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# **Integrated Smart Update Tools 2.8.0 User Guide for Windows, Linux, and VMware ESXi**

## **Abstract**

This document describes how to use Integrated Smart Update Tools to update firmware and operating system drivers on HPE ProLiant servers. This document is intended for individuals who understand the configuration and operations of Microsoft Windows, Windows Server, Linux, VMware, Service Pack for ProLiant (SPP), and Smart Components.

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# iSUT introduction

## Integrated Smart Update Tools

Integrated Smart Update Tools (SUT) is the smart update solution for performing online firmware and driver updates. SUT is used with iLO 4, iLO 5, and with update solutions (management appliances such as iLO Amplifier Pack or HPE OneView and Smart Update Manager (SUM) to stage, install, and activate firmware and driver updates.

The solution must be installed on the operating system, where it updates results through Rich Infrastructure Services (RIS) communication.

- **SUT:** Polls iLO to check for requests from SUM, iLO Amplifier Pack, or HPE OneView for updates through local iLO using the iLO channel interface driver installed on the OS and orchestrates staging, deploying, and activating updates. You can adjust the polling interval by issuing the appropriate command-line option provided by SUT. Performs inventory on target servers, stages deployment, deploys updates, and then reboots the servers.
- **iLO 5 with integrated Smart Update** (Gen10 or later servers only): Performs iLO Repository-based updates by downloading the components from iLO Repository when iLO Installation Queue has the components which can be updated by SUT.
- **iLO Amplifier Pack and HPE OneView:** Displays available updates for servers. Communicates with SUT (or SUT 1.x) to initiate updates using the iLO Redfish interface. SUT reports the status of updates to iLO Amplifier Pack through iLO Restful Interface.
- **SUM:** A tool for firmware and driver maintenance for HPE ProLiant servers and associated options.

---

**NOTE:** SUM and iLO Amplifier Pack should not manage the same nodes.

---

## iSUT/SUT usage scenarios

Online updates using HPE OneView and iLO Amplifier Pack require SUT to be installed in the OS/hypervisor of the remote servers or in a helper OS appliance as follows:

Server generation	OS/hypervisor of remote server	SUT to use	Where is SUT installed and running?
Gen10, Gen9, and Gen8	Windows	Integrated SUT (iSUT) for Windows	In the Windows instance of each remote server.
Gen10, Gen9, and Gen8	Red Hat or SUSE	Integrated SUT (iSUT) for Linux	In the Red Hat or SUSE instance of each remote server.
Gen10	VMware vSphere ESXi 6.5	Integrated SUT (iSUT) for ESXi 6.5	In the ESXi 6.5 instance of each remote server.
	VMware vSphere ESXi 6.7	Integrated SUT (iSUT) for ESXi 6.7	In the ESXi 6.7 instance of each remote server.
	VMware vSphere ESXi 7.0	Integrated SUT (iSUT) for ESXi 7.0	In the ESXi 7.0 instance of each remote server.
Gen9 and Gen8	VMware vSphere ESXi	SUT for VMware vSphere ESXi	In a Red Hat instance running on a physical server, or VM.



# Platform support

Operating System	Version supported
Windows	Integrated Smart Update Tools 2.8.0 for Windows
Linux	Integrated Smart Update Tools 2.8.0 for Linux
VMware ESXi	Integrated Smart Update Tools 2.8.0 for VMware ESXi

## iSUT operating modes

SUT runs in the following modes:

- **OnDemand mode** (default): This is the CLI-based mode in which every action needs to be triggered by a user action. OnDemand mode enables the administrator user to write commands in the CLI window that:
  - Stage updates
  - Deploy updates
  - Reboot servers

You can set the mode to OnDemand using the `sut -set mode=OnDemand` command.

- **Auto/Service mode**: This is the automatic mode of update where the user can set the correct mode and polling interval time. Once the mode and polling interval time is set, SUT periodically polls the RIS for a new request. After the request is received, SUT performs the updates automatically.

