



Hewlett Packard
Enterprise

HPE MSA 1060/2060/2062 Chassis Replacement Instructions

Abstract

This document details procedures for replacing a failed controller enclosure or drive enclosure chassis.

Notices

The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Confidential computer software. Valid license from Hewlett Packard Enterprise required for possession, use, or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Links to third-party websites take you outside the Hewlett Packard Enterprise website. Hewlett Packard Enterprise has no control over and is not responsible for information outside the Hewlett Packard Enterprise website.

Acknowledgments

Intel®, Itanium®, Pentium®, Intel Inside®, and the Intel Inside logo are trademarks of Intel Corporation in the United States and other countries.

Microsoft® and Windows® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Adobe® and Acrobat® are trademarks of Adobe Systems Incorporated.

Java® and Oracle® are registered trademarks of Oracle and/or its affiliates.

UNIX® is a registered trademark of The Open Group.



About this document

- As there are some differences between the Large Form Factor (LFF) and Small Form Factor (SFF) chassis, illustrations in this document may differ slightly from your devices.
- The Storage Management Utility (SMU) and the Command Line Interface (CLI) can be used to manage the storage. Tasks in this document demonstrate using the CLI. For detailed instructions on using those interfaces, refer to the *HPE MSA 1060/2060/2062 CLI Reference Guide* and the *HPE MSA 1060/2060/2062 Storage Management Guide*, available at <https://www.hpe.com/info/MSAdocs>.

Before you begin

Observe the following:

-
- ⚠ **CAUTION:** Parts can be damaged by electrostatic discharge; use proper antistatic protection. Keep parts in electrostatic containers until needed and ensure you are properly grounded when touching static-sensitive components.
-
- ⓘ **IMPORTANT:** If the system has licensed features, record the licensing serial number prior to replacing the chassis. Once a new chassis has been installed, you will need to request a new license using the new licensing serial number and your old license.
-

Complete the following tasks before beginning these procedures:

- Schedule a maintenance window that will include time for shutdown, 60 minutes of replacement work, and restart.
- Verify that there is a recent backup of the system.
- Record system settings.
- Label all cables.
- Prepare a large, stable work surface.

Prepare for the replacement

-
- ⓘ **IMPORTANT:** Use caution when handling Fibre Channel cables:
 - Touching the end of a Fibre Channel cable either damages the cable or causes performance problems, including intermittent difficulties accessing the storage.
 - When a Fibre Channel cable or port is not connected, install protective covers on the ends of the cable or in the device port.
-

Procedure

1. If the controller enclosure or drive enclosure chassis is operational, do the following to shut down the storage system:
 - a. Stop all I/O to the storage system that includes the chassis being replaced.
 - b. Shut down all array controllers in the system by entering the following CLI command:

```
# shutdown both
```



After the controllers shut down, the white **OK to Remove** LED on the controller illuminates.

NOTE: There is no **OK to Remove** LED on expansion modules.

2. Turn off the power supply module switches.
3. Make sure that the cables are clearly labeled and then disconnect the cables, including the power cords, from the modules.

