



**Hewlett Packard**  
Enterprise

# **HPE Apollo 4510 Gen9 Chassis**

## Setup and Installation Guide

### Abstract

This document contains setup, installation, and configuration information for the HPE Apollo 4510 Gen9 Chassis. This document is for the person who installs, administers, and troubleshoots servers and storage systems. Hewlett Packard Enterprise assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

Part Number: 819250-004  
November 2016  
Edition: 5

© Copyright 2015, 2016 Hewlett Packard Enterprise Development LP

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.

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

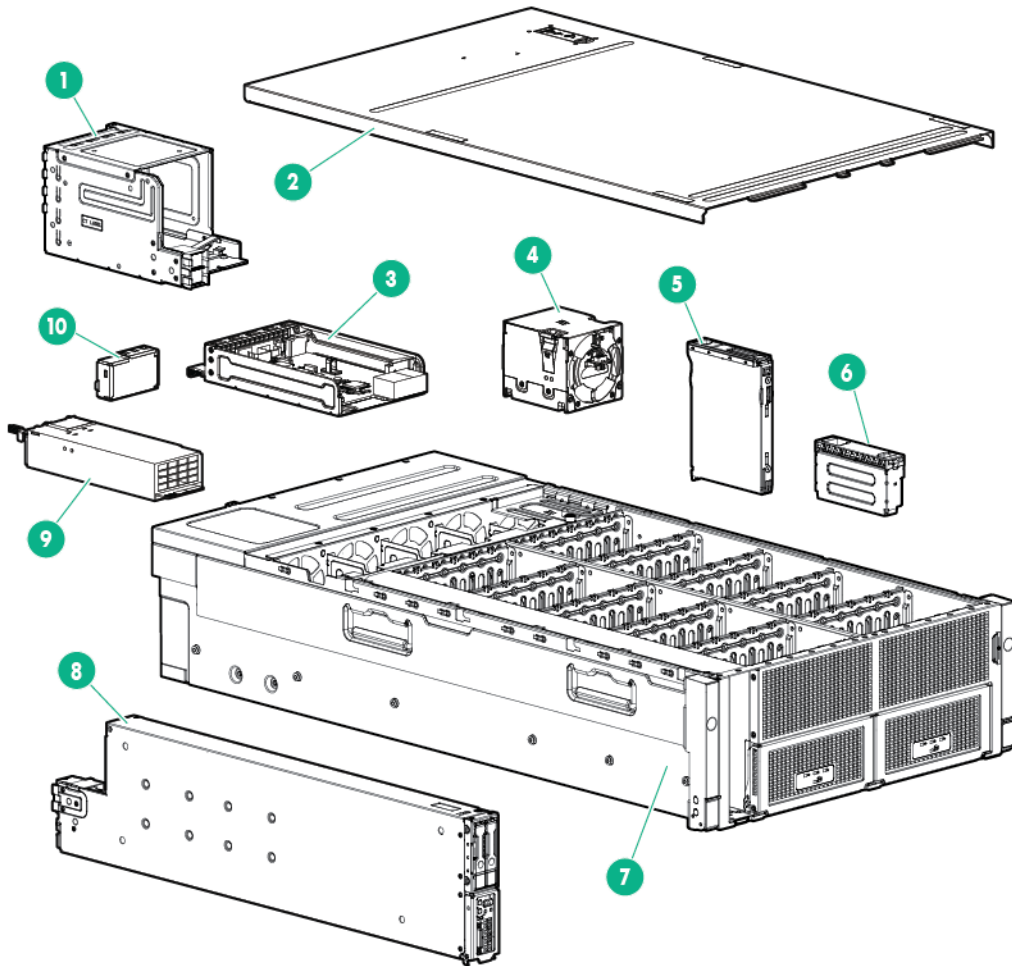
# Contents

Planning the installation .....	5
Verifying the pallet contents .....	5
Warnings and cautions .....	6
Space and airflow requirements .....	6
Temperature requirements .....	7
Power requirements .....	7
Grounding requirements .....	8
Identifying components and LEDs .....	9
Front panel components .....	9
Storage display LEDs .....	9
Server front panel components .....	10
Server front panel LEDs and buttons .....	11
Rear panel components .....	12
Power supply LEDs .....	12
Management module components .....	13
Management module LEDs .....	13
I/O module components .....	14
I/O module LEDs .....	14
PCIe slot definitions (standard I/O module) .....	15
PCIe slot definitions (I/O module with x16 riser option) .....	16
HPE Smart Array P440 Controller port identification .....	17
HPE Smart Array P840 Controller port identification .....	17
HPE H240 Smart Host Bus Adapter port identification .....	18
LFF drive bay numbering .....	18
LFF drive LED definitions .....	19
Optional 8 LFF drive cage bay numbering .....	20
Installing the chassis .....	21
Installation overview .....	21
Disassembling the chassis .....	21
Install the chassis into the rack .....	25
Install the system components into the chassis .....	28
Installing a server .....	28
Installing a hot-plug drive .....	29
Installing a flex slot power supply .....	30
Installing the system fan .....	31
Installing a management module .....	32
Installing the expansion board .....	33
Installing an I/O module .....	34
HPE Smart Storage Battery option .....	35
Cabling and powering up the chassis .....	37
Cabling the chassis .....	37
Installing the cable management arm .....	37
Converting the cable management arm for opposite side mounting .....	39
I/O module option cabling .....	40
HPE Smart Array P440 Controller cabling .....	41
HPE Smart Array P840 Controller cabling .....	42
HPE H240 Smart Host Bus Adapter cabling .....	42
Powering up the system .....	43
Hot-plug power supply calculations .....	43
Troubleshooting .....	44
Important safety information .....	44

Symbols on equipment .....	44
Troubleshooting resources .....	45
Warranty and regulatory information .....	46
Warranty information .....	46
Regulatory information .....	46
Safety and regulatory compliance .....	46
Belarus Kazakhstan Russia marking .....	46
Turkey RoHS material content declaration .....	47
Ukraine RoHS material content declaration .....	47
Specifications .....	48
Environmental specifications .....	48
Chassis specifications .....	48
Power supply specifications .....	48
HPE 800W Flex Slot Platinum Hot-plug Power Supply .....	48
HPE 800W Flex Slot -48VDC Hot-plug Power Supply .....	49
HPE 800W Flex Slot Titanium Plus Hot-plug Power Supply .....	50
HPE 800W Flex Slot Universal Hot-plug Power Supply .....	50
HPE 1400W Flex Slot Platinum Plus Hot-plug Power Supply .....	51
Hot-plug power supply calculations .....	51
Environmental considerations .....	52
Communications interference .....	52
Preventing electrostatic discharge .....	52
Grounding methods to prevent electrostatic discharge .....	52
Support and other resources .....	54
Accessing Hewlett Packard Enterprise Support .....	54
Information to collect .....	54
Accessing updates .....	54
Websites .....	54
Customer Self Repair .....	55
Remote support .....	62
Acronyms and abbreviations .....	63
Documentation feedback .....	65
Index .....	66

# Planning the installation











## Verifying the pallet contents



Item	Description
1	I/O module
2	Access panel
3	Management module
4	System fans (5)
5	Drives*
6	Drive blank
7	HPE Apollo 4510 Gen9 Chassis
8	Server
9	Power supply*
10	Power supply blank
11	Rack rails and cable management arm**

\* The quantity depends on the configuration ordered.

## Warnings and cautions

- 
-  **WARNING:** To reduce the risk of personal injury or damage to equipment, heed all warnings and cautions throughout the installation instructions.
- 
-  **WARNING:** To reduce the risk of personal injury or damage to the equipment, be sure that:
- The rack is bolted to the floor using the concrete anchor kit.
  - The leveling feet extend to the floor.
  - The full weight of the rack rests on the leveling feet.
  - The racks are coupled together in multiple rack installations.
  - Only one component is extended at a time. If more than one component is extended, a rack might become unstable.
- 
-  **WARNING:** The chassis is very heavy. To reduce the risk of personal injury or damage to the equipment:
- Observe local occupational health and safety requirements and guidelines for manual material handling.
  - Remove all installed components from the chassis before installing or moving the chassis.
  - Use caution and get help to lift and stabilize the chassis during installation or removal, especially when the chassis is not fastened to the rack.
- 
-  **WARNING:** To reduce the risk of personal injury or damage to the equipment, you must adequately support the chassis during installation and removal.
- 
-  **WARNING:** Always have at least two people to lift the chassis into the rack. If the chassis is being loaded into the rack above chest level, an additional person must assist with aligning the chassis with the rails while the other people support the weight of the chassis.
- 
-  **WARNING:** Be sure to install enclosures starting from the bottom of the rack and work your way up the rack.
- 
-  **WARNING:** To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.
- 
-  **WARNING:** To reduce the risk of electric shock or damage to the equipment:
- Never reach inside the chassis while the system is powered up.
  - Perform service on system components only as instructed in the user documentation.
- 
-  **CAUTION:** Always be sure that equipment is properly grounded and that you follow proper grounding procedures before beginning any installation procedure. Improper grounding can result in ESD damage to electronic components. For more information, refer to "Electrostatic discharge."
- 
-  **CAUTION:** When performing non-hot-plug operations, you must power down the chassis and/or the system. However, it may be necessary to leave the chassis powered up when performing other operations, such as hot-plug installations or troubleshooting.
- 

## Space and airflow requirements

To enable servicing and ensure adequate airflow, observe the following spatial requirements when deciding where to install a rack:

- Leave a minimum clearance of 121.9 cm (48.0 in) in front of the rack and between rows of racks.
- Leave a minimum clearance of 76.2 cm (30.0 in) in back of the rack for a single row of racks or after the final row of racks.

Hewlett Packard Enterprise Rack products draw cool air in through the front and expel warm air through the rear of the enclosure. Therefore, the front of the rack enclosure must be adequately ventilated to enable ambient room air to enter the enclosure, and the rear of the enclosure must be adequately ventilated to enable the warm air to escape from the enclosure.



---

**IMPORTANT:** Do not block the ventilation openings.

---

If the front of the rack is not completely filled with components, the remaining gaps between the components can cause changes in the airflow, which can adversely affect cooling within the rack. Cover these gaps with blanking panels.



---

**CAUTION:** Always use blanking panels to fill empty vertical spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

---

Racks provide proper server cooling from flow-through perforations in the front and rear doors that provide a 65% open area for ventilation.

## Temperature requirements

To ensure continued safe and reliable equipment operation, install or position the rack in a well-ventilated, climate-controlled environment.

The operating temperature inside the rack is always higher than the room temperature and is dependent on the configuration of equipment in the rack. Check the TMRA for each piece of equipment before installation.



---

**CAUTION:** To reduce the risk of damage to the equipment when installing third-party options:

- Do not permit optional equipment to impede airflow around the chassis or to increase the internal rack temperature beyond the maximum allowable limits.
  - Do not exceed the manufacturer's TMRA.
- 

## Power requirements

Installation of this equipment must comply with local and regional electrical regulations governing the installation of IT equipment by licensed electricians. This equipment is designed to operate in installations covered by NFPA 70, 1999 Edition (National Electric Code) and NFPA-75, 1992 (code for Protection of Electronic Computer/Data Processing Equipment). For electrical power ratings on options, refer to the product rating label or the user documentation supplied with that option.



---

**WARNING:** To reduce the risk of personal injury, fire, or damage to the equipment, do not overload the AC supply branch circuit that provides power to the rack. Consult the electrical authority having jurisdiction over wiring and installation requirements of your facility.

---



---

**CAUTION:** Protect the chassis from power fluctuations and temporary interruptions with a regulating UPS. This device protects the hardware from damage caused by power surges and voltage spikes and keeps the chassis in operation during a power failure.

---

# Grounding requirements

This equipment must be grounded properly for proper operation and safety. In the United States, you must install the equipment in accordance with NFPA 70, 1999 Edition (National Electric Code), Article 250, as well as any local and regional building codes.

In Canada, you must install the equipment in accordance with Canadian Standards Association, CSA C22.1, Canadian Electrical Code.

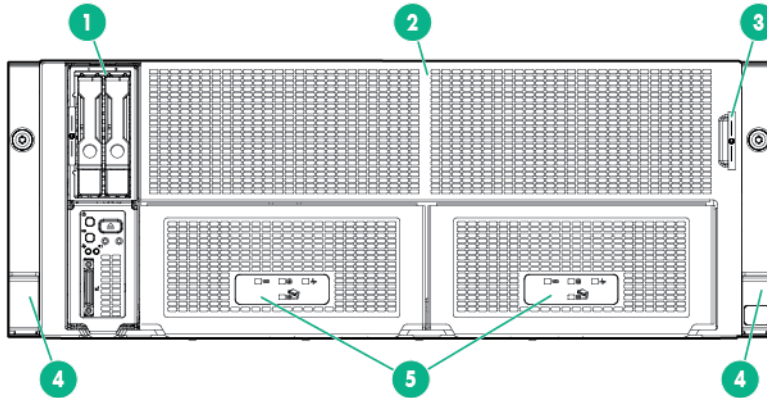
In all other countries, you must install the equipment in accordance with any regional or national electrical wiring codes, such as the International Electrotechnical Commission (IEC) Code 364, parts 1 through 7. Furthermore, you must be sure that all power distribution devices used in the installation, such as branch wiring and receptacles, are listed or certified grounding-type devices.

Because of the high ground-leakage currents associated with this equipment, Hewlett Packard Enterprise recommends the use of a PDU that is either permanently wired to the building's branch circuit or includes a nondetachable cord that is wired to an industrial-style plug. NEMA locking-style plugs or those complying with IEC 60309 are considered suitable for this purpose. Using common power outlet strips to supply power to this equipment is not recommended.



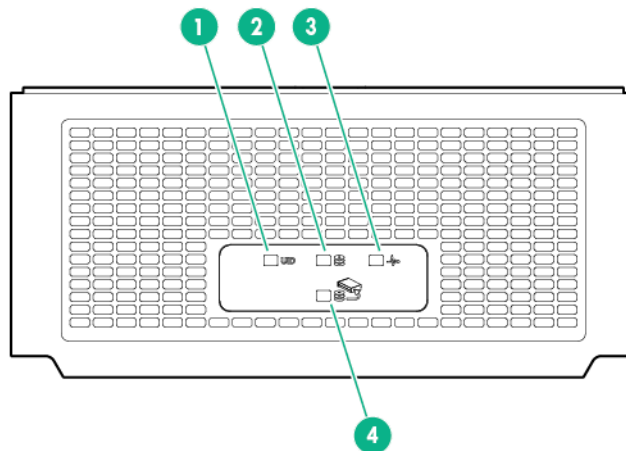
# Identifying components and LEDs

## Front panel components



Item	Description
1	Server bay
2	Server bay LFF drives
3	Chassis serial label pull tab
4	Quick-release levers (2)
5	Storage LED display

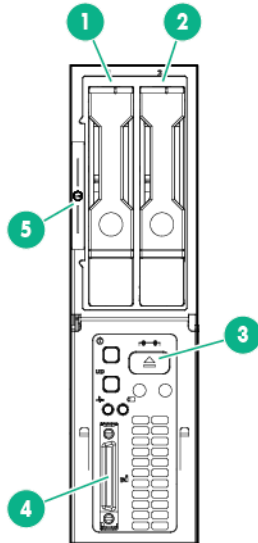
## Storage display LEDs



Item	LED description	LED state
1	UID LED	Off = Normal operating mode Solid blue = One or more drives is in locate mode. Flashing blue = Firmware update is in progress.

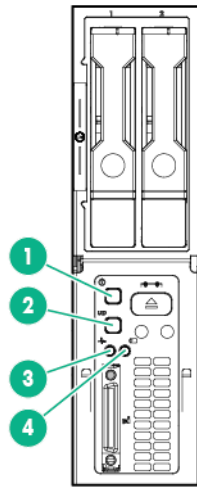
Item	LED description	LED state
2	Drive health LED	Off = No drives are configured. Solid green = One or more drives are members of a logical drive. Flashing green = One or more drives are rebuilding or performing a RAID migration, stripe size migration, capacity expansion, logical drive extension, or erasing. Flashing amber = One or more drives are predicted to fail. Solid amber = One or more drives have failed.
3	Backplane health LED	Green = Backplane health is normal. Amber = Backplane error detected
4	Rear drive health LED	Off = No drives are configured. Solid green = One or more drives are members of a logical drive. Flashing green = One or more drives are rebuilding or performing a RAID migration, stripe size migration, capacity expansion, logical drive extension, or erasing. Flashing amber = One or more drives are predicted to fail. Solid amber = One or more drives have failed.

## Server front panel components



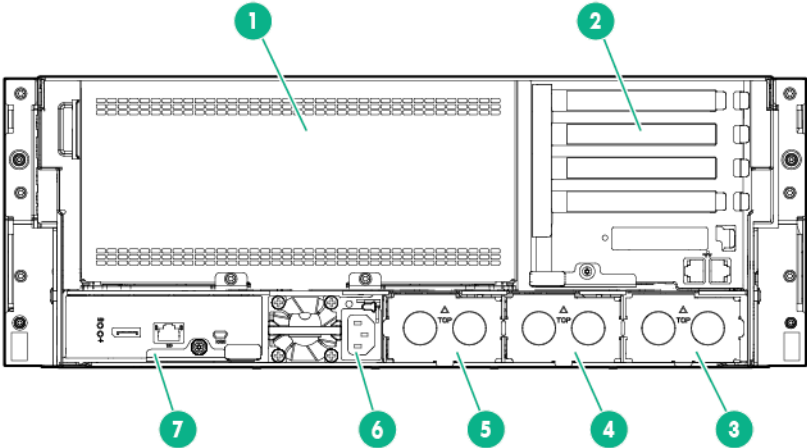
Item	Description
1	Drive bay 1
2	Drive bay 2
3	Server ejector button
4	SUV cable connector
5	Server serial label pull tab

# Server front panel LEDs and buttons



Item	Description	Status
1	Power On/Standby button and system power LED	Solid green = System on Flashing green (1 Hz/cycle per sec) = Performing power on sequence Solid amber = System in standby Off = No power present
2	UID button/LED	Solid blue = Activated Flashing blue: <ul style="list-style-type: none"> <li>• 1 Hz/cycle per sec = Remote management or firmware upgrade in progress</li> <li>• 4 Hz/cycle per sec = iLO manual reboot sequence initiated</li> <li>• 8 Hz/cycle per sec = iLO manual reboot sequence in progress</li> </ul> Off = Deactivated
3	Server health LED	Solid green = Normal Flashing green (1 Hz/cycle per sec) = iLO is rebooting Flashing amber = System degraded Flashing red (1 Hz/cycle per sec) = System critical
4	Server backup LED	Off = Normal operations. No backup in progress. Flashing white = Backup in progress. Do not remove drives or associated system components, and do not power down the server.

