



Hewlett Packard
Enterprise

HPE ProLiant DL360 Gen11 Server Maintenance and Service Guide

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HPE ProLiant DL360 Gen11 Server Maintenance and Service Guide

Abstract

This document is for the person who installs, administers, and troubleshoots servers and storage systems. Hewlett Packard Enterprise assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

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Customer self repair

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

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



NOTE

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

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

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

Parts only warranty service

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

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

Réparation par le client (CSR)

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

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

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

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

d'expédition et de retour, et détermine la société de courses ou le transporteur à utiliser.

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

Service de garantie "pièces seules"

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

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

Riparazione da parte del cliente

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

- **Obbligatorie**—Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad Hewlett Packard Enterprise, deve sostenere le spese di spedizione e di manodopera per il servizio.
- **Opzionali**—Parti la cui riparazione da parte del cliente è 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 garanteservice voor het product.

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

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

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

Garanteservice "Parts Only"

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

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

Reparo feito pelo cliente

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

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

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

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

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

Serviço de garantia apenas para peças

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

カスタマーセルフリペア

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

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

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

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

部品のみ保証サービス

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

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

客户自行维修

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

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

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

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

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

仅部件保修服务

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

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

客戶自行維修

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

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

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

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

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

僅限零件的保固服務

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

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

고객 셀프 수리

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

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

참고: 일부 Hewlett Packard Enterprise 제품은 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.

Illustrated parts catalog

Subtopics

[Mechanical components](#)

[System components](#)

[Server options](#)

Mechanical components

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

https://sketchfab.com/models/463c3e2252ae4fd190d8c9787933dfee/embed?ui_infos=0&ui_watermark=0&ui_help=0&ui_vr=0&ui_settings=0&ui_inspector=0&ui_hint=2&ui_animations=0&ui_color=01a982&ui_theme=d

Item	Description
1	Left server ear spare part
2	Access panel spare part
3	PCIe riser cage spare part
4	Right server ear/power switch spare part
5	Miscellaneous blank spare parts*
6	Rack mounting hardware spare parts*
7	Cable management arm spare parts*
8	DIMM guard spare parts*

*Not shown

Subtopics

[Server ear and power switch spare parts](#)

[Access panel spare parts](#)

[PCIe riser cage spare part](#)

[Miscellaneous blank spare parts](#)

[Rack mounting hardware spare parts](#)

[Cable management arm spare parts](#)

[DIMM guard spare part](#)

Server ear and power switch spare parts

[Customer self repair: Mandatory](#)

Description	Spare part number
Left ear	P56499-001
Right ear and power switch	P56500-001

Access panel spare parts

[Customer self repair: Mandatory](#)

Description	Spare part number
Access panel	P56474-001

PCIe riser cage spare part

[Customer self repair: Optional](#)

Description	Spare part number
1U 2 x16 riser cage, full-height	P56492-001

For riser board spares, see [PCIe riser board spare parts](#).

Miscellaneous blank spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Miscellaneous blanks	P56489-001
• OCP adapter blank • 2SFF blank • Serial port blank • PCI blank	

Rack mounting hardware spare parts

Customer self repair: **Mandatory**

Description	Spare part number
1U friction rail kit 3 for 8SFF servers	P58211-001
1U friction rail kit 5 for 4LFF servers	P59872-001

Cable management arm spare parts

Customer self repair: **Mandatory**

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

DIMM guard spare part

Customer self repair: **Mandatory**

Description	Spare part number
DIMM guard spare parts, left and right	P56495-001

System components

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

https://sketchfab.com/models/e2c8b432d00c4834a66170f3224659ad/embed?ui_infos=0&ui_watermark=0&ui_help=0&ui_vr=0&ui_settings=0&ui_inspector=0&ui_hint=2&ui_animations=0&ui_color=01a982&ui_theme=dark&autostart=1&camera=0

Item	Description
1	System board assembly spare parts
2	Fan spare parts
3	Heatsink spare parts
4	Processor spare parts
5	DIMM spare parts
6	Power supply spare parts
7	Battery and capacitor spare parts
8	Closed-loop liquid cooling heatsink kit spare parts *

*Not shown

Subtopics

- [System board assembly spare parts](#)
- [Fan spare parts](#)
- [Heatsink spare parts](#)
- [Processor spare parts](#)
- [DIMM spare parts](#)
- [Power supply spare parts](#)
- [Battery and capacitor spare parts](#)
- [Closed-loop liquid cooling heatsink kit spare parts](#)
- [Direct liquid cooling solution spare parts](#)

System board assembly spare parts

[Customer self repair: Optional](#)

Description	Spare part number
System board for fourth-generation Intel processors	P53214-001
System board for fifth-generation Intel processors	P53214-002

Fan spare parts

[Customer self repair: Mandatory](#)

Description	Spare part number
Standard fans	P53226-001
High-performance fans	P53227-001

Heatsink spare parts

Customer self repair: Optional

Description	Spare part number
Standard heatsink	P53219-001
High-performance heatsink	P53220-001

Processor spare parts

Subtopics

[Fourth Generation Intel Xeon Scalable Processors](#)

[Fifth Generation Intel Xeon Scalable Processors](#)

Fourth Generation Intel Xeon Scalable Processors

Subtopics

[34xx processor spare parts](#)

[44xx processor spare parts](#)

[54xx processor spare parts](#)

[64xx processor spare parts](#)

[84xx processor spare parts](#)

[94xx processor spare parts](#)

34xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon Scalable processor 3408U (1.8G, 8C, 125W)	P60439-001

44xx processor spare parts



Customer self repair: Optional

Description	Spare part number
Intel Xeon Scalable processor 4416+ (2.0G, 20C, 165W)	P60434-001
Intel Xeon Scalable processor 4410Y (2.0G, 12C, 150W)	P60433-001

54xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon Scalable processor 5420+ (2.0G, 28C, 205W)	P60436-001
Intel Xeon Scalable processor 5418Y (2.0G, 24C, 185W)	P60435-001
Intel Xeon Scalable processor 5418N (1.8G, 24C, 165W)	P60448-001
Intel Xeon Scalable processor 5416S (2.0G, 16C, 150W)	P60452-001
Intel Xeon Scalable processor 5415+ (2.9G, 8C, 150W)	P60426-001
Intel Xeon Scalable processor 5411N (1.9G, 24C, 165W)	P60447-001

64xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon Scalable processor 6458Q (3.1 GHz, 32C, 350W)	P60438-001
Intel Xeon Scalable processor 6454S (2.2 GHz, 32C, 270W)	P53136-001
Intel Xeon Scalable processor 6448Y (2.1 GHz, 32C, 225W)	P60429-001
Intel Xeon Scalable processor 6444Y (3.6 GHz, 16C, 270W)	P60431-001
Intel Xeon Scalable processor 6442Y (2.4 GHz, 24C, 225W)	P60428-001
Intel Xeon Scalable processor 6438Y+ (2.0 GHz, 32C, 205W)	P60437-001
Intel Xeon Scalable processor 6438N (2.0 GHz, 32C, 205W)	P60446-001
Intel Xeon Scalable processor 6434 (3.7 GHz, 8C, 195W)	P60445-001
Intel Xeon Scalable processor 6430 (2.1 GHz, 32C, 270W)	P53120-001
Intel Xeon Scalable processor 6426Y (2.5 GHz, 16C, 185W)	P60427-001
Intel Xeon Scalable processor 6421N (1.8 GHz, 32C, 185W)	P60449-001
Intel Xeon Scalable processor 6414U (2.2 GHz, 32C, 250W)	P53123-001
Intel Xeon Scalable processor 6416H (2.0 GHz, 18C, 165W)	P49422-001
Intel Xeon Scalable processor 6418H (2.2 GHz, 24C, 185W)	P49423-001
Intel Xeon Scalable processor 6448H (2.0 GHz, 32C, 225W)	P49424-001
Intel Xeon Scalable processor 6434H (4.0 GHz, 8C, 205W)	P49425-001

84xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon Scalable processor 8480+ (2.0G, 56C, 350W)	P53119-001
Intel Xeon Scalable processor 8470 (2.0G, 52C, 350W)	P53118-001
Intel Xeon Scalable processor 8470Q (2.1G, 52C, 350W)	P53122-001
Intel Xeon Scalable processor 8470N (1.7G, 52C, 300W)	P53130-001
Intel Xeon Scalable processor 8468 (2.1G, 48C, 350W)	P53117-001
Intel Xeon Scalable processor 8468V (2.4G, 48C, 330W)	P53132-001
Intel Xeon Scalable processor 8462Y+ (2.8G, 32C, 300W)	P60432-001
Intel Xeon Scalable processor 8460Y+ (2.0G, 40C, 300W)	P53116-001
Intel Xeon Scalable processor 8458P (2.7G, 44C, 350W)	P53133-001
Intel Xeon Scalable processor 8452Y (2.0G, 36C, 300W)	P53121-001
Intel Xeon Scalable processor 8444H (2.9G, 16C, 270W)	P53124-001
Intel Xeon Scalable processor 8450H (2.0G, 28C, 250W)	P53125-001
Intel Xeon Scalable processor 8460H (2.2G, 40C, 330W)	P53127-001
Intel Xeon Scalable processor 8468H (2.1G, 48C, 330W)	P53128-001
Intel Xeon Scalable processor 8490H (1.9G, 60C, 350W)	P53129-001

94xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon CPU Max processor 9462 (2.7G, 32C, 350W)	P62346-001

Fifth Generation Intel Xeon Scalable Processors

Subtopics

[35xx processor spare parts](#)

[45xx processor spare parts](#)

[55xx processor spare parts](#)

[65xx processor spare parts](#)

[85xx processor spare parts](#)

35xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon 3508U, 2.10 GHz, 8C, 125W	P67660-001

45xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon 4509Y, 2.60 GHz, 8C, 125 W	P67651-001
Intel Xeon 4510, 2.40 GHz, 12C, 150 W	P67652-001
Intel Xeon 4510T, 2.00 GHz, 12C, 115 W	P67663-001
Intel Xeon 4514Y, 2.00 GHz, 16C, 150 W	P67653-001
Intel Xeon 4516Y+, 2.20 GHz, 24C, 185 W	P67654-001

55xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon 5512U, 2.10 GHz, 28C, 185 W	P67661-001
Intel Xeon 5515+, 3.20 GHz, 8C, 165 W	P67640-001
Intel Xeon 5520+, 2.20 GHz, 28C, 205 W	P67655-001

65xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon 6526Y, 2.80 GHz, 16C, 195W	P67641-001
Intel Xeon 6530, 2.10 GHz, 32C, 270W	P67656-001
Intel Xeon 6534, 3.90 GHz, 8C, 195W	P67644-001
Intel Xeon 6538N, 2.10 GHz, 32C, 205W	P67664-001
Intel Xeon 6538Y+, 2.20 GHz, 32C, 225W	P67657-001
Intel Xeon 6542Y, 2.90 GHz, 24C, 250W	P67642-001
Intel Xeon 6544Y, 3.60 GHz, 16C, 270W	P67645-001
Intel Xeon 6548N, 2.80 GHz, 32C, 250W	P67665-001
Intel Xeon 6548Y+, 2.50 GHz, 32C, 250W	P67643-001
Intel Xeon 6554S, 2.20 GHz, 36C, 270W	P67670-001
Intel Xeon 6558Q, 3.20 GHz, 32C, 350W	P67659-001

85xx processor spare parts

Customer self repair: Optional

Description	Spare part number
Intel Xeon 8558, 2.10 GHz, 48C, 330W	P67658-001
Intel Xeon 8558P, 2.70 GHz, 48C, 350W	P67668-001
Intel Xeon 8558U, 2.00 GHz, 48C, 300W	P67662-001
Intel Xeon 8562Y+, 2.80 GHz, 32C, 300W	P67646-001
Intel Xeon 8568Y+, 2.30 GHz, 48C, 350W	P67647-001
Intel Xeon 8570, 2.10 GHz, 56C, 350W	P67648-001
Intel Xeon 8571N, 2.40 GHz, 52C, 300W	P67666-001
Intel Xeon 8580, 2.00 GHz, 60C, 350W	P67649-001
Intel Xeon 8581V, 2.00 GHz, 60C, 270W	P67669-001
Intel Xeon 8592+, 1.90 GHz, 64C, 350W	P67650-001
Intel Xeon 8592V, 2.00 GHz, 64C, 330W	P67667-001
Intel Xeon 8593Q, 2.20 GHz, 64C, 385W	P68576-001

DIMM spare parts

Customer self repair: Mandatory

5600 MT/s DIMMs

Description	Spare part number
HPE 16GB 1Rx8 PC5-5600B-R Smart Kit	P65253-001
HPE 32GB 2Rx8 PC5-5600B-R Smart Kit	P65254-001
HPE 64GB 2RX4 PC5-5600B-R Smart Kit	P65255-001
HPE 96GB 2RX4 PC5-5600B-R Smart Kit	P65256-001
HPE 128GB 4RX4 PC5-5600B-R Smart Kit	P65257-001

4800 MT/s DIMMs

Description	Spare part number
HPE 16GB 1Rx8 PC5-4800B-R Smart Kit	P48499-001
HPE 32GB 1Rx4 PC5-4800B-R Smart Kit	P48500-001
HPE 32GB 2RX8 PC5-4800B-R Smart Kit	P48501-001
HPE 64GB 2RX4 PC5-4800B-R Smart Kit	P48502-001
HPE 128GB 4RX4 PC5-4800B-R 3DS Smart Kit	P48503-001
HPE 256GB 8RX4 PC5-4800B-R 3DS Smart Kit	P48504-001

DIMM blanks

Description	Spare part number
HPE DDR4 DIMM Blank Kit	812914-001

Power supply spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE 800W Flex Slot Platinum Hot-plug Low Halogen Power Supply	P39385-001
HPE 1000W Flex Slot Titanium Hot-plug Low Halogen Power Supply	P44412-001
HPE 1600W Flex Slot Platinum Hot-plug Low Halogen Power Supply	P39384-001

Battery and capacitor spare parts

Customer self repair: **Mandatory**



Description	Spare part number
HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P07473-001
HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	878643-001
System battery	319603-001
HPE ProLiant DL360 Gen11 Storage Controller Enablement Cable Kit	P56488-001

Closed-loop liquid cooling heatsink kit spare parts

Customer self repair: No

The closed-loop liquid cooling heatsink is not a customer-serviceable part. To service or replace, contact an authorized Hewlett Packard Enterprise service provider.

Description	Spare part number
Closed-loop liquid cooling heatsink assembly	P53221-001
Closed-loop liquid cooling heatsink fan kit	P53225-001



IMPORTANT

- **Maximum Usage Limitation Reminder:** The closed-loop liquid cooling heatsink used in this server is subject to a Maximum Usage Limitation not to exceed five (5) years of operation. After reaching this five (5) years limit, it is required that the liquid cooling heatsink be replaced. Parts and components that Hewlett Packard Enterprise determines have reached or exceeded their Maximum Usage Limitation will not be provided, repaired, or replaced under a warranty or service contract. Contact your local HPE sales representative for additional information.
- The tubes of the liquid cooling heatsink are prefilled with coolant. In the unlikely event of a spill or leak of this server coolant, follow the recommended procedure in Appendix I: Server coolant spill response of the server maintenance guide:
<https://www.hpe.com/info/dl360gen11-msg>

Direct liquid cooling solution spare parts

Customer self repair: Cold plate modules are **Optional**. Hose sets are **Mandatory**.

Description	Spare part number
SPS-Cold Plate Module w/bracket (DLC) WM36	P63150-001
SPS-Cold Plate Module w/brkt (DLC) PCIe3638	P63151-001
SPS-DLC Hose Set (SVRtoMAN) 45cm QD	P63156-001

Server options

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

https://sketchfab.com/models/e4da64c91e004f6a9a882d63a2790d23/embed?ui_infos=0&ui_watermark=0&ui_help=0&ui_vr=0&ui_settings=0&ui_inspector=0&ui_hint=2&ui_animations=0&ui_color=01a982&ui_theme=dark&autostart=1&camera=0

Item	Description
1	Hard drive spare parts • EDSFF drive spare parts • NVMe drive spare parts • SAS drive spare parts • SATA drive spare parts
2	Drive backplane spare parts
3	Battery and capacitor spare parts
4	NS204i-u boot device
5	Intrusion detection switch
6	PCIe riser board spare parts
7	Serial port spare part
8	Expansion board spare parts*: • Controller spare parts • Host bus adapter spare parts • Infiniband adapter spare parts • Ethernet adapter spare parts
9	OCP 3.0 network adapter and controller spare parts *
10	GPU spare parts *
11	Display port/USB/Optical spare parts *
12	Systems Insight Display spare parts *
13	Cable kit spare parts *

*Not shown

Subtopics

- [EDSFF drive spare parts](#)
- [NVMe drive spare parts](#)
- [SAS drive spare parts](#)
- [SATA drive spare parts](#)
- [Drive backplane spare parts](#)
- [HPE NS204i-u Boot Device spare parts](#)
- [Chassis Intrusion Detection Switch spare part](#)
- [PCIe riser board spare parts](#)
- [Serial port spare part](#)
- [Controller spare parts](#)
- [GPU spare parts](#)
- [Host bus adapter spare parts](#)
- [Infiniband adapter spare parts](#)
- [Ethernet adapter spare parts](#)

[OCP 3.0 network adapters](#)

[Display port/USB/optical spare parts](#)

[Systems Insight Display spare parts](#)

[Cable kit spare parts](#)

EDSFF drive spare parts

[Customer self repair: Mandatory](#)

Description	Spare part number
SPS-DRV SSD 15.3TB E3S NVMe RI EC1	P58427-001
SPS-DRV SSD 7.68TB E3S NVMe RI EC1	P58426-001
SPS-DRV SSD 3.84TB E3S NVMe RI EC1	P58425-001
SPS-DRV SSD 7.68TB E3S NVMe RI EC1 CD7	P56716-001
SPS-DRV SSD 3.84TB E3S NVMe RI EC1 CD7	P56715-001
SPS-DRV SSD 1.92TB E3S NVMe RI EC1 CD7	P56714-001

NVMe drive spare parts

[Customer self repair: Mandatory](#)

Description	Spare part number
HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50961-001
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50959-001
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P48226-001
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50956-001
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P48225-001
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF BC U.3 PM1733a SSD	P50953-001
HPE 1.9TB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P48224-001
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF BC U.3 Static Multi Vendor SSD	P48223-001
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50970-001
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P48219-001
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50967-001
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P48218-001
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF BC U.3 PM1735a SSD	P50964-001
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P48217-001
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF BC U.3 Static Multi Vendor SSD	P48216-001

SAS drive spare parts

Customer self repair: **Mandatory**

LFF drives

Description	Spare part number
Midline - 12G SAS - LFF Drives	
HPE 20TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Helium 512e ISE Multi-Vendor	P54677-001
HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Helium 512e ISE Multi Vendor HDD	P54677-001
HPE 16TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Helium 512e ISE Multi Vendor HDD	P25245-001
HPE 14TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Helium 512e Multi Vendor HDD	P11518-001
HPE 12TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Helium 512e Multi Vendor HDD	882398-001
HPE 10TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty 512e ISE Multi-Vendor	P54672-001
HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty 512e Multi Vendor HDD	834132-001
HPE 6TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty 512e Multi Vendor HDD	862136-001
HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Multi Vendor HDD	834134-001
HPE 2TB SAS 12G Business Critical 7.2K LFF LP 1- year Warranty Multi Vendor HDD	834133-001
Read Intensive - 12G SAS - LFF –Solid State Drives	
HPE 7.68TB SAS 24G Read Intensive LFF LPC Multi Vendor SSD	P49740-001
Mixed Use - 12G SAS - LFF –Solid State Drives	
HPE 960GB SAS 12G Mixed Use LFF LPC Value SAS Multi Vendor SSD	P37070-001

SFF drives

Description	Spare part number
Mission Critical - 12G SAS - SFF Drives	
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting FIPS HDD	P36212-001
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD	P36214-001
Enterprise - 12G SAS - SFF Drives	
HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P30562-001
HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	P54682-001
HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P30563-001
HPE 1TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty HDD	P54683-001
HPE 900GB SAS 15K SFF BC MV HDD	P40784-001
HPE 600GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P54680-001
HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P54681-001

Description	Spare part number
HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	P30561-001
HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	P40785-001
Midline - 12G SAS - SFF Drives	
HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P30575-001
Read Intensive - 12G SAS - SFF - Solid State Drives	
HPE 15.36TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49743-001
HPE 7.68TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P41534-001
HPE 7.68TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49741-001
HPE 3.84TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P41533-001
HPE 3.84TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49737-001
HPE 1.92TB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P41532-001
HPE 1.92TB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49735-001
HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD	P41531-001
HPE 960GB SAS 24G Read Intensive SFF BC Multi Vendor SSD	P49733-001
Mixed Use - 12G SAS - SFF - Solid State Drives	
HPE 6.4TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49751-001
HPE 3.84TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P41537-001
HPE 3.2TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49749-001
HPE 1.92TB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P41536-001
HPE 1.6TB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49747-001
HPE 960GB SAS 12G Mixed Use SFF BC Value SAS Multi Vendor SSD	P41535-001
HPE 800GB SAS 24G Mixed Use SFF BC Multi Vendor SSD	P49745-001

SATA drive spare parts

Customer self repair: **Mandatory**

LFF drives

Description	Spare part number
Read Intensive - 6G SATA - LFF - Solid State Drives	
HPE 960GB SATA 6G Read Intensive LFF LPC Multi Vendor SSD	P48229-001
Midline - 6G SATA - LFF Drives	
HPE 18TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P38440-001
HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	P25244-001
HPE 14TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	P11519-001
HPE 12TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	882401-001
HPE 10TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	P54673-001
HPE 8TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	834131-001
HPE 6TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	862134-001
HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	862133-001
HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	862132-001
HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	862130-001

SFF drives

Description	Spare part number
Midline - 6G SATA - SFF Drives	
HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	P30573-001
HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD	P30574-001
Read Intensive - 6G SATA - SFF - Solid State Drives	
HPE 7.68TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P41526-001
HPE 3.84TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P41525-001
HPE 3.84TB SATA 6G Read Intensive SFF BC S4520 SSD	P47487-001
HPE 3.84TB SATA 6G Read Intensive SFF BC PM893 SSD	P46055-001
HPE 1.92TB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P41524-001
HPE 1.92TB SATA 6G Read Intensive SFF BC S4520 SSD	P47485-001
HPE 1.92TB SATA 6G Read Intensive SFF BC PM893 SSD	P46054-001
HPE 480GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P41522-001
HPE 480GB SATA 6G Read Intensive SFF BC PM893 SSD	P46052-001
HPE 960GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P41523-001
HPE 960GB SATA 6G Read Intensive SFF BC PM893 SSD	P46053-001
HPE 240GB SATA 6G Read Intensive SFF BC Multi Vendor SSD	P41521-001
Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 3.84TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P41530-001
HPE 3.84TB SATA 6G Mixed Use SFF BC S4620 SSD	P47492-001
HPE 1.92TB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P41529-001
HPE 1.92TB SATA 6G Mixed Use SFF BC PM897 SSD	P46051-001
HPE 960GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P41528-001
HPE 960GB SATA 6G Mixed Use SFF BC PM897 SSD	P46050-001
HPE 480GB SATA 6G Mixed Use SFF BC Multi Vendor SSD	P41527-001
HPE 480GB SATA 6G Mixed Use SFF BC S4620 SSD	P47489-001
HPE 480GB SATA 6G Mixed Use SFF BC PM897 SSD	P46049-001

Drive backplane spare parts

Customer self repair: **Mandatory**

Description	Spare part number
SPS-PCA,12 E3.S 32Gx4UBM5 E3C,2U	P53217-001
SPS-PCA Bkpln+HDD Cage Flex Bay 2SFF	875554-001
SPS-Enclosure FLEX BAY 2x HDD DL360 Gen9	775428-001
SPS-PCA 360 2SFF+SAS SATA FB HDD Bkpl	775401-001
SPS-Backplane: 4-LFF UBM SAS LP	P40451-001
SPS-8SFFx4 NVMe/SAS U.3BCBP	P53228-001
SPS-PCA,8SFF U.2 x4 NVMe E UBM4 BP	P31225-001
SPS-20E.3s x4 NVMe U.5 E3CBP	P53229-001
SPS-2SFFx4 NVMe/SAS U.3BCBP	P58321-001
SPS-2SFF U.2 x4 NVMe E BP	P40859-001
8SFF U.3 x1 drive backplane	P40444-001
8SFF U.3 x4 drive backplane	P40445-001
8SFF x1 SAS/SATA drive backplane	P31227-001
8SFF U.2 x4 NVMe drive backplane	P31225-001
2SFF SAS/SATA drive cage	P31217-001
2SFF U.3 NVMe drive cage	P31219-001
2SFF U.2 NVMe drive cage	P31218-001

HPE NS204i-u Boot Device spare parts

Customer self repair: Mandatory

Description	Spare part number
Boot device cage assembly	P51341-001
M.2 SSD carrier	P59777-001
480 GB NVMe RI M.2 SV 2280 SSD	P69616-001
Boot device SlimSAS and power cables ¹	P56479-001

¹ This is a miscellaneous cable spare kit; only the cables listed in this table are used in this server.

