



Hewlett Packard
Enterprise

HPE ProLiant DL365 Gen10 Plus Server Maintenance and Service Guide

Part Number: 30-11CA689F-003

Published: October 2021

Edition: 3

HPE ProLiant DL365 Gen10 Plus Server Maintenance and Service Guide

Abstract

This document is for the person who installs, administers, and troubleshoots server 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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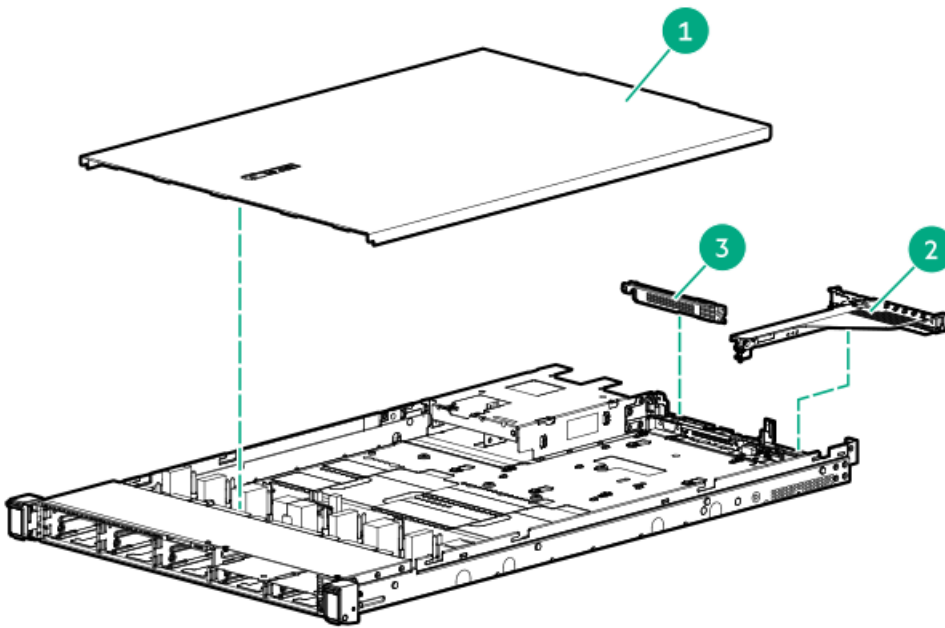
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Mechanical components

Hewlett Packard Enterprise continually improves and changes product parts. For complete and current supported parts information, see the [Hewlett Packard Enterprise PartSurfer website](#).



Item	Description
1	<u>Access panel spare parts</u>
2	<u>PCIe riser cage spare parts</u>
3	<u>PCIe riser blank spare parts</u>
4 ¹	<u>Server ear spare parts</u>
5 1	<u>Rack mounting hardware spare part*</u>
6 ¹	<u>DIMM guard spare part</u>
7 ¹	<u>Cable management arm spare parts</u>

¹ Item not shown.

Access panel spare part

Customer self repair: Mandatory

Description	Spare part number
Access panel	P42617-001

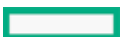


PCIe riser cage spare part

Customer self repair: Optional

Description	Spare part number
RISER, Tertiary, x16FH	P31223-001
RISER, x16LP	P31222-001
RISER, PCIe x16/x8/M.2	P28340-001

For primary riser board spares, see [PCI riser board spare parts](#)



PCIe riser blank spare parts

Customer self repair: Mandatory

Description	Spare part number
PCIe riser blank, slotted	875537-001



Server ear spare parts

Customer self repair: Mandatory

Table :

Description	Spare part number
SFF left ear	P38894-001
Right ear	P38895-001



Rack mounting hardware spare parts

Customer self repair: Mandatory

Description	Spare part number
1U Easy Install SFF	P38898-001



DIMM guard spare part

Customer self repair: Mandatory

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



Cable management arm spare parts

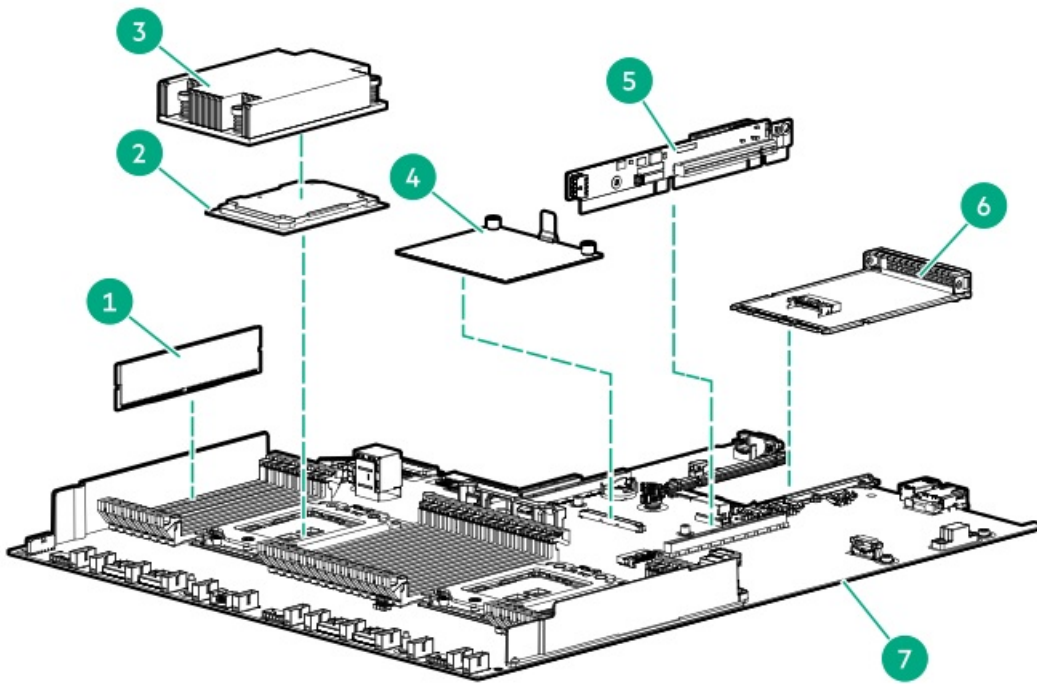
Customer self repair: Mandatory

Description	Spare part number
1U Cable Management Arm	P38900-001



System components

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Item	Description
1	<u>DIMM spare parts</u>
2	<u>Processor spare parts</u>
3	<u>Heatsink spare parts</u>
4	<u>Smart array controller spare parts</u>
5	<u>PCIe riser board spare parts</u>
6	<u>Network adapter spare parts</u>
7	<u>System board spare part</u>

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



AMD EPYC 7xx2 processor spare parts

Customer self repair: Optional

Description	Spare part number
3.20 GHz AMD EPYC 7262 processor, 8C, 155 W	P17341-001
3.00 GHz AMD EPYC 7302 processor, 16C, 155 W	P17339-001
2.35 GHz AMD EPYC 7452 processor, 32C, 155 W	P17338-001
2.50 GHz AMD EPYC 7502 processor, 32C, 180 W	P17334-001
2.00 GHz AMD EPYC 7702 processor, 64C, 200 W	P17332-001



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
3.50 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
2.75 GHz AMD EPYC 7453 processor	P39056-001
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
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



Heatsink spare parts

Customer self repair: Optional

Description	Spare part number
Standard heatsink 1U	P00248-001
High-performance heatsink 1U	P24556-001



Smart Array controller spare parts

Customer self repair: Mandatory

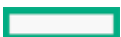
Description	Spare part number
HPE Smart Array E208i-a SR Gen10 Controller	836259-001
HPE Smart Array P408i-a SR Gen10 Controller	836260-001
HPE Smart Array E208i-p SR Gen10 Controller	836266-001
HPE Smart Array E208e-p SR Gen10 Controller	836267-001
HPE Smart Array P408i-p SR Gen10 Controller	836269-001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

PCI riser board spare parts

Customer self repair: Optional

Description	Spare part number
Primary PCIe riser	P31228-001
x16/x8 M.2 riser	P28340-001
Secondary riser x16 LP	P31222-001
x16FH tertiary riser	P31223-001





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

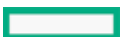
Description	Spare part number
HPE CN1100R 2P Converged Network Adapter	706801-001
HPE StoreFabric CN1100R-T 10Gb Converged Network Adapter	872605-001
HPE StoreFabric CN1200E 10Gb Converged Network Adapter	767078-001
HPE StoreFabric CN1200E-T 10Gb Converged Network Adapter	827607-001



OCP 3.0 adapter spare parts

Customer self repair: Optional

Description	Spare part number
1GbE 4-port BaseT I350-T4 OCP 3.0 adapter	P14487-001
10GbE 2-port BT BCM 57416 OCP3 adapter	P13640-001



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



System battery spare part

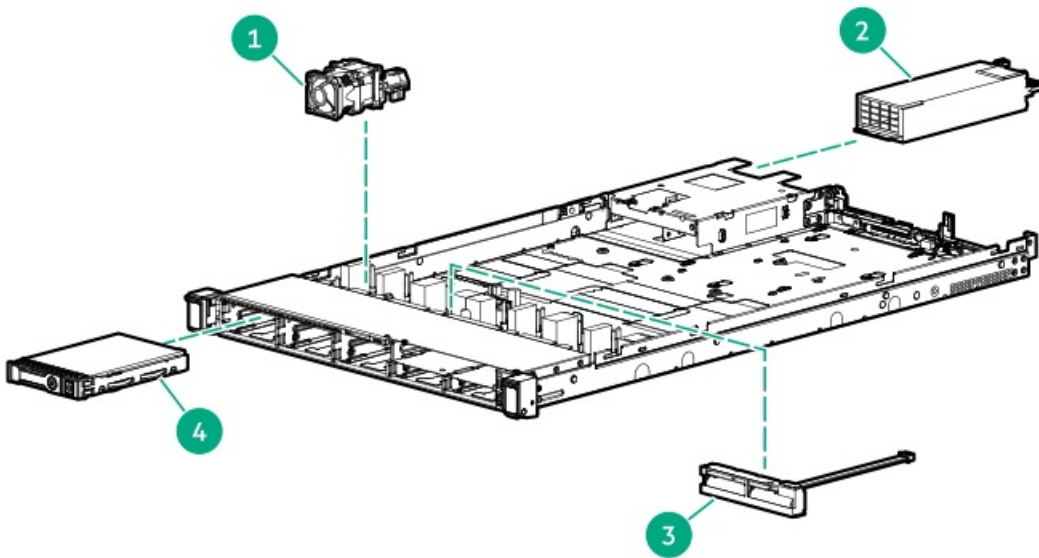
Customer self repair: Mandatory

<u>Description</u>	<u>Spare part number</u>
System battery	319603-001



Server options

Hewlett Packard Enterprise continually improves and changes product parts. For complete and current supported parts information, see the [Hewlett Packard Enterprise PartSurfer website](#).



Item	Description
1	Fan spare parts
2	Power supply spare parts
3	Battery and capacitor spare parts
4	Hot-plug drive spare parts
5 ¹	Cable spare parts
6 ¹	Thermal grease spare parts

¹ Item not shown.

Fan spare parts

Customer self repair: Mandatory

Description	Spare part number
Standard fan	P31214-001
Max performance fan for Gen10 Plus	P31213-001

Power supply spare parts

Customer self repair: Mandatory

Description	Spare part number
800W Flex-slot 48VDC	866728-001
500W Flex-slot Platinum	866729-001
800W Flex-slot Platinum	866730-001
800W Flex-slot High Efficiency Titanium 96%	866793-001
1600W Flex-slot Platinum	863373-001
1600W Flex-slot -48 VDC	P18510-001



Battery and capacitor spare parts

Customer self repair: Mandatory

Description	Spare part number
HPE Smart Storage Hybrid Capacitor	P07473-001
HPE Smart Storage Battery	878643-001



Hot-plug drive spare parts

Customer self repair: Mandatory

SFF drives

Description	Spare part number
300GB SAS 10k SFF SC HDD	785410-001
300GB SAS 10K SFF SC DS HDD	872735-001
300GB SAS 15K SFF SC HDD	759546-001
300GB SAS 15K SFF SC DS HDD	870792-001
450GB SAS 15K SFF SC HDD	759547-001
600GB SAS 10K SFF SC DS HDD	872736-001
600GB SAS 10K SFF SC HDD	781577-001
600GB SAS 15K SFF SC DS HDD	870794-001
600GB SAS 15K SFF SC 512e DS HDD	870797-001
600GB SAS 15K SFF SC HDD	759548-001
600GB SAS 15K SFF SC 512e HDD	748435-001
900GB SAS 10K SFF SC HDD	785411-001
900GB SAS 15K SFF SC DS HDD	870795-001
900GB SAS 15K SFF SC 512e DS HDD	870798-001
1TB SAS 7.2K SFF SC DS HDD	832984-001
1TB SAS 7.2K SFF SC 512e DS HDD	765872-001
1TB SATA 7.2K SFF SC 512e DS HDD	765868-001
1TB SATA 7.2K SFF SC DS HDD	656108-001
1.2TB SAS 10K SFF SC HDD	781578-001
1.2TB SAS 10K SFF SC DS HDD	872737-001
1.8TB SAS 10K SFF SC 512e DS HDD	872738-001
1.8TB SAS 10K SFF SC 512e HDD	791055-001
2TB SAS 7.2K SFF SC 512e DS HDD	765873-001
2TB SATA 7.2K SFF SC 512e DS HDD	765869-001

Cable kit spare parts

Customer self repair: Mandatory

Description	Spare part number
PWR, SAS/SATA/H BRD, 8SFF	P38905-001
SAS/SATA,2SFF BP,P816i-a,10P	P38909-001
2SFF BP/NVMe/MLB to port8a/10P	P42988-001
8SFF BP,S/S,P450/P850ar,10P	P42987-001
2SFF U.3 BP, Pri NVMe, 10P	P38920-001
2SFF U.3 BP, NVMe, 10P	P38924-001



Thermal grease spare part

Customer self repair: 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 spedisce direttamente al cliente per la sostituzione. Vi sono due categorie di parti CSR:

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

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

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

Per ulteriori informazioni sul programma CSR di Hewlett Packard Enterprise, contattare il centro di assistenza di zona.

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 Teilkatalog 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 garantiev voorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

Afhankelijk van de leverbaarheid en de locatie worden CSR-onderdelen verzonden voor levering op de eerstvolgende werkdag. Levering op dezelfde dag of binnen vier uur kan tegen meerkosten worden aangeboden, indien dit mogelijk is gezien de locatie. Indien assistentie is gewenst, belt u het Hewlett Packard Enterprise Support Center om via de telefoon ondersteuning van een technicus te ontvangen. Hewlett Packard Enterprise vermeldt in de documentatie bij het vervangende CSR-onderdeel of het defecte onderdeel aan Hewlett

Packard Enterprise moet worden geretourneerd. Als het defecte onderdeel aan Hewlett Packard Enterprise moet worden teruggezonden, moet u het defecte onderdeel binnen een bepaalde periode, gewoonlijk vijf (5) werkdagen, retourneren aan Hewlett Packard Enterprise. Het defecte onderdeel moet met de bijbehorende documentatie worden geretourneerd in het meegeleverde verpakkingsmateriaal. Als u het defecte onderdeel niet terugzendt, kan Hewlett Packard Enterprise u voor het vervangende onderdeel kosten in rekening brengen. Bij reparatie door de klant betaalt Hewlett Packard Enterprise alle verzendkosten voor het vervangende en geretourneerde onderdeel en kiest Hewlett Packard Enterprise zelf welke koerier/transportonderneming hiervoor wordt gebruikt.

Neem contact op met een Service Partner voor meer informatie over het Customer Self Repair programma van Hewlett Packard Enterprise.

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となります。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

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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。

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Removal and replacement procedures



Required tools

The following tools might be required to perform some procedures:

- T-10/T-15/T-30 Torx screwdriver
- HPE Insight Diagnostics software

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 \pm 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
 - Use heel straps, toe straps, or boot straps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
 - Use conductive field service tools.
 - Use a portable field service kit with a folding static-dissipating work mat.

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

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



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.

Rack warnings

- ⚠ WARNING:** To reduce the risk of personal injury or damage to the equipment, be sure that:
- The leveling jacks are extended to the floor.
 - The full weight of the rack rests on the leveling jacks.
 - The stabilizing feet are attached to the rack if it is a single-rack installation.
 - The racks are coupled together in multiple-rack installations.
 - Only one component is extended at a time. A rack may become unstable if more than one component is extended for any reason.
-

- ⚠ WARNING:** To reduce the risk of personal injury or equipment damage when unloading a rack:
- At least two people are needed to safely unload the rack from the pallet. An empty 42U rack can weigh as much as 115 kg (253 lb), can stand more than 2.1 m (7 ft) tall, and might become unstable when being moved on its casters.
 - Never stand in front of the rack when it is rolling down the ramp from the pallet. Always handle the rack from both sides.
-

⚠ WARNING:

To reduce the risk of personal injury or damage to the equipment, adequately stabilize the rack before extending a component outside the rack. Extend only one component at a time. A rack may become unstable if more than one component is extended.

⚠ WARNING:

When installing a server in a telco rack, be sure that the rack frame is adequately secured at the top and bottom to the building structure.

Preparation procedures

To access some components and perform certain service procedures, you must perform one or more of the following procedures:

- Extend the server from the rack.

If you are performing service procedures in a Hewlett Packard Enterprise, Compaq branded, Telco, or third-party rack cabinet, you can use the locking feature of the rack rails to support the server and gain access to internal components.

For more information about Telco rack solutions, refer to the [RackSolutions.com website](http://RackSolutions.com).

- Power down the server.

If you must remove a server from a rack or a non-hot-plug component from a server, power down the server.

- Remove the server from the rack.

If the rack environment, cabling configuration, or the server location in the rack creates awkward conditions, remove the server from the rack.



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.

Power down the server

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

i 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.

Extend the server from the rack



NOTE:

If the cable management arm option is installed, you can extend the server without powering down the server or disconnecting peripheral cables and power cords. These steps are only necessary with the standard cable management solution.

Procedure

1. Power down the server.
 2. Disconnect all peripheral cables and power cords.
 3. Loosen the front panel thumbscrews.
 4. Extend the server on the rack rails until the server rail-release latches engage.
-



WARNING:

To reduce the risk of personal injury or equipment damage, be sure that the rack is adequately stabilized before extending a component from the rack.



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.

5. After the installation or maintenance procedure, slide the server into the rack:
 - a. Slide the server fully into the rack.
 - b. Secure the server by tightening the thumbscrews.
6. Connect the peripheral cables and power cords.

Remove the server from the rack

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

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 and the internal system components to cool before touching them.

⚠ 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.

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.

Install the access panel

Procedure

1. Place the access panel on top of the server with the latch open.

Allow the panel to extend past the rear of the server approximately 1.25 cm (0.5 in).

2. Push down on the latch.

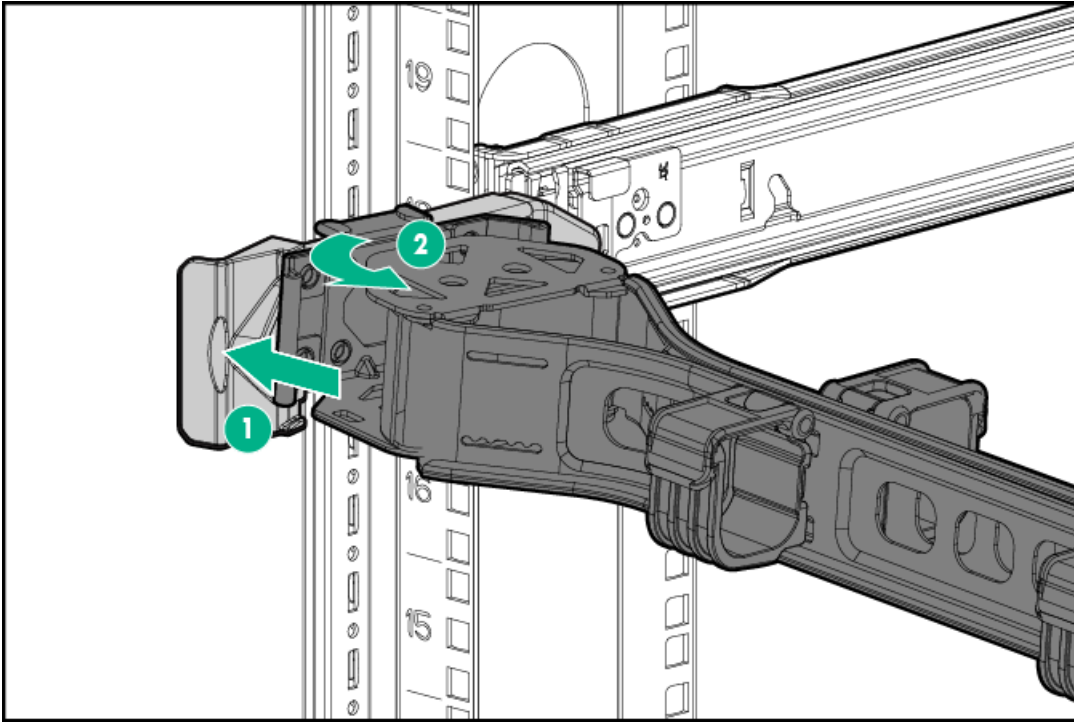
The access panel slides to a closed position.

3. Tighten the security screw on the latch, if needed.

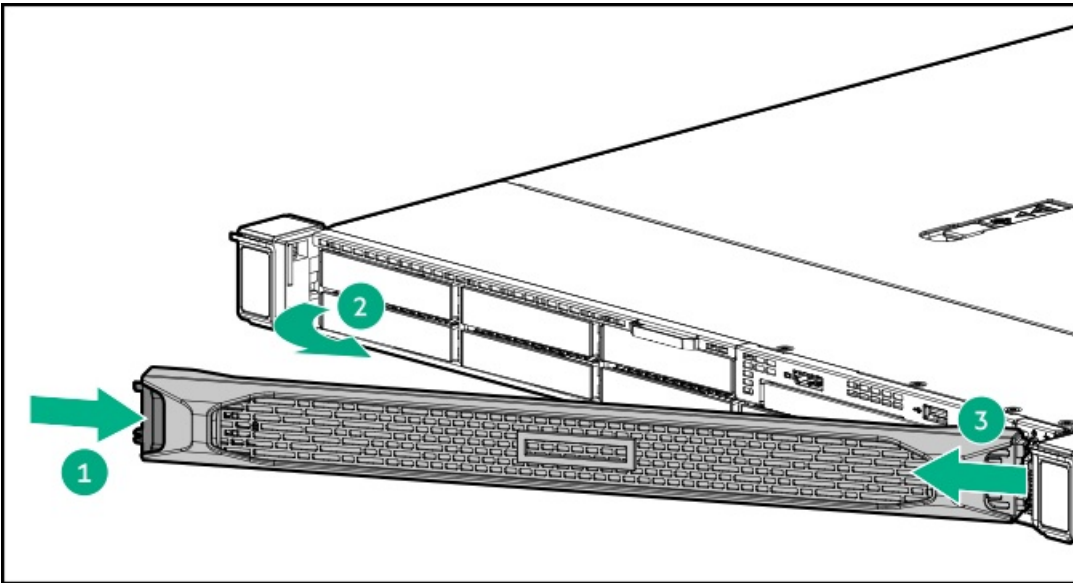
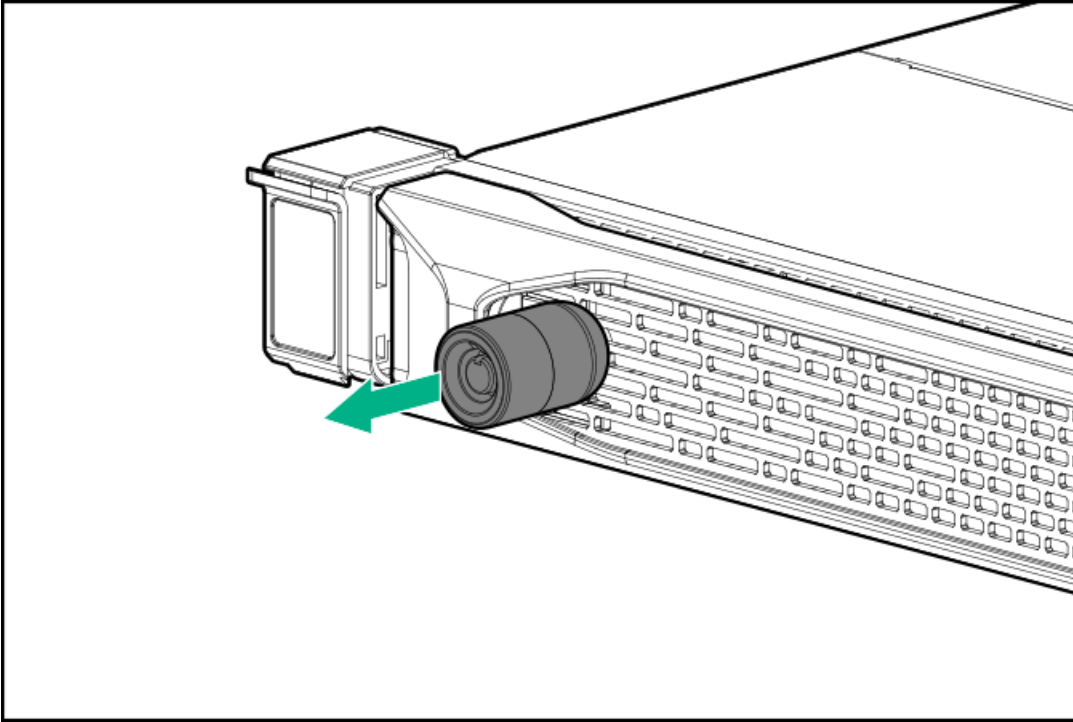


Release the cable management arm

Release the cable management arm and then swing the arm away from the rack.



