



Hewlett Packard
Enterprise

HPE ProLiant MicroServer Gen10 Plus Maintenance and Service Guide

Abstract

This document contains information on the hardware spare parts supported by the server and the relevant component replacement procedures. This document is intended for the person who installs, administers, and troubleshoots server or storage products. Hewlett Packard Enterprise assumes that you are qualified to service computer equipment, and are trained in recognizing hazards in products with hazardous energy levels.

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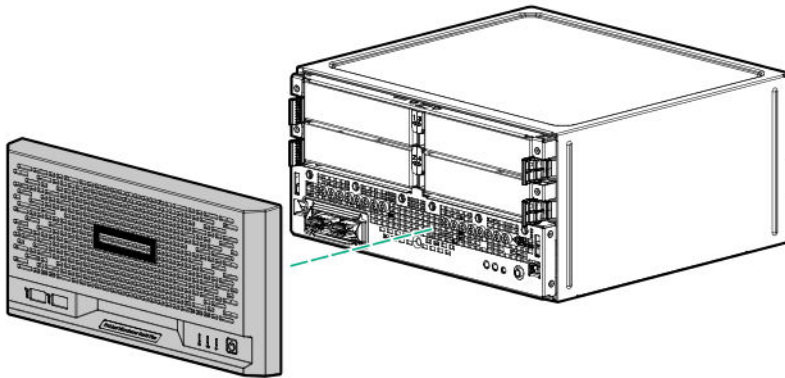
Illustrated parts catalog

This chapter lists the hardware spare parts supported by the server.

Mechanical components

Hewlett Packard Enterprise continually improves and changes product parts. For complete and current supported spare parts information, see the Hewlett Packard Enterprise PartSurfer website:

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



Item	Description
1	Front bezel spare part
2	Drive screws spare part*

* Not shown

Front bezel spare part

Customer self repair: mandatory

Description	Spare part number
Front bezel	P19419-001

For more information on the removal and replacement procedures, see [Removing the front bezel](#).

Drive screws spare part

Customer self repair: mandatory

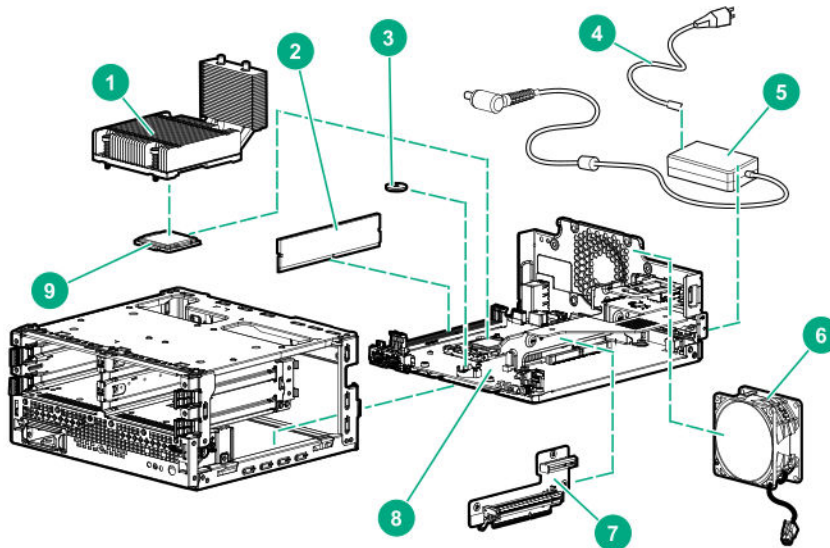
Description	Spare part number
Drive screws (four screws used for the LFF drive and SFF drive converter tray)	407752-001



System components

Hewlett Packard Enterprise continually improves and changes product parts. For complete and current supported spare parts information, see the Hewlett Packard Enterprise PartSurfer website:

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



Item	Description
1	<u>Heatsink spare part</u>
2	<u>DIMM spare parts</u>
3	<u>System battery spare part</u>
4	<u>Power cord spare parts</u>
5	<u>Power adapter spare part</u>
6	<u>Fan spare part</u>
7	<u>Riser board spare part</u>
8	<u>System board spare part</u>
9	<u>Processor spare parts</u>
10	<u>Four-bay non-hot-plug drive cable assembly spare part*</u>

* Not shown

Heatsink spare part

Customer self repair: mandatory

Description	Spare part number
Heatsink	P19423-001

For more information on the removal and replacement procedures, see **Removing and replacing a heatsink**.



DIMM spare parts

Customer self repair: mandatory

Description	Spare part number
8 GB, single-rank x8 PC4-2666V-E	P06772-001
16 GB, dual-rank x8 PC4-2666V-E	P06773-001

For more information on the removal and replacement procedures, see [Removing and replacing a DIMM](#).

System battery spare part

Customer self repair: mandatory

Description	Spare part number
3.3-V, 220-mAh lithium battery coin	319603-001

For more information on the removal and replacement procedures, see [System battery replacement](#).

Power cord spare parts

Customer self repair: mandatory

Description	Spare part number
AC power cord, C5-UL DOM	213356-001
AC power cord, C5-BRAZIL	438722-001
AC power cord, C5-IT/CL	213352-001
AC power cord, C5-AU/NZ	213356-001
AC power cord, C5-UK/SING	213351-001
AC power cord, C5-EURO	213350-001
AC power cord, C5-INDIA	404827-001
AC power cord, C5-JPN	213355-001
AC power cord, C5-CHINA	871471-001
AC power cord, C5-TAIWAN	393313-001
AC power cord, C5-TH/PH	871470-001

Power adapter spare part

Customer self repair: mandatory

Description	Spare part number
180 W, 100–240 V AC power adapter	P19429-001

Fan spare part

Customer self repair: mandatory



Description	Spare part number
Fan	P19422-001

For more information on the removal and replacement procedures, see [Removing and replacing the fan](#).

Riser board spare part

Customer self repair: mandatory

Description	Spare part number
Riser board	P19428-001

For more information on the removal and replacement procedures, see [Removing and replacing the riser board](#).

System board spare part

Customer self repair: mandatory

Description	Spare part number
System board	P19470-001

For more information on the removal and replacement procedures, see [Removing and replacing the system board](#).

Processor spare parts

Customer self repair: mandatory

Description	Spare part number
Intel Pentium Gold G5420, 3.80 GHz, 2C, 54 W	P19425-001
Intel Xeon E-2224, 3.40 GHz, 4C, 71 W	P19426-001

For more information on the removal and replacement procedures, see [Removing and replacing a processor](#).

Four-bay non-hot-plug drive cable assembly spare part

Customer self repair: mandatory

! **IMPORTANT:** The four-bay non-hot-plug drive cable assembly consists of the drive and ambient temperature sensor cables. If any of these cables becomes defective, the entire cable assembly will need to be replaced.

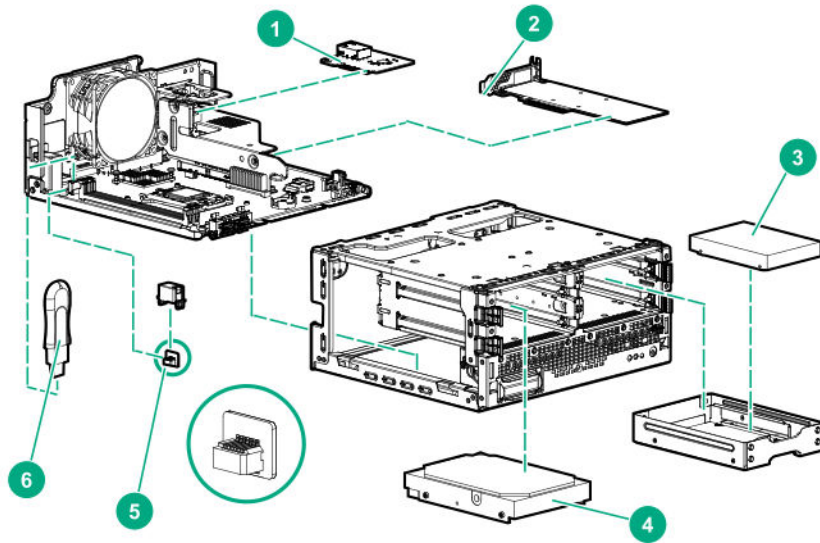
Description	Spare part number
Four-bay non-hot-plug drive cable assembly	P19420-001

For more information on the removal and replacement procedures, see [Replacing the four-bay non-hot-plug drive cable assembly](#).

Server options

Hewlett Packard Enterprise continually improves and changes product parts. For complete and current supported spare parts information, see the Hewlett Packard Enterprise PartSurfer website:





Item	Description
1	iLO enablement module spare part
2	Expansion board For more information on the removal and replacement procedures, see Removing and replacing an expansion board .
3	SFF non-hot-plug solid-state drive For more information on the removal and replacement procedures, see Removing and replacing an SFF drive .
4	LFF non-hot-plug hard drive For more information on the removal and replacement procedures, see Removing and replacing an LFF drive .
5	HPE Trusted Platform Module 2.0 Gen10 spare part
6	Internal USB device For more information on the removal and replacement procedures, see Removing and replacing an internal USB device .

* Not shown

iLO enablement module spare part

Customer self repair: mandatory

Description	Spare part number
iLO enablement module	P19427-001



For more information on the removal and replacement procedures, see [Removing and replacing iLO enablement module](#).

HPE Trusted Platform Module 2.0 Gen10 spare part

Customer self repair: no

Description	Spare part number
HPE Trusted Platform Module (TPM) 2.0 Gen10	872159-001



Customer self repair

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

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

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

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

For more information about the Hewlett Packard Enterprise CSR program, contact your local service provider.

Parts only warranty service

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

For parts only warranty service, CSR part replacement is mandatory. If you request Hewlett Packard Enterprise to replace these parts, you will be charged for the travel and labor costs of this service.

Réparation par le client (CSR)

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

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



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

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

Pour plus d'informations sur le programme CSR de Hewlett Packard Enterprise, contactez votre Mainteneur Agréé local.

Service de garantie "pièces seules"

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

Dans le cadre de ce service, la réparation des pièces CSR par le client est obligatoire. Si vous demandez à Hewlett Packard Enterprise de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.

Riparazione da parte del cliente

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

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

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

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

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

Servizio di garanzia per i soli componenti

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



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

Customer Self Repair

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

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

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

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

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

Parts-only Warranty Service (Garantieservice ausschließlich für Teile)

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

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

Reparaciones del propio cliente

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



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

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

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

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

Servicio de garantía exclusivo de componentes

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

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

Customer Self Repair

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

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

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



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

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

Garantieservice "Parts Only"

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

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

Reparo feito pelo cliente

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

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

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

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

Para obter mais informações sobre o programa de reparo feito pelo cliente da Hewlett Packard Enterprise, entre em contato com o fornecedor de serviços local.



Service de garantie 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料を全額負担し、使用する宅配便会社や運送会社を指定します。

部品のみ保証サービス

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

部品のみ保証サービスにおいては、CSR部品をお客様により交換作業していただくことが必須になります。当該部品について、もしもお客様がHewlett Packard Enterpriseに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様のご負担となります。

客户自行维修

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

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

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

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

有关 Hewlett Packard Enterprise 客户自行维修计划的详细信息，请与您当地的服务提供商联系。

仅部件保修服务

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

仅部件保修服务要求进行 CSR 部件更换。如果您请求 Hewlett Packard Enterprise 更换这些部件，则必须为该服务支付差旅费和人工费用。



客戶自行維修

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

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

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

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

如需 Hewlett Packard Enterprise 的 CSR 方案詳細資訊，請連絡您當地的服務供應商。

僅限零件的保固服務

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

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



고객 셀프 수리

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

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

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

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

Hewlett Packard Enterprise CSR 프로그램에 대한 자세한 내용은 가까운 서비스 제공업체에 문의하십시오.

부품 제공 보증 서비스

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

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



Removal and replacement procedures

This chapter provides detailed instructions on how to remove and replace component spare parts.

Safety considerations

Before performing service procedures, review all the safety information.

Electrostatic discharge

Be aware of the precautions you must follow when setting up the system or handling components. A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the system or component.

To prevent electrostatic damage:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly. Use one or more of the following methods when handling or installing electrostatic-sensitive parts:
 - Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm \pm 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
 - Use heel straps, toe straps, or boot straps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
 - Use conductive field service tools.
 - Use a portable field service kit with a folding static-dissipating work mat.

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

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

Symbols on equipment

The following symbols might be found on the equipment to indicate the presence of potentially hazardous conditions.



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

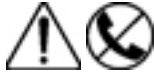
WARNING: To reduce the risk of injury from electric shock hazards, do not open this enclosure. Refer all maintenance, upgrades, and servicing to qualified personnel.



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

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





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

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



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

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



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

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



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

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

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.

CAUTION: Protect the server 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 server in operation during a power failure.

CAUTION: To prevent improper airflow and insufficient cooling that can lead to thermal damage, observe the following:

- Do not operate the server with the front bezel or chassis cover removed.
- Periodically clean the dust filter on the inner surface of the front bezel.

CAUTION: To prevent damage to electrical components, properly ground the server before beginning any installation 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.

Preparation procedures

Power down the server

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



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

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

- Press and release the Power On/Standby button.
This method initiates a controlled shutdown of applications and the OS before the server enters standby mode.
- Press and hold the Power On/Standby button for more than 4 seconds to force the server to enter standby mode.
This method forces the server to enter standby mode without properly exiting applications and the OS. If an application stops responding, you can use this method to force a shutdown.
- Use a virtual power button selection through iLO 5.
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.

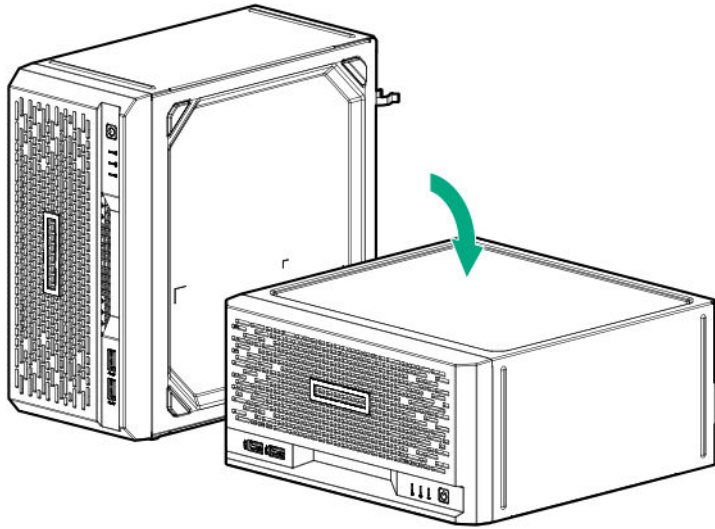
Removing the chassis cover

To access the front bezel locks, remove the chassis cover.

Procedure

- 1. Power down the server.**
- 2.** Disconnect the power cord from the AC source.
- 3.** Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
- 4.** Disconnect all peripheral cables from the server.
- 5.** If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
- 6.** If the server is in a vertical orientation, position the server in a horizontal orientation.



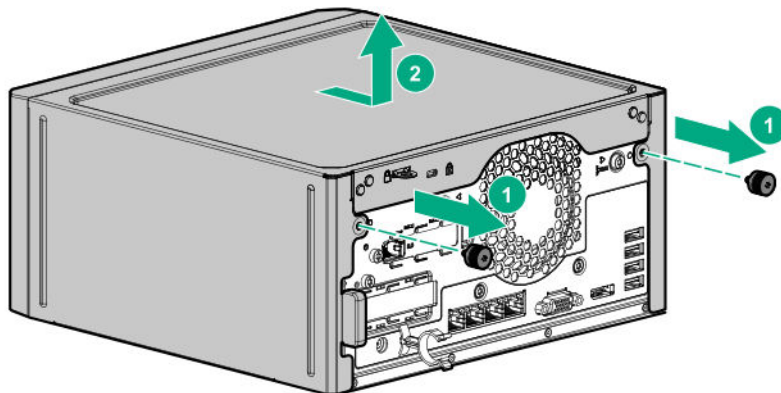


7. Remove the chassis cover:

- a. Remove the cover thumbscrews.**

If the thumbscrews are too tight, use a T-15 Torx screwdriver to remove them (callout 1).

- b. Slide the cover about half an inch towards the rear panel until the arrowhead markers on the front edge of the chassis are exposed, and then detach the cover from the server (callout 2).**



Removing the system board assembly

To access most internal components, remove the system board assembly.

Prerequisites

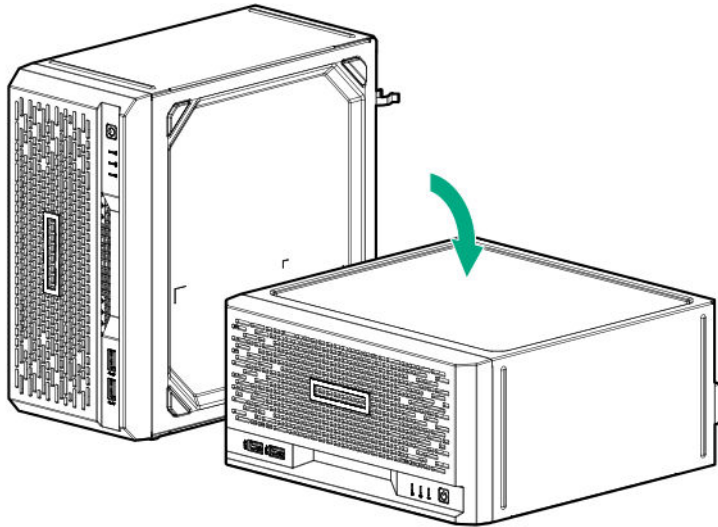
Before you perform this procedure, make sure that you have a T-15 Torx screwdriver available.

Procedure

- 1. Power down the server.**
- 2.** Disconnect the power cord from the AC source.
- 3.** Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
- 4.** Disconnect all peripheral cables from the server.

