HPE ProLiant DL385 Gen10 Plus v2 Server Maintenance and Service Guide

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Abstract

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.

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Hewlett Packard Enterprise continually improves and changes product parts. For complete and current supported parts information, see the Hewlett Packard Enterprise PartSurfer website (http://www.hpe.com/info/partssurfer).
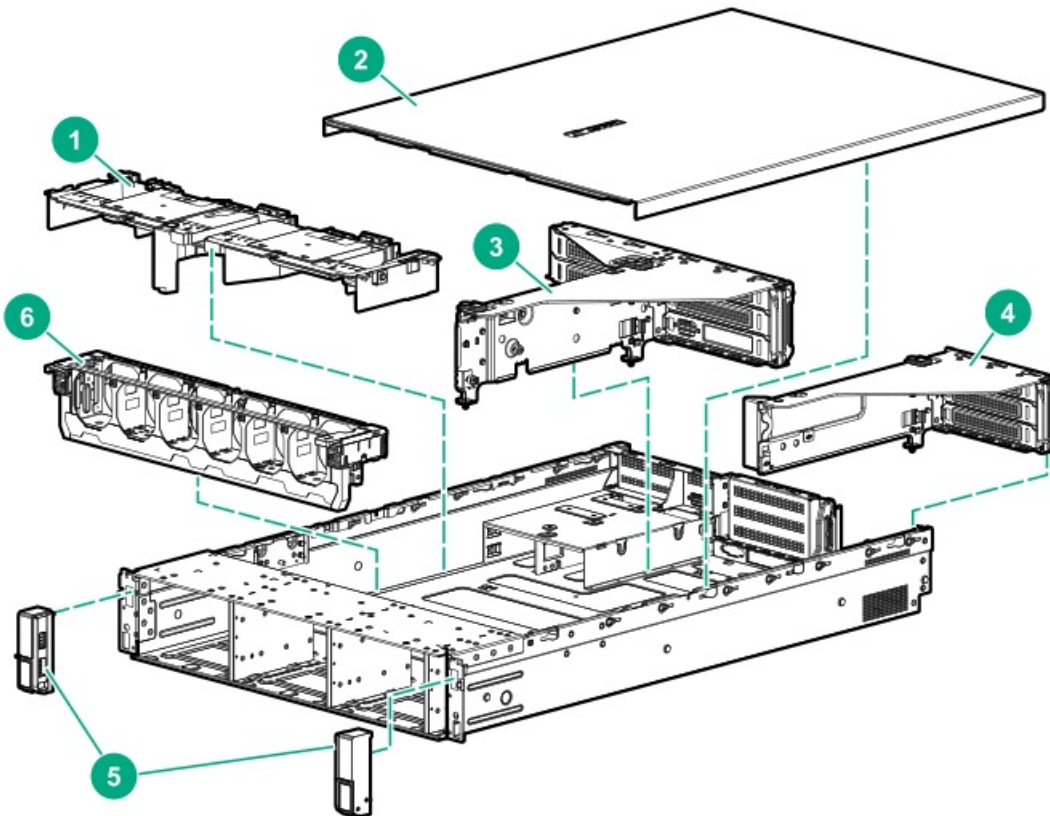
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*Not shown

For more information, see Removal and replacement procedures.

Air baffle spare part

Customer self repair: **Mandatory**

Description	Spare part number
Air baffle	P24140-001
• System air baffle	
• Retainer baffle, PCIe, 2U	
• Retainer baffle, tertiary, 2U	

Access panel spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Access panel for the SFF chassis	P42652-001
Access panel for the LFF chassis	P42651-001

Secondary and tertiary PCI riser cage spare parts

<u>Customer self repair</u>: **Mandatory**

Description	Spare part number
PCI tertiary butterfly riser cage	P24030-001
PCI tertiary riser cage without retainer clip	P40013-001

Primary PCI riser cage spare parts

Customer self repair: **Optional**

Description	Spare part number
PCI riser cage	P42325-001
PCI riser cage without retainer clip (primary/secondary)	P40012-001

Chassis ear spare parts

Customer self repair: **Mandatory**

Description	Spare part number
SFF/LFF left and right chassis ears kit with power cable • SFF, left ear • SFF, right, standard • LFF, right, power/UID • LFF, power • LFF, left, 2U, standard	P24141-001

Fan cage spare part

<u>Customer self repair</u>: **Mandatory**

Description	Spare part number
Fan cage	P24029-001

2U bezel spare part

Customer self repair: **Mandatory**

Description	Spare part number
2U bezel	875065-001

Rack-mounting hardware spare parts

Customer self repair: **Mandatory**

Description	Spare part number
SFF easy install rail kit	P24098-001
LFF easy install rail kit	P24099-001
Cable management arm	P24100-001

DIMM guard spare part

Customer self repair: **Mandatory**

Description	Spare part number
2U DIMM guard, left/right	P24307-001

Miscellaneous mechanical spare parts

Miscellaneous front drive box blanks spare kit

Customer self repair: **Mandatory**

Description	Spare part number
• 2 SFF Flex Bay hard drive blank	875069-001
• Hard drive box, standard blank	
• Hard drive box blank, NVMe	
• LFF hard drive box blank	

Miscellaneous blanks spare parts

Customer self repair: **Mandatory**

Description	Spare part number
• Tertiary blank	P24101-001
• Secondary PCI blank	
• Rear 2 SFF serial blank	
• 2 SFF rear bracket	
• OCP NIC 3.0 blank	
• Drive bay, 2U	
Quad NIC blank	P19929-001
Fan blanks, HPE Smart Storage Battery latch, retainers	875066-001
Rear 2 SFF serial blank	878510-001
Power supply blank	775423-001

Fan blanks, energy pack latch, and retention clips spare kit

Customer self repair: **Mandatory**

Description	Spare part number
● Fan blanks (2)	875066-001
● Energy pack latch	
● Retention clips for the primary riser cage (2)	
● Retention clip for the secondary/tertiary riser cage	

Optical drive blank spare part

Customer self repair: **Mandatory**

Description	Spare part number
Optical drive blank	707300-001

System components

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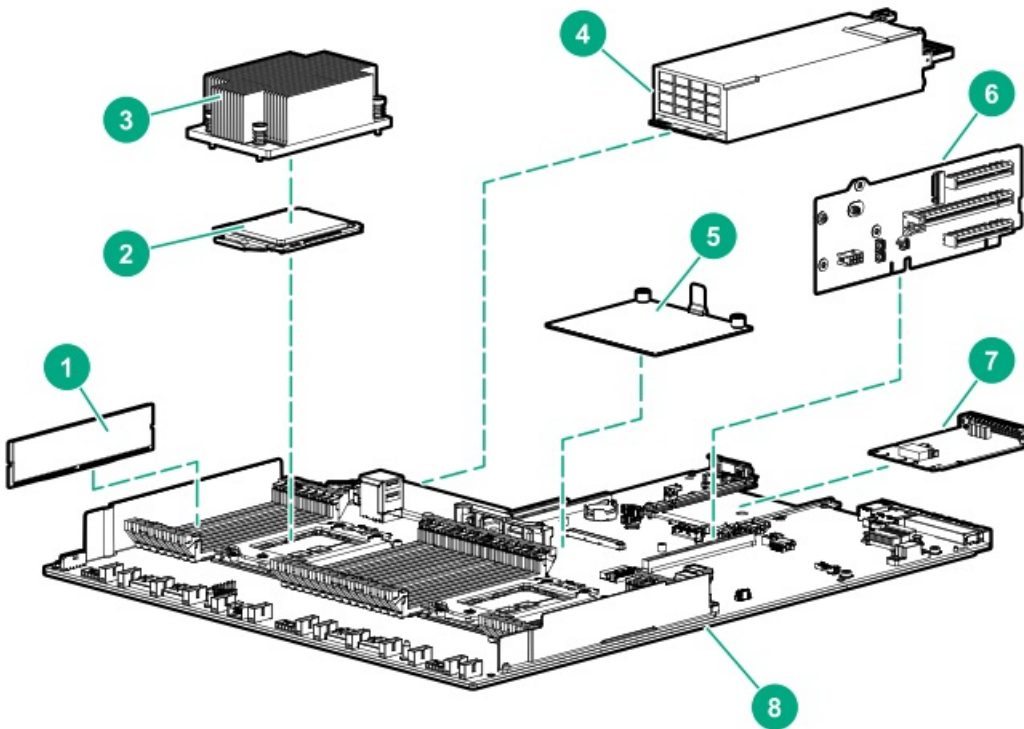
Item	Description
1	DIMM spare parts
2	Processor spare parts
3	Heatsink spare parts
4	Power supply spare parts
5	Storage controller spare parts
6	PCI riser spare parts
7	Network adapter spare parts
8	System board spare parts
9	LFF front I/O board spare part *
10	Systems Insight Display spare part*
11	System battery spare part*

* Not shown

For more information, see Removal and replacement procedures.

DIMM spare parts

Customer self repair: **Mandatory**

Description	Spare part number
3200 MT/s DIMMs	—
8 GB, single-rank x8 PC4-3200AA-R	P20499-001
16 GB, dual-rank x4 PC4-3200AA-R	P20500-001
16 GB, single-rank x8 PC4-3200AA-R	P20501-001
32 GB, single-rank x4 PC4-3200AA-R	P39381-001
32 GB, dual-rank x8 PC4-3200AA-R	P20502-001
32 GB, dual-rank x4 PC4-3200AA-R	P20503-001
64 GB, quad-rank x4 PC4-3200AA-R	P20504-001
128 GB, quad-rank x4 PC4-3200AA-L	P20505-001

Processor spare parts

AMD EPYC 7xx3 processor spare parts

Customer self repair: **Optional**

Description	Spare part number
3.70 Ghz AMD EPYC 72F3 processor	P39063-001
2.90 GHz AMD EPYC 7313 processor	P39053-001
3.10 GHz AMD EPYC 7343 processor	P39054-001
3.10 GHz AMD EPYC 7373X processor	P46981-001
3.50 GHz AMD EPYC 73F3 processor	P39064-001
2.55 GHz AMD EPYC 7413 processor	P39055-001
2.75 GHz AMD EPYC 7443 processor	P39057-001
2.35 GHz AMD EPYC 7453 processor	P39056-001
2.80 GHz AMD EPYC 7473X processor	P46980-001
3.20 GHz AMD EPYC 74F3 processor	P39065-001
2.50 GHz AMD EPYC 7513 processor	P39058-001
2.70 GHz AMD EPYC 7543 processor	P39059-001
2.80 GHz AMD EPYC 7573X processor	P46979-001
3.20 GHz AMD EPYC 75F3 processor	P39066-001
2.20 GHz AMD EPYC 7643 processor	P39489-001
2.00 GHz AMD EPYC 7663 processor	P39060-001
2.00 GHz AMD EPYC 7713 processor	P39061-001
2.50 GHz AMD EPYC 7763 processor	P39062-001
2.20 GHz AMD EPYC 7773X processor	P46977-001

Heatsink spare parts

Customer self repair: **Optional**
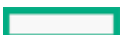
Description	Spare part number
Standard heatsink 2U	P00249-001
High-performance heatsink 1U	P24556-001
High-performance heatsink 2U	P22547-001

Power supply spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE 500 W Hot-plug Power Supply	866729-001
HPE 800 W HVDC Hot-plug Power Supply	866727-001
HPE 800 W -48VDC Hot-plug Power Supply	866728-001
HPE 800 W Flex Slot Platinum Hot-plug Low Halogen Power Supply	866730-001
HPE 800 W Hot-plug Power Supply	866793-001
HPE 1600 W Flex Slot Platinum Hot-plug Low Halogen Power Supply	863373-001
HPE 1600 W Flex Slot -48 VDC hot-plug power supply	P18510-001

Storage controller spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE Smart Array E208e-p SR Gen10 Controller	836267-001
HPE Smart Array E208i-a SR Gen10 Controller	836259-001
HPE Smart Array E208i-p SR Gen10 Controller	836266-001
HPE Smart Array P408e-p SR Gen10 Controller	836270-001
HPE Smart Array P408i-a SR Gen10 Controller	836260-002
HPE Smart Array P408i-p SR Gen10 Controller	836269-001
HPE Smart Array P816i-a SR Gen10 Controller	836261-001
HPE SR416i-a Gen10 Plus Controller	P13928-001
HPE MR216i-a Gen10 Plus Controller	P28348-001
HPE MR416i-a Gen10 Plus Controller	P28335-001
HPE SR932i-p Gen10 Plus Controller	P18875-001
HPE MR216i-p Gen10 Plus Controller	P28336-001
HPE MR416i-p Gen10 Plus Controller	P17303-001
HPE AROC 1-Port NVMe adapter	P18719-001

PCI riser board spare parts

Customer self repair: **Optional**

Description	Spare part number
3 x16 tri-mode riser	P24048-001
x16 tertiary riser	P24034-001
x16 cabled riser	P24031-001
x8 re-timer PCIe card	P40449-001
x16 re-timer PCIe card	P40450-001
x16 x16 PCIe slot 1/2 riser	P18721-001
x16 x16 PCIe slot 2/3 riser	P18720-001
x16 tertiary riser kit	P40447-001
2x16 tertiary riser kit	P40448-001

Network adapter spare parts

Ethernet adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE Ethernet 1Gb 4-port BaseT I350-T4 adapter	P22200-001
HPE Ethernet 10Gb 2-port SFP+ QL41132 adapter	P22199-001
HPE Ethernet 10Gb 4-port SFP+ QL41134 adapter	P13346-001
HPE Ethernet 10Gb 2-port BaseT QL41132 adapter	P11688-001
HPE Ethernet 10/25Gb 2-port SFP28 QL41232 adapter	P23451-001
HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT adapter	P22202-001
HPE Ethernet 10/25Gb 2-port SFP28 MCX512F adapter	P16004-001
HPE Ethernet 10/25Gb 2-port SFP28 X2522-PLUS adapter	P22204-001
HPE Ethernet 100G QSFP28 MCX516A adapter	P22203-001
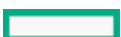
Fibre channel host bus adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE SN1600Q 32Gb 1p FC HBA	868140-001
HPE SN1600Q 32Gb 2p FC HBA	868141-001
HPE SN1600E 32Gb 1p FC HBA	869999-001
HPE SN1600E 32Gb 2p FC HBA	870000-001
HPE SN1200E 16Gb 1p FC HBA	870001-001
HPE SN1200E 16Gb 2p FC HBA	870002-001
HPE SN1100Q 16Gb 1p FC HBA	863010-001
HPE SN1100Q 16Gb 2p FC HBA	853011-001

Converged network adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE CN1100R 2P Converged Network Adapter	706801-001
HPE StoreFabric CN1100R-T 10Gb Converged Network Adapter	872605-001
HPE StoreFabric CN1200E 10Gb Converged Network Adapter	767078-001
HPE StoreFabric CN1200E-T 10Gb Converged Network Adapter	827607-001

OCP NIC 3.0 spare parts

Customer self repair: **Optional**

Description	Spare part number
HPE 1GbE 4-port BaseT I350-T4 OCP 3.0 adapter	P14487-001
HPE 10GbE 2-port SFP+ QL41132 adapter OCP 3.0 adapter	P11586-001
HPE 10GbE 2-port BaseT QL41132 OCP 3.0 adapter	P13345-001
HPE 10GbE 2-port SFP+MCX4621A OCP 3.0 adapter	P12806-001
HPE 25GbE 2-port SFP28 MLX OCP 3.0 adapter	P12619-001
HPE 10/25GbE 2-port SFP28 QL41232 OCP 3.0 adapter	P11710-001
HPEDL Gen10 Plus OCP cable kit	P24128-001
HPE10GbE 2-port BT BCM 57416 OCP3 adapter	P13640-001
OCP right and left guide rails	P23634-001

InfiniBand adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE InfiniBand HDR100/Ethernet 1-port 940QSFP56 x16 Adapter	P08356-001
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	P08355-001
HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	P08354-001

System board spare parts

Customer self repair: Optional

Description	Spare part number
System board with sub-pan	P40453-001

LFF front I/O board spare part

Customer self repair: **Optional**

Description	Spare part number
LFF front I/O board	875088-001

Systems Insight Display spare part

<u>Customer self repair</u>: **Optional**

Description	Spare part number
Systems Insight Display module	P24033-001

System battery spare part

Customer self repair: **Mandatory**

Description	Spare part number
System battery	319603-001

Server options

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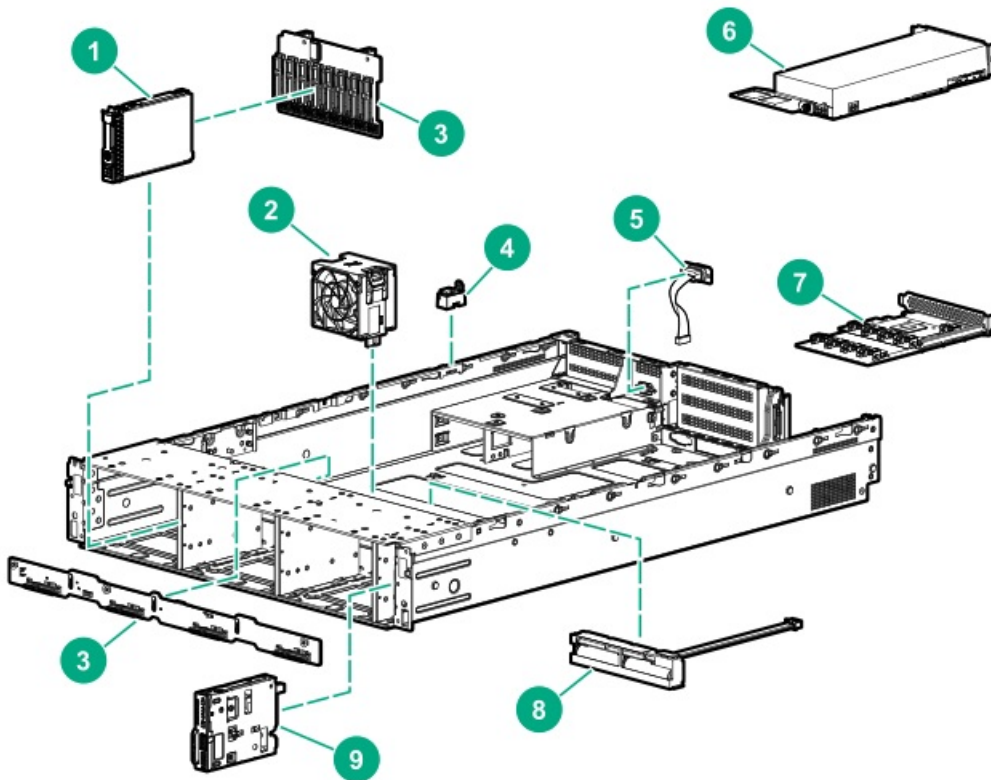
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10	Pensando Distributed Services Platform card spare parts*
11	Flex bay spare parts*
12	Midtray drive cage spare part*
13	Cable spare parts*
14	Thermal grease spare part*

* Not shown

For more information, see Removal and replacement procedures.

Drive spare parts

Hard disk drive spare parts

Customer self repair: **Mandatory**

Description	Spare part number
SFF HDD spare parts	—
300 GB SAS 10K SFF BC HDD	P40785-001
300 GB SAS 15K SFF BC HDD	P30561-001
900 GB SAS 15K SFF BC HDD	P40784-001
1 TB SATA 7.2K SFF BC HDD	P30574-001
1.2 TB SAS 10K SFF BC HDD	P30563-001
2 TB SATA 7.2K SFF BC 512e HDD	P30573-001
2 TB SAS 7.2K SFF BC 512e HDD	P30575-001
2.4 TB SAS 10K SFF BC 512e HDD	P30562-001
LFF HDD spare parts	—
1 TB SATA 7.2K LFF LP DS HDD	862130-001
2 TB SAS 7.2K LFF LP DS HDD	834133-001
2 TB SATA 7.2K LFF LP DS HDD	862132-001
4 TB SAS 7.2K LFF LP DS HDD	834134-001
4 TB SATA 7.2K LFF LP DS HDD	862133-001
6 TB SAS 7.2K LFF LP 512e DS HDD	862136-001
6 TB SATA 7.2K LFF LP 512e DS HDD	862134-001
8 TB SAS 7.2K LFF LP 512e DS HDD	834132-001
8 TB SATA 7.2K LFF LP He 512e DS HDD	834131-001
10 TB SAS 7.2K LFF LP He 512e DS HDD	P11186-001
10 TB SATA 7.2K LFF LP He 512e DS HDD	P11184-001
12 TB SAS 7.2K LFF LP He 512e DS HDD	882398-001
12 TB SATA 7.2K LFF LP He 512e DS HDD	882401-001
14 TB SAS 7.2K LFF LP He 512e DS HDD	P11518-001
14 TB SATA 7.2K LFF LP He 512e DS HDD	P11519-001

NVMe solid state drive spare parts

Customer self repair: **Mandatory**

Description	Spare part number
375 GB NVMe WI SFF BC U.2 P4800x SSD	P41550-001
750 GB NVMe WI SFF BC U.2 P4800x SSD	P41551-001
800 GB NVMe MU SFF BC U.3 CD6 SSD	P41511-001
800 GB NVMe MU SFF BC U.3 CM6 SSD	P41517-001
800 GB NVMe MU SFF BC U.3 PE8030 SSD	P41488-001
800 GB NVMe MU SFF BC U.3 PM1735 SSD	P41567-001
960 GB NVMe RI SFF BC U.3 PE8010 SSD	P41487-001
960 GB NVMe RI SFF BC U.3 PM1733 SSD	P41562-001
1.6 TB NVMe MU SFF BC U.2 P4610 SSD	P41547-001
1.6 TB NVMe MU SFF BC U.3 CD6 SSD	P41512-001
1.6 TB NVMe MU SFF BC U.3 CM6 SSD	P41518-001
1.6 TB NVMe MU SFF BC U.3 PE8030 SSD	P41492-001
1.6 TB NVMe MU SFF BC U.3 PM1735 SSD	P41568-001
1.92 TB NVMe RI BC U.3 PE8010 SSD	P41489-001
1.92 TB NVMe RI BC U.3 PM1733 SSD	P41563-001
1.92 TB NVMe RI SFF BC U.3 CD6 SSD	P41508-001
1.92 TB NVMe RI SFF BC U.3 CM6 SSD	P41515-001
2 TB NVMe RI SFF BC U.2 P4510 SSD	P41545-001
3.2 TB NVMe MU SFF BC U.2 P4610 SSD	P41548-001
3.2 TB NVMe MU SFF BC U.3 CD6 SSD	P41513-001
3.2 TB NVMe MU SFF BC U.3 CM6 SSD	P41519-001
3.2 TB NVMe MU SFF BC U.3 PE8030 SSD	P41493-001
3.2 TB NVMe MU SFF BC U.3 PM1735 SSD	P41569-001
3.84 TB NVMe RI BC U.3 PE8010 SSD	P41490-001
3.84 TB NVMe RI BC U.3 PM1733 SSD	P41564-001
3.84 TB NVMe RI SFF BC U.3 CD6 SSD	P41509-001
3.84 TB NVMe RI SFF BC U.3 CM6 SSD	P41516-001
4 TB NVMe RI SFF BC U.2 P4510 SSD	P41546-001
6.4 TB NVMe MU SFF BC U.2 P4610 SSD	P41549-001
6.4 TB NVMe MU SFF BC U.3 CD6 SSD	P41514-001
6.4 TB NVMe MU SFF BC U.3 CM6 SSD	P41520-001
6.4 TB NVMe MU SFF BC U.3 PE8030 SSD	P41494-001
6.4 TB NVMe MU SFF BC U.3 PM1735 SSD	P41570-001
7.68 TB NVMe RI BC U.3 PE8010 SSD	P41491-001
7.68 TB NVMe RI BC U.3 PM1733 SSD	P41565-001
7.68 TB NVMe RI SFF BC U.3 CD6 SSD	P41510-001
15.36 TB NVMe RI BC U.3 PM1733 SSD	P41566-001

Solid state drive SAS spare parts

Customer self repair: **Mandatory**

Description	Spare part number
400 GB SAS WI SFF BC PM6 SSD	P41505-001
400 GB SAS WI SFF BC SS540 SSD	P41574-001
800 GB SAS MU SFF BC PM1645a SSD	P41558-001
800 GB SAS MU SFF BC PM6 SSD	P41500-001
800 GB SAS MU SFF BC SS540 SSD	P41571-001
800 GB SAS WI SFF BC PM6 SSD	P41506-001
800 GB SAS WI SFF BC SS540 SSD	P41575-001
960 GB SAS MU SFF BC VS MV SSD	P41535-001
960 GB SAS RI SFF BC MV VS SSD	P41531-001
960 GB SAS RI SFF BC PM1643a SSD	P41554-001
960 GB SAS RI SFF BC PM6 SSD	P41495-001
1.6 TB SAS MU SFF BC PM1645a SSD	P41559-001
1.6 TB SAS MU SFF BC PM6 SSD	P41501-001
1.6 TB SAS MU SFF BC SS540 SSD	P41572-001
1.6 TB SAS WI SFF BC PM6 SSD	P41507-001
1.92 TB SAS MU SFF BC MV VS SSD	P41536-001
1.92 TB SAS RI SFF BC MV VS SSD	P41532-001
1.92 TB SAS RI SFF BC PM1643a SSD	P41555-001
1.92 TB SAS RI SFF BC PM6 SSD	P41496-001
3.2 TB SAS MU SFF BC PM1645a SSD	P41560-001
3.2 TB SAS MU SFF BC PM6 SSD	P41503-001
3.2 TB SAS MU SFF BC SS540 SSD	P41573-001
3.84 TB SAS MU SFF BC MV VS SSD	P41533-001
3.84 TB SAS RI SFF BC PM1643a SSD	P41556-001
3.84 TB SAS RI SFF BC PM6 SSD	P41497-001
6.4 TB SAS MU SFF BC PM1645a SSD	P41561-001
6.4 TB SAS MU SFF BC PM6 SSD	P41504-001
7.68 TB SAS RI SFF BC MV VS SSD	P41534-001
7.68 TB SAS RI SFF BC PM1643a SSD	P41557-001
7.68 TB SAS RI SFF BC PM6 SSD	P41498-001
15.3 TB SAS RI SFF BC PM6 SSD	P41499-001

Solid state drive SATA spare parts

Customer self repair: **Mandatory**

Description	Spare part number
240 GB SATA RI SFF BC MV SSD	P41521-001
480 GB SATA MU SFF BC MV SSD	P41527-001
480 GB SATA MU SFF BC S4610 SSD	P41543-001
480 GB SATA RI SFF BC MV SSD	P41522-001
480 GB SATA RI SFF BC SED 5300P SSD	P42595-001
960 GB SATA MU SFF BC MV SSD	P41528-001
960 GB SATA MU SFF BC SED 5300M SSD	P42597-001
960 GB SATA RI SFF BC MV SSD	P41523-001
1.92 TB SATA MU SFF BC MV SSD	P41529-001
1.92 TB SATA MU SFF BC SED 5300M SSD	P42598-001
1.92 TB SATA RI SFF BC MV SSD	P41524-001
1.92 TB SATA RI SFF BC S4510 SSD	P41541-001
1.92 TB SATA RI SFF BC SED 5300P SSD	P42596-001
1.92 TB SATA VRO SFF BC 5210 SSD	P41552-001
3.84 TB SATA MU SFF BC MV SSD	P41530-001
3.84 TB SATA MU SFF BC S4610 SSD	P41544-001
3.84 TB SATA RI SFF BC MV SSD	P41525-001
3.84 TB SATA RI SFF BC S4510 SSD	P41542-001
7.68 TB SATA RI SFF BC MV SSD	P41526-001
7.68 TB SATA VRO SFF BC 5210 SSD	P41553-001

Optical drive spare parts

Customer self repair: **Mandatory**

Description	Spare part number
9.5 mm SATA DVD-ROM drive	652296-001
9.5 mm SATA DVD-RW drive	652297-001
Mobile USB DVD-RW drive	775676-001

Fan spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Standard fan	P23971-001
Max performance fan for Gen10 Plus	P23970-001

Drive backplane board spare parts

Customer self repair: **Optional**

Description	Spare part number
SFF drive backplane spares	—
2 SFF U.3 backplane (stacked/premium)	P39782-001
2 SFF U.3 backplane	P39783-001
8 SFF SAS/SATA backplane	P39777-001
8 SFF U.3 backplane (premium)	P24047-001
8 SFF midtray backplane	P39784-001
8 SFF midtray backplane (premium)	P40452-001
LFF drive backplane spares	—
2 LFF backplane (stack/riser)	P40446-001
4 LFF SAS/SATA backplane	P40451-001

Chassis Intrusion Detection Switch spare part

Description	Spare part number
Chassis Intrusion Detection Switch	P24555-001

Rear serial port interface spare part

Customer self repair: **Mandatory**

Description	Spare part number
Rear serial port interface	875571-001

Accelerator spare parts

Customer self repair: **Optional**

Description	Spare part number
Computational accelerator spare part	—
NVIDIA Tesla T4 16 GB	P09571-001
NVIDIA Tesla V100 32 GB	P05913-001
NVIDIA Tesla A100 40GB	P35962-001
Workload accelerator spare parts	—
HPE 750 GB PCIe x4 WI, HH, DS	P03580-001
HPE 1.6 TB NVMe x8 MU, HH, DS	P10670-001
HPE 3.2 TB NVMe x8 MU, HH, DS	P10671-001
HPE 6.4 TB NVMe x8 MU, HH, DS	P10672-001
GPU spare parts	
HPE NVIDIA Quadro RTX4000 Module	P11603-001
HPE NVIDIA Quadro RTX6000 Module	P11377-001
HPE NVIDIA Quadro RTX8000 Module	P11743-001
AMD Radeon Instinct MI100 Module	P26986-001

HPE DL38x Gen10 12Gb SAS Expander Card spare part

Customer self repair: **Optional**

Description	Spare part number
HPE DL38x Gen10 Plus 12Gb SAS Expander Card	876907-001

Energy pack spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE Smart Storage Battery 96 W, 145 mm cable	878643-001
HPE Smart Storage Hybrid Capacitor, 145 mm cable	P07473-001

Power switch module spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Power switch module for SFF chassis (no SID)	P23972-001
Power switch/System Insight Display module	P00845-001
Power switch/optical drive module for 8 LFF chassis	P23973-001

Pensando Distributed Services Platform card spare part

<u>Customer self repair</u>: **Mandatory**

Description	Spare part number
Pensando Distributed Services Platform DSC-25 10/25G 2-port SFP28 card	P27682-001

Flex bay spare parts

Customer self repair: **Optional**

Description	Spare part number
Flex bay cage	881696-001

Midtray drive cage spare part

<u>Customer self repair</u>: **Optional**

Description	Spare part number
8 SFF NVMe and SAS SC midtray drive cage kit	P24046-001

Cable spare parts

Customer self repair: **Mandatory**

Description	Spare part number
SFF mini-SAS cable kit	875089-001
LFF mini-SAS cable kit	875090-001
NVMe direct attach kit	875092-001
HPE Smart Array type-a controller to expansion board cable kit	875093-001
Mini-SAS cable kit	875094-001
Data cables kit	875095-001
GPU cables kit	875097-001
GPU 2x8P Y power cable	P04670-001

SAS/SATA cable spare parts

<u>Customer self repair</u>: **Mandatory**

Description	Spare part number
Split-Straight x4 Mini SAS to x8 Slim SAS • Box 6 to port 1 Smart Array controller in secondary riser • Box 6 to port 4 SAS expansion board in secondary riser • Box 5 to port 3 SAS expansion board in secondary riser • Box 5 to port 2 Smart Array controller in primary riser • Box 6 to port 2 Smart Array controller in secondary riser • Box 5 to port 1 Smart Array controller in secondary riser	P42326-001
x4 Mini SAS 4 LFF/8 SFF primary/tertiary SAS to expansion board • Box 2/3 x8 Mini SAS to ports 3-6 on expansion board • x4 Mini SAS port 1 and 2 on expansion board in primary riser to Smart Array controller port 1 and 2 • x4 Mini SAS port 1 and 2 on expansion board in tertiary riser to Smart Array controller port 1 and 2 • 4 LFF backplane ports 1-3 to expansion board/Smart Array controller	P24139-001
2 SFF/4 LFF/8 LFF SAS/SATA cables • Mini SAS/SATA on system board to 4 LFF, short • Slim SAS/SATA x4 8 LFF Box 1-2 to x8 Slim SAS • Slim SAS/SATA x4 8 LFF Box 3/midtray to x8 Slim SAS • Slim SAS to 7p SAS/SATA 2 SFF, front • x4 to 7p, SAS/SATA 2 SFF front/rear	P24553-001

NVMe cable spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Box 1 to primary riser, Box 2 to secondary riser • Box 1 port 1 of controller in primary riser • Box 2 port 2 of controller in secondary riser	P42195-001
Box 3 to riser • Box 3 premium ports 1-4 to riser • Box 3 premium backplane single x32 • Box 2 premium backplane to system board ports 1-4	P24130-001
Box 2 to x32, Box 1 to x16 primary/secondary • Box 2 premium ports 1, 2, 3, 4 to x32 tri-mode controller • Box 1 premium ports 1, 2, 3, 4 to x32 tri-mode controller • Box 1 media 2 SFF -x16	P24132-001
Box 2 to secondary riser, ports 1, 2 or 3, 4 • Box 2 premium port 1, 2 to x32 tri-mode controller • Box 2 premium port 3, 4 to x32 tri-mode controller	P24131-001
Box 3 premium ports 1-4 to x16 on primary riser • Box 3 ports 1-4 to x16 on primary riser • Box 1 ports 1-4 to x16 on secondary riser	P24134-001
Box 2 premium ports 1, 2 or 3, 4 to x16 on secondary riser • Box 2 premium ports 1-2 to x16 on secondary riser • Box 2 premium ports 3-4 to x16 on secondary riser	P24135-001
8 NVMe ports 1-4 to system board and controller • Box 1/2 premium ports 1-2 to 1A/1B (box 2) or 1B/2B (box 1) on system board • Box 2 premium port 3-4 to 1B/2B on system board • Box 2 premium port 3 to Smart Array controller (7A) • Box 2 premium port 4 to system board (8A) • Box 2 premium port 3-4 to 1C/2C on system board	P24554-001

Power cable spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Power cable spare parts • I/O wire to system board, front • 1x5 to 2x4, LFF, 240mm • 1x5 to 2x4, LFF, 400mm • 1x5 to 2x4 +x, LFF, 400mm • 2x3 to 2x3, SFF • 2x5 to 2x3 + 2x4	P23361-001
HPE 1600W -48VDC 600V 3.5m power cable kit	P22173-B21

Miscellaneous cable spare parts

Description	Spare part number
Miscellaneous cables - Display port + USB 2.0 - Internal USB to USB port, front - Optical disk drive, Slim SATA - Serial port	P24138-001
Mini SAS cable assembly kit	784621-001
Mini SAS cable kit	784629-001
Power cables kit	875096-001
I/O board to system board, front	P24127-001
Midtray, premium/basic host board	P24133-001
Re-timer cable kit - NVMe 8 SFF - Re-timer PCIe card	P27685-001
Split midtray port 1-4 to x32	P24136-001
SAS 1-3 SAS/SATA x8 SlimSAS	P24137-001
OCP NIC 3.0 cables - Slim SAS x8 to low profile Slim SAS x8 - Low profile Slim SAS x8 to x8 OCP processor 1	P24128-001
Processor 1/2 to riser port 1/port 2 cables - Processor to riser port 1, 686mm - Processor 1 to secondary riser, port 1, 248mm - Processor 1 to secondary riser, port 1, 686mm	P24129-001

Thermal grease spare part

<u>Customer self repair</u>: **Mandatory**

Description	Spare part number
2.0g thermal grease (1g per processor)	777298-001

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.

Parts only warranty service

Your Hewlett Packard Enterprise Limited Warranty may include a parts only warranty service. Under the terms of parts only warranty service, Hewlett Packard Enterprise will provide replacement parts free of charge.

For parts only warranty service, CSR part replacement 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.

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.

Service de garantie "pièces seules"

Votre garantie limitée Hewlett Packard Enterprise peut inclure un service de garantie "pièces seules". Dans ce cas, les pièces de rechange fournies par Hewlett Packard Enterprise ne sont pas facturées.

Dans le cadre de ce service, la réparation des pièces CSR 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.

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 spedirà 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 addizionali 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 component. 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.

Servizio di garanzia per i soli componenti

La garanzia limitata Hewlett Packard Enterprise può includere un servizio di garanzia per i soli componenti. Nei termini di garanzia del servizio per i soli componenti, Hewlett Packard Enterprise fornirà gratuitamente le parti di ricambio.

Per il servizio di garanzia per i soli componenti è obbligatoria la formula CSR che prevede la riparazione da parte del cliente. Se il cliente invece richiede la sostituzione ad Hewlett Packard Enterprise dovrà sostenere le spese di spedizione e di manodopera per il servizio.

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.

Parts-only Warranty Service (Garantieservice ausschließlich für Teile)

Ihre Hewlett Packard Enterprise Garantie umfasst möglicherweise einen Parts-only Warranty Service (Garantieservice ausschließlich für Teile). Gemäß den Bestimmungen des Parts-only Warranty Service stellt Hewlett Packard Enterprise Ersatzteile kostenlos zur Verfügung.

Für den Parts-only Warranty Service ist das CSR-Verfahren zwingend vorgegeben. Wenn Sie den Austausch dieser Teile von Hewlett Packard Enterprise vornehmen lassen, werden Ihnen die Anfahrt- und Arbeitskosten für diesen Service berechnet.

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.

Servicio de garantía exclusivo de componentes

La garantía limitada de Hewlett Packard Enterprise puede que incluya un servicio de garantía exclusivo de componentes. Según las condiciones de este servicio exclusivo de componentes, Hewlett Packard Enterprise le facilitará los componentes de repuesto sin cargo adicional alguno.

Para este servicio de garantía exclusivo de componentes, es obligatoria la sustitución de componentes por parte del usuario (CSR). 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.

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 garantievoorwaarden 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.

Garantieservice "Parts Only"

Het is mogelijk dat de Hewlett Packard Enterprise garantie alleen de garantieservice "Parts Only" omvat. Volgens de bepalingen van de Parts Only garantieservice zal Hewlett Packard Enterprise kosteloos vervangende onderdelen ter beschikking stellen.

Voor de Parts Only garantieservice is vervanging door CSR-onderdelen verplicht. Als u Hewlett Packard Enterprise verzoekt deze onderdelen voor u te vervangen, worden u voor deze service reiskosten en arbeidsloon in rekening gebracht

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.

Serviço de garantia apenas para peças

A garantia limitada da Hewlett Packard Enterprise pode incluir um serviço de garantia apenas para peças. Segundo os termos do serviço de garantia apenas para peças, a Hewlett Packard Enterprise fornece as peças de reposição sem cobrar nenhuma taxa.

No caso desse serviço, a substituição de peças CSR é obrigatória. Se desejar que a Hewlett Packard Enterprise substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.

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サポートセンター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。

部品のみ保証サービス

Hewlett Packard Enterprise保証サービスには、部品のみ保証サービスが適用される場合があります。このサービスでは、交換部品は無償で提供されます。

部品のみ保証サービスにおいては、CSR部品をお客様により交換作業していただくことが必須になります。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、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のご負担となります。

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。如果要求您将有缺陷的部件返还给 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。

仅部件保修服务

您的 Hewlett Packard Enterprise 有限保修服务可能涉及仅部件保修服务。根据仅部件保修服务条款的规定，Hewlett Packard Enterprise 将免费提供更换的部件。

仅部件保修服务要求进行 CSR 部件更换。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。

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性的。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。

僅限零件的保固服務

您的「Hewlett Packard Enterprise 有限保固」可能包含僅限零件的保固服務。在僅限零件的保固服務情況下，Hewlett Packard Enterprise 將免費提供替換零件。

針對僅限零件的保固服務，CSR 零件替換是強制性的。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。

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.

부품 제공 보증 서비스

Hewlett Packard Enterprise 제한 보증에는 부품 제공 보증 서비스가 포함될 수 있습니다. 이러한 경우 Hewlett Packard Enterprise는 부품 제공 보증 서비스의 조건에 따라 교체 부품만을 무료로 제공합니다.

부품 제공 보증 서비스 제공 시 CSR 부품 교체는 의무 사항입니다. 사용자가 Hewlett Packard Enterprise에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.

Removal and replacement procedures

Safety considerations

Before performing service procedures, review all the safety information.

Electrostatic discharge

Be aware of the precautions you must follow when setting up the system or handling components. 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 system or component.

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. 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 ±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.

Symbols on equipment

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

This symbol in conjunction with any of the following symbols indicates the presence of a potential hazard. The potential for injury exists if warnings are not observed. Consult your documentation for specific details.

該符號與以下任意符號組合使用，指示存在潛在的危險。如果不遵守警告，可能會造成人身傷害。詳細信息請參閱相關文檔。

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.

此符號表明存在危險電路或觸電的危險。所有維修工作應由具有相關資格的人員來完成。
警告：為了減少觸電造成人身傷害的危險，請不要打開此外殼。所有維護、升級和維修工作都應由具有相關資格的人員來完成。

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 risk of injury from electric shock hazards, do not open this enclosure.

此符號表明存在觸電的危險。在這一區域內沒有用戶可以現場維修的部件。一定不要打開。警告：為了減少觸電造成人身傷害的危險，請不要打開此外殼。

This symbol on an RJ-45 receptacle indicates a Network Interface Connection.

WARNING:

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

RJ-45 插孔上的該符號指示網絡接口連接。
警告：為了減少觸電、火災或設備損壞的危險，不要將電話或電信連接設備插入此插孔。

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.

此符號表明表面或組件過熱。如果觸摸此表面，可能會造成人身傷害。警告：為了減少因組件過熱而造成人身傷害的危險，應等到表面降溫後再觸摸。

This symbol indicates the presence of a moving fan blade. If the spinning blades are contacted, the potential for injury exists.

⚠ **WARNING:**

Hazardous moving parts. Keep away from moving fan blades. To reduce the risk of injury from a hot component, allow the surface to cool before touching.

此符號表明存在運動風扇葉片的危險。如果觸摸旋轉葉片，可能會造成人身傷害。警告：危險的運動部件。請遠離運動風扇刀片。為減少被高溫組件燙傷的危險，應在表面冷卻之後再接觸。

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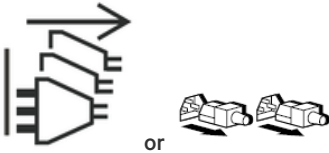
These symbols on power supplies or systems indicate that the equipment is supplied by multiple sources of power.

⚠ **WARNING:**

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

電源或系統上的這些符號表明設備由多個電源供電。
警告：為了減少觸電造成人身傷害的危險，應拔下所有電源線插頭，完全斷開系統的電源。

Weight in kg.
Weight in lb.

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.

此符號表明組件的重量超出了建議值，一個人無法安全取放。
警告：為了減少人身傷害或設備損壞的危險，應遵守當地有關人工取放物品的職業保健與安全規定及準則。

A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. To prevent damage, observe antistatic precautions.

手指或其它導體所釋放的靜電可能損壞主板或其它對靜電敏感的設
備。為防止發生損壞，請遵守防靜電預防措施。

This symbol indicates the presence of a laser device in the product that may exceed Class 1 limits. Refer to the product documentation for more information.

此符號表明在可能會超出 1 類限制的產品中存在激光設備。有關詳細
信息，請參閱產品文檔。

This symbol indicates the presence of moving parts inside the product that may present a pinch point if improperly contacted.

> ⚠ **WARNING:**
>
> Hazardous moving parts. Do not insert any tools or any part of your body into the product while it is operating or in any openings.

Server warnings and cautions

⚠ **WARNING:**

This server is 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.

- Get help to lift and stabilize the product during installation or removal, especially when the product is not fastened to the rails. Hewlett Packard Enterprise recommends that a minimum of two people are required for all rack server installations. If the server is installed higher than chest level, a third person may be required to help align the server.

- Use caution when installing the server in or removing the server from the rack; it is unstable when not fastened to the rails.

⚠ **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 personal injury, electric shock, or damage to the equipment, remove the power cord to remove power from the server. The front panel Power On/Standby button does not completely shut off system power. Portions of the power supply and some internal circuitry remain active until AC/DC power is removed.

⚠ **WARNING:**

To reduce the risk of fire or burns after removing the energy pack:

- Do not disassemble, crush, or puncture the energy pack.

- Do not short external contacts.

- Do not dispose of the energy pack in fire or water.

- Do not expose the energy pack to low air pressure as it might lead to explosion or leakage of flammable liquid or gas.

- Do not expose the energy pack to temperatures higher than 60°C (140°F).

After power is disconnected, battery voltage might still be present for 1s to 160s.

⚠ **CAUTION:**

Protect the server from power fluctuations and temporary interruptions with a regulating uninterruptible power supply. This device protects the hardware from damage caused by power surges and voltage spikes and keeps the system in operation during a power failure.

⚠ **CAUTION:**

Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

Preparation procedures

To access components and perform certain upgrade, maintenance, or service procedure, you must perform one or more of the procedures described in this section.
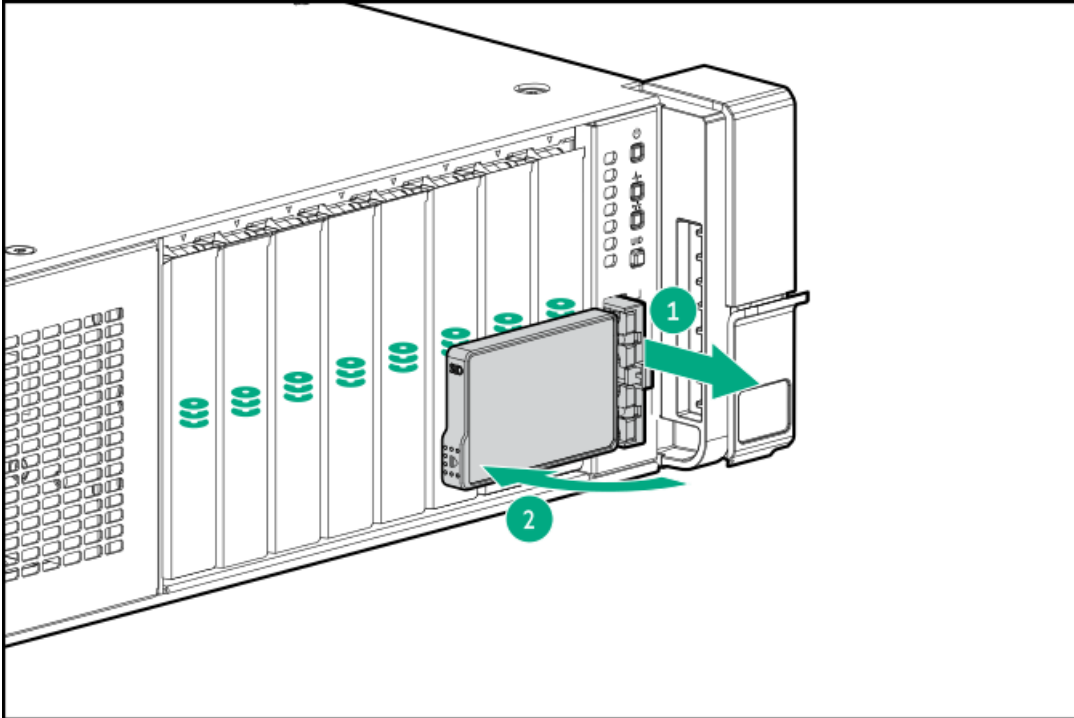
Prerequisites

Before powering down the server for an upgrade, maintenance, or service procedure, perform a backup of critical server data and programs.

Access the Systems Insight Display

The Systems Insight Display is supported only on SFF models.

Procedure

1. Press and release the panel.

2. After the display fully ejects, rotate the display to view the LEDs.

Power down the server

Before powering down the server for any upgrade or maintenance procedures, perform a backup of critical server data and programs.

> ⓘ **IMPORTANT:**
>
> When the server is in standby mode, auxiliary power is still being provided to the system.

To power down the server, use one of the following methods:

- Press and release the Power On/Standby button.

  This method initiates a controlled shutdown of applications and the OS before the server enters standby mode.

- Press and hold the Power On/Standby button for more than 4 seconds to force the server to enter standby mode.

  This method forces the server to enter standby mode without properly exiting applications and the OS. If an application stops responding, you can use this method to force a shutdown.

- Use a virtual power button selection through iLO.

  This method initiates a controlled remote shutdown of applications and the OS before the server enters standby mode.

Before proceeding, verify that the server is in standby mode by observing that the system power LED is amber.
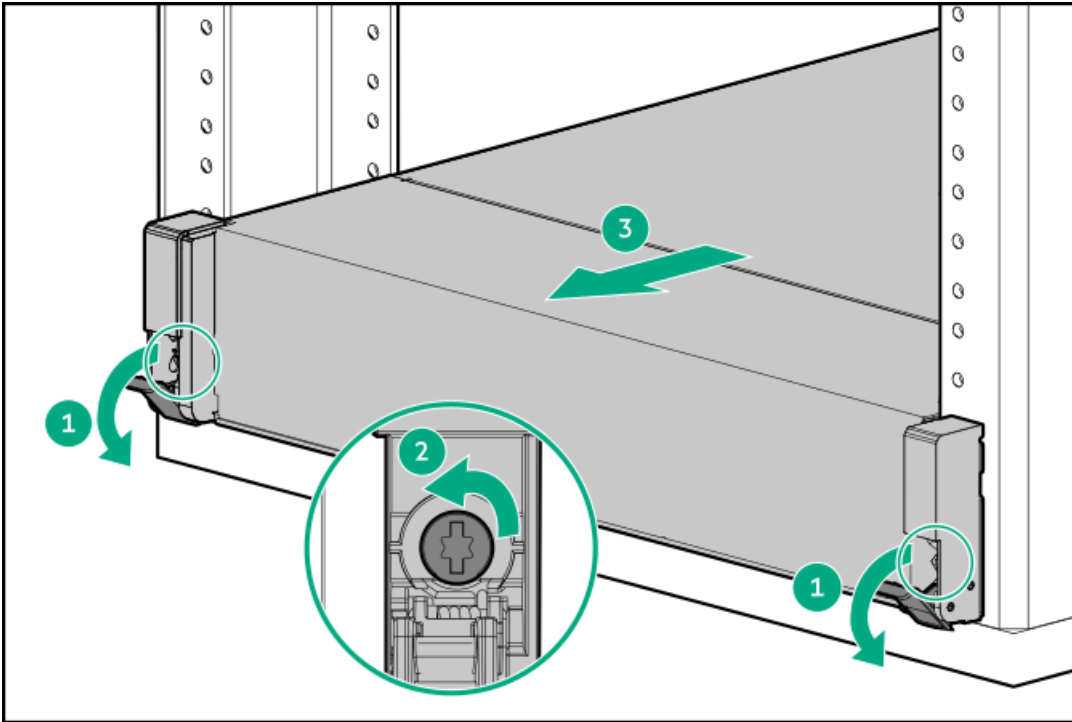
Power up the server

To power up the server, use one of the following methods:

- Press the Power On/Standby button.

- Use the virtual power button through iLO.

Extend the server from the rack

1. Pull down the quick release levers on each side of the server.

2. If necessary, use a T-25 Torx screwdriver to loosen the shipping screws.

3. Extend the server from the rack.

4. After performing the installation or maintenance procedure, slide the server back into the rack, and then press the server firmly into the rack to secure it in place.

   ⚠ **WARNING:**

   > To reduce the risk of personal injury, be careful when pressing the server rail-release latches and sliding the server into the rack. The sliding rails could pinch your fingers.

Remove the server from the rack

To remove the server from a Hewlett Packard Enterprise, Compaq-branded, Telco, or third-party rack, complete the following.

Procedure

1. Power down the server .

2. Extend the server from the rack .

3. Disconnect the cabling and remove the server from the rack.

   For more information, see the documentation that ships with the rack mounting option.

4. Place the server on a sturdy, level surface.

Remove the access panel

⚠ **WARNING:** To reduce the risk of personal injury from hot surfaces, allow the drives, power supplies, and internal system components to cool before touching them.

⚠ **CAUTION:**

Do not operate the chassis for long periods with the access panel open or removed. Operating the chassis in this manner results in improper airflow and improper cooling that can lead to thermal damage.

Procedure

1. Power down the server.

2. Extend the server from the rack.

3. Open or unlock the locking latch, slide the access panel to the rear of the chassis, and remove the access panel.

Removing the air baffle

⚠ **CAUTION:** Do not detach the cable that connects the battery pack to the cache module. Detaching the cable causes any unsaved data in the cache module to be lost.

⚠ **CAUTION:** For proper cooling, do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   ● Extend the server from the rack.

   ● Remove the server from the rack.

4. Remove the access panel.

5. Remove the air baffle.
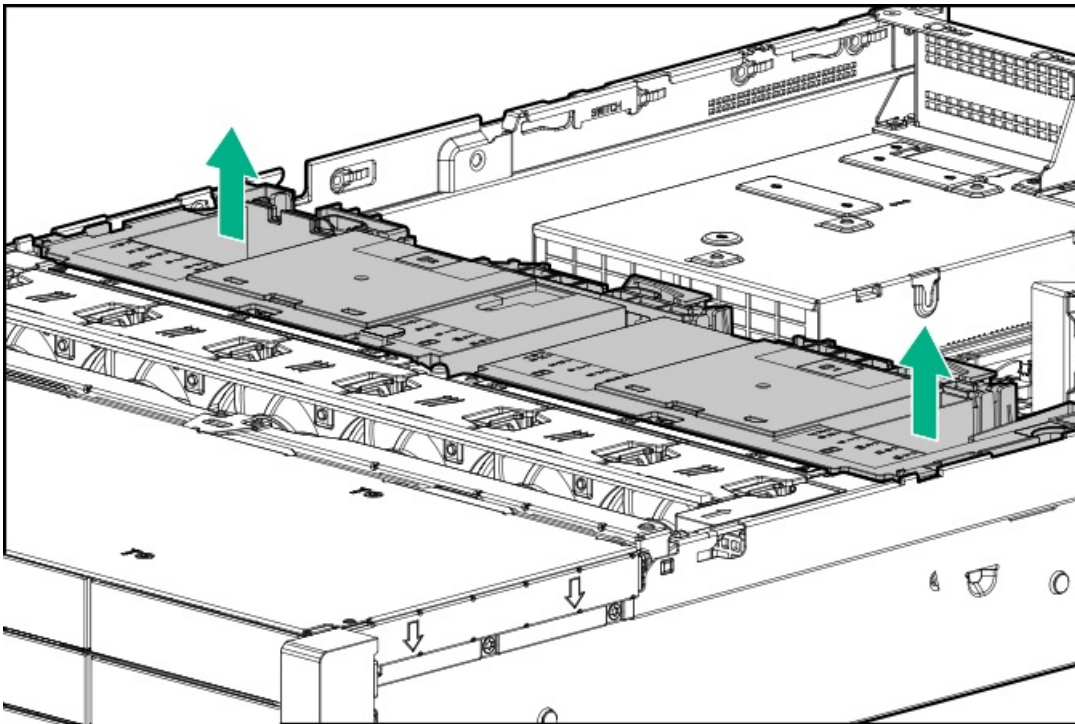
Release the full-length expansion board retainer

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    *   Extend the server from the rack.