Replace the chassis

Procedure

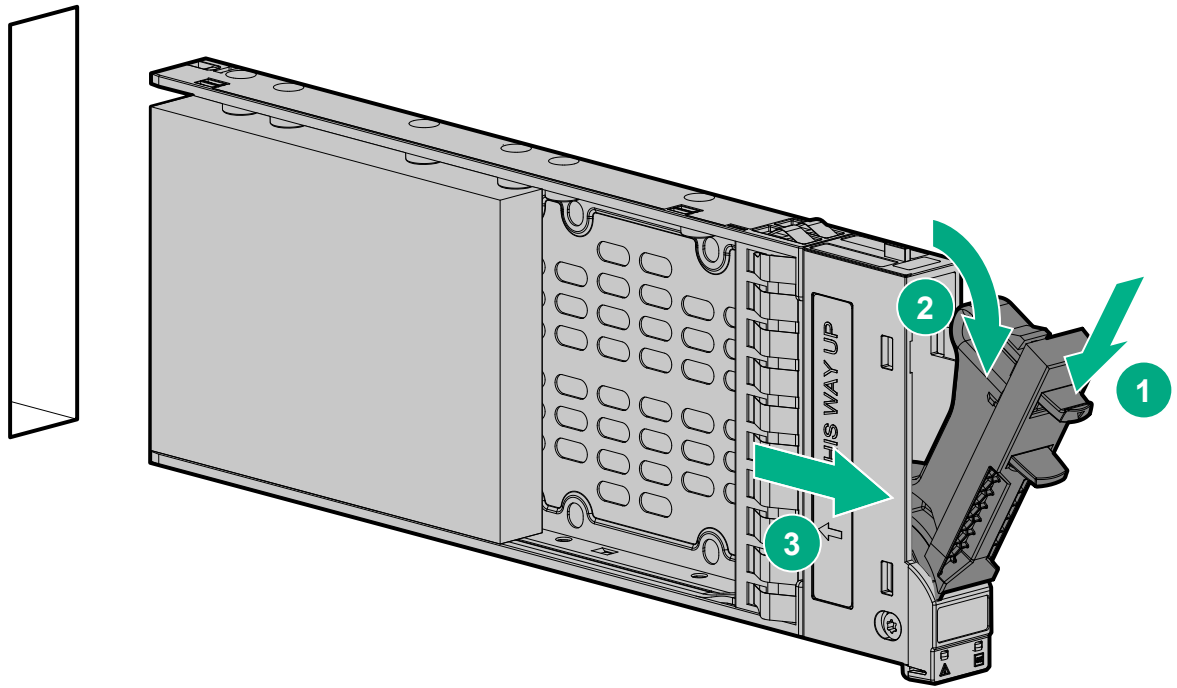
1. Remove drive and drive blank modules from the failed chassis.
2. Remove the chassis from the rack.
3. Install the replacement chassis in the rack.
4. Move power supply modules to the replacement chassis.
5. Move controller or I/O modules to the replacement chassis.
6. Install drive or drive blank modules in the replacement chassis.
7. Complete the installation process.
8. Verify operation.

Remove drive and drive blank modules from the failed chassis

CAUTION:

- These procedures require that all drives and drive blank modules be removed from the failed chassis and then installed in the replacement chassis.
 - Because drives are heavy, Hewlett Packard Enterprise recommends removing drives prior to moving the chassis. If this is not possible, two or more people are required to lift the chassis.
 - Remove the drives after confirming that all internal movement has halted.
-





Procedure

1. Press and slide the release latch buttons to release the latch handles (1).
2. Rotate out the latch handle to disengage the module from the internal connector (2).
3. Pull the module straight out of the chassis (3).
4. To ensure that you reinstall the modules in the same bay number from which they were removed, remove the drive and drive blank modules in bay-number sequence, label them, and organize them on your work surface in the same sequence.

Remove the chassis from the rack



WARNING: Two people may be required to remove the chassis.