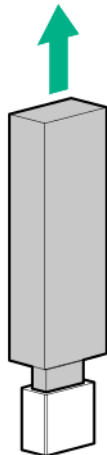


5. If the server is in a vertical orientation, position the server in a horizontal orientation.

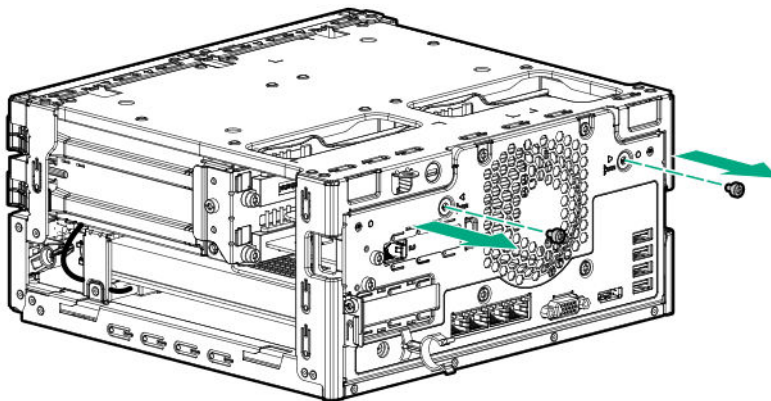


6. **Remove the chassis cover.**

7. If a tall internal USB device is installed, remove the device.

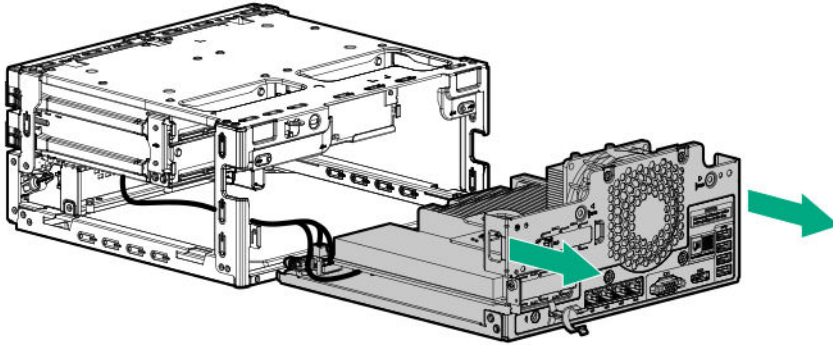


8. Remove the system board tray screws.



-
- ⓘ **IMPORTANT:** The storage cables connect the system board to the chassis. If you are completely separating the system board assembly from the chassis, **disconnect the storage cabling**.
-

9. Use the blue touchpoints on both sides of the tray to pull out the system board assembly from the chassis.



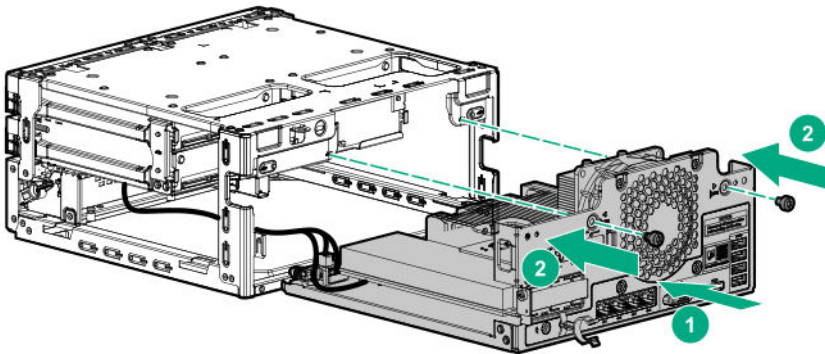
Installing the system board assembly

Prerequisites

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

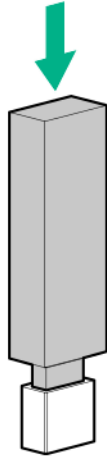
Procedure

1. If the storage cables were removed, **reconnect the cables**.
2. Install the system board assembly:
 - a. Slide the system board assembly into the chassis (callout 1).
 - b. Install the system board assembly screws (callout 2).



3. If removed, install the internal USB device.





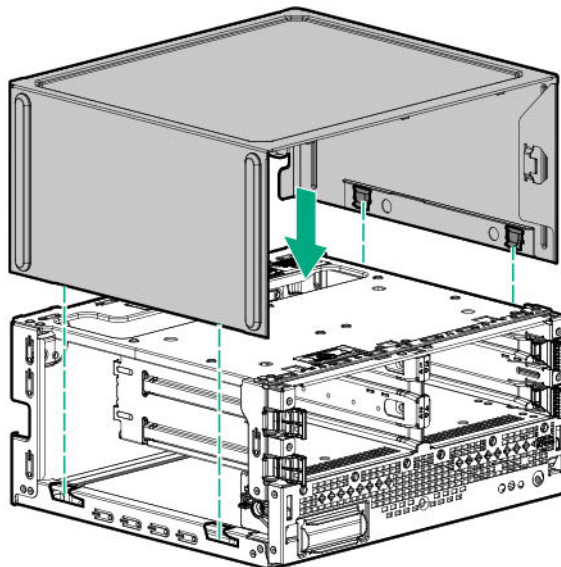
4. Install the chassis cover.

5. If removed, install the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. Connect all peripheral cables to the server.
7. Connect the power adapter to the server, and then secure the power adapter cord in the power cord clip.
8. Connect the power cord to the AC source.
9. **Power up the server.**

Installing the chassis cover

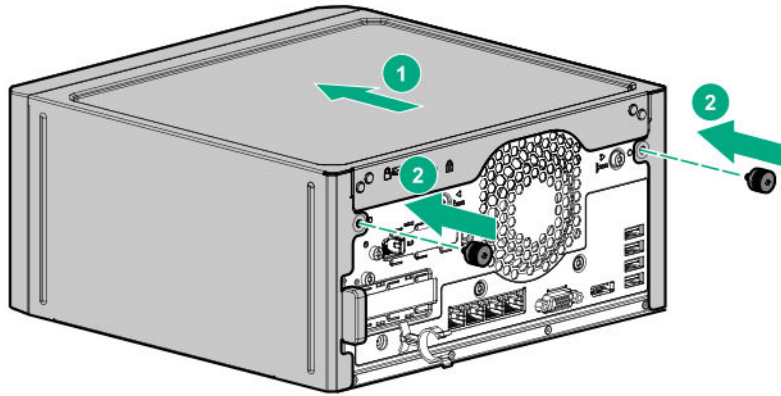
Procedure

1. Install the chassis cover:
 - a. Insert the cover tabs to their chassis openings. Make sure that the cover is flushed against the top of the chassis.



- b. Slide the chassis cover towards the front panel (callout 1), and then install the chassis thumbscrews (callout 2).





2. If removed, install the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
3. Connect all peripheral cables to the server.
4. Connect the power adapter to the server, and then secure the power adapter cord in the power cord clip.
5. Connect the power cord to the AC source.
6. **Power up the server.**

Power up the server

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

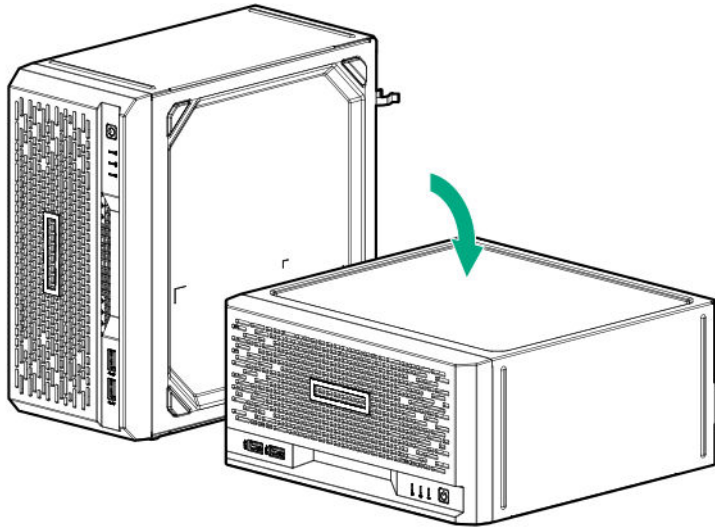
- Press the Power On/Standby button.
- Use the virtual power button through iLO.

Removing and replacing the front bezel

Procedure

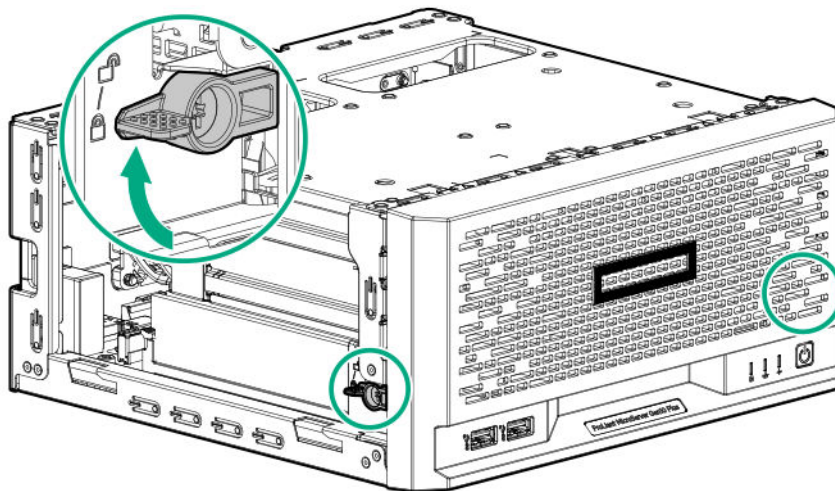
1. **Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If the server is in a vertical orientation, position the server in a horizontal orientation.





6. If the front bezel is locked, do the following:

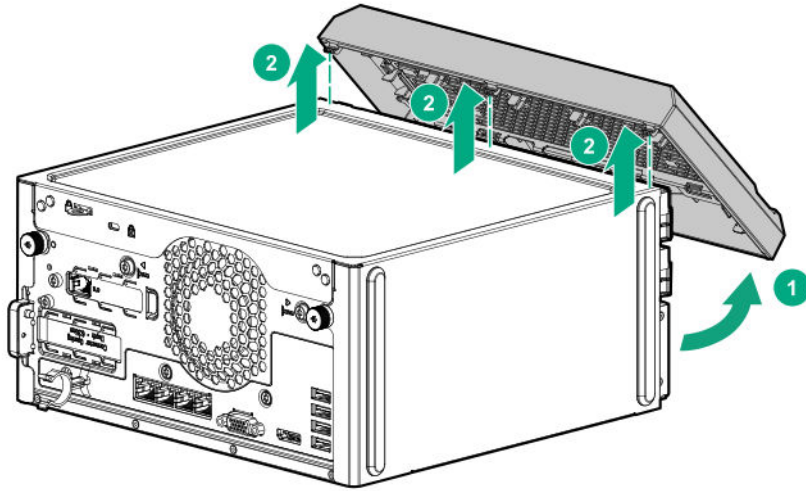
- a. **Remove the chassis cover.**
- b. Switch the bezel locks upward.



7. To remove an unlocked front bezel, do the following:

- a. Pivot the bottom part of the bezel upward (callout 1).
- b. Release the bezel tabs from their chassis openings (callout 2).





To replace the component, reverse the removal procedure.

Removing and replacing an LFF drive

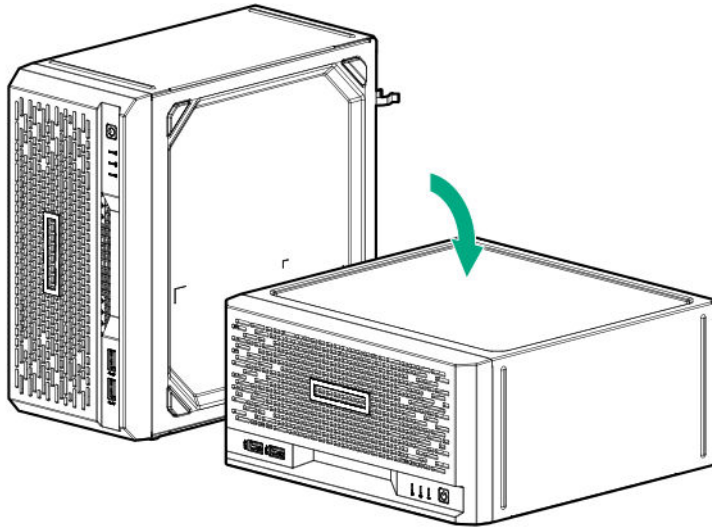
Prerequisites

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

Procedure

- 1. Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.

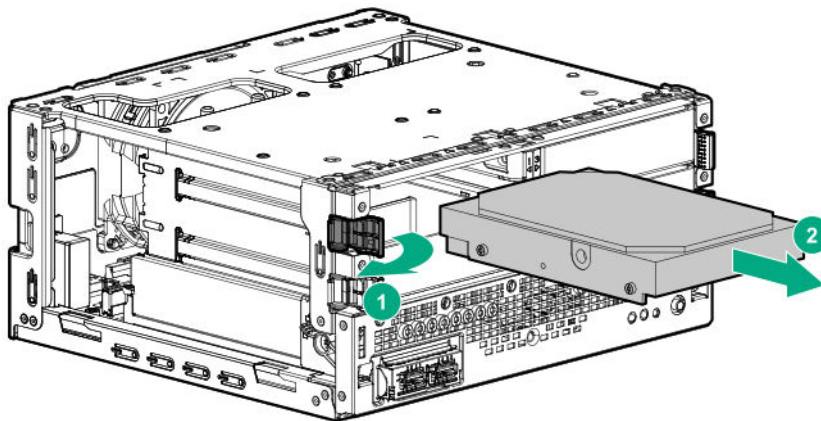




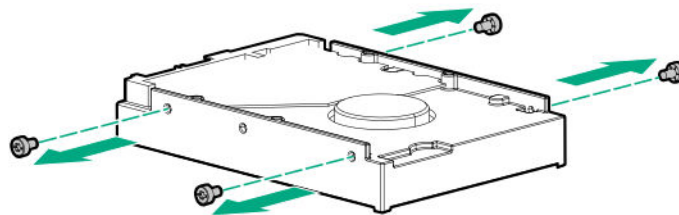
7. Remove the front bezel.

8. Remove the LFF drive:

- a. Press the drive latch (callout 1).
- b. Slide the drive out of the drive bay (callout 2).



- c. Remove the screws from the drive and retain the screws for use in the replacement drive.



To replace the component, reverse the removal procedure.



Removing and replacing an SFF drive

Prerequisites

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

- T-10 Torx screwdriver
- T-15 Torx screwdriver

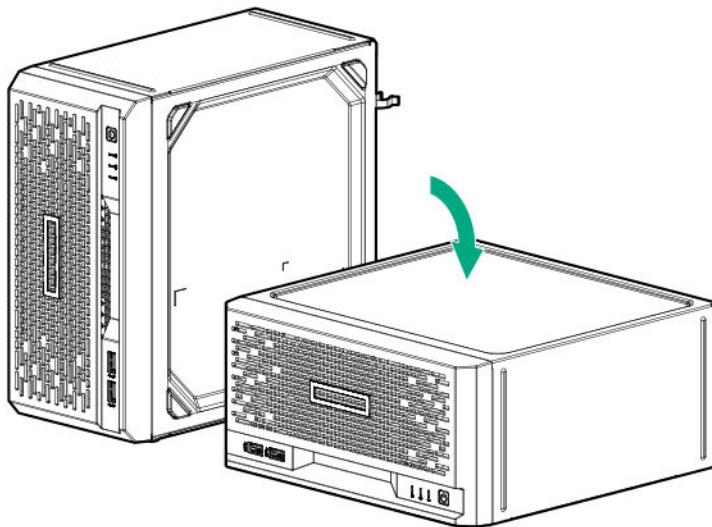
Procedure

1. **Power down the server.**

2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.

For more information, see the lock documentation.

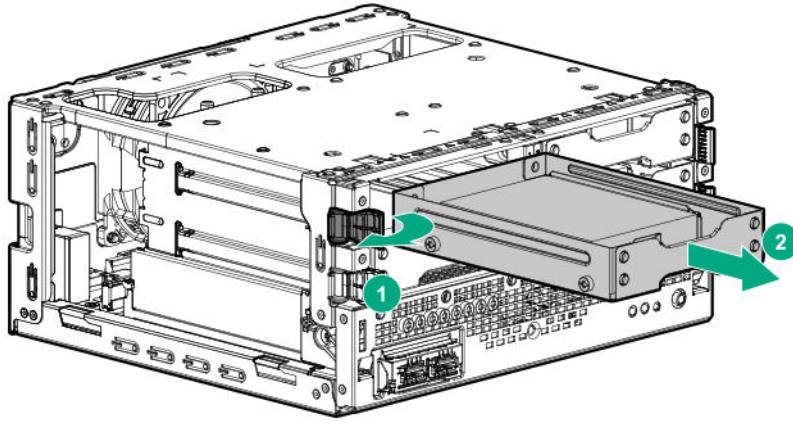
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



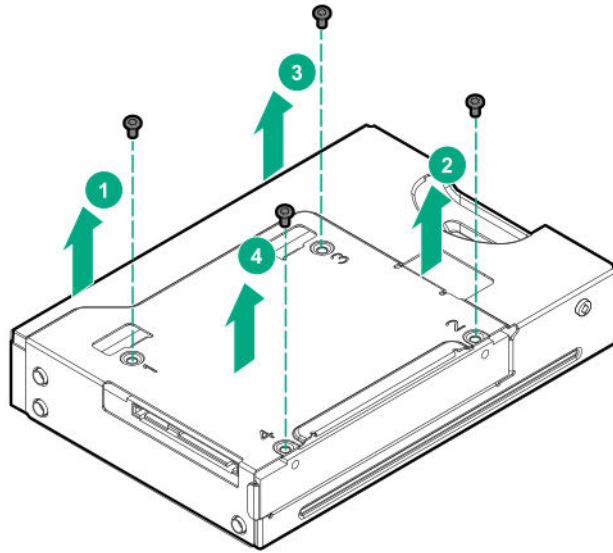
7. **Remove the front bezel.**

8. Remove the SFF drive:
 - a. Press the drive latch (callout 1).
 - b. Slide the drive converter tray out of the drive bay (callout 2).

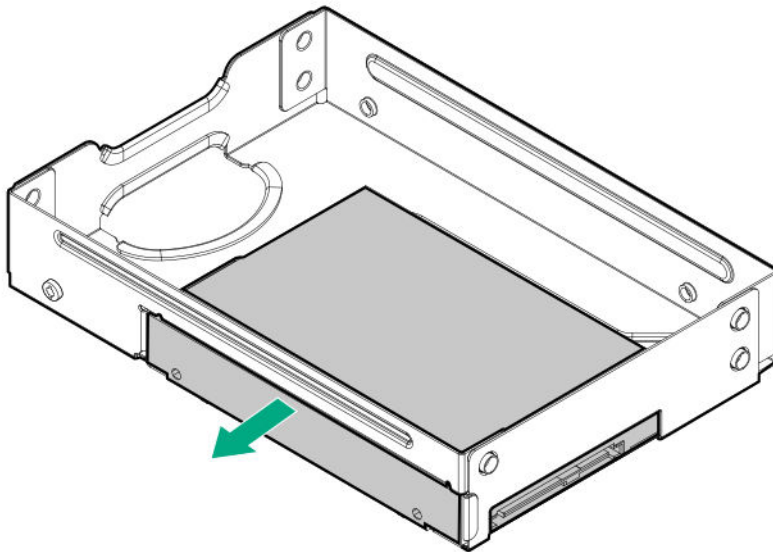




- c. Remove the screws on the bottom of the converter tray and retain the screws for use in the replacement drive.



- d. Remove the drive from the converter tray.



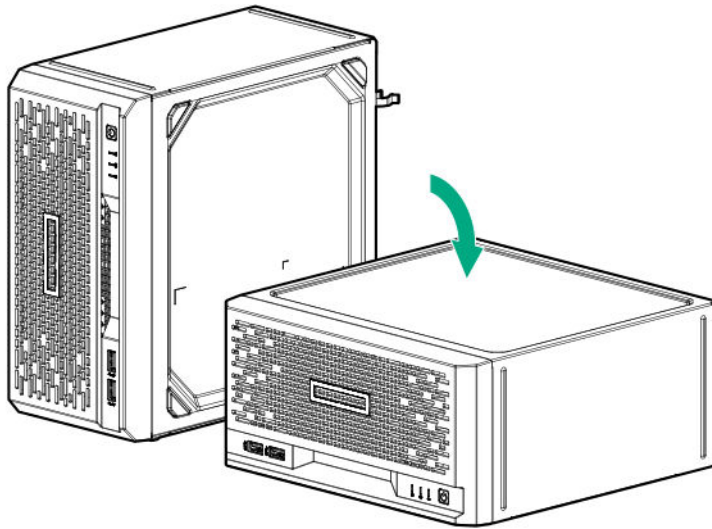
To replace the component, reverse the removal procedure.