    *   Remove the server from the rack.

4. Remove the access panel.

5. Remove the air baffle.

6. Release the full-length expansion board retainer.
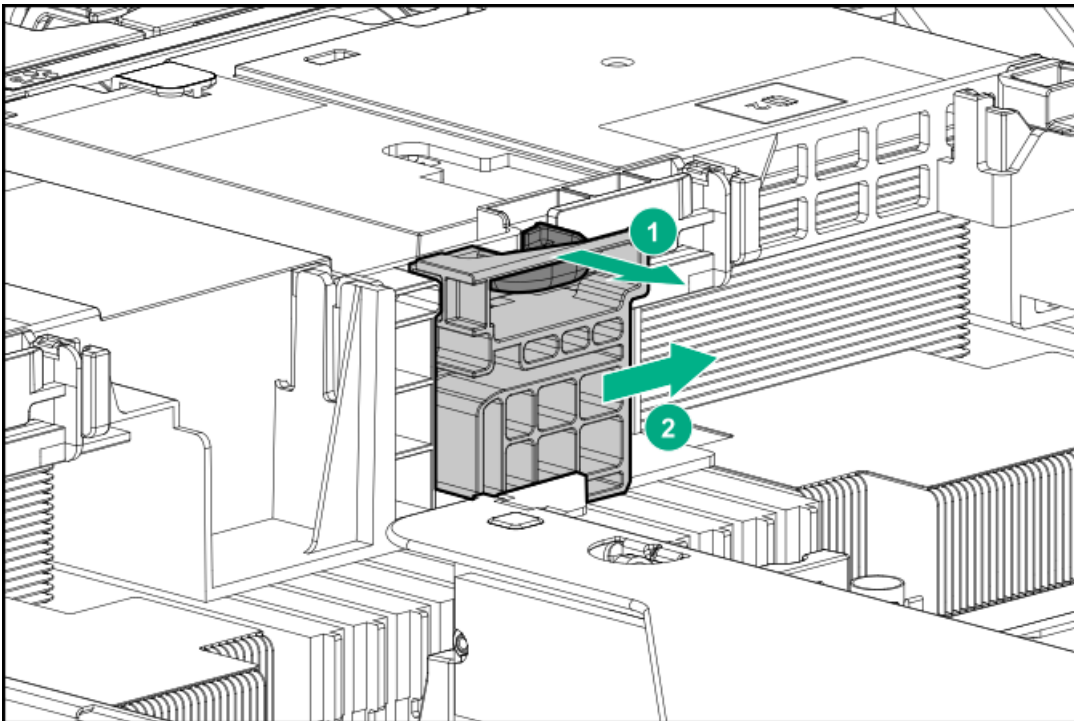
To replace the component, reverse the removal procedure.

Releasing the cable management arm

Release the cable management arm and then swing the arm away from the rack.
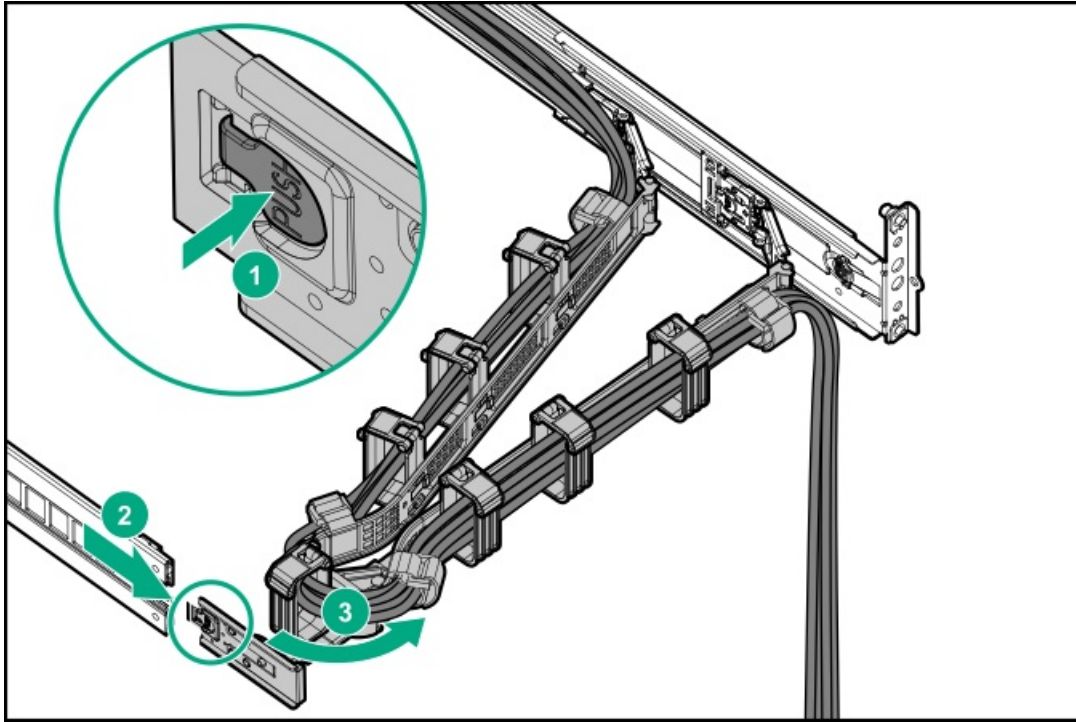
Removing and replacing the front bezel

Procedure

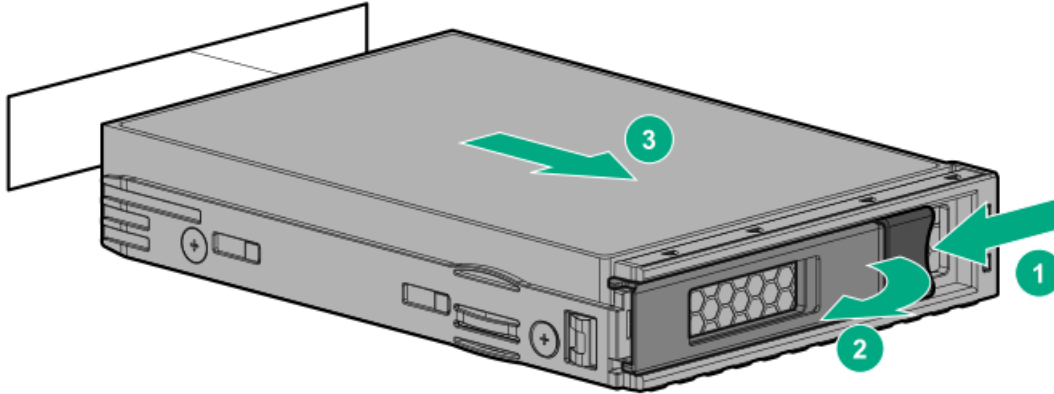1. If installed, remove the Kensington security lock.
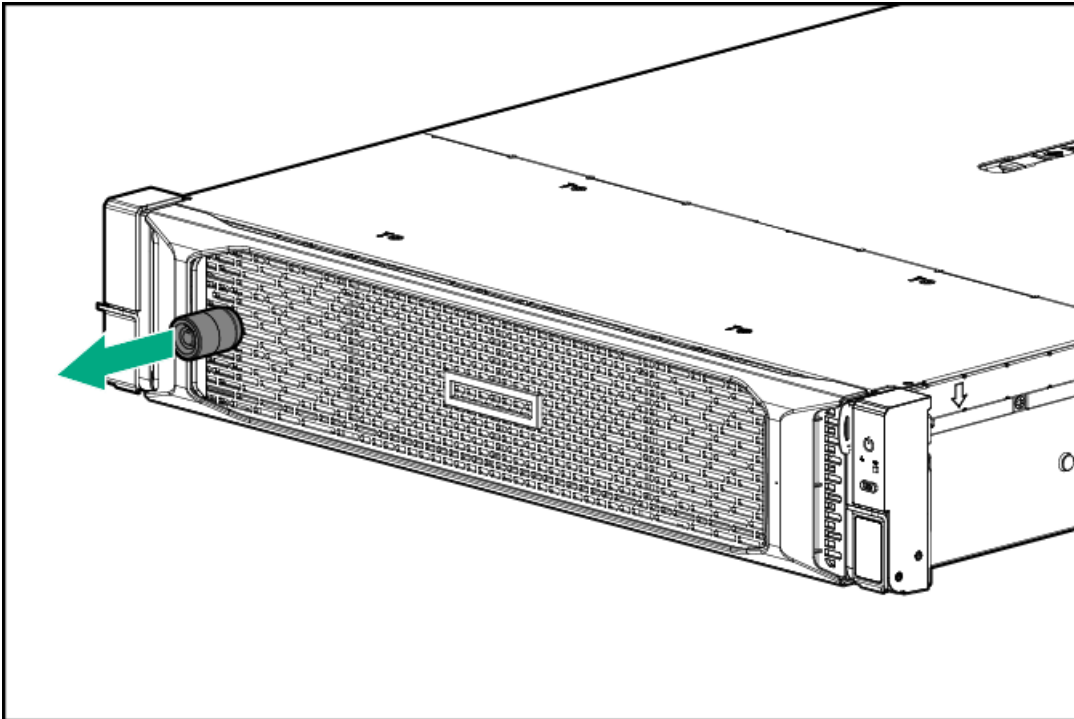
2. Remove the front bezel.
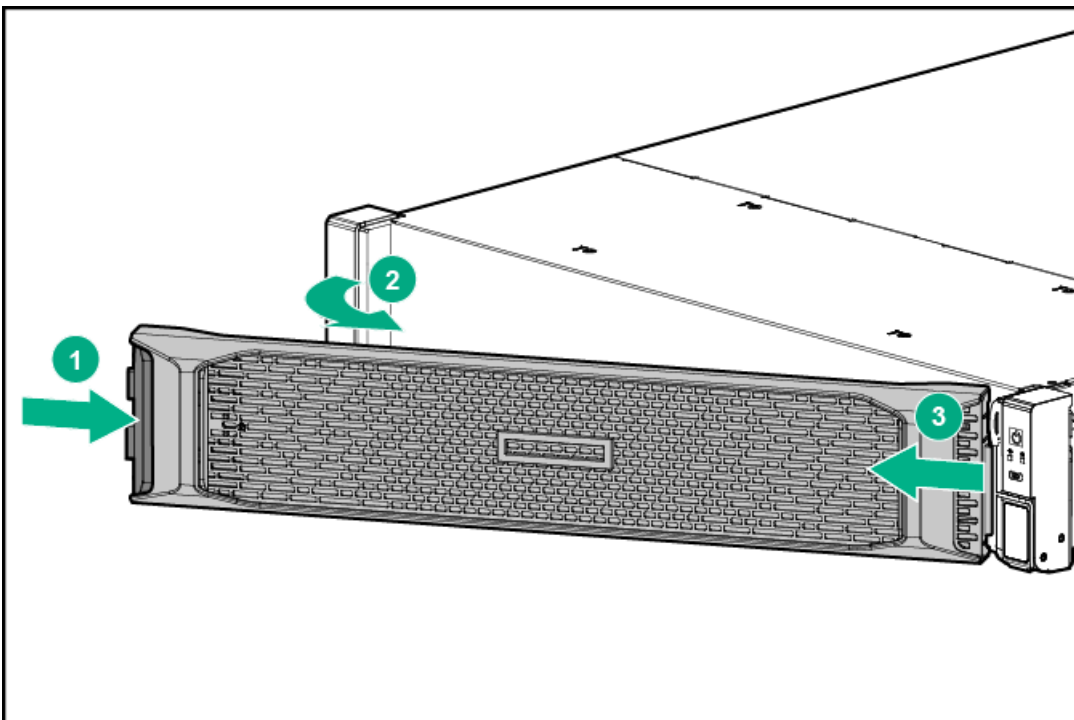
To replace the component, reverse the removal procedure.

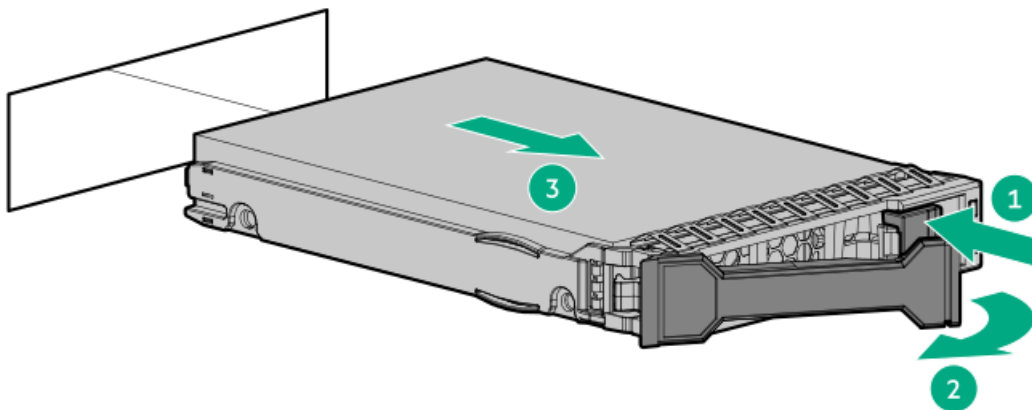# Removing and replacing a hot-plug SAS, SATA or NVMe drive

△ **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.

Procedure

1. Back up all server data on the drive.

2. If installed, remove the front bezel.

3. Observe the drive LED status and determine if it can be removed.

4. Remove the drive.

   - LFF drive

   - SFF drive

To replace the component, reverse the removal procedure.

Removing and replacing a drive blank

△ **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.

Procedure

1. If installed, remove the front bezel.

2. Remove the drive blank.

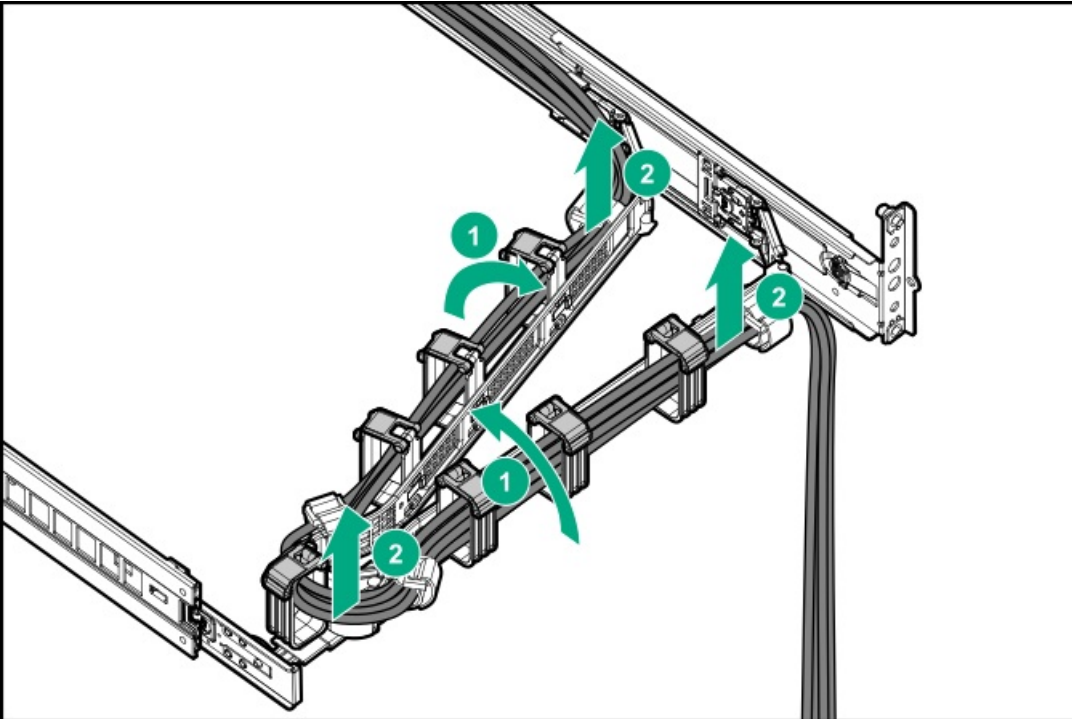   ● LFF drive blank
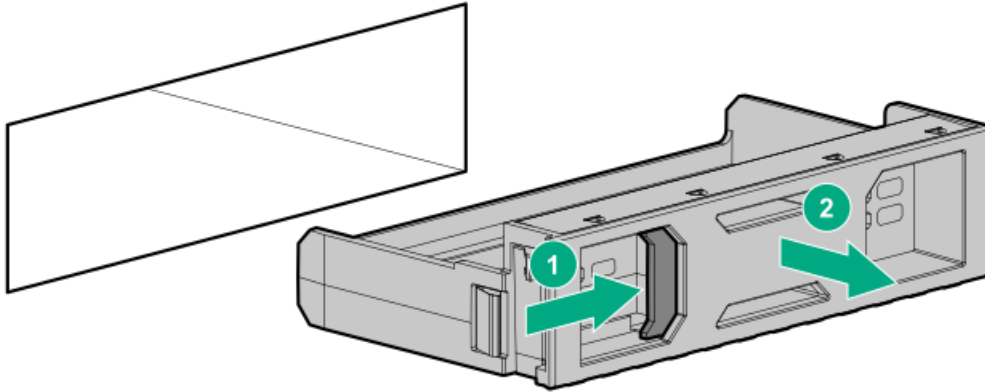
   ● SFF drive blank
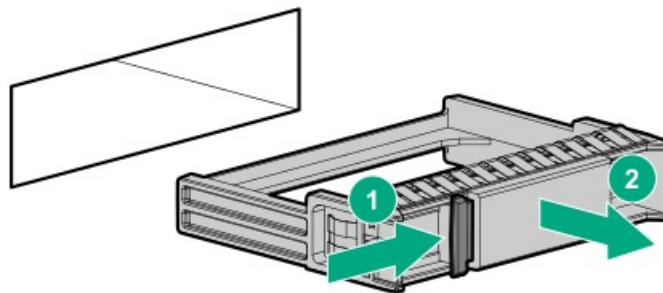
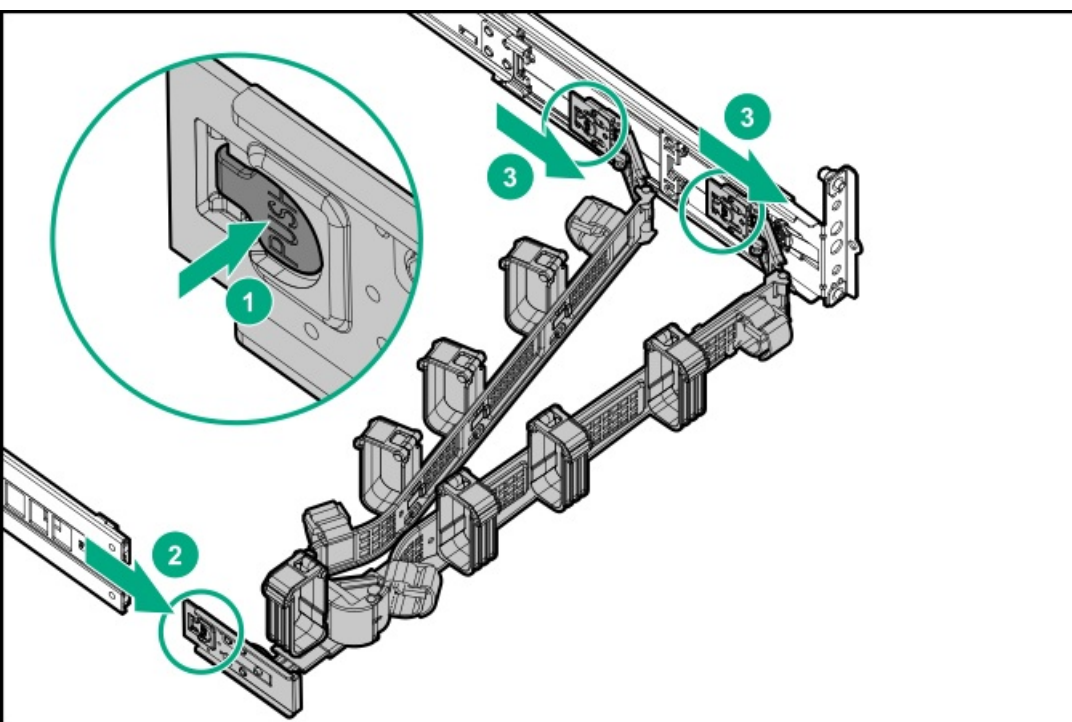To replace the component, reverse the removal procedure.

Removing and replacing the cable management arm

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Extend the server from the rack.

4. Remove the cables from the cable management arm.

5. Remove the cable management arm.

To replace the component, reverse the removal procedure.

Removing and replacing a power supply

Power supply warnings and cautions

> ⚠ **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.

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

> ⚠ **CAUTION:** Mixing different types of power supplies in the same server might:
> - Limit or disable some power supply features including support for power redundancy.
> - Cause the system to become unstable and might shut down.
>
> To ensure access to all available features, all power supplies in the same   server should have the same output and efficiency ratings. Verify that all power supplies have the same part number and label color.

Removing and replacing a hot-plug AC power supply

⚠ **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.

⚠ **WARNING:** To reduce the risk of personal injury from hot surfaces, allow the drives, power supplies, and internal system components to cool before touching them.

⚠ **CAUTION:** To prevent damage to electrical components, properly ground the server before beginning any installation procedure. Improper grounding can cause electrostatic discharge.

⚠ **CAUTION:**

To prevent improper cooling and thermal damage, do not operate the server or the enclosure unless all drive and device bays are populated with either a component or a blank.
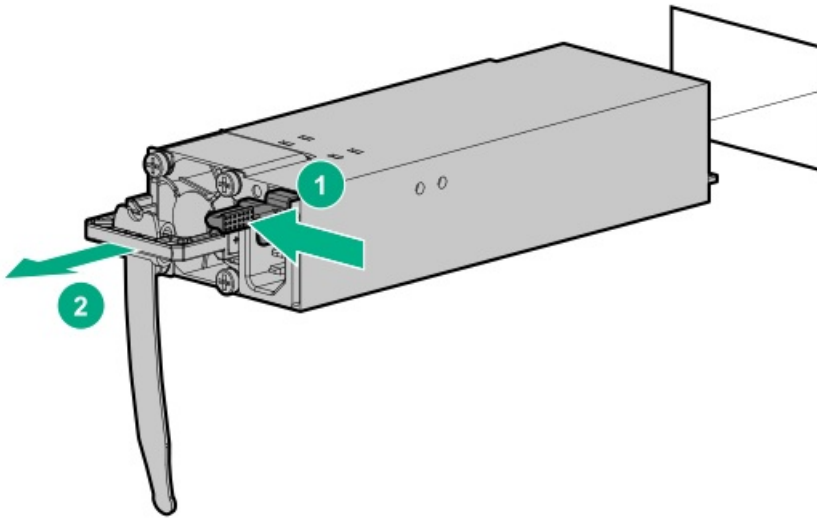
Procedure

1. If installed, release the cable management arm .

2. If the server is using a single power supply only, remove all power from the server:

   a. Back up all server data.

   b. Power down the server .

   c. Disconnect all peripheral cables from the server.

3. Release the power cord from the strain relief strap.
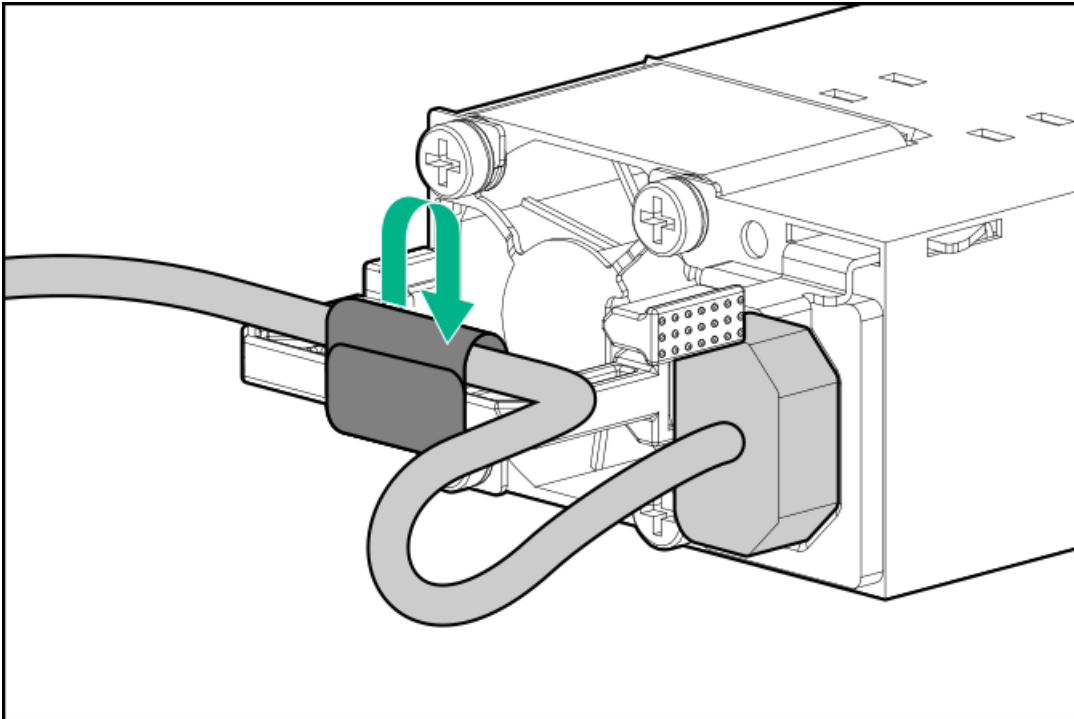
4. Disconnect the power cord from the power supply.
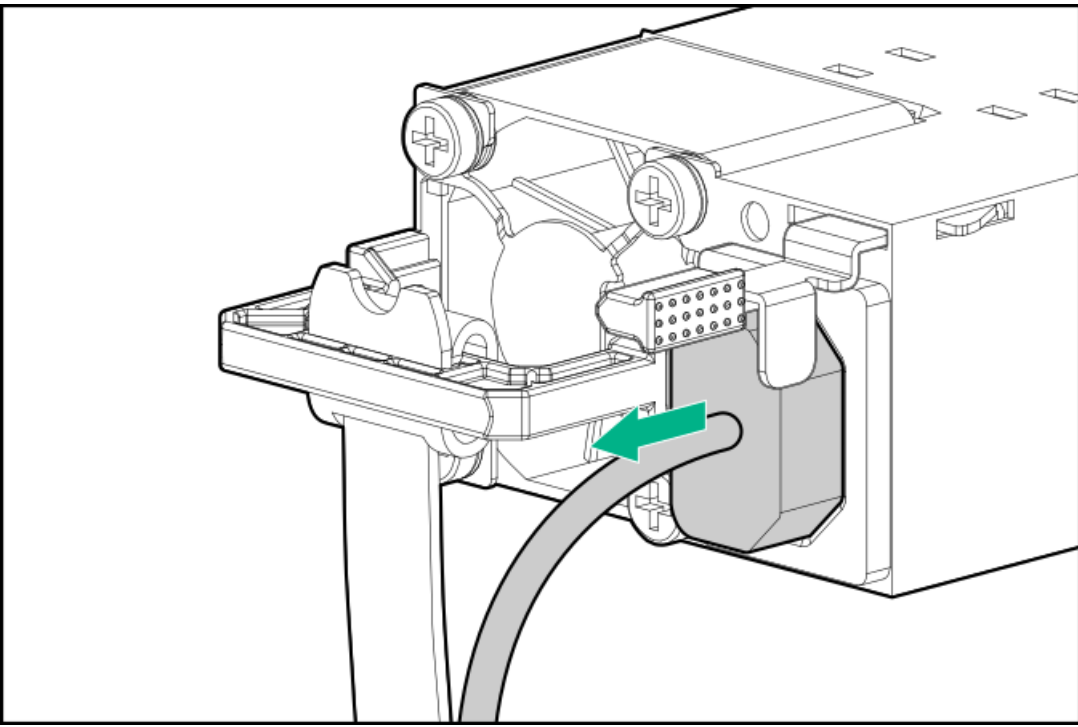
5. Remove the power supply.

To replace the component, reverse the removal procedure.

Removing and replacing the HPE 800 W Flex Slot -48 VDC hot-plug power supply

> ⚠ **WARNING:**
>
> To reduce the risk of electric shock, fire, and damage to the equipment, you must install this product in accordance with the following guidelines:
>
> - The HPE 800 W Flex Slot -48 VDC hot-plug power supplyis intended only for installation in Hewlett Packard Enterprise servers located in a restricted access location.
>
> - The HPE 800 W Flex Slot -48 VDC hot-plug power supplyis not intended for direct connection to the DC supply branch circuit. Only connect this power supply to a power distribution unit (PDU) that provides an independent overcurrent-protected output for each DC power supply. Each output overcurrent-protected device in the PDU must be suitable for interrupting fault current available from the DC power source and must be rated no more than 30 A.
>
> - The PDU output must have a shut-off switch or a circuit breaker to disconnect power for each power supply. To completely remove power from the power supply, disconnect power at the PDU. Disconnect the power for each power supply, if there are multiple power supplies.
>
> - In accordance with applicable national requirements for Information Technology Equipment and Telecommunications Equipment, this power supply only connects to DC power sources that are classified as SELV or TNV. Generally, these requirements are based on the International Standard for Information Technology Equipment, IEC 60950-1/IEC 62368-1. In accordance with local and regional electric codes and regulations, the DC source must have one pole (Neutral/Return) reliably connected to earth ground.
>
> - You must connect the power supply ground screw located on the front of the power supply to a suitable ground (earth) terminal. In accordance with local and regional electric codes and regulations, this terminal must be connected to a suitable building ground (earth) terminal. Do not rely on the rack or cabinet chassis to provide adequate ground (earth) continuity.

Prerequisites

Before you perform this procedure, make sure that you have the following items:

- No. 1 Phillips screwdriver

- If you are replacing the factory installed ground lug, use the KST RNB5-5 crimp terminal ring or equivalent. Use an M5-0.80 x 8 screw to attach the ground lug to the power supply.

Procedure

1. If installed, release the cable management arm.

2. If the server is using a single power supply only, remove all power from the server:

   a. Back up all server data.

   b. Power down the server.

   c. Disconnect all peripheral cables from the server.

3. Release the power cord, wires, and/or cables from the strain relief strap.

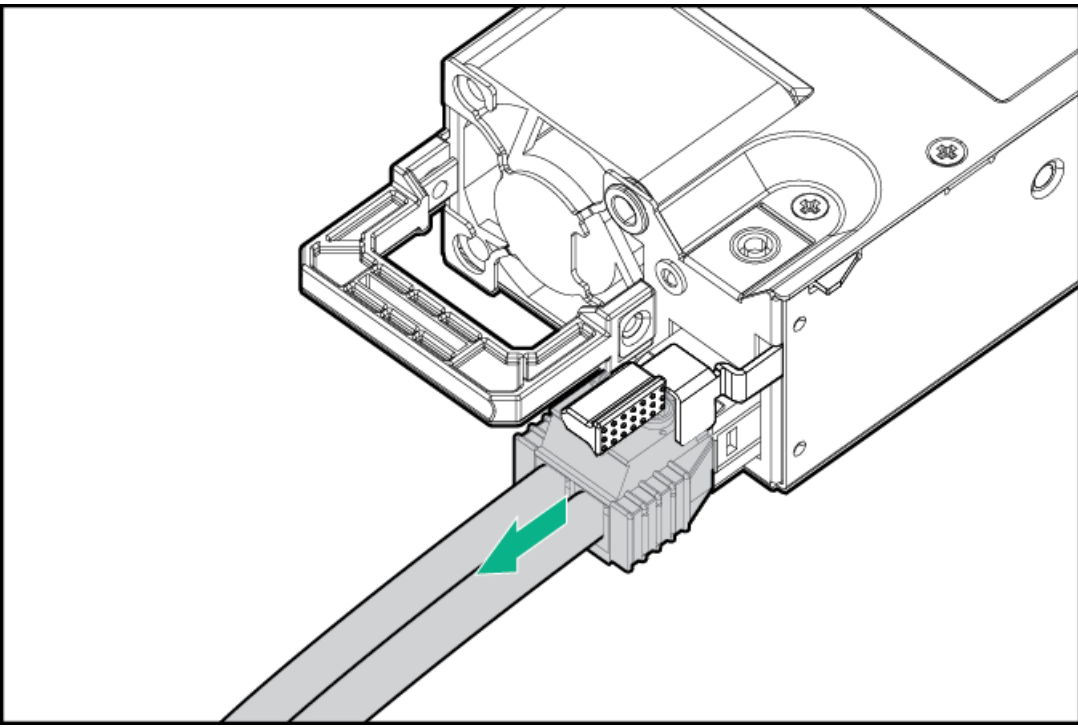4. To access the ground cable screw, slide the power supply out of the bay.
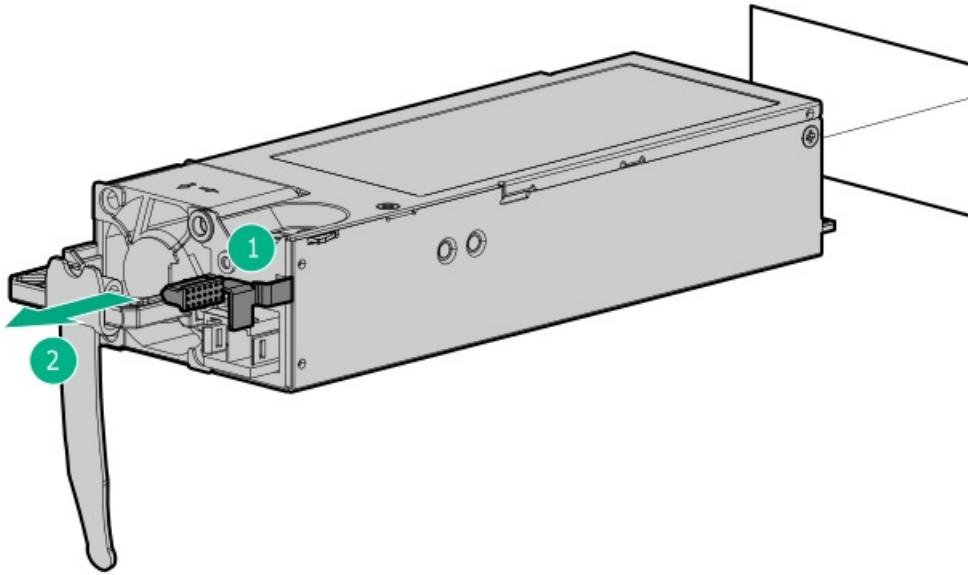
5. Detach the ground (earthed) cable from the power supply.
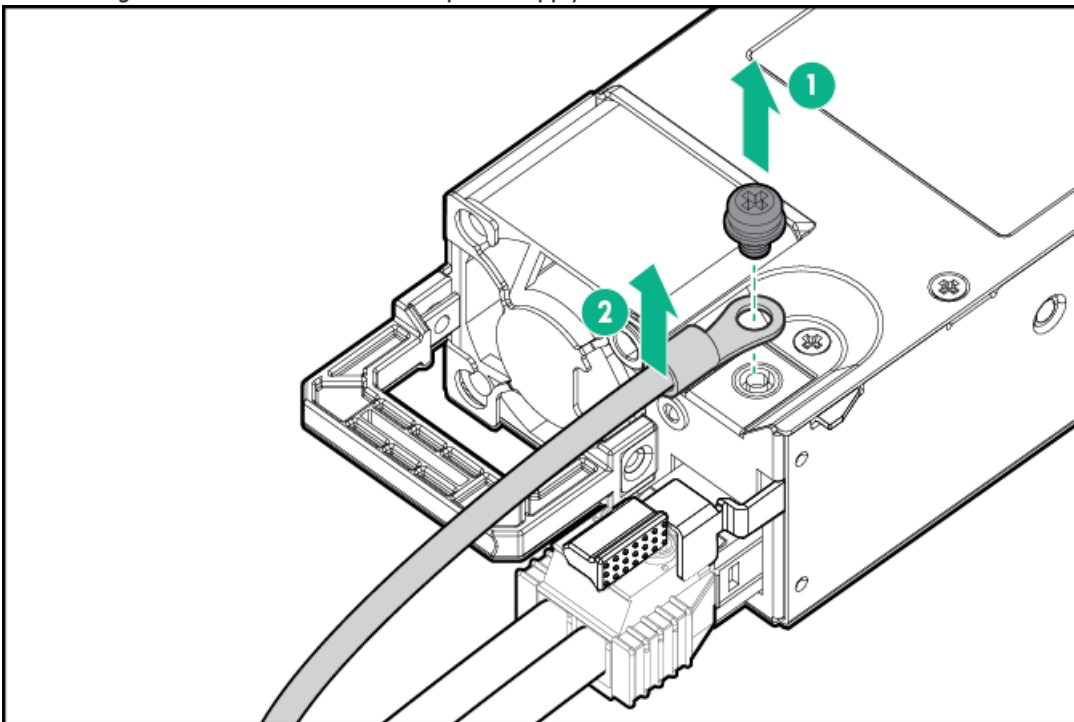
6. Remove the terminal block connector from the power supply.

To replace the component, reverse the removal procedure.

Removing and replacing an HPE 1600 W Flex Slot -48 VDC hot-plug power supply

⚠ **WARNING:**

To reduce the risk of electric shock, fire, and damage to the equipment, you must install this product in accordance with the following guidelines:

- The HPE 1600 W Flex Slot -48 VDC hot-plug power supply is intended only for installation in Hewlett Packard Enterprise servers located in a restricted access location.

- The HPE 1600 W Flex Slot -48 VDC hot-plug power supply is not intended for direct connection to the DC supply branch circuit. Only connect this power supply to a power distribution unit (PDU) that provides an independent overcurrent-protected output for each DC power supply. Each output overcurrent-protected device in the PDU must be suitable for interrupting fault current available from the DC power source and must be rated no more than 45 A.

- The PDU output must have a shut-off switch or a circuit breaker to disconnect power for each power supply. To completely remove power from the power supply, disconnect power at the PDU. The end product may have multiple power supplies. To remove all power from the product, disconnect the power for each power supply.

- In accordance with applicable national requirements for Information Technology Equipment and Telecommunications Equipment, this power supply only connects to DC power sources that are classified as SELV or TNV. Generally, these requirements are based on the International Standard for Information Technology Equipment, IEC 60950-1/IEC 62368-1. In accordance with local and regional electric codes and regulations, the DC source must have one pole (Neutral/Return) reliably connected to earth ground.

- You must connect the power supply ground screw located on the front of the power supply to a suitable ground (earth) terminal. In accordance with local and regional electric codes and regulations, this terminal must be connected to a suitable building ground (earth) terminal. Do not rely on the rack or cabinet chassis to provide adequate ground (earth) continuity.

Prerequisites

Before you perform this procedure, make sure that you have a No. 1 Phillips screwdriver.

Procedure

1. If installed, release the cable management arm.

2. If the server is using a single power supply only, remove all power from the server:

   a. Back up all server data.

   b. Power down the server.

   c. Disconnect all peripheral cables from the server.

3. Slide the power supply out of the bay.

4. Release the ground (earthed), -48 V, and return wires from the strain relief strap.
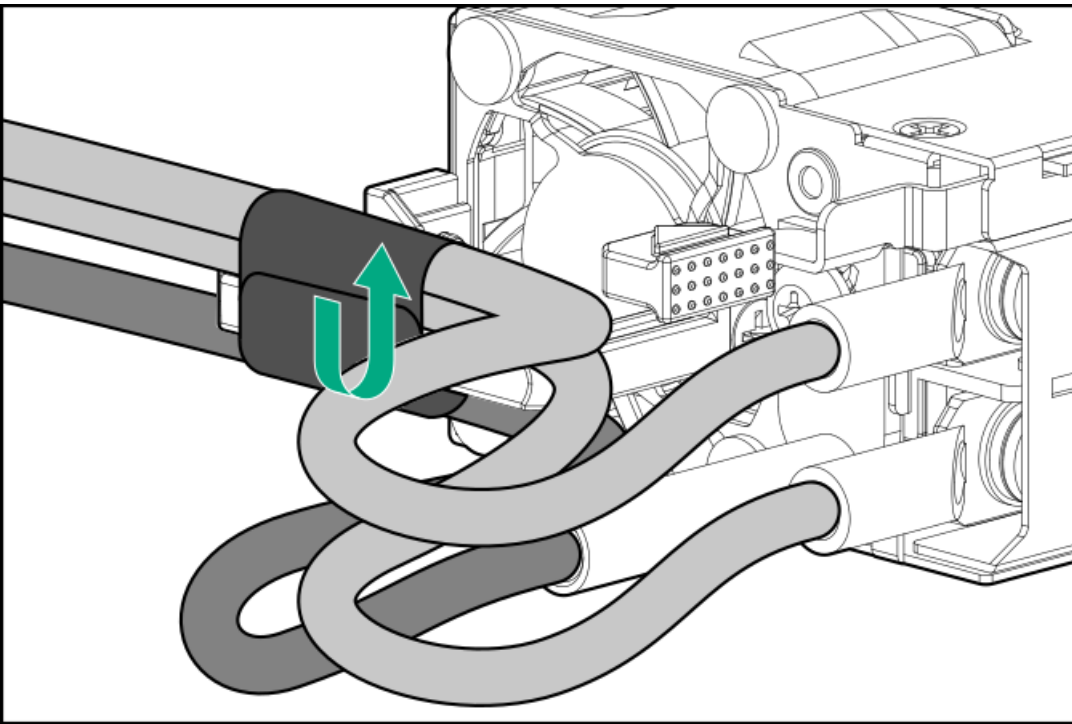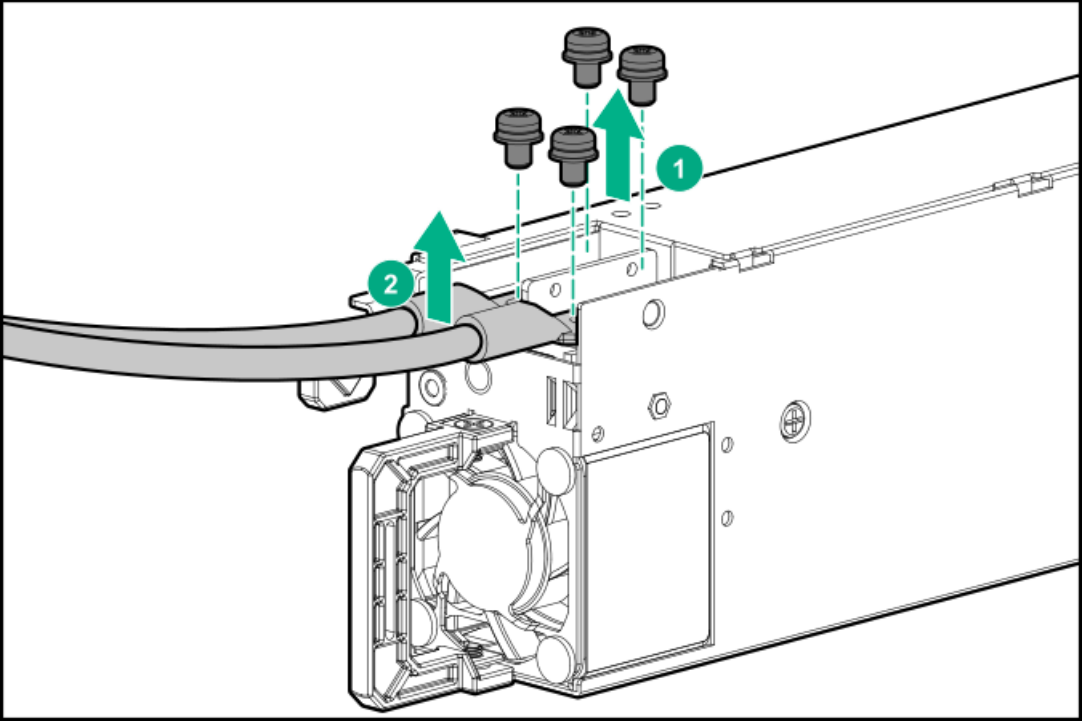
5. Disconnect the ground (earthed) wire from the power supply.
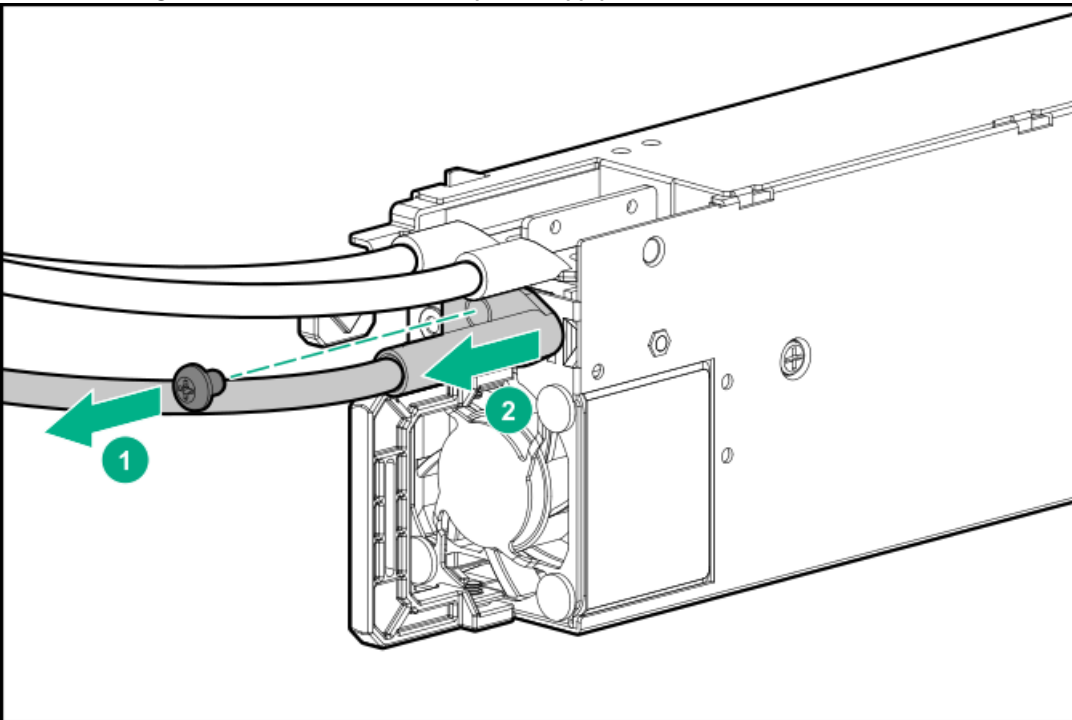
6. Remove the clear plastic cover from the power supply.
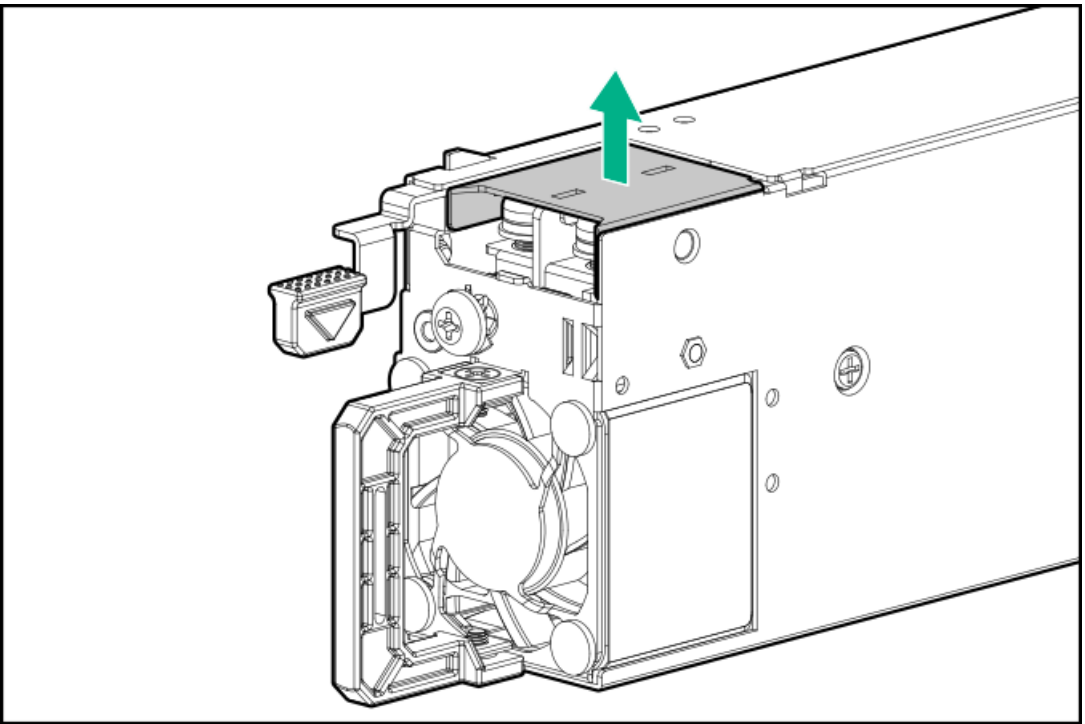
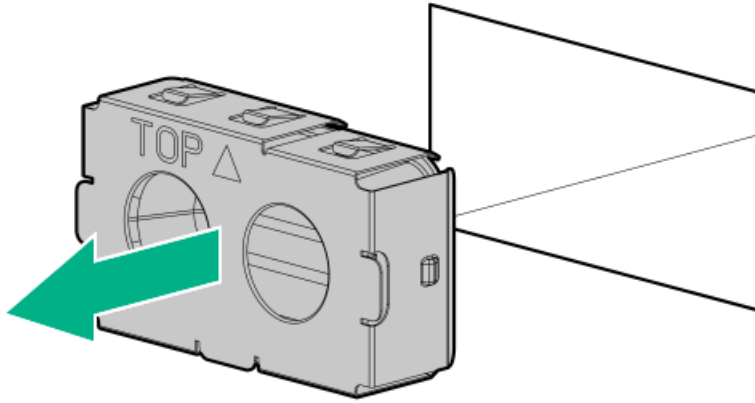7. Disconnect the -48 V and return wires from the power supply.

To replace the component, reverse the removal procedure.

Removing and replacing a power supply blank

Procedure

Remove the component as indicated.

To replace the component, reverse the removal procedure.

Removing and replacing the rack rails

> ⚠ **WARNING:**
>
> To reduce the risk of personal injury or damage to the equipment, you must adequately support the enclosure during installation and removal.

Prerequisites

Before you begin, be sure that you have the appropriate screwdriver for the screws in the rack.
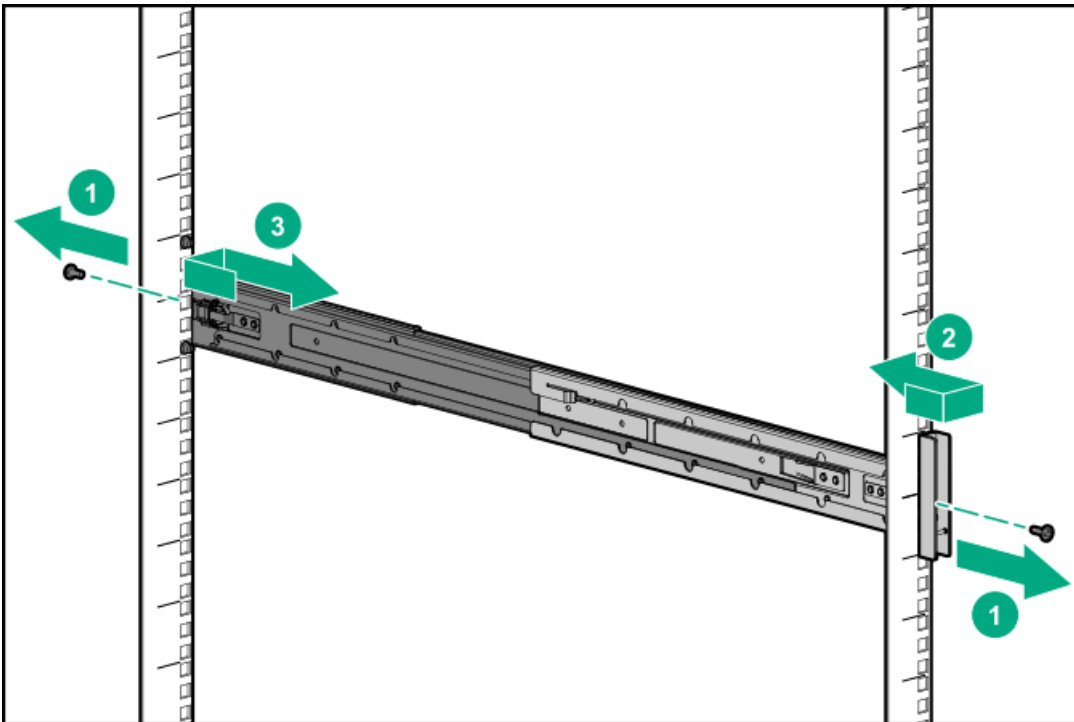
Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Remove the server from the rack.

