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## **Integrated Smart Update Tools 5.0.0 User Guide for Windows, Linux, and VMware ESXi**

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# Integrated Smart Update Tools 5.0.0 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 (iSUT) is the smart update solution for performing online firmware and driver updates. iSUT is used with iLO 5, iLO 6, and with update solutions (management appliances such as iLO Amplifier Pack or HPE OneView or Compute Ops Management and Smart Update Manager) to stage, install, and activate firmware and driver updates.

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

- **iSUT:** Polls iLO to check for requests from SUM, iLO Amplifier Pack, HPE OneView or Compute Ops Management 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 iSUT. Performs inventory on target servers, stages deployment, deploys updates, and then reboots the servers.
- **iLO 5/iLO 6 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 iSUT.
- **iLO Amplifier Pack and HPE OneView:** Displays the available updates for servers. Communicates with iSUT (or iSUT 1.x) to initiate updates using the iLO Redfish interface. iSUT 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.

## Subtopics

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## iSUT usage scenarios

Online updates require iSUT 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 iSUT installed and running?
Gen10 or later	Windows	Integrated iSUT for Windows	In the Windows instance of each remote server.
Gen10 or later	Red Hat or SUSE	Integrated iSUT for Linux	In the Red Hat or SUSE instance of each remote server.
Gen10 or later	VMware vSphere ESXi 7.0	Integrated SUT (iSUT) for ESXi 7.0	In the ESXi 7.0 instance of each remote server.
Gen10 or later	VMware vSphere ESXi 8.0	Integrated SUT (iSUT) for ESXi 8.0	In the ESXi 8.0 instance of each remote server.

## Platform support

Operating System	Version supported
Windows	Integrated Smart Update Tools 5.0.0 for Windows
Linux	Integrated Smart Update Tools 5.0.0 for Linux
VMware ESXi	Integrated Smart Update Tools 5.0.0 for VMware ESXi

## iSUT operating modes

iSUT runs in the following modes:

- **OnDemand mode:** It is a CLI-based mode in which every action must be triggered by the user. It enables the administrator to write commands in the CLI window.

In this mode, the user can perform the following actions:

- Stage updates
- Deploy updates
- Reboot servers

User can set the mode to OnDemand, using the command `sut -set mode=OnDemand`

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

iSUT runs in the Auto/Service modes:

- AutoStage Mode:
  - It Mounts the SPP from the iLO Virtual Media.
  - It uses SUM present in the SPP for the server inventory.
  - It Copies the applicable components from the SPP to the server for deployment.



### NOTE:

- AutoStage mode is the default mode for Gen10 or later servers.
- In AutoStage mode, management software like HPE OneView will perform staging of the required firmware and driver components. This mode can be used to stage the components prior to installing firmware.

For installing and activating the staged firmware, iSUT mode must be changed to AutoDeploy or OnDemand mode and then `deploy-reboot` command must be issued from the iSUT CLI.

- AutoDeploy
  - It Performs all the tasks in AutoStage mode.
  - It updates the applicable components found in the iSUT staging directory to the host server.

**NOTE:**

The Components updatable by iSUT from the iLO Repository are downloaded to the iSUT staging directory.

- AutoDeployReboot
  - It Performs all the tasks in AutoDeploy mode.
  - If required, It 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:**

1. If the deployment succeeds, iSUT verifies the updates by default.
2. Use the command `sut /deploy noautoverify` to prevent the default verification.

**NOTE:**

It is not applicable for iLO Repository-based updates.

Use the `sut -set mode=AutoStage/AutoDeploy/AutoDeployReboot` command to set iSUT to Auto/Service mode.

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



**NOTE:** To view information about all the iSUT commands, use the `sut -help` command.

## iLO Repository-based update options

iLO Repository-based update options are available on Gen10, Gen10 Plus, and Gen11 servers. Smart update solutions such as iLO Amplifier Pack, HPE OneView, Compute Ops Management, 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 10.0 User Guide posted at <https://www.hpe.com/support/SUMGen11-UG-en>

## Dual boot environment notes

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

If you run iSUT 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:**

iSUT requires permission to write to the staging directory.

## ESXCLI extension for remote execution

Use ESXCLI extension feature to run iSUT OnDemand commands remotely using ESXCLI (ESXi 7.x / ESXi 8.x).

### Subtopics

[iSUT ESXCLI extension advantages](#)

## iSUT ESXCLI extension advantages

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

- Login to each remote ESXi host individually to execute the command.
- Enable SSH on each of the remote ESXi hosts.
- Run the 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 the supported CLI commands with ESXCLI extension, see [https://support.hpe.com/hpesc/public/docDisplay?docId=a00118593en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=a00118593en_us)

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## Downloading iSUT

iSUT is available on Windows, Linux and ESXi for Gen10, Gen10 Plus, and Gen11 systems. This iSUT 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 iSUT component part of the SPP.