Removing and replacing an internal USB device

Procedure

1. Power down the server.

2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



7. Remove the chassis cover.

8. Disconnect the USB device from the internal USB port.



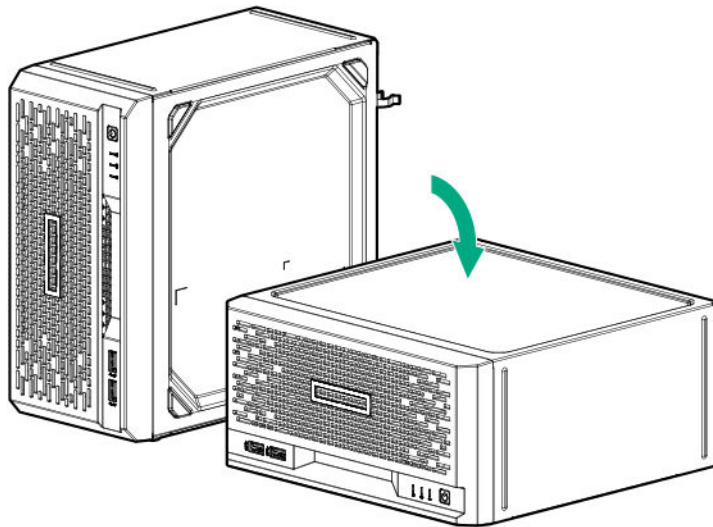
To replace the component, reverse the removal procedure.

Removing and replacing a DIMM

⚠ CAUTION: Before replacing a DIMM, expansion board, or other similar PCA components due to a perceived hardware error, make sure first that the component is firmly seated in the slot. Do not bend or flex circuit boards when reseating components.

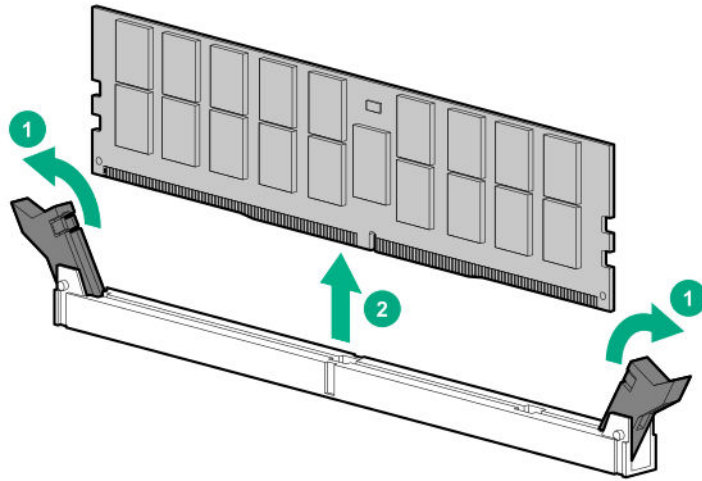
Procedure

- 1. Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



- 7. Remove the chassis cover.**
- 8. Remove the system board assembly.**
9. Remove the DIMM.





To replace the component, reverse the removal procedure.

Removing and replacing a heatsink

Removing a heatsink



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

Prerequisites

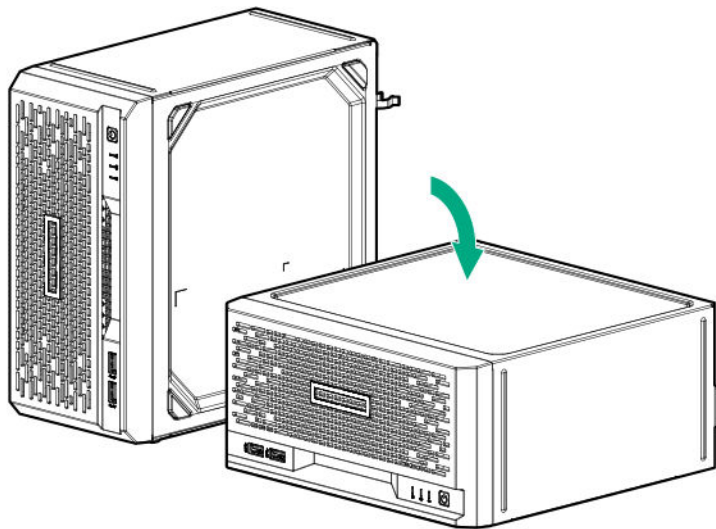
Before you perform this procedure, make sure that you have the following items available:

- T-15 Torx screwdriver
- Torque screwdriver

Procedure

- 1. Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.

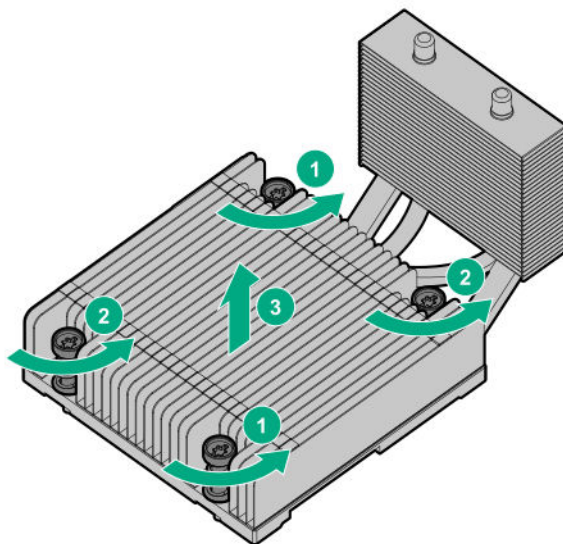




7. **Remove the chassis cover.**
8. **Remove the system board assembly.**
9. Allow the heatsink to cool.

⚠ 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.

10. Remove the heatsink:
 - a. Loosen one pair of diagonally opposite screws halfway, and then loosen the other pair of screws (callouts 1 and 2).
When using a torque wrench, apply $0.56 \text{ N} \cdot \text{m}$ (5.0 lbf-in) of torque to completely loosen the screws.
 - b. Lift the heatsink away from the system board (callout 3).



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



Replacing a heatsink

Prerequisites

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

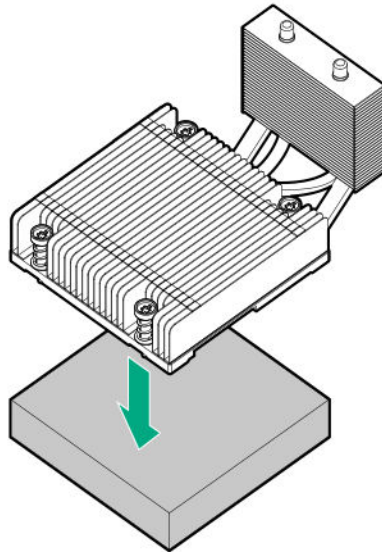
- T-15 Torx screwdriver
- Torque screwdriver
- Alcohol wipe

Procedure

1. Use an alcohol wipe to remove the existing thermal grease from the processor.
Allow the alcohol to evaporate before continuing.

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.

2. Remove the thermal interface protective cover from the heatsink.



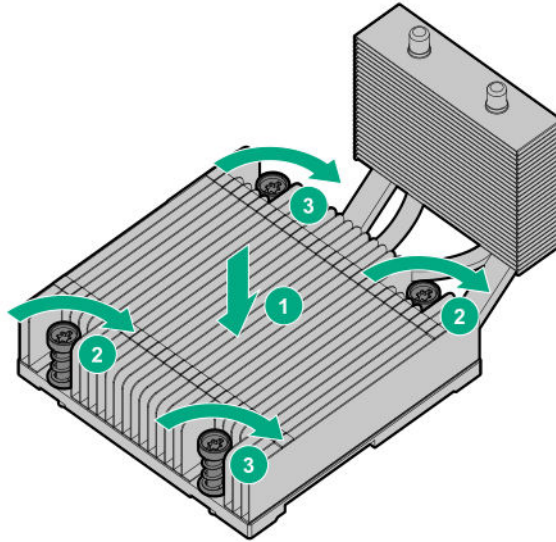
CAUTION: To prevent thermal failure or component damage, do not move the heatsink once the bottom of its base plate touches the top of the processor. Excessive heatsink movement can cause the thermal grease to smear and become uneven. Voids in the compound can adversely impact the transfer of heat away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

3. Install the heatsink:
 - a. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws (callout 1).
 - b. Tighten one pair of diagonally opposite screws halfway, and then tighten the other pair of screws (callouts 2 and 3).



When using a torque wrench, apply 0.56 N·m (5.0 lbf-in) of torque to completely tighten the screws.



4. **Install the server board assembly.**
5. **Install the chassis cover.**
6. If removed, install the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
7. Connect all peripheral cables to the server.
8. Connect the power adapter to the server, and then secure the power adapter cord in the power cord clip.
9. Connect the power cord to the AC source.
10. **Power up the server.**

The procedure is complete.

Removing and replacing a processor

Removing a processor

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

- T-15 Torx screwdriver
- Torque screwdriver



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

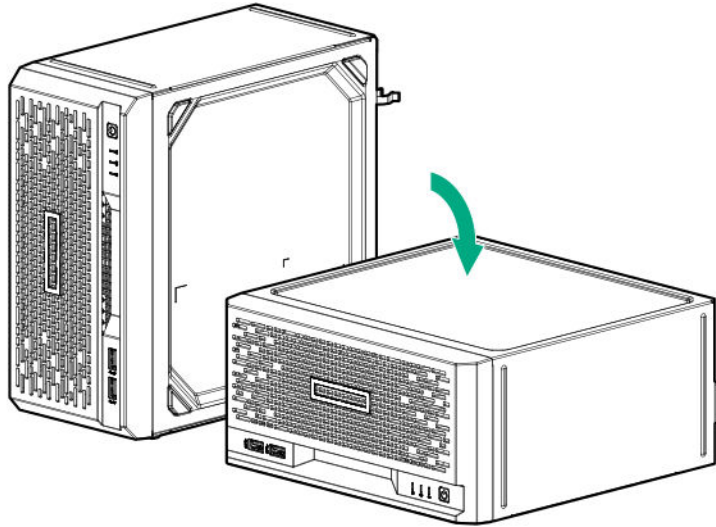


CAUTION: To avoid damage to the processor or system board, only authorized personnel should attempt to replace or install the processor in this server.



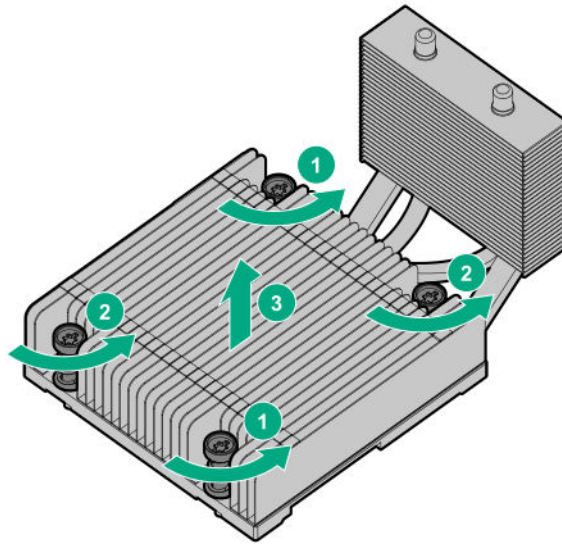
Procedure

1. **Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



7. **Remove the chassis cover.**
8. **Remove the system board assembly.**
9. Allow the heatsink to cool.
10. Remove the heatsink:
 - a. Loosen one pair of diagonally opposite screws halfway, and then loosen the other pair of screws (callouts 1 and 2).
When using a torque wrench, apply 0.56 N · m (5.0 lbf-in) of torque to completely loosen the screws.
 - b. Lift the heatsink away from the system board (callout 3).





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

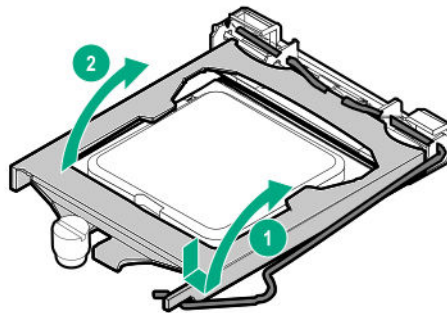
11. Use an alcohol wipe to remove the existing thermal grease from the heatsink.

Allow the alcohol to evaporate before continuing.

12. Open the processor load plate:

a. Push the processor locking lever down to unclip it, and then pivot it to the vertical position (callout 1).

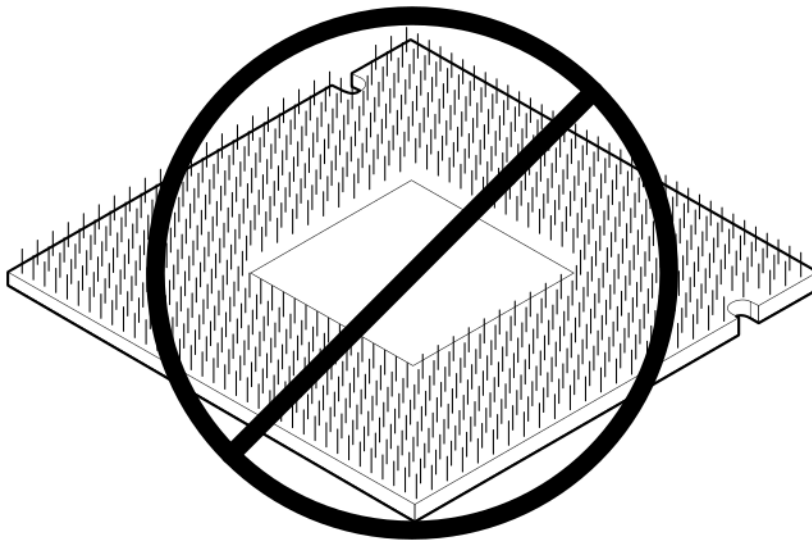
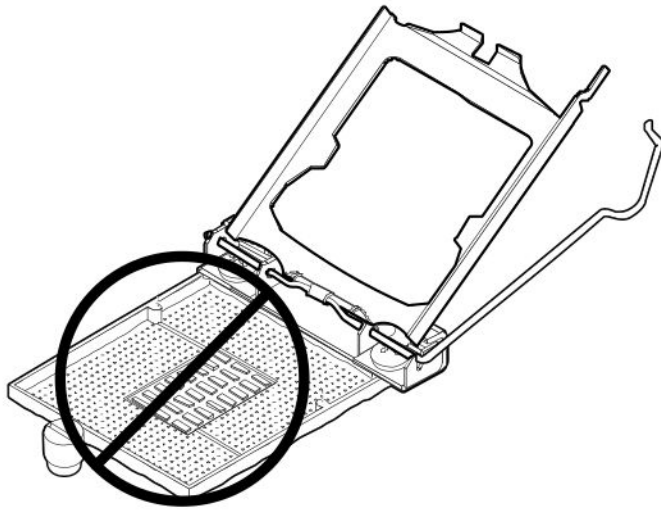
b. Open the processor load plate (callout 2).



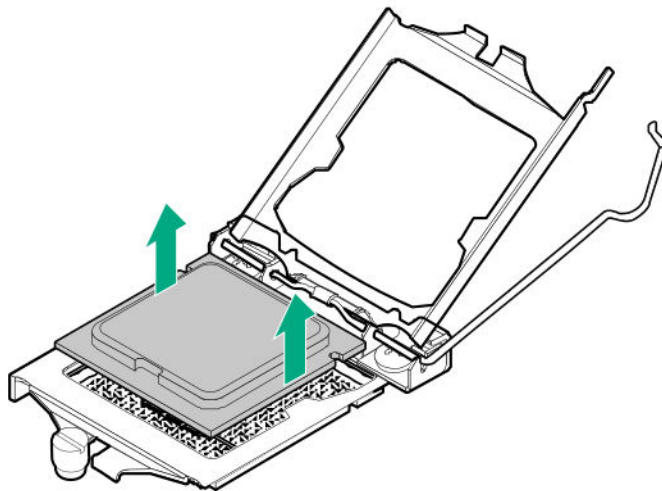
CAUTION: THE PINS ON THE PROCESSOR SOCKET AND ON THE PROCESSOR ARE VERY FRAGILE AND EASILY DAMAGED. Any damage to them might require replacing the system board.

13. Do not touch the socket contacts or the bottom of the processor.





14. Hold the processor by the edges, and then lift it out of the socket.



Replacing a processor

Prerequisites

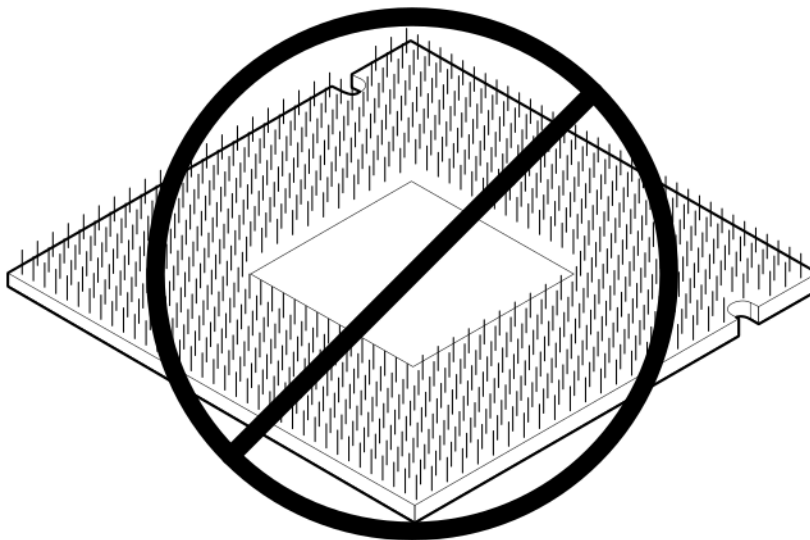
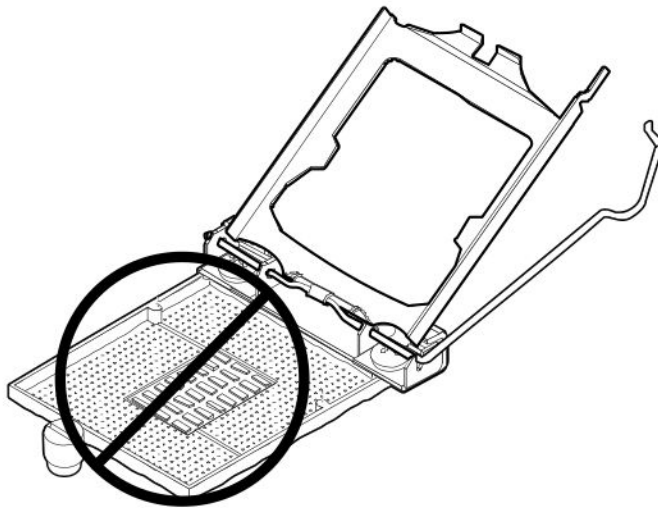
Before you perform this procedure, make sure that you have the following items available:

- T-15 Torx screwdriver
- Torque screwdriver
- Alcohol wipe
- Thermal grease

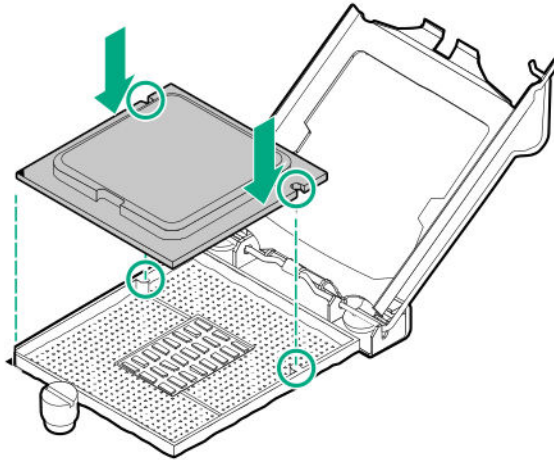
Procedure

⚠ CAUTION: THE PINS ON THE PROCESSOR SOCKET AND ON THE PROCESSOR ARE VERY FRAGILE AND EASILY DAMAGED. Any damage to them might require replacing the system board.