4. Place the server on a sturdy, level surface.

   > ⓘ **IMPORTANT:**
   >
   > When removing the rail from the rack, always remove the front of the rail first.

5. Remove the rail from the rack.

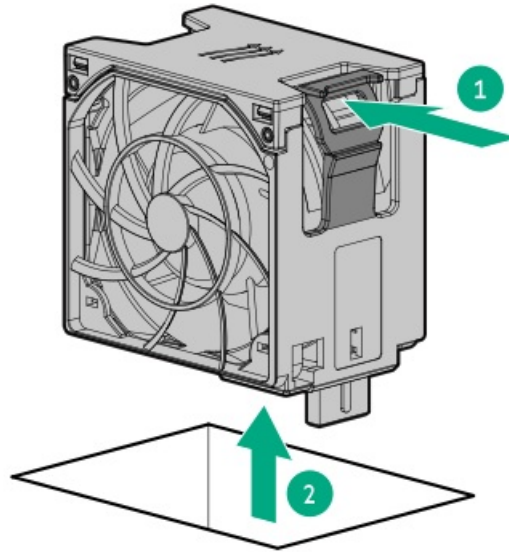To replace the component, reverse the removal procedure.

Removing and replacing the hot-plug fan

> ⓘ **IMPORTANT:**
>
> Do not mix standard fans and high-performance fans in the same server.

Procedure

1. If installed, release the cable management arm.

2. Extend the server from the rack.

3. Remove the access panel.

4. Remove the fan.

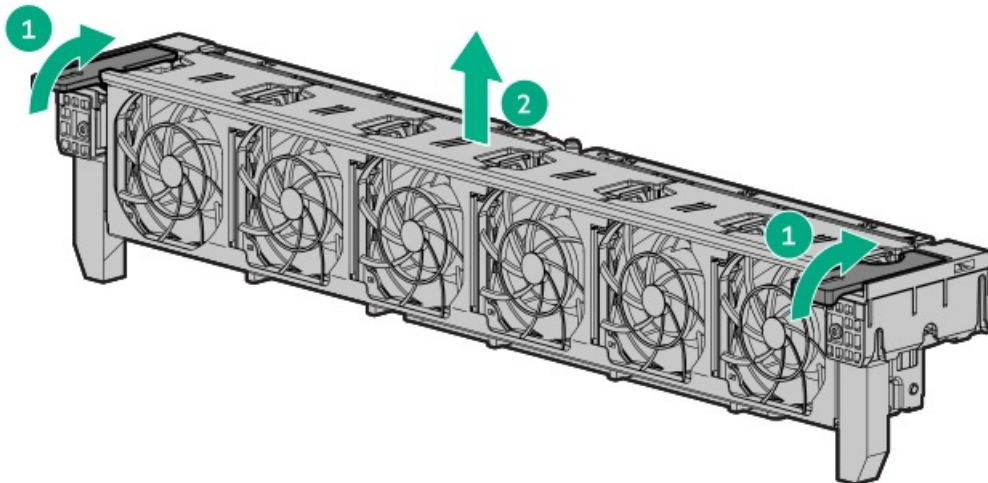To replace the component, reverse the removal procedure.

Removing and replacing the fan cage

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

   > △ **CAUTION:** Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

5. Remove the fan cage.

   > ⓘ **IMPORTANT:** For optimum cooling, install fans in all primary fan locations.

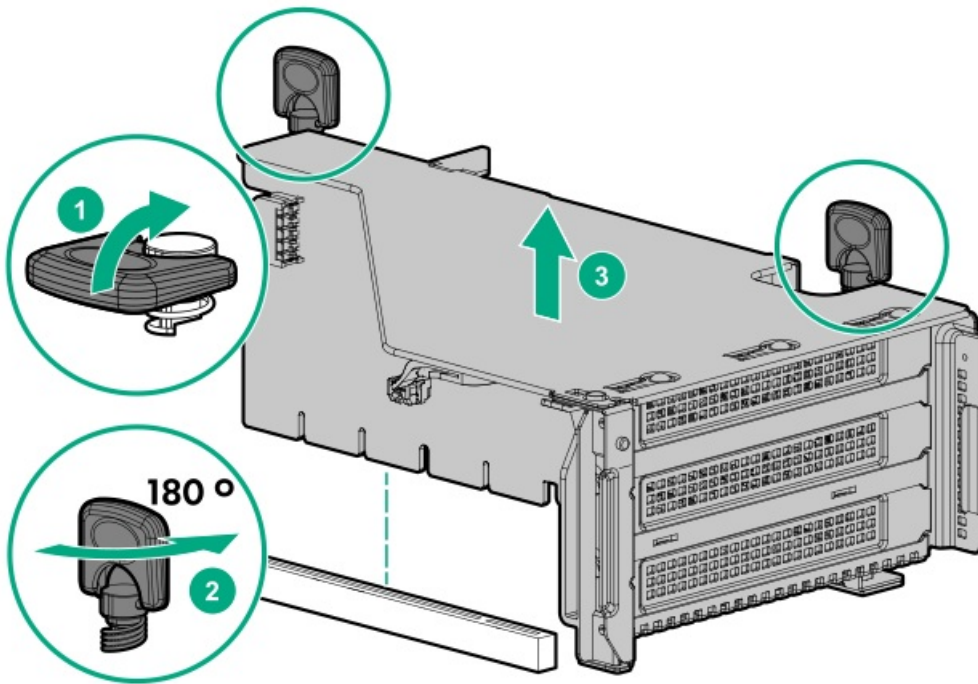   For more information, see Fan bay numbering.

To replace the component, reverse the removal procedure.

Removing and replacing the primary PCIe riser cage

⚠ **CAUTION:** To prevent improper cooling or thermal damage, the server PCI slots must have an expansion slot blank or an expansion board installed.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Disconnect any external cables that are connected to the expansion board.

4. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

5. Remove the access panel.

6. Disconnect any internal cables that are connected to the expansion board.

7. Remove the expansion board.
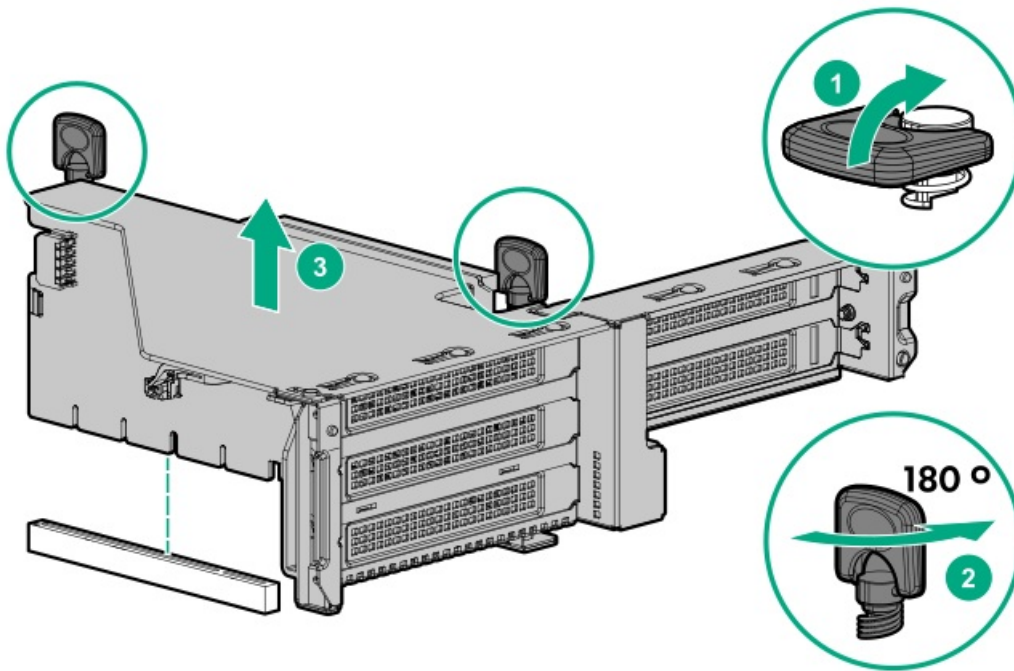
8. Remove the PCIe riser cage.

To replace the component, reverse the removal procedure.

Removing and replacing the secondary and tertiary PCIe riser cages

⚠ **CAUTION:** To prevent improper cooling or thermal damage, the server PCI slots must have an expansion slot blank or an expansion board installed.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Disconnect any external cables that are connected to the expansion board.

4. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

5. Remove the access panel.

6. Disconnect any internal cables that are connected to the expansion board.

7. Removing and replacing an expansion board.

8. Remove the PCIe riser cage.

To replace the component, reverse the removal procedure.
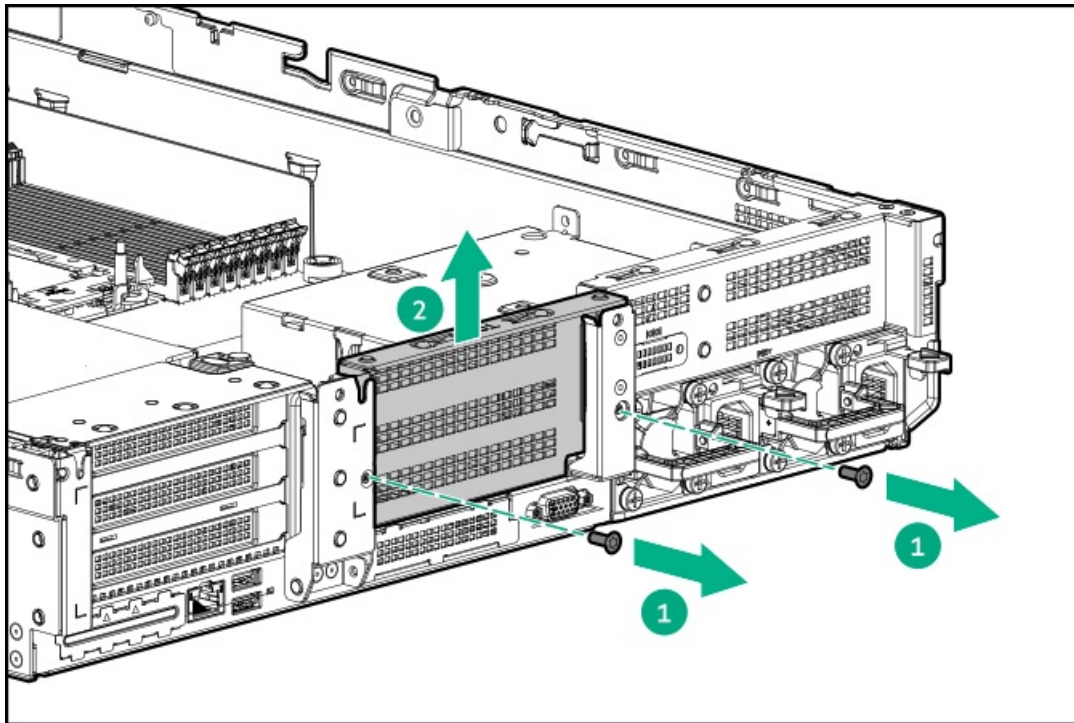
Removing and replacing the PCIe riser blank

> ⚠ **CAUTION:** To prevent improper cooling or thermal damage, the server PCI slots must have an expansion slot blank or an expansion board installed.
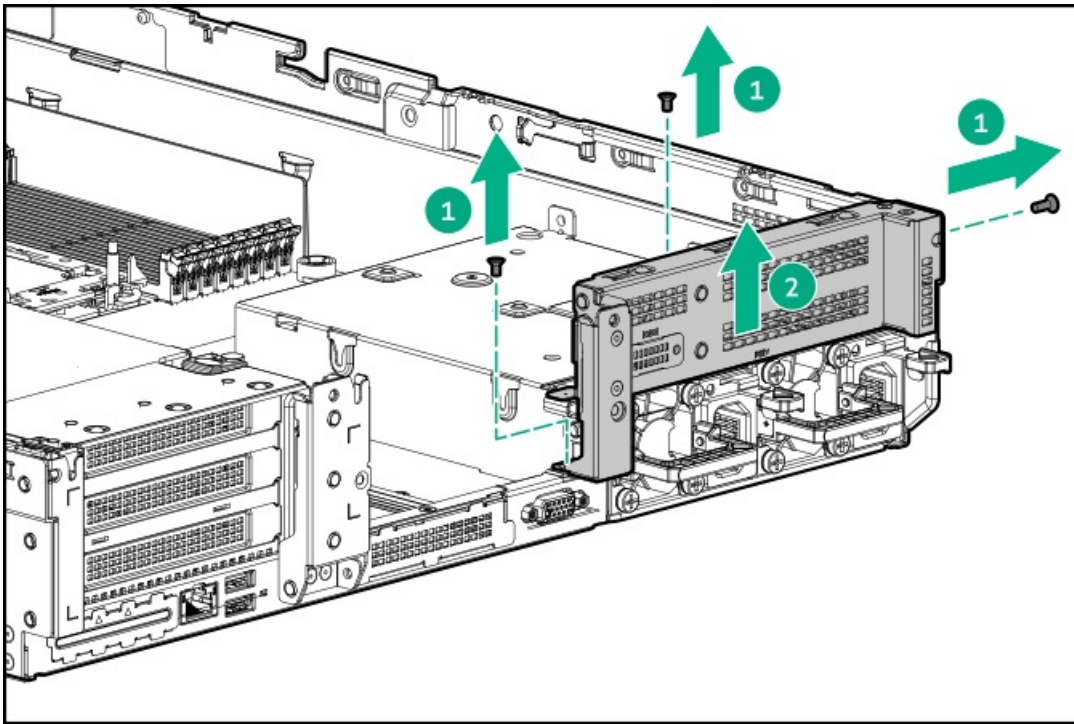
Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the PCIe riser blank:

   - Secondary

   - Tertiary

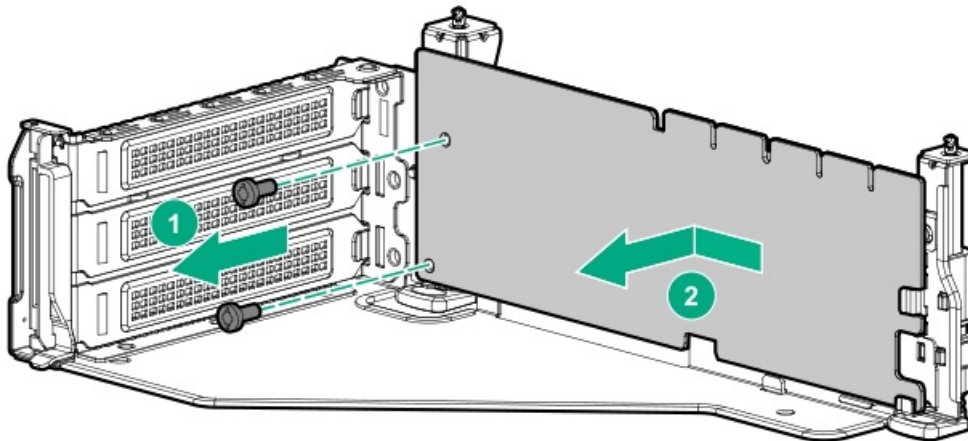To replace the component, reverse the removal procedure.

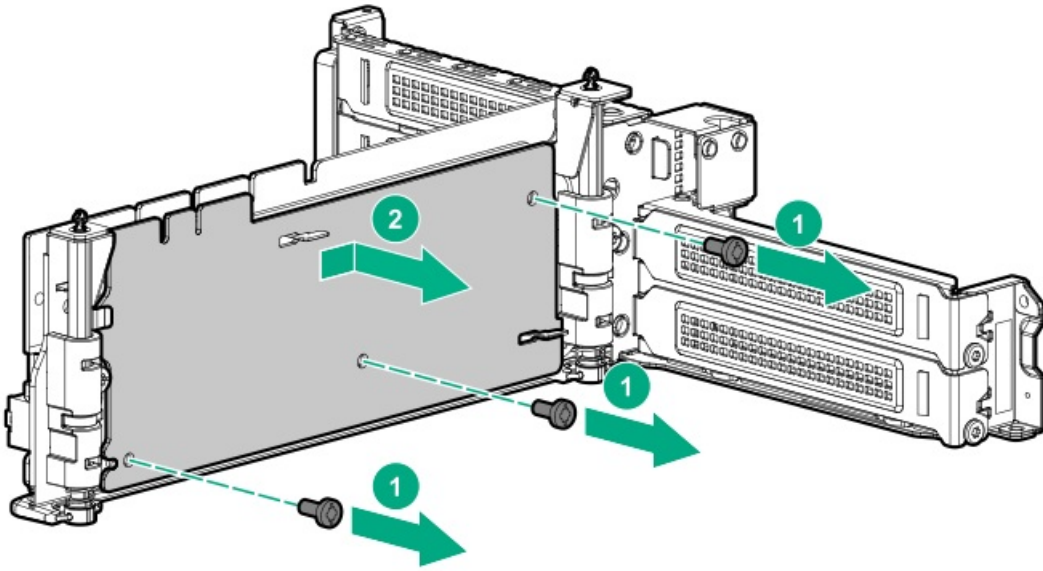# Removing and replacing the PCIe riser board

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Release the full-length expansion board retainer if necessary .

6. Remove the PCIe riser cage:

   - Remove the primary PCIe riser cages

   - Remove the secondary and tertiary PCIe riser cage

7. Remove any expansion boards from the PCIe riser cage.

8. Remove the PCIe riser board:

   - Primary and secondary riser cage

   - Tertiary riser cage

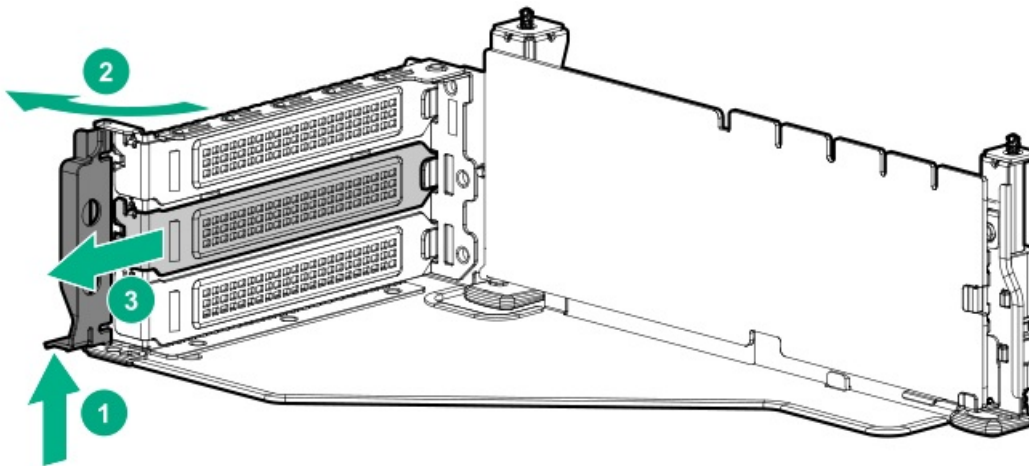To replace the component, reverse the removal procedure.

Removing and replacing an expansion slot blank

> ⚠ **WARNING:** To reduce the risk of personal injury, electric shock, or damage to the equipment, remove power from the server by removing the power cord. The front panel Power On/Standby button does not shut off system power. Portions of the power supply and some internal circuitry remain active until AC power is removed.

> ⚠ **CAUTION:** For proper cooling, do not operate the server without the access panel, baffles, expansion slot covers, or blanks installed. If the server supports hot-plug components, minimize the amount of time the access panel is open.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the PCIe riser cage:

   - Remove the primary PCIe riser cages

   - Remove the secondary and tertiary PCIe riser cage

6. Remove the expansion slot blank.
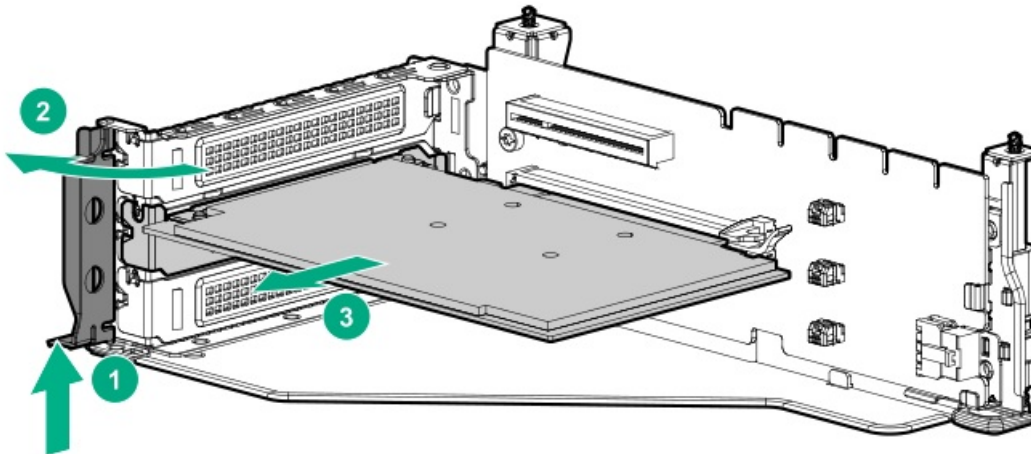

To replace the component, reverse the removal procedure.

Removing and replacing an expansion board

> ⚠ **WARNING:** To reduce the risk of personal injury, electric shock, or damage to the equipment, remove power from the server by removing the power cord. The front panel Power On/Standby button does not shut off system power. Portions of the power supply and some internal circuitry remain active until AC power is removed.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Disconnect any external cables that are connected to the expansion board.

4. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

5. Remove the access panel.

6. Disconnect any internal cables that are connected to the expansion board.

7. Release the full-length expansion board retainer if necessary.

8. Remove the PCIe riser cage:

   - Remove the primary PCIe riser cages

   - Remove the secondary and tertiary PCIe riser cage

9. Remove the expansion board.
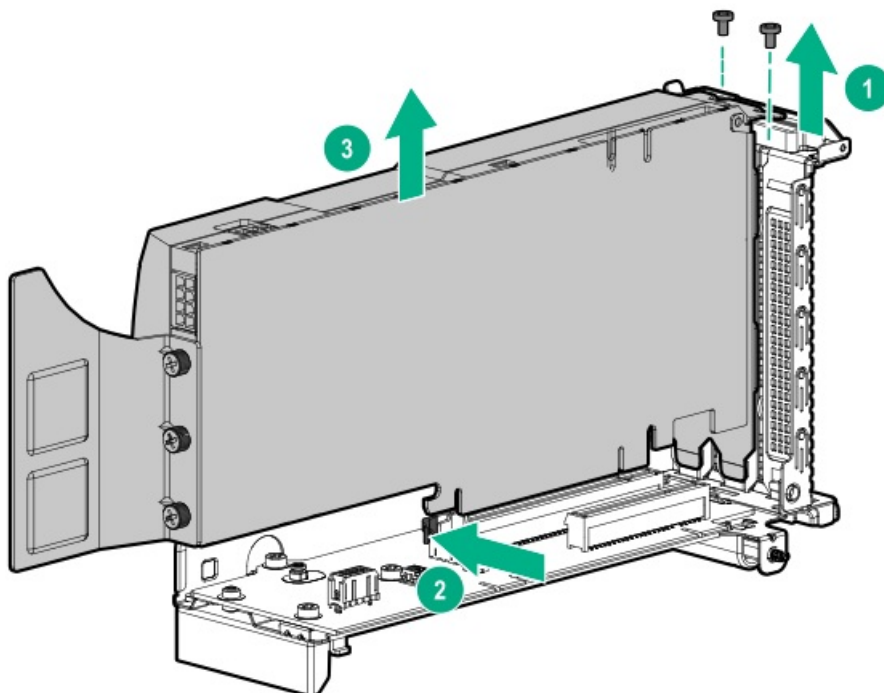

To replace the component, reverse the removal procedure.

Removing and replacing a GPU enablement board

⚠ **WARNING:** To reduce the risk of personal injury, electric shock, or damage to the equipment, remove the power cord to remove power from the server. The front panel Power On/Standby button does not shut off system power. Portions of the power supply and some internal circuitry remain active until AC power is removed.

⚠ **CAUTION:** To prevent improper cooling and thermal damage, do not operate the server unless all PCI slots have either an expansion slot cover or an expansion board installed.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the air baffle.

6. Release the full-length expansion board retainer.

7. Remove the PCIe riser cage:

   - Remove the primary PCIe riser cages

   - Remove the secondary and tertiary PCIe riser cage

8. Disconnect the power cable from the GPU.

9. Remove the GPU enablement board from the GPU-enabled riser cage:

   - Primary riser cage

   - Secondary and tertiary riser cage
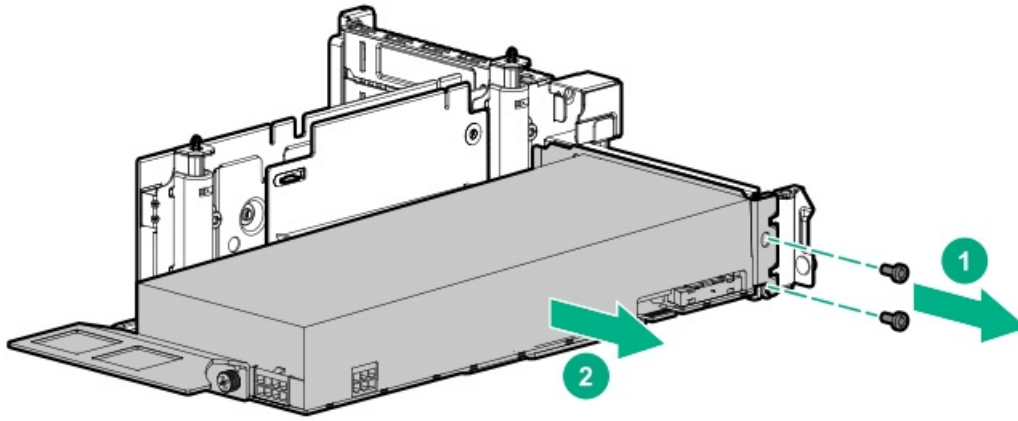
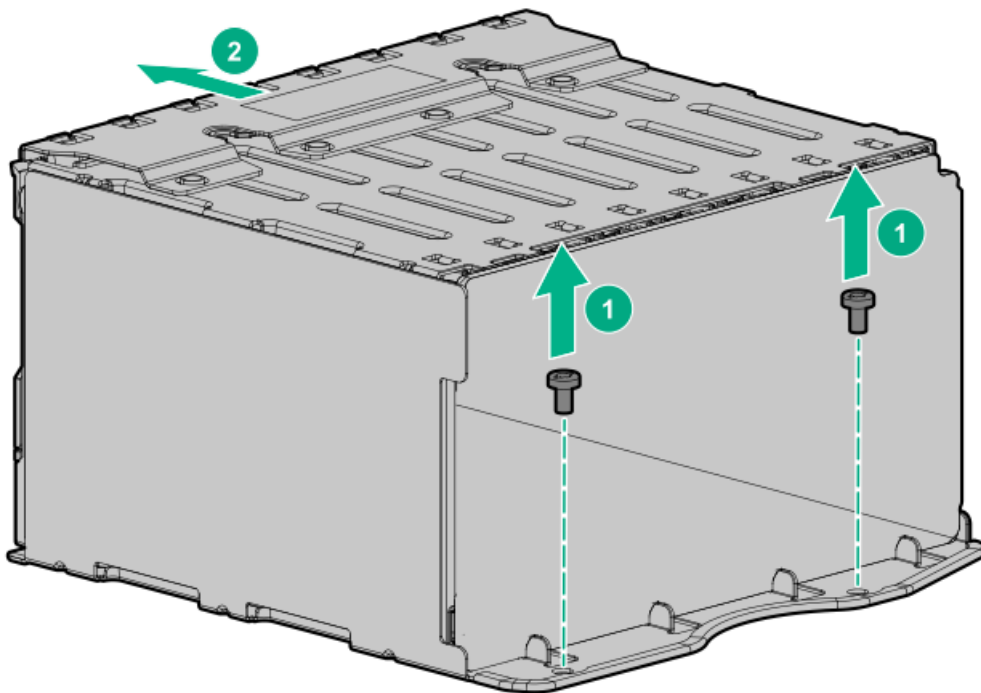To replace the component, reverse the removal procedure.

Removing and replacing the SFF universal media bay

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Remove all drives.

6. Remove the fan cage.

7. Disconnect all cables from the universal media bay.

8. Remove the universal media bay.

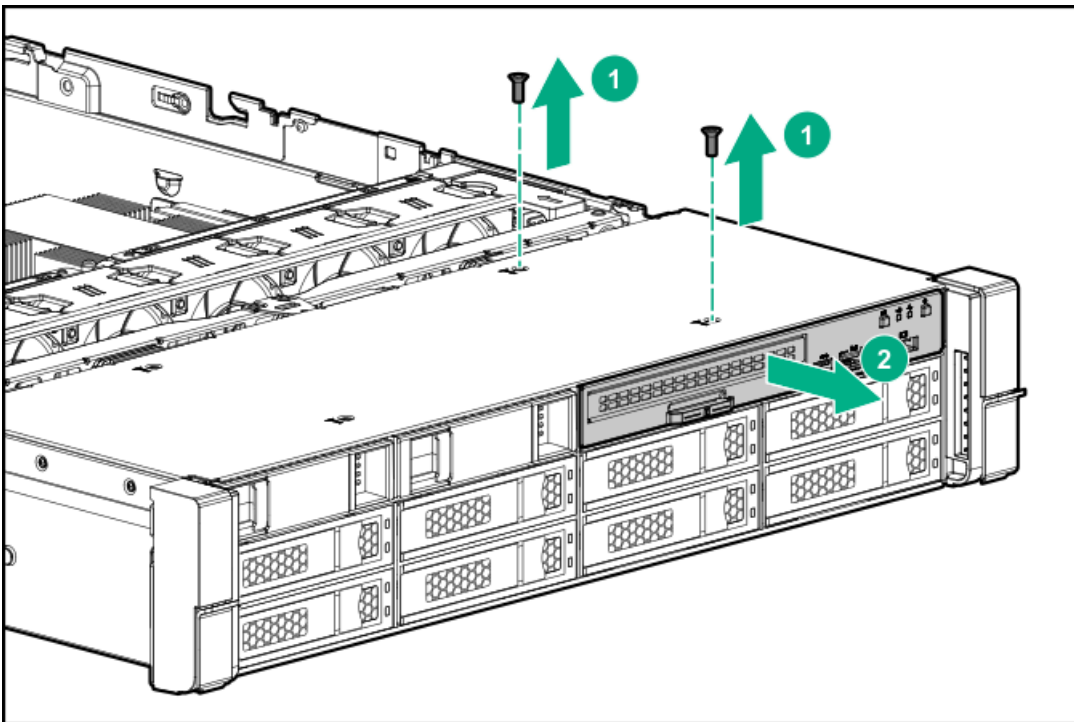To replace the component, reverse the removal procedure.

Removing and replacing the LFF power switch module

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove all drives.

6. Remove the fan cage.

7. Disconnect all cables connecting the power switch module to the system board and other components.

8. Feeding the cables through the front of the server, remove the power switch module.

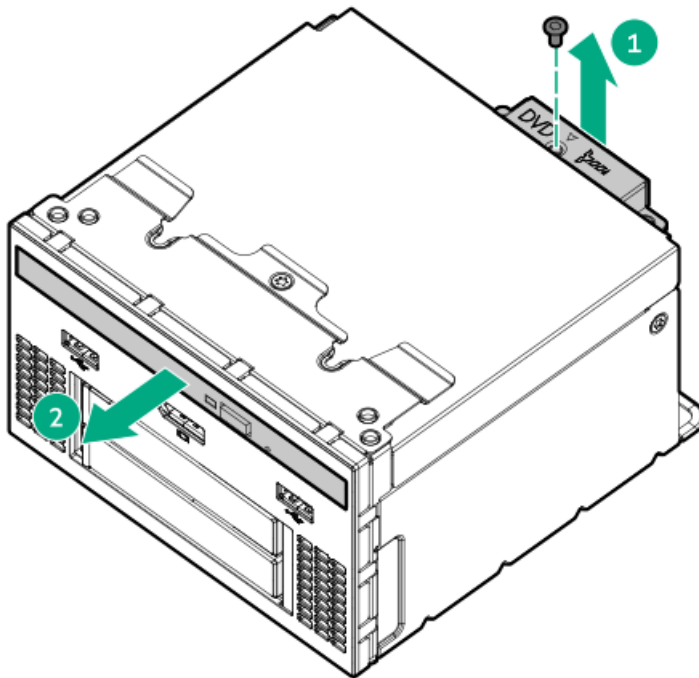To replace the component, reverse the removal procedure.

Removing and replacing the SFF optical drive

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the fan cage.

6. Disconnect all cables from the SFF universal media bay.

7. Remove the SFF universal media bay.

8. Remove the optical drive.

9. Remove the optical drive bracket and retain for use with the replacement optical drive.

10. Before replacing the component, install the optical drive bracket retained from the optical drive you are replacing.

To replace the component, reverse the removal procedure.

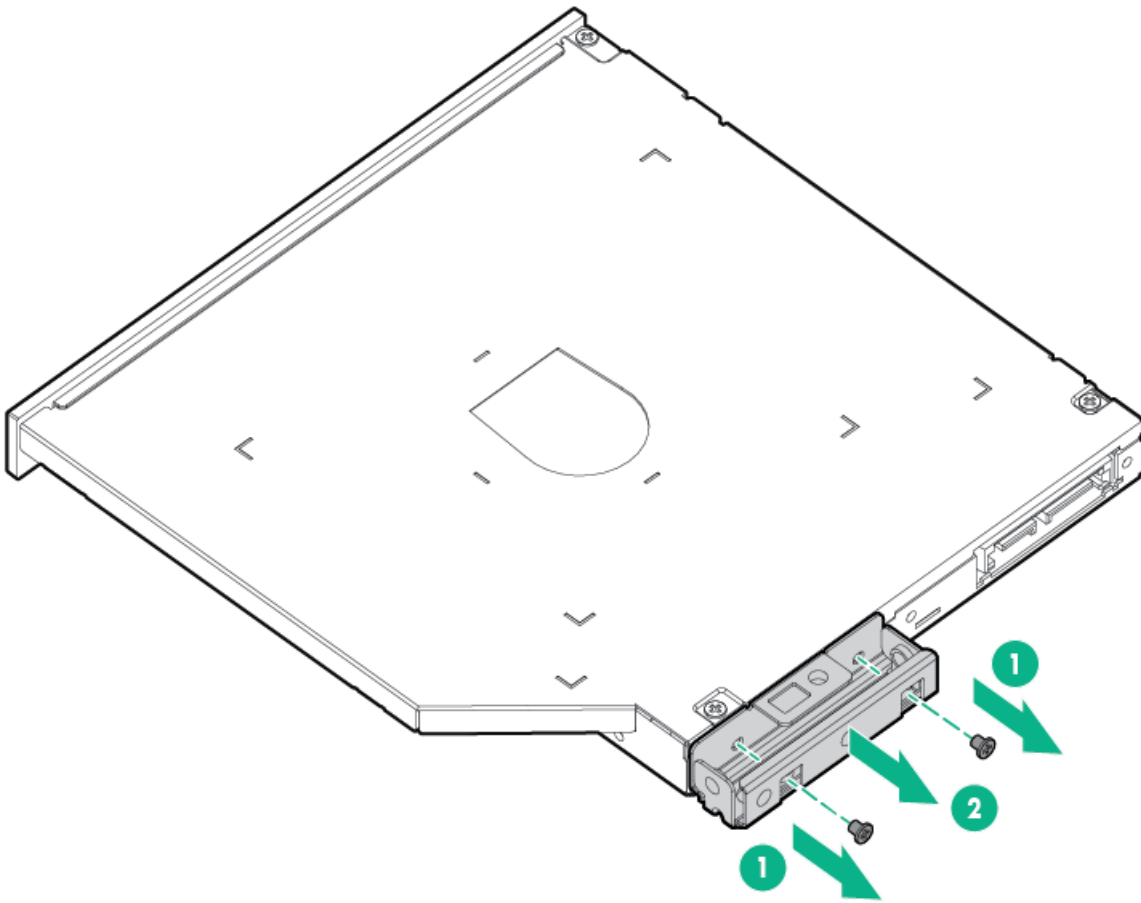# Removing and replacing the LFF optical drive

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.
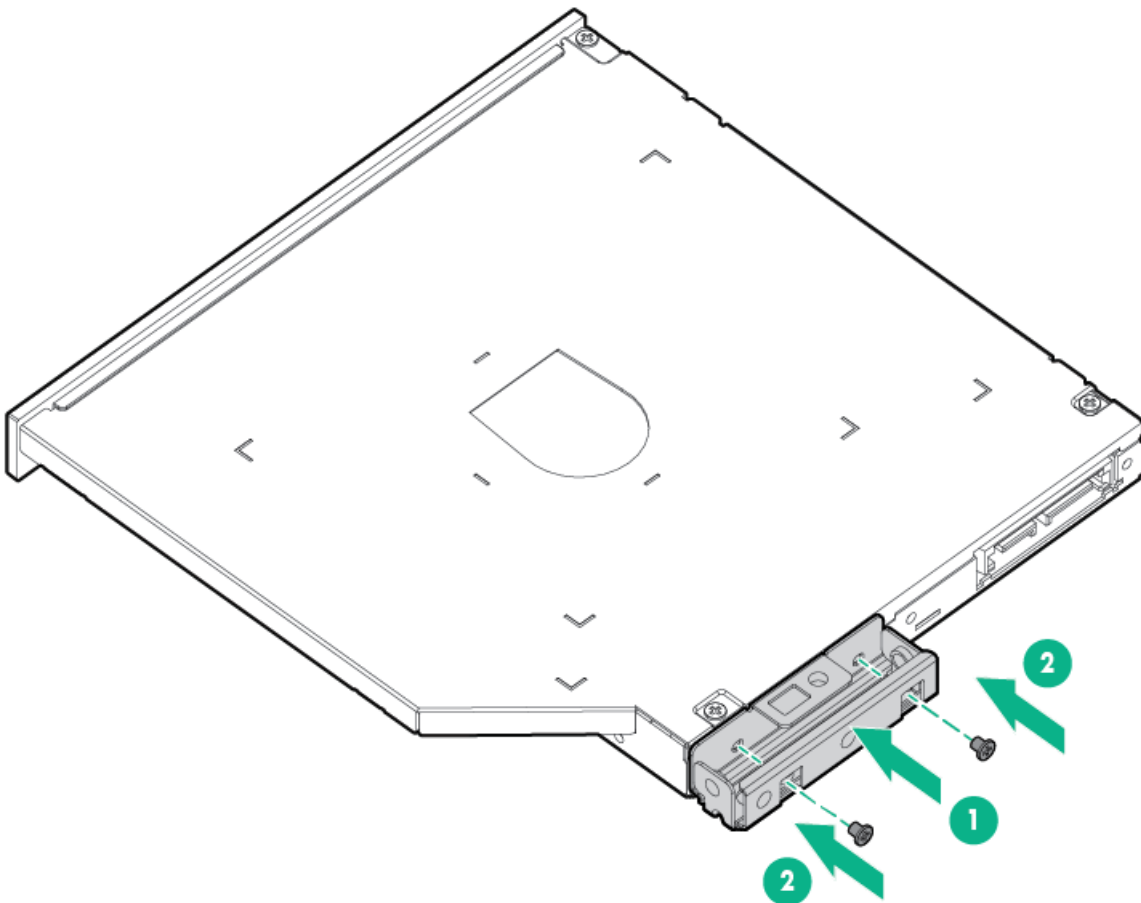
Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Remove the fan cage.

6. Disconnect all cables from the LFF power switch module.

7. Remove the LFF power switch module.

8. Remove the optical drive.

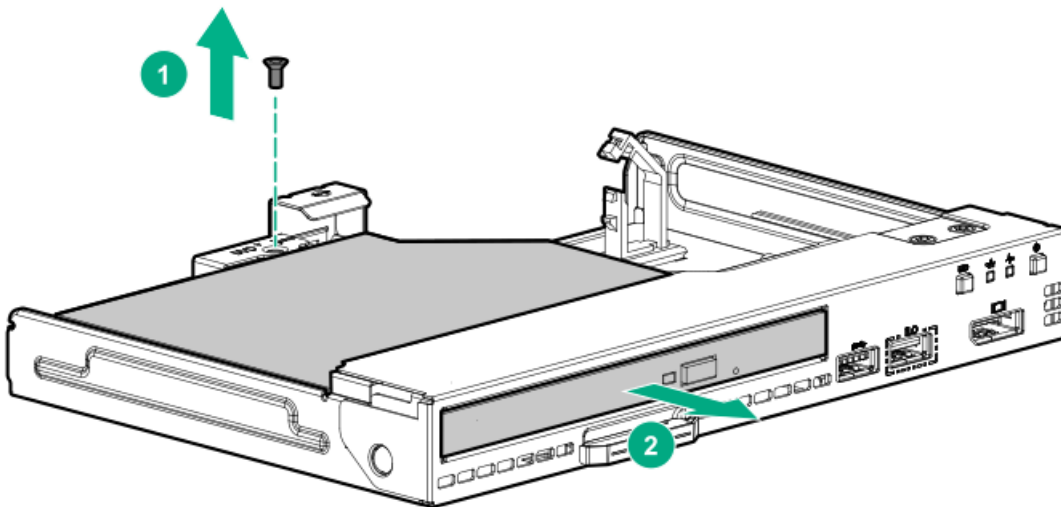To replace the component, reverse the removal procedure.

Removing and replacing the 8 SFF drive cage

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Remove all drives.

6. Remove the fan cage.

7. Disconnect all cables from the drive backplane.

8. Remove the drive cage.

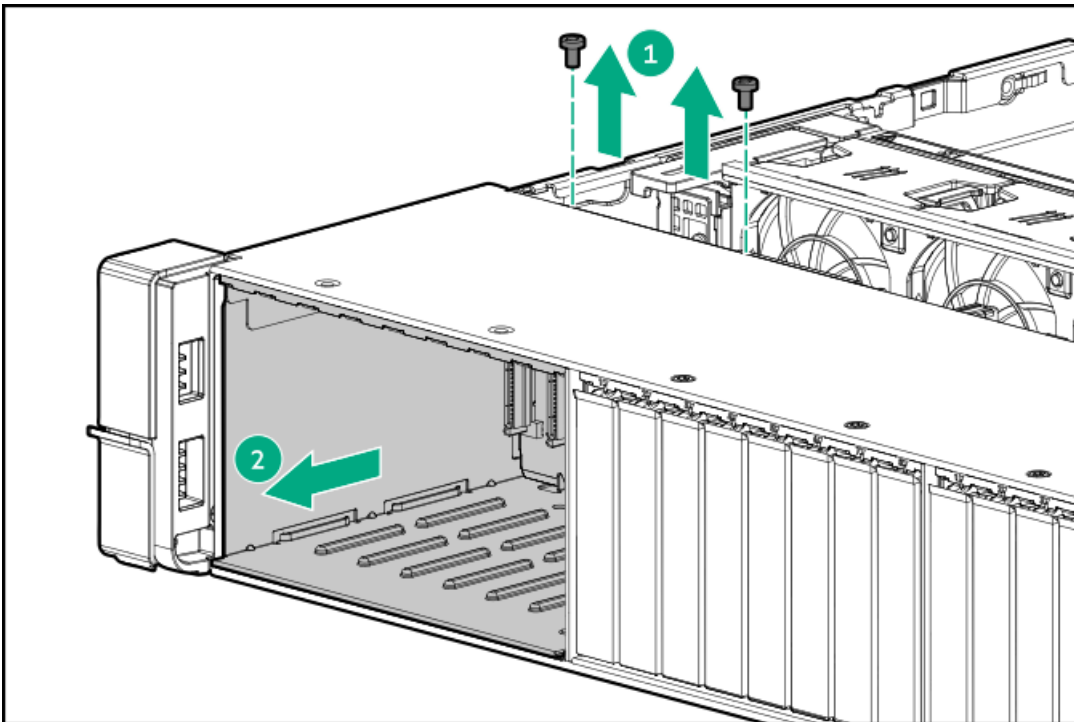To replace the component, reverse the removal procedure.

Removing and replacing the 8 SFF drive backplane

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the fan cage.

6. Remove all drives.

7. Remove the 8 SFF drive cage.

8. Remove the drive backplane.

To replace the component, reverse the removal procedure.

Removing and replacing the 2 SFF front drive cage

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove all drives.

6. Disconnect all cables from the drive backplane.

7. Remove the drive cage.

To replace the component, reverse the removal procedure.

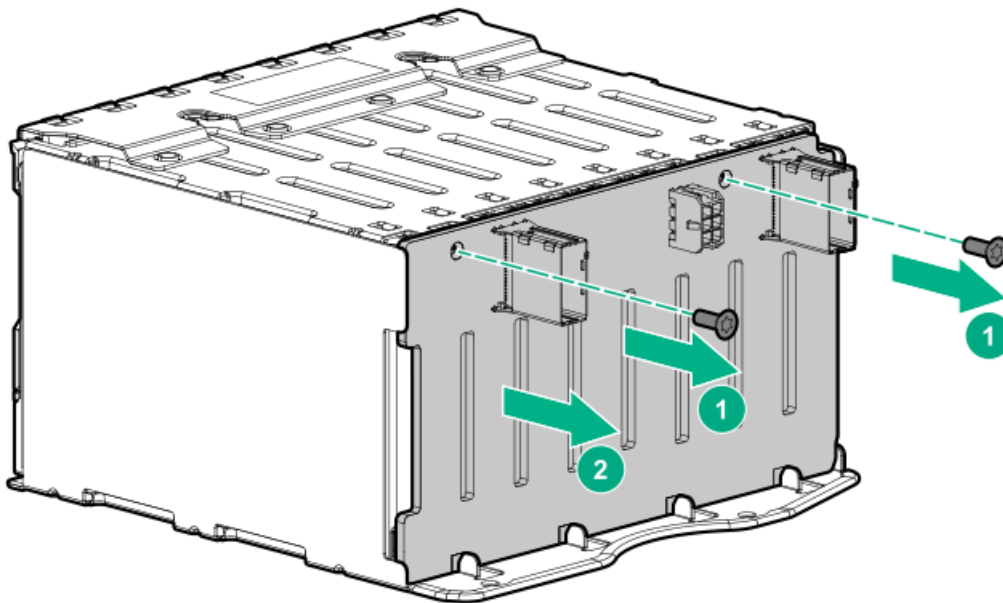# Removing and replacing the 2 SFF rear drive bay and riser cage

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Remove all drives.

6. Disconnect all cables from the drive backplane.

7. Remove the drive cage.

To replace the component, reverse the removal procedure.

Removing and replacing the 2 SFF drive cage

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove all drives.

6. Disconnect all cables from the drive backplane.
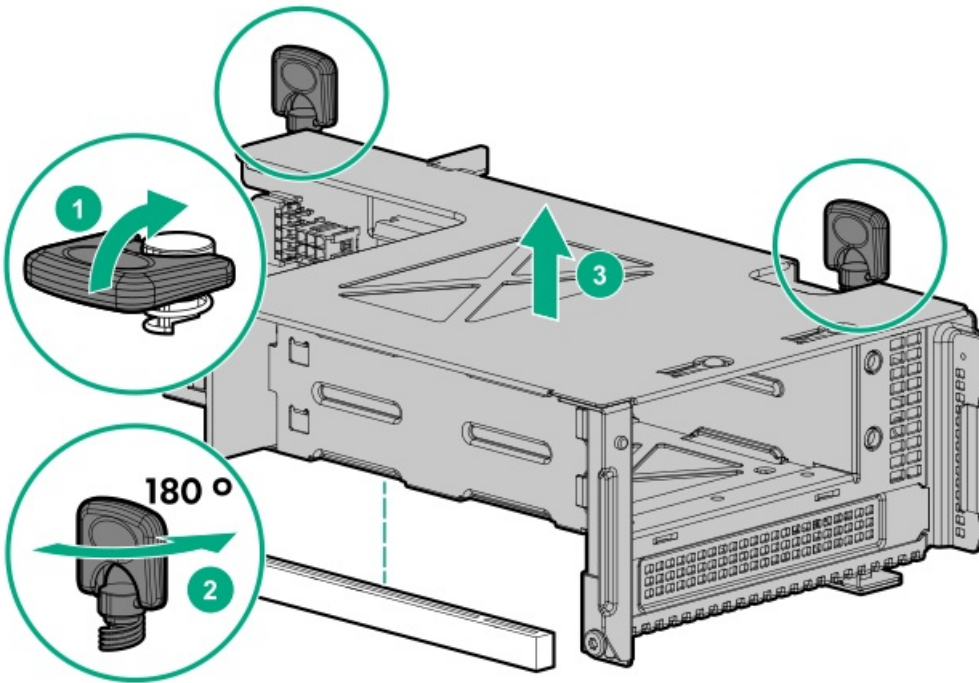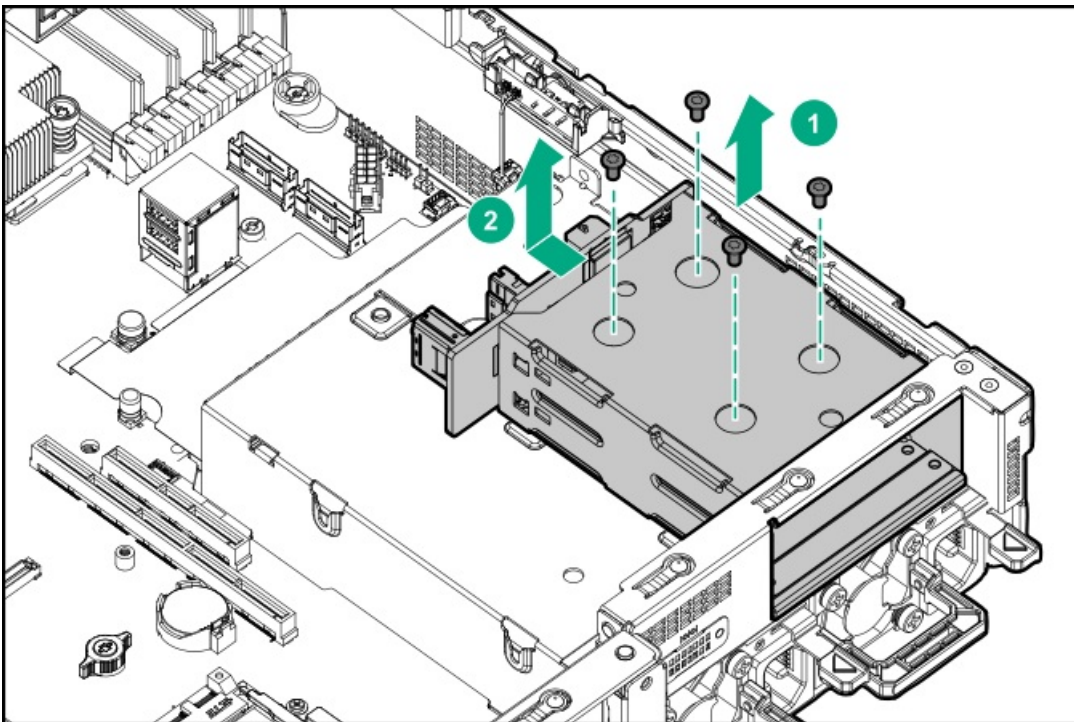
7. Remove the drive cage.

To replace the component, reverse the removal procedure.

Removing and replacing the 2 SFF rear drive backplane

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the fan cage.

6. Remove all drives.

7. Remove the 2 SFF drive cage.

8. Remove the drive backplane.

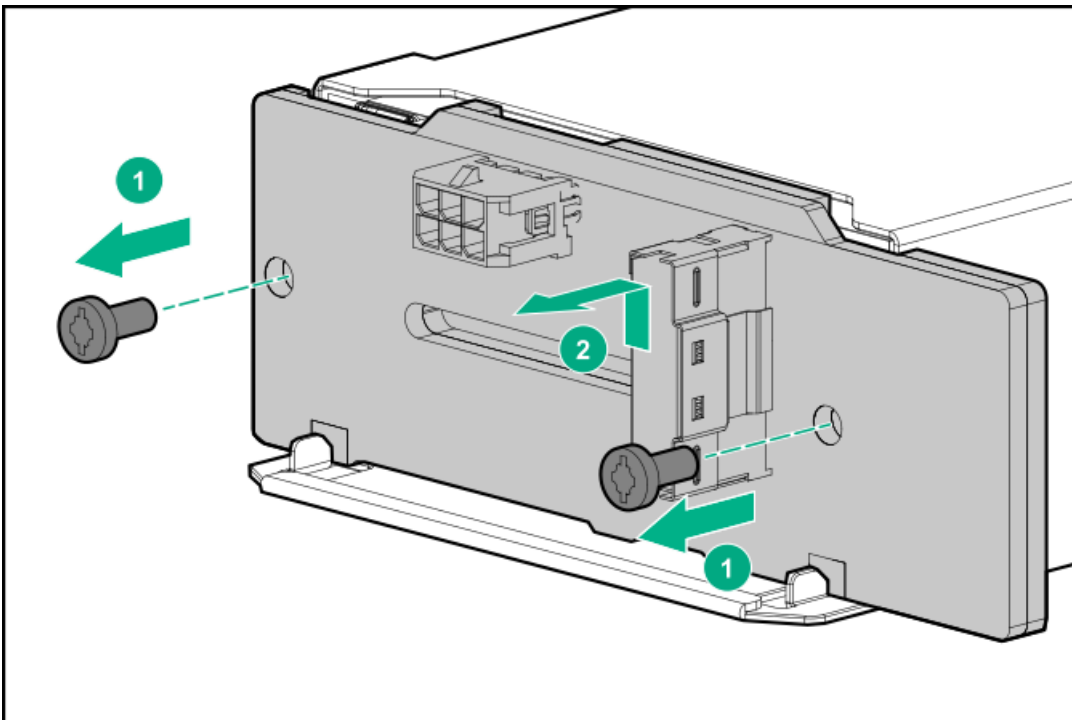To replace the component, reverse the removal procedure.

Removing and replacing the NVMe drive backplane

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Remove the LFF midplane cage.

