com/go/smartupdate/integrity.

Deployment scenarios

HP SUM deploys updates from a local host to one or more remote hosts. If the host running HP SUM uses Windows, you can update Windows, Linux, VMware, or HP-UX targets. If the host running HP SUM uses Linux, you can update Linux, VMware, or HP-UX nodes. You can also update remote HP ProLiant or HP Integrity iLO, OA, and VC nodes from Windows or Linux systems.

The following table describes when typical HP SUM deployment scenarios are used.

Scenario	Used when
Graphical deployment on a local host	• You are not familiar with command line tools. • You are deploying components on a local, single host. • Updates do not require scripting.
Scripted deployment on a local host	• You are familiar with command line tools. • You are deploying components on a local, single host. • Updates require a customized, scripted deployment.
Graphical deployment to a remote host	• You are not familiar with command line tools. • You are deploying components on one or more remote hosts. • Updates do not require scripting.
Scripted deployment to a remote host	• You are familiar with command line tools. • You are deploying components on one or more hosts. • Updates require a customized, scripted deployment to one or more host systems.

Disabling BitLocker to permit firmware updates (Windows only)

The TPM, when used with BitLocker, measures a system state. Upon detection of a changed ROM image, it restricts access to the Windows file system if the user cannot provide the recovery key. HP SUM detects if a TPM is enabled in your system. For some newer models of HP ProLiant servers, if a TPM is detected in your system or with any remote server selected as a target, HP SUM utilities for HP iLO, Smart Array, NIC, and BIOS warn users prior to a flash. If the user does not temporarily disable BitLocker and does not cancel the flash, the BitLocker recovery key is needed to access the user data upon reboot.

A recovery event is triggered in the following situations:

• You do not temporarily disable BitLocker before flashing the system BIOS when using the Microsoft BitLocker Drive Encryption.

• You have optionally selected to measure HP iLO, Smart Array, and NIC firmware.

If HP SUM detects a TPM, a warning message appears:

CAUTION: A Trusted Platform Module (TPM) has been detected in this system. Failure to perform proper OS encryption procedures will results in loss of access to your data if recovery key is not available. Recommended procedure for Microsoft Windows (R) BitLocker (TM) is to \"suspend\" BitLocker prior to System ROM or Option ROM firmware flash. If you do not have your recovery key or have not suspended BitLocker, exit this flash. Failure to follow these instructions will results in loss of access to your data.

To enable firmware updates without the need to type in the TPM password on each server, the BitLocker Drive Encryption must be temporarily disabled. Disabling the BitLocker Drive Encryption keeps the hard drive data encrypted. However, BitLocker uses a plain text decryption key that is stored on the hard drive to read the information. After the firmware updates have been completed,

the BitLocker Drive Encryption can be re-enabled. Once the BitLocker Drive Encryption has been re-enabled, the plain text key is removed and BitLocker secures the drive again.

△ **CAUTION:** Temporarily disabling BitLocker Drive Encryption can compromise drive security and should only be attempted in a secure environment. If you are unable to provide a secure environment, HP recommends providing the boot password and leaving BitLocker Drive Encryption enabled throughout the firmware update process. This requires setting the `/tpmbypass` parameter for HP SUM or the firmware update is blocked.

To temporarily disable BitLocker support to allow firmware updates:
1. Click **Start**, and then search for `gpedit.msc` in the Search Text box.
2. When the Local Group Policy Editor starts, click **Local Computer Policy**.
3. Click **Computer Configuration**→**Administrative Templates**→**Windows Components**→**BitLocker Drive Encryption**.
4. When the BitLocker settings are displayed, double-click **Control Panel Setup: Enable Advanced startup options**.
5. When the dialog box appears, click **Disable**.
6. Close all windows, and then start the firmware update.

To enable advanced startup options:
1. Enter `cscript manage-bde.wsf -protectors -disable c:`
2. When the firmware update process is completed, the BitLocker Drive Encryption support can be re-enabled by following steps 1 through 4 but clicking **Enabled** in step 5 instead. The following command can be used to re-enable BitLocker Drive Encryption after firmware deployment has completed.
3. Enter `cscript manage-bde.wsf -protectors -enable c:`

The following table describes TPM detection scenarios that you might encounter.

Scenario	Result
If TPM is detected and enabled, the installation is not silent, and a system ROM must be updated.	A warning message appears. Select **OK** to continue. The installation is not canceled.
If TPM is detected and enabled, the installation is silent, the `/tpmbypass` switch is not given, and any firmware updated must be applied to the server.	No warning appears. A new log file is generated (`%systemdrive%\cpqsystem\log\cpqstub.log`). Because the installation is silent, the installation is terminated and cannot continue.
If TPM is detected and enabled with Option ROM Measuring, the installation is not silent, and a system ROM must be updated.	A warning message appears. After selecting **OK**, you can continue. The installation is not canceled.
If TPM is detected and enabled with Option ROM Measuring, the installation is silent, the `/tpmbypass` switch is not given, and any firmware updated must be applied to the server.	No warning appears. A new log file is generated (`%systemdrive%\cpqsystem\log\cpqstub.log`). Because the installation is silent, the installation is terminated and cannot continue.
If TPM is detected and enabled, the installation is silent, the installation occurs, and the `/tpmbypass` switch is supplied.	The installation occurs.

Using Linux and HP-UX root credentials

If you run HP SUM and add a remote Linux or HP-UX system, you can use root credentials, a user with sudo permissions, or provide both non-root and root credentials.

Prerequisites for using Linux and HP-UX root credentials on a remote node

- If you have run HP SUM as a root user directly on this system in the past, remove the temp directory created by HP SUM.
- Make sure the user has read/write access permissions to the `/tmp` and `/var` directories.
- If you create a sudo user, make sure that you add that user to the `/etc/sudoers` file. The following table shows the privileges and specifications for users.

User	Privilege	Specification
Root	ALL= (ALL)	ALL
Sudo_user	ALL= (ALL)	ALL

- Edit the entry in the `/etc/sudoers` file so the system asks for the sudo user password instead of root user password when you run the sudo command.

  The following table shows the privileges to comment or remove from `/etc/sudoers`.

User	Privilege	Specification
All	ALL= (ALL)	ALL

  This often occurs in SUSE Linux systems.

  `#Defaults targetpw #` ask for the password of the target user. For example,

⚠ **WARNING!** Only use this option with `Defaults targetpw`.

- To use super user functionality, configure the user as a super user with all root privileges. You can also use non-root user with a root user to update components.

Launching and logging into HP SUM

Launching HP SUM

HP SUM supports 32–bit and 64–bit processors. When you launch HP SUM, a script chooses the version of HP SUM to run. HP SUM logs you in using your current user credentials. To run HP SUM, your userid needs to be part of the administrator group, or, on a Linux system, you can run HP SUM using the `sudo` command. If you are using Windows Server 2012, log in with an account that has Administrator privileges, or right-click `hpsum.bat`, and then select **Run as Administrator**.

NOTE: Do not open HP SUM in more than one browser tab or window or run HP SUM CLI or interactive CLI commands when the GUI is open.

For more information about supported browsers, see the *HP Smart Update Manager Release Notes*, available at the HP Smart Update Manager Information Library, http://www.hp.com/go/hpsum/documentation.

Procedure 1 Launching HP SUM from an HP SUM download on a Windows host

1. Unzip the file you downloaded.
2. In the HP SUM directory, double-click `hpsum.bat`.

Procedure 2 Launching HP SUM from an HP SUM download on a Linux host

- From a command-line, type `./hpsum`, `sudo ./hpsum`, or `su root`, press **Enter**, and then type `./hpsum`.

Logging into HP SUM

If HP SUM is already running, and no user is logged in, use your computer's credentials to log into HP SUM.

Logging out of the HP SUM GUI

1. Click the user icon, and then click **Logout**.
2. Select one of the following:

    - **Log Off - Current user.**

    - **Shutdown - This option will shutdown HP SUM engine.**

3. Click **OK**.

HP SUM stores node information between sessions, including user credentials for nodes. The information is stored in a database file. To clear the information, run the `clean-cache.cmd` (Windows) or `clean-cache.sh` (Linux). To run clear-cache:

1. Shut down the HP SUM engine.
2. From a command-line window, navigate to the directory that contains HP SUM.
3. Type `clear-cache.bat` (Windows) or `clear-cache.sh` (Linux).

    NOTE: If you are using a GUI, you can navigate to the directory that holds HP SUM and double-click the file to clear the cache. Running the clean-cache command erases all nodes, baselines, and other information entered in HP SUM.

3 Using the HP SUM GUI

Updating a node with HP SUM example

The following steps offer a simplified example of deploying updates to a single node without using the Localhost Guided Update.

1. Add a baseline to the Baseline Library. For more information, see "Adding a baseline" (page 26).
2. Add a node to the Nodes screen. For more information, see "Adding a node" (page 32).
3. Inventory the node. For more information, see "Node inventory" (page 37).
4. Review the updates and then deploy the updates. For more information, see "Deploying a node" (page 38).
5. Run reports on updates HP SUM deployed. For more information, see "Node reports" (page 40).

Using the Home screen

When you launch HP SUM, HP SUM displays the Home screen. From this screen, you can click **Localhost Guided Update**, **Baseline Library**, or **Nodes**. There is also a **Get Started** button that launches Localhost Guided Update. To navigate to other screens, use the navigation menu in the upper-left corner.
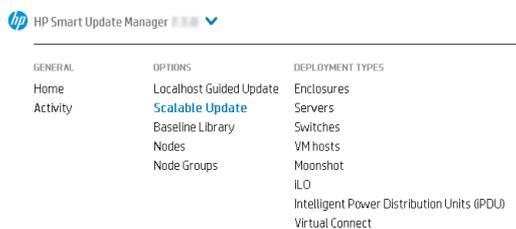
Using the Activity screen

The Activity screen provides a brief update of the activities that HP SUM is performing, or has recently performed. The table displays the source, message, state, and last update time of an activity.

Using Localhost Guided Update

Use the Localhost Guided Update function to update the localhost. You can use a baseline you have added to the Baseline Library, if you do not specify a baseline, HP SUM uses the updates in the directory from which HP SUM is run.

NOTE: If the directory from which you are running HP SUM has no updates, you cannot use Localhost Guided Update. If there is no default baseline, HP SUM displays a message in the Inventory of Baseline section. Localhost Guided Update does not support configure components. Configure components from the Baseline screen.

Localhost Guided Update modes

- **Interactive**: HP SUM uses the default baseline to update the localhost. You can choose the updates that HP SUM applies to the localhost.
- **Automatic**: HP SUM automatically updates the localhost and uses the default baseline. After you click **OK**, HP SUM begins updating the node.
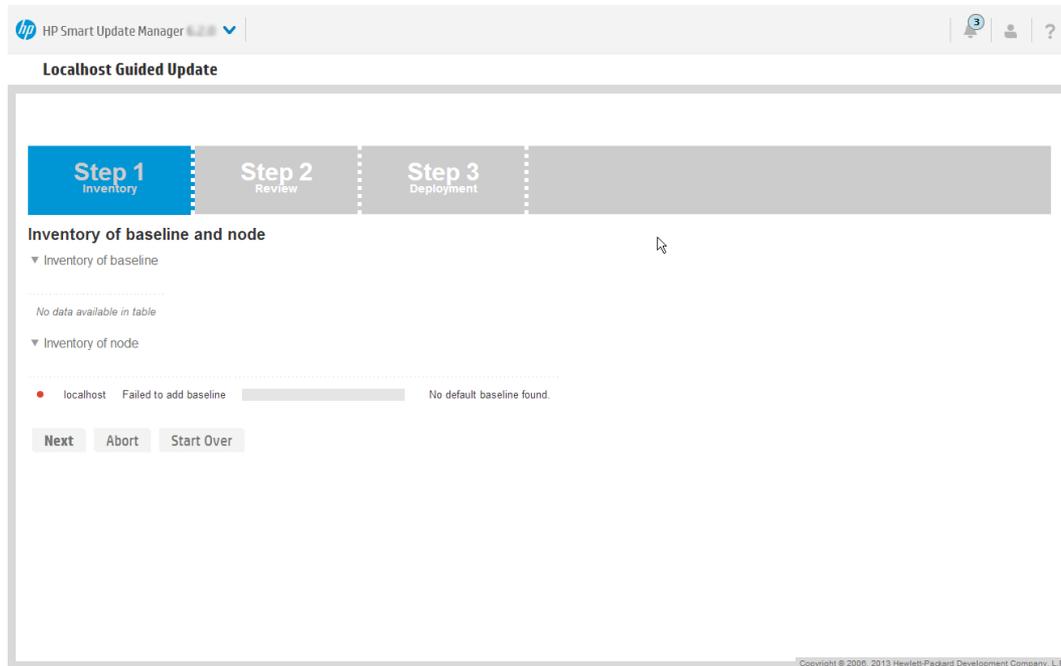
Procedure 3 Using Localhost Guided Update in Interactive mode

1. In the navigation menu, click **Localhost Guided Update**.

    NOTE: If you need to make a change to your selections on this screen, click **Start Over**.

2. Click **Interactive**.
3. HP SUM displays the current baseline selected for the Localhost.
    - To use the currently selected baseline, continue to the next step.
    - Click the **X** next to the baseline to use a different baseline.
4. Select **Assign Baseline** to add another **Baseline** or **Additional package**. Select the baseline or package to apply.
5. Click **OK**. HP SUM begins inventory on the baseline and Localhost.
6. Click **Next** after HP SUM finishes the inventory.

    Recommended updates ready to deploy are highlighted in blue and HP SUM displays a green icon in the **Ready to proceed** column.

7. Click **Deploy**.

    NOTE: Items that are up-to-date or optional are not highlighted. Click **Force** to deploy these updates. If you want to globally select all components to rewrite or downgrade, select **Actions→Advanced Options** and select **Rewrite** or **Downgrade**. Click **Analyze**, and HP SUM performs an analysis again. Double-click an update to view the component details. If you want to view the information in the new update, click the hyperlink.

    HP SUM performs component analysis before deploying updates.

8. Review the installation log files.

Procedure 4 Using Localhost Guided Update in Automatic mode

1. In the navigation menu, click **Localhost Guided Update**.
2. Click **Automatic**.
3. Click **OK**.

> **NOTE:** HP SUM begins to deploy updates after you click **OK**. HP SUM cannot interrupt updates in the Localhost Guided Update Automatic mode. HP SUM cannot install SNMP and WBEM Providers components in Automatic mode. Use Interactive mode if you want to install these components.

Using the Scalable Update screen

You can use HP SUM to inventory and deploy software to the members of an iLO Federation group. Communication with the group members is facilitated by a node in the group that is called the interface iLO. This is available with iLO 4 firmware version 1.40 and later. For more information about iLO Federation, see the *HP iLO Federation User Guide*, available at http://www.hp.com/support/ilo4_federation_ug_en.

When you log in to HP SUM, it automatically searches for iLO Federation groups on your connected networks. HP SUM searches each group and displays the nodes that respond to the HP SUM's search. You use the **Edit scalable update group** screen to enter the IP address and user credentials for one node in the iLO Federation group that HP SUM uses as the interface for inventory and deployment to the nodes in the group.

When you select a group, HP SUM displays information about the group, including a description, server types, number of servers, and installed firmware versions. HP SUM displays the PMC, CPLD, System ROM, and iLO firmware. HP SUM only deploys System ROM and iLO firmware to iLO Federation group nodes.

The HP SUM iLO Federation feature relies on proper configuration of iLO Federation groups before you launch HP SUM. Multiple iLO Federation groups with the same name or fragmented iLO Federation groups will result in HP SUM only working with a portion of the expected systems.

To disable the automatic network search functionality:

1. Navigate to the temp directory for HP SUM. The default location for the temp directory is `/tmp/HPSUM` (Linux) or `%temp%\HPSUM` (Windows).

   > **NOTE:** If this is the first time using HP SUM on this node, start HP SUM, and then shut down the application. HP SUM creates the file `hpsum.ini` and shutting down the application allows you to edit the file.

2. Open the `hpsum.ini` file in a text editor.
3. Change the setting for `auto_multicast_discovery` to `false`.
4. Save the file.

> **NOTE:** If you disable automatic updates, you can still scan for iLO Federation groups. Click the **Rescan** button on the **Scalable Update** screen.

Adding a new iLO Federation group

When you start HP SUM, it discovers iLO Federation groups. Local iLO Federation groups and those within the network scope of the host running HP SUM should be discovered automatically. iLO Federation groups that are not discovered automatically due to the network configuration or firewalls can be added manually by specifying the IP address, group name, and credentials.

1. From the **Scalable Update** screen, click **Add Group**.

2. Enter the **iLO Federation group name**.
3. Enter the **iLO Federation group description**.
4. Click **Add**.

Re-scanning for iLO Federation groups

When you open the **Scalable Update** screen, HP SUM automatically scans the network for iLO Federation groups. You can force HP SUM to re-scan the network to automatically search for iLO Federation Groups.

- From the **Scalable Update** screen click **Rescan**.

Editing an iLO Federation group

1. From the **Scalable Update** screen, select **Actions→Edit**.

2. You can change the following items for the selected iLO Federation group:
   - **iLO Federation group description**
   - **Username** and **Password** credentials
   - **Baseline** and **Additional Packages** to apply

3. After you finish making changes, click **OK**.

Performing inventory on an iLO Federation group

1. From the **Scalable Update** screen, select an iLO Federation group, and then select **Actions**→**Inventory**.

2. HP SUM opens the Inventory page and displays the **iLO Federation Group Name**.
3. In **Interface iLO**, select **Enter an iLO manually by IP or DNS** or **Select from discovered list of member iLO IPs**. If the group or Interface iLO are no longer on the network, HP SUM displays a status message indicating that the group or interface iLO is not available.

(i) **IMPORTANT:** Do not select an interface iLO that has been added as an individual node.

4. Do one of the following:
   - If you selected **Select from discovered list of member iLO IPs**, select an iLO IP address.
   - If you selected **Enter an iLO manually by IP or DNS**, enter the iLO IP or DNS address of the iLO you want to use.
5. In the **Credentials** section, enter the **Username** and **Password** for the interface iLO.
6. In the **Baseline to Apply** section, select a **Baseline** or **Additional Package** from the Baseline Library.

   If you assigned a baseline or additional package by editing the group or performing inventory on the group, those values are entered automatically.
7. Click **Inventory**.

Viewing iLO Federation group firmware versions

1. From the main menu, select **Scalable Update**.
2. Select an iLO Federation group.
3. If the group has not been inventoried, start the inventory process.

   For instructions, see "Performing inventory on an iLO Federation group" (page 22).

4. In the **Inventoried firmware versions of the group** section, select one of the following firmware types:

- iLO
- BIOS
- PMC
- CPLD

For each firmware type, HP SUM shows the firmware type, firmware version, and the number of systems using each firmware version.

Viewing iLO Federation group members

1. From the main menu, select **Scalable Update**.
2. Select an iLO Federation group.
3. If the group has not been inventoried, start the inventory process.

   For instructions, see "Performing inventory on an iLO Federation group" (page 22).

   The **Servers** section lists the server models in the group and the total number of each server model.

Deploying software to an iLO Federation group (online)

1. From the **Scalable Update** screen, select **Actions→Online Review/Deploy**.

2. Select the **Installation Options**.

    NOTE: If you choose to downgrade or rewrite components, you must specify which components to downgrade or rewrite: **Firmware**, **Software**, or both.

3. In the **Filters** section, select the servers you want to update.
4. In the **Baseline Library** section, select the components you want to deploy. If you make changes to the default selections, click **Analysis**.
5. Click **Deploy**.

If HP SUM loses connection with the interface iLO during deployment, HP SUM prompts you for the credentials for an interface iLO.

Deploying software to an iLO Federation group (offline)

Use offline update to mount an ISO to all nodes in a group and then reset the nodes to boot from the ISO and perform an offline update.

1. From the **Scalable Update** screen, select **Actions→Offline Review/Deploy**.

    HP SUM displays the **iLO Federation group name** and **Interface iLO**.

2. In the **ISO Image** box enter the URL of an ISO image that is available via HTTP on the network.
3. Click **Validate**.

   HP SUM confirms that the path is valid.
4. In the **Filters** section, select the servers you want HP SUM to power off and deploy components.
5. Click **Power off and Deploy**.

HP SUM displays an error message if the ISO image does not mount.

Generating reports

HP SUM generates the same reports for iLO Federation groups as it does for regular nodes. For more information about generating reports, see "Node reports" (page 40).

NOTE: iLO Federation reports contain aggregate details for versions and updates only, not for each server in the group.

Deleting an iLO Federation group

- From the **Scalable Update** screen, select an iLO Federation group, and then select **Actions→Delete**.