For more information on the removal and replacement procedures, see [Removing and replacing the NS204i-u OS boot device](#)

Chassis Intrusion Detection Switch spare part

Customer self repair: Mandatory

Description	Spare part number
Chassis Intrusion Detection Switch	P52442-001

PCIe riser board spare parts

Customer self repair: Optional

Description	Spare part number
1U 1 x16 low-profile riser	P56498-001
1U 2 x16 riser	P56497-001

Serial port spare part

Customer self repair: Mandatory

Description	Spare part number
Serial port spare part	P56488-001

Controller spare parts

Customer self repair: Optional

Description	Spare part number
HPE SR932i-p Gen11 x32 Lanes 8GB Wide Cache PCI SPDM Plug-in Storage Controller	P47623-001
HPE MR416i-p Gen11 x16 Lanes 8GB Cache PCI SPDM Plug-in Storage Controller	P47951-001
HPE MR416i-o Gen11 x16 Lanes 8GB Cache OCP SPDM Storage Controller	P47952-001
HPE MR216i-p Gen11 x16 Lanes without Cache PCI SPDM Plug-in Storage Controller	P47953-001
HPE MR216i-o Gen11 x16 Lanes without Cache OCP SPDM Storage Controller	P47954-001
HPE MR408i-o Gen11 x8 Lanes 4GB Cache OCP SPDM Storage Controller	P58543-001
HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	836267-001

GPU spare parts

Customer self repair: Mandatory

Description	Spare part number
SPS-PCA, NVIDIA A2 GPU MOD	P51434-001
SPS-PCA, NVIDIA L4 24GB PCIe Acc	P59360-001

Host bus adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	P14421-001
HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter	P14422-001
HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	P14419-001
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	P14420-001

Infiniband adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
HPE InfiniBand NDR 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter	P47627-001
HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	P36069-001
HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	P36070-001
HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter	841703-001
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter	841703-001
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter	P24752-001

Ethernet adapter spare parts

Customer self repair: **Mandatory**

Description	Spare part number
Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P51304-001
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T Adapter for HPE	P26987-001
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ Adapter for HPE	P26874-001
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P42266-001
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P26871-001
Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE	P22200-001
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P14483-001
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P10582-001
Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE	P22201-001
Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P42934-001
Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	P26155-001
Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	P14488-001
HPE Slingshot SA210S Ethernet 200Gb 1-port PCIe NIC	P40789-001
HPE Slingshot SA410S 400GbE 1p PCIe NIC	R9Y95A

OCP 3.0 network adapters

Customer self repair: Optional

Description	Spare part number
Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P51305-001
Broadcom BCM57416 Ethernet 10Gb 2-port BASE-T OCP3 Adapter for HPE	P13640-001
Broadcom BCM57412 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE	P26256-B21
Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE	P42265-001
Broadcom BCM57414 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P14484-001
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	P14487-001
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P14485-001
Intel E810 100GbE 2p QSFP28 OCP3 Adptr	P24113-001
Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	P42933-001

Display port/USB/optical spare parts

Customer self repair: Mandatory

Description	Spare part number
SFF display port/USB/optical drive blank	P41232-001
LFF display port/USB Option	P60077-001

Systems Insight Display spare parts

Customer self repair: Mandatory

Description	Spare part number
SFF Systems Insight Display	P56496-001

Cable kit spare parts

Customer self repair: Mandatory

Description	Spare part number
SPS-Cable: 20EDSFF to controller/538mm (P70646-001)	P73248-001
SPS-Cable: 20EDSFF to controller/660mm (P70647-001)	P73249-001
SPS-Cable: 20EDSFF to controller/705mm (P70648-001)	P73250-001
SPS-CA kit, 20EDSFF to CPU2 MCIO,pwr	P56478-001
8SFF U.3/U.2 BP power connectors:	P56475-001
- U.3/U.2 backplane power cable 2SFF to 8SFF power cable	
Port 9/10/11 to OCP Slot15 Port1/2	P52801-001
8SFF U.3/U.2 slimSAS to MLB	P52802-001
8SFF U.3 x1 to MLB	P56476-001
2SFF slimSAS to CPU1/CPU2/MLB	P56477-001
NS204i-u front power (SFF)	P56479-001
8SFF/2SFF U.3 x1/U2 to controller	P53222-001
8SFF U.3 x4 to controller 1/2/3/4	P56480-001
8SFF U.3 x4 to controller Y-cable 1/2	P56480-001
8SFF U.3 x4 to controller Y-cable1/2	P53223-001
4LFF to MR416i-p/SR308i-p	P53224-001
OCP1 card to 4LFF	P56483-001
OCP1 to 8SFF x1 U.3	P56484-001
4LFF DisplayPort and ODD	P56485-001
8SFF Display and ODD	P56486-001
4LFF to PRI/TER/8SFF SAS	P24139-001

Removal and replacement procedures

Subtopics

[Safety considerations](#)

[Preparation procedures](#)

[Removing and replacing the front bezel](#)

[Removing and replacing the cable management arm](#)

[Removing and replacing the server rails](#)

[Remove the hard drive blank](#)

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

[Removing and replacing a hot-plug E3.S drive](#)

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

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

[Removing and replacing a fan blank](#)

[Removing and replacing a fan](#)

[Removing and replacing a riser cage](#)

[Removing and replacing the OCP 3.0 adapter](#)

[Removing and replacing an expansion card](#)

[Removing and replacing a GPU](#)
[Removing and replacing the NS204i-u OS boot device](#)
[Removing and replacing a primary riser board](#)
[Removing and replacing the serial port](#)
[Removing and replacing the chassis intrusion detection switch](#)
[Removing and replacing a type-o storage controller](#)
[Removing and replacing a type-p storage controller](#)
[Removing and replacing a DIMM](#)
[Removing and replacing the system battery](#)
[Removing and replacing an energy pack](#)
[Removing and replacing a processor or heatsink](#)
[Removing and replacing the direct liquid cooling assembly](#)
[Removing and replacing the Systems Insight Display](#)
[Removing and replacing the LFF optical disk drive/display port/USB](#)
[Removing and replacing the SFF optical disk drive/display port/USB](#)
[Removing and replacing the chassis ear power switch module](#)
[Removing and replacing the 4 LFF drive backplane](#)
[Removing and replacing the EDSFF drive backplane](#)
[Removing and replacing the 8 SFF drive backplane](#)
[Removing and replacing the 2 SFF drive backplane](#)
[Removing and replacing the system board](#)

Safety considerations

Before performing service procedures, review all the safety information.

- [Electrostatic discharge](#)
- [Symbols on equipment](#)
- [Rack warnings and cautions](#)
- [Server warnings and cautions](#)

Subtopics

[Electrostatic discharge](#)
[Symbols on equipment](#)
[Rack warnings and cautions](#)
[Server warnings and cautions](#)
[Rail identification markers](#)
[Rack mounting interfaces](#)

Electrostatic discharge

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

To prevent electrostatic damage:

- Avoid hand contact by transporting and storing products in static-safe containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free workstations.
- Place parts on a grounded surface before removing them from their containers.

- Avoid touching pins, leads, or circuitry.
- Always be properly grounded when touching a static-sensitive component or assembly. Use one or more of the following methods when handling or installing electrostatic-sensitive parts:
 - Use a wrist strap connected by a ground cord to a grounded workstation or computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm ± 10 percent resistance in the ground cords. To provide proper ground, wear the strap snug against the skin.
 - Use heel straps, toe straps, or boot straps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
 - Use conductive field service tools.
 - Use a portable field service kit with a folding static-dissipating work mat.

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

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

Symbols on equipment

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



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

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



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



WARNING

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

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

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



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



WARNING

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

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



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



WARNING

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

RJ-45 插孔上的該符號指示網絡接口連接。

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



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



WARNING

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

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



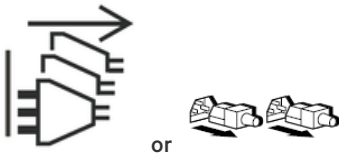
This symbol indicates the presence of a moving fan blade. If the spinning blades are contacted, the potential for injury exists.



WARNING

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

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



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

**WARNING**

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

電源或系統上的這些符號表明設備由多個電源供電。

警告：為了減少觸電造成人身傷害的危險，應拔下所有電源線插頭，完全斷開系統的電源。



Weight in kg.

Weight in lb.

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

**WARNING**

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

此符號表明組件的重量超出了建議值，一個人無法安全取放。

警告：為了減少人身傷害或設備損壞的危險，應遵守當地有關人工取放物品的職業保健與安全規定及準則。



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

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



These symbols appearing together indicate that the product may have high touch current and that a reliable earth ground must be in place before connecting the equipment.

**WARNING**

Risk of electric shock due to high touch current. Connect to earth before connecting to supply.



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

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



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



WARNING

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



This symbol indicates the presence of coin cell battery.



WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause Internal Chemical Burns in as little as 2 hours.
- **KEEP** new and used batteries **OUT OF REACH** of **CHILDREN**.
- Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.

Rack warnings and cautions



WARNING

When all components are removed, the server weighs 13.04 - 16.27 kg (28.74 - 35.86 lb). When all components are installed, the server can weigh up to 13.77 - 16.78 kg (30.36 - 37.00 lb).

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



WARNING

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

- Observe local occupational health and safety requirements and guidelines for manual material handling.
- Get help to lift and stabilize the product during installation or removal, especially when the product is not fastened to the rails. The server weighs more than 13.04 - 16.27 kg (28.74 - 35.86 lb), so at least two people must lift the server into the server together. An additional person may be required to help align the server if the server is installed higher than chest level.
- Use caution when installing the server in or removing the server from the server.
- Adequately stabilized the server before extending a component outside the server. Extend only one component at a time. A server may become unstable if more than one component is extended.
- Do not stack anything on top of rail-mounted component or use it as a work surface when extended from the rack.

**WARNING**

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

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

**WARNING**

To reduce the risk of personal injury or equipment damage when unloading a rack:

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

**CAUTION**

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

**CAUTION**

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

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

Server warnings and cautions

**WARNING**

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

**WARNING**

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



WARNING

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

- Do not disassemble, crush, or puncture the energy pack.
- Do not short external contacts.
- Do not dispose of the energy pack in fire or water.
- Do not expose the energy pack to low air pressure as it might lead to explosion or leakage of flammable liquid or gas.
- Do not expose the energy pack to temperatures higher than 60°C (140°F).

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



CAUTION

Protect the 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 damage to electrical components, properly ground the server before beginning any installation, removal, or replacement procedure. Improper grounding can cause electrostatic discharge.



CAUTION

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



CAUTION

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

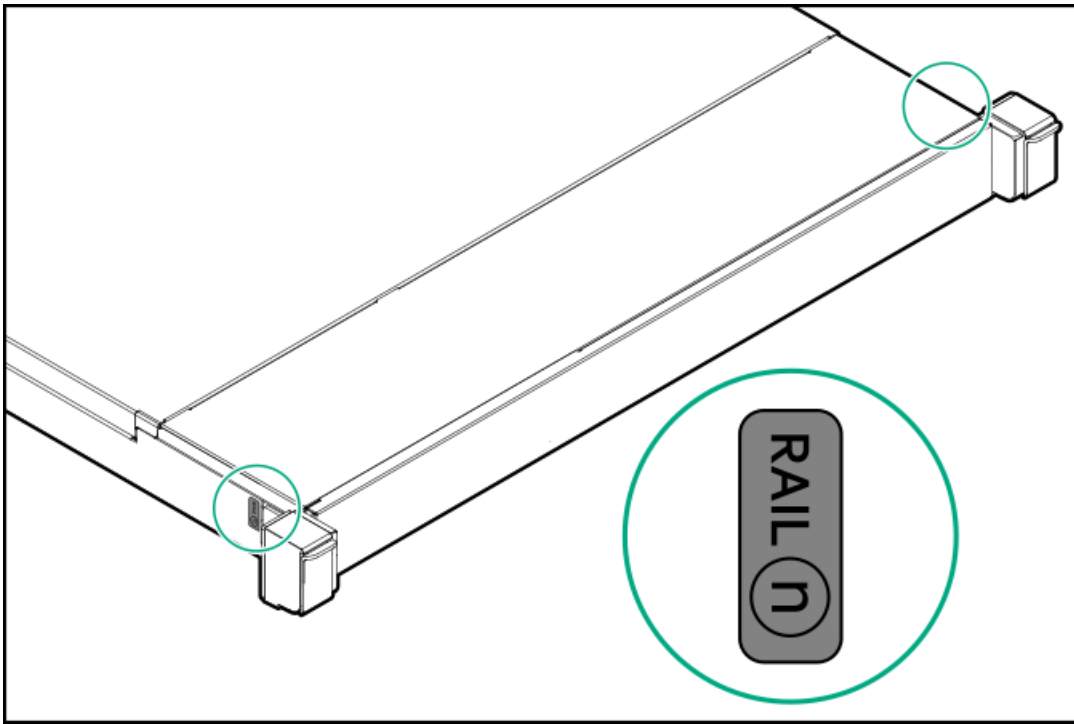
Rail identification markers

The rack rail option support is dependent on these two factors:

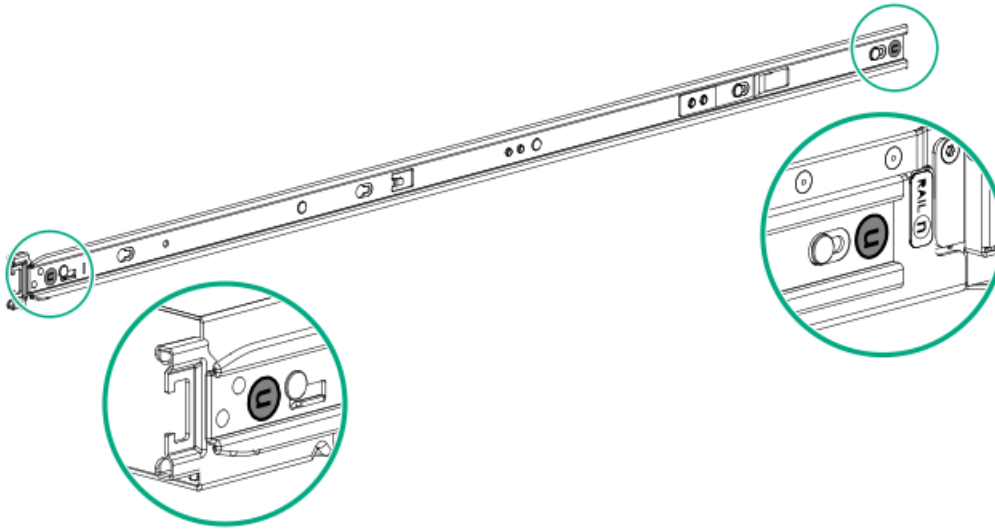
- The height and weight of the chassis as determined by the front- and rear-end server configurations.
- The depth of the chassis as measured from the edge of the front panel (without the front bezel) to the edge of the rear panel.

To ensure compatibility between the rack rails and the server, verify that the rail number labels on the chassis match the ones stamped on the rails.

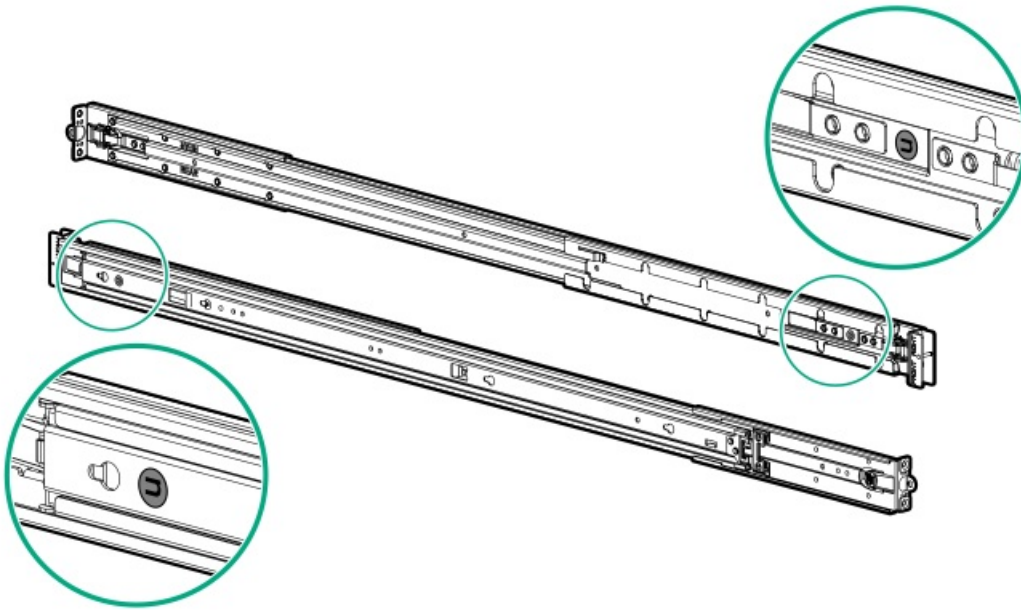
- Rail number labels on the chassis
Rail #3 and #5



- Rail identifier stamps on the inner rail of the friction rack rail

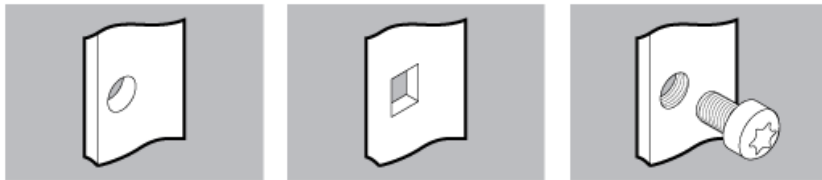


- Rail identifier stamps on the mounting rail of the friction rack rail



Rack mounting interfaces

The server rails can be installed in a rack that has the following mounting interfaces:



Round-hole

Square-hole

Threaded round-hole

The illustrations used in this procedure show an icon on the upper right corner of the image. This icon indicates the type of mounting interface for which the action illustrated in the image is valid.

Preparation procedures

Prerequisites

Before powering down the server for an upgrade, maintenance, or service procedure, [perform a backup of critical server data](#).

About this task

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

Subtopics

[Server data backup](#)

[Power down the server](#)

[Extend the server from the rack](#)

[Release the cable management arm](#)

[Remove the server from the rack](#)

[Remove the access panel](#)

[Install the access panel](#)

[Power up the server](#)

Server data backup

To avoid data loss, make sure to back up all server data before installing or removing a hardware option, performing a server maintenance, or a troubleshooting procedure.

Server data in this context refers to information that may be required to return the system to a normal operating environment after completing a hardware maintenance or troubleshooting procedure. This information may include:

- User data files
- User account names and passwords
- Application settings and passwords
- Component drivers and firmware
- TPM recovery key/password
- BIOS configuration settings—Use the backup and restore function in UEFI System Utilities. For more information, see the UEFI user guide (<https://www.hpe.com/info/UEFI-manuals>).
 - Custom default system settings
 - Security passwords including those required for power-on and BIOS admin access, persistent memory, and Server Configuration Lock (for HPE Trusted Supply Chain servers)
 - Server serial number and the product ID
- iLO-related data—Use the iLO backup and restore function. For more information, see the iLO user guide (<https://www.hpe.com/support/ilo6>).
 - iLO license
 - Customer iLO user name, password, and DNS name
 - iLO configuration settings
- For servers managed by HPE GreenLake for Compute Ops Management, make sure that you have your HPE GreenLake account ID. For more information, see [HPE GreenLake for Compute Ops Management Getting Started Guide](#).

Power down the server

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



IMPORTANT

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

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

- Press and release the Power On/Standby button.
This method activates a controlled shutdown of applications and the OS before the server enters standby mode. It can also activate a shutdown behavior governed by an OS configuration or policy.
- Press and hold the Power On/Standby button for more than 4 seconds to force the server to enter standby mode.

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

- Use a virtual power button selection through iLO.

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

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

Extend the server from the rack

Prerequisites

- You might need a T-25 Torx screwdriver to loosen the shipping screws.
- Review the:
 - [Rack warnings and cautions](#)
 - [Server warnings and cautions](#)

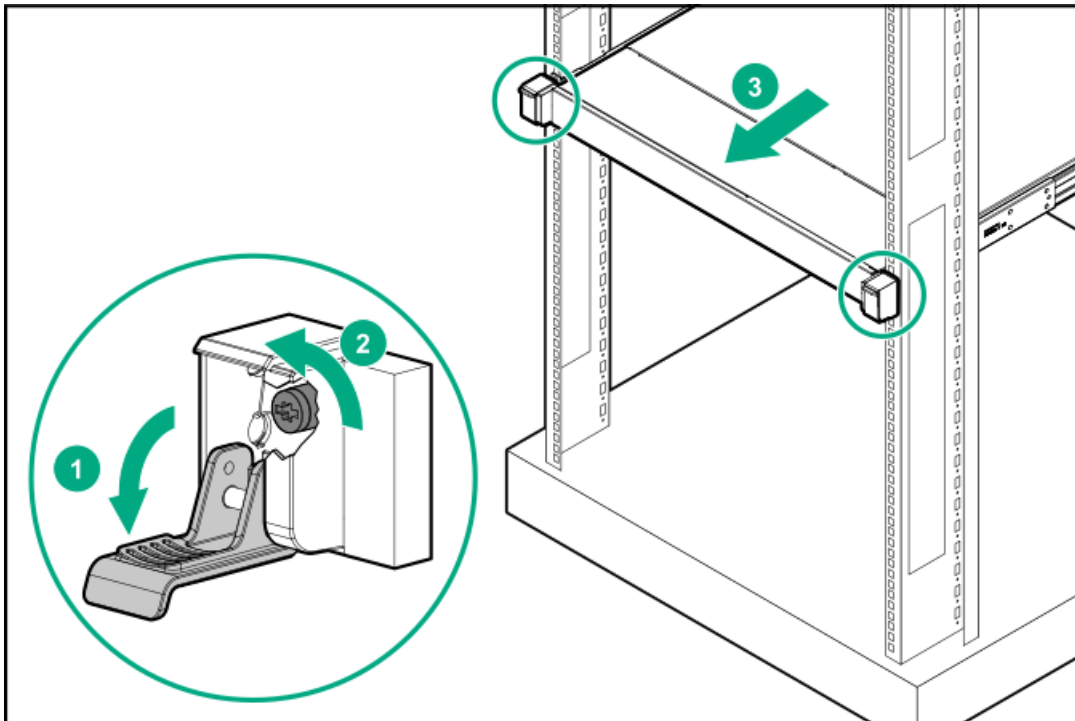
Procedure

Extend the server from the rack.



WARNING

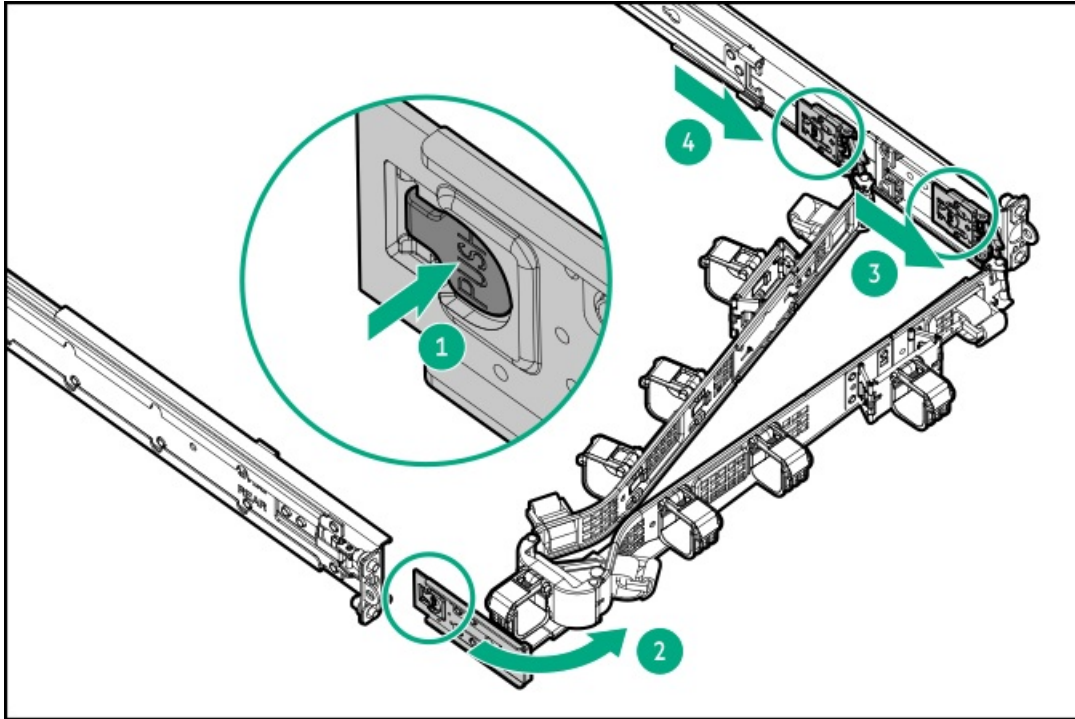
To reduce the risk of personal injury or equipment damage, be sure that the rack is adequately stabilized before extending anything from the rack.



Release the cable management arm

Procedure

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



Remove the server from the rack

Prerequisites

Before you perform this procedure, review the:

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

About this task

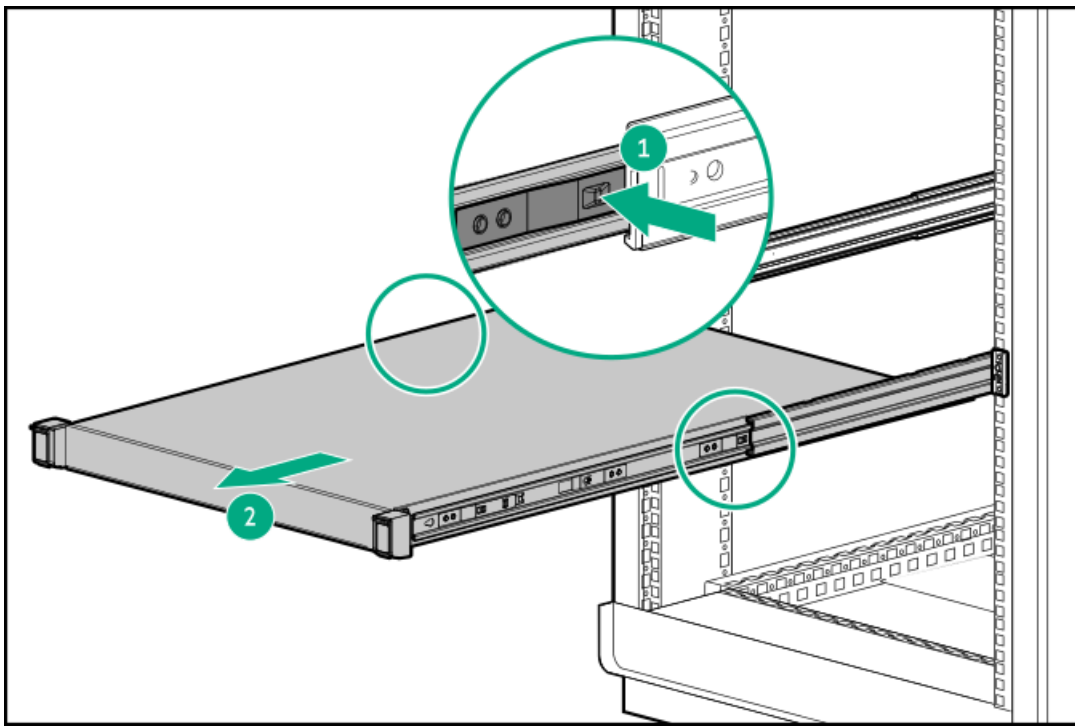


WARNING

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

Procedure

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



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

Remove the access panel

About this task



WARNING

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

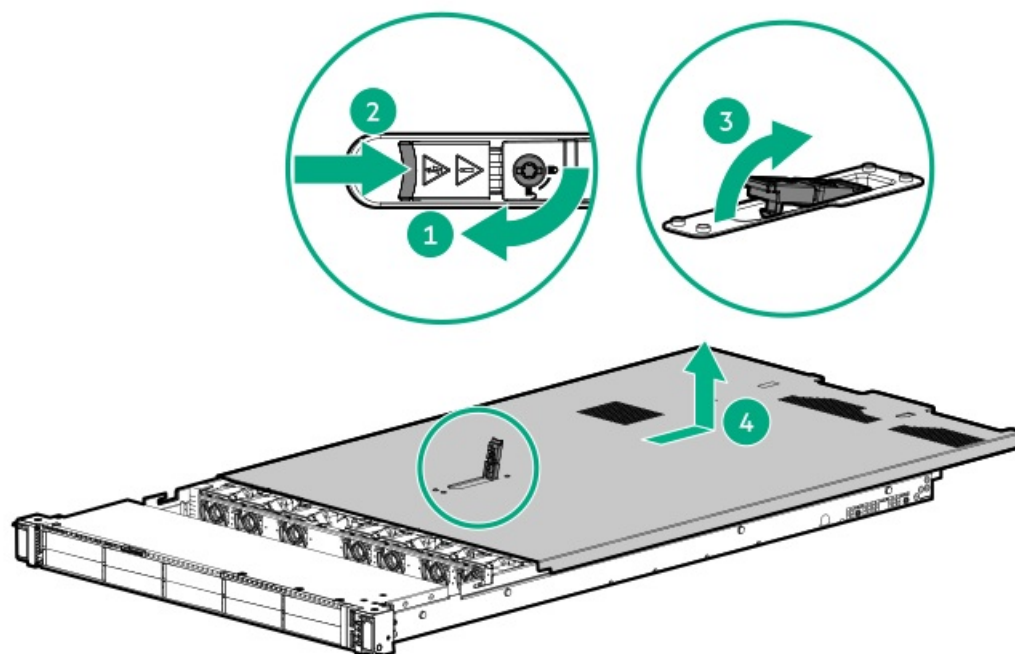


CAUTION

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

Procedure

1. Power down the server.
2. Extend the server from the rack.
3. Open or unlock the locking latch, slide the access panel to the rear of the chassis, and remove the access panel.



Install the access panel

Procedure

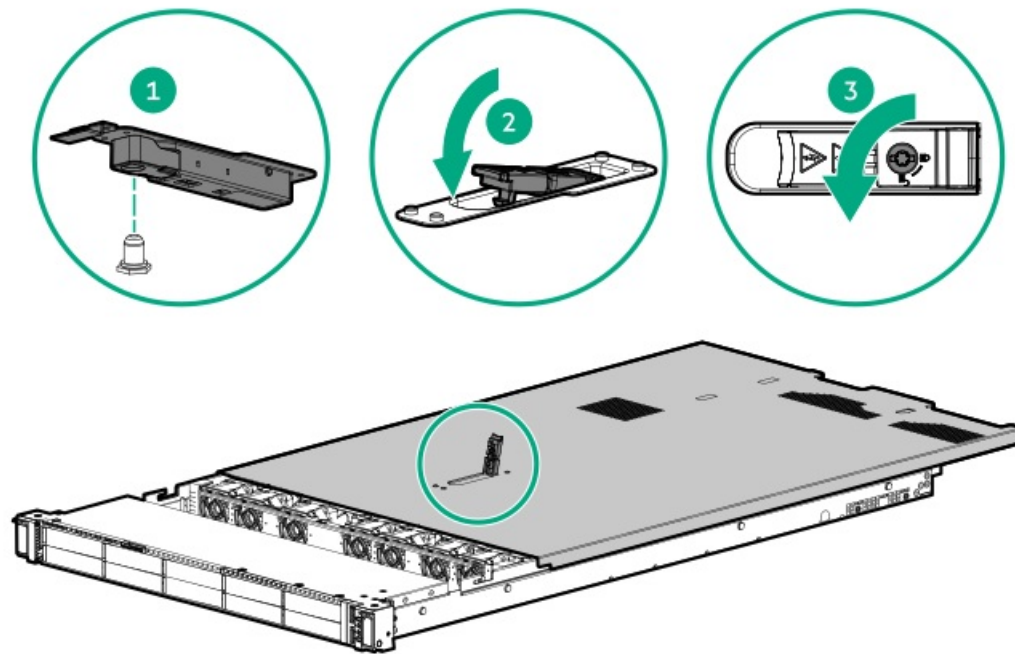
1. Place the access panel on top of the server with the latch open.