6. Remove the NVMe drive backplane.
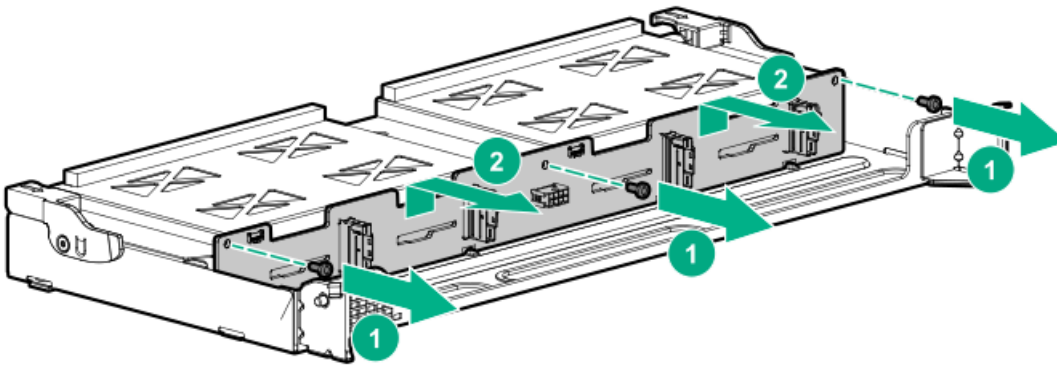
To replace the component, reverse the removal procedure.

Removing and replacing a midplane drive cage

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. If installed, remove all riser cages:

   - Remove the primary PCIe riser cage

   - Remove the secondary and tertiary PCIe riser cage

6. Disconnect the power and cables from the drive cage.

7. Raise the blue tabs on the drive tray and lift the drive cage to a 15 degree angle.

8. Pull the plunger pin to disengage it.

9. Remove all drives.

10. Using both hands, remove the drive cage from the server.

To replace the component, reverse the removal procedure.

Removing and replacing the LFF backplane assembly

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.
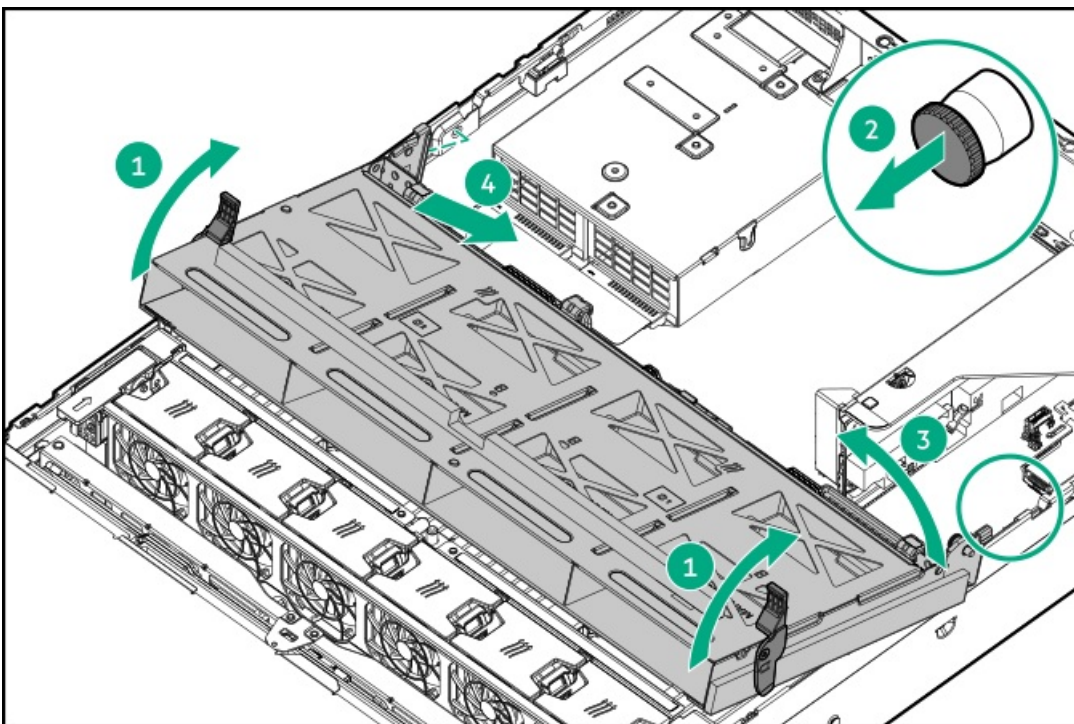
5. Remove the fan cage).

6. Remove all drives.

7. Disconnect all cables connected to the LFF backplane assembly.

8. Remove the LFF backplane assembly.

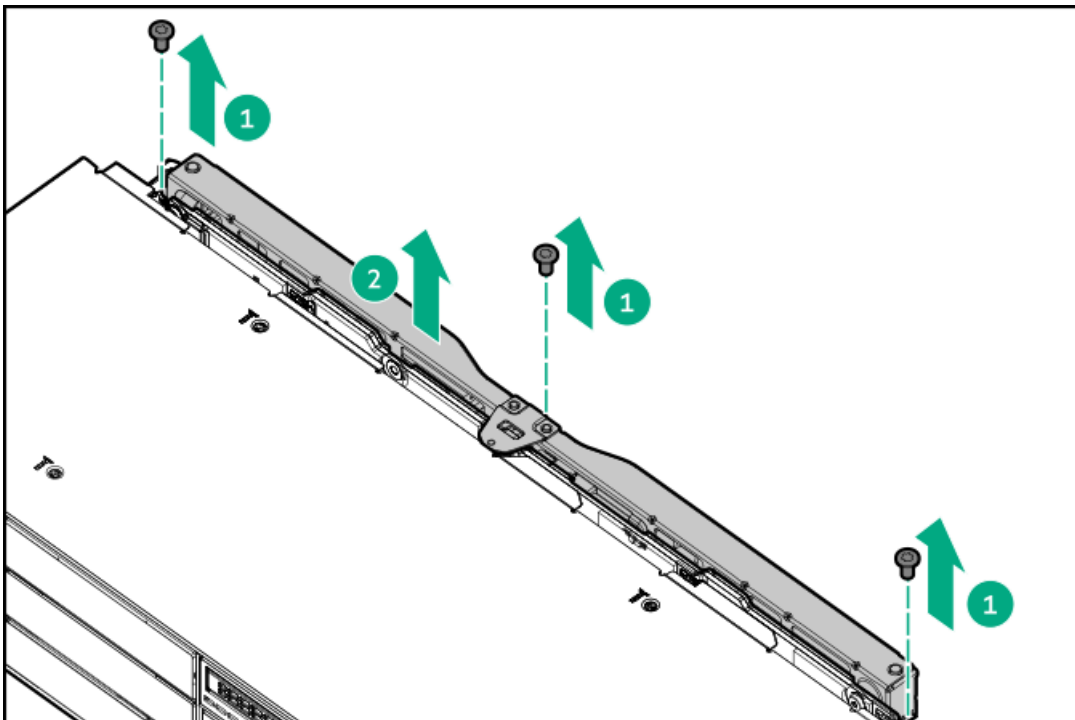To replace the component, reverse the removal procedure.

Removing and replacing a front LFF drive backplane

Prerequisites

Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Remove the fan cage.

6. Remove all drives.

7. Disconnect all cables connected to the LFF backplane assembly.

8. Remove the LFF backplane assembly.
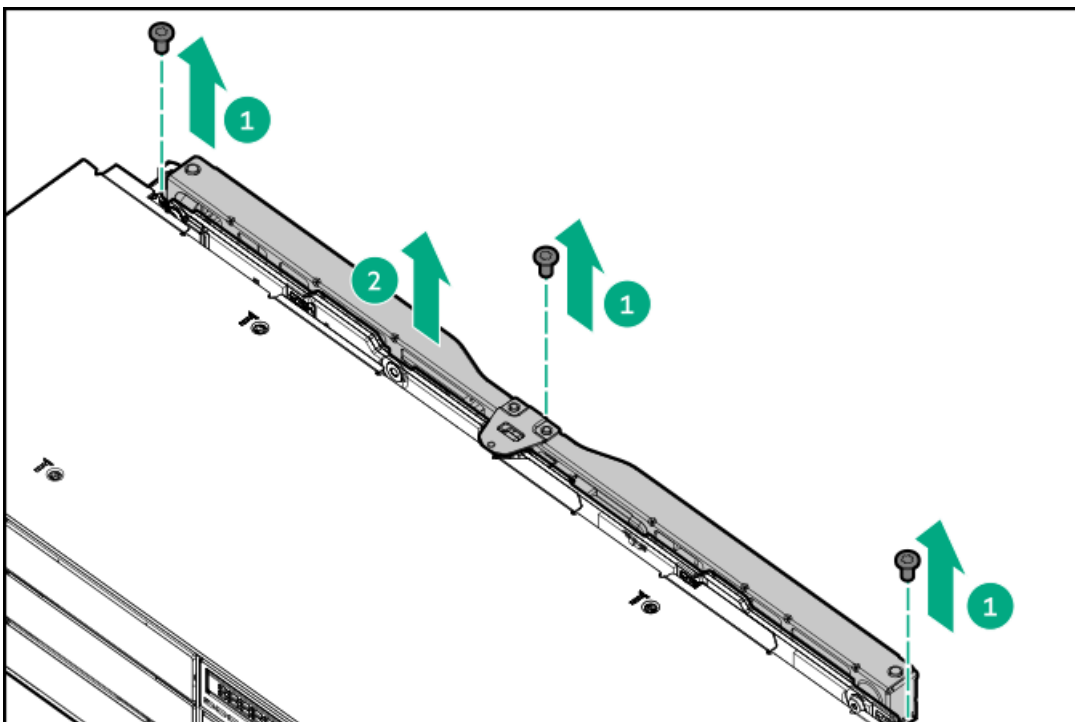
9. Remove the drive backplane.
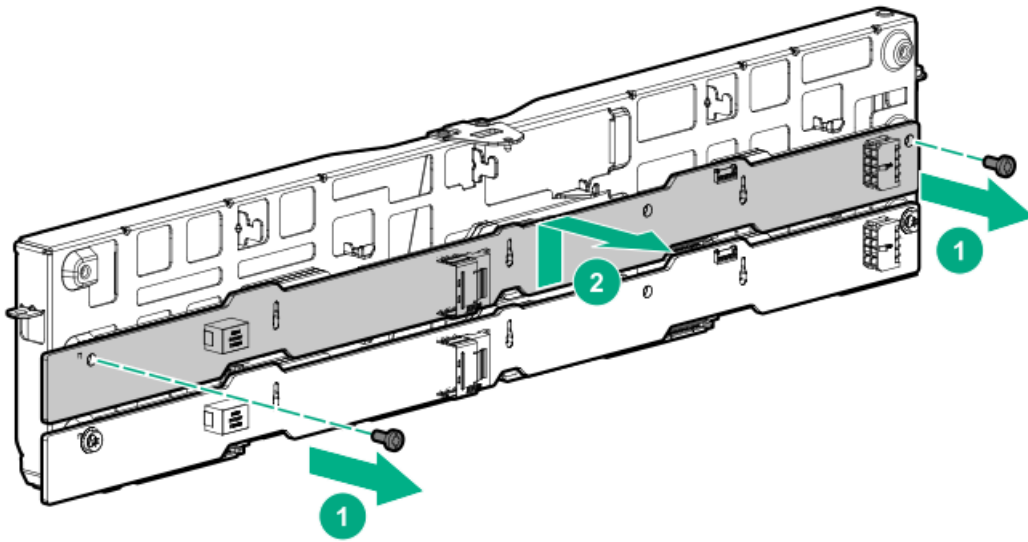
To replace the component, reverse the removal procedure.

DIMM-processor compatibility

The installed processor determines the type of DIMM that is supported in the   server:

AMD EPYC processors support DDR4-3200 DIMMS.

Mixing DIMM types is not supported. Install only the supported DDR4-3200 DIMMs in the   server.

Removing and replacing a DIMM

To identify the DIMMs installed in the server, see DIMM slot locations.

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Do one of the following:

    - Remove the air baffle.

    - Remove the midplane drive cage.

6. Remove the DIMM.
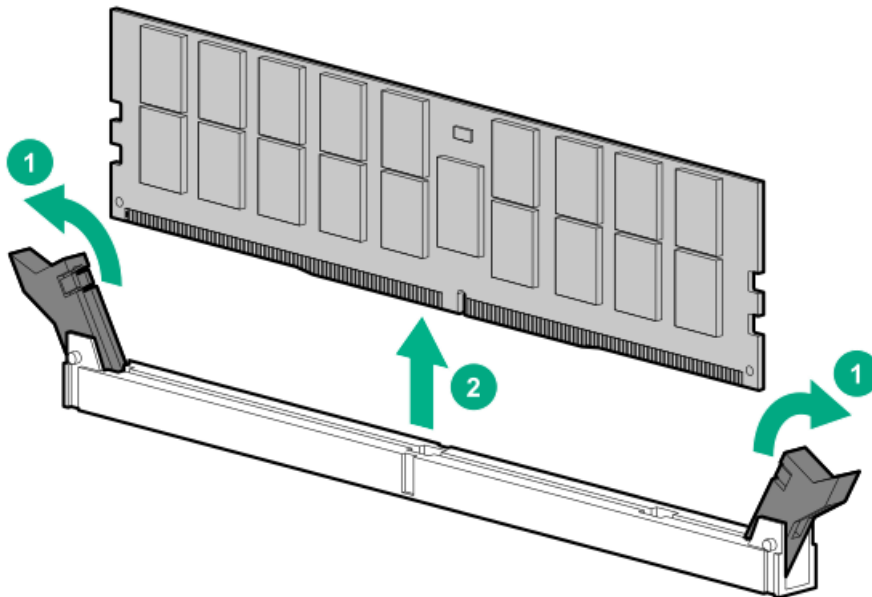
To replace the component, reverse the removal procedure.

For DIMM configuration information, see the server user guide.

Removing and replacing a heatsink

This procedure shows a standard heatsink as an example. The replacement process is the same for both the standard and high-performance heatsinks.

Hewlett Packard Enterprise recommends identifying the processor and socket components before performing this procedure.

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-20 screwdriver

- Alcohol wipe

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Do one of the following:

   - Remove the air baffle.

   - If installed, remove the midplane drive cage (Removing and replacing a midplane drive cage).

6. Allow the existing heatsink to cool.

7. Remove the heatsink:

   > ⚠ **CAUTION:**
   >
   > To prevent mechanical damage or depositing oil on your hands or other contaminants to the heatsink contact surface, hold the heatsink only by the edge of its baseplate. Do not touch the heatsink fins.

   > ⚠ **CAUTION:**
   >
   > Heatsink screws must be tightened and loosened in alternating sequence as shown on the heatsink label.

   a. Use a T-20 screwdriver to loosen the captive screws in the sequence specified on the heatsink label.

   b. Lift the heatsink away from the system board.

c. Place the heatsink on a flat work surface with its contact side facing up.

8. Use an alcohol wipe to remove the existing thermal grease from the processor.

    Allow the alcohol to evaporate before continuing.

9. Remove the thermal interface protective cover from the new heatsink.

10. Install the heatsink.

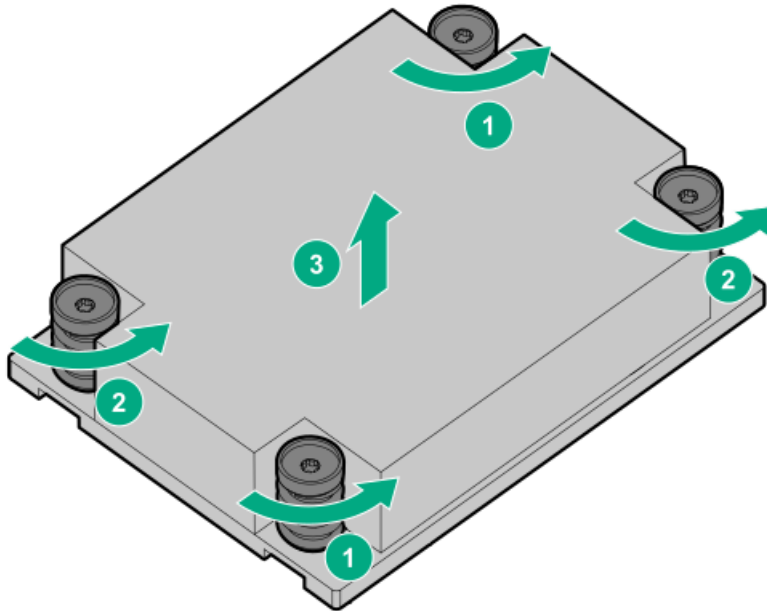   ⚠ CAUTION:

    To prevent mechanical damage or depositing oil on your hands or other contaminant to the heatsink contact surface, hold the heatsink only by the edge of its base plate. Do not touch the heatsink fins.

    ⚠ CAUTION:

    To prevent thermal failure or component damage, do not move the heatsink once the bottom of its base plate touches the top of the processor. Excessive heatsink movement can cause the thermal grease to smear and become uneven. Voids in the compound can adversely impact the transfer of heat away from the processor.

    ⚠ CAUTION:

    Heatsink screws must be tightened and loosened in alternating sequence. Do not overtighten the screws as this might damage the system board or the processor socket.

    a. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws.

    b. Use a T-20 screwdriver to tighten the captive screws in the sequence specified on the heatsink label until fully seated.

11. Install the air baffle.

12. Install the access panel.

13. Install the server into rack.

14. Connect each power cord to the server.

15. Connect each power cord to the power source.

16. Power up the server.

Removing and replacing a processor

Hewlett Packard Enterprise recommends identifying the processor and socket components before performing this procedure.

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-20 Torx screwdriver

- 1.0 gm (0.5 ml) or two 0.5 gm (0.25 ml) of thermal grease

- Alcohol wipe

Procedure

1. Observe the following alerts.

   ⚠ **CAUTION:** To avoid damage to the processor or system board, only authorized personnel should attempt to replace or install the processor in this server.

   ⚠ **CAUTION:** To prevent possible server malfunction and damage to the equipment, multiprocessor configurations must contain processors with the same part number.

   ⚠ **CAUTION:** If installing a processor with a faster speed, update the system ROM before installing the processor.

   To download firmware and view installation instructions, see the **Hewlett Packard Enterprise Support Center website**.

   ⚠ **CAUTION: THE CONTACTS ARE VERY FRAGILE AND EASILY DAMAGED.** To avoid damage to the socket or processor, do not touch the contacts.

2. Power down the server.

3. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

4. Do one of the following:

   a. Extend the server from the rack.

   b. Remove the server from the rack.

5. Remove the access panel.

6. Remove the air baffle (Removing the air baffle).

7. Allow the heatsink to cool.

8. Remove the heatsink:

   ⚠ **CAUTION:**

   To prevent mechanical damage or depositing oil on your hands or other contaminant to the heatsink contact surface, hold the heatsink only by the edge of its base plate. Do not touch the heatsink fins.
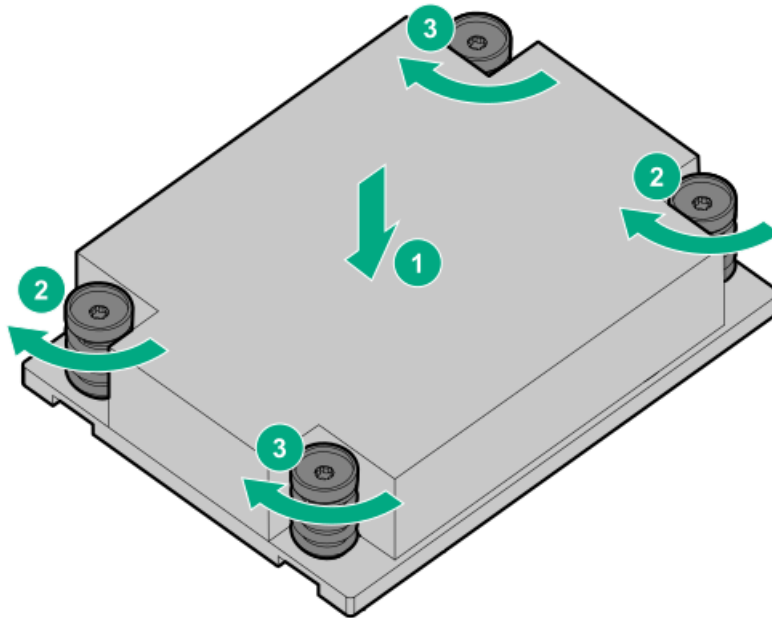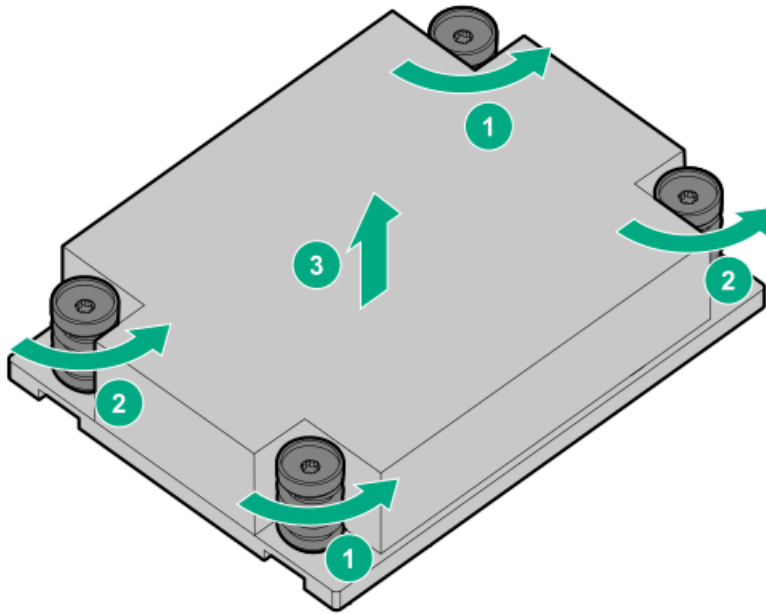
   ⚠ **CAUTION:**

   Heatsink screws must be tightened and loosened in alternating sequence. Do not overtighten the screws as this might damage the system board or the processor socket.

   a. Use a T-20 Torx screwdriver to loosen the captive screws in the sequence specified on the heatsink label.

   b. Lift the heatsink away from the system board.

    c.   Place the heatsink on a flat work surface with its contact side facing upward.

9.   Use an alcohol wipe to remove the existing thermal grease from the heatsink.

    Allow the alcohol to evaporate before continuing.

10.   Use a T-20 Torx screwdriver to loosen the three captive screws in the sequence shown in the following image, and then pivot the force frame upward.
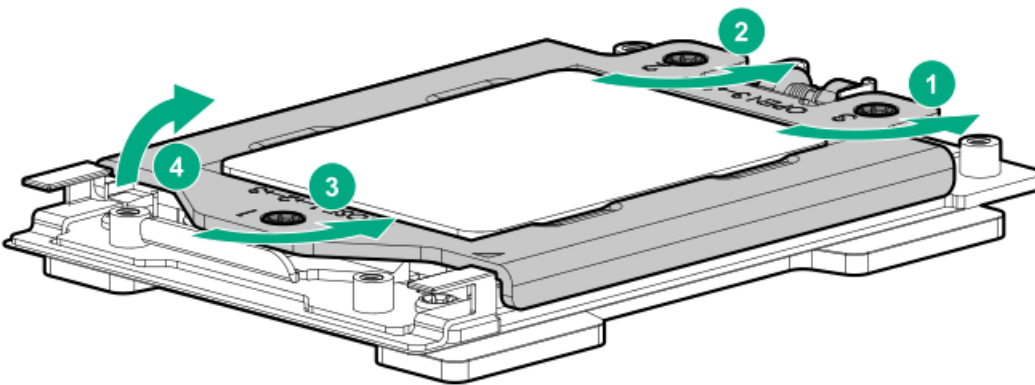
11.   Remove the processor:

    a.   Hold the lift tabs near the front end of the rail frame, and then pivot the rail frame to the vertical position.

    b.   Slide the processor out of the rail frame.

12. Install the new processor:

   a. Hold the processor by its carrier handle and slide the processor into the rail frame until it engages with a click sound.

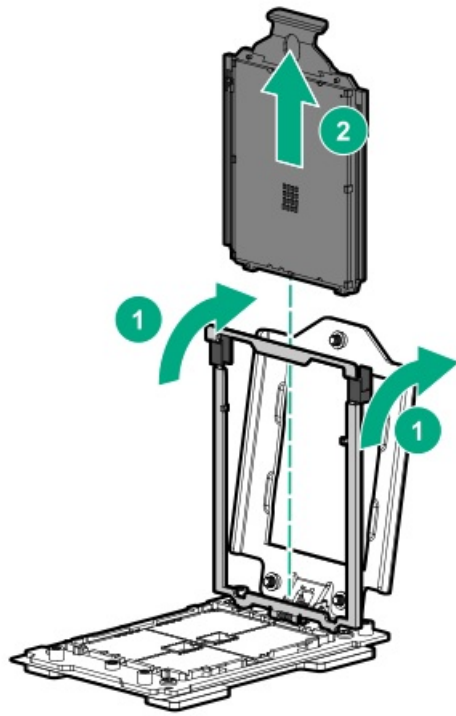   b. Hold the lift tabs near the front end of the rail frame and pivot the rail frame to the closed position.

      A click sound indicates that the rail frame is properly engaged.
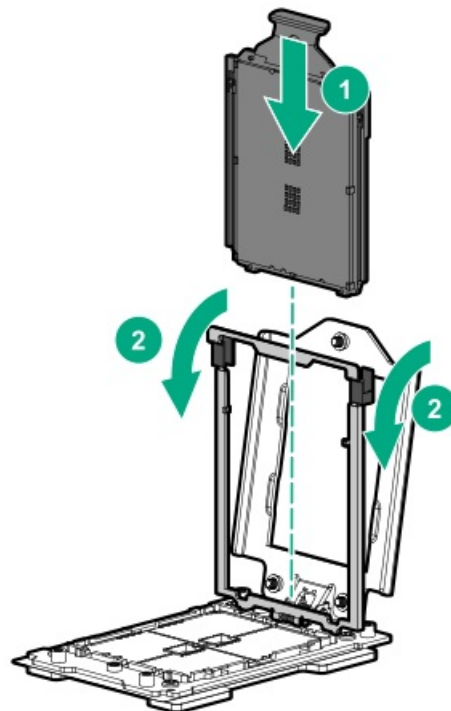
13. Close the force frame:

   > **⚠ CAUTION:**
   >
   > Do not overtighten the screws as this might damage the system board or the processor socket.

   a. Pivot the spring loaded force frame downward and hold it down (callout 1).

   b. Use a T-20 Torx screwdriver to tighten the captive screws in the sequence shown in the following image (callouts 2–4).

      When using a torque wrench to tighten the screws, apply a torque of 1.58 N-m (14 lbf-in).

14. Apply new thermal grease to the processor in the pattern shown in the following image. Use the full contents of the thermal grease syringe.
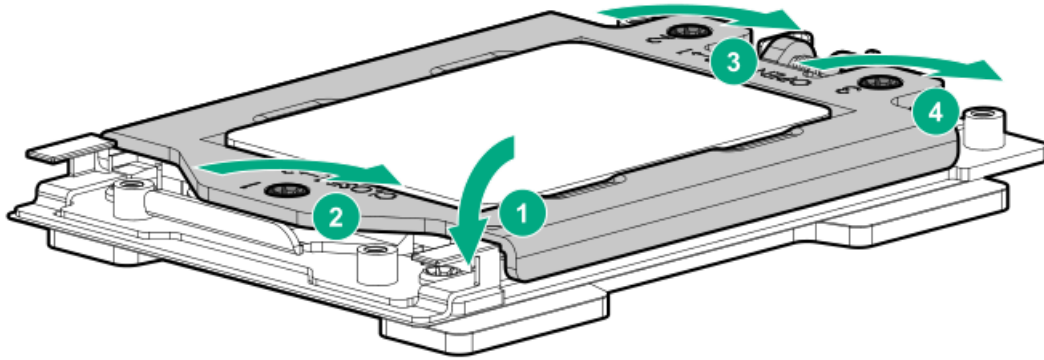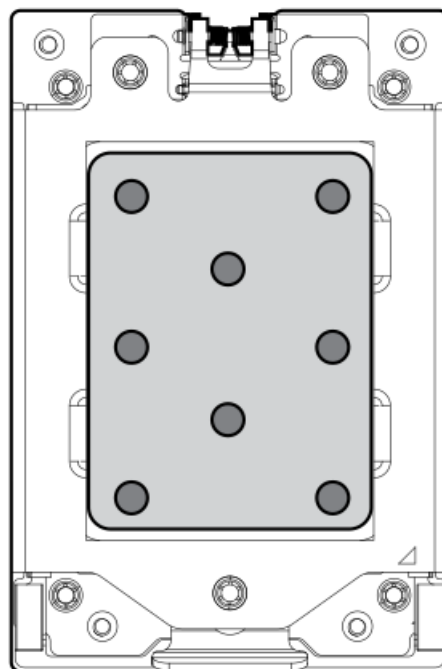

15. Install the heatsink:

> ⚠ **CAUTION:**
>
> To prevent mechanical damage or depositing oil on your hands or other contaminant to the heatsink contact surface, hold the heatsink only by the edge of its base plate. Do not touch the heatsink fins.

> ⚠ **CAUTION:**
>
> To prevent thermal failure or component damage, do not move the heatsink once the bottom of its base plate touches the top of the processor. Excessive heatsink movement can cause the thermal grease to smear and become uneven. Voids in the compound can adversely impact the transfer of heat away from the processor.

> ⚠ **CAUTION:**
>
> Heatsink screws must be tightened and loosened in alternating sequence. Do not overtighten the screws as this might damage the system board or the processor socket.

   a. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws.

   b. Use a T-20 Torx screwdriver to tighten the captive screws in the sequence specified on the heatsink label.

When using a torque wrench to tighten the screws, apply a torque of 1.58 N-m (14 lbf-in).
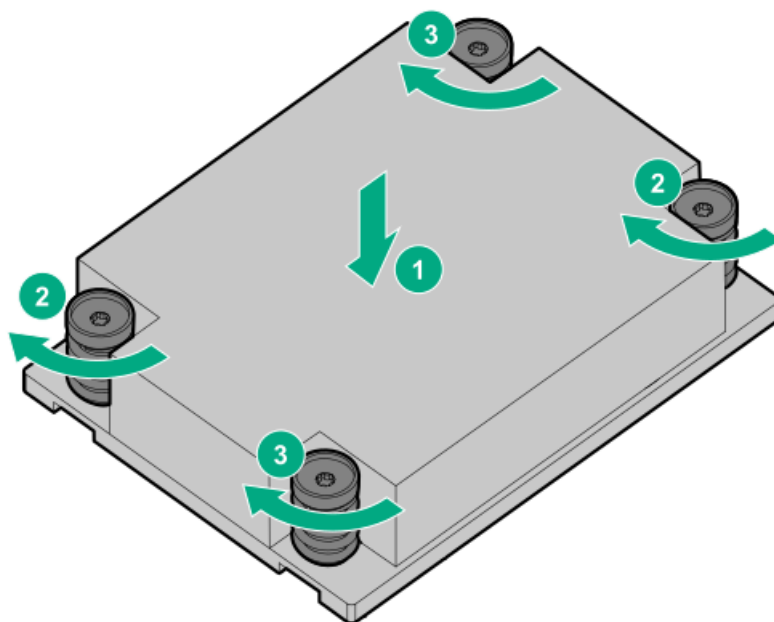
16. Install the air baffle

17. Install the access panel.

18. Install the server into the rack.

19. Connect each power cord to the server.

20. Connect each power cord to the power source.

21. Power up the server.

Removing and replacing an energy pack

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Do one of the following:

   - Remove the air baffle.

   - Remove the midplane drive cage.

6. Remove the fan cage.

7. Disconnect the energy pack cable, and then remove the energy pack.
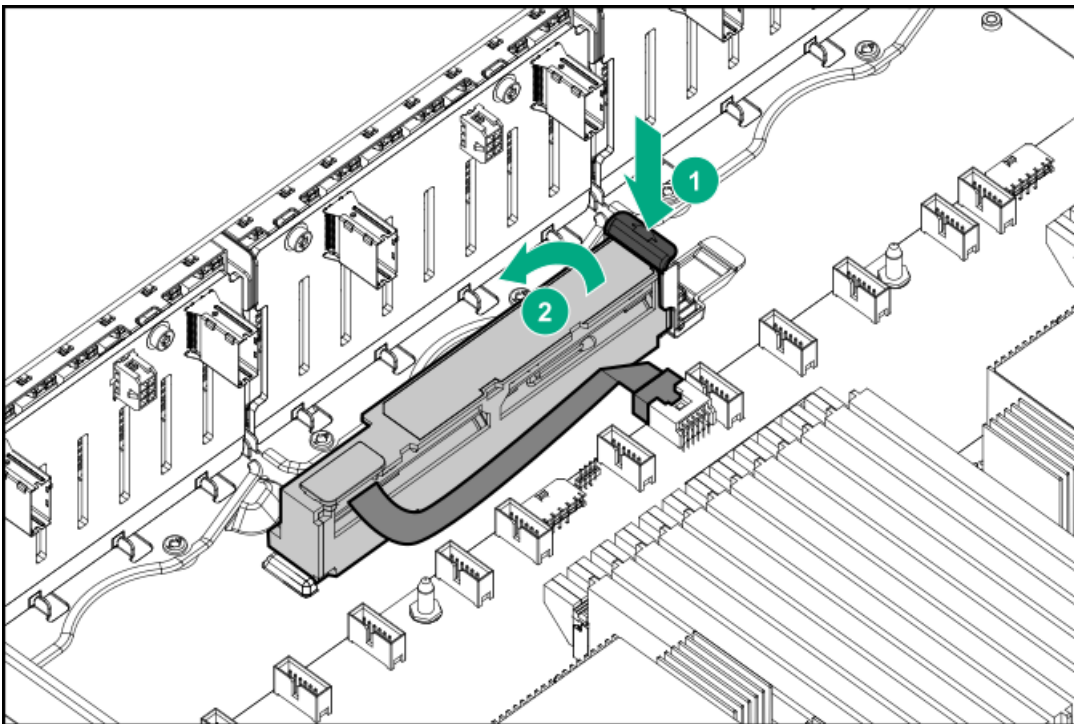
To replace the component, reverse the removal procedure.

Removing and replacing a Smart Array type-a modular controller

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. Do one of the following:

   - Remove the air baffle.

   - Remove the midplane drive cage.

6. Disconnect the SAS cables.

7. Remove the modular controller.
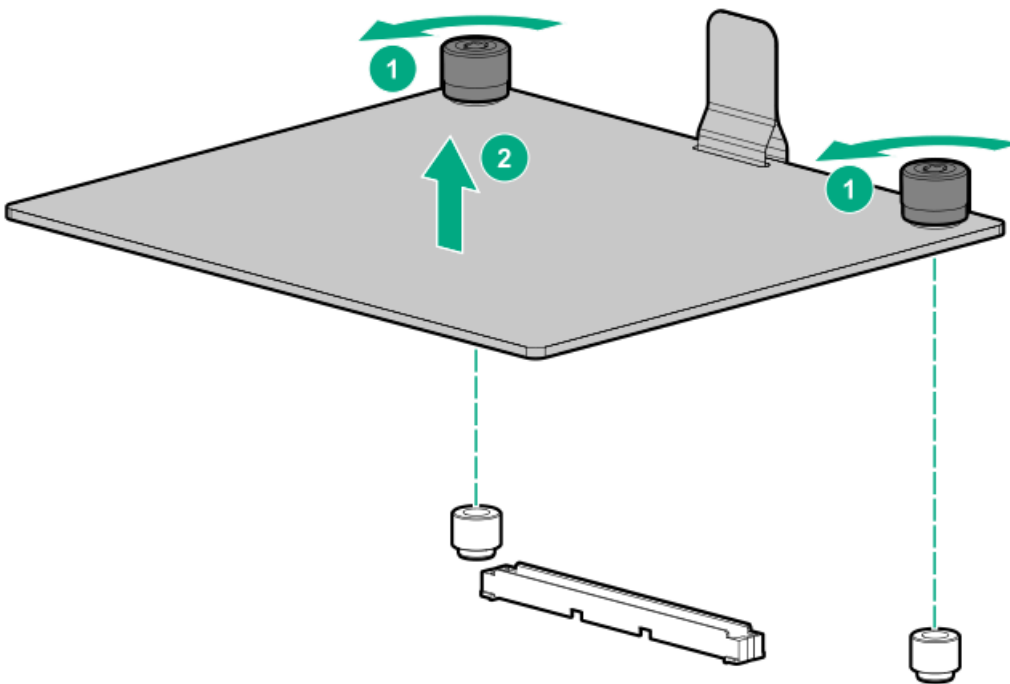
To replace the component, reverse the removal procedure.

Removing and replacing the Pensando DSP DSC-25 2p SFP28 card

Decommissioning the Pensando DSP DSC-25 2p SFP28 card

Procedure

Before removing the DSC-25 card from the server, you must first decommission the card using the Pensando Policy and Services Manager (PSM).

For more information, see Pensando Distributed Services Card for Single-Wire Management (DSC-25-SWM) Removal/Replacement Guide on the Hewlett Packard Enterprise website (**https://www.hpe.com/support/dsc25-replacement**).

Removing the Pensando DSP DSC-25 2p SFP28 card

> **NOTE:**
>
> Images might differ from the actual product.

Prerequisites

The DSC-25 card has been decommissioned.

Procedure

1. Observe the following alerts:

    > ⚠ **WARNING:** To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.

    > ⚠ **CAUTION:**
    >
    > A discharge of static electricity from a finger or other conductor might damage system boards or other static-sensitive devices. To prevent damage, observe antistatic precautions.

    > ⚠ **CAUTION:**
    >
    > To prevent improper cooling and thermal damage, do not operate the server unless all PCI slots have either an expansion slot cover or an expansion board installed.

2. Power down the server.

3. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

4. Do one of the following:

    -   Extend the server from the rack.

    -   Remove the server from the rack.

5. Remove the access panel.

    > ⚠ **CAUTION:** Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

6. Remove the primary PCIe riser cage.
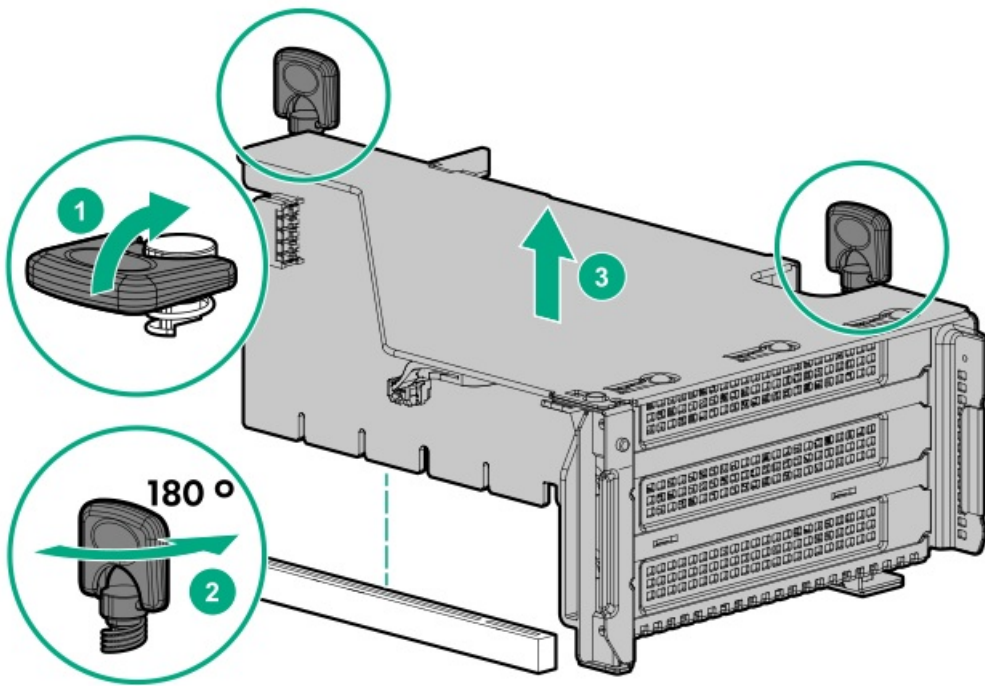
7. Remove the DSC-25 card from the slot.
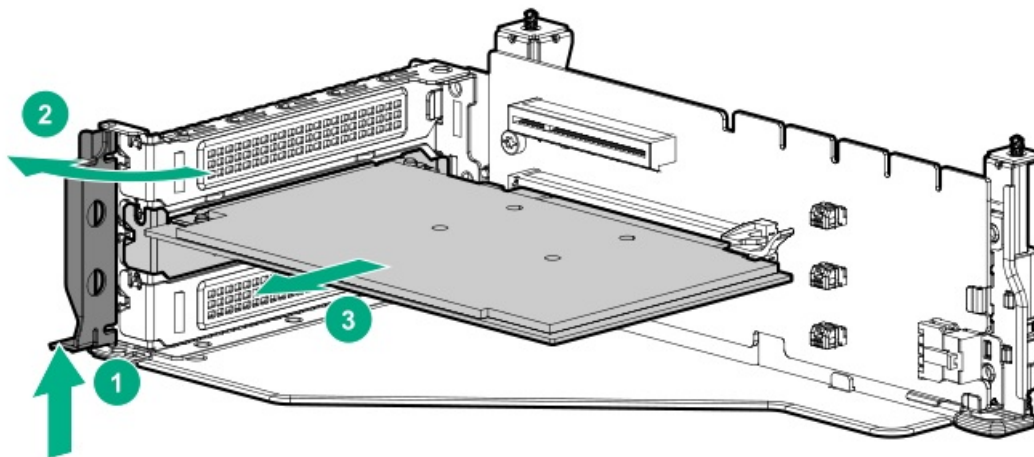
Replacing the Pensando DSP DSC-25 2p SFP28 card

Pensando DSP iLO Sideband ALOM Module requires that the accompanying Smart I/O card (Pensando DSP DSC-25 2p SFP28 card) be installed on slot 1 of the primary PCIe riser cage.

Procedure

1. Install the DSC-25 card into the PCIe slot:
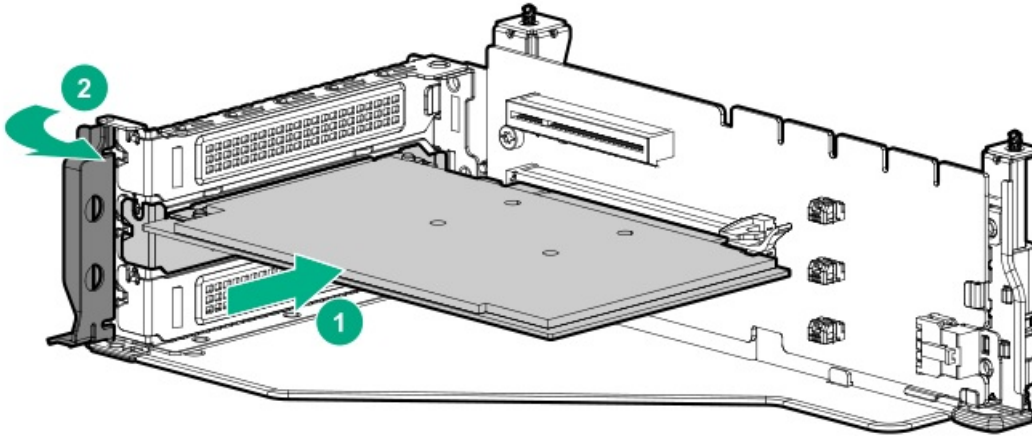
2. Install the PCIe riser cage into the server.

    ⚠ **CAUTION:**

    Do not twist the cable service loop during installation.
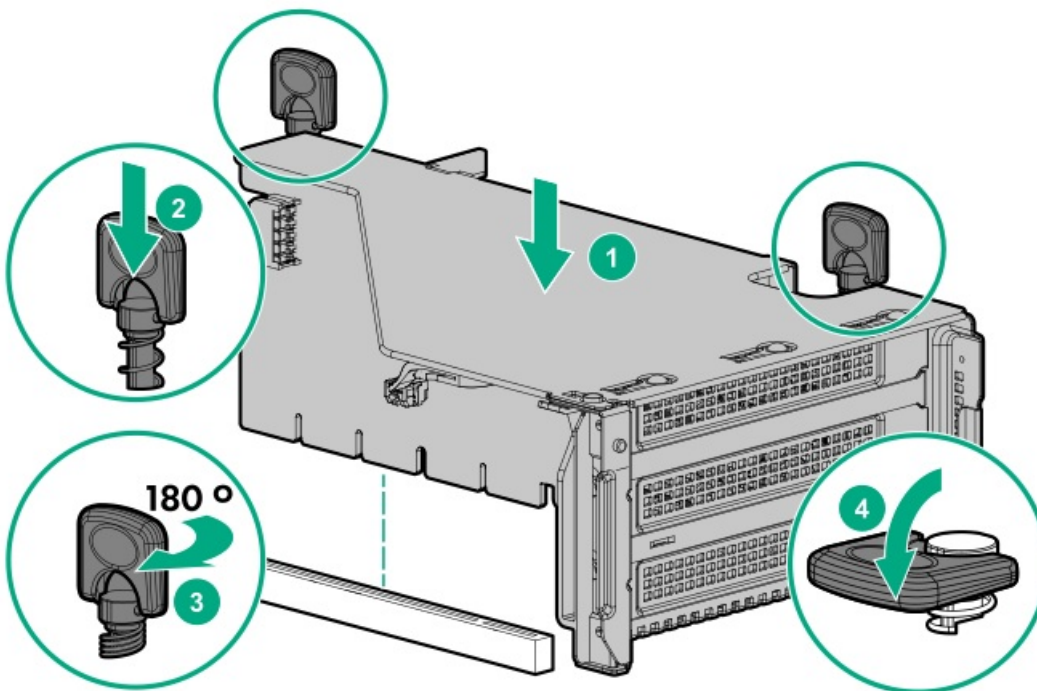
3. Install the access panel.

4. Slide the server into the rack.

5. Connect each power cord to the server.

6. Connect each power cord to the power source.

7. Power up the server.

8. Admit the new card to the Pensando Policy and Services Manager (PSM).

For more information, see the replacement instructions for the card on the   Hewlett Packard Enterprise website

https://www.hpe.com/support/hpesc

Removing and replacing the front I/O board in the LFF right chassis ear

Prerequisites

Before you perform this procedure, make sure that you have the following tools available:

- T-10 Torx screwdriver

- Small flat head screwdriver

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Remove the server from the rack.

4. Remove the access panel.

5. Remove the cable protection panel.
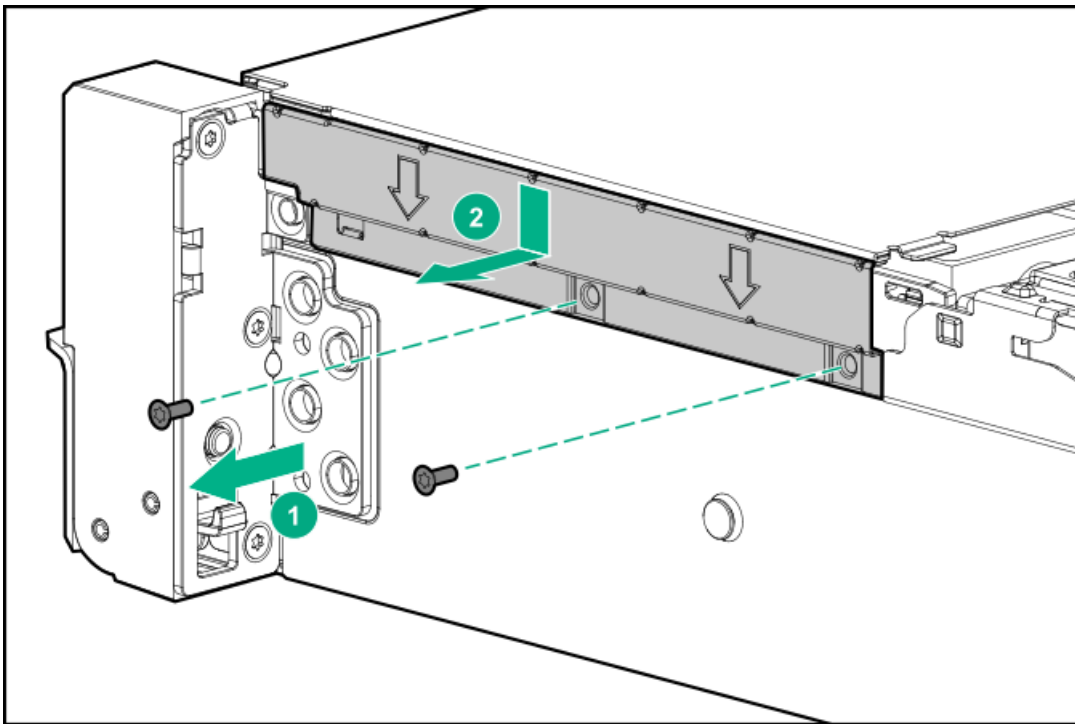
6. To allow some cable slack for disengaging the right chassis ear, detach the power switch cable from the side of the chassis.

7. Disengage the right chassis ear:

    a. Remove the screws behind the chassis ear.

    b. Pull up on the chassis ear.

    c. Rotate the chassis ear open.

8. Remove the front I/O board from the right chassis ear.

9. Press and hold the cable latch, and then disconnect the power switch cable.
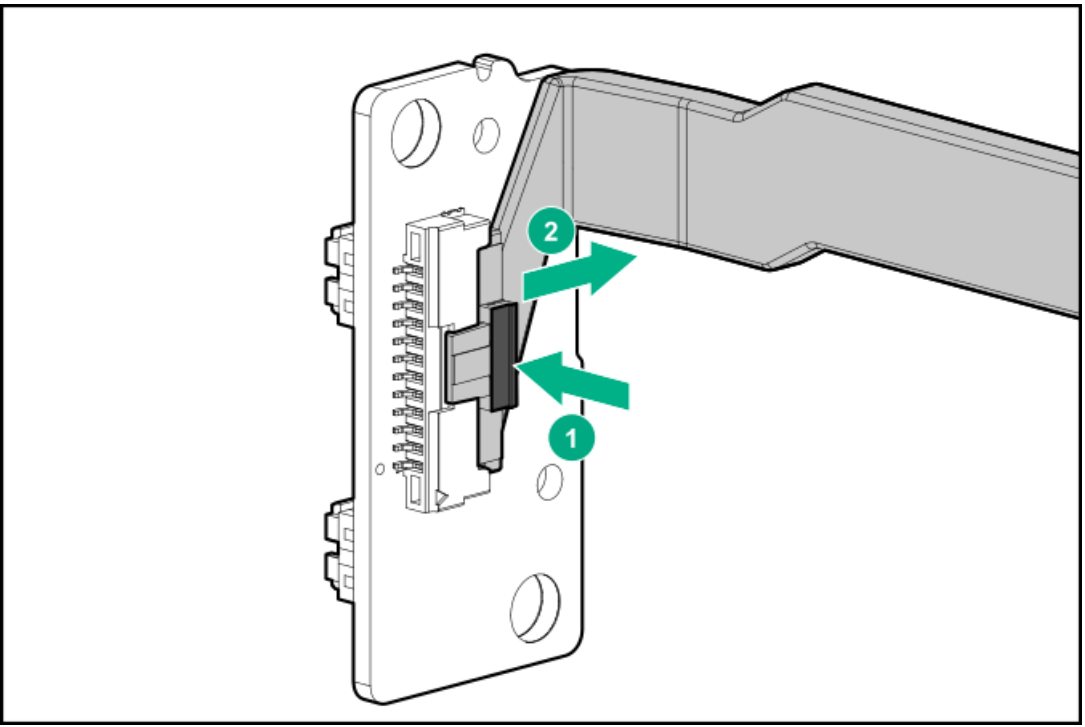
To replace the component, reverse the removal procedure.

Removing and replacing the LFF chassis ear assembly

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Remove the server from the rack.

4. Remove the access panel.

5. Disconnect the power switch cable.
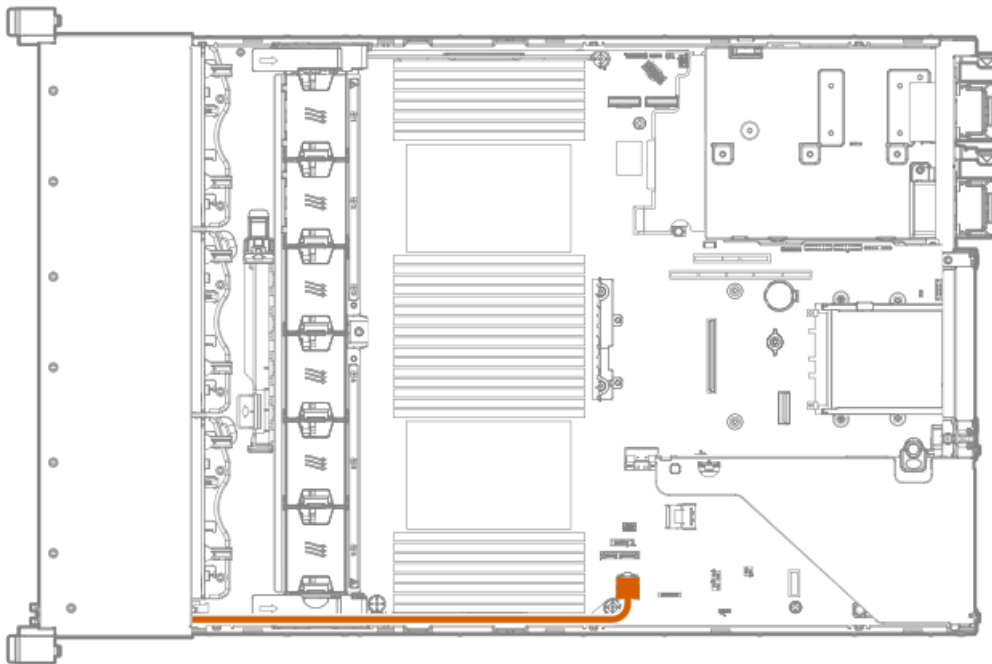
6. Remove the cable protection panel behind the chassis ear.