Prerequisites

T-25 Torx screwdriver

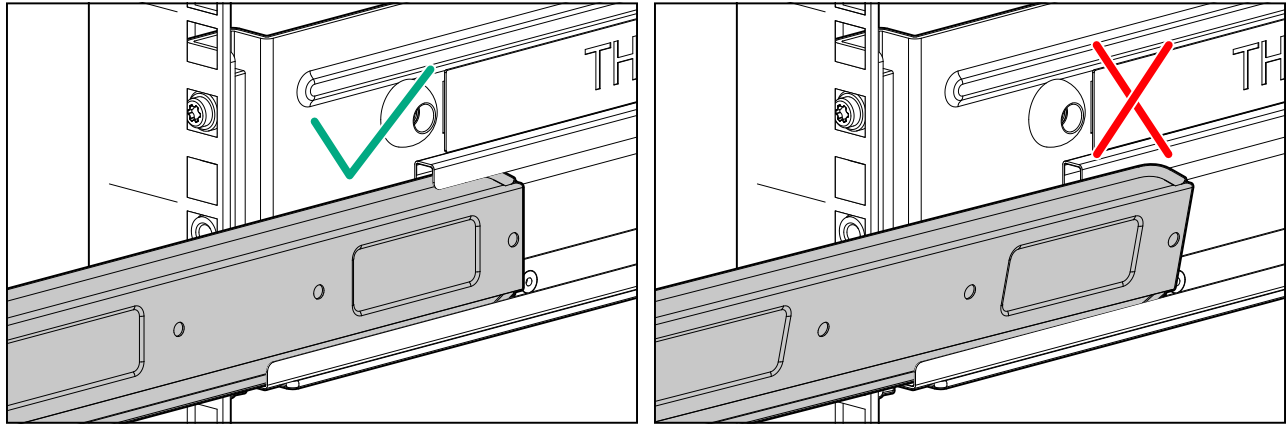
Procedure

1. If installed, remove bezel and hubcaps to access retaining screws.
2. Remove enclosure screws securing the front and rear of the chassis to the rails.
3. Remove the chassis from the rack.
4. Place the failed chassis on the work surface near the replacement chassis.



Install the replacement chassis in the rack

NOTE: Aligning the chassis to the rails can be difficult. Verify that the top and bottom of the chassis inner rail is correctly captured by the rack outer rail.



Procedure

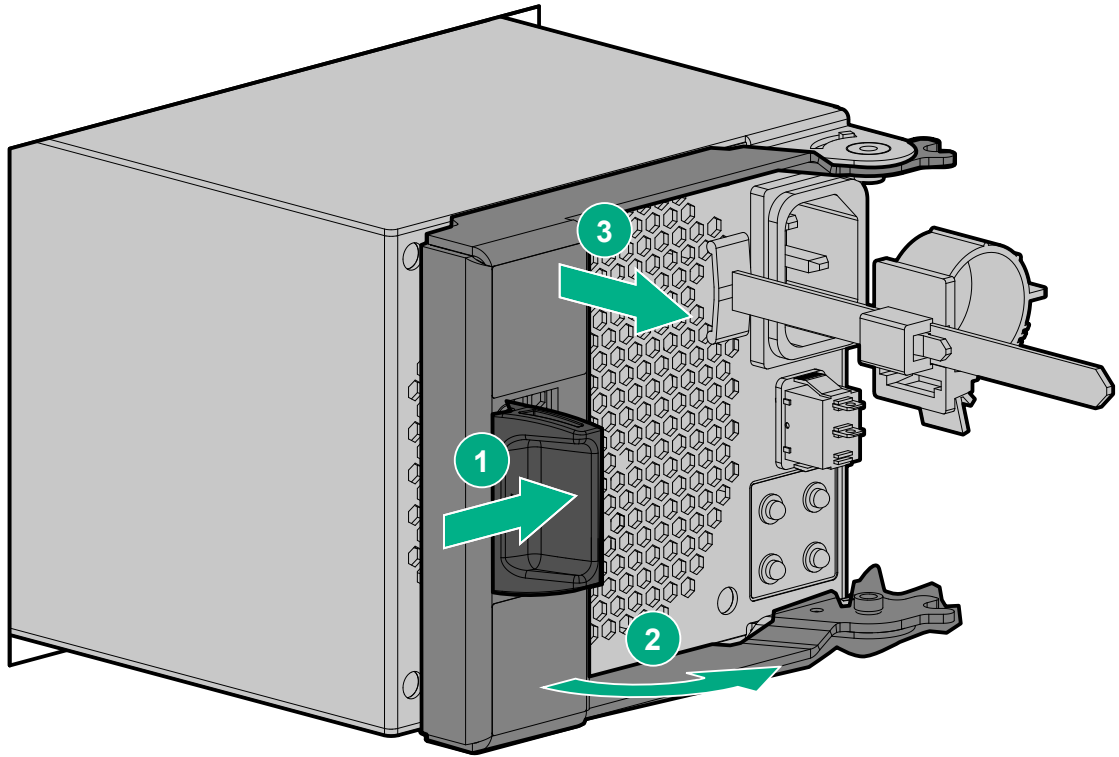
1. Support the bottom of the chassis and align the chassis with the rails in the rack.
Enclosure screws should be on the bottom and the LED display on the left.
2. Insert the chassis into the rails and push fully in.
3. Secure the chassis to the front and rear of the rails using the retaining screws.