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

2. Push down on the latch.

The access panel slides to a closed position.

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



Power up the server

About this task

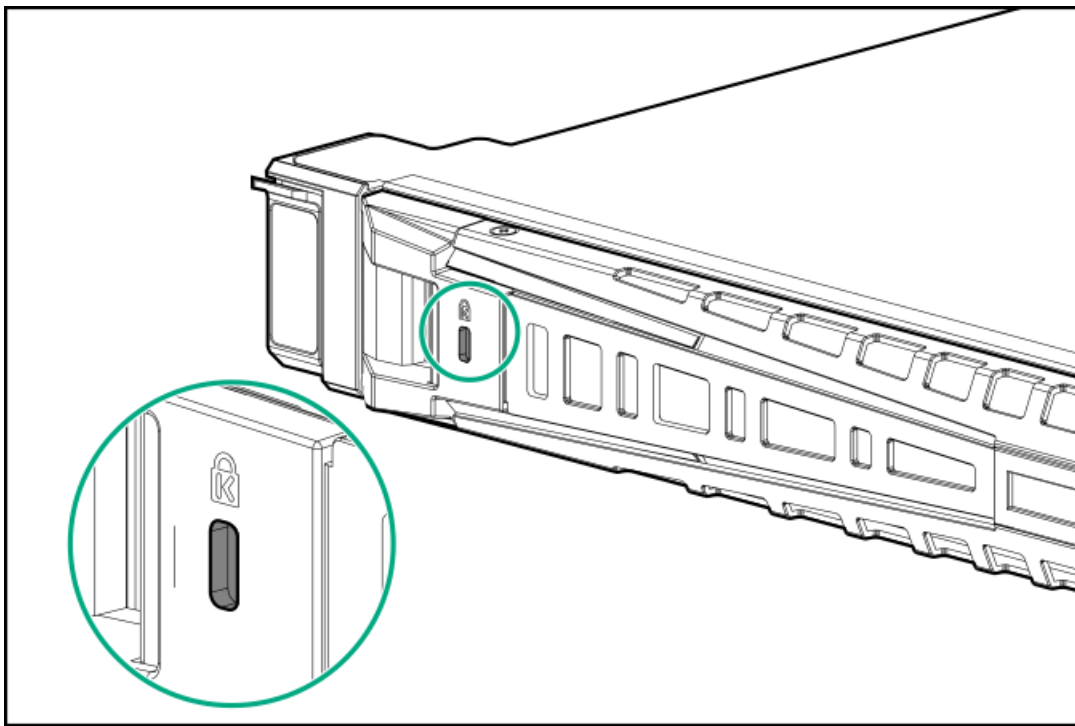
To power up the server, use one of the following methods:

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

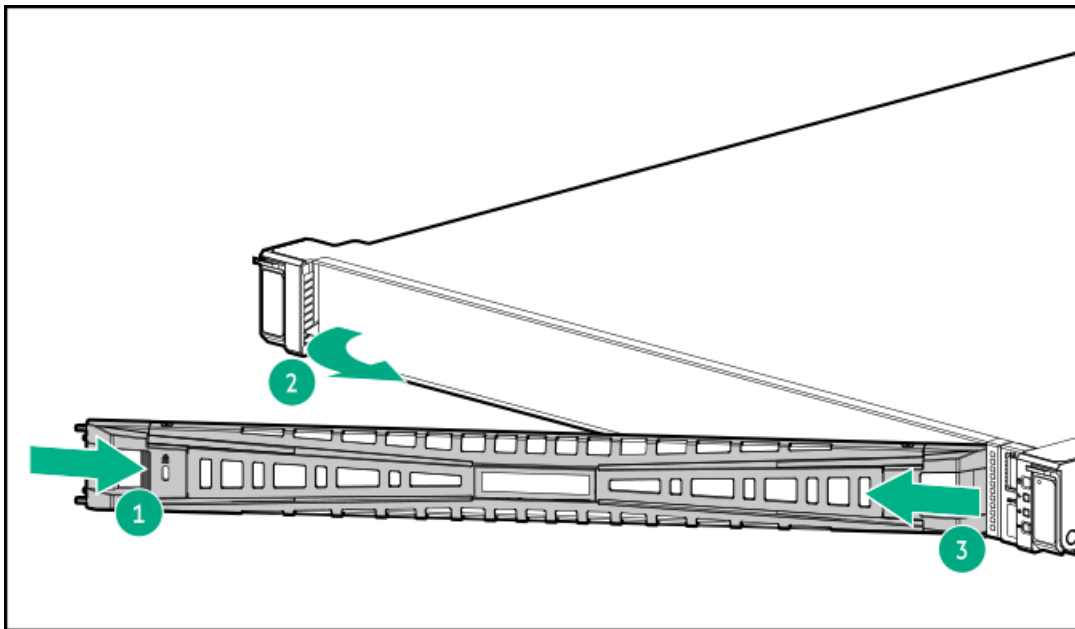
Removing and replacing the front bezel

Procedure

1. If installed, remove the Kensington security lock.



2. Remove the bezel.



Results

To replace the component, reverse the removal procedure.

Removing and replacing the cable management arm

About this task

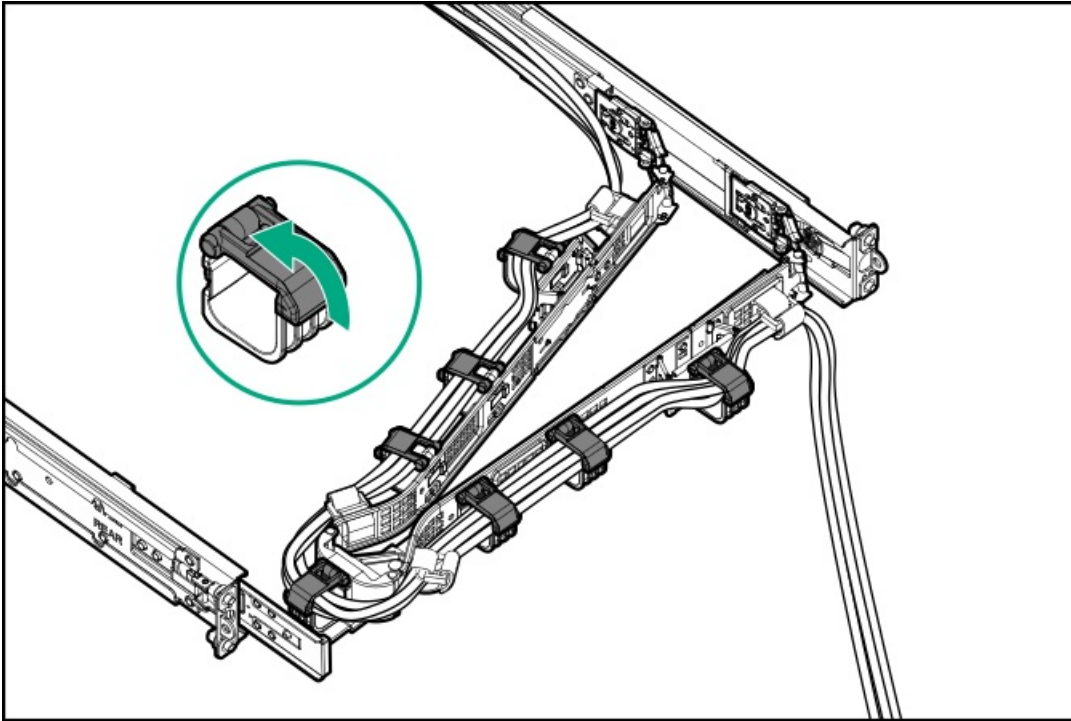


CAUTION

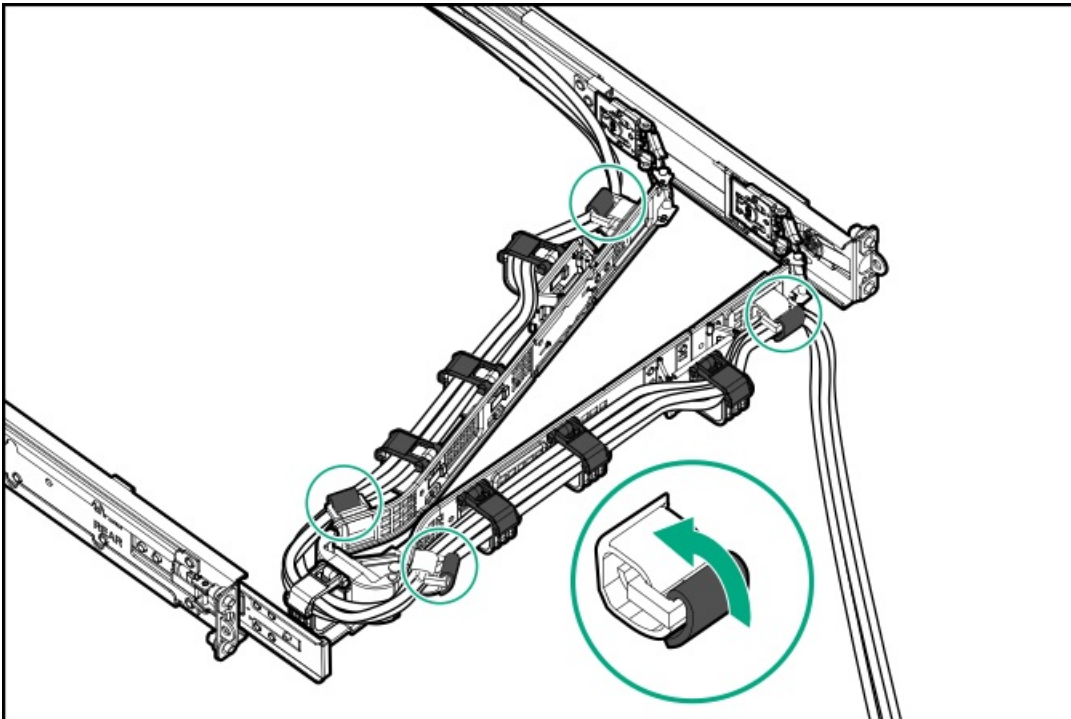
Support the CMA during the removal and replacement procedures. Do not allow the CMA to hang by its own weight during the procedure.

Procedure

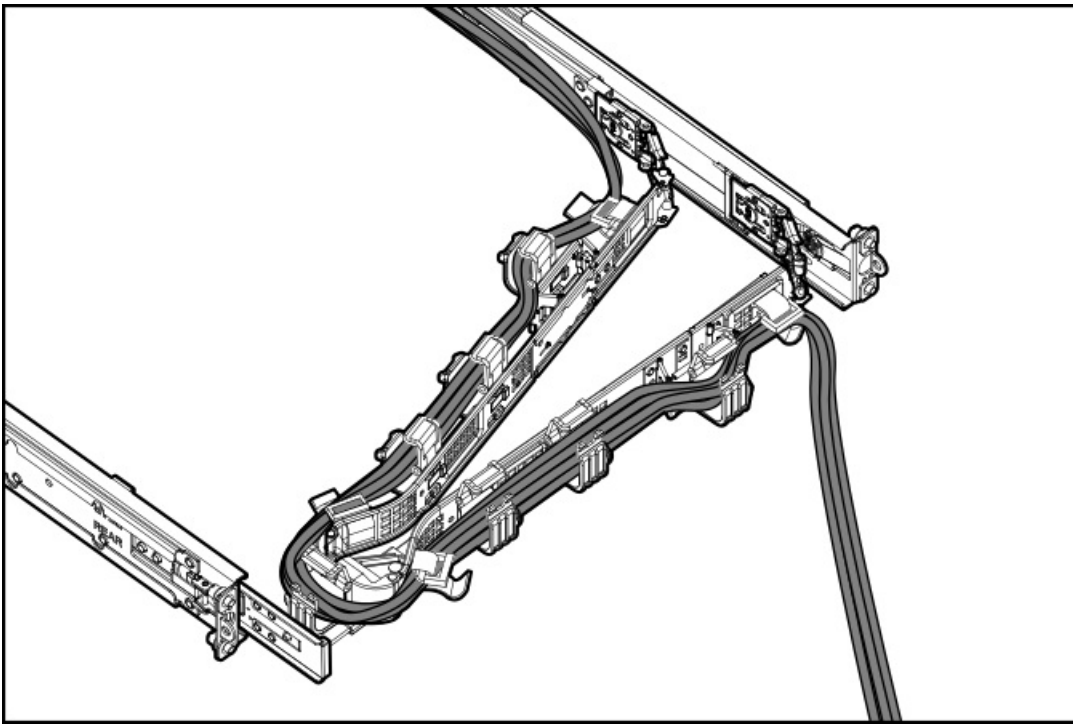
1. Open the cable clamps.



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

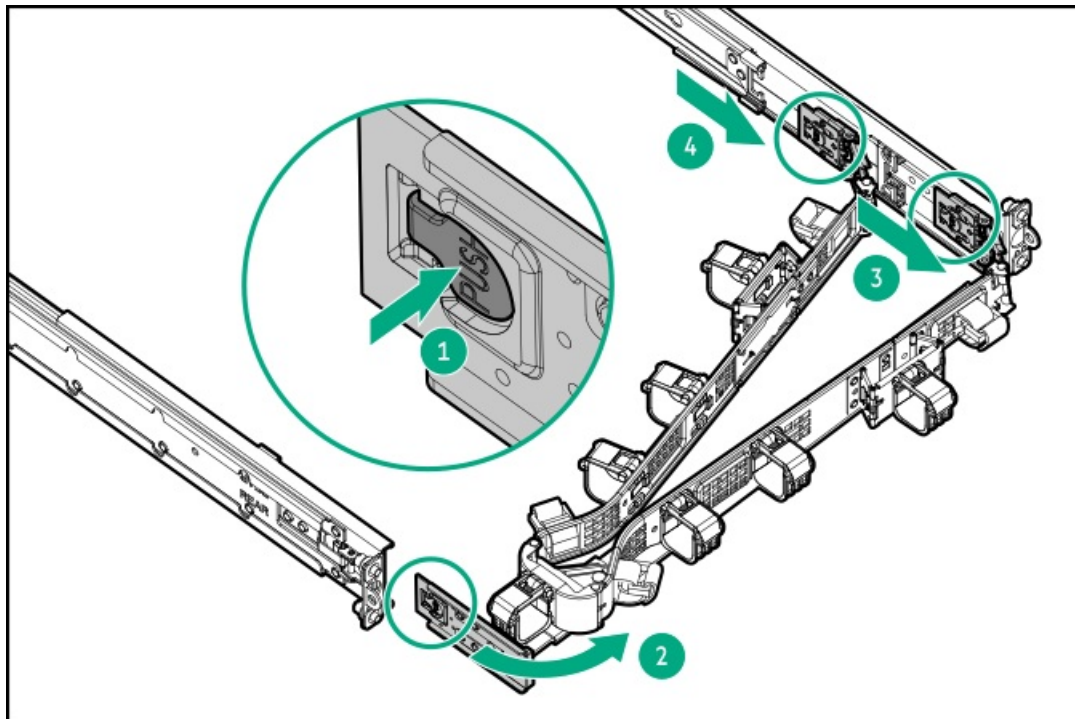


3. Remove the peripheral cables and power cords from the CMA.



4. Remove the cable management arm:

- a. Press and hold the blue **PUSH** button on the retention bracket.
- b. Swing the arm away from the mounting rail.
- c. Press and hold the blue **PUSH** buttons on the outer and inner tabs and detach from the server rails.



Results

To replace the component, reverse the removal procedure.

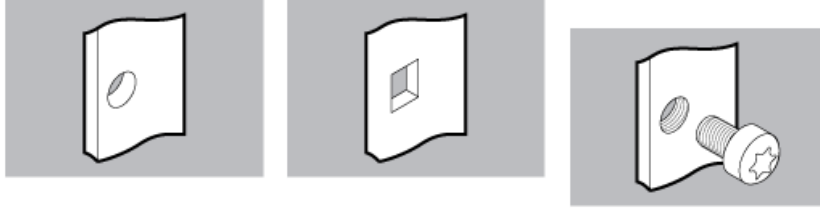
Removing and replacing the server rails

Prerequisites

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

About this task

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



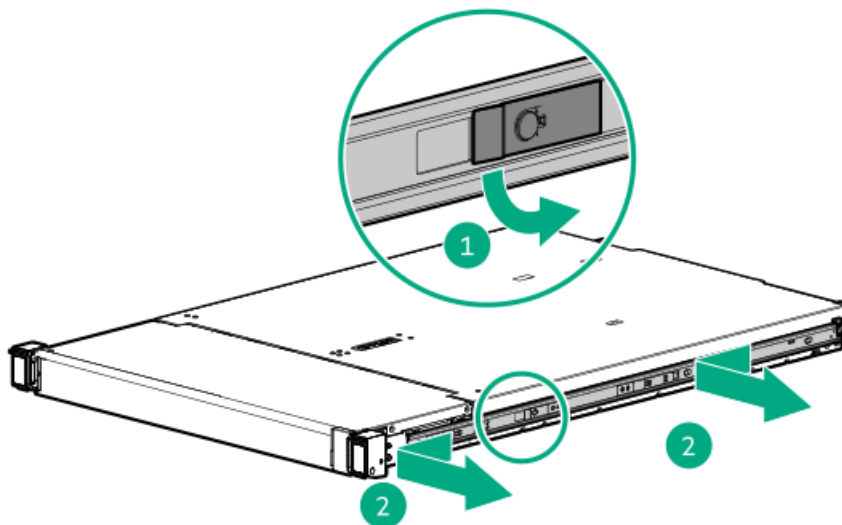
Round-hole server

Square-hole server

Threaded-hole server

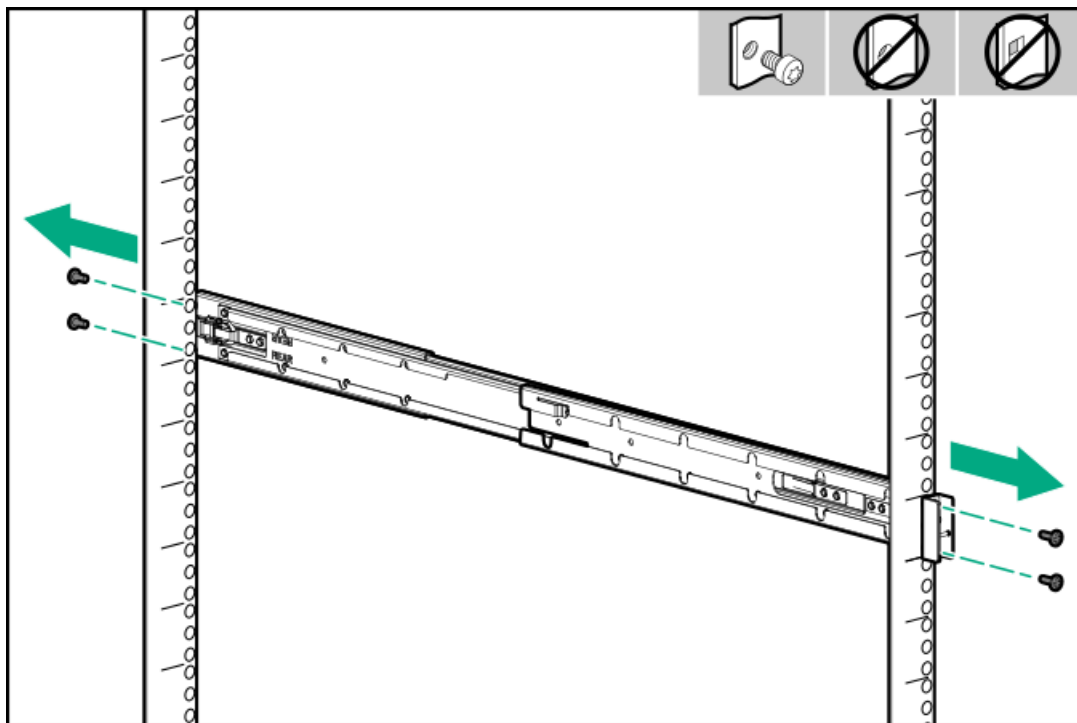
Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect all peripheral cables from the server.
4. Remove the server from the server.
5. Place the server on a flat, level surface.
6. To remove the sliding rails, do the following:
 - a. Pull and hold the release latch (callout 1).
 - b. Slide the rail towards the front panel and pull it from the server (callout 2).

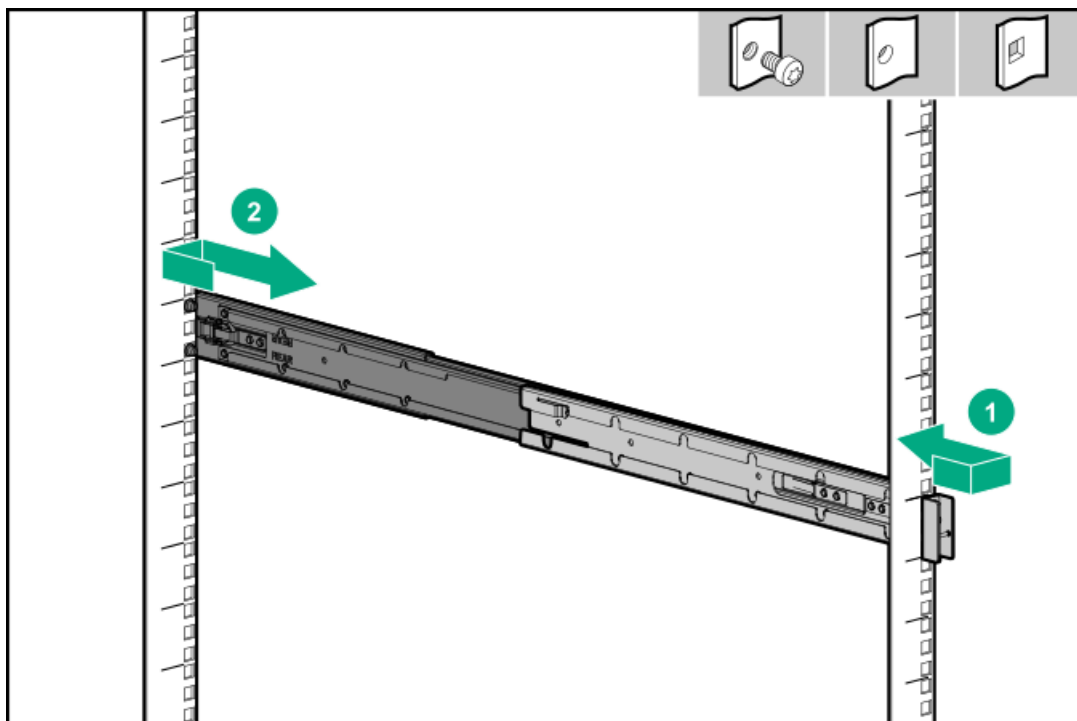


- c. Repeat steps a and b to remove the other rail.
7. To remove the server mounting rails, do the following:

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



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



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

Results

To replace the component, reverse the removal procedure.

Remove the hard drive blank



About this task



CAUTION

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

Figure 1. Removing an SFF drive blank

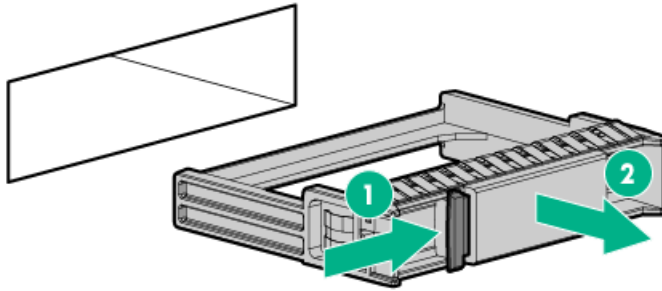
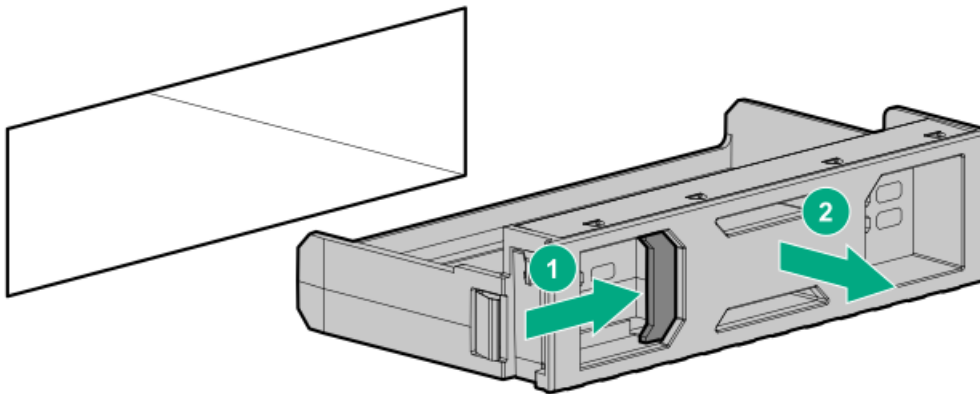


Figure 2. Removing an LFF drive blank



Results

To replace the component, reverse the removal procedure.

Removing a hot-plug SAS/SATA/NVMe drive



CAUTION

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

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

Figure 1. SFF drive

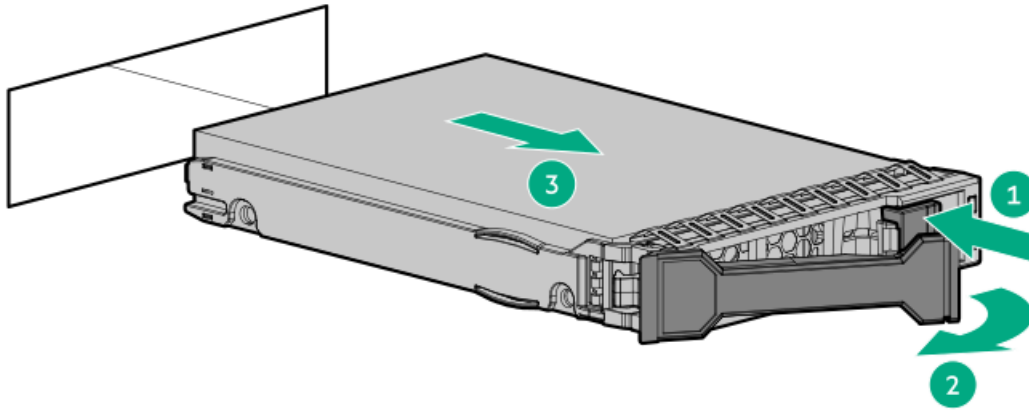
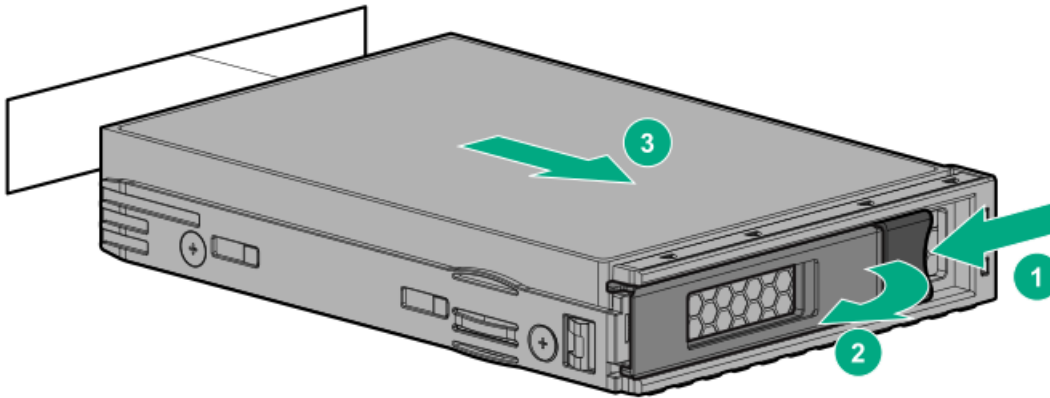


Figure 2. LFF drive



Removing and replacing a hot-plug E3.S drive

About this task



CAUTION

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

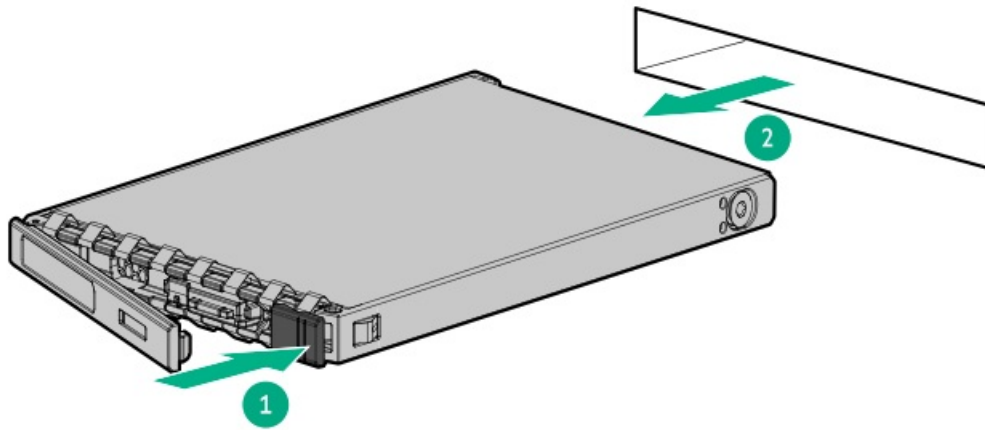


CAUTION

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

Procedure

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



Results

To replace the component, reverse the removal procedure.

