



Hewlett Packard
Enterprise

HPE ProLiant DL365 Gen11 Server Maintenance and Service Guide

Part Number: 30-1FF6625F-002
Published: April 2023
Edition: 2

HPE ProLiant DL365 Gen11 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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Illustrated parts catalog

Subtopics

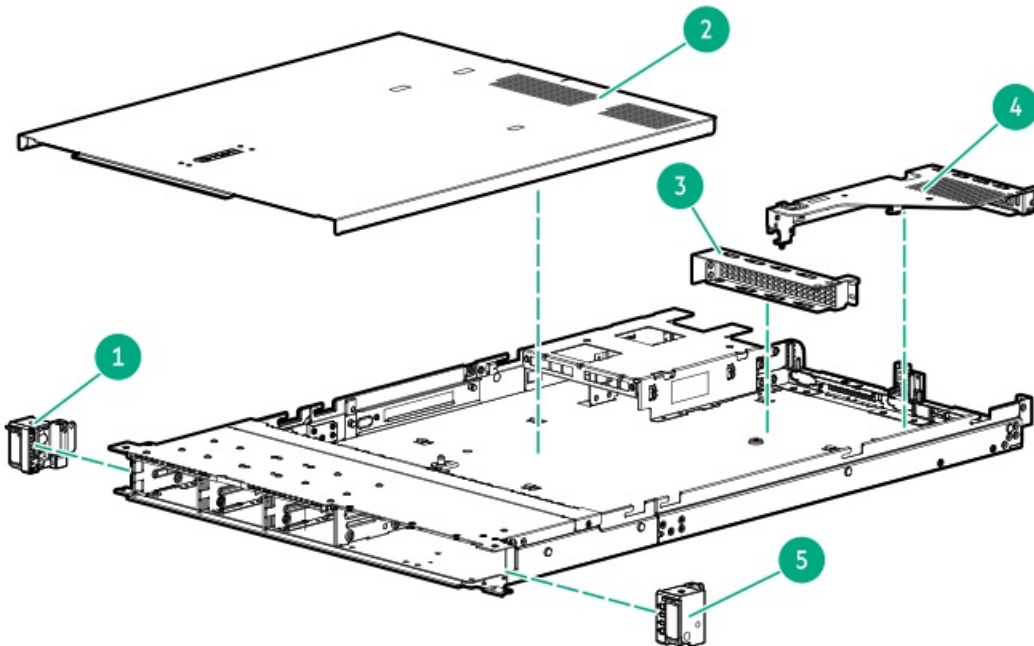
[Mechanical components](#)

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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	Chassis left ear spare part
2	Access panel spare parts
3	PCIe riser blank spare parts
4	PCIe riser cage spare parts
5	Chassis right ear spare part
7	DIMM guard spare part
8	Cable management arm spare parts

Subtopics

[Chassis left ear spare part](#)

[Access panel spare part](#)

[PCIe riser blank spare part](#)

[PCIe riser cage spare parts](#)

[Chassis right ear w/switch spare part](#)

[Rack rail kit](#)

[DIMM guard spare part](#)

[Cable management arm spare parts](#)

Chassis left ear spare part

[Customer self repair: Mandatory](#)

Description	Spare part number
Chassis left ear	P56499-001

Access panel spare part

[Customer self repair: Mandatory](#)

Description	Spare part number
Access panel	P56474-001

PCIe riser blank spare part

[Customer self repair: Optional](#)

Table 1.

Description	Spare part number
PCIe riser blank	P60141-001

PCIe riser cage spare parts

[Customer self repair: Mandatory](#)

Description	Spare part number
NS204i-u + secondary low-profile one-slot PCIe5 x16 riser	P60408-001
One-slot PCIe 5x16 riser	P59443-001

Chassis right ear w/switch spare part

Customer self repair: Mandatory

Description	Spare part number
Chassis right ear (includes PCA switch and cable)	P56500-001

Rack rail kit

Customer self repair: Mandatory

Description	Spare part number
Rack rail kit	P59490-001

DIMM guard spare part

Customer self repair: Mandatory

Description	Spare part number
Left DIMM guard	P59124-001
Right DIMM guard	P52487-001

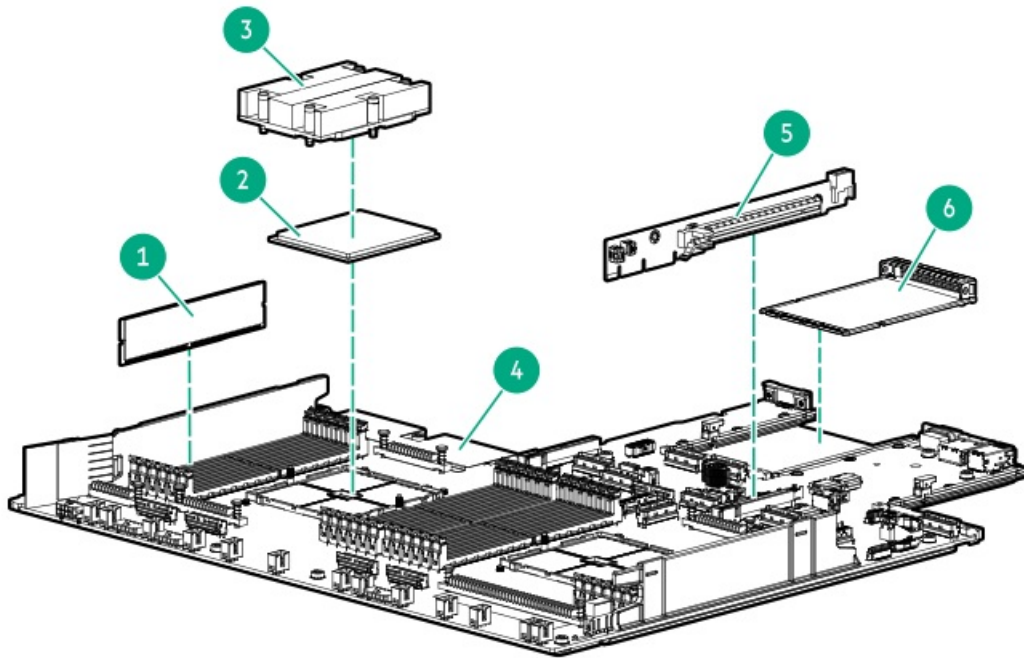
Cable management arm spare parts

Customer self repair: Mandatory

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

System 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	DIMM spare parts
2	Processor spare parts
3	Heatsink spare parts
4	Smart array controller spare parts
5	PCIe riser board spare parts
6	OCP NIC 3.0 adapter spare parts
7	System board spare part

Subtopics

[DIMM spare parts](#)

[Processor spare parts](#)

[Heatsink spare parts](#)

[Storage controller spare parts](#)

[PCI riser board spare parts](#)

[OCP NIC 3.0 adapter spare parts](#)

[System board spare parts](#)

[System battery spare part](#)

DIMM spare parts

Customer self repair: Mandatory

Description	Spare part number
4800 MT/s DIMMs	—
16 GB, single-rank x8 PC4-4800B-R	P56150-001
32 GB, single-rank x4 PC4-4800B-R	P56151-001
32 GB, dual-rank x8 PC4-4800B-R	P56152-001
64 GB, single-rank x8 PC4-4800B-R	P56153-001

Processor spare parts

Subtopics

AMD EPYC 9xx4 processor spare parts

AMD EPYC 9xx4 processor spare parts

Customer self repair: Optional

Description	Spare part number
AMD EPYC 9124 3.0G 16C 200W	P54064-001
AMD EPYC 9174F 4.1G 16C 320W	P54060-001
AMD EPYC 9224 2.5G 24C 200W	P58633-001
AMD EPYC 9354 3.25G 32C 280W	P54063-001
AMD EPYC 9374F 3.85G 32C 320W	P54072-001
AMD EPYC 9554 3.1G 64C 360W	P54062-001
AMD EPYC 9654 2.4G 96C 360W	P54058-001

Heatsink spare parts

Customer self repair: Optional

Description	Spare part number
Standard heatsink	P59976-001
High-performance heatsink	P59965-001

Storage controller spare parts

Customer self repair: Mandatory

Description	Spare part number
HPE Smart Array SR932i-p Gen11 Controller	P47623-001
HPE Smart Array MR408i-o Gen11 Controller	P58543-001
HPE Smart Array MR416i-p Gen11 Controller	P47951-001
HPE Smart Array MR416i-o Gen11 Controller	P47952-001

PCI riser board spare parts

Customer self repair: Optional

Description	Spare part number
Riser, 1U (low profile)	P60408-001
Riser, 1U PCIe x16	P59443-001

OCP NIC 3.0 adapter spare parts

Customer self repair: Mandatory

Description	Spare part number
OCP 2-port 10Gb BASE-T adapter	P13640-001

For more information on the removal and replacement procedures, see: .

System board spare parts

Customer self repair: Optional

Description	Spare part number
-------------	-------------------

System board with sub-pan, DIMM guards, and air baffle	P60410-001
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System battery spare part

Customer self repair: **Mandatory**

Description	Spare part number
-------------	-------------------

3.3-V lithium battery coin (CR2032)	319603-001
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For more information on the removal and replacement procedures, see .

Thermal grease spare part

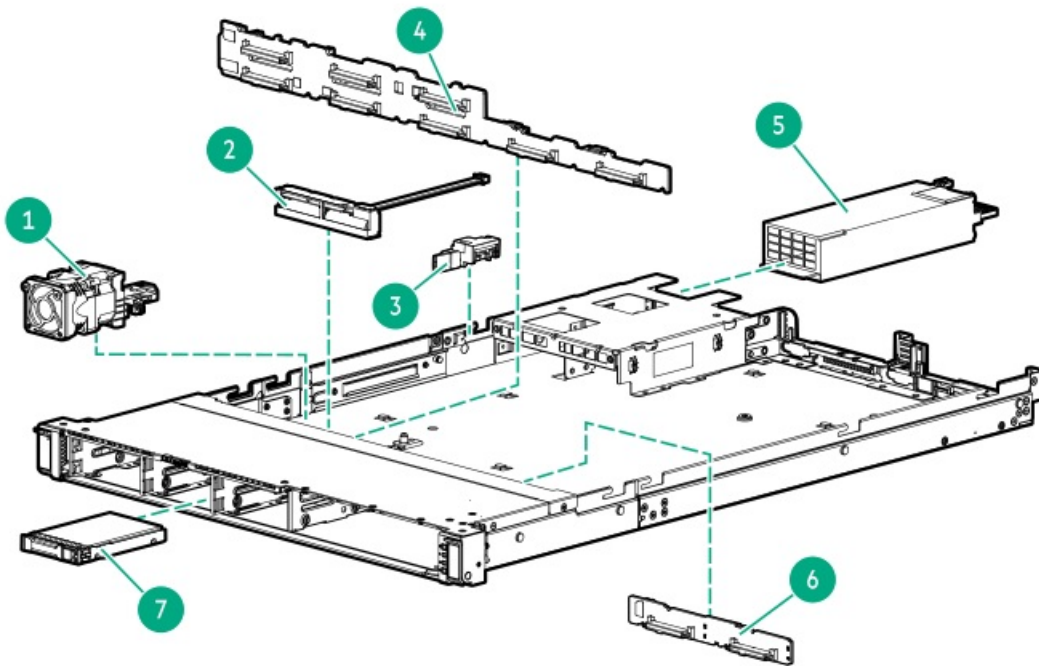
Customer self repair: **Mandatory**

Description	Spare part number
-------------	-------------------

2.0g thermal grease (1g per processor)	777298-001
--	------------

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	Battery and capacitor spare parts
3	Chassis intrusion detection spare part
4	8 SFF drive backplane spare parts
5	Power supply spare parts
6	2 SFF drive backplane spare parts
7	Hot-plug drive spare parts

Subtopics

[Fan spare parts](#)

[Battery and capacitor spare parts](#)

[Chassis intrusion detection spare part](#)

[Drive backplane spare parts](#)

[Power supply spare parts](#)

[Hot-plug drive spare parts](#)

[Cable kit spare parts](#)

Fan spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Standard fan	P53226-001
Max performance fan for Gen11	P53227-001

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

Chassis intrusion detection spare part

Customer self repair: Mandatory

Description	Spare part number
Chassis intrusion detection spare part	P52442-001

Drive backplane spare parts

Customer self repair: Mandatory

Description	Spare part number
2 SFF 24G x4 U.3 NVMe / SAS / SATA UBM3 BC	P39783-001
2 SFF 24G x4 U.3 NVMe / SAS / SATA UBM6 BC	P62071-001
8 SFF 24G x1 U.3 NVMe / SAS / SATA UBM3 BC	P40444-001
8 SFF 24G x4 U.3 NVMe / SAS / SATA UBM3 BC	P40445-001
8 SFF 24G x1 U.3 NVMe / SAS / SATA UBM6 BC	P62072-001
8 SFF 24G x4 U.3 NVMe / SAS / SATA UBM6 BC	P62066-001

Power supply spare parts

Customer self repair: Mandatory

Description	Spare part number
800W Flex-slot 48VDC	866728-001
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

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
8SFF U.3 to OCP 2 (port 1)	P61248-001
8SFF U.3 to OCP 1 (port 2)	P61249-001
2SFF U.3 to MLB Proc 1	P61250-001
8SFF U.3 to MLB Proc 2, P2	P61251-001
8SFF U.3 to MLB Proc 1, P2	P61252-001
8SFF U.3 to MLB Proc 1	P61253-001
8SFF BP, P1/P2 to Pri riser	P61254-001
8SFF BP, P3/P4 to Pri riser	P61255-001
2SFF x4 BP to OCP1	P65256-001
8SFF BP to OCP1	P65257-001
2SFF U3/U2 to Proc 1, Proc 2	P61258-001
2SFF NVMe/MLB MCIO	P61259-001
DA SATA 8SFF x1 to MLB Proc 1	P61260-001
MB to 8SFF BP PWR	P61264-001

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 contact the Hewlett Packard Enterprise Support Center and a technician will help you over the telephone or by electronic means. 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 facultativa. 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 Teilekatalog sind diese Teile mit „No“ bzw. „Nein“ gekennzeichnet.

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

Weitere Informationen über das Hewlett Packard Enterprise Customer Self Repair Programm erhalten Sie von Ihrem Servicepartner vor Ort.

Parts-only Warranty Service (Garantieservice ausschließlich für Teile)

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

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

Reparaciones del propio cliente

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

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

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

Según la disponibilidad y la situación geográfica, los componentes CSR se enviarán para que lleguen a su destino al siguiente día laborable. Si

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

Para obtener más información acerca del programa de Reparaciones del propio cliente de Hewlett Packard Enterprise, póngase en contacto con su proveedor de servicios local.

Servicio de garantía exclusivo de componentes

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

Para este servicio de garantía exclusivo de componentes, es obligatoria la sustitución de componentes por parte del usuario (CSR). Si solicita a Hewlett Packard Enterprise que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.

Customer Self Repair

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

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

Garanteservice "Parts Only"

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

Voor de Parts Only garanteservice 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

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

針對僅限零件的保固服務，CSR 零件替換是強制性的。如果您要求 Hewlett Packard Enterprise 更換這些零件，Hewlett Packard Enterprise 將會向您收取此服務所需的外出費用與勞動成本。

고객 셀프 수리

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

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Removal and replacement procedures

Subtopics

Required tools

Safety considerations

Preparation procedures

Removing and replacing the front bezel

Removing and replacing the cable management arm

Removing and replacing the enclosure rails

Removing the hard drive blank

Removing and replacing a hot-plug E3.S drive

[Removing a hot-plug NVMe drive](#)

[Removing and replacing an M.2 SSD](#)

[Removing and replacing a power supply blank](#)

[Removing and replacing a hot-plug AC power supply](#)

[Removing and replacing a fan blank](#)

[Removing and replacing a fan](#)

[Removing and replacing a PCIe blank](#)

[Removing and replacing a riser cage](#)

[Removing and replacing an expansion card](#)

[Removing and replacing a primary riser card](#)

[Removing and replacing a GPU in the riser cage](#)

[Removing and replacing the serial port](#)

[Removing and replacing the chassis intrusion detection switch](#)

[Removing and replacing storage controllers](#)

[Removing and replacing a DIMM](#)

[Removing and replacing an energy pack](#)

[Removing and replacing a heatsink](#)

[Removing and replacing a processor](#)

[Removing and replacing the system board](#)

[Removing and replacing the SFF optical disk drive/display port/USB](#)

[Removing and replacing the Systems Insight Display power module](#)

[Removing and replacing the 8 SFF drive backplane](#)

[Removing and replacing the system battery](#)

[Trusted Platform Module 2.0](#)

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.

Subtopics

[Electrostatic discharge](#)

[Server warnings and cautions](#)

[Rack warnings and cautions](#)

[Symbols on equipment](#)

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:

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



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

**CAUTION:**

To prevent damage to electrical components, properly ground the server before beginning any installation, removal, or replacement procedure. Improper grounding can cause [electrostatic discharge](#).

**CAUTION:**

To avoid data loss, Hewlett Packard Enterprise recommends that you [back up all server data](#) before installing or removing a hardware option, or performing a server maintenance or troubleshooting procedure.



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 and cautions

**WARNING:**

When all components are removed, the server weighs (). When all components are installed, the server can weigh up to ().

Before configuring your rack solution, be sure to check the rack manufacturer weight limits and specifications. Failure to do so can result in physical injury or damage to the equipment and the facility.

**WARNING:**

The server is heavy. To reduce the risk of personal injury or damage to the equipment, do the following:

- 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. The server weighs more than (), so at least two people must lift the server into the enclosure together. An additional person may be required to help align the server if the server is installed higher than chest level.
- Use caution when installing the server in or removing the server from the enclosure.
- Adequately stabilized the enclosure before extending a component outside the enclosure. Extend only one component at a time. A enclosure may become unstable if more than one component is extended.
- Do not stack anything on top of rail-mounted component or use it as a work surface when extended from the rack.

**WARNING:**

To reduce the risk of personal injury or damage to the equipment, be sure that:

- The rack has anti-tip measures in place. Such measures include floor-bolting, anti-tip feet, ballast, or a combination as specified by the rack manufacturer and applicable codes.
- The leveling jacks (feet) are extended to the floor.
- The full weight of the rack rests on the leveling jacks (feet).
- The stabilizing feet are attached to the rack if it is a single-rack installation.
- The racks are coupled together in multiple rack installations.

**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.

**CAUTION:**

Always plan the rack installation so that the heaviest item is on the bottom of the rack. Install the heaviest item first, and continue to populate the rack from the bottom to the top.

**CAUTION:**

Before installing the server in a enclosure, be sure to properly scope the limitations of the enclosure. Before proceeding with the installation, consider the following:

- You must fully understand the static and dynamic load carrying capacity of the enclosure and be sure that it can accommodate the weight of the server .
- Be sure sufficient clearance exists for cabling, installation and removal of the server , and movement of the rack doors.

Symbols on equipment

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



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

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



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



WARNING:

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

此符號表明存在危險電路或觸電的危險。所有維修工作應由具有相關資格的人員來完成。

警告：為了減少觸電造成人身傷害的危險，請不要打開此外殼。所有維護、升級和維修工作都應由具有相關資格的人員來完成。



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



WARNING:

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

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



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



WARNING:

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

RJ-45 插孔上的該符號指示網絡接口連接。

警告：為了減少觸電、火災或設備損壞的危險，不要將電話或電信連接設備插入此插孔。



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



WARNING:

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

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



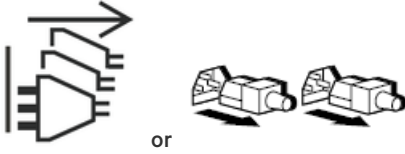
This symbol indicates the presence of a moving fan blade. If the spinning blades are contacted, the potential for injury exists.



WARNING:

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

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



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



WARNING:

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

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



Weight in kg.

Weight in lb.

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



WARNING:

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

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



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

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



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



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



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



WARNING:

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

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.

Subtopics

[Power up the server](#)

[Power down the server](#)

[Extend the server from the rack](#)

[Remove the server from the rack](#)

[Remove the access panel](#)

[Install the access panel](#)

[Releasing the cable management arm](#)

Power up the server

About this task

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.



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 activates a controlled shutdown of applications and the OS before the server enters standby mode. It can also activate a shutdown behavior governed by an OS configuration or policy.
- 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

Prerequisites

Before you perform this procedure, review the:

- [Rack warnings and cautions](#)
- [Server warnings and cautions](#)

About this task

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.



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.

4. Extend the server on the rack rails until the server rail-release latches engage.
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

Prerequisites

Before you perform this procedure, review the:

- [Rack warnings and cautions](#)
- [Server warnings and cautions](#)

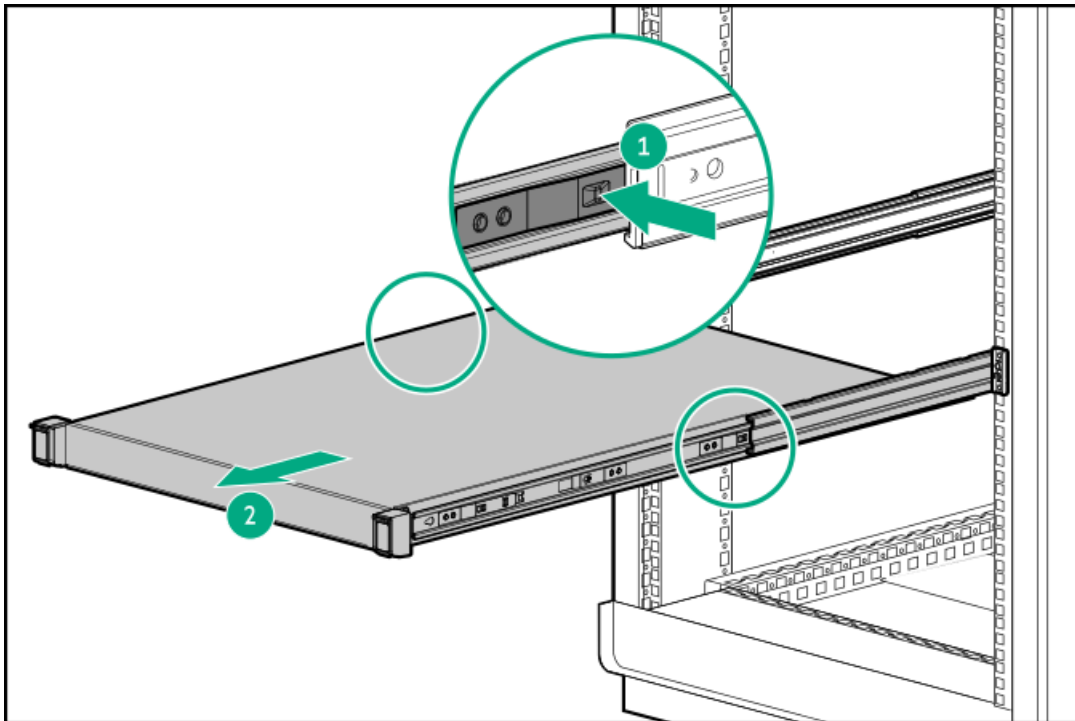
About this task



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

Procedure

1. [Power down the server.](#)
2. [Release the cable management arm.](#)
3. Disconnect the cabling from the rear panel.
4. [Extend the server from the rack.](#)
5. Remove the server from the rack:



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

Remove the access panel

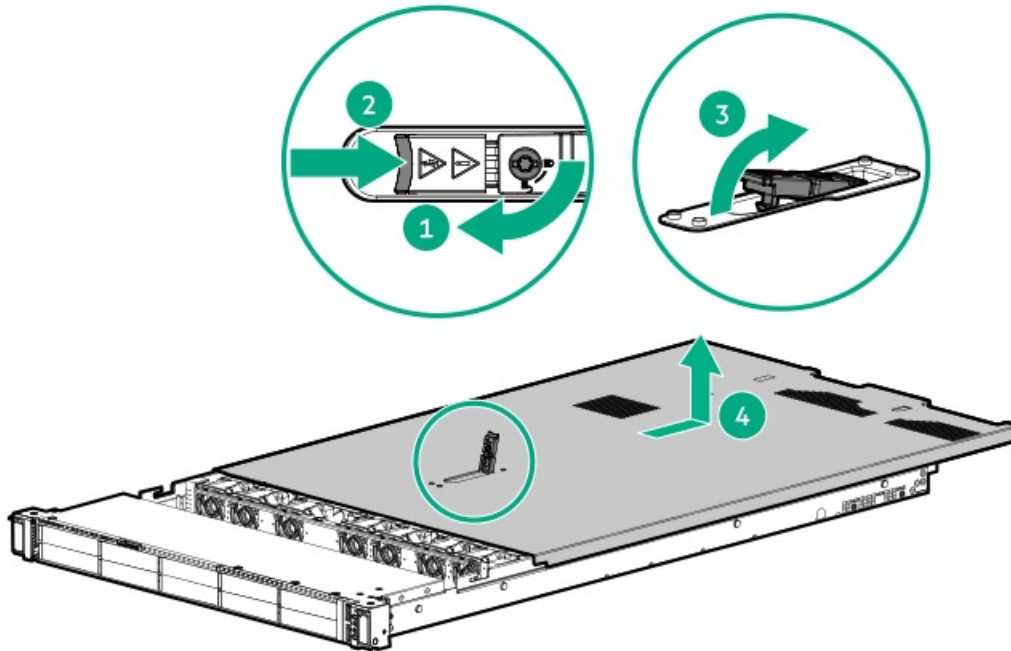
About this task

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.



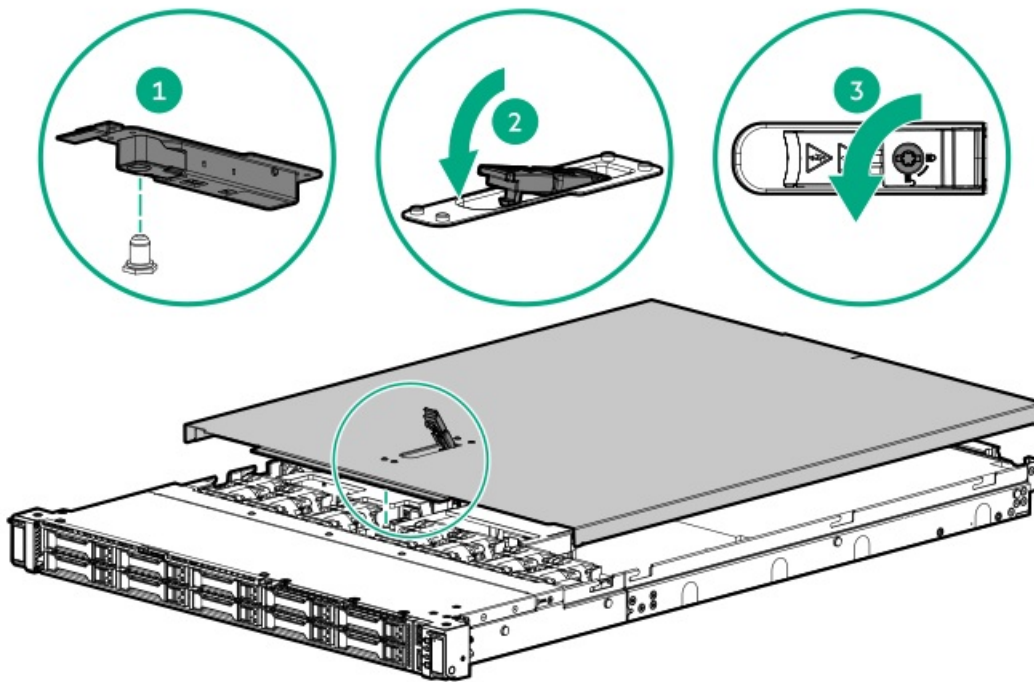
Install the access panel

Prerequisites

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

Procedure

1. With the access panel latch open, insert the guide pin on the chassis through the hole on the bottom side of the latch.
2. Close the access panel latch.
The access panel slides to the closed position.
3. Lock the access panel latch.

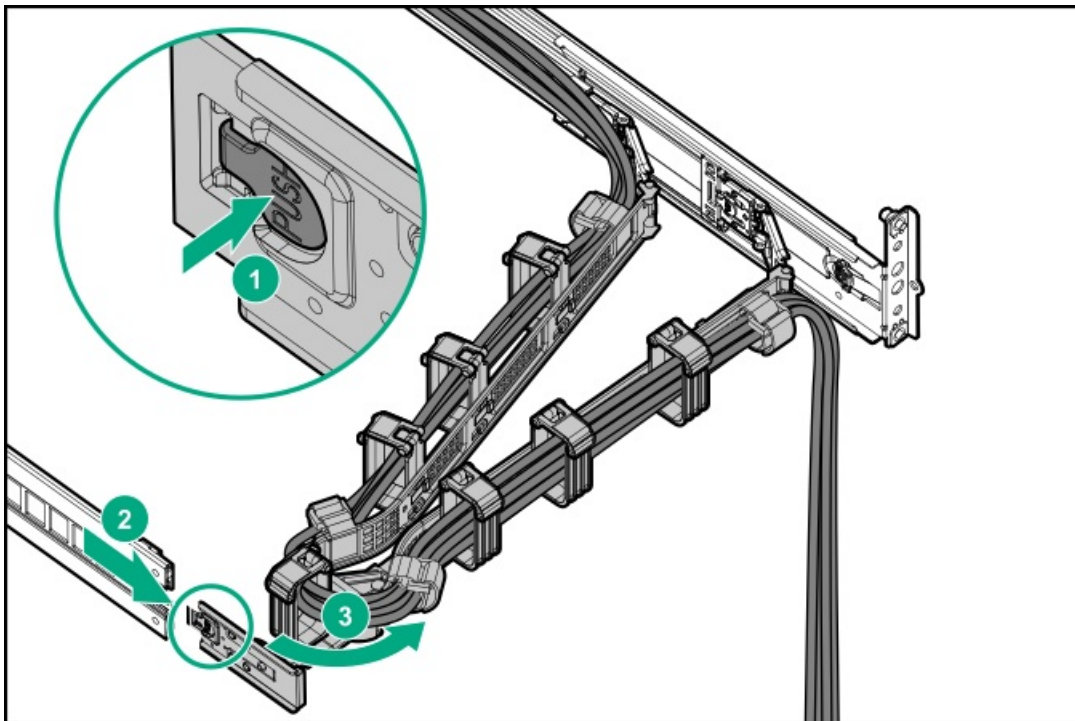


4. Perform the post-installation or maintenance steps required by the procedure that necessitates the removal of the access panel.