Removing and replacing the bezel

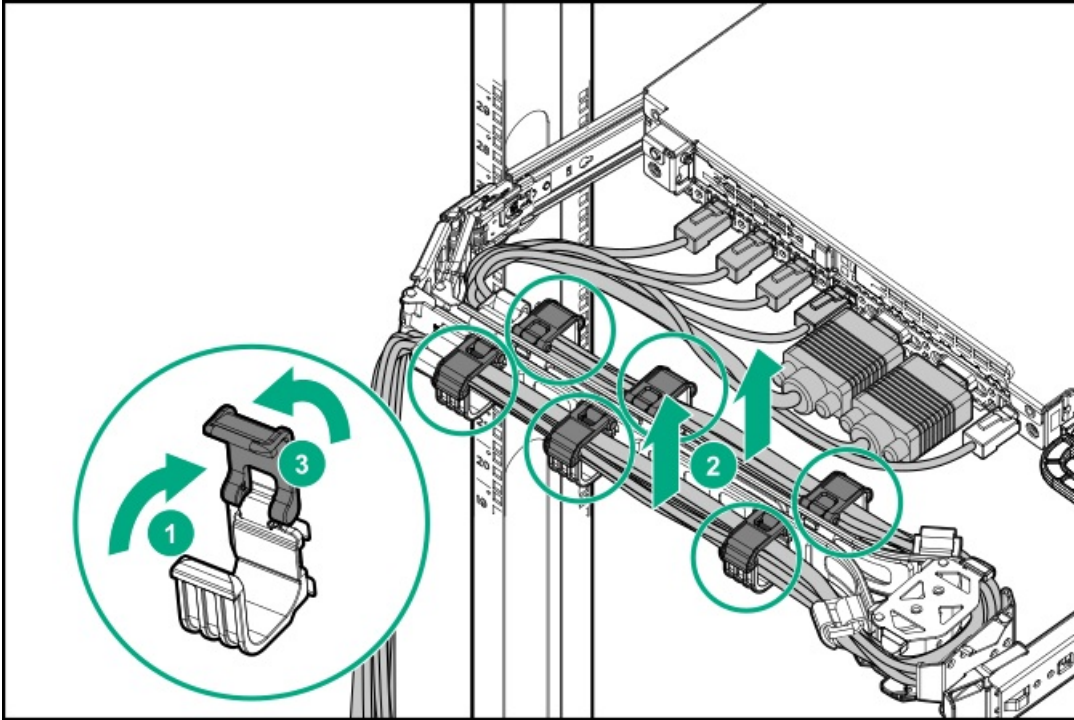


Removing and replacing the cable management arm

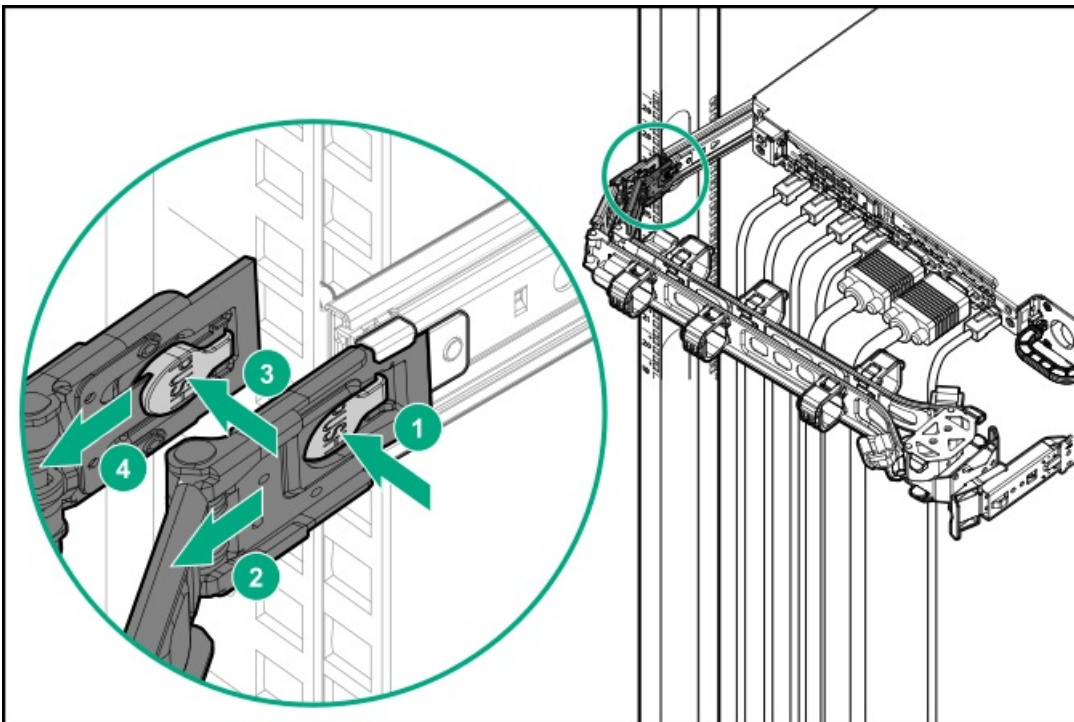
CAUTION: Support the CMA during the removal/replacement procedure. Do not allow the CMA to hang by its own weight during the procedure.

Procedure

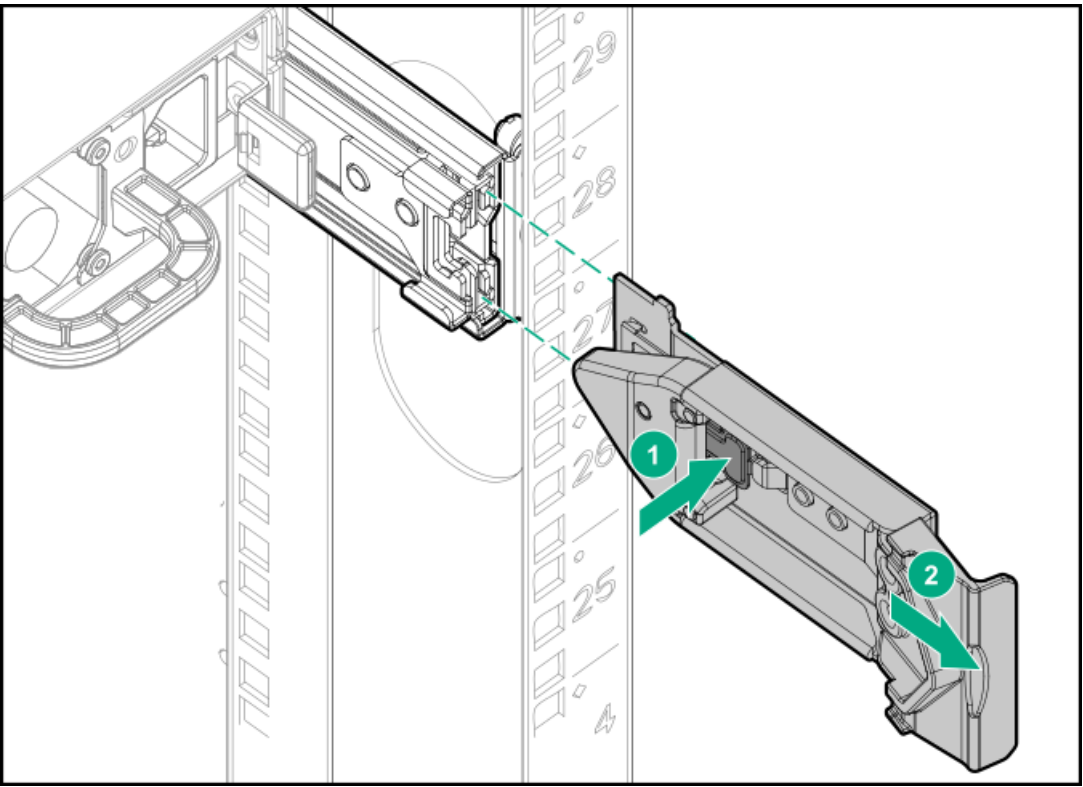
1. Extend the server from the rack.
2. Open the cable clamps and remove the cables routed through the CMA.



3. Release the CMA.



4. Remove the CMA latch.



To replace the component, reverse the removal procedure.

Removing and replacing the easy install rails

WARNING:

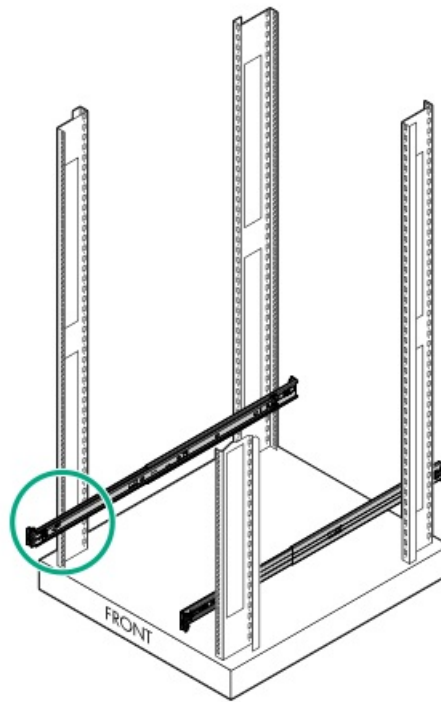
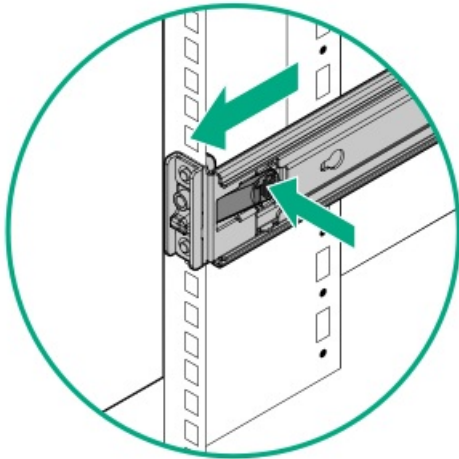
To reduce the risk of personal injury or damage to the equipment, you must adequately support the enclosure during installation and removal.

Prerequisites

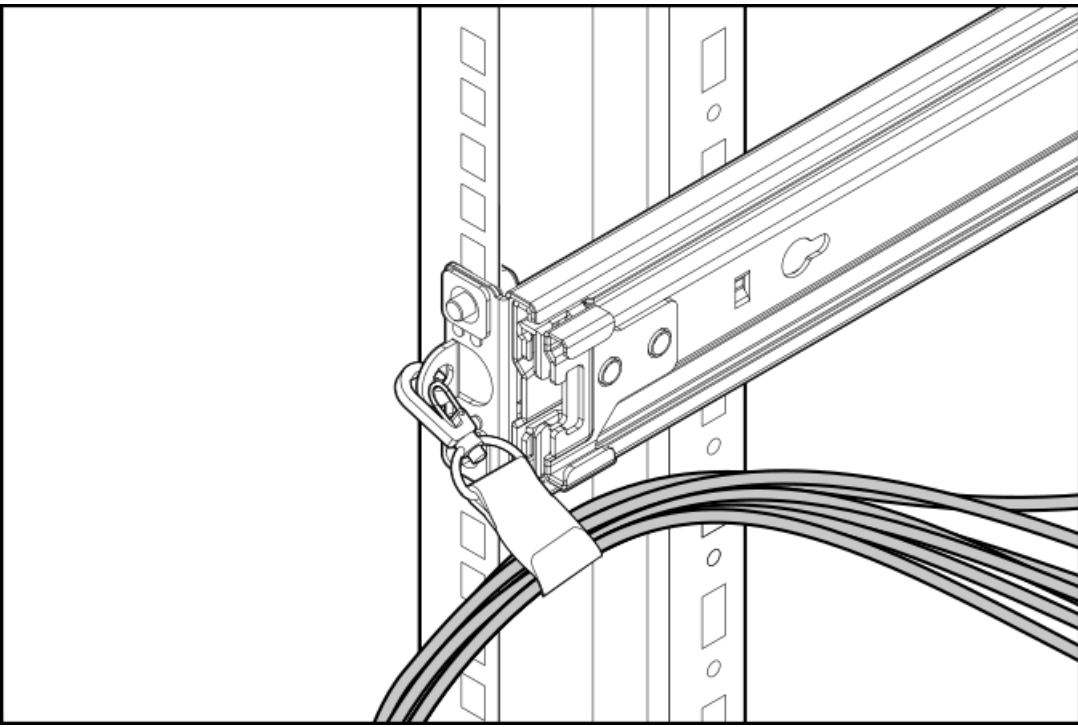
Before you begin, be sure that you have appropriate screwdriver for the screws in the rack.

Procedure

1. Power down the server.
2. Extend the server from the rack.
3. Disconnect the cabling.
4. Remove the server from the rack.
5. Place the server on a sturdy, level surface.
6. Remove the front of the rail.



7. Secure the cables.



To replace the component, reverse the removal procedure.

Removing and replacing the ball bearing rails

WARNING:

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

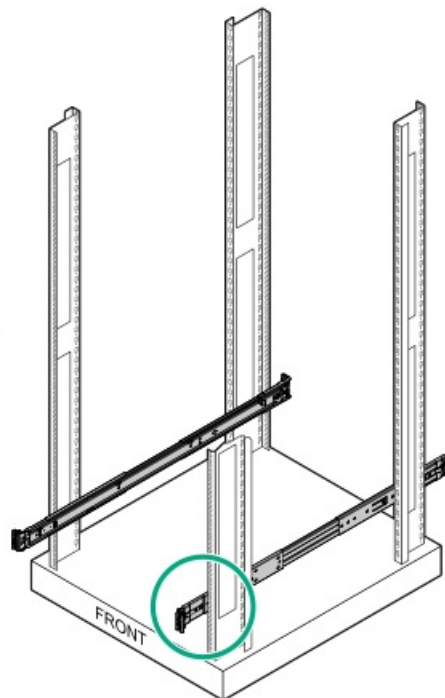
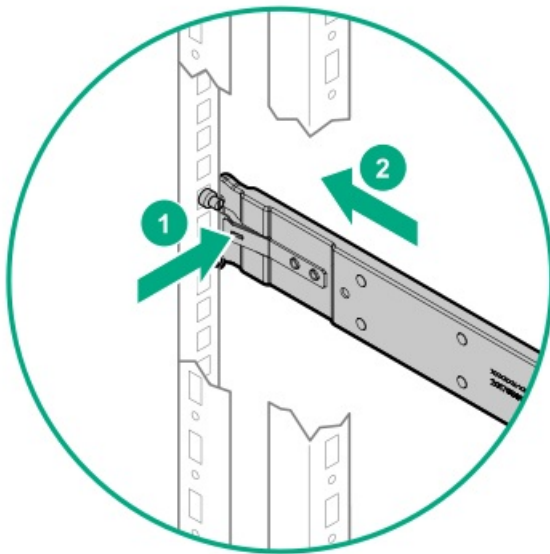
Prerequisites

Before you begin, be sure that you have the following items:

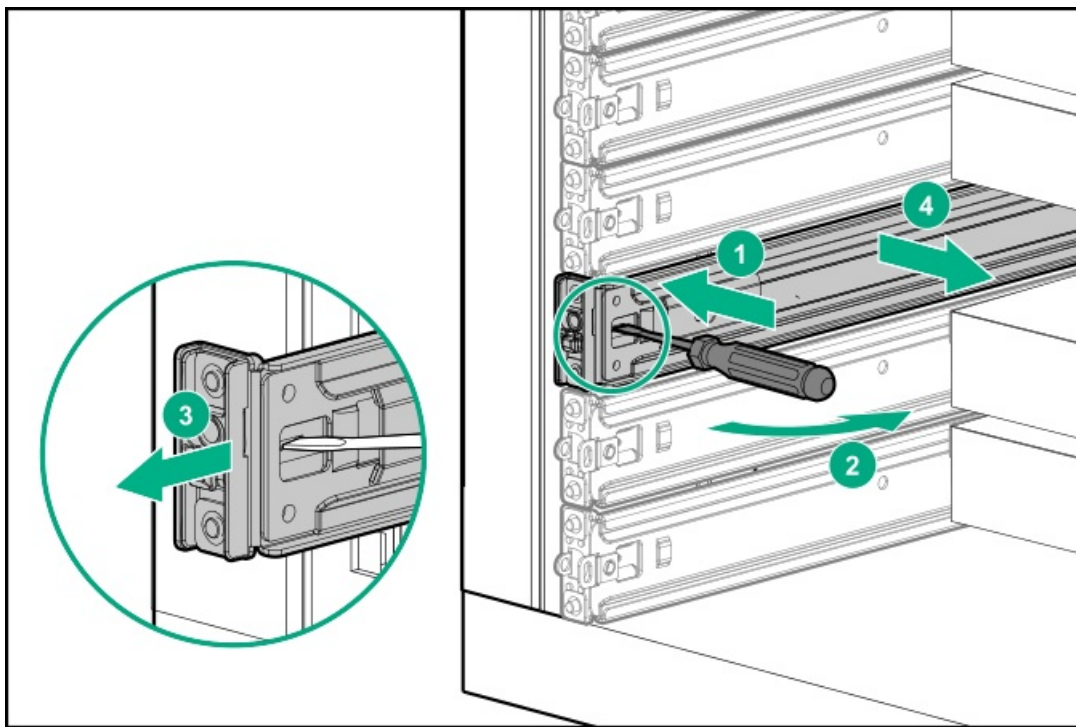
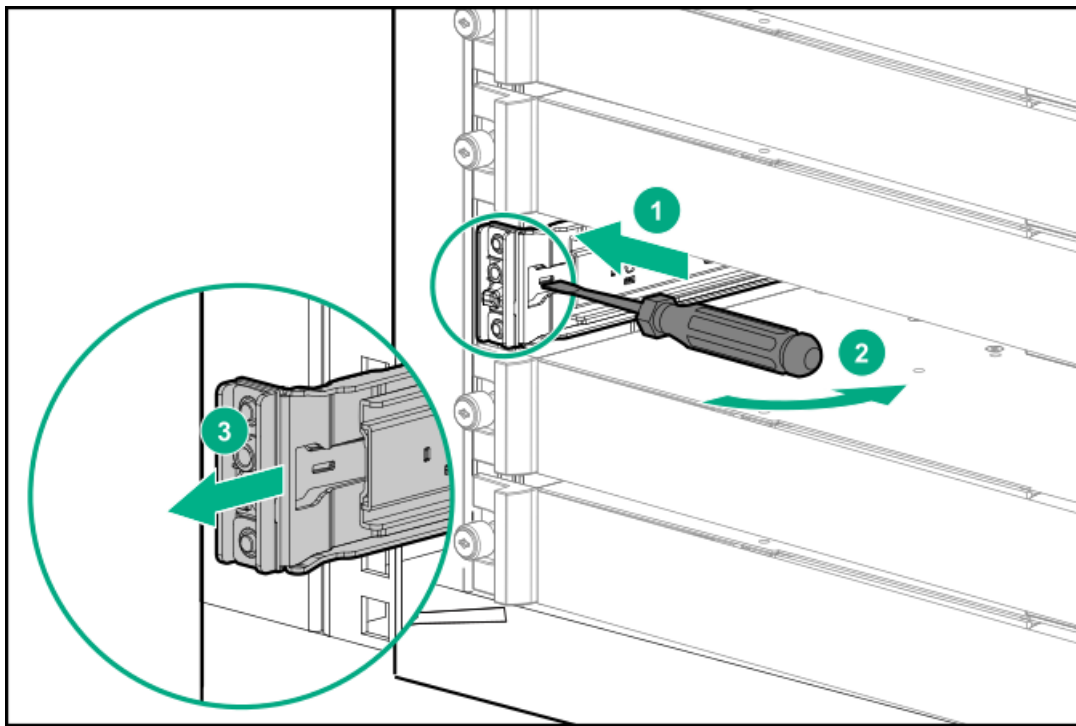
- Appropriate screwdriver for the screws in the rack.
- Optional installation tool (695539-001), if the rails were installed using it.

Procedure

1. Power down the server.
2. Extend the server from the rack.
3. Disconnect the cabling.
4. Remove the server from the rack.
5. Place the server on a sturdy, level surface.
6. Do one of the following:
 - (Optional) Remove the rail without a tool.

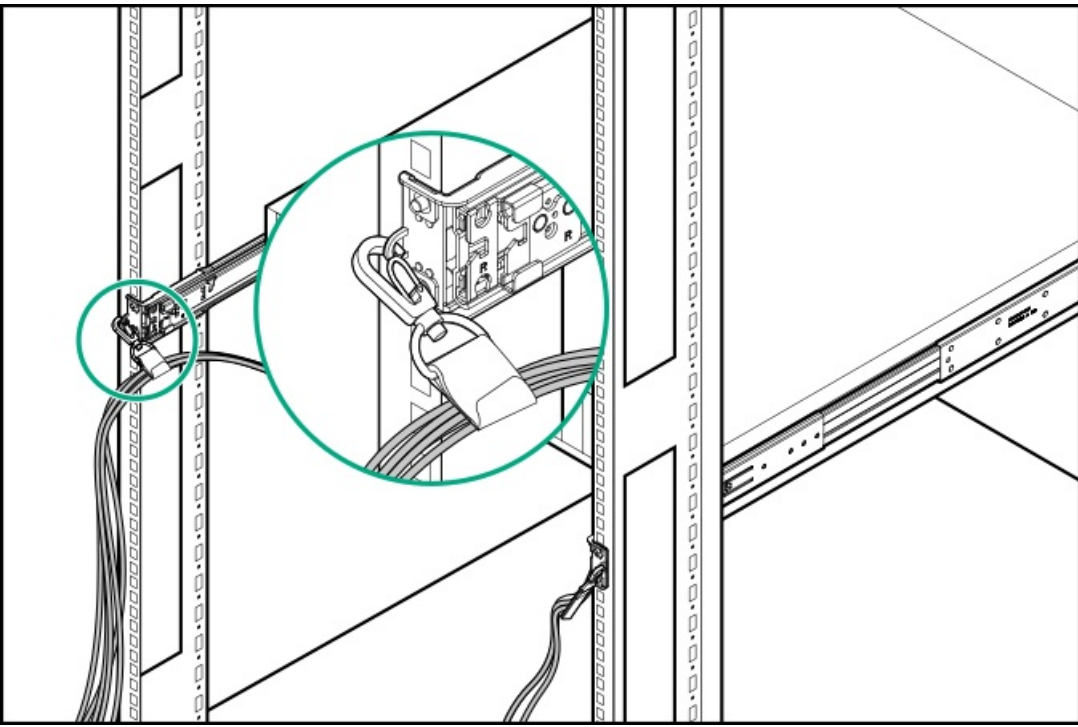


- (Optional) Remove the rail with the tool.



7. Secure the cables.

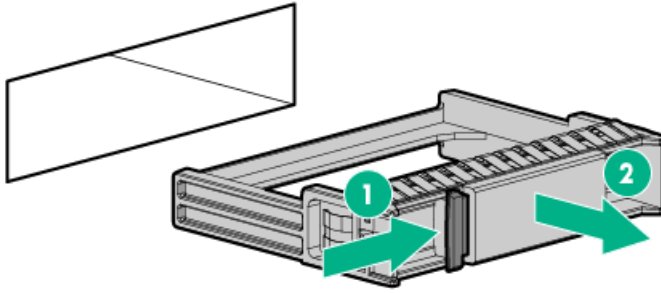




To replace the component, reverse the removal procedure.

Removing the hard drive blank

Remove the component as indicated.



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

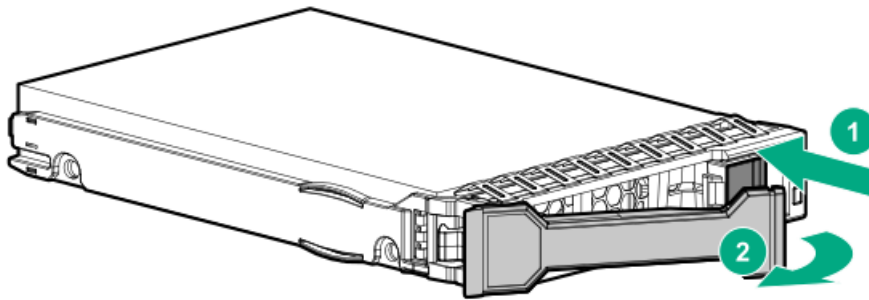
CAUTION: To prevent improper cooling and thermal damage, do not operate the server unless all bays are populated with either a component or a blank.

Prerequisites

Determine the status of the drive from drive LED definition .

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.