SUT runs in the following Auto/Service modes:

- AutoStage
  - Mounts the SPP through iLO Virtual Media.
  - Uses SUM present in the SPP to inventory the server.
  - Copies the applicable components from the SPP to the server for deployment.

---

**NOTE:** AutoStage is a no-operation mode for iSUT during iLO repository updates. Therefore, to perform firmware updates, this mode should be changed to OnDemand mode or any AutoDeploy mode.

---

- AutoDeploy
  - Performs all the tasks in AutoStage mode.
  - Updates the applicable components found in the iSUT staging directory on the host server.

---

**NOTE:** Components that are updated by iSUT in iLO Repository-based updates are downloaded to the iSUT staging directory before updating.

---

- AutoDeployReboot
  - Performs all the tasks in AutoDeploy mode.
  - If required, reboots the host server.



---

**NOTE:** For VMware ESXi, the server must be in Maintenance mode.

---

**NOTE:** HPE OneView schedules online firmware updates by specifying a schedule time. iSUT for Windows, Linux, and VMware supports the scheduling only if it is configured in AutoDeployReboot mode or AutoDeploy mode.

---

**NOTE:** If the deployment succeeds, SUT verifies the updates by default. Use the command `sut /deploy noautoverify` to prevent the default verification. This is not applicable for iLO Repository-based updates.

---

You can set the mode to Auto/Service mode by using the command `sut -set mode=AutoStage/AutoDeploy/AutoDeployReboot`.

Use the `status` command to view which mode SUT is running.

## iLO Repository-based update options

iLO Repository-based update options are available on Gen10 servers. Smart update solutions such as iLO Amplifier Pack, HPE OneView, or SUM can use this mechanism to update servers. This update option needs Agentless Management Service (AMS) to be installed on the target server on which iSUT is installed. If AMS is not installed, HPE OneView reports it as a Warning alert in the profile when a profile is applied with any of the iSUT options.

**NOTE:** For more information, see the [Smart Update Manager 8.7.0 User Guide](#).


---

## Dual boot environment notes

If you have an environment where servers boot to both Windows and Linux operating systems.

If you run SUT in one operating system, and then are going to run it in on another, change the staging directory to the correct path. Use the following command:

```
sut -set stagingdirectory=<staging_directory_path>
```

 **IMPORTANT:** SUT requires permission to write to the staging directory.

---

## ESXCLI extension for remote execution

Use ESXCLI extension feature to run iSUT OnDemand commands remotely using vCLI (ESXi 6.x)/ESXCLI (ESXi 7.x).

### More information

[Installing iSUT VMware ESXi \(Gen10 only\)](#)

### iSUT ESXCLI extension advantages

On using iSUT ESXCLI extension, you are not required to:

- Log into each remote ESXi host individually to execute command.
- Enable SSH on each of the remote ESXi hosts.
- Run same set of commands manually on each server. A script file can be used to run the supported iSUT commands.



---

**NOTE:** For more information on supported CLI commands with ESXCLI extension, see *Integrated Smart Update Tools CLI Reference Guide*.

---





# Downloading iSUT

## Downloading SUT

SUT is available on Windows and Linux for Gen8, Gen9 and Gen10 systems and on ESXi for Gen10 systems. This SUT is part of the Service Proliant Pack (SPP) shipped by HPE. Each SPP contains a contents.html, which can be looked up using the substring **Integrated Smart Update Tools** to find the SUT component part of the SPP.

If you are downloading an older SPP, you can download the latest SUT version through the product downloads page.

### Procedure

Download SUT from <https://www.hpe.com/servers/sut>.

## Downloading SUM

If SUT is not installed on the target system, you can download SUM and use it to install SUT for the first time on the target system using the SUM GUI. For more information, see [Installing iSUT with the SUM GUI](#).

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**NOTE:** SUT cannot be installed on Gen10 VMware ESXi systems using SUM.

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### Procedure

1. Go to <https://www.hpe.com/servers/sum>.
2. Click **Download**.
3. Select the SUM version you want to download.
4. In the **Delivery Options** area, select the SUM file you want to download.