Releasing the cable management arm

About this task

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

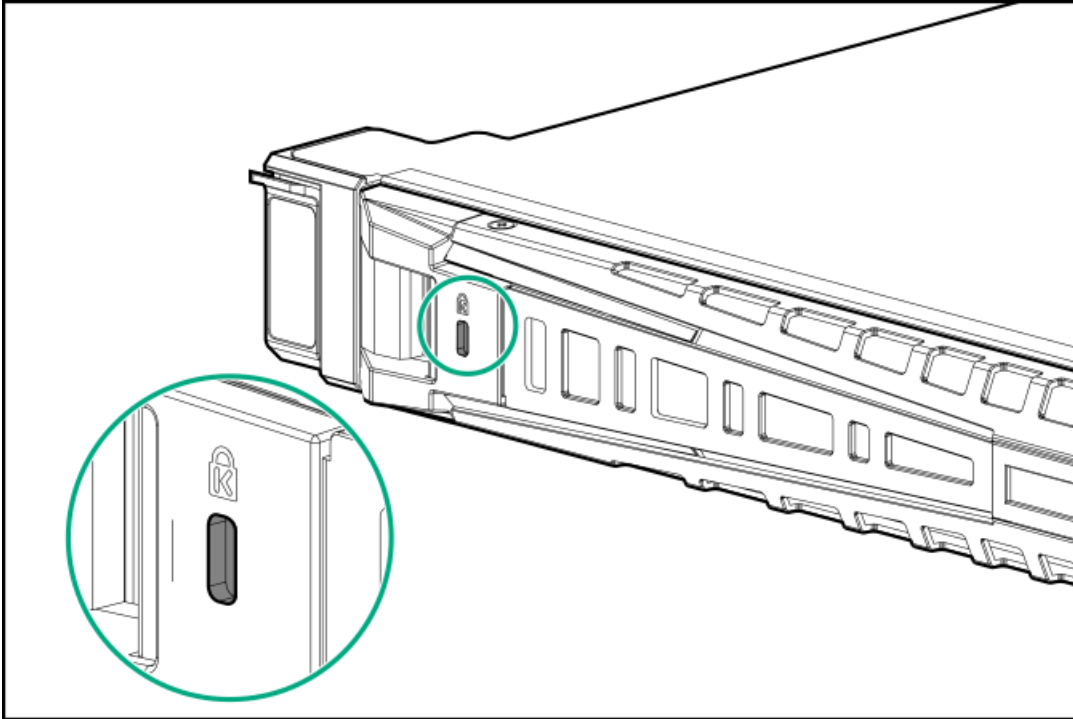


Removing and replacing the front bezel

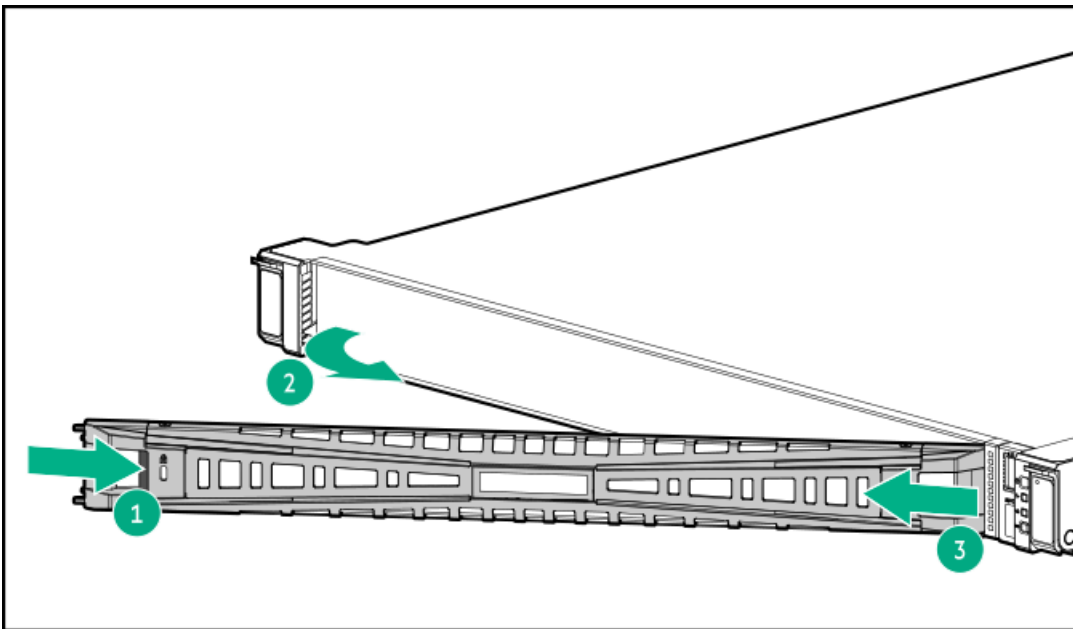
Procedure

1. If installed, remove the Kensington security lock.

For more information, see the lock documentation.



2. Press the bezel release latch (callout 1), and then pivot the bezel open (callout 2).
3. Release the right side of the bezel from the front panel (callout 3).



To replace the front bezel, reverse the removal procedure.

Removing and replacing the cable management arm



About this task

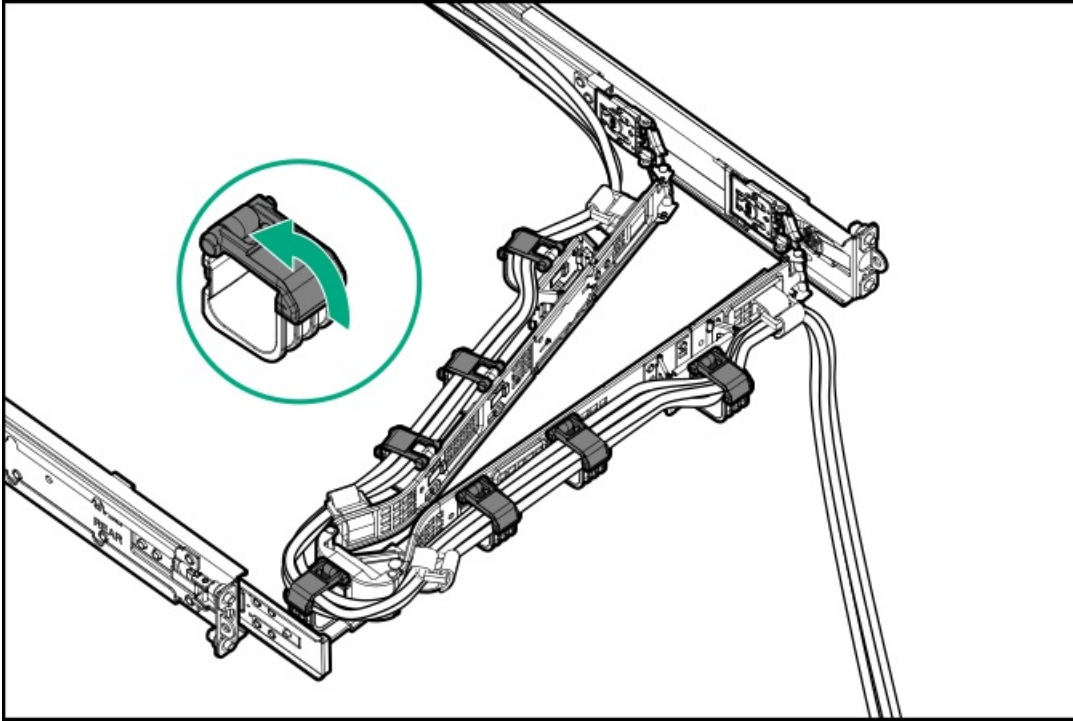


CAUTION:

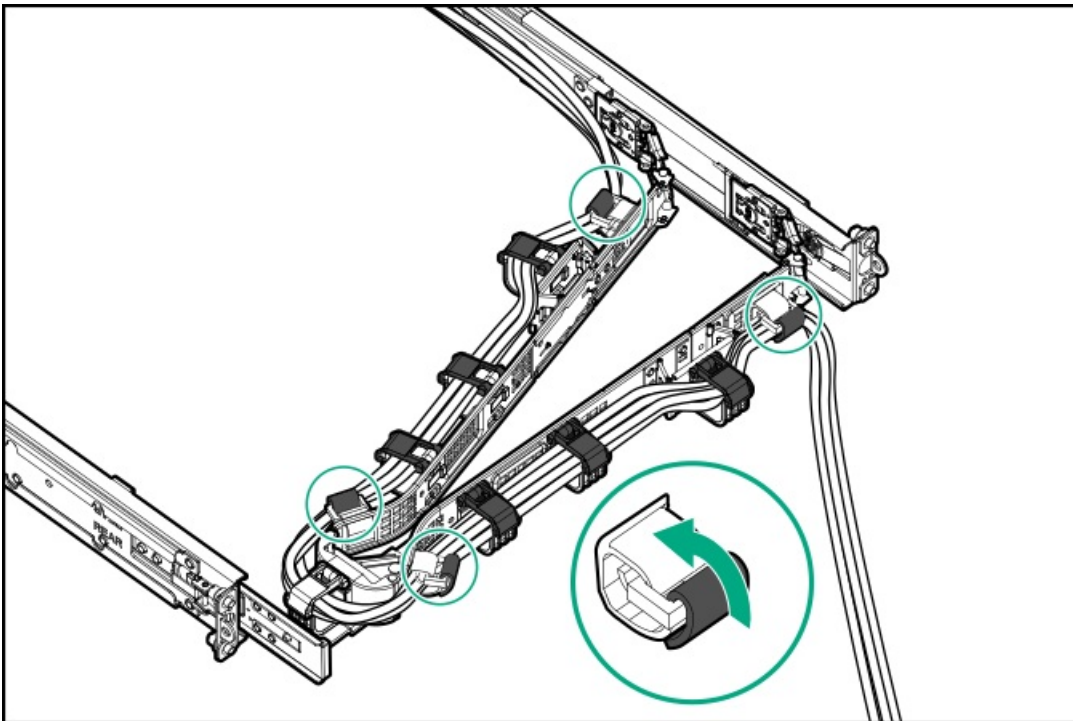
Support the CMA during the removal and replacement procedures. Do not allow the CMA to hang by its own weight during the procedure.

Procedure

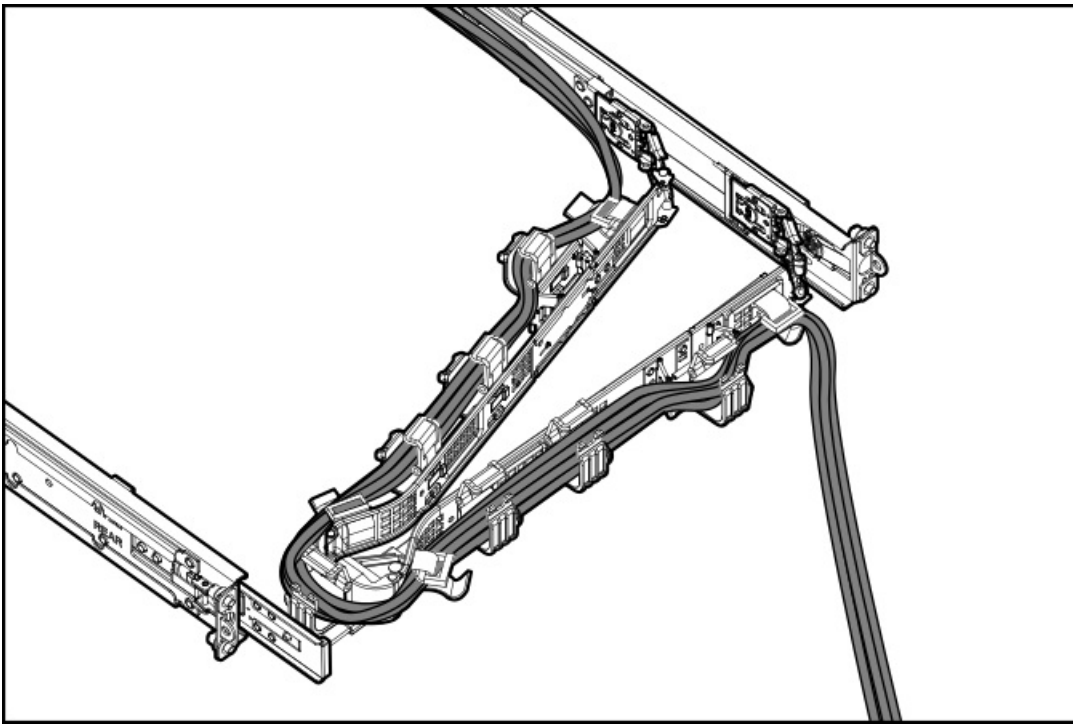
1. Open the cable clamps.



2. (Optional) If your CMA has cable straps, unwrap the straps.

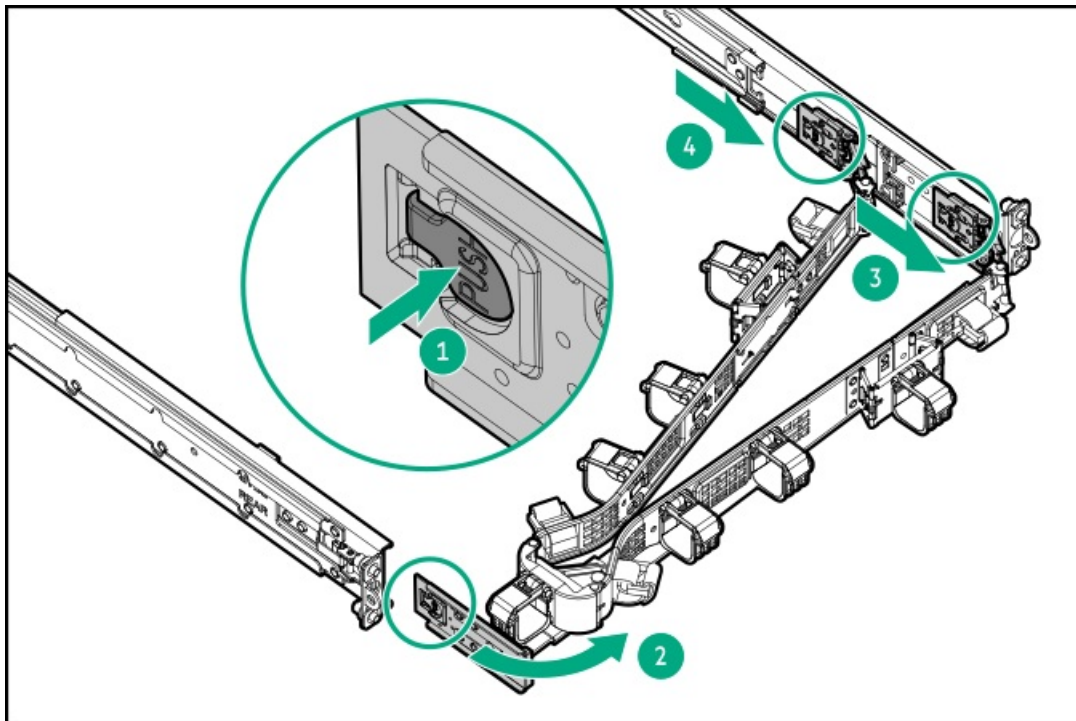


3. Remove the peripheral cables and power cords from the CMA.



4. Remove the cable management arm:

- a. Press and hold the blue **PUSH** button on the retention bracket (callout 1).
- b. Swing the arm away from the mounting rail (callout 2).
- c. Press and hold the blue **PUSH** buttons on the outer and inner tabs and detach from the enclosure rails (callouts 3 and 4).



Results

To replace the component, reverse the removal procedure.

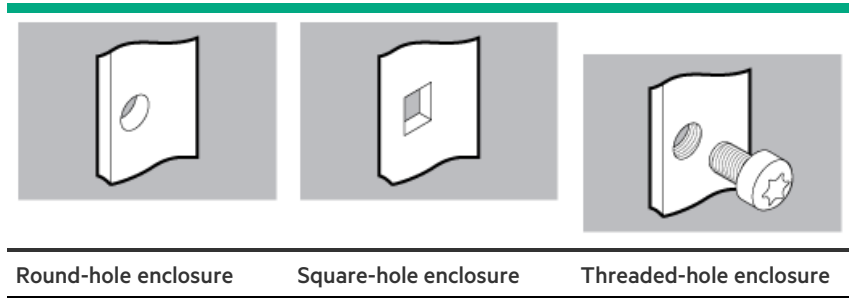
Removing and replacing the enclosure rails

Prerequisites

If you are replacing the enclosure mounting rails from a threaded-hole enclosure, make sure that you have a T-25 Torx screwdriver available.

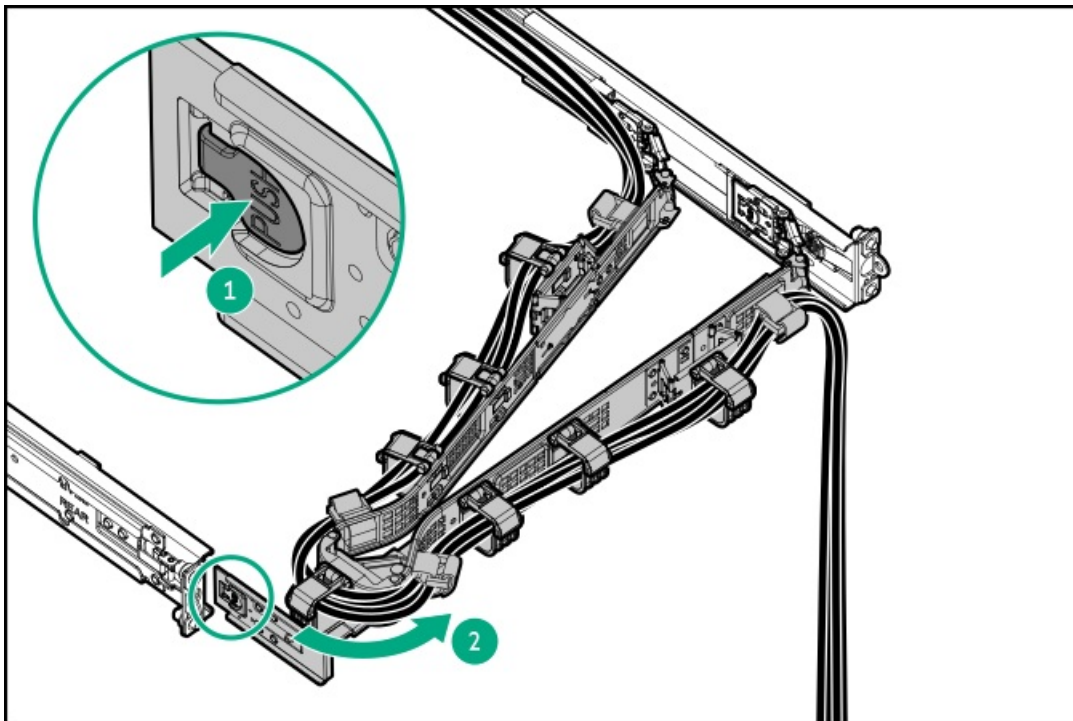
About this task

The illustrations used in this procedure show an icon on the upper right corner of the image. This icon indicates whether the action shown in the image is for a round-hole, square-hole, or a threaded-hole enclosure.



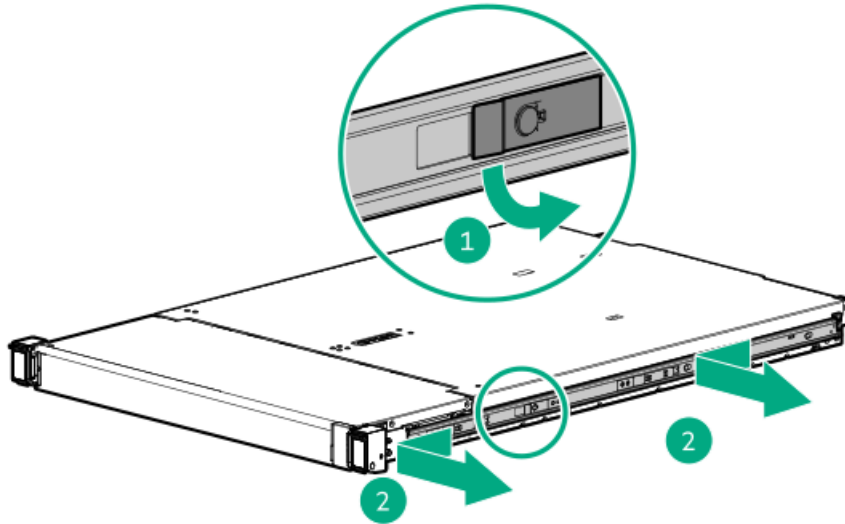
Procedure

1. Power down the server.
2. If installed, open the cable management arm.



3. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
4. Disconnect all peripheral cables from the server.
5. Remove the server from the enclosure.
6. Place the server on a flat, level surface.
7. To remove the sliding rails, do the following:

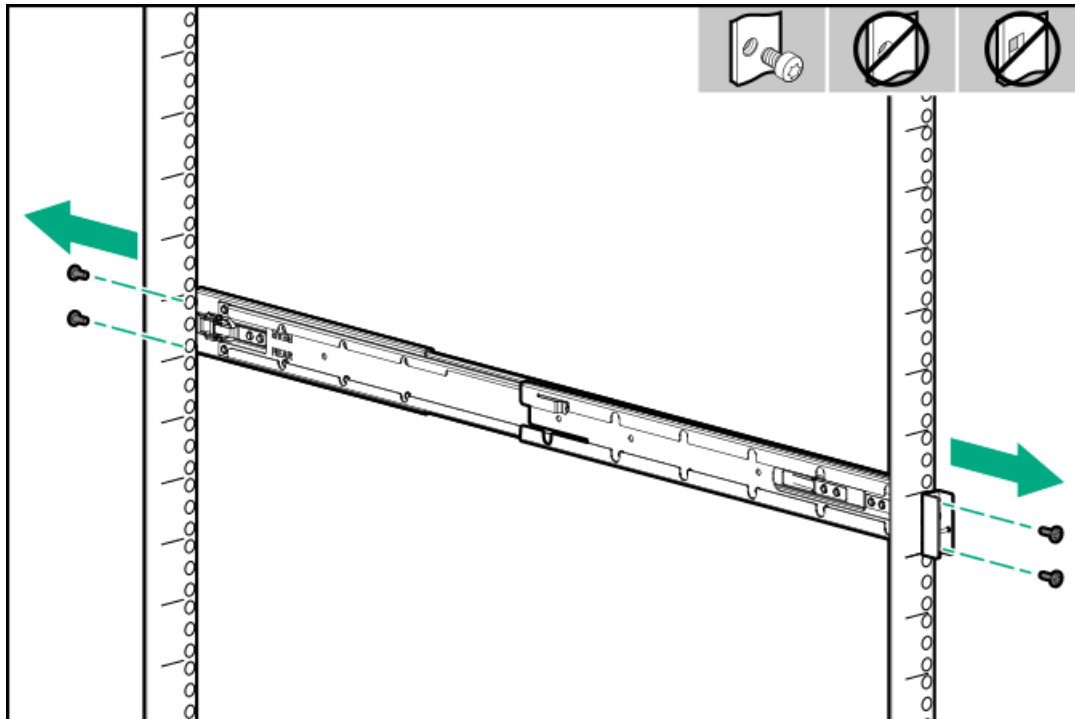
- a. Pull and hold the release latch (callout 1).
- b. Slide the rail towards the front panel and pull it from the server (callout 2).



- c. Repeat steps a and b to remove the other rail.

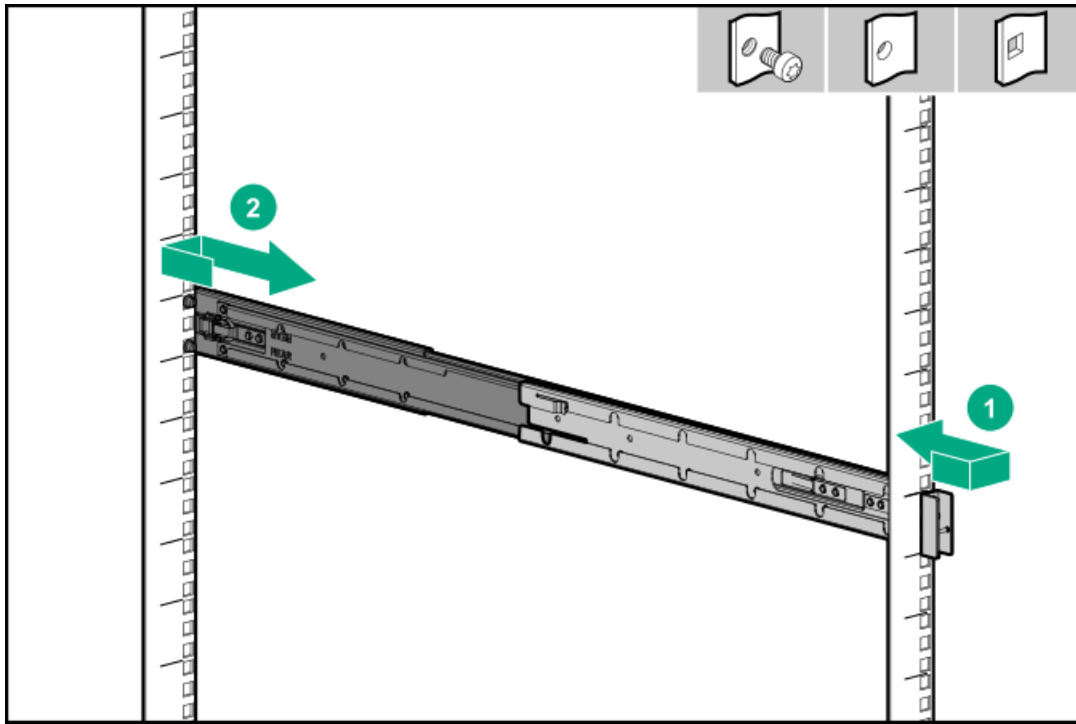
8. To remove the enclosure mounting rails, do the following:

- a. In a threaded-hole enclosure, remove the rail screws.



- b. Disengage the rail pins from the enclosure columns (callouts 1 and 2).





c. Repeat steps a and b to remove the other enclosure rail.

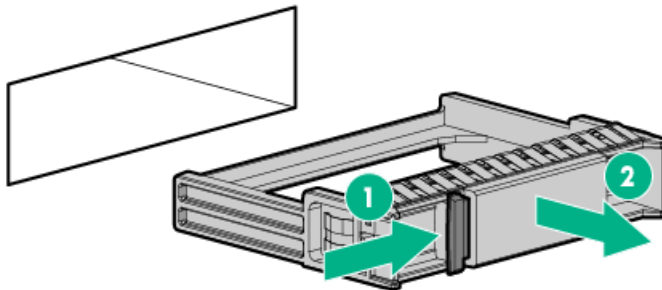
Results

To replace the component, reverse the removal procedure.

Removing the hard drive blank

About this task

Remove the component as indicated.



Removing and replacing a hot-plug E3.S drive

About this task

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.

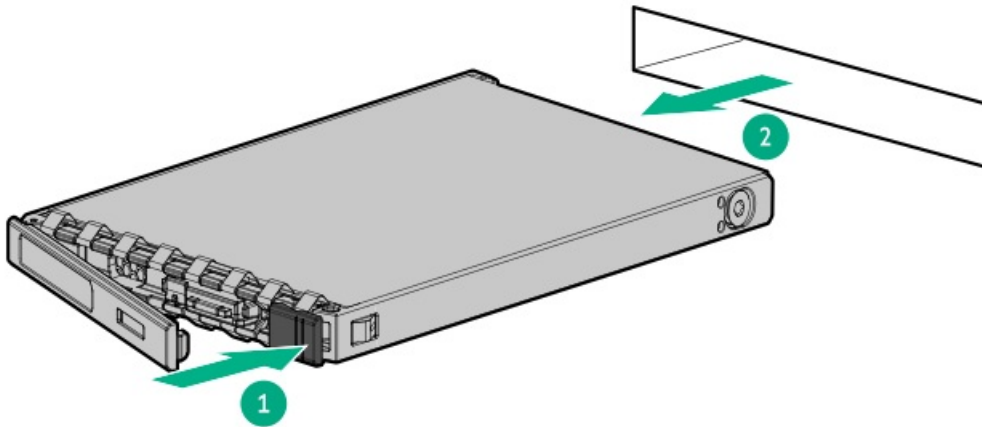


CAUTION:

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

Procedure

1. Back up all server data.
2. If installed, remove the front bezel.
3. Observe the drive LED status and determine if the drive can be removed.
4. Remove the drive.



Results

To replace the component, reverse the removal procedure.

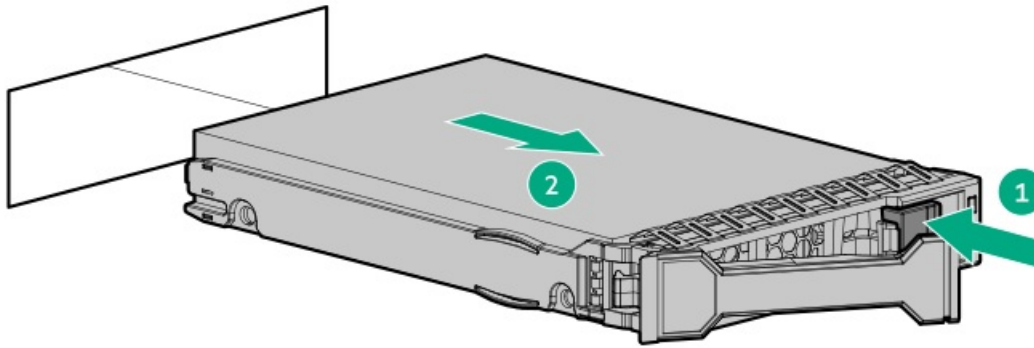
Removing a hot-plug NVMe drive

About this task

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

Procedure

1. Determine the status of the drive from the hot-plug drive LED definitions.
2. Back up all server data on the drive.
3. Remove the drive.



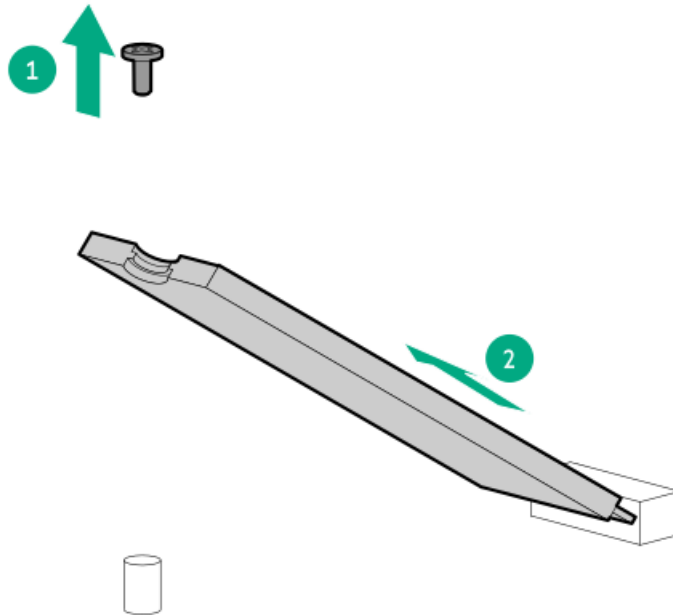
Removing and replacing an M.2 SSD

About this task

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.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a power supply blank

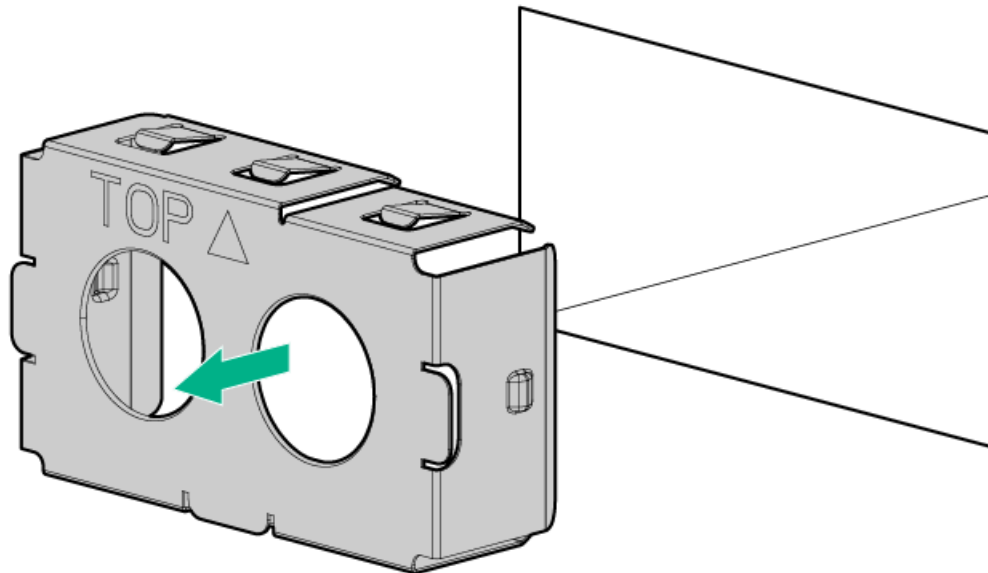
About this task

WARNING: To reduce the risk of personal injury from hot surfaces, allow the power supply, power supply blank, or dual slot power supply adapter 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

Prerequisites

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

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

About this task



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.