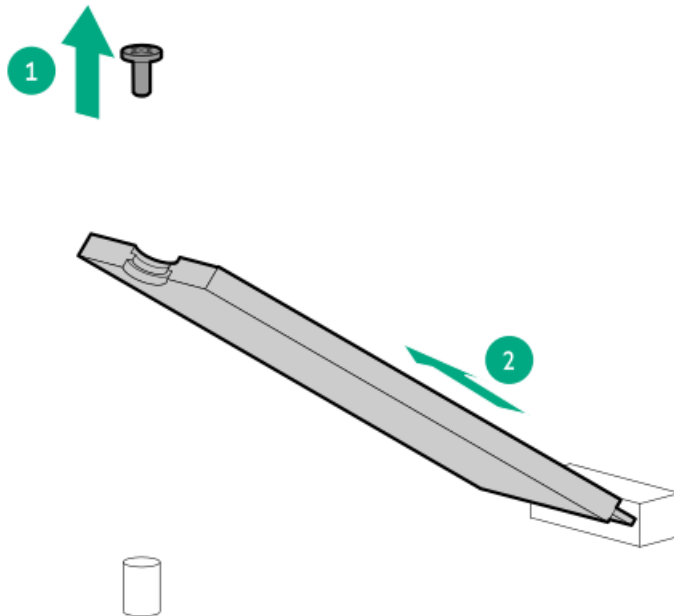
To replace the component, reverse the removal procedure.

Removing and replacing an M.2 SSD

This procedure is for drives on the system board, riser, or expansion card. Do not use this procedure on uFF drives.

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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the primary riser cage.
6. Remove the M.2 SSD.



To replace the component, reverse the removal procedure.

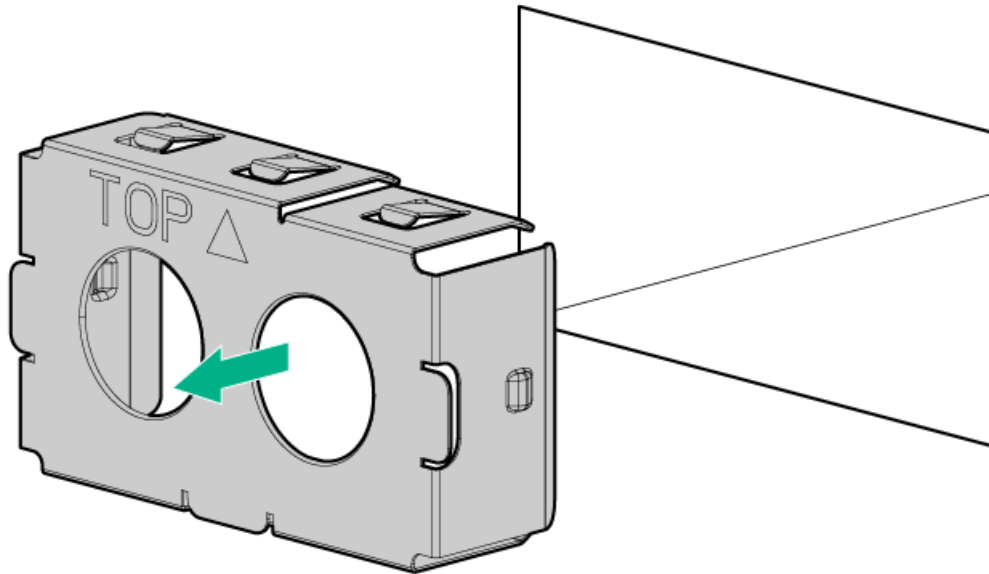
Removing and replacing a power supply blank

⚠ WARNING: To reduce the risk of personal injury from hot surfaces, allow the power supply or power supply blank to cool before touching it.

⚠ 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. Remove the power supply blank.



2. Immediately install the replacement power supply blank spare.

Removing and replacing a hot-plug AC power supply

⚠ WARNING:

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

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

⚠ 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 and the 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.

⚠ 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.

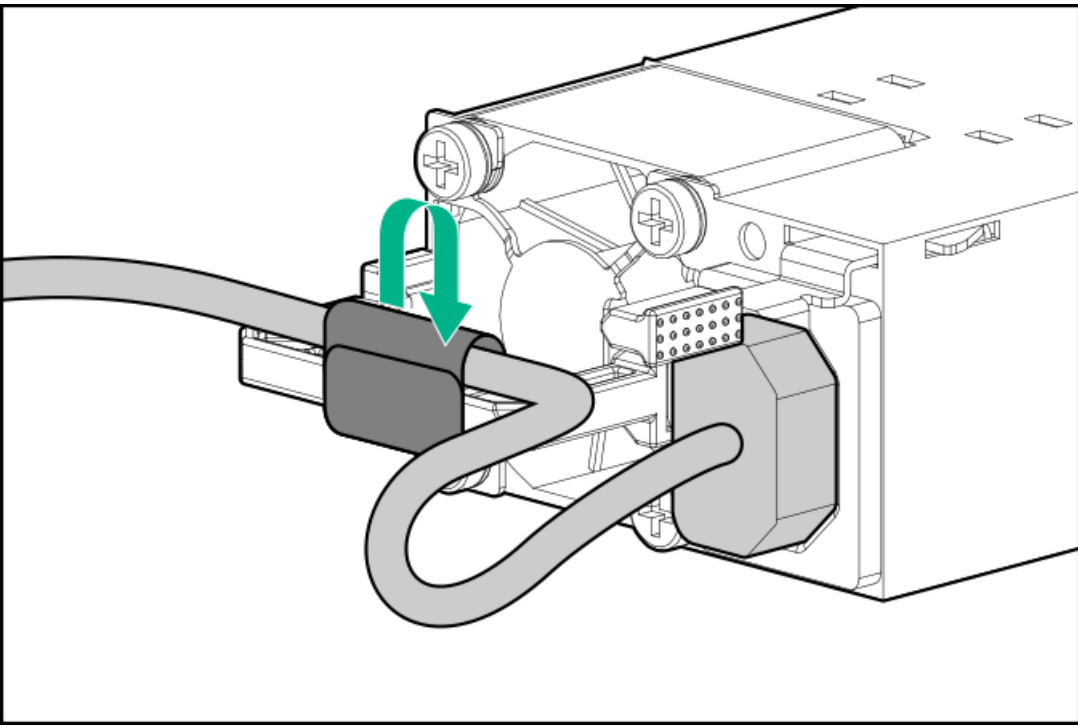
Prerequisites

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

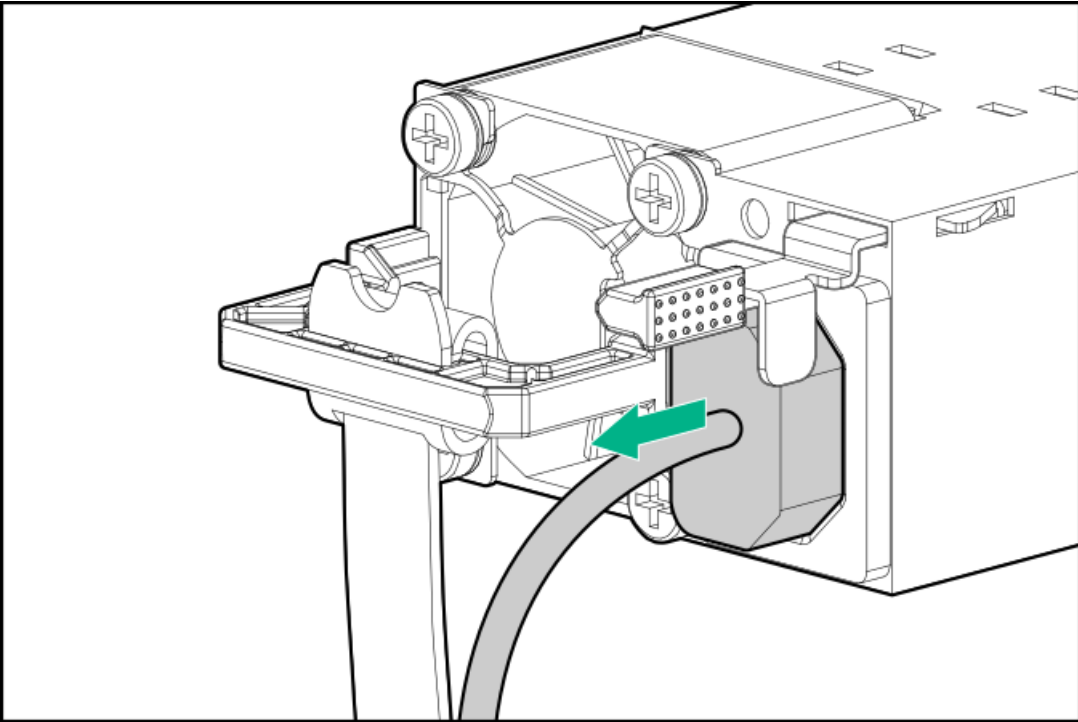
- Components included with the hardware kit
- No. 1 Phillips screwdriver

Procedure

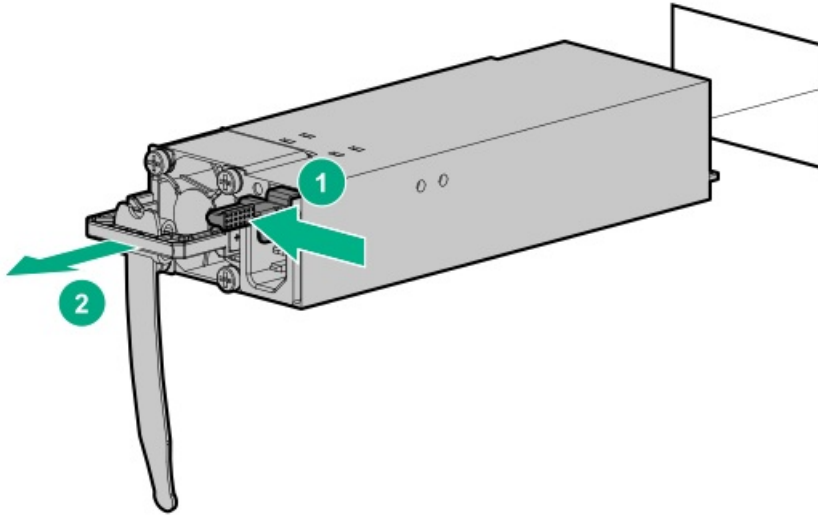
1. Release the cable management arm.
2. If the server is using a single power supply only, remove all power from the server:
 - a. Back up all server data.
 - b. Power down the server.
 - c. Disconnect all peripheral cables from the server.
3. Release the power cords from the strain relief straps.



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

The DC power supply option kits do not ship with a Power Supply DC cable Kit and may not include a Power Supply Cable Lug kit. The optional DC Cable kit or the optional DC Cable Lug Kit may be purchased directly from Hewlett Packard Enterprise or an authorized HPE reseller. For additional information, refer to the power supply QuickSpecs at <https://www.hpe.com/info/fsp-s-q>.

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:

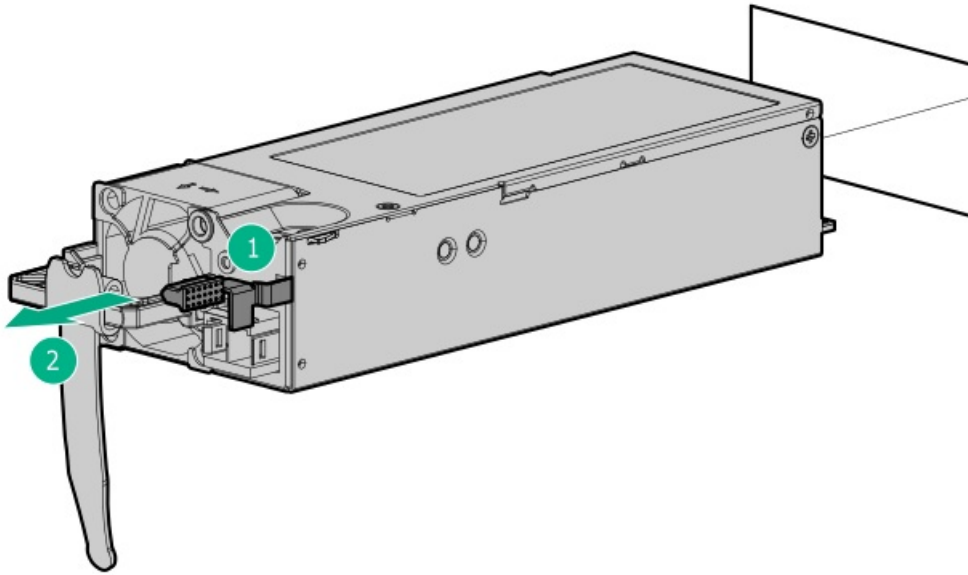
- The HPE 800 W Flex Slot -48 VDC hot-plug power supply is intended only for installation in Hewlett Packard Enterprise servers located in a restricted access location.
- The HPE 800 W Flex Slot -48 VDC hot-plug power supply is not intended for direct connection to the DC supply branch circuit. Only 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 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

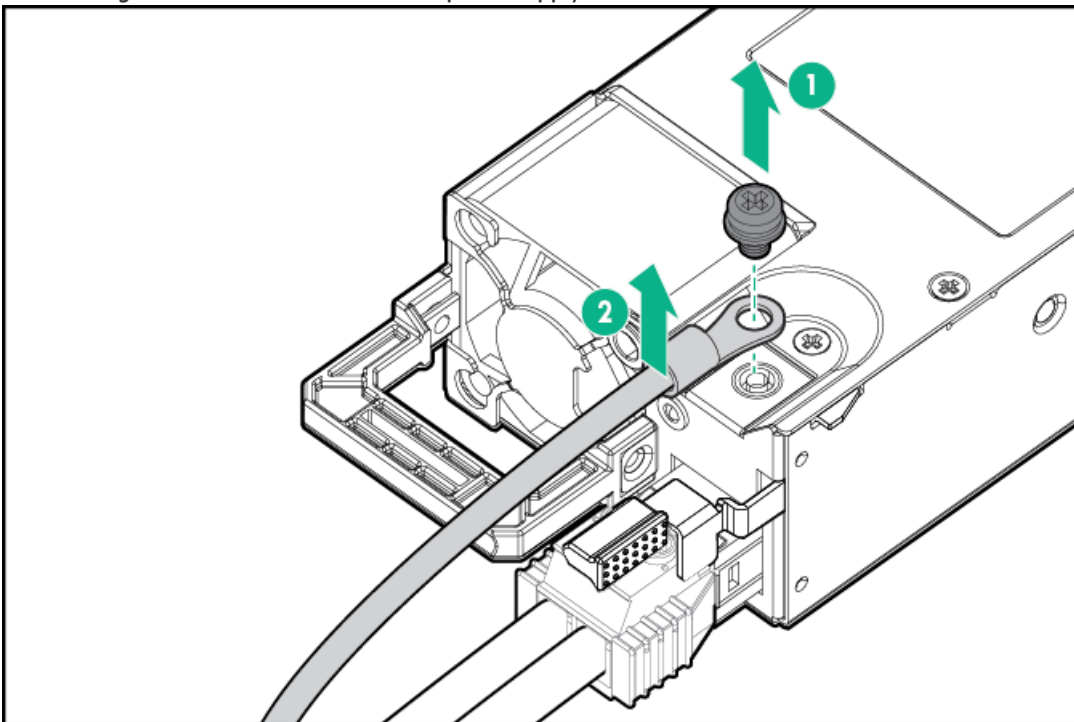
- Components included with the hardware option kit are available
- No. 1 Phillips screwdriver
- Optional Q0H80A HPE 800W DC Power Cable Kit can be purchased from an HPE authorized reseller.
- If you are not using an input power cord option, the power supply cabling must be made in consultation with a licensed electrician and be compliant with local code.
- 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

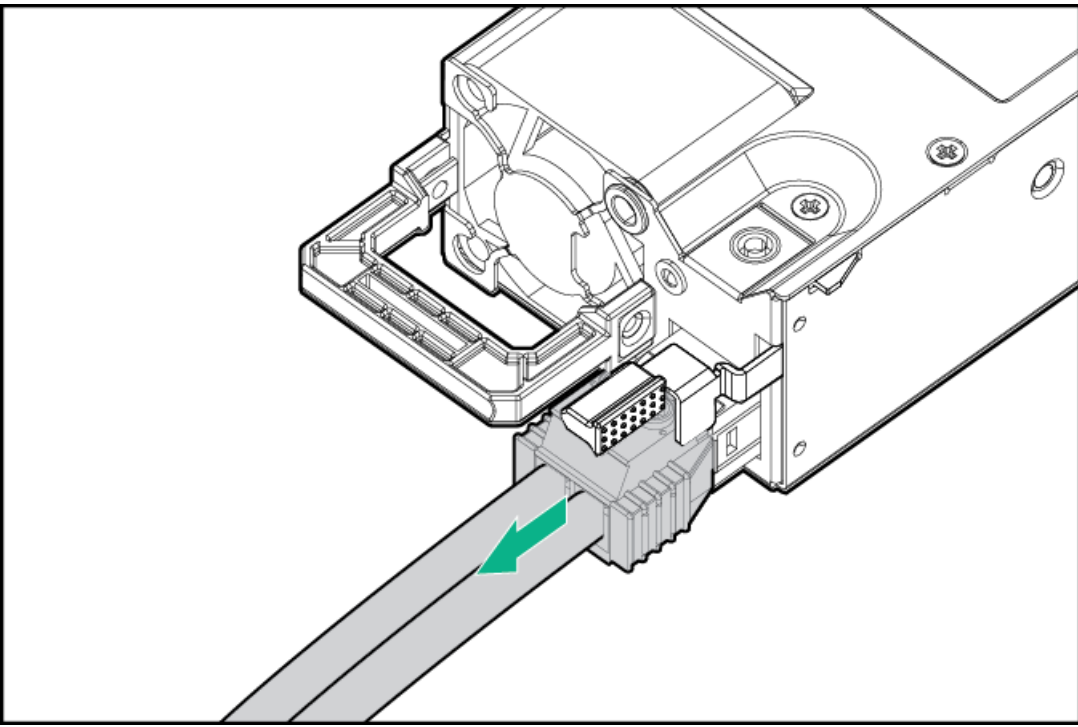
1. Release the cable management arm.
2. If the server is using a single power supply only, remove all power from the server:
 - a. Back up all server data.
 - b. Power down the server.
 - c. Disconnect all peripheral cables from the server.
3. Release the power cords from the strain relief straps.
4. 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 a fan

⚠ 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.

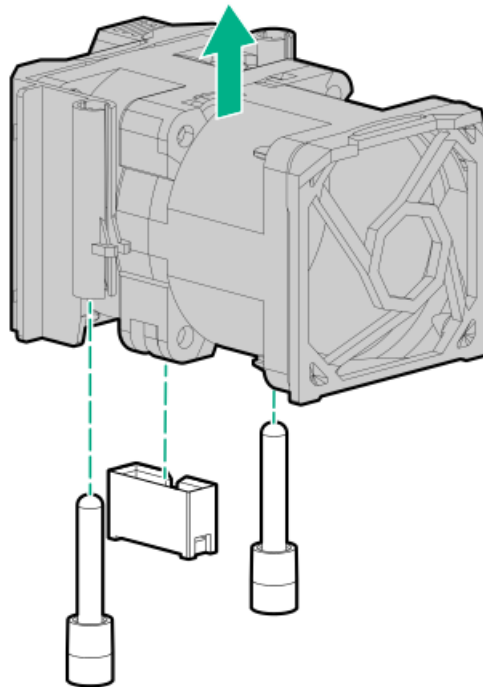
ⓘ IMPORTANT: For optimum cooling, install fans in all primary fan locations.

Procedure

1. Extend the server from the rack.
2. Remove the access panel.
3. Remove the fan.

ⓘ IMPORTANT: When a hot-plug fan is removed, the other fans in the server will increase speed to compensate.

⚠ CAUTION: To avoid server shutdown, a fan must be replaced within 60 seconds of being removed.



To replace the component, reverse the removal procedure.

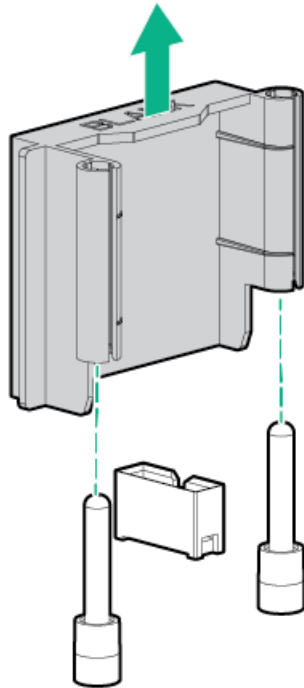
Removing and replacing a fan blank

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.

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

Procedure

1. Extend the server from the rack.
2. Remove the access panel.
3. Remove the fan blank.



To replace the component, reverse the removal procedure.

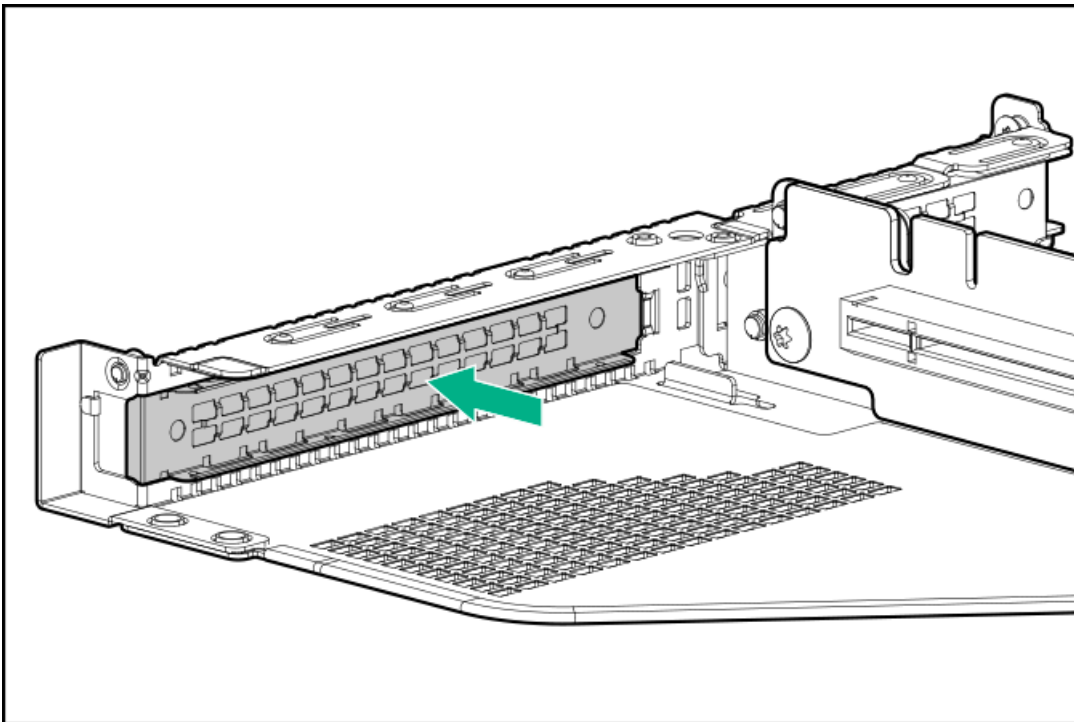
Removing and replacing a PCIe blank

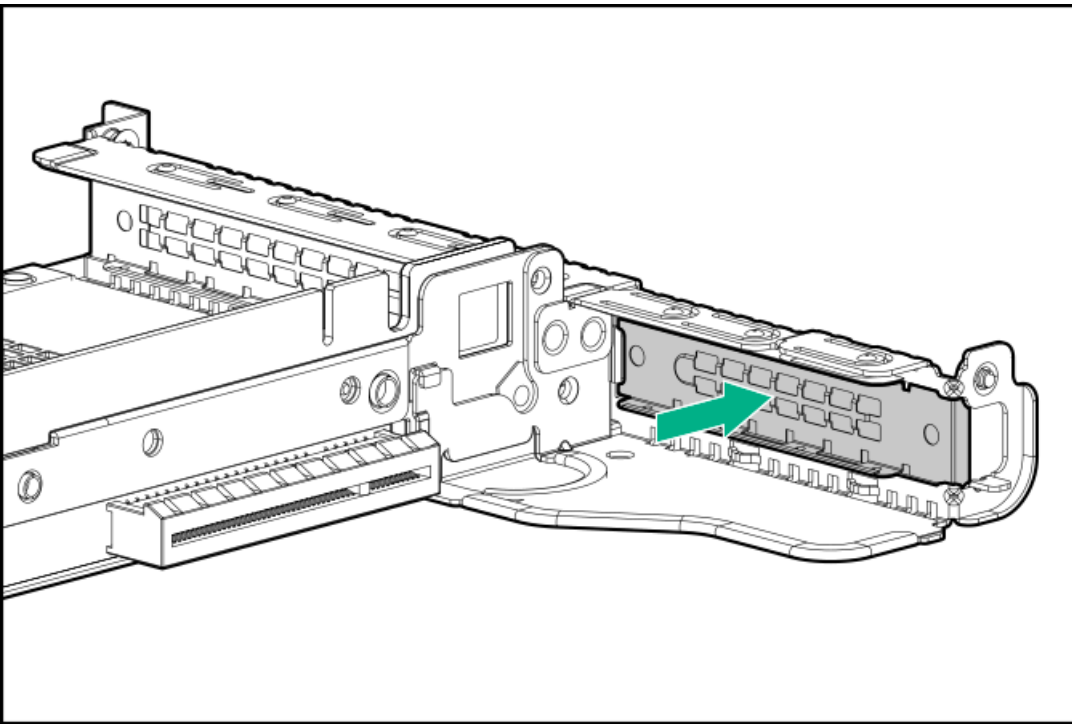
CAUTION: To prevent damage to the server or expansion boards, power down the server and remove all AC power cords before removing or installing the PCI riser cage.