## Downloading SUT RPM keys

### Procedure

Open the link <https://downloads.linux.hpe.com/SDR/keys.html> in a web browser and follow the instructions.



# Installing iSUT for Windows and Linux

## SUT installation

SUT must be installed manually the first time. Ensure that every Windows or Linux system on which SPP must be applied has iSUT installed.

After you install SUT, the default mode of SUT is set to OnDemand mode. During every SPP upgrade, SUT self-upgrades itself if the version of SUT found in SPP is higher. During self-upgrade, SUT configurations such as mode are retained. You can change the SUT mode to a mode of your choice after a successful SUT installation. To do so, use the following command:

```
sut -set mode=<OnDemand/AutoStage/AutoDeployAutoDeployReboot>
```

## SUT installation for Windows

To install SUT on Windows, perform the following steps:

1. Download the Smart Component (cpxxxxxx.exe) file to a local directory on the server where you want to install the software.
2. Change to the directory.
3. Run the .exe file by double-clicking it. A dialog box appears.
4. Click the **Install** button to install SUT.

## iSUT installation for Linux

### Prerequisites

- Linux OS configuration is required.
- Directories `/tmp` and `/var/tmp/sut` must have exec permission.
- If you are mounting file systems to the `/tmp` or `/var/tmp/sut` directories, you must mount them as read/write.

To install iSUT on Linux, use the following command:

```
rpm -ivh <dir_location>/sut-<version>.linux.x86_64.rpm
```

---

**NOTE:** On Linux systems, you can also install iSUT using the repository <https://downloads.linux.hpe.com/SDR/repo/sut/>. For more information, see <https://downloads.linux.hpe.com/SDR/index.html>.

---

## Configuring SUT components

While installing on Windows and Linux systems, you can configure iSUT using the following methods. On Gen10 ESXi systems, you must log into the system and run the iSUT commands to configure polling interval, staging directory or mode of operation. For more information on selecting the iSUT mode of operation, see [iSUT operating modes](#).

### Method 1



1. Run SUM and set the mode to one of the auto modes (AutoStage/AutoDeploy/AutoDeployReboot) on the Baseline configuration page.
2. Export the configuration details to a directory.
3. Use this configuration file and run the component independently by passing the /config\_file option:
  - For Windows: Use the command, `cpxxxxxx.exe /silent /config_file C:\temp\cpxxxxxx_conf\sut_cfg.dat`.
  - For Linux: Copy the sut\_cfg.dat file to /usr/local/hp/ directory and run the install command.

## Method 2

1. Extract the component to a directory.
2. Copy sut\_cfg.dat to a different directory.
3. Edit the file to set the mode to one of the automodes.
4. Use this configuration file and run the component independently by passing the /config\_file option:
  - For Windows:
    - Use the command, `cpxxxxxx.exe /silent /config_file C:\temp\cpxxxxxx_conf\sut_cfg.dat`.
  - For Linux:
    - Extract the RPM using the command: `rpm2cpio sut-<version>-<build>.linux.x86_64 | cpio -id`
    - Edit the sut\_cfg.dat file and copy it to the /usr/local/hp/ directory and run the install command.

## Configuring iSUT for High Security/CNSA/FIPS

### Prerequisite

iLO must already be set in one of the modes: High Security/CNSA/FIPS

### Procedure

1. Provide the iLO credentials to SUT using the following command: `sut -set ilusername=<> ilopassword=<>`
2. Change the SUT mode to the requisite mode.
3. Initiate updates.

---

**NOTE:** Required Host Authentication must be enabled to enforce authentication using certificates or iLO credentials.

---



# Configuring iSUT when CAC Smartcard Authentication is enabled in iLO

## Prerequisite

- If HPE iLO enables CAC Smartcard Authentication, iSUT can communicate with iLO using a certificate, credentials, or any other authentication methods.
- If HPE iLO enables Strict CAC, iSUT can communicate with iLO only using certificates.