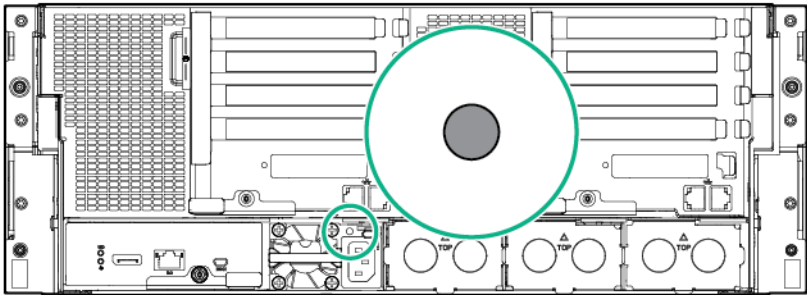
# Rear panel components



Item	Description
1	Rear LFF drive cage blank
2	I/O module
3	Power supply bay 4
4	Power supply bay 3
5	Power supply bay 2
6	Power supply bay 1
7	Management module

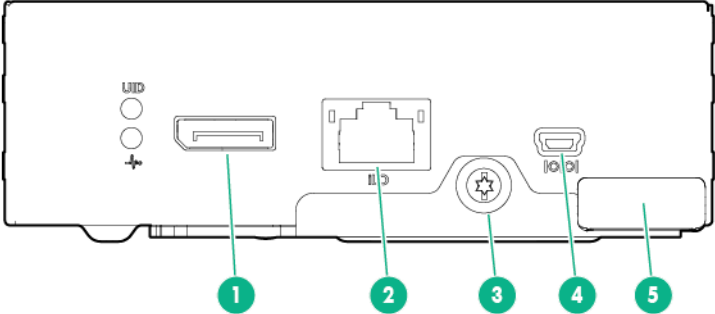
# Power supply LEDs

The power supply LED is located on each power supply.



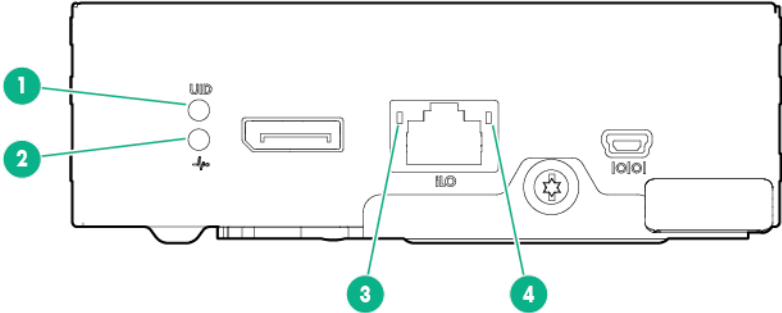
LED Status	Description
Off	System is off or power supply has failed.
Solid Green	Normal

# Management module components



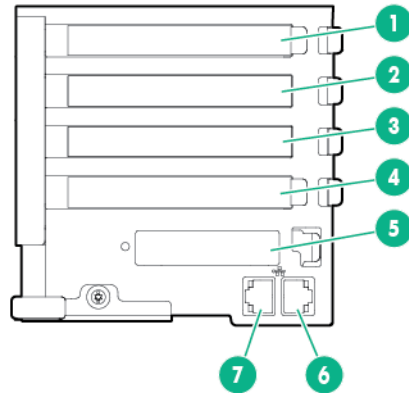
Item	Description
1	HPE APM connector
2	HPE iLO connector
3	Management module thumbscrew
4	Reserved
5	Management module release lever

# Management module LEDs



Item	Description
1	Management module UID LED
2	Management module health LED
3	iLO link LED
4	iLO activity LED

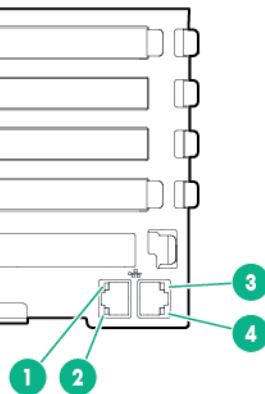
## I/O module components



Item	Description
1	PCIe expansion slot 4
2	PCIe expansion slot 3
3	PCIe expansion slot 2
4	PCIe expansion slot 1
5	FlexibleLOM slot
6	NIC 2
7	NIC 1

The FlexibleLOM slot is not available on the I/O module with the x16 PCIe riser option.

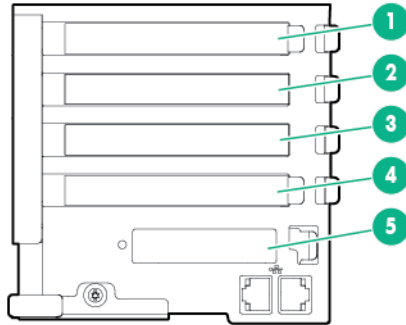
## I/O module LEDs



Item	Description
1	NIC 1 activity LED
2	NIC 1 link LED
3	NIC 2 activity LED

Item	Description
4	NIC 2 link LED

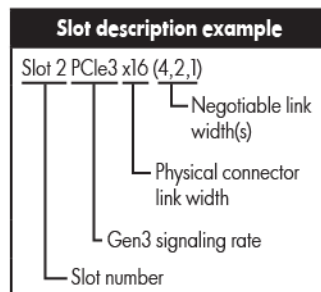
## PCIe slot definitions (standard I/O module)



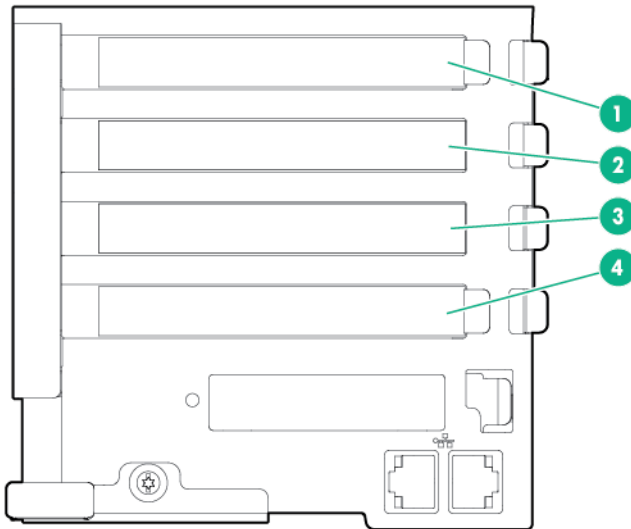
Item	Description
1	PCIe expansion slot 4* — PCIe3 x8 (8, 4, 2, 1)**
2	PCIe expansion slot 3* — PCIe3 x8 (8, 4, 2, 1)**
3	PCIe expansion slot 2* — PCIe3 x8 (8, 4, 2, 1)
4	PCIe expansion slot 1* — PCIe3 x8 (8, 4, 2, 1)
5	FlexibleLOM slot — PCIe3 x8

\*The HPE Apollo 4500 system with its centralized HPE Smart Storage Battery supports up to two HPE Smart Array controllers per node.

\*\*Processor 2 must be installed to support options installed in PCIe expansion slots 3 and 4.



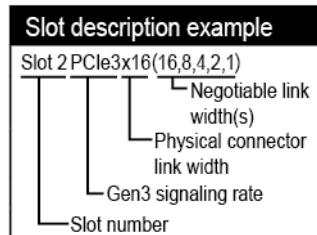
# PCIe slot definitions (I/O module with x16 riser option)



Item	Description
1	PCIe expansion slot 4* — PCIe3 x8 (8, 4, 2, 1)**
2	PCIe expansion slot 3* — PCIe3 x8 (8, 4, 2, 1)**
3	PCIe expansion slot 2* — PCIe3 x16 (16, 8, 4, 2, 1)
4	PCIe expansion slot 1* — PCIe3 x8 (8, 4, 2, 1)

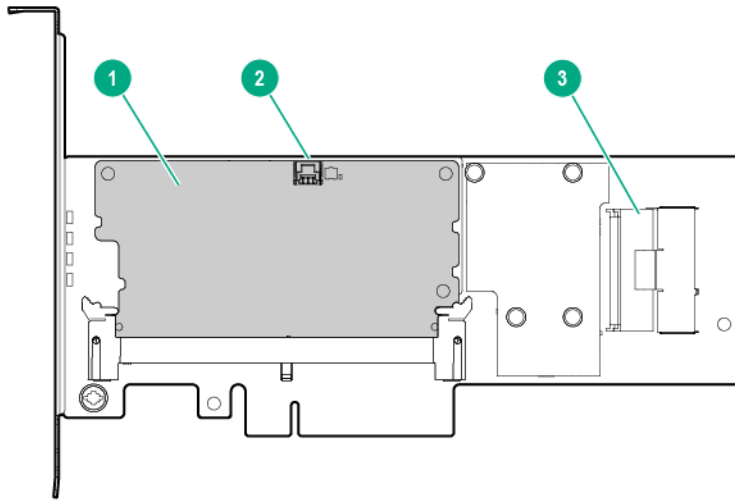
\*The HPE Apollo 4500 system with its centralized HPE Smart Storage Battery supports up to two HPE Smart Array controllers per node.

\*\*Processor 2 must be installed to support options installed in PCIe expansion slots 3 and 4. Only slots 3 and 4 support HPE Smart Array Controllers.



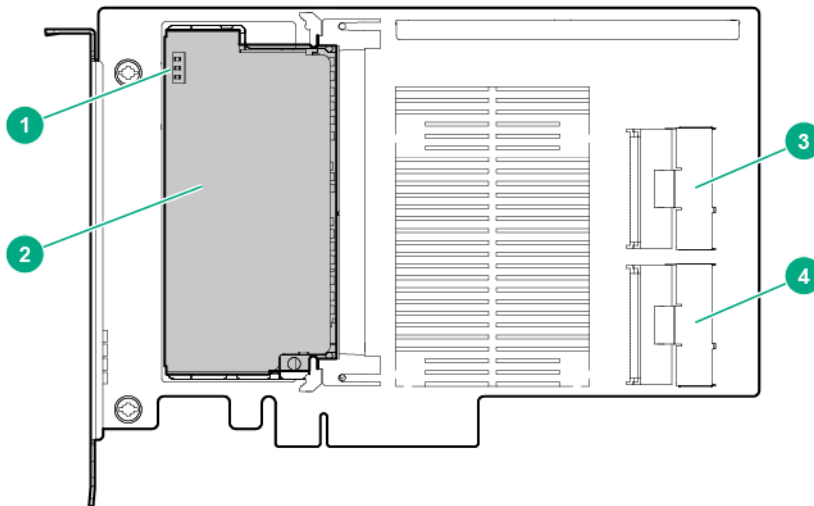


## HPE Smart Array P440 Controller port identification



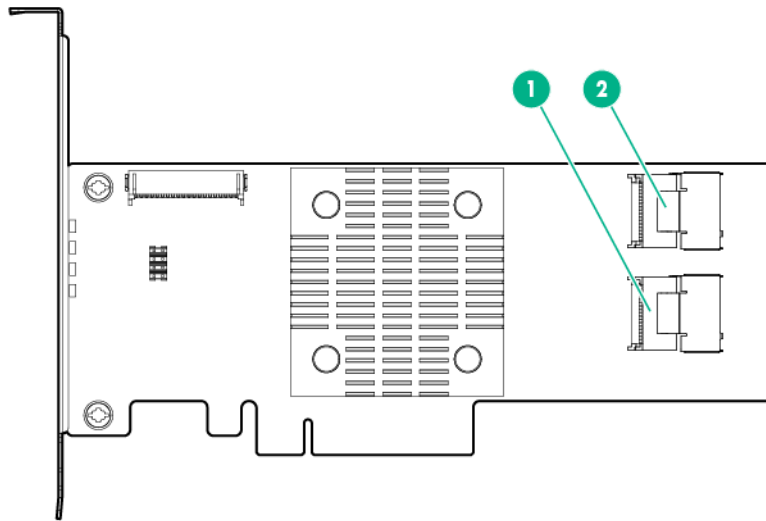
Item	Description
1	Cache module
2	Cache module cable connector
3	Internal SAS port 1I

## HPE Smart Array P840 Controller port identification



Item	Description
1	Cache module cable connector
2	Cache module
3	Internal SAS port 1I
4	Internal SAS port 2I

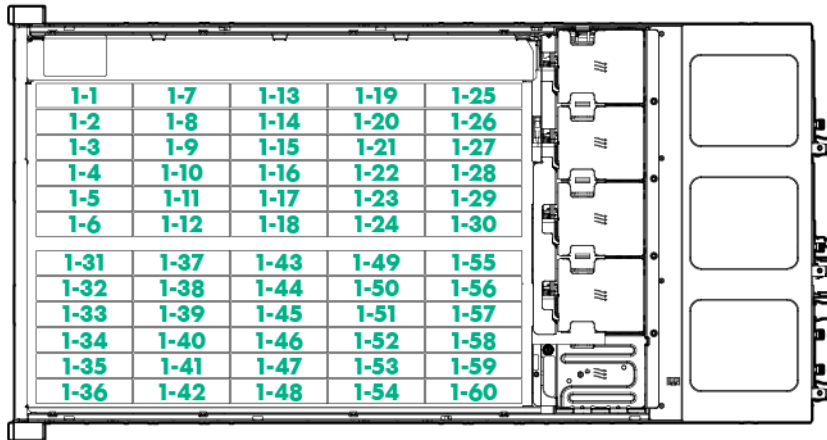
# HPE H240 Smart Host Bus Adapter port identification



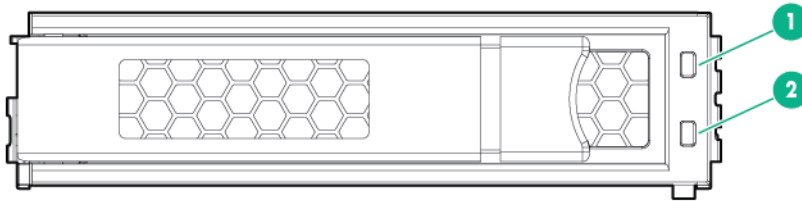
Item	Description
1	Port 2i
2	Port 1i

## LFF drive bay numbering

The drives are numbered 1-60 for each server installed in the chassis. The first digit in the illustration represents the server associated with the drive and the second set of digits represent the drive bay number.



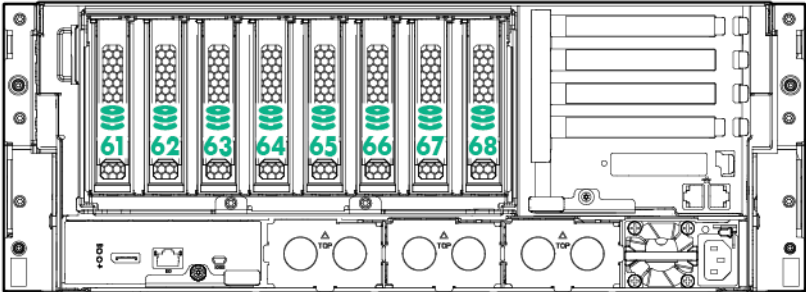
# LFF drive LED definitions



Item	Definition
1	Fault/UID (amber/blue)
2	Online/Activity (green)

Online/Activity LED (green)	Fault/UID LED (amber/blue)	Definition
On, off, or flashing	Alternating amber and blue	One or more of the following conditions exist: <ul style="list-style-type: none"> <li>The drive has failed.</li> <li>A predictive failure alert has been received for this drive.</li> <li>The drive has been selected by a management application.</li> </ul>
On, off, or flashing	Solid blue	One or both of the following conditions exist: <ul style="list-style-type: none"> <li>The drive is operating normally.</li> <li>The drive has been selected by a management application.</li> </ul>
On	Flashing amber	A predictive failure alert has been received for this drive. Replace the drive as soon as possible.
On	Off	The drive is online but is not currently active.
1 flash per second	Flashing amber	Do not remove the drive. Removing the drive might terminate the current operation and cause data loss. The drive is part of an array that is undergoing capacity expansion or stripe migration, but a predictive failure alert has been received for this drive. To minimize the risk of data loss, do not remove the drive until the expansion or migration is complete.
1 flash per second	Off	Do not remove the drive. Removing the drive might terminate the current operation and cause data loss. The drive is rebuilding, erasing, or is part of an array that is undergoing capacity expansion or stripe migration.
4 flashes per second	Flashing amber	The drive is active but a predictive failure alert has been received for this drive. Replace the drive as soon as possible.
4 flashes per second	Off	The drive is active and is operating normally.
Off	Solid amber	A critical fault condition has been identified for this drive and the controller has placed it offline. Replace the drive as soon as possible.
Off	Flashing amber	A predictive failure alert has been received for this drive. Replace the drive as soon as possible.
Off	Off	The drive is offline, a spare, or not configured as part of an array.

# Optional 8 LFF drive cage bay numbering



# Installing the chassis

## Installation overview

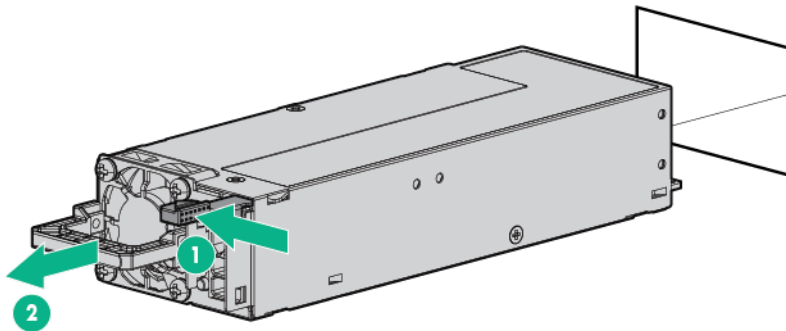
To set up and install the chassis:

1. Set up and install the rack. For more information, see the documentation that ships with the rack.
2. Disassemble the chassis ("[Disassembling the chassis](#)" on page 21).
3. Install the chassis into the rack (on page 25).
4. Install the system components into the chassis (on page 28).

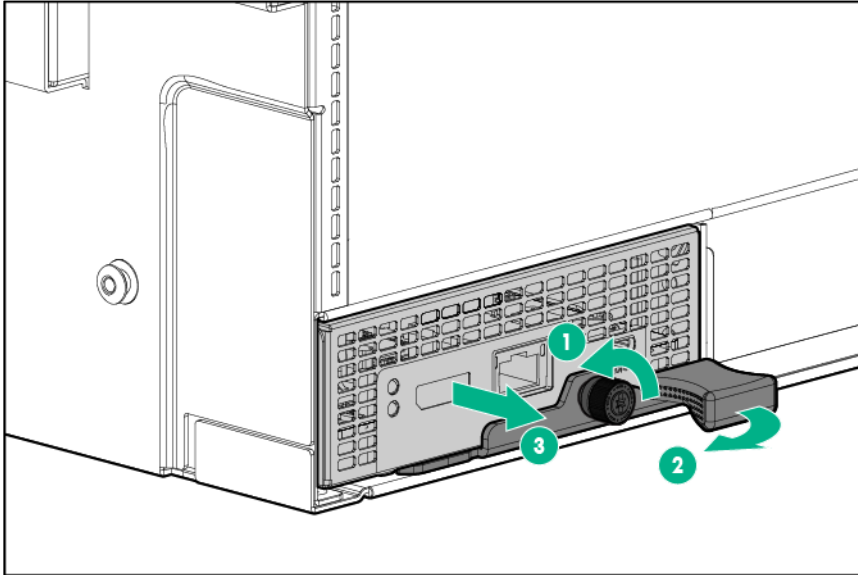
## Disassembling the chassis

Before installing the chassis into the rack, you must remove the pluggable modules and system components from the chassis. Because a fully populated chassis can weigh up to 99.79 kg (220.00 lb), remove the components from the chassis to make moving and installing the chassis easier.