Removing and replacing a power supply blank

About this task



WARNING

To reduce the risk of personal injury from hot surfaces, allow the power supply, power supply blank, or dual slot power supply adapter to cool before touching it.

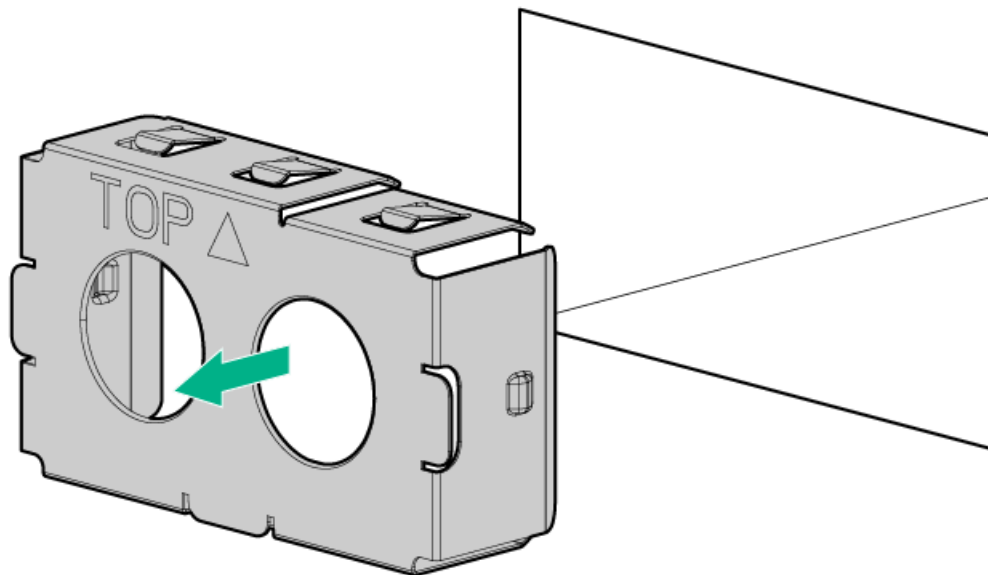


CAUTION

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

Procedure

1. Remove the power supply blank.



2. Immediately install the replacement power supply blank spare.

Removing and replacing a hot-plug AC power supply

Prerequisites

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

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

About this task

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vpsg00005191en_us&noframe



WARNING

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

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



WARNING

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

**WARNING**

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

**CAUTION**

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

**CAUTION**

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

**CAUTION**

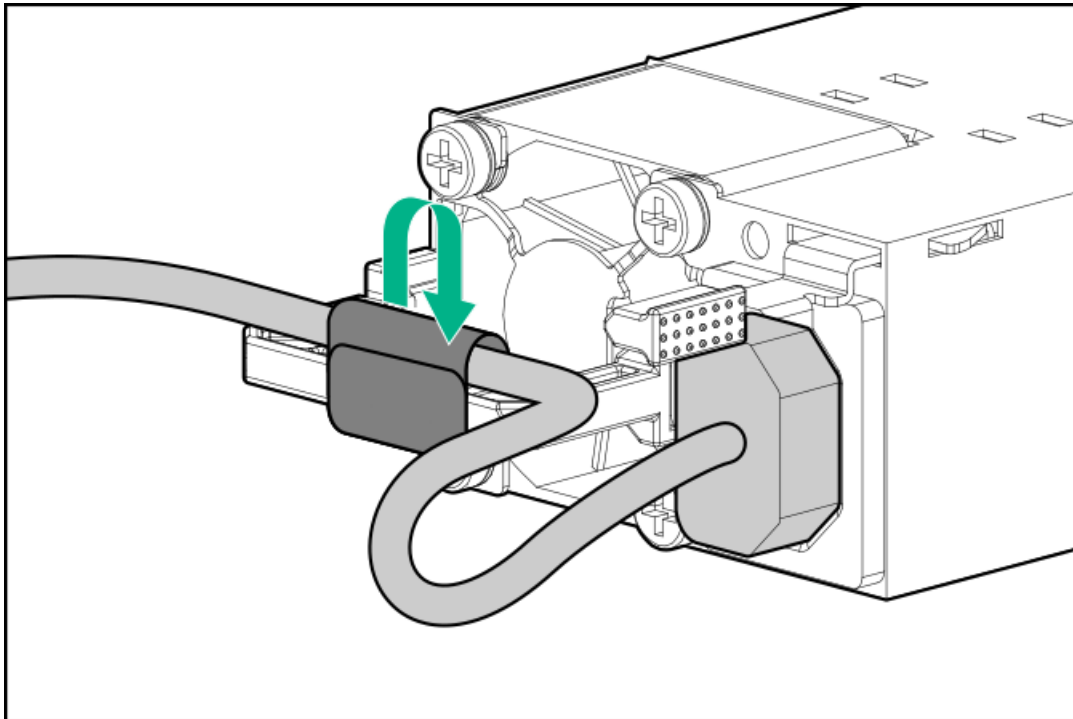
Mixing different types of power supplies in the same server might:

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

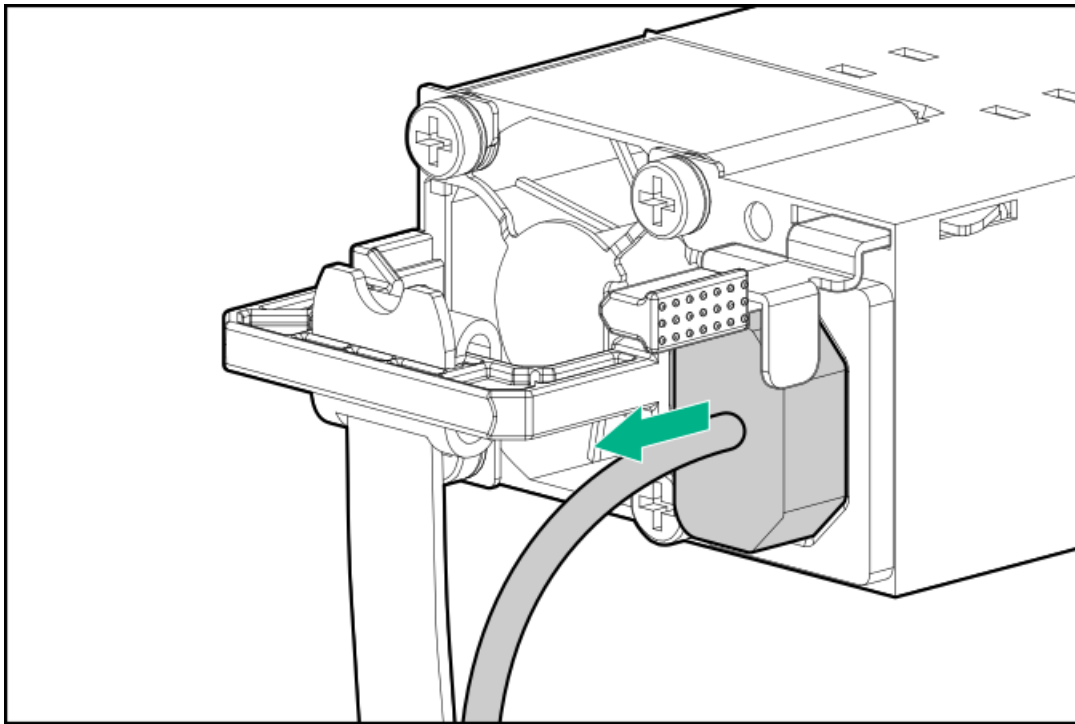
To ensure access to all available features, all power supplies in the same server should have the same output and efficiency ratings. Verify that all power supplies have the same part number and label color.

Procedure

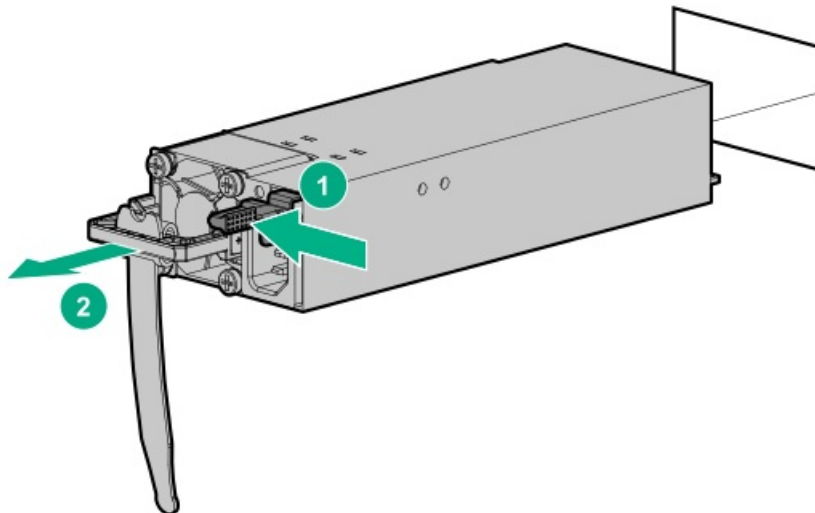
1. Release the cable management arm.
2. If the server is using a single power supply only, remove all power from the server:
 - a. Back up all server data.
 - b. Power down the server.
 - c. Disconnect all peripheral cables from the server.
3. Release the power cords from the strain relief straps.



4. Disconnect the power cord from the power supply.



5. Remove the power supply.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a fan blank

About this task



CAUTION

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

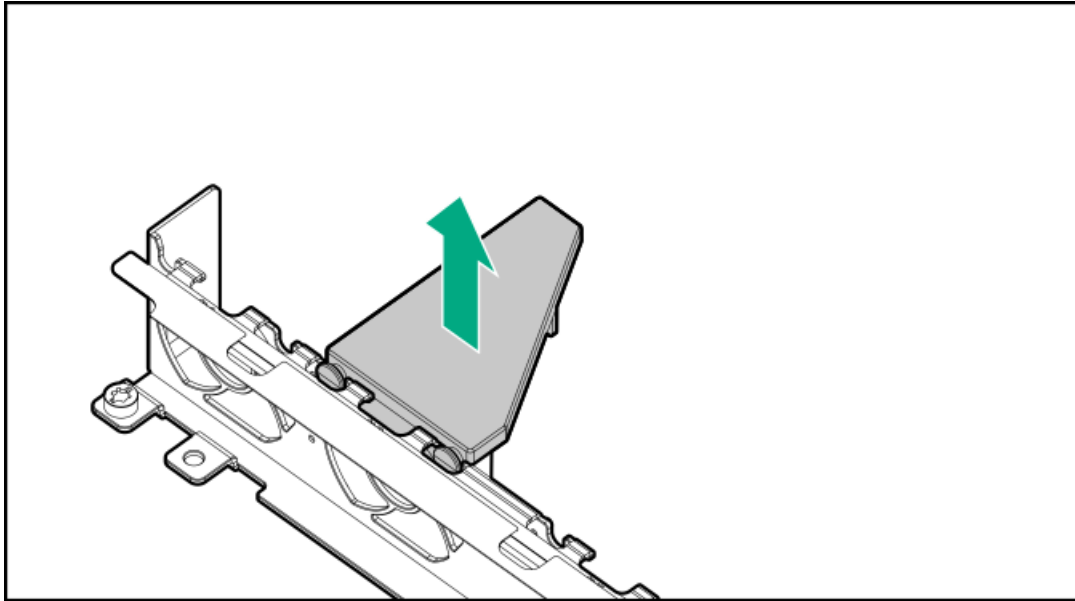


IMPORTANT

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

Procedure

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



Results

To replace the component, reverse the removal procedure.

Removing and replacing a fan

About this task



CAUTION

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



IMPORTANT

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

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vpseg00005198en_us&noframe

Procedure

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

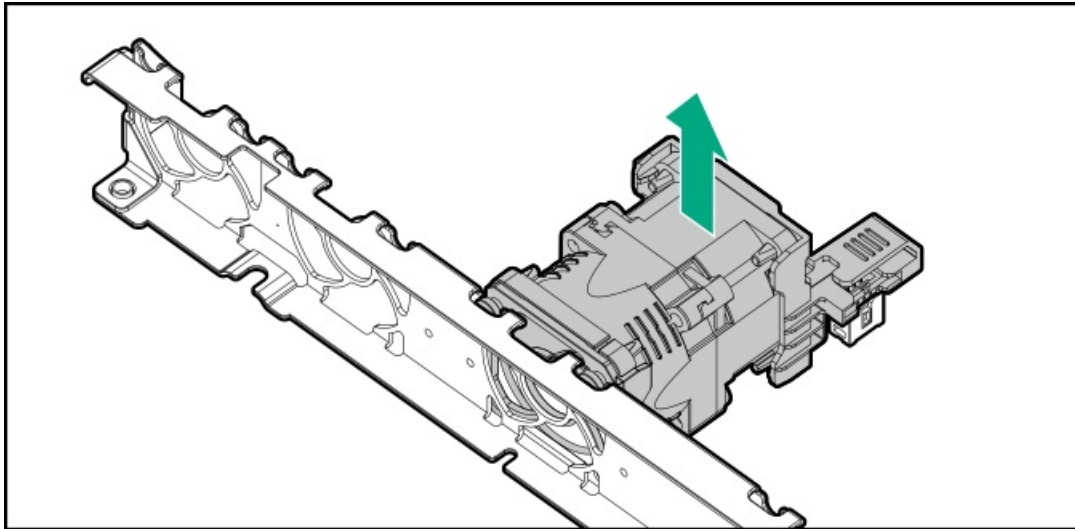
3. Remove the fan.

**IMPORTANT**

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

**CAUTION**

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

**Results**

To replace the component, reverse the removal procedure.

Removing and replacing a riser cage

About this task

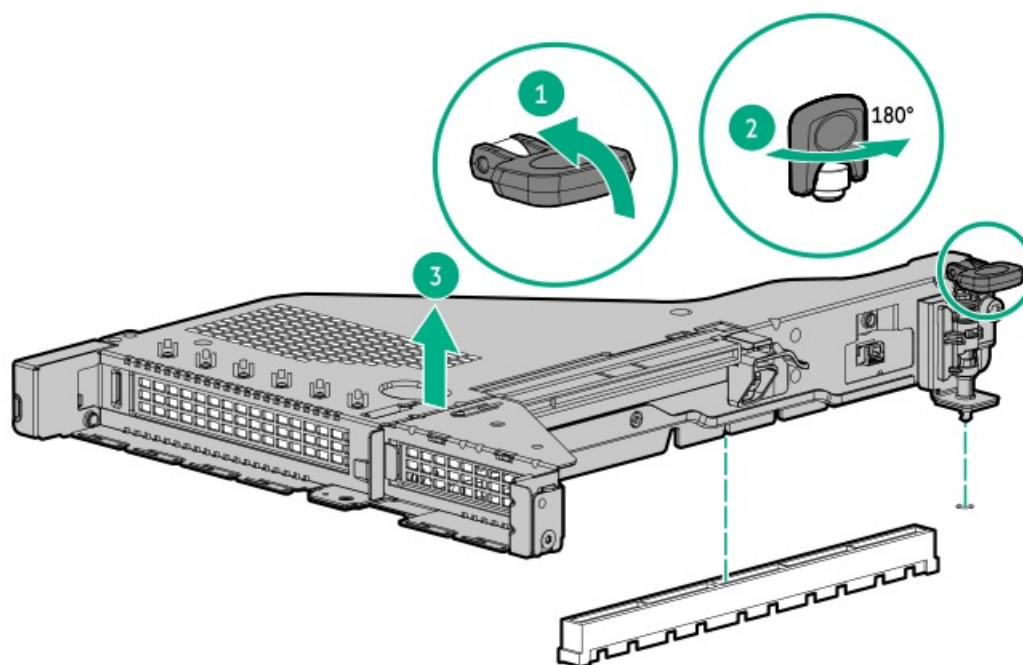
https://support.hpe.com/hpesc/public/videoDisplay?videoid=vp00005201en_us&noframe

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vp00005203en_us&noframe

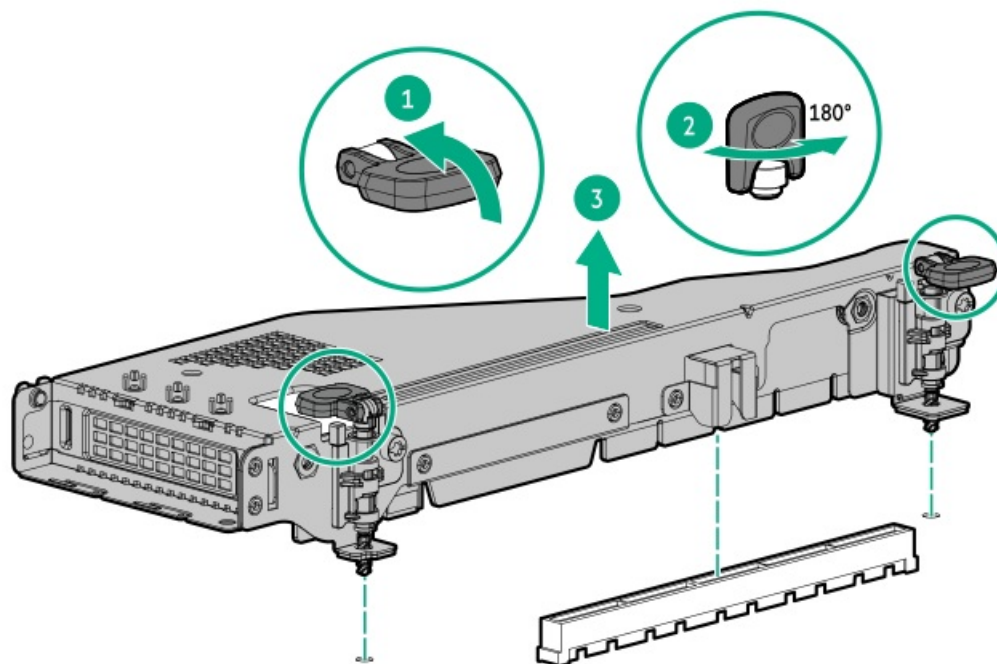
Procedure

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

To remove the primary riser cage:

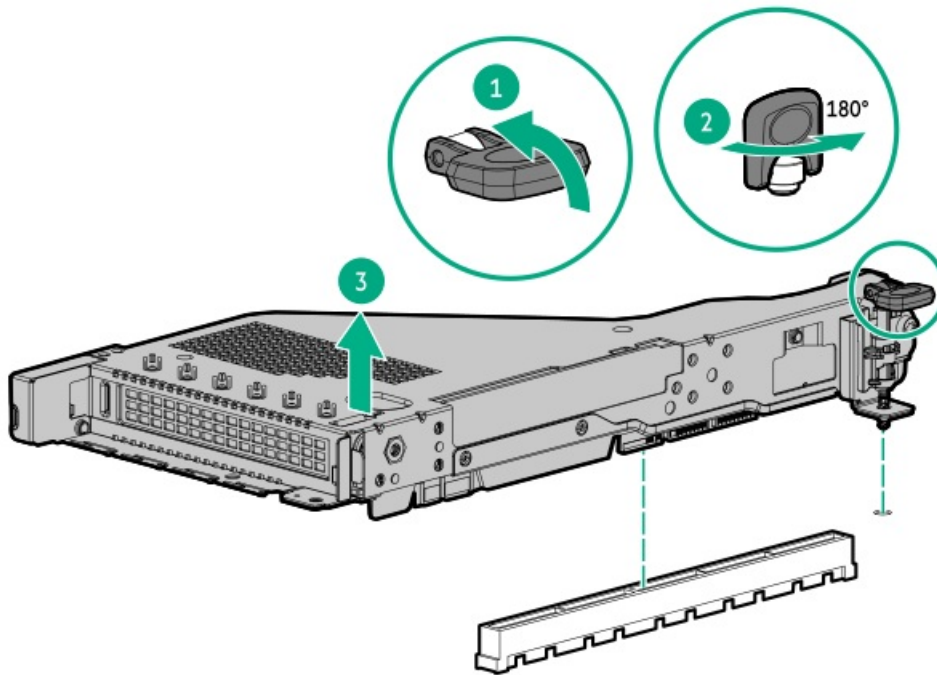


To remove the secondary riser cage:



To remove a full-height riser cage:





Results

To replace the component, reverse the removal procedure.

Removing and replacing the OCP 3.0 adapter

About this task

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vpqg00005199en_us&noframe



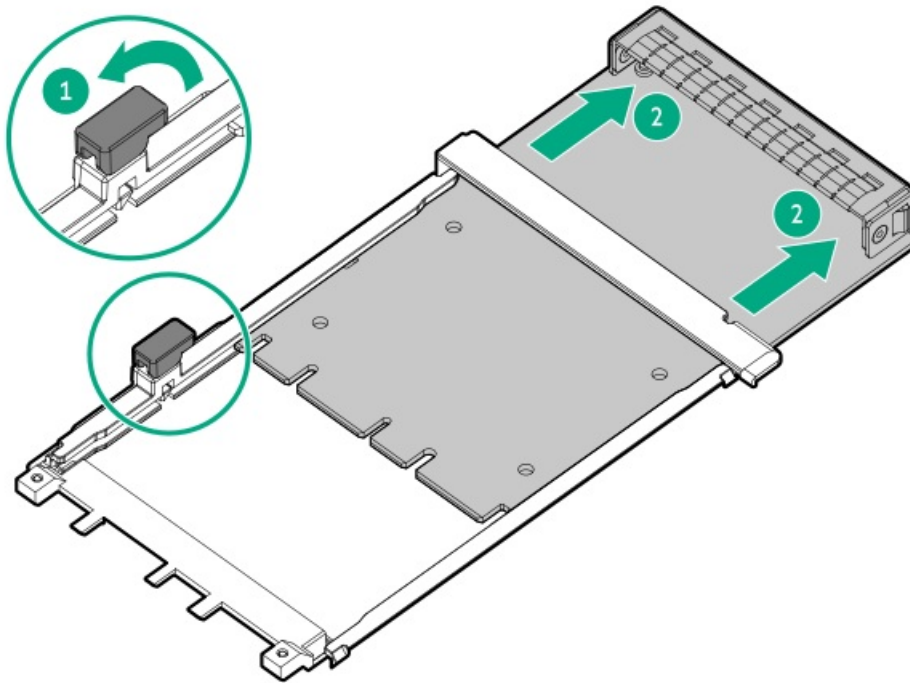
WARNING

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

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
5. Remove the access panel.

6. If installed, remove the riser cage.
7. Remove the OCP 3.0 adapter.



To replace the component, reverse the removal procedure.

Removing and replacing an expansion card

About this task



WARNING

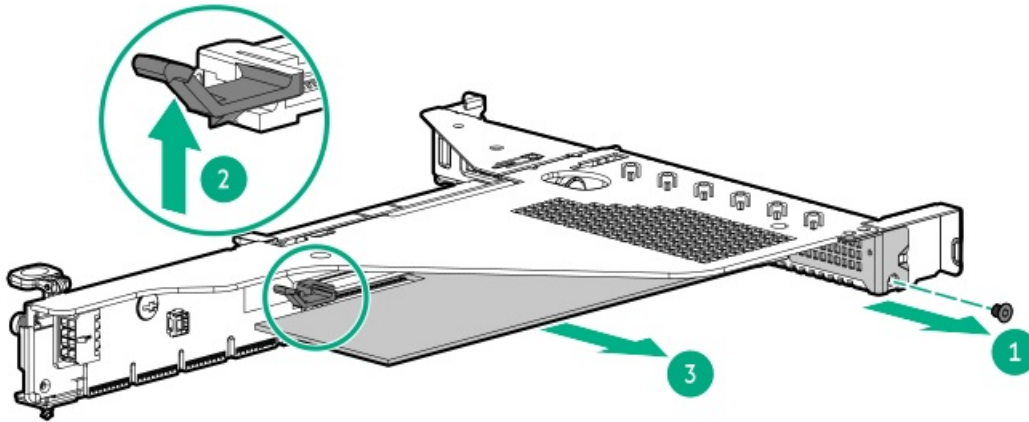
To reduce the risk of personal injury, electric shock, or damage to the equipment, remove power from the server by removing the power cord. The front panel Power On/Standby button does not shut off system power. Portions of the power supply and some internal circuitry remain active until AC power is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

Procedure

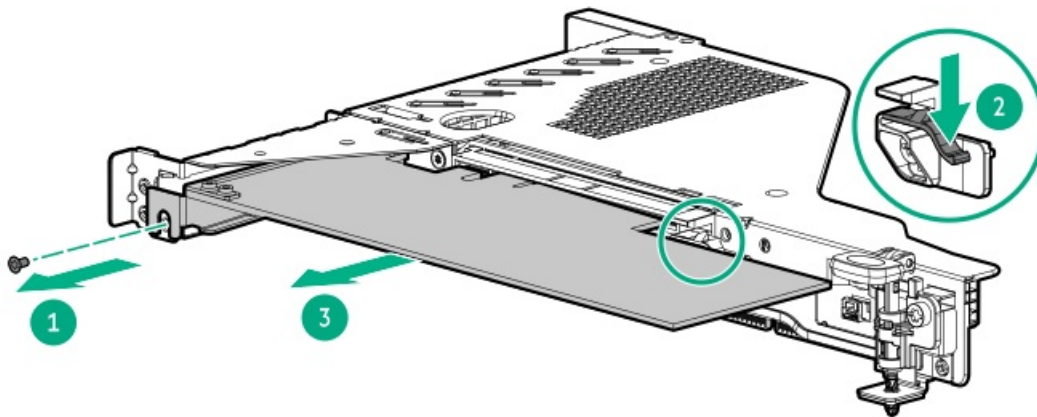
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser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

6. Remove the expansion card from the riser cage.

- Primary slot 1



- Primary slot 2



Results

To replace the component, reverse the removal procedure.