---

**NOTE:** For more information, see *CAC Smartcard Authentication* in the **HPE iLO 5 User Guide**.

---

## Procedure

1. Provide the iLO certificate to iSUT using the command `sut -addcertificate <path to certificate file>`.

If iSUT locates the file and successfully adds it, it queries for a private key value. Provide the following information:

- Enter private key path.
  - Does private key has an associated password (yes/no).
  - Enter private key password.
2. Change the iSUT mode to the requisite mode.
  3. Initiate updates.

---

**NOTE:** Required Host Authentication must be enabled to enforce authentication using certificates or iLO credentials.

---

## Configuring SUT with the SUM GUI (Windows/Linux)

For more information on using SUM, see the SUM documentation at <https://www.hpe.com/info/sum-docs>.

### Prerequisites

Directory containing the SUT components.

### Procedure

1. Launch SUM in GUI mode.
2. On the **Baseline Library** Screen, click **Add Baseline**, and then map to the directory that contains the configured SUT components.
3. To sort the SUT components, click **Configurable**.
4. Click **Components**.



5. Click **Configurable** or **Configured**. Components labeled **Configurable** have no configuration settings. Components labeled **Configured** have saved configuration settings.
6. Change the configuration parameters, and then click **Save in SUM** or **Save and Export**.

## Installing SUT with the SUM GUI (Windows/Linux)

You can also use the SUM CLI and CLI with Input File modes to install SUT. For more information on using SUM, see the *Smart Update Manager CLI Guide* at <https://www.hpe.com/info/sum-docs>.

### Prerequisites

Directory with the SUT components.

### Procedure

1. Launch SUM in GUI mode.
2. On the **Baseline Library** screen, add a baseline, and then map to the directory that contains the configured SUT components.
3. On the **Nodes Library** screen, add the nodes where you are installing SUT and assign the baseline with the SUT components.
4. On the **Nodes Library** screen, perform inventory on the nodes where you are installing SUT.
5. Install the components.

## Verifying SUT installation

### Procedure

Issue the following command on the host:

```
sut -status
```

If SUT is installed, the command output displays SUT settings, such as mode of update and polling interval.

## Setting the staging directory

If you do not want to use the default SUT staging directory, issue the following command to assign the staging directory.

### Procedure

1. Open a command-line window.
2. Enter the command `sut /set stagingdirectory=<directory_path>` (Window/Linux/VMware ESXi).

SUT creates a backup configuration file that SUT can use in future sessions.



# Reinstalling SUT with the SUM GUI

You can reinstall SUT with SUM and overwrite the currently installed version of SUT. You can reinstall SUT to change the configuration for multiple servers at the same time.

## Prerequisites

Directory with SUT components configured.

## Procedure

1. Launch SUM in GUI mode.
2. On the **Baseline Library** screen, add a baseline, and then map to the directory that contains the configured SUT components.
3. On the **Nodes Library** screen, add the nodes where you are installing SUM and assign the baseline with the SUT components.
4. On the **Nodes Library** screen, perform inventory on the nodes where you are installing SUT.
5. Install the components. Use the **Advanced Deployment** mode and **Force** the component updates.



# Installing iSUT for VMware ESXi

## Installing iSUT VMware ESXi (Gen10 only)

**NOTE:** You can also install iSUT on VMware ESXi using VMware Update Manager (VUM). For more information, see <https://vibsdepot.hpe.com/>.

### Procedure

1. Extract the bundle from the iSUT component (cpxxxxxx.zip).
2. Copy the iSUT bundle (sutComponent\_<esxi version>.<iSUT version>.zip) to the VMware ESXi system.
3. Install the iSUT bundle on the VMware ESXi host—`esxcli software component apply -d <absolute path for iSUT bundle>`.
4. Reboot the VMware ESXi host.
5. To clear the iLO settings used by the earlier iSUT installation, execute the `sut -deregister` command.
6. Set the iSUT mode using the OnDemand command, `sut -set mode=<OnDemand/AutoDeploy/AutodeployReboot>`.