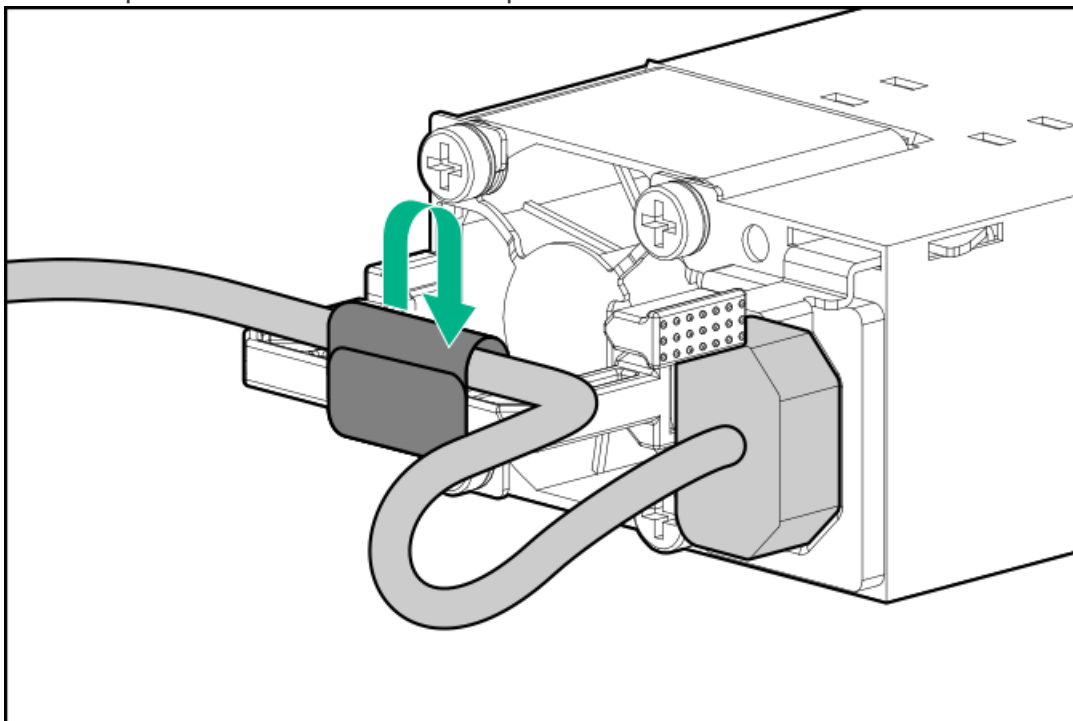
CAUTION: Mixing different types of power supplies in the same server might:

- Limit or disable some power supply features including support for power redundancy.
- Cause the system to become unstable and might shut down.

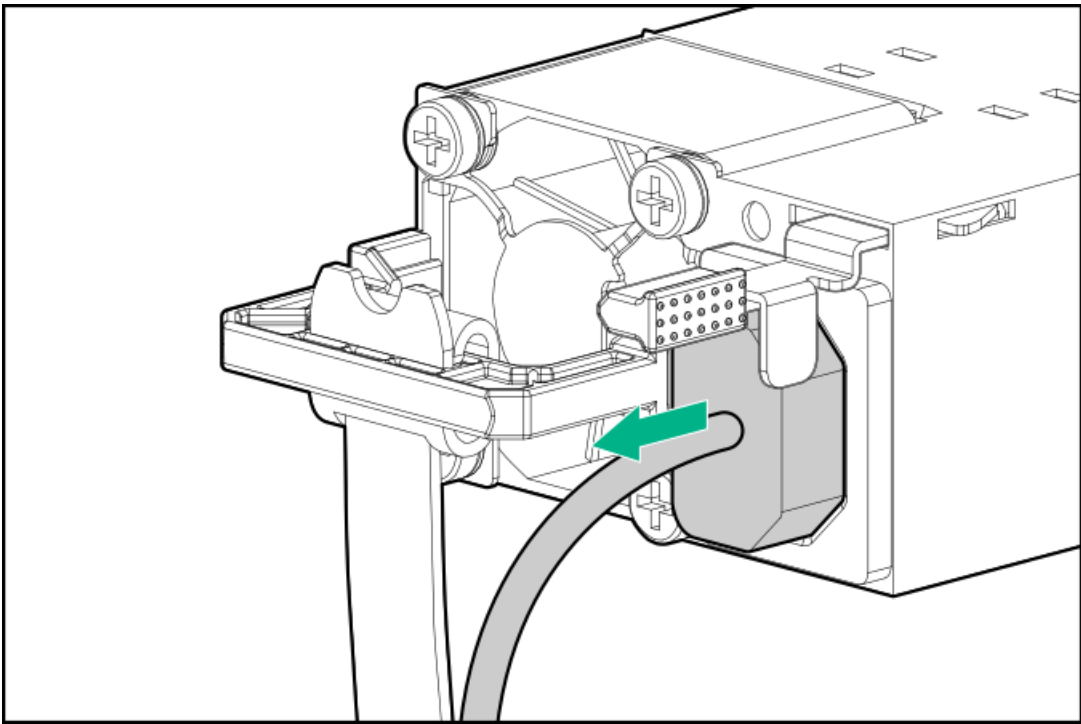
To ensure access to all available features, all power supplies in the same server should have the same output and efficiency ratings. Verify that all power supplies have the same part number and label color.

Procedure

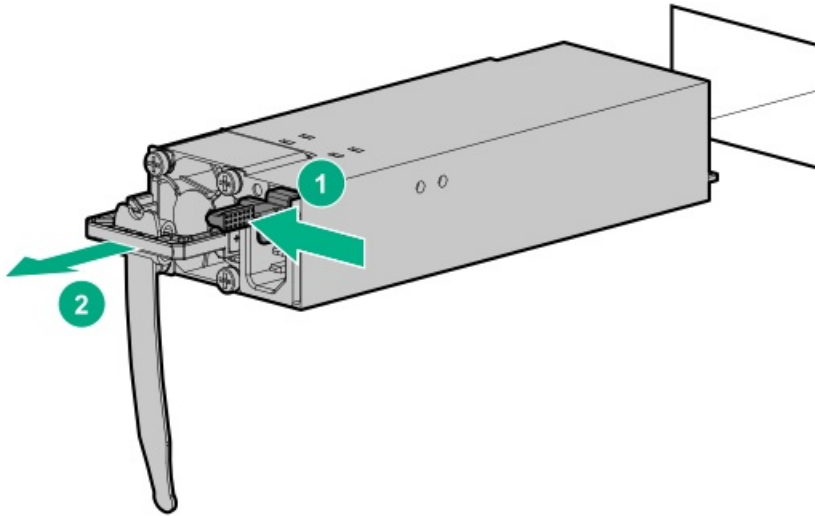
1. Release the cable management arm.
2. If the server is using a single power supply only, remove all power from the server:
 - a. Back up all server data.
 - b. Power down the server.
 - c. Disconnect all peripheral cables from the server.
3. Release the power cords from the strain relief straps.



4. Disconnect the power cord from the power supply.



5. Remove the power supply.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a fan blank

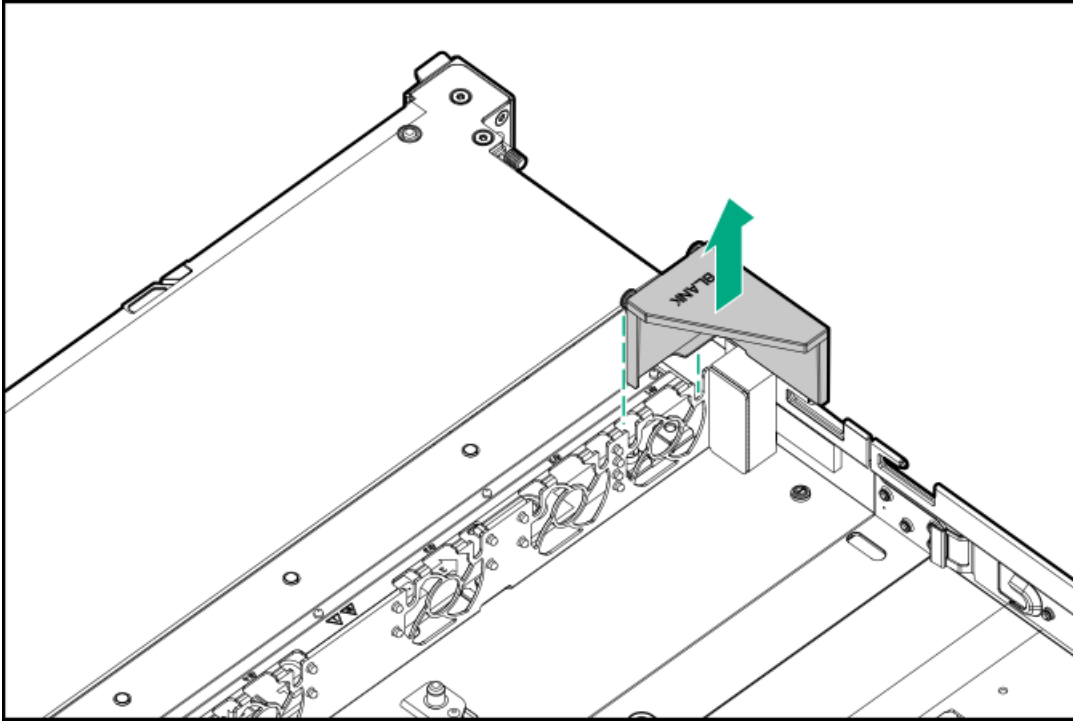
About this task

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.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a fan

About this task

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.

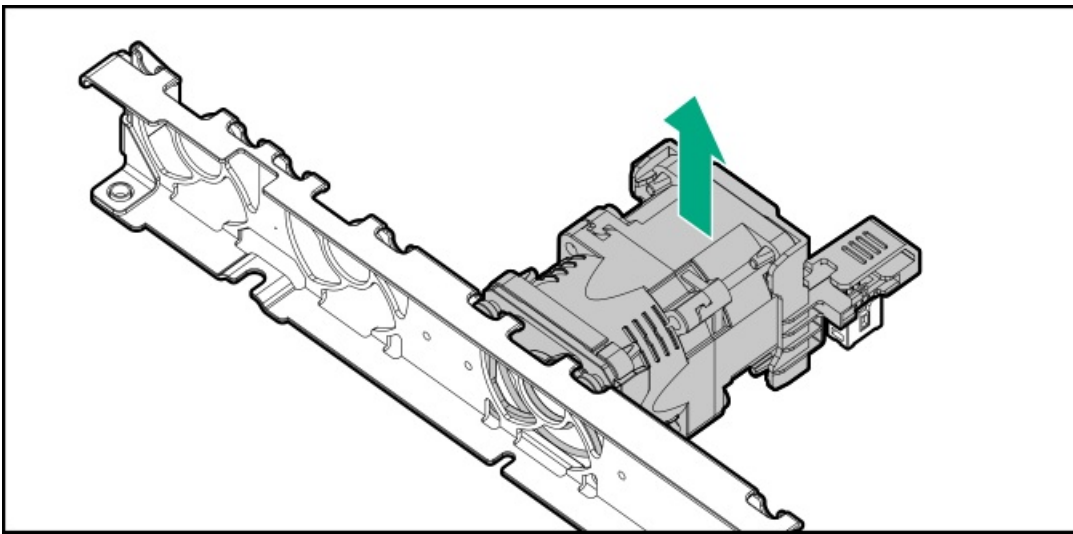
IMPORTANT: For optimum cooling, install fans in all primary fan locations.

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.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a PCIe blank

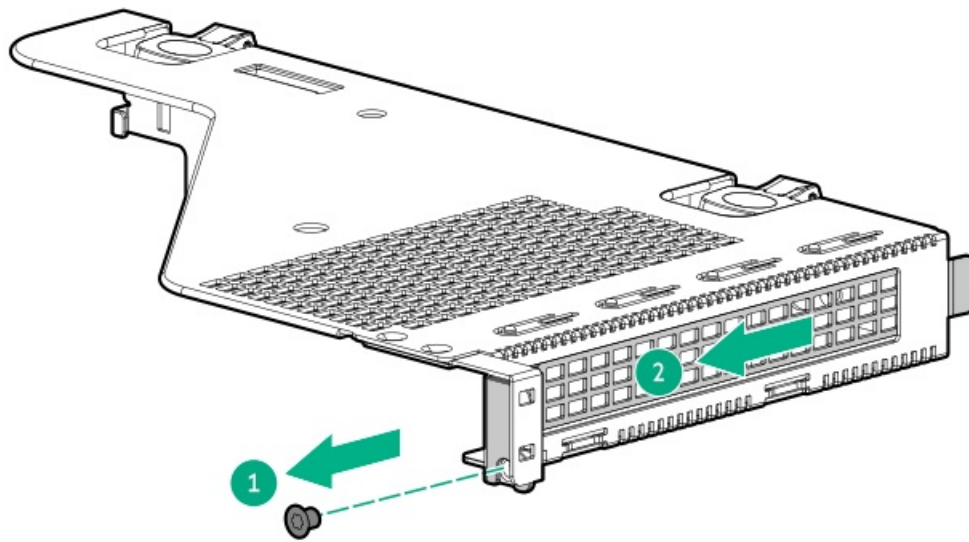
About this task

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

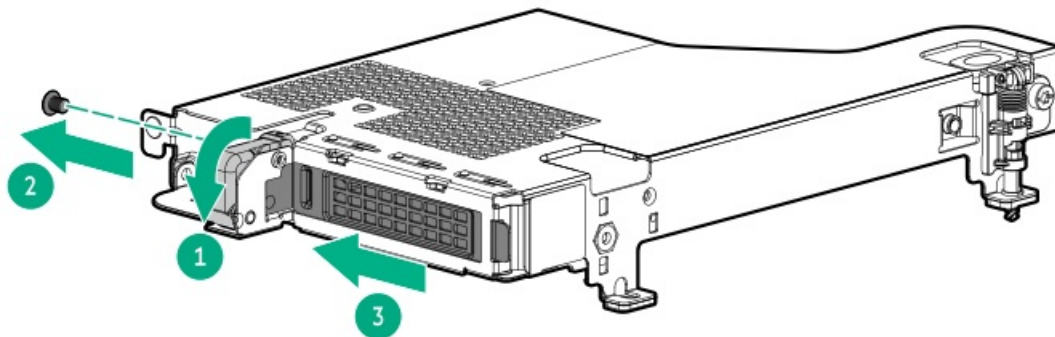
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove the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

To remove blanks from the primary riser:



To remove blanks from the secondary riser:

- a. Lift the latch.
- b. Remove the screw securing the PCIe blank.
- c. Remove the PCIe blank.



Results

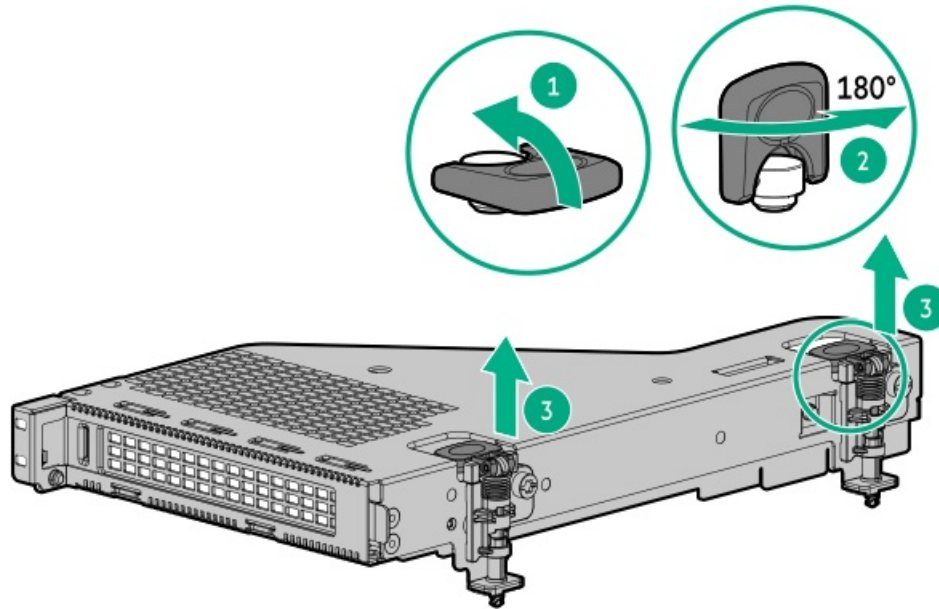
To replace the component, reverse the removal procedure.

Removing and replacing a 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.



Results

To replace the component, reverse the removal procedure.

Removing and replacing an expansion card

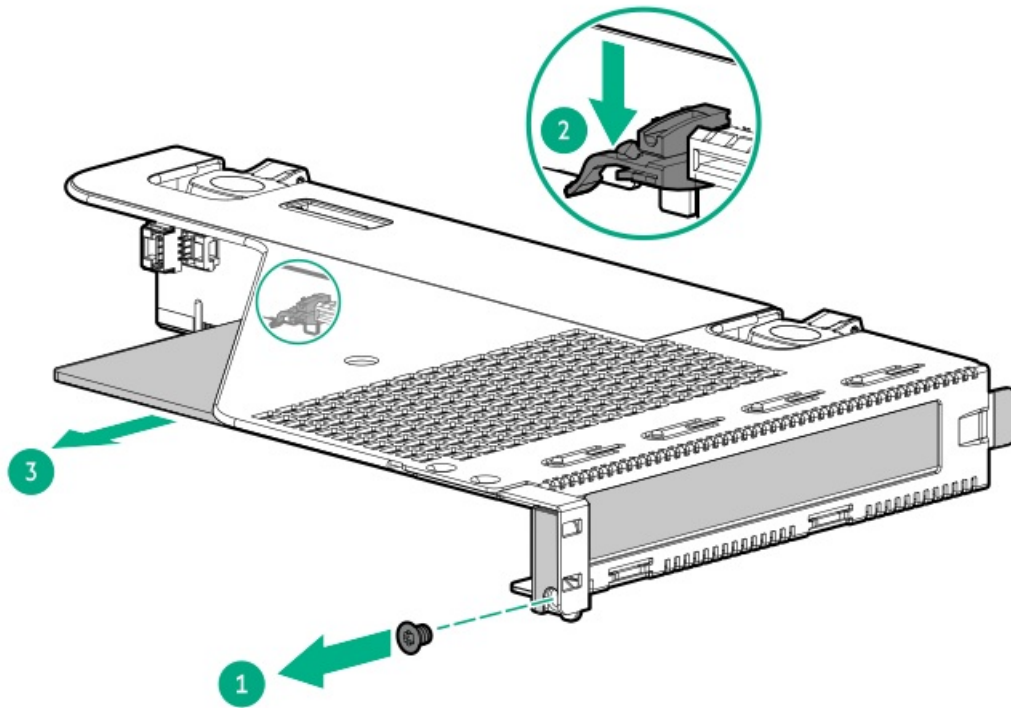
About this task

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. Remove the expansion card from the riser cage.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a primary riser card

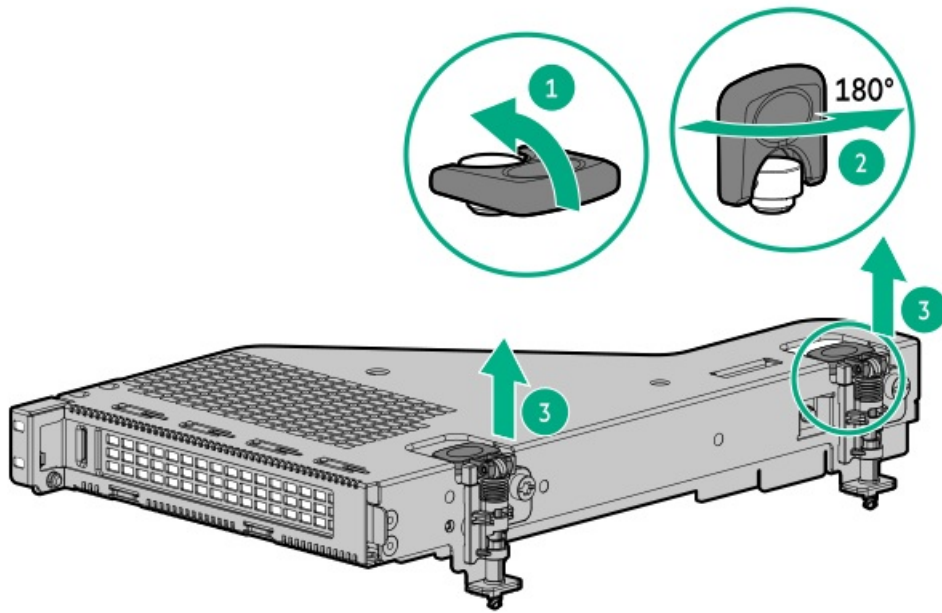
About this task

Secondary risers are spared with the riser cage.

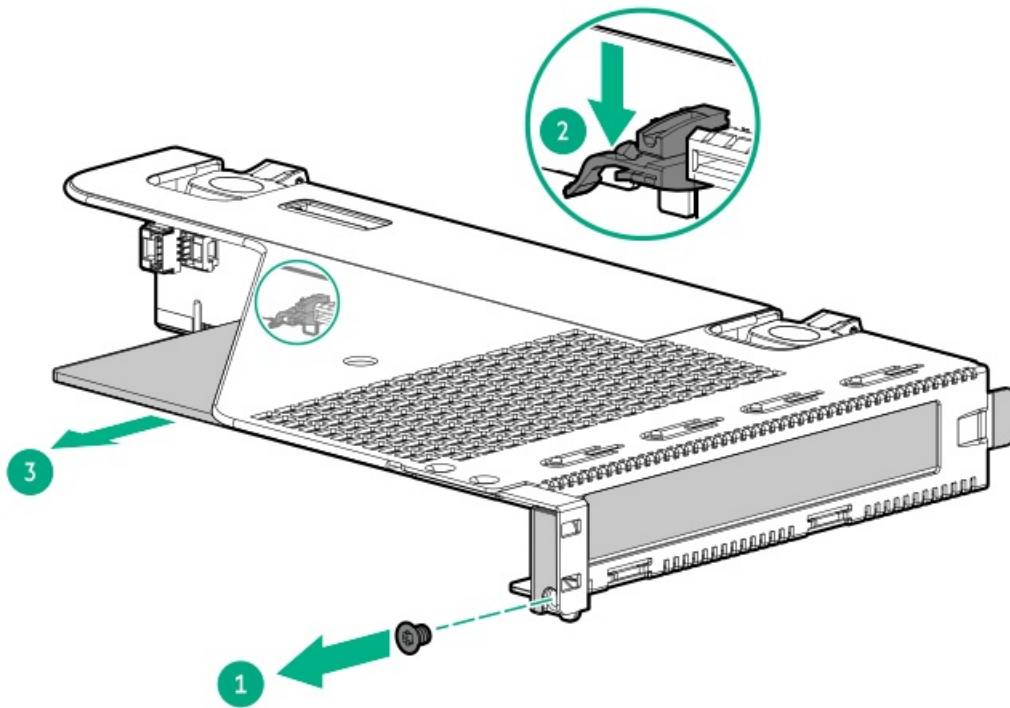
CAUTION: To prevent damage to the server or expansion boards, power down the server and remove all AC power cords before removing or installing the PCI riser cage.

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.

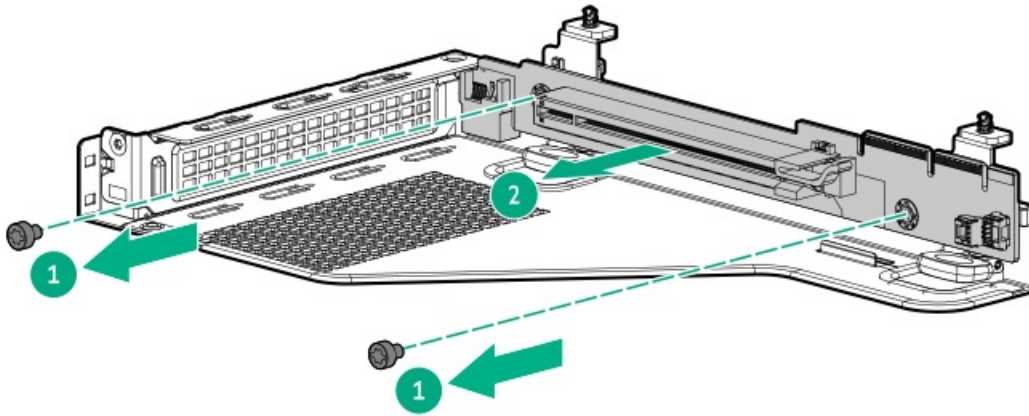


6. Remove all expansion cards.



7. Remove the riser.





Results

To replace the component, reverse the removal procedure.

Removing and replacing a GPU in the riser cage

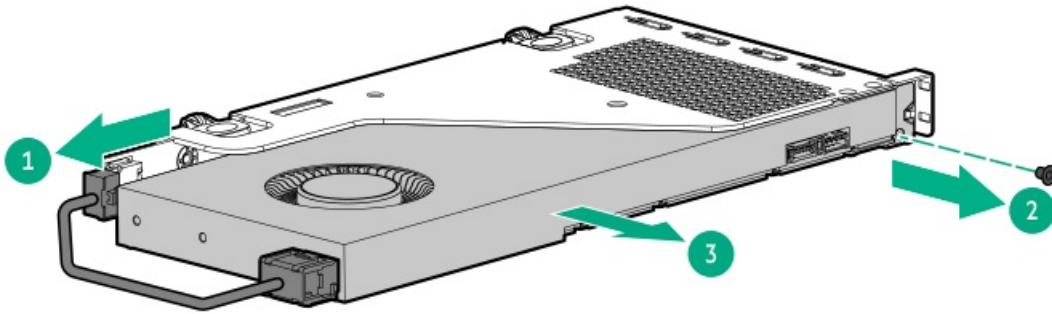
About this task



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

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 applicable, disconnect the GPU power cable, and then remove the GPU from the riser.



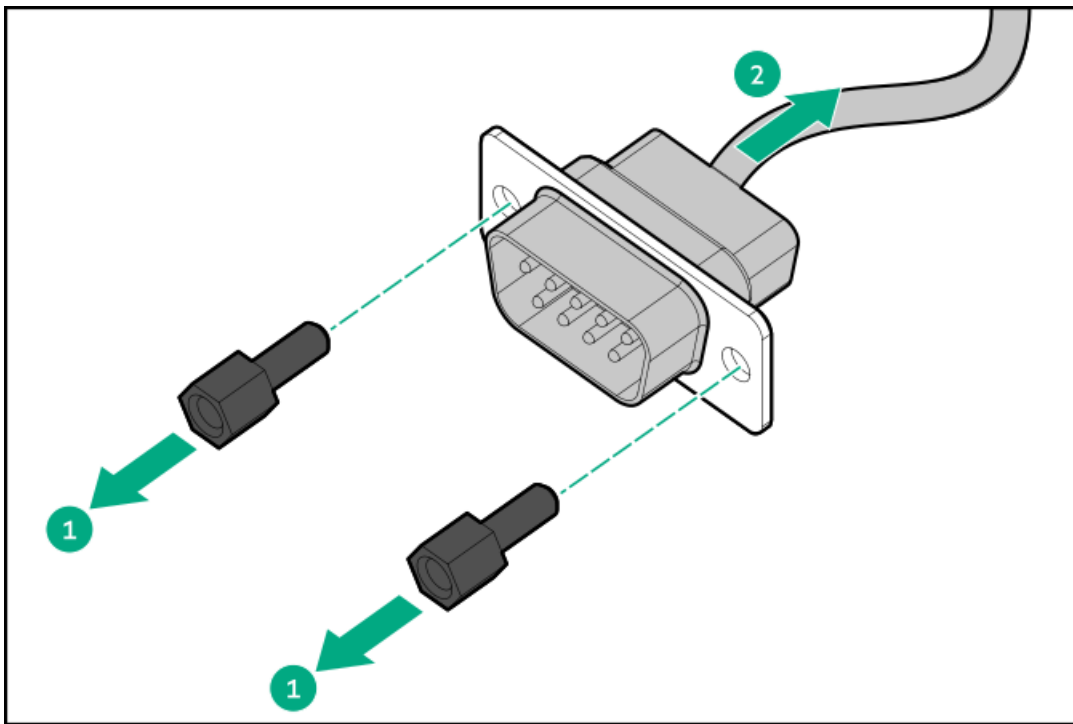
Results

To replace the component, reverse the removal procedure.

Removing and replacing the serial port

Procedure

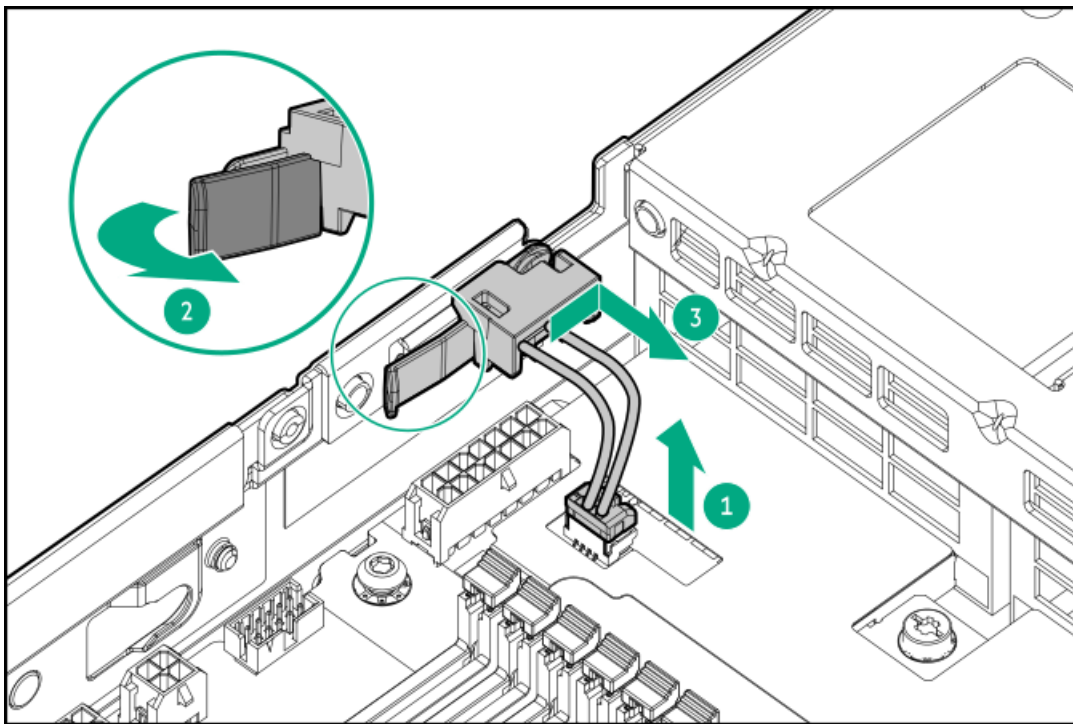
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Remove all riser cages.
6. Disconnect the serial port cable from the system board.
7. Remove the serial port:
 - a. Remove the hex screws (callout 1).
Retain screws for future use.
 - b. Detach the serial port from the rear panel (callout 2).



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.



Results

To replace the component, reverse the removal procedure.

Removing and replacing storage controllers

Subtopics

[Removing and replacing a type-o storage controller](#)

[Removing and replacing a type-p storage controller](#)

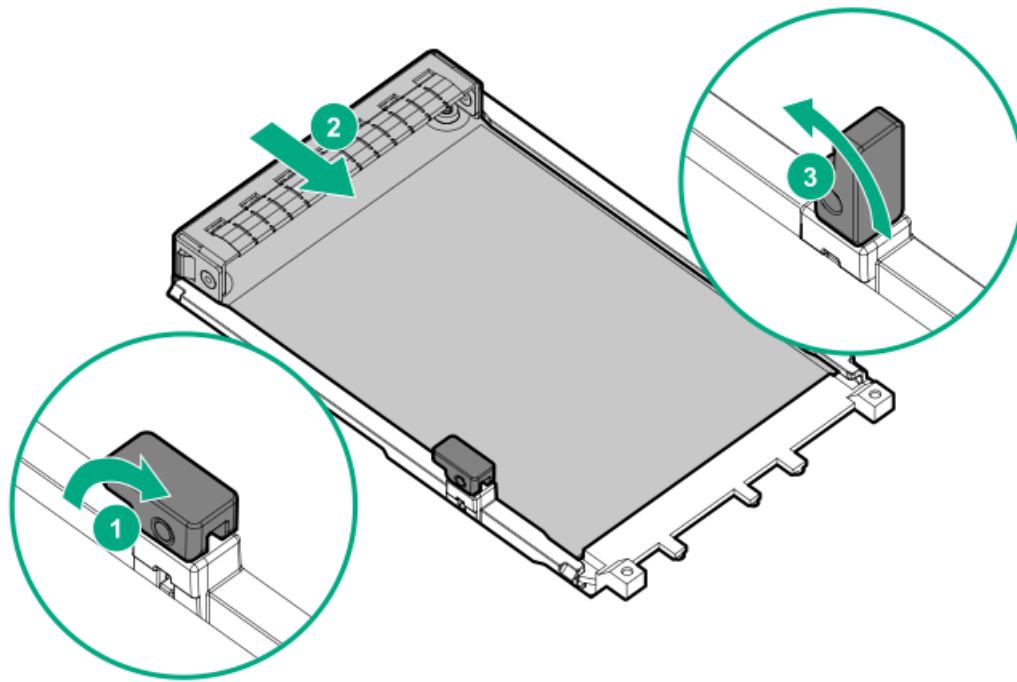
Removing and replacing a type-o storage controller

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.