Move power supply modules to the replacement chassis

Procedure

1. Remove the power supply modules from the chassis being replaced:
 - a. Disengage the latch lock and pull the latch (1).
 - b. Rotate the latch outward to disconnect the module from the internal connector (2).
 - c. Pull the module straight out of the chassis (3).





2. Install power supply modules in the replacement chassis.

With the latch in the open position, slide the module into the chassis as far as it will go. Rotate the latch in to engage the module with the internal connector. Engage the latch lock to secure the module.

Move controller or I/O modules to the replacement chassis

- !** **IMPORTANT:** Modules must be reinstalled in the same bays from which they were removed. Installing a module in a bay other than the one from which it was removed may result in loss of access to the storage.

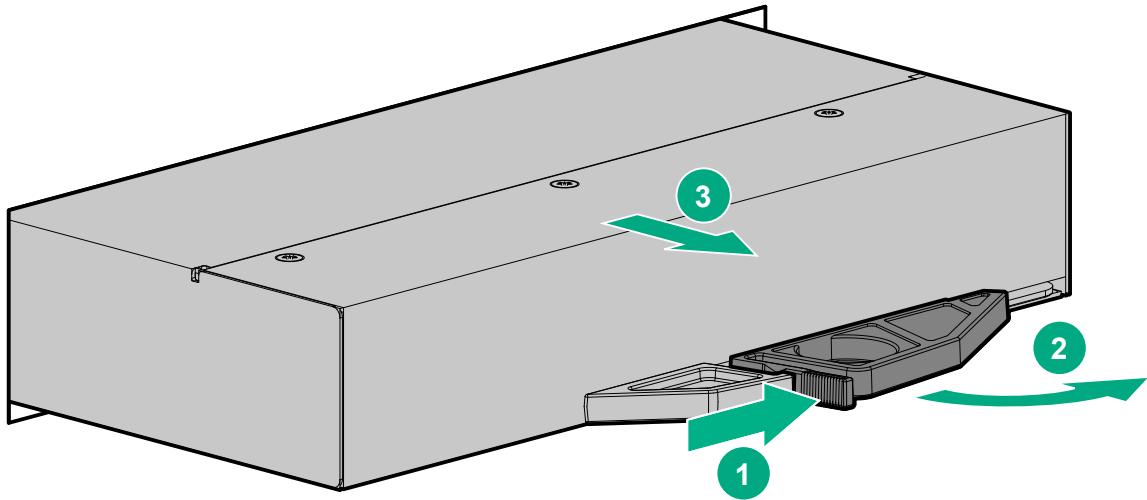
NOTE: Controller and I/O modules are inverted between top and bottom slots. Align the controller correctly for the slot. Latches will be positioned in the middle.

- 💡 TIP:** Consider labeling the controllers before removing them so they go into the same locations in the replacement chassis.

Procedure

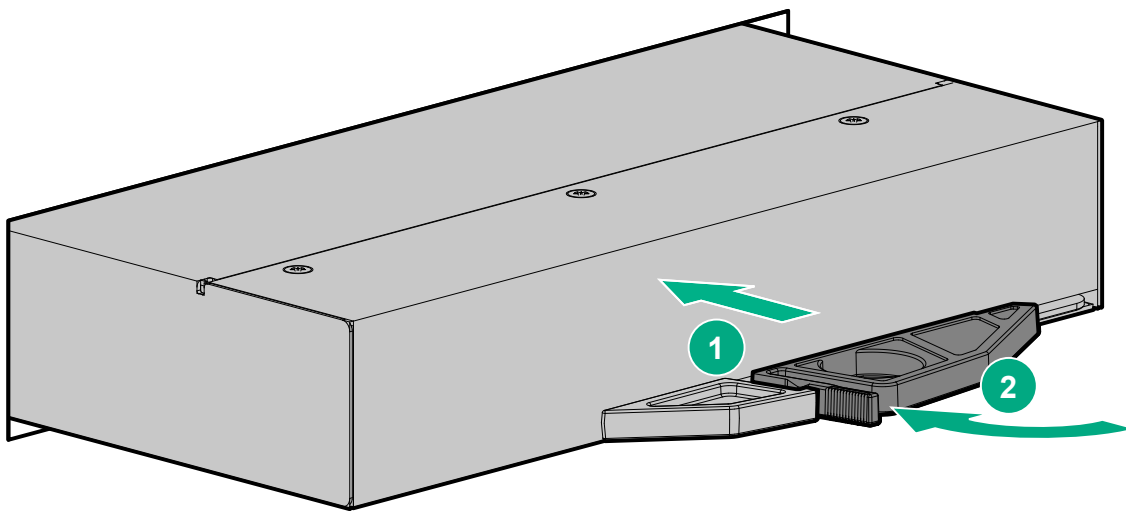
1. Remove the modules from the chassis being replaced:
 - a. Disengage the latch lock (1).
 - b. Rotate the latch handle (2) to disengage the module from the internal connector.
 - c. Pull the module straight out of the chassis (3).