### NOTE:

- You can set the iSUT mode to AutoDeployReboot mode. However, iSUT reboots the VMware ESXi host only if the host is in Maintenance mode. To set the VMware ESXi host in Maintenance mode, run the command `esxcli system maintenanceMode set -e true` on the VMware ESXi host.
- When using the latest HPE VMware OS image, iSUT gets pre-installed on the OS. If iSUT is already present, you can proceed from Step 5 directly.

## VMware ESXi v7.0 restrictions

VMware ESXi v7.0 provides a new architecture. As a result, there are changes in iSUT running on an ESXi v7.0 as follows:

- After installing iSUT on a VMware ESXi v7.0 and rebooting the system, the iSUT service starts running on the ESXi system. The iSUT service runs as part of a sandbox created on the server. Use the following command to check whether iSUT service is actually running:

```
ps | grep -i sut
```

- The `sut-stop` and `sut-start` commands do not completely stop or start the iSUT service along with the sandbox cleanup or sandbox creation. As a result, they are now disabled for VMware ESXi v7.0. Use the following commands to stop, start, or restart the iSUT service and check its status.

<code>/etc/init.d/sut stop</code>	Stops the iSUT service along with the sandbox clean up.
<code>/etc/init.d/sut start</code>	Start the iSUT service along with the sandbox creation.
<code>/etc/init.d/sut restart</code>	Restarts the iSUT service along with the sandbox cleanup/creation.
<code>/etc/init.d/sut status</code>	Checks the status of iSUT service.

- Except for the `sut-stop` and `sut-start` commands, you can use other iSUT OnDemand commands until you do not stop the iSUT service using the `/etc/init.d/sut stop` command or if the iSUT service exits for some reason.
- Use the `sut -status` and `/etc/init.d/sut status` commands to confirm if the iSUT service and the sandbox created for the iSUT service are still running.
  - When you use one of the commands and if either the iSUT service or the sandbox created for iSUT service is not running on the system, the following messages are displayed:

```
[root@localhost:~] sut-status
SUT service is not running. Execute '/etc/init.d/sut restart'
and retry the command.
[root@localhost:~]
```

OR

```
[root@localhost:~] /etc/init.d/sut status
daemon_sut is not running
[root@localhost:~]
```

- To restart the iSUT service with the necessary sandbox, run the following command:

```
[root@localhost:~] /etc/init.d/sut restart
```





# Installing VMware software Smart Components on Gen10 using SUM and iSUT

To install the VMware ESXi software bundle Smart Components on Gen10 servers, you must configure the ESXi host with iSUT.

## Starting Configuration

Install the HPE custom image for the required version of VMware ESXi.

## Set up the ESXi host with iSUT

1. Install the appropriate iSUT component.

---

**NOTE:** Currently, the iSUT products are smart components that do not unzip correctly on the ESXi platform. Unzip the Smart Component in Linux or uncompress them on Windows.

---

2. After you unzip the smart component to extract the `sutComponent_<esxi OS version>.<iSUT Version>.zip` file, copy the `sutComponent_<esxi OS version>.<iSUT Version>.zip` file to the ESXi platform, and then install the component:

```
esxcli software component apply -d <sutComponent_***.***.zip>
```

3. Reboot the server.
4. If you want iSUT to run in Automode, change the mode to one of the auto modes. For example, `sut -set mode=autodeployreboot`.

## Setup and execute the test using SUM

1. Get the appropriate SPP file.
2. If you are hosting the SPP on a Windows 10 environment, right-click the file, and then mount the \*.iso.

---

**NOTE:** If you are not hosting the SPP on a Windows 10 environment, use Virtual CloneDrive to mount ISOs.

---

3. Navigate to the folder that has the SPP files mounted, and then click **launch\_sum.bat**. The SUM GUI screen appears.
4. Click **Baseline Library** at the upper-left corner of the SUM GUI.
5. To add an additional baseline package, click **Add Baseline** in the top-left pane. The Add Baseline Options screen appears.
6. Click **Add Baseline** in the pop-up window. The Add Baseline screen appears.