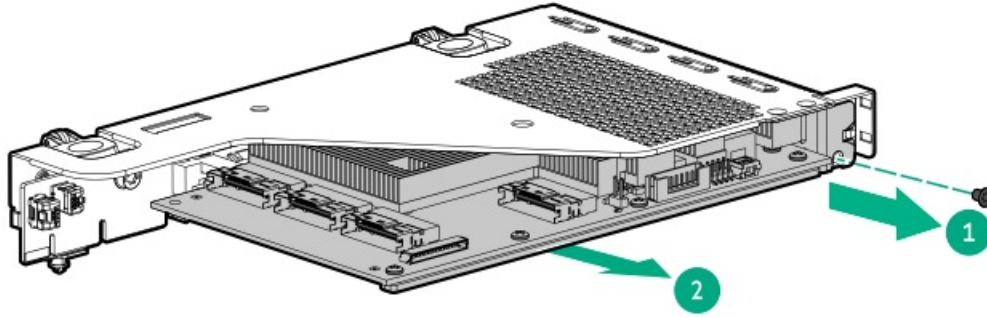
Results

To replace the component, reverse the removal procedure.

Removing and replacing a type-p 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. Remove the riser cage.
6. Disconnect any cables from the controller
Note the port numbers before disconnecting the cables.
7. Remove the controller.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a DIMM

Prerequisites

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

About this task



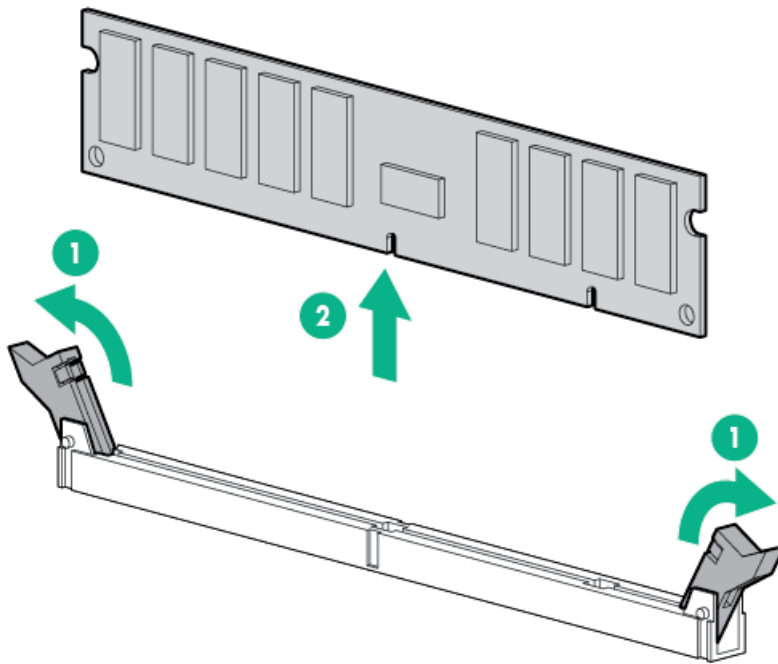
CAUTION:

Failure to properly handle DIMMs can damage DIMM components and the system board connector.

To identify DIMMs installed in the server, see "."

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.



Results

To replace the component, reverse the removal procedure.

Subtopics

DIMM-processor compatibility

DIMM-processor compatibility

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

AMD EPYC 9xx4 processors support DDR5-4800 DIMMS.

Mixing DIMM types is not supported. Install only the supported DDR5-4800 DIMMs in the server.

Removing and replacing an energy pack

About this task

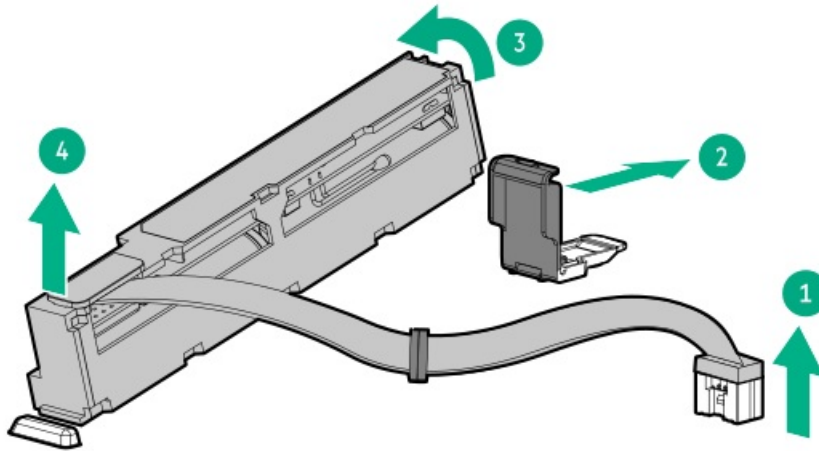


NOTE: System ROM and firmware messages might display "energy pack" in place of "Smart Storage Battery." Energy pack refers to both HPE Smart Storage batteries and HPE Smart Storage Hybrid capacitors.

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.

Results

To replace the component, reverse the removal procedure.

Removing and replacing a heatsink

Prerequisites

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

- The components included with the hardware option kit
- T-20 Torx screwdriver
- Two 1.0 gm (0.5 ml) or four 0.5 gm (0.25 ml) of thermal grease
- Alcohol wipe

About this task

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

Before performing this procedure, Hewlett Packard Enterprise recommends [identifying the processor and socket components](#).

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.

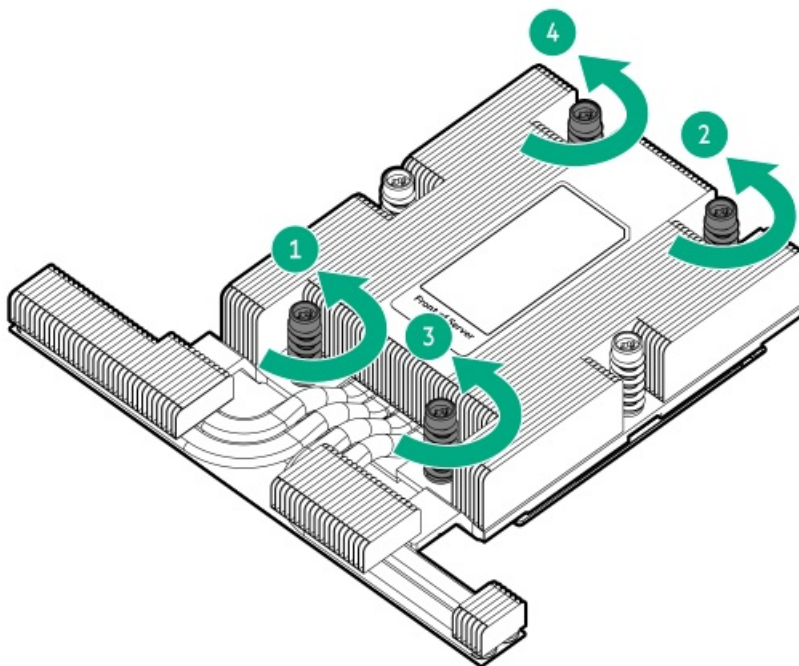
- Remove the server from the rack.
4. Remove the access panel.
 5. Remove the air baffle.
 6. Allow the existing heatsink to cool.
 7. Use a T-20 Torx screwdriver to loosen the captive screws in the sequence specified on the heatsink label.

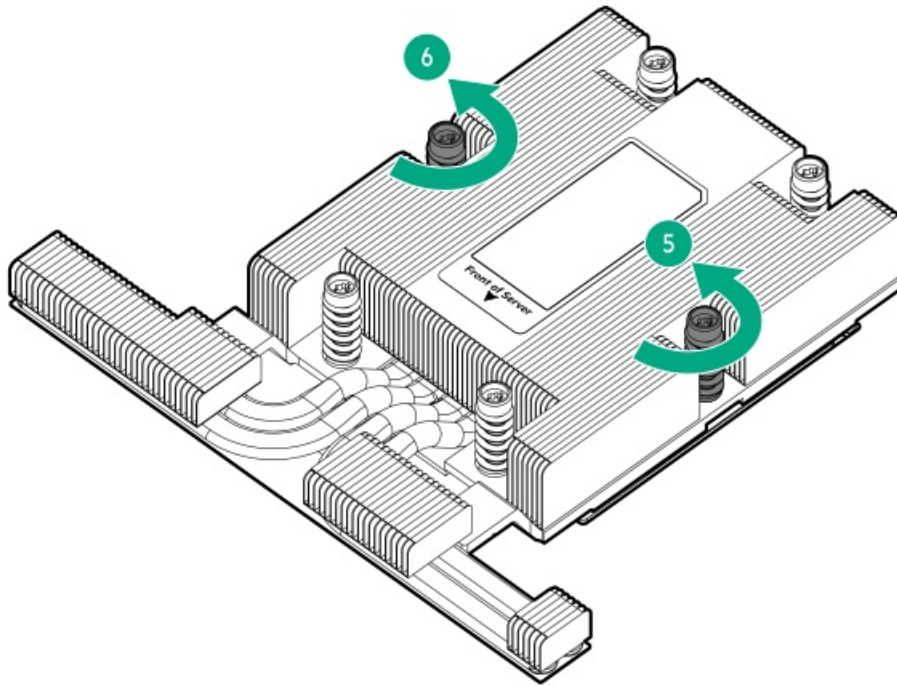
△ CAUTION:

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

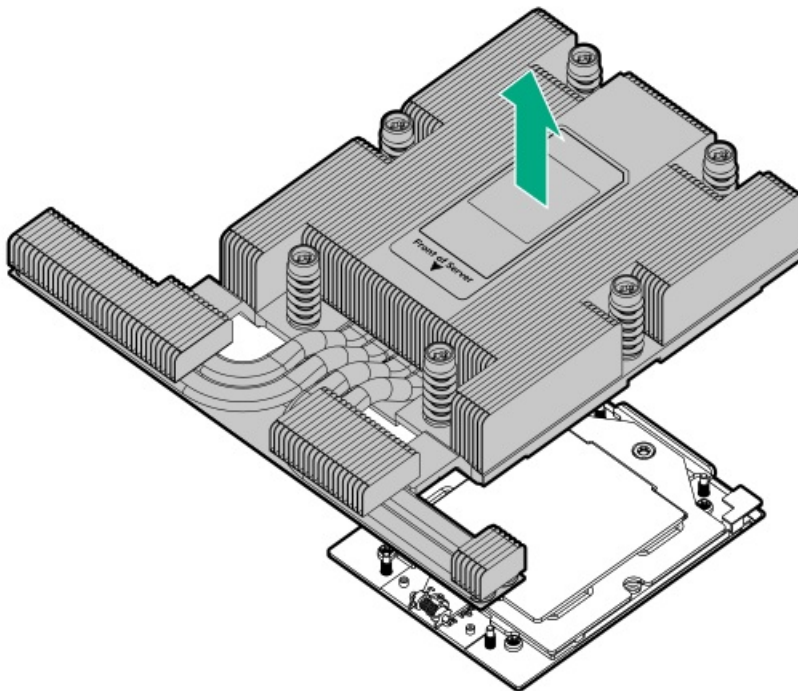
△ CAUTION:

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





8. Lift the heatsink away from the system board.



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

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

Allow the alcohol to evaporate before continuing.

11. Remove the thermal interface protective cover from the new 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.

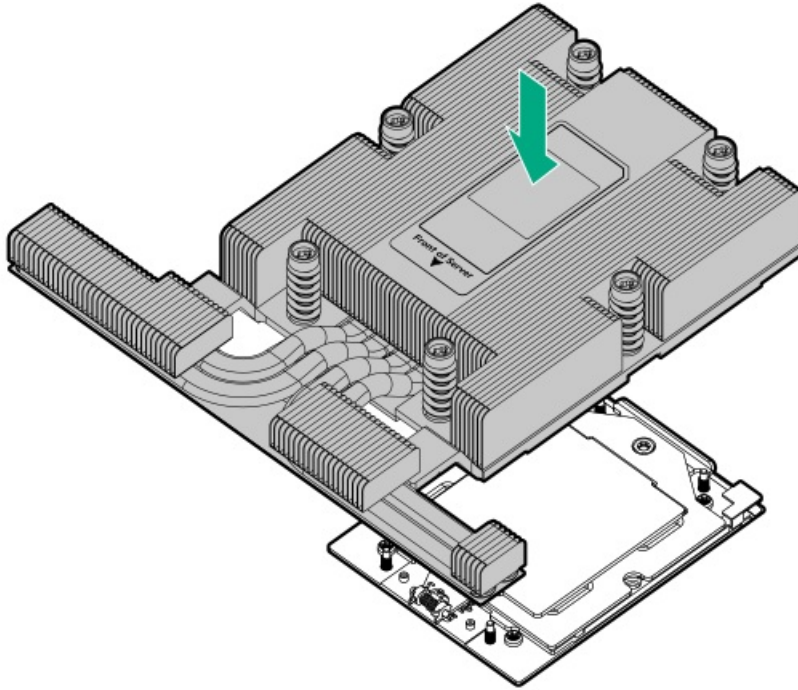
12. Position the heatsink on top of the processor. Ensure that it is properly seated before securing the screws.

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.

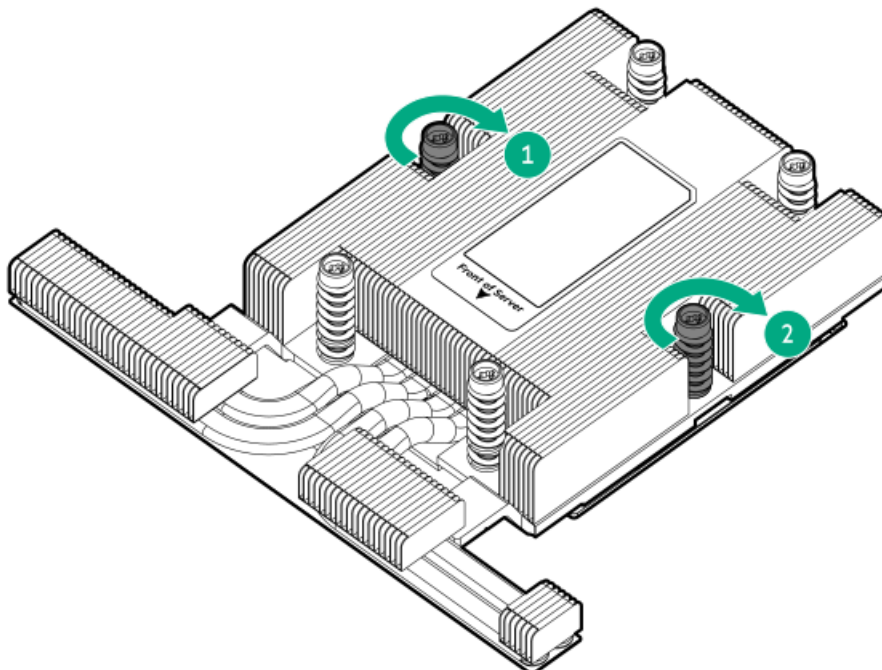
CAUTION:

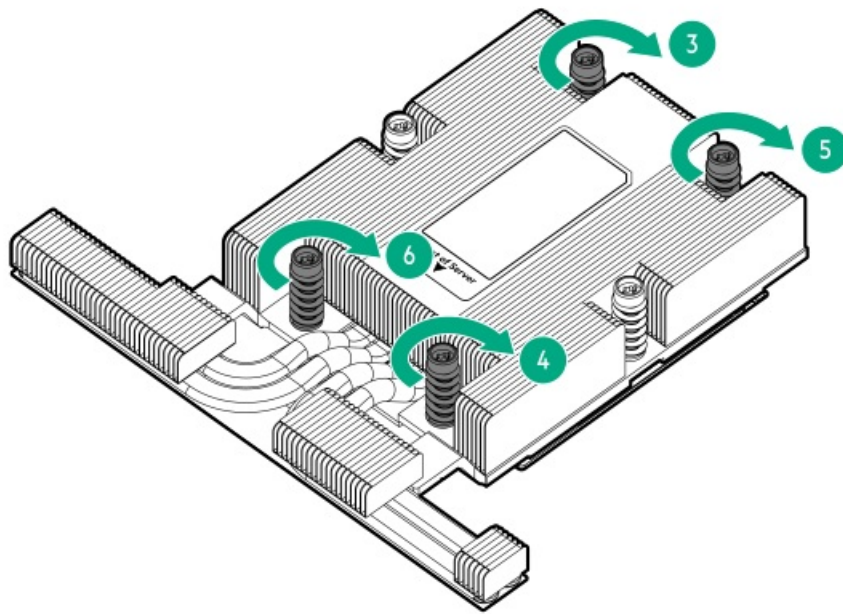
Heatsink screws must be tightened and loosened in alternating sequence. Do not overtighten the screws as this might damage the system board or the processor socket.



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

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





Removing and replacing a processor

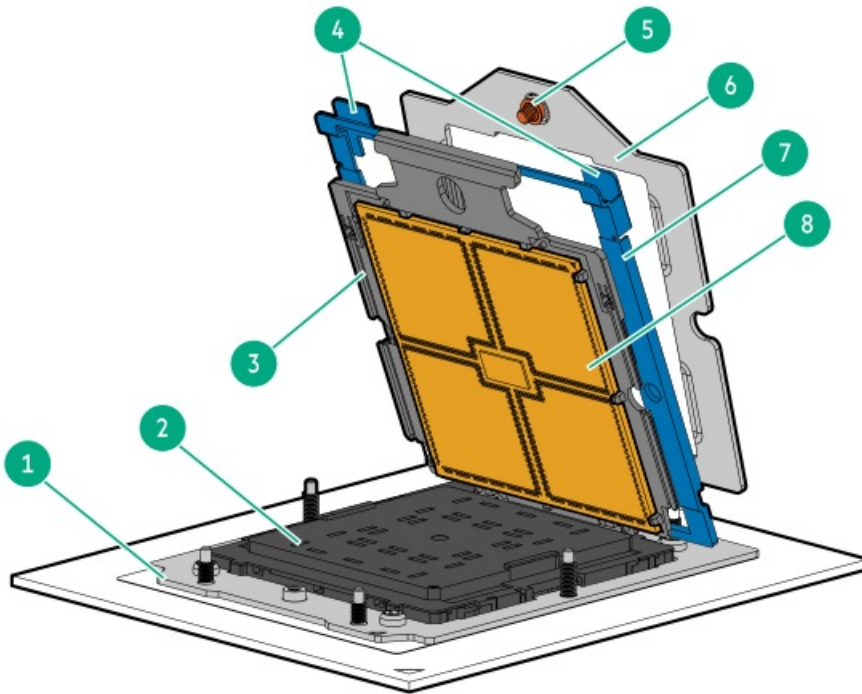
Subtopics

[Processor and socket components](#)

[Removing a processor](#)

[Installing a processor](#)

Processor and socket components



Item	Description
1	Processor socket
2	Pin field cover cap
3	Processor carrier
4	Rail frame lift tabs
5	Retention frame screw (T-20)
6	Retention frame
7	Rail frame
8	Processor

Removing a processor

Prerequisites

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

- T-20 screwdriver
- Two 1.0 gm (0.5 ml) or four 0.5 gm (0.25 ml) of thermal grease
- Alcohol wipe

About this task

Before performing this procedure, Hewlett Packard Enterprise recommends [identifying the processor and socket components](#).

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.

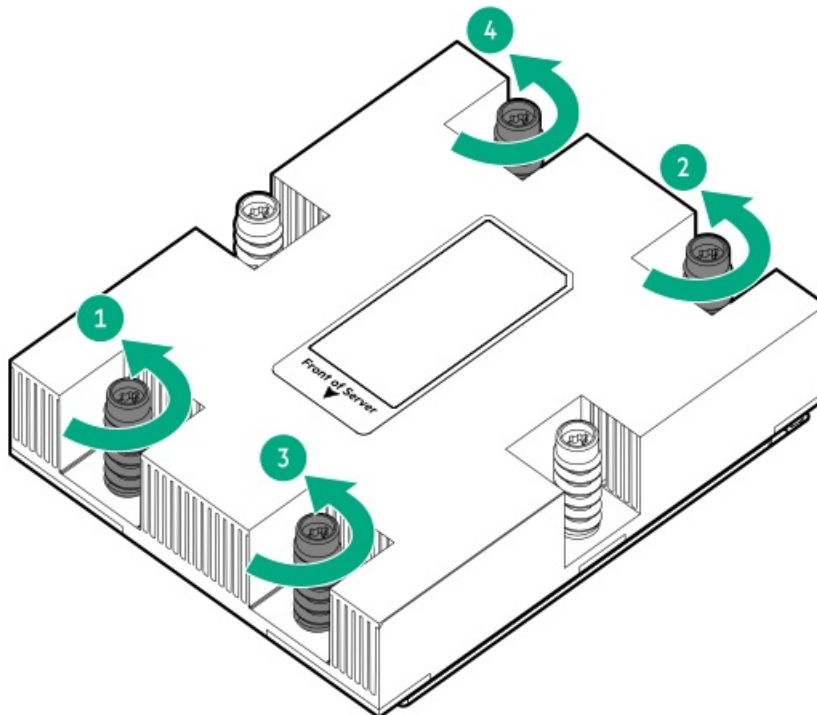
⚠ **CAUTION:** If installing a processor with a faster speed, update the system ROM before installing the processor.
To download firmware and view installation instructions, see the [Hewlett Packard Enterprise Support Center website](#).

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

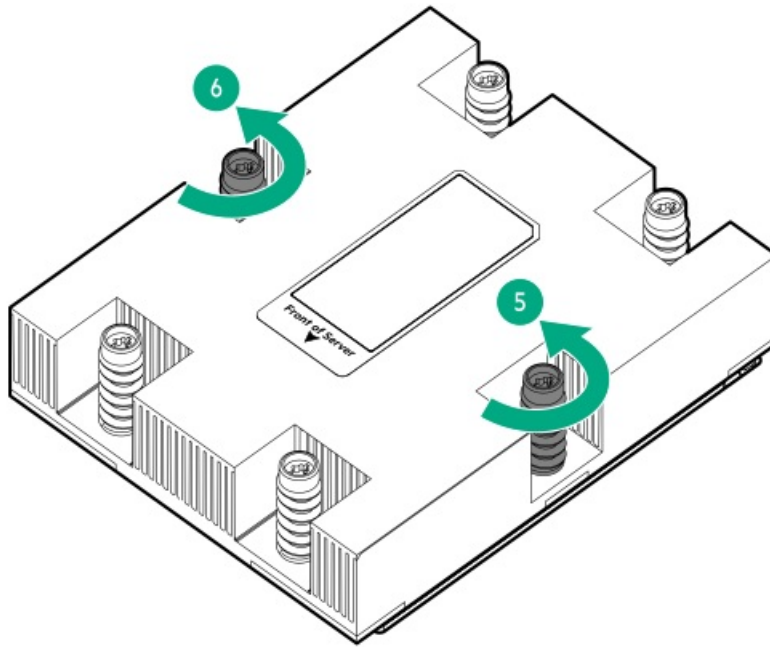
2. Power down the server.
3. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
4. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
5. Remove the access panel.
6. Allow the heatsink to cool.
7. Remove the heatsink:

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

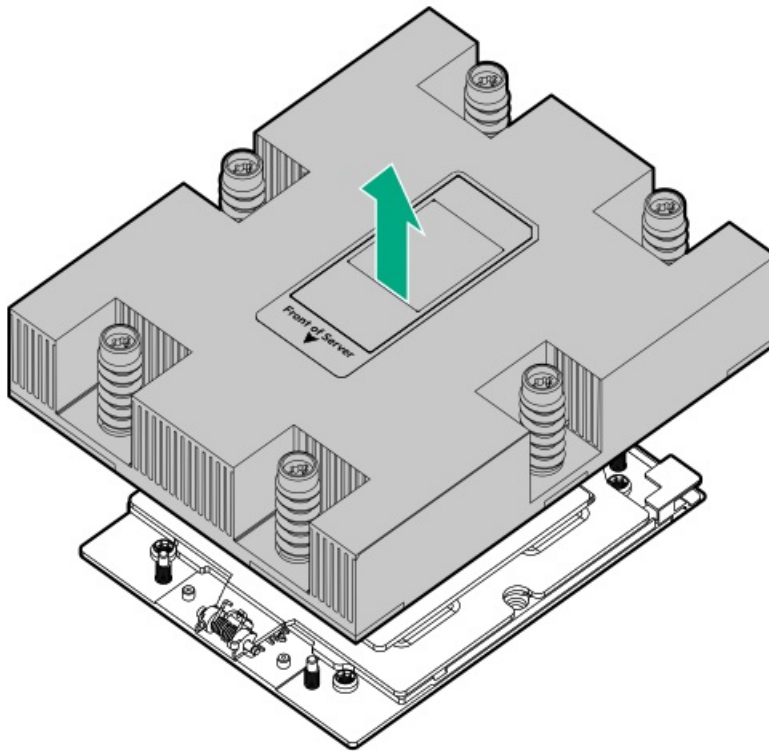
- a. Review the heatsink screw numbering on the heatsink label.
- b. Loosen the heatsink screw numbers 6, 5, 4, and 3 in a diagonal manner (callouts 1 to 4).



c. Loosen the heatsink screw numbers 2 and 1 (callouts 5 and 6).



8. Lift the heatsink away from the processor socket.



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

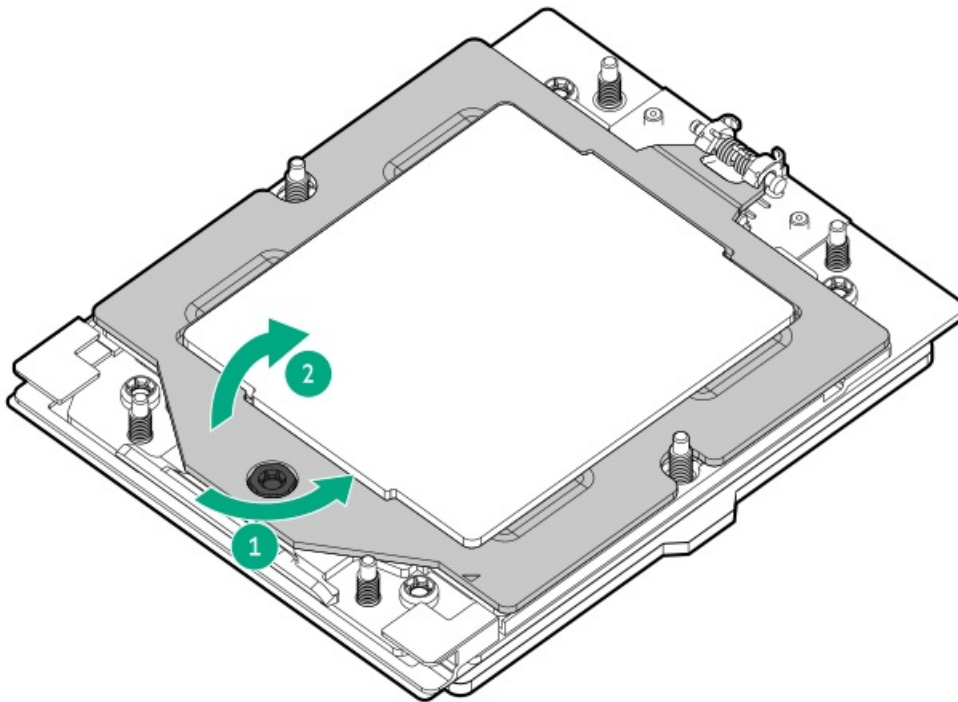
10. Use an alcohol wipe to remove the existing thermal grease from the processor.

Allow the alcohol to evaporate before continuing.

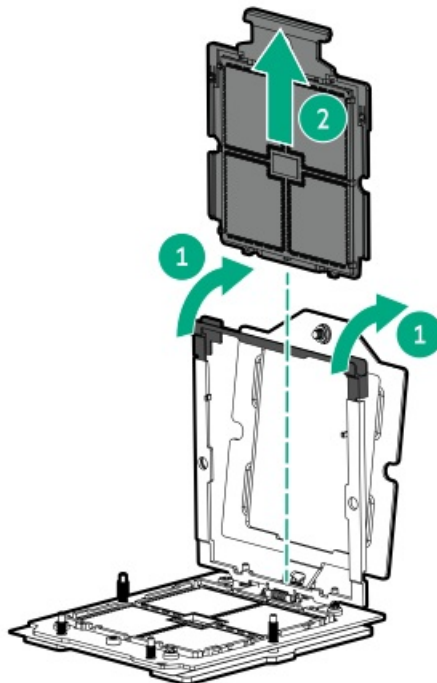
11. Remove the processor:

a. While holding the sides of the retention frame, loosen the frame screw (callout 1).

This retention frame is spring-loaded. Once the screw is loosened enough, hold the retention frame as it automatically pivots to a vertical position (callout 2).



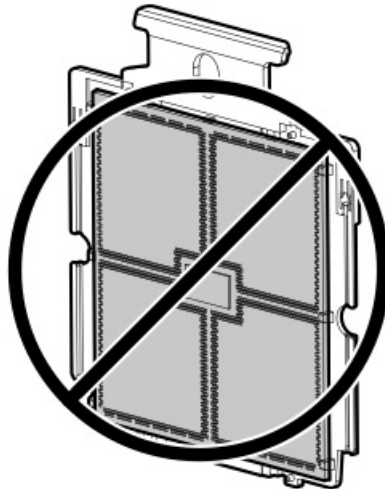
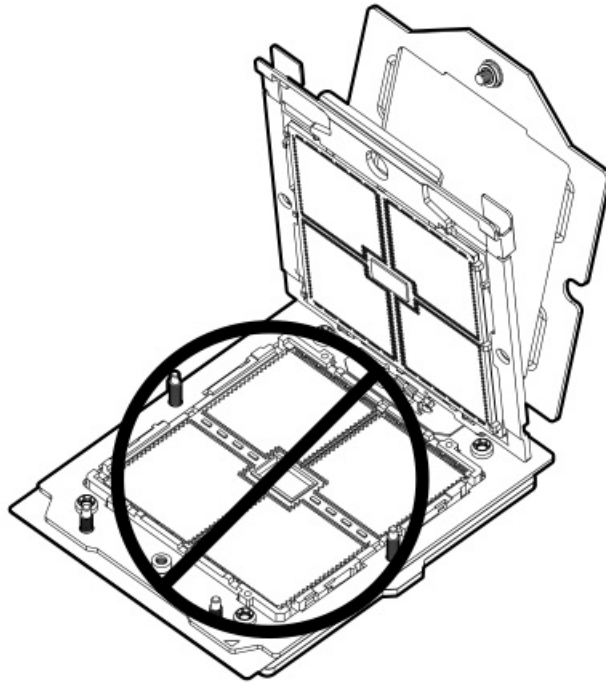
- b. Hold the lift tabs and pivot the rail frame to the vertical position (callout 1).
- c. Slide the processor out of the rail frame (callout 2).



⚠ CAUTION: The pins on the processor socket and on the processor are very fragile and easily damaged. To avoid component damage, do not touch these pins. Any damage to them might require replacing the system board and/or processor.

- 12. Do not touch the pin field on the socket and the processor contacts.





Installing a processor

Prerequisites

Before performing this procedure, be sure that you have the components included with the hardware option kit, as well as the following items:

- T-20 Torx screwdriver
- Two 1.0 gm (0.5 ml) or four 0.5 gm (0.25 ml) of thermal grease
- Alcohol wipe

About this task

Hewlett Packard Enterprise recommends [identifying the processor and socket components](#) before performing this procedure.

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:

- Extend the server from the rack.
- Remove the server from the rack.

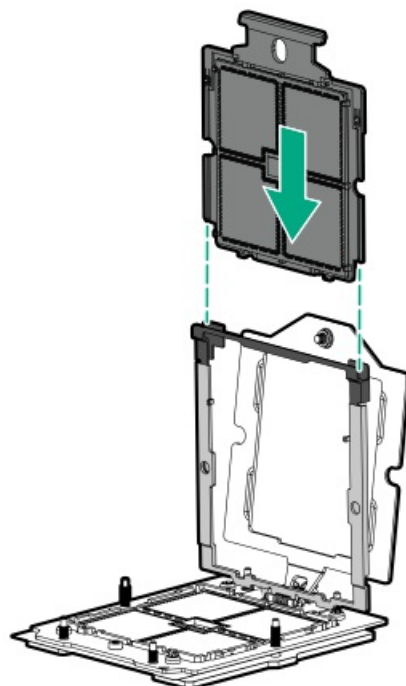
5. Remove the access panel.