Using the Baseline Library screen

The Baseline Library screen displays the baselines and additional packages you will use to update your nodes. Baselines include the HP SPP, HP Integrity bundle, or custom baselines that include updates that you select from other baselines or additional packages. Additional packages are directories that hold updates that are not included in a named update package, for example a Hot Fix. HP SUM saves baseline information between sessions.
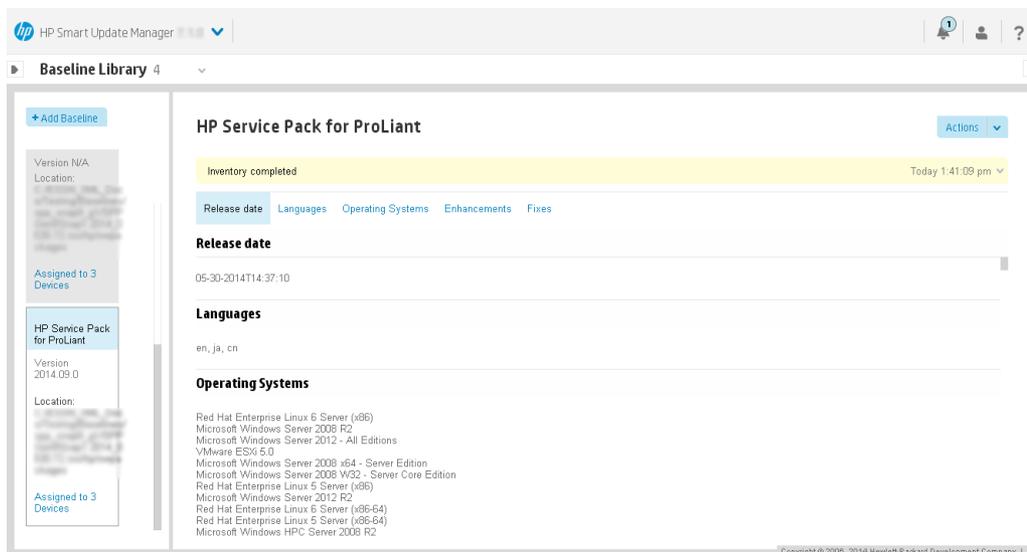
HP SUM displays each added baseline in the left pane. Select a baseline, and HP SUM displays the following information for each baseline and additional package.

NOTE: If you created a custom ISO, you need to mount the ISO on the system so HP SUM can detect the files, and then add the directory as a baseline. For more information, see "Adding a baseline" (page 26).

- Release date
- Languages
- Operating systems

- Enhancements

- Fixes – HP SUM includes a search box for finding updates that meet the search parameters. You can search on file name, description, and update type.

  Double-click an update to view its details.

- Component configuration – You need to configure some components before you can deploy the update. For more information about configuring components, see "Configuring components" (page 31).

Adding a baseline

1. On the Baseline Library screen, click **Add Baseline**.

   > **NOTE:** If you want to clear the Add baselines screen, click **Reset**.

   HP SUM opens the add baseline screen.

Add Baseline	Location type ∨	?

   Location type

   Select the location type   Browse HP SUM server path ∨

   Location Details

   Browse or manually enter a directory path where the components for the baseline are located.

   Enter directory path   [   ] **Browse**

            Add   Start Over   Close

2. Do one of the following:

To add this baseline:	Follow these steps:
Browse HP SUM Server Path: This is a directory or file share that the system running HP SUM can access.	**1.** Select the location type **Browse HP SUM Server Path**. **2.** Enter the directory path to the baseline, or click **Browse** and use the menu to navigate to the directory. **NOTE:** If you are adding an SPP, navigate to the `hp/swpackages` directory.
UNC path (for example \\host\dir): This location uses UNC paths that the system can access. **NOTE:** UNC path is only supported in Windows systems.	**1.** Select the location type **UNC path (for example \\host\dir)**. **2.** In the **Enter URI for the baseline field**, type the UNC address for the source baseline. **3.** Enter the username, required. **4.** Enter the password, required **NOTE:** HP SUM does not support mapped UNC drives.
Download from hp.com	**1.** Select the location type **Download from hp.com**. **2.** In the Location Details section, click **Browse** and select an empty directory where you want HP SUM to store the downloaded baseline.

To add this baseline:	Follow these steps:
	3. In the Proxy Settings section, select the **Proxy Options**: • **No Proxy Needed**: Use this option if your network settings do not require a proxy server. • **Proxy Server**: Use this option if your network settings require a proxy server. Add the **Address**, **Port**, **Username**, and **Password**. • **Proxy Script**: Use this option if your network settings require a proxy script. Enter the **Script**, **Username**, and **Password**. **4.** Click **Retrieve List**. **5.** Select the baseline you want to download.
Download from http share	**1.** **Enter working directory:** Enter, or browse to, the directory where you want to save the baseline. **2.** **Enter HTTP URL**: Enter an HTTP URL where a bundle file is saved. The server can be local or remote, and you can use an Apache, Tomcat, or IIS server. Provide the complete URL, including the bundle XML. The components must reside in the same directory as the bundle XML.

NOTE: HP SUM adds all baselines in a directory.

3. Click **Add**.

   Check the activity log to see the status of the baseline. If the baseline does not appear in the baseline list, make sure there are updates in the directory.

NOTE: HP SUM begins to inventory a baseline as soon as you finish adding the baseline. To minimize the impact on system resources, HP SUM does not recommend adding other baselines until the baseline inventory process finishes.

Creating a custom baseline and ISO

Creating a custom baseline allows you to deploy specific updates, minimize the size of update baselines or bootable and non-bootable ISOs, and standardize the updates that you deploy to your environment.

NOTE: Before you create a custom bootable ISO, make sure you have an unpacked ISO available in a local directory in order to use it as a source for the boot environment. For example, a recent HP SPP ISO. Do not unpack more than one ISO in a directory.

1. Outside of HP SUM, create a new, empty directory where you want to save the custom baseline or ISO.

   NOTE: Make sure that you save custom baselines and ISOs in an empty directory. This prevents HP SUM from deleting files in the directory when it creates the custom baseline or ISO.

2. Make sure that a baseline is added to the Baseline Library screen before you create a custom baseline. For more information on adding a baseline, see .

3. From the Baseline Library screen, select **Actions→Create Custom**.

   HP SUM displays the Create Custom Baseline screen.

4. In the **Description** text box, enter a description for the baseline. The maximum length for the description is 50 characters.

5. Select a date for the **Version**, and enter a 1 or 2-character identifier, for example, `1` or `1a`.

   NOTE: The Baseline Name is automatically generated by combining the description and version.

6. In the **Output Location** field, click **Browse** to navigate to an empty directory where you want to save the baseline. HP SUM deletes all files in a directory before it writes the custom baseline components.

   NOTE: HP SUM does not support creating a new directory when it creates the custom baseline. Create the new directory outside of HP SUM.

7. Select **Make Bootable ISO file** if you want to create a bootable ISO with your baseline.

   NOTE: To create a custom bootable ISO, you must have a bootable HP SPP or HP SUM ISO extracted in a local directory.

   If you choose to make a bootable ISO, in the **Source ISO Location** field, click **Browse** and choose a directory where HP SUM can find the extracted bootable ISO.

   NOTE: Make sure the directory with the bootable ISO source does not include more than one extracted ISO file.

8. Select whether you want to **Run in background** or not.

   If you select to create the baseline in the background, you can monitor the progress in the Activity screen.

9. In the **Baseline Sources** section, select the baselines that contain the components you want to include in the custom baseline.

   NOTE: If the same component is included in more than one source baseline, HP SUM lists the component multiple times. If you select the component from multiple baselines, HP SUM displays the component multiple times when you add it as a baseline, but the baseline only includes one copy of the component file.

10. In the Filters section:
    a. Select whether you want the custom baseline to **Match CloudSystem Matrix Version**. This allows you to select the latest Matrix Recipe available on the web or use a local `MatrixConfig.xml` file. If you select this option Advanced Filters become inactive.

       If you select **Match CloudSystem Matrix Version**, do the following:
       i.   Select whether you want to compare the custom baseline to an Matrix Definition XML file on the local system or on hp.com.
       ii. Enter a directory for the Matrix Definition file. If you selected a file on hp.com, select whether you need to use a Proxy server, and then enter the proxy information.

       NOTE: If you are comparing the baseline to a CloudSystem Matrix version that is online, do not press the Escape button after HP SUM begins to download the Matrix version.

    b. If you did not select **Match CloudSystem Matrix Version**, do the following:
       i.   In the Filters section, select the **Component Type** you want to choose, **Firmware**, **Software**, or **Firmware and Software**.

       NOTE: Select one of these options if you want to create a baseline with only firmware or software updates. Use the baseline with only firmware or software updates to automatically update only firmware or software for a node.

       ii. Select each kind of update you want to include in the baseline:
            - **Critical Updates**: Updates that HP requires you to deploy immediately.
            - **Recommended Updates**: Updates that HP recommends you deploy at your earliest convenience.
            - **Optional Updates**: Update to this version if your system is affected by one of the documented fixes, or if there is a desire to utilize any of the enhanced functionality provided by this version.
            - Select the **Advanced Filters** you want to apply to the baseline:

Filter category	Options
Architecture	Select the system architecture to include in the baseline.
Operating System	Select the operating systems to include in the baseline. The list of options is provided by the source baseline.
Non server devices	Select the non-server device components to include in the baseline.
Server Type	Select the server device components to include in the baseline. The list of options is provided by the source baseline.

       NOTE: HP SUM supports creating a baseline for node types supported by the HP SPP.

11. Click **Apply Filters**. HP SUM displays a list of available updates.
12. Select the individual component updates you want to include in your baseline.

    Use the search function to find specific updates in the list.
13. Click **Create ISO** or **Save Baseline** to create the baseline.

    When you click **Create ISO** or **Save Baseline**, HP SUM does not close the Create Custom Baseline screen, in case you want to create another custom baseline.

14. Click **Close** to close the Create Custom Baseline screen.

> **NOTE:** If you created a custom ISO, you need to mount the ISO on the system so HP SUM can detect the files, and then add the directory as a baseline. For more information, see .

Baseline reports

You can generate an Inventory report from the Baseline Library screen. This is the same Inventory report that you can generate on the Nodes screen. For more information on generating the Inventory report, see "Node reports" (page 40).

Deleting a baseline

Before deleting a baseline, assign a different baseline to each node that uses the selected baseline. The Baseline screen lists how many nodes use each baseline. Click the hyperlink to display the nodes use the baseline.

To delete a baseline:

1. On the Baseline Library screen, select a baseline.
2. Select **Actions→Delete**.

> **NOTE:** If the baseline is associated with one or more nodes, HP SUM displays a list of the nodes. Edit the nodes to change the associated baseline, or delete the node. For more information, see "Editing a node" (page 36) or "Deleting a node" (page 41).

3. Click **Yes, delete** to confirm that you want to delete the baseline.

Validating a baseline

HP SUM can validate a baseline against the following sources:

- Bundle file: Allows you to validate against a bundle, for example an HP SPP. You can use this feature after you pull an SPP from the web or copying a bundle between systems.

  If a component has been unpublished after the SPP or MSB was published, HP SUM does not pull the component from the web. HP SUM displays there is a missing component when it validates the bundle. You can look up the component on the HP website to see if it is available for download.

- CloudSystem Matrix file: Allows you to verify a custom baseline matches a specific version of CloudSystem Matrix. You can validate the baseline against a downloaded file, or you can pull the latest configuration file from the web.

  After HP SUM validates a baseline matches a CloudSystem Matrix configuration file, you can use the baseline to inventory nodes to confirm the nodes match the configuration. Node inventory reports whether the baseline is an exact match to the installed versions, or if the node needs updates to match the CloudSystem Matrix configuration. Inventory also reports if installed components are at a higher version than the CloudSystem configuration file.

1. From the Baseline Library screen, select a baseline, and then select **Actions→Validate**.

   HP SUM displays the baseline and baseline bundle file location.

2. Select a validation type, **Validate against bundle file** or **Validate against CloudSystem Matrix version**.

   - Do the following if you are validating against a CloudSystem Matrix file on your local system:
     1. In **Matrix Definition XML File**, select **Latest MatrixConfig.xml file from local**.
     2. Enter the path, or browse, to the Matrix XML file.
   - Do the following if you are validating against a CloudSystem Matrix file on the HP website:
     1. In **Matrix Definition XML File**, select **Latest MatrixConfig.xml file from hp.com**.

2. Enter the path, or browse, to the working directory.
3. Select the proxy options, if necessary.
4. Select the CloudSystem Matrix Version you want to use.
5. Click **Retrieve File**.

3. Click **Validate**.

Configuring components

Some components might have required or optional configuration settings. Configuration parameters include information necessary to set up the component correctly or passwords required for software installed by the component. You can change component options from the Baseline Library screen. HP SUM 6.0.0 and later stores configuration settings differently than in earlier versions. HP SUM no longer stores configuration settings in the component, it stores the settings in the HP SUM database. You will need to re-configure component settings if you:

- Run the `clean-cache` utility.
- Copy the component files to a remote server after configuring components settings on a local host.

NOTE: You can also configure components if you use an input file. For more information about input files, see "Using the command line interface (CLI) with Input files" (page 67).

Fixes						
Search:						
Component	Name	Type	Criticality	Version	Configuration	▼
cp019016.exe	HP Insight Management WBEM Providers for Windows Server	Driver	Recommended	9.4.0.0	Needs configuration	
cp019017.exe	HP Insight Management WBEM Providers for Windows Server x64 Editions	Driver	Recommended	9.4.0.0	Needs configuration	
cp020257.exe	HP System Management Homepage for Windows x86	Driver	Recommended	7.2.2.9	Needs configuration	
cp020258.exe	HP System Management Homepage for Windows x64	Driver	Recommended	7.2.2.9	Needs configuration	

To configure components:

- On the Baseline Library screen, scroll down to the list of components, and then click **Needs Configuration** for each component you need to configure. Configuration options vary based on the component.

NOTE: HP SUM 7.x does not support configuring components released prior to the HP SPP 2013.09.0(B). Use HP SUM 5.3.5 to update these components.

Using the Nodes screen

Nodes are hardware environment components. The Nodes screen displays the nodes that you have added to HP SUM and HP SUM can manage. On the Nodes screen, HP SUM displays information about the node, depending on the node type. Some information HP SUM displays includes:

- General
- Associated devices
- Storage
- NIC/FC-HBA/CNA
- Enclosures
- Switches

- Partitions
- Cartridges
- VC information
- OA information
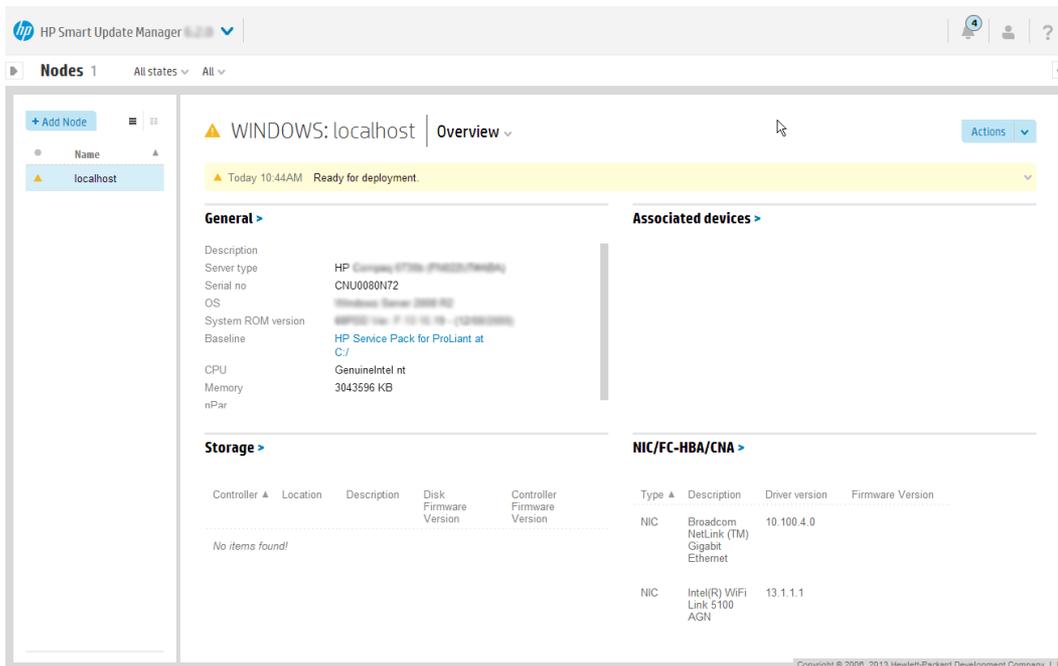
The yellow information bar under the node name gives a brief description of the status or action you can perform next on the node. Click the arrow to expand for full details. For example, after you add a node, the status bar might give a link to Inventory the node. Or, after you inventory a node, the status bar will provide a link to review the updates before you deploy updates. This status bar also includes a log that details the activity that HP SUM is performing on the node.

NOTE: The details that HP SUM displays vary based on the node type.

The Deployment Type screens provide the same information as the main Nodes screen, but it filters on the specific node type, for example OA or iLO.

Adding a node

You can add a node using a specific IP address or by searching an IP address range. Prerequisites for adding a node:

- Know the IP address of the node you are adding.
- Know the type of node you are adding. This helps HP SUM complete the inventory faster.
- If you are planning to assign a baseline to a node, add the baseline first. For more information, see "Adding a baseline" (page 26).

NOTE: HP SUM uses the same function to add all node types.

1. From the Nodes screen, click **Add Node**.

    If you want to add a single node by IP or DNS name, go to the next step, and then skip step 3. If you want to search a range of IP addresses for node, skip to step 3.

2. If you want to add a single node by IP or DNS name:

Add New   ?

Nodes

Select the type of add: Add a single node or known range of nodes ▾

IP/DNS: 10.0.0.15

Description: Windows

Type of node to add: Windows ▾

If active update process is detected on the remote node, HP SUM should

○ Leave the update running and bypass the node

● Stop any currently running update process on the node and replace it with updates from this session

Baseline to Apply

(Optional) Select an already added and inventoried baseline and/or additional package to apply to this node. If not added now, a baseline or additional package must be specified when Inventory is started on the node.

Baseline: | 🔍

Additional Packages

an_test_baseline

HP Moonshot Component Pack 2014.06.0 2014.06.0 at C:

Node Group

[Add] [Start Over] [Close]

a. Select **Add a single node or known range of nodes**.

b. Enter the IP address, DNS name, or range of IP addresses. For example, entering 10.0.1.1–10.0.1.20 adds 20 nodes.

c. Enter a description for the node.

d. In the **Type of node to add** field, select the node type. If you do not know the node type, select **Unknown**. During the inventory process, HP SUM determines the node type.

> **NOTE:** Selecting the correct node type might help HP SUM complete node inventory faster.

Some nodes require information that is specific to the node. For more information about the requires for each node, see "Node-specific additional details" (page 35).

For more information on a Moonshot node, see "Moonshot node overview" (page 41).

e. Select the baseline, additional package, or both to apply to this node. This is optional.

f. Select a group from the list, if you want to assign the node to a group.

g. Select one of the following:

- **Use current credentials (requires existing trust relationship with the node)**: This option is for Windows nodes only.

- **Enter administrator credentials**: Enter the username and password.

h. Linux and HP-UX nodes allow you to use sudo credentials to deploy updates without logging into the node with root credentials. To use sudo commands, you have to install sudo capabilities on the node.

> **NOTE:** Super user and sudo are not available for all nodes.

If you want to use sudo, in the **Access Level** field, select one of the following:

- Click **Use sudo to update components** if you want to use sudo credentials.

- Click **Enter super user credentials to update components** if you want to enter super user credentials.

> **NOTE:** If you are using super user credentials, enter normal user credentials in the Credentials field, and then add super user credentials in the Access Level field. HP SUM first logs in using the normal user credentials, and then uses the super user credentials to log into the super user account.

i. Click **Add**.

3. If you want to add a node by searching a range of IP addresses:
   a. Select **Find nodes on network with an IP range**.
   b. Click **Find Nodes**.
   c. Enter a range of IP addresses for HP SUM to search, and click **Search**.

   NOTE: HP SUM only searches one subnet/octet, the final four digits of an IPv4 address. HP SUM does not search IPv6 networks.

   HP SUM displays the nodes it finds in the **Available Nodes** field.

   d. Select the nodes you want to add from the **Available Nodes** section, and then click **Add Nodes**.
   e. If you want to assign a baseline, select a **Baseline**, **Additional Packages** in the **Baseline to Apply** field.
   f. In the **Credentials** section, select whether to **Use current user credentials** (Windows only) or **Enter administrator credentials**.

   If you choose to enter administrator credentials, enter a username and password.

4. Click **Add**.

   In the **Added Nodes** section, HP SUM displays the nodes you selected.

5. Click **Cancel** to go back to the Nodes screen.

Node-specific additional details

Some nodes have node-specific information that you need to include when you add a node.