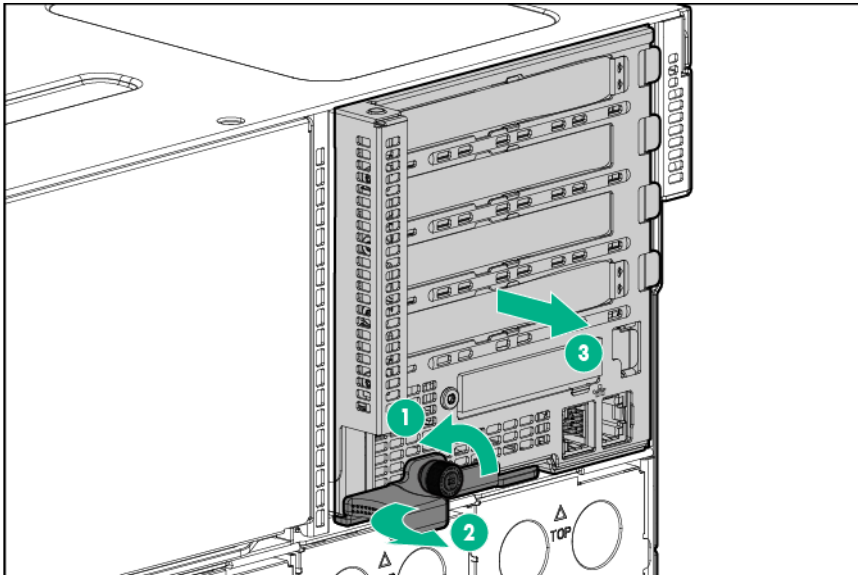
1. With the chassis still on the pallet, remove all components from the front and rear of the chassis.
  - o Power supplies



- o Management module

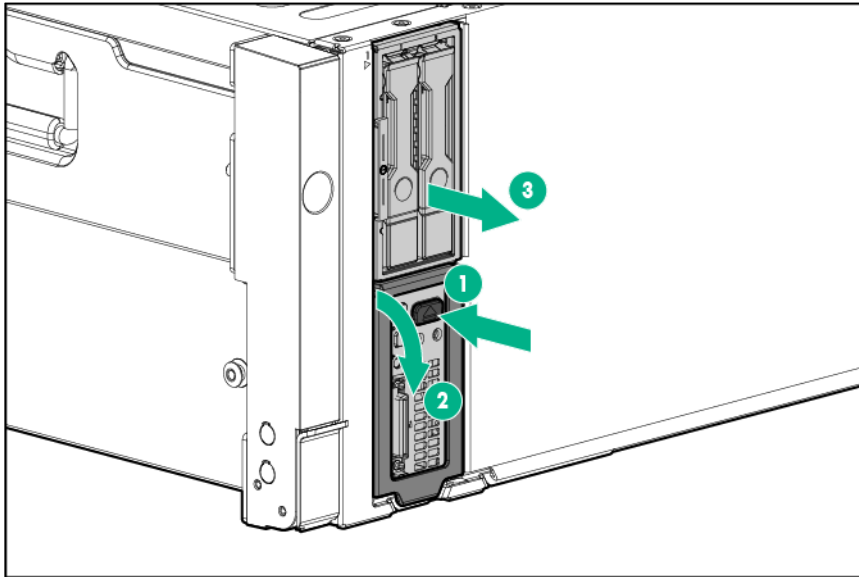


- o I/O module



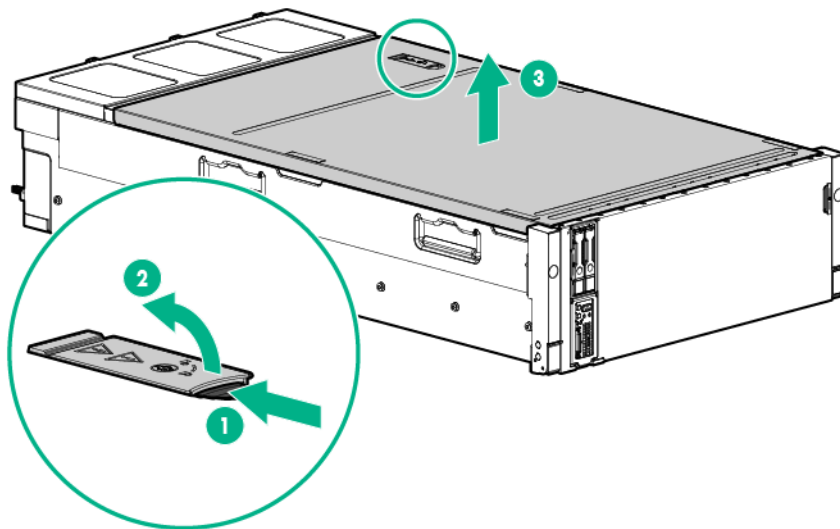
**CAUTION:** To avoid damage to the server, always support the bottom of the server when removing it from the chassis.

- o Server

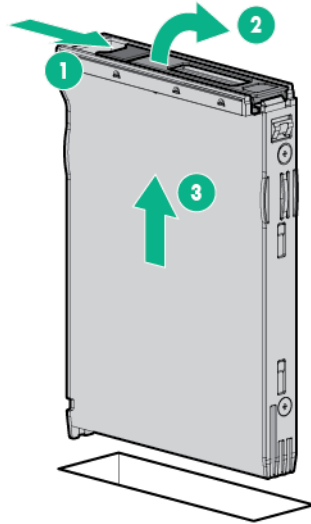


**⚠ CAUTION:** To avoid damage to the device, do not use the removal handle to carry it.

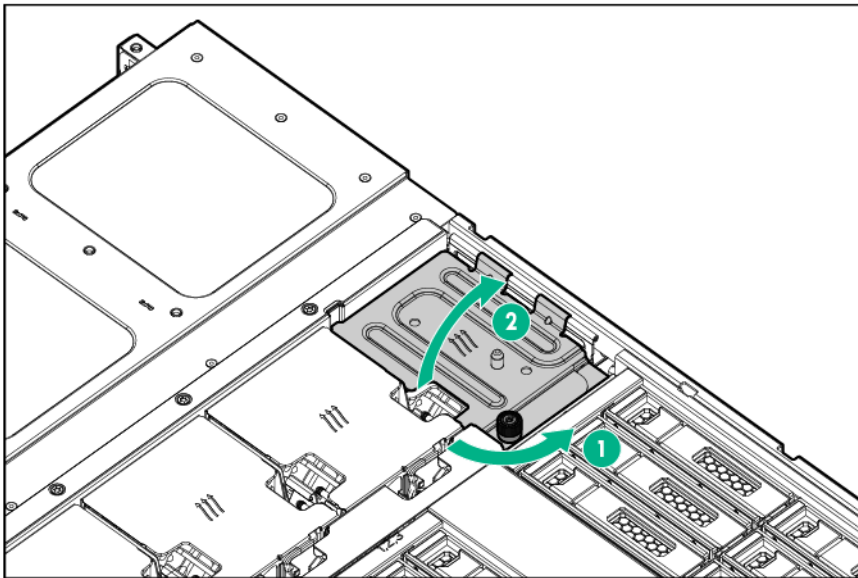
2. Remove the access panel.



3. Remove all LFF drives.

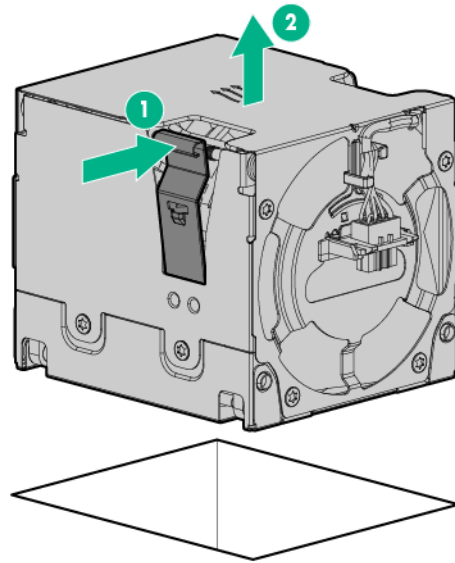


4. System fans (bays 1 through 4)
  - a. In bay 5, open the fan bay door.





- b. Remove the system fans from all 5 fan bays.



## Install the chassis into the rack

- WARNING:** Always have at least two people to lift the chassis into the rack. If the chassis is being loaded into the rack above chest level, an additional person must assist with aligning the chassis with the rails while the other people support the weight of the chassis.
- WARNING:** The chassis is very heavy. To reduce the risk of personal injury or damage to the equipment:
- Observe local occupational health and safety requirements and guidelines for manual material handling.
  - Remove all installed components from the chassis before installing or moving the chassis.
  - Use caution and get help to lift and stabilize the chassis during installation or removal, especially when the chassis is not fastened to the rack.
- WARNING:** To avoid risk of personal injury or damage to the equipment, do not stack anything on top of rail-mounted equipment or use it as a work surface when extended from the rack.
- CAUTION:** Always plan the rack installation so that the heaviest item is on the bottom of the rack. Install the heaviest item first, and continue to populate the rack from the bottom to the top.
- CAUTION:** Hewlett Packard Enterprise has not tested or validated the Apollo 4510 Gen9 Chassis with any third-party racks. Before installing the Apollo 4510 Gen9 Chassis in a third-party rack, be sure to properly scope the limitations of the rack. Before proceeding with the installation, consider the following:
- You must fully understand the static and dynamic load carrying capacity of the rack and be sure that it can accommodate the weight of the Apollo 4510 Gen9 Chassis.
  - Be sure sufficient clearance exists for cabling, installation and removal of the chassis, and actuation of the rack doors.

The chassis requires rails for installation in a rack. To install the rack rails, see the *Quick Deploy Rail System Installation Instructions* that ship with the rack hardware kit.

You can install up to nine chassis in a 36U, 1200mm deep rack. If you are installing more than one chassis, install the first chassis in the bottom of the rack, and then install additional chassis by moving up

the rack with each subsequent chassis. Plan the rack installation carefully because it is difficult to change the location of components after they are installed.

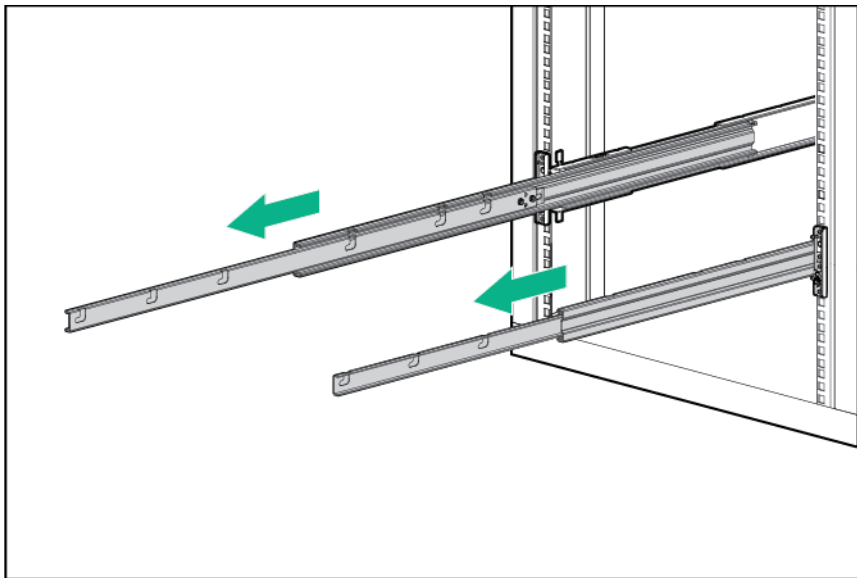
- ⚠ WARNING:** To reduce the risk of personal injury or damage to the equipment, be sure that:
- The rack is bolted to the floor using the concrete anchor kit.
  - The leveling feet extend to the floor.
  - The full weight of the rack rests on the leveling feet.
  - The racks are coupled together in multiple rack installations.
  - Only one component is extended at a time. If more than one component is extended, a rack might become unstable.

- ⚠ WARNING:** To reduce the risk of personal injury or equipment damage, be sure that the rack is adequately stabilized before installing the chassis.

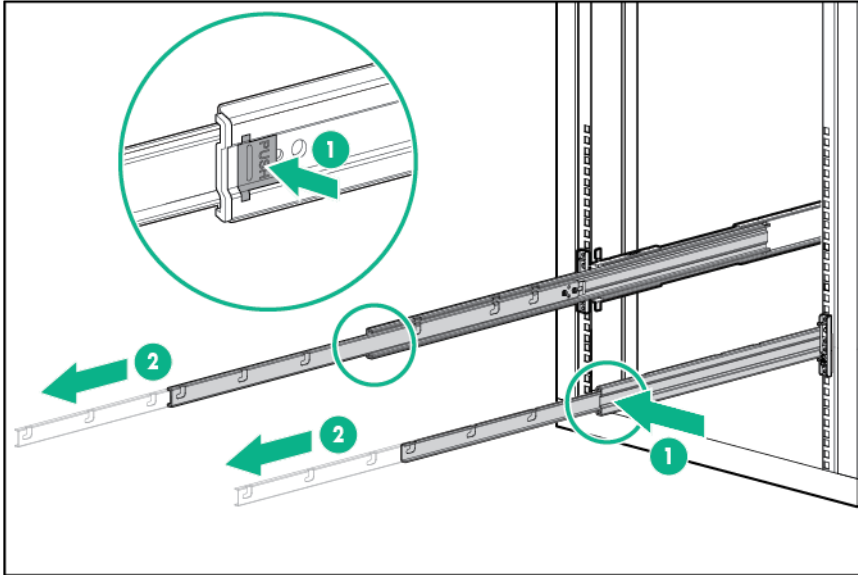
To install the chassis:

- ⚠ WARNING:** To reduce the risk of personal injury or damage to the equipment, you must fully extend the rails. To fully extend the rails, press the push tabs and extend the rails until the rails click twice.

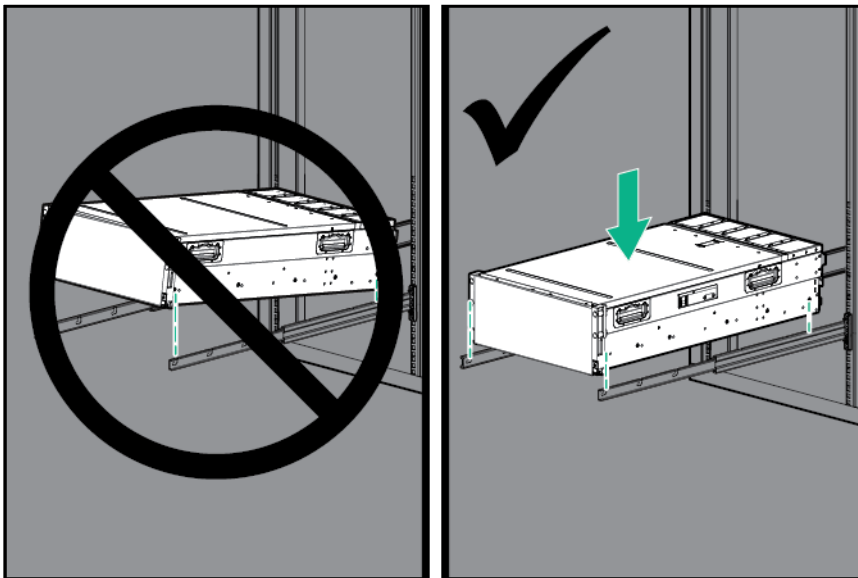
1. Extend the rails until they stop.



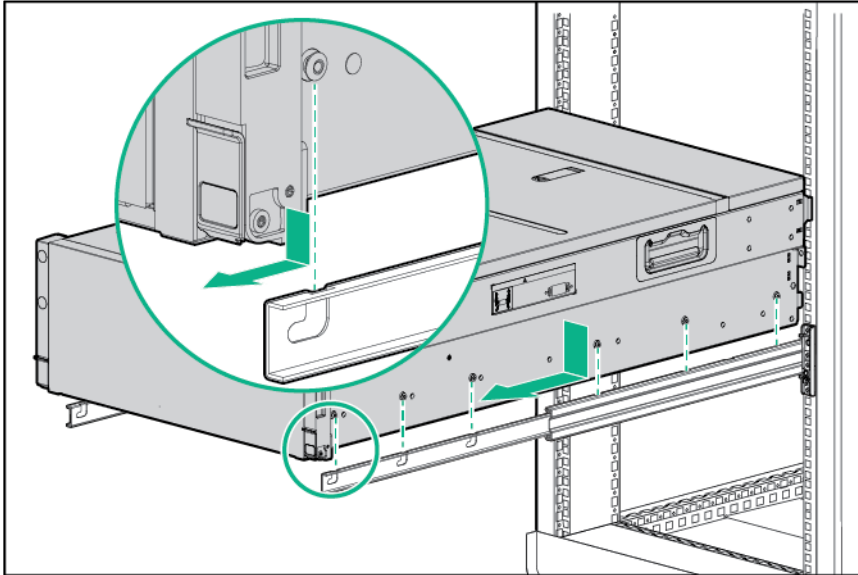
2. Fully extend the rails by pressing the push tabs and extending the rails until the rails click two times.



⚠ **CAUTION:** Be sure to keep the product parallel to the floor when installing the chassis. Tilting the product up or down could result in damage to the rails.