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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser cage.
6. Remove the riser blank.

To remove blanks from the primary riser:

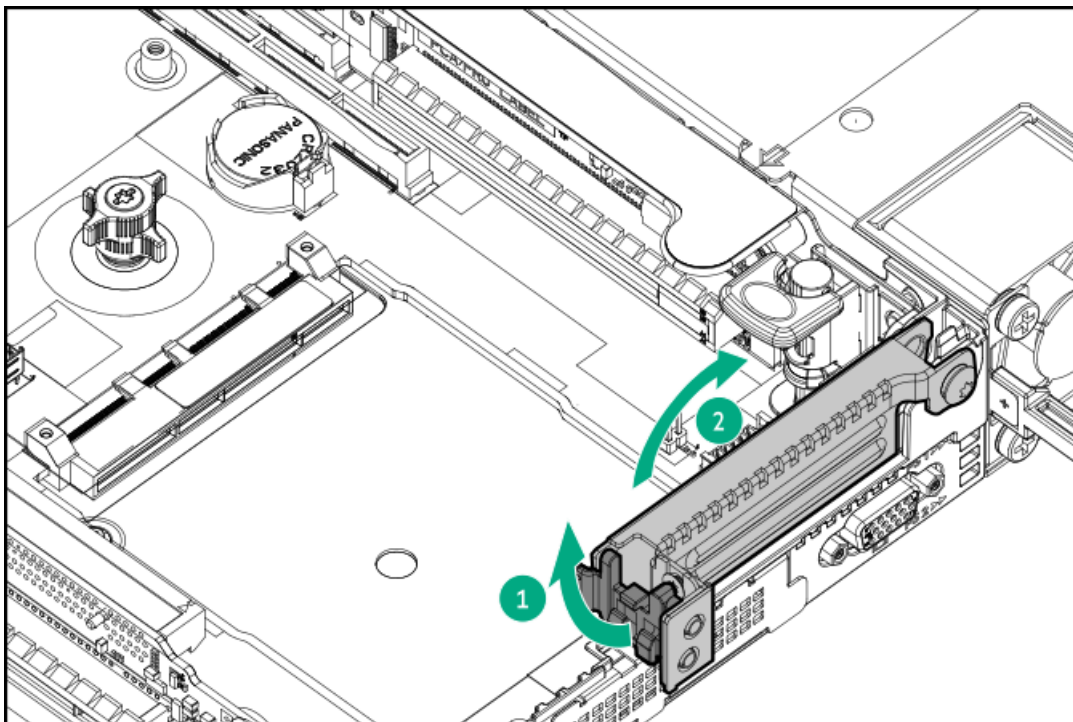




To remove blanks from the secondary riser:

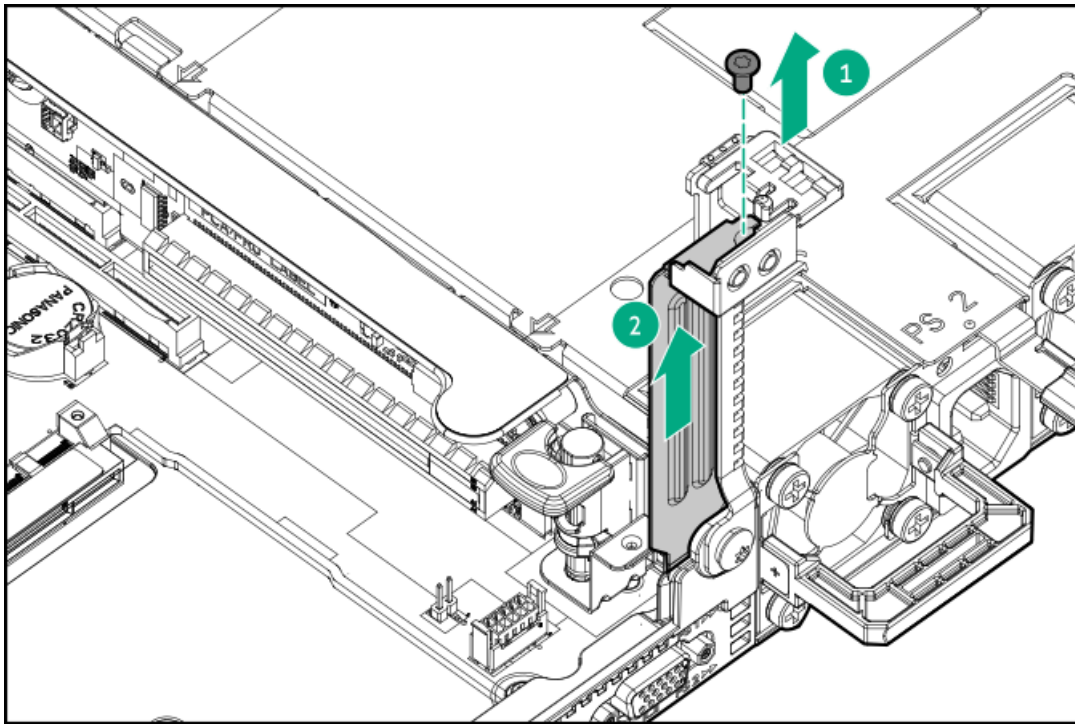
- a. Lift the rear wall latch.

Half-height

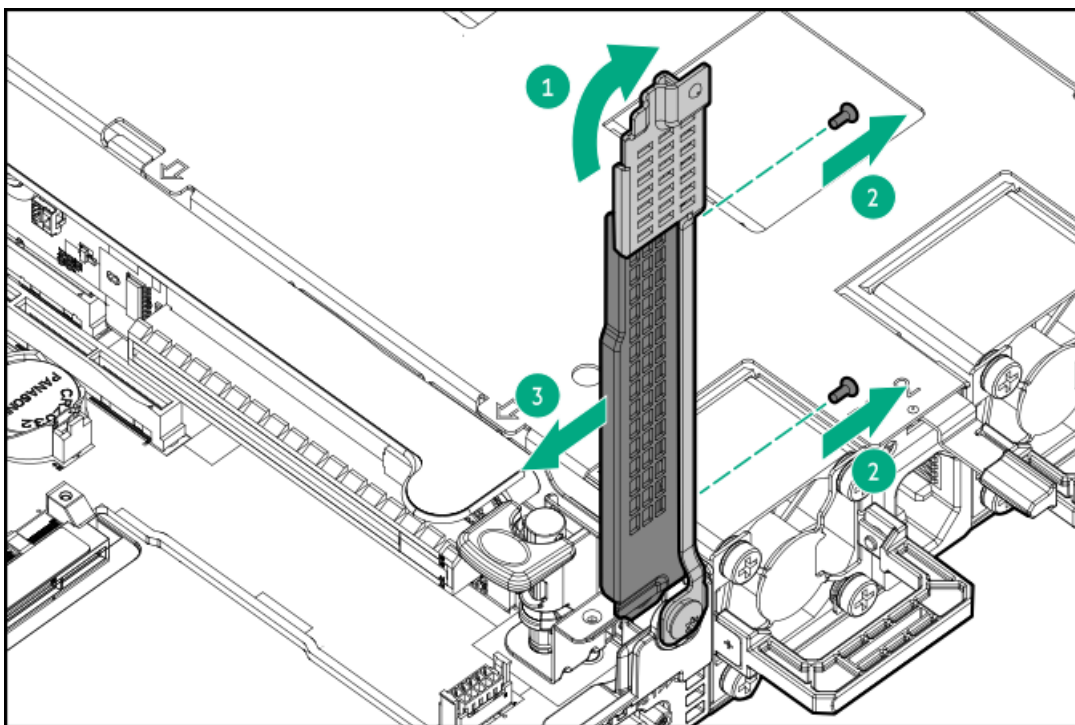


- b. Remove the riser blank.





Full-height



To replace the component, reverse the removal procedure.



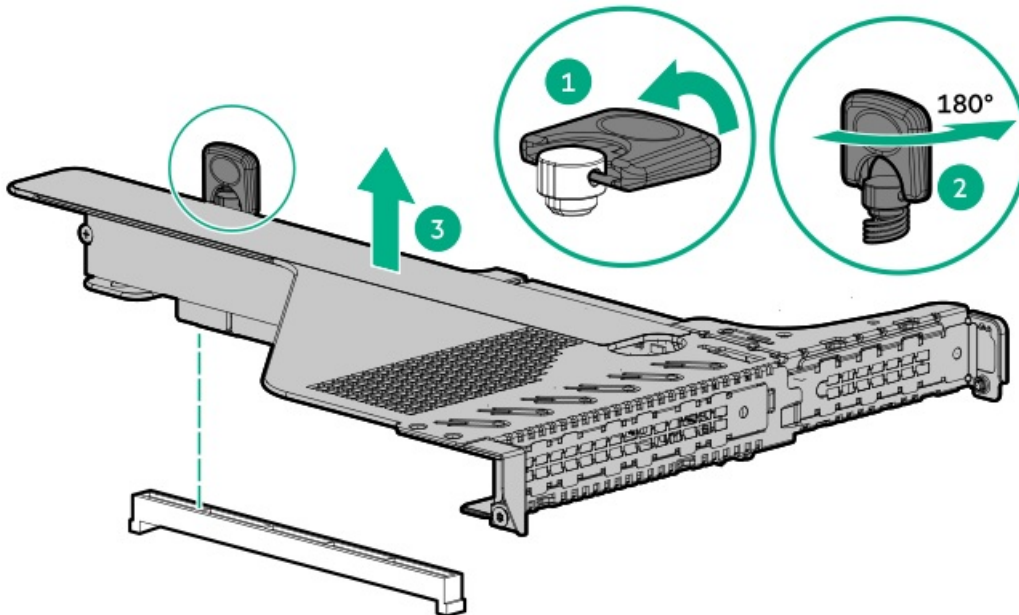
Removing and replacing a riser cage

CAUTION: To prevent damage to the server or expansion boards, power down the server and remove all AC power cords before removing or installing the PCI riser cage.

Procedure

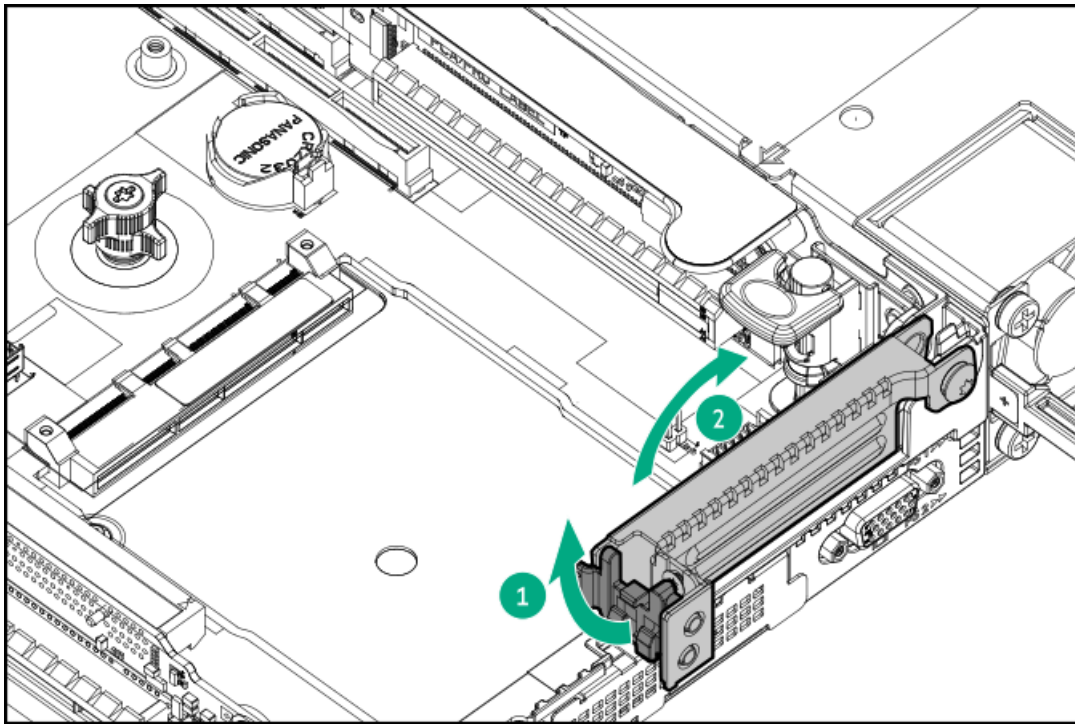
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser cage.

To remove the primary riser cage:

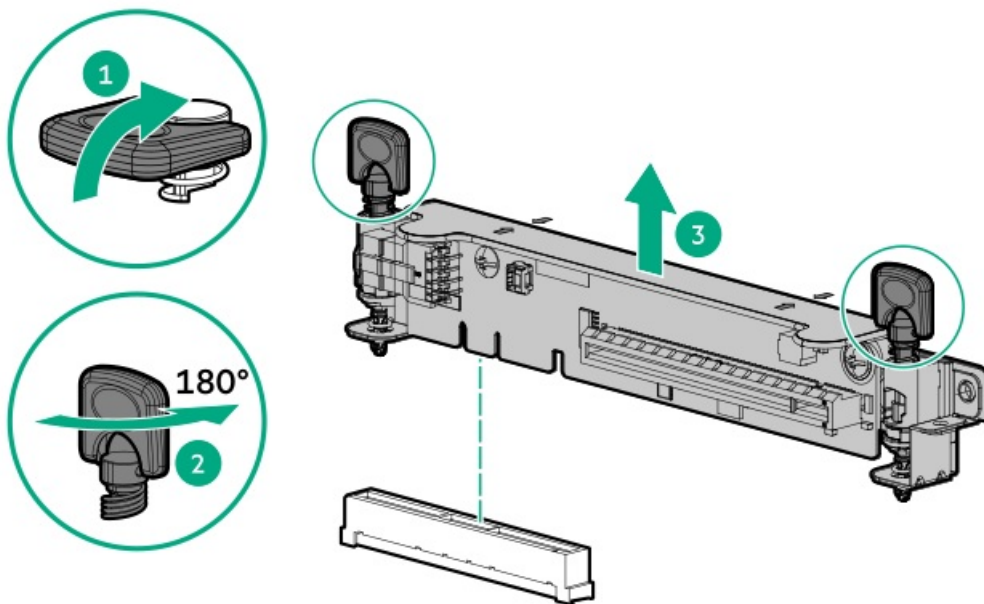


To remove the secondary riser cage:

- a. Remove the primary riser cage.
- b. Open the secondary rear wall.



- c. Remove any expansion boards.
- d. Remove the riser cage.



To replace the component, reverse the removal procedure.

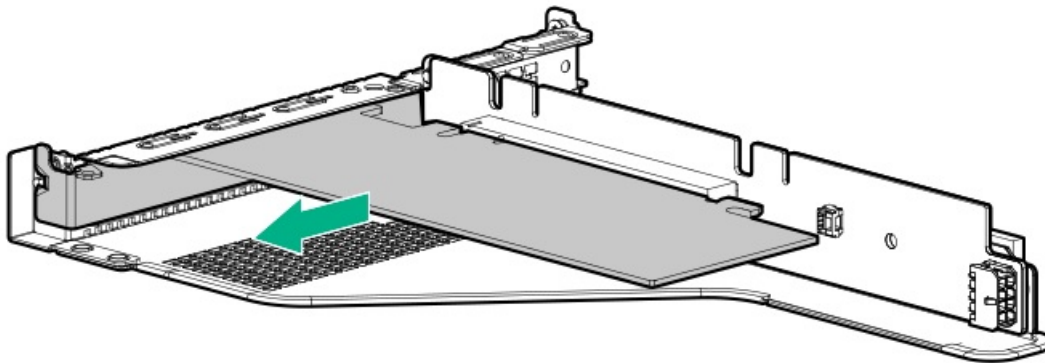
Removing and replacing an expansion board

Use these instructions to remove and replace expansion boards such as Smart I/O cards (such as the Pensando DSP DSC-25 2p SFP28 card), solid state NVMe/PCIe Add-In-Cards, HBAs, CNAs, InfiniBand adapters, and accelerators.

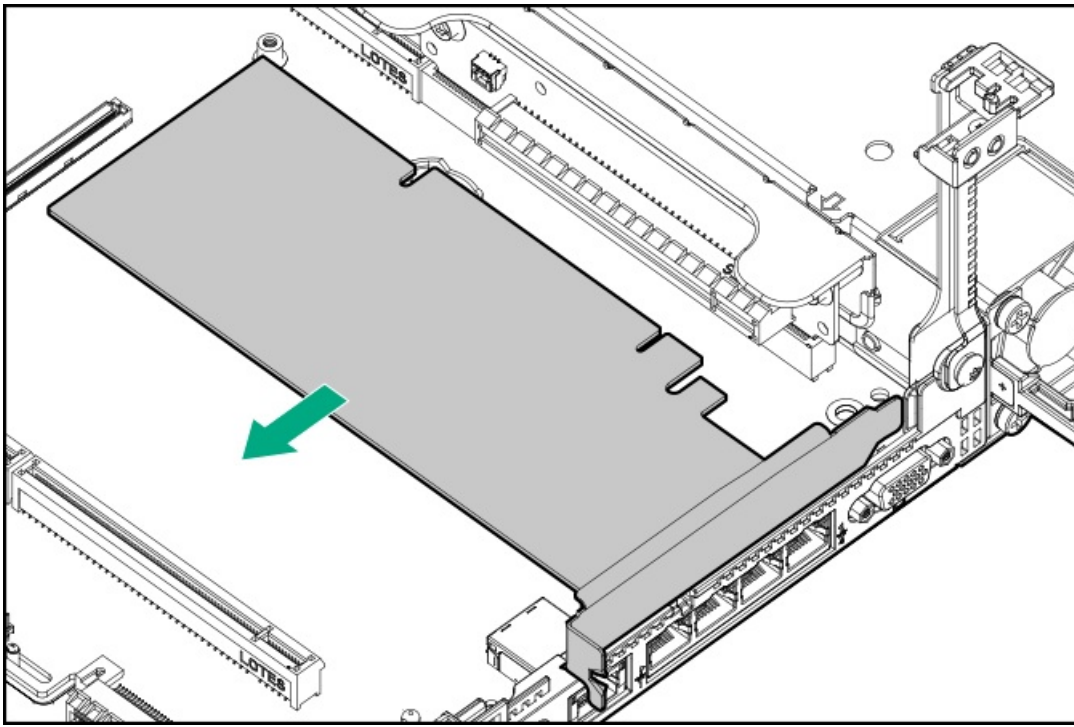
⚠ WARNING: To reduce the risk of personal injury, electric shock, or damage to the equipment, remove power from the server by removing the power cord. The front panel Power On/Standby button does not shut off system power. Portions of the power supply and some internal circuitry remain active until AC 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. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser cage.
6. If a retaining screw is installed, remove the screw.
7. Do one of the following:
 - Remove the expansion board from the primary riser cage:
 - a. Remove the expansion board.



- Remove the expansion board from the secondary riser cage:
 - a. Lift the secondary rear wall.
 - b. Remove the expansion card.



To replace the component, reverse the removal procedure.

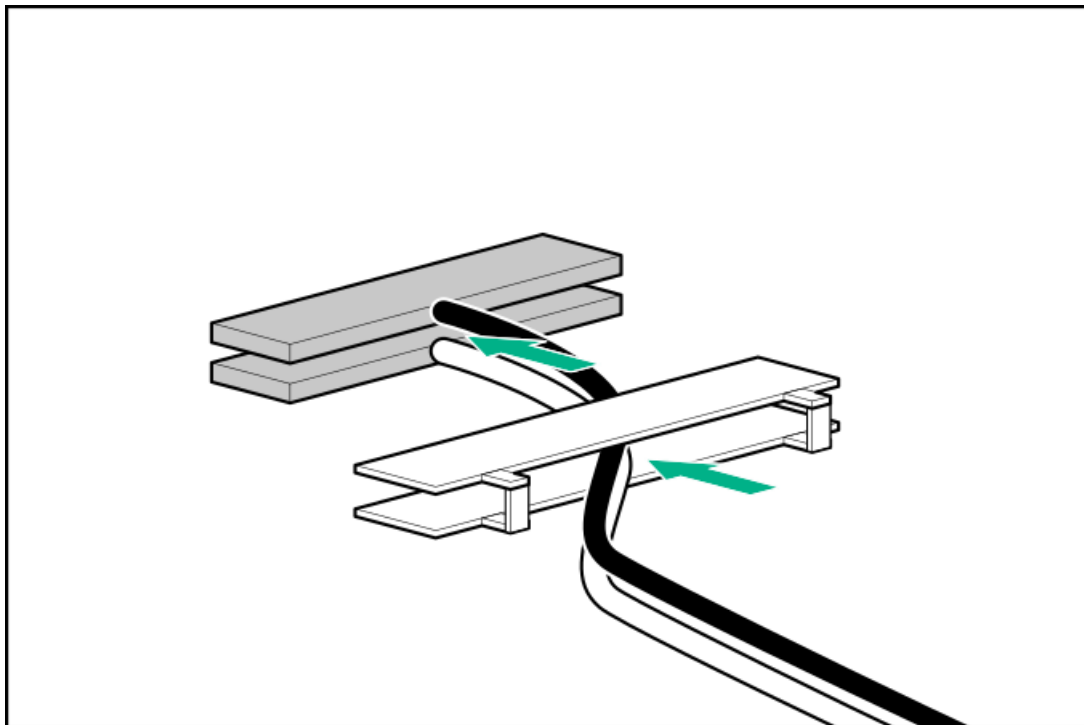
Removing and replacing a 940QSFP56 x16 adapter and auxiliary card

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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser cage (Removing and replacing a riser cage).
6. Remove the auxiliary card from slot 3 (Removing and replacing an expansion board).
7. Disconnect the cables to the auxiliary card:
 - a. Open the retention clip and slide it away from the connectors.
 - b. Gently pull up the top corner of the cable latch door.
 - c. Disconnect the card cables.
8. Remove 940QSFP56 x16 adapter from slot 2 (Removing and replacing an expansion board).
9. Disconnect the cables to the 940QSFP56 x16 adapter.

To replace the component:

1. Thread the adapter end of the auxiliary card cables through one of the retention clips provided with the installation kit.



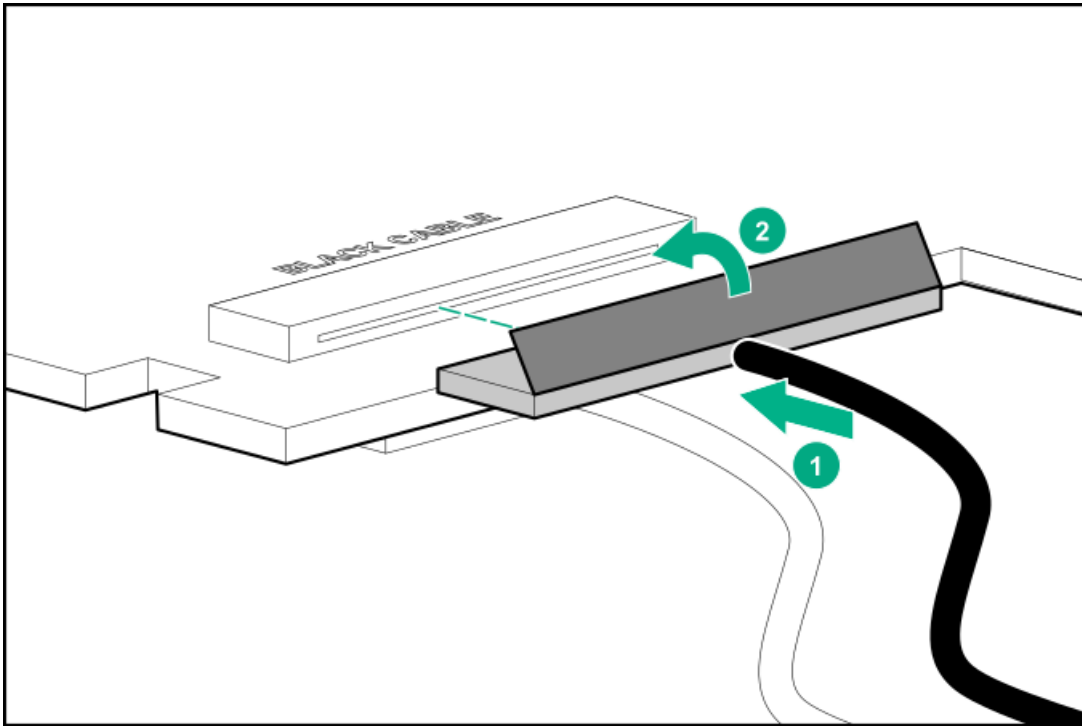
2. Open the cable latch door, connect the auxiliary card cables to the 940QSFP56 x16 adapter ports so that the golden side of the cable connector is on the top, and then close the cable latch door.

The white and black cables from the auxiliary card connect to the expansion board ports labeled WHITE CABLE and BLACK CABLE, respectively.