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

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

### Subtopics

[Downloading SUM](#)

[Downloading iSUT RPM keys](#)

## Downloading SUM

### About this task

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



**NOTE:**

iSUT cannot be installed on Gen10, Gen10 Plus, and Gen11 VMware ESXi systems using SUM.

---

### Procedure

1. Go to <https://www.hpe.com/servers/sum>.
2. Click Download.
3. Select the SUM version that you want to download.



4. In the Delivery Options area, select the SUM file you want to download.

## Downloading iSUT RPM keys

### Procedure

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

## Install iSUT for Windows and Linux

### iSUT installation

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

After you install iSUT, the default mode of iSUT is as follows:

Server generation	Default mode
Gen10, Gen10 Plus and Gen11	AutoStage

During every SPP upgrade, iSUT self-upgrades itself if the version of iSUT found in SPP is higher. During Self-Upgrade, iSUT configurations such as mode are retained (except for OnDemand mode in Gen10 and Gen11 servers).

Server generation	Current Mode (Before Self-Upgrade)	New Mode(After Self-Upgrade)
Gen10, Gen10 Plus and Gen11	OnDemand	AutoStage



#### NOTE:

- If Server is in Auto (AutoStage/AutoDeploy/AutoDeployReboot) mode before self upgrade, mode will be retained after self upgrade for all generations.
- You can change the iSUT mode to a mode of your choice after a successful iSUT installation. To do so use the following command:

```
sut-set mode=<OnDemand/AutoStage/AutoDeploy/AutoDeployReboot>
```

### Subtopics

[iSUT installation for Windows](#)

[iSUT installation for Linux](#)

[Configuring iSUT components](#)

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## iSUT installation for Windows

To install iSUT 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 iSUT.

## iSUT installation for Linux

### Prerequisites

- Linux OS configuration.
- Linux utility OpenSSL.
- 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 iSUT components

While installing on Windows and Linux systems, you can configure iSUT using the following methods. On Gen10 or later 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 iSUT using the following command:

```
sut -set ilusername=<> ilopassword=<>
```

2. Change the iSUT mode to the requisite mode.
3. Initiate updates.



#### NOTE:

- If you are using iLO 5 2.95 or later and iLO 6 1.50 or later, disable the Two-Factor Authentication (TFA) mode, as iSUT does not currently support this mode.
  - `Required Host Authentication` must be enabled to enforce authentication using certificates or iLO credentials.
  - While providing the iLO credentials to iSUT, if the iLO password contains special characters, enclose it within `'` (single quotes) for Linux and VMware ESXi OS, and in `"` (double quotes) for Windows OS.
- 

## 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 User Guide posted at <https://www.hpe.com/support/ilo-docs>.

---

### 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 iSUT with the SUM GUI (Windows/Linux)

### Prerequisites

- Directory containing the iSUT components.

### About this task

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

### 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 iSUT components.
3. To sort the iSUT 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 iSUT with the SUM GUI (Windows/Linux)

### Prerequisites

- Directory with the iSUT components.

### About this task

You can also use the SUM CLI and CLI with Input File modes to install iSUT. For more information on using SUM, see the Smart Update Manager 10.0 CLI Guide at

<https://www.hpe.com/support/SUMGen11-CLI-en>

### 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 iSUT components.
3. On the Nodes Library screen, add the nodes where you are installing iSUT and assign the baseline with the iSUT components.
4. On the Nodes Library screen, perform an inventory on the nodes where you are installing iSUT.
5. Install the components.

## Verifying iSUT installation

### Procedure

Issue the following command on the host:

```
sut -status
```

### Results

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

## Setting the staging directory

### About this task

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

### Procedure

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

### Results

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

## Reinstalling iSUT with the SUM GUI

### Prerequisites

- Directory with iSUT components configured.

### About this task

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

### 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 iSUT components.
3. On the Nodes Library screen, add the nodes where you are installing SUM and assign the baseline with the iSUT components.
4. On the Nodes Library screen, perform inventory on the nodes where you are installing iSUT.
5. Install the components. Use the Advanced Deployment mode and Force the component updates.

# Installing iSUT for VMware ESXi

## Subtopics

[Installing iSUT VMware ESXi](#)

## Installing iSUT VMware ESXi

### About this task



#### 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.
- AutoStage mode is the default mode for Gen10 or later servers.

During every SPP upgrade, iSUT self-upgrades itself if the version of iSUT found in SPP is higher. During Self-Upgrade, iSUT configurations such as mode are retained (except for OnDemand mode in Gen10 and later servers).

Server generation	Current Mode (Before Self-Upgrade)	New Mode (after Self-Upgrade)
Gen10 or later servers	OnDemand	AutoStage

**NOTE:**

- If Server is in Auto(AutoStage/AutoDeploy/AutoDeployReboot) mode before self upgrade, the mode will be retained after self upgrade for all generations.
- You can change the iSUT mode to a mode of your choice after successful iSUT installation. To do so use the following command:

```
sut -set mode=<OnDemand/AutoStage/AutoDeploy/AutoDeployreboot>
```

## Installing VMware software smart components on Gen10 or above using SUM and iSUT

To install the VMware ESXi (" ") software bundle smart Components on Gen10 or above 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 components 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 Auto mode, 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 components. They must be available in the same location.