Removing and replacing a GPU

Procedure

1. Observe the following warning:



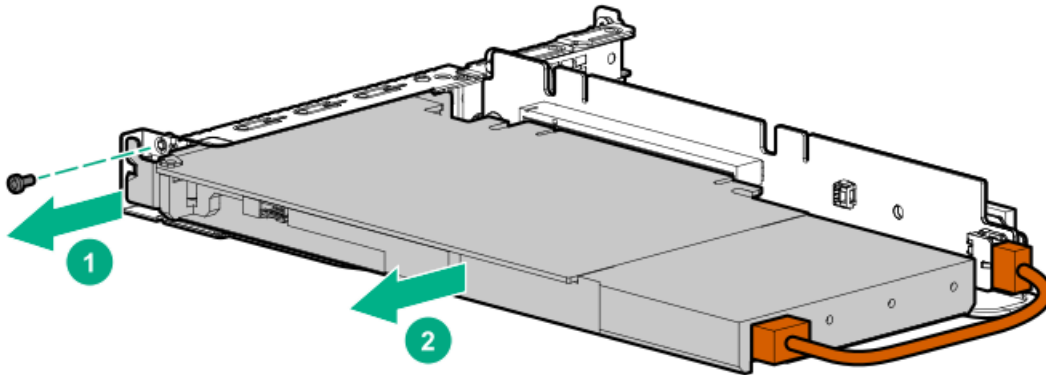
WARNING

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

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

4. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
5. Remove the access panel.
6. Remove the riser cage.
7. If needed, disconnect the GPU power cable and then remove the GPU from the riser.

The primary riser cage is shown as an example.



Results

To replace the component, reverse the removal procedure.

Removing and replacing the NS204i-u OS boot device

Prerequisites

Be sure you have a T-10 Torx screwdriver

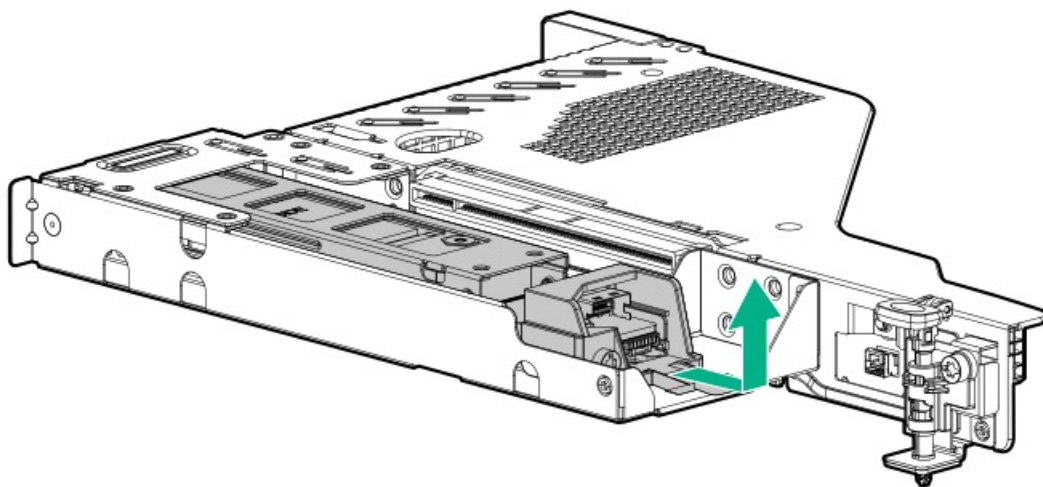
About this task

https://sketchfab.com/models/984a1645c21e40308830026b462525d5/embed?ui_infos=0&ui_watermark=0&ui_help=0&ui_vr=0&ui_settings=0&ui_inspector=0&ui_hint=2&ui_color=01a982&ui_theme=dark&autostart=1&camera=0

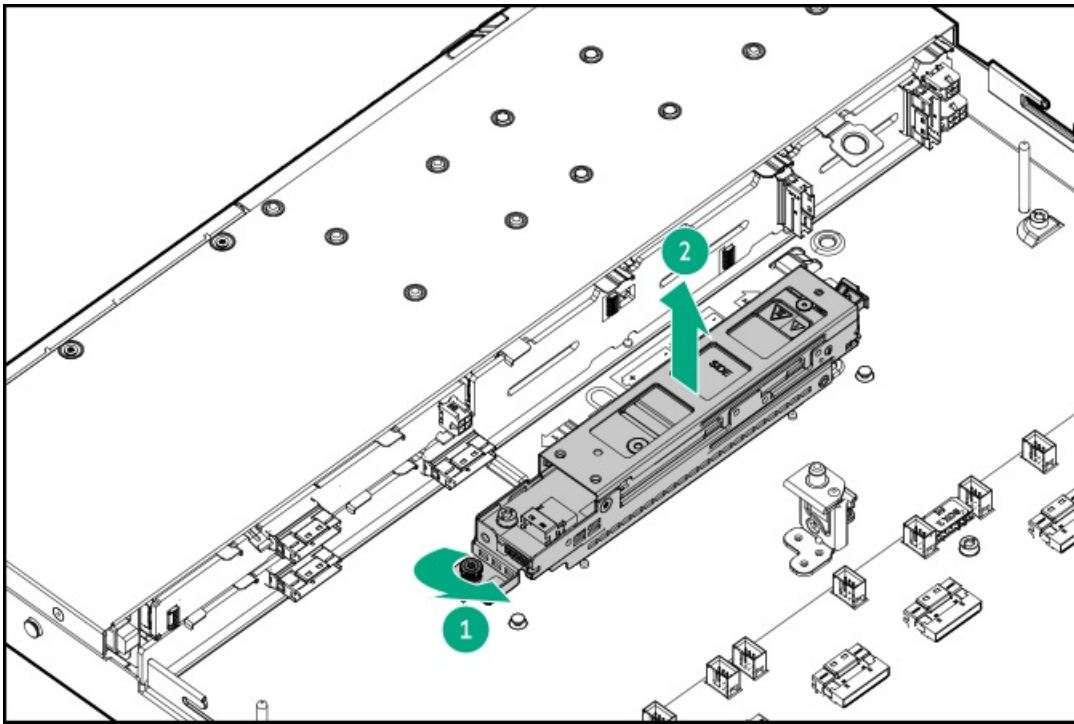
Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:

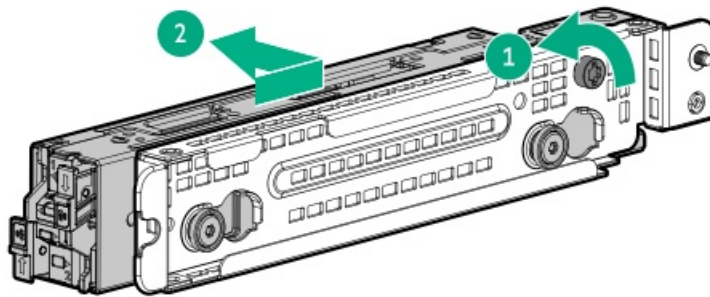
- Extend the server from the rack.
 - Remove the server from the rack.
4. Remove the access panel.
 5. Disconnect any cables to the boot device.
 6. Remove the boot device.
 - To remove the hotplug boot device:
 - a. Remove the drives.
Note where each drive was installed.
 - b. Remove the riser cage.
 - c. Remove the boot device.



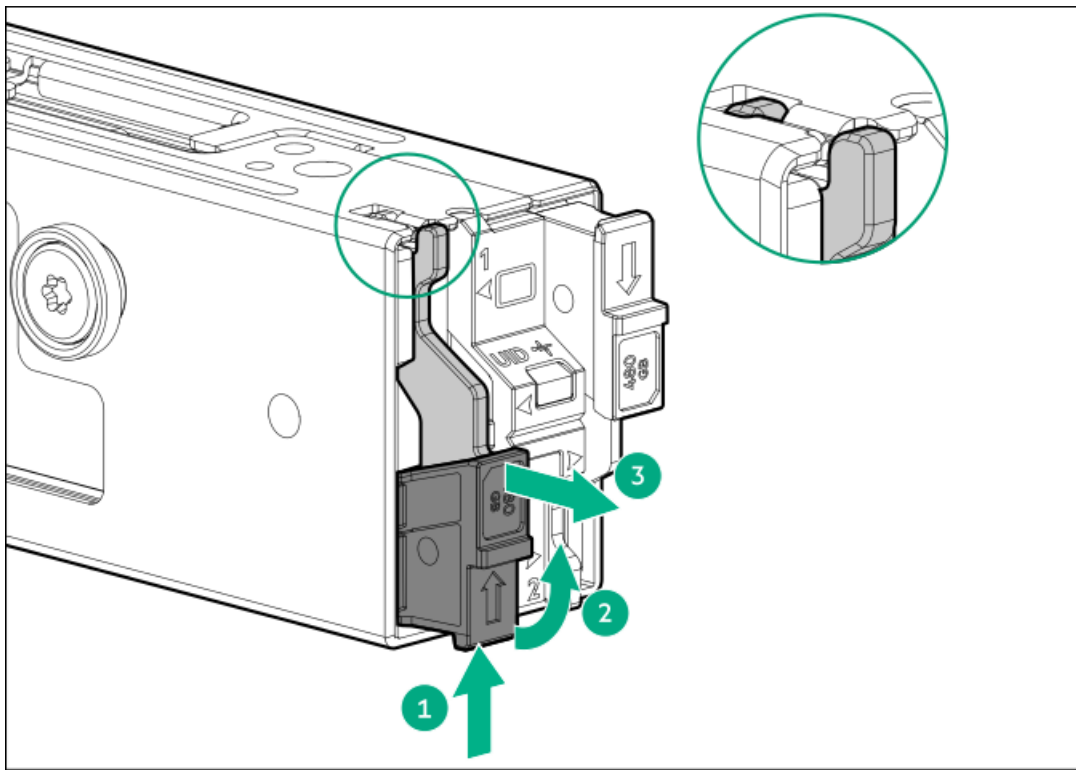
- To remove the internal boot device:
 - a. Remove the boot device.



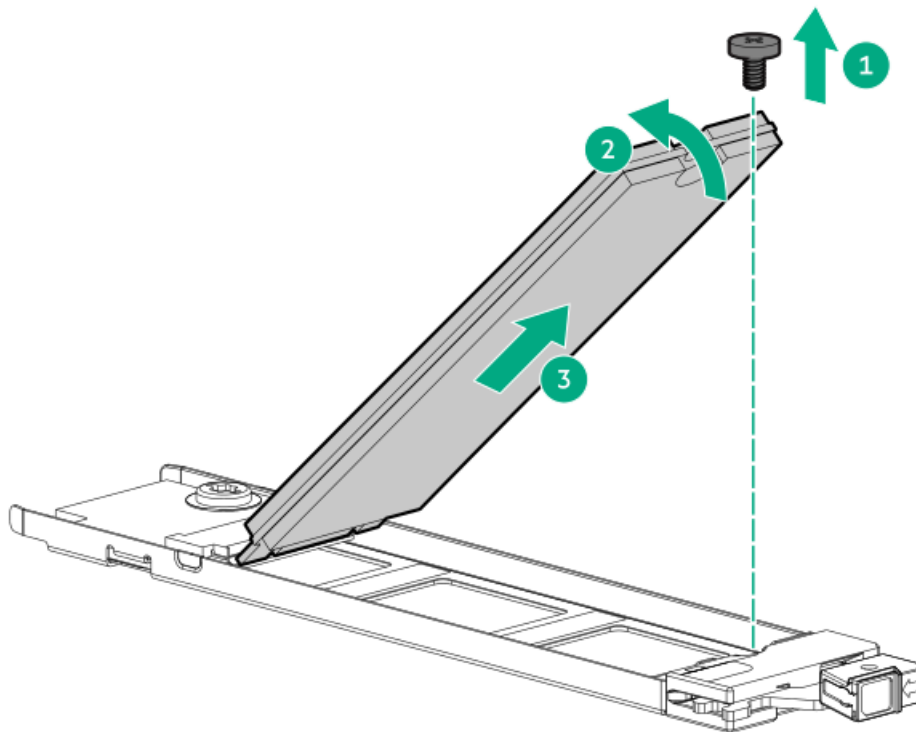
b. Remove the support bracket.



c. Remove the drives.
Note where each drive was installed.



d. Remove the SSD.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a primary riser board

About this task

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vpseg00005202en_us&noframe

Secondary risers are spared with the riser cage.

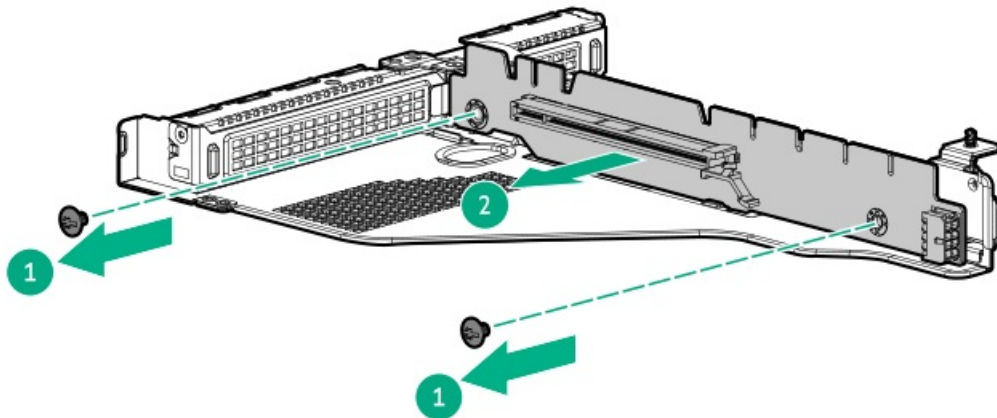


CAUTION

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

Procedure

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



Results

To replace the component, reverse the removal procedure.

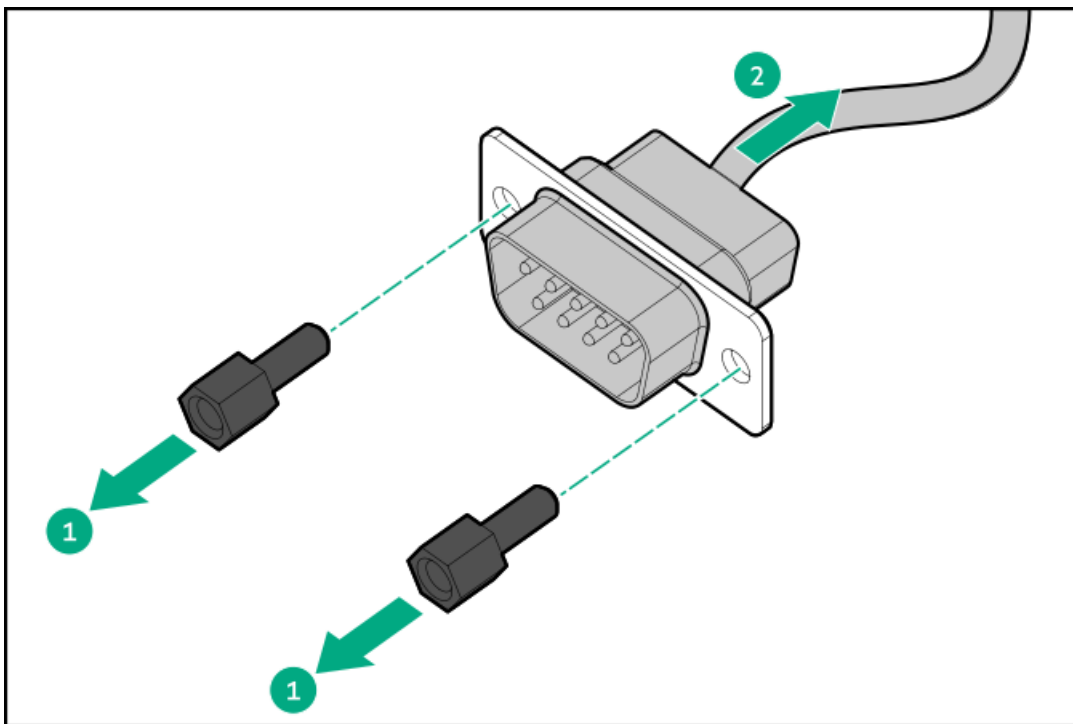
Removing and replacing the serial port

Prerequisites

Be sure you have a 5mm nut driver.

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
5. Remove the access panel.
6. Remove all riser cages.
7. Disconnect the cable from the system board.
8. Using a 5mm nut driver, remove the serial port.



Results

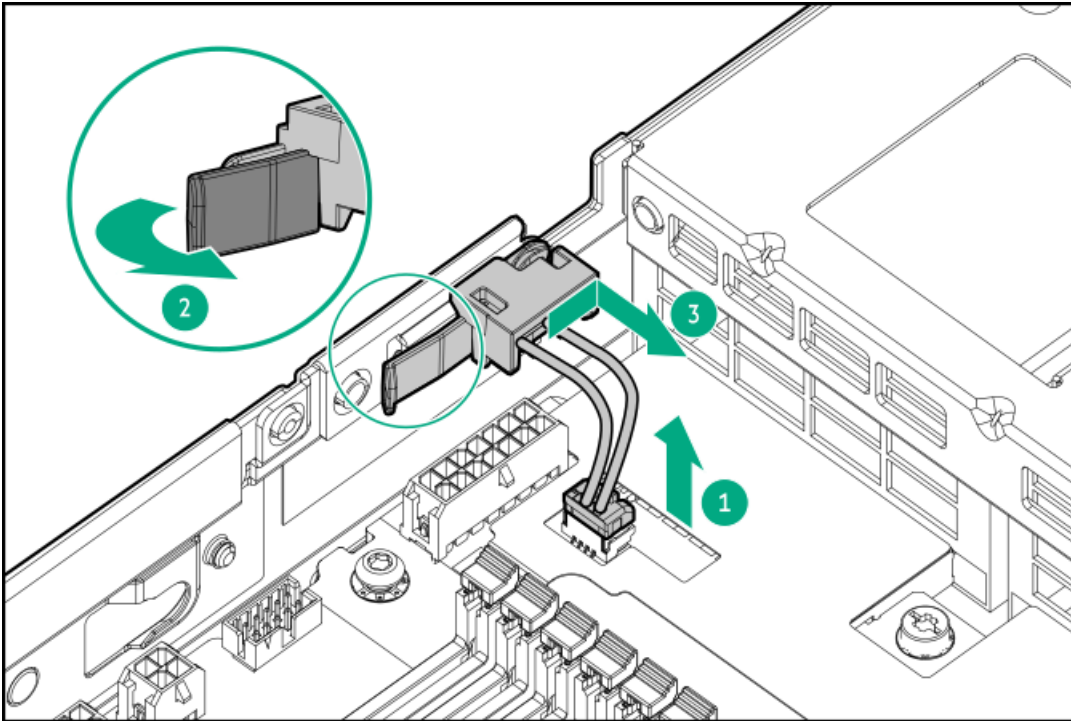
To replace the component, reverse the removal procedure.

Removing and replacing the chassis intrusion detection switch

About this task

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Remove the server from the rack.
4. Remove the access panel.
5. Remove the chassis intrusion detection switch.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a type-o storage controller

About this task



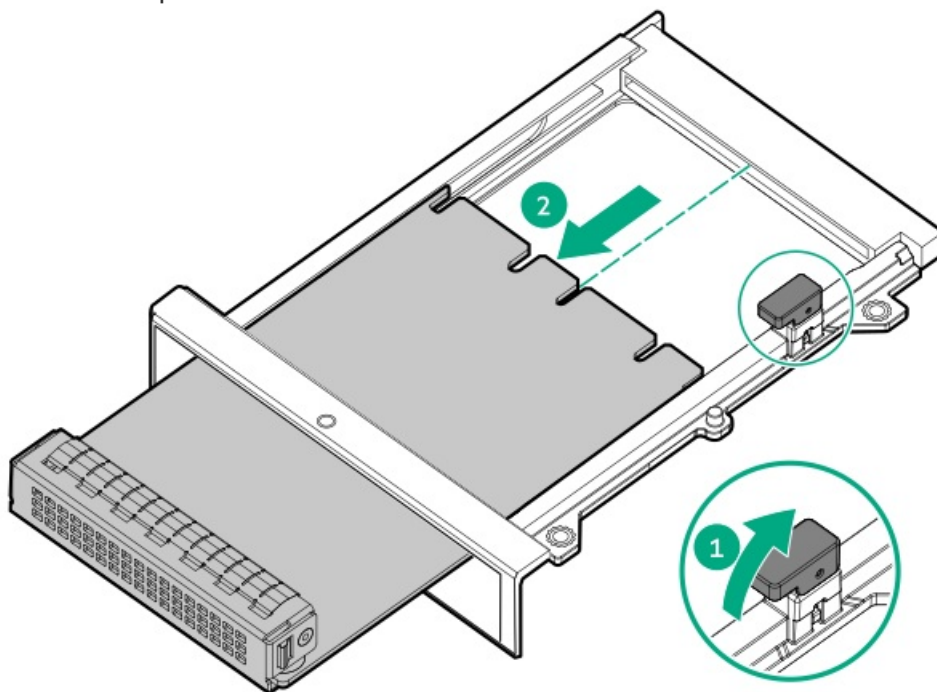
WARNING

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

Procedure

1. Power down the server.

2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
5. Remove the access panel.
6. If installed, remove the riser cage.
7. Remove the OCP 3.0 adapter.



To replace the component, reverse the removal procedure.

Removing and replacing a type-p storage controller

About this task



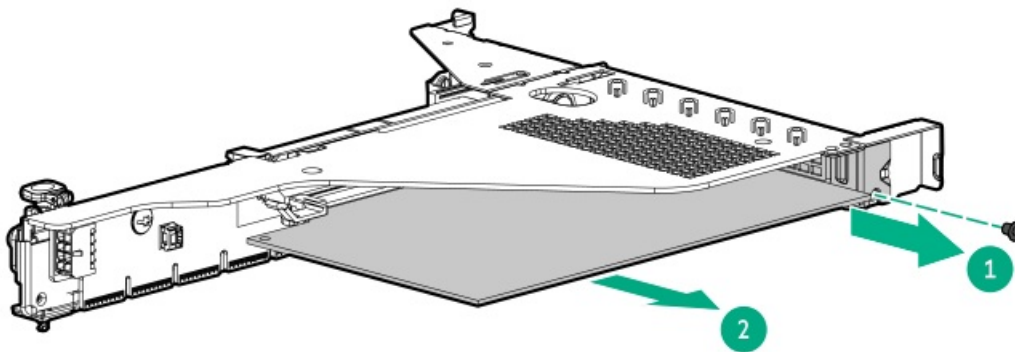
WARNING

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

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.

- b. Disconnect each power cord from the server.
3. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
4. Remove the access panel.
5. Remove the riser cage: Remove the riser cage.
 - Remove the primary riser cage.
 - Remove the secondary riser cage.
6. Disconnect any cables from the storage controller.
Note the connection for each cable.
7. Remove the storage controller from the riser cage.



Results

To replace the component, reverse the removal procedure.

Removing and replacing a DIMM

Prerequisites

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

About this task



CAUTION

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

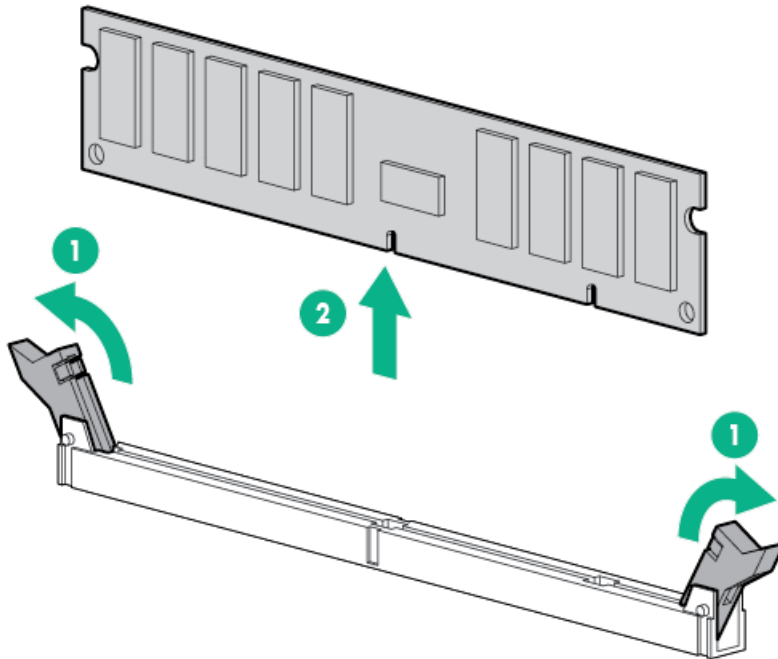
https://support.hpe.com/hpesc/public/videoDisplay?videoid=vp5g00005194en_us&noiframe

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

Procedure

1. Power down the server.

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



Results

To replace the component, reverse the removal procedure.

Subtopics

[DIMM-processor compatibility](#)

DIMM-processor compatibility

Fourth-generation Intel Xeon Scalable processors support DDR5-4800 DIMMs.

Do not mix DIMMs. Install only the supported DDR5-4800 DIMMs in the server.

Removing and replacing the system battery

About this task

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



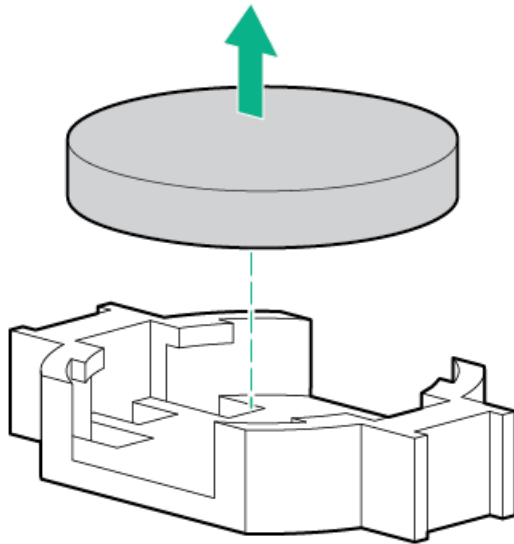
WARNING

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

- Do not attempt to recharge the battery.
- Do not expose the battery to temperatures higher than 60°C (140°F).
- Do not expose the battery to extremely low air pressure as it might lead to explosion or leakage of flammable liquid or gas.
- Do not disassemble, crush, puncture, short external contacts, or dispose of in fire or water.
- Replace only with the spare designated for this product.

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
5. Remove the access panel.
6. Locate the battery (System board components).
7. Remove the battery.



8. To replace the component, reverse the removal procedure.

9. Properly dispose of the old battery.

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

Removing and replacing an energy pack

About this task

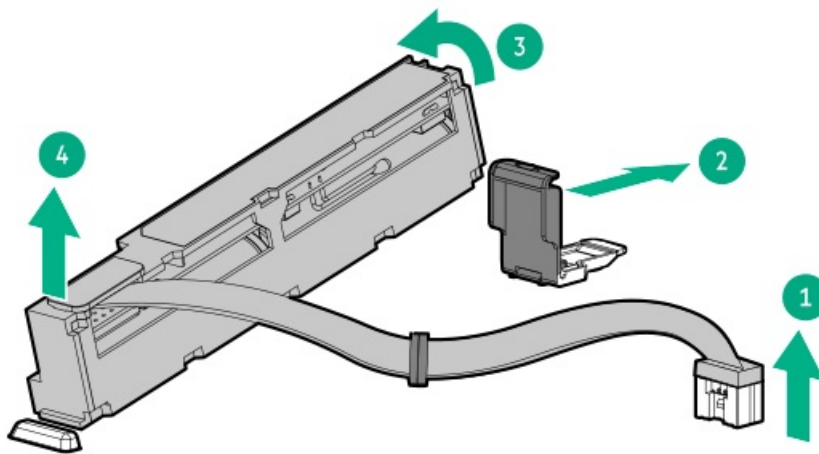


NOTE

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

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove the access panel.
5. Disconnect the cable and then remove the battery or capacitor pack.



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

Results

To replace the component, reverse the removal procedure.