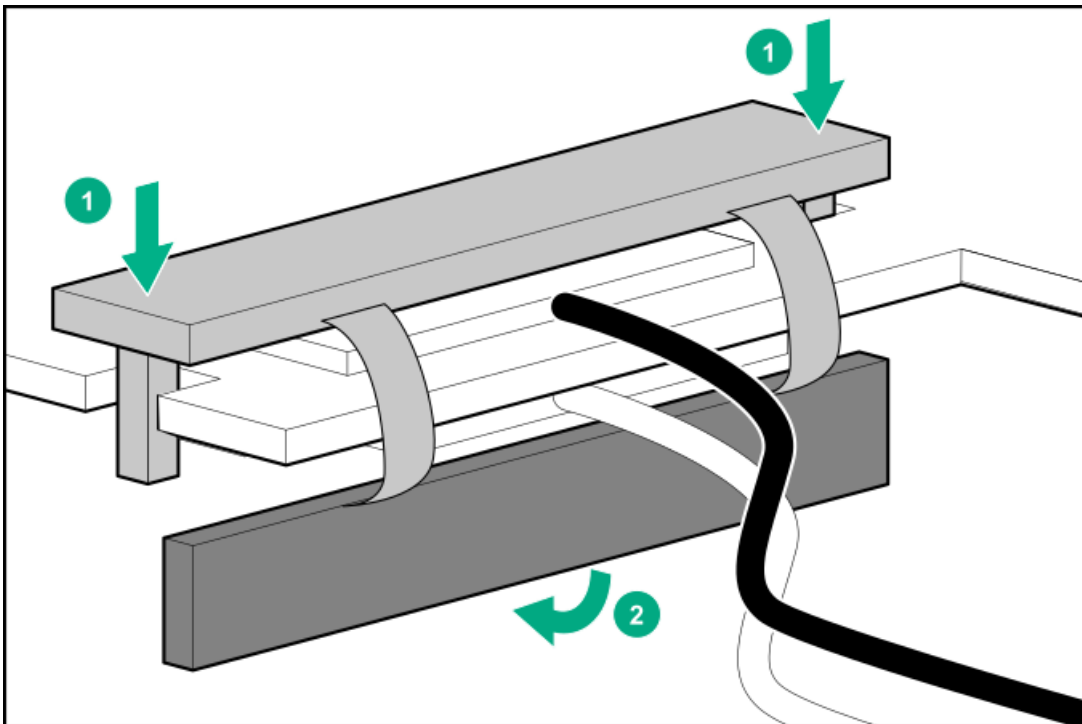
The cable latch door must be open when connecting the cables.

CAUTION:

The connector pins are fragile and easily damaged. To avoid damaging the connector pins, do not use excessive force when connecting the cables.



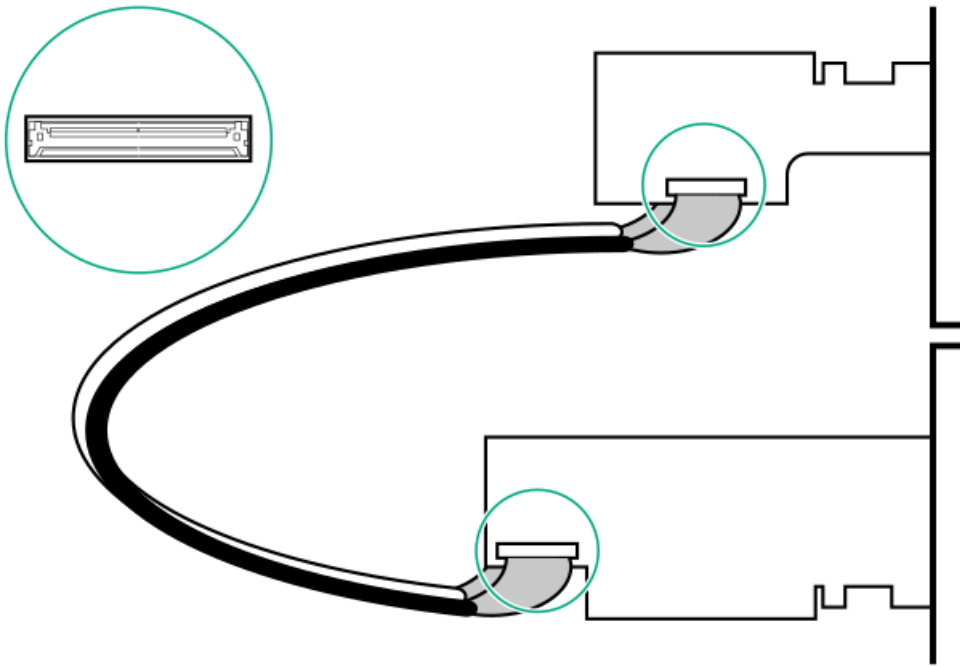
3. Install the retention clip.



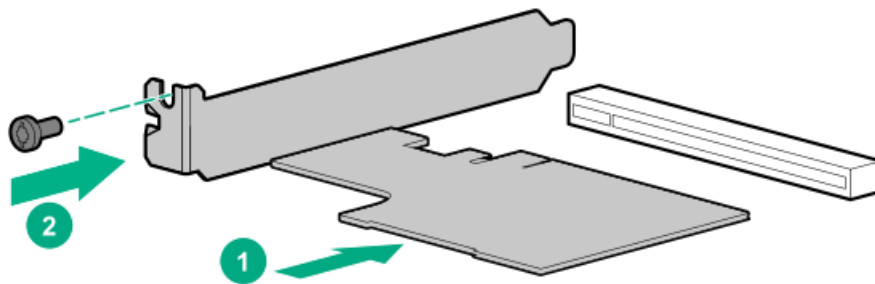
4. Thread the auxiliary cables through the second retention clip.

5. Connect the auxiliary cables to the auxiliary card.

6. Confirm that the orientation of the cables is correct.

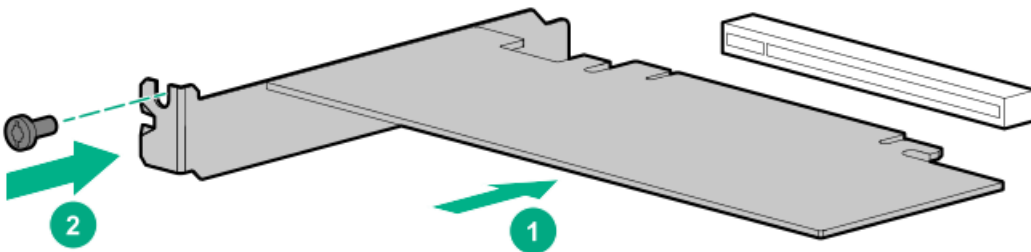


7. Install the auxiliary card into expansion slot 3.



8. Install the retaining screw, if removed.

9. Install the 940QSFP56 x16 adapter into expansion slot 2.



10. Install the retaining screw, if removed.

11. Install the riser cage.

12. Install the access panel.

13. Connect each power cord to the server.



14. Connect each power cord to the power source.

15. Power up the server.

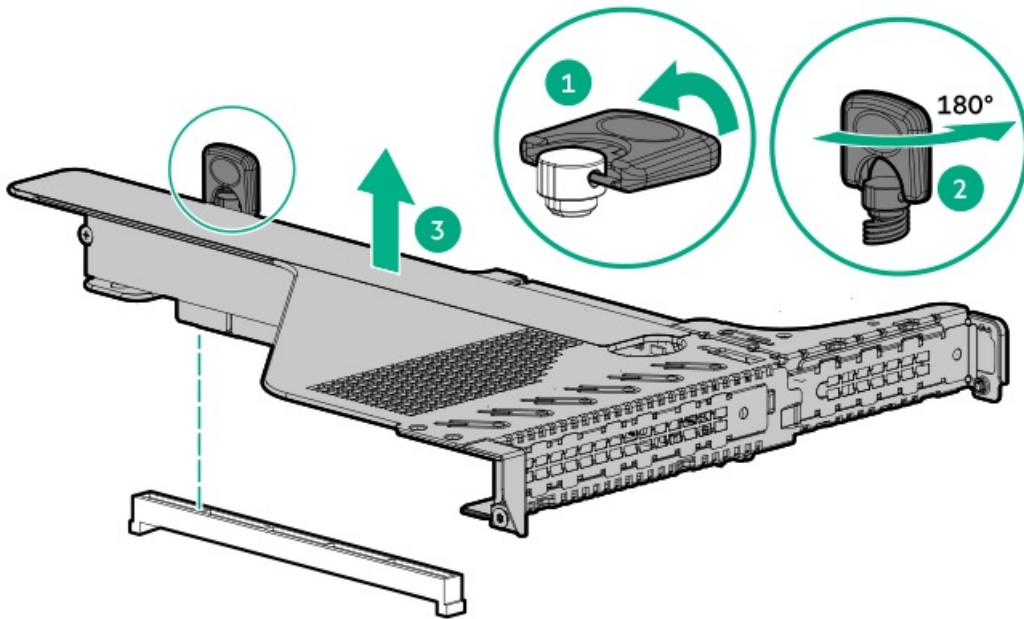
Removing and replacing a primary riser card

Secondary risers are spared with the riser cage.

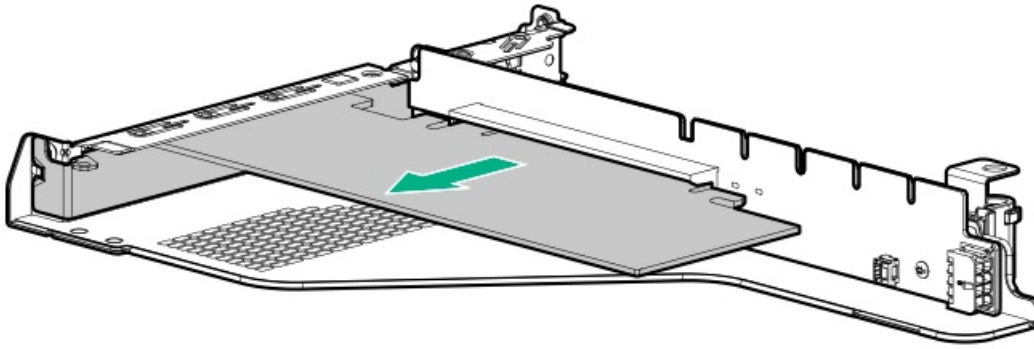
CAUTION: To prevent damage to the server or expansion boards, power down the server and remove all AC power cords before removing or installing the PCI riser cage.

Procedure

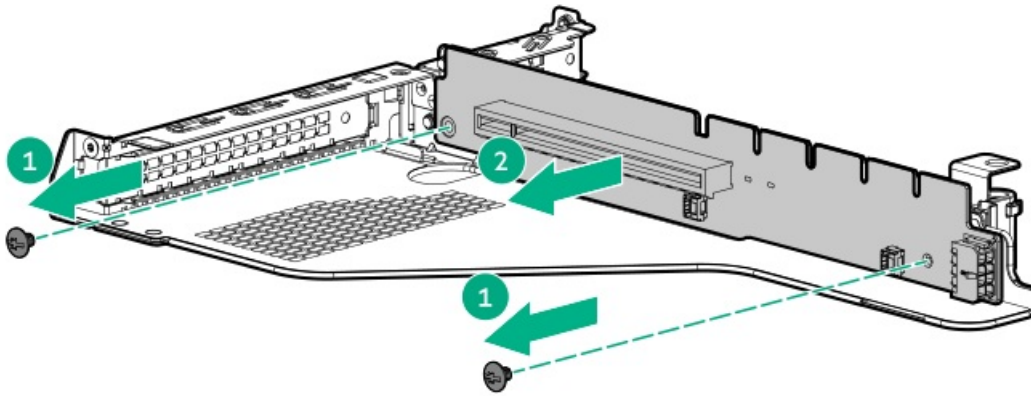
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser cage.



6. Remove all expansion boards.



7. Remove the riser.

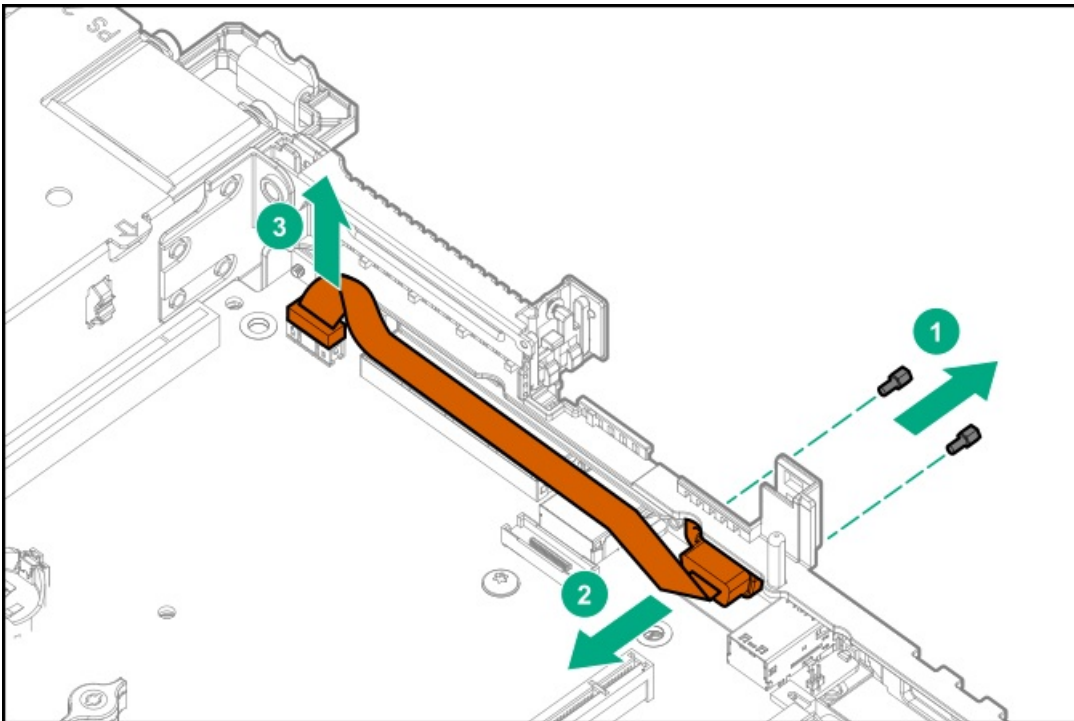


To replace the component, reverse the removal procedure.

Removing and replacing the serial port

Procedure

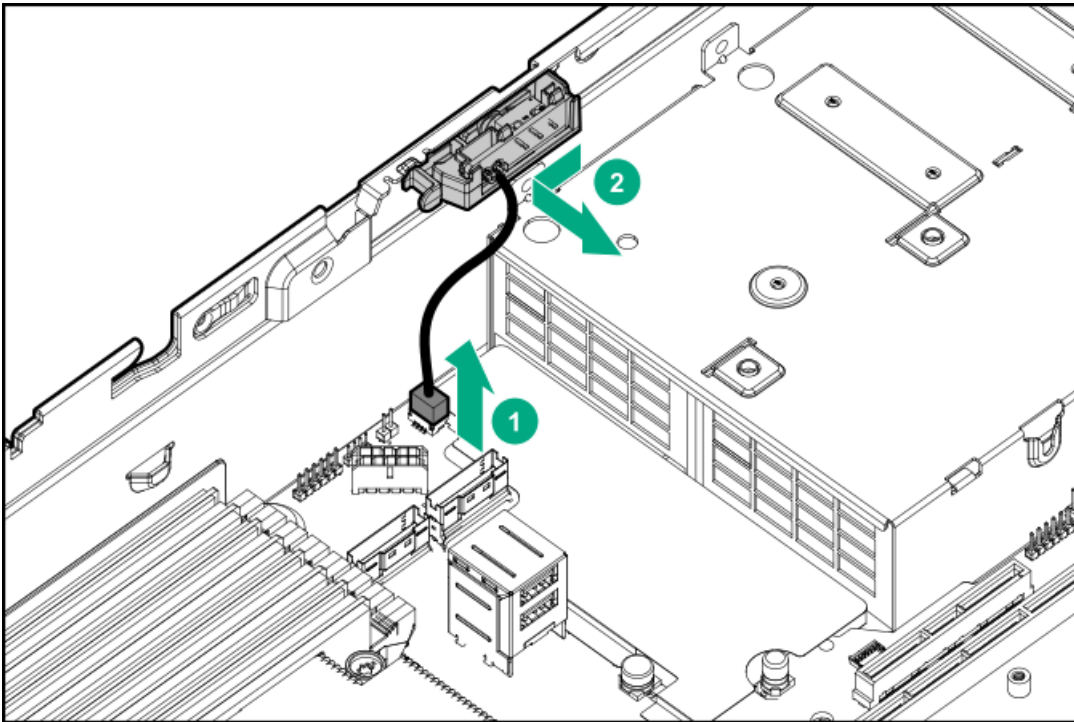
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove all riser cages.
6. Remove the switch and then disconnect the cable.



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.

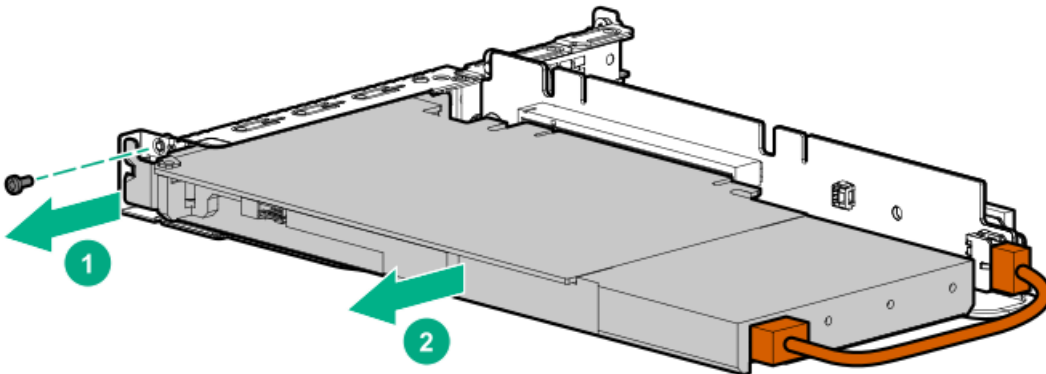
Removing and replacing a GPU in the primary riser

Procedure

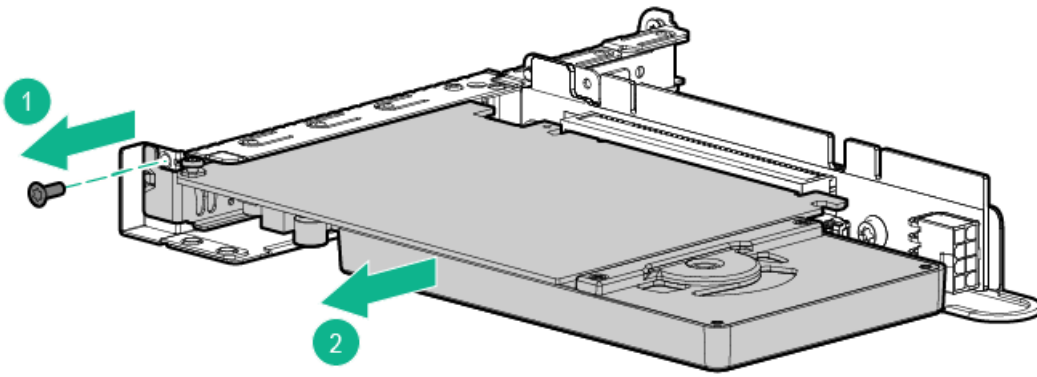
1. Observe the following warning:

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

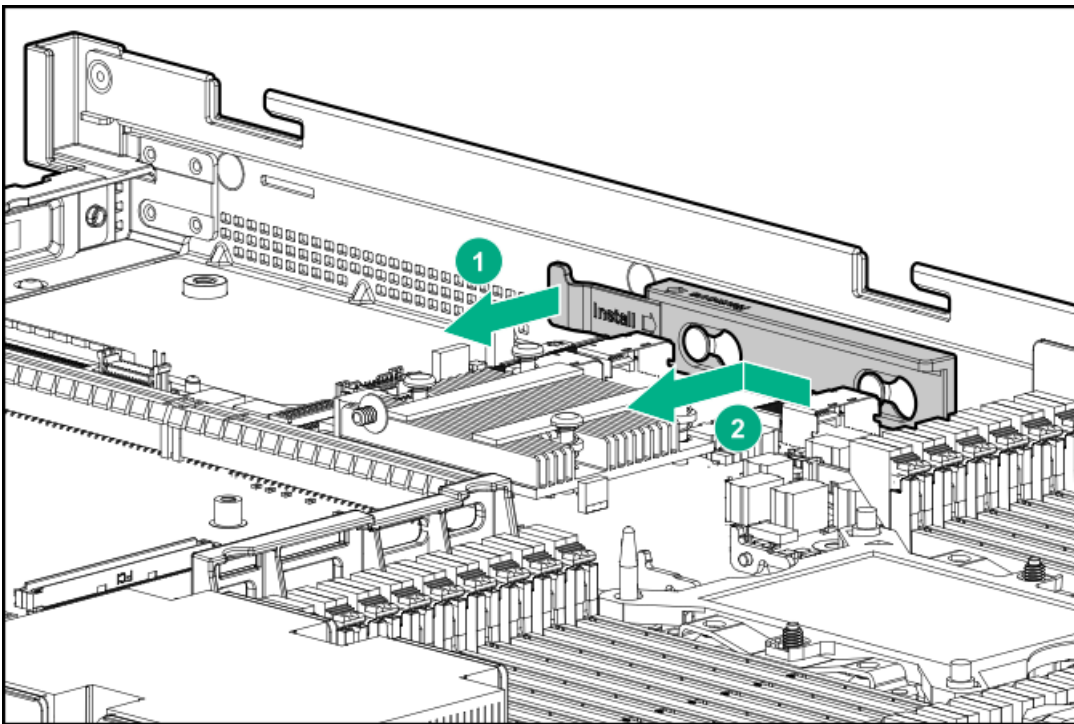
2. Power down the server.
3. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
4. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
5. Remove the access panel.
6. Remove the riser cage.
7. If needed, disconnect the GPU power cable and then remove the GPU from the riser.



If there is no power cable, remove the GPU:



8. If replacing the system board, remove the GPU support bracket.



To replace the component, reverse the removal procedure.

Removing and replacing a GPU in the secondary riser

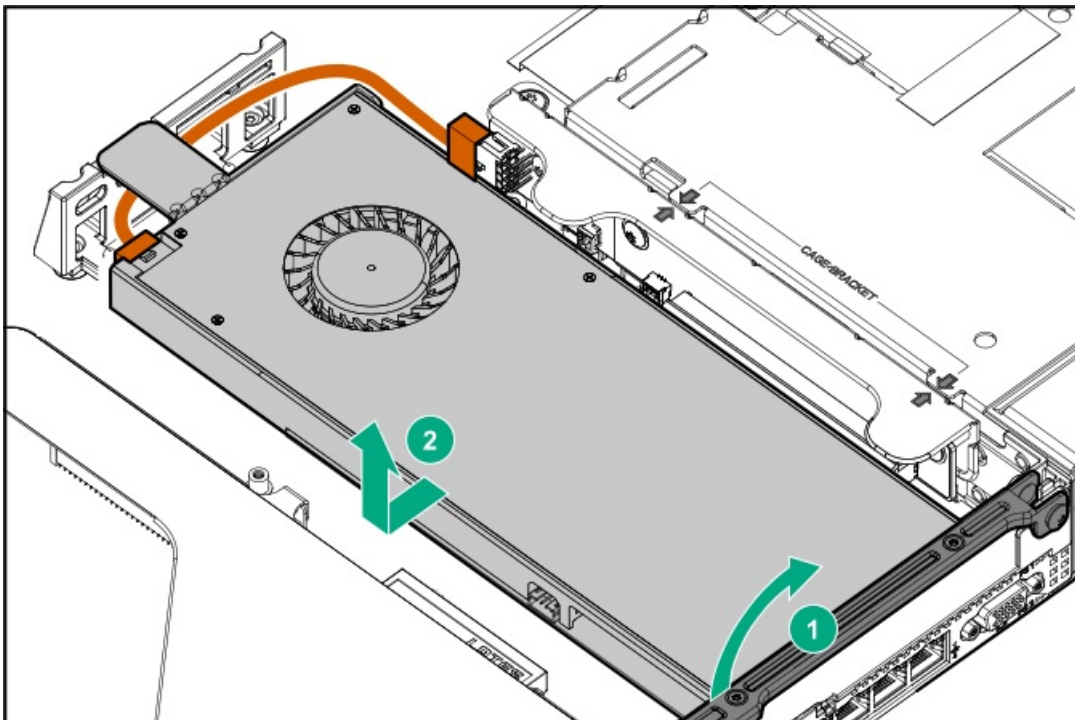
This procedure applies to 3/4 length GPUs. Some GPUs might not have a power cable or a support bracket. Be sure to reuse the power cable or bracket from the existing GPU, if needed.