Node type	Additional details
Windows	- Enter what you want to do if HP SUM detects an update process on the node: **Leave the update running and bypass the node** **Stop any currently running update process on the node and replace it with updates from this session**
Linux	- Enter what you want to do if HP SUM detects an update process on the node: **Leave the update running and bypass the node** **Stop any currently running update process on the node and replace it with updates from this session** - Select the access level for this node: - None - Use sudo with credentials entered above - Enter super user credentials to update components
HP-UX	- Enter what you want to do if HP SUM detects an update process on the node: **Leave the update running and bypass the node** **Stop any currently running update process on the node and replace it with updates from this session** - Select the access level for this node: - None - Use sudo with credentials entered above - Enter super user credentials to update components
VMware Host	No node-specific settings.
Onboard Administrator	Select whether you want to automatically add associated nodes. This adds all nodes in the chassis. If you are updating OAs and iLOs at the same time, select this for OA nodes so HP SUM detects associated iLO nodes. HP SUM can determine the proper deployment order when you deploy updates to the OA. If you do not provide credentials, HP SUM uses the credentials you provide for the OA for associated VCs.
Superdome 2 Onboard Administrator	No node-specific settings.

Node type	Additional details
HP SAS B/L Interconnect Switch	• Select whether you want to automatically add associated nodes. This adds all nodes in the chassis. Add the Associated Onboard Administrator's credentials • **Associated Onboard Administrator IP/DNS** • **Use credentials above**: Uses the same credentials you entered previously. • **Enter administrator credentials**: Enter the credentials if they differ from the credentials you entered earlier.
Fibre Channel Switch	• Select whether you want to automatically add associated nodes. This adds the onboard administrator.
iLO	• Select whether you want to automatically add associated nodes. This adds the onboard administrator. **IMPORTANT:** Do not add an iLO as a node if you are going to use it as the interface iLO in an iLO Federation group. If you are updating OAs and iLOs at the same time, select this for OA nodes so HP SUM detects associated iLO nodes. HP SUM can determine the proper deployment order when you deploy updates to the OA.
Intelligent Power Distribution Unit (iPDU)	Add the Partner iPDU credentials • **Partner iPDU IP/DNS** • **Use credentials above**: Uses the same credentials you entered previously. • **Enter administrator credentials**: Enter the credentials if they differ from the credentials you entered earlier.
Virtual Connect	Some VC options, such as VC Activation order, can be set from the Edit Node or Review/Deploy Node screen. • Select whether you want to automatically add associated nodes. This adds all nodes in the chassis. Add the Associated Onboard Administrator's credentials • **Associated Onboard Administrator IP/DNS** • **Use credentials above**: Uses the same credentials you entered previously. • **Enter administrator credentials**: Enter the credentials if they differ from the credentials you entered earlier.

Editing a node

Nodes are changed using the Edit option on the Nodes screen. Make sure HP SUM has completed all functions, for example, node inventory or deployment, before you edit a node.

NOTE: HP SUM uses the same function to edit all node types.

1. From the Nodes screen, highlight the node and then select **Actions→Edit**.
2. Change the items you want to edit:
   • **Description**
   • **Type**

> **NOTE:** Select the check box if you want HP SUM to automatically add Associated Devices. (Not available for all node types.)
>
> If you are updating OAs and iLOs at the same time, select this for OA nodes so HP SUM detects associated iLO nodes. HP SUM can determine the proper deployment order when you deploy updates to the OA.

- HP SUM displays the currently selected baseline and additional package. Use the drop-down menu if you want to change these.

  > **NOTE:** If you want to delete a baseline or additional package, the baseline or additional package cannot be associated with a node. Associate a new baseline or delete the node to delete a baseline.

- **Credentials**
- **OS Management Options** – None, Use SNMP, Agentless Management Service, Use WBEM
- **Reboot Options** – Reboot system, Reboot delay, Reboot message
- **Installation Options** – Downgrade or rewrite versions
- **Force Options** – Show firmware or software updates

3. Click **OK** to accept the changes and return to the Nodes screen.

Aborting a node update

If you have deployed updates to a node and want to cancel the updates:

- From the Nodes screen, highlight the node, select **Actions→Abort**.

  > **NOTE:** If HP SUM has started to perform updates, it completes the component update it is deploying, and then aborts the remaining component updates. HP SUM does not display the **Abort** button if it is only applying one component.

Node inventory

The node inventory collects information about the node, and the firmware, software, and driver versions installed on the node.

HP SUM cannot inventory a node if the credentials are not valid. If the credentials are not valid for the node, edit the node credentials. For more information, see "Editing a node" (page 36).

> **NOTE:** If you perform inventory on an OA node, HP SUM automatically adds and inventories the associated nodes if you select the check box on the Add Nodes screen. Add VC credentials separately. If you perform inventory on other nodes, HP SUM does not find an associated OA until the end of the inventory process. Add credentials to the OA and then perform inventory on the OA node.

> **NOTE:** HP SUM uses the same inventory function for all node types.

1. From the Nodes screen, highlight the node and then select **Actions→Inventory**.
2. HP SUM displays the baseline associated with the node. If you want to reassign the baseline that HP SUM will use for inventory, select a baseline, additional package, or both.

3. Click **Inventory**. HP SUM displays errors that you need to resolve before you can deploy updates. For example:
   - The node is part of an active Serviceguard cluster.
   - The node does not have enough disk space.
   - The node is managed by HP OneView.

Deploying a node

When you open the Deploy screen, HP SUM displays the IP/DNS address for the node and node type. The Deploy screen displays components available for deployment, and if a version of the component is installed on the node, HP SUM displays the Installed version and Active version of the component.
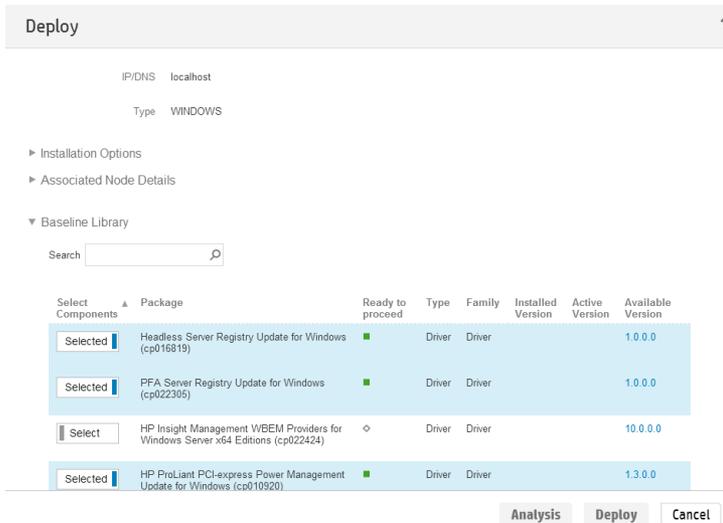
NOTE: HP SUM supports configuring components on the Baseline Library screen. For more information, see "Configuring components" (page 31).

To set deployment options:

NOTE: The Deploy function only deploys the current partition if you are updating an HP Integrity BL870c i4 and BL890c i4 server. If you want to deploy an enclosure, see "Deploying all partitions in an HP Integrity BL870c i4 or BL890c i4 node" (page 40).

NOTE: HP SUM uses the same deploy function for all node types.

1. From the Nodes screen, select a node to update, and then select **Actions→Review/Deploy**.
2. If you want to change installation options, click **Installation Options** and then select from the following:
   - **Downgrade**: This allows you to downgrade all of the components in the node to an older firmware version without clicking **Force** for each component in the baseline library list.

> **NOTE:** If you click **Downgrade**, HP SUM displays only components that can downgrade the node.

- **Rewrite**: This allows you to rewrite the current firmware version to components in the node without clicking **Force** for each component in the baseline library list.
- If you want to downgrade or rewrite options to firmware or software only, click **Firmware/Software options can be applied to**, and then select from the following:
    - ○ **Firmware**: This displays only firmware updates.
    - ○ **Software**: This displays only software updates.

3. In the **Associated Node Details** field, select any nodes that you want to update along with this node.
4. In the **Baseline Library** field, select each component that you want to update. Use the Search box to type in search terms for the components. For more information about an update, click the version number. If you are deploying a Linux node, HP SUM displays only RPM updates that are valid for your node.

> **NOTE:** You can click **Force** to downgrade or rewrite a component that is available for downgrade or rewrite. If you select **Downgrade**, **Rewrite**, or both in the **Installation Options**, HP SUM does not display the **Force** button.

5. HP SUM can reboot server node types. If you want HP SUM to initiate a reboot after updates are deployed, click **Reboot Options** and do the following:
   a. In **Reboot System After Installation**, select **Never**, **If Needed**, or **Always**.
   b. In **Reboot Delay (seconds)**, enter the number of seconds you want the node to wait before beginning the reboot. The minimum delay is 15 seconds, and the maximum display is 3600 seconds.
   c. In the text box, enter a reboot message of up to 255 characters to display before the node reboots.

> **NOTE:** If HP SUM cannot successfully deploy all updates in a node, it does not reboot the node. View the deployment logs to find and resolve the issue before you reboot the node.

6. HP SUM displays a list of updates that are available. You can select or deselect updates that you don't want to perform. If HP SUM finds two versions of the same component, HP SUM displays the component that matches the following specifications:

- HP SUM displays the RPM version of a component and hides a SCXE version of a component.
- HP SUM compares the component operating system to the node operating system. HP SUM displays the correct component version for the operating system. For example, if the baseline includes a 32-bit version of a component and a 64-bit version of a component, HP SUM checks the operating system of the node and displays only the version that applies.

7. If you added or removed any components from the list, click **Analysis**.
8. Click **Deploy** to begin the deployment.

> **NOTE:** To begin the deployment, all dependency issues must be resolved, for example, adding a baseline, administrator credentials, and supported installed versions.

9. Click **View log** for the node, in the General section of the Node screen, and then click **View log** for the component you installed, to view the details of the installation.

Deploying all partitions in an HP Integrity BL870c i4 or BL890c i4 node

1. Inventory the HP Integrity BL870c i4 or BL890c i4 node partition.

   When HP SUM completes the inventory, it displays associated partitions in the Associated Devices section.

   NOTE: Begin inventory on the Onboard Administrator and HP SUM automatically inventories all partitions and displays **Deploy Domain**.

2. Click **Deploy Domain** in the yellow status box.
3. Select the following

   - In the Baselines section, select the baselines you want HP SUM to use.
   - In the Installation Options section, select if you want to downgrade or rewrite the updates.
   - In the Reboot Options, select any partitions you want to reboot after updating.

     NOTE: If you make any changes to these sections, click **Analysis**.

4. Click **Review/Deploy**.

   HP SUM closes the Deploy Integrity iLO Domain screen, and updates the domain.

Node reports

You can generate reports that give details about the node firmware, software, and driver details, components you can install, failed dependencies for nodes, and updates HP SUM installs. The reports for a node enable you to generate HTML, XML, and CSV reports. On the Reports screen, HP SUM includes a **Reports Center** that displays previous reports you have generated.

NOTE: HP SUM uses the same function to generate reports for all node types.

1. From the Nodes screen, select a report or multiple reports, and then select **Actions→Report**.

2. Select the reports you want to generate:

   - **Firmware details**: This displays firmware versions that are currently installed on the node.
   - **Deploy preview**: This displays components that HP SUM can install on the node.
   - **Failed Dependency details**: This displays any failed dependencies on the node.
   - **Last deploy details**: This displays details about what HP SUM installed on a node.

- **Inventory**: This displays details about what components are in the baselines.
- **Combined**: This generates one of each report type.

> **NOTE:** If you cannot select a report, HP SUM might not have enough information to generate the report.

3. Click the report format you want HP SUM to generate, **HTML**, **CSV**, or **XML**.
4. **Run in Background**: Select whether you want the run the report in the background or not.
5. Click **Generate**.

Deleting a node

1. From the Nodes screen, highlight the node, and then select **Actions→Delete**.

> **NOTE:** If you want to delete a baseline, the baseline cannot be associated with any nodes. First assign a new baseline to the nodes that use the baseline.

2. Click **Yes, Delete** to confirm you want to delete the node.

Server overview

When you select a node, the Server Overview screen displays a progress bar for inventory and deployment of the node, and information about the node. You can change the baseline for the server on this screen.

During the inventory and deploy process, HP SUM displays a progress bar for current tasks.

> **NOTE:** If you added an Integrity node, see "Integrity node overview" (page 41) for more information.

Integrity node overview

If you added an Integrity node, HP SUM automatically displays the Server Overview screen after HP SUM finishes inventorying and adding the node. HP SUM displays the following information:

- Model
- Associated OA (if the node is a blade)
- Complex firmware version
- Location
- Part number
- Serial number
- List of devices

Moonshot node overview

HP SUM displays the following information for Moonshot nodes:

- Description
- Chassis Name
- Product Name
- Installed Version
- Baseline
- Serial Number
- Product ID

- UUID
- Switch information
- Cartridge information

NOTE: The first time you deploy updates to a Moonshot node, HP SUM does not display the Installed Version or Active Version. After deploying updates, HP SUM displays the Installed Version and Active Version the second time you deploy updates using HP SUM.

The following actions are available from the Overview screen:

- **Add**: See "Adding a node" (page 32).
- **Edit**: See "Editing a node" (page 36).
- **Report**: See "Node reports" (page 40).
- **Deploy**: See "Deploying a node" (page 38).

    NOTE: HP SUM disables the Reboot options for Moonshot nodes.

Using the Node Groups screen

The node groups screen allows you to combine nodes and perform tasks as a group instead of individually. You can assign baselines, enter credentials, perform inventory, and review and deploy updates to all nodes in the groups that share these settings. The settings you assign on a group screen, for example a baseline, overrides what you applied to the node when you added the node to HP SUM.

NOTE: If you do not enter a setting to a node group, HP SUM uses the information from the node. For example, if you leave the node group credentials blank, HP SUM uses the credentials you entered on the Nodes screen.

Adding a node group

1. On the Groups screen, click **Add Node Group**.

2. Enter a **Node Group Name**.
3. Enter a **Node Group Description**.
4. In the **Add Node(s) to Node Group** section, select the nodes that you want to add to the group.
5. In the **Baseline** section, select a **Baseline** and **Additional Packages** (optional) for the group, if you want all the nodes to use the same baseline..

> **NOTE:** The baseline or additional package you select overrides the baseline or additional package you selected on the Nodes screen.

6. Click **Add**.

> **NOTE:** To remove a node from a node group, click the **X** on the right side of the row for the node.

Editing a node group

1. Select a node group from the list.
2. Select **Actions→Edit**.
3. Enter a new **Node Group Name**, if you want to change it.
4. Enter a new **Node Group Description**, if you want to change it.
5. In the **Add Node(s) to Node Group** section, select the nodes you want to add to the node group.
6. In the **Remove Node(s) from Node Group** section, select the nodes you want to remove from the node group.
7. Select the baseline and additional package, if you want to change them for all the nodes in the node group.
8. Enter new user credentials, if you want to change them.
9. Click **OK**.

Node group inventory

1. Select a node group from the list.
2. Select **Actions→Inventory**.
3. HP SUM displays the selected baseline and additional package. You can change the baseline or additional package.
4. Click **Inventory**.

Deploying a node group

1. Select a node group from the list.
2. Select **Actions→Review/Deploy**.
3. Select the **Installation Options** you want to deploy.
4. Select the **Reboot options**.
5. Select the **Baseline Library** components you want to deploy.
6. Click **Analysis**.
7. Click **Deploy**.

Node group reports

1. Select a node group from the list.
2. Select **Actions→Reports**.
3. Select the reports you want to generate.

   HP SUM generates the same reports for node groups and for nodes. For more information about the reports, see "Node reports" (page 40).

Aborting a node group update

1. Select a node group from the list.
2. Select **Actions→Abort**.

Deleting a node group

1. Select a node group from the list.
2. Select **Actions**→**Delete**.
3. Confirm that you want to delete the node group.

4 Advanced topics

Configuring IPv6 networks

You can deploy to remote nodes in IPv6-based networks for Windows and Linux node servers. Using HP SUM with IPv6 networks presents challenges for IT administrators.

For Windows-based servers, to communicate with remote node servers, HP SUM uses either existing credentials or the user-provided user name and password to connect to the admin$ share. This share is an automatic share provided by Windows Server. After HP SUM connects to the admin$ share, it copies a small engine to the node server for the duration of the installation. After this engine starts, HP SUM uses this engine to communicate between the local and remote node server. During this process, HP SUM opens ports in the Windows firewall to enable HP SUM to communicate with the HP SUM engine on the node over SSL to pass data among local and remote systems. For more information about the ports used, see "Making HP SUM network ports available" (page 45). After the installation is completed or canceled, HP SUM stops the remote engine, removes it from the node, closes the port on the Windows firewall, and then releases the share to the node server admin$ share.

For Linux-based servers, to communicate to remote node servers, HP SUM starts by using the user-provided user name and password to create a SSH connection to the node server. After it connects, HP SUM copies a small engine to the node server for the duration of the installation. After this engine starts, HP SUM uses this engine to communicate between the local and remote node server. During this process, HP SUM opens ports in the iptables firewall to enable HP SUM to communicate with the HP SUM engine over SSL to pass data between the local and remote systems. For more information about the ports used, see "Making HP SUM network ports available" (page 45). When the installation is completed or canceled, HP SUM stops the remote engine, removes it from the target server, closes the port in the iptables firewall, and then closes the SSH connection to the node server.

To set up IPv6 networking, refer the documentation for your operating system.

Making HP SUM network ports available

HP SUM requires that certain network ports are available for proper operation. If you lock down network ports, make sure that the ports listed in the network port tables are open so that HP SUM works correctly when connecting to remote node servers and hosts. If you are unable to unlock these network ports, you must run HP SUM locally and update network-based hosts, such as the OA, iLO, and VC modules, through their web interfaces.

NOTE: Use the `open_firewall` parameter for HP SUM to automatically open the required firewall ports on the local host and any remote servers.

Updates for most node types require network traffic in both directions between the server running HP SUM and the node. The server running HP SUM creates a local HTTP server, which is used to serve firmware binaries to the node and to communicate node status. The remote node issues HTTP requests and posts status updates to the server running HP SUM during the update process. If there is a routing problem or firewall blocking traffic back from the remote node to the system running HP SUM, firmware updates might be blocked, status updates blocked or delayed, or both.

Table 2 HP SUM Windows network ports

Ports	Description
Port 22	Establishes a connection to a remote node via SSH to perform node inventory.
Port 443	A secure data port used to transfer information.

Table 2 HP SUM Windows network ports *(continued)*

Ports	Description
Ports 445 and 137/138/139 (Port 137 is used only if you are using NetBIOS naming service.)	Connects to the remote ADMIN$ share on node servers. These are the standard ports Windows servers use to connect to the remote file shares. If you can connect remotely to a remote Windows file share on the node server, you have the correct ports open.
Port 5989	This port is used for VMware WBEM discovery. Make sure this port is not blocked on the VMware ESXi or VMware vSphere host.
Ports 63001–63002	Updates are passed to the node and retrieved through an internal web server that runs by default on port 63001 for localhost http traffic and port 63002 for local and remote secure https traffic. This allows iLO and VC firmware updates without having to access the host server. It also allows the servers to run VMware or other virtualization platforms to update the iLO firmware without requiring a server reboot or a migration of the virtual machines to other servers. Remote HP Integrity iLO and Superdome 2 updates require these ports to be open on systems for network traffic in both directions to transfer firmware files.
Ports 21 or 63006–63010	You can use these FTP ports to perform switch updates.

Table 3 HP SUM Linux network ports

Ports	Description
Port 22	Establishes a connection to a remote node via SSH to perform node inventory.
Port 443	A secure data port used to transfer information.
Port 5989	This port is used for VMware WBEM discovery. Make sure this port is not blocked on the VMware ESXi or VMware vSphere host.
Ports 63001–63002	Updates are passed to the node and retrieved through an internal web server that runs by default on port 63001 for localhost http traffic and port 63002 for local and remote secure https traffic. This support allows iLO and VC firmware updates without having to access the host server. It also allows servers running VMware or other virtualization platforms to update their iLO without having to reboot their server or to migrate their virtual machines to other servers. Remote HP Integrity iLO and Superdome 2 updates require these ports to be open on systems for network traffic in both directions to transfer firmware files.
Ports 21 or 63006–63010	You can use these FTP ports to perform switch updates.

NOTE: HP SUM 6.0.0 and later supports `/port` and `/ssl_port` options, which allow you to use ports other than 63001 and 63002. Use these options to avoid conflicts with firewalls. HP SUM supports `--open_firewall` on Linux systems only. HP SUM uses the `iptables` command to open the HTTP and HTTPS ports used by HP SUM for external access. Open these ports for remote node functionality and for remote browser access. For example:

```
hpsum /port 80 /ssl_port 443
```

Beginning with HP SUM 6.3.0, you can use the command `/ftp_port` to assign which port to use for FTP service. By default FTP port is disabled. Use the command to enable the service.

Changing the port address in the `hpsum.ini` file

You can change the default ports in the hpsum.ini file, instead of using the `/port` or `/ssl_port` parameters.

1. Navigate to the `hpsum.ini` file in the temp directory, `%temp%\HPSUM` (Windows) or `/tmp/HPSUM` (Linux).

    > **NOTE:** HP SUM creates this directory the first time you launch HP SUM. If you have not launched HP SUM, launch it and then shut it down.