1. Do not touch the socket contacts or the bottom of the processor.

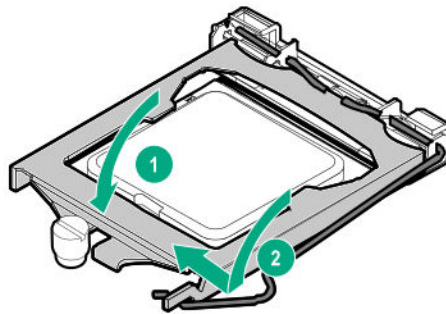


2. Install the processor:
 - a. Hold the processor by the edges and align the:
 - Socket notches with the processor notches
 - Pin 1 indicator on the processor and the socket
 - b. Lower the processor straight down, without tilting or sliding the processor in the socket .
Make sure that the processor is properly seated in the socket.



⚠ CAUTION: The processor load plate and locking lever should close without resistance. Forcing to close these parts can damage the processor and the socket. This damage might require replacing the system board.

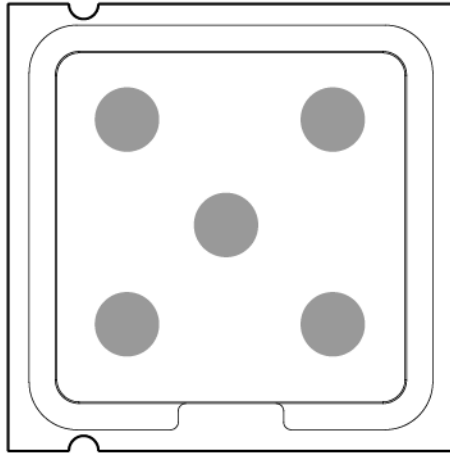
3. Close the processor load plate (callout 1), and then engage the processor locking lever (callout 2).



⚠ 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.

4. Apply new thermal grease to the processor in the pattern shown in the following image to ensure even distribution. Use the full contents of the thermal grease syringe.





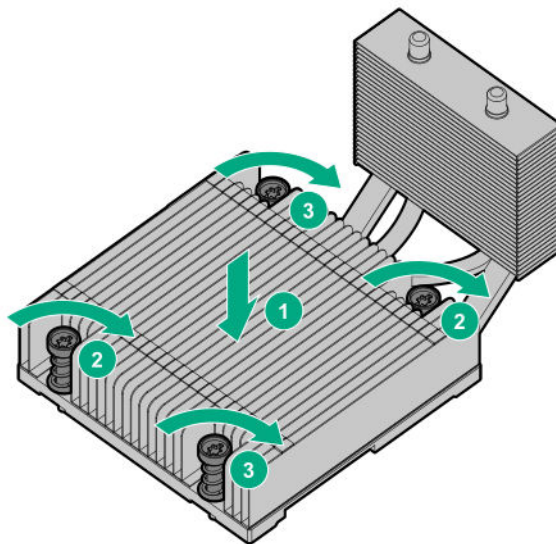
CAUTION: To prevent thermal failure or component damage, do not move the heatsink once the bottom of its base plate touches the top of the processor. Excessive heatsink movement can cause the thermal grease to smear and become uneven. Voids in the compound can adversely impact the transfer of heat away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

5. Install the heatsink:

- a. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws (callout 1).
- b. Tighten one pair of diagonally opposite screws halfway, and then tighten the other pair of screws (callouts 2 and 3).

When using a torque wrench, apply 0.56 N·m (5.0 lbf-in) of torque to completely tighten the screws.



6. Install the server board assembly.

7. Install the chassis cover.



8. If removed, install the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
9. Connect all peripheral cables to the server.
10. Connect the power adapter to the server, and then secure the power adapter cord in the power cord clip.
11. Connect the power cord to the AC source.
12. **Power up the server.**

The procedure is complete.

Removing and replacing the iLO enablement module

⚠ CAUTION: Before replacing a DIMM, expansion board, or other similar PCA components due to a perceived hardware error, make sure first that the component is firmly seated in the slot. Do not bend or flex circuit boards when reseating components.

⚠ CAUTION: To prevent improper cooling and thermal damage, do not operate the server unless either the iLO enablement module or blank is installed.

ⓘ IMPORTANT: The iLO shared connectivity of the RJ-45 port 1 is dependent on the presence of the iLO enablement module. If this optional module is not installed, use an in-band communication method for accessing iLO.

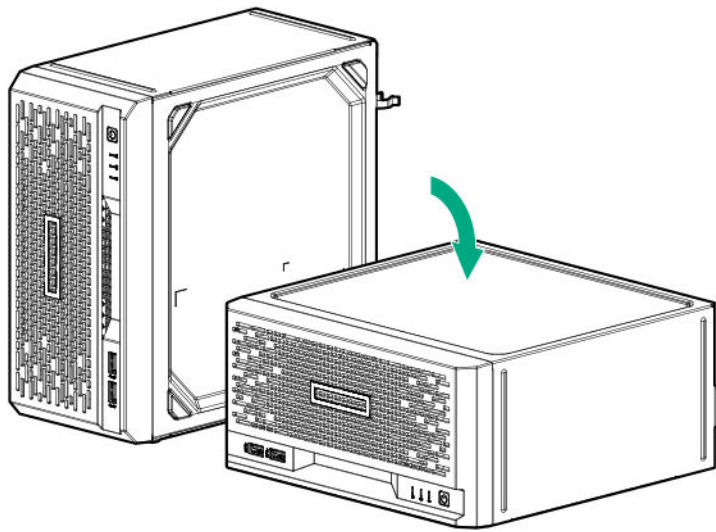
Prerequisites

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

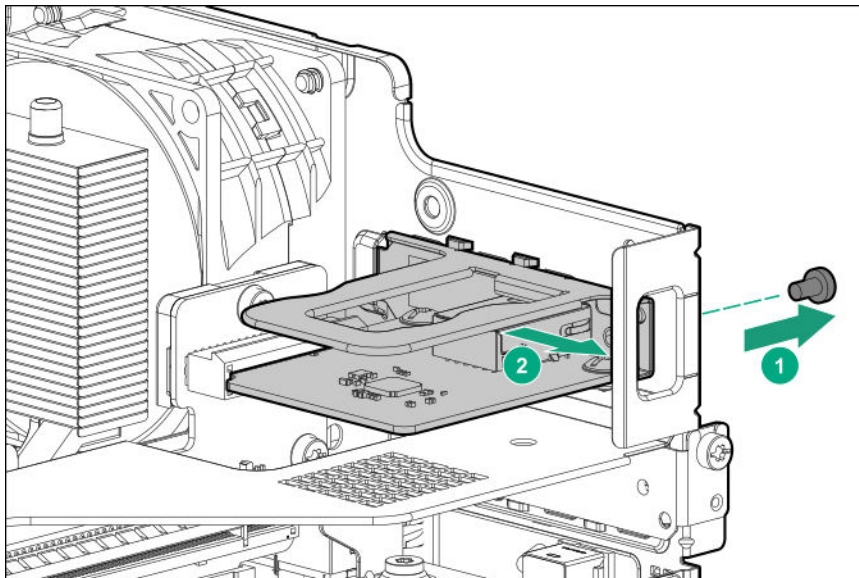
Procedure

1. **Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



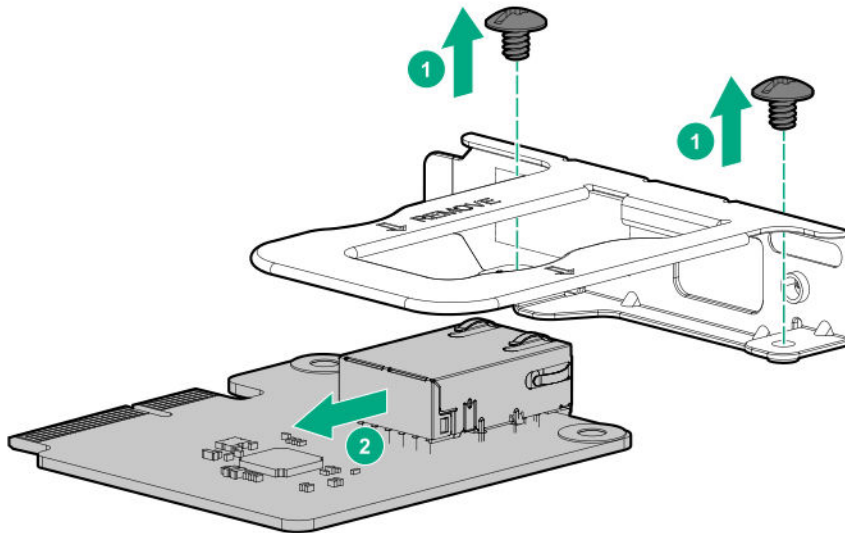


7. **Remove the chassis cover.**
8. **Remove the system board assembly.**
9. Remove the screw on the rear panel (callout 1), and then remove the iLO enablement module (callout 2).



10. Remove the module screws (callout 1), and then separate the iLO enablement module from its bracket (callout 2).





To replace the component, reverse the removal procedure.

Removing and replacing an expansion board

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

IMPORTANT: Before replacing a DIMM, expansion board, or any other circuit board component due to a perceived hardware error, verify that the component is firmly seated in the slot. Do not bend or flex circuit boards when reseating components.

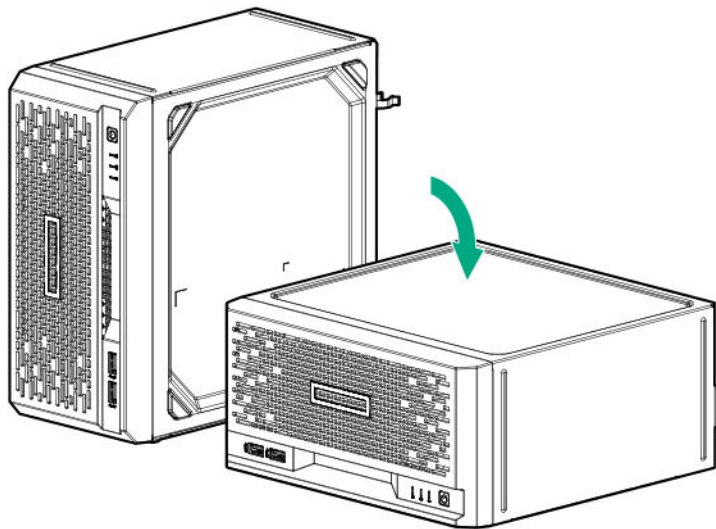
Prerequisites

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

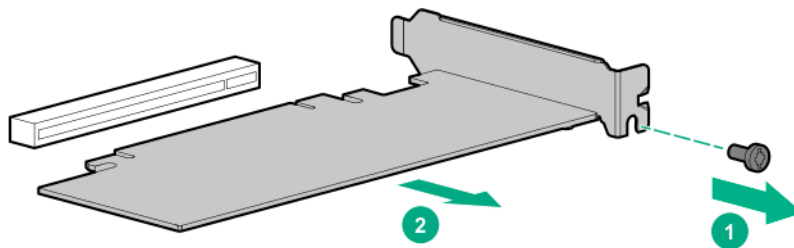
Procedure

- 1. Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.





7. **Remove the chassis cover.**
8. **Remove the system board assembly.**
9. Disconnect any internal cables that are connected to the expansion board.
10. Remove the expansion board.



To replace the component, reverse the removal procedure.

If the new expansion board is shipped with an air baffle attached, **remove this baffle from the board.**

If the new expansion board is shipped with a full-height bracket attached, **remove the bracket from the board and replace it with a low-profile bracket.**

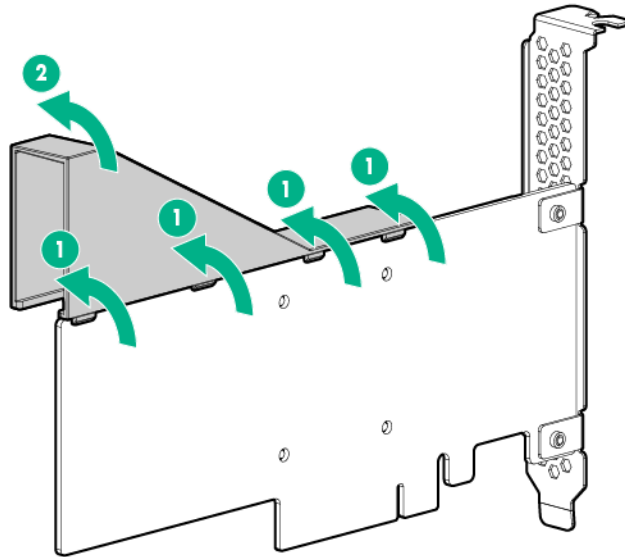
Remove the air baffle from the expansion board

Procedure

Remove the air baffle from the expansion board.

The number and location of the latches that secure the baffle to the board will vary depending on the expansion board. The illustration below is an example image only. See the expansion board documentation for model-specific information.



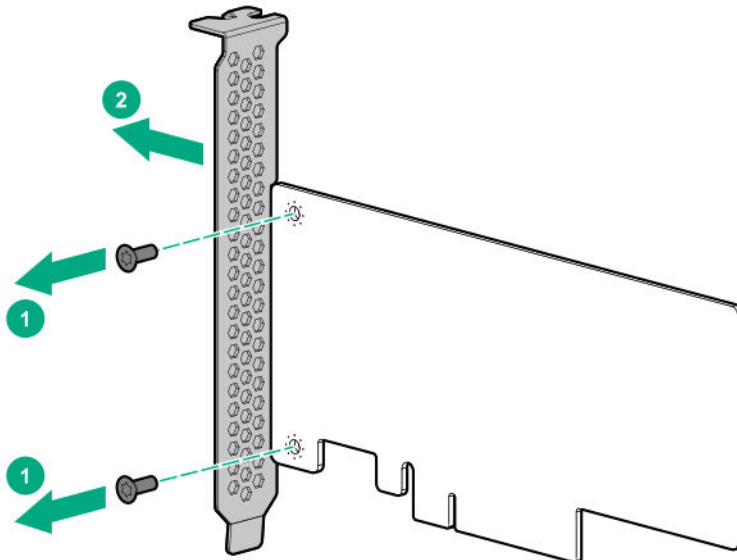


Install a low-profile bracket on the expansion board

The number and location of the bracket screws will vary depending on the expansion board. The illustrations below are example images only. See the expansion board documentation for model-specific information.

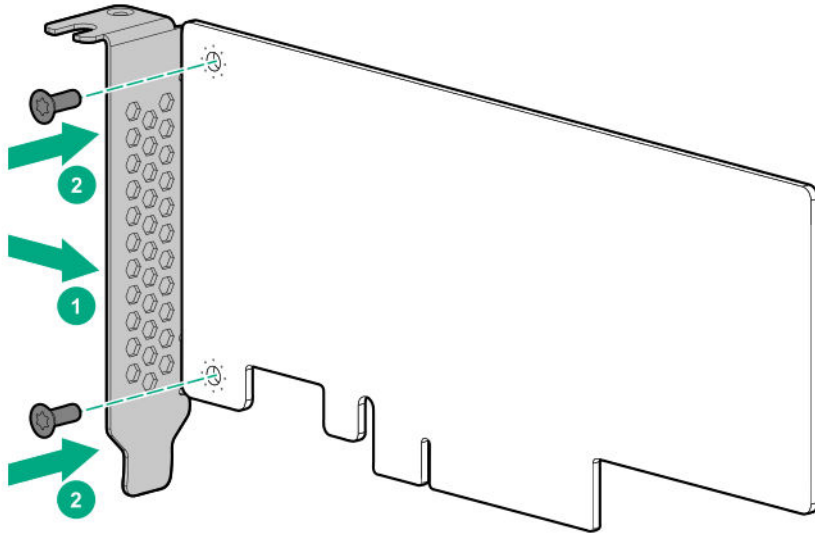
Procedure

1. Remove the full-height bracket from the expansion board.



2. Install the low-profile bracket on the expansion board.





Removing and replacing the riser board

⚠ CAUTION: Before replacing a DIMM, expansion board, or other similar PCA components due to a perceived hardware error, make sure first that the component is firmly seated in the slot. Do not bend or flex circuit boards when reseating components.

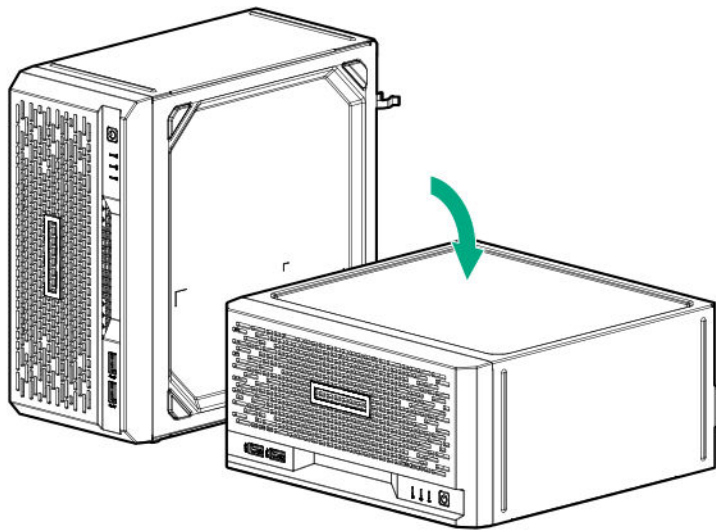
Prerequisites

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

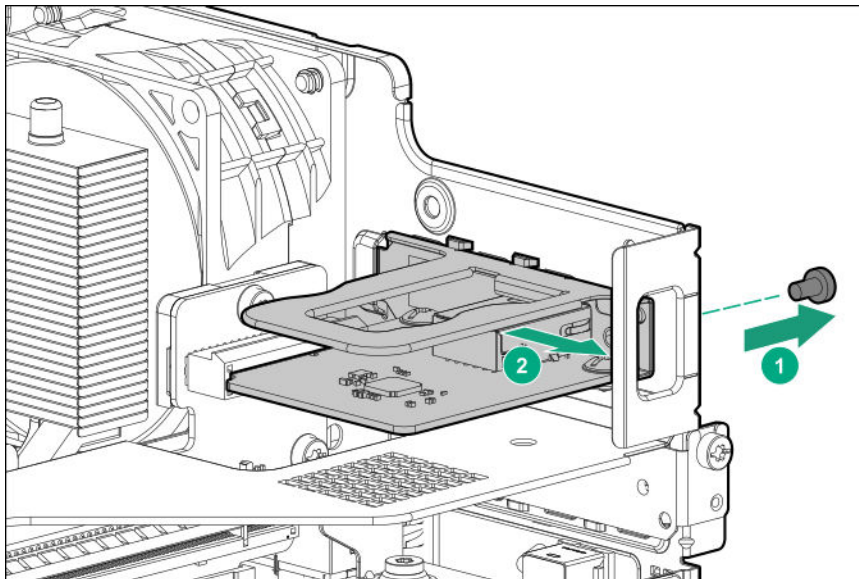
Procedure

- 1. Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



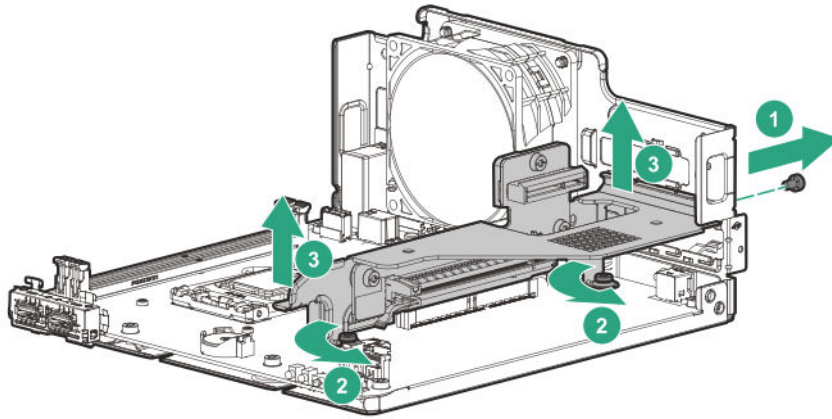


7. **Remove the chassis cover.**
8. **Remove the system board assembly.**
9. If installed, remove the iLO enablement module screw (callout 1), and then remove the module (callout 2).