Procedure

1. Observe the following warning:

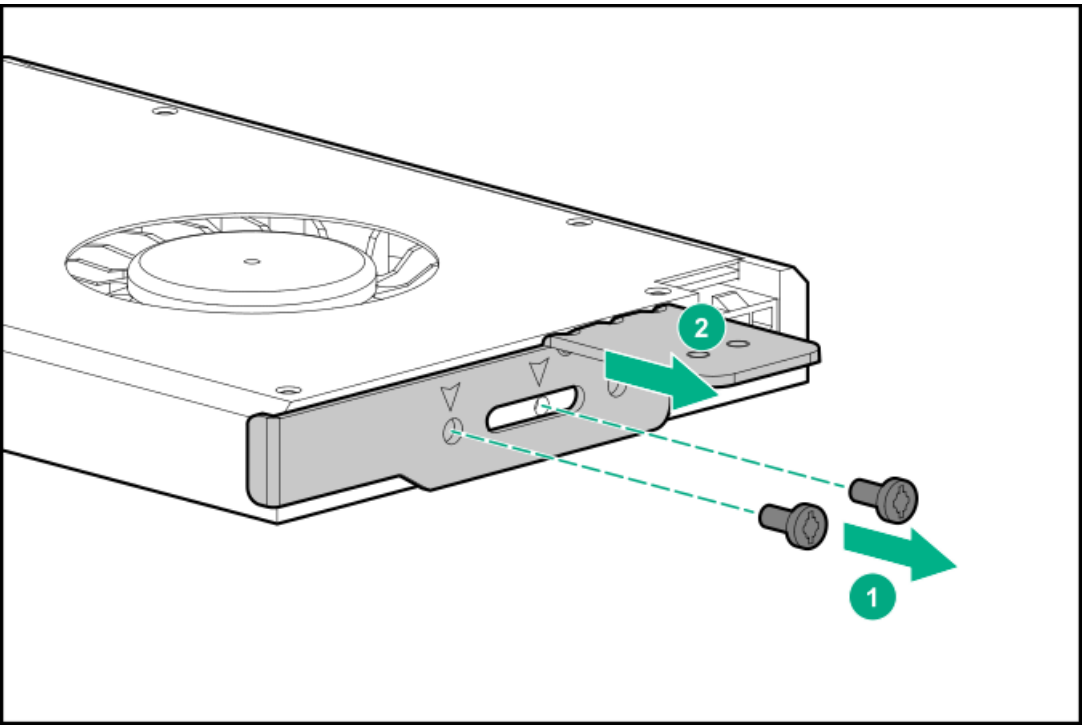
⚠ WARNING: To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.

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 primary riser cage.
7. Disconnect the GPU power cable from the riser, and then remove the GPU from the riser.



8. If needed, remove the bracket from the existing GPU, and then install it on the new GPU.

Your bracket might look different than the one shown.

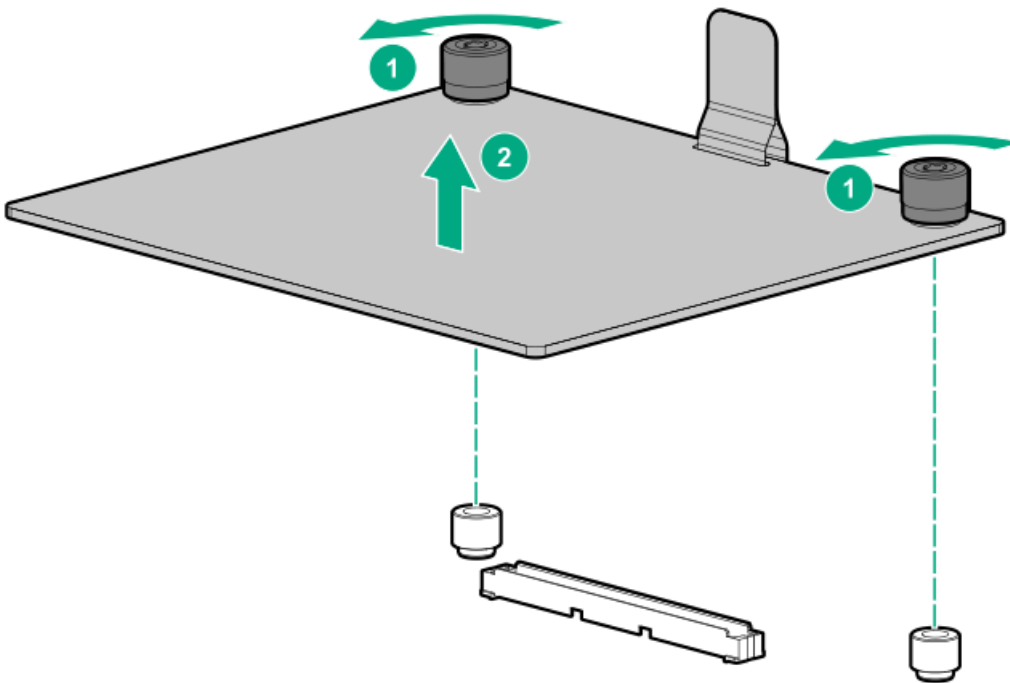


To replace the component, reverse the removal procedure.

Removing and replacing a storage 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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Disconnect any cables from the controller
Note the port numbers before disconnecting the cables.
6. Remove the controller.



To replace the component, reverse the removal procedure.

Removing and replacing a DIMM

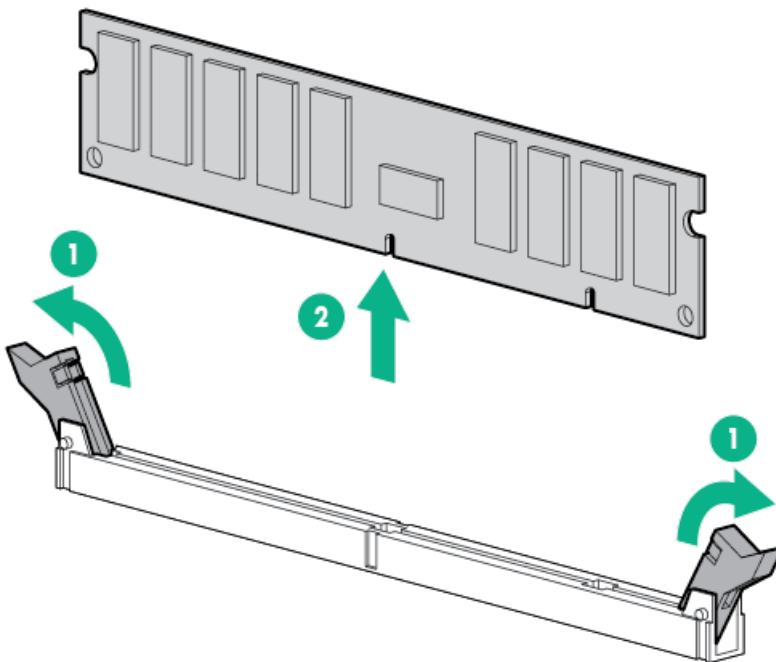
To identify DIMMs installed in the server, see "[DIMM slot locations](#)."

Prerequisites

Before replacing memory, read the memory configuration and population guidelines in the server user guide.

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:
 - a. [Extend the server from the rack](#).
 - b. [Remove the server from the rack](#).
4. [Remove the access panel](#).
5. Remove the DIMM.



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 the system battery

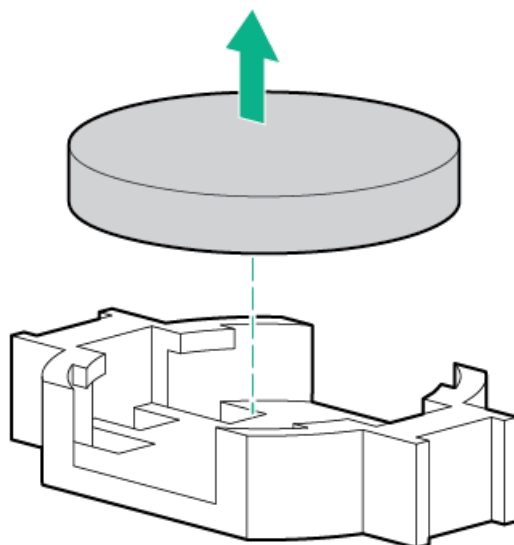
The system battery provides power to the real-time clock. If the server no longer automatically displays the correct date and time, you might need to replace the system battery.

⚠ WARNING: The computer contains an internal lithium manganese dioxide, a vanadium pentoxide, or an alkaline battery pack. A risk of fire and burns exists if the battery pack is not properly handled. 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 of in fire or water.
 - Replace only with the spare designated for this product.
-

Procedure

1. Power down the server ([Power down the server](#)).
2. Remove all power:
 - Disconnect each power cord from the power source.
 - Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack ([Extend the server from the rack](#)).
 - b. Remove the server from the rack ([Remove the server from the rack](#)).
4. Remove the access panel ([Remove the access panel](#)).
5. Locate the battery ([System board components](#)).
6. Remove the battery.



7. To replace the component, reverse the removal procedure.
8. Properly dispose of the old battery.

For more information about battery replacement or proper disposal, contact an authorized reseller or an authorized service

provider.

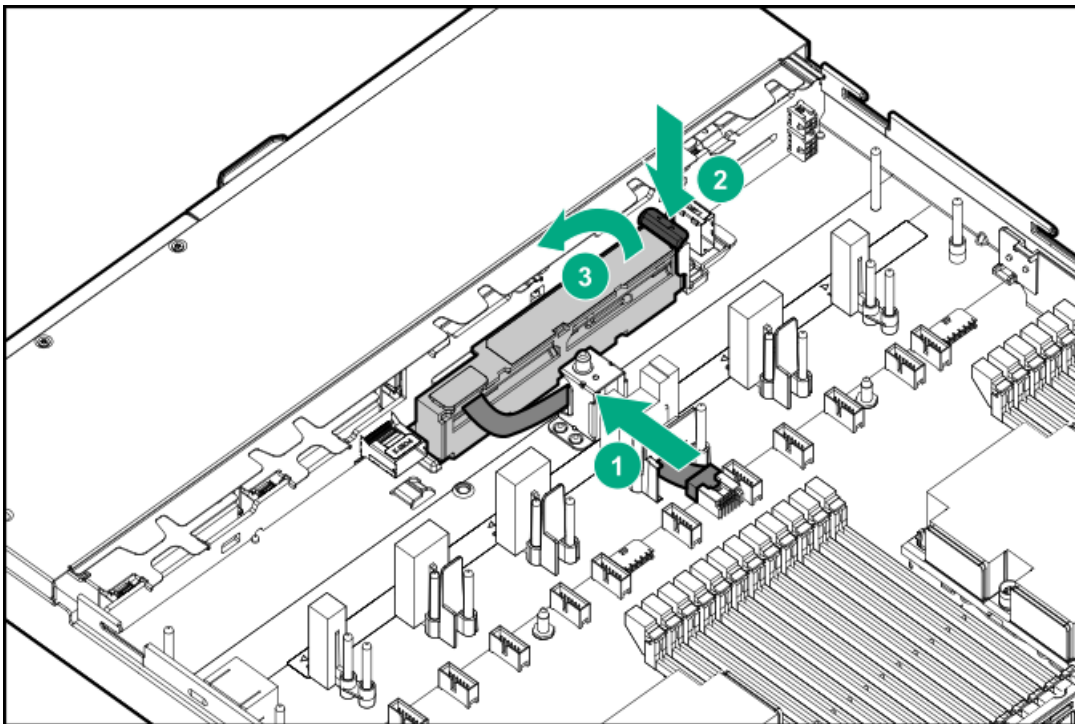


Removing and replacing the Smart Storage Battery or Hybrid Capacitor

NOTE: System ROM and firmware messages might display "energy pack" in place of "Smart Storage Battery." Energy pack refers to both HPE Smart Storage batteries and HPE Smart Storage Hybrid capacitors.

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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Disconnect the cable and then remove the battery or capacitor pack.



When removing the cable, remove the cable and cable extender.

To replace the component, reverse the removal procedure.

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
- 1.0 gm (0.5 ml) or two 0.5 gm (0.25 ml) of thermal grease
- 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. Remove the air baffle
6. Allow the existing heatsink to cool.
7. Remove the heatsink:

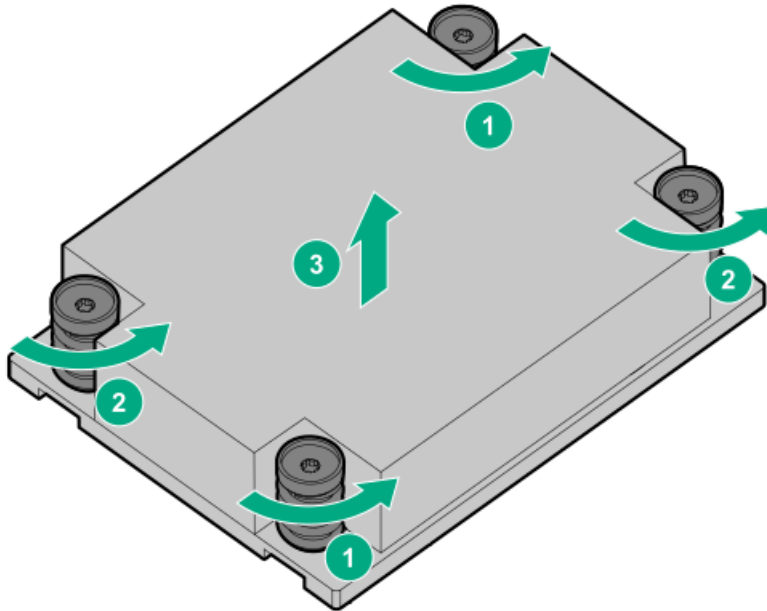
△ CAUTION:

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.

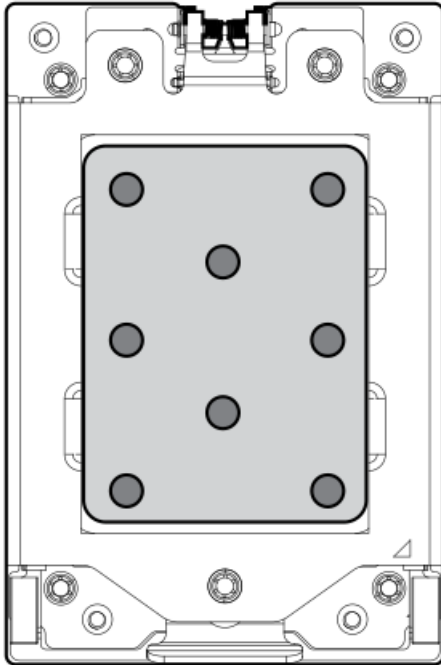
△ CAUTION:

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



- 10. Remove the thermal interface protective cover from the new heatsink.
- 11. 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.



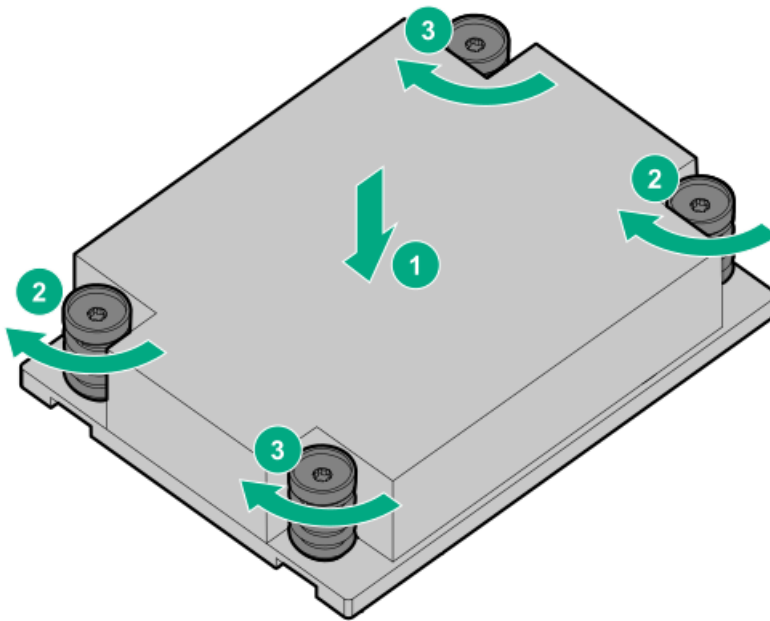
CAUTION:

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.



12. Install the air baffle.
13. Install the access panel.
14. Install the server into rack.
15. Connect each power cord to the server.
16. Connect each power cord to the power source.
17. 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 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](#).

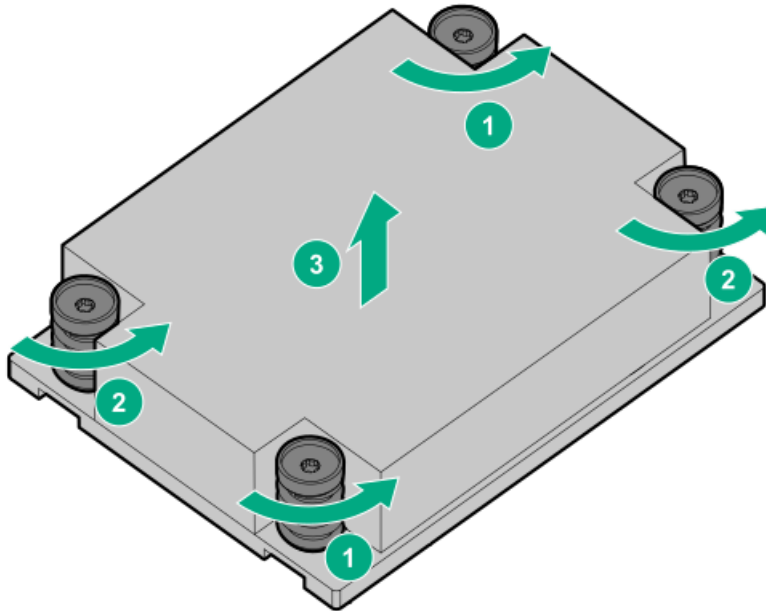
△ CAUTION: THE CONTACTS ARE VERY FRAGILE AND EASILY DAMAGED. To avoid damage to the socket or processor, do not touch the contacts.

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. Allow the heatsink to cool.
7. Remove the heatsink:

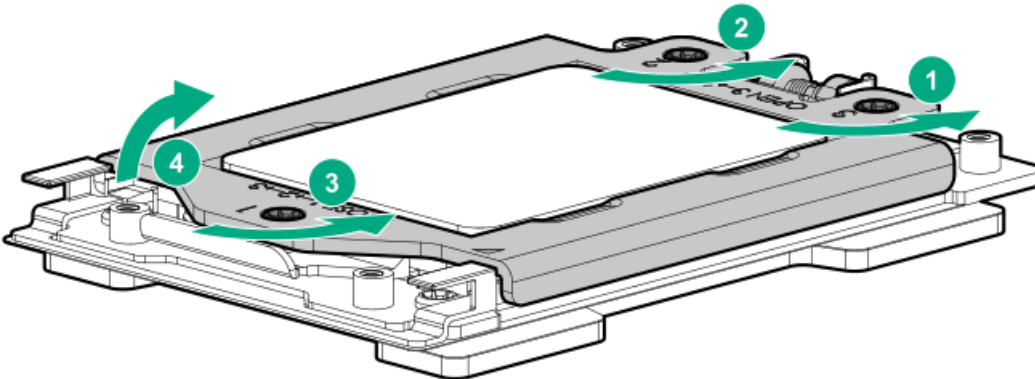
△ CAUTION:
To prevent mechanical damage or depositing oil on your hands or other contaminants to the heatsink contact surface, hold the heatsink only by the edge of its baseplate. Do not touch the heatsink fins.

△ 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.

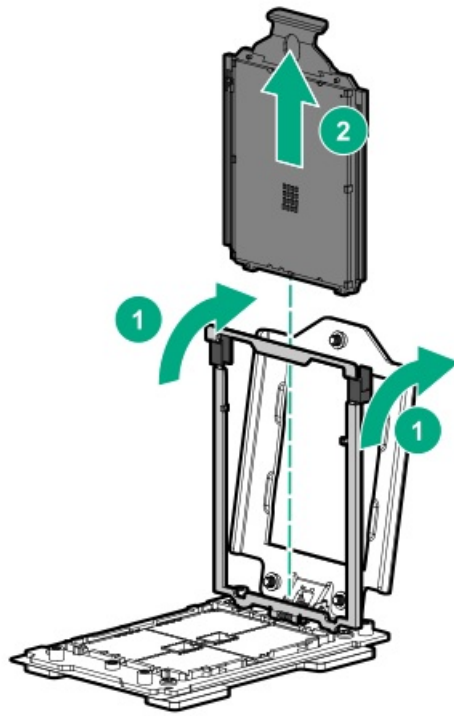


- c. Place the heatsink on a flat work surface with its contact side facing up.
- 8. Use an alcohol wipe to remove the existing thermal grease from the processor.
Allow the alcohol to evaporate before continuing.
- 9. Use a screwdriver to loosen the three captive screws in the sequence shown and then pivot the force frame up.



- 10. 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.





11. Install the processor:

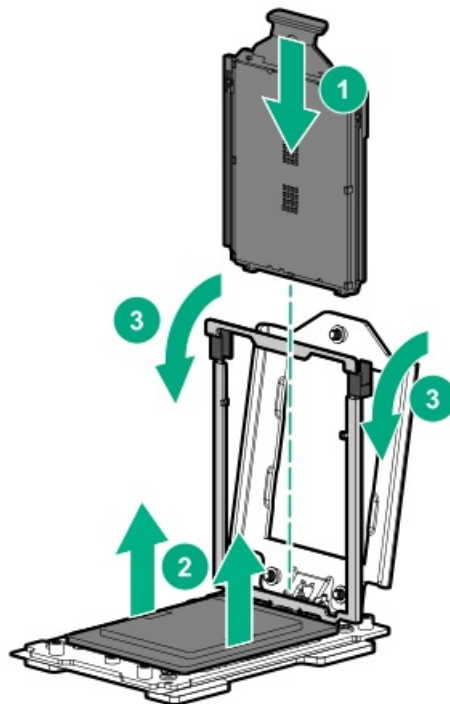
- a. Hold the processor by its carrier handle and slide the processor into the rail frame until it engages with a click sound.
- b. Remove the pin field cover cap.

△ 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.

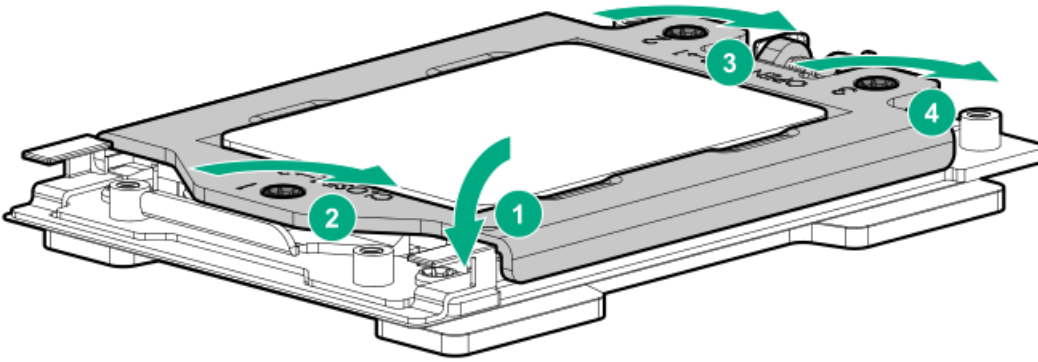


12. Close the force frame.

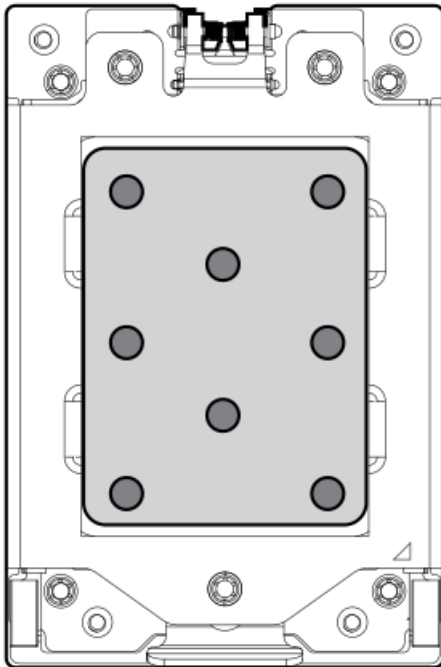
△ CAUTION:



Do not overtighten the screws as this might damage the system board or the processor socket.



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



14. 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.

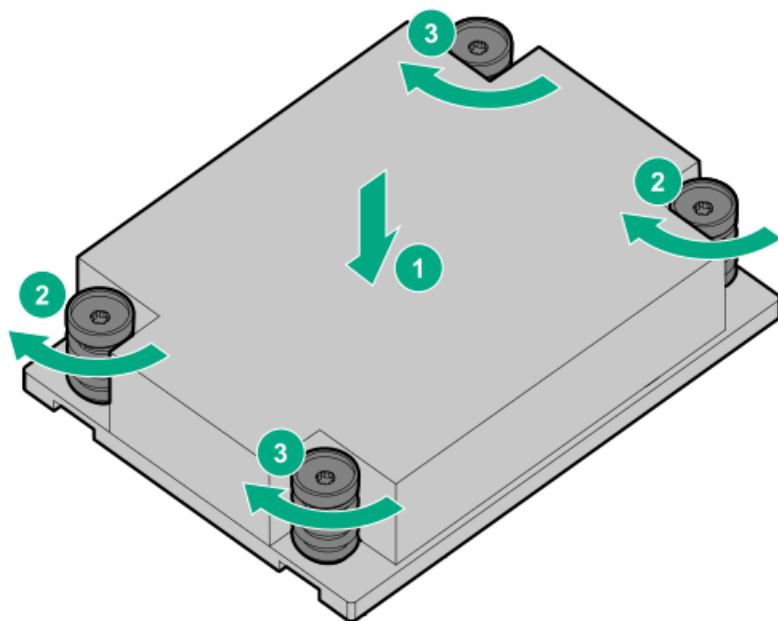
△ CAUTION:

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.