2. Install the modules in the replacement chassis.

With the latches in the open position, slide the module into the chassis as far as it will go. Rotate the latches in to engage the module with the internal connector. Verify that the latch lock is secure.



Install drive or drive blank modules in the replacement chassis

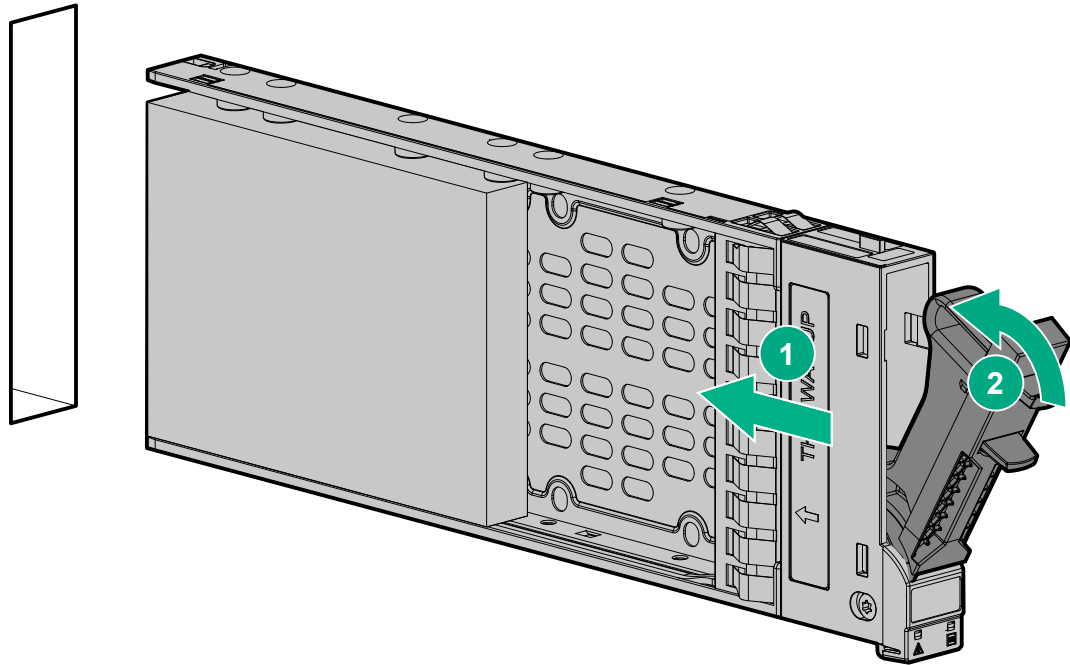
⚠ CAUTION: Prolonged use of the array, while one or more drives slots are not covered by either a drive or drive blank module, can result in damage to the system from overheating.

! IMPORTANT: Reinstall each drive or drive blank module in the same bay number from which it was removed.

Procedure

1. With the latch in the open position, slide the module into the drive slot as far as it will go (1).
2. Rotate the latch closed until it clicks (2).