6. Remove the air baffle

7. Remove the heatsink blank.

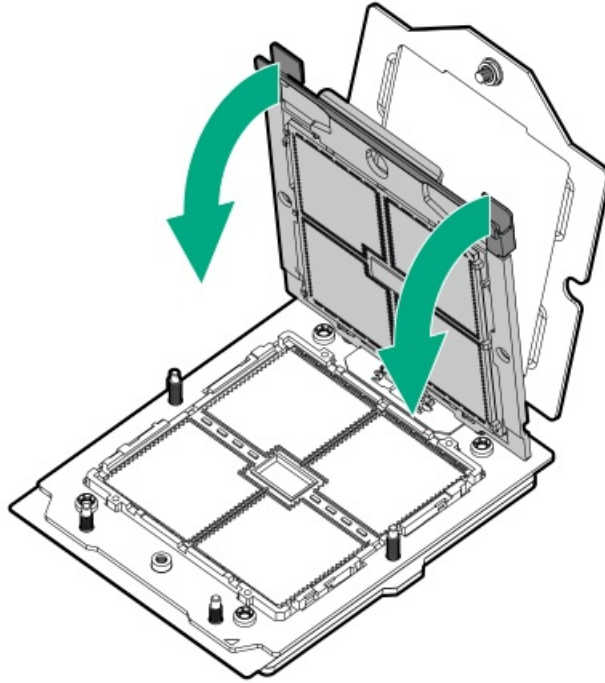
8. Install the processor:

- a. Hold the processor by its carrier handle.
- b. Slide the processor into the rail frame until it engages with a click sound.



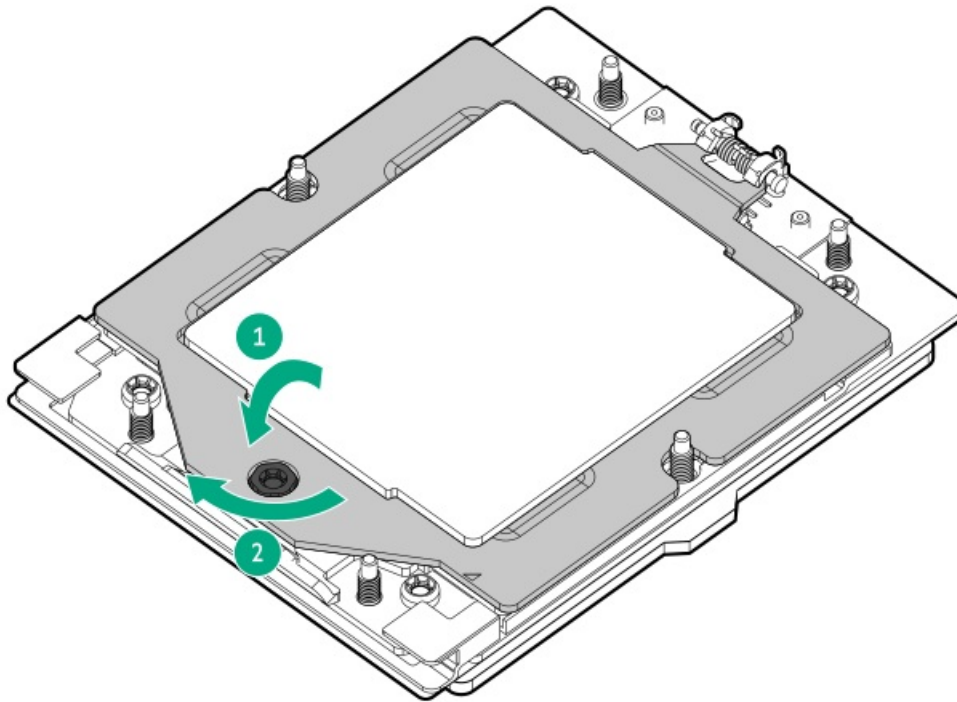
9. Hold the lift tabs and pivot the rail frame to the closed position.

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



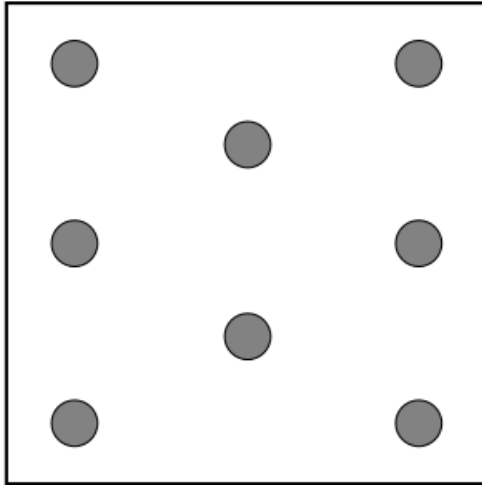
10. Close the retention frame:

- a. When using a torque wrench to tighten the retention frame screw, set a torque between 1.24 N-m (11 lbf-in) to 1.47 N-m (13 lbf-in) .
- b. Pivot the spring loaded retention frame downward and hold it down (callout 1).
- c. Tighten the retention frame screw (callout 2).



11. If you are using the same heatsink, apply the full content of the thermal grease syringes on top of the processor. Follow the pattern shown in the following image.





12. If you are using a new heatsink, remove the thermal interface protective cover from the heatsink.

13. Install the heatsink:

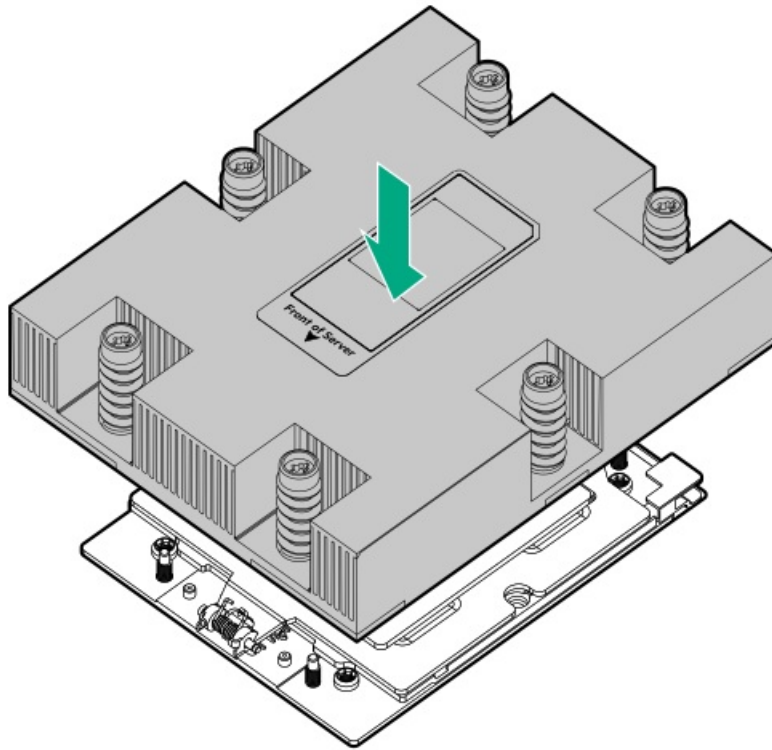
△ CAUTION:

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.

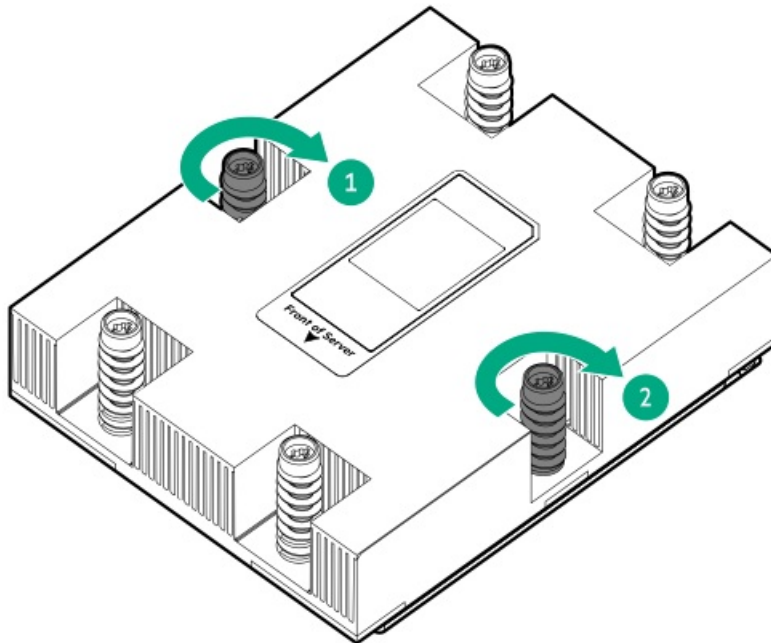
△ CAUTION:

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.

- a. When using a torque wrench to tighten the heatsink screws, set a torque between 1.24 N-m (11 lbf-in) to 1.47 N-m (13 lbf-in) .
- b. Note the **Front of server** text on the heatsink label to correctly orient the heatsink over the processor socket.
- c. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws.

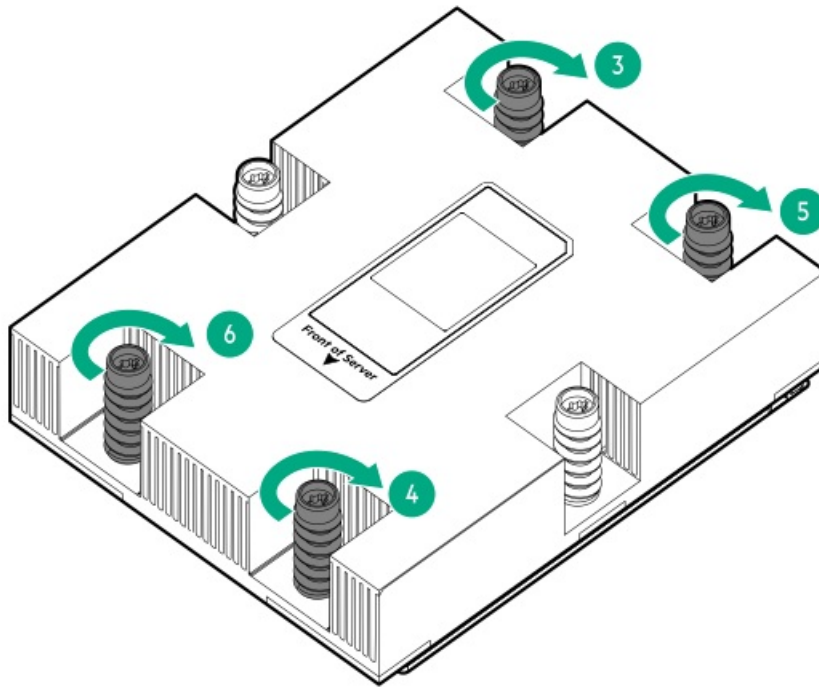


d. Tighten the heatsink screw numbers 1 and 2 (callouts 1 and 2).



e. Tighten the heatsink screw numbers 3, 4, 5, and 6 in a diagonal manner (callouts 3 to 6).





14. Remove the protective cover from the new heatsink.
15. Install the heatsink.

Removing and replacing the system board

About this task

Procedure

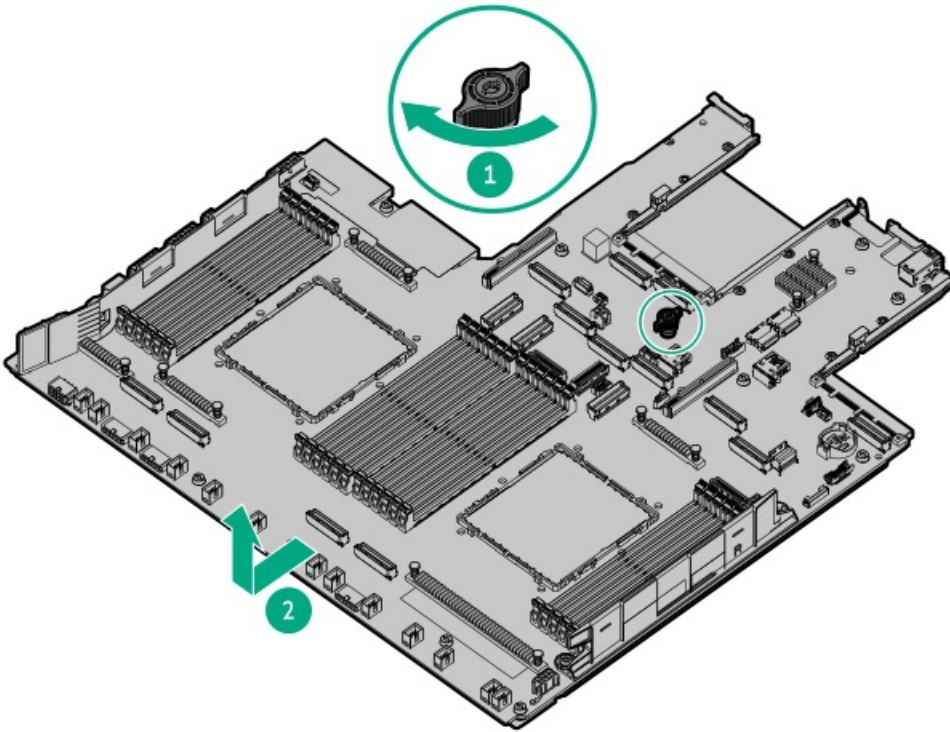
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove all power supplies.
5. Remove the 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 controller.
10. Remove all fans.
11. Remove all fan blanks.

12. 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.

13. Remove the processor heatsink assembly.

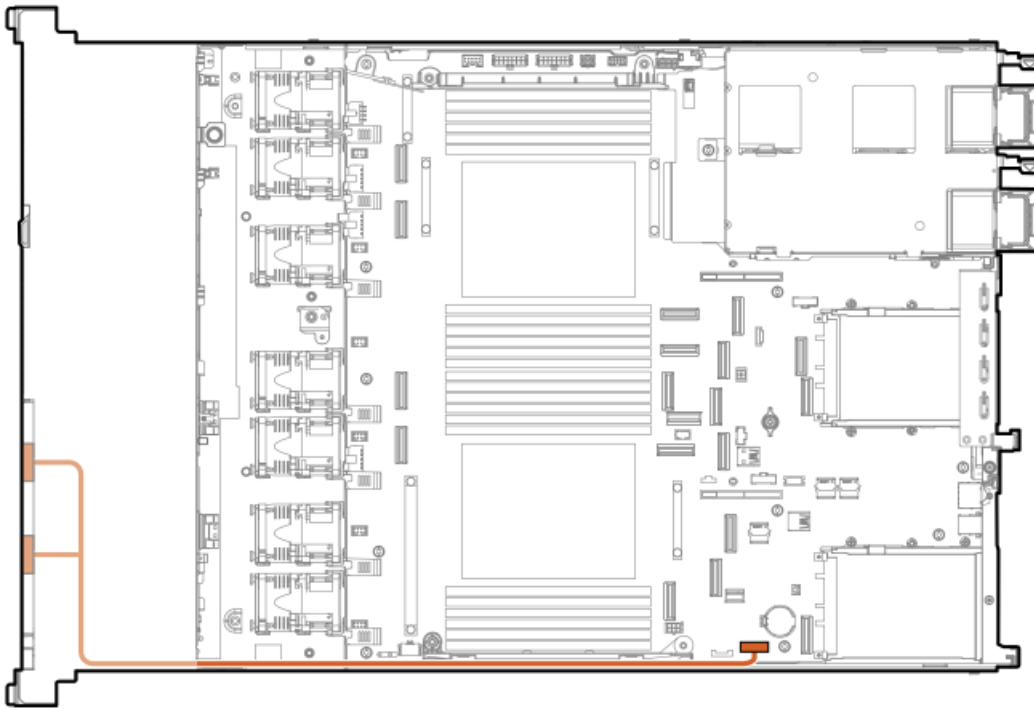
14. Loosen the system board thumbscrew, and then remove the system board.



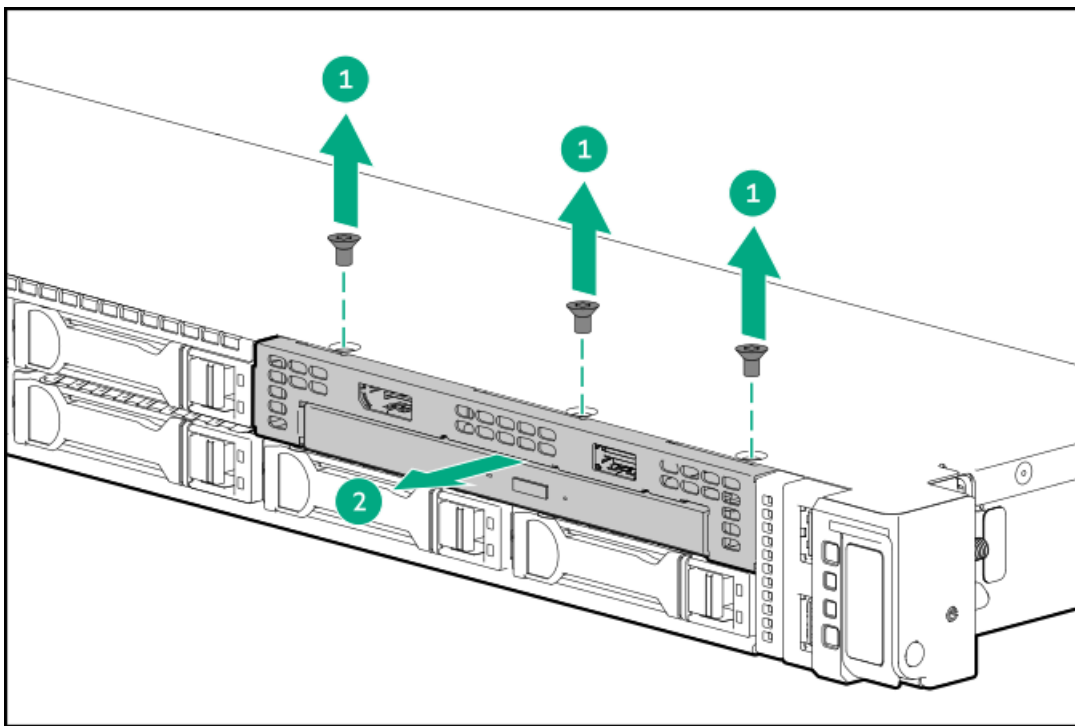
Removing and replacing the SFF optical disk drive/display port/USB

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 applicable, disconnect the optical disk drive cable from the system board.



6. Remove the component.



Results

To replace the component, reverse the removal procedure.

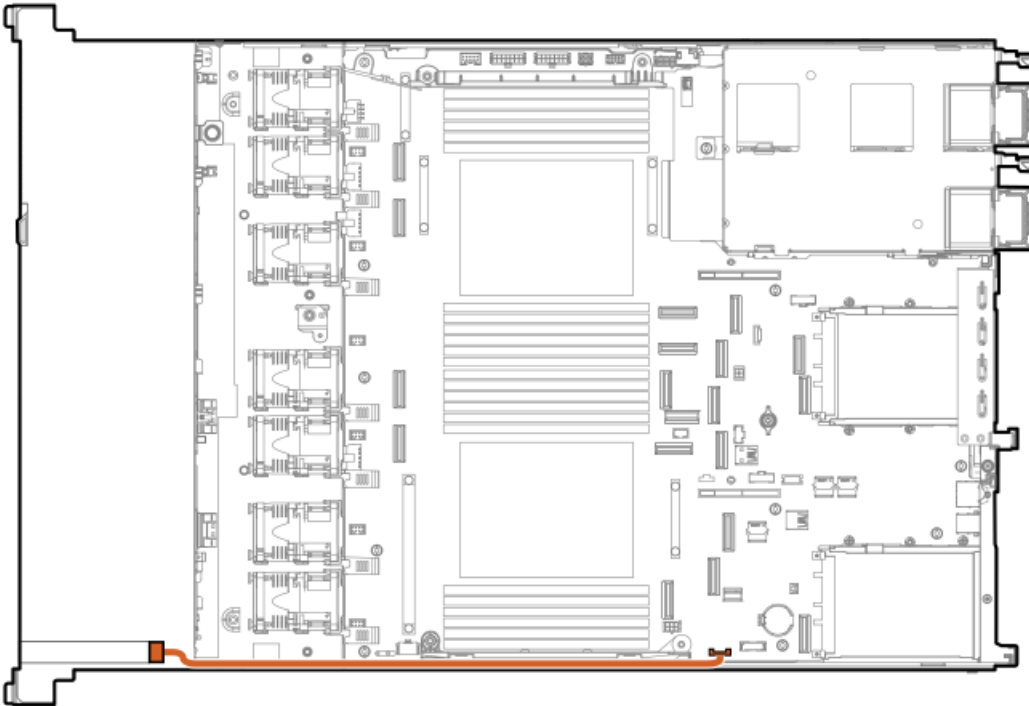
Removing and replacing the Systems Insight Display power module

Procedure

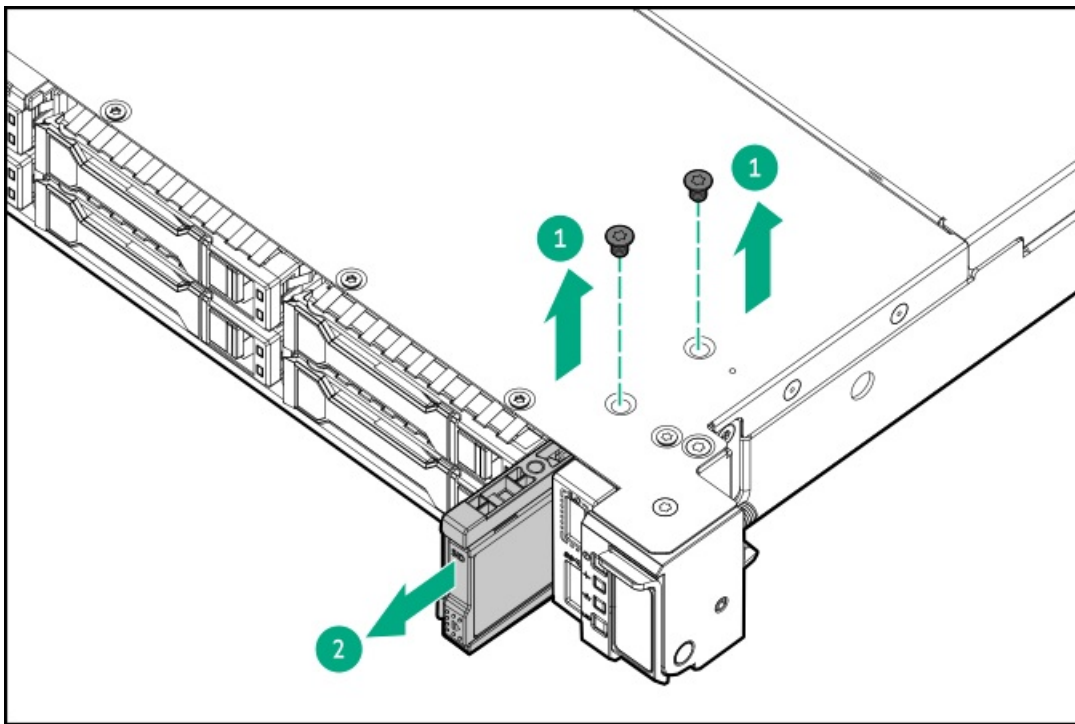
1. Power down the server.



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.



Results

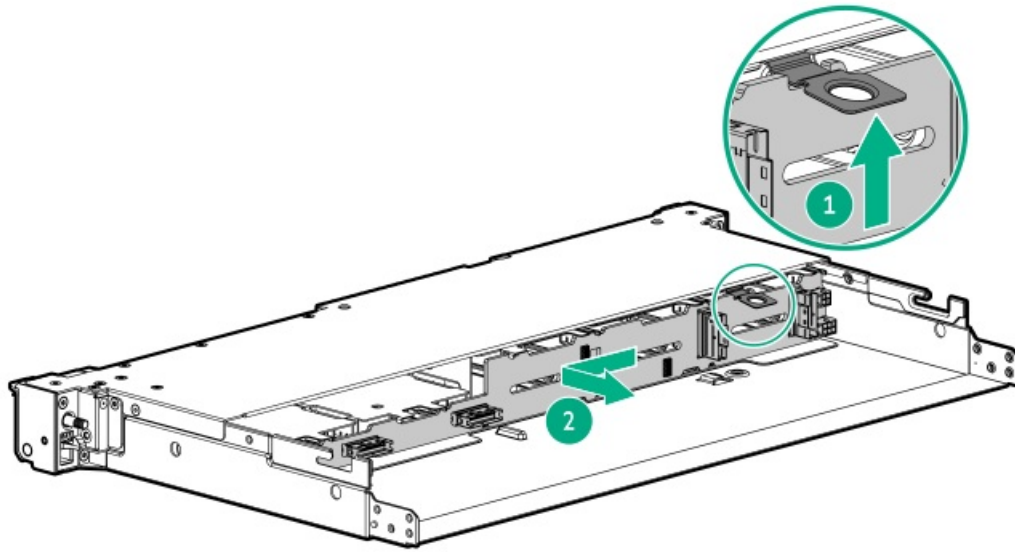
To replace the component, reverse the removal procedure.

Removing and replacing the 8 SFF drive backplane

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 drives and drive blanks.

Note where each drive is located.
6. If installed, remove the Smart Storage Battery (Removing and replacing an energy pack).
7. Disconnect and remove all cables from the drive backplane.
8. Remove the drive backplane.



Results

To replace the component, reverse the removal procedure.

Removing and replacing the system battery

About this task

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.

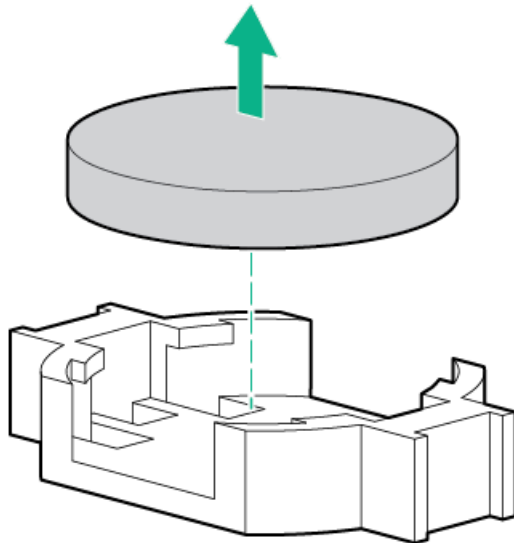
⚠ WARNING: The computer contains an internal lithium manganese dioxide, a vanadium pentoxide, or an alkaline battery pack. A risk of fire and burns exists if the battery pack is not properly handled. To reduce the risk of personal injury:

- 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.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.

3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - [Extend the server from the rack.](#)
 - [Remove the server from the rack.](#)
5. [Remove the access panel.](#)
6. Locate the battery ([System board components](#)).
7. Remove the battery.



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

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

Trusted Platform Module 2.0

The Trusted Platform Module 2.0 (TPM) is a hardware-based system security feature that securely store artifacts used to authenticate the platform. These artifacts can include passwords, certificates, and encryption keys.

The TPM 2.0 Gen10 Plus is embedded on the server system board.

The TPM 2.0 Gen10 Plus is supported with specific operating system support such as Microsoft Windows Server 2012 R2 and later. For more information about operating system support, see the product QuickSpecs on the Hewlett Packard Enterprise website (<https://www.hpe.com/info/qs>). For more information about Microsoft Windows BitLocker Drive Encryption feature, see the Microsoft website (<https://www.microsoft.com>).

Troubleshooting

Subtopics

Troubleshooting resources

Troubleshooting resources are available for HPE Gen11 server products in the following documents:

- Troubleshooting Guide for HPE ProLiant Gen11 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 Gen11 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 Gen11 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](#).

Configuration resources

Use the following resources to find documentation for configuring and managing your server.

- Some utilities might not apply to your server. For information about server compatibility with the products listed in this chapter, see the product QuickSpecs (<https://www.hpe.com/servers/dl365-gen11>).
- Products ordered from HPE Factory Express might have already been configured with some or all the configurations in this chapter. To determine if any additional setup is required, see your HPE Factory Express order.
- For the most recent changes, feature enhancements, and bug fixes, see the latest product release notes.

Component identification

Subtopics

[Front panel components](#)

[Front panel LEDs and buttons](#)

[Rear panel components](#)

[Rear panel LEDs](#)

[System board components](#)

[Device numbers](#)

[Drives](#)

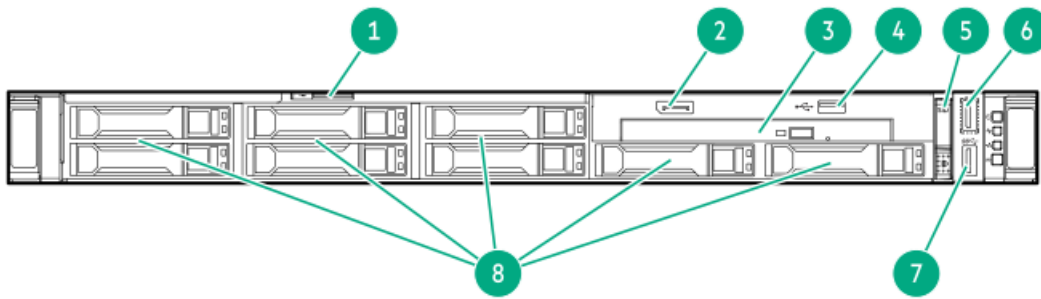
[Fan bay numbering](#)

[DSC-25 2-port SFP28 card ports and LEDs](#)

[HPE NS204i-u Boot Device components](#)

Front panel components

8SFF/8SFF + 2SFF

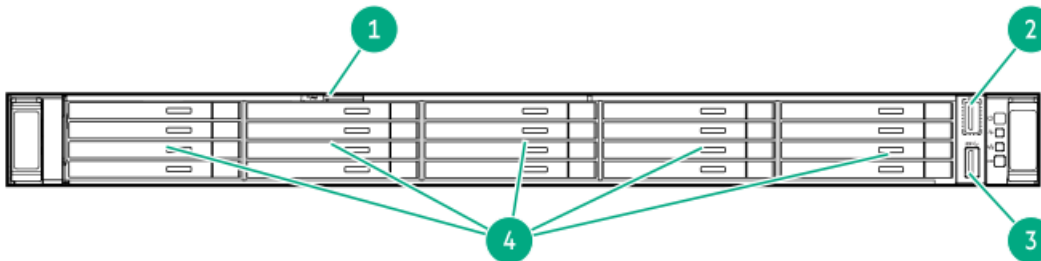


Item	Description
1	Serial number/iLO information pull tab
2	Display port (optional) ¹
3	Optical drive (optional) ¹
4	USB 2.0 port (optional) ¹
5	System Insight Display module
6	iLO Service Port ²
7	USB 3.2 Gen1 port
8	Drive bays

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

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

20 EDSFF

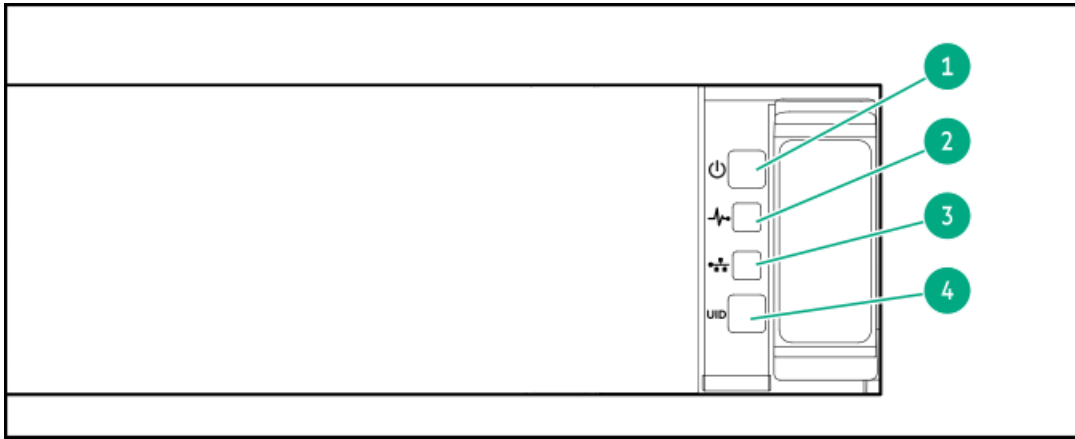


Item	Description
1	Serial number/iLO information pull tab
2	iLO Service Port ¹
3	USB 3.2 Gen1 port
4	Drive bays

¹ The operating system does not recognize this port as a USB port.