15. Install the access panel.
16. Install the server into the rack.
17. Connect each power cord to the server.
18. Connect each power cord to the power source.
19. Power up the server.

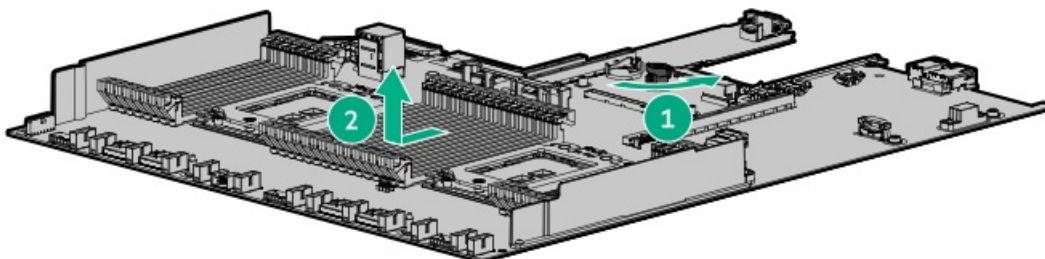
Removing and replacing the system board

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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove all power supplies.
5. Remove the access panel.
6. Take note of port numbers and cables connections to risers and the system board.
7. Disconnect and remove all cables that are connected to risers or the system board.
8. Remove all riser cages.
9. Remove the GPU support bracket.
10. Remove the controller.
11. Remove all fans.
12. Remove all fan blanks.
13. Remove all DIMMs.

Be sure to note the DIMM slot locations in which each DIMM is installed. These components must be installed in the same locations on the new system board.

14. Remove the processor heatsink assembly.
15. Loosen the system board thumbscrew, and then remove the system board.



Replacing the system board

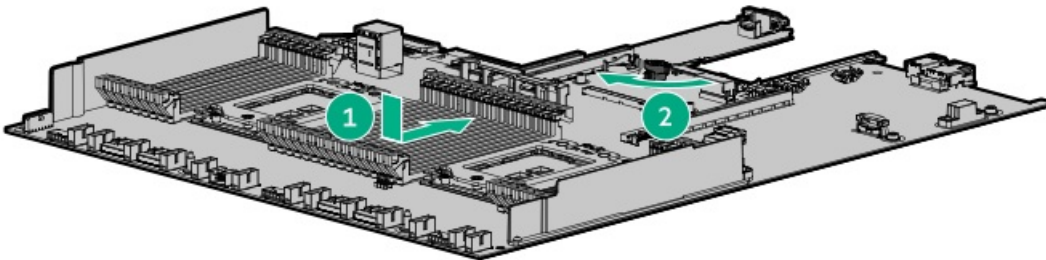
Prerequisites

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

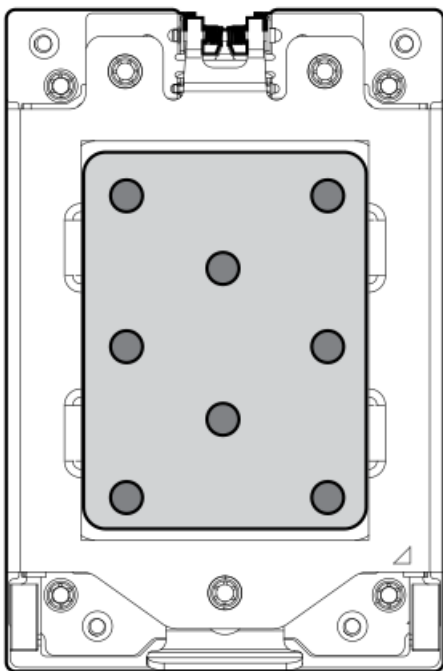
- T-15 screwdriver (for system board screws)
- T-20 screwdriver for processor and heatsink screws
- Alcohol wipe
- Thermal grease (spare part number 777298-001)

Procedure

1. Install the spare system board.



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



4. Remove the thermal interface protective cover from the new heatsink.
5. Install the heatsink.
6. Install all components removed from the failed system board.
7. Install the access panel.
8. Install the power supplies.
9. Power up the server.
10. Ensure all firmware, including option cards and embedded devices, is updated to the same versions to ensure that the latest drivers

are being used.

11. Re-enter any Secure Boot Keys that were previously added in the Secure Boot configuration.
12. Re-enter the server serial number and product ID.



Re-entering the server serial number and product ID

After you replace the system board, you must re-enter the server serial number and the product ID.

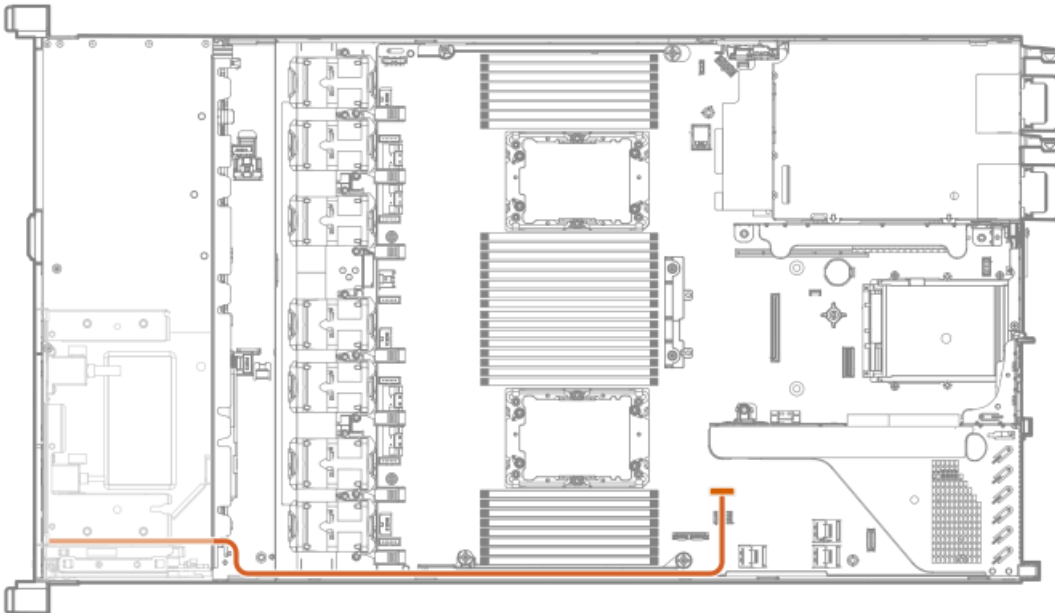
Procedure

1. During the server startup sequence, press the F9 key to access UEFI System Utilities.
2. Select the System Configuration > BIOS/Platform Configuration (RBSU) > Advanced Options > Advanced System ROM Options > Serial Number, and then press Enter.
3. Enter the serial number and press Enter. The following message appears: `The serial number should only be modified by qualified service personnel. This value should always match the serial number located on the chassis.`
4. Press Enter to clear the warning.
5. Enter the serial number and press Enter.
6. Select Product ID. The following warning appears: `Warning: The Product ID should ONLY be modified by qualified service personnel. This value should always match the Product ID located on the chassis.`
7. Enter the product ID and press Enter.
8. Press the F10 key to confirm exiting System Utilities. The server automatically reboots.

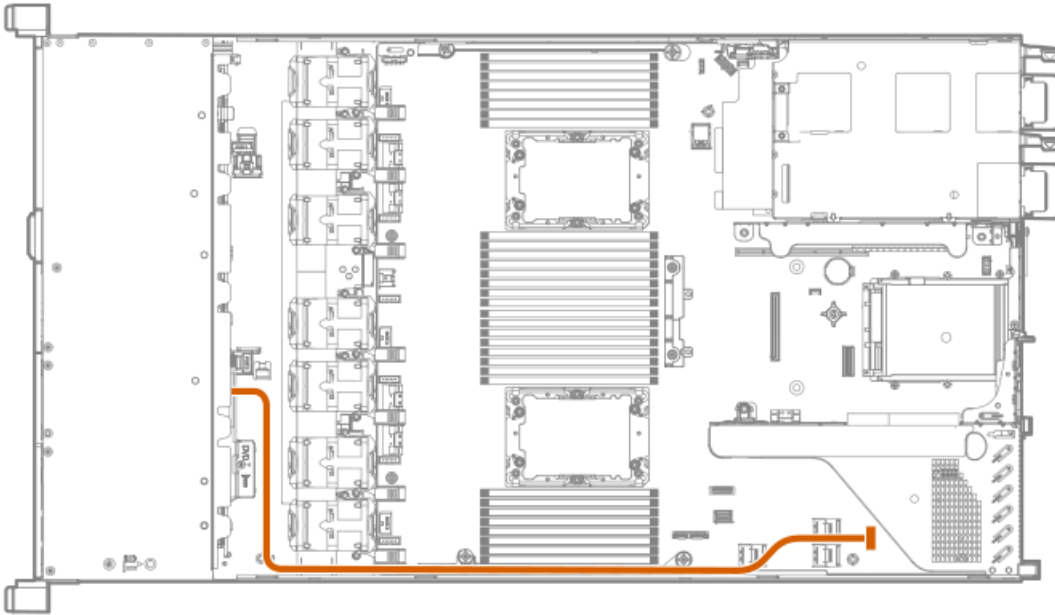
Removing and replacing the SFF optical disk drive/display port/USB

Procedure

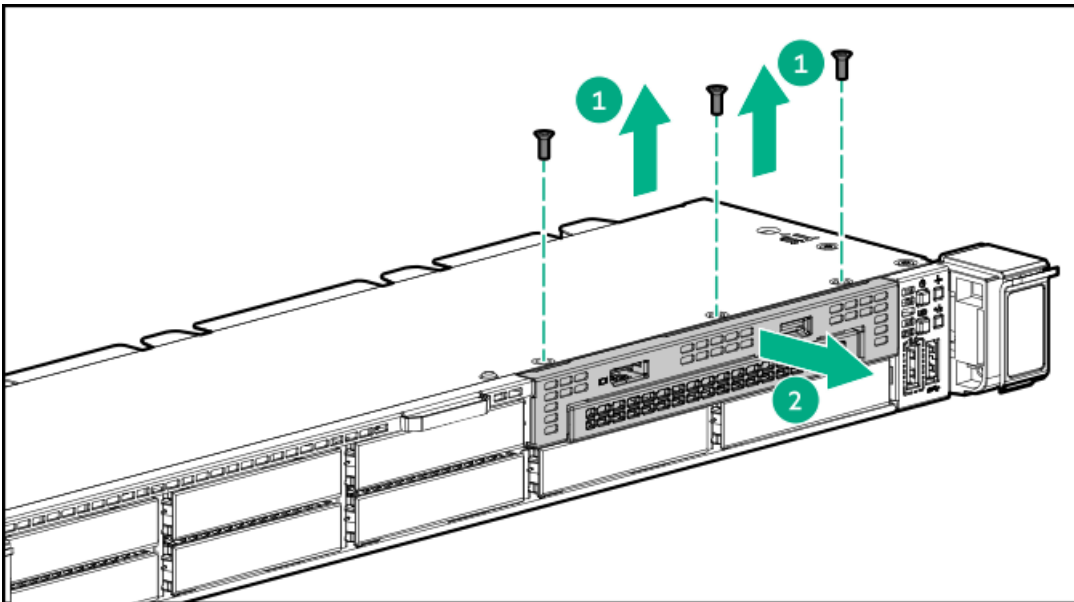
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. If needed, disconnect the optical disk drive cable from the system board.



6. Disconnect the display port/USB cable from the system board.



7. Remove the component.

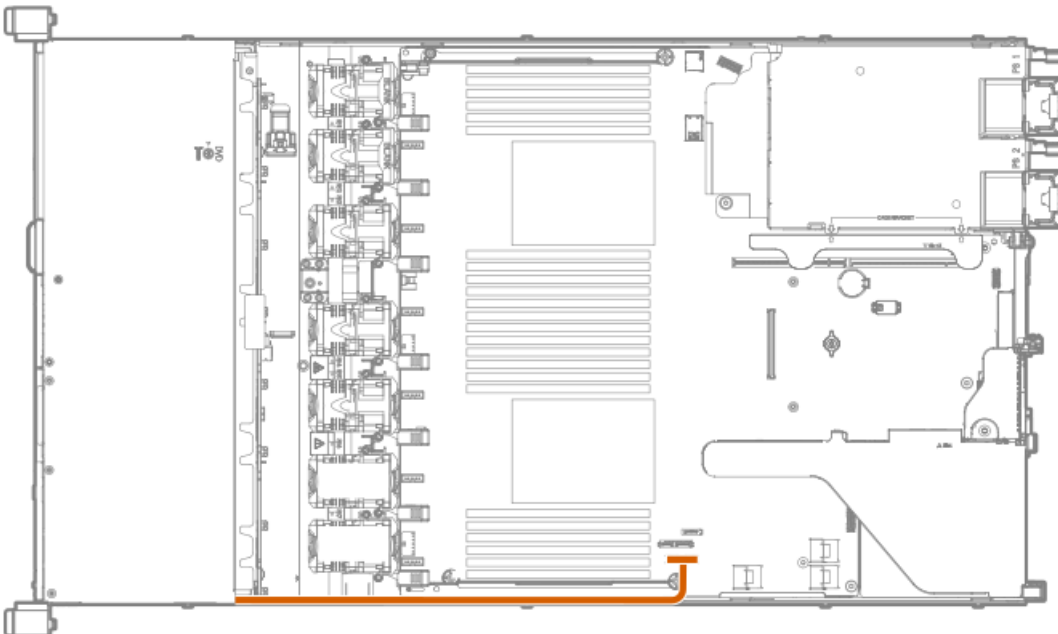


To replace the component, reverse the removal procedure.

Removing and replacing the Systems Insight Display power module

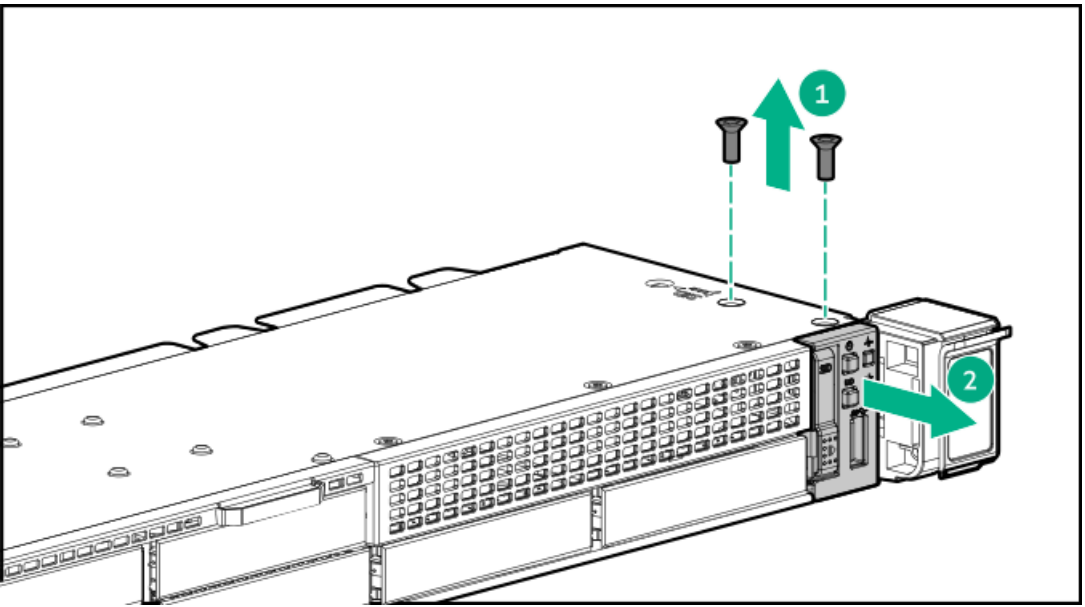
Procedure

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:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Disconnect the cable from the system board.



6. Remove the component.

SFF



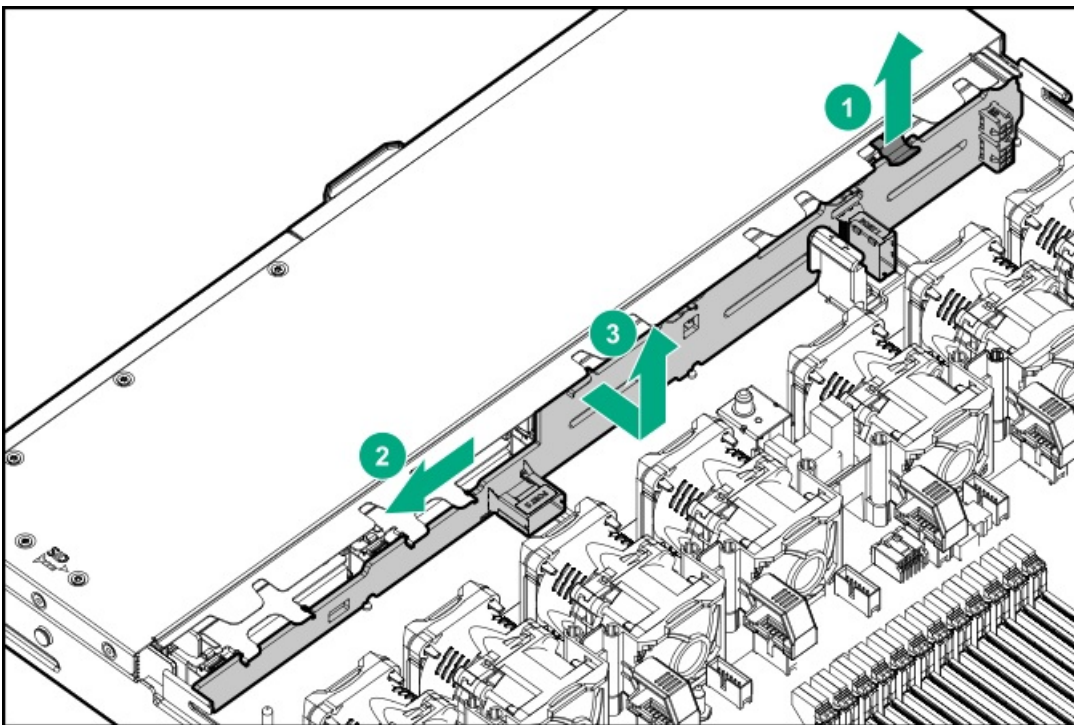
To replace the component, reverse the removal procedure.

Removing and replacing the 8 SFF drive backplane

Procedure

1. Power down the server ([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:
 - a. Extend the server from the rack ([Extend the server from the rack](#)).
 - b. Remove the server from the rack ([Remove the server from the rack](#)).
4. Remove the access panel ([Remove the access panel](#)).
5. Remove all drives and drive blanks.

Note where each drive is located.
6. If installed, remove the Smart Storage Battery ([Removing and replacing the Smart Storage Battery or Hybrid Capacitor](#)).
7. Disconnect and remove all cables from the drive backplane.
8. Remove the drive backplane.



To replace the component, reverse the removal procedure.

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 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.
- Error Message Guide for HPE ProLiant Gen10 Plus servers and HPE Synergy provides a list of error messages and information to assist with interpreting and resolving error messages.
- 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](#).

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

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

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.



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

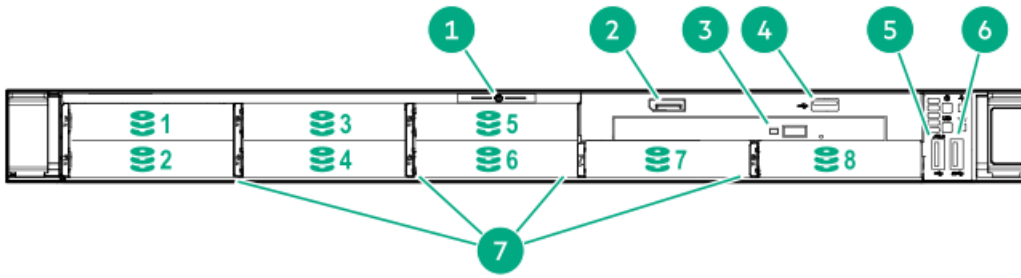
SSA is the main tool for configuring arrays on these controllers. It exists in three interface formats: the SSA GUI, the SSA CLI, and SSA Scripting. All formats provide support for configuration tasks. Some of the advanced tasks are available in only one format.

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

- **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.

Front panel components

8SFF/8SFF + 2SFF



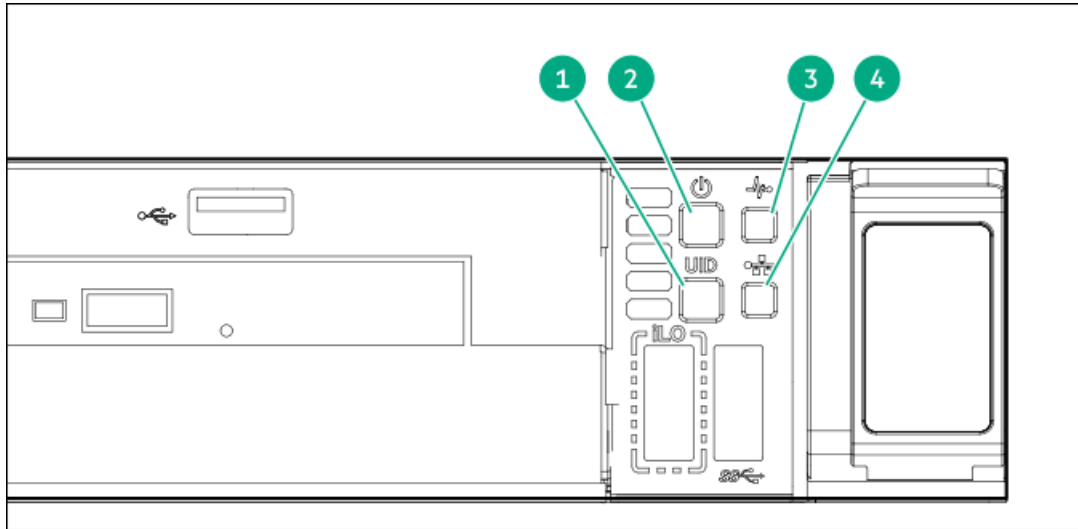
Item	Description
1	Serial number/iLO information pull tab
2	Display port (optional) ¹
3	Optical drive (optional) ¹
4	USB 2.0 port (optional) ¹
5	iLO Service Port ²
6	USB 2.0/USB 3.0 port
7	Drive bays

¹ Optional 2SFF drive bays in 8SFF + 2SFF model

² The operating system does not recognize this port as a USB port.

Front panel LEDs and buttons

8 SFF/8 SFF + 2 SFF



Item	Description	Status
1	UID button/LED ¹	<p>Solid blue = Activated</p> <p>Flashing blue:</p> <ul style="list-style-type: none"> • 1 Hz = Remote management or firmware upgrade in progress • 4 Hz = iLO manual reboot sequence initiated • 8 Hz = iLO manual reboot sequence in progress <p>Off = Deactivated</p>
2	Power On/Standby button and system power LED ¹	<p>Solid green = System on</p> <p>Flashing green = Performing power on sequence</p> <p>Solid amber = System in standby</p> <p>Off = No power present ²</p>
3	Health LED ¹	<p>Solid green = Normal</p> <p>Flashing green = iLO is rebooting.</p> <p>Flashing amber = System degraded</p> <p>Flashing red = System critical ³</p>
4	NIC status LED ¹	<p>Solid green = Link to network</p> <p>Flashing green = Network active</p> <p>Off = No network activity</p>

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

² Facility power is not present, power cord is not attached, no 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.

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 combined LED descriptions

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

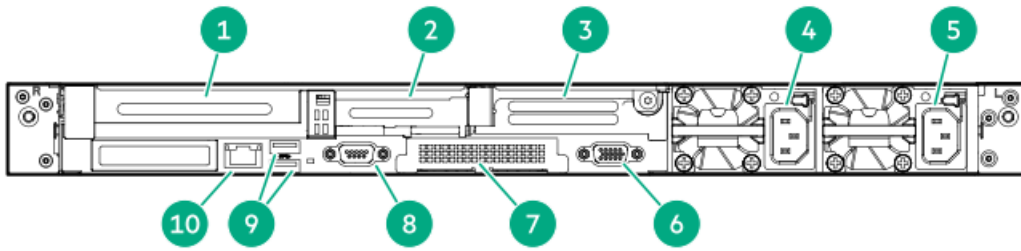
- Systems Insight Display LEDs
- System power LED
- Health LED

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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.

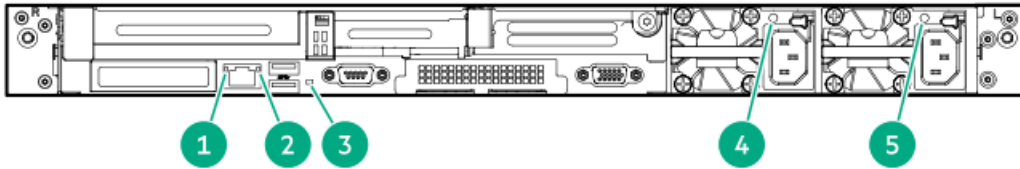
i IMPORTANT: If more than one DIMM slot LED is illuminated, further troubleshooting is required. Test each bank of DIMMs by removing all other DIMMs. Isolate the failed DIMM by replacing each DIMM in a bank with a known working DIMM.