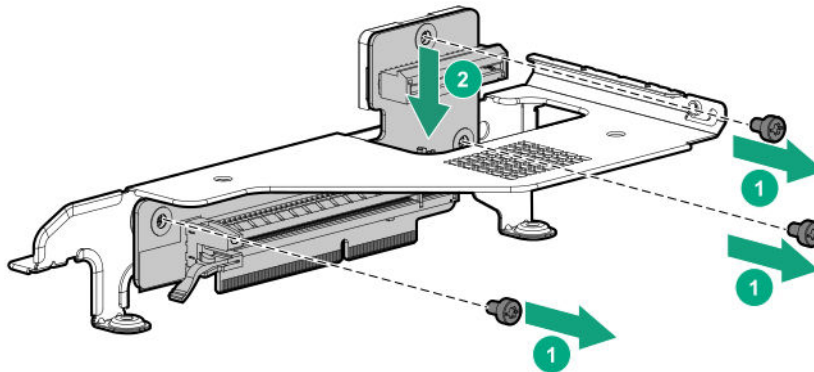


10. If installed, **remove the expansion board from the riser.**
11. Remove the riser board:
 - a. Remove the riser screw on the rear panel (callout 1).
 - b. Loosen the screws on the base of the riser (callout 2).
 - c. Remove the riser board from the system board (callout 3).





12. Separate the riser board from its bracket.



To replace the component, reverse the removal procedure.

Removing and replacing the system board

Removing the system board

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

Prerequisites

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

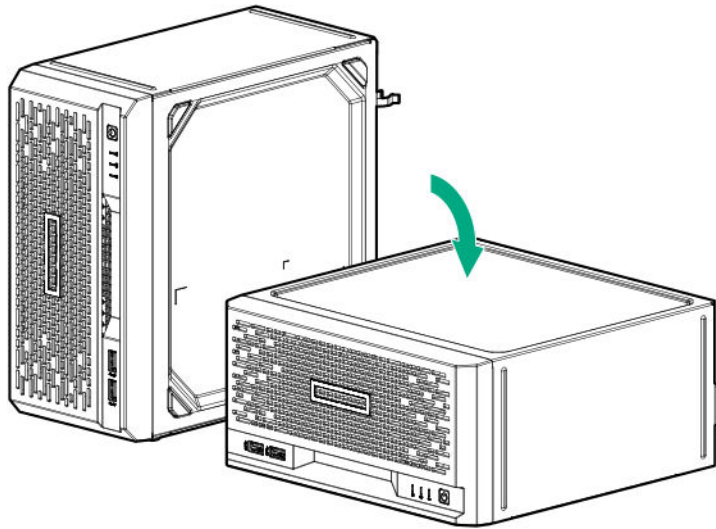
- T-15 Torx screwdriver
- Torque screwdriver

Procedure

1. **Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.

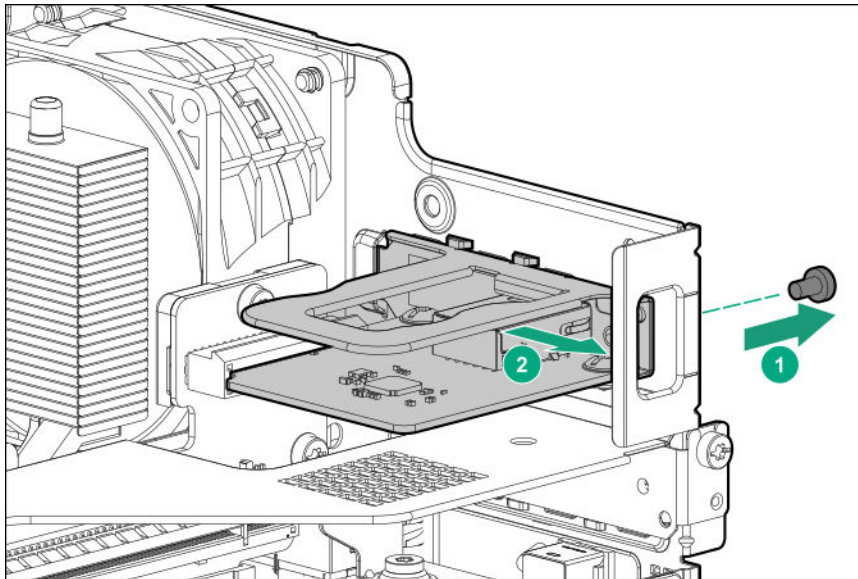


4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.



7. **Remove the chassis cover.**
8. **Remove the system board assembly.**
9. Disconnect the following cables from the system board:
 - **Four-bay non-hot-plug drive cable assembly**
 - **Fan cable**
10. If installed, remove these server options:
 - **Internal USB device**
 - **Expansion board**
11. If installed, remove the iLO enablement module screw (callout 1), and then remove the module (callout 2).

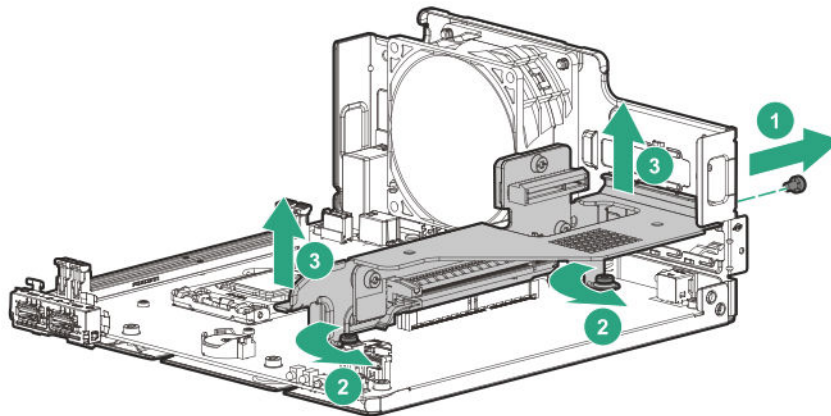




12. Remove all DIMMs.

13. Remove the riser board:

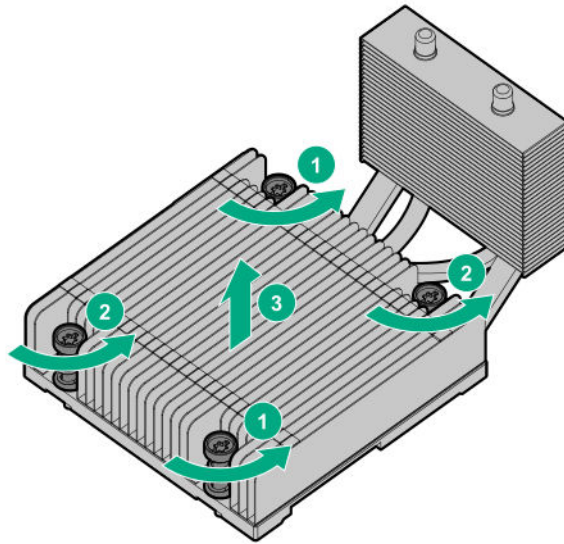
- a. Remove the riser screw on the rear panel (callout 1).
- b. Loosen the screws on the base of the riser (callout 2).
- c. Remove the riser board from the system board (callout 3).



14. Remove the heatsink:

- a. Loosen one pair of diagonally opposite screws halfway, and then loosen the other pair of screws (callouts 1 and 2).
When using a torque wrench, apply 0.56 N · m (5.0 lbf-in) of torque to completely loosen the screws.
- b. Lift the heatsink away from the system board (callout 3).



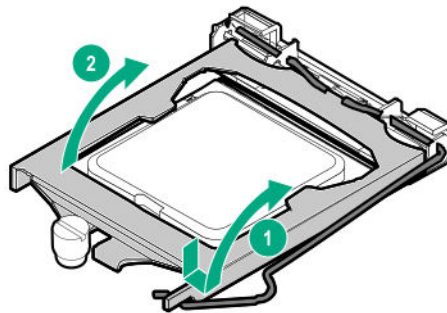


c. Place the heatsink on a flat work surface with its contact side facing upward.

15. Use an alcohol wipe to remove the existing thermal grease from the heatsink and the top of the processor. Allow the alcohol to evaporate before continuing.

16. Open the processor load plate:

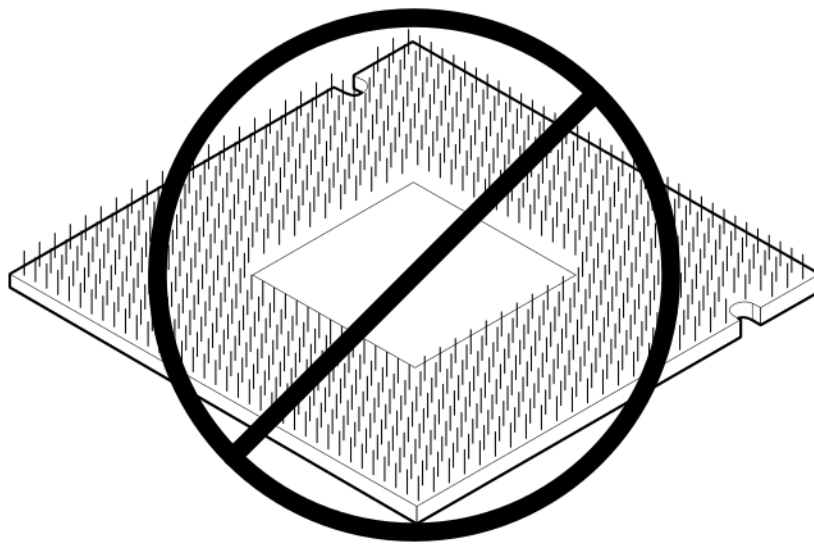
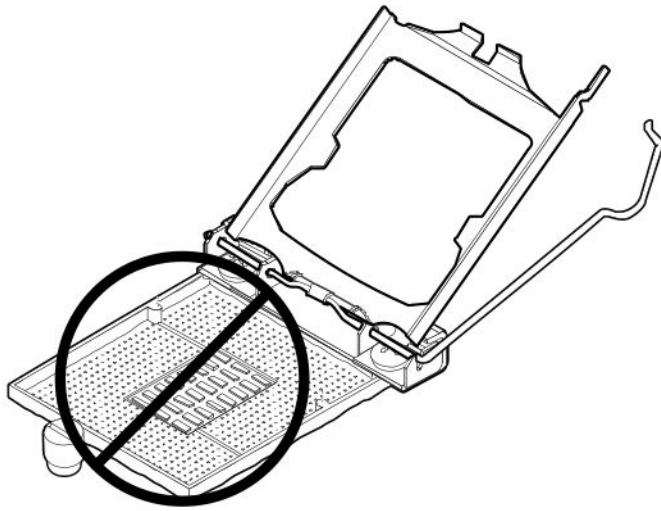
- a. Push the processor locking lever down to unclip it, and then pivot it to the vertical position (callout 1).
- b. Open the processor load plate (callout 2).



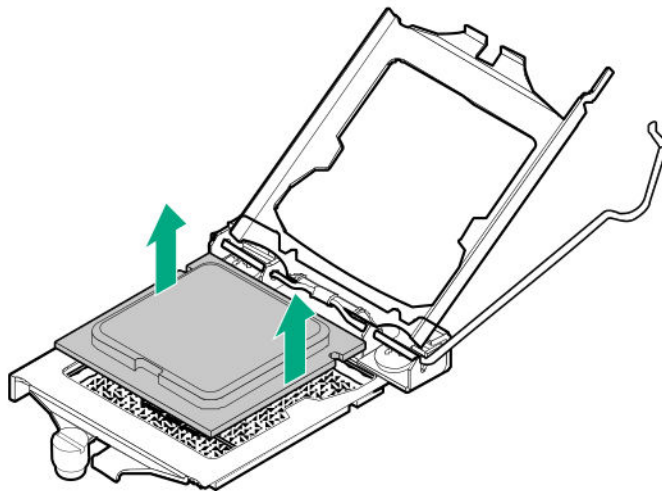
⚠ CAUTION: THE PINS ON THE PROCESSOR SOCKET AND ON THE PROCESSOR ARE VERY FRAGILE AND EASILY DAMAGED. Any damage to them might require replacing the system board.

17. Do not touch the socket contacts or the bottom of the processor.





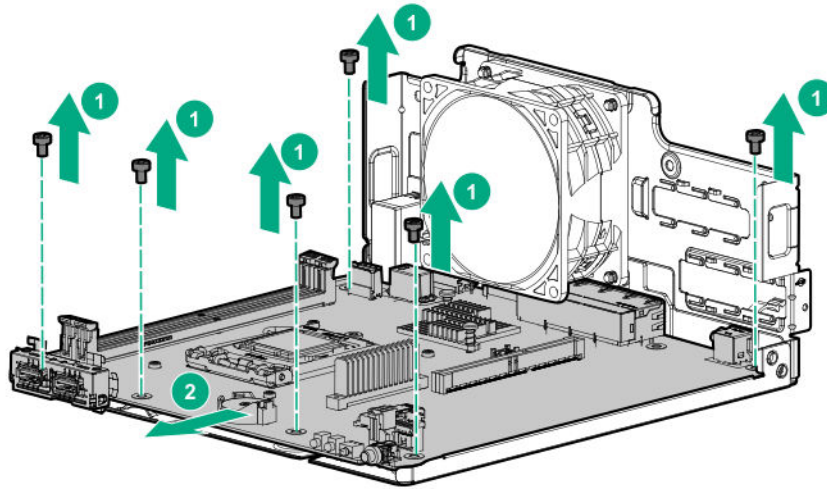
18. Hold the processor by the edges, and then lift it out of the socket.



19. Remove the system board:



- a. Remove the system board screws (callout 1).
- b. Remove the system board from its tray (callout 2).



Replacing the system board

Prerequisites

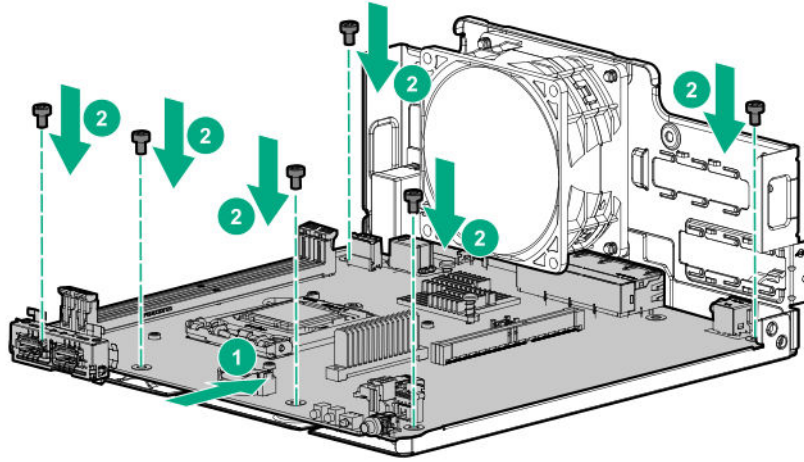
Before you perform this procedure, make sure that you have the following items available:

- T-15 Torx screwdriver
- Torque screwdriver
- Alcohol wipe
- Thermal grease

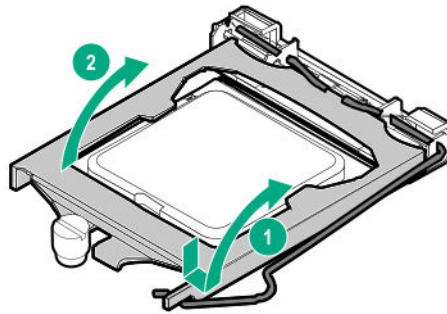
Procedure

1. Install the system board spare:
 - a. Place the system board on the tray (callout 1).
 - b. Install the system board screws (callout 2).





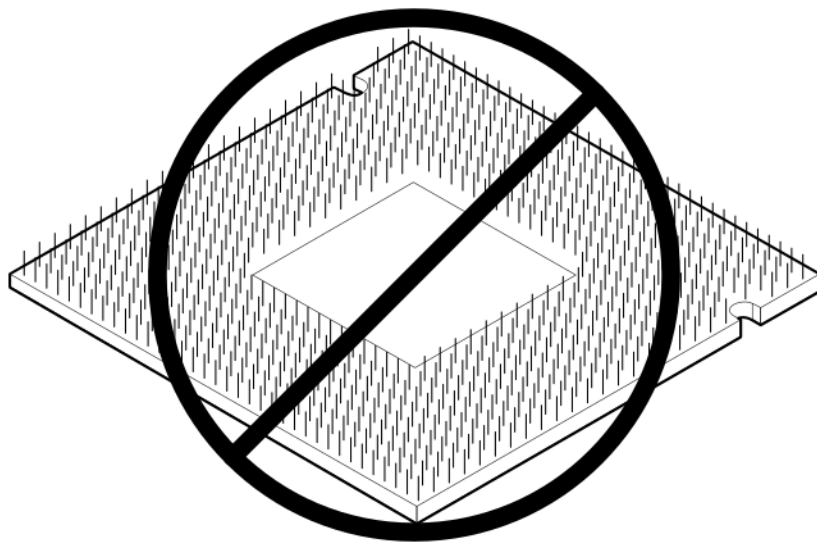
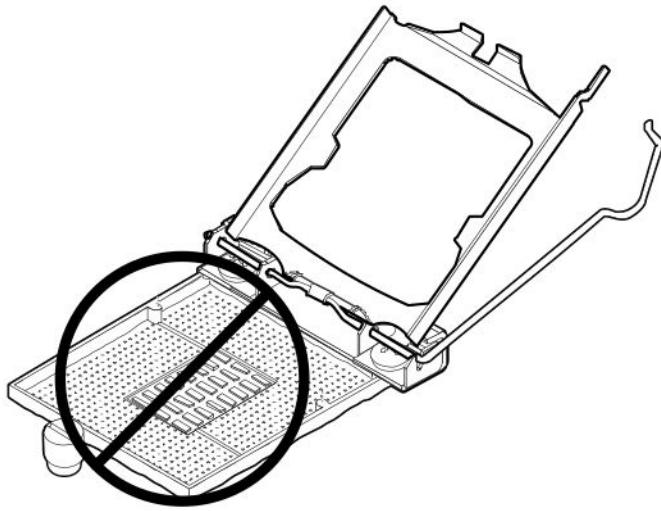
2. Open the processor load plate:
 - a. Push the processor locking lever down to unclip, and then lift it upwards (callout 1).
 - b. Open the processor load plate (callout 2).