2. Open the file in a text editor, and edit the following items in the **[HTTP]** section.
    *   `port=63001` edit to `port=80`
    *   `ssl_port=63002` edit to `ssl_port=443`
3. Save the file.
4. Launch HP SUM. It now uses the 80 and 443 ports.

Enabling HP SUM ports for VMware nodes

By default, outgoing connections are blocked in VMware servers, except ports 80 and 443. Use the following steps to enable the default ports of 63001 and 63002. You need to enable these outgoing ports on the VMware server.

1. Create an httpHPSUM firewall rule that enables outgoing connection via port 63001.
2. Create the file `httpSUM.xml` in the `/etc/vmware/firewall` directory. Type the following into the file:

```
/etc/vmware/firewall # cat httpHPSUM.xml
<!-- Firewall configuration information for FDM -->
<ConfigRoot>
<service id='0000'>
<id>httpHPSUM</id>
<rule id='0000'>
<direction>outbound</direction>
<protocol>tcp</protocol>
<porttype>dst</porttype>
<port>63001</port>
</rule>
<enabled>true</enabled>
<required>false</required>
</service>
</ConfigRoot>
```

3. Refresh by using the command, `esxcli network firewall refresh`.
4. Repeat the steps for port 63002.

Special network configuration note for HP Integrity servers

HP Integrity servers have management network and production interfaces. These are usually kept on separate subnets in an installation. To perform full remote administration of the server, access is required for both networks. If you keep both networks isolated, you need to perform management and operating systems tasks separately.

GatherLogs

HP SUM provides a tool that collects all log files into one file. If you are troubleshooting an issue, run `gatherlogs`. The script is available in the same directory that holds HP SUM.

5 Troubleshooting

Collecting trace directories

If you need to contact HP for support with an issue, run the `GatherLogs` utility. `GatherLogs` is in the same directory as HP SUM.

HP SUM generates a set of debug trace logs that contain internal process and debug information which can be useful in determining HP SUM failures. Trace directories are stored in the `/tmp/HPSUM` (Linux) and `%temp%\HPSUM` (Windows) directories. HP SUM creates trace directories for each function and node that HP SUM updates.

HP SUM includes a utility named `GatherLogs.bat` (Windows) or `Gatherlogs.sh` (Linux) to create a compressed .zip (Windows) or tar.Z (Linux) file with all the logs. If you need to review the log files, you can run this utility to gather all the logs in one file.

NOTE: Exit HP SUM before running the `GatherLogs` utility.

If you are running HP SUM in offline mode, use the following instructions to collect trace directories and logs.

1. Launch HP SUM in offline mode.
2. Launch the command prompt from the HP SUM GUI by pressing **CTRL-ALT-D-B-X**.

   NOTE: After approximately 30 seconds, the command prompt appears over the HP SUM GUI window.

3. Change the directory to the one running HP SUM. For example, `cd /mnt/bootdevice/SPP2012060B/hp/swpackages`.
4. Type `./gatherlogs.sh` to collect the HP SUM logs. All logs are collected in a `.tar.gz` file in the directory where you placed HP SUM or in a temp directory if the HP SUM directory is read-only. The log file is named `HPSUM_Logs_$(datetime).tar`.
5. Place the logs on a removable media if you want to view them on another computer.

HP SUM stores logs in the following locations:

Logs	Windows directory	Linux directory
User level logs	`C:\cpqsystem\hp\log`	`/var/hp/log`
Debug logs	`%temp%\HPSUM`	`/tmp/HPSUM`
Local copy of HP SUM binaries when needed*	`%temp%\localhpsum`	`/tmp/localhpsum`
Remote node files	`admin$\temp`	`/tmp/HPSUM`

*HP SUM 6.3.0 and higher makes a local copy of binaries and support files when HP SUM is launched from a network mounted share or read-only location. This allows HP SUM uninterrupted access during updates.

NOTE: On Linux systems, if you do not find logs in the locations listed above, check the directory `/var/cpq/Component.log`.

Baseline troubleshooting

HP SUM lists SUSE Enterprise Linux dependencies for Red Hat Enterprise Linux systems

Solution: No action to take. HP SUM incorrectly lists the SUSE components. HP SUM will install the Red Hat components.

HP SUM displays two versions of the same component when creating a custom baseline

Solution: Multiple instances of the same component can be seen when creating a custom baseline because the same component exists in the multiple baselines that were selected to be included in the custom baseline. When you create a custom baseline, make sure you only select one version of a component if it is included in multiple source baselines.

HP SUM stops responding when performing inventory on large baselines

Solution: Only perform inventory on one large (SPP-size) baseline at a time. Performing inventory on more than one inventory might use too many system resources.

HP SUM deletes the baselines and nodes after quitting a Remote Desktop session

Solution: This is a known issue with Remote Desktop. For more information, see the article on the Microsoft website:

http://technet.microsoft.com/en-us/library/cc755098.aspx

HP SUM cannot connect to a UNC path baseline

Solution: To work around this issue, map to the drive where the UNC path directory is pointing.

Node troubleshooting

HP SUM does not respond when editing a node with sudo

Solution: Make sure the user that is logged into HP SUM is part of the administrator group for the system.

HP SUM does not display the **Deploy** button on the Deploy Nodes screen

Solution: Make sure that HP SUM has resolved all dependencies before attempting to deploy updates. If HP SUM discovers a failed dependency, it does not activate the **Deploy** button.

An HP-UX node displays the error Inventory failed. The pciinfo module requires manual update on remote target

Solution: Use the following instructions to resolve the error:

1. Close all tasks and back up important data on the node server.
2. Log in to the node server with root privileges.
3. Transfer the file `pciinfo.depot`, located in the HP SUM directory `/ia64/` to the node server.
4. Run **swinstall -x autoreboot=true -s 'pwd' ./pciinfo.depot PCCIINFO**.
5. After the update finishes, you can re-run HP SUM on a remote host to continue with additional updates.

HP SUM does not detect solid state hard drives

Solution: If HP SUM does not detect the solid state hard drive, run the smart component individually.

After HP SUM finishes an inventory, the inventory screen does not close

Solution: Click the **Cancel** button to close the inventory screen.

Cannot add a Windows node when running HP SUM on a Linux host

Solution: Run HP SUM on a Windows host to add Windows nodes.

HP SUM does not display a reboot message in Guided Update

Solution: No action to take.

HP SUM displays message Unable to locate the item you requested

Solution: Press **F5** when HP SUM displays this message.

HP SUM stops responding when performing inventory on multiple nodes

Solution: Inventory only one node at a time. When performing inventory on multiple nodes at the same time, the host might run low on resources.

HP SUM displays the message Unable to login or identify node as a supported device when HP SUM cannot find a node

Solution: Ping the node to make sure it is on the network. HP SUM might not be able to connect to the node. If the node is running Windows, be sure an $Admin share is enabled.

If the node is an Onboard Administrator, be sure HTTP and SSH access are enabled for the enclosure in the Network Access settings section.

HP SUM displays the message `Ready for deployment` while HP SUM is performing inventory on a node

Solution: Make sure that HP SUM completes an inventory before attempting to deploy updates to a node.

HP SUM does not display an entire screen

Solution: Change the resolution of a display or browser.

You can edit a node while HP SUM is deploying updates to the node

Solution: Wait for HP SUM to finish deployment before editing a node. Editing a node before HP SUM finishes deployment might cause issues with the deployment.

HP SUM automatically performs inventory on a node after editing the node

Solution: No action. This is a known issue.

NIC firmware does not activate during reboot from HP SUM

Updates on Broadcom and Intel cards do not activate on reboot that HP SUM initiates.

Solution: Manually reboot the NIC. Select the EFI shell during the boot sequence. The update continues and reboots to HP UX after it completes.

HP SUM returns an update error for HP host bus adapters H220, H221, H222, and H210

Solution: View the component log, if the return code is 7, the Linux node is missing a 32-bit library dependency. For more information on the dependencies, see the *HP Smart Update Manager Release Notes*.

HP SUM cannot upgrade VC in FIPS mode

Solution: Use HP SUM 6.3.0 or later to upgrade VC nodes in FIPS mode.

The command `open_firewall` does not work on some nodes

Solution: HP SUM is unable to open the firewall in all instances. These include: third-party firewall applications, Linux iptables DROP entries, and firewalls with complex rules. When the `open_firewall` command does not work, manually open the firewall and then HP SUM can manage the node.

Inventory fails on remote Windows nodes

The node logs display the error `RegOpenKeyEx failed with error RegOpenKeyEx completed with error 997: Overlapped I/O operation is in progress`. This might be an issue with other processes running on the remote Windows node, for example a backup or process that accesses the registry.

Solution: Shut down the remote process that is accessing the registry, or run HP SUM locally on the node to perform inventory and deploy updates.

Activity screen troubleshooting

HP SUM does not update the Activity screen accurately

Solution: No action. This is a known issue.

VMware troubleshooting

HP SUM displays an inventory error on a VMware node

Solution: Use the following steps to make sure the VMware service is running.
1. Log in to the VMware ESXi shell.
2. Check the provider version, type **esxcli software vib list | grep smx**.
3. Verify that the provider service is running, type **/etc/init.d/sfcbd-watchdog status**.
4. Verify that the provider responds to queries, type **enum_instances SMX_SCInstallationService root/hpq**.
5. If you need to restart the service, type **/etc/init.d/sfcbd-watchdog restart; /etc/init.d/sfcbd-watchdog status;**.

HP SUM cannot downgrade Virtual Connect from 4.10 to 4.01

Solution: Make sure that previous updates are activated before attempting to downgrade the VC. Reset the modules if necessary.

Reports troubleshooting

HP SUM does not generate reports for nodes that are offline

Solution: Verify that HP SUM can ping the node.

HP SUM displays only requested reports in CSV and XML format

Solution: No action to take. This is the expected result.

HP SUM engine troubleshooting

HP SUM engine stops running when HP SUM is mounted from a virtual media source

Solution: Do not mount a virtual media source through an iLO and attempt to update firmware on the iLO. A known issue causes the iLO to restart and causes HP SUM to stop working.

HP SUM allows all users to log in

Solution: All users can log into HP SUM. Only users with administrator permission can deploy updates or add nodes.

Some screens are not translated from English

Solution: No action. This is a known issue that will be fixed in a future version.

HP SUM displays the error message "Multiple connections to a server or shared resource by the same user…"

HP SUM uses the admin$ share function on Windows-based servers to copy files and perform required operations on remote node servers. If HP SUM detects multiple connections to the remote Windows node, it might display "Multiple connections to a server or shared resource by the same user, using more than one user name, are not allowed. Disconnect all previous connections to the server or shared resource and try again."

Suggested Action: If HP SUM displays the error check for open `admin$` shares on the remote node you want to update, and remove the connections. Use the following commands to check for open shares and delete them:

1. Open a command prompt window.
2. Type **net use**.
3. If open connections on the remote node are found, type:

   net use <node_admin_share> /delete

4. Attempt the operation in HP SUM that caused HP SUM to display the error.

HP SUM does not use the expected language

Suggested Action: Make sure that the expected language is selected in the host system's language settings. HP SUM does not support using the language selected in the web browser.

HP SUM on a mapped drive stops working after an idle period

Suggested Action: Run HP SUM locally, not from a mapped drive. For more information about running an application from a mapped drive see http://social.msdn.microsoft.com/Forums/windowsdesktop/en-US/d8e7aa2e-95ba-48b5-9ce3-e7cb9f5e57b2/issues-running-applications-from-network-shares?forum=windowsgeneraldevelopmentissues.

CLI commands troubleshooting

HP SUM does not deploy multiple components if all specified separately in one command

Solution: Copy the components into a directory and use the `/use_location` command. If you are deploying more than ten components, use the work around.

The `/use_web` CLI command does not work

Solution: No action. This is a known issue. This version of HP SUM does not support this command.

6 Running commands outside the GUI

HP SUM provides three ways to run system commands outside the GUI. These include CLI, CLI with Input Files, and interactive CLI. The HP SUM CLI allows you to add all parameters in one command line, and then use the silent switch to execute the entire sequence on multiple nodes without any user interaction. This method requires the use of the silent switch and requires no user interaction. You can update one or more nodes using this method. For more information, see "Using the command line interface (CLI) to deploy updates" (page 53).

Using the HP SUM CLI with Input Files allows you to add all parameters to a text file, and then call HP SUM using the inputfile command with the text filename as the parameter. This method requires the use of the silent switch and requires no user interaction. Using the input file method allows you to provide a larger number of nodes to update. For more information, see "Using the command line interface (CLI) with Input files" (page 67).

The HP SUM iCLI provides an interactive method for each step of a process. You can run each command individually to add a baseline, add a node, start inventory, and so on. This method is similar to using the GUI but you provide individual commands instead. HP SUM iCLI takes a single command at a time. Using this method allows you to have nodes a different stages of update. For example, you can have one node in the inventory phase, one node in the deployment phase, and another node that you are just adding. For more information, see "Using the interactive command line interface (iCLI) to deploy updates" (page 88).

The HP SUM binary executable maintains state information as needed on a per-session basis. HP SUM saves this information in the `hpsum.ini` file. This file is in the `%tmp%\HPSUM\` location in Windows and `/tmp/HPSUM/` in Linux. HP SUM stores the user, session ID, host, and port information. This information enables you to log in and run HP SUM using different credentials.

Using the command line interface (CLI) to deploy updates

The HP SUM CLI allows you to add all parameters in one command line, and requires use of the silent switch to execute the entire sequence on multiple nodes without any user interaction.

Command-line syntax

The general command-line syntax for HP SUM is as follows:

`hpsum [/s] [/h] [/f]:bundle] [/r[eboot]`

On Windows, use a slash before each argument. On Linux, use a hyphen before each argument. For example:

`hpsum /s /h` (Windows)

`hpsum -s -h` (Linux)

HP SUM with OA requires a user ID and password to log in. The user ID must be an administrator equivalent ID and not an operator or user equivalent level ID.

Use the `/s[ilent]` argument for all commands, except when you use `/express_install`.

> **ⓘ IMPORTANT:** Command-line syntax does not support double-byte character sets. Any messages entered through the command line using a double-byte character set do not display correctly.

Switch update commands

G7 and earlier servers do not support AMS agents. The following tables show which updates occur when you use the switch agent commands.

To find out if you have any switches installed, use HP SUM to create the Firmware Details Report.

The following table shows what updates occur if no switches are currently installed.

Command	G7 and earlier servers	Gen8 servers
`no switches`	SNMP	AMS
`/no_mgmt`	Nothing	Nothing
`/use_ams`	SNMP	AMS
`/use_snmp`	SNMP	SNMP
`/use_wmi`	WBEM	WBEM
`/use_ams /use_snmp`	SNMP	AMS and SNMP
`/use_ams /use_wmi`	SNMP and WBEM	AMS and WBEM
`/use_wmi /use_snmp`	WBEM and SNMP	WBEM and SNMP
`/use_ams /use_wmi /use_snmp`	WBEM and SNMP	AMS, SNMP, and WBEM

Command-line arguments

HP SUM recognizes the command-line arguments listed in the table below. You cannot use some arguments, such as `/romonly` and `/softwareonly`, together.

Help commands

You can view the help for the CLI by typing `hpsum /s /h`.

Help	Description
`/h[elp] or /?`	Displays command line help information.

Installation commands

The following table lists attributes you can use while installing updates.

Installation options	Description
`/f[orce]`	Overrides or downgrades an existing component installation. This produces the same results as `/f:software`.
`/f[orce]:bundle`	Overrides or downgrades the existing installation of components in the selected bundle.
`/f[orce]:rom`	Overrides or downgrades the existing installation of the selected firmware components (applies to firmware only).
`/f[orce]:software`	Overrides or downgrades the existing installation of the selected software components.
`/f[orce]:all`	Overrides or downgrades the existing installation of the selected software components, firmware components, and bundles.
`/g or /downgrade`	Downgrades to an earlier version of components.
`/e or /rewrite`	Rewrites the current version of components.
`/port <n>`	Changes the port HP SUM uses for the internal HTTP server from 63001 to the selected port.
`/ssl_port <n>`	Changes the port HP SUM uses for the internal HTTPS server from 63002 to the selected port.

Installation options	Description
`/open_firewall`	Allows HP SUM to open the HTTP and HTTPS ports used by HP SUM for external access. Also used to open the ports for remote node functionality and for remote browser access. HP SUM deploys updates to nodes even when ip_tables include DROP commands. Use `open_firewall` to bypass the DROP rules.
`/s[ilent]`	Causes the installation to run silently with no GUI or interactive CLI output. All data writes to the log file. **IMPORTANT:** HP SUM requires the silent parameter for CLI commands.
`/c[omponent]<component_to_install>` or `<component1_to_install>` `<component2_to_install>`	Specifies which components to install. You can specify components to install with or without the `/c[omponent]` argument. If you use the `/c[omponent]` argument, you can specify only one component. per argument, but you can specify multiple `/c` arguments with individual components on the same command line. If you do not use the `/c[omponent]` argument, you can specify multiple components separated by a blank space, and listed after all other arguments on the command line. The utility installs components in the order provided unless dependencies between components require installation in a different order. If so, the utility changes the installation order based on the component dependencies to ensure the successful installation of as many components as possible. You can specify multiple components (see `/c[omponent]<component_to_install>`) and bundles on the same command line. When you mix components and bundles on the command line, the filter switches control what components and bundles are installed. HP SUM only uses the component name. If you type the entire directory path, HP SUM ignores the path. If you use `/use_location` and `/c`, HP SUM checks both the default repository and the directory provided.
`/group "group_name"`	This argument specifies an already defined group name in the HP SUM GUI.
`/b[undle] <bundlename>`	This argument specifies bundles to install. You can specify bundles to install with or without the `/b[undle]` argument. You can specify multiple components and bundles (see `/b[undle] <bundlename>`) on the same command line. When you mix components and bundles on the command line, the filter switches control which components and bundles are installed.
`/allow_update_to_bundle`	This argument is a filter switch. Installs newer versions of components defined in a PSP, ISP, or firmware bundle, and replaces the older versions of the same component that might have shipped with the bundles. Defaults to TRUE.
`/allow_non_bundle_components`	This argument is a filter switch. Installs components that are not included in the bundle but reside in the directory with the components in the bundle. Defaults to TRUE.

Installation options	Description
/use_latest	This argument is a filter switch for use with bundles. Uses the latest version of the bundle when you list multiple versions of bundles on the command line. When using this command with no bundles specified, and multiple bundles in the directory, HP SUM installs the latest available version of the bundle.
/use_location "file_share"	Specifies a directory or file share that contains the SPP, HP Integrity Smart Update Firmware Bundles, and components for use with HP SUM. HP SUM expects that the targeted *file_share* is a mapped file share or UNC format.
	Without this argument, HP SUM defaults to the directory that contains hpsum.exe or HP SUM.
	Make sure the logged-in account has access to this location. If the location is a UNC file share, you must provide credentials to the file share using the /unc_username and /unc_password. If you do not provide these credentials, HP SUM uses the current credentials to access the share.
/unc_username	Username credentials for accessing the file share.
/unc_password	Password credentials for accessing the file share.
/no_mgmt	Indicates that management components for AMS, SNMP, and WBEM Providers are optional on the Components Selection screen. In silent mode, HP SUM does not update any management components.
/use_snmp	Specifies that components using the SNMP protocol and the AMS components are available for installation by default. Using the /use_snmp argument means that the AMS components are required, but the WMI components are optional.
/use_wmi	Specifies that components using the WMI protocol are available for installation. These components are optional and are not installed unless you use this argument. When you use the /use_wmi argument without using the /use_snmp and /use_ams arguments, the SNMP and AMS components are optional. This argument does not apply to HP Integrity servers.
/use_ams	Specifies which AMS components to install along with SNMP components. Default selections include AMS and SNMP components. Using the /use_ams argument means that the SNMP components are required, and the WMI components are optional.
/romonly	Filter switch. Allows you to see only the firmware components needed for installation. When you use this filter switch, you must exit and restart HP SUM to return to an unfiltered state.
	This argument applies to firmware only. Do not use the /romonly argument with the /softwareonly argument.
/softwareonly	Filter switch. Allows you to see only the software components needed for installation. When you use this filter switch, you must exit and restart HP SUM to return to an unfiltered state.
	Do not use the /softwareonly argument with the /romonly argument.
/express_install	If you run scripts that contain this command, HP SUM executes this command the same way it runs /silent.

Installation options	Description
	HP SUM shuts down ten seconds after the script finishes running.

Override error commands

The following table lists attributes you can use to override errors HP SUM encounters.