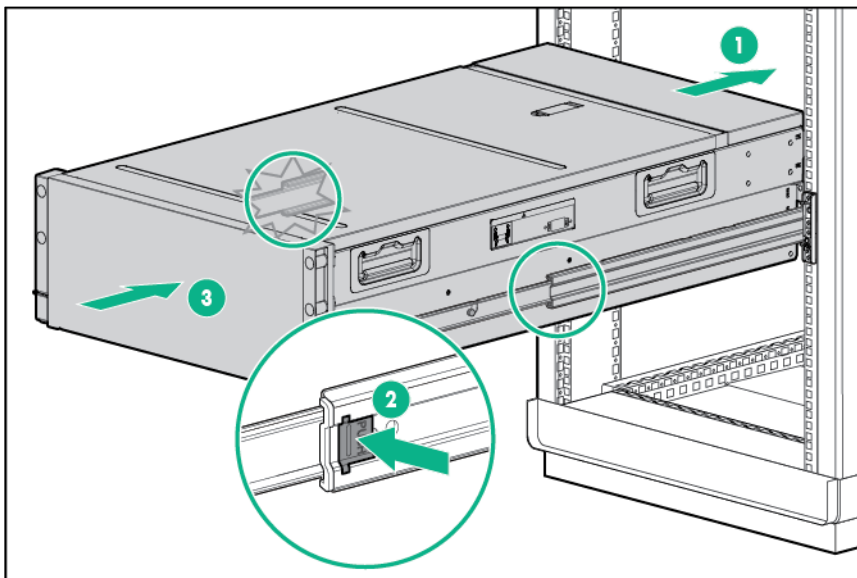
3. Install the chassis into the J-slot on the rails, and then pull it forward.



4. Press the Push tabs on each rail, and then slide the chassis into the rack. When the chassis stops midway, press the push tabs on each rail to release the chassis and slide it fully into the rack.



**CAUTION:** Press and hold the "Push" tab on each rail until the chassis begins to slide into the rack. Then, release the "Push" tabs and continue to slide the chassis into the rack. Press and hold the "Push" tab on each rail again when the rails lock at a 76.2-cm (30-inch) extension. Then, release the "Push" tabs again and finish sliding the chassis into the rack. Failure to release the "Push" tabs may cause damage to the rails.



## Install the system components into the chassis

Once the chassis is installed in the rack, begin installing the components in the chassis.

### Installing a server

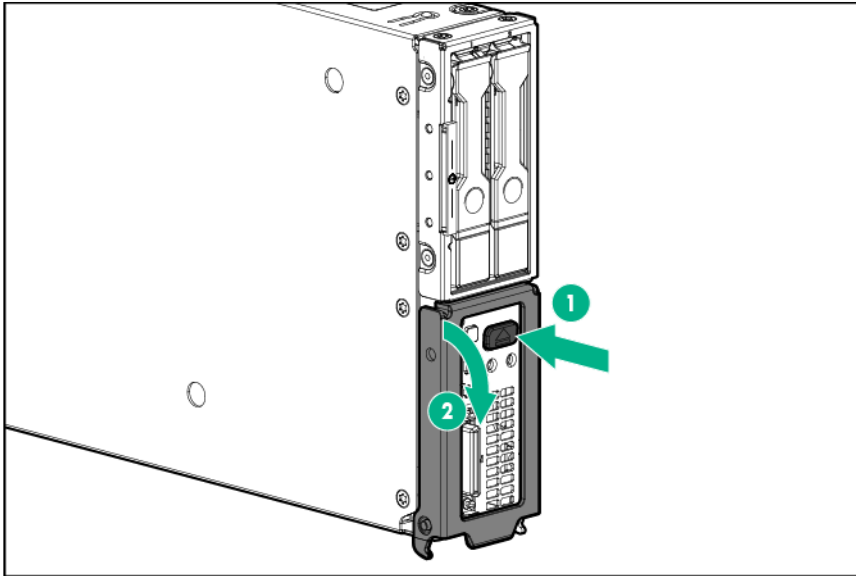
---

**CAUTION:** To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

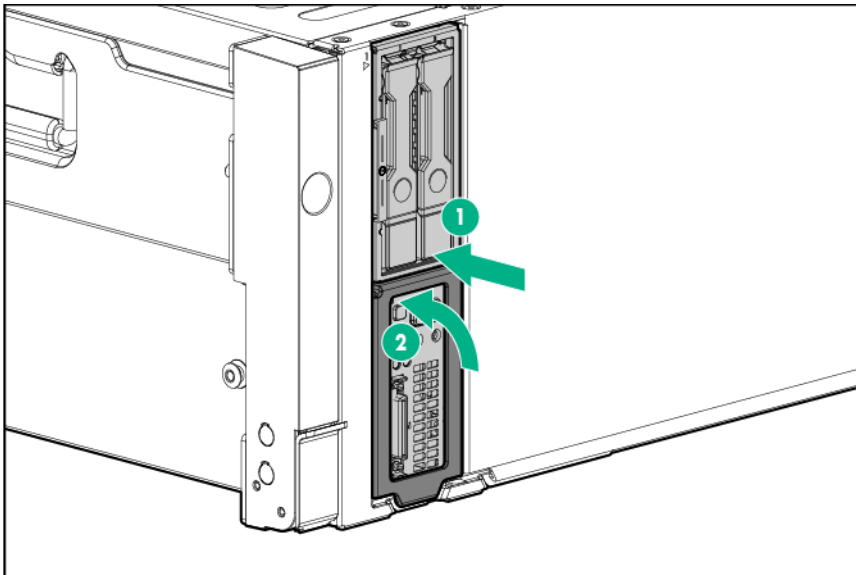
---

To install the component:

1. Prepare the server for installation.



2. Install the server. When seated properly, the server will be flush with the front of the chassis and the release lever will close completely without resistance.



## Installing a hot-plug drive

---

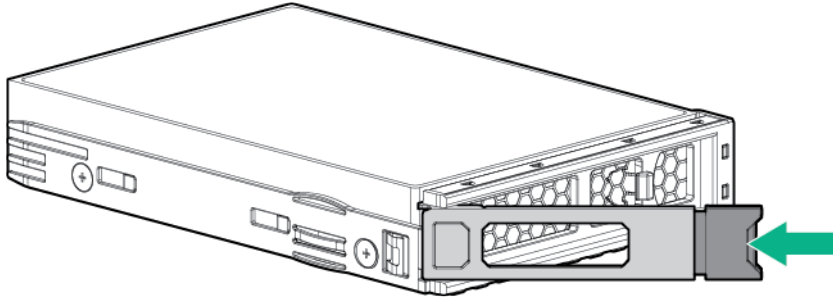
**WARNING:** To reduce the risk of injury from electric shock, do not install more than one drive carrier at a time.

---

To install the component:

1. Remove the drive blank.

2. Prepare the low-profile LFF hot-plug drive for installation.



3. Install the LFF hot-plug drive in the chassis.



4. Determine the status of the drives using the drive LEDs located on the storage display LEDs (on page 9).

To configure arrays, see the *HPE Smart Storage Administrator User Guide* on the Hewlett Packard Enterprise website (<http://www.hpe.com/info/smartstorage/docs>).

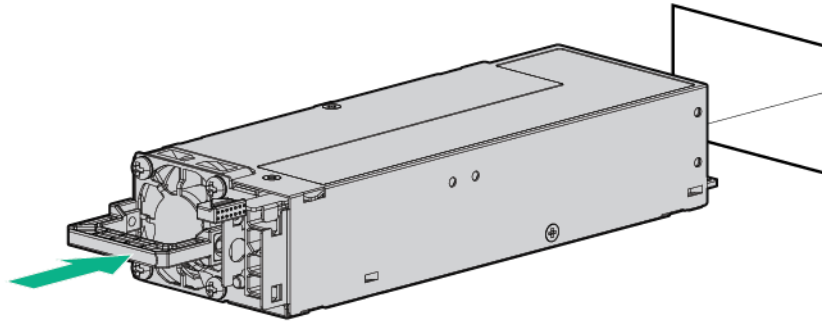
## Installing a flex slot power supply



**WARNING:** To reduce the risk of electric shock or damage to the equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
- Unplug the power cord from the power supply to disconnect power to the equipment.
- Do not route the power cord where it can be walked on or pinched by items placed against it. Pay particular attention to the plug, electrical outlet, and the point where the cord extends from the server.

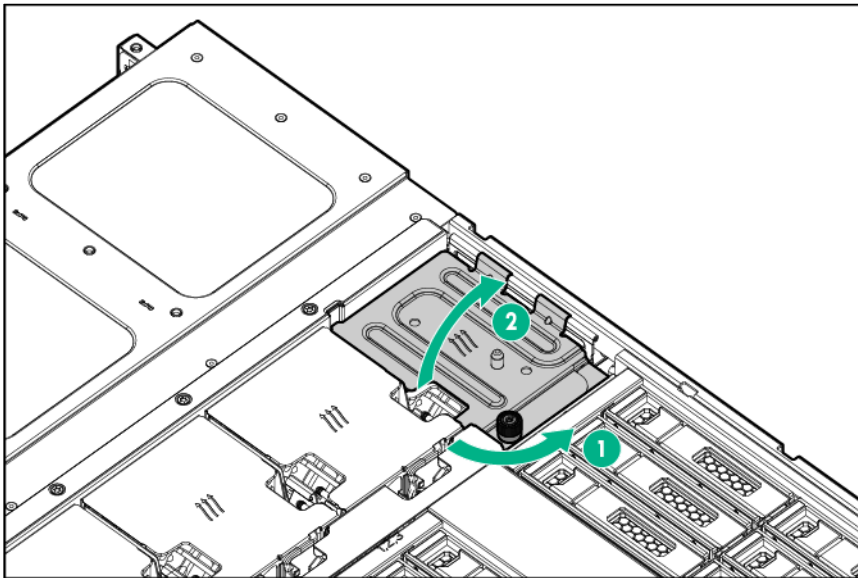
Install the component as indicated.



## Installing the system fan

To install the component:

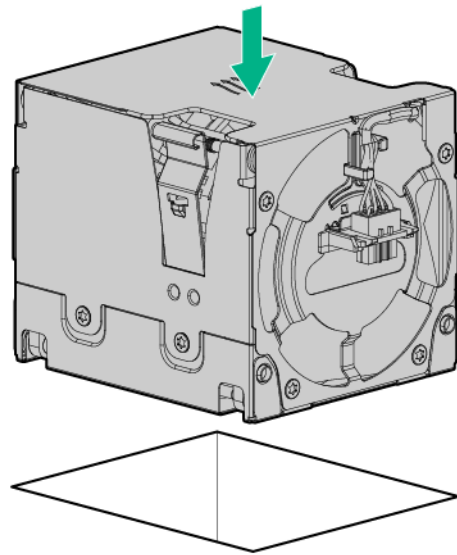
1. To install a fan in bay 5, open the fan door. For all other fans, proceed to step 2.



2. Push in on the tabs, and then insert the system fan into the chassis.

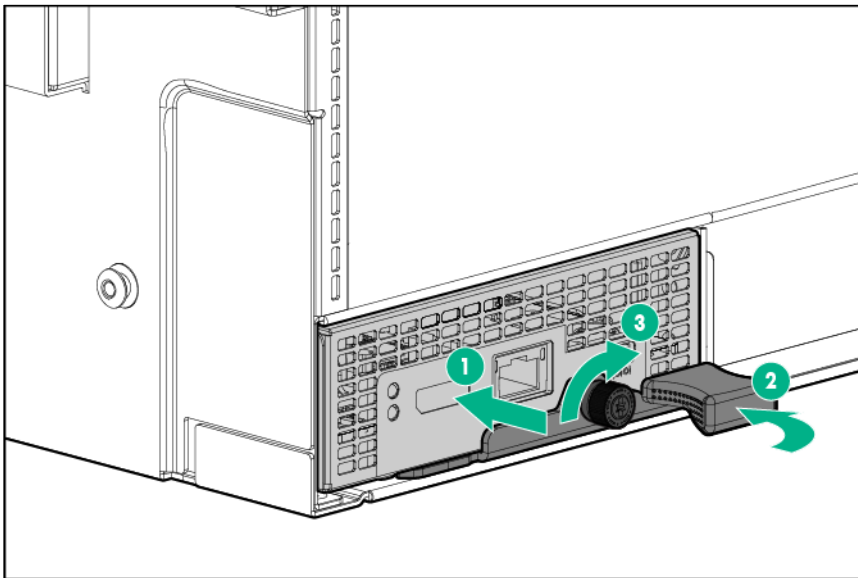


**IMPORTANT:** Use the tabs to insert the system fan into the chassis. Do not push in on the system fan grill to install it.



## Installing a management module

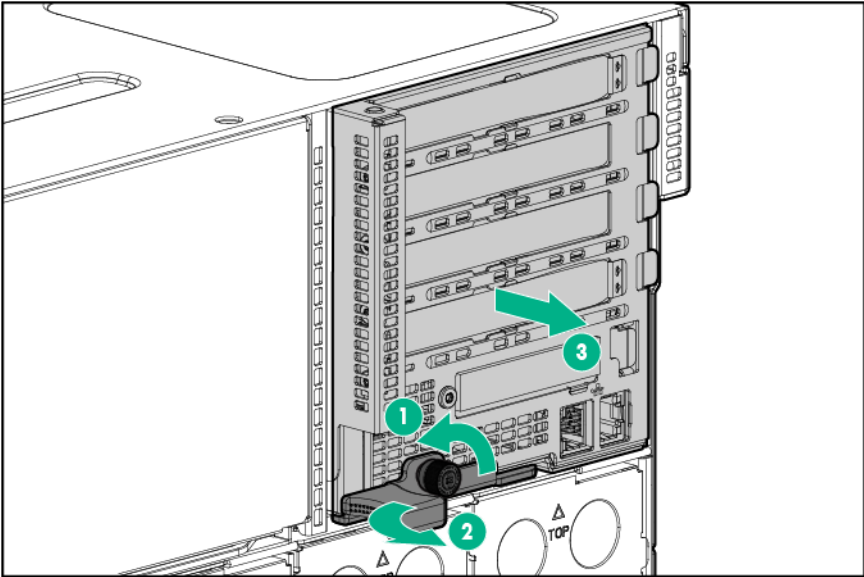
Install the component as indicated.



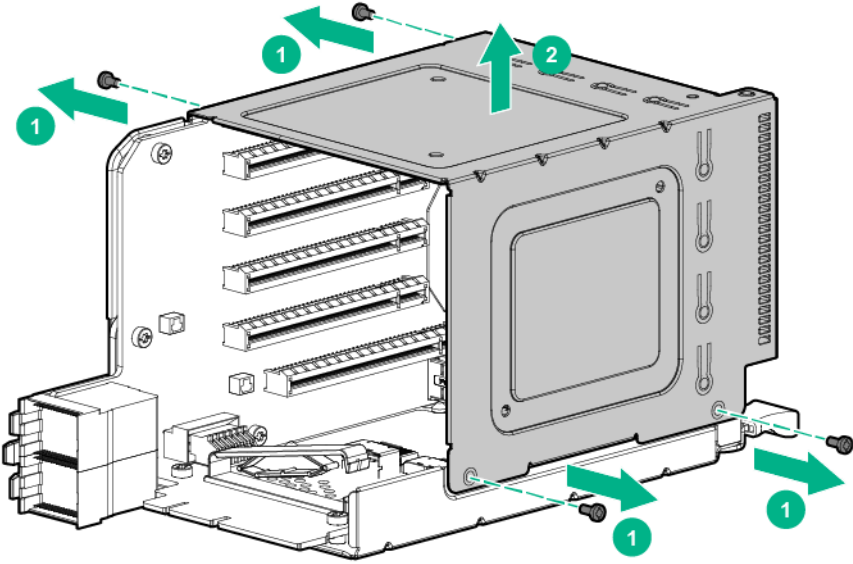


# Installing the expansion board

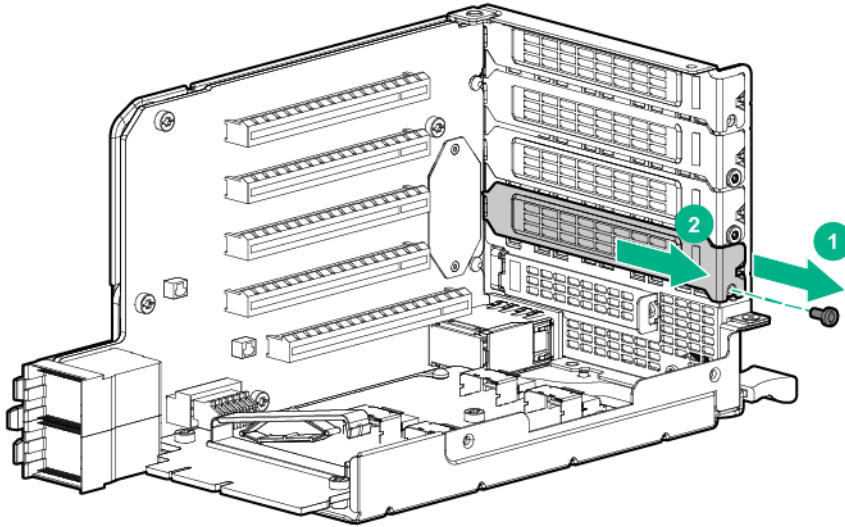
- 1. Remove the I/O module.



- 2. Remove the I/O module access panel.

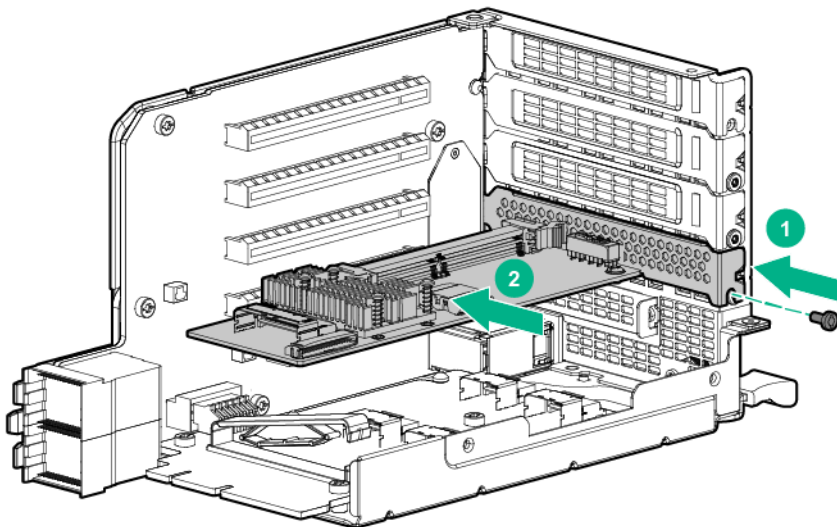


3. Remove the PCIe blank from the expansion slot.



4. Install a supported expansion board option in one of the PCIe expansion slots.  
Only slots 3 and 4 support HPE Smart Array Controllers.

If installing an expansion board option in an I/O module with the x16 riser option, be sure to install the x16 expansion board in PCIe slot 2. For more information, see the "PCIe slot definitions (I/O module with x16 riser option) (on page 16)."



5. Cable the board according to the option installed. For more information, see "I/O module option cabling (on page 40)."