7. Remove the chassis ear assembly.

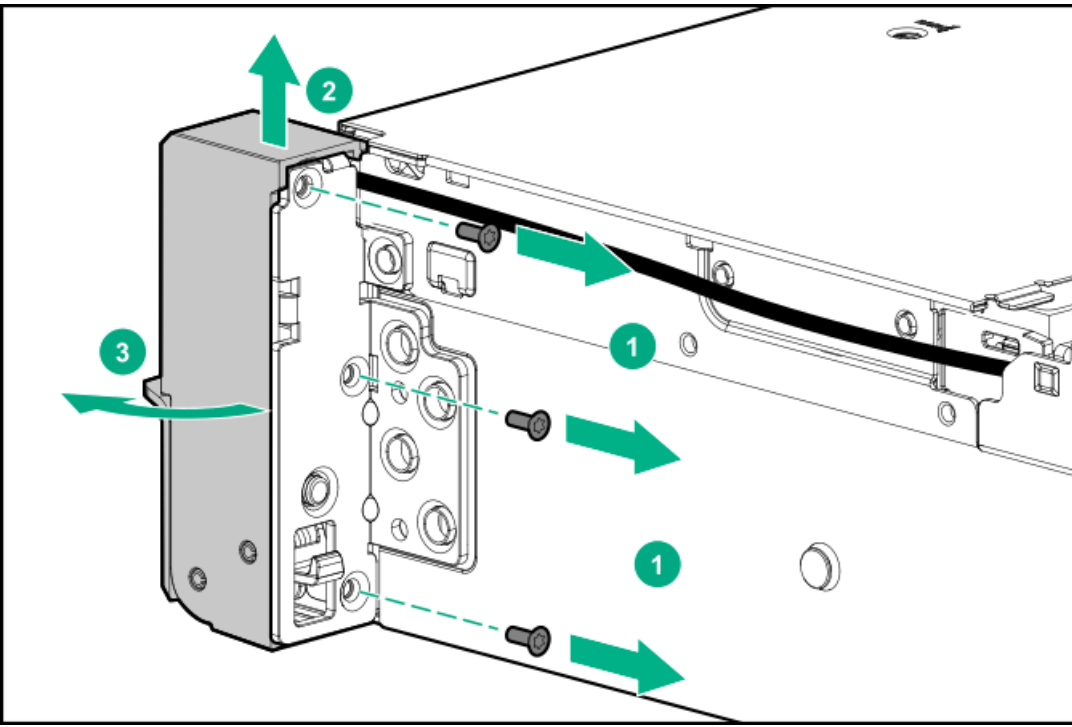To replace the component, reverse the removal procedure.

Removing and replacing an SFF power switch module

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

3. Remove the access panel.

4. Disconnect cables from the power switch module.

5. Remove the power switch module.
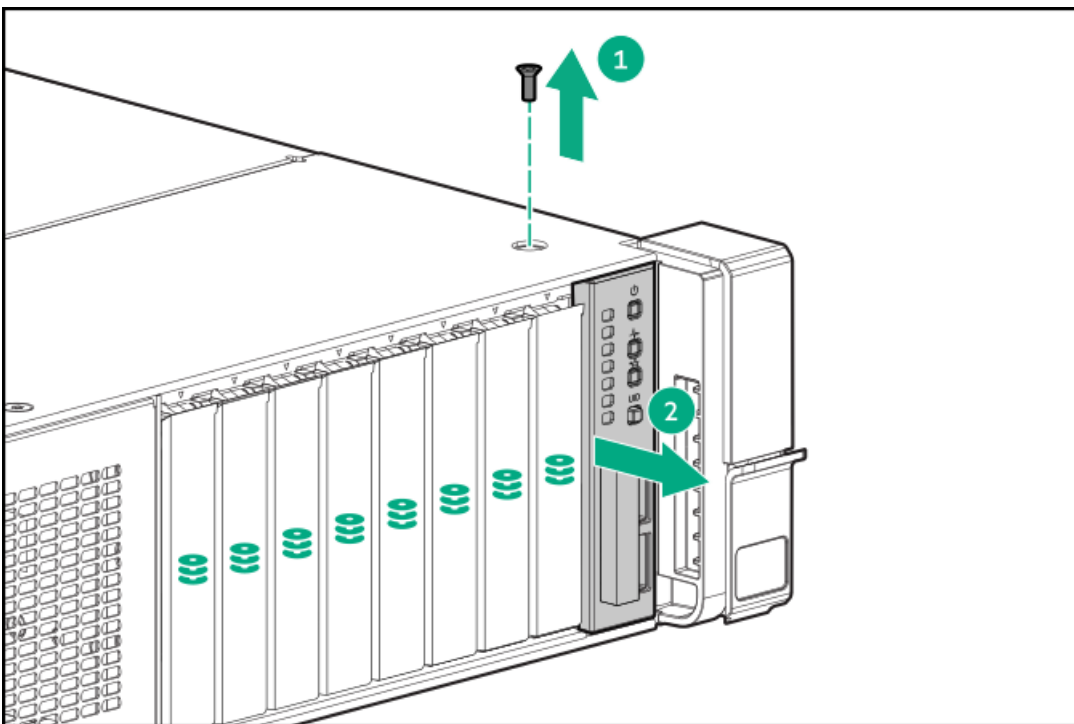
To replace the component, reverse the removal procedure.

Removing and replacing an SFF chassis ear

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.
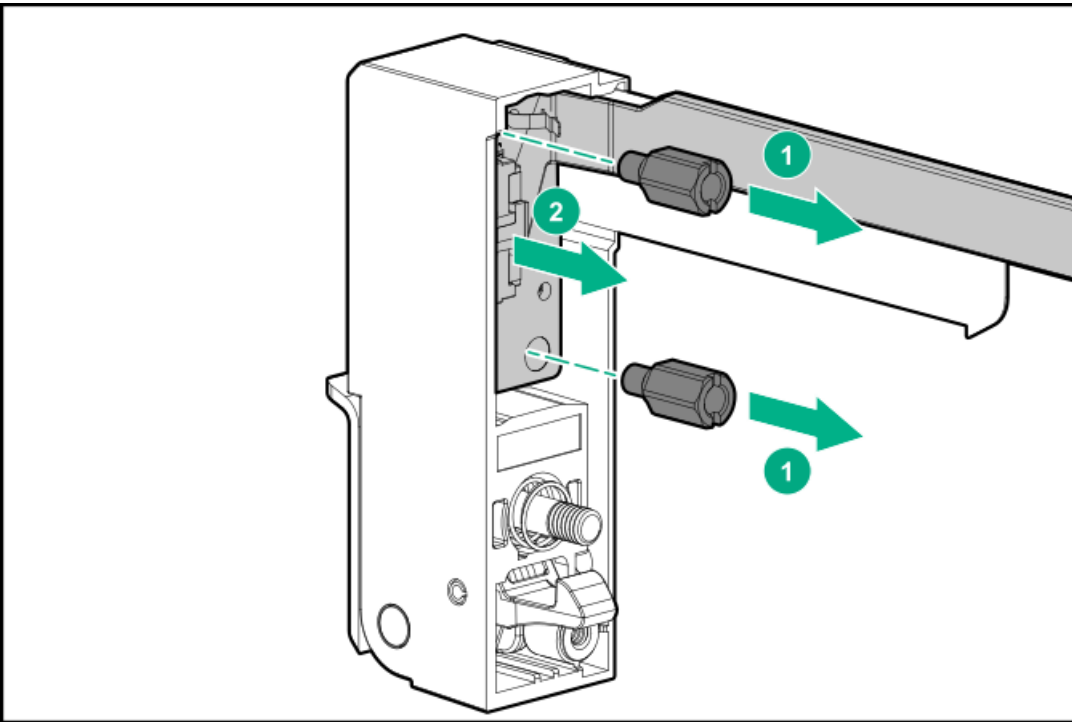
Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Remove the server from the rack.
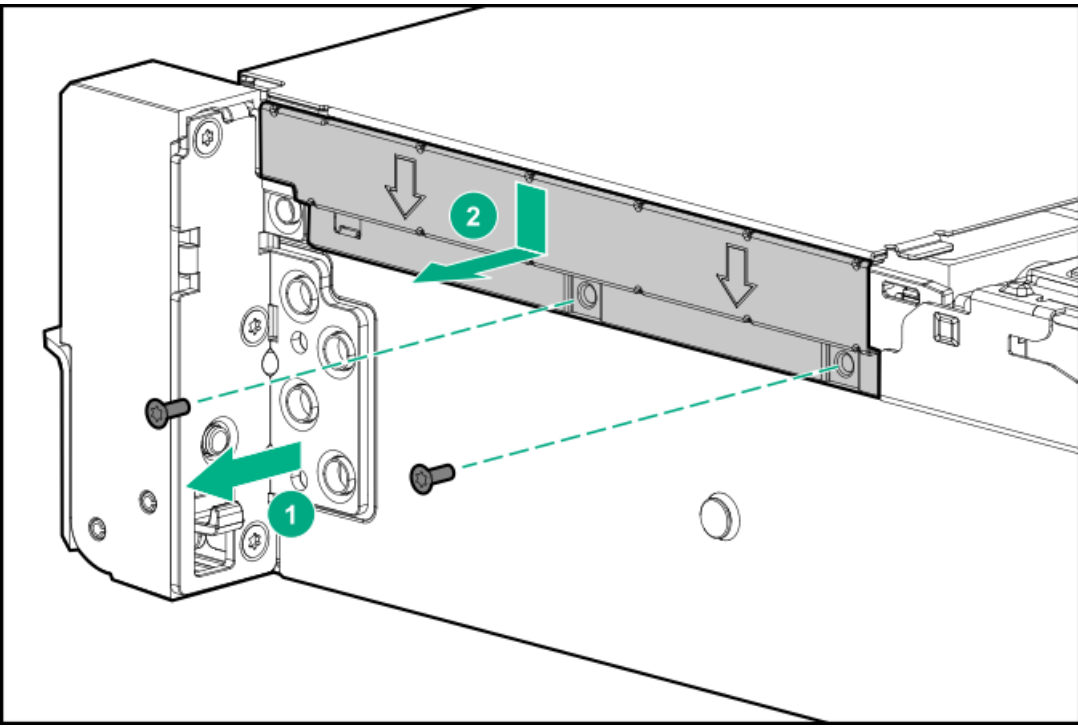
4. Remove the chassis ear.
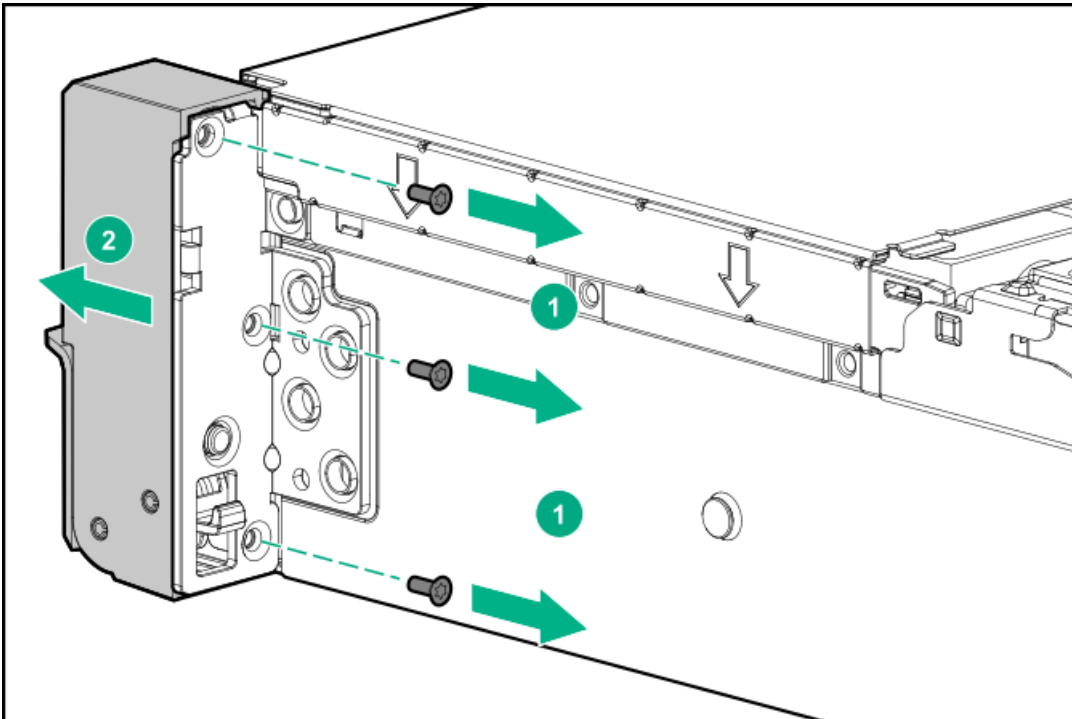
To replace the component, reverse the removal procedure.

Removing and replacing the chassis intrusion detection switch

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Remove the server from the rack.

4. Remove the access panel.

5. Remove the chassis intrusion detection switch.
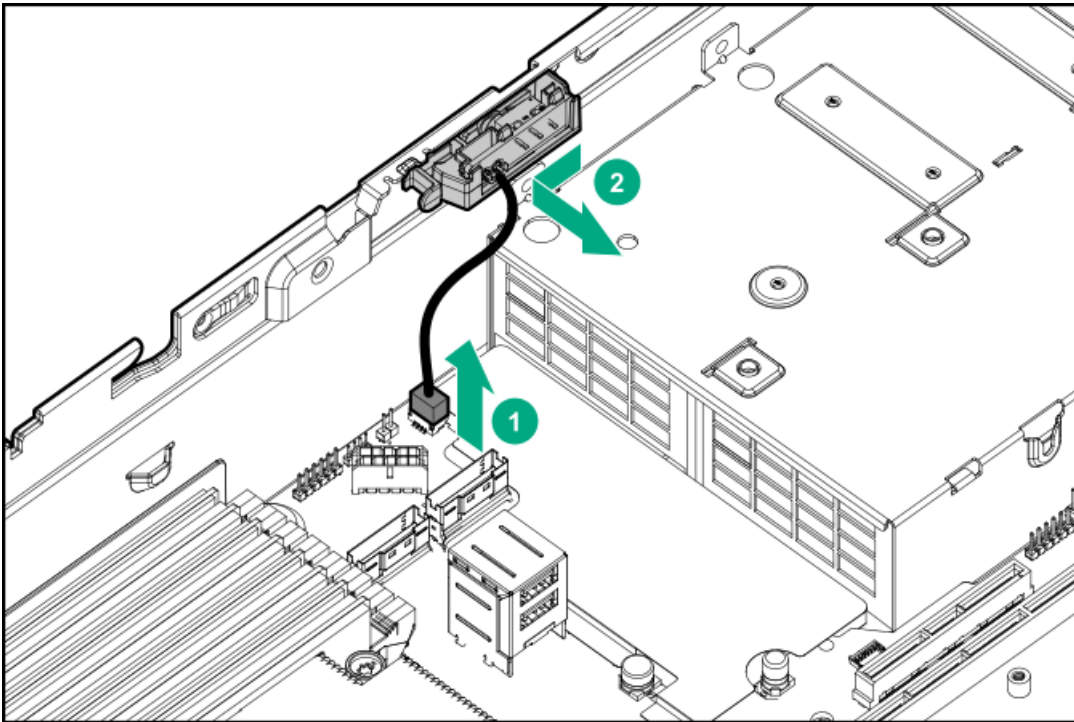
To replace the component, reverse the removal procedure.

Removing and replacing the OCP NIC 3.0 adapter

> ⚠ **WARNING:** To reduce the risk of personal injury, electric shock, or damage to the equipment, remove power from the server by removing the power cord. The front panel Power On/Standby button does not shut off system power. Portions of the power supply and some internal circuitry remain active until AC power is removed.
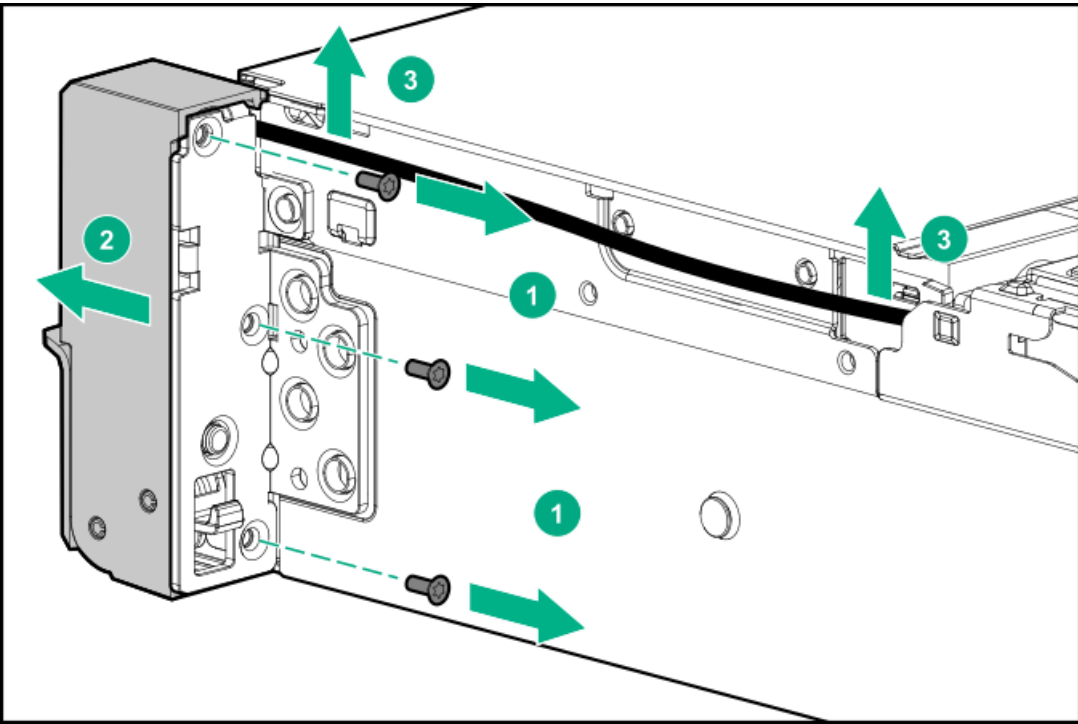
Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Disconnect any external cables that are connected to the expansion board.

4. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

5. Remove the access panel.

6. Remove the secondary riser cage (if equipped) (Removing and replacing the secondary and tertiary PCIe riser cage).

7. Remove the OCP NIC 3.0 adapter.
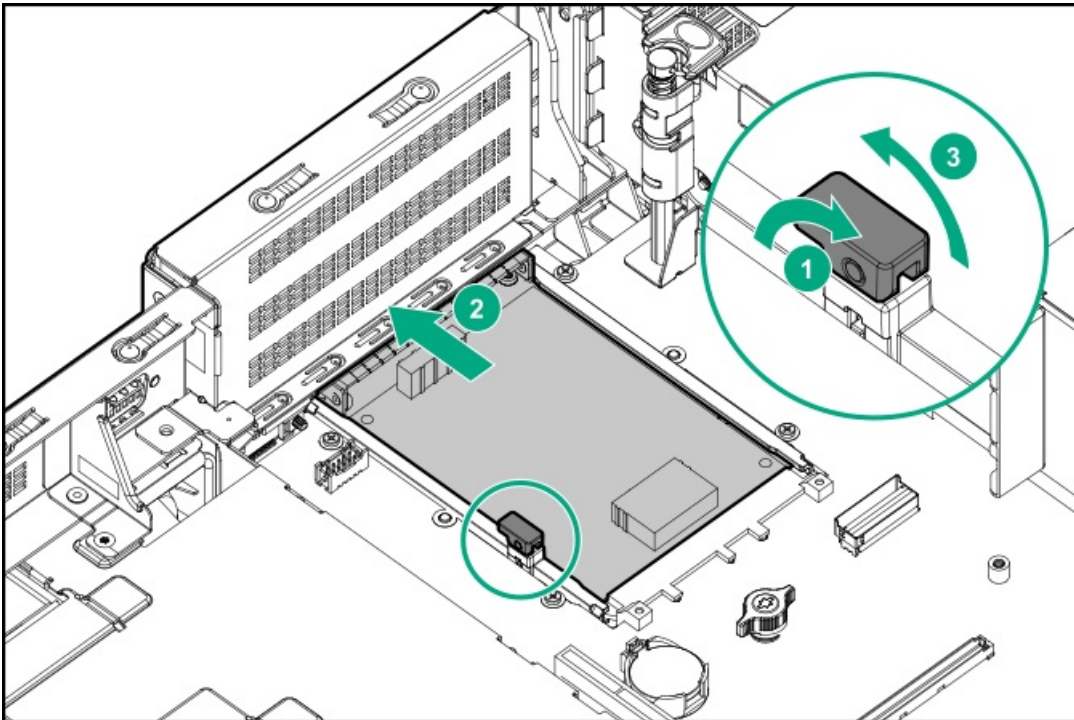
To replace the component, reverse the removal procedure.

Removing and replacing a rear serial port interface (primary)

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    • Extend the server from the rack.

    • Remove the server from the rack.

4. Remove the access panel.

5. Using a T-10 Torx screwdriver, remove the screws securing the serial port.
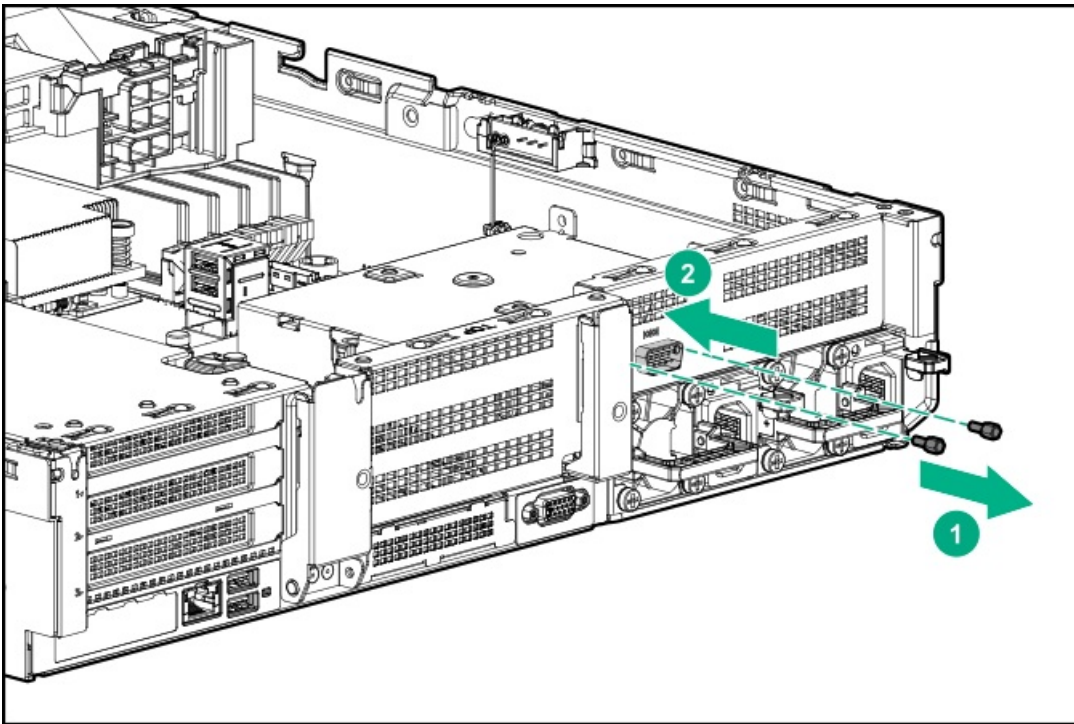
6. Disconnect and remove the serial cable.

To replace the component, reverse the removal procedure.

Removing a rear serial port interface (secondary and tertiary)

Prerequisites

Before you perform this procedure, make sure that you have a T-10 Torx screwdriver available.

Procedure

1. Power down the server.

2. Remove all power:

    a. Disconnect each power cord from the power source.

    b. Disconnect each power cord from the server.

3. Do one of the following:

    - Extend the server from the rack.

    - Remove the server from the rack.

4. Remove the access panel.

5. Disconnect the cable.

6. Remove the riser cage.

7. Using a T-10 Torx screwdriver, remove the serial port interface.
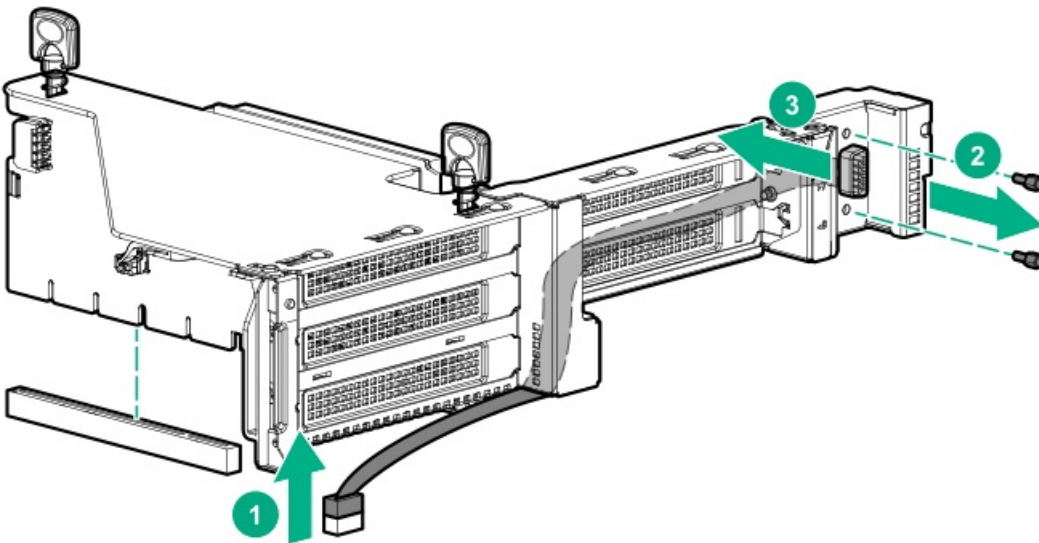
To replace the component, reverse the removal procedure.

System battery replacement

System battery information

The server contains an internal lithium manganese dioxide, a vanadium pentoxide, or an alkaline battery that provides power to the real-time clock. If this battery is not properly handled, a risk of the fire and burns exists. To reduce the risk of personal injury:

- Do not attempt to recharge the battery.

- Do not expose the battery to temperatures higher than 60°C (140°F).

- Do not expose the battery to extremely low air pressure as it might lead to explosion or leakage of flammable liquid or gas.

- Do not disassemble, crush, puncture, short external contacts, or dispose the battery in fire or water.

- If the server no longer automatically displays the correct date and time, then replace the battery that provides power to the real-time clock. Under normal use, battery life is 5 to 10 years.

Replace the system battery

Prerequisites

Before you perform this procedure, make sure that you have a small, flat-bladed, nonconductive tool available.
Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Do one of the following:

   - Extend the server from the rack.

   - Remove the server from the rack.

4. Remove the access panel.

5. If installed, remove the tertiary riser cage.

6. Locate the battery on the system board.

7. Use a small flat-bladed, nonconductive tool to carefully lift the front of the battery from the socket.

8. Remove the battery.
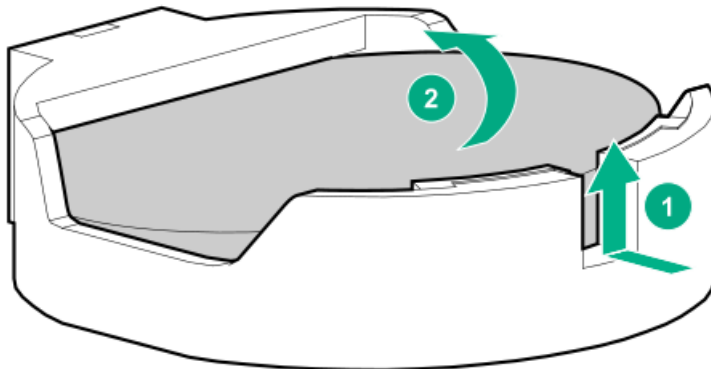
9. Install the system battery.
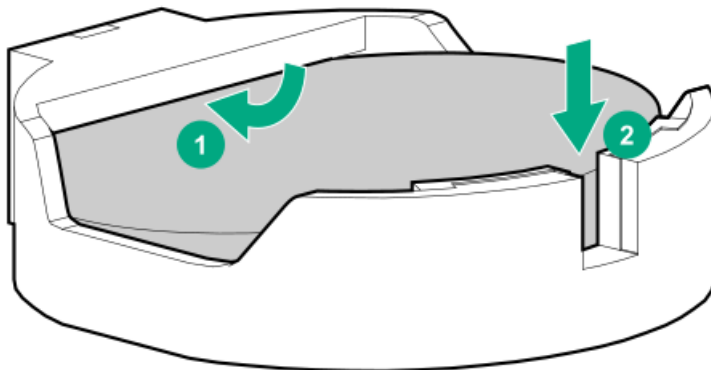
For more information about battery replacement or proper disposal, contact an authorized reseller or a support specialist.

Removing and replacing the system board

Removing the system board

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 screwdriver (for system board screws)
- T-20 screwdriver for processor and heatsink screws
- Alcohol wipe

Procedure

1. Power down the server.

2. Remove all power:

   a. Disconnect each power cord from the power source.

   b. Disconnect each power cord from the server.

3. Remove the server from the rack.

4. Remove all power supplies.

5. Remove the access panel.

6. Do one of the following:

   - Remove the air baffle.
   - Remove the midplane drive cage.

7. Remove the primary PCIe riser cage.

8. If installed, remove the secondary or tertiary PCIe riser cage (Remove the secondary or tertiary PCIe riser cage).

9. Remove the OCP network adapter.

10. Allow the existing heatsink to cool.

11. Remove the heatsink:

    > △ **CAUTION:**
    >
    > To prevent mechanical damage or depositing oil on your hands or other contaminants to the heatsink contact surface, hold the heatsink only by the edge of its baseplate. Do not touch the heatsink fins.

    > △ **CAUTION:**
    >
    > Heatsink screws must be tightened and loosened in alternating sequence as shown on the heatsink label.

    a. Use a T-20 screwdriver to loosen the captive screws in the sequence specified on the heatsink label.

    b. Lift the heatsink away from the system board.
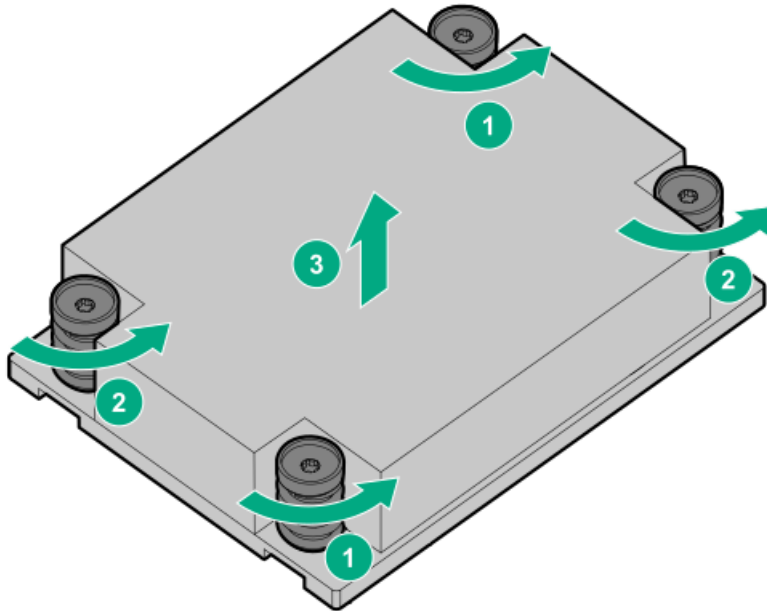
c. Place the heatsink on a flat work surface with its contact side facing up.

12. Use an alcohol wipe to remove the existing thermal grease from the heatsink and the processor.

Allow the alcohol to evaporate before continuing.

13. Use a screwdriver to loosen the three captive screws in the sequence shown and then pivot the force frame up.
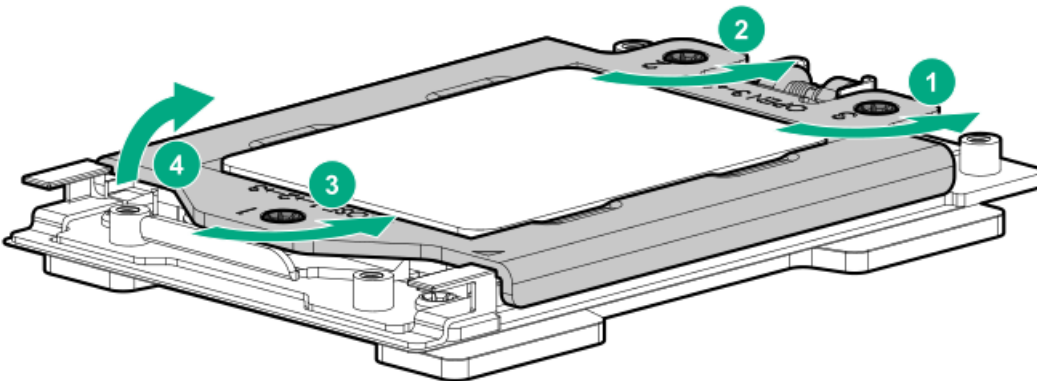
14. Remove the processor:

a. Hold the lift tabs near the front end of the rail frame, and then pivot the rail frame to the vertical position.

b. Slide the processor out of the rail frame.
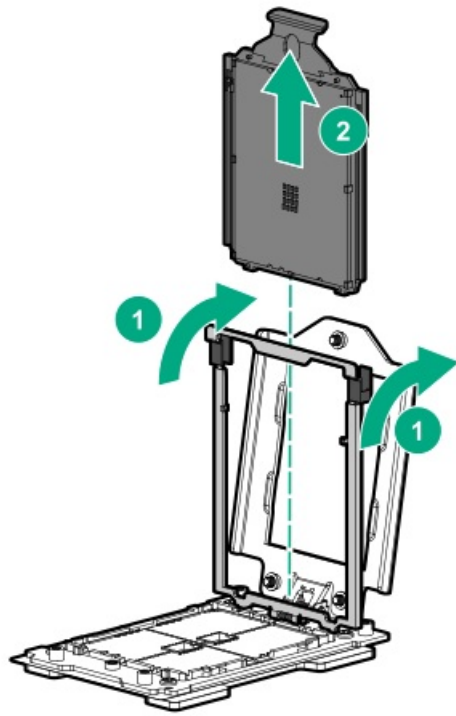
15. Remove a DIMM.

16. Remove the fan cage.

17. Disconnect all cables connected to the system board.

18. Loosen the system board thumbscrews.

19. Remove the system board.
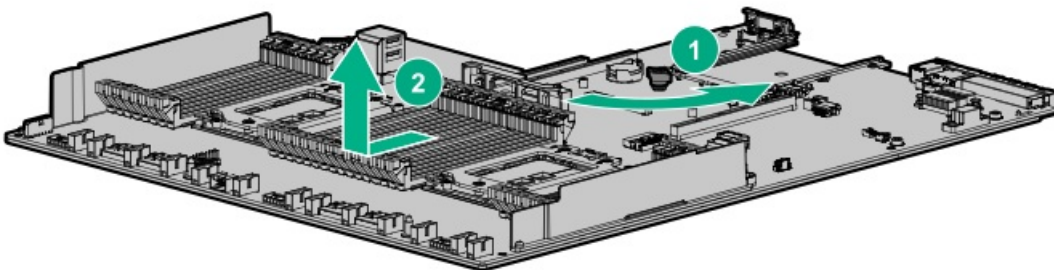
Replacing the system board

Prerequisites

Before you perform this procedure, make sure that you have the following items available:

- T-15 screwdriver (for system board screws)
- T-20 screwdriver for processor and heatsink screws
- Alcohol wipe
- Thermal grease (spare part number 777298-001)

Procedure

1. Install the spare system board.
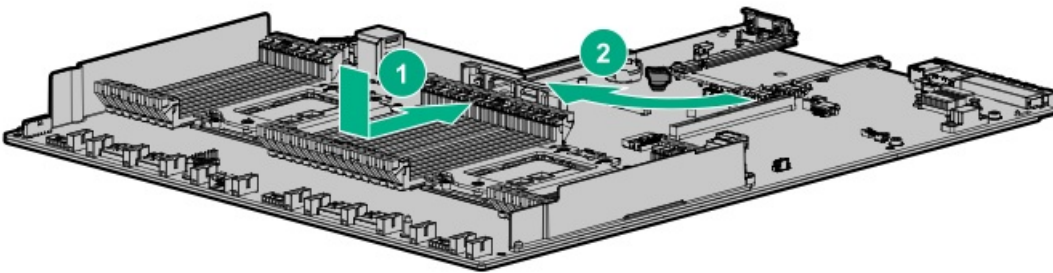
2. Use a screwdriver to loosen the three captive screws in the sequence shown and then pivot the force frame up.
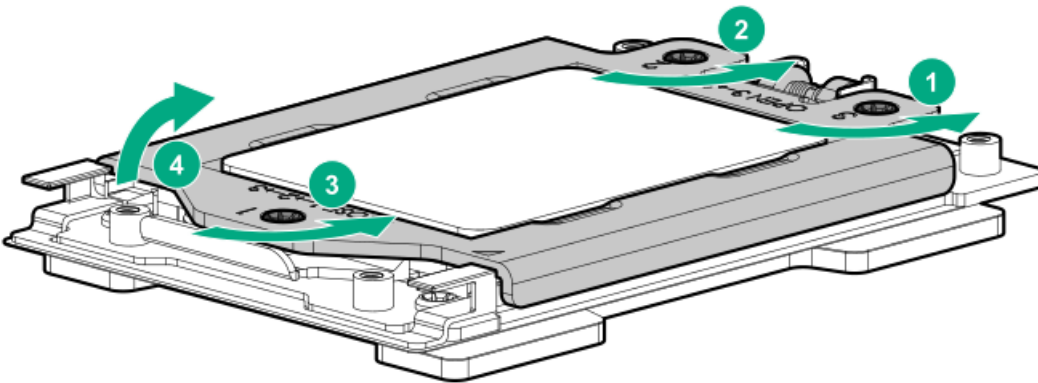
3. Remove the external cap.

   a. Hold the lift tabs near the front end of the rail frame, and then pivot the rail frame to the vertical position.

   b. Slide the external cap out of the rail frame.

   Retain the external cap for future use.
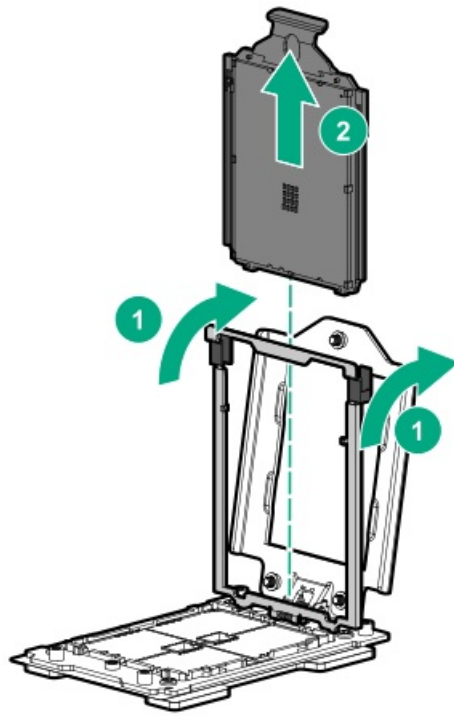
4. Install the processor:

   a. Hold the processor by its carrier handle and slide the processor into the rail frame until it engages with a click sound.

   b. Remove the pin field cover cap.

   > △ **CAUTION:**
   >
   > To prevent the risk of damaging the pins in the processor socket, do not reinstall the pin field cover cap after removing it.

   c. Hold the lift tabs near the front end of the rail frame, and then pivot the rail frame to the closed position.

   A click sound indicates that the rail frame is properly engaged.
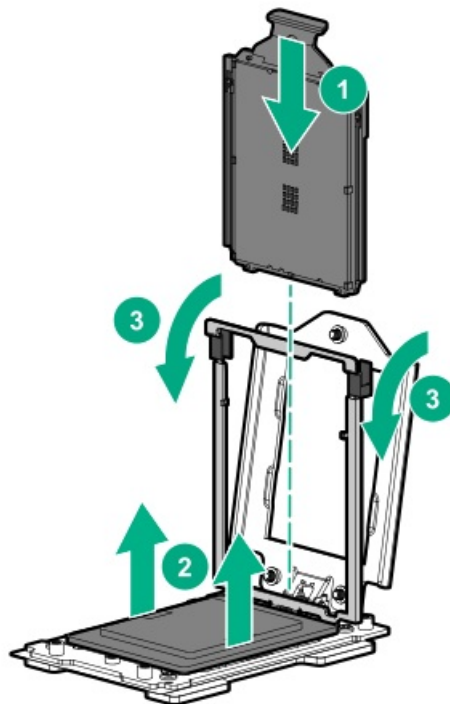
5. Close the force frame.

   > △ **CAUTION:**

Do not overtighten the screws as this might damage the system board or the processor socket.
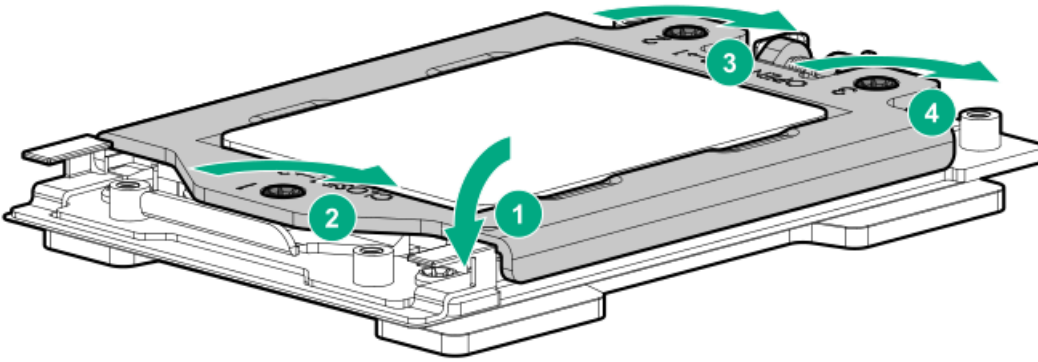
6. Apply new thermal grease to the processor in the pattern shown in the following image. Use the full contents of the thermal grease syringe.
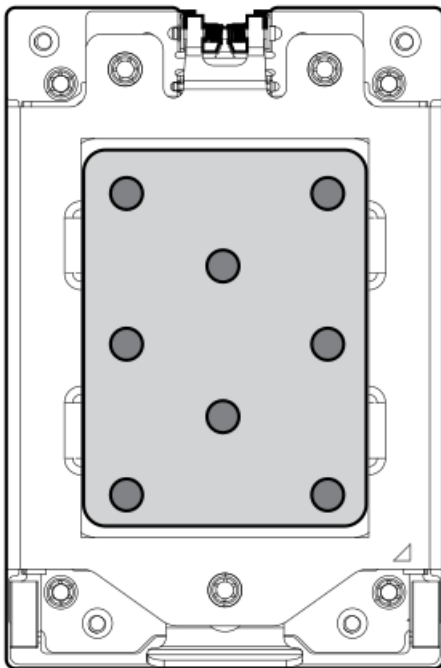
7. Remove the thermal interface protective cover from the new heatsink.

8. Install the heatsink.

△ **CAUTION:**

To prevent mechanical damage or depositing oil on your hands or other contaminant to the heatsink contact surface, hold the heatsink only by the edge of its base plate. Do not touch the heatsink fins.

△ **CAUTION:**

To prevent thermal failure or component damage, do not move the heatsink once the bottom of its base plate touches the top of the processor. Excessive heatsink movement can cause the thermal grease to smear and become uneven. Voids in the compound can adversely impact the transfer of heat away from the processor.

△ **CAUTION:**

Heatsink screws must be tightened and loosened in alternating sequence as shown on the heatsink label. Do not overtighten the screws as this might damage the system board or the processor socket.

a. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws.

b. Use a T-20 screwdriver to tighten the captive screws in the sequence specified on the heatsink label until fully seated.
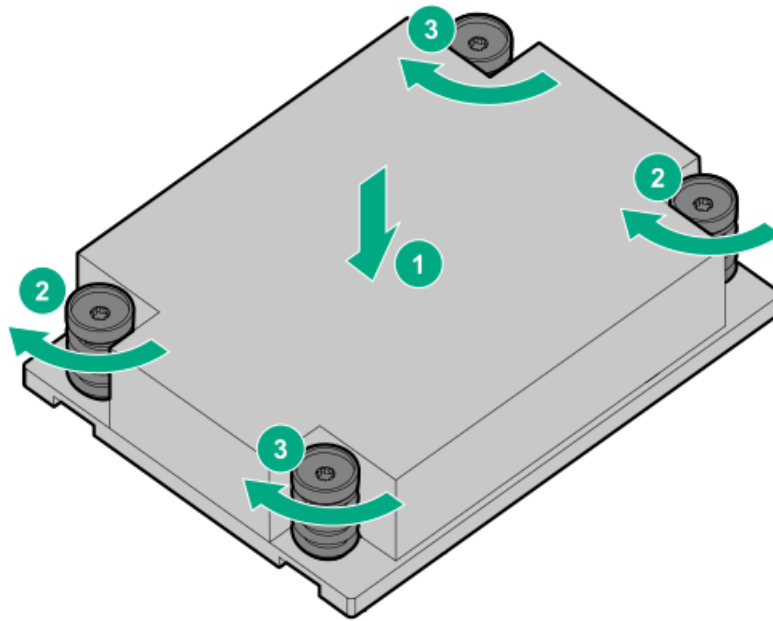
9. Install all components removed from the failed system board.

10. Install the access panel.

11. Install the power supplies.

12. Power up the server.

13. Ensure all firmware, including option cards and embedded devices, is updated to the same versions to ensure that the latest drivers are being used.

14. Re-enter any Secure Boot Keys that were previously added in the Secure Boot configuration.

15. Re-enter the server serial number and product ID.

Re-entering the server serial number and product ID

After replacing the system board, re-enter the system serial number and product ID, and configure the date and time settings.

Procedure

1. Access the UEFI System Utilities. During POST, press **F9**.

2. From the System Utilities screen, select System Configuration > BIOS/Platform Configuration (RBSU) > Advanced Options > Advanced Service Options.

3. Select Serial Number, and then press **Enter**.

   The following warning appears:

   ```
   The serial number is modified by qualified service personnel and must match the serial number located on the chassis.
   ```

4. Click OK.

5. Type the serial number, and then press **Enter**.

6. Select Product ID, and then press **Enter**.

   The following warning appears:

   ```
   Product ID is modified only by qualified service personnel. This value must match the product ID located on the chassis.
   ```

7. Type the product ID, and then press **Enter**.

8. From the System Utilities screen, select System Configuration > BIOS/Platform Configuration (RBSU) > Date and Time.

9. Configure the date and time settings:

   - Date (mm-dd-yyyy)—Enter the date in a month-day-year (mm-dd-yyyy) format.

   - Time (hh:mm:ss)—Enter the time in a 24-hour format (hh:mm:ss) format.

   - Hour Format—Select either a 12- or 24-hours format. (This menu is supported in Gen10 Plus and later servers.)

   - Time Format

     - Coordinated Universal Time (UTC)—Calculates the time stored in the hardware real-time clock (RTC) from the associated Time Zone setting.

     - Local Time—Removes the use of the Time Zone setting. This option is useful for addressing interaction issues in Windows operating systems set in legacy BIOS boot mode.

     - Time Zone—Select the time zone for the system.

     - Daylight Savings Time—Select whether to enable DST in the system time setting.

10. To confirm and save the settings, press **F12**.

    The server automatically reboots.

    The installation is complete.

HPE Trusted Platform Module 2.0 Gen10 Plus option

The option is not a customer-removable part.

> ⚠ **CAUTION:** If the TPM is removed from the original server and powered up on a different server, data stored in the TPM including keys will be erased.

If you suspect a TPM board failure, leave the TPM installed and remove the system board (system board). Contact a Hewlett Packard Enterprise authorized service provider for a replacement system board and TPM module.

Troubleshooting

Troubleshooting resources

Troubleshooting resources are available for HPE Gen10 and Gen10 Plus server products in the following documents:

- Troubleshooting Guide for HPE ProLiant Gen10 and Gen10 Plus servers provides procedures for resolving common problems and comprehensive courses of action for fault isolation and identification, issue resolution, and software maintenance.

- Integrated Management Log Messages and Troubleshooting Guide for HPE ProLiant Gen10 and Gen10 Plus servers and HPE Synergy provides IML messages and associated troubleshooting information to resolve critical and cautionary IML events.

To access troubleshooting resources for your product, see the **Hewlett Packard Enterprise website**.

Diagnostic tools

UEFI System Utilities

The UEFI System Utilities is embedded in the system ROM. Its features enable you to perform a wide range of configuration activities, including:

- Configuring system devices and installed options.

- Enabling and disabling system features.

- Displaying system information.

- Selecting the primary boot controller or partition.

- Configuring memory options.

- Launching other preboot environments.

HPE servers with UEFI can provide:

- Support for boot partitions larger than 2.2 TB. Such configurations could previously only be used for boot drives when using RAID solutions.

- Secure Boot that enables the system firmware, option card firmware, operating systems, and software collaborate to enhance platform security.

- UEFI Graphical User Interface (GUI)

- An Embedded UEFI Shell that provides a preboot environment for running scripts and tools.

- Boot support for option cards that only support a UEFI option ROM.

Selecting the boot mode

This server provides two Boot Mode configurations: UEFI Mode and Legacy BIOS Mode. Certain boot options require that you select a specific boot mode. By default, the boot mode is set to UEFI Mode. The system must boot in UEFI Mode to use certain options, including:

- Secure Boot, UEFI Optimized Boot, Generic USB Boot, IPv6 PXE Boot, iSCSI Boot, NVMe Boot and Boot from URL

- Fibre Channel/FCoE Scan Policy

> **NOTE:**
>
> The boot mode you use must match the operating system installation. If not, changing the boot mode can impact the ability of the server to boot to the installed operating system.

Prerequisite

When booting to UEFI Mode, leave UEFI Optimized Boot enabled.

Procedure

1. From the System Utilities screen, select System Configuration > BIOS/Platform Configuration (RBSU) > Boot Options > Boot Mode.

2. Select a setting.

    - UEFI Mode (default)—Configures the system to boot to a UEFI compatible operating system.

    - Legacy BIOS Mode—Configures the system to boot to a traditional operating system in Legacy BIOS compatibility mode.

3. Save your setting.

4. Reboot the server.

Secure Boot

Secure Boot is a server security feature that is implemented in the BIOS and does not require special hardware. Secure Boot ensures that each component launched during the boot process is digitally signed and that the signature is validated against a set of trusted certificates embedded in the UEFI BIOS. Secure Boot validates the software identity of the following components in the boot process:

- UEFI drivers loaded from PCIe cards

- UEFI drivers loaded from mass storage devices

- Preboot UEFI Shell applications

- OS UEFI boot loaders

When Secure Boot is enabled:

- Firmware components and operating systems with boot loaders must have an appropriate digital signature to execute during the boot process.

- Operating systems must support Secure Boot and have an EFI boot loader signed with one of the authorized keys to boot. For more information about supported operating systems, see **https://www.hpe.com/servers/ossupport**.

You can customize the certificates embedded in the UEFI BIOS by adding or removing your own certificates, either from a management console directly attached to the server, or by remotely connecting to the server using the iLO Remote Console.

You can configure Secure Boot:

- Using the System Utilities options described in the following sections.

- Using the iLO RESTful API to clear and restore certificates. For more information, see the Hewlett Packard Enterprise website (**https://www.hpe.com/info/redfish**).

- Using the `secboot` command in the Embedded UEFI Shell to display Secure Boot databases, keys, and security reports.

Launching the Embedded UEFI Shell

Use the Embedded UEFI Shell option to launch the Embedded UEFI Shell. The Embedded UEFI Shell is a preboot command-line environment for scripting and running UEFI applications, including UEFI boot loaders. The Shell also provides CLI-based commands you can use to obtain system information, and to configure and update the system BIOS.

Prerequisites

- Embedded UEFI Shell is set to Enabled.

Procedure

1. From the System Utilities screen, select Embedded Applications > Embedded UEFI Shell.

   The Embedded UEFI Shell screen appears.

2. Press any key to acknowledge that you are physically present.

   This step ensures that certain features, such as disabling Secure Boot or managing the Secure Boot certificates using third-party UEFI tools, are not restricted.

3. If an administrator password is set, enter it at the prompt and press Enter.

   The `Shell>` prompt appears.

4. Enter the commands required to complete your task.

5. Enter the `exit` command to exit the Shell.

iLO Service Port

The Service Port is a USB port with the label **iLO** on supported servers and compute modules.

To find out if your server or compute module supports this feature, see the server specifications document at the following website: **https://www.hpe.com/info/qs**.

When you have physical access to a server, you can use the Service Port to do the following:

- Download the Active Health System Log to a supported USB flash drive.

  When you use this feature, the connected USB flash drive is not accessible by the host operating system.

- Connect a client (such as a laptop) with a supported USB to Ethernet adapter to access the following:

  - iLO web interface

  - Remote console

  - iLO RESTful API

  - CLI

  Hewlett Packard Enterprise recommends the HPE USB to Ethernet Adapter (part number Q7Y55A).

  Some servers, such as the XL170r, require an adapter to connect a USB to Ethernet adapter to the iLO Service Port.

  Hewlett Packard Enterprise recommends the HPE Micro USB to USB Adapter (part number 789904-B21).

When you use the iLO Service Port:

- Actions are logged in the iLO event log.

- The server UID flashes to indicate the Service Port status.

  You can also retrieve the Service Port status by using a REST client and the iLO RESTful API.

- You cannot use the Service Port to boot any device within the server, or the server itself.

- You cannot access the server by connecting to the Service Port.

- You cannot access the connected device from the server.

For more information about the iLO Service Port, see the iLO user guide at the following website: **https://www.hpe.com/support/ilo-docs**.