---

**NOTE:** You must have both the `cp*.zip` and `cp*.compsig` files for the smart component available in the same location as the smart components.

---

7. Click **Add**. The “Additional package” gets added with a list of the smart components found at the location you specified.



---

**NOTE:** Use the “Additional package” as your baseline if you want to test the installation of the new components. You can test the installation by adding nodes.

For Gen10 servers, add an iLO node (use iLO IP for requested IP address).

---

8. Select Smart Update Manger in the top-left corner of the GUI, and then click **Nodes**. SUM starts performing “discovery” actions.

After adding a node, you can perform an inventory, and then deploy the smart components.

---

**NOTE:** For more information, see the SUM, HPE iLO Amplifier Pack, and HPE OneView documentation.

- Smart Update Manager User Guide: [www.hpe.com/info/sum-docs](http://www.hpe.com/info/sum-docs)
  - HPE iLO Amplifier Pack User Guide: [www.hpe.com/support/ilo-ap-docs](http://www.hpe.com/support/ilo-ap-docs)
  - HPE OneView 5.0 User Guide: [www.hpe.com/info/oneview/docs](http://www.hpe.com/info/oneview/docs)
- 



# iSUT log files

## About log files

SUT automatically saves the logs after:

- Deploying updates
- Staging updates
- Verifying updates

SUT saves the log files in the following location:

- Linux: `/var/tmp/sut`
- Windows:
  - OnDemand mode: `C:\Users\Administrator\AppData\Local\sut\logs`
  - Auto mode: `C:\Users\System32\config\systemprofile\AppData\Local\sut\logs`
- VMware ESXi: `/opt/sut/tmp`

## Collecting log files

### Procedure

1. Use one of the following commands:

- Windows: `C:\Program Files\SUT\bin\gatherlogs_x64.exe`
- Linux: `/opt/sut/bin/gatherlogs.sh`
- VMware ESXi: `/opt/sut/bin/gatherlogs.sh`



# Uninstalling iSUT

## Uninstalling iSUT in Windows

### Procedure

1. On your Windows server, open **Programs and Features**.
2. Select **Integrated Smart Update Tools for Windows**, and then click **Uninstall**.

## Uninstalling iSUT in Linux

### Procedure

Use the following command to uninstall SUT:

```
- rpm -e sut
```

## Uninstalling iSUT in VMware ESXi

### Procedure

1. Execute the `sut -deregister` command.
2. Execute the `sut -clearilocreds` command only if iLO is configured in a High Security mode, such as FIPS.
3. Use the following command to uninstall iSUT:
  - VMware ESXi 6.x:
    - `esxcli software vib remove -n sut`
    - `esxcli software vib remove -n sutesxcli`
  - VMware ESXi 7.x: `esxcli software component remove -n sutComponent`



# iSUT troubleshooting

## Baseline URI not Detected as a Supported Baseline

### Symptom

The URI provided is not detected as a supported baseline ISO.

### Cause

The directory contents do not match the SPP structure.

### Action

1. Verify that the SPP ISO is valid.
2. Reissue the request.

## iSUT unexpectedly installs a CHIF driver

### Symptom

SUT installs an HPE iLO Channel Interface (CHIF) driver when you did not select it for installation.

### Cause

SUT requires the CHIF driver to perform tasks.

### Action

No action.

## Cannot clear the SUT staging directory

### Symptom

While staging components, SUT cannot clear the staging directory.

### Solution 1

### Cause

The user does not have execution permissions for the directory or file.



**Action**

Make sure that the administrator has write permissions for the directory.

**Solution 2****Cause**

Other processes are using the staged files.

**Action**

Verify that other processes are not using the staged files.

## **SUT is installed, but does not issue commands**

**Symptom**

SUT installed succeeds, but commands do not function.

**Cause**

A user account without administrator or root user privileges installed SUT.

