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## **Integrated Smart Update Tools 6.1.0 User Guide for Windows, Linux, and VMware ESXi**

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# Integrated Smart Update Tools 6.1.0 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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# 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, iLO6, iLO7 and with update solutions (management appliances such as 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, HPE OneView, or Compute Ops Management for updates through local iLO using the iLO channel interface driver installed on the OS (iLO 5 / iLO 6 based Servers) or virtual NIC (iLO 7 based servers) and orchestrates staging, deploying, and activating updates. You can adjust the polling interval by issuing the appropriate command-line option provided by iSUT. It performs inventory on target servers, stages deployment, deploys updates, and then reboots the servers.
- **iLO 5 / iLO6 / iLO 7 with Integrated Smart Update Tools** (Gen10 or later servers only): It performs the iLO Repository-based updates by downloading the components from iLO Repository when the iLO installation queue has the components which can be updated by iSUT.
- **HPE OneView:** It displays available updates for the servers. Communicates with iSUT to initiate updates using the iLO Redfish interface. iSUT reports the status of updates through iLO RestfulInterface.
- **SUM:** A tool for firmware and driver maintenance for the HPE ProLiant Servers and associated options.

## Subtopics

- [iSUT usage scenarios](#)
- [Platform support](#)
- [iSUT operating modes](#)
- [iLO Repository-based update options](#)
- [Dual boot environment notes](#)
- [ESXCLI extension for remote execution](#)

## 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 8.0/ ESXi 9.0	Integrated SUT (iSUT) for ESXi 8.0 and ESXi 9.0	In the ESXi 8.0/ ESXi 9.0 instance of each remote server.

## Platform support



Operating System	Version supported
Windows	Integrated Smart Update Tools 6.1.0 for Windows
Linux	Integrated Smart Update Tools 6.1.0 for Linux
VMware ESXi	Integrated Smart Update Tools 6.1.0 for VMware ESXi

## iSUT operating modes

iSUT runs in the following modes:

- **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:



### NOTE

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

### ◦ AutoDeploy

- It updates the applicable components found in the iSUT staging directory to the host server.



### NOTE

The Components updatable by iSUT from an iLO installation 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.

- **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`

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

Use the `sut -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 and later servers. Smart update solutions such as 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 Smart Update Manager user guide posted at <https://www.hpe.com/support/SUMGen12-UG-en>.

## Dual boot environment notes

if you have an environment where servers boot to dual operating systems (Windows, Linux, VMware).

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 the ESXCLI extension feature to run iSUT OnDemand commands remotely using ESXCLI (ESXi 8.x / ESXi 9.x).

### Subtopics

[iSUT ESXCLI extension advantages](#)

## iSUT ESXCLI extension advantages

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

- Log in 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)

## Downloading iSUT

iSUT is available on Windows, Linux, and ESXi for Gen10 and later 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 and later VMware ESXi systems using SUM

### Procedure

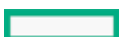
1. Go to <https://www.hpe.com/servers/sum>.
2. Click Download.
3. Select the SUM version that you want to download.
4. In the Delivery Options area, select the SUM file you want to download.

## 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 and later    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 later servers).

Server generation	Current Mode (Before Self-Upgrade)	New Mode(After Self-Upgrade)
Gen10 and later	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](#)

[Configuring iSUT for high Security/CNSA/FIPS on iLO 5/iLO 6-based servers](#)

[Configuring iSUT for Secure Standard/CNSA/FIPS on iLO 7-based servers](#)

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[Verifying iSUT installation](#)

[Setting the staging directory](#)

[Reinstalling iSUT with the SUM GUI](#)

[Installing iSUT VMware ESXi](#)

## 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 **Install**.



#### **NOTE**

On the iLO 7-based Gen12 servers, an application account for iSUT can be created by providing the iLO credentials (optional) during installation.

# iSUT installation for Linux

## Prerequisites

- Linux OS configuration.
- 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>.
- On the iLO 7-based Gen12 servers, application account for iSUT can be created by providing the iLO credentials (optional) during installation.