For more information, see the **Anywhere Access to HPE ProLiant Gen10 Servers** video.

Intelligent Provisioning

Intelligent Provisioning is a single-server deployment tool embedded in ProLiant servers and HPE Synergy compute modules. Intelligent Provisioning simplifies server setup, providing a reliable and consistent way to deploy servers.

Intelligent Provisioning prepares the system for installing original, licensed vendor media and Hewlett Packard Enterprise-branded versions of OS software. Intelligent Provisioning also prepares the system to integrate optimized server support software from the Service Pack for ProLiant (SPP). SPP is a comprehensive systems software and firmware solution for ProLiant servers, server blades, their enclosures, and HPE Synergy compute modules. These components are preloaded with a basic set of firmware and OS components that are installed along with Intelligent Provisioning.

> (i) **IMPORTANT:**
>
> HPE ProLiant XL servers do not support operating system installation with Intelligent Provisioning, but they do support the maintenance features. For more information, see "Performing Maintenance" in the Intelligent Provisioning user guide and online help.

After the server is running, you can update the firmware to install additional components. You can also update any components that have been outdated since the server was manufactured.

To access Intelligent Provisioning:

- Press F10 from the POST screen and enter Intelligent Provisioning .

- From the iLO web interface using Lifecycle Management. Lifecycle Management allows you to access Intelligent Provisioning without rebooting your server.

HPE Insight Remote Support

Hewlett Packard Enterprise strongly recommends that you register your device for remote support to enable enhanced delivery of your Hewlett Packard Enterprise warranty, HPE support services, or Hewlett Packard Enterprise contractual support agreement. Insight Remote Support supplements your monitoring continuously to ensure maximum system availability by providing 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. Notifications can be sent to your authorized Hewlett Packard Enterprise Channel Partner for onsite service, if configured and available in your country.

For more information, see Insight Remote Support and Insight Online Setup Guide for ProLiant Servers and BladeSystem c-Class Enclosures on the **Hewlett Packard Enterprise website**. Insight Remote Support is available as part of Hewlett Packard Enterprise Warranty, HPE support services, or Hewlett Packard Enterprise contractual support agreement.

HPE InfoSight for servers

The HPE InfoSight portal is a secure web interface hosted by HPE that allows you to monitor supported devices through a graphical interface.

HPE InfoSight for servers:

- Combines the machine learning and predictive analytics of HPE InfoSight with the health and performance monitoring of Active Health System (AHS) and HPE iLO to optimize performance and predict and prevent problems

- Provides automatic collection and analysis of the sensor and telemetry data from AHS to derive insights from the behaviors of the install base to provide recommendations to resolve problems and improve performance

For more information on getting started and using HPE InfoSight for servers, go to: **https://www.hpe.com/info/infosight-servers-docs**.

USB support

Hewlett Packard Enterprise Gen10 and Gen10 Plus servers support all USB operating speeds depending on the device that is connected to the server.

External USB functionality

Hewlett Packard Enterprise provides external USB support to enable local connection of USB devices for server administration, configuration, and diagnostic procedures.

For additional security, external USB functionality can be disabled through USB options in UEFI System Utilities.

Smart Storage Administrator

SSA is the main tool for configuring arrays on these controllers. It exists in three interface formats: the SSA GUI, the SSA CLI, and SSA Scripting. All formats provide support for configuration tasks. Some of the advanced tasks are available in only one format.

The diagnostic features in SSA are also available in the standalone software Smart Storage Administrator Diagnostics Utility CLI.

SSA is accessible both offline and online:

- **Accessing SSA in the offline environment:** Using one of multiple methods, you can run SSA before launching the host operating system. In offline mode, users can configure or maintain detected and supported HPE ProLiant devices, such as optional controllers and integrated controllers. Some SSA features are only available in the offline environment, such as setting the boot controller or performing split-mirror operations.

- **Accessing SSA in the online environment:** This method requires an administrator to download the SSA executables and install them. You can run SSA online after launching the host operating system.

Component identification

Front panel components

SFF front panel components
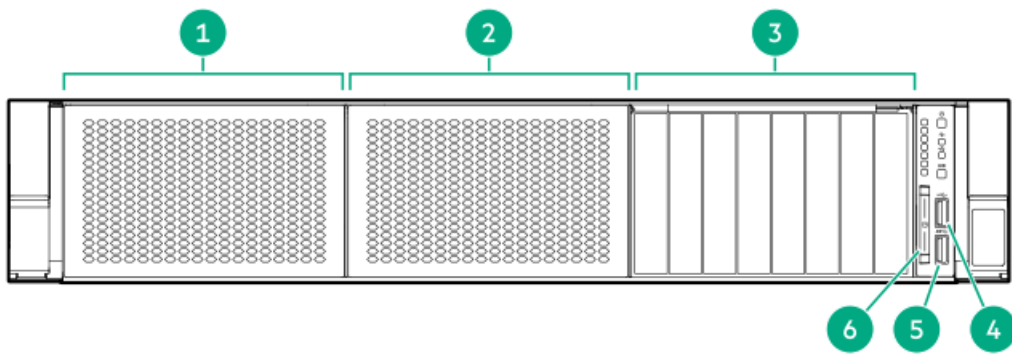
Item	Description
1	Box 1 (optional drives or universal media bay)
2	Box 2 (optional drives)
3	Box 3 drives 1 through 8
4	iLO service port
5	USB 3.0 port
6	Serial label pull tab or optional Systems Insight Display LEDs

Universal media bay components
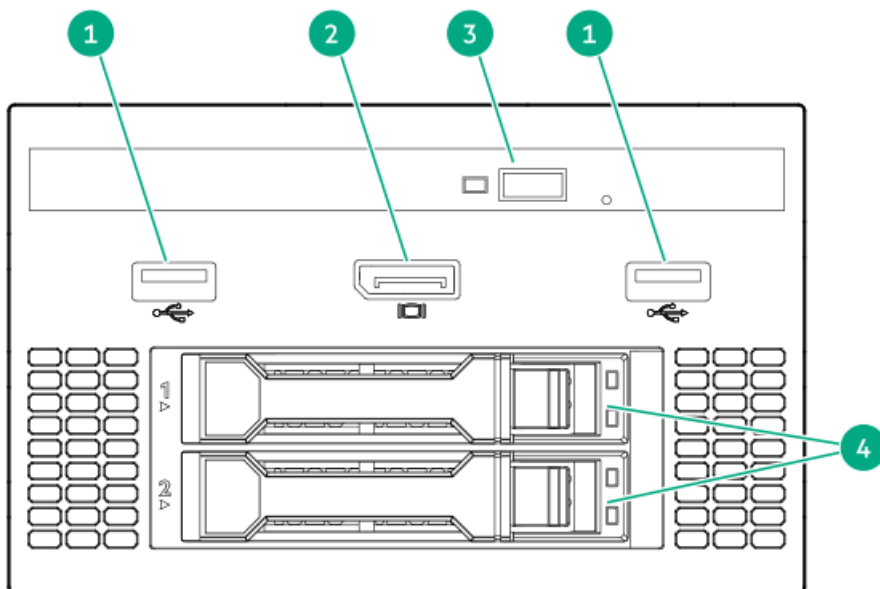
Item	Description
1	USB 2.0 port
2	Video display port
3	Optical disc drive (optional)
4	Drives (optional)

12 LFF front panel components
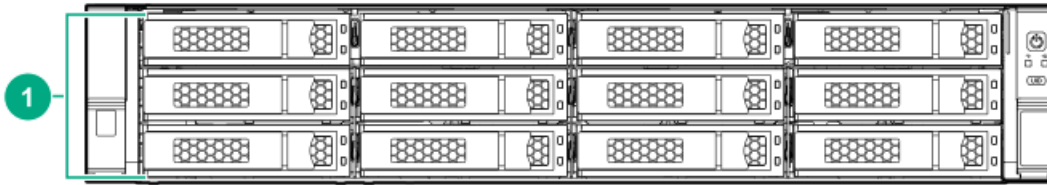
Item	Description
1	Drive bays

8 LFF front panel components
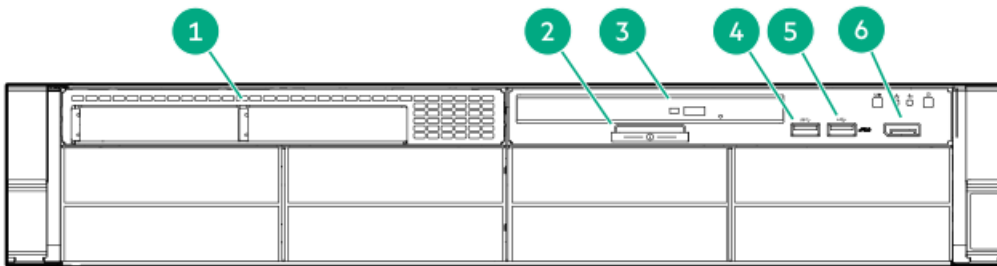
Item	Description
1	2 SFF module
2	iLO information pull tab
3	Optical drive (optional)
4	USB 3.0 port
5	iLO service port
6	Display port

LFF power switch module components
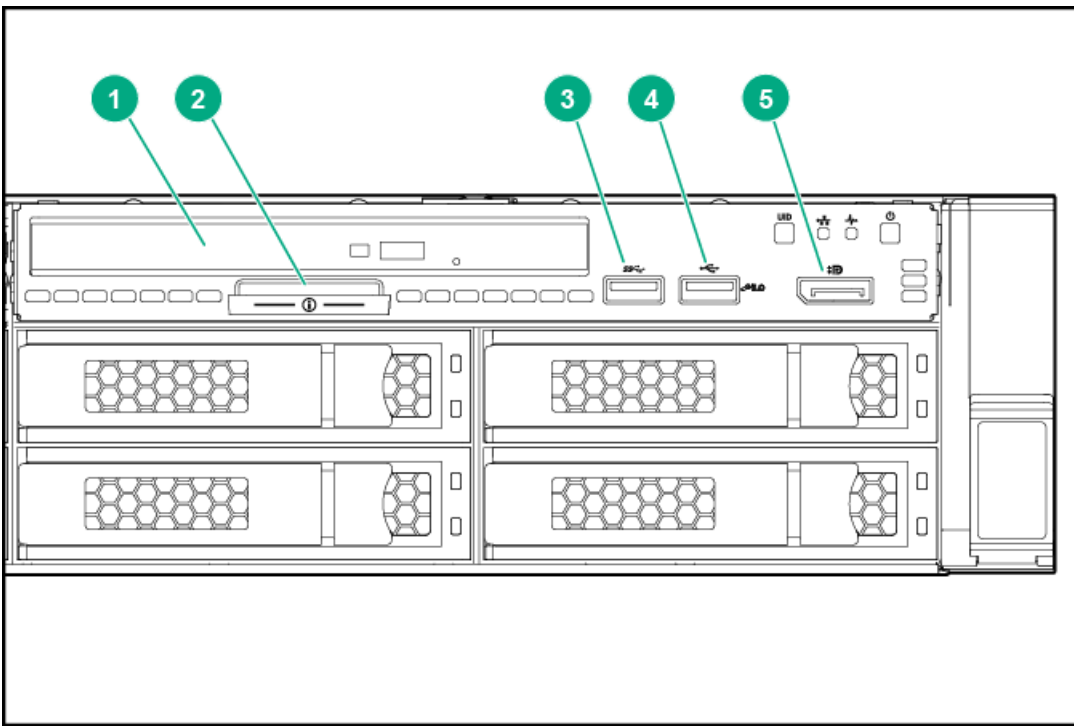
Item	Description
1	Optical disc drive
2	Serial label pull tab
3	USB 3.0 port
4	iLO service port
5	Video display port

Front panel LEDs and buttons

SFF front panel LEDs and buttons
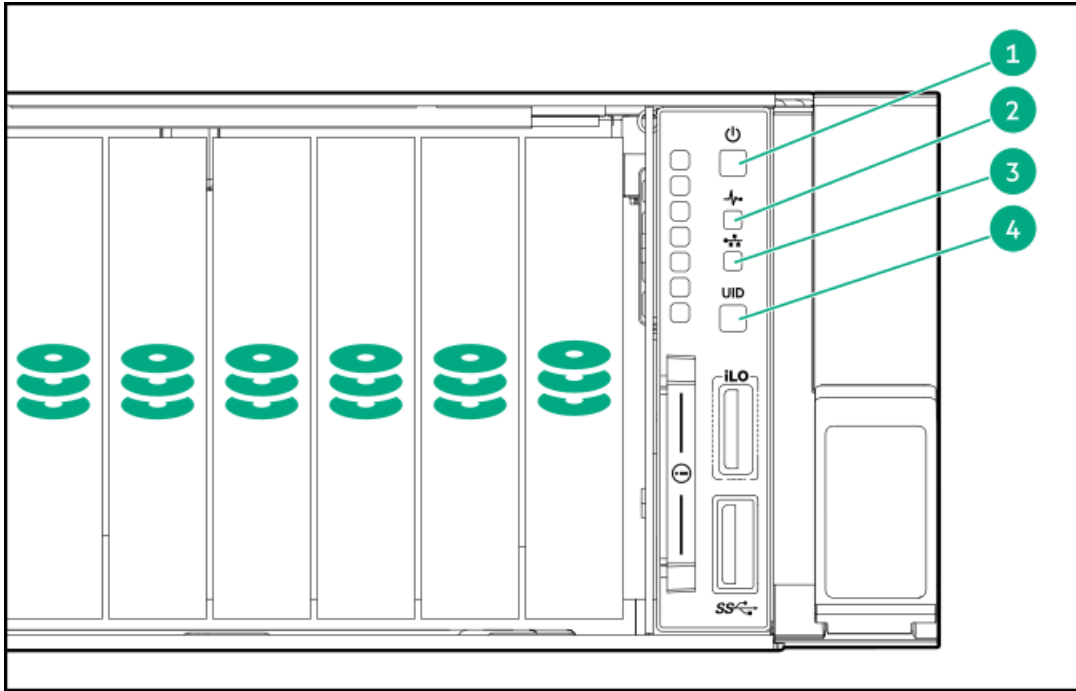
12 LFF front panel LEDs and buttons
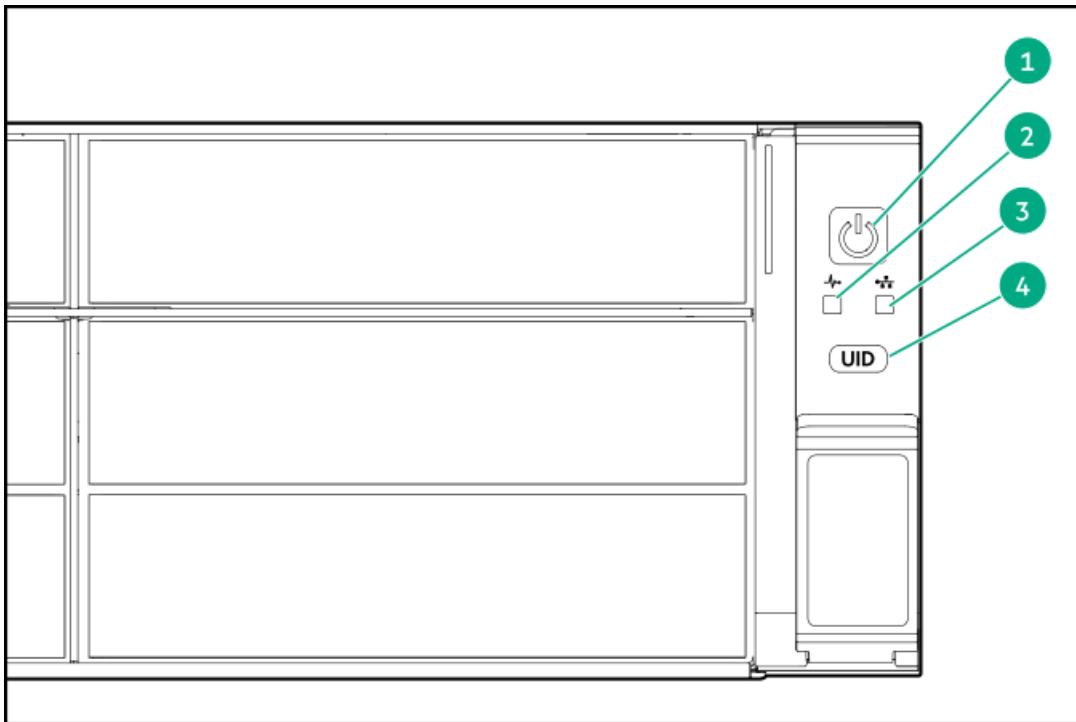
Item	Description	Status
1	Power On/Standby button and system power LED [1]	• Solid green = System on • Flashing green (1 Hz/cycle per sec) = Performing power on sequence • Solid amber = System in standby • Off = No power present [2]

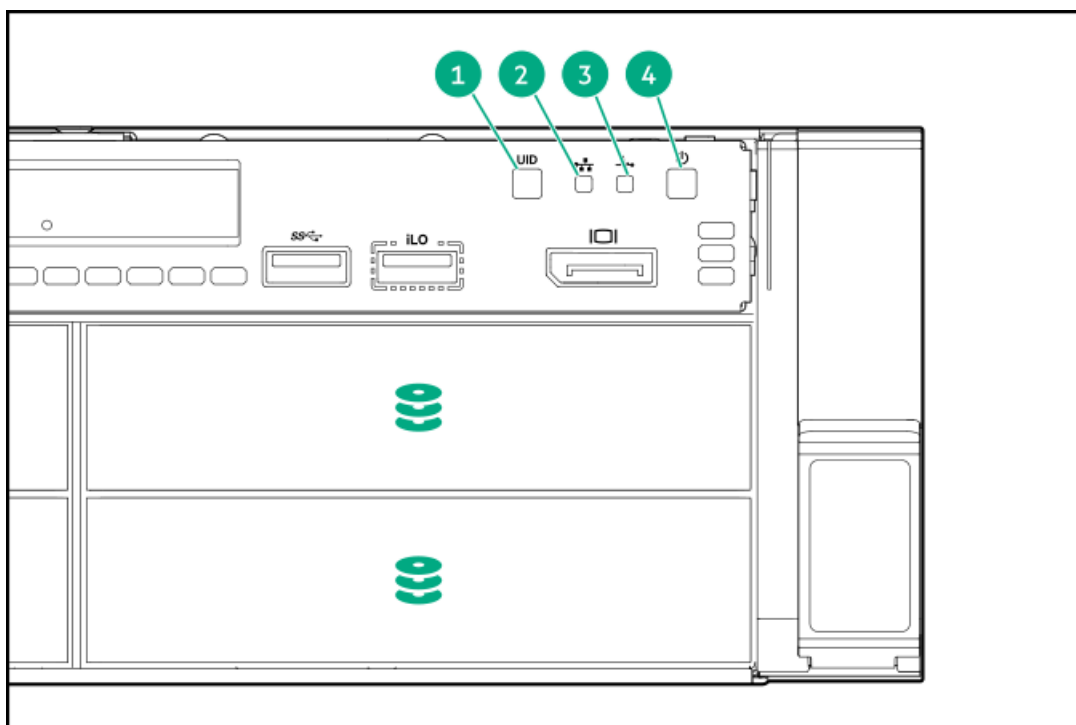| Item	Description	Status
2	Health LED [1]	• Solid green = Normal • Flashing green (1 Hz/cycle per sec) = iLO is rebooting • Flashing amber = System degraded • Flashing red (1 Hz/cycle per sec) = System critical [3]
3	NIC status LED [1]	• Solid green = Link to network • Flashing green (1 Hz/cycle per sec) = Network active • Off = No network activity
4	UID button/LED [1]	• Solid blue = Activated • Flashing blue: ○ 1 Hz/cycle per sec = Remote management or firmware upgrade in progress ○ 4 Hz/cycle per sec = iLO manual reboot sequence initiated ○ 8 Hz/cycle per sec = iLO manual reboot sequence in progress ○ Off = Deactivated

[1] If all four LEDs described in this table flash simultaneously, a power fault has occurred.

[2] Facility power is not present, the power cord is not attached, no power supplies are installed, power supply failure has occurred, or the power button cable is disconnected.

[3] If the health LED indicates a degraded or critical state, review the system IML or use iLO to review the system health status.

LFF power switch module LEDs and buttons

Item	Description	Status

Item	Description	Status
1	UID button/LED [1]	- Solid blue = Activated - Flashing blue: 1 Hz/cycle per sec = Remote management or firmware upgrade in progress 4 Hz/cycle per sec = iLO manual reboot sequence initiated 8 Hz/cycle per sec = iLO manual reboot sequence in progress - Off = Deactivated
2	NIC status LED [1]	- Solid green = Link to network - Flashing green (1 Hz/cycle per sec) = Network active - Off = No network activity
3	Health LED [1]	- 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 [2]
4	Power On/Standby button and system power LED [1]	- Solid green = System on - Flashing green (1 Hz/cycle per sec) = Performing power on sequence - Solid amber = System in standby - Off = No power present [3]

[1] If all four LEDs described in this table flash simultaneously, a power fault has occurred.
[2] If the health LED indicates a degraded or critical state, review the system IML or use iLO to review the system health status.
[3] Facility power is not present, the power cord is not attached, no power supplies are installed, power supply failure has occurred, or the power button cable is disconnected.

UID button functionality

The UID button can be used to display the Server Health Summary when the   server will not power on. For more information, see the latest HPE iLO 5 User Guide on the **Hewlett Packard Enterprise website**.
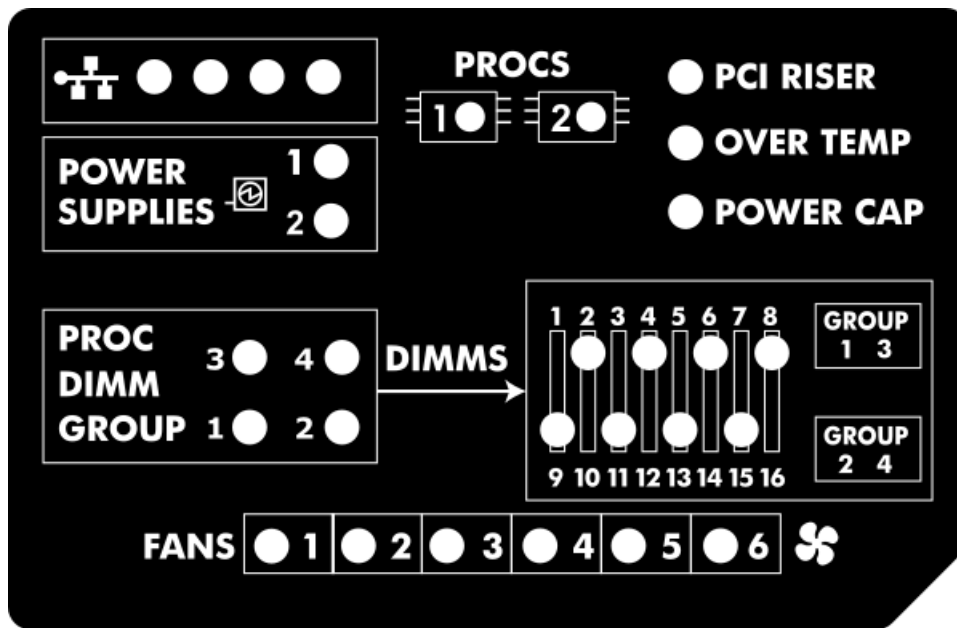
Front panel LED power fault codes

The following table provides a list of power fault codes, and the subsystems that are affected. Not all power faults are used by all servers.

Subsystem	LED behavior
System board	1 flash
Processor	2 flashes
Memory	3 flashes
Riser board PCIe slots	4 flashes
FlexibleLOM	5 flashes
Storage controller	6 flashes
System board PCIe slots	7 flashes
Power backplane	8 flashes
Storage backplane	9 flashes
Power supply	10 flashes
PCIe expansion cards installed in riser board	11 flashes
Chassis	12 flashes
GPU card	13 flashes

Systems Insight Display LEDs

The Systems Insight Display LEDs represent the system board layout. The display enables diagnosis with the access panel installed.

Description	Status
Processor LEDs	• Off = Normal • Amber = Failed processor
DIMM LEDs	• Off = Normal • Amber = Failed DIMM or configuration issue
Fan LEDs	• Off = Normal • Amber = Failed fan or missing fan
NIC LEDs [1]	• Off = No link to network • Solid green = Network link • Flashing green = Network link with activity If power is off, the front panel LED is not active. For status, see Rear panel LEDs.
Power supply LEDs	• Off = Normal • Solid amber = Power subsystem degraded, power supply failure, or input power lost
PCI riser LED	• Off = Normal • Amber = Incorrectly installed PCI riser cage
Over temp LED	• Off = Normal • Amber = High system temperature detected
AMP status LED	• Off = AMP modes disabled • Solid green = AMP mode enabled • Solid amber = Failover • Flashing amber = Invalid configuration

Description	Status
Power cap LED	● Off = System is in standby, or no cap is set ● Solid green = Power cap applied

[1] For Networking Choice server models, the embedded NIC ports are not equipped on the server. Therefore, the NIC LEDs on the Systems Insight Display will flash based on the FlexibleLOM network port activity. In the case of a dual-port FlexibleLOM, only NIC LED 1 and 2 will illuminate to correspond with the activity of the respective network ports.

When the health LED on the front panel illuminates either amber or red, the server is experiencing a health event. For more information on the combination of these LEDs, see Systems Insight Display combined LED descriptions.

Systems Insight Display combined LED descriptions

The combined illumination of the following LEDs indicates a system condition:

- Systems Insight Display LEDs
- System power LED
- Health LED

Systems Insight Display LED and color	Health LED	System power LED	Status
Processor (amber)	Red	Amber	One or more of the following conditions might exist: • Processor in socket X has failed. • Processor X is not installed in the socket. • Processor X is unsupported. • ROM detects a failed processor during POST.
Processor (amber)	Amber	Green	Processor in socket X is in a pre-failure condition.
DIMM (amber)	Red	Green	One or more DIMMs have failed.
DIMM (amber)	Amber	Green	DIMM in slot X is in a pre-failure condition.
Over temp (amber)	Amber	Green	The Health Driver has detected a cautionary temperature level.
Over temp (amber)	Red	Amber	The server has detected a hardware critical temperature level.
PCI riser (amber)	Red	Green	The PCI riser cage is not seated properly.
Fan (amber)	Amber	Green	One fan has failed or has been removed.
Fan (amber)	Red	Green	Two or more fans have failed or been removed.
Power supply (amber)	Red	Amber	One or more of the following conditions might exist: • Only one power supply is installed and that power supply is in standby. • Power supply fault. • System board fault.
Power supply (amber)	Amber	Green	One or more of the following conditions might exist: • Redundant power supply is installed and only one power supply is functional. • AC power cord is not plugged into redundant power supply. • Redundant power supply fault. • Power supply mismatch at POST or power supply mismatch through hot-plug addition.
Power cap (off)	—	Amber	Standby.

Systems Insight Display LED and color	Health LED	System power LED	Status
Power cap (green)	—	Flashing green	Waiting for power.
Power cap (green)	—	Green	Power is available.
Power cap (flashing amber)	—	Amber	Power is not available.

ⓘ **IMPORTANT:** If more than one DIMM slot LED is illuminated, further troubleshooting is required. Test each bank of DIMMs by removing all other DIMMs. Isolate the failed DIMM by replacing each DIMM in a bank with a known working DIMM.

Rear panel components
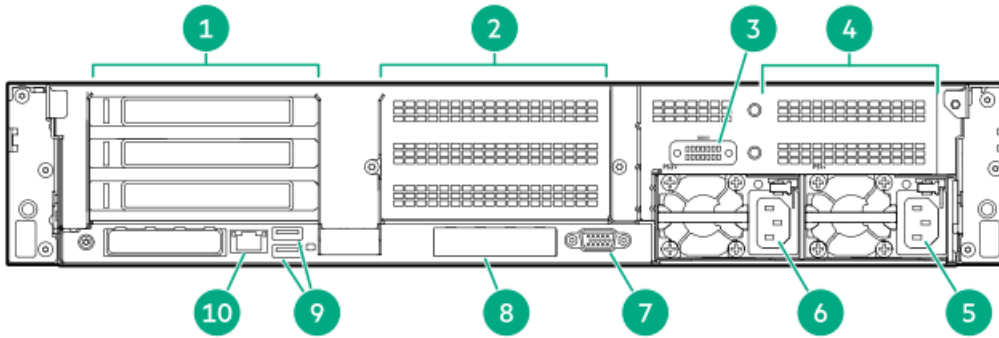
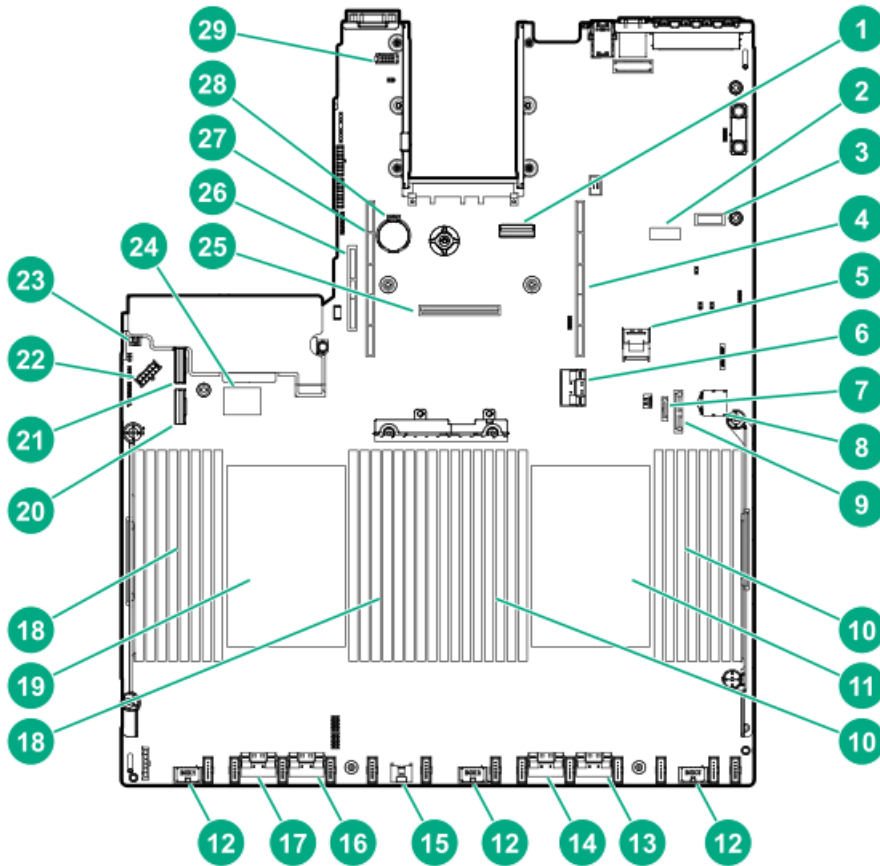| Item	Description
1	Primary riser slots 1–3 (optional drive cage)
2	Optional secondary riser slots 4–6 (optional drive cage)
3	Serial port (optional) [1]
4	Optional tertiary riser slots 7–8 (optional drive cage)
5	Power supply 1
6	Power supply 2
7	Video port
8	OCP NIC 3.0 slot
9	USB 3.1 Gen1 connectors (2)
10	Dedicated iLO management port

[1] When a secondary or tertiary riser cage is installed as shown, the serial port can be installed in the riser slot 8.

Rear panel LEDs
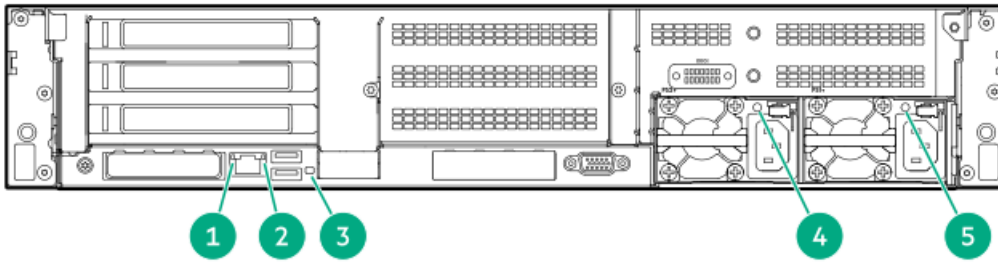
Item	Description	Status
1	Link LED	- Off = No network link - Green = Network link
2	Status LED	- Off = No network activity - Solid green = Link to network - Flashing green = Network activity
3	UID LED	- Off = Deactivated - Solid blue = Activated - Flashing blue = System is being managed remotely
4-5	Power supply LED	- Off = System is off or power supply has failed - Solid green = Normal

System board components

Item	Description
1	OCP X16 Slimline Connector
2	System maintenance switch
3	Display port/USB connector
4	Primary (processor 1) PCIe riser connector
5	x2 SATA port 1
6	NVMe port 8A
7	x1 SATA port 2
8	Front power/USB 3.1 Gen1 connector
9	Optical/SATA port 3
10	DIMMs
11	Processor 1
12	Drive backplane power connectors
13	NVMe port 2A
14	NVMe port 1A
15	Energy Pack connector
16	NVMe port 2B
17	NVMe port 1B
18	DIMMs
19	Processor 2
20	NVMe port 1C

Item	Description
21	NVMe port 2C
22	Drive backplane power connector
23	Chassis Intrusion Detection connector
24	Dual USB port
25	Flexible Smart Array connector
26	Tertiary (processor 2) PCI riser connector
27	Secondary (processor 2) PCIe riser connector
28	System battery
29	Serial port connector

System maintenance switch descriptions

Position	Default	Function
S1 [1]	Off	- Off = iLO security is enabled. - On = iLO security is disabled.
S2	Off	Reserved
S3	Off	Reserved
S4	Off	Reserved
S5	Off	- Off = Power-on password is enabled. - On = Power-on password is disabled.
S6 [2], [3]	Off	- Off = No function - On = Restore default manufacturing settings
S7	Off	Reserved
S8	—	Reserved
S9	—	Reserved
S10	—	Reserved
S11	—	Reserved
S12	—	Reserved

[1] To access the redundant ROM, set S1, S5, and S6 to On.

[2] When the system maintenance switch position 6 is set to the On position, the system is prepared to restore all configuration settings to their manufacturing defaults.

[3] When the system maintenance switch position 6 is set to the On position and Secure Boot is enabled, some configurations cannot be restored. For more information, see
Secure Boot
.

DIMM label identification

To determine DIMM characteristics, see the label attached to the DIMM. The information in this section helps you to use the label to locate specific information about the DIMM.

For more information about product features, specifications, options, configurations, and compatibility, see the HPE DDR4 SmartMemory QuickSpecs on the Hewlett Packard Enterprise website (https://www.hpe.com/support/DDR4SmartMemoryQS).
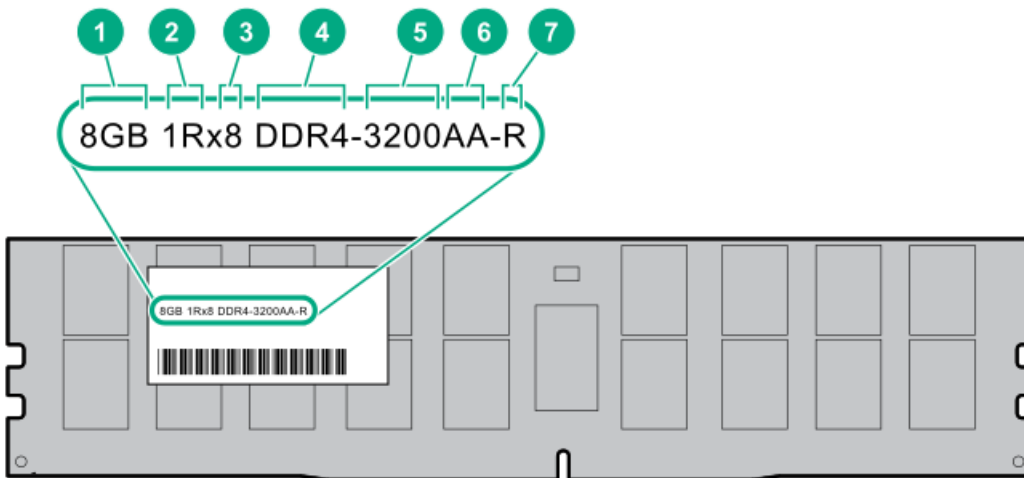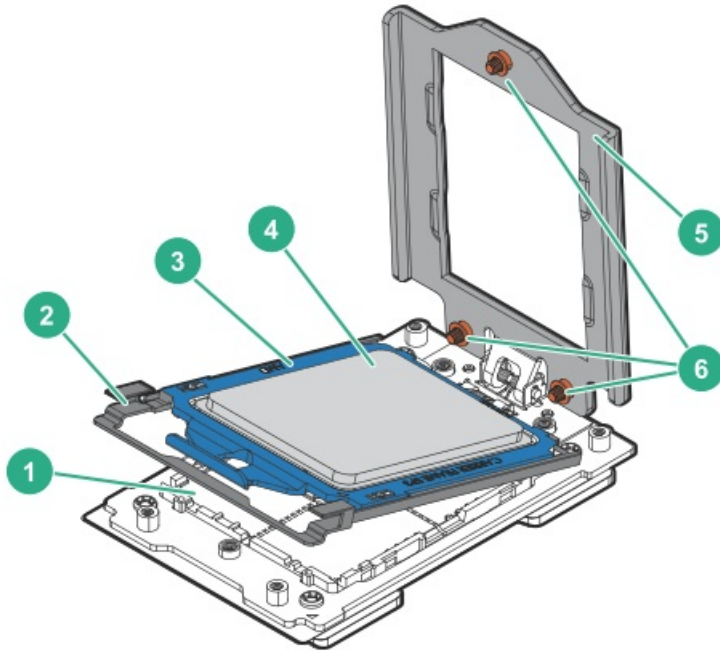

Item	Description	Example
1	Capacity	8 GB
		16 GB
		32 GB
		64 GB
		128 GB
		256 GB
2	Rank	1R = Single rank
		2R = Dual rank
		4R = Quad rank
		8R = Octal rank
3	Data width on DRAM	x4 = 4-bit
		x8 = 8-bit
4	Memory generation	PC4 = DDR4
5	Maximum memory speed	3200 MT/s
6	CAS latency	AA = CAS 22-22-22
		AA = CAS 26-22-22 (for 3DS LRDIMM)
7	DIMM type	E = Unbuffered ECC (UDIMM)
		R = RDIMM (registered)
		L = LRDIMM (load reduced)

DIMM slot locations

DIMM slots are numbered sequentially (1 through 16) for each processor. The supported AMP modes use the letter assignments for population guidelines.
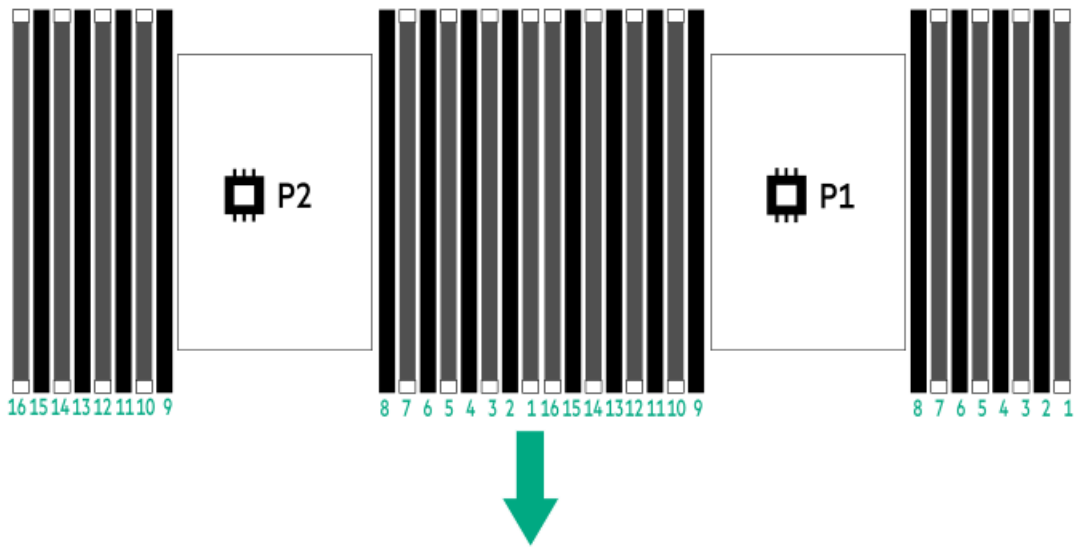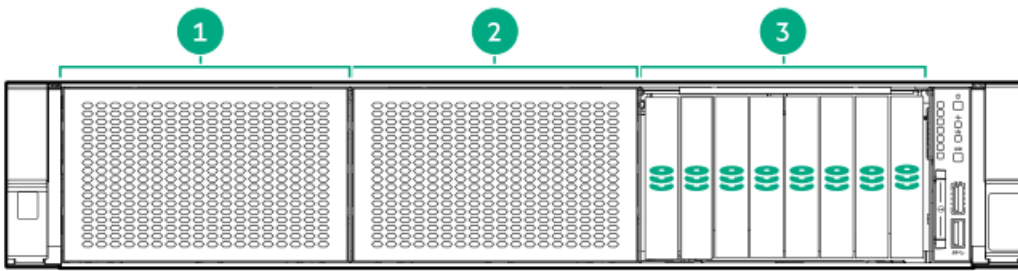
Processor and socket components

Item	Description
1	Pin field
2	Rail frame
3	Carrier frame
4	Processor
5	Force frame
6	Captive screws (Torx T-20)

Drive box identification

Front boxes

Item	Description
1	Box 1
2	Box 2
3	Box 3

Item	Description
1	Box 1
2	Box 2
3	Box 3

Rear boxes
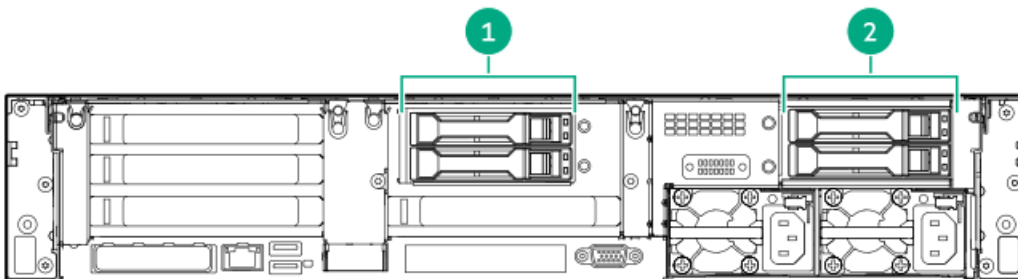
Item	Description
1	Box 5
2	Box 6
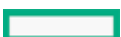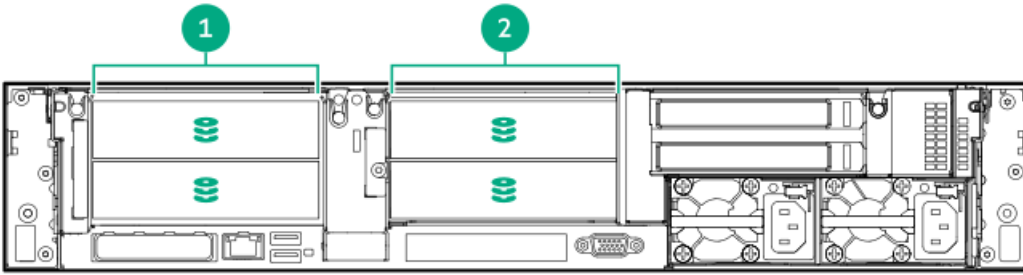
Item	Description
1	Box 4
2	Box 5

Midplane box (LFF)
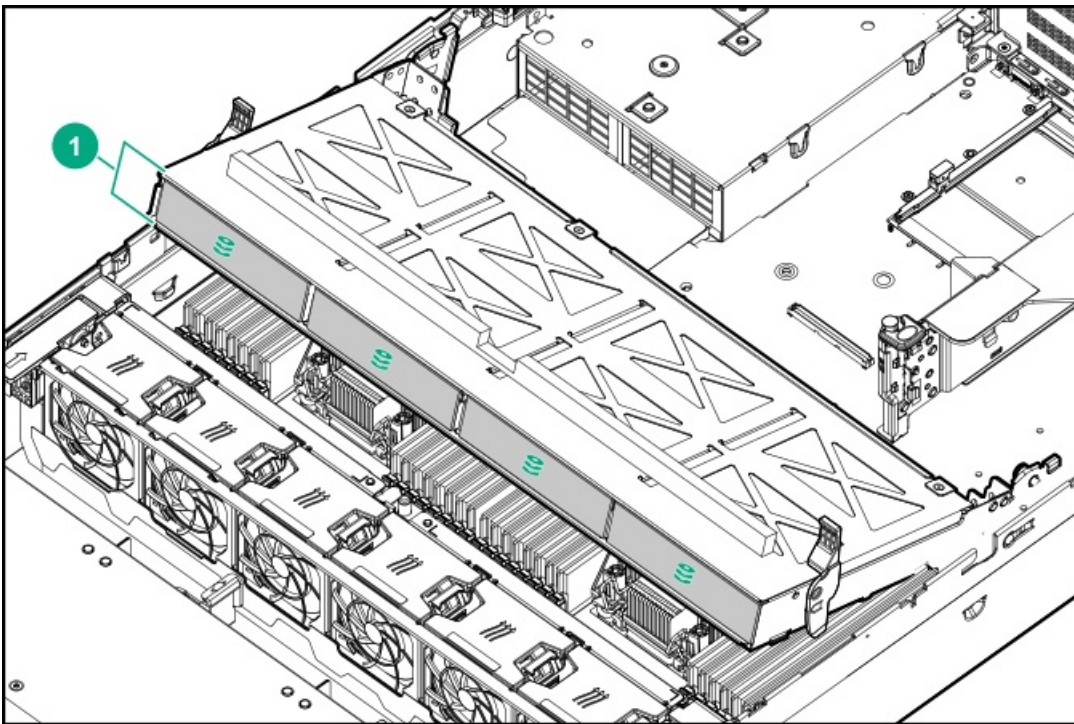
Item	Description
1	Box 7

Midplane box (SFF)
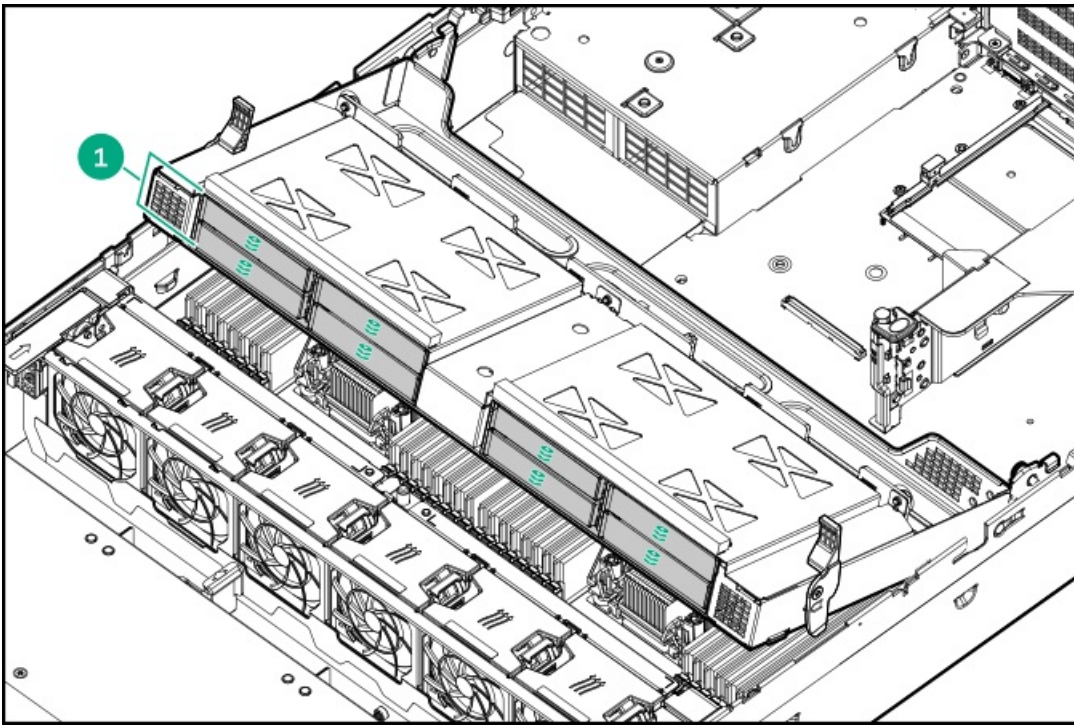
| Item	Description
1	Box 7

Drive bay numbering

Drive bay numbering depends on how the drive backplanes are connected:

- To a controller:
    - Embedded controllers use the onboard SATA ports.

    - Type-a controllers install to the type-a smart array connector.

    - Type-p controllers install to a PCIe riser.

- To a SAS expander:
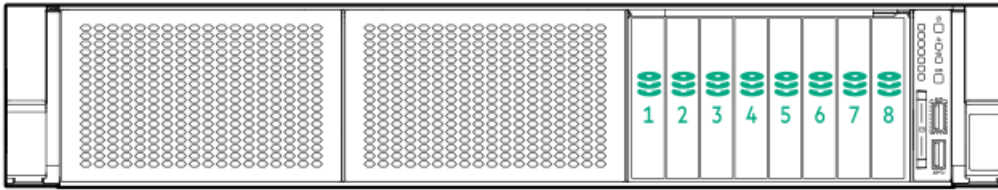 Installs in the primary or secondary PCIe riser

Drive bay numbering: Smart Array controller

When the drive backplane is connected directly to a storage controller, then each drive box starts at 1. The following images are examples of common configurations.
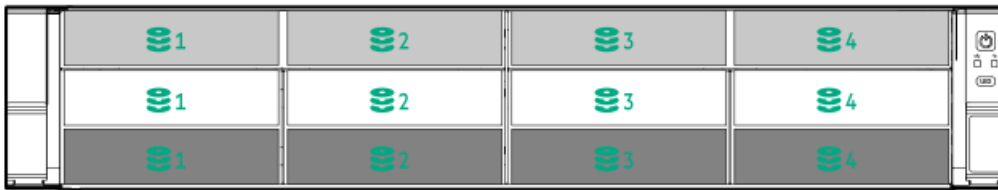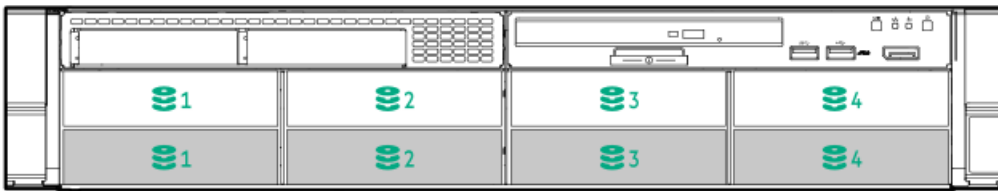
24 SFF
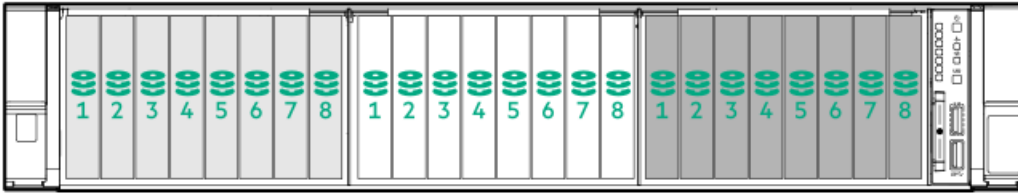
8 SFF

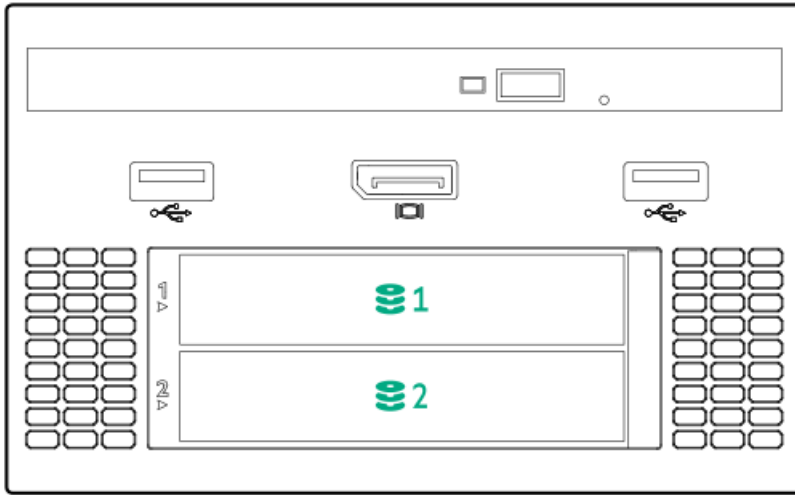## 12 LFF

8 LFF

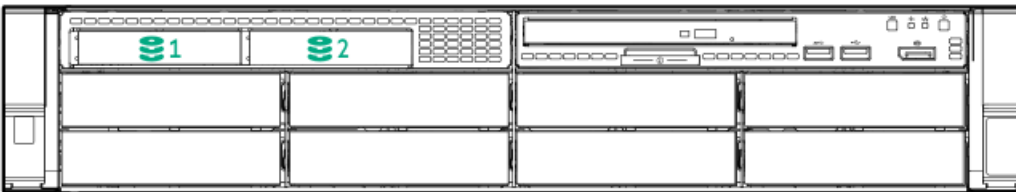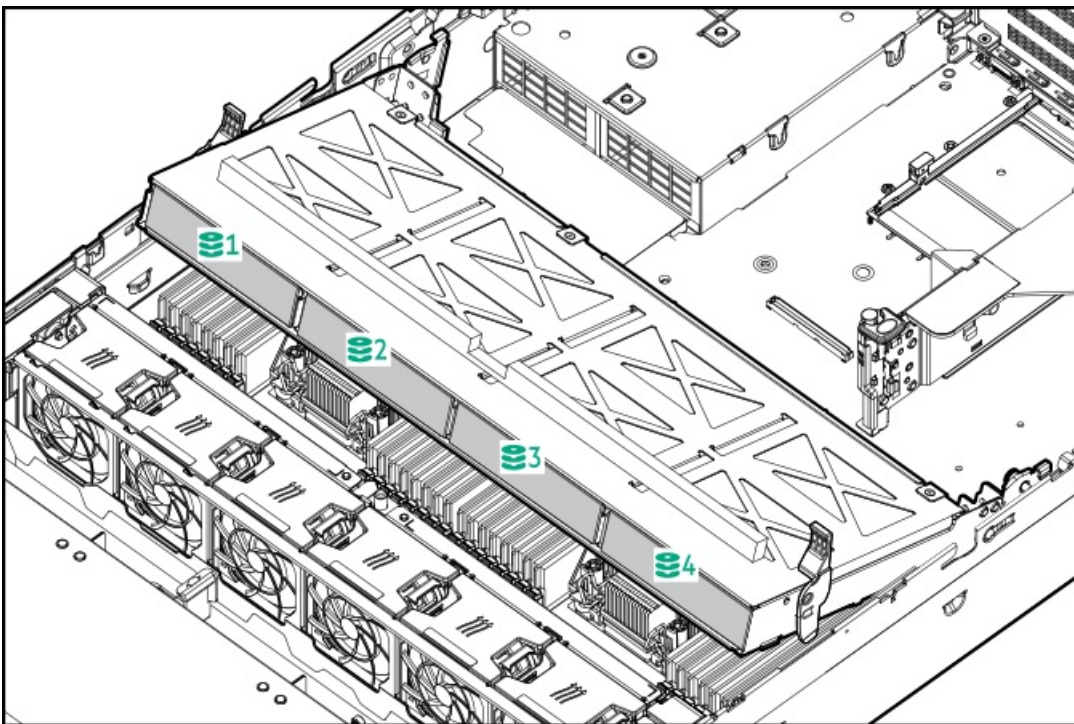## 2x 2 LFF rear panel

Universal media bay

8 LFF + Universal media bay, optional 2 SFF, and optical drive

Midplane box LFF

Midplane box SFF
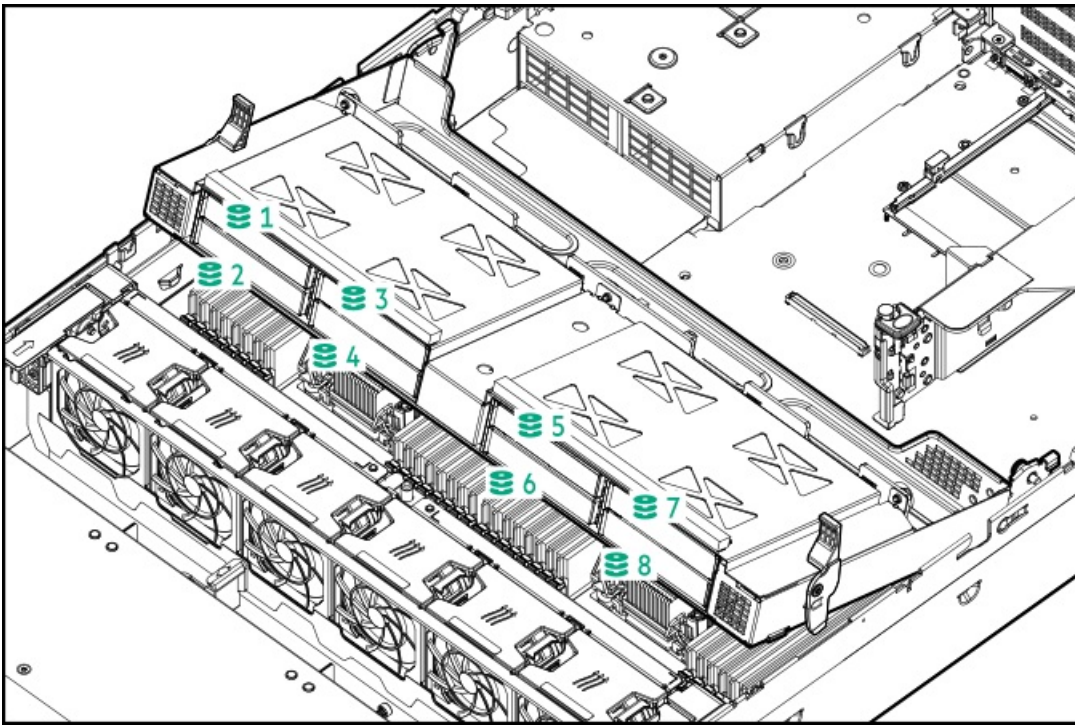
Drive bay numbering: SAS expander

Drive numbering through a SAS Expander is continuous:

- SAS expander port 1 always connects to port 1 of the controller.