Removing and replacing a processor or heatsink

Prerequisites

- Identify the heatsink and processor socket components.
- Review the processor cautions.
- Before you perform this procedure, make sure that you have the following items available:
 - T-30 Torx screwdriver
 - Alcohol wipe

About this task



WARNING

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



CAUTION

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

Procedure

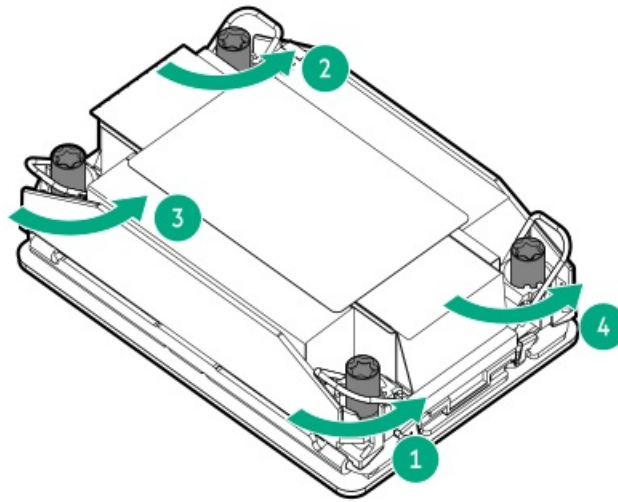
1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect all peripheral cables from the server.

4. If the server is installed in an enclosure or a rack, remove the server and place it on a flat, level work surface.
5. Remove the access panel.
6. Remove the air baffle and all components that block access to the heatsink and processor.
7. Allow all internal system components to cool before continuing.

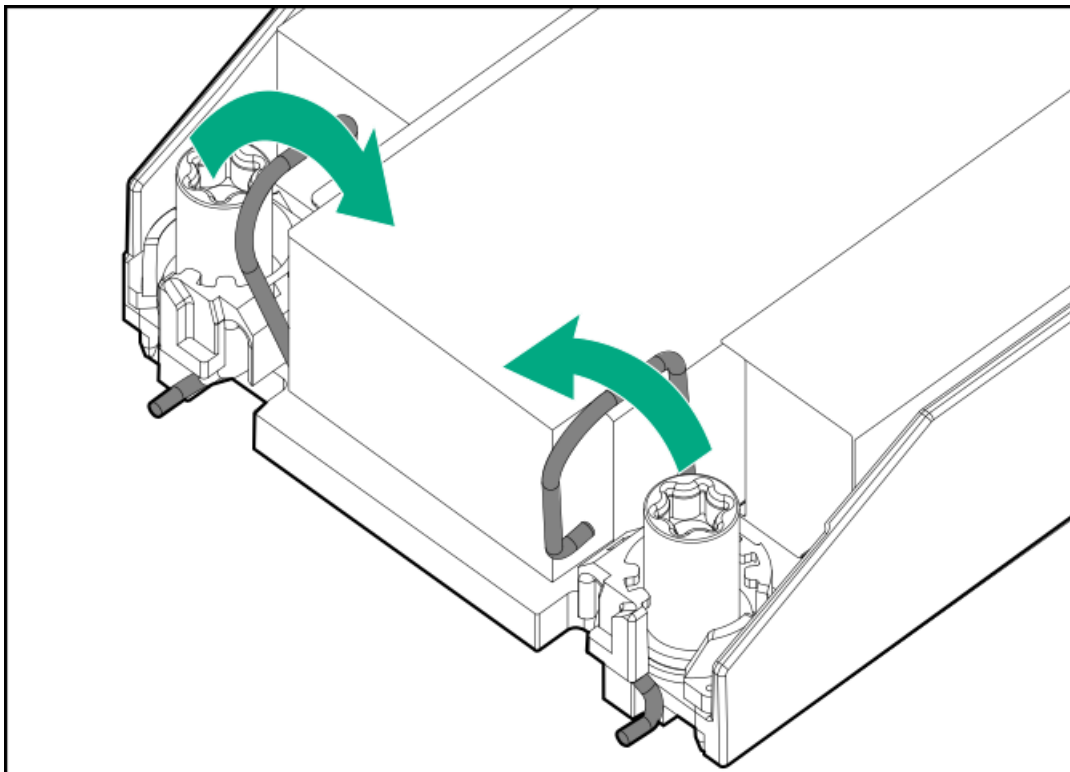
8. **CAUTION**

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.

Use a T-30 Torx screwdriver to loosen one pair of diagonally opposite heatsink screws (callouts 1 and 2), and then loosen the other pair of heatsink screws (callouts 3 and 4).



9. Set the anti-tilt wires to the unlocked position.



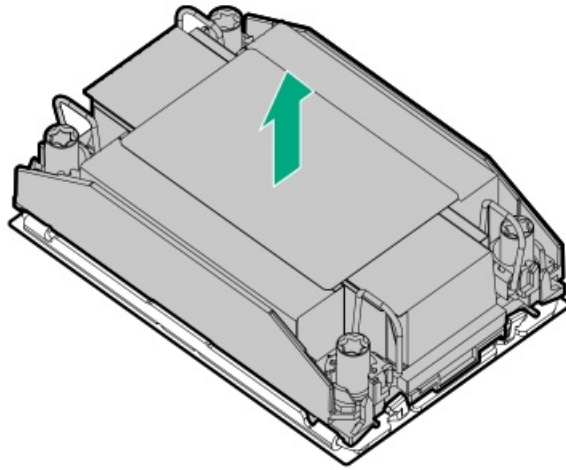
10.



CAUTION

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

Lift the processor-heatsink module straight up from the system board.



11. Place the processor-heatsink module on a flat work surface with its contact side facing up.

12.



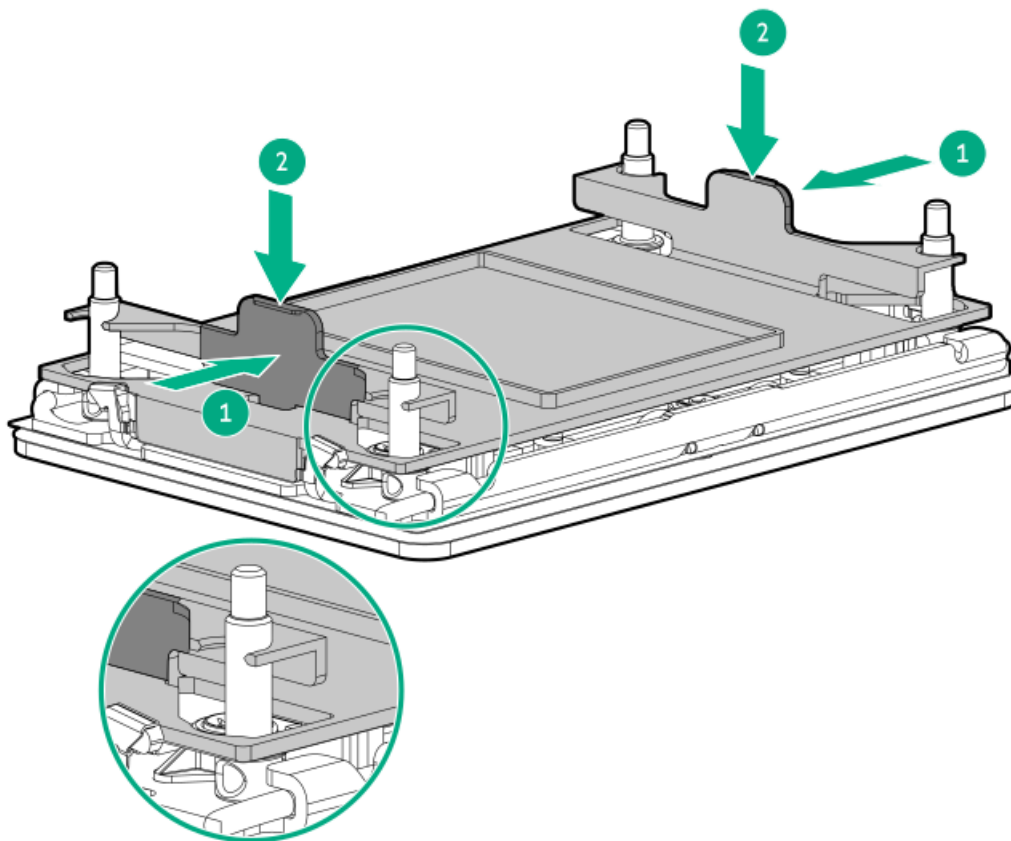
CAUTION

Do not press down on the dust cover. Pressing down on the dust cover might damage the processor socket.

If you are not immediately installing the replacement processor-heatsink module, install the dust cover on the empty processor socket:

- a. Press and hold the grip tabs on the dust cover (callout 1).
- b. Carefully lower the dust cover onto the bolster plate guide posts (callout 2).

Make sure that the corner holes of the dust cover are properly engaged with the guide posts on the bolster plate.



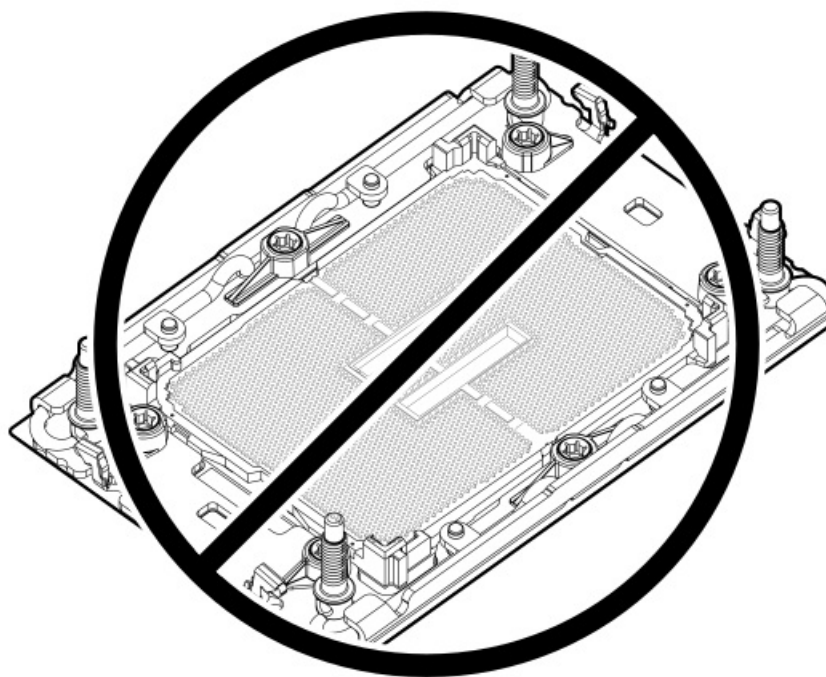
13.

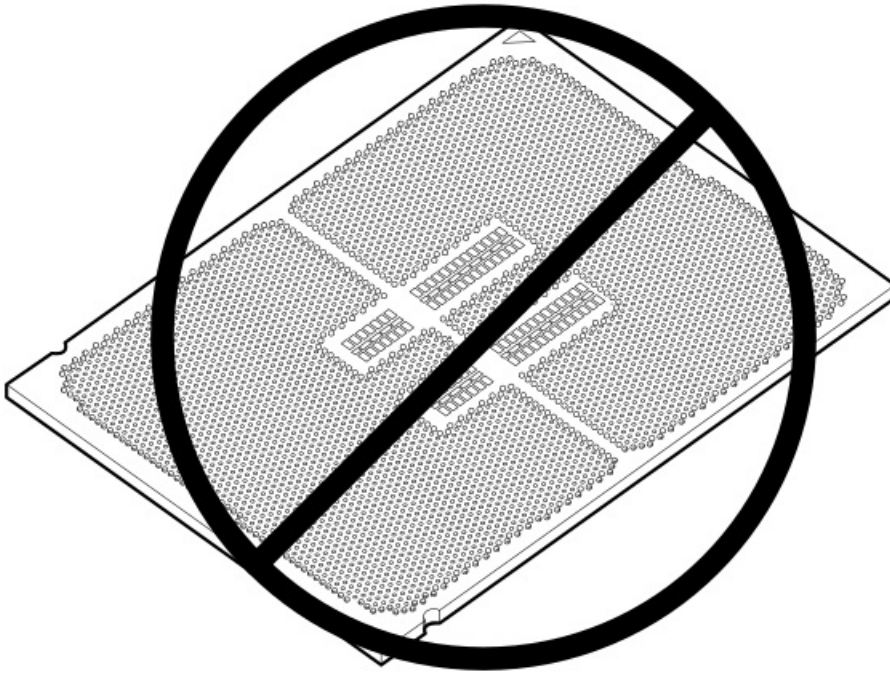


CAUTION

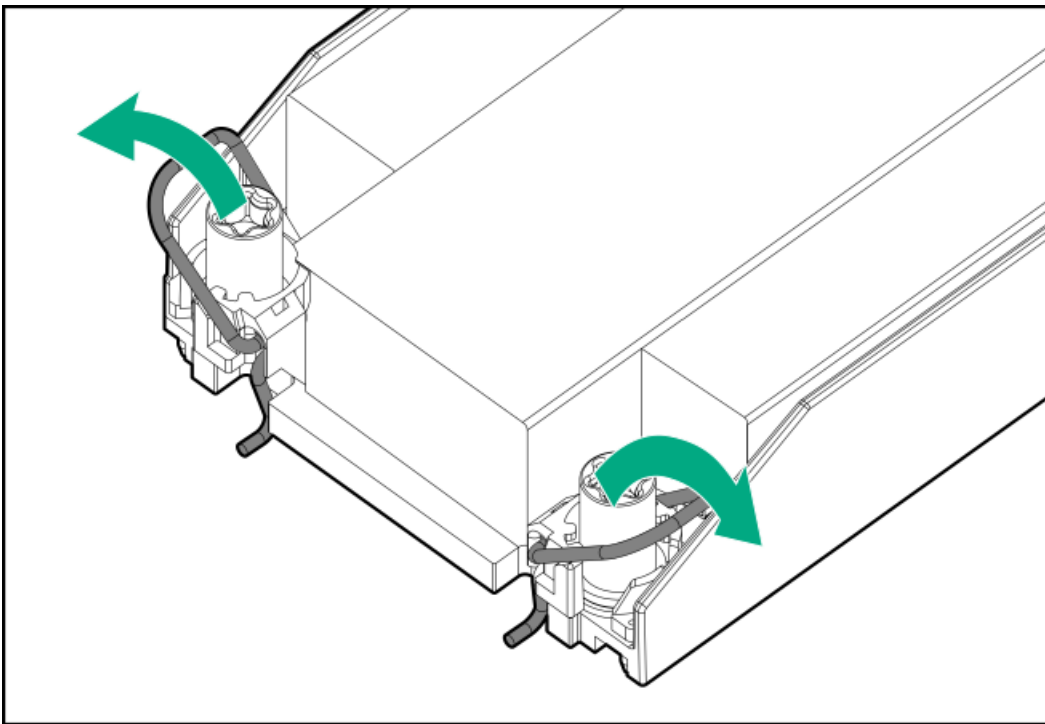
THE PINS ON THE PROCESSOR SOCKET AND ON THE PROCESSOR ARE VERY FRAGILE AND EASILY DAMAGED. Any damage to them might require replacing the system board.

Do not touch the pins on the processor socket and the processor.





14. Set the anti-tilt wires to the locked position.



- 15.



NOTE

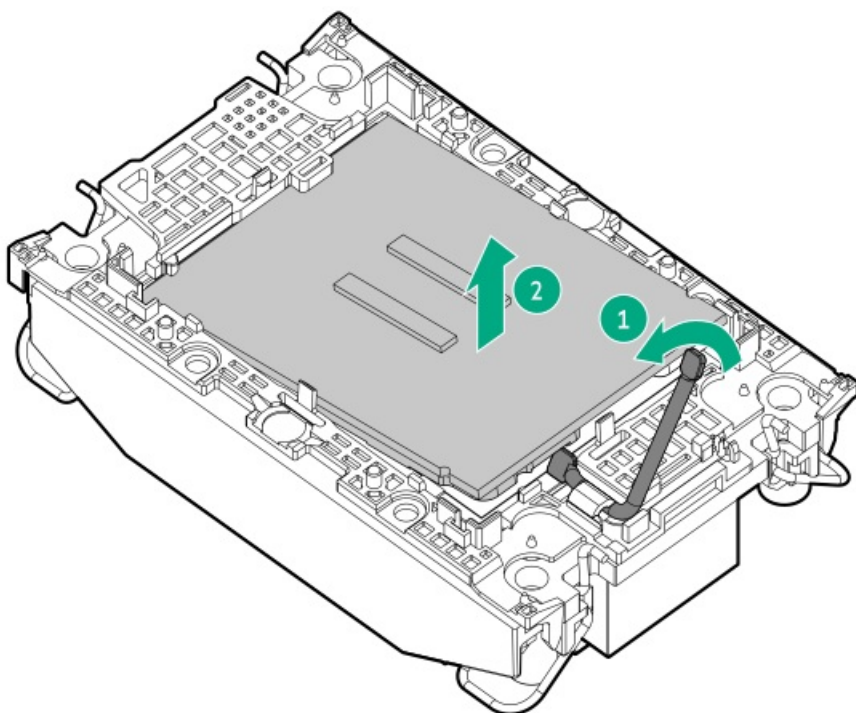
Some processor carriers have a thermal interface material (TIM) breaker lever; some do not. For information about removing a processor without a TIM breaker lever, see the server maintenance and service guide.

Remove the processor from the heatsink:

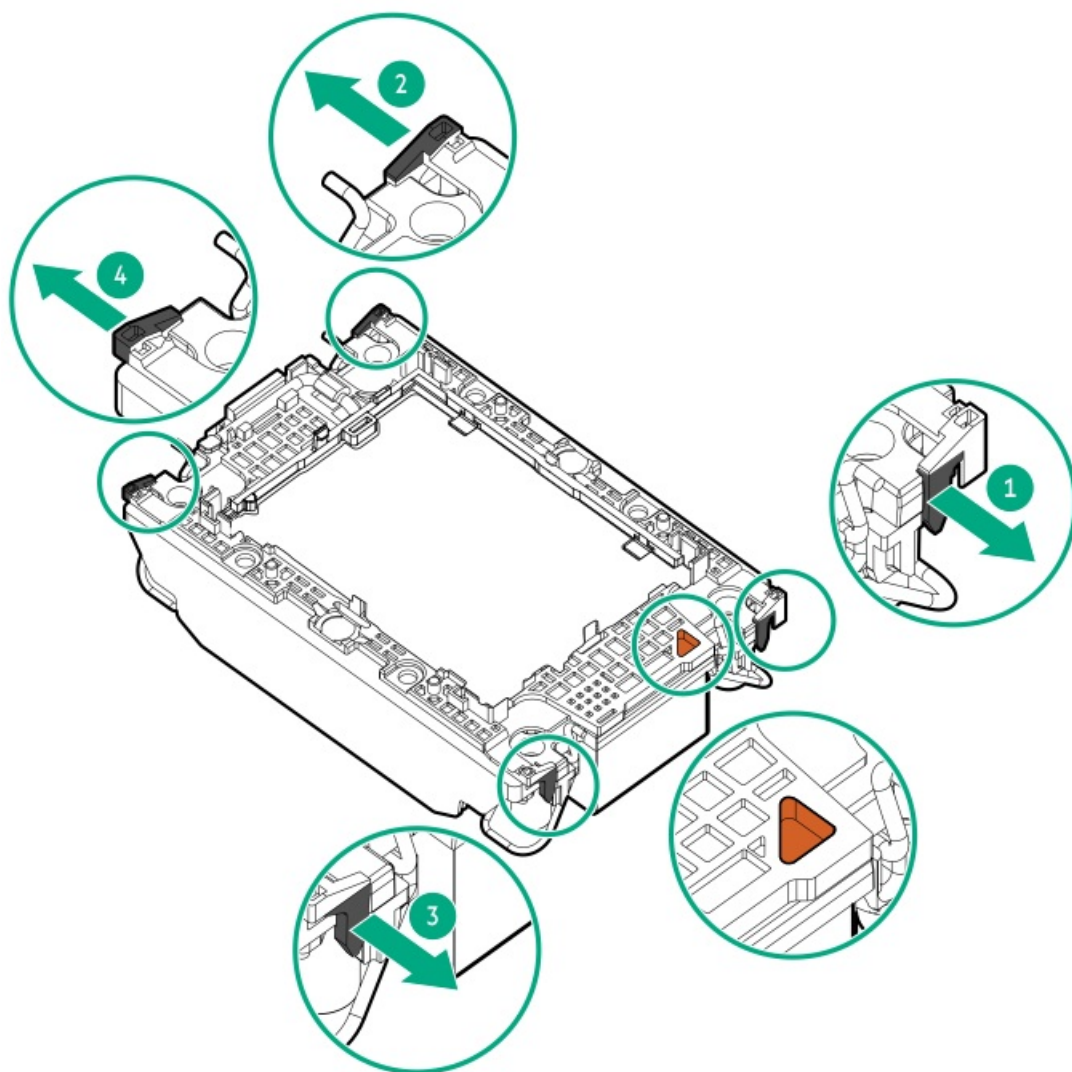
- a. Open the TIM breaker lever (callout 1).

This action breaks the adhesion between the processor and the heatsink.

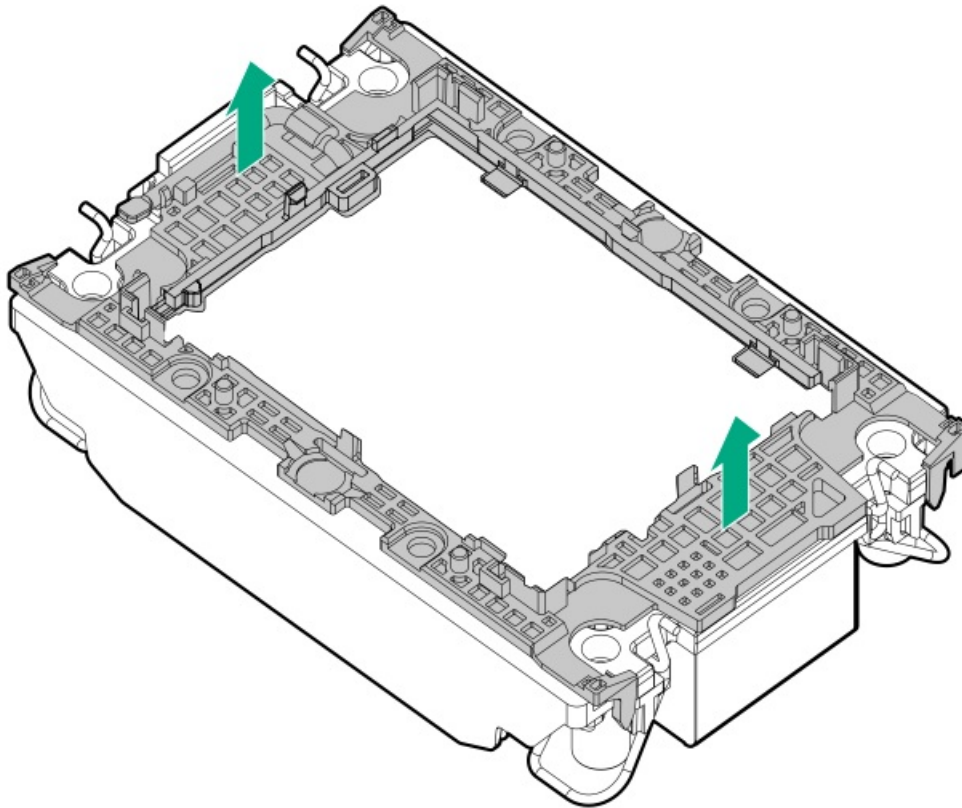
- b. Hold the processor on its edges, and then remove it from the carrier (callout 2).



- c. Starting from the pin 1 corner and moving in an opposite manner, disengage the processor carrier release tabs from the heatsink (callouts 1–4).



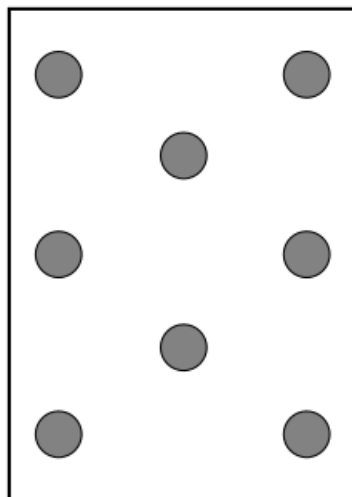
- d. Lift the processor carrier away from the heatsink.



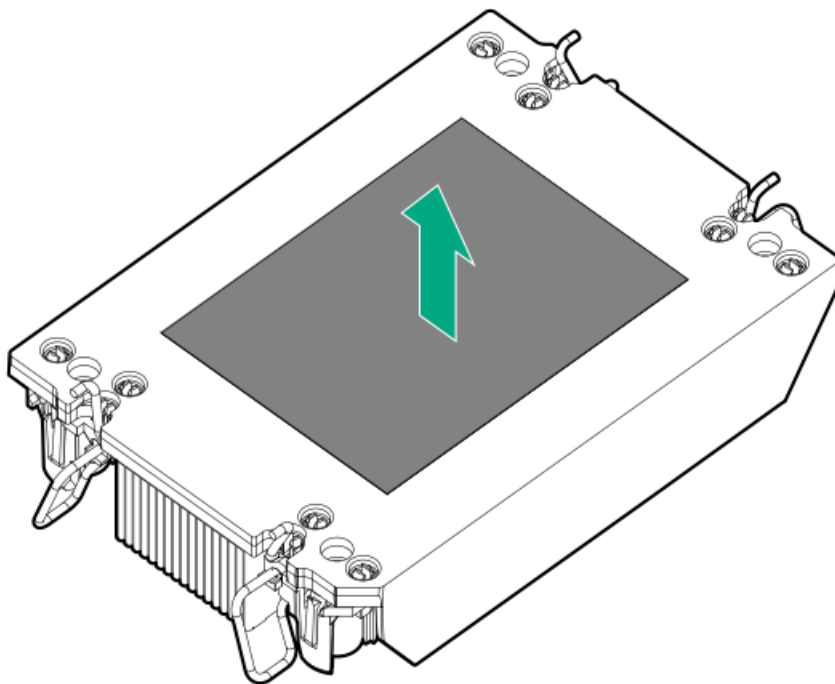
16. If you are using the same heatsink, use an alcohol wipe to remove the existing thermal grease from the heatsink.

Allow the alcohol to evaporate before continuing.

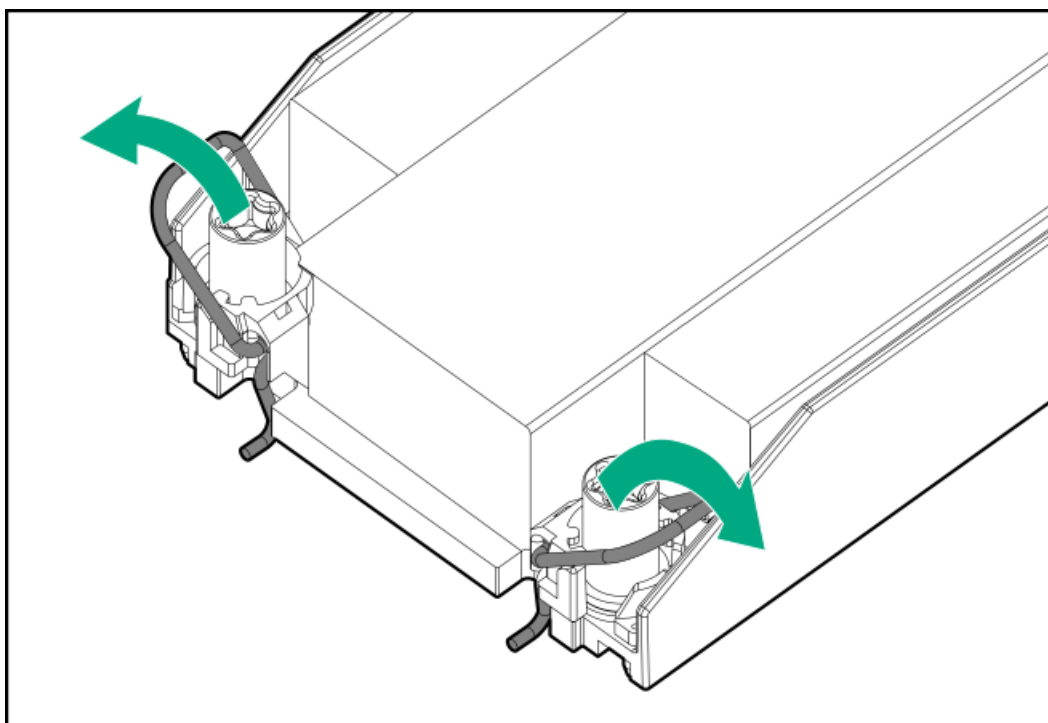
17. If you are using the same heatsink, apply the full content of the thermal grease syringes on top of the processor. Follow the pattern shown in the following image.