Front panel LEDs and buttons

FROM PANEL LEDs AND BUTTONS



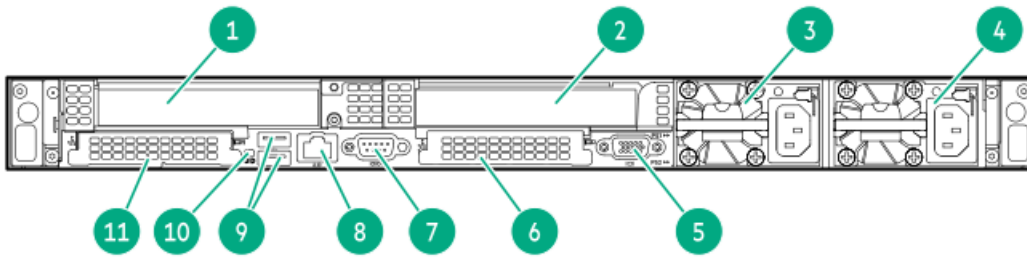
Item	Description	Status
1	Power On/Standby button and system power LED ¹	Solid green = System on Flashing green = Performing power on sequence Solid amber = System in standby Off = No power present ¹
2	Health LED ¹	Solid green = Normal Flashing green = iLO is rebooting. Flashing amber = System degraded Flashing red = System critical ²
3	NIC status LED ¹	Solid green = Link to network Flashing green = Network active Off = No network activity
4	UID button/LED ³	Solid blue = Activated Flashing blue: <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 Off = Deactivated

¹ Facility power is not present, power cord is not attached, no power supplies are installed, power supply failure has occurred, or the power button cable is disconnected.

² If the health LED indicates a degraded or critical state, review the system IML or use iLO to review the system health status.

³ When all four LEDs described in this table flash simultaneously, a power fault has occurred.

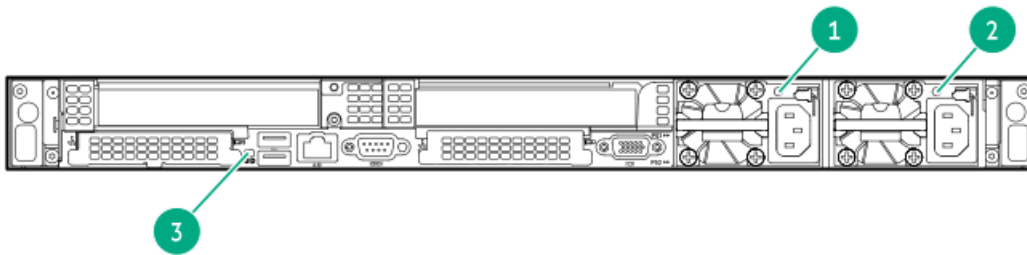
Rear panel components



Item Description

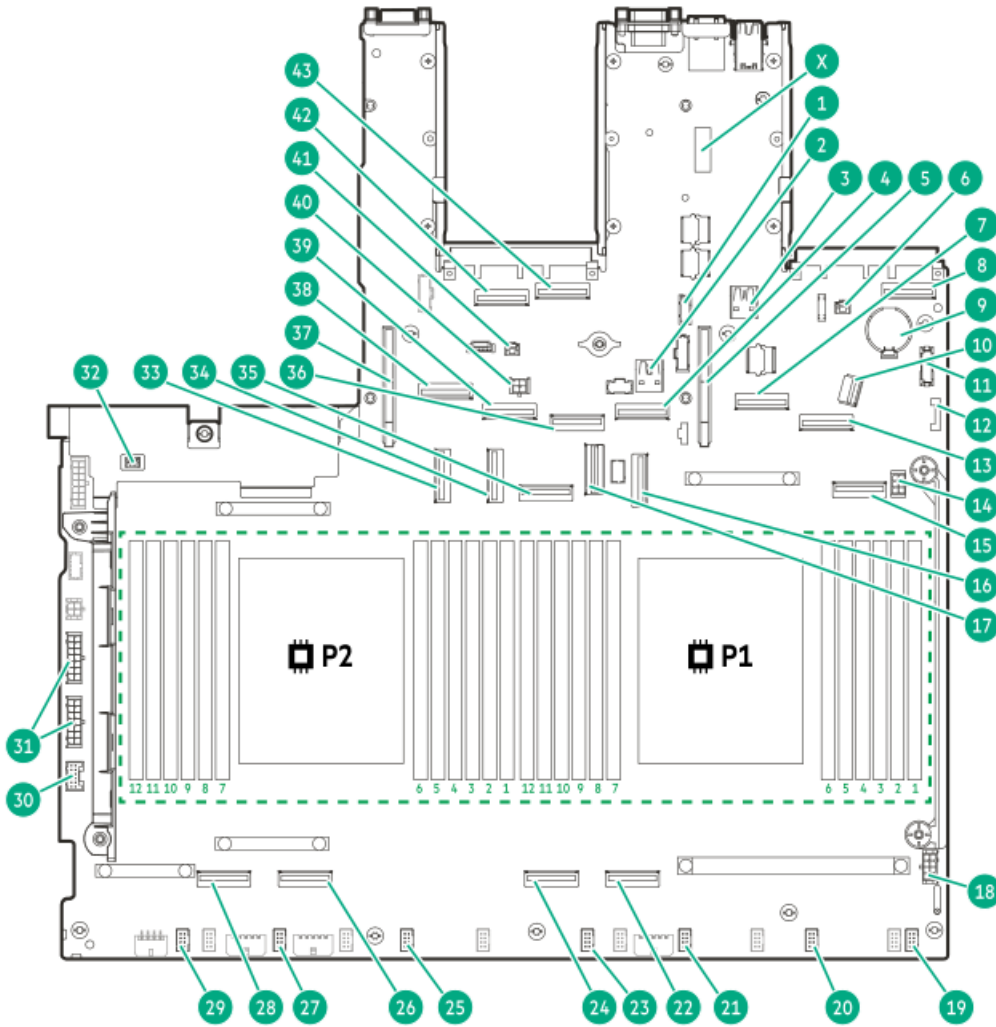
1	Slot 1 PCIe x16
2	Slot 2 PCIe x16
3	Power supply 2 (PS2)
4	Power supply 1 (PS1)
5	Video (VGA) port
6	OCP slot 22
7	Serial port (optional)
8	iLO Management Port
9	USB 3.2 Gen1 ports
10	UID LED
11	OCP slot 21

Rear panel LEDs



Item	Description	Status
1	Power supply 2 LED	<p>Solid green = Normal</p> <p>Off = One or more of the following conditions exists:</p> <ul style="list-style-type: none"> • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit
2	Power supply 1 LED	<p>Solid green = Normal</p> <p>Off = One or more of the following conditions exists:</p> <ul style="list-style-type: none"> • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit
3	UID LED	<p>Solid blue = Identification is activated.</p> <p>Flashing blue = System is being managed remotely.</p> <p>Off = Identification is deactivated.</p>

System board components



Item	Description
1	Serial port connector
2	Internal USB 3.2 Gen1 port
3	Internal USB 3.2 Gen1 port
4	NVMe/SATA port 1A
5	Primary riser connector
6	OCP slot 21 backup power connector
7	NVMe port 7A
8	OCP slot 21 x16 upgrade connector
9	System battery
10	Front I/O connector
11	Front DisplayPort/ USB 2.0 connector
12	SID connector
13	NVMe port 6A
14	ODD / 2 SFF power connector
15	NVMe port 4A

Item	Description
16	NVMe / SATA port 9A
17	NS204i-u signal connector
18	GPU riser power connector
19	Fan connector 7
20	Fan connector 6
21	Fan connector 5
22	NVMe port 2A
23	Fan connector 4
24	NVMe port 3A
25	Fan connector 3
26	NVMe port 2B
27	Fan connector 2
28	NVMe port 3B
29	Fan connector 1
30	Energy pack connector
31	Backplane / GPU power connector
32	Chassis intrusion detection switch connector
33	NVMe port 7B
34	NVMe port 6B
35	NVMe port 4B
36	NVMe port 5B
37	Secondary riser connector
38	NVMe port 9B
39	NVMe port 8B
40	Smart NIC mode 2 power connector
41	OCP slot 22 backup power connector
42	OCP slot 22 port 1
43	OCP slot 22 port 2
x	System maintenance switch

Subtopics

[System maintenance switch descriptions](#)

[DIMM label identification](#)

[DIMM slot numbering](#)

[Processor and socket components](#)

System maintenance switch descriptions

Table 1. System maintenance switch

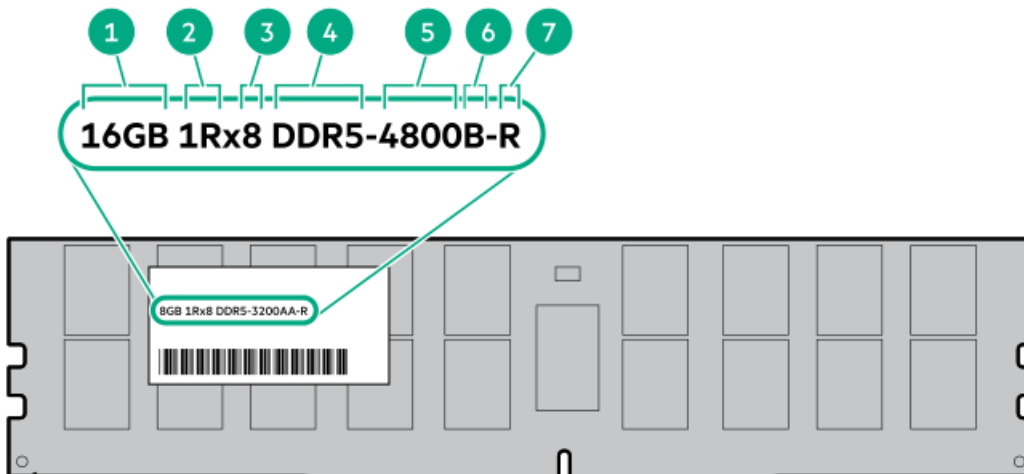
Position	Functions: OFF = Default ON - Activates the function
1	iLO security override
5	Password disabled
6	Reset configuration

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.

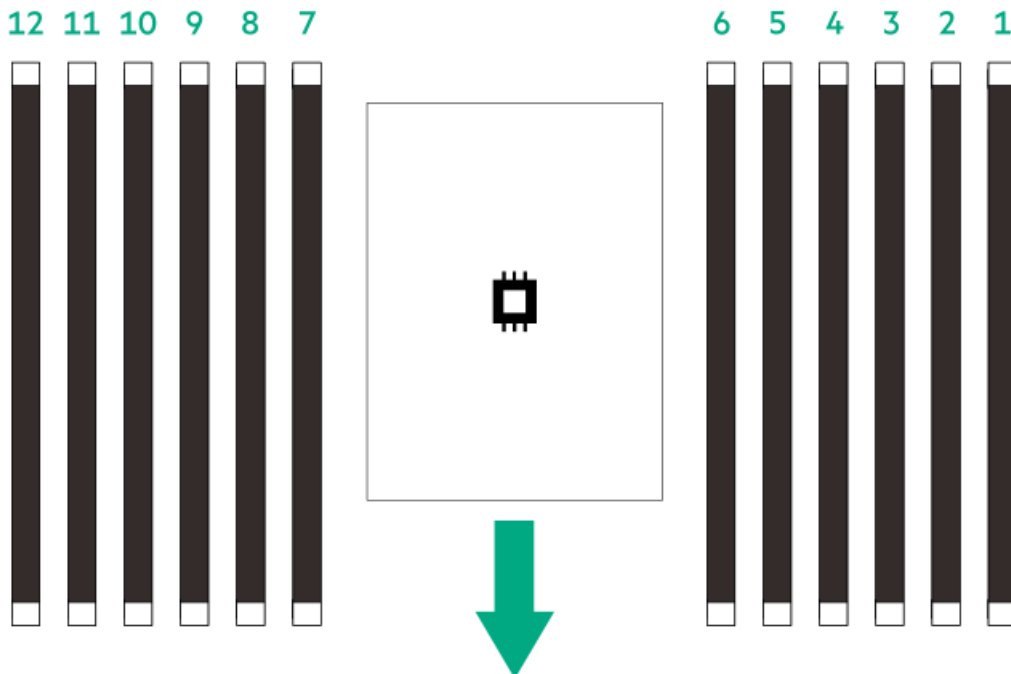
For more information about product features, specifications, options, configurations, and compatibility, see the HPE DDR5 SmartMemory QuickSpecs:

<https://www.hpe.com/docs/server-memory>



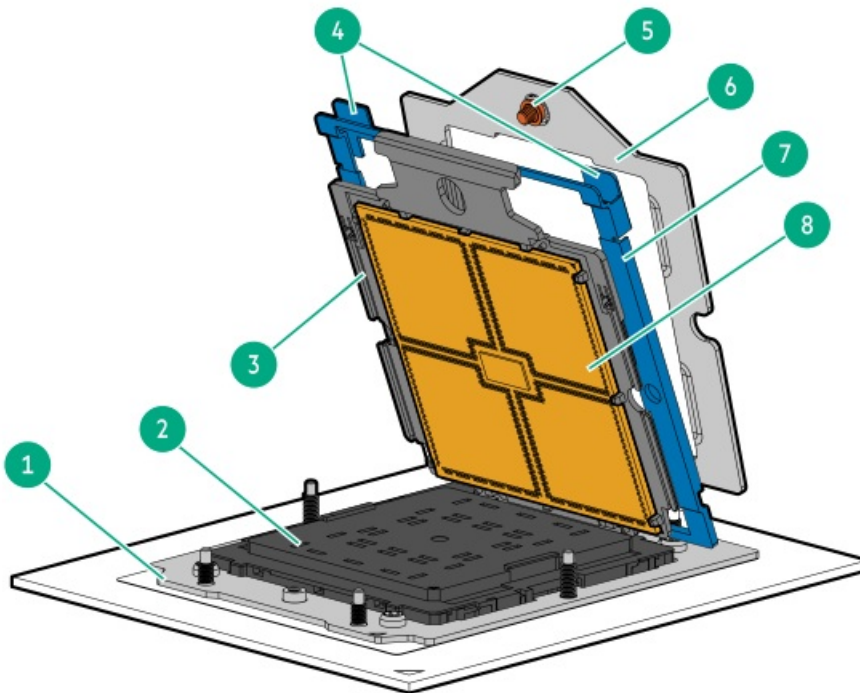
Item	Description	Example
1	Capacity	16 GB 32 GB 64 GB 128 GB 256 GB
2	Rank	1R—Single rank 2R—Dual rank 4R—Quad rank 8R—Octal rank
3	Data width on DRAM	x4—4-bit x8—8-bit
4	Memory generation	PC5—DDR5
5	Maximum memory speed	4800 MT/s
6	CAS latency	B—42-42-42 B—50-42-42 (for 128 GB and 256 GB capacities)
7	DIMM type	R—RDIMM (registered)

DIMM slot numbering



The arrow points to the front of the server.

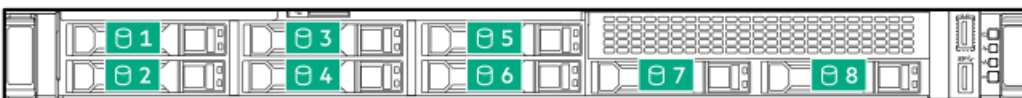
Processor and socket components



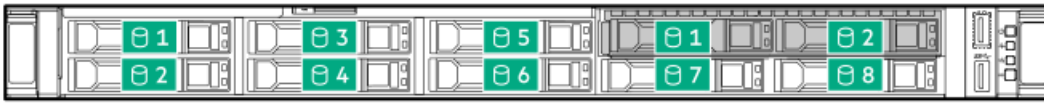
Item	Description
1	Processor socket
2	Pin field cover cap
3	Processor carrier
4	Rail frame lift tabs
5	Retention frame screw (T-20)
6	Retention frame
7	Rail frame
8	Processor

Device numbers

8 SFF device bay numbering



8 SFF + 2 SFF device bay numbering



20 EDSFF device bay numbering



Drives

Subtopics

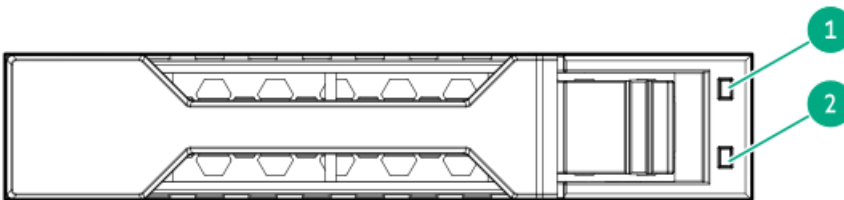
[HPE Basic Drive LED definitions](#)

[EDSFF SSD LED definitions](#)

[HPE NS204i-u Boot Device LED definitions](#)

HPE Basic Drive LED definitions

SFF basic drive carrier



Item	LED	Status	Definition
1	Fault or Locate	Solid amber	This drive has failed, is unsupported, or is invalid.
		Solid blue	A management application has identified the drive and the drive is operating normally.
		Flashing amber or blue (1 flash per second)	The drive has failed, or a predictive failure alert has been received for this drive. A management application has also identified the drive.
		Flashing amber (1 flash per second)	A predictive failure alert has been received for this drive. Replace the drive as soon as possible.
		Off	The drive is operating normally.
2	Online or Activity	Solid green	The drive is online and not active.
		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 Activating a replacement drive
		Flashing green (4 flashes per second)	The drive is operating normally.
		Off	The drive is not configured or is a spare drive.

EDSFF SSD LED definitions

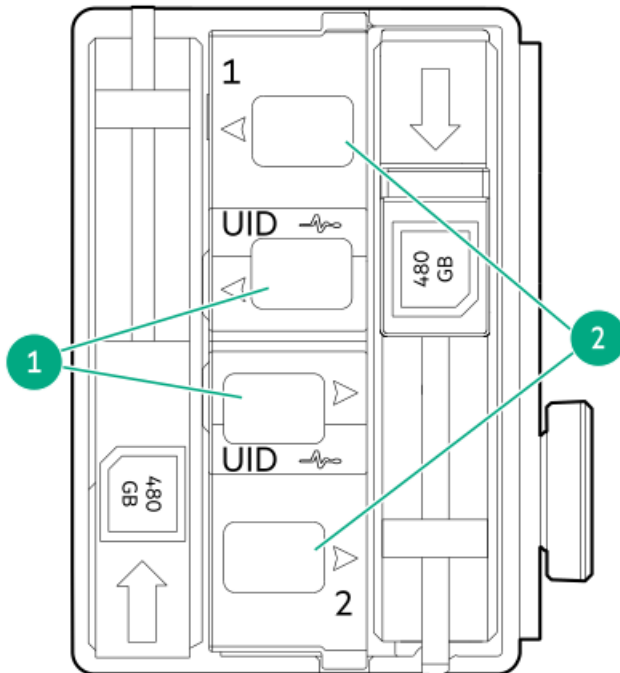
The server supports hot-plug Enterprise and Data Center Standard Form Factor (EDSFF) NVMe SSDs in the E3.S form factor. The E3.S drive carrier has two LEDs:

- Amber/blue LED—Managed by the drive backplane in conjunction with the storage controller and is used to indicate drive status.
- Green LED—Managed by the drive itself and indicates the drive activity.



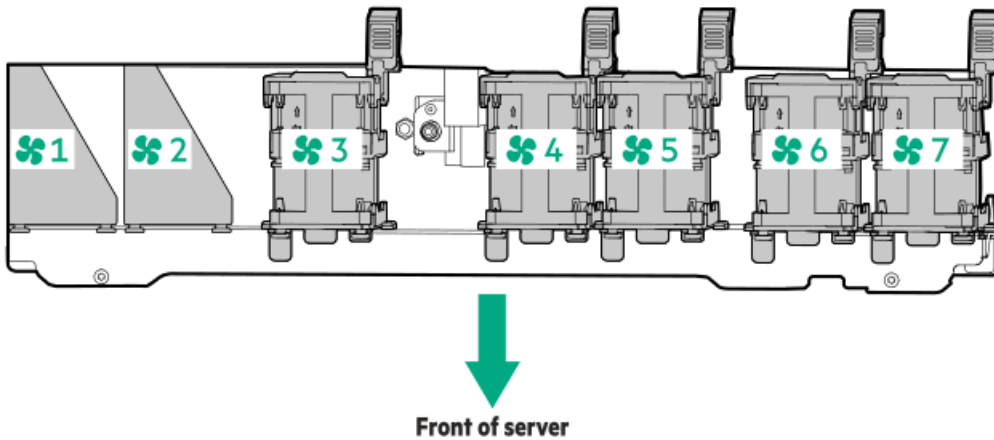
Item	LED	State	Definition
1	Fault/Locate	Solid amber	This drive has failed, is unsupported, or is invalid.
		Solid blue	The drive is operating normally and being identified by a management application.
		Flashing amber/blue (1 flash per second)	The drive has failed, or a predictive failure alert has been received for this drive. The drive has also been identified by a management application.
		Flashing amber (1 flash per second)	A predictive failure alert has been received for this drive. Replace the drive as soon as possible.
		Off	The drive is operating normally and not being identified by a management application.
2	Online/Activity	Solid green	The drive is online and has no activity.
		Flashing green (4 flashes per second)	The drive is operating normally and has activity.
		Off	No power present

HPE NS204i-u Boot Device LED definitions



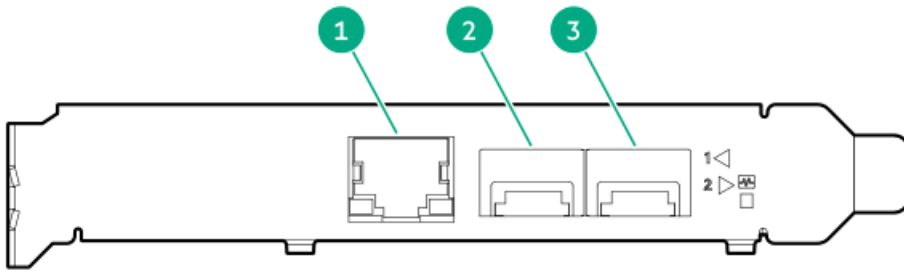
Item	LED	Status	Definition
1	Fault/Locate	Solid amber	Drive has failed, unsupported, or invalid.
		Solid blue	Drive is operating normally and being identified by a management application.
		Flashing amber/blue (1 flash per second)	Drive has failed, or a predictive failure alert is received for the drive. The drive has also been identified by a management application.
		Flashing amber (1 flash per second)	Drive predictive failure alert is received. Replace the drive as soon as possible.
		Off	Drive is operating normally and is not identified by a management application.
2	Online/Activity	Solid green	Drive is online and has no activity.
		Flashing green (1 flash per second)	Drive is doing one of the following: <ul style="list-style-type: none"> Rebuilding or performing a RAID Erasing
		Flashing green (4 flashes per second)	Drive is operating normally and has activity.
		Off	Drive is not configured by a RAID controller or is a spare drive.

Fan bay numbering



DSC-25 2-port SFP28 card ports and LEDs

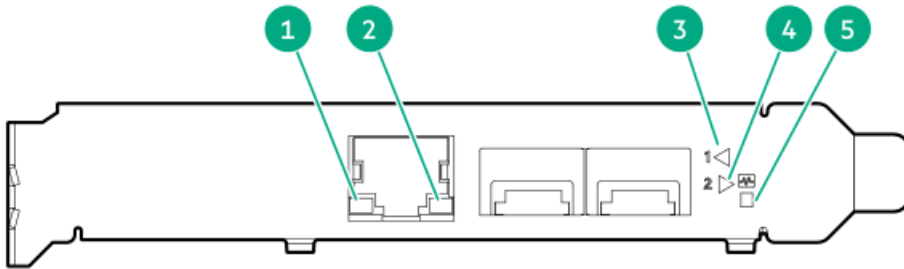
Ports



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

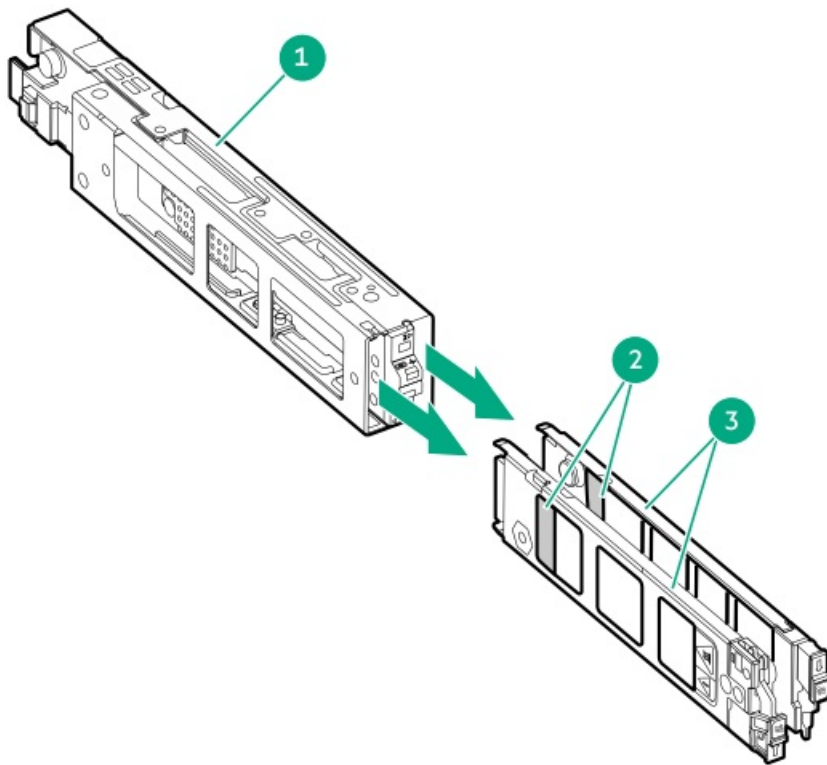
LEDs

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.



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
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

HPE NS204i-u Boot Device components



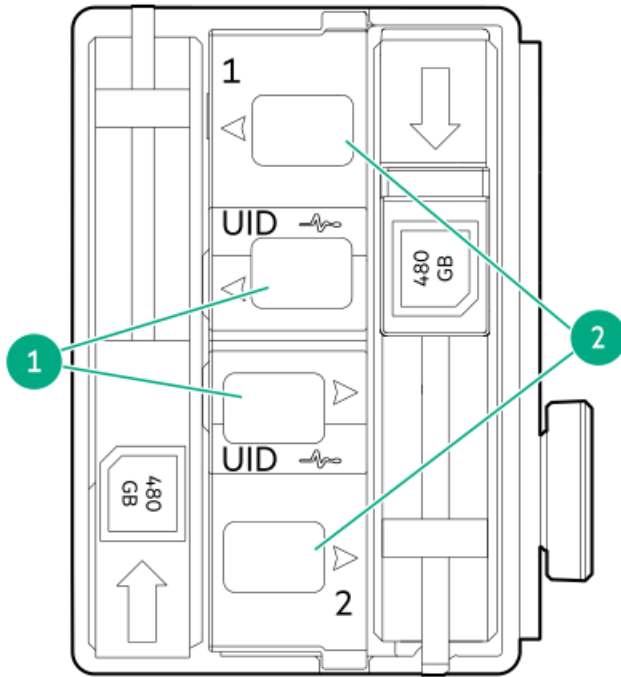
Item	Description
1	Boot device cage
2	M.2 slots
3	Boot device carriers

Subtopics

[HPE NS204i-u Boot Device LED definitions](#)

HPE NS204i-u Boot Device LED definitions





Item	LED	Status	Definition
1	Fault/Locate	Solid amber	Drive has failed, unsupported, or invalid.
		Solid blue	Drive is operating normally and being identified by a management application.
		Flashing amber/blue (1 flash per second)	Drive has failed, or a predictive failure alert is received for the drive. The drive has also been identified by a management application.
		Flashing amber (1 flash per second)	Drive predictive failure alert is received. Replace the drive as soon as possible.
		Off	Drive is operating normally and is not identified by a management application.
2	Online/Activity	Solid green	Drive is online and has no activity.
		Flashing green (1 flash per second)	Drive is doing one of the following: <ul style="list-style-type: none"> Rebuilding or performing a RAID Erasing
		Flashing green (4 flashes per second)	Drive is operating normally and has activity.
		Off	Drive is not configured by a RAID controller or is a spare drive.

Cabling

This chapter includes cabling guidelines and diagrams for internal component cabling.

Subtopics

[Cabling guidelines](#)

[Cabling diagrams](#)

Cabling guidelines

Observe the following:

- Some diagrams show alphabetical callouts A, B, C, etc. These callouts correspond to labels near the connectors on the cable.
- The cable colors in the cabling diagrams used in this chapter are for illustration purposes only.
- Observe all guidelines when working with server cables.

Before connecting cables

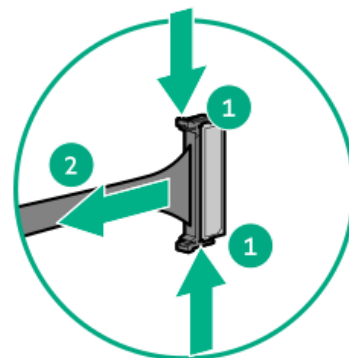
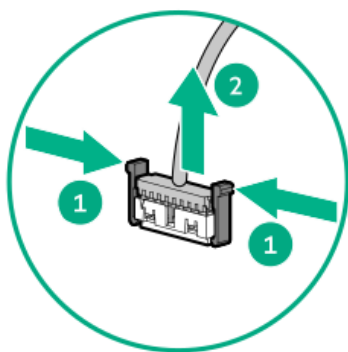
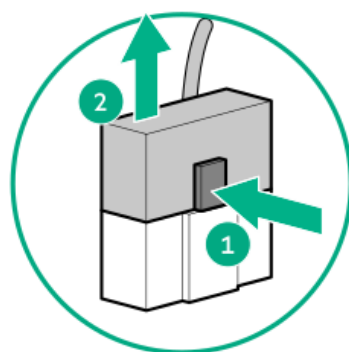
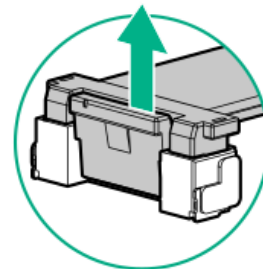
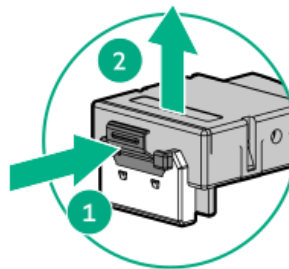
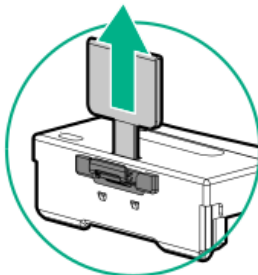
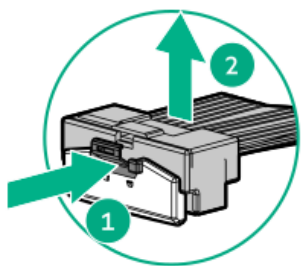
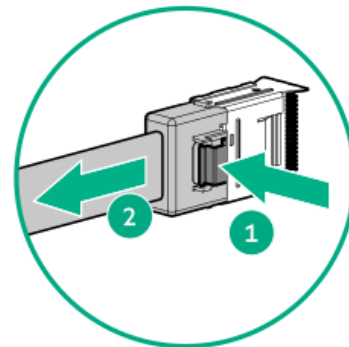
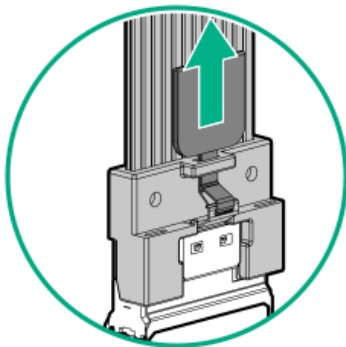
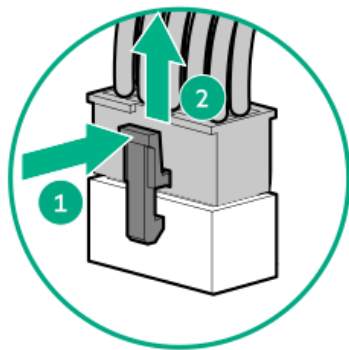
- Note the port labels on the PCA components. Not all these components are used by all servers:
 - System board ports
 - Drive and power supply backplane ports
 - Expansion board ports (controllers, adapters, expanders, risers, and similar boards)
- Note the label near each cable connector. This label indicates the destination port for the cable connector.
- Some data cables are prebent. Do not unbend or manipulate the cables.
- To prevent mechanical damage or depositing oil that is present on your hands, and other contamination, do not touch the ends of the connectors.