**Action**

Uninstall SUT and reinstall with an administrator account or root user.

## **iSUT does not recognize a configuration file**

**Symptom**

SUT does not recognize the specified configuration file.

**Cause**

The path to the configuration file includes spaces.

**Action**

Remove all empty spaces from the directory path to a configuration file.

## **SUT cannot stage files**

**Symptom**

SUT cannot stage files.

**Solution 1****Cause**

SUT files require more space than available on the disk.



**Action**

Clear disk space on staging drive and retry the staging operation.

**Solution 2****Cause**

The component is not in the baseline SPP.

**Action**

Verify that the component is in the baseline SPP.

**Solution 3****Cause**

SPP fails security validation on Windows.

**Action**

Update the Windows root certificates. Manually update the GlobalSign Root CA and AddTrust External Root CA certificates.

## SUT cannot mount baseline ISO through iLO Virtual Media

**Symptom**

Mounting the baseline ISO through the iLO Virtual Media failed.

**Cause**

- The baseline is not accessible.
- The HTTPS server hosting the baseline ISO is busy.
- There is no HPE iLO Advanced license installed.

**Action**

1. Check to see if another baseline ISO is already mounted through iLO Virtual Media.
2. Verify that an HPE iLO Advanced license is installed.
3. Verify that the staging directory URI is accessible.
4. Retry the operation.



## SUT cannot start deployment

### Symptom

SUT cannot deploy updates.

### Solution 1

#### Cause

The staging directory is not accessible or has been deleted.

#### Action

Verify that the staging directory is valid.

### Solution 2

#### Cause

For Gen10 iLO Repository-based updates, if the system is connected to HPE OneView and you manually add components to the iLO queue, SUT does not pick components for update.

#### Action

Remove the server from HPE OneView or initiate the deployment from HPE OneView.

## SUT cannot reboot a server

### Symptom

SUT cannot reboot a server after deploying updates to the server.

### Action

Manually reboot the server.

## Components in an iLO installation queue are marked as `Exception`

### Symptom

SUT marks the component state in iLO installation queue as `Exception` with message ID as `InvalidFile`.

### Cause

This can occur if the component signature is not imported into the rpm database.

Windows certificates are not current.





### Action

1. Make sure that the certificates are up-to-date on the system.

Linux: Import the HPE rpm keys at <https://downloads.linux.hpe.com/SDR/keys.html>. Use the `rpm --import` command.

## SUT does not launch SUM

### Symptom

SUM does not execute.

### Solution 1

#### Cause

The SUM binary does not exist in the staging location.

#### Action

Make sure that SUM exists in the SPP ISO.

### Solution 2

#### Cause

The SUM binary does not have the correct permissions.

#### Action

Make sure that the SUM binary has the correct permissions.

## SUT does not support the version of SUM

### Symptom

SUT cannot launch SUM.

#### Cause

The version of SUM is too old.

#### Action

Verify that the version of SUM is supported. For more information, see the *Integrated Smart Update Tools Release Notes*.

## An unprivileged account installed SUT

### Symptom

SUT installed succeeds, but commands do not function.



**Cause**

A user account without administrator or root user privileges installed SUT.

**Action**

Uninstall SUT and reinstall with an administrator account or root user.

## **SUT unexpectedly changes the command**

**Symptom**

A requested command changes during processing.

**Cause**

A user sent a request while SUT processed another request.

**Action**

Reissue the command that changed. Make sure that one command ends before issuing another command.

## **Firmware update is delayed when firmware is applied in mixed mode**

**Symptom**

When you create a profile in mixed mode, the firmware update schedule is delayed.

**Cause**

A group of nodes picked by SUT for concurrent deployment can have a maximum of 20 nodes. The scheduled nodes that have similar attributes for Force Flag, Install type, Baseline URI, and Schedule time are grouped. These nodes are then sent for concurrent updates. If the update for a concurrent group is already in progress, the schedule for the subsequent group is delayed by 1 hour to allow the scheduled nodes to complete their updates.