18. If you are using a new heatsink, remove the protective film from the thermal interface material.

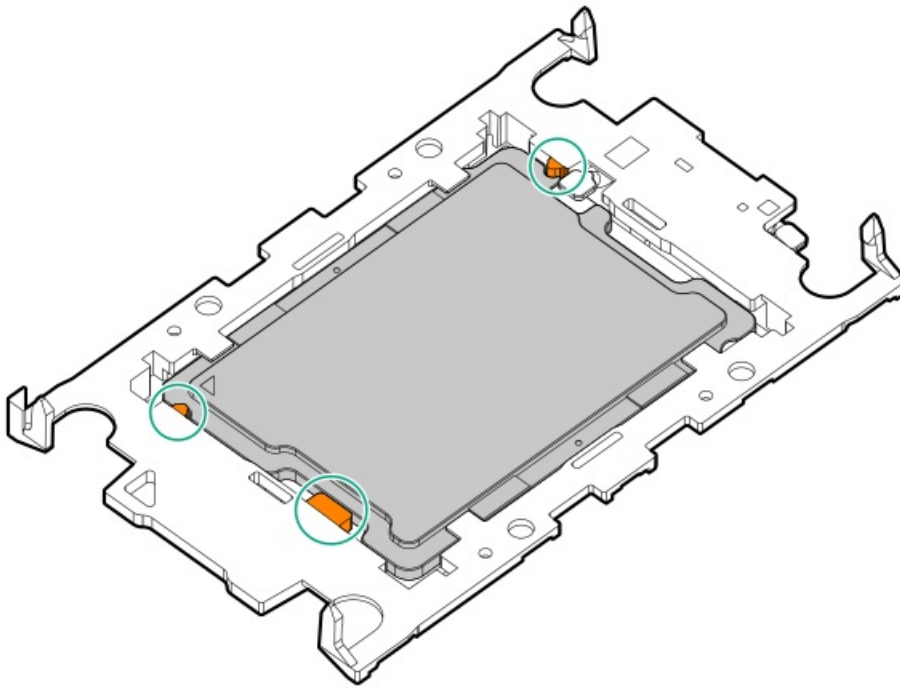


19. Set the anti-tilt wires to the locked position.



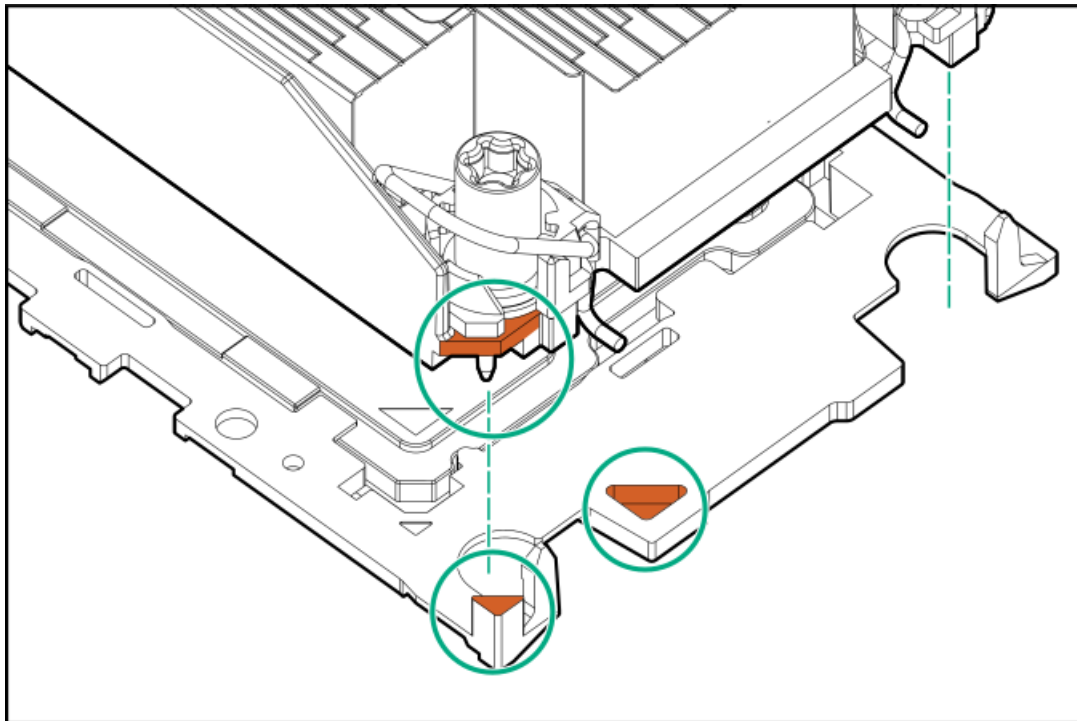
20. Verify that the processor is securely latched to the processor carrier.

The following illustration calls out the keying feature tabs that secure the processor. Different processor carriers will have these tabs in different locations.



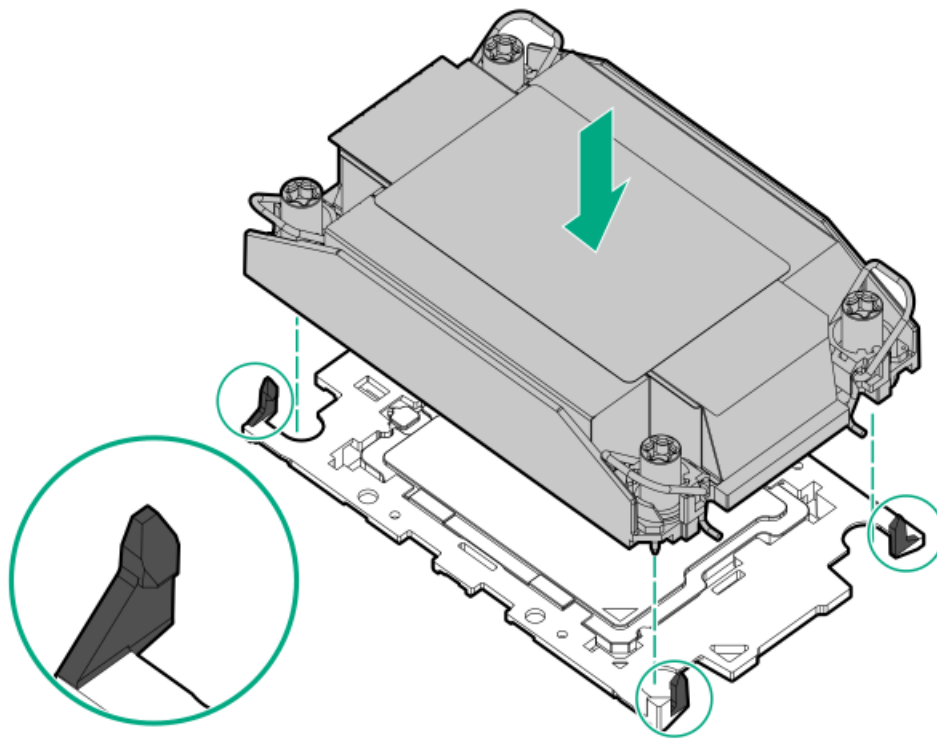
21. Attach the heatsink to the processor carrier:

- a. Align the pin 1 indicator on the processor carrier with that on the heatsink.



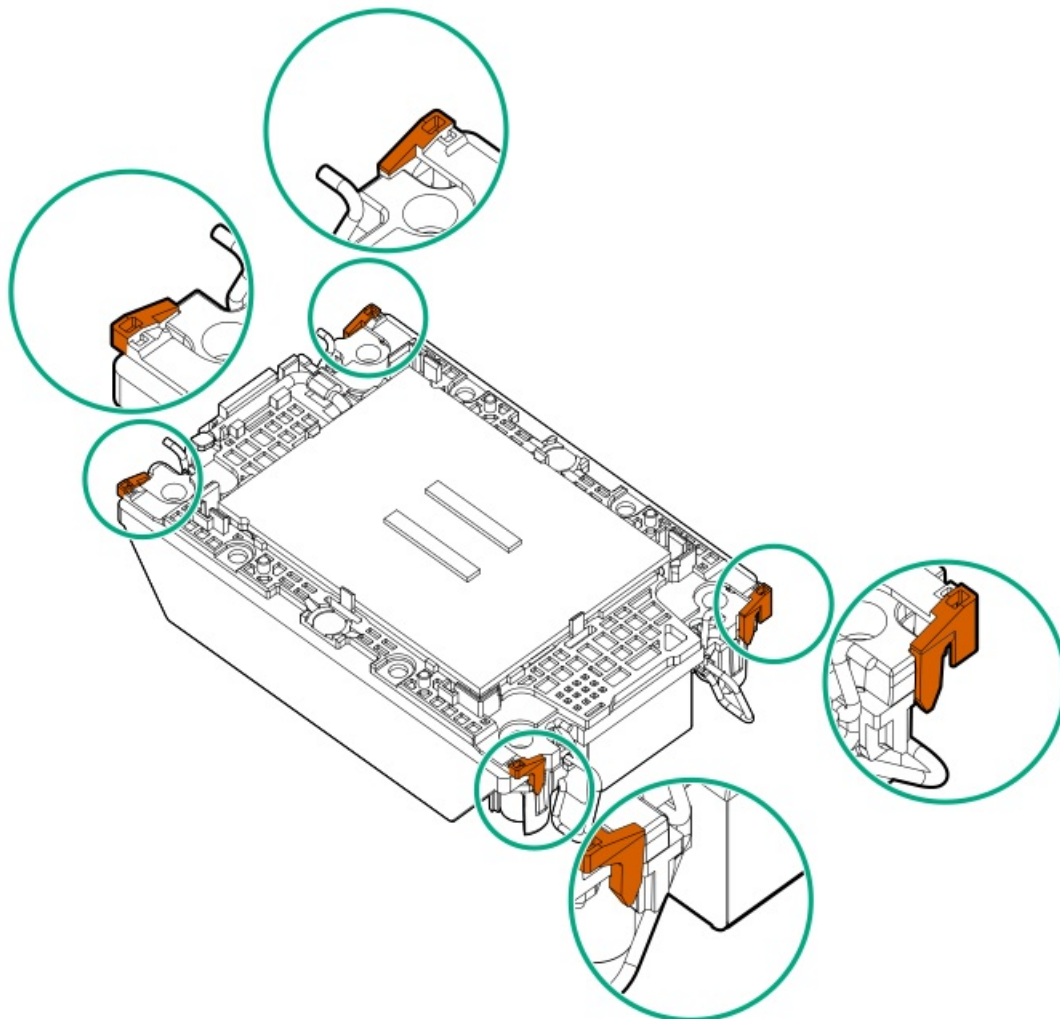
- b. Lower the heatsink on the processor carrier until the carrier tabs snap into place.

There will be an audible click to indicate that the heatsink is properly latched on the processor carrier.

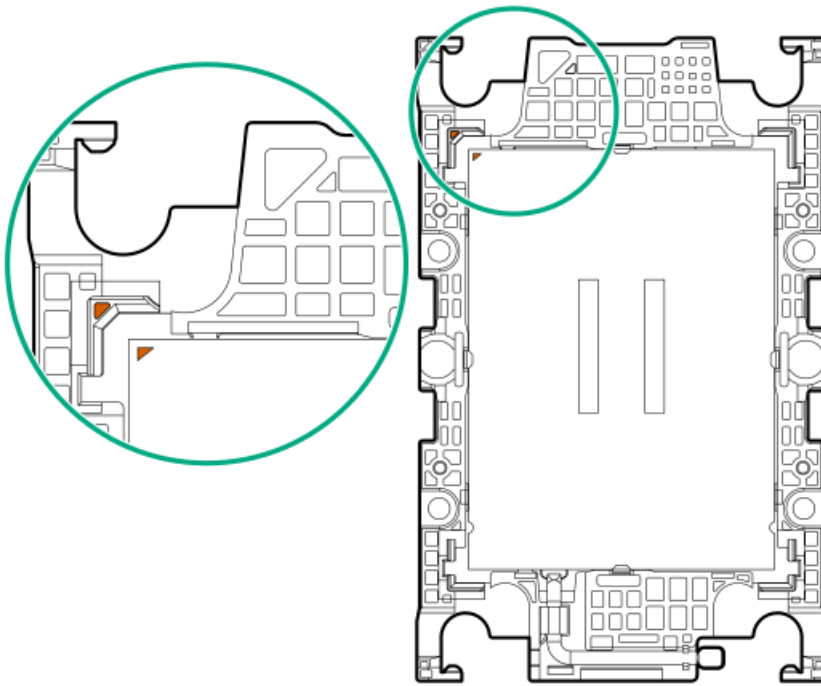


22. Perform the following verification steps:

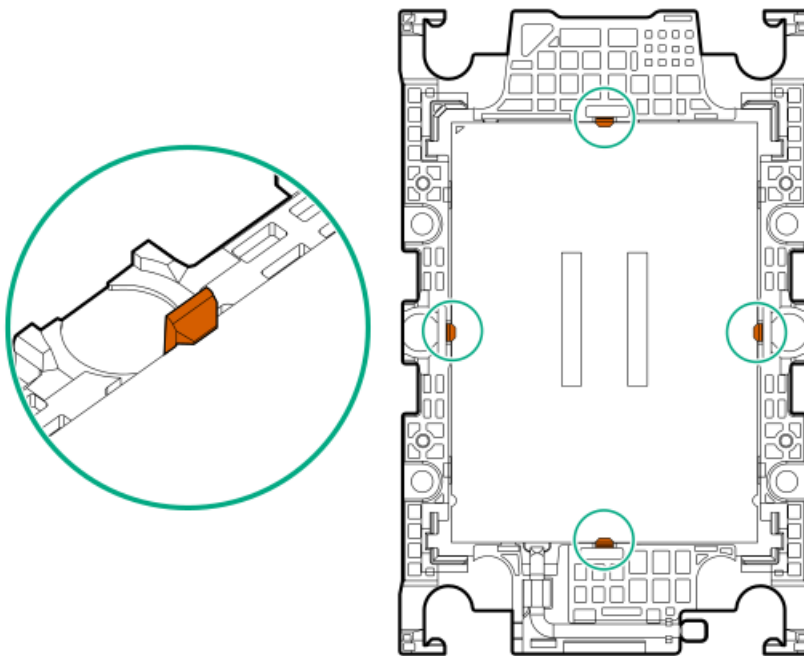
- a. Verify that the tabs on the processor carrier are securely latched on the heatsink.



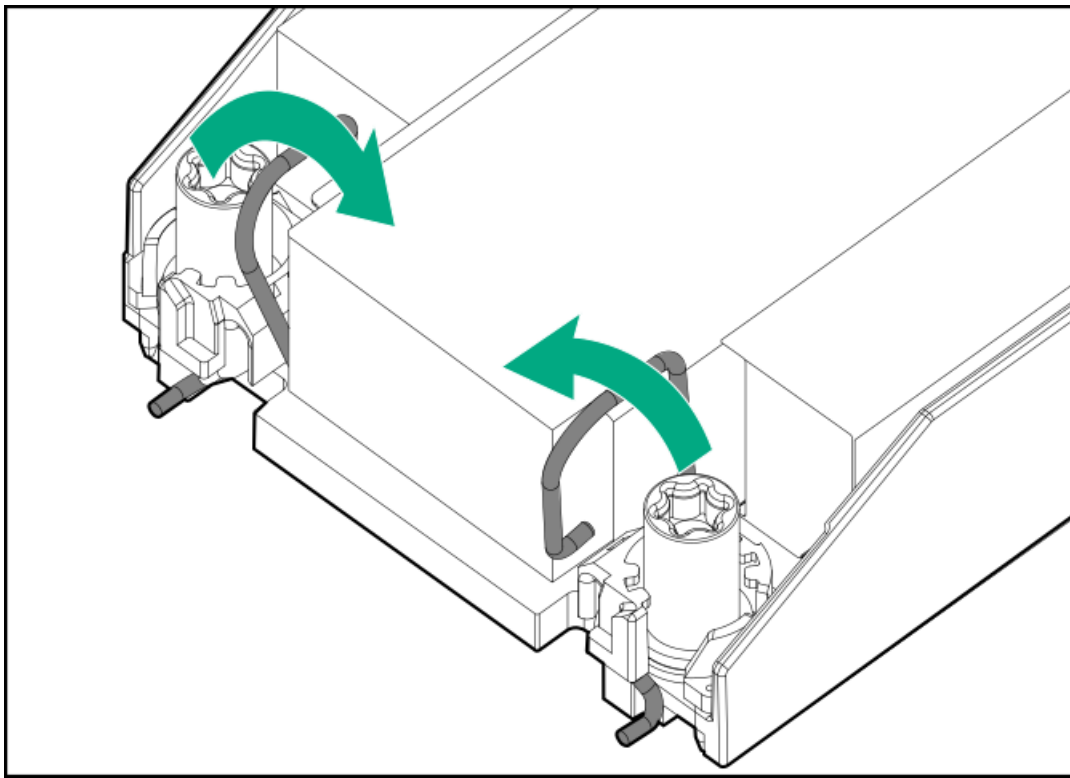
- b. Verify that the pin 1 indicators on the processor and processor carrier are aligned.



- c. Verify that the processor is properly secured by the carrier snaps.



23. Set the anti-tilt wires to the unlocked position.



24.



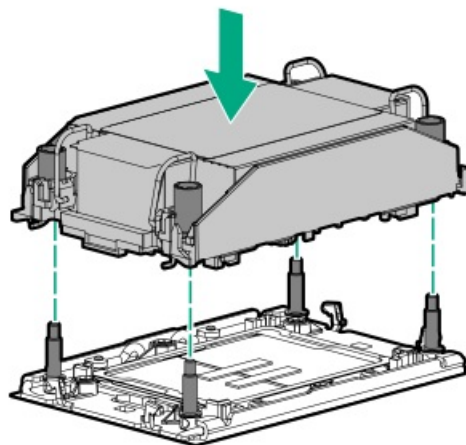
CAUTION

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

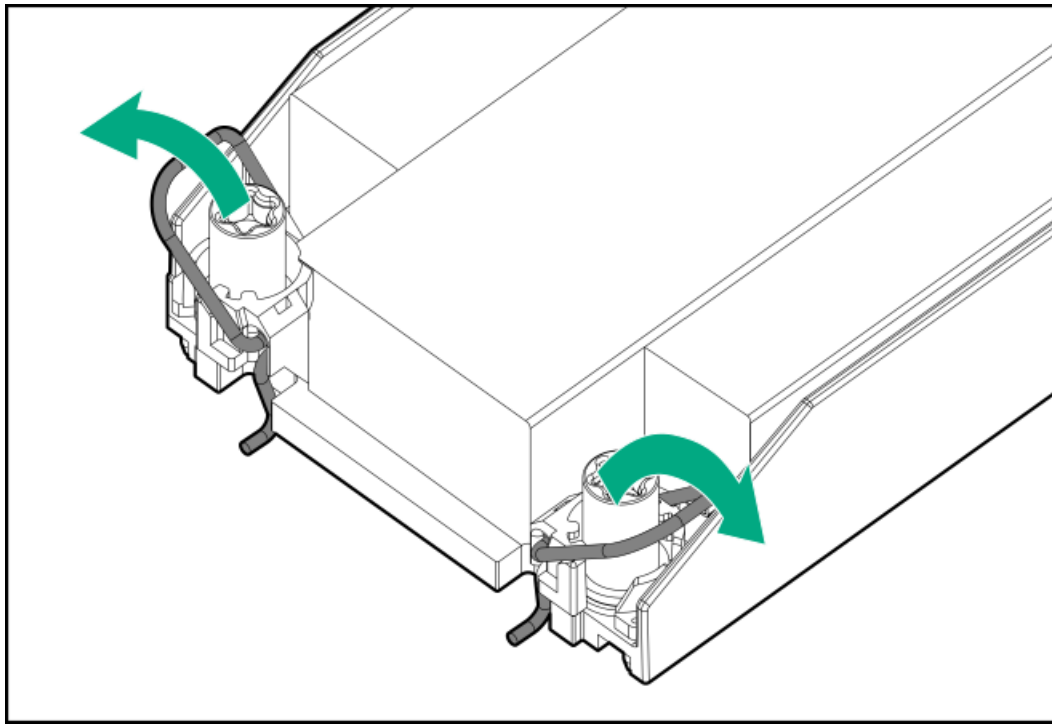
Install the processor-heat sink module:

- a. When using a torque wrench to tighten the heatsink screws, set it to 0.9 N-m (8 in-lb) of torque .
- b. Note the **Front of server** text on the heatsink label to correctly orient the processor-heat sink module over the bolster plate.
- c. Carefully lower the processor-heat sink module onto the bolster plate guide posts.

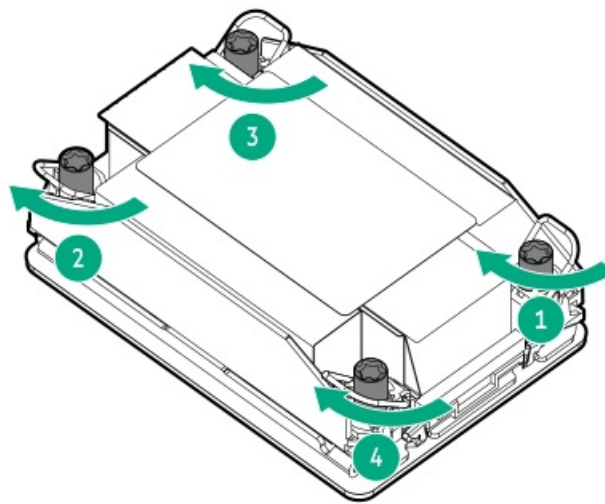
The posts are keyed so that the module can only be installed one way. Make sure that the module is properly seated on the bolster plate before securing the screws.



- d. Set the anti-tilt wires to the locked position.



- e. Use a T-30 Torx screwdriver to tighten one pair of diagonally opposite heatsink screws (callouts 1 to 2), and then tighten the other pair of heatsink screws (callouts 3 to 4).



25. Install the air baffle and other removed hardware components.
26. Install the access panel.
27. If the server was removed from an enclosure or a rack, reinstall it now.
28. Connect all peripheral cables to the server.
29. Connect each power cord to the server.
30. Connect each power cord to the power source.
31. Power up the server.

Results

The installation procedure is complete.

Removing and replacing the direct liquid cooling assembly

Prerequisites

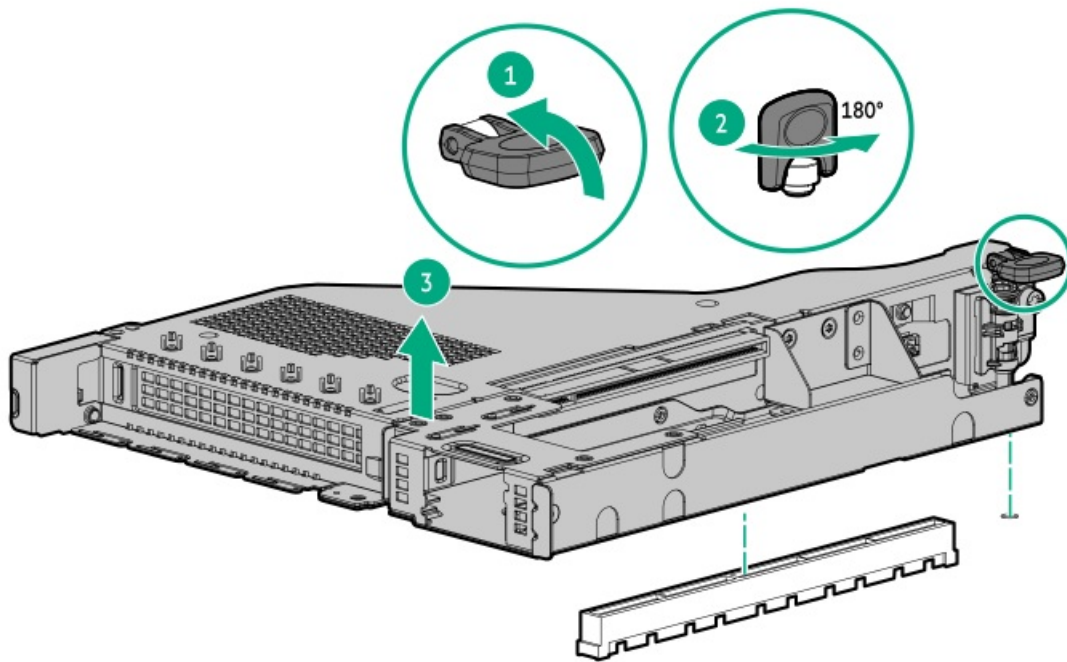
- Read the **HPE Cray XD Direct Liquid Cooling System Site Preparation, User, and Maintenance Guide** :
<http://www.hpe.com/info/xdDLCguide>
- Identify liquid cooling components
- In addition to the tools and materials required for the DLC System, be sure you also have the following:
 - T-30 Torx screwdriver
 - T-10 Torx screwdriver

About this task

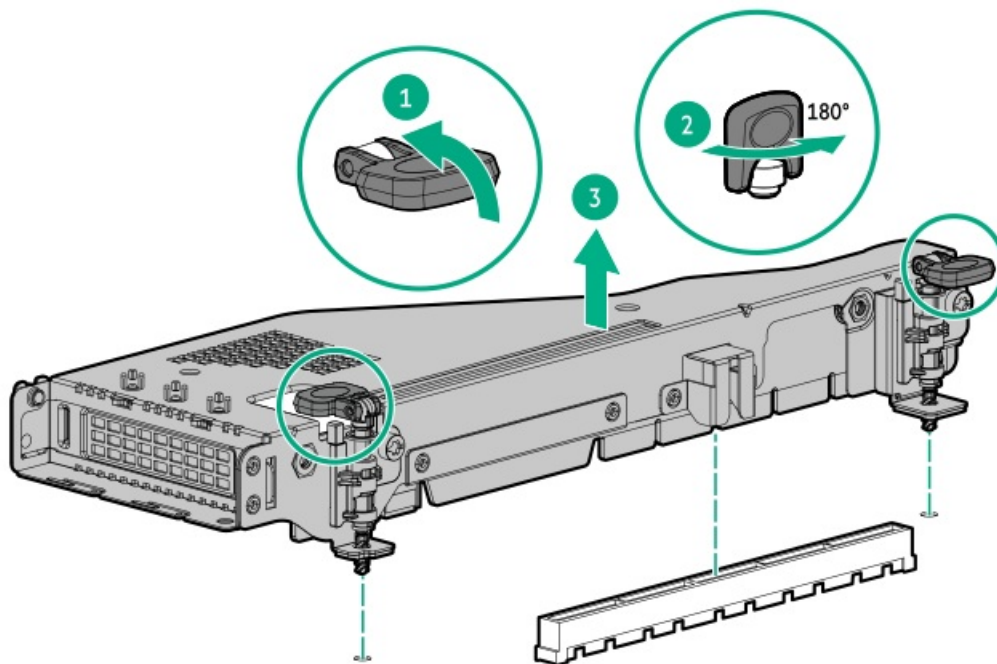
The entire cooling loop must be removed as one unit. Do not attempt to remove riser cages or cold plates separately.