When connecting cables

- Before connecting a cable to a port, lay the cable in place to verify the length of the cable.
- Use the internal cable management features to properly route and secure the cables.
- When routing cables, be sure that the cables are not in a position where they can be pinched or crimped.
- Avoid tight bend radii to prevent damaging the internal wires of a power cord or a server cable. Never bend power cords and server cables tight enough to cause a crease in the sheathing.
- Make sure that the excess length of cables is properly secured to avoid excess bends, interference issues, and airflow restriction.
- To prevent component damage and potential signal interference, make sure that all cables are in their appropriate routing position before installing a new component and before closing up the server after hardware installation/maintenance.

When disconnecting cables

- Grip the body of the cable connector. Do not pull on the cable itself because this action can damage the internal wires of the cable or the pins on the port.
- If a cable does not disconnect easily, check for any release latch that must be pressed to disconnect the cable.



- Remove cables that are no longer being used. Retaining them inside the server can restrict airflow. If you intend to use the removed cables later, label and store them for future use.

Cabling diagrams

Observe the following:

- Before cabling components, see the [cabling guidelines](#).
- Use the cable part number or search feature to find your diagram.



Component cabling	Cable part number
2 SFF drive power cabling	<u>P54591-001</u>
8 SFF drive power cabling	<u>P57306-001</u>
20 EDSFF drive power cabling	<u>P57315-001</u>
8 SFF: SAS/SATA cabling to box 1	<u>P57307-001</u>
8 SFF: Box 1 to Primary riser	<u>P57076-001</u>
2 SFF: Box 2 to Primary riser	<u>P57041-001</u>
Type-p controller cabling	<u>P57070-001</u>
	<u>P57057-001</u>
	<u>P57076-001</u>
	<u>P57041-001</u>
Type-o controller cabling	<u>P58152-001</u>
2 SFF: NVMe Direct attach cabling - 1 processor	<u>P57311-001</u>
8 SFF: SAS/SATA to OCP	<u>P57079-001</u>
8 SFF: NVMe Direct attach cabling - 1 processor	<u>P57308-001</u>
	<u>P57309-001</u>
8 SFF: NVMe Direct attach cabling - 2 processors	<u>P57309-001</u>
	<u>P57310-001</u>
EDSFF Direct attach cabling	<u>P57313-001</u>
	<u>P57314-001</u>
8 SFF: U.3 to OCP1 Y cable	<u>P57334-001</u>
	<u>P57335-001</u>
Energy pack cabling	<u>P58176-001</u>
HPE NS204i Boot Device cabling on the secondary riser cage	<u>P54087-001</u>
	<u>P54088-001</u>
System Insight Display cabling	<u>P48971-001</u>
Chassis intrusion switch cabling	<u>P47751-001</u>
Serial port cabling	<u>873747-001</u>
Optical drive cabling	<u>P57326-001</u>
Slot 21 OCP NIC 3.0 x16 upgrade cabling	<u>P58174-001</u>
Slot 22 OCP NIC 3.0 x16 upgrade cabling	<u>P58173-001</u>
	<u>P58174-001</u>
XGMI cabling	<u>P64556-001</u>

Subtopics

[Drive power cabling](#)

[2 SFF Drive controller cabling](#)

2 SFF: NVMe drive direct attach cabling

8 SFF: NVMe drive direct attach cabling

EDSFF drive direct attach cabling

8 SFF: SAS/SATA/NVMe cabling

Ear switch board cabling

Type-p storage controller cabling

Type-o storage controller cabling

Energy pack cabling

HPE NS204i Boot Device cabling

System Insight Display cabling

Chassis intrusion switch cabling

Serial port cabling

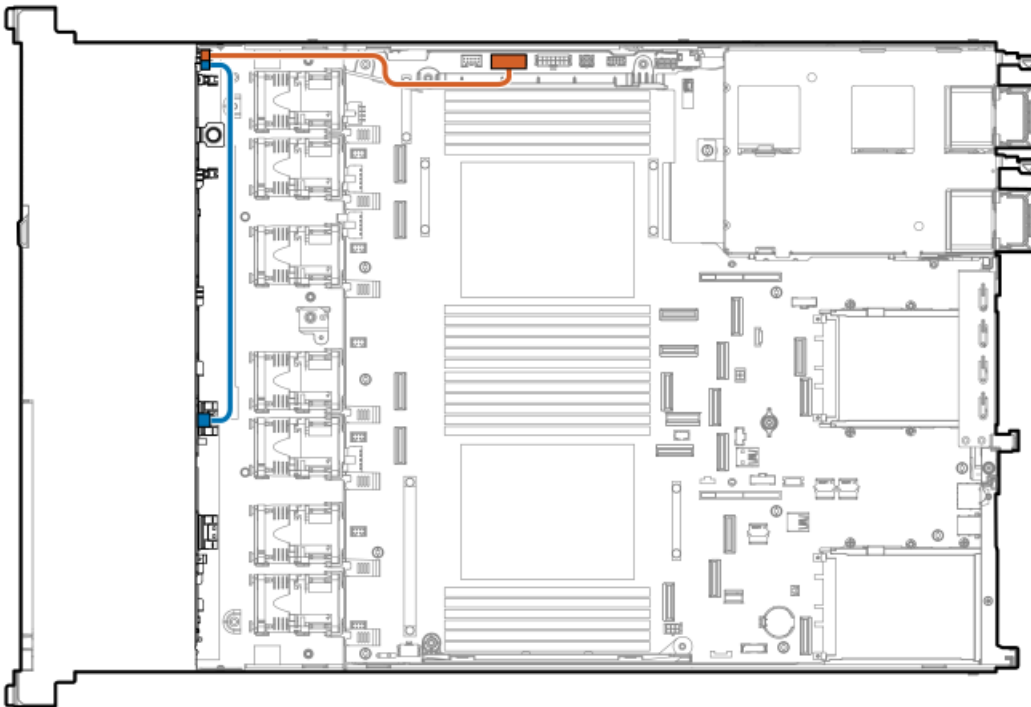
Optical drive cabling

OCP NIC 3.0 x16 upgrade cabling

XGMI cabling

Drive power cabling

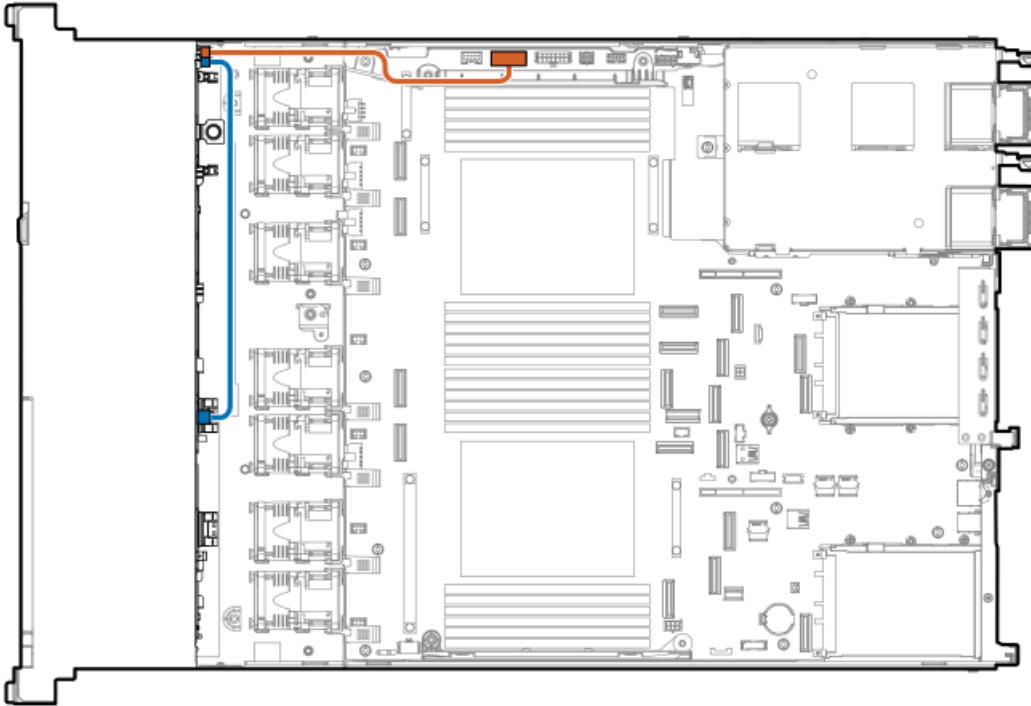
2 SFF drive power cable



Cable part number	Cable color	From	To
P54591-001 ¹	Blue	8 SFF Box 1 backplane	2 SFF Box 2 backplane

¹ Option kits: P55023-B21, P55025-B21

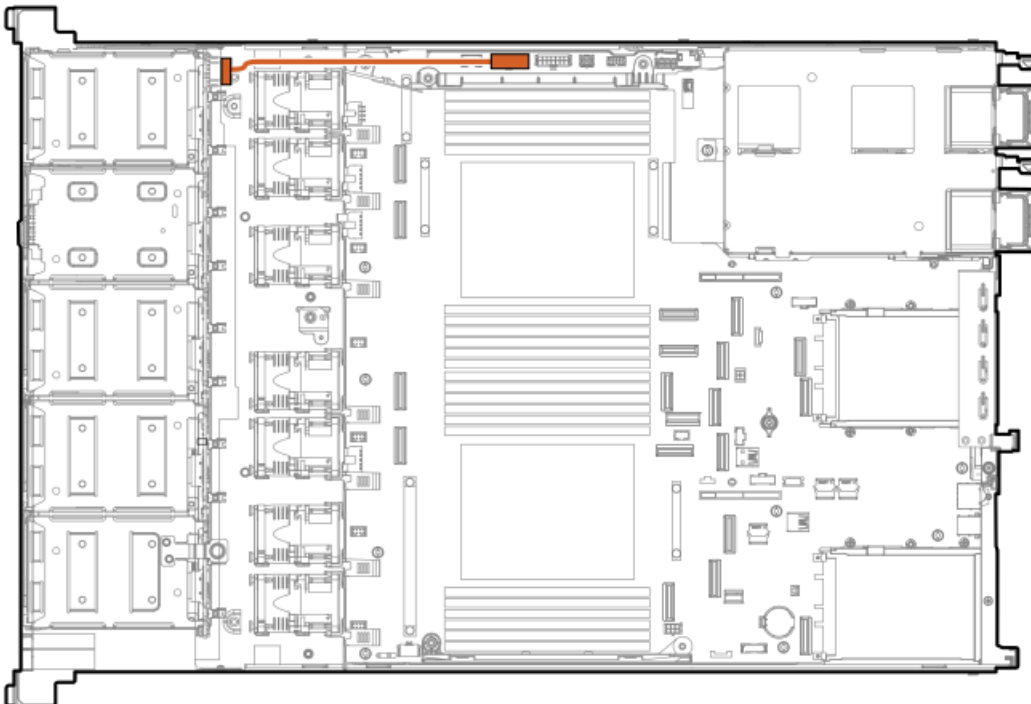
8 SFF drive power cable



Cable part number	Cable color	From	To
P57306-001 ¹	Orange	Box 1 backplane	Drive backplane / Graphics card power connector A (J5007)

¹ Option kits: P55020-B21, P55021-B21, P55022-B21

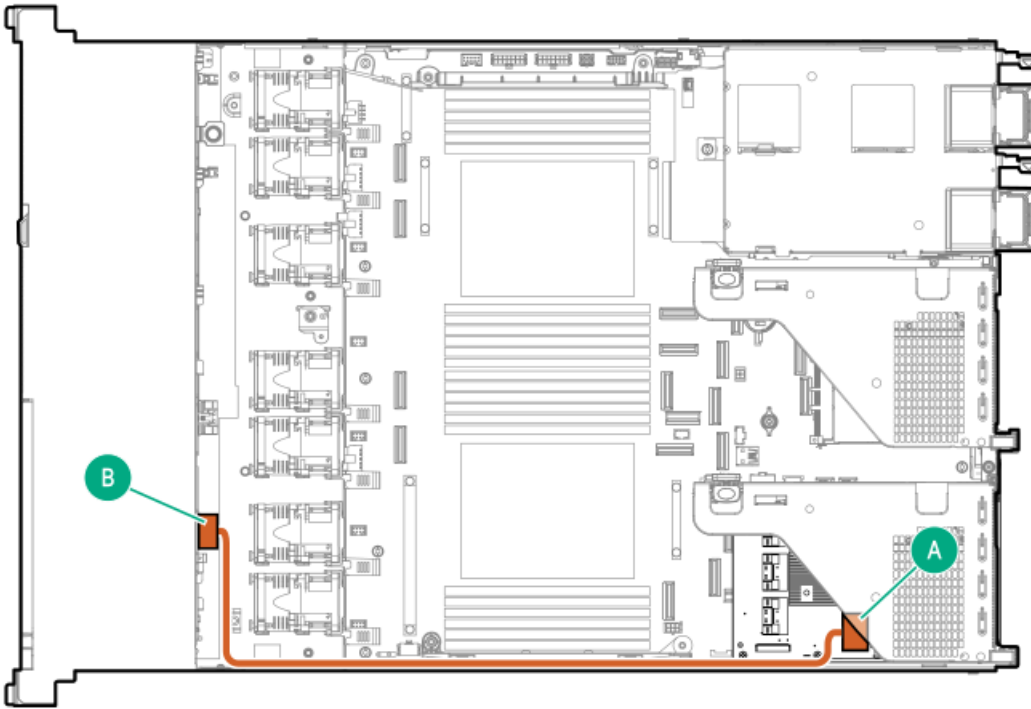
20 EDSFF drive power cable



Cable part number	Cable color	From	To
P57315-001 ¹	Orange	Box 1 backplane	Drive backplane / Graphics card power connector A (J5007)

¹

2 SFF Drive controller cabling

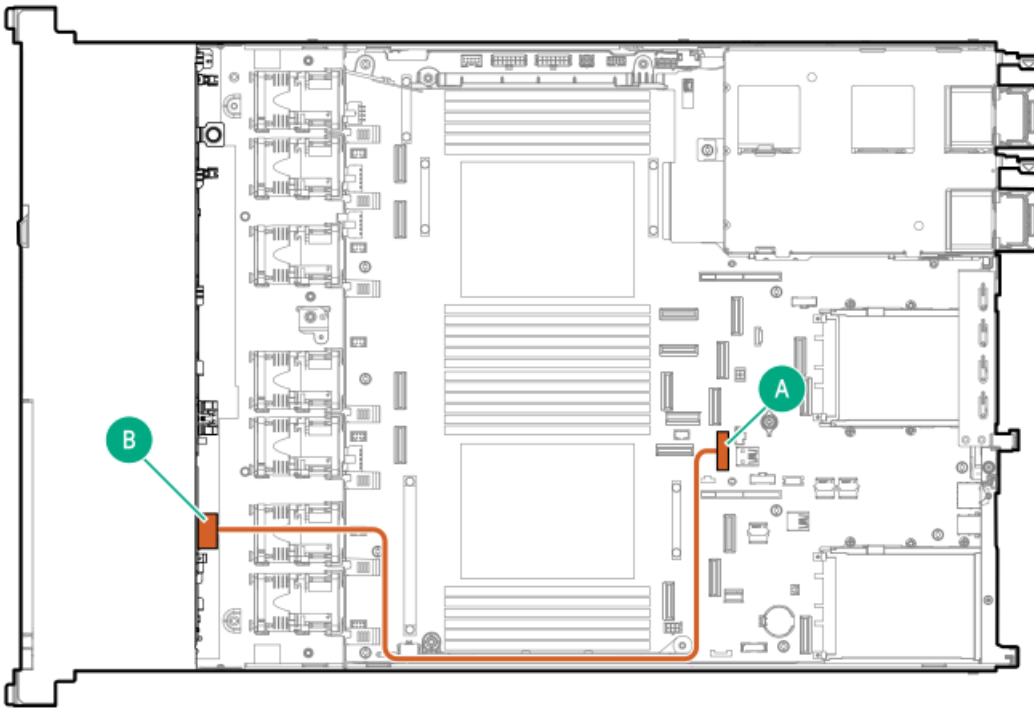


Cable part number	Color	From	To
P57041-001 ¹	Orange	Port 4	Port 1

¹ Option kit: P56907-B21

2 SFF: NVMe drive direct attach cabling

NVMe drive direct attach (1 processor)

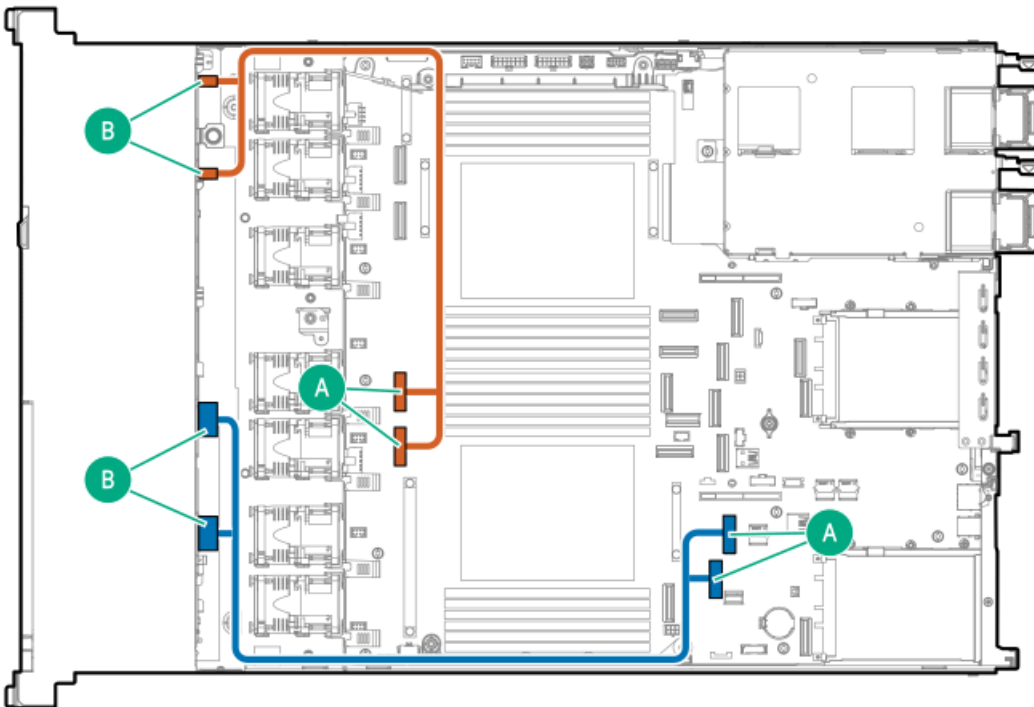


Cable part number	Cable color	From	To
P57311-001 ¹	Orange	Box 2	Port 1A

¹ Option kits: P55023-B21, P55025-B21

8 SFF: NVMe drive direct attach cabling

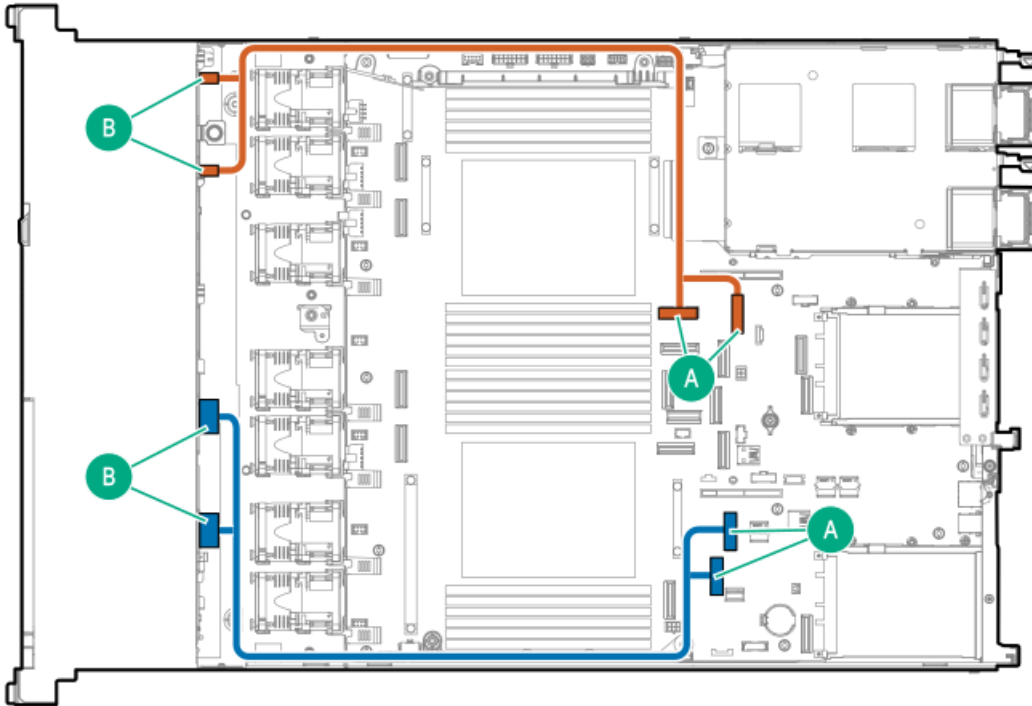
8 SFF NVMe drive direct attach (1 processor)



Cable part number	Cable color	From	To
P57308-001 ¹	Orange	Port 1	Port 2A
		Port 2	Port 3A
P57309-001 ¹	Blue	Port 3	Port 6A
		Port 4	Port 7A

¹ Option kits: P55021-B21, P55022-B21

8 SFF: NVMe drive direct attach cable (2 processors)

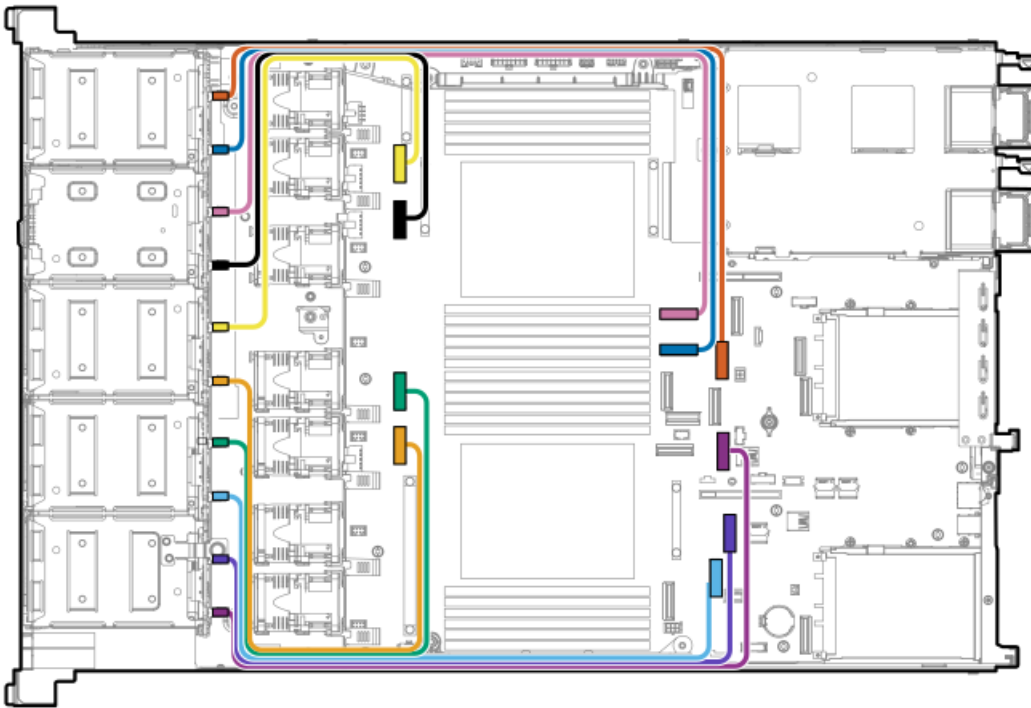


Cable part number	Cable color	From	To
P57310-001 ¹	Orange	Port 1	Port 9B
		Port 2	Port 7B
P57309-001 ¹	Blue	Port 3	Port 6A
		Port 4	Port 7A

¹ Option kits: P55021-B21, P55022-B21

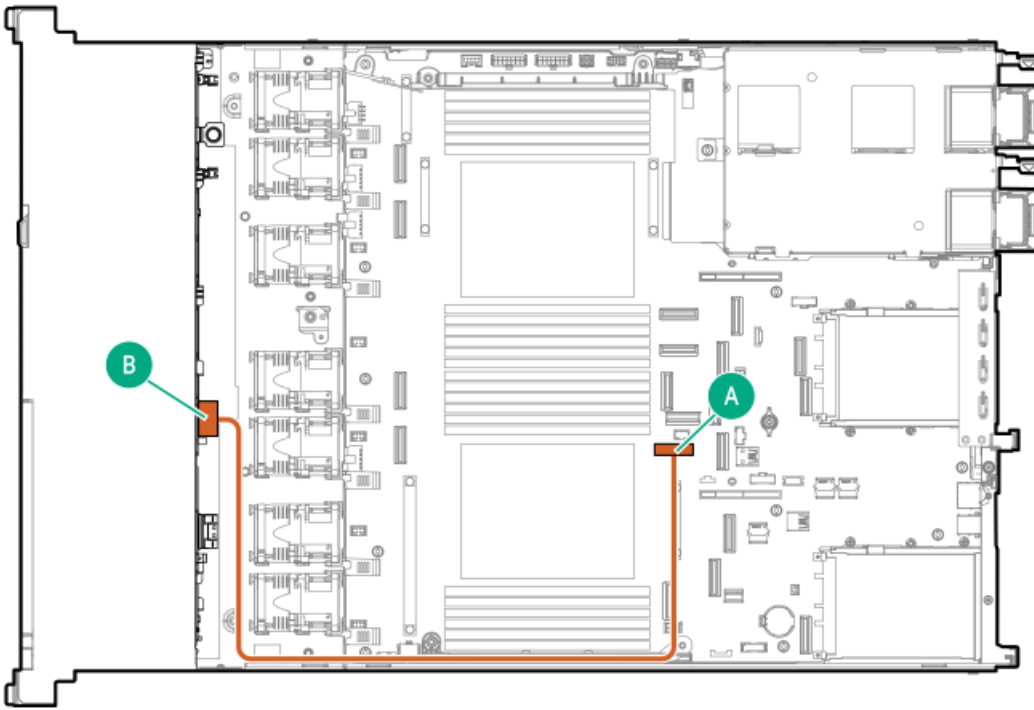
EDSFF drive direct attach cabling

EDSFF drive direct attach



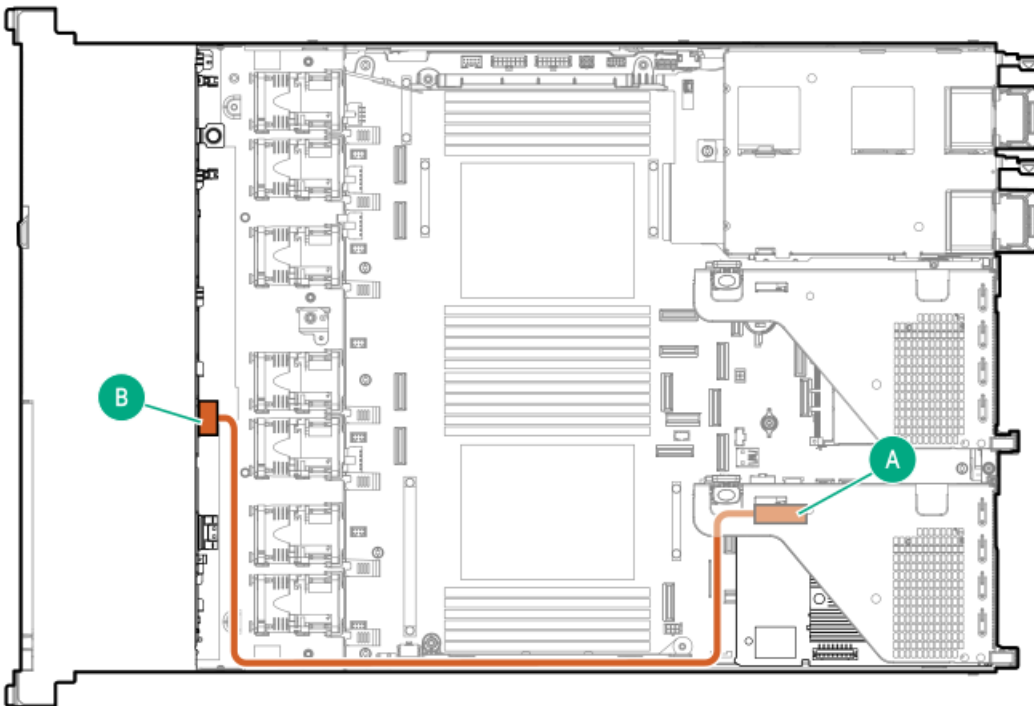
Cable part number	Cable color	From	To
P57313-001	Red	Backplane port 1	Port 8B
	Blue	Backplane port 2	Port 6B
	Pink	Backplane port 3	Port 7B
	Black	Backplane port 4	Port 2B
	Yellow	Backplane port 5	Port 3B
P57314-001	Orange	Backplane port 6	Port 2A
	Green	Backplane port 7	Port 3A
	Light blue	Backplane port 8	Port 6A
	Violet	Backplane port 9	Port 7A
	Purple	Backplane port 10	Port 1A