## 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 on iLO 5/iLO 6-based servers

### 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=<> ilpassword=<>
```

2. Change the iSUT mode to the requisite mode.
3. Start update.



#### 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 support this mode now.
- **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.
- Users must have both Login and Configure iLO Settings permissions in iLO to perform any update.

## Configuring iSUT for Secure Standard/CNSA/FIPS on iLO 7-based servers

The default mode of iLO7 is Secure Standard. On iLO 7-based Gen12 server, users need to create an application account or set the iLO credentials for iSUT to enable it to communicate with iLO. Application account is a service account in iLO 7 which is used by host applications to securely authenticate and communicate with iLO.

Application account can be created during the:

- Installation in interactive mode
- Post installation using CLI commands

Application account can be deleted:

- Using the CLI command
- Uninstallation of the iSUT application



#### NOTE

- For ESXi operating system, the application account can be created or deleted using the CLI commands only.
- As all the modes (SecureStandard/CNSA/FIPS) in iLO 7 are high security modes, iSUT cannot communicate with iLO without either creation of application account or setting iLO credentials.
- When the TPM is cleared from the BIOS, the application accounts stored in the TPM will get erased. Therefore, iSUT needs to be set with iLO credentials to be recreated.
- When the iLO is reset to factory defaults, all application accounts are cleared in the iLO. Therefore, application accounts need to be removed from the TPM in the host OS and then the application accounts need to be recreated.
- An application account creation is not required if it already exists, while reinstalling the Windows/Linux OS. Application account needs to be created again only when VMware ESXi OS is reinstalled.
- Users must have both `Login` and `Configure iLO Settings` permissions in iLO to perform any update.

#### Subtopics

[Creating the application account](#)

[Deleting the application account](#)

## Creating the application account

Application account can be created in different ways:

### In the interactive mode

A user can create an application account while installing the application on Windows/Linux operating systems. During installation, iSUT will request for the iLO credentials and create the application account.

### Using CLI commands

To create an application account, use the following CLI command:

```
sut appaccount create -u <ilo_username> -p <ilo_password>
```

To proceed without creating an application account, provide the iLO credentials using the following CLI command:

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

## Deleting the application account

To delete the application account, use the command:

```
sut appaccount delete
```

Also, the application account is removed automatically when the iSUT application is uninstalled (Windows/Linux).

## Configuring iSUT when CAC smartcard authentication is enabled in iLO



## Prerequisites

- If HPE iLO enables CAC Smartcard Authentication, iSUT can communicate with iLO using a certificate, credentials, application account, or any other authentication methods.
- If HPE iLO enables Strict CAC, iSUT can communicate with iLO only using the 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 have 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 the 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 Smart Update Manager CLI Guide at <http://www.hpe.com/support/SUMGen12-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 `sut /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 is 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 an 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 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.

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

To install the VMware ESXi (" ") software bundle smart Components on Gen10 or later 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. Unzip the smart component to extract the `sutComponent_<esxi OS version>.<iSUT Version>.zip` file and install the component using following command.

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

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

#### Set up 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 the nodes.

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

8. Select Smart Update Manager in the top-left corner of the GUI, and then click Nodes. SUM boots performing discovery actions.

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



#### NOTE

For more information, see SUM and HPE OneView documentation.

- Smart Update Manager User Guide posted at <https://www.hpe.com/support/SUMGen12-UG-en>.
- HPE OneView User Guide: [www.hpe.com/info/oneview/docs](http://www.hpe.com/info/oneview/docs)

## Subtopics

### Log files

#### Collecting log files

## Log files

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` , `/scratch/log`



#### NOTE

- On VMware ESXi 8.0 and later versions, iSUT logs are captured in the `/scratch/log path` file to preserve them across reboots.



#### NOTE

For iLO 7-based Gen12 servers, iSUT logs are not captured in the AHS log.

## 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

This section provides the procedures to uninstall iSUT based on the OS platform.

- Uninstalling iSUT in Windows



- [Uninstalling iSUT in Linux](#)
- [Uninstalling iSUT in VMware ESXi](#)

#### 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

### Procedure

1. Execute the `sut -deregister` command.
2. Execute the `sut -clearilocreds` command only if the credentials are set for iSUT.
3. Execute the `sut appaccount delete` command only if the application account was created on the iLO 7-based Gen12 servers.
4. Use the following command to uninstall iSUT:
  - VMware ESXi 8.x/ ESXi 9.x: `esxcli software component remove -n sutComponent`

## iSUT troubleshooting

Commonly encountered errors and information on how to troubleshoot them.

#### Subtopics

[Application account creation fails on the dual-boot iLO 7-based Gen12 servers](#)

[The components in the iLO installation queue are marked as exceptions in VMware ESXi OS](#)

[The ondemand command sut -status does not show any details about the application account when VNIC is disabled](#)

[iSUT installs a CHIF driver by default \(Windows only\)](#)

Cannot clear the iSUT staging directory

iSUT is installed, but does not issue commands

iSUT does not recognize a configuration file

iSUT cannot stage files

iSUT cannot start deployment

iSUT cannot reboot a server

Components in an iLO installation queue are marked as Exception

An unprivileged account installed iSUT

iSUT unexpectedly changes the command

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

Firmware update stuck in InstalledPendingReboot state on HPE OneView GUI

## Application account creation fails on the dual-boot iLO 7-based Gen12 servers

### Symptom

The application account creation process fails, if Windows / Linux operating systems are installed on the dual-boot iLO 7-based Gen12 server, after the installation of ESXi OS.

### Cause

When the ESXi operating system is installed on the dual-boot iLO7-based Gen12 server, it locks the TPM. Access of the TPM is required to store an application account. Because the TPM is locked and is not accessible by Windows/Linux operating systems, the application account creation fails.

### Action

No action.

## The components in the iLO installation queue are marked as exceptions in VMware ESXi OS

### Symptom

When the firewall is unloaded, iSUT cannot validate the components and marks the component state in the iLO installation queue as an exception.

### Cause

Some of the esxcli commands executed by iSUT on the VMware ESXi OS to validate components do not work as expected when the firewall is unloaded.

### Action

For ESXi 8.0 and later, ensure that the firewall is loaded and is disabled before initiating the firmware update.

To disable the firewall, run the command `esxcli network firewall set --enabled false`.

## The ondemand command **sut -status** does not show any details about the application account when VNIC is disabled

### Symptom

On the iLO 7-based Gen12 servers, the iSUT application uses a virtual NIC (VNIC) to communicate with iLO. The Virtual NIC requires an

application account or iLO credentials to communicate with iLO. When the VNIC is disabled and the user executes the `sut -status` command, then an error message is displayed. This error message does not contain any information about the VNIC-related errors.

### Cause

Virtual NIC (VNIC) has been disabled on the iLO7-based Gen12 servers.

### Action

No action.

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

### Symptom

iSUT installs an HPE iLO Channel Interface (CHIF) driver on a iLO 5 / iLO 6 based servers with Windows operating system, if you do not select it for installation.

### Cause

iSUT requires the CHIF driver to perform tasks on a iLO 5 / iLO6 based servers with Windows operating system.

### 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 installation 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 or root user account.

## 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 the 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 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.



#### NOTE

1. Due to OS specific reasons the system returns a failure return code for the reboot request sent from iSUT.
2. In VMware ESXi OS, iSUT cannot reboot if the server is not in the maintenance mode.

## 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

It 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.

## 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 or root user account.

## 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 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 the 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.
2. 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>
Using Application Accounts and VNIC in iLO 7	<a href="http://www.hpe.com/psnow/doc/a00147207enw">http://www.hpe.com/psnow/doc/a00147207enw</a>
HPE SDR site	<a href="http://downloads.linux.hpe.com">downloads.linux.hpe.com</a>

### Software Licenses:

The latest software license documentation for open source components is available at <https://www.hpe.com/servers/sut>.

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

## Subtopics

[Support and other resources](#)

# Support and other resources

## Subtopics

[Accessing Hewlett Packard Enterprise Support](#)

[HPE product registration](#)

[Accessing updates](#)

[Remote support](#)

[Warranty information](#)

[Regulatory information](#)

[Documentation feedback](#)

## 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

## HPE product registration

To gain the full benefits of the Hewlett Packard Enterprise Support Center and your purchased support services, add your contracts and products to your account on the HPESC.

- When you add your contracts and products, you receive enhanced personalization, workspace alerts, insights through the dashboards, and easier management of your environment.
- You will also receive recommendations and tailored product knowledge to self-solve any issues, as well as streamlined case creation for



faster time to resolution when you must create a case.

To learn how to add your contracts and products, see <https://www.hpe.com/info/add-products-contracts>.

## 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>



### 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.

## 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

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.