Overriding errors	Description
`/tpmbypass` or `/ignore_tpm`	If you have enabled TPM, you can ignore the warning message and continue with component installation. For more information about TPM, see "Disabling BitLocker to permit firmware updates (Windows only)" (page 14).
`/ignore_warnings`	Allows the installation to proceed on a Linux or HP-UX node that is an active member of a Serviceguard cluster. If you do not specify this option and the node is an active member of a Serviceguard cluster, the node does not enter the installation or deploy phases.
	Allows installation to proceed after HP SUM receives warnings on nodes. Some warnings include:
	Active member of a Serviceguard cluster
	HP-UX boot disk
	Superdome 2 OA
`/continue_on_error <error>`	Causes the installation to continue and ignore errors. Valid values are as follows:
	* `<error>=ServerNotFound` and
	* `<error>=BadPassword.`
	* `<error>=FailedDependencies`
	Use the `ServerNotFound` option to bypass inactive or unavailable remote hosts when you deploy firmware or software to multiple remote hosts at the same time.
	Use the `BadPaddword` option to bypass remote nodes that report incorrect credentials provided and continue with other nodes. Use the `FailedDependencies` option to bypass remote nodes with failed dependencies and continue with other nodes that are ready to be installed. This can be overridden by using `/on_failed_dependency:Force` or `:OmitComponent`.
`/override_existing_connection`	Defines the behavior when a remote node has an existing HP SUM session in progress. Overrides the session in progress and re-initializes the installation framework on the remote host.
`/on_failed_dependency: <parameter>`	Provides HP SUM *parameter* the information on how to proceed when a component has a failed dependency. The supported parameters for this argument are:
	`OmitHost` (default)—Puts the host into a failure state, and no installation is attempted.
	`OmitComponent`—Deselects the affected components and proceeds with any updates that do not have dependency failures.
	`Force`—Attempts all updates, even with dependency failures.

Reboot commands

The following table lists attributes you can use for rebooting the nodes.

Reboot options	Description
/r[eboot]	Under the following conditions, causes the server (or host server in a remote installation) to reboot: When you select the /reboot option or use it in a command-line argument. When all components selected for installation are successfully installed. When at least one of the installed components requires a reboot to complete its installation.
/reboot_message "reboot message"	Displays the specified reboot message on remote consoles connected to the server that you want to reboot. You must use this argument with the /reboot option, or the argument is ignored
/reboot_delay timeout_in_secs	Delays the reboot of the server for the length of time that the timeout_in_seconds variable specifies. You must use this argument with the /reboot option, or the argument is ignored. Acceptable values are between 15 and 3600. Defaults to 15 seconds for Microsoft Windows operating systems and 60 seconds for Linux. Linux systems convert the reboot delay time from seconds to minutes, and any value under a full minute (59 seconds or less) rounds to the next minute.
/reboot_always	Forces the server to reboot under the following conditions: You select the /reboot_always option or provide it as a command line argument. All components selected for installation are successfully installed.

Test run commands

Use this attribute along with other attributes in order to have HP SUM run through all processes in the command, except the actual deployment. Use this to verify connections and configurations for remote nodes and to see what HP SUM will update.

Simulating HP SUM	Description
/dryrun	This argument simulates the installation for a test run. Nothing is installed.

Node commands

The following table lists attributes for nodes you update. These attributes are related to each node, and can be used multiple times in a CLI command.

Nodes	Description
/user<*username*> or /username <*username*>	Use this argument to log in to the remote nodes with the user ID.

Nodes	Description
	Make sure the user name belongs to the root or administrator group.
/password *<password>* HP SUM also supports `passwd` and `pwd`	Password for the user ID specified in the /user parameter (except for the OA node). The system uses the password to log in to remote nodes.
/su_username	When the credentials specified in /username and /passwd do not have root privileges to update components, you can use root (super user) username to start a session, and to inventory and update components Use with /su_password You cannot use /su_username with /use_sudo access level. Do not use this command on the local host.

/su_password	When the credentials specified in /username and /passwd do not have root privileges to update components, you can use root (super user) password to start a session, and inventory and update components Use with /su_username.
	
	You cannot use /su_password with /use_sudo access level.
	
	Do not use this command on the local host. To launch HP SUM on the local host using su, use the following example:
	`su root`
	`hpsum /s /f /use_location /mnt/spp`

/use_sudo	When used with `username` and `passwd`, indicates that both are sudo user credentials. You cannot use /use_sudo with /su_username and /su_password. Do not use this command on the local host. To use sudo on a local host, use the following command: `sudo hpsum /s /f /use_location /mnt/spp`
/target "*netAddress*"	This is the IP address or the DNS name of a remote host, which can be a remote server, remote iLO NIC port, Virtual Connect Ethernet or Fibre Channel Module for c-Class BladeSystem, or BladeSystem OA. When two OAs are in an enclosure, use the active OA as the argument. When specifying the IP address, use either the IPv4 or IPv6 format.

/targettype "*type*"	Reduces inventory time for scripted deployments. This is an optional command line argument.
	
	Valid node types
	`Server`
	`Windows`
	`Linux`
	`HPUX`
	`FC Switch` or `Fibre Channel Switch`
	`OA` or `Onboard Administrator`
	`SUPERDOME 2` or `SUPERDOME2` or `Superdome 2 Onboard Administrator`
	`iLO`
	`VC` or `Virtual Connect`

Nodes	Description
	`HP SAS` or `HP SAS B/L Interconnect Switch`
	`VMware` or `VMware Host`
	`iPDU` or `Intelligent Power Distribution Unit (iPDU)`
	Moonshot
	Use `/targettype` with the `/target` parameter. You can interchange the sequence of `/targettype` and `/target`. If the node name includes spaces, make sure you enclose the name in quotation marks, " ".
`/current_credential`	Enables the use of the local host credential to access the nodes instead of providing the user name and password explicitly for each node. Assumes that the current credential is valid for the nodes you are processing. (Applies to Windows only.)
`/oa_username`	Provides the user name credential for the VC target specified using the `target` command. You can specify only one set of OA credentials using command-line parameters, so if you need to add multiple VC nodes using the `target` parameter, make sure that the OA credentials for each specified VC are the same. You do not need to provide an OA network address associated with the VC. HP SUM queries it from a specified VC node.
	To update multiple VCs with different user names and passwords, or VCs with OAs that have different credentials, use the corresponding input files `OAUID` and `OAPWD`.
`/oa_password`	Provides the password credential for OA associated with VC specified with the "node" command-line parameter. Only one set of OA credentials can be specified with command-line parameters. You can add multiple VC nodes to command-line parameters with the "node" parameter only if the credentials of OAs associated with specified VCs are the same. You do not need to provide an OA network address associated with VC. HP SUM queries it from a specified VC node.
	To update multiple VCs with different user names and passwords, or VCs with OAs that have different credentials, use the corresponding input files `OAUID` and `OAPWD` .
`/switch_username`	Use this command to specify Moonshot switch credentials.
`/switch_password`	Use this command to specify Moonshot switch passwords.
`/switch_enable`	Use this command to specify Moonshot switch enable password.
`/encryption_key`	This command is required to enable VC in FIPS mode.
	Possible value:
	String of a minimum 8 characters.
`/ethactorder`	Use this command to determine VC-Enet module activation order.
	Possible value:
	`ODDEVEN`/`PARALLEL`/`SERIAL`, the default is `ODDEVEN`.
`/fcactorder`	Use this command to determine VC-FC activation order.
	Possible value:
	`ODDEVEN`/`PARALLEL`/`SERIAL`, the default is `ODDEVEN`.

Nodes	Description
/ethactdelay	Use this command to determine the time, in minutes, between activating or rebooting VC-Enet modules
	Possible value:
	Max 60 minutes, the default is 0 minutes.
/fcactdelay	Use this command to determine the time to wait between activating or rebooting VC-Enet modules.
	Possible value:
	Max 60 minutes, the default is 0 minutes.

Log file commands

The following table lists attributes for logging details.

Log files	Description
/logdir *"path"*	Redirects the output from HP SUM or the HP BladeSystem c-Class OA flash utility to a directory other than the default location.
	For Windows components, the default location is `%SYSTEMDRIVE%\CPQSYSTEM\hp\log<netAddress>` and the redirected location is `<path>\hp\log\<netAddress>`.
	For Linux components, the default location is `/var/hp/log/<netAddress>` and the redirected location is `<path>/hp/log/<netAddress>`.
/v[erbose] or /veryv[erbose]	Sets the verbosity level for the HP SUM execution log file, `hpsum_execution_log_<date>_<time>.log`. Allows you to increase the level of detail that the log files retain. Defaults to normal verbosity.

Report commands

① **IMPORTANT:** Always run report command separately. When you use a command to generate a report, HP SUM ignores all other commands and only runs the report. If you use other parameters in your command line, HP SUM performs an inventory to populate the report, but does not deploy any updates.

HP SUM generates reports about the specified system or repository using the command-line arguments. If you do not specify additional locations on the command line, HP SUM uses the local host and default repository locations (the directory where HP SUM was initiated). You can specify a node if you provide the appropriate credentials. You can specify a repository by using other command-line parameters to generate reports. For specific commands, see "Using the command line interface (CLI) to deploy updates" (page 53).

HP SUM generates the reports as XML or HTML files that you can view in a JavaScript-enabled web browser. The location defaults to the present working directory where HP SUM is initiated. If that location is write-protected, you can find the files in the same directory as the HP SUM log files.

HP SUM generates reports in CSV format that you can open in any application that supports CSV format.

You can find the HP SUM log files in these folders:

Windows operating systems—`C:\cpqsystem\hp\log`

Linux—`/var/hp/log`

When HP SUM generates the report, the HP SUM GUI does not appear. HP SUM displays the file location for the generated report.

Generating reports[1]	Description
/report	Generates a report listing of the node summary and describes how the components in the repository affect the node; for example, whether each component applies to the node. The report is generated in HTML and XML with file name formats of `HPSUM_Report_<date>_<time>.html` and `HPSUM_Report_<date>_<time>.xml`. The location defaults to the present working directory where HP SUM is initiated. If that location is write-protected, you can find the files in the same directory as the HP SUM log files.
/inventory_report	Generates a report listing of the components in the specified repository. The report is generated in HTML and XML with file name formats of `HPSUM_Inventory_Report_<date>_<time>.html` and `HPSUM_Inventory_Report_<date>_<time>.xml`. The location defaults to the present working directory where HP SUM is initiated. If that location is write-protected, you can find the report in the same directory as the HP SUM log files.
/firmware_report	Generates a report listing of the firmware installed and details of the node. The report is generated in HTML and XML with file names of `HPSUM_Firmware_Report.html` and `fwreport.xml` in the directory named `HPSUM_Firmware_Report_<date>_<time>`. The location defaults to the present working directory where HP SUM is initiated. If that location is write-protected, you can find the report in the same directory as the HP SUM log files.
/dependency_report	Generates a report listing of the failed dependencies for all nodes.
/installed_report	Generates a report that lists all installed firmware, software, and driver versions installed on all nodes.
/combined_report	This report generates all report types in one file.

[1] HP SUM does not install any updates when you include any command to generate a report.

Input file commands

Use the following commands to script the update of multiple or individual nodes, or groups of nodes. For details, see "Using the command line interface (CLI) with Input files" (page 67)

Using input files	Description
/inputfile *"filename"*	Create scripts for the deployment of firmware and software to multiple remote systems at one time. For details, see "Using the command line interface (CLI) with Input files" (page 67).
/deleteinputfile	Instruct HP SUM to delete the input file after it has been read.

Superdome2 server commands

The following table provides parameters for Superdome 2 servers.

Superdome 2 server commands	Description
`/update_type <type>`	Determines which Superdome 2 firmware is updated. You can choose `ALL`, `COMPLEX`, or `PARTITIONS`. The default selection is `ALL`. Example: `/update_type PARTITIONS`
`/device_list <device[,device]...>`	Use this argument when the `/update_type` argument is `PARTITIONS`. This argument specifies the subset of partitions or unassigned blades to update when you do not want to update all partitions or unassigned blades. Valid devices are: `npar(number)` and `blade(enc)/(bay)`. Do not put any spaces between the parameters. Example: `/device_list npar1,npar2,blade1/1,blade1/2`
`/reboot_list <npar[,npar]...>`	Use this argument when the `/update_type` is `ALL` or `PARTITIONS`. This argument specifies specific partitions to reboot after the partition firmware has been updated. Valid `npar` values are `npar(number)`. Do not put any spaces between parameters. Example: `/reboot_list npar1,npar2`

HP SUM CLI examples

Example: Deploy the latest SPP and firmware components

Syntax

```
hpsum /use_latest /allow_non_bundle_components /silent
```

Result

HP SUM determines which software and firmware components from the update bundle in the current directory must be installed and installs them.

Example: Deploy the previous version of the SPP only and force installation of all the software components

Syntax

```
hpsum /f:bundle /softwareonly /use_location c:\downloads\previousSPP /s
```

Result

HP SUM determines which software components in the specified location must be installed and installs them. HP SUM does not install firmware in this example.

Example: Deploy firmware only, from the bundle found in the current HP SUM directory

Syntax

```
hpsum /romonly /s
```

Result

HP SUM determines which firmware components from the current directory must be installed and installs them. HP SUM does not install software in this example.

Example: Deploy two software components

Syntax

Either of the following commands deploy two software components:

```
hpsum /f:software cp008097.exe cp008257.exe /s
hpsum /c cp008097.exe /c cp008257.exe /f:software /s
```

Result

HP SUM logs into the remote Linux node first as userid and then uses su to root user and performs operations. It installs the two components and forces rewrite or install of either component if it is software.

Example: Force deployment to three remote hosts of the latest SPP available in the directory with HP SUM and later versions of components in the bundle

Syntax

Either of the following commands- force deployment of the latest SPP available in the directory with HP SUM, as well as later versions of components in the bundle, including firmware, to three remote hosts:

```
hpsum /group "Management Servers" /current_credential /use_latest
/allow_update_to_bundle /allow_non_bundle_components /force:all
/override_existing_connection /continue_on_error ServerNotFound /silent
/logdir "Management_Server_Files"

hpsum /target server1.mydomain.com /target server2.mydomain.com /target
10.15.25.101 /user administrator /passwd letmein /use_latest
/allow_update_to_bundle /allow_non_bundle_components /force:all
/override_existing_connection /continue_on_error ServerNotFound /silent
/logdir c:\documents\management_server_files
```

Result

On the three target nodes, HP SUM installs all software and firmware components from the update bundle.

Example: Using sudo to update components

Syntax

```
/hpsum / target 10.0.1.7 /targetype linux /username userid /passwd
password /use_sudo /silent
```

Result

On the remote Linux server, HP SUM logs in as userid and executes commands using sudo to perform operations.

Example: Using super user to update components

Syntax

```
/hpsum /target 10.0.1.7 /targetype linux /username userid /passwd
password /silent /su_username root /su_password rootpwd
```

Result

HP SUM installs all components on server 10.0.1.7.

Return codes

HP SUM has consolidated return codes from Linux and Windows smart components into an enhanced return-code mapping. These return codes determine the status of the component installation. You can also use return codes in a script to control the execution of the script and determine any required branching.

In Linux, the negative return codes are reported. These return codes are determined by subtracting the negative value from 256.

Return code	Value	Linux	Windows	Text
SUCCESS_NO_REBOOT	0	0	0	The installation was successful.
SUCCESS_REBOOT	1	1	1	The installation was successful, but a reboot is required.
SUCCESS_NOT_REQUIRED	3	3	3	The component was current or not required.
FAILURE_GENERAL	-1	255	-1	A general failure occurred. For details, see the error log.
FAILURE_BAD_PARM	-2	254	-2	A bad input parameter was encountered.
FAILURE_COMPONENT_FAILED	-3	253	-3	The installation of the component failed.

Windows smart-component return codes

Return code	Meaning
0	The smart component was not installed. For more information, see the log file.
1	The smart component was installed successfully.
2	The smart component was installed successfully, but the system must be restarted.
3	The installation was not attempted because the required hardware is not present, the software is current, or there is nothing to install.

Linux smart-component return codes

HP SUM supports return codes for Linux smart-components for both single-node (see Table 4) and multi-node servers (see Table 5).

Table 4 Single-node server

Return code	Meaning
0	The smart component was installed successfully.
1	The smart component was installed successfully, but the system must be restarted.

Table 4 Single-node server *(continued)*

Return code	Meaning
2	The installation was not attempted because the required hardware is not present, the software is current, or there is nothing to install.
3	The smart component was not installed. For more information, see the log file.

Table 5 Multi-node servers

Return code	Meaning
0	The installation of the deliverable was successful. No reboot is required.
1	The installation of the deliverable was successful. Reboot is required for the deliverable to be enabled.
2	The installation was not attempted because the version to be installed matches the version already installed.
3	The installation was not attempted because of one of the following: The version to be installed is older than the version already installed. The supported hardware is not present, not enabled, or in a state that an installation could not be attempted. The smart component does not support the environment. There is nothing for the component to accomplish.
4	If the component is being installed to a remote node, such as an OA or other network-based deployment, this return code indicates that the node cannot be found.
5	A user canceled the installation before anything could be installed.
6	The installer cannot run because of an un-met dependency or installation tool failure.
7	The actual installation operation (not the installation tool) failed.

Linux RPM return codes

Return code	Meaning
0	The Linux RPM installation was successful.
1	The Linux RPM installation failed.

VMware ESXi smart-component return codes

Return code	Meaning
0	The installation of the deliverable was successful. No reboot is required.
1	The installation of the deliverable was successful. Reboot is required for the deliverable to be enabled.

Return code	Meaning
2	The installation was not attempted because the version to be installed matches the version already installed.
3	The installation was not attempted because of one of the following: The version to be installed is older than the version already installed. The supported hardware is not present, not enabled, or in a state that an installation could not be attempted. The smart component does not support the environment. There is nothing for the component to accomplish.
4	If the component is being installed to a remote node, such as an OA or other network-based deployment, this return code indicates that the node cannot be found.
5	A user canceled the installation before anything could be installed.
6	The installer cannot run because of an un-met dependency or installation tool failure.
7	The actual installation operation (not the installation tool) failed.

Using the command line interface (CLI) with Input files

HP SUM CLI with Input files allow you to create scripts for updating multiple nodes, individual nodes, or groups of nodes (HP ProLiant and Integrity servers and options) within a single operation. To protect your credentials, HP recommends using a secure server or a management console.

Use a text editor to create an input file. All section headers and trailers must match. You can use the DRYRUN=YES option to perform dry runs of installations. Dry run installation help you verify that the scripts are working without actually deploying the firmware updates that might be required on each node. Remove the DRYRUN=YES option when you are ready perform the actual updates.

Use commas, semicolons, or spaces as list separators for parameters that can take list values.

(!) **IMPORTANT:** For greater security, omit the credentials from the file and pass them to HP SUM using the command line. This requires that all nodes use the same user ID and password.

After creating your script file, add it as the inputfile *<filename>* parameter to an HP SUM command line. For example, if the name of the input file is hpsum.in, the command-line syntax is hpsum -inputfile hpsum.in. You can add full paths to the input file location if the file is not stored in the same location as the HP SUM executable files. The *<filename>* field can be enclosed in double quotes to enable paths with spaces.

In addition, you can use all of the command line options along with the input file, and the command line options take precedence over the commands in the input file. This is useful if you need to customize an input file for a particular configuration.

Input file format and rules

The input file contains both configuration details and target node information. You can also add credentials and remote host information for updates.

Configuration details

The configuration section starts from the beginning of the file and proceeds until the first node section is encountered. This section consists of a number of settings and their values. Each configuration setting must appear on a fresh line in the file, along with its value. Comments start

with a pound (#) character at the beginning of the line. Only one pound character is allowed on any line.

```
REBOOTALLOWED = YES

REBOOTREQUIRED = NO

REBOOTMESSAGE = "Server is going down for a reboot"

REBOOTDELAY = 15

COMPONENTSLIST = cp001234.exe, cp001235.exe

BUNDLESLIST = bp001234.xml

ALLOWUPDATEBUNDLE = YES

SKIPTARGET = NO

IGNOREERRORS = ServerNotFound, FailedDependencies

SOURCEPATH = c:\pkgsource1

USELATEST = YES

SILENT = YES

OPTIONS = /f:rom
```

Target nodes

Use the Targets section to identify one or more remote hosts for HP SUM to update using the commands provided in the preceding configuration details. You can repeat this section any number of times in the input file, which makes it useful for organizing nodes and updates in related sets.

Begin a Target section with the following special header enclosed in brackets:

```
[TARGETS]
```

End a Target section with the following special string enclosed in brackets:

```
[END]
```

Adding a Target section to the previous example looks like the following:

```
REBOOTALLOWED = YES

REBOOTREQUIRED = NO

REBOOTMESSAGE = "Server is going down for a reboot"

REBOOTDELAY = 15

COMPONENTSLIST = cp001234.exe, cp001235.exe

BUNDLESLIST = bp001234.xml

ALLOWUPDATEBUNDLE = YES

SKIPTARGET = NO

IGNOREERRORS = ServerNotFound, FailedDependencies

SOURCEPATH = c:\pkgsource1

USELATEST = YES

SILENT = YES

OPTIONS = /f:rom

[TARGETS]

HOST = schinta1

HOST = schinta2

UID = root

PWD = root123
```

```
HOST = 234.567.765.432
```
[END]

You can append a title to the `TARGETS` header to identify the purpose of a given section. For example:

```
[TARGETS_WIN2012]

...

[END]
```

Credentials

The `TARGETS` section allows you to group nodes according to the login credentials needed for remote access. Each `TARGETS` section requires a set of login credentials that applies to all nodes in that section. If you want to use the login credentials of the current host to log in to one or more remote nodes, set the variable `USECURRENTCREDENTIAL` to `YES`. You can supply login credentials for one or more hosts by using the user ID variable `UID` and the password variable `PWD`. If you want to provide the variables at the beginning of a `TARGETS` section, use both of them.