8 SFF: SAS/SATA/NVMe cabling



Cable part number	Color	From	To
P57307-001 ¹	Orange	Port 1	Prot 9A

¹ Option kit: P55020-B21

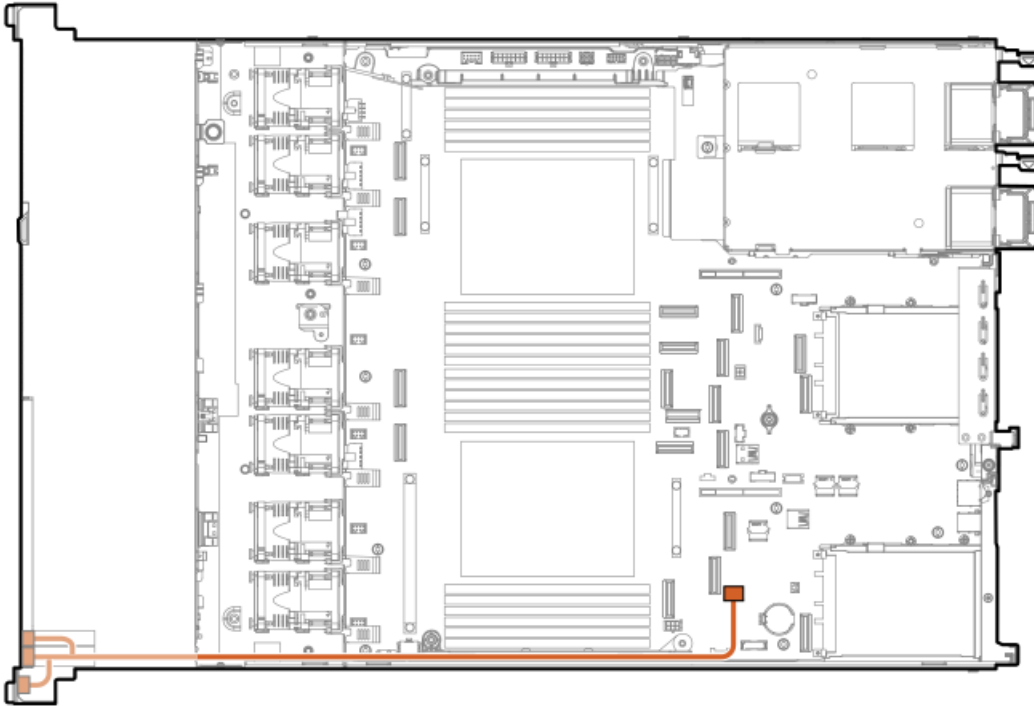


Cable part number	Color	From	To
P57079-001 ¹	Orange	Port 3	OCP

¹ Option kit: P56901-B21

Ear switch board cabling

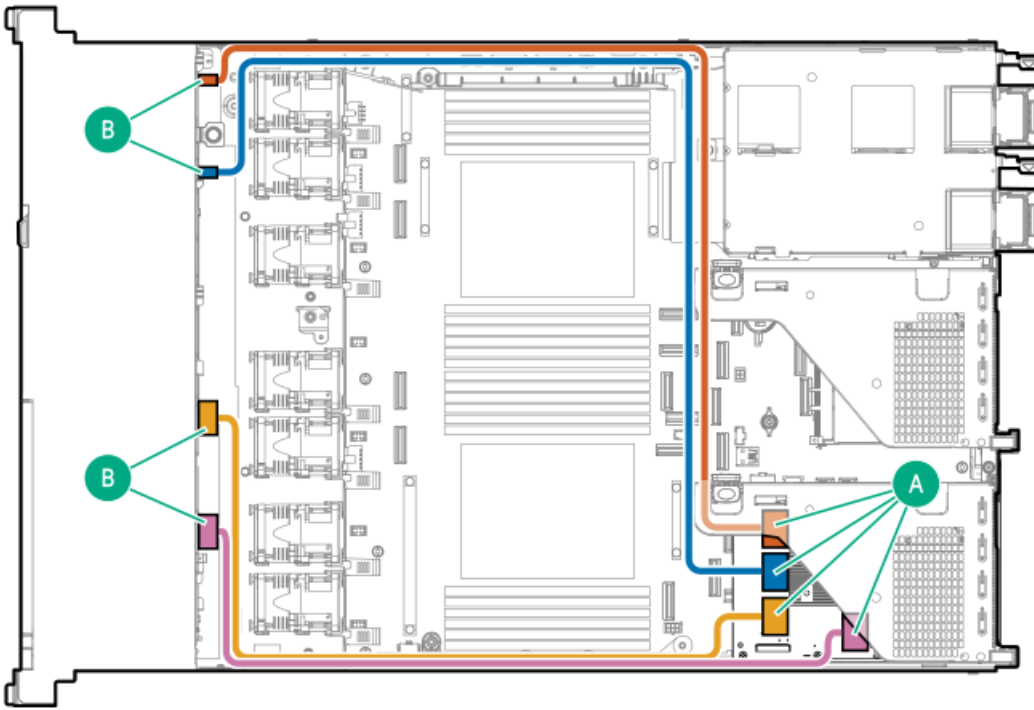
Ear switch board



Cable part number	Cable color	From	To
P43727-001	Orange	Ear switch	Front USB

Type-p storage controller cabling





Cable part number	Color	From	To
P57070-001 ¹	Orange	Port 1	Port 4
P57057-001 ¹	Blue	Port 2	Port 3
P57076-001 ¹	Yellow	Port 3	Port 2
P57041-001 ¹	Pink	Port 4	Port 1

¹ Option kit: P56911-B21

Type-o storage controller cabling

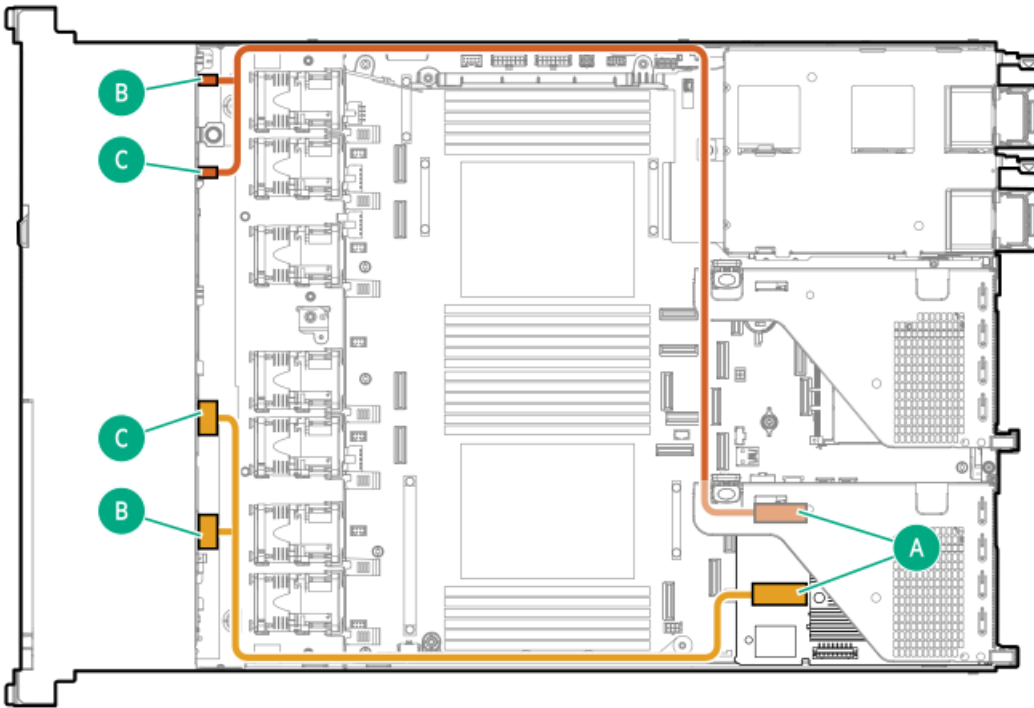
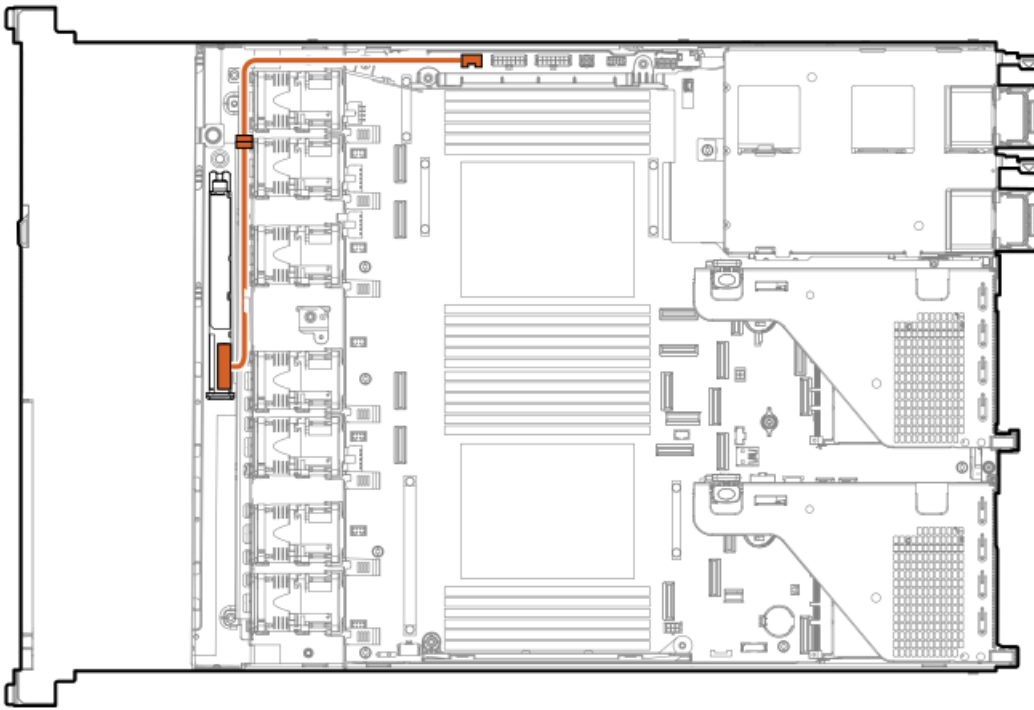


Table 1.

Cable part number	Color	From	To
P57334-001 ¹	Orange	Port 1	Port 2
		Port 2	
P57335-001 ¹	Yellow	Port 3	Port 1
		Port 4	

¹ Option kit: P56913-B21

Energy pack cabling



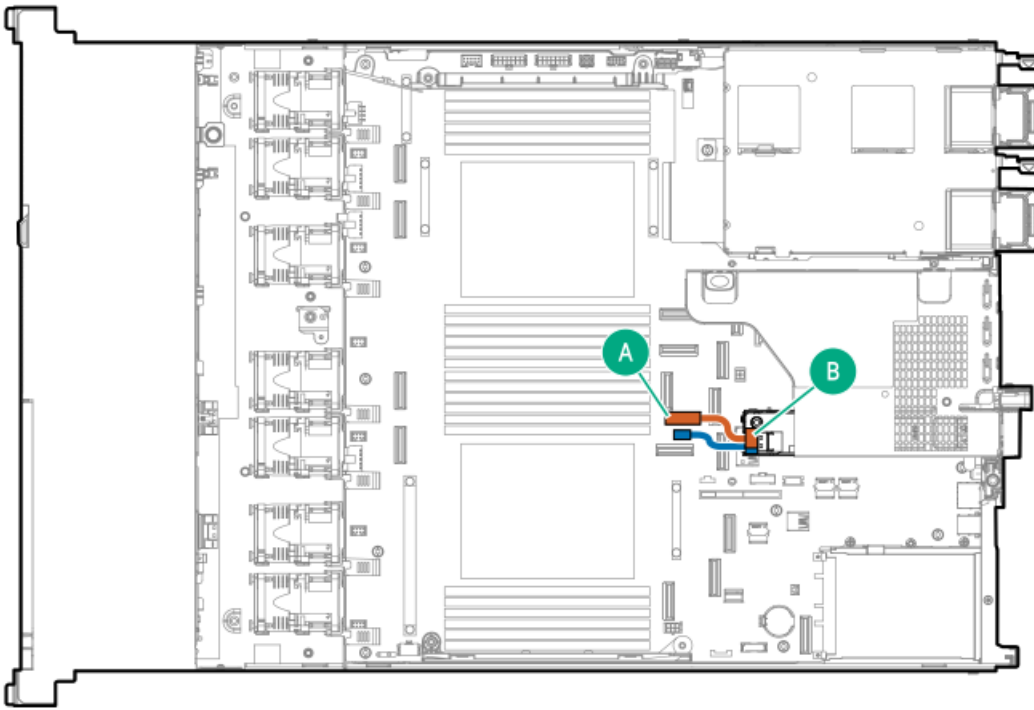
Cable part number	Color	From	To
P58176-001 ¹	Orange	Energy pack extension cable	Energy pack connector
P01366-B21 ¹	Orange	Energy pack	Energy pack extension cable

¹ P57884-B21

HPE NS204i Boot Device cabling

HPE NS204i Boot Device cabling on the secondary riser cage

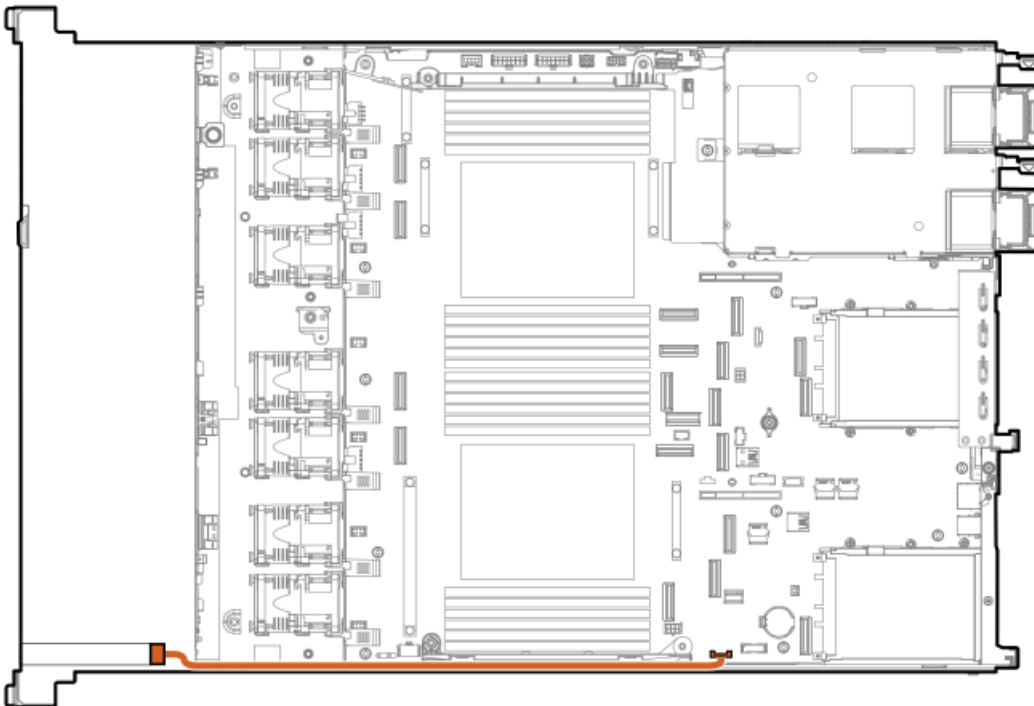




Cable part number	Color	From	To
P54087-001 ¹	Orange	NS204i-u signal connector	HPE NS204i Boot Device
P54088-001 1	Blue	NS204i-u power connector	HPE NS204i Boot Device

¹ Option kit: P57013-B21

System Insight Display cabling

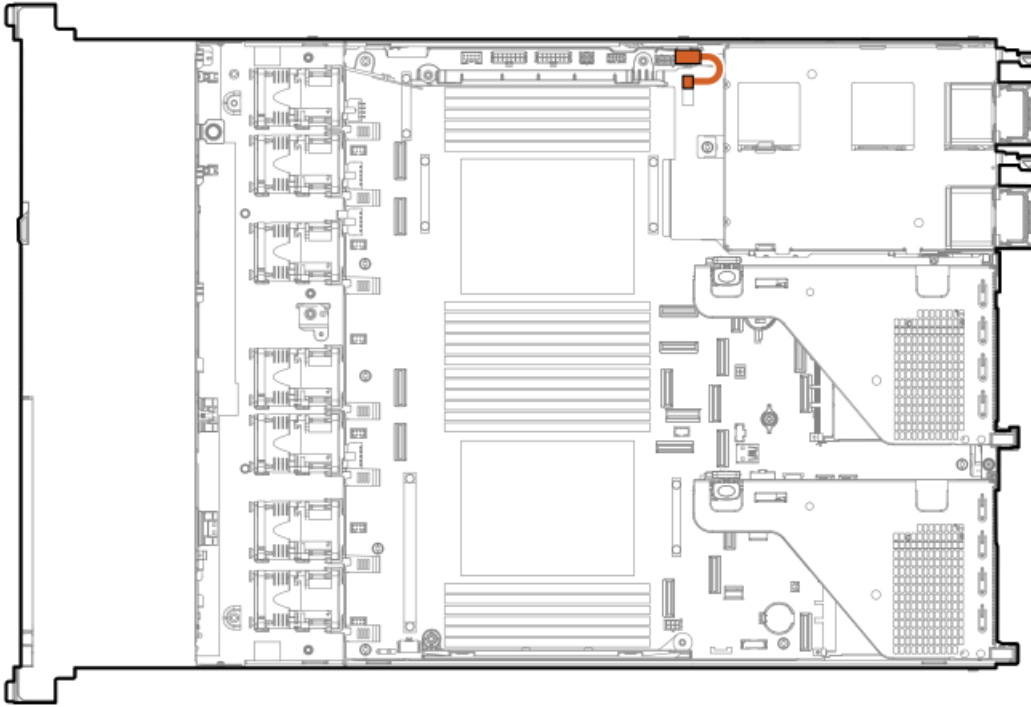


Cable part number From To

P48971-001 ¹ SID connector System Insight Display

¹ Option kit: P56924-B21

Chassis intrusion switch cabling

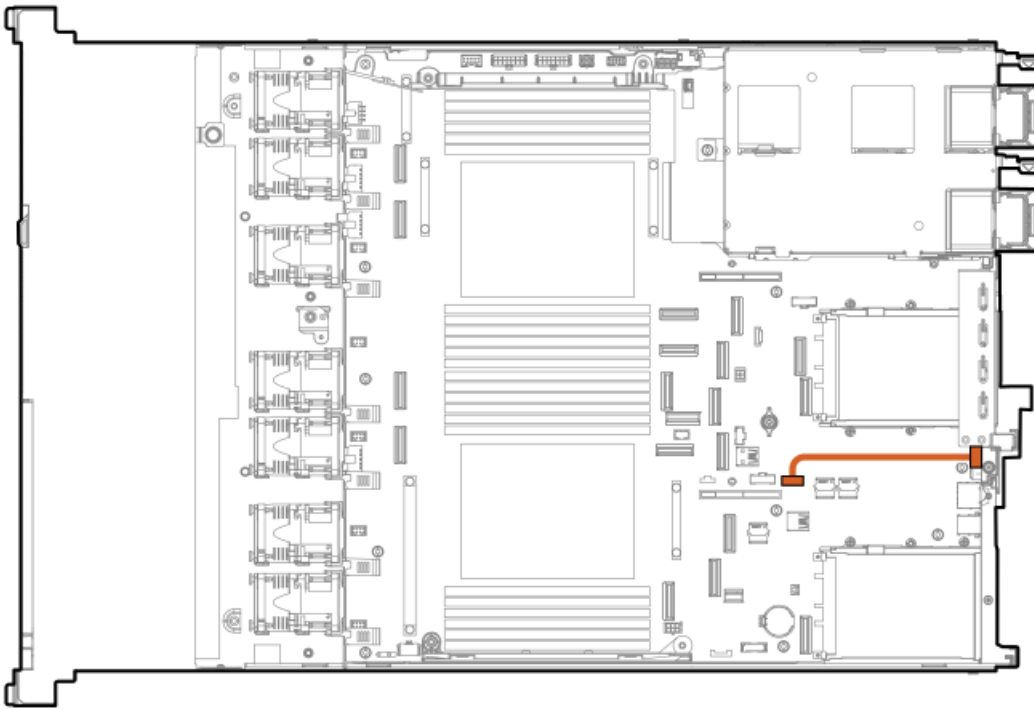


Cable part number From To

P47751-001 ¹ Chassis intrusion detection switch Chassis intrusion detection switch connector

¹ Option kit: P48922-B21

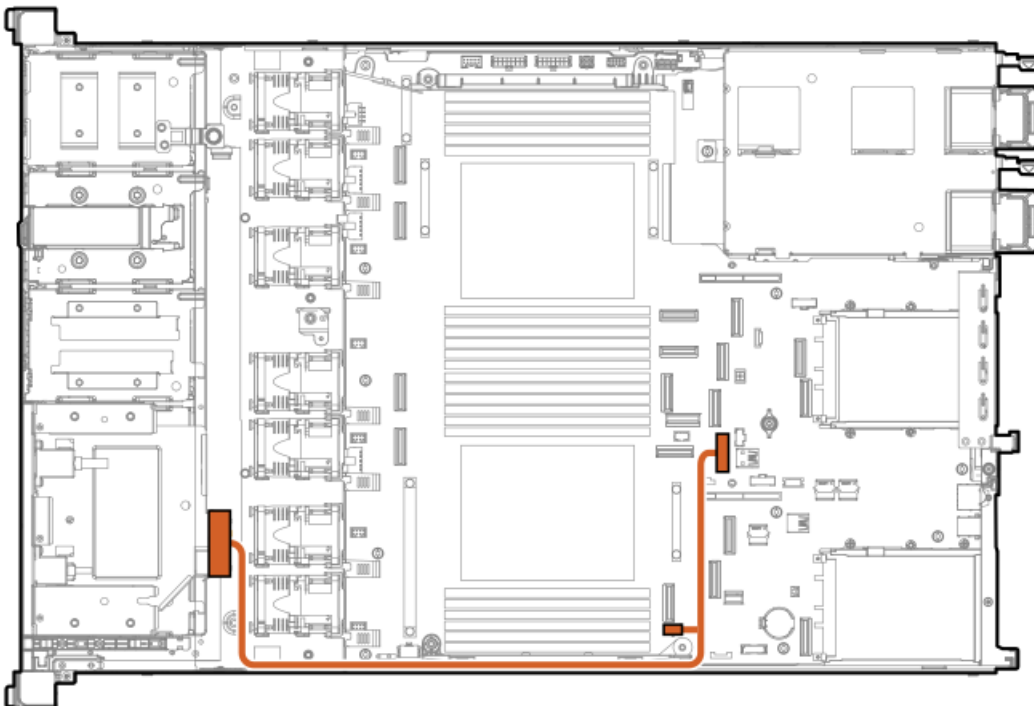
Serial port cabling



Cable part number	From	To
873747-001 ¹	Serial port	Serial port connector

¹ Option kit: P59431-B21

Optical drive cabling



Cable part number	Color	From	To
P57326-001 ¹	Orange	Port 1A	Optical drive

¹ Option kit: P56899-B21

OCP NIC 3.0 x16 upgrade cabling

OCP NIC 3.0 x16 upgrade cabling (1 processor)

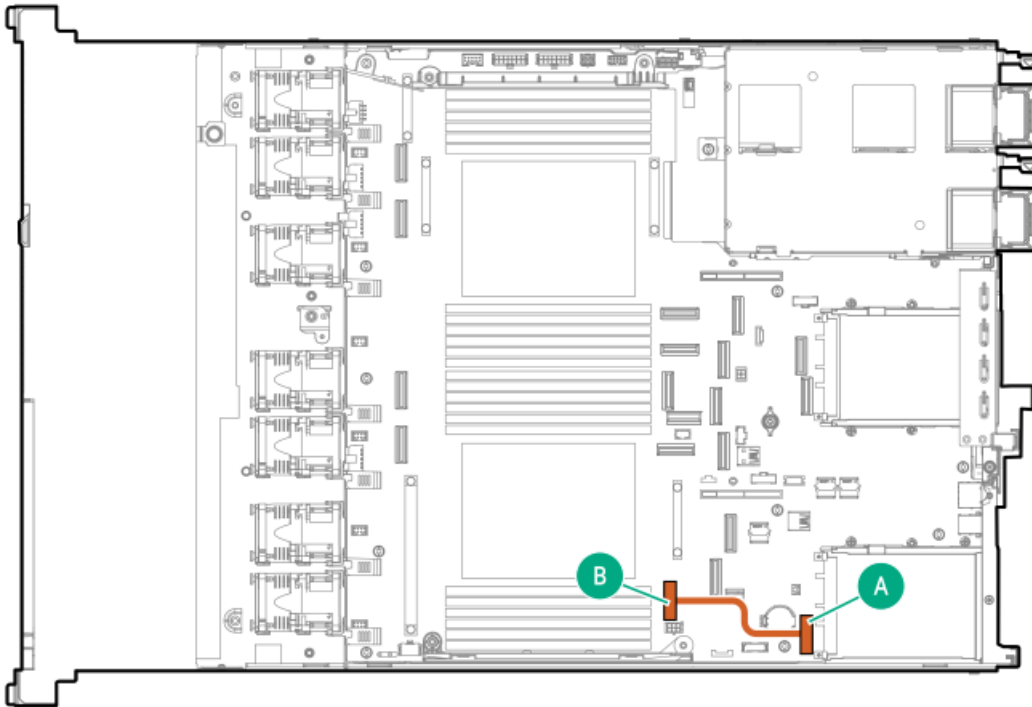
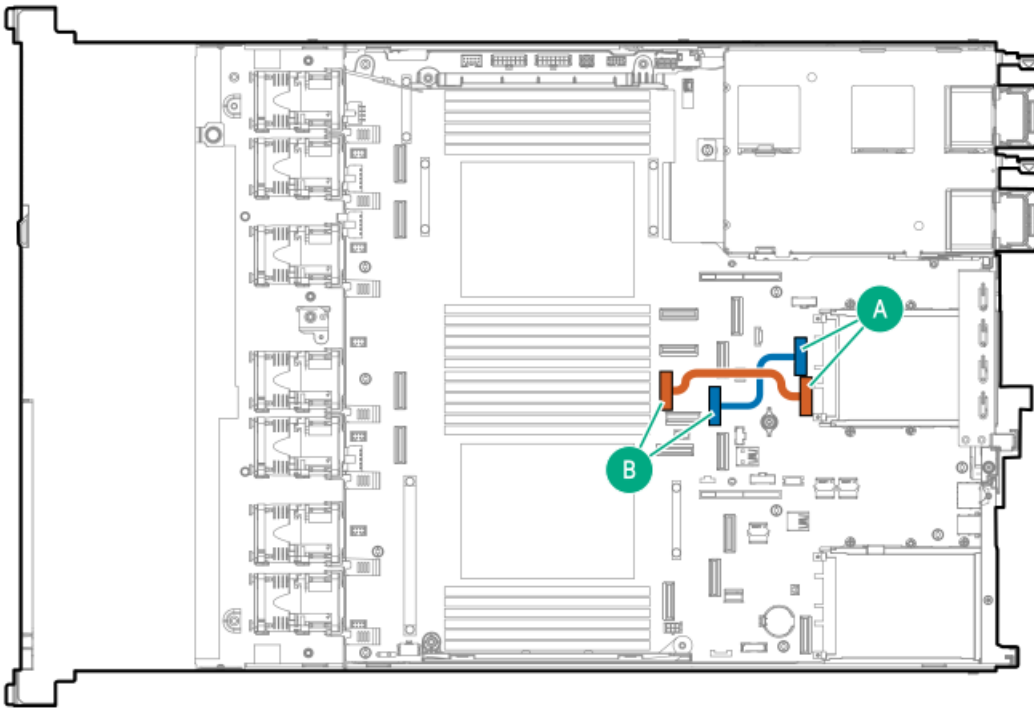


Table 1.

Cable part number	Color	From	To
P58173-001 ¹	Blue	NVMe port 4A	OCP Slot 22 port 1
P58174-001 ¹	Orange	NVME port 4A	OCP Slot 21 x16 upgrade connector

¹ Option kit: P57882-B21

OCP NIC 3.0 x16 upgrade cabling (2 processors)

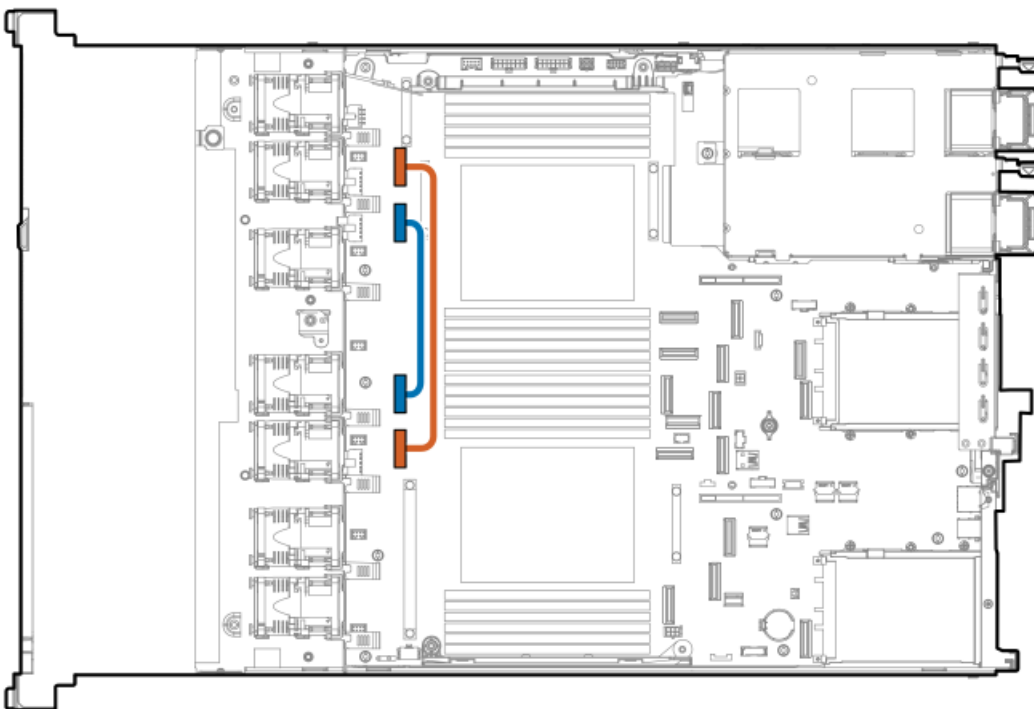


Cable part number	Color	From	To
P58174-001 ^{1 2}	Blue	NVMe port 5B	OCP Slot 22 port 1
P58174-001 ¹	Orange	NVMe port 4B	OCP Slot 22 port 2

¹ Option kit: P57882-B21

² Option kit: P57849-B21

XGMI cabling



Cable part number	Color	From	To
P58128-001 ¹	Orange	NVMe port 3B	NVMe port 2A
	Blue	NVMe port 2B	NVMe port 3A

¹ Option kit: P57880-B21

Specifications

Subtopics

[Environmental specifications](#)

[Server specifications](#)

[Power supply specifications](#)

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	4.29 cm (1.69 in)
Depth	64.9 cm (25.57 in)
Width	44.9 cm (17.67 in)
Weight, SFF minimum	12.7kg (27.94 lb)
Weight, SFF maximum	18.39 kg (40.46 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 800 W Flex Slot Platinum Hot-plug Low Halogen Power Supply
- HPE 1000 W Flex Slot Titanium Hot-plug Power Supply
- HPE 1600 W Flex Slot -48 VDC Hot-plug Power Supply
- HPE 1600 W Flex Slot Platinum Hot-Plug Low Halogen Power Supply
- HPE 1800 - 2200 W Flex Slot Titanium Hot-plug Power Supply

For detailed power supply specifications, see the QuickSpecs on the [Hewlett Packard Enterprise website](#). 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](#).



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.

Subtopics

[HPE 800W Flex Slot Platinum Hot-plug Low Halogen Power Supply](#)

[HPE 1000 W Flex Slot Titanium Hot-plug Power Supply](#)

[HPE 1600W Flex Slot Platinum Hot-plug Low Halogen Power Supply](#)

[HPE 1600 W Flex Slot -48 VDC Hot-plug Power Supply](#)

[HPE 1800-2200 W Flex Slot Titanium Power Supply](#)

HPE 800W 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
Rated input current	9.4 A at 100 VAC 4.5 A at 200 VAC
Maximum rated input power	899 W at 100 VAC 867 W at 200 VAC
BTUs per hour	3067 at 100 VAC 2958 at 200 VAC
Power supply output	—
Rated steady-state power	800 W at 200 VAC to 240 VAC input 800 W at 240 VDC input
Maximum peak power	800 W at 100 VAC to 240 VAC input

For detailed power supply specifications, see the QuickSpecs on the [Hewlett Packard Enterprise website](#).

HPE 1000 W Flex Slot Titanium Hot-plug 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
Rated input current	11.3 A at 100 VAC 6.1 A at 200 VAC
Maximum rated input power	1103 W at 100 VAC 1064 W at 200 VAC
BTUs per hour	3764 at 100 VAC 3629 at 200 VAC
Power supply output	—
Rated steady-state power	1000 W at 100 VAC to 127 VAC 1000 W at 200 VAC to 240 VAC input
Maximum peak power	1000 W at 100 VAC to 127 VAC 1000 W at 200 VAC to 240 VAC

HPE 1600W 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 7.2 A at 240 VAC
Maximum rated input power	1734 W at 200 VAC 1725 W at 240 VAC
BTUs per hour	5918 at 200 VAC 5884 at 240 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	1600 W for 1 ms (turbo mode) at 200 VAC to 240 VAC input

For detailed power supply specifications, see the QuickSpecs on the [Hewlett Packard Enterprise website](#).

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	45 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	1798 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

HPE 1800-2200 W Flex Slot Titanium 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	10 A at 200 VAC 10 A at 240 VAC
Maximum rated input power	1902 W at 200 VAC 2331 W at 240 VAC
BTUs per hour	6497 at 200 VAC 7962 at 240 VAC
Power supply output	—
Rated steady-state power	1799 W at 200 VAC 2200 W at 240 VAC
Maximum peak power	2200 W for 1 ms (turbo mode) at 200 VAC to 240 VAC input

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](#).

Support and other resources

Subtopics

[Accessing Hewlett Packard Enterprise Support](#)

[Accessing updates](#)

[Remote support](#)

[Customer self repair](#)

[Warranty information](#)

[Regulatory information](#)

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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 Onepass set up with relevant entitlements.

Remote support

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

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

HPE Get Connected

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

HPE Pointnext Tech Care

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

HPE Complete Care

<https://www.hpe.com/services/completechcare>

Customer self repair

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

authorized service provider will determine whether a repair can be accomplished by CSR.

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

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.