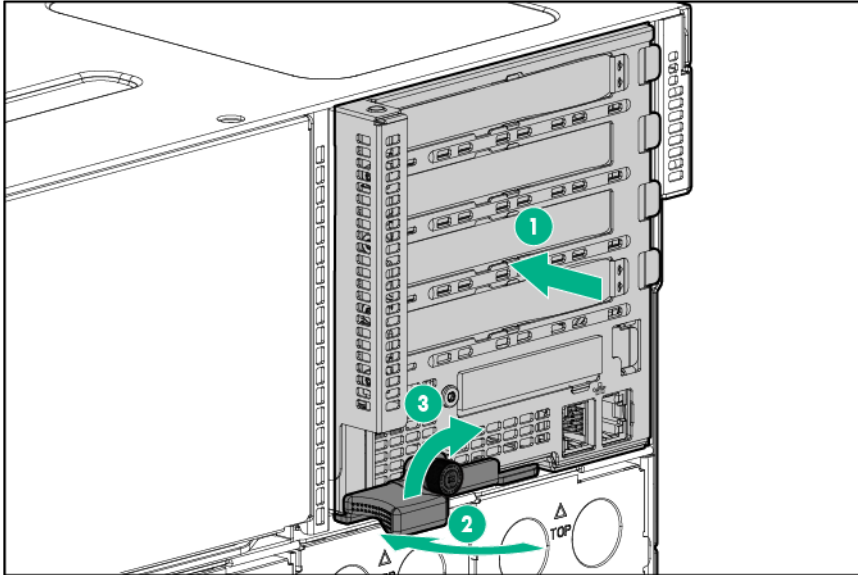
## Installing an I/O module

Install any I/O module options before installing the I/O module into the chassis.



**WARNING:** To reduce the risk of electric shock, fire, or damage to the equipment, do not plug telephone or telecommunications connectors into RJ-45 connectors.

Install the component as indicated.

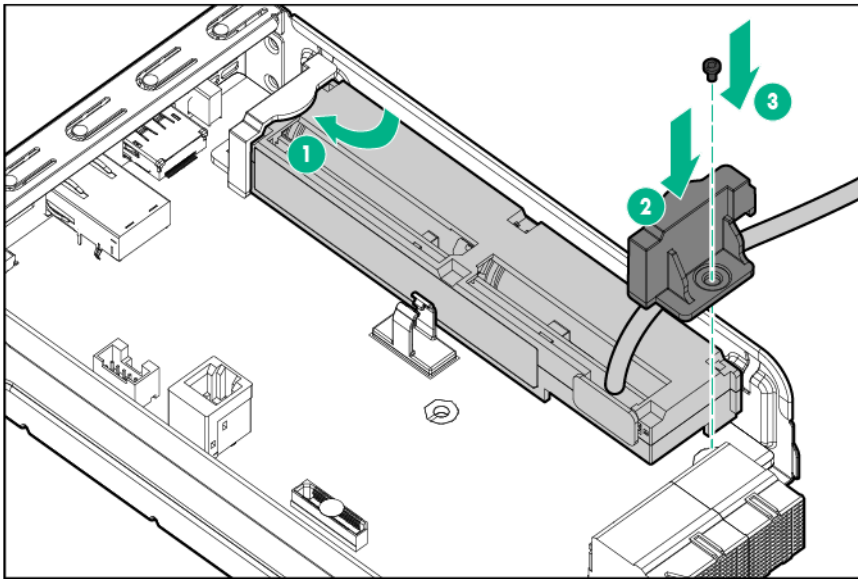


## HPE Smart Storage Battery option

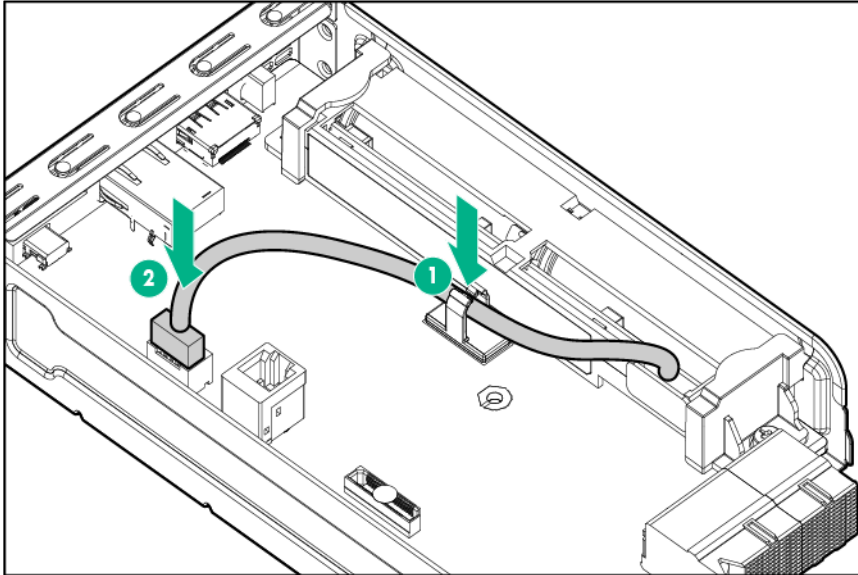
The HPE Apollo 4500 system with its centralized HPE Smart Storage Battery supports up to two HPE Smart Array controllers per node.

To install the component:

1. Install the Smart Storage Battery.



2. Connect the Smart Storage Battery cable to the Smart Storage Battery connector.



# Cabling and powering up the chassis

## Cabling the chassis

After all system hardware is installed, cable the components.



---

**WARNING:** To reduce the risk of electric shock or injury due to high-current electrical energy, be sure that all power is completely disconnected at the source before beginning any power connections to the power bus bars or power bus box.

---



---

**WARNING:** Be sure that all circuit breakers are locked in the off position before connecting any power components.

---



---

**CAUTION:** To avoid damaging the fiber cables, do not drape cables from one side of the rack to the other and do not run cables over a hard corner or edge.

---

To cable the system:

1. Connect the network cables to the Ethernet ports on the I/O module ("[I/O module components](#)" on page [14](#)).
2. Connect a network cable to the iLO connector on the management module ("[Management module components](#)" on page [13](#)).
3. Connect the APM cable to the APM connector on the management module ("[Management module components](#)" on page [13](#)).

## Installing the cable management arm



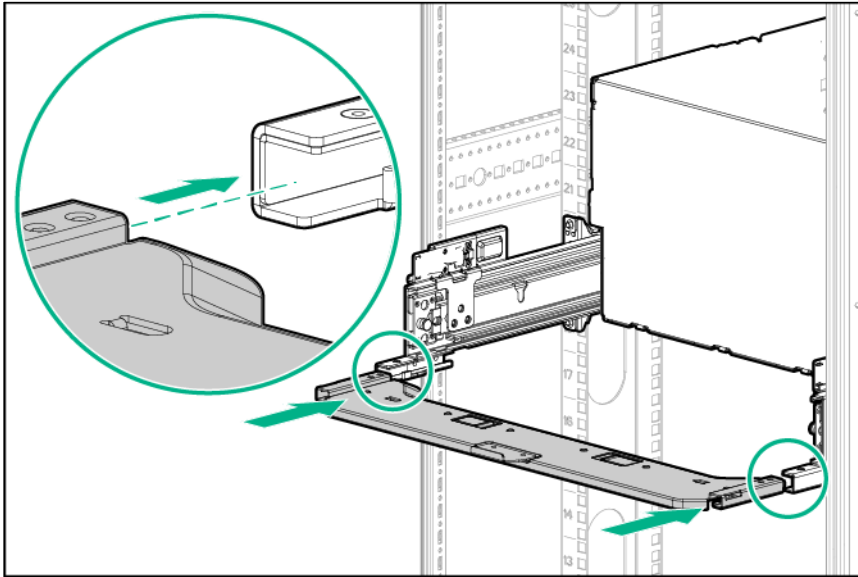
---

**IMPORTANT:** If you need to hinge the cable management arm on the rear right-hand side of the rack, see the instructions in "Converting the cable management arm for opposite side mounting (on page [39](#))."  
Perform these steps to convert the arm to a right-hand swing and install the arm on the right side of the rack.

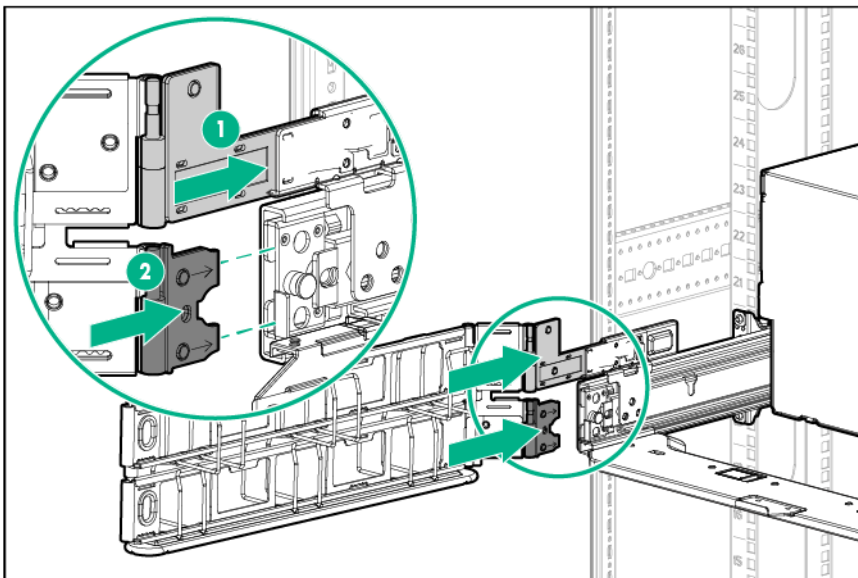
---

To install the component:

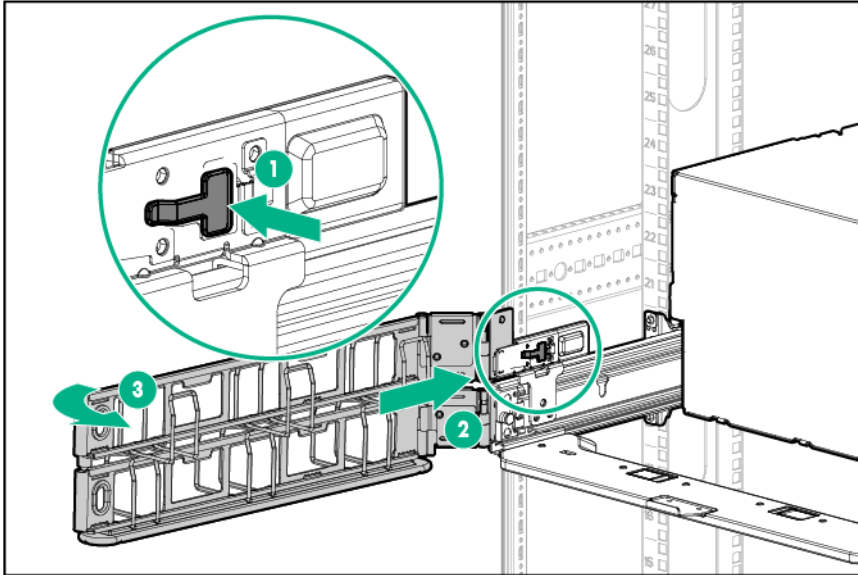
1. Install the rack rail brace.



2. Align and install the cable management arm.



3. Press the latch and slide the cable management arm into place.



## Converting the cable management arm for opposite side mounting

The cable management arm is designed for ambidextrous implementation. You can convert the arm for right-hand swing.

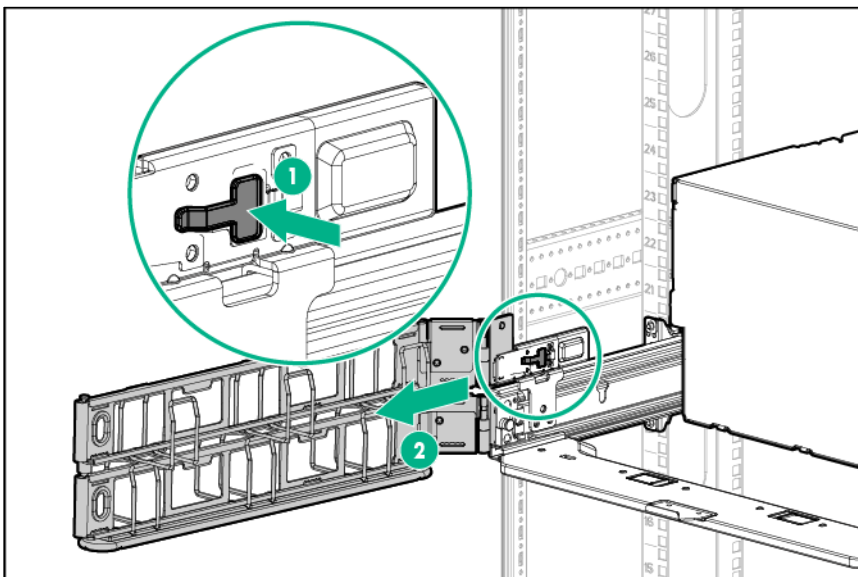


**IMPORTANT:** When converting the cable arm, always be sure to orient the arm with the cable trough facing upward.

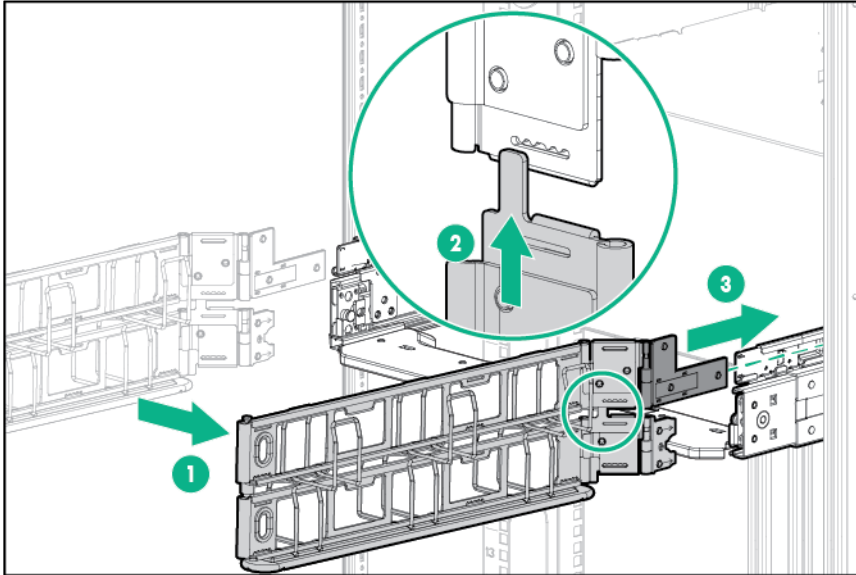
**NOTE:** To access some components on the rear of the product, you may need to remove the cable management arm.

To convert the cable management arm for opposite side mounting:

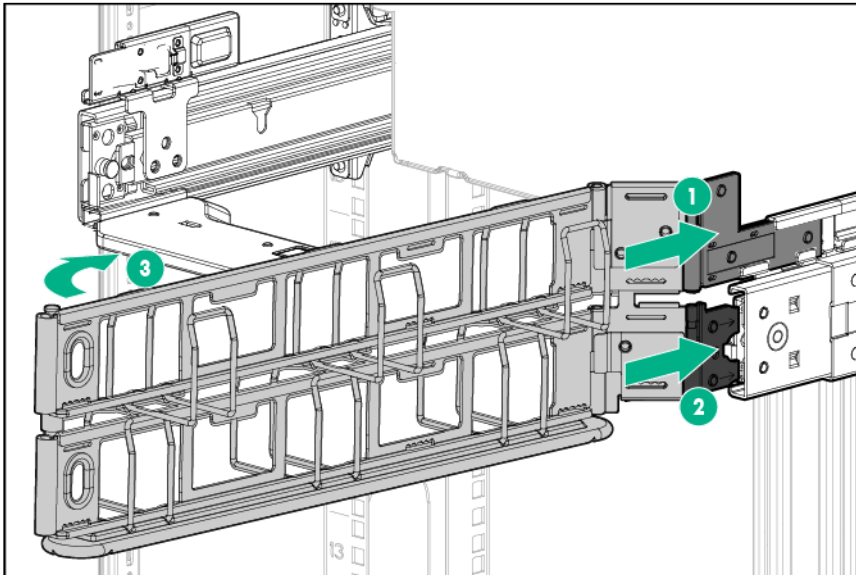
1. Press the latch to release the cable management arm and remove the cable management arm.



2. Move the cable management arm to the right rack rail and align the tab for opposite side mounting.



3. Align and install the cable management arm on the right rack rail.



## I/O module option cabling

The HPE Apollo 4500 system with its centralized HPE Smart Storage Battery supports up to two HPE Smart Array controllers per node.

When an I/O module with the x16 riser option is installed, PCIe slot 2 is reserved for x16 options and the HPE H240 Smart Host Bus Adapter options must be installed in PCIe slots 1 and 3.

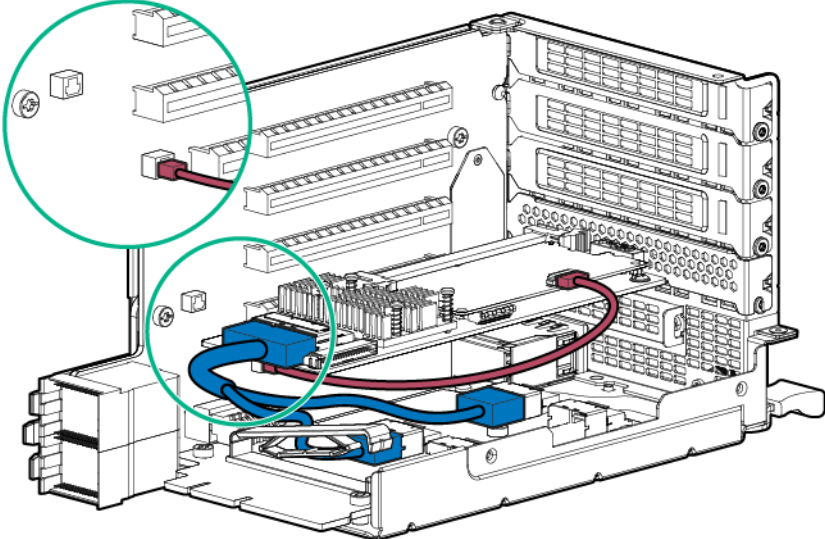
This chassis supports one I/O module. Standard x8 I/O modules have four PCIe slots and one FlexibleLOM slot while x16 I/O modules have four PCIe slots. This section describes the cable routing for the options installed in the I/O module.