- SAS expander port 2 always connects to port 2 of the controller.

- SAS expander port 3 = drive numbers 1 to 4.

- SAS expander port 4 = drive numbers 5 to 8.

- SAS expander port 5 = drive numbers 9 to 12.

- SAS expander port 6 = drive numbers 13 to 16.

- SAS expander port 7 = drive numbers 17 to 20.

- SAS expander port 8 = drive numbers 21 to 24.

- SAS expander port 9 = drive numbers 25 to 28.

Common configuration examples:

NVMe drives

When any stacked 2 SFF drive cage is connected to the SAS expander, the drive numbering skips the second number. For example, when a rear 2 SFF drive cage is connected to SAS expander port 9, then the drive numbers are 25 and 27.

When the front 24 SFF bays are populated, any installed rear 2 SFF drives are always 25 and 27.

Universal media bay
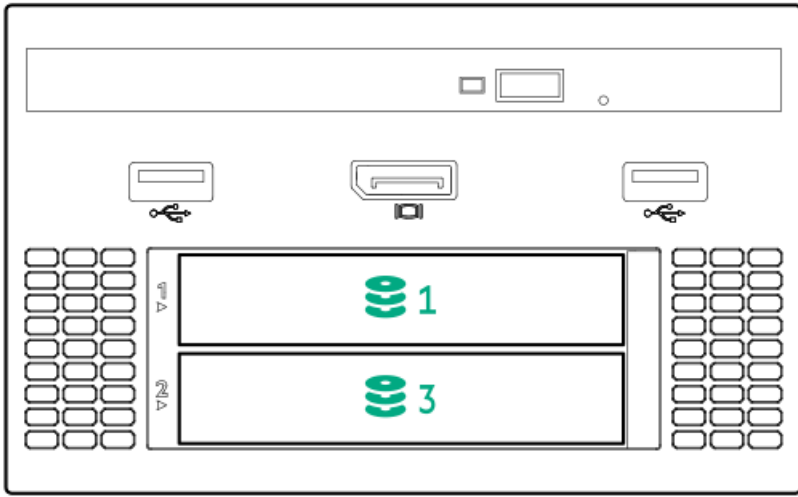
If a 2 SFF drive cage is connected to SAS expander port 3, then the drive numbers are 1 and 3.

8 LFF front panel

12 LFF front panel
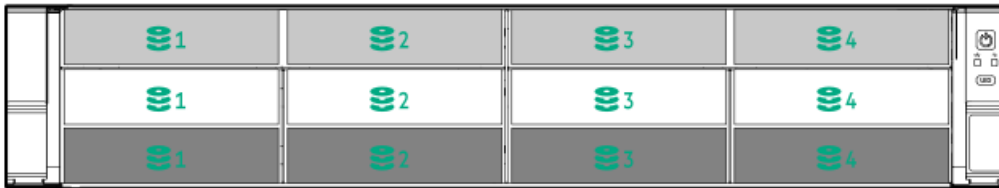
Midplane box (LFF)
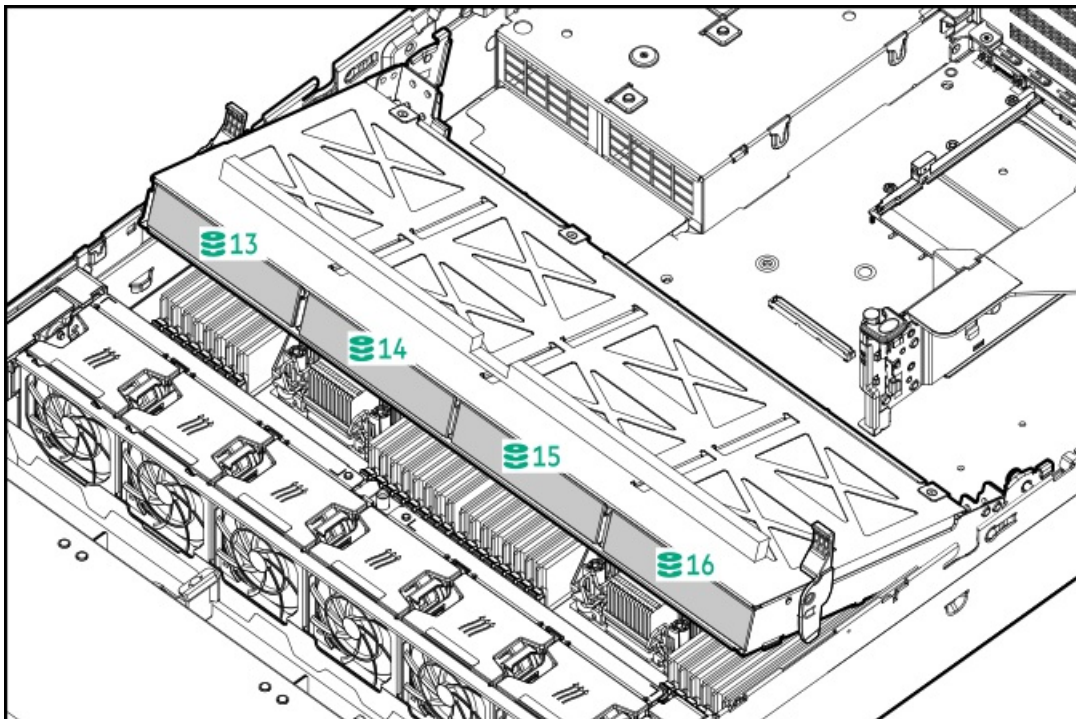
Midplane box (SFF)
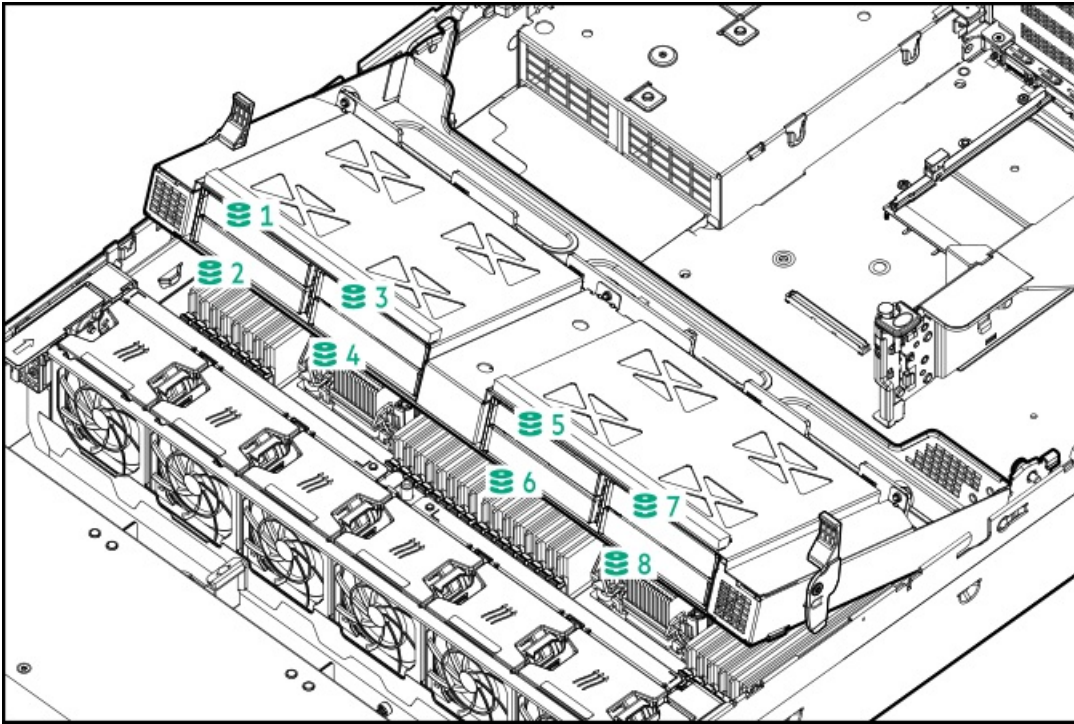
8 SFF
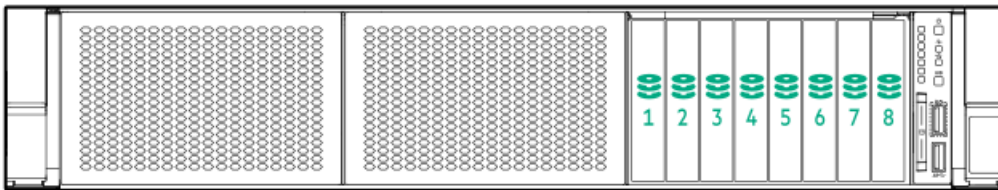
Front 12 LFF + Midplane 4 LFF + All rear 2 SFF

Drive bay numbering: NVMe drives

Server populated with NVMe drives and NVMe risers
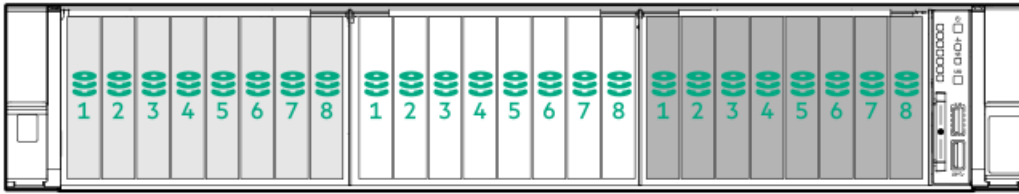
Drives

HPE Basic Drive LED definitions

LFF low-profile drive carrier

The LFF low-profile drive carrier supports hot-plug SAS and SATA drives.
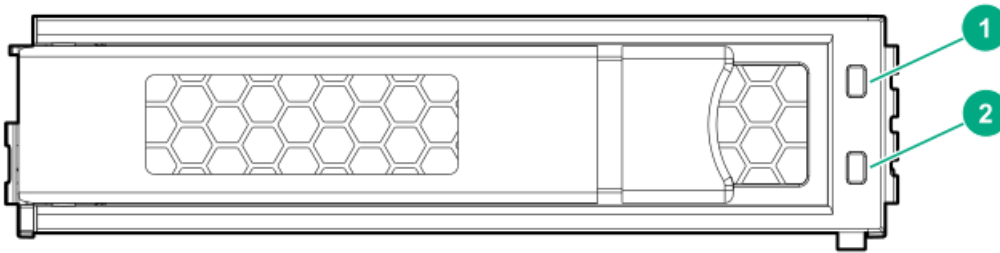
SFF basic drive carrier

The SFF basic drive carrier supports hot-plug SAS, SATA, and NVMe drives.
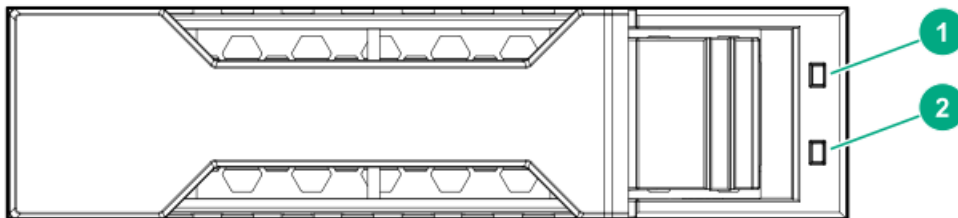
| Item	LED	Status	Definition
1	Fault/Locate	Solid amber	This drive has failed, is unsupported, or is invalid.
		Solid blue	The drive is operating normally and being identified by a management application.
		Flashing amber/blue (1 flash per second)	The drive has failed, or a predictive failure alert has been received for this drive. The drive has also been identified by a management application.
		Flashing amber (1 flash per second)	A predictive failure alert has been received for this drive. Replace the drive as soon as possible.
2	Online/Activity	Solid green	The drive is online and has no activity.
		Flashing green (1 flash per second)	The drive is doing one of the following: • Rebuilding or performing a RAID • Performing a stripe size migration • Performing a capacity expansion • Performing a logical drive extension • Erasing • Spare part activation
		Flashing green (4 flashes per second)	The drive is operation normally and has activity.
		Off	The drive is not configured by a RAID controller or is a spare drive.

DSC-25 2-port SFP28 card ports and LEDs

Ports
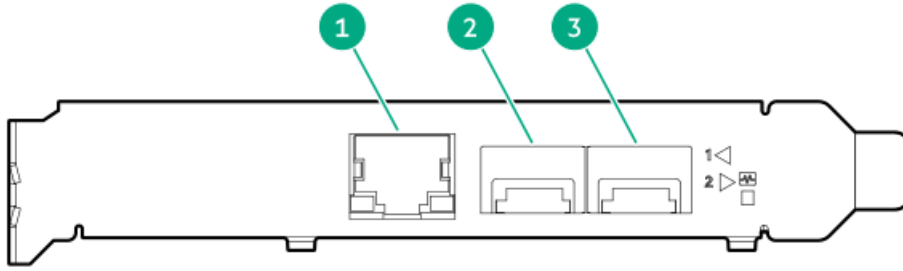
Table 1: Ports

Item	Port	Description
1	Management port	1GbE RJ45
2	Network interface port	10/25G SFP+ based
3	Network interface port	10/25G SFP+ based

LEDs

The HPE for Pensando DSP DSC-25 2p SFP28 card is a dual-port, single-slot, half-height, half-length (HHHL) SFP28 network adapter. It has LEDs for Link (L) and Activity (A) for each port. A half-height bracket is shown in the following illustration with SFP28 ports and LEDs.
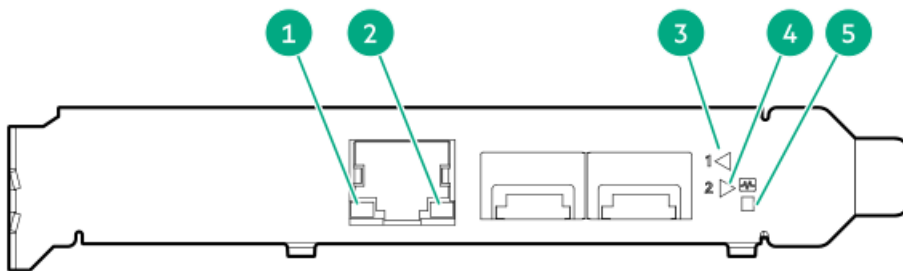
Table 2: LED indicators

Item	LED	Status	Description
1	Management Port Activity LED	Off	No activity
		Flashing	Passing traffic; flashing frequency indicates traffic intensity
2	Management Port Link LED	Off	A link has not been established
		Solid green	Valid Ethernet link
3	SFP Port 1 Link/Activity LED	Off	A link has not been established
		Solid green	Valid Ethernet link
		Flashing green	Passing traffic; flashing frequency indicates traffic intensity
		Solid amber	Link fault

Item	LED	Status	Description
4	SFP Port 2 Link/Activity LED	Off	A link has not been established
		Solid green	Valid Ethernet link
		Flashing green	Passing traffic; flashing frequency indicates traffic intensity
		Solid amber	Link fault
5	System status LED	Off	System is not powered
		Solid amber	Power is up, software has not booted yet
		Solid green	System is up and fully operational

Fan bay numbering
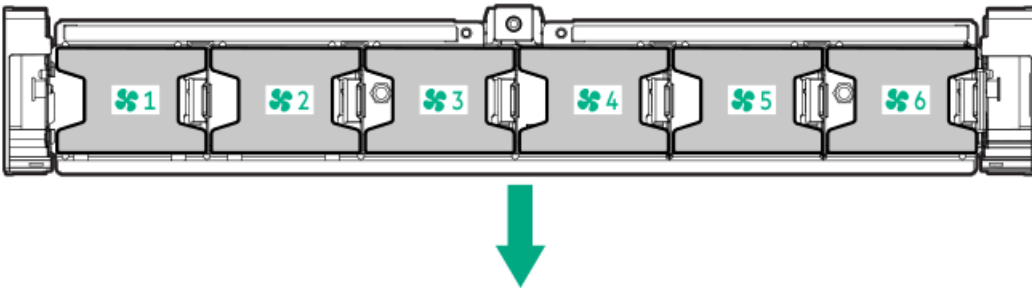
The arrow points to the front of the server.

Cabling

HPE ProLiant Gen10 Plus DL Servers Storage Cabling Guidelines

When installing cables, observe the following:

- All ports are labeled:
  - System board ports
  - Controller ports
  - 12G SAS Expander ports

- Most data cables have labels near each connector with destination port information.

- Some data cables are pre-bent. Do not unbend or manipulate the cables.

- Before connecting a cable to a port, lay the cable in place to verify the length of the cable.

- When routing cables from the front to the rear of the server, use the cable channels on either side of the chassis.

Cabling diagrams

Use the following tables to find cabling information and diagrams. For additional cabling configurations, see https://www.hpe.com/info/proliantcablingmatrix.

Table 3: SAS/SATA options

Option kit	Cable part number	From	To
Optical disk drive, Slim SATA cable	756914-001	Optical disk drive	System board
2 SFF Slim SAS SAS/SATA Universal Media Bay	P22760-001	Universal Media Bay	System board
2 SFF Slim SAS x8 SAS/SATA Universal Media Bay	P22761-001	2 SFF Side by Side backplane	System board

Table 4: LFF/SFF x4 SAS Cable options

Option kit	Cable part number	From	To
x8 Mini SAS cable to x8 Mini SAS cable (x4)	747568-001	8 SFF SAS/SATA option, box 3	HPE Smart Array P408i-a or P816i-a Gen10 Controller, ports 1 and 2
x8 Mini SAS cable to x8 Mini SAS cable (x4)	747568-001	8 SFF SAS/SATA option, box 3	HPE 12GB SAS Expander Card, ports 7 and 8 in the primary riser cage
x8 Mini SAS cable to x8 Mini SAS cable (x4)	776402-001	8 SFF SAS/SATA option, box 1 or 2	HPE Smart Array P816i-a Gen10 Controller, ports 3 and 4
x8 Mini SAS cable to x8 Mini SAS cable (x4)	776402-001	8 SFF SAS/SATA option, box 1 or 2	HPE 12GB SAS Expander Card, ports 3 and 4 in the primary riser cage
x8 Mini SAS cable to x8 Mini SAS cable (x4)	P22897-001	HPE Smart Array P408i-a or P816i-a Gen10 Controller, ports 1 and 2	HPE 12GB SAS Expander Card, ports 1 and 2 in the primary riser cage
Mini SAS straight to Mini SAS straight cable	P22898-001	HPE Smart Array P408i-a or P816i-a Gen10 Controller, ports 1 and 2	HPE 12GB SAS Expander Card, ports 1 and 2 in the tertiary riser cage
Mini SAS straight to Mini SAS side exit cable	P20850-001	8 SFF SAS/SATA option – boxes 2 and 3	HPE 12GB SAS Expander Card, ports 5 through 8 in the primary riser cage
x4 Mini SAS cable	869827-001	4 LFF SAS/SATA drive backplane – box 1	HPE Smart Array P816i-a Gen10 Controller, port 3
x4 Mini SAS cable	869827-001	4 LFF SAS/SATA drive backplane – boxes 1, 2, and 3	HPE 12GB SAS Expander Card, ports 3, 4, and 5 in the secondary or ports 5, 7, and 8 in tertiary riser cages
x4 Mini SAS cable	P22899-001	4 LFF SAS/SATA drive backplane – boxes 2 and 3	HPE Smart Array P816i-a Gen10 Controller, ports 1 and 2
x4 Mini SAS cable	P22899-001	4 LFF SAS/SATA drive backplane – boxes 1, 2, and 3	HPE 12GB SAS Expander Card, ports 3, 4, and 5 in the primary riser cage
x4 Mini SAS cable to x4 Mini SAS cable	869823-001	2 LFF stacked backplane	HPE 12GB SAS Expander Card, primary riser cage

Table 5: Power Switch, Display, Serial, and USB port cable options

Option kit	Cable part number	From	To
Power switch, USB, and thermal sensor cable	P14312-001	SFF Front I/O module	Front power/USB 3.1 Gen1 connector
Power switch, USB, and thermal sensor cable	P14312-001	8 LFF Front I/O module	Front power/USB 3.1 Gen1 connector
Systems Insight Display, power switch board, USB, and thermal sensor cable	P14313-001	System Insight Display	Front power/USB 3.1 Gen1 connector
Power switch and thermal sensor cable	P16076-001	Bezel ear switch module	Front power/USB 3.1 Gen1 connector
Display port and USB cable	P14314-001	Universal Media Bay	Display port/USB connector
Display port cable	869808-001	8 LFF Front I/O module	Display port/USB connector
Universal Media Bay external USB cable	P14315-001	Universal Media Bay, box 1	Internal dual USB port
Rear serial port cable	P14317-001	Rear serial interface	Serial port connector

Table 6: Straight, Direct Connect, and Stand up card NVMe Cable options (not shown)

Option kit	Cable part number	From	To
NVMe Direct Connect Cables	P22903-001	2 SFF Stacked U.3 backplane, box 1	Tertiary riser, x16 PCIe adapter
NVMe Direct Connect Cables	P22904-001	2 SFF Stacked U.3 backplane, box 1	Secondary riser
NVMe Direct Connect Cables	P22905-001	2 SFF Stacked U.3 backplane, box 1	Primary riser

Table 7: Splitter, Direct Connect Riser NVMe Cable options (not shown)

Option kit	Cable part number	From	To
NVMe Direct Connect Cables	P14334-001	2x4 SFF Premium U.3 Midtray, ports 1-4	Secondary riser, x16 or x32 PCIe adapter

Table 8: Fan out cable options – Slim SAS to x4 SAS

Option kit	Cable part number	From	To
Slim SAS x8 (1) to Mini SAS x4 (2)	P20849-001	4 LFF SAS/SATA backplane, box 3	4 LFF midtray backplane and NVMe port 1C on the system board
Slim SAS x8 (1) to Mini SAS x4 (2)	P20849-001	4 LFF SAS/SATA backplane, box 3	4 LFF midtray backplane and HPE Smart Array Gen10 Plus Tri-Mode AROC Controller
Slim SAS x8 (1) to Mini SAS x4 (2)	P20848-001	4 LFF SAS/SATA backplane, box 2-3	NVMe port 8A on the system board
Slim SAS x8 (1) to Mini SAS x4 (2)	P20848-001	4 LFF SAS/SATA backplane, box 2-3	Primary riser, x16 PCIe adapter

Table 9: Straight cable options – OCP Pass Through NVMe Cables (not shown)

Option kit	Cable part number	From	To
OCP Pass Through NVMe Cables (for processor 1)	P14318-001	NVMe port 8A on the system board	OCP pass through

Table 10: Power cable options

| Option kit	Cable part number	From	To
SFF power cable	869825-001	8 SFF Premium U.3 backplane and 8 SFF SAS /SATA, boxes 1, 2, and 3	Drive backplane power connectors (all 3)
LFF power cable	P14341-001	4 LFF low profile SAS/SATA drive backplane, box 1	Drive backplane power connector, box 1
LFF power cable	P14342-001	4 LFF low profile SAS/SATA drive backplane, box 2 or 3	Drive backplane power connector, box 2 or 3
LFF power cable	P14343-001	4 LFF low profile SAS/SATA drive backplane, box 2	2 SFF Side by Side backplane
Rear 2 SFF riser power cable	P14345-001	Riser board power connector, primary or secondary riser cage	Drive backplane power connector, 2 SFF drive option backplane, primary or secondary riser cage
Midtray, 2 SFF, and 2 LFF power cable	P14346-001	Drive backplane power connector	Midtray, 2 SFF riser backplane, and 2 LFF riser backplane in primary, secondary, and tertiary riser

Table 11: GPU power (not shown)

Option kit	Cable part number	From	To
HPE GPU 8px6p Y-Power Cable Kit	869805-001	GPU	Riser
HPE GPU 8p Keyed GPU Cable Kit	869820-001	GPU	Riser
Standard GPU power cable	P03851-001	GPU	Riser

## Table 12: HPE ProLiant DL385 Gen10 Plus v2 Server cable bundle options

Option kit	Cable part number	From	To
8 NVMe Balanced Direct Solution (P42076-B21)			
NVMe Direct Connect Cable	P22345-001	8 SFF Premium U.3 backplane, Box 2, ports 1 and 2	NVMe ports 1A and 2A on the system board (processor 1)
NVMe Direct Connect Cable	P22346-001	8 SFF Premium U.3 backplane, Box 2, ports 3 and 4	NVMe ports 1B and 2B on the system board (processor 2)
8 NVMe Direct Single Processor Solution (P42079-B21)			

| Option kit	Cable part number	From	To
NVMe Direct Connect Cable	P22345-001	8 SFF Premium U.3 backplane, Box 2, ports 1 and 2	NVMe ports 1A and 2A on the system board (processor 1)
NVMe Direct Connect Cable	P22347-001	8 SFF Premium U.3 backplane, Box 2, ports 3	HPE DL38X Gen10 Plus AROC to NVMe Adapter, port 7A
NVMe Direct Connect Cable	P22348-001	8 SFF Premium U.3 backplane, Box 2, ports 4	NVMe port 8A on the system board
16 NVMe Balanced Direct Solution ([P42082-B21](#))			
NVMe Direct Connect Cable	P22345-001	8 SFF Premium U.3 backplane, Box 1, ports 1 and 2	NVMe ports 1B and 2B on the system board (processor 2)
NVMe Direct Connect Cable	P22349-001	8 SFF Premium U.3 backplane, Box 1, ports 3 and 4	NVMe ports 1C and 2C on the system board (processor 2)
NVMe Direct Connect Cable	P22345-001	8 SFF Premium U.3 backplane, Box 2, ports 1 and 2	NVMe ports 1A and 2A on the system board (processor 1)
NVMe Direct Connect Cable	P22347-001	8 SFF Premium U.3 backplane, Box 2, port 3	HPE DL38X Gen10 Plus AROC to NVMe Adapter, port 7A
NVMe Direct Connect Cable	P22348-001	8 SFF Premium U.3 backplane, Box 2, port 4	NVMe port 8A on the system board
24 NVMe Balanced Direct Solution ([P42085-B21](#))			
NVMe Direct Connect Cable	P22904-001	8 SFF Premium U.3 backplane, Box 1, port 1 or 2	PCIe port 1 or 2
NVMe Direct Connect Cable	P22349-001	8 SFF Premium U.3 backplane, Box 1, ports 3 and 4	NVMe ports 1C and 2C on the system board (processor 2)
NVMe Direct Connect Cable	P22345-001	8 SFF Premium U.3 backplane, Box 2, ports 1 and 2	NVMe ports 1A and 2A on the system board (processor 1)
NVMe Direct Connect Cable	P22346-001	8 SFF Premium U.3 backplane, Box 2, ports 3 and 4	NVMe ports 1B and 2B on the system board (processor 2)
NVMe Direct Connect Cable	P22347-001	8 SFF Premium U.3 backplane, Box 3, port 1	HPE Smart Array P408i-a or P816i-a Gen10 Controller, port 7A
NVMe Direct Connect Cable	P22348-001	8 SFF Premium U.3 backplane, Box 3, port 2	NVMe port 8A on the system board
NVMe Direct Connect Cable	P22903-001	8 SFF Premium U.3 backplane, Box 3, port 3 and 4	Primary riser, x16 or x32 PCIe adapter

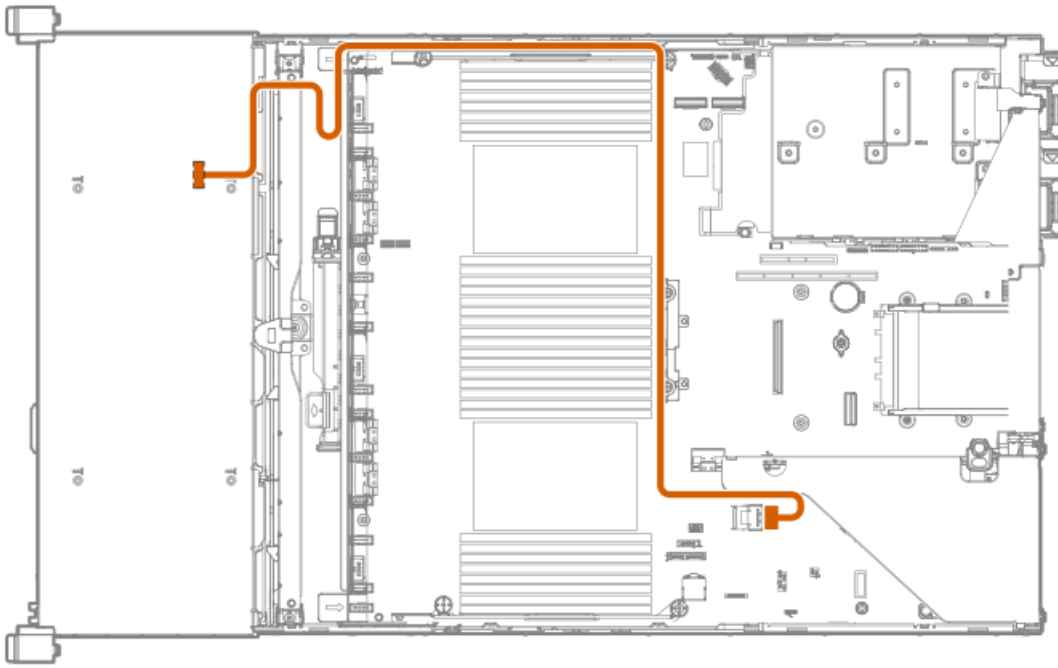# Cable routing: 8 LFF front I/O module to SATA Port
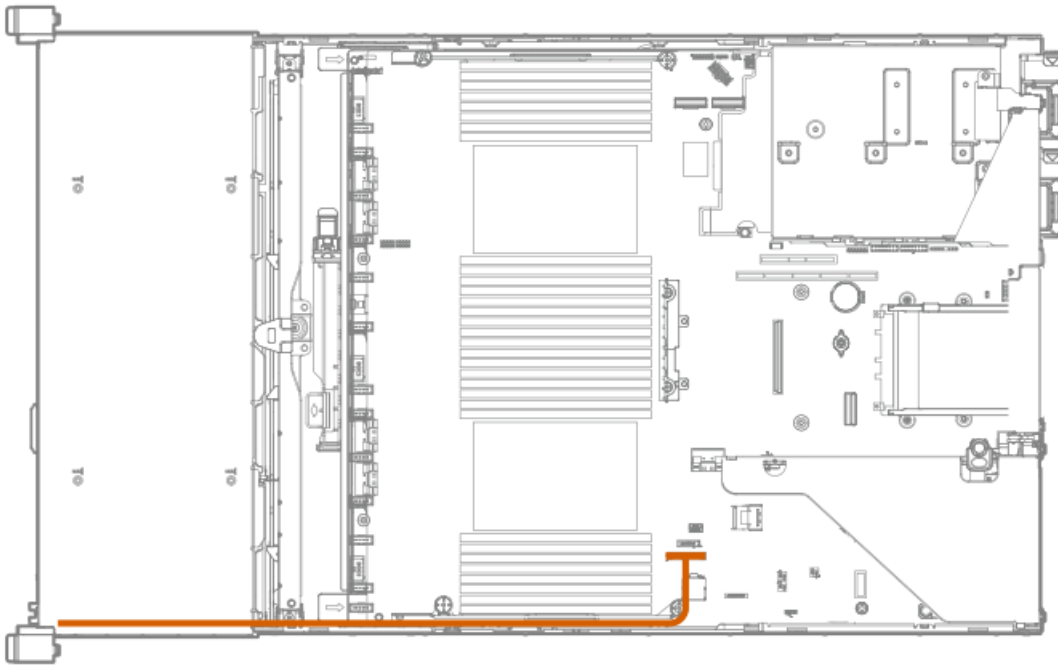
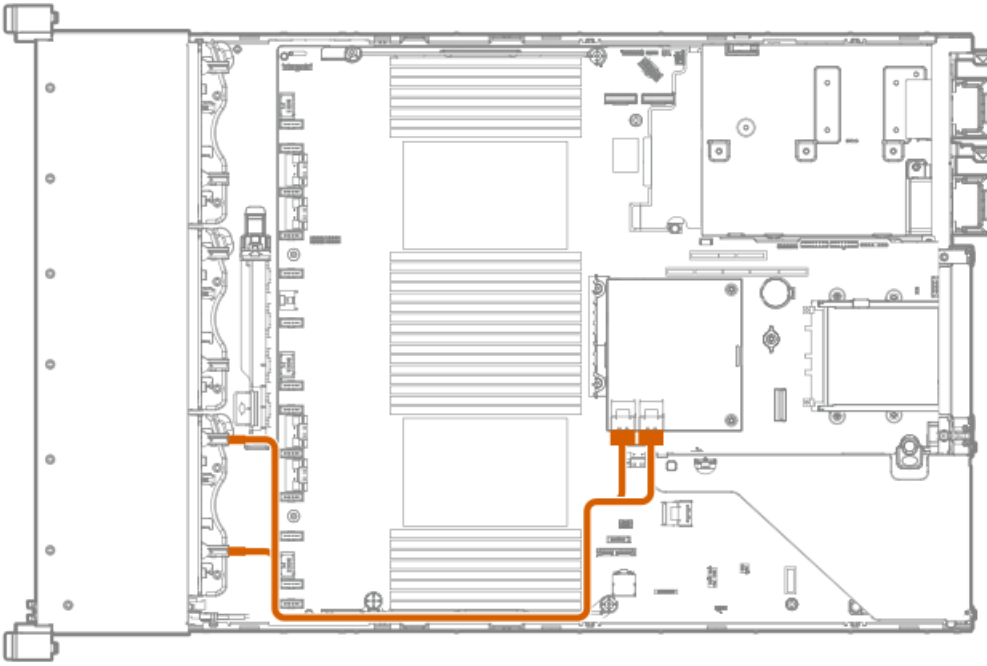# Cable routing: Universal Media Bay to SATA Port
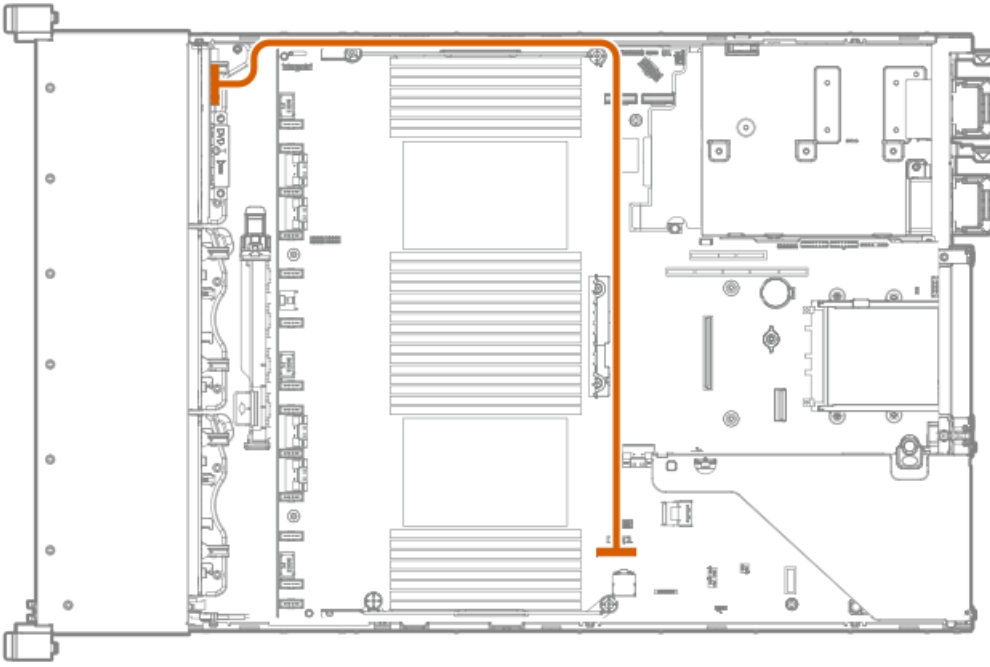
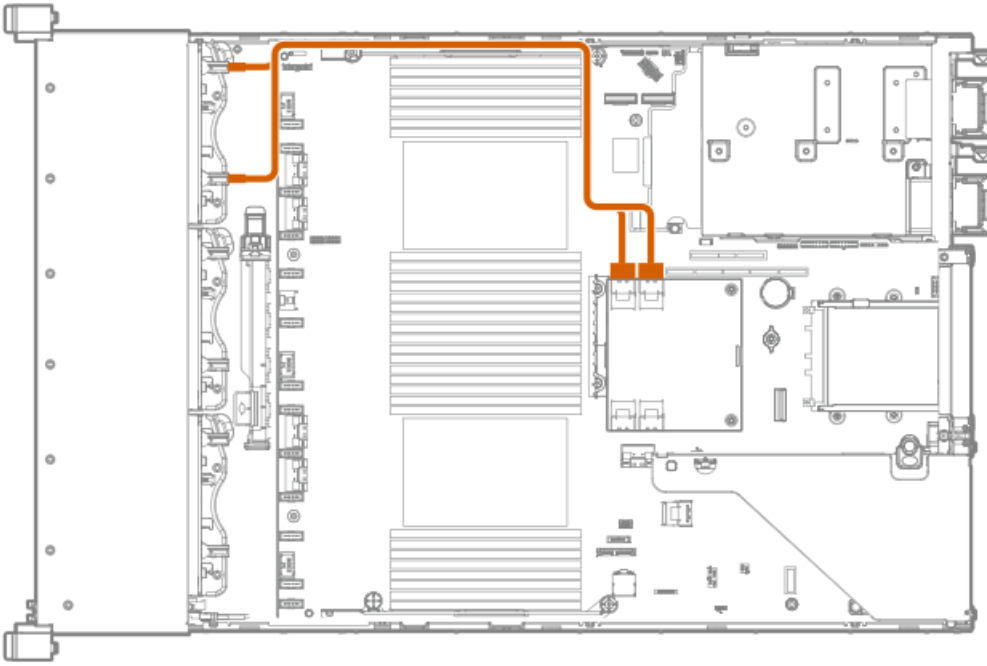# Cable routing: 2 SFF Slim SAS Universal Media Bay in box 1 to system board
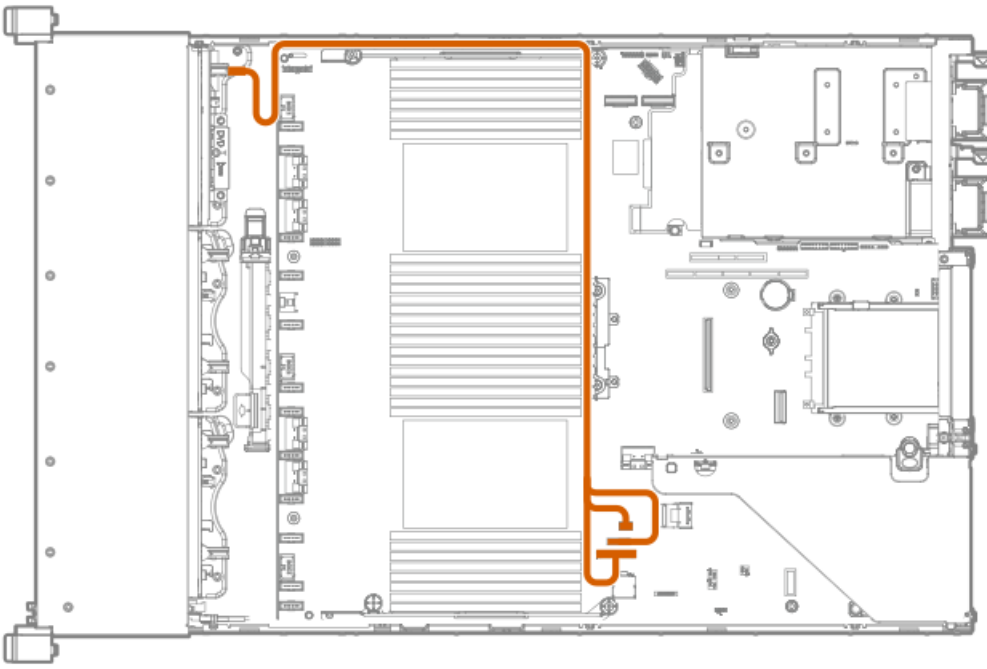
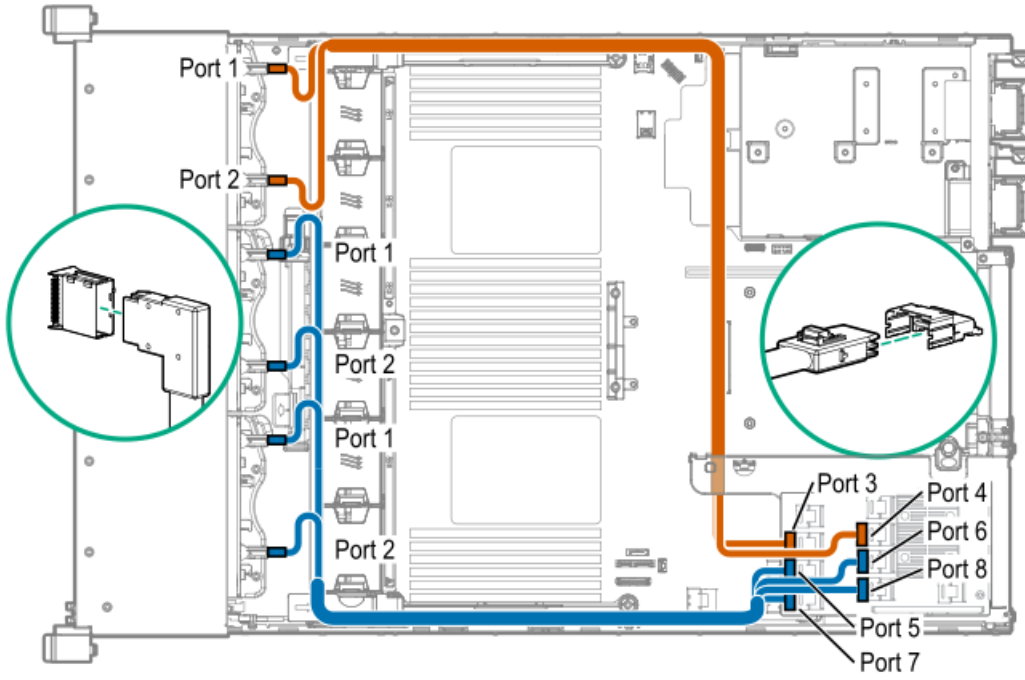# Cable routing: 2 SFF side by side SATA to system board

Cable routing: Front 8 SFF drive options (box 3 to HPE Smart Array E208i-a SR Gen10 Controller, ports 1-2)

Cable routing: Front 8 SFF drive options (box 1 to HPE Smart Array P816i-a SR Controller, ports 3-4)

# Cable routing: 24 SFF SAS drive options (box 1, box 2, and box 3 to SAS expander)

Cable routing: 24 SFF drive options (box 1, box 2, and box 3 to SAS expander card and HPE Smart Array P816i-a SR Gen10 Controller, ports 1-2)

Cable routing: 24 SFF drive options (box 1, box 2, and box 3 to SAS expander card and HPE Smart Array P816i-a SR Gen10 Controller, ports 1-2)

244
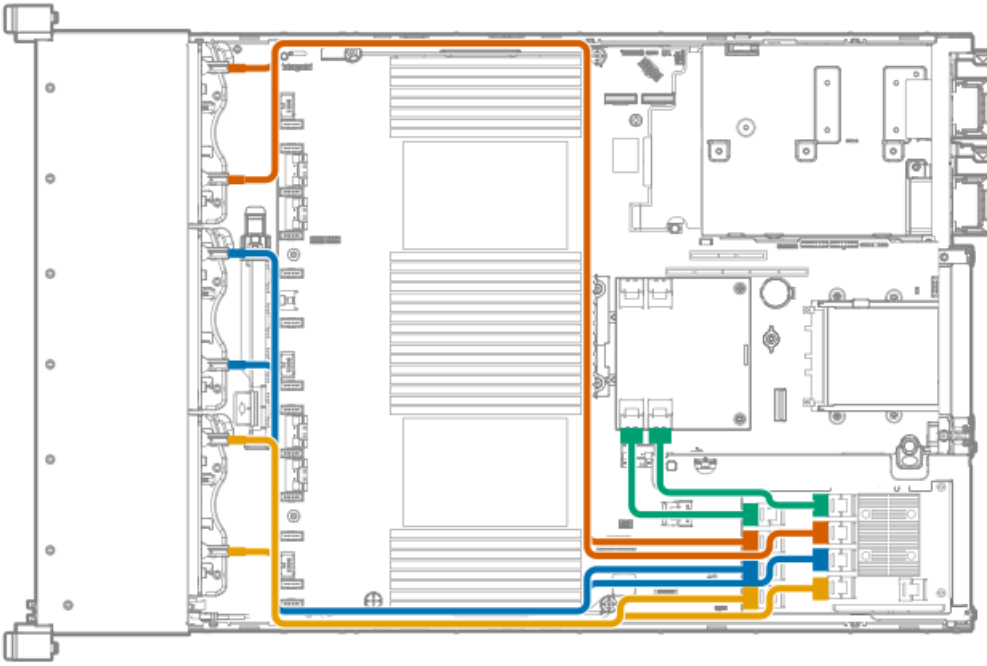
Cable routing: 8 NVMe Balanced Direct Solution
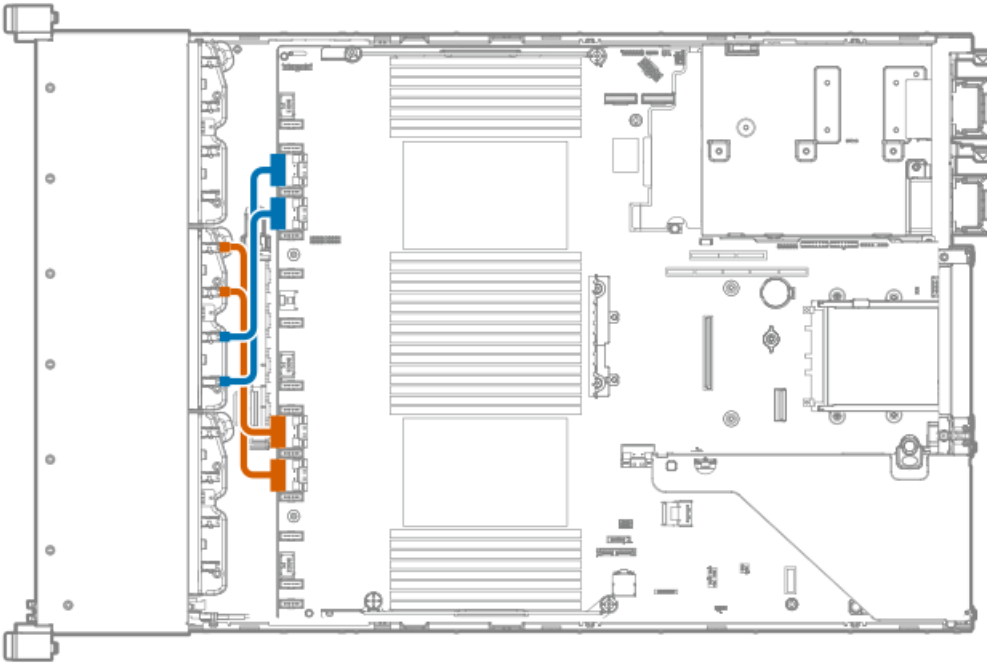
Cable routing: 8 NVMe Direct Single Processor Solution
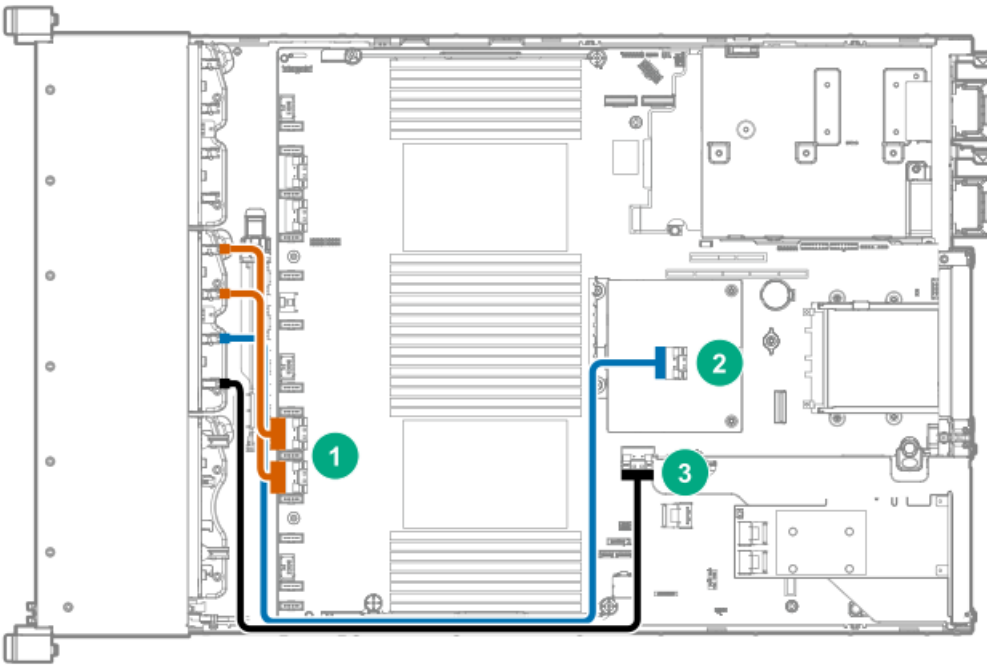
Item	Connections
1	NVMe ports 1A and 2A on the system board
2	HPE DL38X Gen10 Plus AROC to NVMe Adapter, port 7A
3	NVMe port 8A on the system board