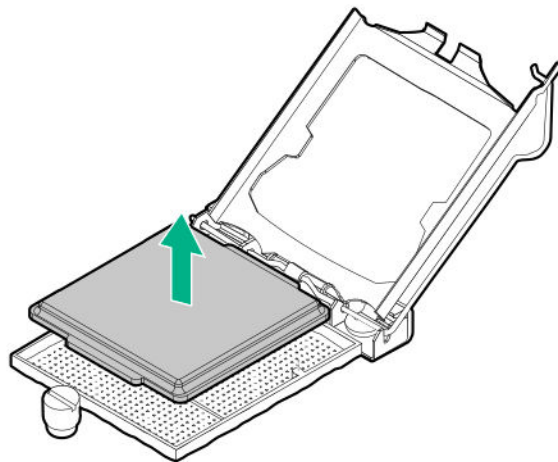
⚠ CAUTION: THE PINS ON THE PROCESSOR SOCKET AND ON THE PROCESSOR ARE VERY FRAGILE AND EASILY DAMAGED. Any damage to them might require replacing the system board.

3. Do not touch the socket contacts or the bottom of the processor.





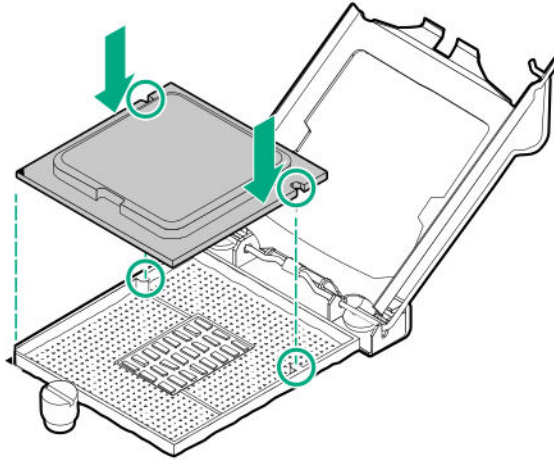
4. Remove the processor socket cover.



5. Install the processor:
 - a. Hold the processor by the edges and align the:

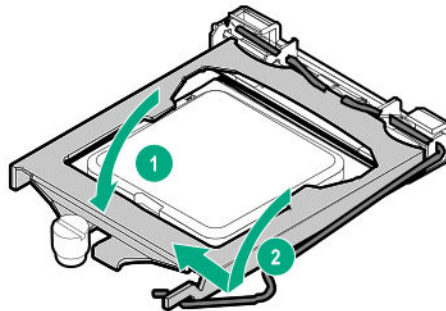


- Socket notches with the processor notches
 - Pin 1 indicator on the processor and the socket
- b.** Lower the processor straight down, without tilting or sliding the processor in the socket .
Make sure that the processor is properly seated in the socket.



⚠ CAUTION: The processor load plate and locking lever should close without resistance. Forcing to close these parts can damage the processor and the socket. This damage might require replacing the system board.

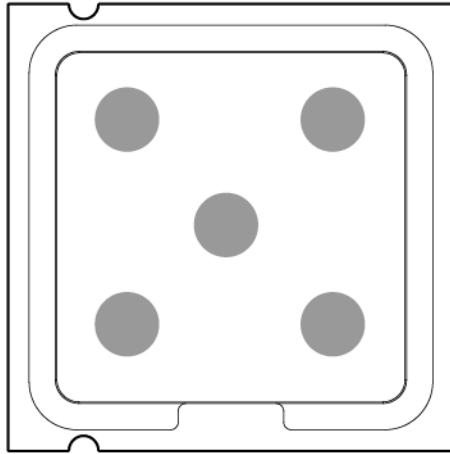
- 6.** Close the processor load plate (callout 1), and then engage the processor locking lever (callout 2).



⚠ 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.

- 7.** Apply new thermal grease to the processor in the following pattern to ensure even distribution. Use the full contents of the thermal grease syringe.





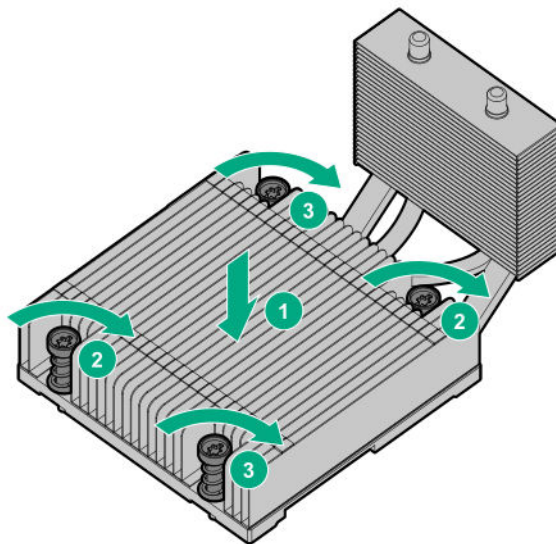
CAUTION: To prevent thermal failure or component damage, do not move the heatsink once the bottom of its base plate touches the top of the processor. Excessive heatsink movement can cause the thermal grease to smear and become uneven. Voids in the compound can adversely impact the transfer of heat away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

8. Install the heatsink:

- a. Position the heatsink on top of the processor, ensuring that it is properly seated before securing the screws (callout 1).
- b. Tighten one pair of diagonally opposite screws halfway, and then tighten the other pair of screws (callouts 2 and 3).

When using a torque wrench, apply 0.56 N·m (5.0 lbf-in) of torque to completely tighten the screws.



9. Install the following removed components:



- DIMMs
 - Riser board
- 10.** If the following server options were removed, install them back:
- Expansion board
 - iLO enablement module
 - Internal USB device
- 11.** **Install the server board assembly.**
- 12.** **Install the chassis cover.**
- 13.** If removed, install the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
- 14.** Connect all peripheral cables to the server.
- 15.** Connect the power adapter to the server, and then secure the power adapter cord in the power cord clip.
- 16.** Connect the power cord to the AC source.
- 17.** **Power up the server.**
- 18.** **Re-enter the server serial number and product ID.**

Re-entering the server serial number and product ID

After you replace the system board, the server serial number and the product ID must be configured.

The server serial number and product ID label is located on the bottom of the server chassis.

Procedure

- 1.** Access System Utilities. During POST, press **F9**.
- 2.** On the System Utilities home screen, select **System Configuration > BIOS/Platform Configuration (RBSU) > Advanced Options > Advanced Service Options**.
- 3.** Select the Serial Number field and press **Enter**.

The following alert appears:

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

- 4.** Click **OK**.
- 5.** Type the serial number and press **Enter**.
- 6.** Select the Product ID field and press **Enter**.

The following alert appears:

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



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

8. Press **F10** to save the configuration.

The procedure is complete.

System battery replacement

System battery information

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

- Do not attempt to recharge the battery.
- Do not expose the battery to temperatures higher than 60°C (140°F).
- Do not expose the battery to extremely low air pressure as it might lead to explosion or leakage of flammable liquid or gas.
- Do not disassemble, crush, puncture, short external contacts, or dispose the battery in fire or water.
- If the server no longer automatically displays the correct date and time, then replace the battery that provides power to the real-time clock. Under normal use, battery life is 5 to 10 years.

Removing and replacing the system battery

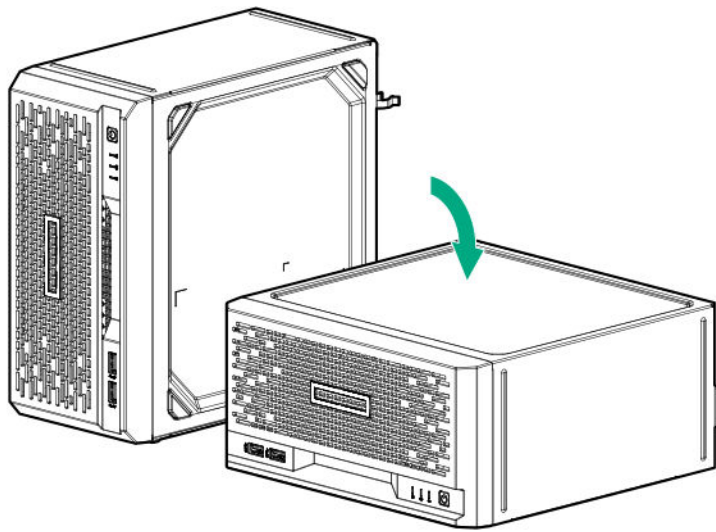
Prerequisites

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

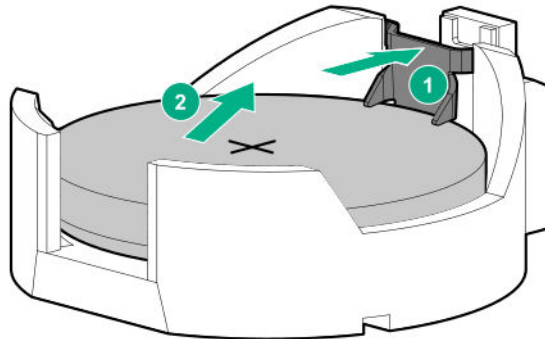
Procedure

1. **Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If the server is in a vertical orientation, position the server in a horizontal orientation.



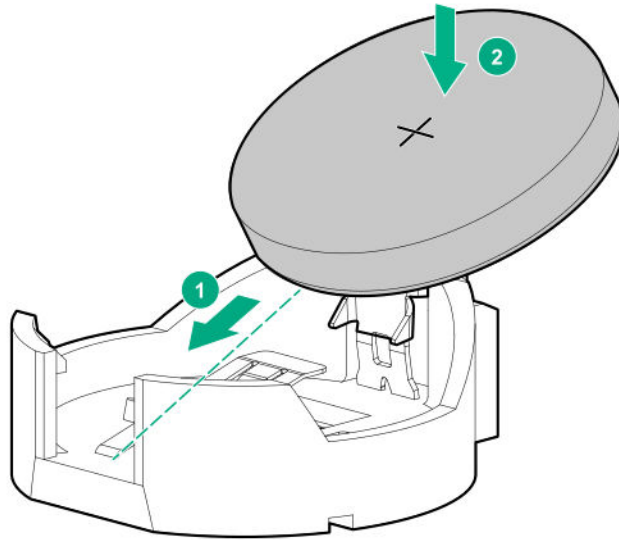


6. **Remove the chassis cover.**
7. **Remove the system board assembly.**
8. **Locate the battery on the system board.**
9. Remove the system battery:
 - a. Use a small flat-bladed, nonconductive tool to press the battery latch (callout 1).
 - b. Remove the system battery from the socket (callout 2).



10. Install the system battery:
 - a. With the side of the battery showing the "+" sign facing up, insert the battery into the socket (callout 1).
 - b. Press the system battery down until it clicks into place (callout 2).





- 11. Install the server board assembly.**
- 12. Install the chassis cover.**
- 13.** If removed, install the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
- 14.** Connect all peripheral cables to the server.
- 15.** Connect the power adapter to the server, and then secure the power adapter cord in the power cord clip.
- 16.** Connect the power cord to the AC source.
- 17. Power up the server.**
- 18.** Properly dispose of the old battery.
For more information about proper battery disposal, contact an authorized reseller or an authorized service provider.

Removing and replacing the fan

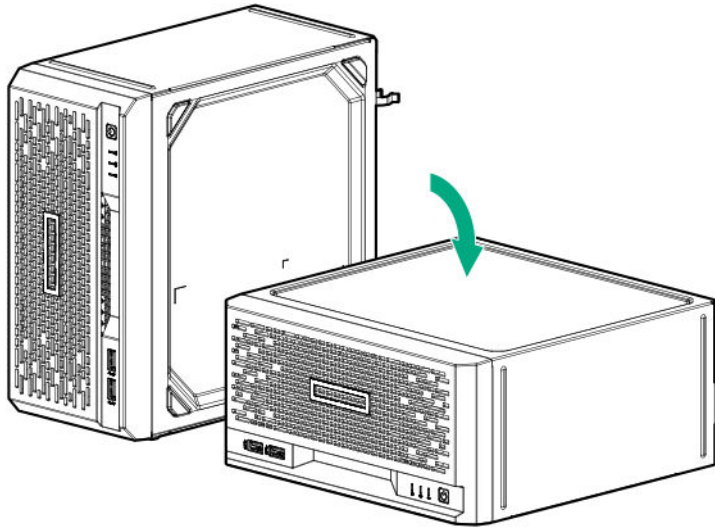
Prerequisites

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

Procedure

- 1. Power down the server.**
- 2.** Disconnect the power cord from the AC source.
- 3.** Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
- 4.** Disconnect all peripheral cables from the server.
- 5.** If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
- 6.** If the server is in a vertical orientation, position the server in a horizontal orientation.





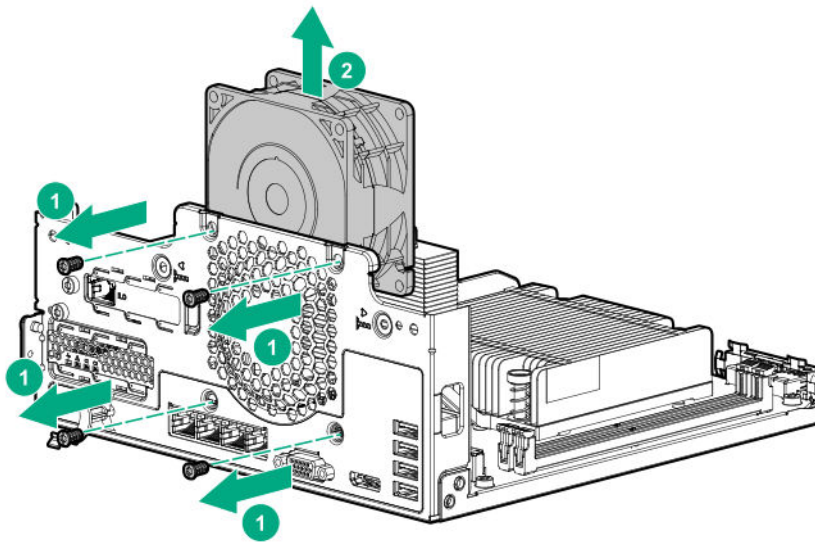
7. **Remove the chassis cover.**

8. **Remove the system board assembly.**

9. Remove the fan:

a. **Disconnect the fan cable.**

b. Remove the fan screws (callout 1), and then remove the fan (callout 2).



To replace the component, reverse the removal procedure.

Removing and replacing the four-bay non-hot-plug drive cable assembly

ⓘ **IMPORTANT:** The four-bay non-hot-plug drive cable assembly consists of the drive and ambient temperature sensor cables. If any of these cables becomes defective, the entire cable assembly will need to be replaced.

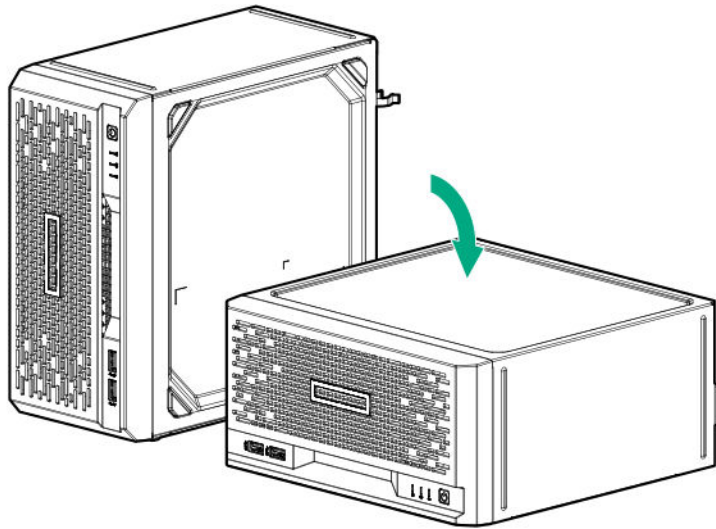


Prerequisites

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

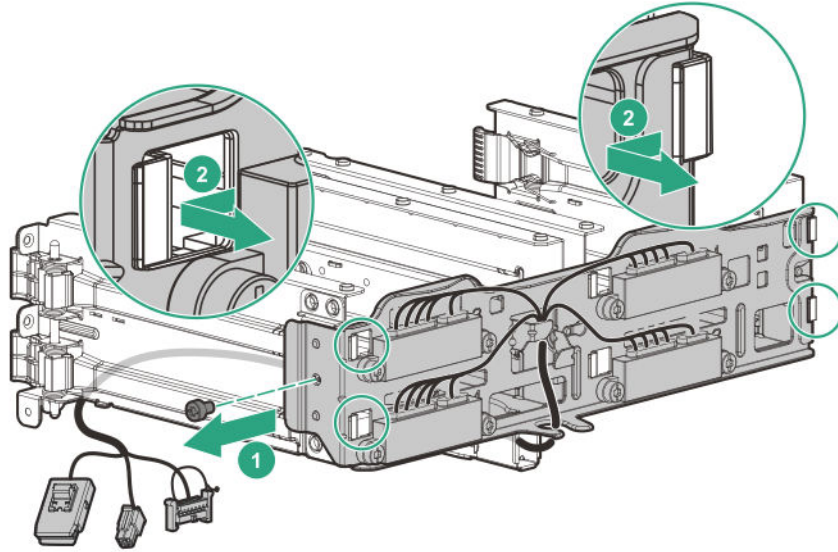
Procedure

1. **Power down the server.**
2. Disconnect the power cord from the AC source.
3. Remove the power adapter cord from the power cord clip, and then disconnect the power adapter from the server.
4. Disconnect all peripheral cables from the server.
5. If installed, unlock and remove the security padlock and/or the Kensington security lock.
For more information, see the lock documentation.
6. If the server is in a vertical orientation, position the server in a horizontal orientation.