Remote node

You can specify a remote node using the variable `HOST`. Possible values are a DNS name or an IP address. Both methods indicate the node is a remote node.

Component-specific configuration

You can specify component-specific configuration settings by using the component short names as shown in the table below. Use the component short name instead of the component file name changes in different SPP releases.

Component	Package name	Component short name
cp021995.exe	HP System Management Homepage for Window x86	hpsmh-windows-x86
cp021996.exe	HP System Management Homepage for Windows x64	hpsmh-windows-x64
cp022423.exe	HP Insight Management WBEM Providers for Windows Server	hpinsightmgmtwbemprovider-windows-x86
cp022424.exe	HP Insight Management WBEM Providers for Windows Server x64 Editions	hpinsightmgmtwbemprovider-windows-x64
cp022558.exe	HP Insight Management Agents for Windows Server	hpinsightmgmtagent-windows-x86
cp022559.exe	HP Insight Management Agents for Windows Server x64 Editions	hpinsightmgmtagent-windows-x64
hpmouse-1.2.1-1.noarch.rpm	HP iLO High-Performance Mouse for Linux	hpmouse-linux
hpsmh-7.3.1-4.i386.rpm	HP System Management	hpsmh-linux-x86

Component	Package name	Component short name
	Homepage for Linux (x86)	
hpsmh-7.3.1-4.x86_64.rpm	HP System Management Homepage for Linux (AMD64/EM64T)	hpsmh-linux-x64
hp-snmp-agents-10.00-2577.2.rhel6.i686.rpm	HP SNMP Agents for Red Hat Enterprise Linux 6 (x86)	hpsnmpagent-rhel6-x86
hp-snmp-agents-10.00-2577.2.rhel6.x86_64.rpm	HP SNMP Agents for Red Hat Enterprise Linux 6 (AMD64/EM64T)	hpsnmpagent-rhel6-x64
hp-snmp-agents-10.00-2577.3.sles11.i586.rpm	HP SNMP Agents for SUSE Linux Enterprise Server 11 (x86)	hpsnmpagent-sles11-x86
hp-snmp-agents-10.00-2577.3.sles11.x86_64.rpm	HP SNMP Agents for SUSE Linux Enterprise Server 11 (AMD64/EM64T)	hpsnmpagent-sles11-x64
hp-snmp-agents-9.60-2573.11.rhel5.i386.rpm	HP SNMP Agents for Red Hat Enterprise Linux 5 (x86)	hpsnmpagent-rhel5-x86
hp-snmp-agents-9.60-2573.11.rhel5.x86_64.rpm	HP SNMP Agents for Red Hat Enterprise Linux 5 (AMD64/EM64T)	hpsnmpagent-rhel5-x64

The following is the syntax to use when you configure components with an inputfile:

```
[COMPONENT_CONFIG=<component short name>]
[<PARAM_NAME1>]
Value1-line1
Value1-line2
[<PARAM_NAME1>]
Value1-line1
Value1-line2
[END_COMPONENT_CONFIG]
```

The following is an example of how to configure component `cp021995.exe`, HP System Management Homepage for Windows x86.

```
SOURCEPATH = E:\HPSUM\Enhancement\Component Configuration\RPM
[COMPONENT_CONFIG=hpsmh-windows-x86]
[force-overwrite]
YES
[admin-group]
ADMINGRP1 ADMINGRP2
[CERTNAME_2]
PRAMS2
```

```
[CERTNAME_2]
-----BEGIN PGP PUBLIC KEY BLOCK-----
Version: GnuPG v1.4.9 (Darwin)
mQENBErJM6oBCAC7NG5NZ5kiJg+KTTaIDjX9BU8bc7FI5a2zCYc3p9eikJfyyZYM
lflfhsl20242309482048039482080(*)(*)(*)(*)(*)(
sWbckvcIjJRcAtRliKbAf+KjplbcEIzt+kxmweE5XeKvDFtzAD041FGAphIkKcuu
IAzL+XcMWzc3DA==
=+ojz
-----END PGP PUBLIC KEY BLOCK-----
[OPERATOR-GROUP]
OPTGRP1 OPTGRP2
[ANONYMOUS-ACCESS]
YES
[END_COMPONENT_CONFIG]
[TARGETS]
HOST = LocalHost
UID = hpsumadmin
PWD = ********
[END]
```

The following is an example of how to configure component cp020718.exe.

```
SILENT = YES
FORCEALL = YES
SOURCEPATH = C:\SPP\SPPGen8Snap6.2013_1119.56\hp\swpackages
COMPONENTSLIST = cp020718.exe
[COMPONENT_CONFIG= hpinsightmgmtagent-windows-x64]
[<pollinterval>]
15 seconds
[<snmpsetsenabled>]
Y
[<remoterebootenabled>]
Y
[END_COMPONENT_CONFIG]
[TARGETS]
HOST = LocalHost
UID = Administrator
PWD = 12iso*help
[END]
```

The following is an example of how to configure component cp020347.exe.

```
SILENT = YES
FORCEALL = YES
SOURCEPATH = C:\SPP\SPPGen8Snap6.2013_1119.56\hp\swpackages
```

```
COMPONENTSLIST = cp020347.exe
[COMPONENT_CONFIG= hpinsightmgmtwbemprovider-windows-x64]
[<config:rwmiuser>]
Useradmin
[END_COMPONENT_CONFIG]
[TARGETS]
HOST = LocalHost
UID = Administrator
PWD = 12iso*help
[END]
```

The following is an example of how to configure component `hpsmh-linux-x86`.

```
SILENT = YES
FORCEALL = YES
SOURCEPATH = C:\SPP\58\hpsum
COMPONENTSLIST = hpsmh-7.4.0-11.i386.rpm
[COMPONENT_CONFIG= hpsmh-linux-x86]
[<FORCE-OVERWRITE>]
YES
[<ADMIN-GROUP>]
ADMINGRP1
[<OPERATOR-GROUP>]
OPTGRP1
[<USER-GROUP>]
USGRP1
[<ANONYMOUS-ACCESSED>]
YES
[<LOCALACCESS-ENABLED>]
YES
[<LOCALACCESS-TYPE>]
Administrator
[<XENAMELIST>]
HPSUM_123
[<PORT-2301-ENABLED>]
YES
[<IP-BINDING>]
YES
[<IP-BINDING-LIST>]
99.99.99.3/255.255.255.0
[<IP-RESTRICTED-LOGINS>]
YES
[<IP-RESTRICTED-EXCLUDE>]
```

```
99.99.99.187
[<IP-RESTRICTED-INCLUDE>]
99.99.99.157
[<TRUSTMODE>]
TrustByAll
[END_COMPONENT_CONFIG]
[TARGETS]
HOST = 15.154.112.81
UID = root
PWD = iso*help
[END]
```

The following is an example of how to configure component `hpsnmagent-rhel5-x86`.

```
SILENT = YES
FORCEALL = YES
COMPONENTSTLIST = <snmp-linux-component>
[COMPONENT_CONFIG= hpsnmpagent-rhel5-x86]
[<CMASTARTWEBAGENT>]
YES
[<CMASTARTSTORAGEAGENT>]
YES
[<CMASTARTNICAGENT>]
YES
[<CMANOTAINTEDKERNEL>]
YES
[<CMALOCALHOSTRWCOMMSTR>]
localhost_rw_com_string
[<CMALOCALHOSTROCOMMSTR>]
localhost_ron_com_string
[<CMAMGMTSTATIONRWIPORDNS>]
15.154.123.123
[<CMAMGMTSTATIONRWCOMMSTR>]
SNMP_rw_authmgmtstncomm
[<CMAMGMTSTATIONROIPORDNS>]
15.154.112.234
[<CMAMGMTSTATIONROCOMMSTR>]
SNMP_ro_authmgmtstncomm
[<CMADEFTRAPCOMMSTR>]
def_snmp_trap_strng
[<CMATRAPDESTINATIONIPORDNS>]
15.156.23.45
[<CMATRAPDESTINATIONCOMMSTR>]
```

```
snmptrap_abovestring

[<CMASYSCONTACT>]

HPSUMind

[<CMASYSLOCATION>]

HPSTSD123

[END_COMPONENT_CONFIG]

[TARGETS]

HOST = LocalHost

UID = root

PWD = iso*help

[END]
```

File encoding

To allow for the inclusion of double-byte characters, the input file is in UTF-8 format.

Error reporting

If errors occur in the input file, HP SUM exits with a return value of –2 (bad parameter). You can find the location and nature of the error in `hpsum_execution_log_<date>_<time>.raw`.

Input file parameters

Session attributes

The following attributes are related to the session, and you can only use these once.

Parameter	Description
SILENT	Possible values: YES, NO Causes the installation to run silently with no GUI or interactive CLI output. All data writes to the log file. Any generated prompts use the default option and continue the installation without user input. If a component requires input before installation (such as configuration information), the component installation fails and writes an error message to the log file. You can avoid this by including the `IGNOREERRORS = "FailedDependencies"` parameter to ignore the entire node or the `ONFAILEDDEPENDENCY="OmitComponent"` parameter to ignore just the components.
FORCEALL	Possible values: YES, NO Forces updates to both firmware and software components.
FORCEROM	Possible values: YES, NO Forces updates to firmware components.
FORCESOFTWARE	Possible values: YES, NO Forces updates to software components.
FORCEBUNDLE	Possible values: YES, Default = NO

Parameter	Description
	Overrides or downgrades an existing installation of components in the selected bundle.
DOWNGRADE	Possible values: YES, NO Downgrades to an earlier version of components.
REWRITE	Possible values: YES, Default = NO Rewrite the same version of components.
REBOOTALLOWED	Possible values: YES, NO Enables you to reboot, if required.
REBOOTMESSAGE	Possible values: Any string (not exceeding 256 characters) Create a message to be displayed prior to rebooting.
REBOOTDELAY	Possible values: Time in seconds Wait time before rebooting.
COMPONENTSLIST	Possible values: Component names with file extensions (.exe, .rpm, or .scexe) Limits the list of components to be updated.
BUNDLESLIST	Possible values: Bundle file names Limits the list of bundle xml files to be filtered.
ALLOWUPDATEBUNDLE	Possible values: YES, NO Filter switch that enables you to install newer versions of components defined in a PSP, ISP, or bundle. Allows these components to replace the older versions of the same component that might have shipped with the bundles.
SKIPTARGET	Possible values: YES, NO Defines the behavior when a remote node has an existing HP SUM session in progress. Use this parameter to skip the host if an existing HP SUM session already exists. A value of NO overrides the session in progress and reinitializes the installation framework on the remote host. **IMPORTANT:** If an HP SUM session discovers a remote node running HP SUM locally, HP SUM ignores the SKIPTARGET command and skips the remote node.
IGNOREERRORS	Possible values: ServerNotFound, BadPassword, FailedDependencies Causes the installation to continue and ignore errors. Use the ServerNotFound option to bypass inactive or unavailable remote hosts when deploying firmware or software to multiple remote hosts at the same time.

Parameter	Description
	Use `FailedDependencies` to ignore any failed dependencies and proceed with those that are ready to be installed.
	Use the `BadPassword` option to bypass remote nodes that report incorrect credentials provided and continue with other nodes. Use `FailedDependencies` to ignore any nodes with failed dependencies and proceed with nodes that are ready to be installed. This can be overridden by using `ONFAILEDDEPENDENCY=OmitComponent` or `Force`.
USELATEST	Possible values: `YES, NO` Filter switch for use with bundles. Allows you to use the latest version of the bundle when the command line lists multiple versions of bundles. With no bundles specified on the command line, and multiple bundles available in the directory, this parameter directs HP SUM to use the bundle that has the latest version.
DRYRUN	Possible values: `YES, NO` Simulates the installation for a test run. Nothing is installed.
OPTIONS	Possible values: One or more CLI switches Specify the HP SUM CLI options inside the input file, which overrides the configuration settings. Separate parameters using a semi-colon, comma, or a space. This parameter replaces the `LSPOPTIONS` parameter that was previously supported with LDU.
NOMGMT	Possible values: `YES, NO` Specifies listing components using AMS and WBEM Providers as optional updates on the Components Selection screen. In silent mode, HP SUM does not update AMS or WBEM Providers. **IMPORTANT:** You can only configure SNMP in HP SUM GUI mode.
USEWMI	Possible values: `YES, NO` Specifies availability of components using WMI protocol so HP SUM can select them for installation. These components are optional by default and are not installed unless you use this parameter. This parameter does not apply to HP Integrity servers.
USEAMS	Possible values: `YES, NO` Specifies availability of AMS agentless management service components so HP SUM can select them for installation. This option applies to Gen8 and later servers. If you set this parameter for a ProLiant G7 and earlier server, HP SUM ignores the parameter. These components are only installed by default on Gen8 and later servers. This parameter does not apply to HP Integrity servers.
ROMONLY	Possible values: `YES, NO` Filter switch that allows you to view only the firmware components required for installation.

Parameter	Description
	Do not use the /romonly parameter with the /softwareonly parameter.
SOFTWAREONLY	Possible values:
	YES, NO
	Filter switch that allows you to view only the software components required for installation.
	Do not use the /softwareonly parameter with the /romonly parameter.
USECURRENTCREDENTIAL	Possible values:
	YES, NO
	Allows you to use the credentials of the local host to access the nodes instead of providing the user name and password explicitly for each node.
	Assumes that the current credentials are valid for the nodes that are being accessed. (Applies to Windows only.)
DELETEINPUTFILE	Possible values:
	YES, NO (default)
	Instructs HP SUM to delete the input file after it has been read.
ONFAILEDDEPENDENCY	Possible values:
	OmitHost (default), OmitComponent, Force
	Tells HP SUM how to proceed when a component has a failed dependency.
	OmitHost—Puts the host in a failure state, and HP SUM does not attempt installation.
	OmitComponent—Clears the affected components and proceeds with any updates that do not have dependency failures.
	Force—Attempts all updates, even if they have dependency failures.
HOST	Possible values:
	IP address, DNS name
	The IP address or the DNS name of a remote server, remote iLO NIC port, Virtual Connect Ethernet, or Fibre Channel Module for c-Class BladeSystem or BladeSystem OA.
	With two OAs in an enclosure, this parameter is the active OA. When specifying the IP address, you can use either the IPv4 or IPv6 format.
	This parameter specifies an already defined group name in the HP SUM GUI.
LOGFILENAME = "path"	Possible values:
	Log file name
	Redirects the output from HP SUM or the HP BladeSystem c-Class OA flash utility to a directory other than the default location.
	For Windows components, the default location is %SYSTEMDRIVE%\ CPQSYSTEM\hp\log<netAddress> and the redirected location is <path>\hp\log\<netAddress>.
	For Linux components, the default location is /var/hp/log/ <netAddress> and the redirected location is <path>/hp/log/ <netAddress>.
CMAMGMTSTATIONRWIPORDNS	Possible values:
	IP address, DNS name
	Specifies the IP address or DNS host name of a system with read/write access to serve as a management station. You can specify multiple locations separated by a space. (Applies to Linux SPP only.)

Parameter	Description
CMAMGMTSTATIONROIPORDNS	Possible values: `IP address, DNS name` Specifies the IP address or DNS host name of a system with read-only access to serve as a management station. You can specify multiple locations separated by a space. (Applies to Linux SPP only.)
CMASYSCONTACT	Possible values: `String value` Specifies a person or phone number for administration of this system. (Applies to Linux SPP only.)
CMASYSLOCATION	Possible values: `String value` Designates the location of this system. (Applies to Linux SPP only.)
CMASTARTWEBAGENT	Possible values: `YES` (start the web agent) `NO` (do not start the web agent) Determines whether to start the HP Systems Insight Manager Web Agent when the health application loads. (Applies to Linux SPP only.)
CMASTARTSTORAGEAGENT	Possible values: `YES` (start the storage agent) `NO` (do not start the storage agent) Determines whether to start the HP Systems Insight Manager Storage Agent when the health application loads. (Applies to Linux SPP only.)
CMASTARTNICAGENT	Possible values: `YES` (start the web agent) `NO` (do not start the web agent) Determines whether to start the HP Systems Insight Manager NIC agent. (Applies to Linux SPP only).
CMANOTAINTEDKERNEL	Possible values: `YES` (start the HP Lights-Out management driver) `NO` (do not start the HP Lights-Out management driver) Determines whether to start the HP Lights-Out management driver when the health application loads. (Applies to Linux SPP only.)
HPVCAVCRMSERVER	Possible values: `VCRM name` Informs the VCA of the name of the VCRM to use as a software distribution baseline. (Applies to Linux SPP only.)
FORCE-OVERWRITE	Possible values: `YES`, `NO` (default) HP Systems Management Homepage (hpsmh) uses this parameter to force overwrite the SMH settings of an existing configuration file.
ADMIN-GROUP	Possible values: Up to five Linux groups, separated by spaces or semicolons, to enable administrative access to the web services. HP Systems Management Homepage (hpsmh) uses this parameter to set up security for the web server. (Applies to Linux SPP only.)

Parameter	Description
USER-GROUP	Possible values:
	Up to five Linux groups, separated by spaces or semicolons, to enable user-level access to the web servers.
	HP Systems Management Homepage uses this parameter to set up security for the web server. (Applies to Linux SPP only.)
OPERATOR-GROUP	Possible values:
	Up to five Linux groups, separated by spaces or semicolons, to enable operator-level access to the web servers.
	HP Systems Management Homepage uses this parameter to set up security for the web server. (Applies to Linux SPP only.)
ANONYMOUS-ACCESS	Possible values:
	YES, NO (default)
	Determines whether an anonymous user can access HP Systems Management Homepage. (Applies to Linux SPP only.)
IP-BINDING	Possible values:
	YES, NO (default)
	HP Systems Management Homepage uses this parameter to determine whether HP SMH can use all available NICs and detect subnets for its web services. (Applies to Linux SPP only.)
IP-BINDING-LIST	Possible values:
	IP address pairs separated by semicolons (for example, `10.1.1.1/255.255.255.0;`
	`10.2.2.2/255.255.255.0`)
	HP Systems Management Homepage uses this parameter to restrict the NICs and subnets to use for its web servers.
	The `IP-BINDING` parameter must be set to `yes` for this parameter to be used during installation. (Applies to Linux SPP only.)
IP-RESTRICTED-LOGINS	Possible values:
	YES, NO (default)
	To enable restrictions on who can log in to the web server, set this parameter to `yes`, and then provide values to the `IP-RESTRICTED-EXCLUDE` or `IP-RESTRICTED-INCLUDE` parameters.
	HP Systems Management Homepage uses this parameter to restrict login access. (Applies to Linux SPP only.)
IP-RESTRICTED-EXCLUDE	Possible values:
	List of IP address ranges separated by semicolons (for example, `10.1.1.1-10.1.1.10;`
	`10.2.2.2-10.2.2.10`)
	HP Systems Management Homepage uses this parameter to exclude specific IP address/netmask pairs from logging into the web services. (Applies to Linux PSP only.)
	HP Systems Management Homepage ignores this parameter unless you set the `IP-RESTRICTED-LOGINS` parameter to `yes`.
IP-RESTRICTED-INCLUDE	Possible values:
	List of IP address ranges separated by semicolons (for example, `10.1.1.1-10.1.1.10;`
	`10.2.2.2-10.2.2.10`)

Parameter	Description
	HP Systems Management Homepage uses this parameter to enable login only from the IP address/netmask pairs specified. (Applies to Linux SPP only.)
	HP Systems Management Homepage ignores this parameter unless you set the `IP-RESTRICTED-LOGINS` parameter to `yes`.
LOCALACCESS-ENABLED	Possible values:
	`YES` (default to include anonymous access), `NO`
	HP Systems Management Homepage uses this parameter to determine whether to enable local anonymous access to the web services. (Applies to Linux SPP only.)
LOCALACCESS-TYPE	Possible values:
	`Anonymous` (default), `Administrator`
	CAUTION: Selecting local access with administrator privileges as the login provides full access to any user who has access to the local console, without prompting for a user name or password.
	HP Systems Management Homepage uses this parameter to determine the type of access granted to local users. (Applies to Linux SPP only)
TRUSTMODE	Possible values:
	`TrustByCert`—If you use this value, you must define the `CERTLIST` parameter to enable access to the server.
	`TrustByName`—If you use this value, you must define the `XENAMELIST`.
	`TrustByAll`—HP does not recommend using this value because of possible negative security consequences.
	CAUTION: The accepted values are case-sensitive and must be capitalized as shown. Failure to do so prevents the trust relationship from being set up properly during installation and can affect access to the web server.
	HP Systems Management Homepage uses this parameter to set up the trust relationship mode. (Applies to Linux SPP only.)
CERTLIST	Possible values:
	`Certificate file name` or `Server DNS name`
	You can provide a list of certificate files or servers where HP SUM can obtain certificates for trust relationships for the HP Systems Management Homepage. (Applies to Linux SPP only.)
XENAMELIST	Possible values:
	`Server DNS name`
	Enables you to provide a list of servers, separated by semicolons, for trust relationships for the HP Systems Management Homepage. (Applies to Linux SPP only.)
	This parameter is valid only if the `TRUSTMODE` parameter is set to `TrustByName`. (Applies to Linux SPP only.)
HPQLA2X00FO	Possible values:
	`SinglePath`, `SecurePath`, `QLogicFailure`
	No default value
	The hp_qla2x00 QLogic Fibre Channel Driver uses this parameter to determine the failover mode to use. (Applies to Linux SPP only.)
HPQLA2X00FORCE	Possible values:
	`Y`, `N` (default)

Parameter	Description
	The hp_qla2x00 QLogic Fibre Channel Driver uses this parameter to determine whether to skip detection of third-party storage. (Applies to Linux SPP only.)
OAUID	Possible values: User can define the OAUID variable multiple times before each HOST variable. Provides the user name credentials for the OA associated with VC. You must define a value for these variables before the HOST variable in the [TARGETS] section. This parameter applies only to VC firmware. You can also use OAUSER or OAUSERNAME.
OAPWD	Possible values: User can define OAPWD variable multiple times before each HOST variable. Provides the password credentials for the OA associated with VC. You must define a value for these variables before the HOST variable in the [TARGETS] section. This parameter applies only to VC firmware. You can also use OAPASSWORD.
IGNOREWARNINGS	Possible values: TRUE, FALSE Allows installation to proceed after HP SUM receives warnings on nodes. Some warnings include: Active member of a Serviceguard cluster HP-UX boot disk Superdome 2 OA
UPDATETYPE	Possible values: ALL, COMPLEX, PARTITIONS Superdome 2 servers only This argument determines which Superdome 2 firmware is updated.
DEVICELIST	Possible values: For example: DEVICELIST=npar1,blade1/1 Do not put spaces between the parameters Superdome 2 servers only Use this argument when the UPDATETYPE is set to PARTITIONS. This argument specifies the subset of partitions or blades to update when you do not want to update all partitions. Valid devices are: npar(number) and blade(enc)/(bay).
REBOOTLIST	Possible values: For example: REBOOTLIST=npar1,npar2 Do not put spaces between the parameters Superdome 2 servers only Use this argument with the UPDATETYPE= ALL or UPDATETYPE= PARTITIONS argument. Specifies the partitions to reboot after updating the partition firmware. Valid npar values are npar(number).
REPORT	Generates a report listing of the node summary and describes how the components in the repository affect the node; for example, whether each component applies to the node. HP SUM generates the report in HTML and XML with file name formats of HPSUM_Report_<date>_<time>.html and HPSUM_Report_<date>_<time>.xml.