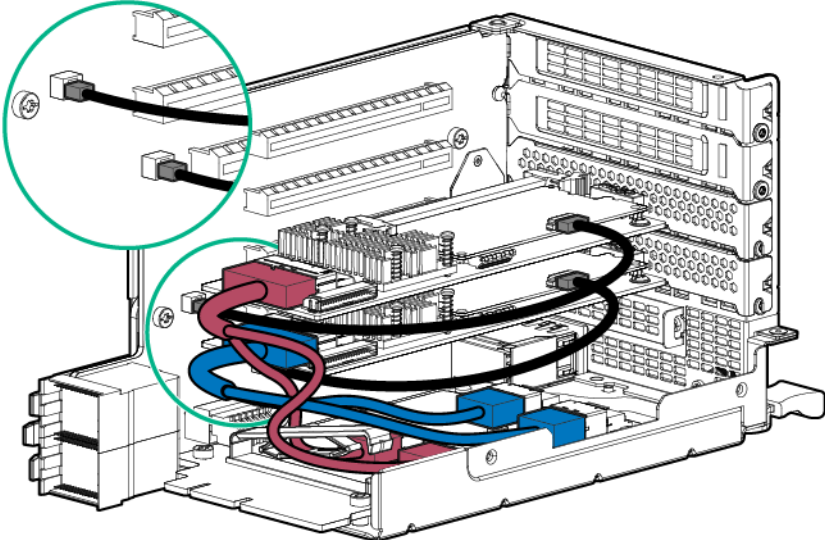
# HPE Smart Array P440 Controller cabling

The HPE Apollo 4510 Gen9 Chassis supports single and dual installation for the HPE Smart Array P440 Controller.

- Single-board option

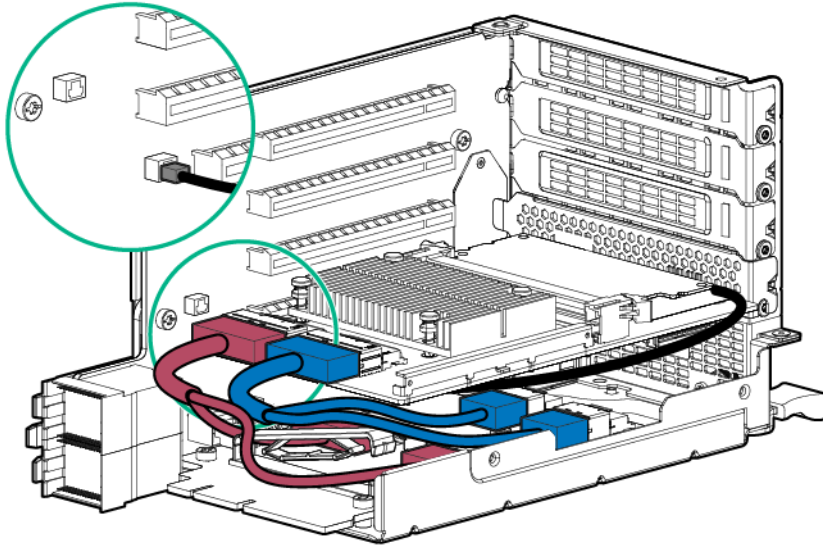


- Dual-board option



## HPE Smart Array P840 Controller cabling

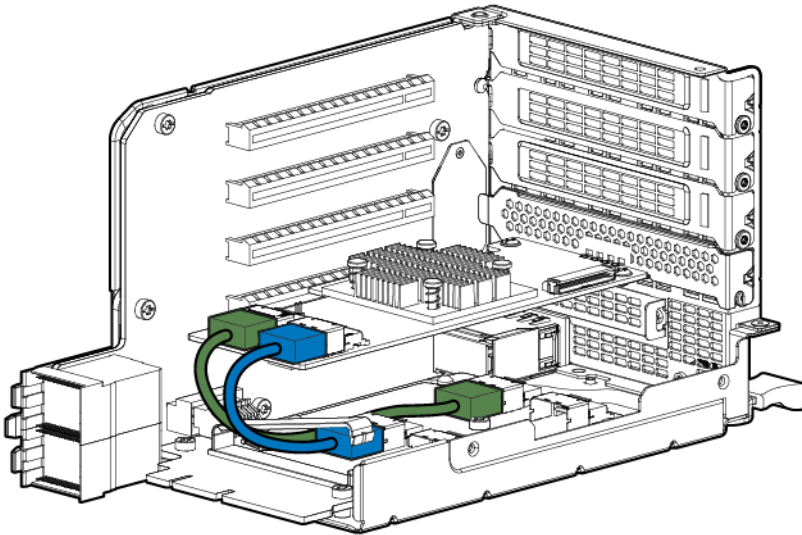
The HPE Apollo 4510 Gen9 Chassis supports single installation for the HPE Smart Array P840 Controller.



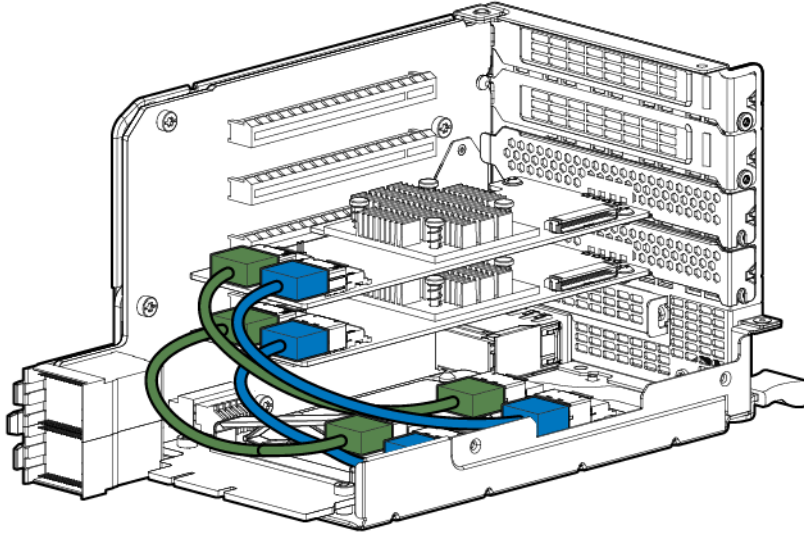
## HPE H240 Smart Host Bus Adapter cabling

The HPE Apollo 4510 Gen9 Chassis supports single and dual installation for the HPE H240 Smart Host Bus Adapter.

- Single-board option



- Dual-board option



## Powering up the system

1. Connect the power cables to the power supplies.
2. Connect the power cables to the power source (UPS or wall outlet) or to an installed PDU.
3. Press the Power On/Standby button on the server.

## Hot-plug power supply calculations

For hot-plug power supply specifications and calculators to determine electrical and heat loading for the server, see the Hewlett Packard Enterprise Power Advisor website (<http://www.hpe.com/info/poweradvisor/online>).

# Troubleshooting

## Important safety information

Familiarize yourself with the safety information in the following sections before troubleshooting the server.



### Important safety information

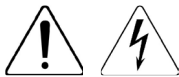
Before servicing this product, read the *Important Safety Information* document provided with the server.

## Symbols on equipment

The following symbols may be placed on equipment to indicate the presence of potentially hazardous conditions.



This symbol indicates Hewlett Packard Enterprise systems and peripherals that contain assemblies and components that are sensitive to electrostatic discharge. Carefully observe the precautions and recommended procedures in this document to prevent component damage from static electricity.



This symbol indicates the presence of hazardous energy circuits or electric shock hazards. Refer all servicing to qualified personnel.

**WARNING:** To reduce the risk of injury from electric shock hazards, do not open this enclosure. Refer all maintenance, upgrades, and servicing to qualified personnel.



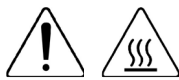
This symbol indicates the presence of electric shock hazards. The area contains no user or field serviceable parts. Do not open for any reason.

**WARNING:** To reduce the risk of injury from electric shock hazards, do not open this enclosure.



This symbol on an RJ-45 receptacle indicates a network interface connection.

**WARNING:** To reduce the risk of electric shock, fire, or damage to the equipment, do not plug telephone or telecommunications connectors into this receptacle.



This symbol indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists.

**WARNING:** To reduce the risk of injury from a hot component, allow the surface to cool before touching.



This symbol indicates that the component exceeds the recommended weight for one individual to handle safely.

**WARNING:** To reduce the risk of personal injury or damage to the equipment, observe local occupational health and safety requirements and guidelines for manual material handling.



These symbols, on power supplies or systems, indicate that the equipment is supplied by multiple sources of power.

**WARNING:** To reduce the risk of injury from electric shock, remove all power cords to disconnect power from the system completely.

# Troubleshooting resources

Troubleshooting resources are available for HPE ProLiant Gen9 servers in the following documents:

- The *HPE ProLiant Gen9 Troubleshooting Guide, Volume I: Troubleshooting* provides procedures for resolving common problems and comprehensive courses of action for fault isolation and identification, issue resolution, and software maintenance on ProLiant servers and server blades.
- The *HPE ProLiant Gen9 Troubleshooting Guide, Volume II: Error Messages* provides a list of error messages and information to assist with interpreting and resolving error messages on ProLiant servers and server blades.

To access the troubleshooting resources, see the Hewlett Packard Enterprise website (<http://www.hpe.com/info/Gen9-troubleshooting>).

# Warranty and regulatory information

## Warranty information

HPE ProLiant and x86 Servers and Options

(<http://www.hpe.com/support/ProLiantServers-Warranties>)

HPE Enterprise Servers (<http://www.hpe.com/support/EnterpriseServers-Warranties>)

HPE Storage Products (<http://www.hpe.com/support/Storage-Warranties>)

HPE Networking Products (<http://www.hpe.com/support/Networking-Warranties>)

## Regulatory information

### Safety and regulatory compliance

For important safety, environmental, and regulatory information, see *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise website (<http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>).

### Belarus Kazakhstan Russia marking



Manufacturer and Local Representative Information

**Manufacturer information:**

Hewlett Packard Enterprise Company, 3000 Hanover Street, Palo Alto, CA 94304 U.S.

**Local representative information Russian:**

- **Russia:**

ООО «Хьюлетт Паккард Энтерпрайз», Российская Федерация, 125171, г. Москва, Ленинградское шоссе, 16А, стр.3, Телефон/факс: +7 495 797 35 00

- **Belarus:**

ИООО «Хьюлетт-Паккард Бел», Республика Беларусь, 220030, г. Минск, ул. Интернациональная, 36-1, Телефон/факс: +375 17 392 28 18

- **Kazakhstan:**

ТОО «Хьюлетт-Паккард (К)», Республика Казахстан, 050040, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7, Телефон/факс: + 7 727 355 35 50

#### Local representative information Kazakh:

- **Russia:**

ЖШС "Хьюлетт Паккард Энтерпрайз" Ресей Федерациясы, 125171,  
Мәскеу, Ленинград тас жолы, 16А блок 3, Телефон/факс: +7 495 797 35 00

- **Belarus:**

«HEWLETT-PACKARD Bel» ЖШС, Беларусь Республикасы, 220030, Минск қ.,  
Интернациональная көшесі, 36/1, Телефон/факс: +375 17 392 28 18

- **Kazakhstan:**

ЖШС «Хьюлетт-Паккард (К)», Қазақстан Республикасы, 050040, Алматы қ.,  
Бостандық ауданы, Әл-Фараби даңғылы, 77/7, Телефон/факс: +7 727 355 35 50

#### Manufacturing date:

The manufacturing date is defined by the serial number.

CCSYWWZZZZ (serial number format for this product)

Valid date formats include:

- YWW, where Y indicates the year counting from within each new decade, with 2000 as the starting point; for example, 238: 2 for 2002 and 38 for the week of September 9. In addition, 2010 is indicated by 0, 2011 by 1, 2012 by 2, 2013 by 3, and so forth.
- YYWW, where YY indicates the year, using a base year of 2000; for example, 0238: 02 for 2002 and 38 for the week of September 9.

## Turkey RoHS material content declaration

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

## Ukraine RoHS material content declaration

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

# Specifications

## Environmental specifications

Specification	Value
<b>Temperature range*</b>	
Operating	10°C to 35°C (50°F to 95°F)
Shipping	-40°C to 70°C (-40°F to 158°F)
Maximum wet bulb temperature	28°C (82.4°F)
<b>Relative humidity (noncondensing)**</b>	
Operating	10% to 90%
Nonoperating	5% to 95%

\* All temperature ratings shown are for sea level. An altitude derating of 1°C per 300 m (1.8°F per 1,000 ft) to 3,048 m (10,000 ft) is applicable. No direct sunlight allowed.

\*\* Storage maximum humidity of 95% is based on a maximum temperature of 45°C (113°F). Altitude maximum for storage corresponds to a pressure minimum of 70 kPa.

## Chassis specifications

Specification	Value
Height	18.96 cm (7.46 in)
Depth	84.91 cm (33.43 in)
Width	44.33 cm (17.45 in)
Weight (fully loaded, with three XL450 servers)	99.79 kg (220.00 lb)
Weight, empty	43.09 kg (95.00 lb)

## Power supply specifications

Depending on installed options, the server is configured with one of the following power supplies:

- HPE 800W Flex Slot Platinum Hot-plug Power Supply (on page 48)
- HPE 800W Flex Slot -48VDC Hot-plug Power Supply (on page 49)
- HPE 800W Flex Slot Titanium Plus Hot-plug Power Supply (on page 50)
- HPE 800W Flex Slot Universal Hot-plug Power Supply (on page 50)
- HPE 1400W Flex Slot Platinum Plus Hot-plug Power Supply (on page 51)

For detailed power supply specifications, see the QuickSpecs on the Hewlett Packard Enterprise website (<http://www.hpe.com/info/proliant/powersupply>).

## HPE 800W Flex Slot Platinum Hot-plug Power Supply

Specification	Value
<b>Input requirements</b>	



Rated input voltage	100 to 127 VAC 200 to 240 VAC 240 VDC for China only
Rated input frequency	50 Hz to 60 Hz Not applicable to 240VDC
Rated input current	9.4 A at 100 VAC 4.5 A at 200 VAC 3.8 A at 240 VDC for China only
Maximum rated input power	940 W at 100 VAC 900 W at 200 VAC 912 W at 240 VDC for China only
BTUs per hour	3207 at 100 VAC 3071 at 200 VAC 3112 at 240 for China only
<b>Power supply output</b>	
Rated steady-state power	800 W at 100 VAC to 127 VAC input 800 W at 200 VAC to 240 VAC input 800 W at 240 VDC input for China only
Maximum peak power	800 W at 100 VAC to 127 VAC input 800 W at 200 VAC to 240 VAC input 800 W at 240 VDC input for China only

## HPE 800W Flex Slot -48VDC Hot-plug Power Supply

Specification	Value
<b>Input requirements</b>	
Rated input voltage	-40 VDC to -72 VDC -48 VDC nominal input
Rated input current	26 A at -40 VDC input 19 A at -48 VDC input, nominal input 12.4 A at -72 VDC input
Rated input power (W)	936 W at -40 VDC input 912 W at -48 VDC input, nominal input 900 W at -72 VDC input
Rated input power (BTUs per hour)	3194 at -40 VDC input 3112 at -48 VDC input, nominal input 3071 at -72 VDC input
<b>Power supply output</b>	
Rated steady-state power (W)	800 W at -40 VDC to -72 VDC
Maximum peak power (W)	800 W at -40 VDC to -72 VDC



**WARNING:** To reduce the risk of electric shock or energy hazards:

- This equipment must be installed by trained service personnel, as defined by the NEC and IEC 60950-1, Second Edition, the standard for Safety of Information Technology Equipment.

- Connect the equipment to a reliably grounded Secondary circuit source. A Secondary circuit has no direct connection to a Primary circuit and derives its power from a transformer, converter, or equivalent isolation device.
- The branch circuit overcurrent protection must be rated 27 A.



**CAUTION:** This equipment is designed to permit the connection of the earthed conductor of the DC supply circuit to the earthing conductor at the equipment. If this connection is made, all of the following must be met:

- This equipment must be connected directly to the DC supply system earthing electrode conductor or to a bonding jumper from an earthing terminal bar or bus to which the DC supply system earthing electrode conductor is connected.
- This equipment must be located in the same immediate area (such as adjacent cabinets) as any other equipment that has a connection between the earthed conductor of the same DC supply circuit and the earthing conductor, and also the point of earthing of the DC system. The DC system must be earthed elsewhere.
- The DC supply source is to be located within the same premises as the equipment.
- Switching or disconnecting devices must not be in the earthed circuit conductor between the DC source and the point of connection of the earthing electrode conductor.

## HPE 800W Flex Slot Titanium Plus Hot-plug Power Supply

Specification	Value
<b>Input requirements</b>	
Rated input voltage	200 to 240 V AC 240 VDC for China only
Rated input frequency	50 Hz to 60 Hz Not applicable to 240 VDC
Rated input current	4.35 A at 200 VAC 3.62 A at 240 VAC 3.62 A at 240 VDC for China only
Maximum rated input power	870 W at 200 VAC 870 W at 240 VAC 870 W at 240 VDC for China only
BTUs per hour	2969 at 200 VAC 2969 at 240 VAC 2969 at 240 VDC for China only
<b>Power supply output</b>	
Rated steady-state power	800 W at 200 VAC to 240 VAC input 800 W at 240 VDC input for China only
Maximum peak power	800 W at 200 VAC to 240 VAC input 800 W at 240 VDC input for China only

## HPE 800W Flex Slot Universal Hot-plug Power Supply

Specification	Value
<b>Input requirements</b>	
Rated input voltage	200 V to 277 V AC 380 VDC
Rated input frequency	50 Hz–60 Hz

Rated input current	4.5 A at 200 V AC 3.2 A at 277 V AC 2.3 A at 380 VDC
Maximum rated input power	900 W at 200 VAC 887 W at 277 VAC 874 W at 380 VDC
BTUs per hour	3071 at 200 VAC 3026 at 277 VAC 2982 at 380 VDC
<b>Power supply output</b>	
Rated steady-state power	800 W at 200 VAC to 277 VAC input 800 W at 380 VDC input
Maximum peak power	800 W at 200 VAC to 277 VAC input 800 W at 380 VDC input

## HPE 1400W Flex Slot Platinum Plus Hot-plug Power Supply

Specification	Value
<b>Input requirements</b>	
Rated input voltage	200 to 240 VAC 240 VDC for China only
Rated input frequency	50 Hz to 60 Hz Not applicable to 240 VDC
Rated input current	8.0 A at 200 VAC 6.7 A at 240 VAC 6.7 A at 240 VDC for China only
Maximum rated input power	1600 W at 200 VAC 1600 W at 240 VAC 1600 W at 240 VDC for China only
BTUs per hour	5459 at 200 VAC 5459 at 240 VAC 5459 at 240 VDC for China only
<b>Power supply output</b>	
Rated steady-state power	1400 W at 200 VAC to 240 VAC input 1400 W at 240 VDC input for China only
Maximum peak power	1400 W at 200 VAC to 240 VAC input 1400 W at 240 VDC input for China only

## Hot-plug power supply calculations

For hot-plug power supply specifications and calculators to determine electrical and heat loading for the server, see the Hewlett Packard Enterprise Power Advisor website (<http://www.hpe.com/info/poweradvisor/online>).