Complete the installation process

Procedure

1. Reconnect data cables to the original cabling configuration. As needed, connect cables:
 - Between the first and all cascaded drive enclosures.
 - Between the controller enclosure and the host.
2. Reconnect power cords to the replaced enclosure.
3. Turn on power supply module switches of all expansion enclosures. Wait 2 minutes then turn on power supply modules of the controller enclosure.
4. **Verify storage systems status.**
5. **Verify firmware version.**
6. If necessary, restart system devices in the following sequence, allowing time for each device to complete its Power On Self-Tests (POST) before proceeding:
 - a. Switches
 - b. Hosts
7. Verify host access to all data on the storage systems.

Verify storage systems status

View LEDs on the front of the chassis and on each module. For detailed LED information, see the user guide for your model controller enclosure or drive enclosure.



- Drive modules: Verify that the Fault LED is not lit.
- Power supply modules: Verify that none of the Fan Fail, AC Fail, or DC Fail LEDs are on.
- Controller modules and I/O modules: Verify that the OK LED is on, indicating that the module has completed initializing and is online.
- Chassis front panel: Verify that the Fault LED is off.
- Perform a rescan to force a fresh discovery of all drive enclosures connected to the controller enclosure. This step clears the internal SAS layout information and reassigns enclosure IDs based on the cabling sequence, ensuring that the enclosures are numbered correctly.

To perform a rescan using the CLI: `#rescan`.

Verify firmware version

After installing any new component, verify that it is running the latest firmware.

Procedure

1. You can find the latest firmware version on the HPE MSA Storage Firmware & Release Notes page at <https://www.hpe.com/storage/MSAFirmware>.
2. If newer firmware is available, download the firmware to your local system and install the latest version on the drive.

For more information on firmware updates, see the applicable SMU reference guide, CLI reference guide, or product user guide listed under [Websites](#).

Returning replaced items

In materials shipped with the replacement, Hewlett Packard Enterprise specifies if the replaced component must be returned. Follow the provided instructions.



Websites

GENERAL WEBSITES

Hewlett Packard Enterprise Information Library

www.hpe.com/info/EIL

Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix

www.hpe.com/storage/spock

HPE Support

<https://support.hpe.com/hpsc/public/home/>

Storage white papers and analyst reports

www.hpe.com/storage/whitepapers

MSA WEBSITES

MSA QuickSpecs

<http://www.hpe.com/info/qs>

MSA Manuals

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

MSA Firmware

<https://www.hpe.com/storage/MSAFirmware>

MSA Drive Firmware

<https://www.hpe.com/storage/MSADriveFirmware>

HPE MSA Support Material Access

<http://www.hpe.com/storage/MSASupportMaterialAccess>

MSA Health Check

www.hpe.com/storage/MSAHealthCheck



Support and other resources

Accessing Hewlett Packard Enterprise Support

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

www.hpe.com/support/hpesc

Hewlett Packard Enterprise Support Center: Software downloads

www.hpe.com/support/downloads

Software Depot

www.hpe.com/support/softwaredepot

- To subscribe to eNewsletters and alerts:
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:
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 Passport set up with relevant entitlements.

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider.

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

www.hpe.com/services/getconnected

HPE Proactive Care services

www.hpe.com/services/proactivecare

HPE Proactive Care service: Supported products list

www.hpe.com/services/proactivecaresupportedproducts

HPE Proactive Care advanced service: Supported products list

www.hpe.com/services/proactivecareadvancedsupportedproducts

Proactive Care customer information

Proactive Care central

www.hpe.com/services/proactivecarecentral

Proactive Care service activation

www.hpe.com/services/proactivecarecentralgetstarted

Warranty information

To view the warranty for your product or to view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products* reference document, go to the Enterprise Safety and Compliance website:

www.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional warranty information

HPE ProLiant and x86 Servers and Options

www.hpe.com/support/ProLiantServers-Warranties

HPE Enterprise Servers

www.hpe.com/support/EnterpriseServers-Warranties



HPE Storage Products

www.hpe.com/support/Storage-Warranties

HPE Networking Products

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:

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:

www.hpe.com/info/reach

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

www.hpe.com/info/ecodata

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

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). 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.