7. Click `Add`. The "Additional package" gets added with a list of the smart components found at the location that 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 or later 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 SUM, HPE iLO Amplifier Pack, and HPE OneView documentation.

- Smart Update Manager 10.0 User Guide posted at <https://www.hpe.com/support/SUMGen11-UG-en>
  - HPE iLO Amplifier Pack User Guide: [www.hpe.com/support/ilo-ap-docs](http://www.hpe.com/support/ilo-ap-docs)
  - HPE OneView User Guide: [www.hpe.com/info/oneview/docs](http://www.hpe.com/info/oneview/docs)
- 

## iSUT log files

### Subtopics

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[Collecting log files](#)

## About log files

iSUT automatically saves the logs after:

- Deploying updates
- Staging updates
- Verifying updates

iSUT saves the log files in the following location:

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

**NOTE:**

- On VMware ESXi 7.0 and later versions, iSUT logs are captured in `/scrath/log/sut.log` file to preserve them across reboot.
- 

## Collecting log files

### Procedure





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

### Subtopics

[Uninstalling iSUT in Windows](#)

[Uninstalling iSUT in Linux](#)

[Uninstalling iSUT in VMware ESXi](#)

## 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 :

```
- rpm -e sut
```

## Uninstalling iSUT in VMware ESXi

### About this task

### 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 7.x / VMware ESXi 8.x: `esxcli software component remove -n sutComponent`

## iSUT troubleshooting

## Subtopics

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## 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 installs a CHIF driver by default (Windows only)

### Symptom

iSUT installs an HPE iLO Channel Interface (CHIF) driver on the Windows system if you do not select it for installation.

### Cause

iSUT requires the CHIF driver to perform tasks.



**Action**

No action.

## Cannot clear the iSUT staging directory

**Symptom**

While staging components, iSUT 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.

## iSUT is installed, but does not issue commands

**Symptom**

iSUT installed succeeds, but commands do not function.

**Cause**

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

**Action**

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

## iSUT does not recognize a configuration file

**Symptom**

iSUT 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.



## iSUT cannot stage files

### Symptom

iSUT cannot stage files.

### Solution 1

#### Cause

iSUT 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.

## iSUT 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.

## iSUT cannot start deployment

### Symptom

iSUT cannot deploy updates.

### Solution 1

#### Cause

The staging directory is not accessible or has been deleted.

#### Action

Verify whether the staging directory is valid.

### Solution 2

#### Cause

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

#### Action

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

## iSUT cannot reboot a server

### Symptom

iSUT 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

iSUT 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

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.

## iSUT 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.

## iSUT does not support the version of SUM

**Symptom**

iSUT 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 iSUT

**Symptom**

iSUT installed succeeds, but commands do not function.

**Cause**

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

**Action**

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

## iSUT unexpectedly changes the command

**Symptom**

A requested command changes during processing.

**Cause**

A user sent a request while iSUT 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 iSUT 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 iSUT for deployment has the following matching properties: Force Flag, Install type, Baseline URI, and Schedule time (if specified).

## Firmware update fails on Gen10 and later servers during COM based update if `enableiloqueuedupdates` is set to `false`

#### Symptom

Firmware update fails on Gen10 and later servers during COM based update, if `enableiloqueuedupdates` flag is set to `false`.

#### Cause

For Gen10 and later servers, iSUT fails to update the components in RIS, if `enableiloqueuedupdates` flag is set to `false`.

#### Action

Set `enableiloqueuedupdates` flag to `true` by running the `sut -set enableiloqueuedupdates=true` command.

## Firmware update stuck in `InstalledPendingReboot` state on HPE OneView GUI

#### Symptom

On Windows / Linux servers, while downgrading iSUT to a version below 4.5.0 using online SPP method, followed by an upgrade using HPE OneView, the firmware update stuck in `InstalledPendingReboot` state on HPE OneView GUI.



**NOTE:** It is not applicable when SPP downgrade is performed using HPE OneView.

#### Cause

Database migration error during downgrade causes SUT service to stop during upgrade.

#### Action

1. Manually reboot the server.

- Restart the `sut` service using the `sut -start` command.

## Website and support

### Websites

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](#).

### Subtopics

[Support and other resources](#)

## Support and other resources

### Subtopics

[Accessing Hewlett Packard Enterprise Support](#)

[Accessing updates](#)

[Remote support](#)

[Warranty information](#)

[Regulatory information](#)

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## 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 OnePass 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 initiates a fast and

accurate resolution based on the service level of your product. 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.

HPE Get Connected

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

HPE Tech Care Service

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

HPE Complete Care Service

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

## 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

## Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, use the Feedback button and icons (at the bottom of an opened document) on the Hewlett Packard Enterprise Support Center portal (<https://www.hpe.com/support/hpesc>) to send any errors, suggestions, or comments. This process captures all document information.