Parameter	Description
	By default, HP SUM saves the files to the working directory where HP SUM is initiated. If that location is write-protected, you can find the files in the same directory as the HP SUM log files.
`INVENTORY_REPORT`	Generates a report listing of the components in the specified repository. The report is generated in HTML and XML with file name formats of `HPSUM_Inventory_Report_<date>_<time>.html` and `HPSUM_Inventory_Report_<date>_<time>.xml`. By default, the report is located in the present working directory where HP SUM is initiated. If that location is write-protected, you can find the report in the same directory as the HP SUM log files.
`FIRMWARE_REPORT`	Generates a report listing of the firmware installed and details of the node. The report is generated in HTML and XML with file names of `HPSUM_Firmware_Report.html` and `fwreport.xml` in the directory named `HPSUM_Firmware_Report_<date>_<time>`. By default, the report is located in the present working directory where HP SUM is initiated. If that location is write-protected, you can find the report in the same directory as the HP SUM log files.
`DEPENDENCY_REPORT`	Generates a report listing of the failed dependencies for all nodes.
`INSTALLED_REPORT`	Generates a report that lists all installed firmware, software, and driver versions installed on all nodes.
`COMBINED_REPORT`	This report generates all report types in one file.

Node attributes

The following attributes are related to nodes and baselines, you can use these attributes for each node or baseline.

Parameter	Description

`TARGETTYPE`	Specifies the type of node (`/targettype Windows`), and can shorten the inventory process.
	
	Valid node types are:
	
	`Windows`
	
	`Linux`
	
	`HPUX`
	
	`FC Switch` or `Fibre Channel Switch`
	
	`OA` or `Onboard Administrator`
	
	`SUPERDOME 2` or `SUPERDOME2` or `Superdome 2 Onboard Administrator`
	
	`iLO`
	
	`VC` or `Virtual Connect`
	
	`HP SAS` or `HP SAS B/L Interconnect Switch`
	
	`VMware` or `VMware Host`
	
	`iPDU` or `Intelligent Power Distribution Unit (iPDU)`
	
	`Moonshot`
	
	If you use the command with a group, HP SUM assumes all nodes in the group are the same node type.

`SOURCEPATH`	Possible values: `Directory path, UNC location`

Parameter	Description
	Provides a single local baseline path or a UNC file share. This action creates an inventory from the given path instead of the local or default baseline.
UNC_USERNAME	Possible Values: `<username>` Provides the user name credentials for the UNC location provided in the `SOURCEPATH`.
UNC_PASSWORD	Possible Values: `<password>` Provides the password to access the UNC location.
SWITCH_USERNAME	Possible Values: `<username>` Provides the username to access the Moonshot switch.
SWITCH_PASSWORD	Possible Values: `<password>` Provides the password to access the Moonshot switch.
SWITCH_ENABLE	Possible Values: `<enable>` Provides the enable password to access Moonshot switch in privilege mode.
SWITCHB_USERNAME	Possible Values: `<username>` Provides the username to access the B Moonshot switch.
SWITCHB_PASSWORD	Possible Values: `<password>` Provides the password to access the B Moonshot switch.
SWITCHB_ENABLE	Possible Values: `<enable>` Provides the enable password to access Moonshot B switch in privilege mode.
UID	Possible values: *`<username>`* Specifies the user ID for logging into the nodes.
PWD	Possible values: *`<password>`* Uses the password for the user ID specified in the `UID`. Specifies the password for logging into the nodes.
SUUSERNAME	Possible values: `<superusername>` Use this argument to provide a superuser username. Do not use `SUUSERNAME` with `USESUDO` access level.
SUPASSWORD	Possible values:

Parameter	Description
	`<superuserpassword>` Use this argument to provide a superuser password. `SUPASSWORD` cannot be used with `USESUDO` access level.
USESUDO	Possible values: `Yes, No` Allows use of the `sudo` command. When you specify `USESUDO = YES` in the input file, along with `UID` and `PWD`, the specified `UID` and `PWD` are considered `sudo` users. You cannot use `USESUDO` with `SUUSERNAME` and `SUPASSWORD` access level. Specifies that username and pasword for a remote node are sudo user credentials. When you specify `USESUDO` in the input file along with username and password, then the username and password are considered a sudo credentials.
ETHACTORDER	Use this command to determine VC-Enet module activation order. Possible value: `ODDEVEN/PARALLEL/SERIAL`, the default is `ODDEVEN`.
FCACTORDER	Use this command to determine VC-FC activation order. Possible value: `ODDEVEN/PARALLEL/SERIAL`, the default is `ODDEVEN`.
ETHACTDELAY	Use this command to determine the time, in minutes, between activating or rebooting VC-Enet modules Possible value: Max 60 minutes, the default is 0 minutes.
FCACTDELAY	Use this command to determine the time to wait between activating or rebooting VC-Enet modules. Possible value: Max 60 minutes, the default is 0 minutes.
ENCRYPTION_KEY	This command is required to enable VC in FIPS mode. Possible value: String of a minimum 8 characters.

HP SUM CLI input file examples

Example: inputfile.txt

```
REBOOTALLOWED = YES
REBOOTREQUIRED = NO
REBOOTMESSAGE = "Server is going down for a reboot"
REBOOTDELAY = 15
COMPONENTSLIST = cp001234.exe, cp001235.exe
BUNDLESLIST = bp001234.xml
ALLOWUPDATEBUNDLE = YES
SKIPTARGET = NO
```

```
IGNOREERRORS = ServerNotFound, FailedDependencies
SOURCEPATH = c:\pkgsource1
USELATEST = YES
SILENT = YES
OPTIONS = /f:rom
[TARGETS]
HOST = schinta1
HOST = schinta2
UID = root
PWD = root123
HOST = 234.567.765.432
[END]
```

Usage

To run the input file example above, use the following command from the command line in the directory where you saved HP SUM.

```
hpsum /inputfile <path:\inputfile.txt>
```

Example: Update two nodes

This example passes two nodes to be updated. The nodes do not necessarily have to be OAs. They can be any node that HP SUM supports.

```
DRYRUN = YES
SILENT = YES
[TARGETS]
HOST = BL465C-01
HOST = 192.168.1.2
[END]
```

Example: Pass a host DNS, user ID, and password to a target host.

This example passes a host DNS, along with the user ID and password to use for the hosts in the group.

```
DRYRUN = YES
SILENT = YES
[TARGETS]
HOST = BL685cG6
UID = Bigboss2
PWD = password
[END]
```

Example: Update one remote Windows node

```
SILENT = YES
IGNOREERRORS = ServerNotFound,BadPassword, FailedDepedencies
SKIPTARGET = NO
SOURCEPATH = C:\fwcd\firmware-8.70-0\hp\swpackages
```

```
[GROUPS]
HOST=winserver
UID=Userid
PWD=password
[END]
```

Example: Update four remote nodes with force

```
SILENT = YES
IGNOREERRORS = ServerNotFound,BadPassword, FailedDepedencies
SKIPTARGET = NO
SOURCEPATH = C:\ fwcd\firmware-8.70-0\hp\swpackages
FORCEALL = YES
REBOOTALLOWED = YES
REBOOTDELAY = 30
REBOOTMESSAGE = "Install complete, server will reboot in 30 seconds"
[TARGETS]
HOST=16.83.62.141
UID=Userid
PWD=password
[END]
[TARGETS]
HOST=16.83.61.48
UID=Userid
PWD=password
[END]
[TARGETS]
HOST=16.83.62.196
UID=Userid
PWD=password
[END]
[TARGETS]
HOST=16.83.61.24
UID=Userid
PWD=password
[END]
```

Example: Update some Superdome 2 partitions and unassigned blades, and reboot the partitions

Superdome 2 input files:

```
IGNOREWARNINGS = TRUE
[TARGET] HOST = 10.0.0.206
UID = Userid
PWD = password
```

```
UPDATETYPE = PARTITIONS
DEVICELIST=npar1,npar2,blade1/4,blade 1/5
REBOOTLIST=npar1,npar2
[END]
```

Usage

Usage example of access level.

```
hpsum /inputfile <path:\inputfile.txt>
```

Example: Update one remote node using a baseline in the current directory

```
SILENT = YES
[TARGETS]
HOST = 10.0.1.7
UID = Userid
PWD = password
[END]
```

Example: Update multiple targets using sudo in an input file

```
SILENT = YES
USESUDO = YES
[TARGETS]
HOST = 10.0.1.7
UID = Userid
PWD = password
[END]
[TARGETS]
HOST = 10.0.1.73
UID = Userid
PWD = password
[END]
```

Example: Using super user to update Linux components

```
SILENT = YES
[TARGETS]
HOST = 10.0.1.7
UID = Userid
PWD = password
SUUSERNAME = root
SUPASSWORD = rootpwd
[END]
```

Example: Update multiple targets using super user in an input file

Update multiple targets using super user in an input file when all targets have the same super user credentials.

```
SILENT = YES
SUUSERNAME = root
SUPASSWORD = rootpwd
[TARGETS]
HOST = 10.0.1.7
UID = Userid
PWD = password
[END]
[TARGETS]
HOST = 10.0.1.73
UID = Userid
PWD = password
[END]
```

Downloading HP SUM and components from the SDR

If you are using a Linux system, you can download HP SUM as an RPM from the HP SDR. This allows you to download and install HP SUM and components from the SDR using common YUM commands. For more information about downloading and installing HP SUM as an RPM, see *Linux best practices using HP Service Pack for ProLiant (SPP) and Software Delivery Repository (SDR)* at http://h20564.www2.hp.com/portal/site/hpsc/public/kb/docDisplay/?docId=c03479393.

For information on using the SDR, see http://www.hp.com/go/sdr.

Using the interactive command line interface (iCLI) to deploy updates

The HP SUM iCLI provides an interactive method to individual processes from the command line. As shown in Table 6, you can run this method to execute individual steps from the command line. This method is similar to using the GUI, but you provide individual commands and interact with each step. HP SUM iCLI takes a single command at a time. Using this method, you can have nodes at different stages of update. For example, you can have one node in the inventory phase, one node in the deployment phase, and another node that you are adding.

Table 6 Sample iCLI processes

Action	Command	Syntax
Add a baseline	Add	`hpsum add /baselines <swpackage path>`
Add a node	Add	`hpsum add /nodes <nodeip> user=root password=password`
Start inventory	Inventory	`hpsum inventory /nodes <nodeip> /baselines < swpackage path >`
Get a list of nodes	GetNodes	`hpsum getnodes`

The following sections provide detail about each command, including syntax and parameters.

Abort

`abort` safely terminates any command. If you do not pass any specifics, HP SUM terminates the command as soon as it is safe. You cannot abort processing a local baseline.

Syntax

```
hpsum abort [--nodes <nodelist>] [--baselines <baselinelist>]
[--cancelpending]
```

Parameters

The `abort` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
abort	Abort pending HP SUM operations. If you do not specify nodes, the command terminates all tasks for all nodes.
--nodes <nodelist>	A list of the nodes (full hostname or IP address) on which to perform the abort operation. If you do not specify nodes, the command terminates all tasks for all nodes.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows Sample Command-Line

```
C:\>hpsum abort /nodes 100.2.3.4 100.2.3.5
C:\>hpsum abort /baselines C:/HPSUM/SPP
```

Linux/HP-UX Sample Command-Line

```
$hpsum abort --nodes 100.2.3.4 100.2.4.5
$hpsum abort --baselines /root/hpsum/spp
```

Activate

`activate` activates any updates previously staged or installed. This can involve rebooting or other processes based on specific devices.

Syntax

```
hpsum activate --nodes <nodelist>
```

Parameters

The `activate` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
activate	The command to activate pending HP SUM updates.
--nodes <nodelist>	A list of the nodes (full hostname or IP address) on which to perform the activate nodes operation. If you do not

Parameter	Description
	provide any, the command applies to all nodes in the session.
--cancelPending	When specified, the command cancels the pending firmware update instead of activating it.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
SUCCESS_NOT_REQUIRED	3	3	The command completed successfully, but was not required or everything was already current <No activation was needed>
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMPONENT_FAILED	-3	253	The installation of the component failed.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum activate /nodes a.b.c.d a.b.c2.d2
```

Linux/HP-UX sample command line

```
$ hpsum activate --nodes a.b.c.d a.b.c2.d2
```

Add

add adds baselines or nodes to the current working set for the current session.

NOTE: Before you add an ftp type baseline, issue the getbaselines command to view a list of SPP baselines available.

```
hpsum getbaselines /list hp.com
```

HP SUM returns a list of available baselines online, for example:

```
Web Baseline Information:
1. Name: HP Service Pack for ProLiant
   Bundle File Name: spp.2014.02.0.B
   Version: 2014.02.0.B
   Release Date: 2014-04-25
2. Name: HP Service Pack for ProLiant
   Bundle File Name: spp.2013.09.0.C
   Version: 2013.09.0.C
   Release Date: 2014-04-30
```

You can supply passwords for all the nodes or baselines at the beginning of the list.

For example, hpsum add --nodes N1 --user userABC --password pwd123 x.x.x.x y.y.y.y

NOTE: HP SUM does not automatically add nodes or baselines. The interactive CLI mode does not automatically add associated nodes. Use GUI mode to add associated devices.

If you add a VC node, include the following attributes: oaip, oa_username, and oa_password.

Syntax

```
hpsum add [--nodes n1 [type=<node_type>] user=<username>
password=<userpassword>]
[--baselines b1 [save_location=<>] [type <>]]
```

NOTE: Do not add baselines in the same command as nodes. Use two separate commands.

Parameters

The `add` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
add	The command to add nodes or baselines to the HP SUM session.
--nodes	Object to perform the add operation. The items in the list should be delimited by spaces. You can specify the user and password globally for all nodes. • domain_name: localhost • ip: 127.0.0.1 • ipv6: ::1 Add either nodes or baselines. Do not add both in the same command.
type	This parameter defines the node type. HP SUM supports node types: • windows • linux • ilofederation • ilo • vc • oa • vmware • hpux • ipdu • sas • fchba_switch • superdome_2 • moonshot • unknown
user=userstring	This username credentials for the node.
password=passwordstring	The user password credentials for the node. If you do not enter this on the command line, HP SUM prompts for the password.

Parameter	Description
`--baselines save_location=workinglocation`	Object to perform the add operating for http baseline. HP SUM supports HTTP and FTP when you add a baseline. Add either nodes or baselines. Do not add both in the same command.
`type`	This parameter defines the baseline type. HP SUM supports baseline types: • `http` • `ftp` • `bundle`
`save_location`	The directory you want to save a downloaded baseline.

Return codes

Return Code	Windows	Linux	Text
`SUCCESS_NO_REBOOT`	0	0	`The command was successful.`
`SUCCESS_NOT_REQUIRED`	3	3	`The command completed successfully, but was not required or everything was already current.` NOTE: The node or baseline already existed.
`FAILURE_GENERAL`	-1	255	`A general failure occurred. For details, see the logs.`
`FAILURE_BAD_PARM`	-2	254	`A bad input parameter was encountered. For details, see the logs.`
`FAILURE_COMMAND_FAILED`	-4	253	`The command failed. For details, see the logs.`

Example

Windows sample command line

```
C:\>hpsum add /nodes 10.0.1.15 type=windows
C:\>hpsum add /baselines type=ftp save_location=c:\temp\pfw
bundle=spp.2014.02.0.B
```

Linux/HP-UX sample command line

```
$ hpsum add --nodes 10.0.1.16 type=linux
$ hpsum add --baselines "/SPP/" "/tmp/myrepos/"
$ hpsum add --baselines type=ftp save_location="/tmp/pfw
bundle=spp.2014.02.0.B
```

NOTE: If the node type is Linux or HP-UX, you can use su_user and su_password, or use use_sudo.

For example:

hpsum add /nodes 192.168.1.1 type=Linux user=user password=password su_user=user1 su_password=password1

hpsum add /nodes 192.168.1.1 type=Linux user=user password=password use_sudo=true

Delete

delete enables you to delete both selected and non-selected baselines or nodes (or all) from the current session. You cannot delete a baseline if it is assigned to a node and HP SUM is performing inventory on the node or deploy the node.

Syntax

```
hpsum delete [--nodes <nodelist>]
hpsum delete [--baselines <baselinelist>]
```

NOTE: Do not delete a baseline and node in the same command.

Parameters

The delete command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
delete	The command to delete nodes or baselines from the HP SUM session.
--nodes [nodelist]	Object to perform the delete operation. Delimit the list with a space. If you do not provide a nodelist, all nodes are deleted.
--baselines [baselinelist]	Object to perform the delete operation. Delimit the list with a space. If you do not provide a list of baselines, all baselines are deleted.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
SUCCESS_NOT_REQUIRED	3	3	The command completed successfully, but was not required or everything was already current. <Node or baseline was not present, so did not need to be deleted.>
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum delete /baselines "spp.2012.01"
```

Linux/HP-UX sample command line

```
$ hpsum delete --baselines "spp.2012.01"
```

Deploy

`deploy` enables you to perform the deployment for nodes in the current working set for the current session. If you do not specify any nodes, the default is **all in the currently selected list**.

Syntax

```
hpsum deploy [--nodes <nodelist>]
```

Parameters

The `deploy` command provides the following options:

Parameter	Description
`hpsum`	The HP SUM script initiates this action.
`deploy`	The command to deploy updates HP SUM.

`--nodes <nodelis>`	A list of the nodes to perform the deploy operation on. You can specify each node in three ways:
	`domain_name: localhost`
	`ip: 127.0.0.1`
	`ipv6: ::1`
	If you do not provide a nodelist, all nodes in the session are deployed.