Cable routing: 16 NVMe Balanced Direct Solution
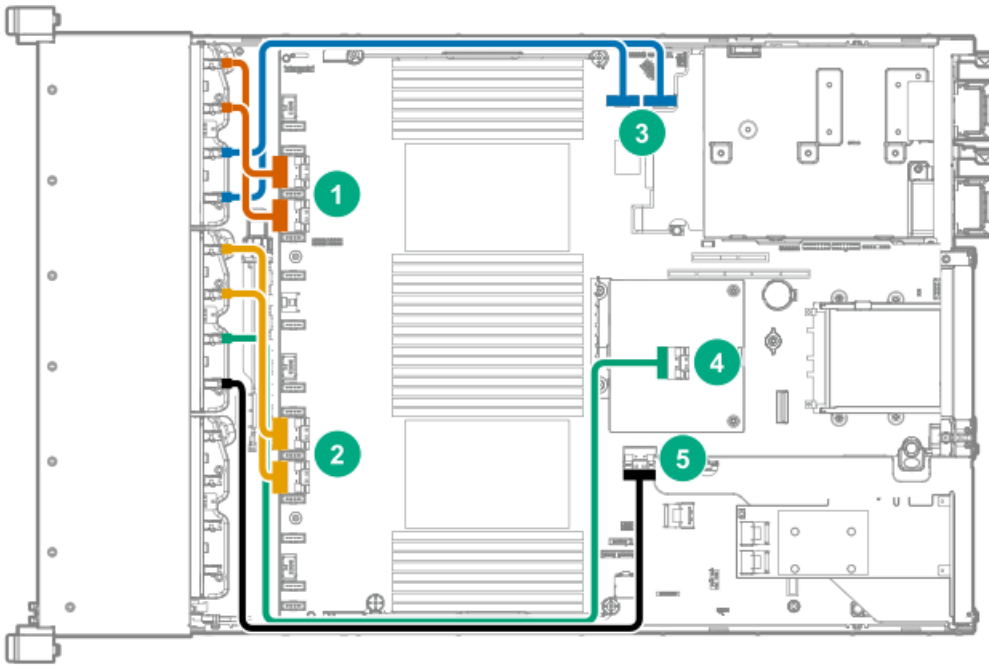
Item	Connections
1	NVMe ports 1B and 2B
2	NVMe ports 1A and 2A
3	NVMe ports 1C and 2C
4	HPE DL38X Gen10 Plus AROC to NVMe Adapter, port 7A
5	NVMe port 8A

Cable routing: 24 NVMe Balanced Direct Solution
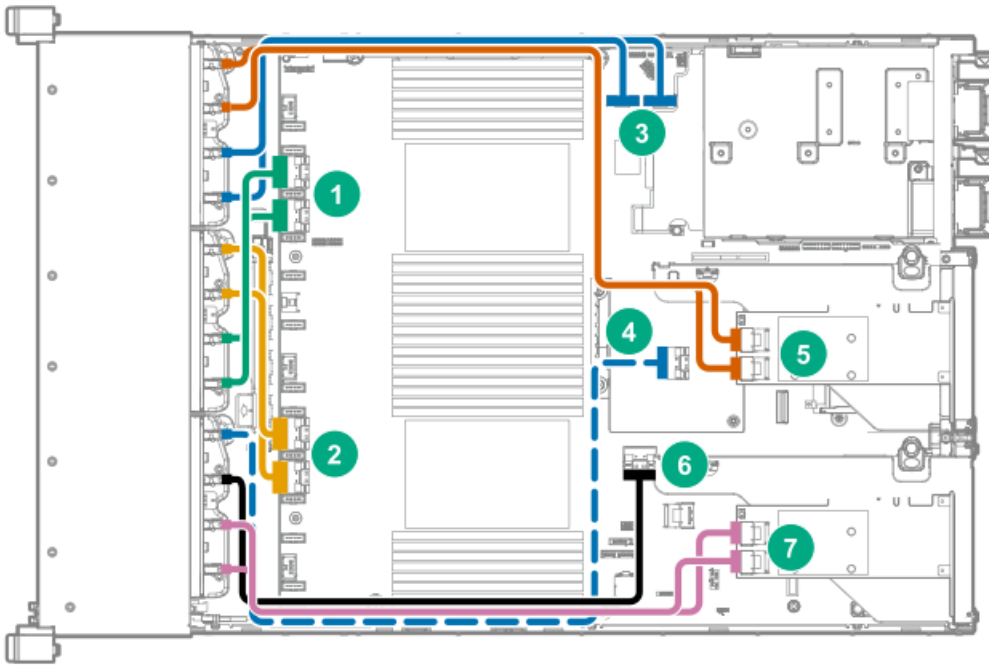
Item	Connections
1	NVMe ports 1B/2B
2	NVMe ports 1A/2A
3	NVMe ports 1C/2C
4	HPE Smart Array Flexible Smart Array Controller port 7A
5	PCIe Gen4 x16 re-timer card (secondary riser)
6	NVMe port 8A
7	PCIe Gen4 x16 re-timer card (primary riser)

Cable routing: Front 8 LFF to system board
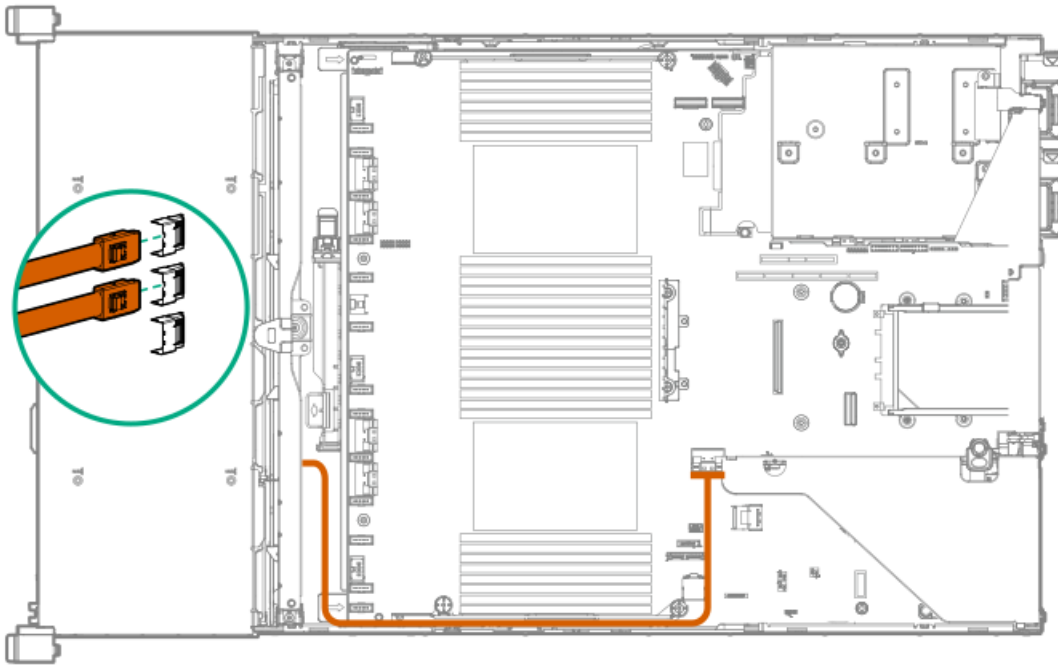
Cable routing: 12 LFF drive options (midtray to system board)
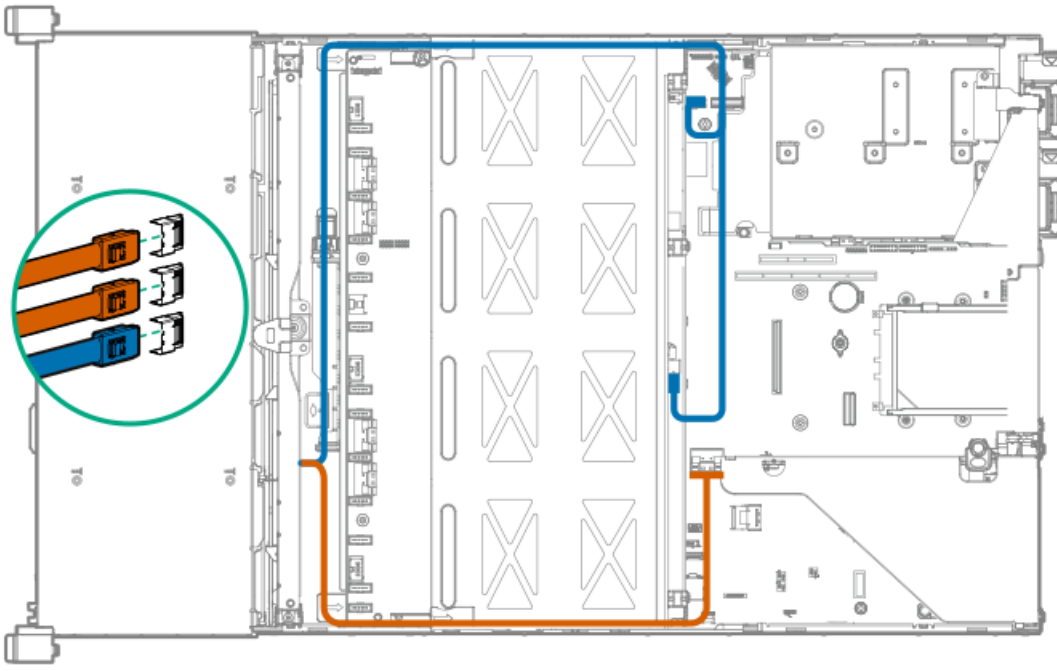
Cable routing: Front 12 LFF drive options (midtray to HPE Smart Array P816i-a SR Gen10 Controller, ports 1-4)
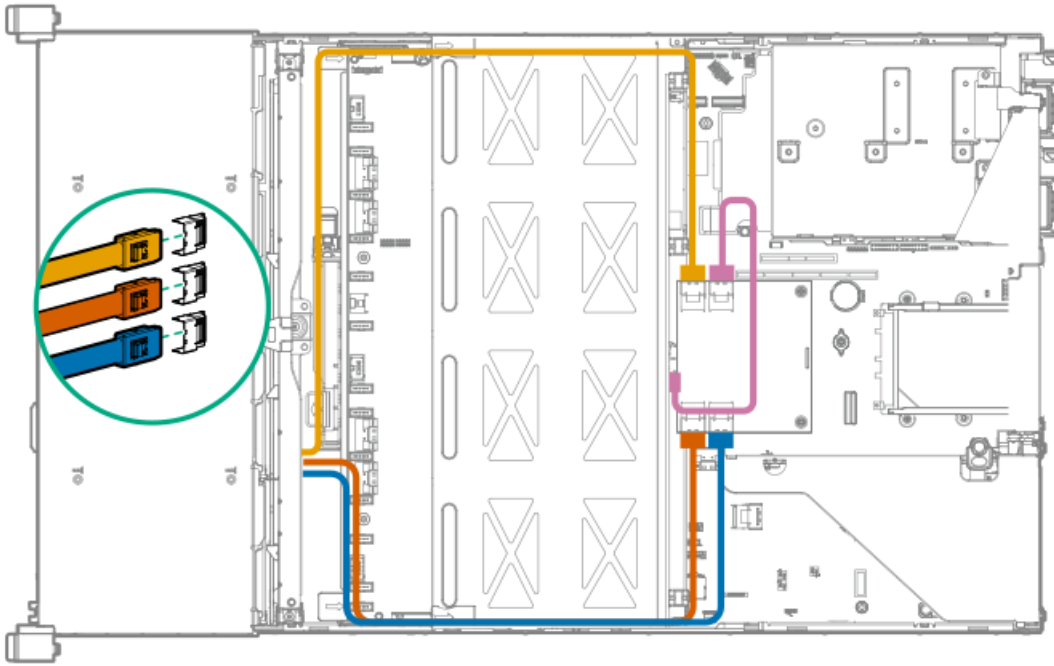
Cable routing: LFF backplane to HPE Smart Array P816i-a SR Gen10 Controller
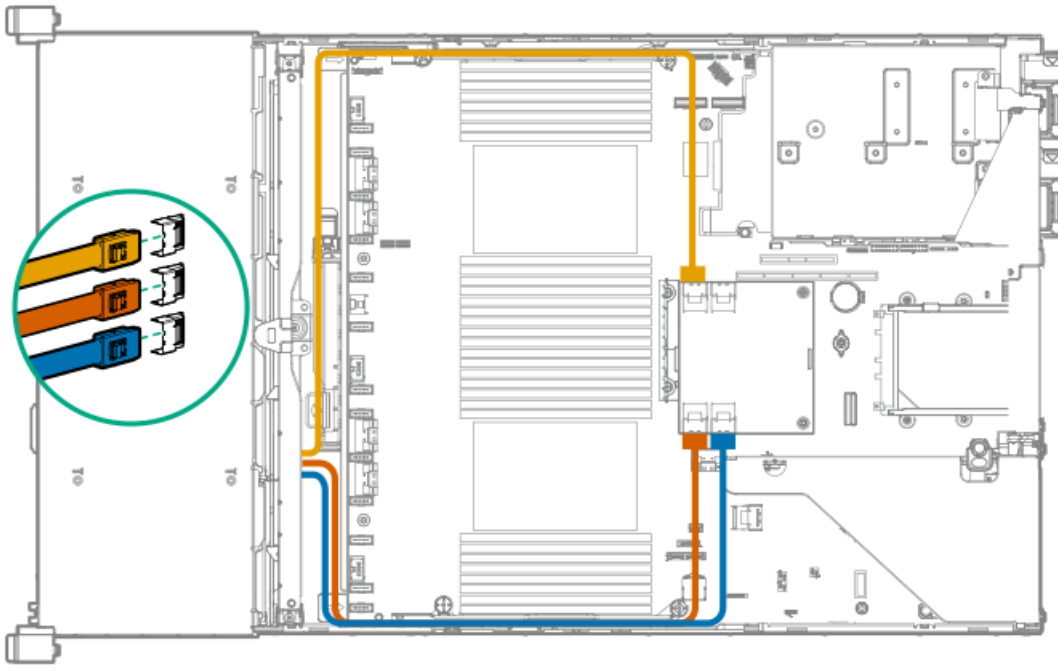
Cable routing: System board processor 1 (ports 1A and 2A) to slotted expansion board ports 1-2 in the primary riser
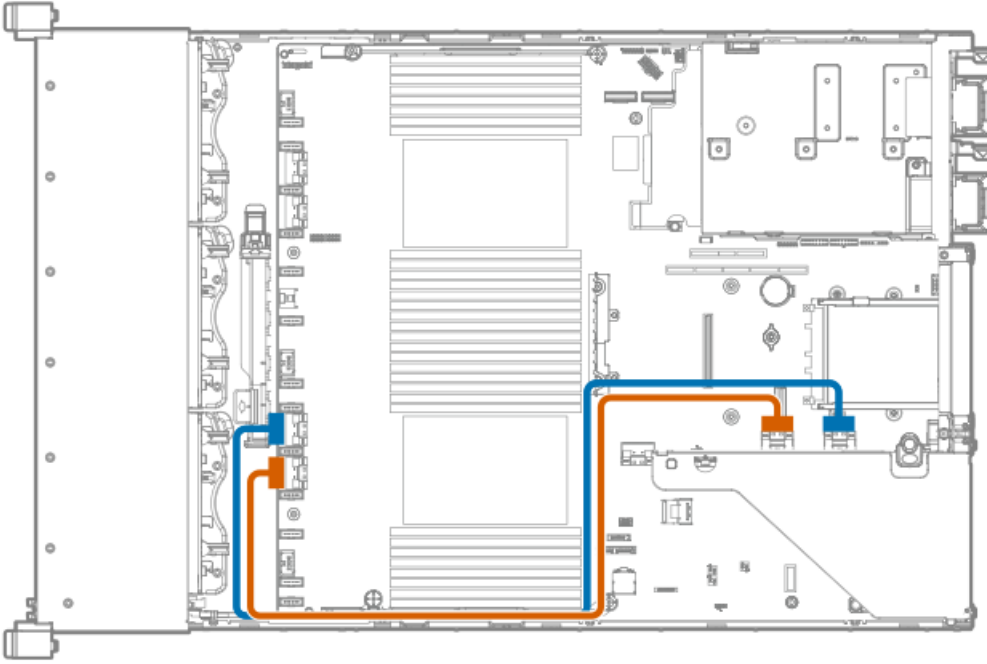
Cable routing: SFF Front I/O module to Front power/USB 3.1 Gen1 connector
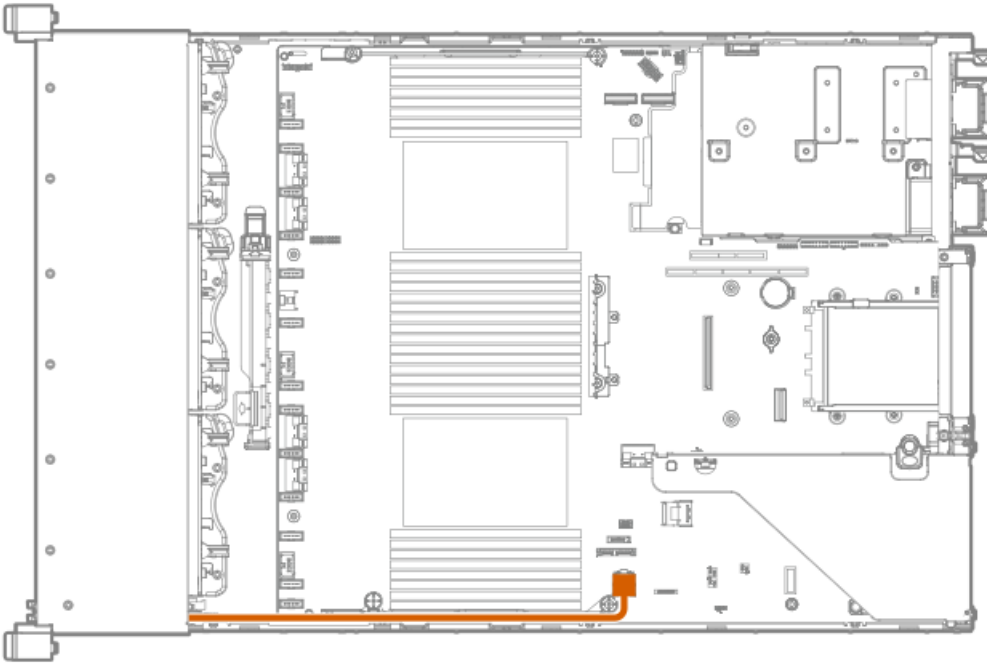
Cable routing: Systems Insight Display to front power/USB 3.1 Gen1 connector
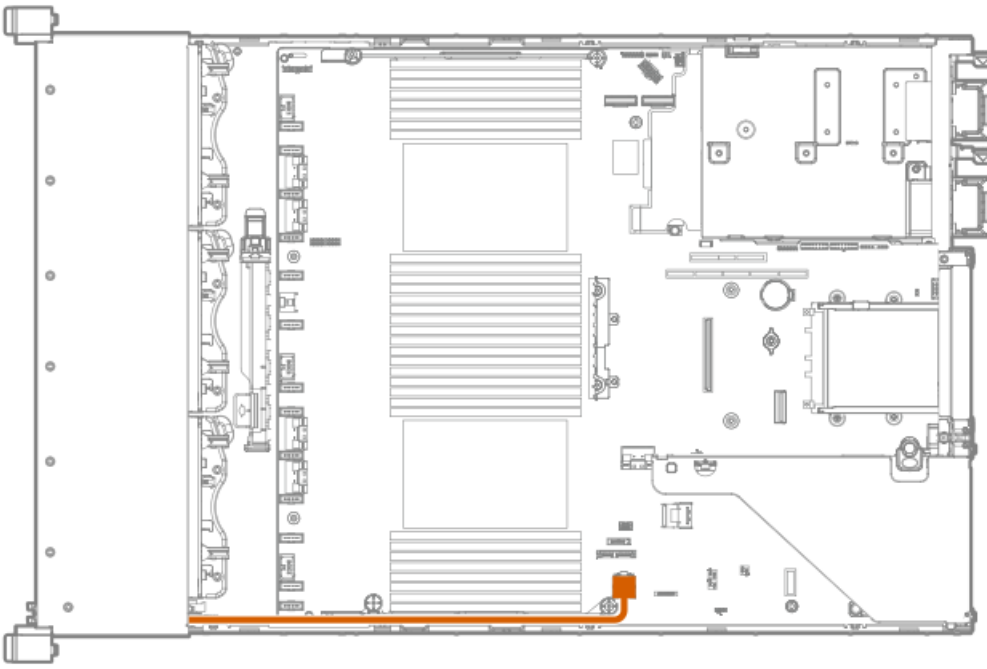
Cable routing: 12 LFF power switch and thermal sensor to system board
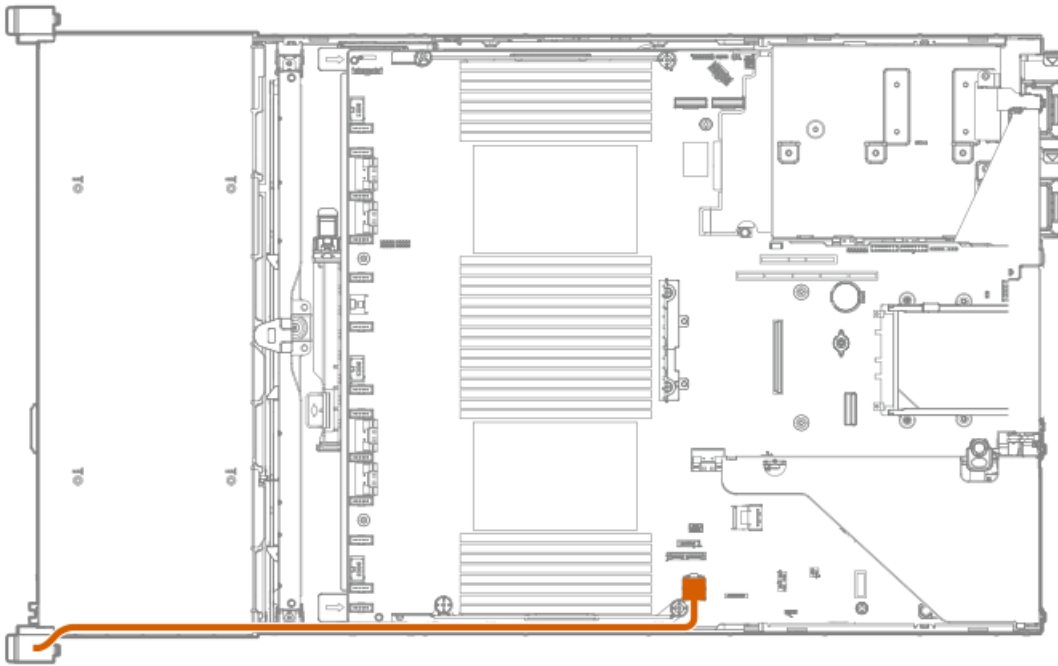
Cable routing: 8 LFF front I/O module display port to system board
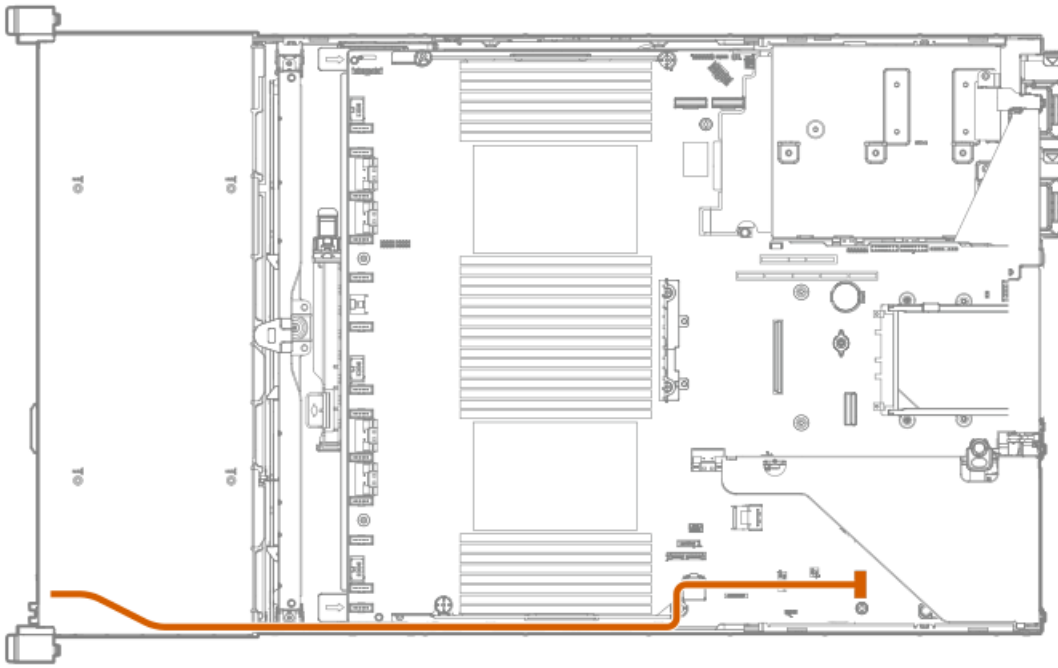
Cable routing: Display port to system board
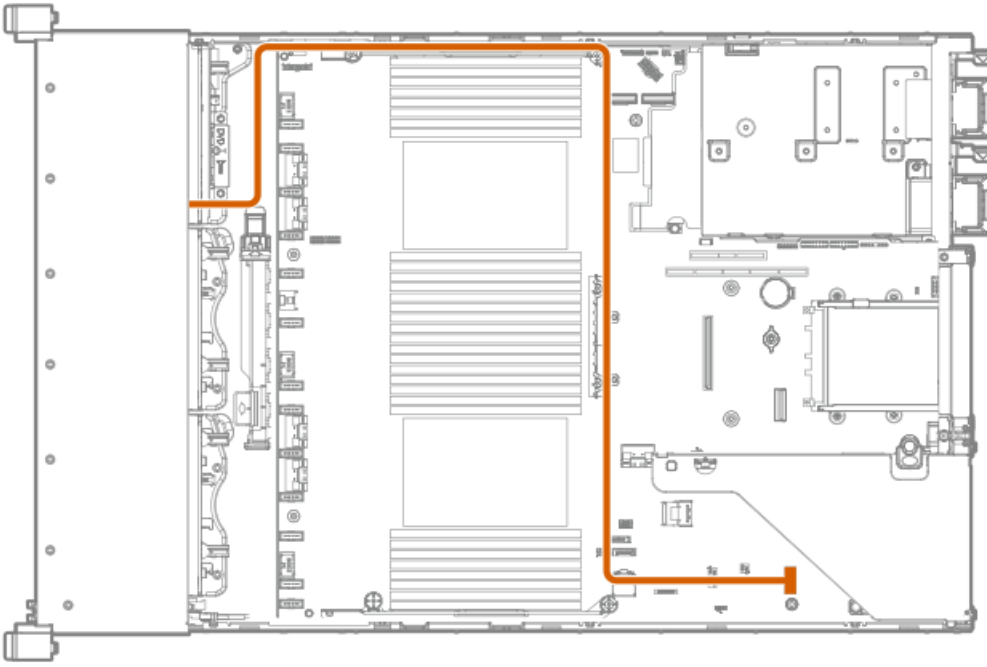
Cable routing: Universal Media bay external USB to dual USB port on system board
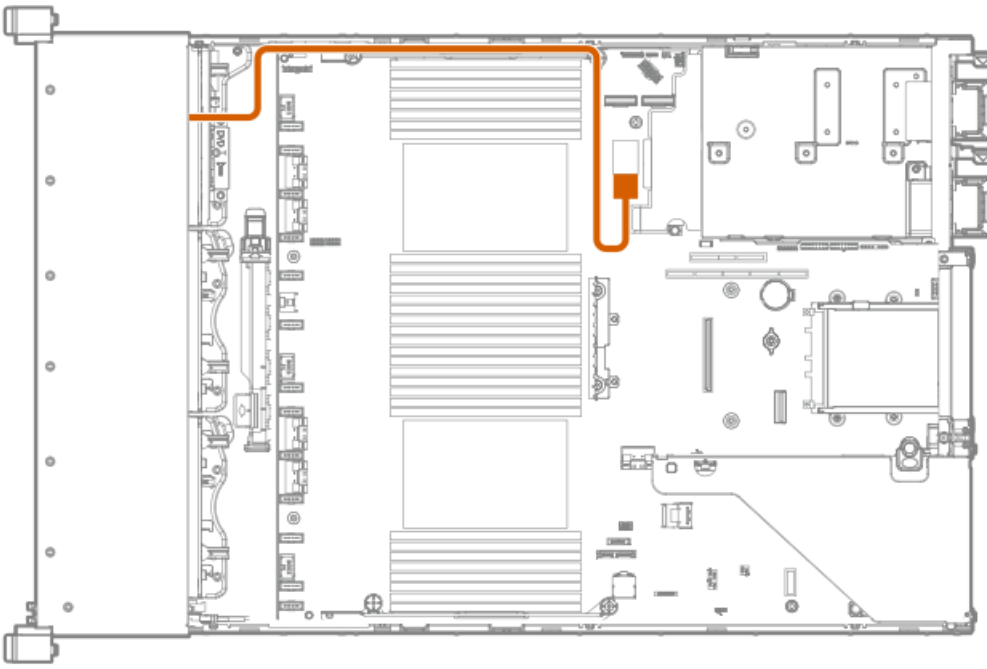
Cable routing: Rear serial port interface
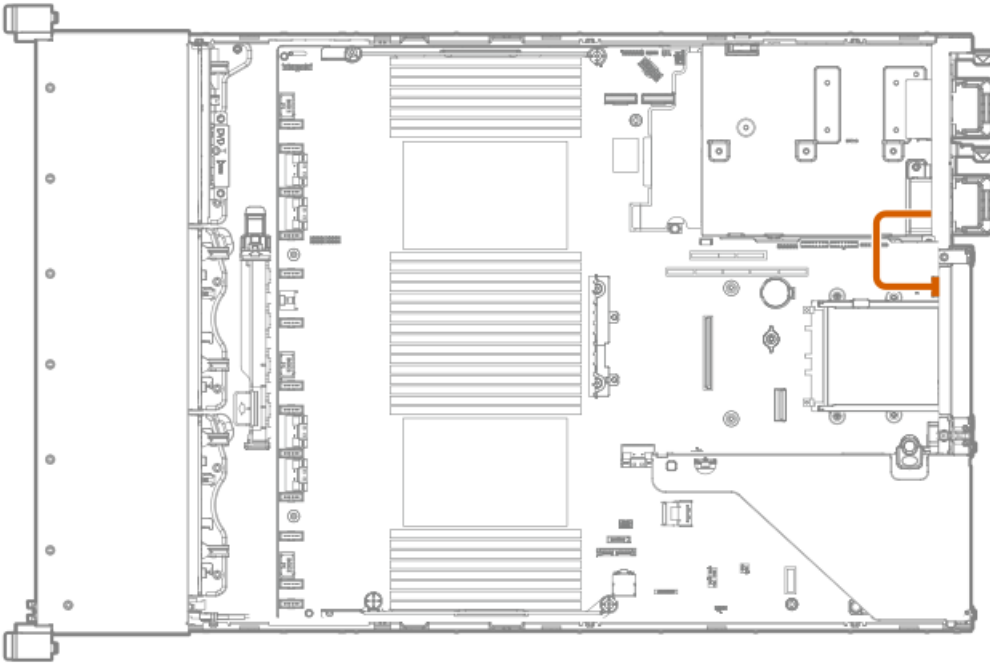
Cable routing: Rear serial port interface (tertiary riser)
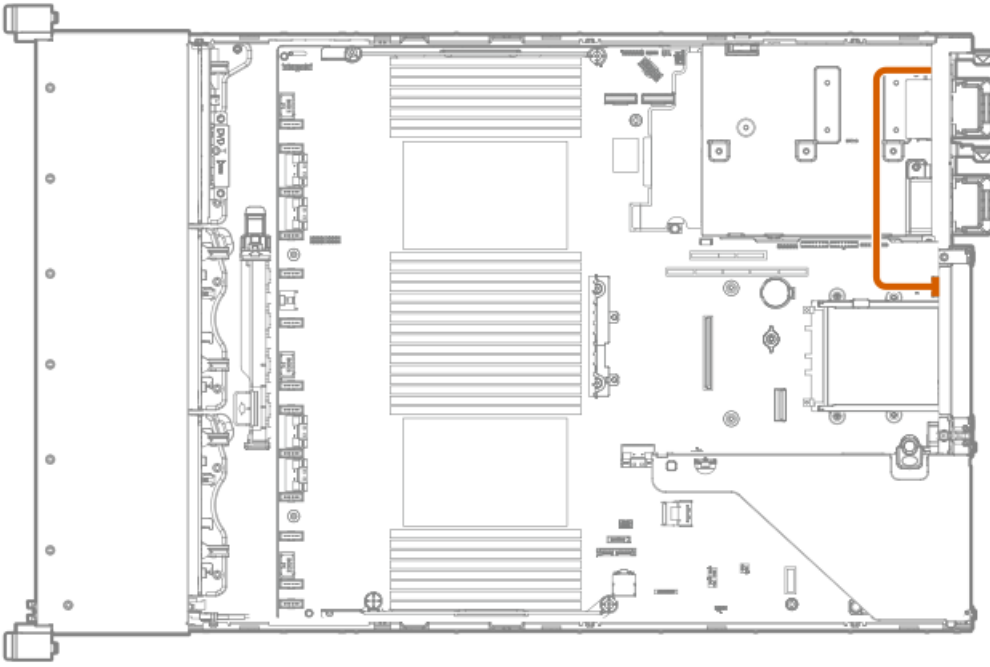
Cable routing: SFF backplane power cabling to the system board
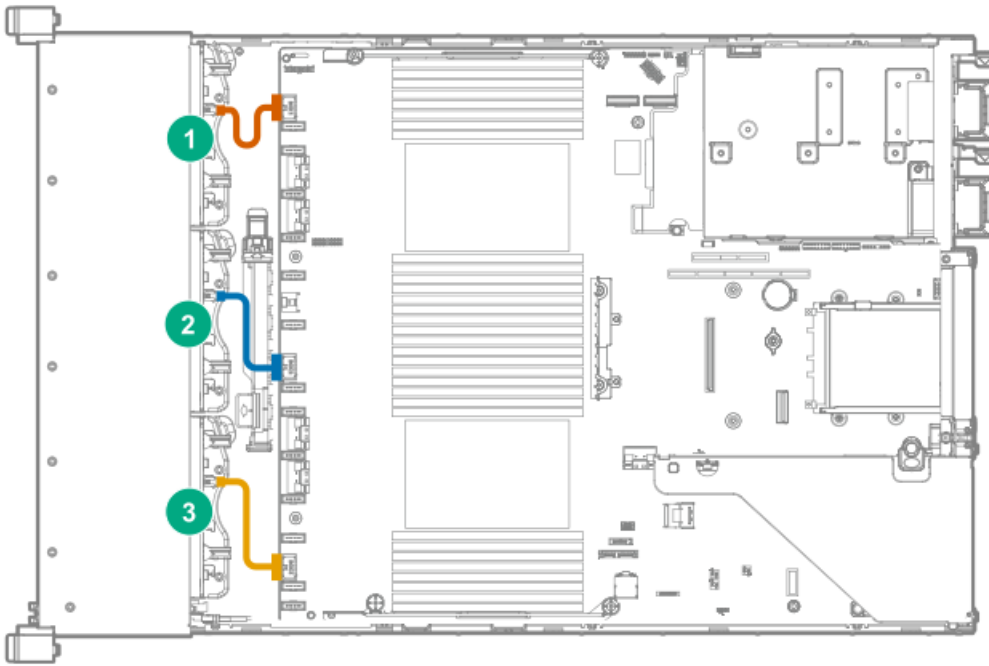
Item	Drive box
1	Box 1
2	Box 2
3	Box 3

Cable routing: LFF backplane power cabling to the system board
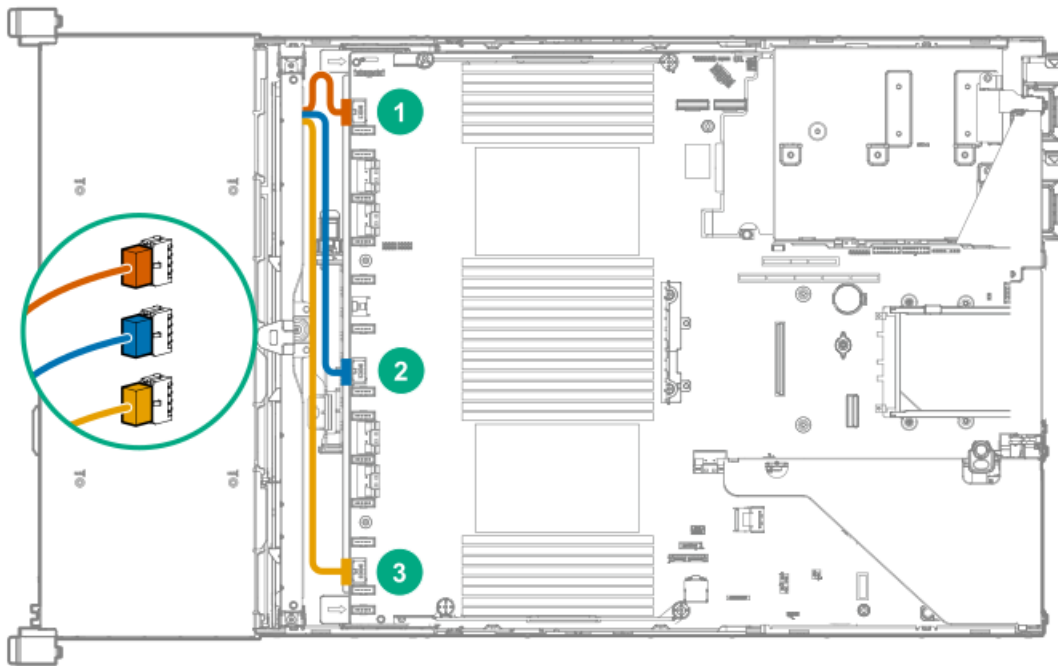
Item	Drive box
1	Box 1
2	Box 2
3	Box 3

Cable routing: 4 LFF backplane and 2 SFF side by side LFF power cable connections to the system board
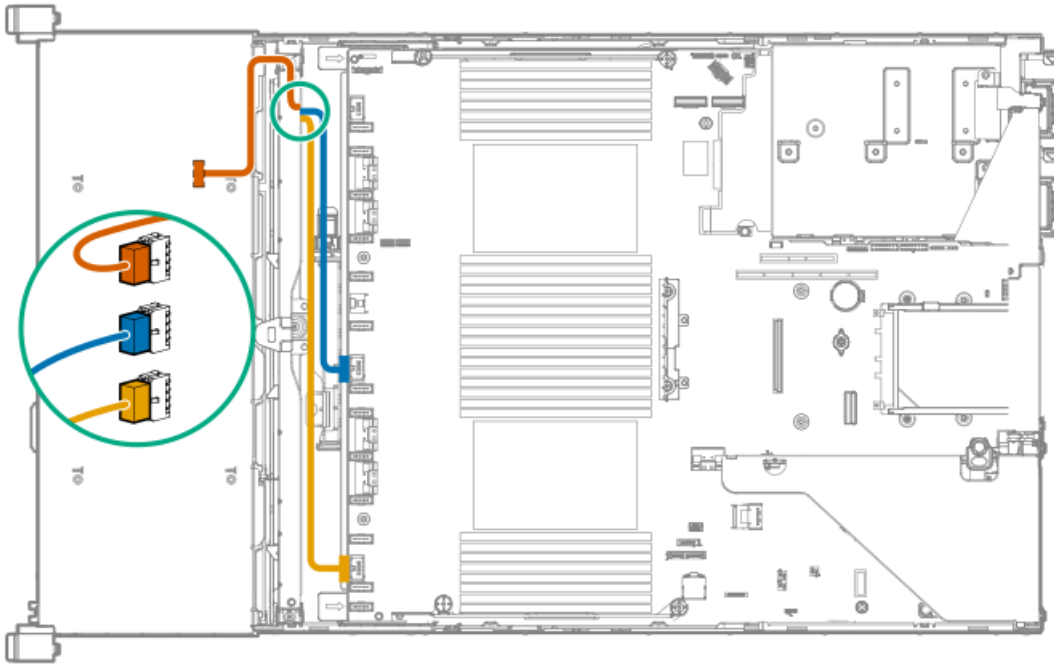
Cabling routing: HPE Smart Array P816i-a Controller

2 LFF configuration
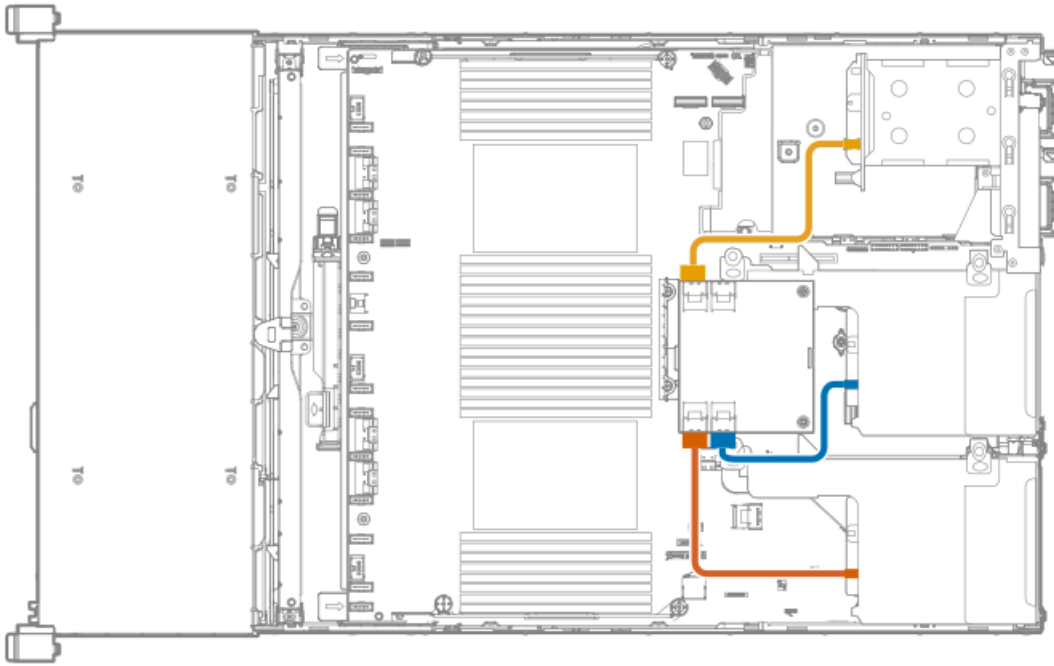
Cable routing: Rear 2 SFF riser power cable
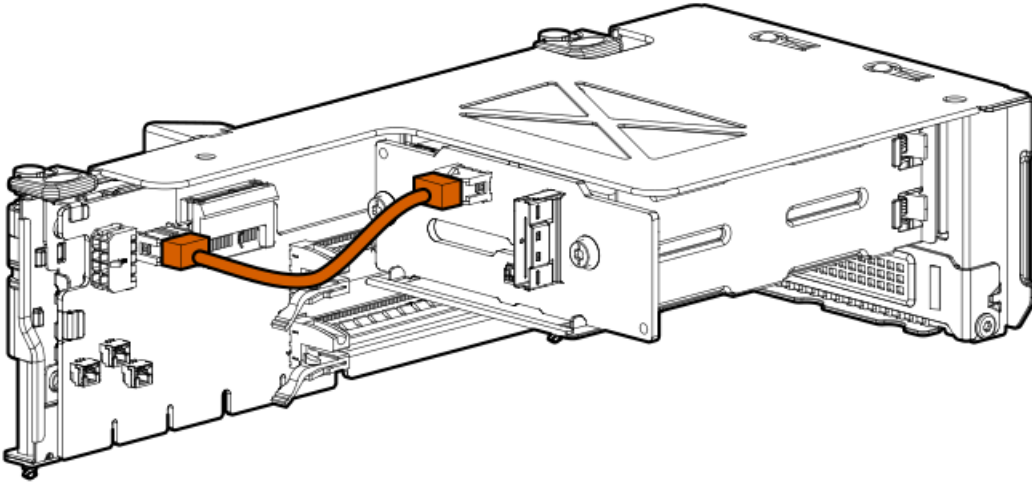
Specifications

For more information on cable, power, environmental, compliance, and general specifications, see the **HPE Compute Transceiver and Cable Hardware Matrix**.

Environmental specifications

Specification	Value
Temperature range [1]	—
Operating	10°C to 35°C (50°F to 95°F)
Nonoperating	-30°C to 60°C (-22°F to 140°F)
Relative humidity (noncondensing)	—
Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity Maximum to be 24°C (75.2°F) dew point or 90% relative humidity
Nonoperating	5% to 95% 38.7°C (101.7°F), maximum wet bulb temperature

[1] All temperature ratings shown are for sea level. An altitude derating of 1.0°C per 304.8 m (1.8°F per 1000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Maximum rate of change is 20°C per hour (36°F per hour). The upper limit and rate of change might be limited by the type and number of options installed.

For certain approved hardware configurations, the supported system inlet temperature range is extended:

- 5°C to 10°C (41°F to 50°F) and 35°C to 40°C (95°F to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3048 m (10,000 ft).

- 40°C to 45°C (104°F to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3048 m (10,000 ft).

The approved hardware configurations for this system are listed on the **Hewlett Packard Enterprise website**.

Mechanical specifications

Specification	Value
Height	87.50 mm (3.44 in)
Depth, SFF	711.20 mm (28.00 in)
Depth, LFF	749.30 mm (29.50 in)
Width	445.40 mm (17.54 in)
Weight, SFF minimum	16.05 kg (35.38 lb)
Weight, SFF maximum	28.60 kg (63.05 lb)
Weight, LFF minimum	22.50 kg (49.60 lb)
Weight, LFF maximum	34.80 kg (76.72 lb)

Power supply specifications

Depending on the installed options and the regional location where the server was purchased, the server can be configured with one of the following power supplies:

- HPE 500 W Flex Slot Platinum Hot-plug Low Halogen Power Supply

- HPE 800 W Flex Slot Platinum Hot-plug Low Halogen Power Supply

- HPE 800 W Flex Slot Titanium Hot-plug Low Halogen Power Supply

- HPE 800 W Flex Slot Universal Hot-plug Low Halogen Power Supply

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

- HPE 1600 W Flex Slot Platinum Hot-plug Low Halogen Power Supply

- HPE 1600 W Flex Slot -48 VDC Hot-plug Power Supply

For detailed power supply specifications, see the QuickSpecs on the Hewlett Packard Enterprise website.

⚠ **CAUTION:** Mixing different types of power supplies in the same server might:
  - Limit or disable some power supply features including support for power redundancy.

  - Cause the system to become unstable and might shut down.

  To ensure access to all available features, all power supplies in the same server should have the same output and efficiency ratings. Verify that all power supplies have the same part number and label color.

HPE 500 W Flex Slot Platinum Hot-plug Low Halogen Power Supply

Specification	Value
Input requirements	—
Rated input voltage	100 VAC to 240 VAC
	240 VDC for China only
Rated input frequency	50 Hz to 60 Hz
	Not applicable to 240 VDC
Rated input current	5.8 A at 100 VAC
	2.8 A at 200 VAC
	2.4 A at 240 VDC for China only
Maximum rated input power	557 W at 100 VAC
	539 W at 200 VAC
	537 W at 240 VDC for China only
BTUs per hour	1902 at 100 VAC
	1840 at 200 VAC
	1832 at 240 VDC for China only
Power supply output	—
Rated steady-state power	500 W at 100 VAC to 127 VAC input
	500 W at 100 VAC to 240 VAC input
	500 W at 240 VDC input for China only
Maximum peak power	500 W at 100 VAC to 127 VAC input
	500 W at 100 VAC to 240 VAC input
	500 W at 240 VDC input for China only

HPE 800 W Flex Slot Platinum Hot-plug Low Halogen Power Supply

Specification	Value
Input requirements	—
Rated input voltage	100 VAC to 127 VAC
	200 VAC to 240 VAC
	240 VDC for China only
Rated input frequency	50 Hz to 60 Hz
	Not applicable to 240 VDC
Rated input current	9.1 A at 100 VAC
	4.4 A at 200 VAC
	3.6 A at 240 VDC for China only
Maximum rated input power	899 W at 100 VAC
	867 W at 200 VAC
	864 W at 240 VDC for China only
BTUs per hour	3067 at 100 VAC
	2958 at 200 VAC
	2949 at 240 VAC for China only
Power supply output	—
Rated steady-state power	800 W at 100 VAC to 127 VAC input
	800 W at 100 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 100 VAC to 240 VAC input
	800 W at 240 VDC input for China only

HPE 800 W Flex Slot Titanium Hot-plug Low Halogen Power Supply

Specification	Value
Input requirements	—
Rated input voltage	200 VAC to 240 VAC
	240 VDC for China only
Rated input frequency	50 Hz to 60 Hz
	Not applicable to 240 VDC
Rated input current	4.3 A at 200 VAC
	3.6 A at 240 VAC
	3.6 A at 240 VDC for China only
Maximum rated input power	851 W at 200 VAC
	848 W at 240 VAC
	848 W at 240 VDC for China only
BTUs per hour	2905 at 200 VAC
	2893 at 240 VAC
	2893 at 240 VDC for China only
Power supply output	—
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 800 W Flex Slot Universal Hot-plug Low Halogen Power Supply

Specification	Value
Input requirements	—
Rated input voltage	200 VAC to 277 VAC
	380 VDC
Rated input frequency	50 Hz to 60 Hz
Rated input current	4.4 A at 200 VAC
	3.8 A at 230 VAC
	2.3 A at 380 VDC
Maximum rated input power	869 W at 200 VAC
	865 W at 230 VAC
	861 W at 277 VAC
	863 W at 380 VDC
BTUs per hour	2964 at 200 VAC
	2951 at 230 VAC
	2936 at 277 VAC
	2943 at 380 VDC
Power supply output	—
Rated steady-state power	800 W at 200 VAC to 277 VAC input
Maximum peak power	800 W at 200 VAC to 277 VAC input

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

Specification	Value
Input requirements	—
Rated input voltage	-40 VDC to -72 VDC
	-48 VDC nominal input
Rated input current	22.1 A at -40 VDC input
	18.2 A at -48 VDC input, nominal input
	12.0 A at -72 VDC input
Rated input power	874 W at -40 VDC input
	865 W at -48 VDC input, nominal input
	854 W at -72 VDC input
Rated input power (BTUs per hour)	2983 at -40 VDC input
	2951 at -48 VDC input, nominal input
	2912 at -72 VDC input
Power supply output	—
Rated steady-state power	800 W at -40 VDC to -72 VDC
Maximum peak power	800 W at -40 VDC to -72 VDC
Maximum peak power	800 W at -40 VDC to -72 VDC input

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

- This equipment must be installed by trained service personnel.

- 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 1600 W Flex Slot Platinum Hot-plug Low Halogen Power Supply

Specification	Value
Input requirements	—
Rated input voltage	200 VAC to 240 VAC 240 VDC for China only
Rated input frequency	50 Hz to 60 Hz
Rated input current	8.7 A at 200 VAC 7.5 A at 230 VAC
Maximum rated input power	1734 W at 200 VAC 1727 W at 230 VAC
BTUs per hour	5918 at 200 VAC 5891 at 230 VAC
Power supply output	—
Rated steady-state power	1600 W at 200 VAC to 240 VAC input 1600 W at 240 VDC input
Maximum peak power	2200 W for 1 ms (turbo mode) at 200 VAC to 240 VAC input

HPE 1600 W Flex Slot -48 VDC Hot-plug Power Supply

Specification	Value
Input requirements	—
Rated input voltage	-40 VDC to -72 VDC
Rated input frequency	DC
Nominal input current	44.2 A DC at -40 VDC input
	36.6 A DC at -48 VDC input
	24.4 A DC at -72 VDC input
Maximum Rated Input Wattage Rating	1766 W at -40 VDC input
	1758 W at -48 VDC input
	1755 W at -72 VDC input
BTUs per hour	6026 at -40 VDC input
	6000 at -48 VDC input input
	5989 at -72 VDC input
Power supply output	—
Rated steady-state power	1600 W at -40 VDC to -72 VDC
Maximum peak power	1600 W at -40 VDC to -72 VDC

Websites

General websites

Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix

https://www.hpe.com/storage/spock

Storage white papers and analyst reports

https://www.hpe.com/storage/whitepapers

For additional websites, see Support and other resources.

Product websites

HPE ProLiant DL385 Gen10 Plus v2 Server

https://www.hpe.com/servers/dl385-gen10-plus-v2

HPE ProLiant DL385 Gen10 Plus v2 Server user documents

https://www.hpe.com/info/dl385v2gen10plus-docs

Support and other resources
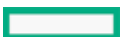
Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

  https://www.hpe.com/info/assistance

- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

  https://www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)

- Product name, model or version, and serial number

- Operating system name and version

- Firmware version

- Error messages

- Product-specific reports and logs

- Add-on products or components

- Third-party products or components

Accessing updates

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

- To download product updates:

  Hewlett Packard Enterprise Support Center

  https://www.hpe.com/support/hpesc
  Hewlett Packard Enterprise Support Center: Software downloads

  https://www.hpe.com/support/downloads
  My HPE Software Center

  https://www.hpe.com/software/hpesoftwarecenter

- To subscribe to eNewsletters and alerts:

  https://www.hpe.com/support/e-updates

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

  https://www.hpe.com/support/AccessToSupportMaterials

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

Remote support

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

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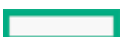
HPE Get Connected

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

HPE Pointnext Tech Care

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

HPE Complete Care

> **https://www.hpe.com/services/completecare**

Warranty information

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

HPE ProLiant and IA-32 Servers and Options

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

HPE Enterprise and Cloudline Servers

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

HPE Storage Products

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

HPE Networking Products

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

Regulatory information

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

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

Additional regulatory information

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

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

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

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

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

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

Documentation feedback

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