Rear panel components



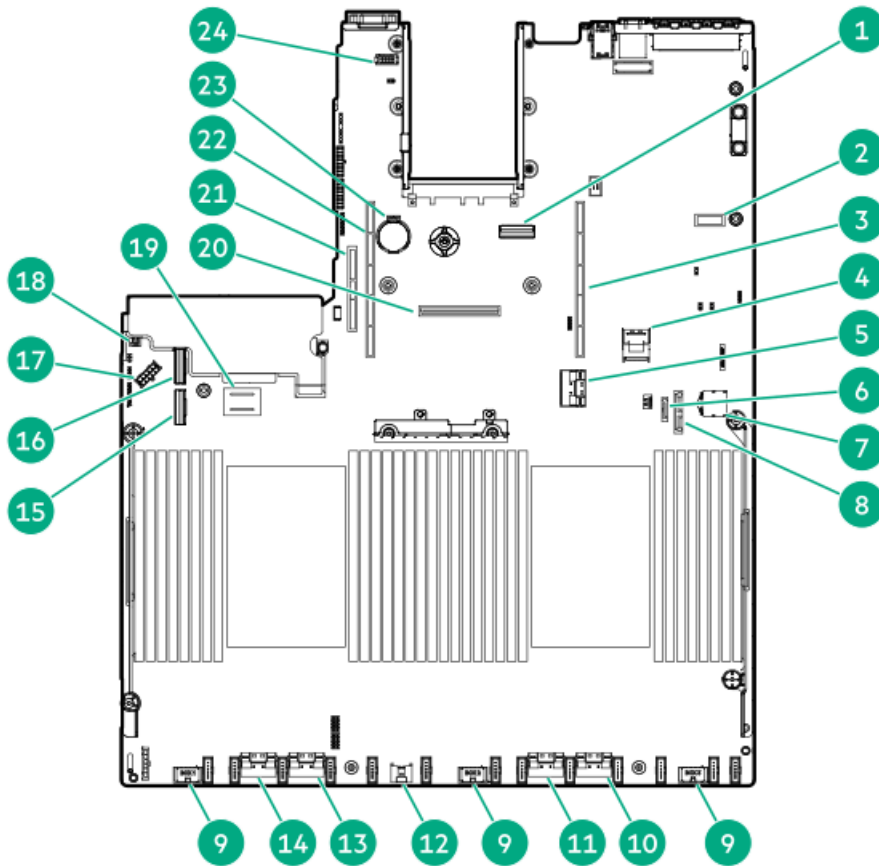
Item	Description
1	Slot 1 PCIe4
2	Slot 2 PCIe4
3	Slot 3 PCIe4 (optional - requires second processor)
4	Power supply 2 (PS2)
5	Power supply 1 (PS1)
6	Video (VGA) port
7	OCP 3.0 adapter (if equipped)
8	Serial port (optional)
9	USB 3.0 ports
10	iLO Management Port

Rear panel LEDs



Item	Description	Status
1	iLO 5/standard NIC link LED	Solid green = Link exists. Off = No link exists.
2	iLO 5/standard NIC activity LED	Solid green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
3	UID LED	Solid blue = Identification is activated. Flashing blue = System is being managed remotely. Off = Identification is deactivated.
4	Power supply 2 LED	Solid green = Normal Off = One or more of the following conditions exists: <ul style="list-style-type: none"> • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit.
5	Power supply 1 LED	Solid green = Normal Off = One or more of the following conditions exists: <ul style="list-style-type: none"> • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit.

System board components



Item	Description
1	OCP X16 Slimline connector
2	Display port/USB connector
3	Primary (processor 1) PCIe riser connector
4	x4 SATA port 2
5	NVMe port 8A
6	x1 SATA port 2
7	Front power/USB 3.1 connector
8	Optical/SATA port 3
9	Drive backplane power connectors
10	x8 NVMe port 2A
11	x8 NVMe port 1A
12	Energy pack connector
13	x8 NVMe port 2B
14	x8 NVMe port 1B
15	x8 NVMe port 1C
16	x8 NVMe port 2C
17	Drive backplane power connector
18	Chassis Intrusion Detection connector
19	Dual USB port
20	Flexible Smart Array connector
21	Tertiary (processor 2) PCIe riser connector

Item	Description
22	Secondary (processor 2) PCIe riser connector
23	System battery
24	Serial port connector



System maintenance switch descriptions

Position	Default	Function
S1 ¹	Off	<ul style="list-style-type: none">• Off = iLO security is enabled.• On = iLO security is disabled.
S2	Off	Reserved
S3	Off	Reserved
S4	Off	Reserved
S5 ¹	Off	<ul style="list-style-type: none">• Off = Power-on password is enabled.• On = Power-on password is disabled.
S6 ^{1, 2, 3}	Off	<ul style="list-style-type: none">• 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](#).

NMI functionality

An NMI crash dump enables administrators to create crash dump files when a system is hung and not responding to traditional debugging methods.

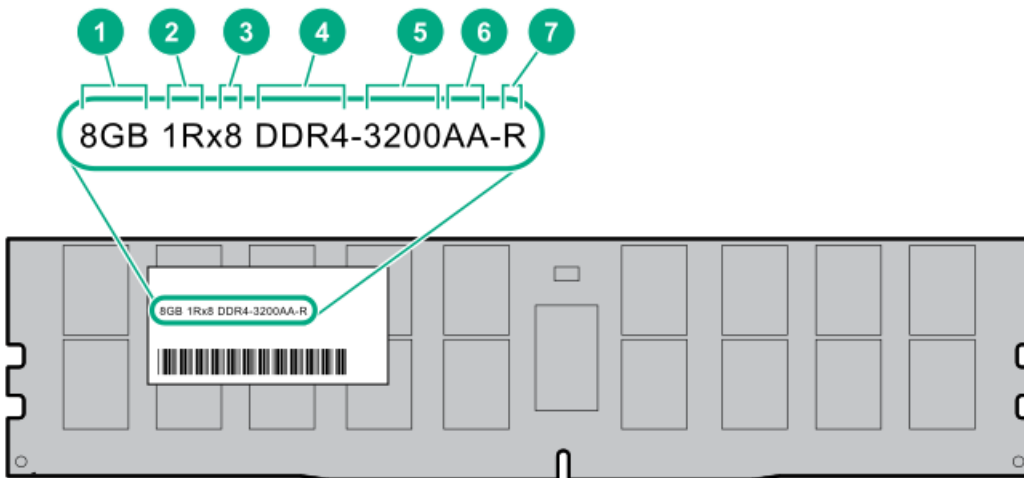
An analysis of the crash dump log is an essential part of diagnosing reliability problems, such as hanging operating systems, device drivers, and applications. Many crashes freeze a system, and the only available action for administrators is to cycle the system power. Resetting the system erases any information that could support problem analysis, but the NMI feature preserves that information by performing a memory dump before a hard reset.

To force the OS to initiate the NMI handler and generate a crash dump log, the administrator can use the iLO Generate NMI feature.

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.

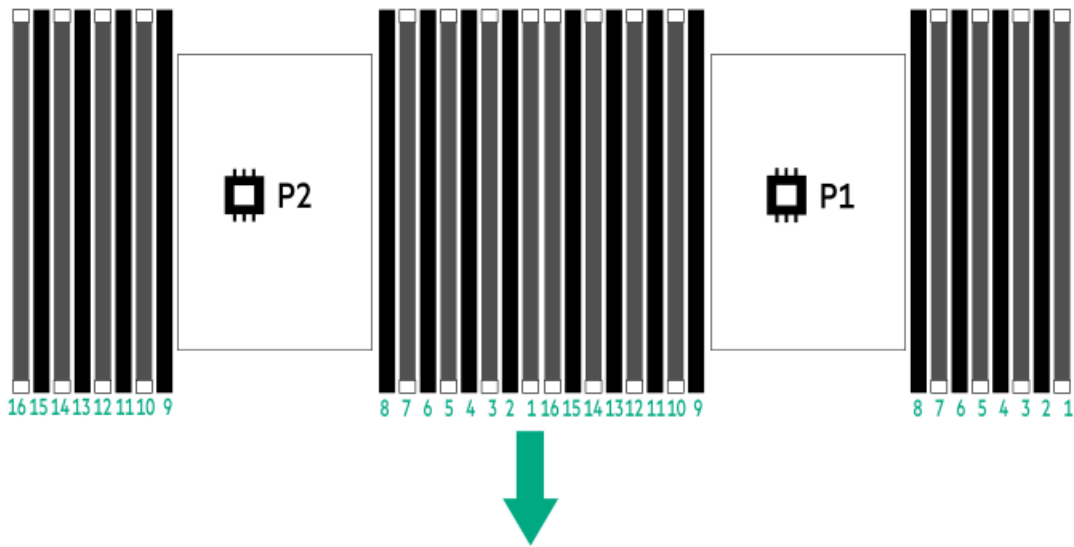
For more information about product features, specifications, options, configurations, and compatibility, see the HPE DDR4 SmartMemory QuickSpecs on the Hewlett Packard Enterprise website (<https://www.hpe.com/support/DDR4SmartMemoryQS>).



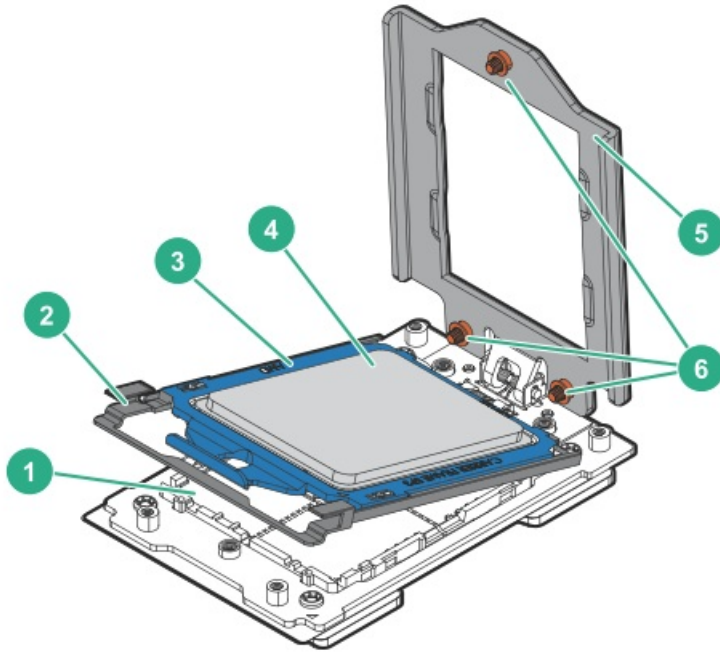
Item	Description	Example
1	Capacity	8 GB 16 GB 32 GB 64 GB 128 GB 256 GB
2	Rank	1R = Single rank 2R = Dual rank 4R = Quad rank 8R = Octal rank
3	Data width on DRAM	x4 = 4-bit x8 = 8-bit
4	Memory generation	PC4 = DDR4
5	Maximum memory speed	3200 MT/s
6	CAS latency	AA = CAS 22-22-22 AA = CAS 26-22-22 (for 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)

Device numbers

8 SFF device bay numbering



8 SFF + 2 SFF device bay numbering

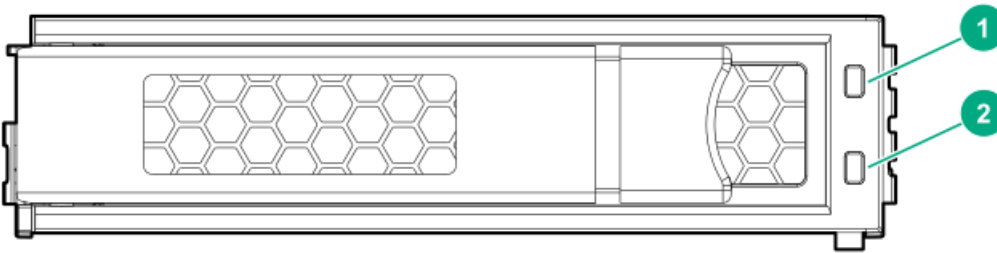




HPE Basic Drive LED definitions

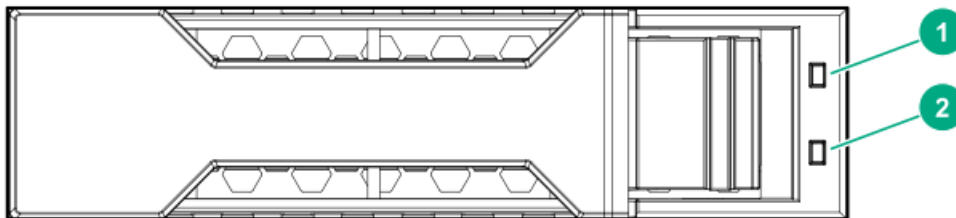
LFF low-profile drive carrier

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	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	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: <ul style="list-style-type: none"> 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

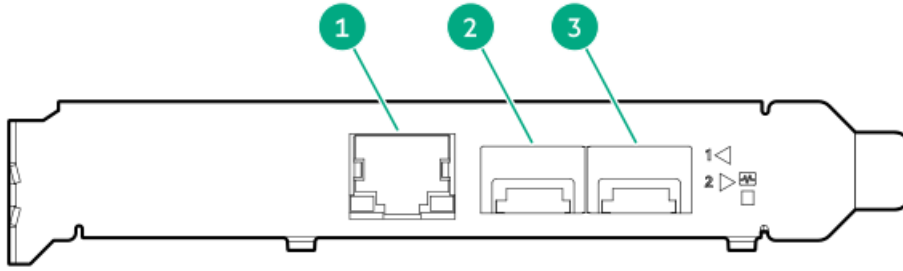


Table 2: Ports

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.

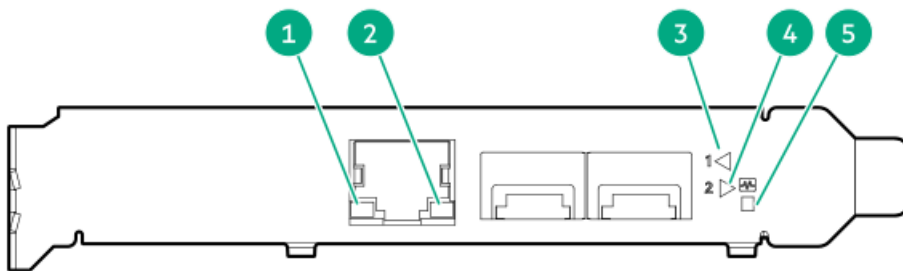


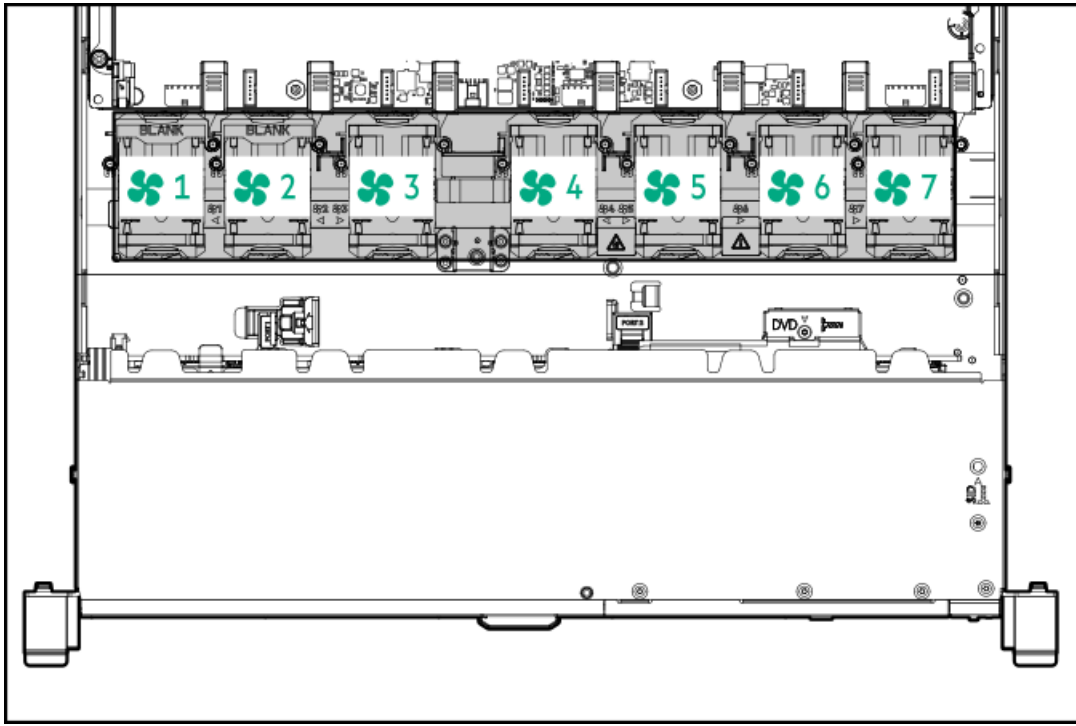
Table 3: LED indicators

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



Cabling overview

This section provides guidelines that help you make informed decisions about cabling the server and hardware options to optimize performance.

 **CAUTION:** When routing cables, always be sure that the cables are not in a position where they can be pinched or crimped.

SFF cables

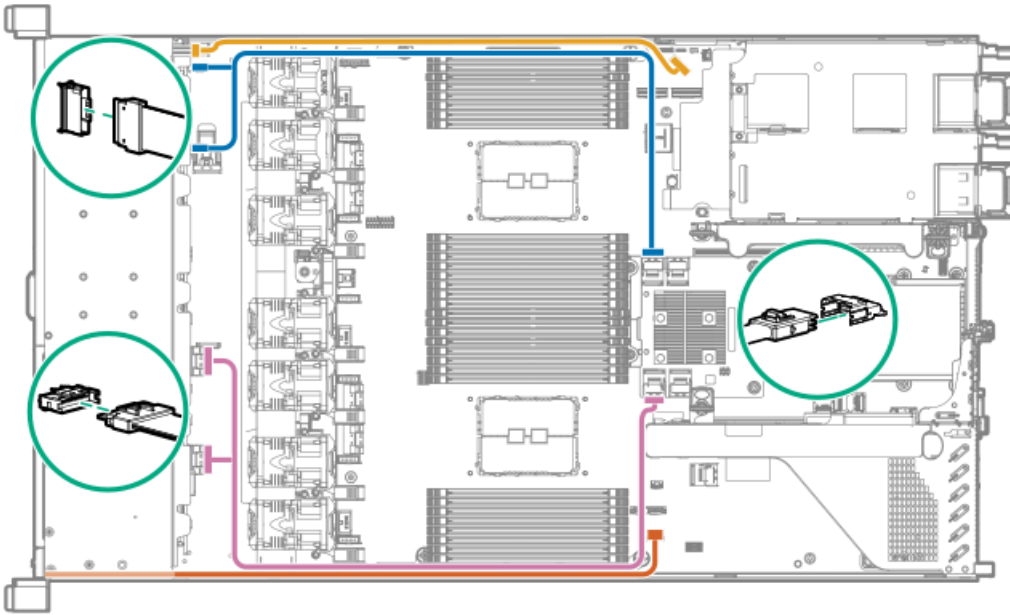
Option kit	Cable part number	Connects from	Connects to
8 SFF x4TMode UBM3 backplane kit (P26429-B21)			
8 SFF NVMe backplane, MLB, x8 port1a	P20855-001	8 SFF x4 UBM3 backplane ports 1 and 2	Port 1B / Port 2B
8 SFF NVMe backplane, MLB, x8 port1b	P20856-001	8 SFF x4 UBM4 backplane ports 3 and 4	Port 1A / Port 2A
8 SFF x4NVMe UBM4 backplane kit (P26433-B21)			
8 SFF NVMe backplane, MLB, x8 port1a	P20855-001	8 SFF x4 UBM4 backplane ports 1 and 2	Port 1B / Port 2B
8 SFF NVMe backplane, MLB, x8 port1b	P20856-001	8 SFF x4 UBM4 backplane ports 1 and 2	Port 1B / Port 2B
8 SFF SAS/SATA backplane kit (P38579-B21)			
SAS/SATA 8 SFF backplane, P408i-a/P816i-a	P20816-001	8 SFF SAS/SATA backplane	Smart Array controllers P408i-p/E208i-p/P408i-a/P816i-a port 1 or port 2
2 SFF SAS/SATA Backplane kit (P38580-B21)			
Power cable, 8 SFF to 2 SFF	869667-001	2 SFF backplane	8 SFF backplane
SAS/SATA, 2 SFF backplane, P816i-a, 10P	P20817-001	2 SFF SAS/SATA backplane	Smart Array controller P816i-a port 3
SAS/SATA 2 SFF backplane, P/E	P26551-001	2 SFF SAS/SATA backplane	SATA port 1, Smart Array controllers P408i-p/E208i-p port 1
2 SFF U.3 Backplane Option Kit (P38581-B21) / 2 SFF U.2 Backplane option kit (P38582-B21)			
Power cable, 8 SFF to 2 SFF	869667-001	2 SFF backplane	8 SFF backplane
2 SFF U.3 backplane Pri NVMe	P20857-001	2 SFF U.3 backplane	R16 riser port 3A
NVMe, 2 SFF backplane, MLB to port 8A	P39979-001	2 SFF U.3 backplane	Port 8A, AROC passthrough board port 7A
8 SFF TMode Cable Kit (P26451-B21)			
8 SFF U.3 backplane, NVMe	P20863-001	8 SFF U.2 / U.3 backplane	HPE Smart Array Controller SR932i-p port 4i
8 SFF U.3 backplane, NVMe2	P20864-001	8 SFF U.2 / U.3 backplane	HPE Smart Array Controller SR932i-p port 3i
8 SFF U.3 backplane, NVMe3	P20865-001	8 SFF U.2 / U.3 backplane	HPE Smart Array Controller SR932i-p port 2i
8 SFF U.3 backplane, NVMe4	P20866-001	8 SFF U.2 / U.3 backplane	HPE Smart Array Controller SR932i-p port 1i

Option kit	Cable part number	Connects from	Connects to
8 SFF U.2 / U.3 backplane, x8, NVMe	P20867-001	8 SFF U.2 / U.3 backplane port 3 / port 4	HPE Smart Array Controllers SR932i-p/SR416i-p/MR416i-p/MR216i-p /SR416i-a/MR416i-a/MR216i-a Port 1-4
8 SFF U.2 / U.3 backplane, x8, NVMe2	P20868-001	8 SFF U.2 / U.3 backplane port 1 / port 2	HPE Smart Array Controllers SR932i-p/SR416i-p/MR416i-p/MR216i-p /SR416i-a/MR416i-a/MR216i-a Port 1-4
2 SFF Trim cable kit (P36657-B21)			
2 SFF U.3 backplane, tri-mode, NVMe	P20869-001	2 SFF U.2 / U.3 backplane	HPE Smart Array Controllers SR932i-p/SR416i-p/MR416i-p/MR216i-p Port 1-4
8 SFF DP/USB/ODD blank kit (P40003-B21)			
Display, SFF	P20854-001	ODD blank kit	MLB
Assy, Slim SATA, SFF	P20813-001	ODD	MLB
SFF SID Power module kit (P26447-B21)			
Assy, SLIM SAS, SFF SW/SID	P20825-001	Switchboard	MLB
Assy, FFC	P26557-001	SID board	Switchboard
SFF Internal cables kit (P26449-B21)			
Mini-SAS, 8 SFF slot 2	P36180-001	8 SFF SAS/SATA backplane	Port 8A
SAS/SATA 2 SFF backplane, P816i-a	P20817-001	2 SFF SAS/SATA backplane	Smart Array Controller P816i-a Port 3
SAS/SATA 2 SFF backplane, P/E	P26551-001	2 SFF SAS/SATA backplane	SATA port 1, HPE Smart Array Controller P408i-p and E208i-p port 1
CPU1 GPU Cable kit (P26469-B21)			
Assy, pwr, 2x3 to 2x4, GPU	869686-001	GPU	Riser
Assy, pwr, 2x4 to 2x4, GPU	869821-001	GPU	Riser
Rear serial cable kit (P26475-B21)			
Assy, Serial, 2x5P/9P	P27044-001	Rear serial port	MLB
AROC NVMe Adapter kit (P38585-B21)			
NVMe, 2 SFF backplane, MLB to port 8a	P39979-001	2 SFF U.2 backplane	AROC Passthrough board Port 7A

Cable routing: HPE Smart Array MR416i-a controller

P20867-001 (blue) to port 1-2.

P20868-001 (purple) to port 3-4.



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](#).



Server specifications

Specification	Value
Height	4.28 cm (1.68 in)
Depth	74.19 cm (29.21 in)
Width	43.46 cm (17.11 in)
Weight, SFF minimum	13.29kg (29.51 lb)
Weight, SFF maximum	18.21 kg (40.14 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

Hot-plug power supply calculations

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

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](#).



Accessing Hewlett Packard Enterprise Support

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

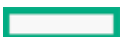
<https://www.hpe.com/info/assistance>

- 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>

ⓘ 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/completecure>



Warranty information

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

HPE ProLiant and IA-32 Servers and Options

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

HPE Enterprise and Cloudline Servers

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

HPE Storage Products

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

HPE Networking Products

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

Regulatory information

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

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

Additional regulatory information

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

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

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

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

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

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

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, use the Feedback button and icons (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.