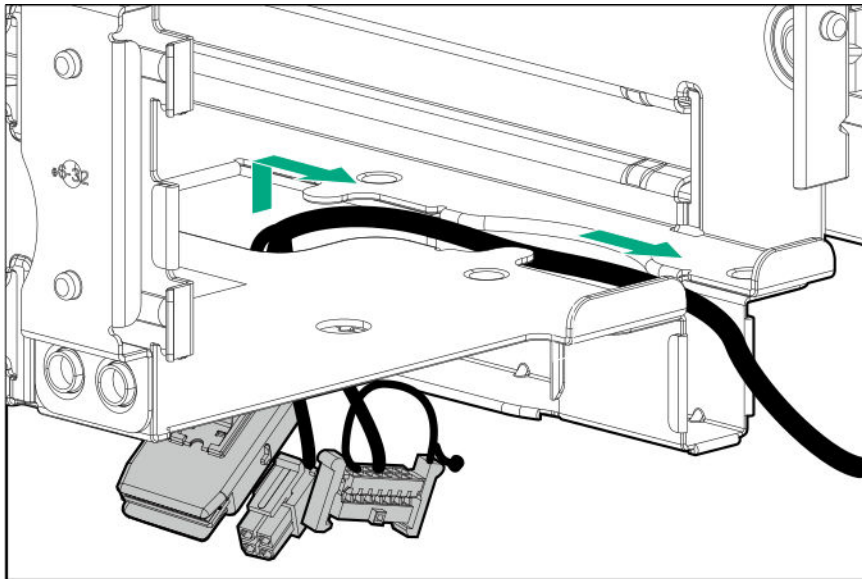


7. **Remove the chassis cover.**
8. **Remove the front panel.**
9. Remove all installed drives.
10. **Remove the system board assembly.**
11. **Disconnect the four-bay non-hot-plug drive cable assembly from the system board.**
12. Remove the drive cable assembly:
 - a. Remove the bracket screw (callout 1).
 - b. Disengage the bracket from the drive cage (callout 2).





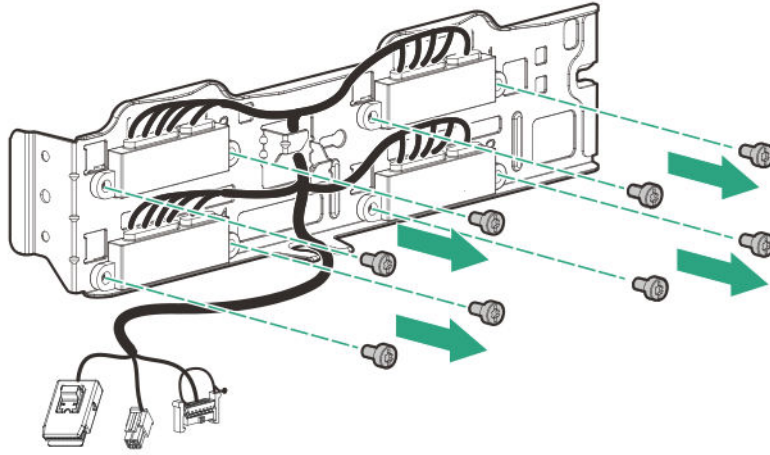
- c. Pull out the drive cable assembly from the cable channel under the drive bay 4.



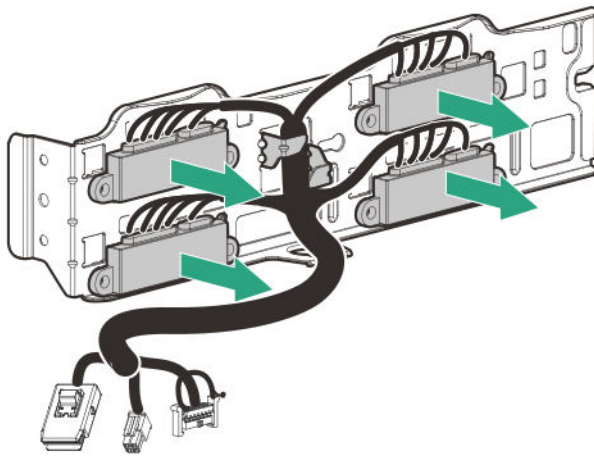
- 13. Separate the drive cable assembly from its bracket:

- a. Remove the cable assembly screws.





b. Separate the drive cable assembly from its bracket.



To replace the component, reverse the removal procedure.

Replacing the external RDX backup system

This server supports several RDX backup system spare parts. For more information on replacing these parts, see the Storage section of the Hewlett Packard Enterprise Information Library:

<https://www.hpe.com/info/storage/docs>

HPE Trusted Platform Module 2.0 Gen10 Option

The HPE Trusted Platform Module 2.0 Gen10 Option is not a customer-removable part.

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

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



Troubleshooting

NMI functionality

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

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

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

Troubleshooting resources

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

- *Troubleshooting Guide for HPE ProLiant Gen10 and Gen10 Plus servers* provides procedures for resolving common problems and comprehensive courses of action for fault isolation and identification, issue resolution, and software maintenance.
- *Error Message Guide for HPE ProLiant Gen10 servers and HPE Synergy* provides a list of error messages and information to assist with interpreting and resolving error messages.
- *Error Message Guide for HPE ProLiant Gen10 Plus servers and HPE Synergy* provides a list of error messages and information to assist with interpreting and resolving error messages.
- *Integrated Management Log Messages and Troubleshooting Guide for HPE ProLiant Gen10 and Gen10 Plus servers and HPE Synergy* provides IML messages and associated troubleshooting information to resolve critical and cautionary IML events.

To access troubleshooting resources for your product, see the Hewlett Packard Enterprise Information Library:

- For Gen10 servers, see <https://www.hpe.com/info/gen10-troubleshooting>.
- For Gen10 Plus servers, see <https://www.hpe.com/info/gen10plus-troubleshooting>.



Diagnostic tools

Product QuickSpecs

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

UEFI System Utilities

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

- Configuring system devices and installed options.
- Enabling and disabling system features.
- Displaying system information.
- Selecting the primary boot controller or partition.
- Configuring memory options.
- Launching other preboot environments.

HPE servers with UEFI can provide:

- Support for boot partitions larger than 2.2 TB. Such configurations could previously only be used for boot drives when using RAID solutions.
- Secure Boot that enables the system firmware, option card firmware, operating systems, and software collaborate to enhance platform security.
- UEFI Graphical User Interface (GUI)
- An Embedded UEFI Shell that provides a preboot environment for running scripts and tools.
- Boot support for option cards that only support a UEFI option ROM.

Selecting the boot mode

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

- Secure Boot, UEFI Optimized Boot, Generic USB Boot, IPv6 PXE Boot, iSCSI Boot, and Boot from URL
- Fibre Channel/FCoE Scan Policy

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

Prerequisite

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



Procedure

1. From the **System Utilities** screen, select **System Configuration > BIOS/Platform Configuration (RBSU) > Boot Options > Boot Mode**.
2. Select a setting.
 - **UEFI Mode** (default)—Configures the system to boot to a UEFI compatible operating system.
 - **Legacy BIOS Mode**—Configures the system to boot to a traditional operating system in Legacy BIOS compatibility mode.
3. Save your setting.
4. Reboot the server.

Secure Boot

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

- UEFI drivers loaded from PCIe cards
- UEFI drivers loaded from mass storage devices
- Preboot UEFI Shell applications
- OS UEFI boot loaders

When Secure Boot is enabled:

- Firmware components and operating systems with boot loaders must have an appropriate digital signature to execute during the boot process.
- Operating systems must support Secure Boot and have an EFI boot loader signed with one of the authorized keys to boot. For more information about supported operating systems, see <https://www.hpe.com/servers/ossupport>.

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

You can configure Secure Boot:

- Using the **System Utilities** options described in the following sections.
- Using the iLO RESTful API to clear and restore certificates. For more information, see the Hewlett Packard Enterprise website (<https://www.hpe.com/info/redfish>).
- Using the `secboot` command in the Embedded UEFI Shell to display Secure Boot databases, keys, and security reports.

Launching the Embedded UEFI Shell

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



Prerequisites

Embedded UEFI Shell is set to **Enabled**.

Procedure

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

The **Embedded UEFI Shell** screen appears.

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

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

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

The `Shell>` prompt appears.

4. Enter the commands required to complete your task.

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


Intelligent Provisioning

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

Intelligent Provisioning 3.30 and later includes HPE Rapid Setup Software. When you launch F10 mode from the POST screen, you are prompted to select whether you want to enter the Intelligent Provisioning or HPE Rapid Setup Software mode.

NOTE: After you have selected a mode, you must re provision the server to change the mode that launches when you boot to F10.

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

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

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

To access Intelligent Provisioning:

- Press **F10** from the POST screen and enter either Intelligent Provisioning or HPE Rapid Setup Software.
- From the iLO web interface using **Always On**. **Always On** allows you to access Intelligent Provisioning without rebooting your server.

Intelligent Provisioning operation

NOTE: Intelligent Provisioning 3.40 and later requires iLO firmware version 2.10.



Intelligent Provisioning includes the following components:

- Critical boot drivers
- Active Health System (AHS)
- Erase Utility
- Deployment Settings

! **IMPORTANT:**

- Although your server is preloaded with firmware and drivers, Hewlett Packard Enterprise recommends updating the firmware upon initial setup. Also, downloading and updating the latest version of Intelligent Provisioning ensures the latest supported features are available.
- For ProLiant servers, firmware is updated using the Intelligent Provisioning Firmware Update utility.
- Do not update firmware if the version you are currently running is required for compatibility.

NOTE: Intelligent Provisioning does not function within multihomed configurations. A multihomed host is one that is connected to two or more networks or has two or more IP addresses.

Intelligent Provisioning provides installation help for the following operating systems:

- Microsoft Windows Server
- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server
- VMware ESXi/vSphere Custom Image
- ClearOS

Not all versions of an OS are supported. For information about specific versions of a supported operating system, see the OS Support Matrix on the Hewlett Packard Enterprise website (<https://www.hpe.com/info/ossupport>).

HPE Insight Remote Support

Hewlett Packard Enterprise strongly recommends that you register your device for remote support to enable enhanced delivery of your Hewlett Packard Enterprise warranty, HPE support services, or Hewlett Packard Enterprise contractual support agreement. Insight Remote Support supplements your monitoring continuously to ensure maximum system availability by providing intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution, based on your product's service level. Notifications can be sent to your authorized Hewlett Packard Enterprise Channel Partner for onsite service, if configured and available in your country.

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

HPE InfoSight for servers

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



HPE InfoSight for servers:

- Combines the machine learning and predictive analytics of HPE InfoSight with the health and performance monitoring of Active Health System (AHS) and HPE iLO to optimize performance and predict and prevent problems
- Provides automatic collection and analysis of the sensor and telemetry data from AHS to derive insights from the behaviors of the install base to provide recommendations to resolve problems and improve performance

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

USB support

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

External USB functionality

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

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

HPE Smart Storage Administrator

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

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

During the initial provisioning of the server or compute module, an array is required to be configured before the operating system can be installed. You can configure the array using SSA.

HPE SSA is accessible both offline (either through HPE Intelligent Provisioning or as a standalone bootable ISO image) and online:

- Accessing HPE SSA in the offline environment

! **IMPORTANT:** If you are updating an existing server in an offline environment, obtain the latest version of HPE SSA through Service Pack for ProLiant before performing configuration procedures.

Using one of multiple methods, you can run HPE SSA before launching the host operating system. In offline mode, users can configure or maintain detected and supported devices, such as optional Smart Array controllers and integrated Smart Array controllers. Some HPE SSA features are only available in the offline environment, such as setting the boot controller and boot volume.

- Accessing HPE SSA in the online environment

This method requires an administrator to download the HPE SSA executables and install them. You can run HPE SSA online after launching the host operating system.

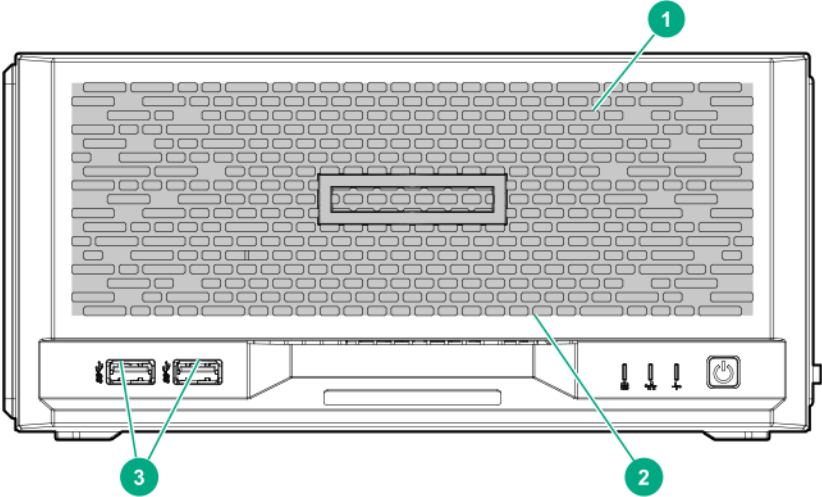
For more information, see *HPE Smart Array SR Gen10 Configuration Guide* at the [Hewlett Packard Enterprise website](#).



Component identification

This chapter describes the external and internal server features and components.

Front panel components

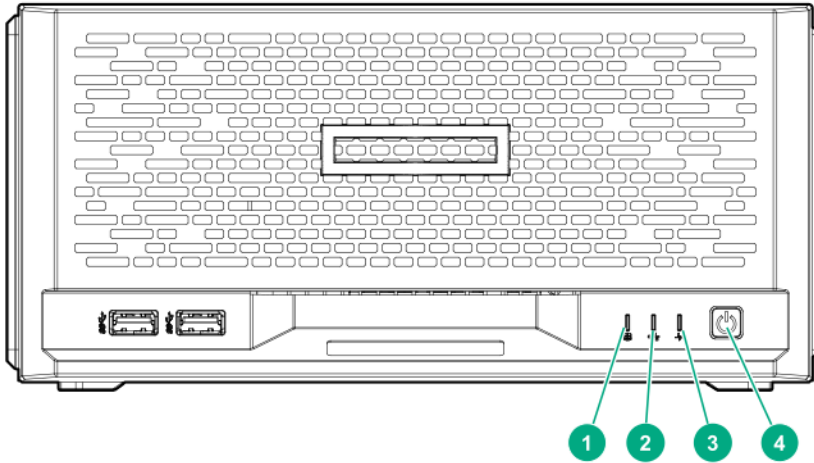


Item	Component	Description
1	Drive bays (4, behind the front bezel)	By default, the drive bays support 3.5-inch LFF SATA drives. To support 2.5-inch SFF drives, install the SFF drive converter option.
2	Front bezel	To access the drive bays, remove this bezel.
3	USB 3.2 Gen 2 Type-A ports ¹	Connect USB devices. These ports are backwards compatible with earlier USB Type-A version devices.

¹ These ports are also known as SuperSpeed USB 10 Gb/s ports. The appropriate cable and compatible hardware are required to take advantage of the 10 Gb/s data transfer speed.



Front panel LEDs and button



Item	Description	Status	Definition
1	Drive activity LED ¹	Flashing green	Ongoing drive activity
		Off	No drive activity
2	NIC status LED ^{2, 3}	Solid green	Linked to network
		Flashing green	Network active
		Off	No network activity
3	Health LED ³	Solid green	Normal
		Flashing green	iLO is rebooting
		Flashing amber	System degraded ⁴
		Flashing red	System critical ⁴
4	Power on/Standby button and system power LED ³	Solid green	System on and normal operation
		Flashing green	Performing power-on sequence
		Amber	System in standby
		Off	No power present ⁵

¹ This LED only reflects the status of drives that are connected to the onboard SATA port.

² This LED reflects the status of the onboard NIC ports managed by the embedded Intel I350-AM4 Ethernet Controller.

³ When these LEDs flash simultaneously, a power fault has occurred. For more information, see [Front panel LED power fault codes](#).

⁴ If the health LED indicates a degraded or critical state, review the system IML or use iLO to review the system health status.

⁵ Facility power is not present, power cord is not attached, or power supply failure has occurred.

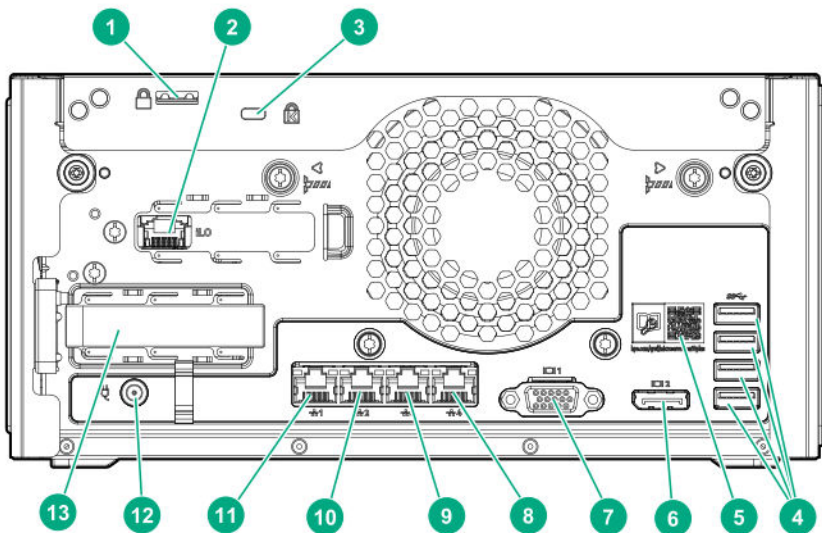
Front panel LED power fault codes

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



Subsystem	LED behavior
System board	1 flash
Processor	2 flashes
Memory	3 flashes
Riser board PCIe slots	4 flashes
FlexibleLOM	5 flashes
Storage controllers	6 flashes
System board PCIe slots	7 flashes
Power backplane or storage backplane	8 flashes
Power supply	9 flashes

Rear panel components



Item	Component	Description
1	Padlock eye	To lock the chassis cover and prevent access to the internal components, attach a padlock here.
2	iLO dedicated network port	To connect iLO to a dedicated management network, connect a standard Ethernet cable here. This port requires the installation of the iLO enablement option.
3	Kensington security slot	To secure the server to a heavy or immovable object, connect an antitheft security cable here.
4	USB 3.2 Gen 1 Type-A ports ¹	Connect USB devices. These ports are backwards compatible with earlier USB Type-A version devices.

Table Continued



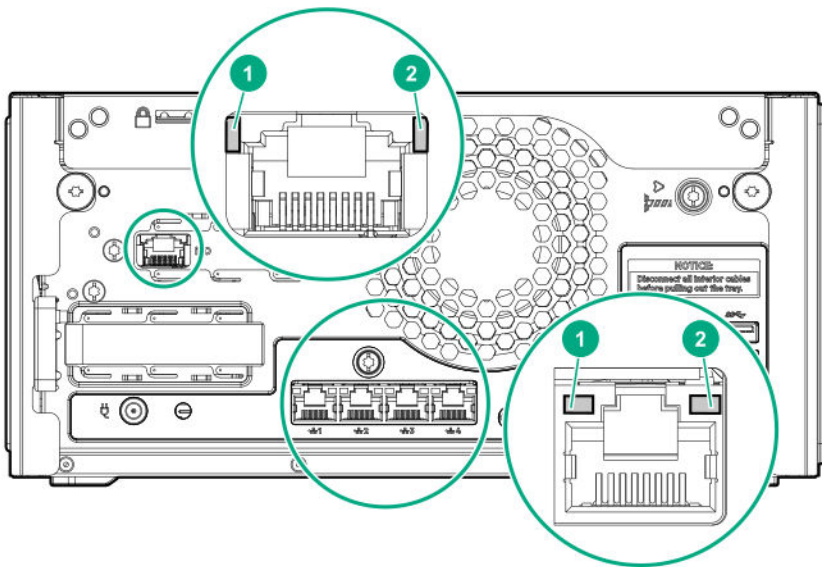
Item	Component	Description
5	System QR code label	To access the server mobile product page (https://www.hpe.com/gref/microservergen10plus), use a QR code scanner app in your smartphone to scan this label. This mobile page contains links to server setup information, spare part numbers, QuickSpecs, troubleshooting resources, and other useful product links.
6	Display port ^{2, 3}	Connects to a high-resolution digital display device.
7	VGA port ³	Connects to an analog display device.
8	1 Gb RJ-45 port 4	
9	1 Gb RJ-45 port 3	To connect the server to a wired network, connect a standard Ethernet cable here.
10	1 Gb RJ-45 port 2	
11	1 Gb RJ-45 port 1/iLO shared network port	To connect the server to a wired network, connect a standard Ethernet cable here. When the iLO enablement option is installed, this port can be configured to handle both server network and iLO network traffic.
12	Power jack	Connects the power cord.
13	PCIe3 x16 expansion slot	Connects a half-height, half-length (low-profile) PCIe3 expansion board option.