# Environmental considerations

## Communications interference

Hewlett Packard Enterprise system compliance tests are conducted with Hewlett Packard Enterprise supported peripheral devices and shielded cables, such as those received with the system. The system meets interference requirements of all countries in which it is sold. These requirements provide reasonable protection against interference with radio and television communications.

Installing and using the system in strict accordance with Hewlett Packard Enterprise instructions minimizes the chances that the system might cause radio or television interference. However, Hewlett Packard Enterprise does not guarantee that the system does not interfere with radio and television reception.

Take these precautions:

- Use only shielded cables.
- Install and route the cables according to the instructions provided.
- Ensure that all cable connector screws are firmly tightened.
- Use only Hewlett Packard Enterprise supported peripheral devices.
- Before system operation, ensure that all panels and cover plates are in place and secure.

## Preventing electrostatic discharge

To prevent damaging the system, be aware of the precautions you must follow when setting up the system or handling parts. A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

To prevent electrostatic damage:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly.

## Grounding methods to prevent electrostatic discharge

Several methods are used for grounding. Use one or more of the following methods when handling or installing electrostatic-sensitive parts:

- Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm  $\pm$ 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.

- Use heel straps, toe straps, or boot straps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
- Use conductive field service tools.
- Use a portable field service kit with a folding static-dissipating work mat.

If you do not have any of the suggested equipment for proper grounding, have an authorized reseller install the part.

For more information on static electricity or assistance with product installation, contact an authorized reseller.

# 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/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, go to either of the following:
  - Hewlett Packard Enterprise Support Center Get connected with updates page (<http://www.hpe.com/support/e-updates>)
  - Software Depot website (<http://www.hpe.com/support/softwaredepot>)
- 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 (<http://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 HP Passport set up with relevant entitlements.

## Websites

- Hewlett Packard Enterprise Information Library (<http://www.hpe.com/info/enterprise/docs>)
- Hewlett Packard Enterprise Support Center (<http://www.hpe.com/support/hpesc>)
- Contact Hewlett Packard Enterprise Worldwide (<http://www.hpe.com/assistance>)

- Subscription Service/Support Alerts (<http://www.hpe.com/support/e-updates>)
- Software Depot (<http://www.hpe.com/support/softwaredepot>)
- Customer Self Repair (<http://www.hpe.com/support/selfrepair>)
- Insight Remote Support (<http://www.hpe.com/info/insightremotesupport/docs>)

## Customer Self Repair

Hewlett Packard Enterprise products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period Hewlett Packard Enterprise (or Hewlett Packard Enterprise service providers or service partners) identifies that the repair can be accomplished by the use of a CSR part, Hewlett Packard Enterprise will ship that part directly to you for replacement. There are two categories of CSR parts:

- **Mandatory**—Parts for which customer self repair is mandatory. If you request Hewlett Packard Enterprise to replace these parts, you will be charged for the travel and labor costs of this service.
- **Optional**—Parts for which customer self repair is optional. These parts are also designed for customer self repair. If, however, you require that Hewlett Packard Enterprise replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.

**NOTE:** Some Hewlett Packard Enterprise parts are not designed for customer self repair. In order to satisfy the customer warranty, Hewlett Packard Enterprise requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the Hewlett Packard Enterprise Support Center and a technician will help you over the telephone. Hewlett Packard Enterprise specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to Hewlett Packard Enterprise. In cases where it is required to return the defective part to Hewlett Packard Enterprise, you must ship the defective part back to Hewlett Packard Enterprise within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in Hewlett Packard Enterprise billing you for the replacement. With a customer self repair, Hewlett Packard Enterprise will pay all shipping and part return costs and determine the courier/carrier to be used.

For more information about the Hewlett Packard Enterprise CSR program, contact your local service provider. For the North American program, go to the Hewlett Packard Enterprise CSR website (<http://www.hpe.com/support/selfrepair>).

## Réparation par le client (CSR)

Les produits Hewlett Packard Enterprise comportent de nombreuses pièces CSR (Customer Self Repair = réparation par le client) afin de minimiser les délais de réparation et faciliter le remplacement des pièces défectueuses. Si pendant la période de diagnostic, Hewlett Packard Enterprise (ou ses partenaires ou mainteneurs agréés) détermine que la réparation peut être effectuée à l'aide d'une pièce CSR, Hewlett Packard Enterprise vous l'envoie directement. Il existe deux catégories de pièces CSR :

- **Obligatoire**—Pièces pour lesquelles la réparation par le client est obligatoire. Si vous demandez à Hewlett Packard Enterprise de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.
- **Facultatif**—Pièces pour lesquelles la réparation par le client est facultative. Ces pièces sont également conçues pour permettre au client d'effectuer lui-même la réparation. Toutefois, si vous demandez à Hewlett Packard Enterprise de remplacer ces pièces, l'intervention peut ou non vous être facturée, selon le type de garantie applicable à votre produit.

**REMARQUE:** Certaines pièces Hewlett Packard Enterprise ne sont pas conçues pour permettre au client d'effectuer lui-même la réparation. Pour que la garantie puisse s'appliquer, Hewlett Packard Enterprise exige que le remplacement de la pièce soit effectué par un Mainteneur Agréé. Ces pièces sont identifiées par la mention "Non" dans le Catalogue illustré.

Les pièces CSR sont livrées le jour ouvré suivant, dans la limite des stocks disponibles et selon votre situation géographique. Si votre situation géographique le permet et que vous demandez une livraison le jour même ou dans les 4 heures, celle-ci vous sera facturée. Pour toute assistance, appelez le Centre d'assistance Hewlett Packard Enterprise pour qu'un technicien vous aide au téléphone. Dans les documents envoyés avec la pièce de rechange CSR, Hewlett Packard Enterprise précise s'il est nécessaire de lui retourner la pièce défectueuse. Si c'est le cas, vous devez le faire dans le délai indiqué, généralement cinq (5) jours ouvrés. La pièce et sa documentation doivent être retournées dans l'emballage fourni. Si vous ne retournez pas la pièce défectueuse, Hewlett Packard Enterprise se réserve le droit de vous facturer les coûts de remplacement. Dans le cas d'une pièce CSR, Hewlett Packard Enterprise supporte l'ensemble des frais d'expédition et de retour, et détermine la société de courses ou le transporteur à utiliser.

Pour plus d'informations sur le programme CSR de Hewlett Packard Enterprise, contactez votre Mainteneur Agréé local. Pour plus d'informations sur ce programme en Amérique du Nord, consultez le site Web Hewlett Packard Enterprise (<http://www.hpe.com/support/selfrepair>).

## Riparazione da parte del cliente

Per abbreviare i tempi di riparazione e garantire una maggiore flessibilità nella sostituzione di parti difettose, i prodotti Hewlett Packard Enterprise sono realizzati con numerosi componenti che possono essere riparati direttamente dal cliente (CSR, Customer Self Repair). Se in fase di diagnostica Hewlett Packard Enterprise (o un centro di servizi o di assistenza Hewlett Packard Enterprise) identifica il guasto come riparabile mediante un ricambio CSR, Hewlett Packard Enterprise lo spedisce direttamente al cliente per la sostituzione. Vi sono due categorie di parti CSR:

- **Obbligatorie**—Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad Hewlett Packard Enterprise, deve sostenere le spese di spedizione e di manodopera per il servizio.
- **Opzionali**—Parti la cui riparazione da parte del cliente è facoltativa. Si tratta comunque di componenti progettati per questo scopo. Se tuttavia il cliente ne richiede la sostituzione ad Hewlett Packard Enterprise, potrebbe dover sostenere spese aggiuntive a seconda del tipo di garanzia previsto per il prodotto.

**NOTA:** alcuni componenti Hewlett Packard Enterprise non sono progettati per la riparazione da parte del cliente. Per rispettare la garanzia, Hewlett Packard Enterprise richiede che queste parti siano sostituite da un centro di assistenza autorizzato. Tali parti sono identificate da un "No" nel Catalogo illustrato dei componenti.

In base alla disponibilità e alla località geografica, le parti CSR vengono spedite con consegna entro il giorno lavorativo seguente. La consegna nel giorno stesso o entro quattro ore è offerta con un supplemento di costo solo in alcune zone. In caso di necessità si può richiedere l'assistenza telefonica di un addetto del centro di supporto tecnico Hewlett Packard Enterprise. Nel materiale fornito con una parte di ricambio CSR, Hewlett Packard Enterprise specifica se il cliente deve restituire dei componenti. Qualora sia richiesta la resa ad Hewlett Packard Enterprise del componente difettoso, lo si deve spedire ad Hewlett Packard Enterprise entro un determinato periodo di tempo, generalmente cinque (5) giorni lavorativi. Il componente difettoso deve essere restituito con la documentazione associata nell'imballo di spedizione fornito. La mancata restituzione del componente può comportare la fatturazione del ricambio da parte di Hewlett Packard Enterprise. Nel caso di riparazione da parte del cliente, Hewlett Packard Enterprise sostiene tutte le spese di spedizione e resa e sceglie il corriere/vettore da utilizzare.

Per ulteriori informazioni sul programma CSR di Hewlett Packard Enterprise, contattare il centro di assistenza di zona. Per il programma in Nord America fare riferimento al sito Web (<http://www.hpe.com/support/selfrepair>).



# Customer Self Repair

Hewlett Packard Enterprise Produkte enthalten viele CSR-Teile (Customer Self Repair), um Reparaturzeiten zu minimieren und höhere Flexibilität beim Austausch defekter Bauteile zu ermöglichen. Wenn Hewlett Packard Enterprise (oder ein Hewlett Packard Enterprise Servicepartner) bei der Diagnose feststellt, dass das Produkt mithilfe eines CSR-Teils repariert werden kann, sendet Ihnen Hewlett Packard Enterprise dieses Bauteil zum Austausch direkt zu. CSR-Teile werden in zwei Kategorien unterteilt:

- **Zwingend**—Teile, für die das Customer Self Repair-Verfahren zwingend vorgegeben ist. Wenn Sie den Austausch dieser Teile von Hewlett Packard Enterprise vornehmen lassen, werden Ihnen die Anfahrt- und Arbeitskosten für diesen Service berechnet.
- **Optional**—Teile, für die das Customer Self Repair-Verfahren optional ist. Diese Teile sind auch für Customer Self Repair ausgelegt. Wenn Sie jedoch den Austausch dieser Teile von Hewlett Packard Enterprise vornehmen lassen möchten, können bei diesem Service je nach den für Ihr Produkt vorgesehenen Garantiebedingungen zusätzliche Kosten anfallen.

**HINWEIS:** Einige Hewlett Packard Enterprise Teile sind nicht für Customer Self Repair ausgelegt. Um den Garantieanspruch des Kunden zu erfüllen, muss das Teil von einem Hewlett Packard Enterprise Servicepartner ersetzt werden. Im illustrierten Teilekatalog sind diese Teile mit „No“ bzw. „Nein“ gekennzeichnet.

CSR-Teile werden abhängig von der Verfügbarkeit und vom Lieferziel am folgenden Geschäftstag geliefert. Für bestimmte Standorte ist eine Lieferung am selben Tag oder innerhalb von vier Stunden gegen einen Aufpreis verfügbar. Wenn Sie Hilfe benötigen, können Sie das Hewlett Packard Enterprise Support Center anrufen und sich von einem Mitarbeiter per Telefon helfen lassen. Den Materialien von Hewlett Packard Enterprise, die mit einem CSR-Ersatzteil geliefert werden, können Sie entnehmen, ob das defekte Teil an Hewlett Packard Enterprise zurückgeschickt werden muss. Wenn es erforderlich ist, das defekte Teil an Hewlett Packard Enterprise zurückzuschicken, müssen Sie dies innerhalb eines vorgegebenen Zeitraums tun, in der Regel innerhalb von fünf (5) Geschäftstagen. Das defekte Teil muss mit der zugehörigen Dokumentation in der Verpackung zurückgeschickt werden, die im Lieferumfang enthalten ist. Wenn Sie das defekte Teil nicht zurückschicken, kann Hewlett Packard Enterprise Ihnen das Ersatzteil in Rechnung stellen. Im Falle von Customer Self Repair kommt Hewlett Packard Enterprise für alle Kosten für die Lieferung und Rücksendung auf und bestimmt den Kurier-/Frachtdienst.

Weitere Informationen über das Hewlett Packard Enterprise Customer Self Repair Programm erhalten Sie von Ihrem Servicepartner vor Ort. Informationen über das CSR-Programm in Nordamerika finden Sie auf der Hewlett Packard Enterprise Website unter (<http://www.hpe.com/support/selfrepair>).

## Reparaciones del propio cliente

Los productos de Hewlett Packard Enterprise incluyen muchos componentes que el propio usuario puede reemplazar (Customer Self Repair, CSR) para minimizar el tiempo de reparación y ofrecer una mayor flexibilidad a la hora de realizar sustituciones de componentes defectuosos. Si, durante la fase de diagnóstico, Hewlett Packard Enterprise (o los proveedores o socios de servicio de Hewlett Packard Enterprise) identifica que una reparación puede llevarse a cabo mediante el uso de un componente CSR, Hewlett Packard Enterprise le enviará dicho componente directamente para que realice su sustitución. Los componentes CSR se clasifican en dos categorías:

- **Obligatorio**—componentes cuya reparación por parte del usuario es obligatoria. Si solicita a Hewlett Packard Enterprise que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.
- **Opcional**—componentes cuya reparación por parte del usuario es opcional. Estos componentes también están diseñados para que puedan ser reparados por el usuario. Sin embargo, si precisa que Hewlett Packard Enterprise realice su sustitución, puede o no conllevar costes adicionales, dependiendo del tipo de servicio de garantía correspondiente al producto.

**NOTA:** Algunos componentes de Hewlett Packard Enterprise no están diseñados para que puedan ser reparados por el usuario. Para que el usuario haga valer su garantía, Hewlett Packard Enterprise pone como condición que un proveedor de servicios autorizado realice la sustitución de estos componentes. Dichos componentes se identifican con la palabra "No" en el catálogo ilustrado de componentes.

Según la disponibilidad y la situación geográfica, los componentes CSR se enviarán para que lleguen a su destino al siguiente día laborable. Si la situación geográfica lo permite, se puede solicitar la entrega en el mismo día o en cuatro horas con un coste adicional. Si precisa asistencia técnica, puede llamar al Centro de asistencia técnica de Hewlett Packard Enterprise y recibirá ayuda telefónica por parte de un técnico. Con el envío de materiales para la sustitución de componentes CSR, Hewlett Packard Enterprise especificará si los componentes defectuosos deberán devolverse a Hewlett Packard Enterprise. En aquellos casos en los que sea necesario devolver algún componente a Hewlett Packard Enterprise, deberá hacerlo en el periodo de tiempo especificado, normalmente cinco días laborables. Los componentes defectuosos deberán devolverse con toda la documentación relacionada y con el embalaje de envío. Si no enviara el componente defectuoso requerido, Hewlett Packard Enterprise podrá cobrarle por el de sustitución. En el caso de todas sustituciones que lleve a cabo el cliente, Hewlett Packard Enterprise se hará cargo de todos los gastos de envío y devolución de componentes y escogerá la empresa de transporte que se utilice para dicho servicio.

Para obtener más información acerca del programa de Reparaciones del propio cliente de Hewlett Packard Enterprise, póngase en contacto con su proveedor de servicios local. Si está interesado en el programa para Norteamérica, visite la página web de Hewlett Packard Enterprise CSR (<http://www.hpe.com/support/selfrepair>).

## Customer Self Repair

Veel onderdelen in Hewlett Packard Enterprise producten zijn door de klant zelf te repareren, waardoor de reparatieduur tot een minimum beperkt kan blijven en de flexibiliteit in het vervangen van defecte onderdelen groter is. Deze onderdelen worden CSR-onderdelen (Customer Self Repair) genoemd. Als Hewlett Packard Enterprise (of een Hewlett Packard Enterprise Service Partner) bij de diagnose vaststelt dat de reparatie kan worden uitgevoerd met een CSR-onderdeel, verzendt Hewlett Packard Enterprise dat onderdeel rechtstreeks naar u, zodat u het defecte onderdeel daarmee kunt vervangen. Er zijn twee categorieën CSR-onderdelen:

- **Verplicht**—Onderdelen waarvoor reparatie door de klant verplicht is. Als u Hewlett Packard Enterprise verzoekt deze onderdelen voor u te vervangen, worden u voor deze service reiskosten en arbeidsloon in rekening gebracht.
- **Optioneel**—Onderdelen waarvoor reparatie door de klant optioneel is. Ook deze onderdelen zijn ontworpen voor reparatie door de klant. Als u echter Hewlett Packard Enterprise verzoekt deze onderdelen voor u te vervangen, kunnen daarvoor extra kosten in rekening worden gebracht, afhankelijk van het type garantieservice voor het product.

**OPMERKING:** Sommige Hewlett Packard Enterprise onderdelen zijn niet ontwikkeld voor reparatie door de klant. In verband met de garanti voorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

Afhankelijk van de leverbaarheid en de locatie worden CSR-onderdelen verzonden voor levering op de eerstvolgende werkdag. Levering op dezelfde dag of binnen vier uur kan tegen meerkosten worden aangeboden, indien dit mogelijk is gezien de locatie. Indien assistentie is gewenst, belt u het Hewlett Packard Enterprise Support Center om via de telefoon ondersteuning van een technicus te ontvangen. Hewlett Packard Enterprise vermeldt in de documentatie bij het vervangende CSR-onderdeel of het defecte onderdeel aan Hewlett Packard Enterprise moet worden geretourneerd. Als het defecte onderdeel aan Hewlett Packard Enterprise moet worden teruggezonden, moet u het defecte onderdeel binnen een bepaalde periode, gewoonlijk vijf (5) werkdagen, retourneren aan Hewlett Packard Enterprise. Het defecte onderdeel moet met de bijbehorende documentatie worden geretourneerd in het meegeleverde verpakkingsmateriaal. Als u het defecte onderdeel niet terugzendt, kan Hewlett Packard Enterprise u voor het vervangende onderdeel kosten in rekening brengen. Bij reparatie door de klant betaalt Hewlett Packard Enterprise alle verzendkosten voor het vervangende en geretourneerde

onderdeel en kiest Hewlett Packard Enterprise zelf welke koerier/transportonderneming hiervoor wordt gebruikt.

Neem contact op met een Service Partner voor meer informatie over het Customer Self Repair programma van Hewlett Packard Enterprise. Informatie over Service Partners vindt u op de Hewlett Packard Enterprise website (<http://www.hpe.com/support/selfrepair>).