Return codes

Return Code	Windows	Linux	Text
`SUCCESS_NO_REBOOT`	0	0	The command was successful.
`SUCCESS_REBOOT`	1	1	The command was successful but a reboot is required.
`SUCCESS_NEW_SESSION_REQUIRED`	2	2	The command was successful but an additional installation session is required to complete the update process.
`SUCCESS_NOT_REQUIRED`	3	3	The command completed successfully, but was not required or everything was already current.
`FAILURE_GENERAL`	-1	255	A general failure occurred. For details, see the logs.
`FAILURE_BAD_PARM`	-2	254	A bad input parameter was encountered. For details, see the logs.
`FAILURE_COMPONENT_FAILED`	-3	253	The installation of the component failed.
`FAILURE_COMMAND_FAILED`	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum deploy /nodes 10.7.0.0
```

Linux/HP-UX sample command line

```
$ hpsum deploy --nodes 10.7.0.0
```

FindAvailableNodes

`findavailablenodes` enables you to search the network for available nodes. To be available, you must be able to reach nodes and another management system must not have exclusive control of the nodes. This command searches the range of IP addresses provided and accepts an optional port.

Syntax

`hpsum findavailablenodes --type ip|LDAP|port [ipAddrLow ipAddrHi] [port]`

Parameters

The `findavailablenodes` command provides the following options:

Parameter	Description
HPSUM	The HP SUM script initiates this action.
findavailablenodes	The command to find all nodes available for updates through HP SUM.
--type ip|LDAP|port	If you pass the `type` option, the value must match one of three types: **1.** `ip` 　Options: `ipAddrLow; ipAddrHi`, or `fromIP;toIP` **2.** `LDAP` 　Options: `ldapServer; username;` ** interactive prompt for password **3.** `port` 　Options: `ipAddrLow; ipAddrHi; portNum`

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

`C:\>hpsum findavailablenodes /type ip 10.7.85.0 10.7.85.128`

Linux/HP-UX sample command line

`$ hpsum findavailablenodes --type port 10.7.85.0 10.7.85.128 445`

GenerateReports

`generatereports` enables you to generate reports for the HP SUM session. These reports include inventory, node firmware, node installables, failed dependency details, and installed details. The output defaults to `attributes values` and the type of report to `all available`.

Syntax

```
hpsum generatereports [--type inventory | firmware | installables |
faileddep | installed | combined] [--output html | xml | csv] [--nodes
<nodelist> --baselines <baselinelist>]
```

Parameters

The `generatereports` command provides the following options:

Parameter	Description
`hpsum`	The HP SUM script initiates this action.
`generatereports`	The command to generate reports within the HP SUM session.
`--type inventory | firmware | installables | faileddep | installed | combined`	If you specify the `type` parameter, it must be one of the following: • Inventory • Firmware • Installables • Faileddep • Installed • Combined If you do not provide a type, all types possible are generated.
`--output html | xml | csv`	Output format (defaults to `attributes` value). If you do not provide an output type, all formats are produced.
`--nodes <nodelist>`	List of nodes to include in the reports. If you do not specify a list of nodes, all nodes in the current session are selected.
`--baselines <baselinelist>`	List of baselines to include in the reports. If you do not specify a list of baselines, all baselines in the current session are selected.

Return codes

Return Code	Windows	Linux	Text
`SUCCESS_NO_REBOOT`	0	0	`The command was successful.`
`FAILURE_GENERAL`	-1	255	`A general failure occurred. For details, see the logs.`
`FAILURE_BAD_PARM`	-2	254	`A bad input parameter was encountered. For details, see the logs.`
`FAILURE_COMMAND_FAILED`	-4	252	`The command failed. For details, see the logs.`

Example

Windows sample command line

```
C:\>hpsum generatereports /type inventory /nodes localhost
```

Linux/HP—UX sample command line

```
$ hpsum generatereports --type faileddep --nodes 10.7.85.0 10.7.85.128
```

GetAttributes

getattributes enables you to view any of the attributes for the selected node. You can change attributes using the SetAttributes command.

Syntax

```
hpsum getattributes --nodes <nodelist>
```

Parameters

The getattributes command provides the following options:

Parameter	Description
HPSUM	The HP SUM script initiates this action.
getattributes	The command to show attributes for the selected nodes.
--nodes [nodelist]	A list of the nodes for which to get the attributes. If you do not specify a nodelist, all nodes in the session are shown.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum getattributes /nodes localhost
```

Linus/HP-UX sample command line

```
$ hpsum getattributes --nodes localhost
```

GetBaselines

getbaselines enables you to show the list of the baselines in the current HP SUM session.

Syntax

```
hpsum getbaselines [--details] [--list hp.com]
```

Parameters

The getbaselines command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
getbaselines	The command shows the baselines in the current HP SUM session.

Parameter	Description
`baselinelist [--details]`	Baseline location to use for performing the operation. Specify `--details` to get detailed baseline information.
`--list hp.com`	This parameter retrieves the list of available baselines from ftp.hp.com

Return codes

Return Code	Windows	Linux	Text
`SUCCESS_NO_REBOOT`	0	0	`The command was successful.`
`FAILURE_GENERAL`	-1	255	`A general failure occurred. For details, see the logs.`
`FAILURE_BAD_PARM`	-2	254	`A bad input parameter was encountered. For details, see the logs.`
`FAILURE_COMMAND_FAILED`	-4	252	`The command failed. For details, see the logs.`

Example

Windows sample command line

`C:\>hpsum getbaselines /list hp.com /details`

Linux/HP-UX sample command line

`$ hpsum getbaselines --list hp.com`

GetComponentLogs

`getcomponentlogs` enables you to view the component logs for a node.

Syntax

`hpsum getcomponentlogs [--nodes <nodelist> [--component <componentname>]]`

Parameters

The `getcomponentlogs` command provides the following options:

Parameter	Description
`hpsum`	The HP SUM script initiates this action.
`getcomponentlogs`	The command to get the logs from the HP SUM engine.
`--nodes <nodelist>`	Nodes for this request. If you do not provide a nodelist, all nodes in the session are used.
`--component <componentname>`	The name of the component that HP SUM will display the log. If you use this parameter, you must enter a component name.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum getcomponentlogs /nodes localhost
```

Linux/HP-UX sample command line

```
$ hpsum getcomponentlogs --nodes 16.1.1.105 --component cp020024.exe
```

GetCurrentlyInstalledVersions

getcurrentlyinstalledversions enables you to get the currently installed versions of components on nodes in the current HP SUM session.

Syntax

```
hpsum getcurrentlyinstalledversions [--nodes [nodelist]]
```

Parameters

The getcurrentlyinstalledversions command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
getcurrentlyinstalledversions	The command to get the currently installed update version of installed items.
--nodes [nodelist]	A list of the nodes to get the installed versions. If you do not provide a nodelist, all nodes in the session are used.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum getcurrentlyinstalledversions /nodes localhost
```

Linux/HP-UX sample command line

```
$ hpsum getcurrentlyinstalledversions --nodes localhost
```

GetEngineStatus

`getenginestatus` enables you to retrieve the status information of the HP SUM session.

Syntax

```
hpsum getenginestatus
```

Parameters

The `getenginestatus` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
getenginestatus	The command to get the session status of the current HP SUM session.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:/>hpsum getenginestatus
```

Linux/HP—UX sample command line

```
$hpsum getenginestatus
```

GetLogs

`getlogs` launches the `GatherLogs` function for HP SUM.

Syntax

```
hpsum getlogs
```

Parameters

The `getlogs` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
getlogs	The command to get the current trace logs.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum getlogs
```

Linux/HP-UX sample command line

```
$ hpsum getlogs
```

GetNeededUpdates

`getneededupdates` enables you to see the details of needed updates based on either the state of the current selections or items passed in as part of the command. If you do not specify any nodes, the command uses those currently selected in the session.

Syntax

```
hpsum getneededupdates [--nodes [nodelist]]
```

Parameters

The `getneededupdates` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
getneededupdates	The command shows needed updates.
--nodes [nodelist]	A list of the nodes on which to perform the check for needed updates operation. If you do not specify a nodelist, all nodes in the session are used.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum getneededupdates /nodes localhost
```

Linux/HP-UX sample command line

```
$ hpsum getneededupdates --nodes localhost
```

GetNodes

getnodes enables you to show the list of the nodes in the current HP SUM session.

Syntax

```
hpsum getnodes [--nodes [nodelist --details]]
```

Parameters

The getnodes command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
getnodes	The command show the nodes in the current HP SUM session.
--nodelist [--details]	The nodes on which to perform the operation. Specify [--details] to get detail information.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\>hpsum getnodes 16.157.90.123 /details
```

Linux/HP-UX sample command line

```
$ hpsum getnodes 16.157.90.123 --details
```

Inventory

`inventory` enables you to scan nodes for the currently installed version of firmware, drivers, and hardware components.

Syntax

```
hpsum inventory [--nodes <nodelist>] [--baselines <baselinelist>]
```

NOTE: If the baseline location include spaces or special characters, use escape characters (Linux) or double-quotations (Windows).

Parameters

The `inventory` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
inventory	The command to inventory the nodes.
--nodes [nodelist]	A list of the nodes on which to perform the inventory command. You can specify each node in the following ways: **1.** `localhost` **2.** `127.0.0.1` **3.** `::1`
--baselines [baselinelist]	You can specify the path of the SPP or components. If a location contains multiple bundles, you can specify a specific bundle in the location. If you have assigned a baseline to a node by using the `setattributes` command, you do not need to specify a baseline. **1.** `baseline: C:\repor1` **2.** `baseline: C:\repor1\bp0001.xml`

Example

Windows sample command line

```
C:\>hpsum inventory /nodes 16.157.90.182 /baselines
C:\Users\Administrator\Desktop\blds\ilo\26.33
```

Linux sample command line

```
$ hpsum inventory --nodes 16.157.90.182 --baselines
/root/Desktop/rono/blds/ilo
```

Login

The `Login` command enables you to set the credentials used for the current session.

Syntax

Authenticating with credentials for the first time:

```
hpsum login [--username <username> --password <password>] [--port <port>]
[--ssl_port <sslport>]
```

Authenticating with current credentials:

```
hpsum login
```

Parameters

Parameter	Description
hpsum	The HP SUM script initiates this action.
login	The command to set credentials for the HP SUM session.
--username	Optional parameter for adding username.
--password	Optional parameter for adding user password.
--port	Optional parameter to define a port that HP SUM uses.
--ssl_port	Optional parameter to define an SSL port that HP SUM uses.

Return codes

Return code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum login /username rono /password pwd123 /ssl_port 9091
```

Linux/HP-UX sample command line

```
$ hpsum login --username rono --password pwd123 --ssl_port 9091
```

SetAttributes

setattributes enables you to change the attributes of an HP SUM node or session. This command might return an invalid parameter notice if the permissions are not correct, or if either the parameter is not part of the requested set or if the value is not allowed.

You can set the following node attributes: force, rewrite, downgrade, action, delay, username, password, baseline, ignore_warnings, forcefirmware, forcesoftware, and message (reboot message).

NOTE: If you use the rewrite=true, or downgrade=true parameters, you must use the forcefirmware=true, forcesoftware=true, or both.

The following attributes are specific to Superdome 2 nodes:
`update_type=[ALL/COMPLEX/PARTITIONS]`, `ignore_warnings=[true/false]`, `device_list=[devicelist]`, and `reboot_list=[rebootlist]`.

You can set the session's `open_firewall` attribute.

Syntax

```
hpsum setattributes --nodelist [<nodelist>] attribute1=value1
attribute2=value2
hpsum setattributes --session attribute1=value1
```

Parameters

The `setattributes` command provides the following options:

Parameter	Description
`hpsum`	The HP SUM script initiates this action.
`setattributes`	The command to set attributes pending HP SUM operations.
`--nodes [nodelist] [attribute=value]`	Specify the nodes and attributes that you want to apply to nodes.
`--session`	Specify the session attribute you want to change. **NOTE:** Currently HP SUM supports only changing the `open_firewall` attribute.
`switch_username`	This provides the username for the A switch for Moonshot systems.
`switch_password`	This provides the password for the A switch for Moonshot systems.
`switch_enable`	This enables the password for the A switch for Moonshot systems.
`switchb_username`	This provides the username for the B switch for Moonshot systems.
`switchb_password`	This provides the password for the B switch for Moonshot systems.
`switchb_enable`	This enables the password for the B switch for Moonshot systems.
`encryption_key`	This command is required to enable VC in FIPS mode. Possible value: String of a minimum 8 characters.
`ethactorder`	Use this command to determine VC-Enet module activation order. Possible value: `ODDEVEN/PARALLEL/SERIAL`, the default is `ODDEVEN`. This is the
`fcactorder`	Use this command to determine VC-FC activation order. Possible value: `ODDEVEN/PARALLEL/SERIAL`, the default is `ODDEVEN`.
`ethactdelay`	Use this command to determine the time, in minutes, between activating or rebooting VC-Enet modules Possible value:

Parameter	Description
	Max 60 minutes, the default is 0 minutes.
fcactdelay	Use this command to determine the time to wait between activating or rebooting VC-Enet modules. Possible value: Max 60 minutes, the default is 0 minutes.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:\> hpsum setattributes /nodes 16.1.1.105 forcefirmware=true
forcesoftware=true rewrite=true downgrade=true
C:\> hpsum setattributes /nodes 16.1.1.117 update_type=all
C:\> hpsum setattributes /session open_firewall=yes
```

Linux/HP-UX sample command line

```
$ hpsum setattributes --nodes 16.1.1.105 forcefirmware=true
forcesoftware=true rewrite=true downgrade=true
$ hpsum setattributes -nodes 16.1.1.117 update_type=all
$ hpsum setattributes -session open_firewall=yes
```

ShutdownEngine

shutdownengine enables you to terminate the HP SUM engine. If other sessions are active, this fails unless you use the --force option.

△ **CAUTION:** Using --force can cause loss of information.

Syntax

```
hpsum shutdownengine [--force]
```

Parameters

The `shutdownengine` command provides the following options:

Parameter	Description
hpsum	The HP SUM script initiates this action.
shutdownengine	The command to shut down HP SUM engine.
--force	Force shutdown even if other sessions are still active.

Return codes

Return Code	Windows	Linux	Text
SUCCESS_NO_REBOOT	0	0	The command was successful.
FAILURE_GENERAL	-1	255	A general failure occurred. For details, see the logs.
FAILURE_BAD_PARM	-2	254	A bad input parameter was encountered. For details, see the logs.
FAILURE_COMMAND_FAILED	-4	252	The command failed. For details, see the logs.

Example

Windows sample command line

```
C:/>hpsum shutdownengine /force
```

Linux/HP—UX sample command line

```
$ hpsum shutdownengine --force
```

7 Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

Receive, by email, support alerts announcing product support communications, driver updates, software releases, firmware updates, and customer-replaceable component information by signing up at http://www.hp.com/go/myadvisory.

To change options for support alerts you already receive, click the **Sign in** link on the right.

Related information

Documents

You can find these documents on the Smart Update Information Library page:

http://www.hp.com/go/SmartUpdate/docs

- *HP Smart Update Manager Release Notes*
- *HP Service Pack for ProLiant Release Notes*
- *HP Service Pack for ProLiant Server Support Guide*
- *HP Smart Update Best Practices Overview*
- *HP Smart Update Best Practices Planning Guide*
- *HP Smart Update Best Practices Implementer Guide*

The following document is available for HP Integrity firmware update best practices:

- *Using HP Smart Update Manager with Integrity Servers*
  http://h20564.www2.hp.com/portal/site/hpsc/public/kb/docDisplay/?docId=c03572337

Websites

For more information about HP SUM, see the HP SUM website:

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

For more information about SPP, see the SPP website:

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

To download the latest SPP and available hot fixes, see the SPP download page:

http://www.hp.com/go/spp/download

For information about HP Subscriber's Choice, see the Subscriber's Choice website:

> http://www.hp.com/go/subscriberschoice

For information on the HP Systems Insight Manager, see the following documents on the HP Systems Insight Manager website:

> http://www.hp.com/go/insightmanagement/sim/docs

- *HP Systems Insight Manager Installation and Configuration Guide for MS Windows*
- *HP Systems Insight Manager User Guide*

For more information about HP ProLiant Gen8 servers and software see the HP website:

> http://www.hp.com/go/proliantgen8/docs

For information about HP Insight Control Management Software, see the HP website:

> http://www.hp.com/servers/rdp

For information about operating systems supported by HP ProLiant servers, see the operating system support matrices:

> http://www.hp.com/go/supportos

For information about support for updating SATA hard drives in a Modular Smart Array 20/50/60/70 storage enclosure connected to an HP ProLiant server using a Smart Array controller, see the support matrix on the HP StorageWorks Modular Smart Arrays website:

> http://www.hp.com/go/msa

Typographic conventions

Table 7 Document conventions

Convention	Element
Blue text: Table 7 (page 109)	Cross-reference links and e-mail addresses
Blue, underlined text: http://www.hp.com	Website addresses
Bold text	- Keys that are pressed - Text typed into a GUI element, such as a box - GUI elements that are clicked or selected, such as menu and list items, buttons, tabs, and check boxes
Italic text	Text emphasis
`Monospace` text	- File and directory names - System output - Code - Commands, their arguments, and argument values

NOTE: Provides additional information.

HP Insight Remote Support

HP strongly recommends that you register your device for remote support to enable enhanced delivery of your HP Warranty, HP Care Pack Service, or HP contractual support agreement. HP Insight Remote Support supplements your monitoring continuously to ensure maximum system availability by providing intelligent event diagnosis, and automatic, secure submission of hardware event notifications to HP, which will initiate a fast and accurate resolution, based on your product's

service level. Notifications can be sent to your authorized HP Channel Partner for onsite service, if configured and available in your country.

For more information, see *HP Insight Remote Support and Insight Online Setup Guide for ProLiant Servers and BladeSystem c-Class Enclosures* on the HP website (http://www.hp.com/go/enterprise/docs). HP Insight Remote Support is available as part of HP Warranty, HP Care Pack Service, or HP contractual support agreement.

HP Insight Online direct connect

When you use the embedded Remote Support functionality with an HP ProLiant Gen8 or Gen9 server or HP BladeSystem c-Class enclosure, you can register a server or enclosure to communicate directly to HP Insight Online without the need to set up an HP Insight Remote Support centralized Hosting Device in your local environment. HP Insight Online will be your primary interface for remote support information.

The Insight Online direct connect configuration is available in iLO 4 1.40 and later, Intelligent Provisioning 1.60 and later, and Onboard Administrator 4.11 and later.

For more information, see the product documentation on the HP website: http://www.hp.com/go/insightremotesupportdocs.

HP Insight Remote Support central connect

When you use the embedded Remote Support functionality with an HP ProLiant Gen8 or Gen9 server or HP BladeSystem c-Class enclosure, you can register a server or enclosure to communicate to HP through an HP Insight Remote Support centralized Hosting Device in your local environment. All configuration and service event information is routed through the Hosting Device. This information can be viewed by using the local HP Insight RS user interface or the web-based view in HP Insight Online.

The Insight Remote Support central connect configuration is available in iLO 4 1.10 and later, Intelligent Provisioning 1.20 and later, and Onboard Administrator 3.60 and later.

For more information, see the product documentation on the HP website: http://www.hp.com/go/insightremotesupportdocs.

HP Insight Online

HP Insight Online is a capability of the HP Support Center portal. Combined with HP Insight Remote central connect or HP Insight Online direct connect, it automatically aggregates device health, asset, and support information with contract and warranty information, and then secures it in a single, personalized dashboard that is viewable from anywhere at any time. The dashboard organizes your IT and service data to help you understand and respond to that information more quickly. With specific authorization from you, an authorized HP Channel Partner can also view your IT environment remotely by using HP Insight Online.

For more information, see the following documents on the HP website (http://www.hp.com/go/insightremotesupport/docs):

- *HP Insight Online User's Guide*

- *HP Insight Remote Support and Insight Online Setup Guide for ProLiant Servers and BladeSystem c-Class Enclosures*

8 Documentation feedback

HP is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (**docsfeedback@hp.com**). Include the document title and part number, version number, or the URL when submitting your feedback.

Glossary

AMS	Agentless Management Service
Analyze	The process where HP SUM verifies all dependencies before deploying updates
Baseline	A set of updates for your hardware
CPLD	complex programmable logic device
Deploy	The process where HP SUM begins the update process by installing the component update files to the node.
DNS	domain name system
Guided Update	An automated or wizard-style method to update the local node
iLO	Integrated Lights-Out
Inventory	The process where HP SUM determines baseline and node contents
iPDU	intelligent power distribution unit
ISP	Integrity Support Pack
Location	Network directory for baseline updates
MSB	Maintenance Supplement Bundle
Node	A piece of hardware you want to update, for example a server, iLO, or NIC.
OA	Onboard Administrator
Offline	Offline mode boots the server to a small Linux kernel to launch HP SUM and deploy updates. Offline mode does not use the installed operating system.
Online	Online mode uses the server's installed operating system to launch HP SUM and deploy updates.
RILOE II	Remote Insight Lights-Out Edition II
Scouting	The process where HP SUM determines node type
SDR	Software Delivery Repository
SPP	HP Service Pack for ProLiant
SSH	Secure Shell
SSL	Secure Sockets Layer
TPM	Trusted Platform Module
UNC	Universal Naming Convention
URI	Uniform resource identifier, commonly known as the web address
VC	Virtual Connect
WBEM	Web-Based Enterprise Management
WMI	Windows Management Instrumentation

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