¹ These ports are also known as SuperSpeed USB 5 Gb/s ports. The appropriate cable and compatible hardware are required to take advantage of the 5 Gb/s data transfer speed.

² The display port does not support passive type adapters. Passive adapters are marked with the DP++ symbol. To ensure proper video display when connecting an HDMI or DVI display to the display port, use only active type adapters.

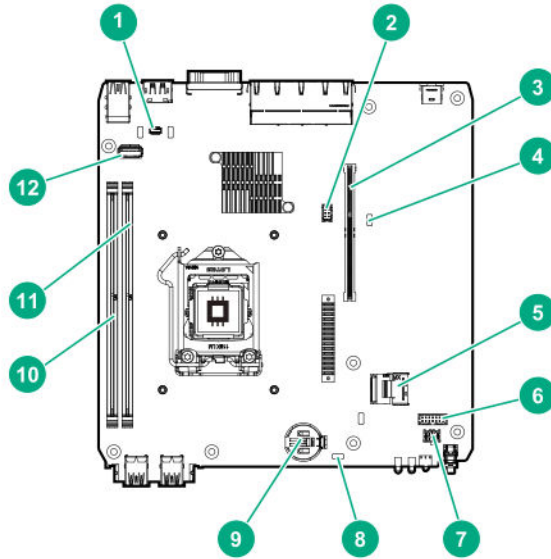
³ The server iLO chipset does not support dual display setup. To enable dual display setup, install a compatible PCIe graphics card that has this function.

Rear panel LEDs



Item	LED	Status	Definition
1	NIC link	Solid green	Network link
		Off	No network link
2	NIC status	Solid green	Linked to network
		Flashing green	Network active
		Off	No network activity

System board components



Item	Component	Description
1	TPM connector	This connector supports the HPE Trusted Platform Module 2.0 Gen10 option (864279-B21) for data security.
2	Fan connector	Connects the fan cable.
3	Riser connector	Connects the system riser board.
4	System maintenance switch	Use this switch to physically configure various server settings.
5	SATA 6GB/s port	Connects the drive SATA cable.
6	Drive sideband connector	Connects the drive sideband signal cable.
7	Drive power connector	Connects the drive power cable.
8	CMOS header	Use this header to clear the CMOS and reset the BIOS settings to their factory default values.
9	System battery	This battery provides power to the server CMOS and real-time clock.
10	DIMM slot 1B	This slot supports standard UDIMMs with ECC only.

Table Continued



Item	Component	Description
11	DIMM slot 2A	This slot supports standard UDIMMs with ECC only. If only one UDIMM is installed, install it in this slot.
12	Internal USB 2.0 port	Connect a USB device, such as a USB security key or a USB drive key, intended for permanent use. The internal connection avoids issues of clearance on the front or rear of the server and prevents physical access to secure data.

System maintenance switch descriptions

Position	Default	Function
S1 ¹	Off	Off = iLO 5 security is enabled. On = iLO 5 security is disabled.
S2	Off	Reserved
S3	Off	Reserved
S4	Off	Reserved
S5 ¹	Off	Off = Power-on password is enabled. On = Power-on password is disabled.
S6 ^{1, 2, 3}	Off	Off = No function On = Restore default manufacturing settings
S7	Off	Reserved
S8	—	Reserved
S9	—	Reserved
S10	—	Reserved
S11	—	Reserved
S12	—	Reserved

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

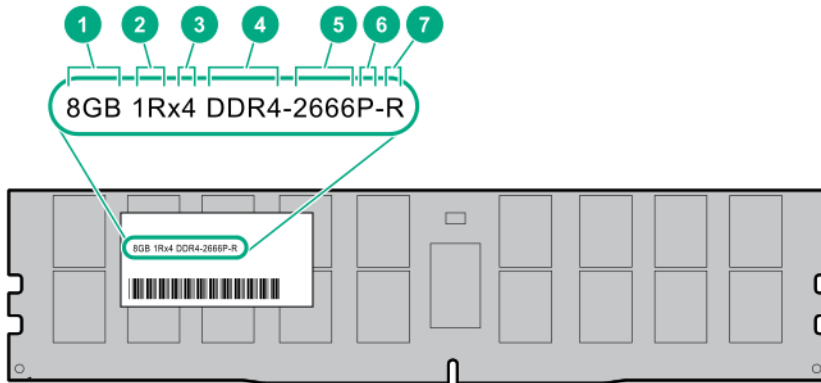
² When the system maintenance switch position 6 is set to the On position, the system is prepared to restore all configuration settings to their manufacturing defaults.

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

DIMM label identification

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





Item	Description	Example
1	Capacity	8 GB 16 GB 32 GB 64 GB 128 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 x16 = 16-bit
4	Memory generation	PC4 = DDR4
5	Maximum memory speed	2133 MT/s 2400 MT/s 2666 MT/s 2933 MT/s

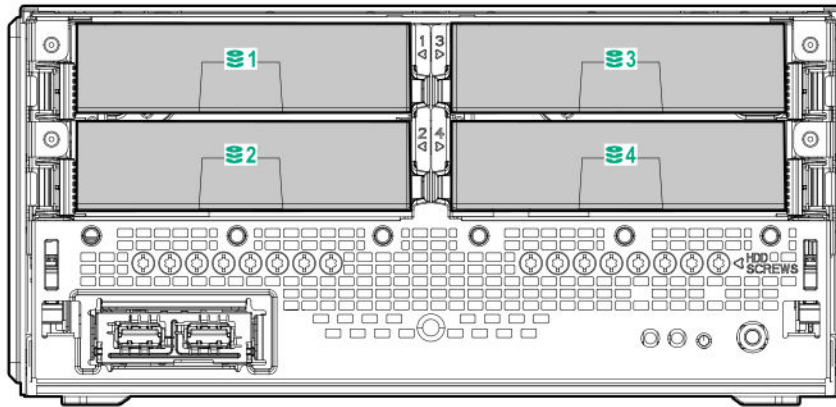
Table Continued



Item	Description	Example
6	CAS latency	P = CAS 15-15-15 T = CAS 17-17-17 U = CAS 20-18-18 V = CAS 19-19-19 (for RDIMM, LRDIMM) V = CAS 22-19-19 (for 3DS TSV LRDIMM) Y = CAS 21-21-21 (for RDIMM, LRDIMM) Y = CAS 24-21-21 (for 3DS TSV LRDIMM)
7	DIMM type	R = RDIMM (registered) L = LRDIMM (load reduced) E = Unbuffered ECC (UDIMM)

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

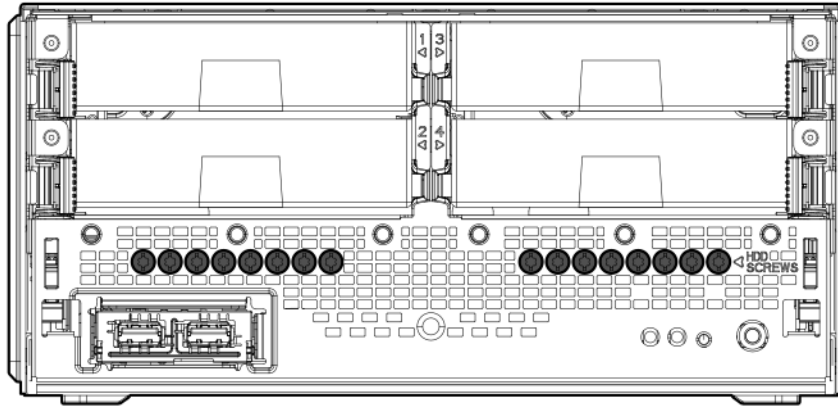
Drive bay numbering



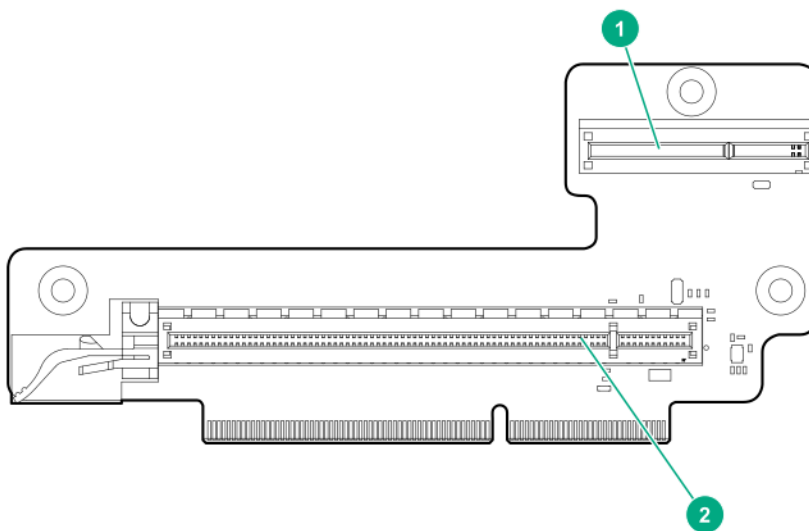
Drive screws

There are 16 T-15 Torx screws located under the drive bays. Use these screws to install drives in the server.





Riser board slots



Item	Description	Supported option
1	iLO dedicated network module slot	Install the iLO enablement option here.
2	PCIe3 x16 expansion slot	Install a half-height PCIe3 x16 expansion board here. See the product QuickSpecs on the server website at https://www.hpe.com/servers/microserver for list of supported expansion options.



Cabling

Cabling overview

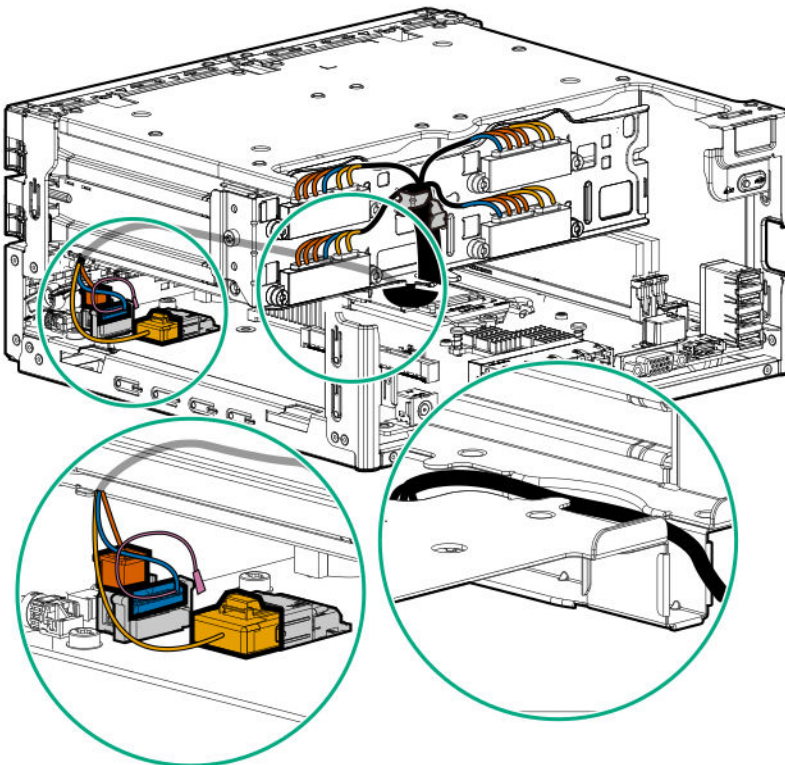
This section provides guidelines that help you make informed decisions about cabling the server and hardware options to optimize performance.

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

Storage cabling

Four-bay drive cabling: Onboard SATA controller cabling

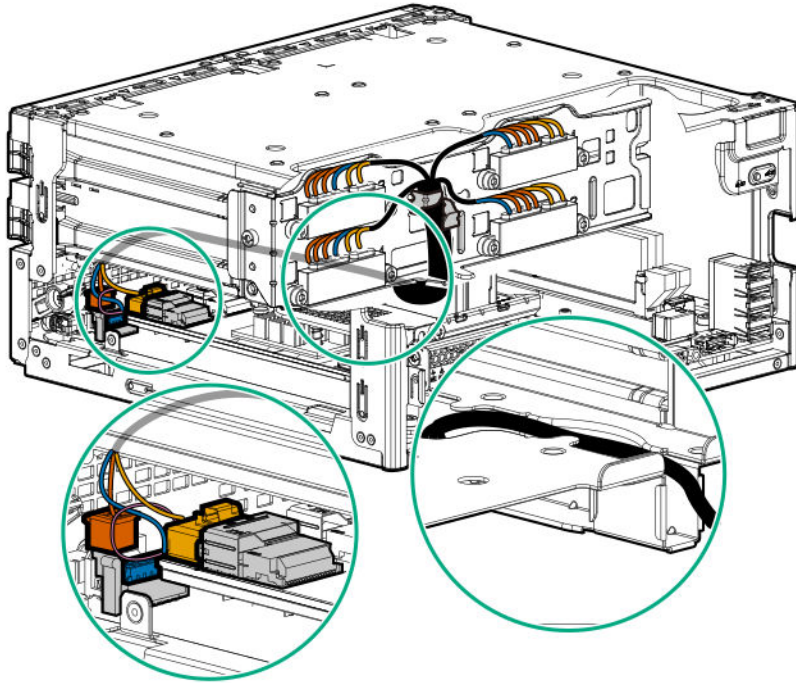
⚠ IMPORTANT: The four-bay non-hot-plug drive cable assembly consists of the drive and ambient temperature sensor cables. If any of these cables becomes defective, the entire cable assembly will need to be replaced.



Cable color	Description
Orange	Drive power cable
Blue	Drive sideband signal cable
Gold	Drive data cable
Pink	Ambient temperature sensor cable

Four-bay drive cabling: Smart Array controller cabling

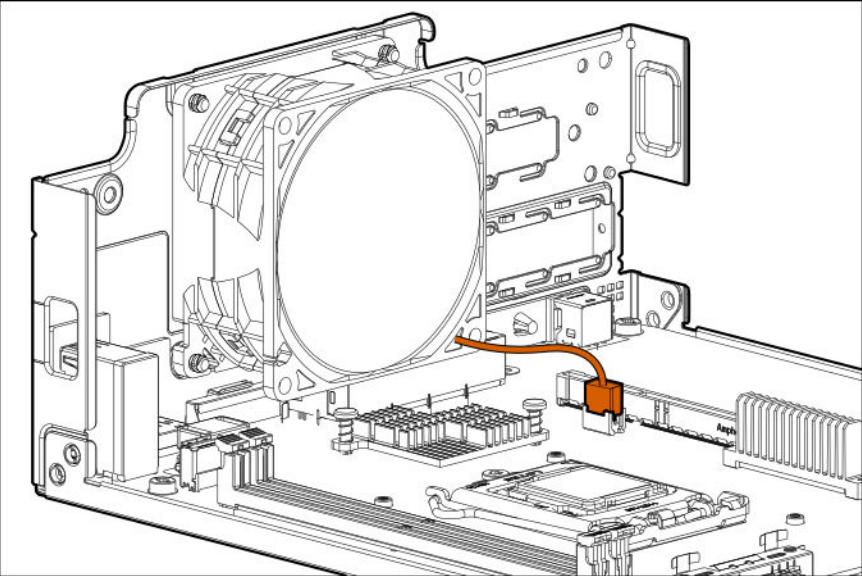
⚠ **IMPORTANT:** The four-bay non-hot-plug drive cable assembly consists of the drive and ambient temperature sensor cables. If any of these cables becomes defective, the entire cable assembly will need to be replaced.



Cable color	Description
Orange	Drive power cable
Blue	Drive sideband signal cable
Gold	Drive data cable
Pink	Ambient temperature sensor cable



Fan cabling



Specifications

Environmental specifications

Specifications	Value
Temperature range*	—
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	8% to 90% 28°C (82.4°F) maximum wet bulb temperature
Nonoperating	5 to 95% 38.7°C (101.7°F) maximum wet bulb temperature
Altitude	—
Operating	3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
Nonoperating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Standard operating support

10°C to 35°C (50°F to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.

System performance during standard operating support may be reduced if operating above 30°C (86°F).

Extended ambient operating support

For approved hardware configurations, the supported system inlet range is extended to be: 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 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the [Hewlett Packard Enterprise website](#).

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 3050 m (10,000 ft). The approved hardware configurations for this system are listed on the [Hewlett Packard Enterprise website](#).

System performance may be reduced if operating in the extended ambient operating range.



Mechanical specifications

Dimension	Value
Height	11.89 cm (4.68 in)
Depth	24.50 cm (9.65 in)
Width	24.50 cm (9.65 in)
Weight, minimum (one drive and one DIMM installed, no iLO enablement module or expansion board installed)	4.82 kg (10.63 lb)
Weight, maximum (four drives, two DIMMs, iLO enablement module, and an expansion board installed)	7.20 kg (15.87 lb)



Websites

General websites

Hewlett Packard Enterprise Information Library

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

Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix

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

Storage white papers and analyst reports

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

For additional websites, see **Support and other resources**.

Product websites

HPE ProLiant MicroServer Gen10 Plus product page

<https://www.hpe.com/servers/microserver>

HPE ProLiant MicroServer Gen10 Plus support page

<https://www.hpe.com/support/microservergen10plus>

HPE ProLiant MicroServer Gen10 Plus user documents

<https://www.hpe.com/info/microservergen10plus-docs>



Support and other resources

Accessing Hewlett Packard Enterprise Support

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

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

ClearCARE technical support

Support for ClearOS and ClearVM is not provided by Hewlett Packard Enterprise. Support for ClearOS and ClearVM is purchased and delivered by ClearCenter. You can purchase single support incidents by submitting a support ticket to ClearCenter, or you can purchase a Bronze, Silver, Gold, or Platinum ClearCARE subscription. For more information, go to the ClearOS website:

<https://www.clearos.com/>

Several levels of professional technical support are available to licensed users. For more information, go to the ClearCARE support website:

<https://www.clearos.com/products/support/clearcare-overview>

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>

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



Remote support

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

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

Remote support and Proactive Care information

HPE Get Connected

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

HPE Proactive Care services

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

HPE Datacenter Care services

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

HPE Proactive Care service: Supported products list

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

HPE Proactive Care advanced service: Supported products list

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

Proactive Care customer information

Proactive Care central

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

Proactive Care service activation

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

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (docsfeedback@hpe.com). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.