**Action**

Ensure that a single group of nodes sent to SUT for deployment has the following matching properties: Force Flag, Install type, Baseline URI, and Schedule time (if specified).



# Website and support

## Websites

Hewlett Packard Enterprise Information Library	<a href="http://www.hpe.com/info/EIL">www.hpe.com/info/EIL</a>
Smart Update Manager	<a href="http://www.hpe.com/servers/sum">www.hpe.com/servers/sum</a>
Smart Update Manager Information Library	<a href="http://www.hpe.com/info/sum-docs">www.hpe.com/info/sum-docs</a>
Smart Update Tools	<a href="http://www.hpe.com/servers/sut">www.hpe.com/servers/sut</a>
Smart Update Tools Information Library	<a href="http://www.hpe.com/info/isut-docs">www.hpe.com/info/isut-docs</a>
Service Pack for ProLiant	<a href="http://www.hpe.com/servers/spp">www.hpe.com/servers/spp</a>
Service Pack for ProLiant documentation	<a href="http://www.hpe.com/info/spp/documentation">www.hpe.com/info/spp/documentation</a>
Service Pack for ProLiant downloads	<a href="http://www.hpe.com/servers/spp/download">www.hpe.com/servers/spp/download</a>
Service Pack for ProLiant custom downloads	<a href="http://www.hpe.com/servers/spp/custom">www.hpe.com/servers/spp/custom</a>
HPE SDR site	<a href="http://downloads.linux.hpe.com">downloads.linux.hpe.com</a>

For additional websites, see [Support and other resources](#).

## Support and other resources

### Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:  
<https://www.hpe.com/info/assistance>
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:  
<https://www.hpe.com/support/hpesc>

#### Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs



- Add-on products or components
- Third-party products or components

## Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.

- To download product updates:

### **Hewlett Packard Enterprise Support Center**

**<https://www.hpe.com/support/hpesc>**

### **Hewlett Packard Enterprise Support Center: Software downloads**

**<https://www.hpe.com/support/downloads>**

### **My HPE Software Center**

**<https://www.hpe.com/software/hpesoftwarecenter>**

- To subscribe to eNewsletters and alerts:

**<https://www.hpe.com/support/e-updates>**

- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

**<https://www.hpe.com/support/AccessToSupportMaterials>**

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- ❗ **IMPORTANT:** Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.
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## Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

### **Remote support and Proactive Care information**

#### **HPE Get Connected**

**<https://www.hpe.com/services/getconnected>**

#### **HPE Proactive Care services**

**<https://www.hpe.com/services/proactivecare>**

#### **HPE Datacenter Care services**

**<https://www.hpe.com/services/datacentercare>**

#### **HPE Proactive Care service: Supported products list**

**<https://www.hpe.com/services/proactivecaresupportedproducts>**

#### **HPE Proactive Care advanced service: Supported products list**

**<https://www.hpe.com/services/proactivecareadvancedsupportedproducts>**



### **Proactive Care customer information**

#### **Proactive Care central**

<https://www.hpe.com/services/proactivecarecentral>

#### **Proactive Care service activation**

<https://www.hpe.com/services/proactivecarecentralgetstarted>

## **Warranty information**

To view the warranty information for your product, see the links provided below:

#### **HPE ProLiant and IA-32 Servers and Options**

<https://www.hpe.com/support/ProLiantServers-Warranties>

#### **HPE Enterprise and Cloudline Servers**

<https://www.hpe.com/support/EnterpriseServers-Warranties>

#### **HPE Storage Products**

<https://www.hpe.com/support/Storage-Warranties>

#### **HPE Networking Products**

<https://www.hpe.com/support/Networking-Warranties>

## **Regulatory information**

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

<https://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

#### **Additional regulatory information**

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

<https://www.hpe.com/info/reach>

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

<https://www.hpe.com/info/ecodata>

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

<https://www.hpe.com/info/environment>

## **Documentation feedback**

Hewlett Packard Enterprise 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@hpe.com](mailto:docsfeedback@hpe.com)). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.