## Reparo feito pelo cliente

Os produtos da Hewlett Packard Enterprise são projetados com muitas peças para reparo feito pelo cliente (CSR) de modo a minimizar o tempo de reparo e permitir maior flexibilidade na substituição de peças com defeito. Se, durante o período de diagnóstico, a Hewlett Packard Enterprise (ou fornecedores/parceiros da Hewlett Packard Enterprise) concluir que o reparo pode ser efetuado pelo uso de uma peça CSR, a Hewlett Packard Enterprise enviará a peça diretamente ao cliente. Há duas categorias de peças CSR:

- **Obrigatória**—Peças cujo reparo feito pelo cliente é obrigatório. Se desejar que a Hewlett Packard Enterprise substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.
- **Opcional**—Peças cujo reparo feito pelo cliente é opcional. Essas peças também são projetadas para o reparo feito pelo cliente. No entanto, se desejar que a Hewlett Packard Enterprise as substitua, pode haver ou não a cobrança de taxa adicional, dependendo do tipo de serviço de garantia destinado ao produto.

**OBSERVAÇÃO:** Algumas peças da Hewlett Packard Enterprise não são projetadas para o reparo feito pelo cliente. A fim de cumprir a garantia do cliente, a Hewlett Packard Enterprise exige que um técnico autorizado substitua a peça. Essas peças estão identificadas com a marca "No" (Não), no catálogo de peças ilustrado.

Conforme a disponibilidade e o local geográfico, as peças CSR serão enviadas no primeiro dia útil após o pedido. Onde as condições geográficas permitirem, a entrega no mesmo dia ou em quatro horas pode ser feita mediante uma taxa adicional. Se precisar de auxílio, entre em contato com o Centro de suporte técnico da Hewlett Packard Enterprise para que um técnico o ajude por telefone. A Hewlett Packard Enterprise especifica nos materiais fornecidos com a peça CSR de reposição se a peça com defeito deve ser devolvida à Hewlett Packard Enterprise. Nos casos em que isso for necessário, é preciso enviar a peça com defeito à Hewlett Packard Enterprise, você deverá enviar a peça com defeito de volta para a Hewlett Packard Enterprise dentro do período de tempo definido, normalmente em 5 (cinco) dias úteis. A peça com defeito deve ser enviada com a documentação correspondente no material de transporte fornecido. Caso não o faça, a Hewlett Packard Enterprise poderá cobrar a reposição. Para as peças de reparo feito pelo cliente, a Hewlett Packard Enterprise paga todas as despesas de transporte e de devolução da peça e determina a transportadora/serviço postal a ser utilizado.

Para obter mais informações sobre o programa de reparo feito pelo cliente da Hewlett Packard Enterprise, entre em contato com o fornecedor de serviços local. Para o programa norte-americano, visite o site da Hewlett Packard Enterprise (<http://www.hpe.com/support/selfrepair>).

## カスタマーセルフリペア

修理時間を短縮し、故障部品の交換における高い柔軟性を確保するために、Hewlett Packard Enterprise製品には多数のカスタマーセルフリペア（CSR）部品があります。診断の際に、CSR部品を使用すれば修理ができるとHewlett Packard Enterprise（Hewlett Packard EnterpriseまたはHewlett Packard Enterprise正規保守代理店）が判断した場合、Hewlett Packard Enterpriseはその部品を直接、お客様に発送し、お客様に交換していただきます。CSR部品には以下の2種類があります。

- **必須** - カスタマーセルフリペアが必須の部品。当該部品について、もしもお客様がHewlett Packard Enterpriseに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様に請求されます。
- **任意** - カスタマーセルフリペアが任意である部品。この部品もカスタマーセルフリペア用です。当該部品について、もしもお客様がHewlett Packard Enterpriseに交換作業を依頼される場合には、お買い上げの製品に適用される保証サービス内容の範囲内においては、別途費用を負担していただくことなく保証サービスを受けることができます。

**注：** Hewlett Packard Enterprise製品の一部の部品は、カスタマーセルフリペアの対象外です。製品の保証を継続するためには、Hewlett Packard EnterpriseまたはHewlett Packard Enterprise正規保守代理店による交換作業が必須となります。部品カタログには、当該部品がカスタマーセルフリペア除外品である旨が記載されています。

部品供給が可能な場合、地域によっては、CSR部品を翌営業日に届くように発送します。また、地域によっては、追加費用を負担いただくことにより同日または4時間以内に届くように発送することも可能な場合があります。サポートが必要なときは、Hewlett Packard Enterpriseの修理受付窓口に電話していただければ、技術者が電話でアドバイスします。交換用のCSR部品または同梱物には、故障部品をHewlett Packard Enterpriseに返送する必要があるかどうかが表示されています。故障部品をHewlett Packard Enterpriseに返送する必要がある場合は、指定期限内（通常は5営業日以内）に故障部品をHewlett Packard Enterpriseに返送してください。故障部品を返送する場合は、届いた時の梱包箱に関連書類とともに入れてください。故障部品を返送しない場合、Hewlett Packard Enterpriseから部品費用が請求されます。カスタマーセルフリペアの際には、Hewlett Packard Enterpriseは送料および部品返送費を全額負担し、使用する宅配便会社や運送会社を指定します。

# 客户自行维修

Hewlett Packard Enterprise 产品提供许多客户自行维修 (CSR) 部件，以尽可能缩短维修时间和在更换缺陷部件方面提供更大的灵活性。如果在诊断期间 Hewlett Packard Enterprise (或 Hewlett Packard Enterprise 服务提供商或服务合作伙伴) 确定可以通过使用 CSR 部件完成维修，Hewlett Packard Enterprise 将直接把该部件发送给您进行更换。有两类 CSR 部件：

- **强制性的** — 要求客户必须自行维修的部件。如果您请求 Hewlett Packard Enterprise 更换这些部件，则必须为该服务支付差旅费和人工费用。
- **可选的** — 客户可以选择是否自行维修的部件。这些部件也是为客户自行维修设计的。不过，如果您要求 Hewlett Packard Enterprise 为您更换这些部件，则根据为您的产品指定的保修服务类型，Hewlett Packard Enterprise 可能收取或不再收取任何附加费用。

**注：**某些 Hewlett Packard Enterprise 部件的设计并未考虑客户自行维修。为了满足客户保修的需要，Hewlett Packard Enterprise 要求授权服务提供商更换相关部件。这些部件在部件图解目录中标记为“否”。

CSR 部件将在下一个工作日发运（取决于备货情况和允许的地理范围）。在允许的地理范围内，可在当天或四小时内发运，但要收取额外费用。如果需要帮助，您可以致电 Hewlett Packard Enterprise 技术支持中心，将会有技术人员通过电话为您提供帮助。Hewlett Packard Enterprise 会在随更换的 CSR 部件发运的材料中指明是否必须将有缺陷的部件返还给 Hewlett Packard Enterprise。如果要求您将缺陷的部件返还给 Hewlett Packard Enterprise，那么您必须在规定的期限内（通常是五 (5) 个工作日）将缺陷部件发给 Hewlett Packard Enterprise。有缺陷的部件必须随所提供的发运材料中的相关文件一起返还。如果未能送还有缺陷的部件，Hewlett Packard Enterprise 可能会要求您支付更换费用。客户自行维修时，Hewlett Packard Enterprise 将承担所有相关运输和部件返回费用，并指定快递商/承运商。

有关 Hewlett Packard Enterprise 客户自行维修计划的详细信息，请与您当地的服务提供商联系。有关北美地区的计划，请访问 Hewlett Packard Enterprise 网站 (<http://www.hpe.com/support/selfrepair>)。

# 客戶自行維修

Hewlett Packard Enterprise 產品設計了許多「客戶自行維修」(CSR) 的零件以減少維修時間，並且使得更換瑕疵零件時能有更大的彈性。如果在診斷期間，Hewlett Packard Enterprise (或 Hewlett Packard Enterprise 服務供應商或維修夥伴) 辨認出此項維修工作可以藉由使用 CSR 零件來完成，則 Hewlett Packard Enterprise 將直接寄送該零件給您作更換。CSR 零件分為兩種類別：

- **強制的** — 客戶自行維修所使用的零件是強制的。如果您要求 Hewlett Packard Enterprise 更換這些零件，Hewlett Packard Enterprise 將會向您收取此服務所需的外出費用與勞動成本。
- **選購的** — 客戶自行維修所使用的零件是選購的。這些零件也設計用於客戶自行維修之用。不過，如果您要求 Hewlett Packard Enterprise 為您更換，則可能需要也可能不需要負擔額外的費用，端視針對此產品指定的保固服務類型而定。

**備註：**某些 Hewlett Packard Enterprise 零件沒有消費者可自行維修的設計。為符合客戶保固，Hewlett Packard Enterprise 需要授權的服務供應商更換零件。這些零件在圖示的零件目錄中，被標示為「否」。

基於材料取得及環境允許的情況下，CSR 零件將於下一個工作日以快遞寄送。在環境的允許下當天或四小時內送達，則可能需要額外的費用。若您需要協助，可致電 Hewlett Packard Enterprise 支援中心，會有一位技術人員透過電話來協助您。不論損壞的零件是否必須退回，Hewlett Packard Enterprise 皆會在與 CSR 替換零件一起運送的材料中註明。若要將損壞的零件退回 Hewlett Packard Enterprise，您必須在指定的一段時間內（通常為五 (5) 個工作天），將損壞的零件寄回 Hewlett Packard Enterprise。損壞的零件必須與寄送資料中隨附的相關技術文件一併退還。如果無法退還損壞的零件，Hewlett Packard Enterprise 可能要向您收取替換費用。針對客戶自行維修情形，Hewlett Packard Enterprise 將負責所有運費及零件退還費用，並指定使用何家快遞/貨運公司。

如需 Hewlett Packard Enterprise 的 CSR 方案詳細資訊，請連絡您當地的服務供應商。至於北美方案，請參閱 Hewlett Packard Enterprise 的 CSR 網站 [selfrepair](http://www.hpe.com/support/selfrepair) (<http://www.hpe.com/support/selfrepair>)。

## 고객 셀프 수리

Hewlett Packard Enterprise 제품은 수리 시간을 최소화하고 결함이 있는 부품 교체 시 더욱 융통성을 발휘할 수 있도록 하기 위해 고객 셀프 수리(CSR) 부품을 다량 사용하여 설계되었습니다. 진단 기간 동안 Hewlett Packard Enterprise(또는 Hewlett Packard Enterprise 서비스 공급업체 또는 서비스 협력업체)에서 CSR 부품을 사용하여 수리가 가능하다고 판단되면 Hewlett Packard Enterprise는 해당 부품을 바로 사용자에게 보내어 사용자가 교체할 수 있도록 합니다. CSR 부품에는 두 가지 종류가 있습니다.

- 필수 - 고객 셀프 수리가 의무 사항인 필수 부품. 사용자가 Hewlett Packard Enterprise에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.
- 선택 사항 - 고객 셀프 수리가 선택 사항인 부품. 이 부품들도 고객 셀프 수리가 가능하도록 설계되었습니다. 하지만 사용자가 Hewlett Packard Enterprise에 이 부품의 교체를 요청할 경우 사용자가 구입한 제품에 해당하는 보증 서비스 유형에 따라 추가 비용 없이 교체가 가능할 수 있습니다.

참고: 일부 Hewlett Packard Enterprise 부품은 고객 셀프 수리가 불가능하도록 설계되었습니다. Hewlett Packard Enterprise는 만족스러운 고객 보증을 위해 공인 서비스 제공업체를 통해 부품을 교체하도록 하고 있습니다. 이러한 부품들은 Illustrated Parts Catalog에 “No”라고 표시되어 있습니다.

CSR 부품은 재고 상태와 지리적 조건이 허용하는 경우 다음 영업일 납품이 가능하도록 배송이 이루어집니다. 지리적 조건이 허용하는 경우 추가 비용이 청구되는 조건으로 당일 또는 4시간 배송이 가능할 수도 있습니다. 도움이 필요하시면 Hewlett Packard Enterprise Support Center로 전화하십시오. 전문 기술자가 전화로 도움을 줄 것입니다. Hewlett Packard Enterprise는 결함이 발생한 부품을 Hewlett Packard Enterprise로 반환해야 하는지 여부를 CSR 교체 부품과 함께 배송된 자료에 지정합니다. 결함이 발생한 부품을 Hewlett Packard Enterprise로 반환해야 하는 경우에는 지정된 기간 내(통상 영업일 기준 5일)에 Hewlett Packard Enterprise로 반환해야 합니다. 이때 결함이 발생한 부품은 제공된 포장 재료에 넣어 관련 설명서와 함께 반환해야 합니다. 결함이 발생한 부품을 반환하지 않는 경우 Hewlett Packard Enterprise가 교체 부품에 대해 비용을 청구할 수 있습니다. 고객 셀프 수리의 경우, Hewlett Packard Enterprise는 모든 운송 및 부품 반환 비용을 부담하며 이용할 운송업체 및 택배 서비스를 결정합니다.

Hewlett Packard Enterprise CSR 프로그램에 대한 자세한 내용은 가까운 서비스 제공업체에 문의하십시오. 북미 지역의 프로그램에 대해서는 Hewlett Packard Enterprise CSR 웹 사이트(<http://www.hpe.com/support/selfrepair>)를 참조하십시오.

## 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 (<http://www.hpe.com/services/getconnected>)

HPE Proactive Care services (<http://www.hpe.com/services/proactivecare>)

HPE Proactive Care service: Supported products list

(<http://www.hpe.com/services/proactivecaresupportedproducts>)

HPE Proactive Care advanced service: Supported products list

(<http://www.hpe.com/services/proactivecareadvancedsupportedproducts>)

### Proactive Care customer information

Proactive Care central (<http://www.hpe.com/services/proactivecarecentral>)

Proactive Care service activation (<http://www.hpe.com/services/proactivecarecentralgetstarted>)

# Acronyms and abbreviations

AC

alternating current

APM

advanced power management

CSA

Canadian Standards Association

CSR

Customer Self Repair

ESD

electrostatic discharge

IEC

International Electrotechnical Commission

iLO

Integrated Lights-Out

LFF

large form factor

LOM

LAN on Motherboard

PCIe

Peripheral Component Interconnect Express

PDU

power distribution unit

TMRA

recommended ambient operating temperature

UID

unit identification

UPS

uninterruptible power system

USB

universal serial bus



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

# Index

## A

airflow requirements 6  
authorized reseller 52, 54

## B

batteries, replacing 35  
battery replacement notice 46  
battery warranty 46  
before you contact Hewlett Packard Enterprise 54  
Belarus Kazakhstan Russia marking 46  
BSMI notice 46  
buttons, front panel 11

## C

cable configuration 37  
Cable guard 37  
cable management arm 37, 39  
cable management arm, converting 39  
cable management arm, installing 37  
cables 37  
cables, overview 37  
cabling 37, 42  
Canadian notice 46  
Care Pack 54  
cautions 52  
chassis, installing server 28  
checking the circuit breakers 37  
compliance 46  
components 9, 10, 28  
components, front panel 9, 10  
components, identification 9, 12  
connectors, I/O module 14  
connectors, management module 13  
contact information 54  
contacting Hewlett Packard Enterprise 54  
contents 5  
CSR (customer self repair) 55  
customer self repair (CSR) 55

## D

Declaration of Conformity 46, 47  
diagnosing problems 44  
disassembling the enclosure 21  
disposal, battery 46  
documentation 65  
documentation feedback 65  
drive activity LED 19

drive bays 9, 10, 18, 20

## E

electrical 52  
electrical grounding requirements 8  
electrostatic discharge 52  
enclosure, disassembling 21  
environmental considerations 52  
environmental specifications 48, 52  
error messages 45  
EuroAsian Economic Commission 46  
European Union notice 46  
expansion board 33  
expansion slot definitions 15, 16

## F

fan, installing 31  
fans 31  
Federal Communications Commission (FCC)  
notice 46  
firmware upgrade utility, troubleshooting 44  
front panel buttons 11  
front panel components 9, 10

## G

grounding methods 52  
grounding requirements 8, 52  
GS gloss declaration 46  
guidelines, troubleshooting 44

## H

hard drive LEDs 9  
hard drives, installing 29  
help resources 54  
Hewlett Packard Enterprise contact information 54  
Hewlett Packard Enterprise Technical Support 54,  
62  
Hewlett Packard Enterprise, contacting 54  
hot-plug power supply calculations 43

## I

I/O module 14, 15, 16, 34  
I/O module connectors 14  
Important Safety Information document 44  
installation 21  
installation overview 5, 21  
installation, cable management arm 37, 39  
installation, chassis 21

installing components 28  
installing fans 31

## J

Japanese notice 46

## L

LED identification 9  
LED, drive activity 19  
LEDs 11  
LEDs, front panel 11  
LEDs, management module 13  
LEDs, power supply 12  
LEDs, storage display 9  
LEDs, troubleshooting 44  
limited warranty 46  
load protection guarantee 46

## M

management module 32  
management module connectors 13  
management module LEDs 13  
minimum requirements 7, 8  
modifications, FCC notice 46

## O

overview of installation process 21

## P

PDU (power distribution unit) 8  
phone numbers 54  
planning the installation 5  
POST error messages 44  
power calculator 43  
power distribution unit (PDU) 8  
power requirements 7  
power supplies 30, 48, 49, 50, 51  
power supply calculations 43  
power supply LEDs 12  
power supply, hot-plug 43  
power supply, installing 30  
powering up 43  
powering up the enclosure 37  
preparation procedures 5  
problem diagnosis 44, 45

## Q

quick release levers 9

## R

rack installation 25  
rack stability 6  
rack warnings 6

rear panel components 12  
regulatory compliance identification numbers 44, 46  
regulatory compliance information 46  
regulatory compliance notices 46, 47  
regulatory information 46  
requirements, airflow 6  
requirements, electrical grounding 8  
requirements, minimum 7, 8  
requirements, power 7  
requirements, space 6  
requirements, temperature 7  
resources 54  
RoHS 47

## S

safety considerations 44, 46, 52  
safety information 44, 46  
serial label pull tab 9, 10  
serial number 9, 10  
series number 46  
server bays 9  
server, installation 28  
shipping carton contents 5  
space requirements 6  
specifications 6, 7, 8, 43, 48  
static electricity 52  
storage display LEDs 9  
support 54  
support and other resources 54  
supported servers 44  
supported targets 44  
symbols on equipment 44

## T

Taiwan battery recycling notice 46  
technical support 54  
telephone numbers 54  
temperature requirements 7, 48  
TMRA (recommended ambient operating temperature) 7  
troubleshooting 44, 45  
troubleshooting resources 45  
troubleshooting, firmware upgrade utility 44  
Turkey RoHS material content declaration 47

## U

Ukraine notice 47  
Ukraine RoHS material content declaration 47  
uninterruptible power supply (UPS) 7  
UPS (uninterruptible power supply) 7

## V

ventilation 6

## **W**

warranty 46

warranty information 46

website, Hewlett Packard Enterprise 54