Procedure

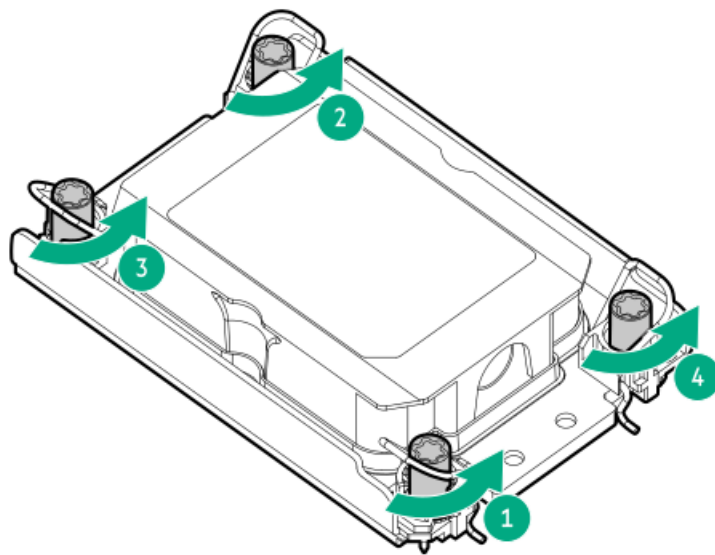
1. Back up all server data.
2. Power down the server.
3. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
4. Disconnect the hoses from the DLC manifold.
5. Remove the server from the rack.
6. Remove the access panel.
7. Prepare to remove the components.
 - a. Loosen the riser cage. Set it on the slot while you loosen the cold plate nuts.
 - For the NS204i-u assembly, loosen the riser cage:



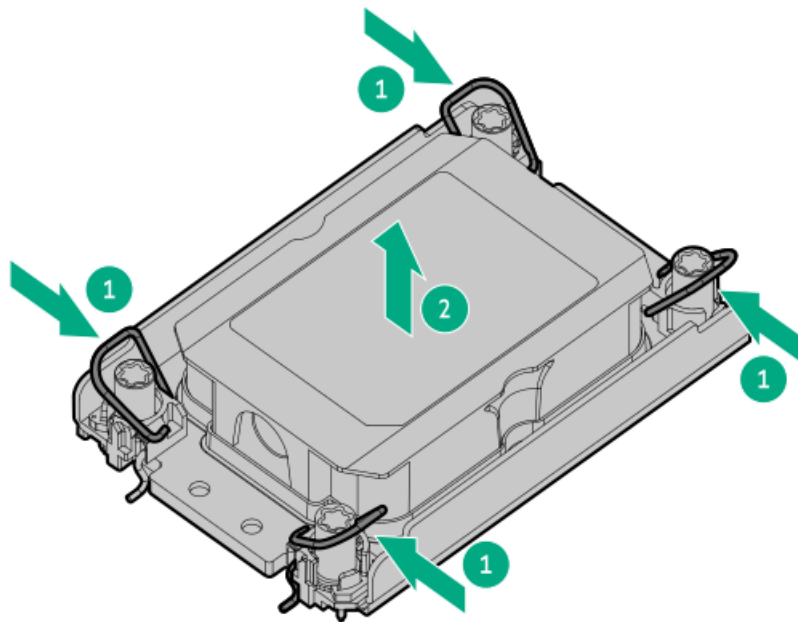
- For the PCIe assembly, loosen the riser cage:



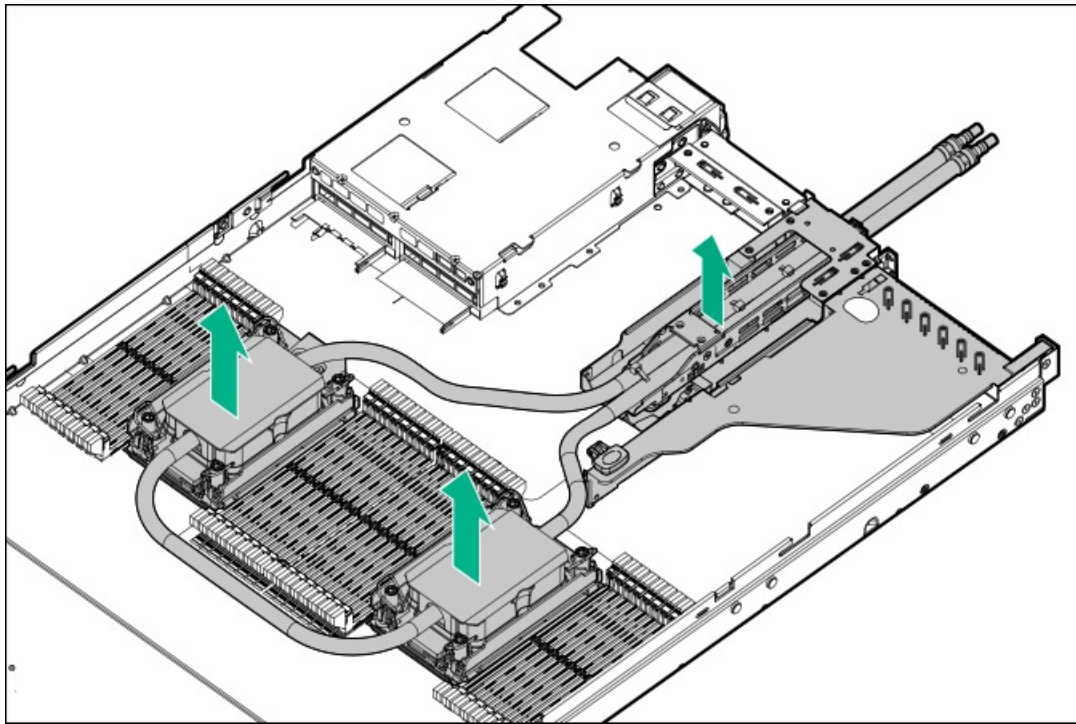
- Using a T-30 Torx screwdriver, loosen the nuts on both cold plates.



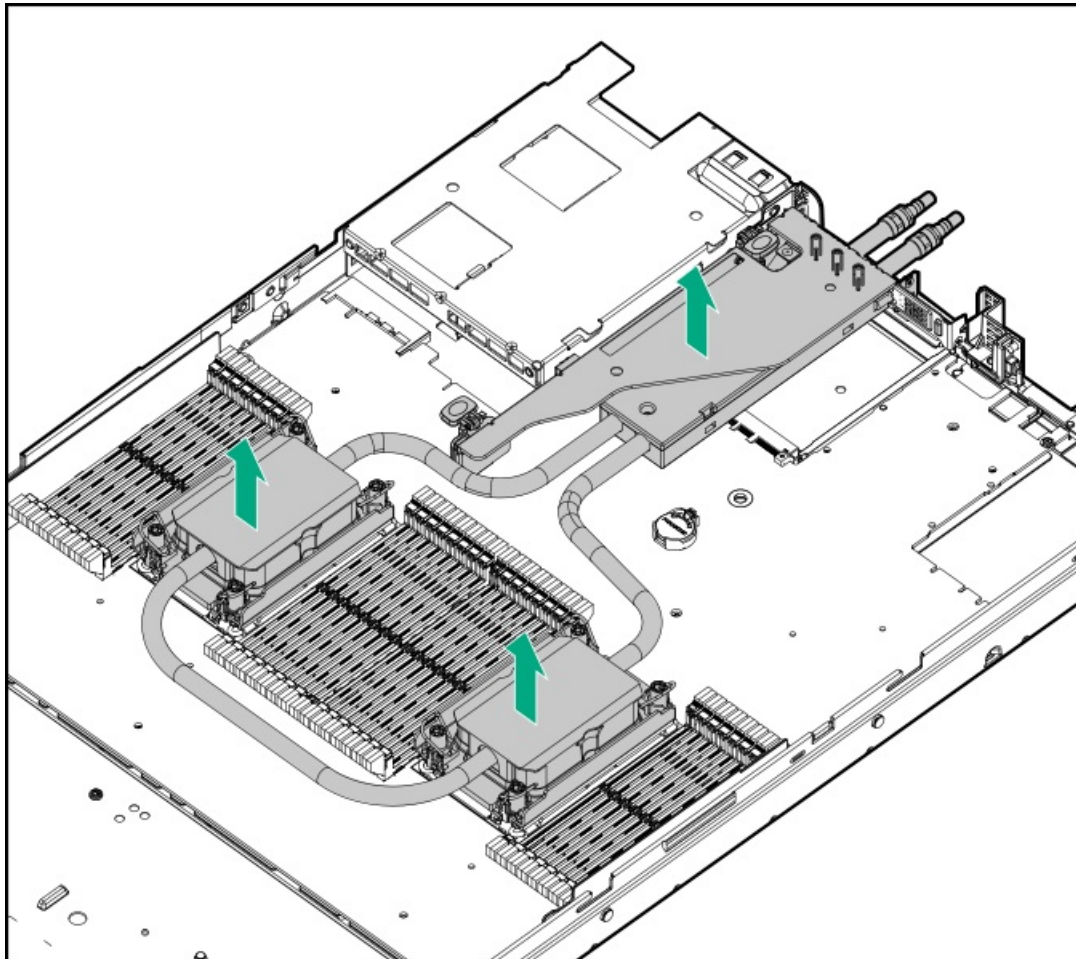
- c. Verify that the nuts are disengaged. Partially lift the cold plates away from the socket, and then set them back down.



8. Holding the hose between the cold plates and the riser cage, lift the assembly away from the server.
- To remove the NS204i-u assembly:

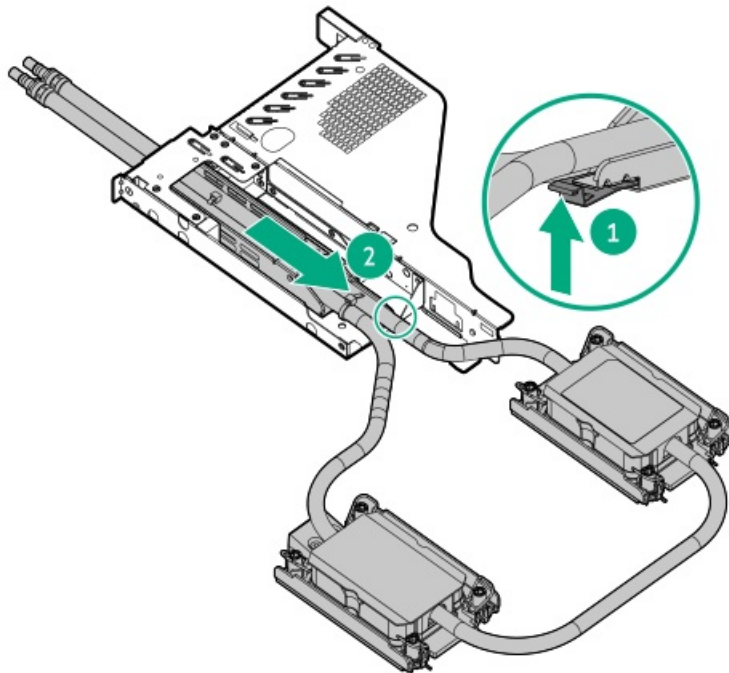


- To remove the PCIe assembly:

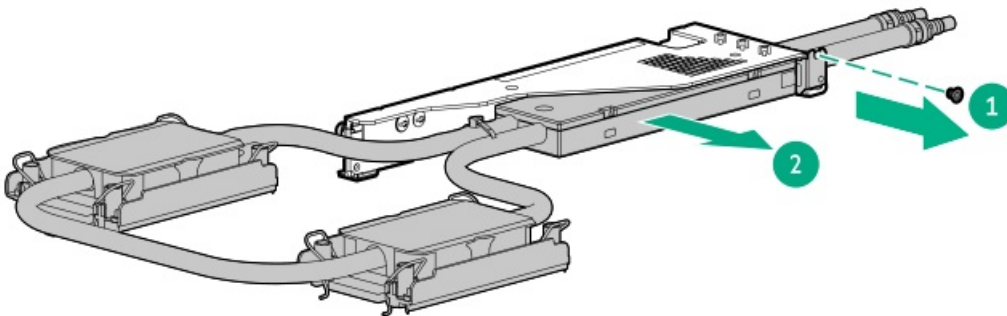


9. Set the assembly upside down on a flat surface.
10. Remove the bracket.

- To remove the NS204i-u assembly:



- To remove the PCIe assembly:



Results

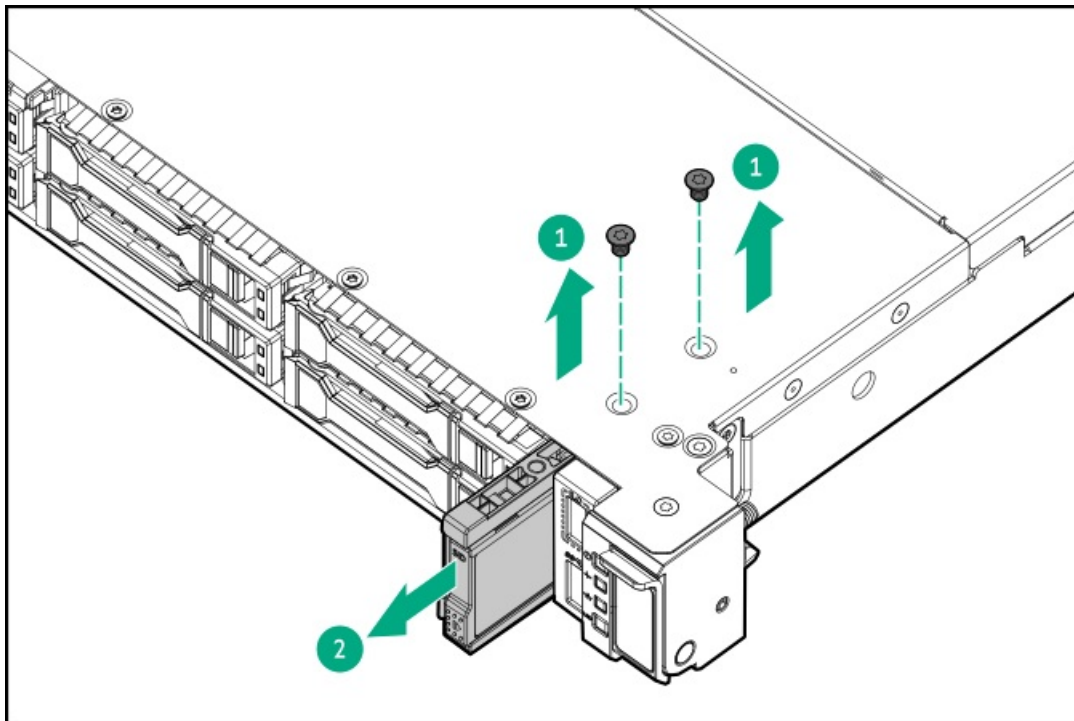
To replace the assembly, reverse the removal procedure.

Removing and replacing the Systems Insight Display

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:

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



Results

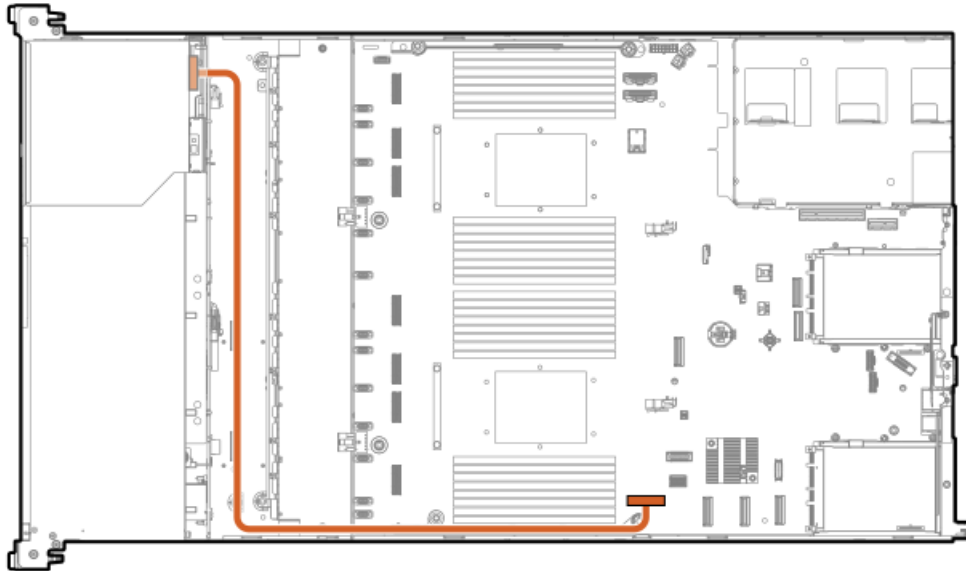
To replace the component, reverse the removal procedure.

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

Procedure

1. Power down the server.
2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
5. Remove the access panel.

6. Disconnect the optical drive cable from the system board.

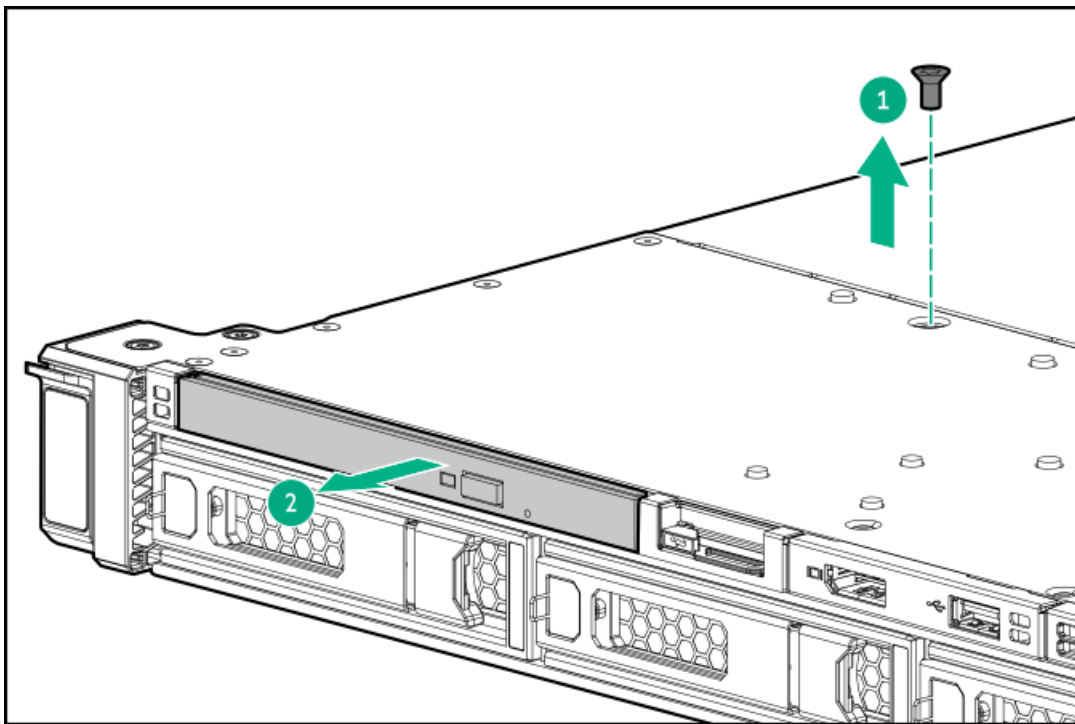


7. Disconnect the display port/USB cable from the system board.

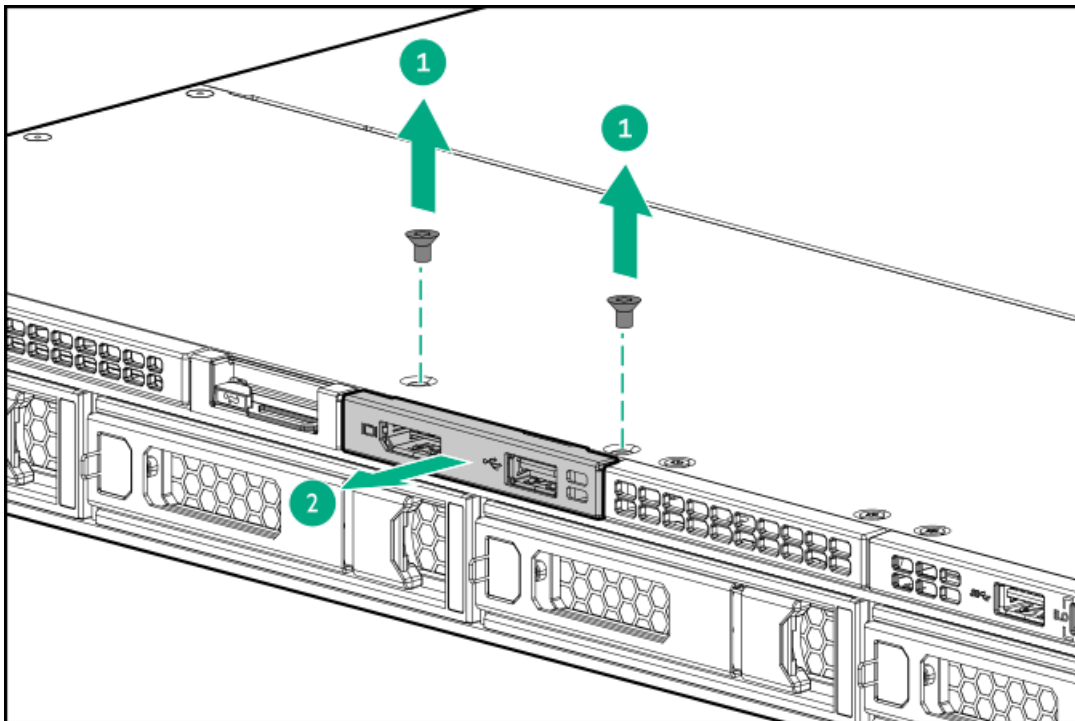


8. Remove the component.

Optical disk drive



Display port/USB



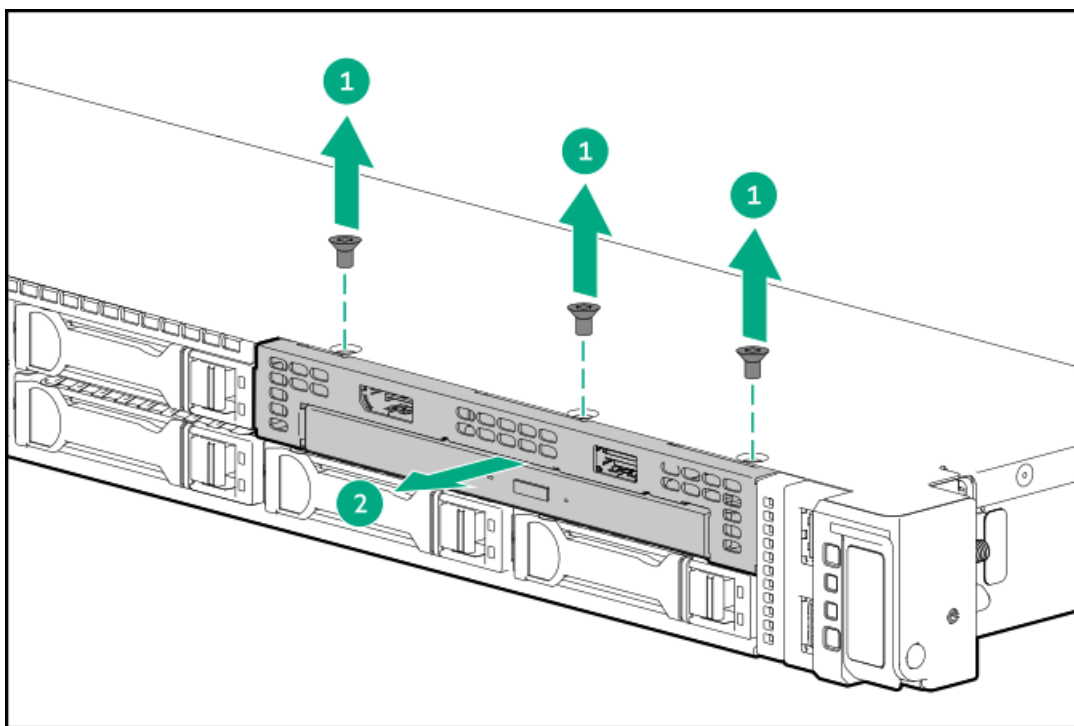
Results

To replace the component, reverse the removal procedure.

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

Procedure

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



Results

To replace the component, reverse the removal procedure.

Removing and replacing the chassis ear power switch module

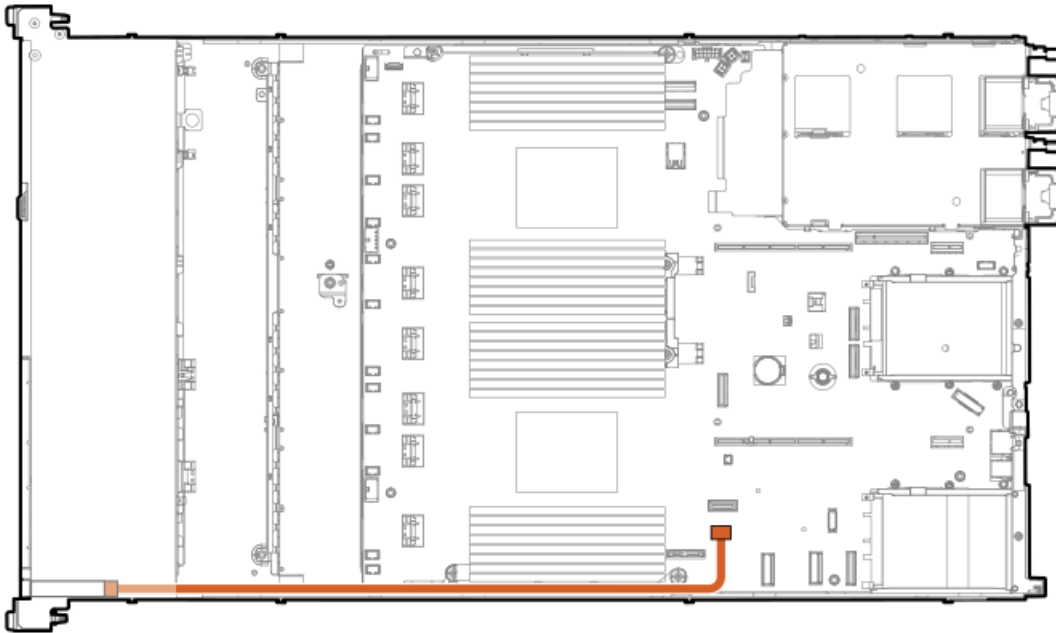
About this task

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vpsg00005206en_us&noframe

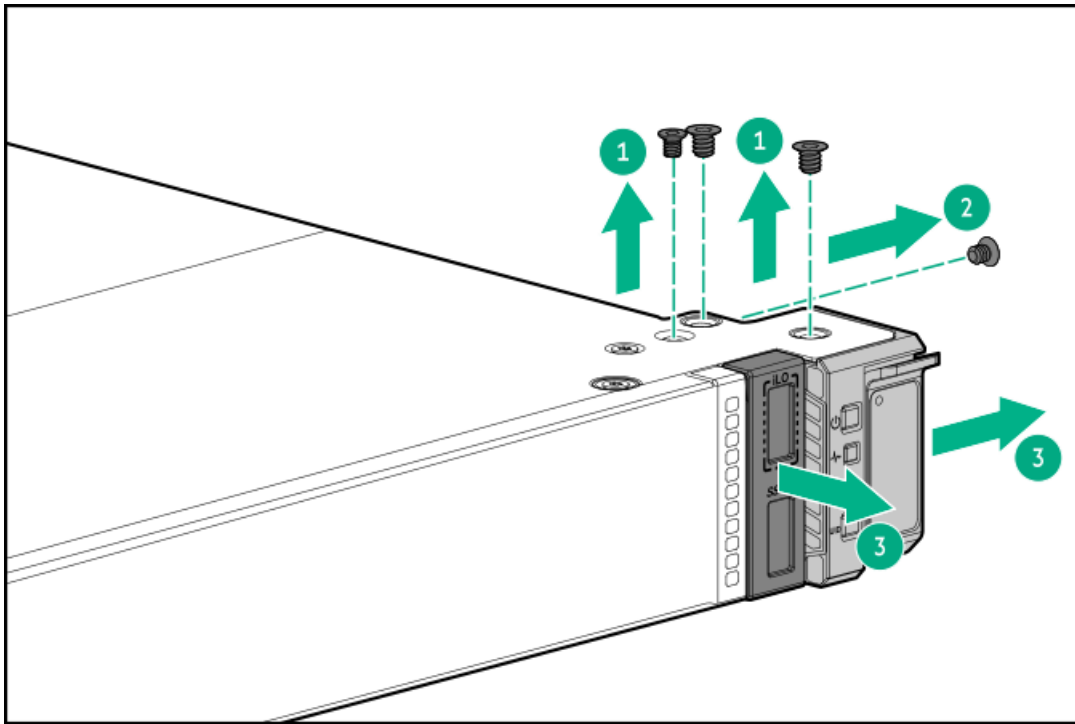
Procedure

1. Power down the server.

2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Disconnect any external cables that are connected to the expansion board.
4. Do one of the following:
 - Extend the server from the rack.
 - Remove the server from the rack.
5. Remove the access panel.
6. Disconnect the cable from the system board.



7. Remove the chassis ear power module.



Results

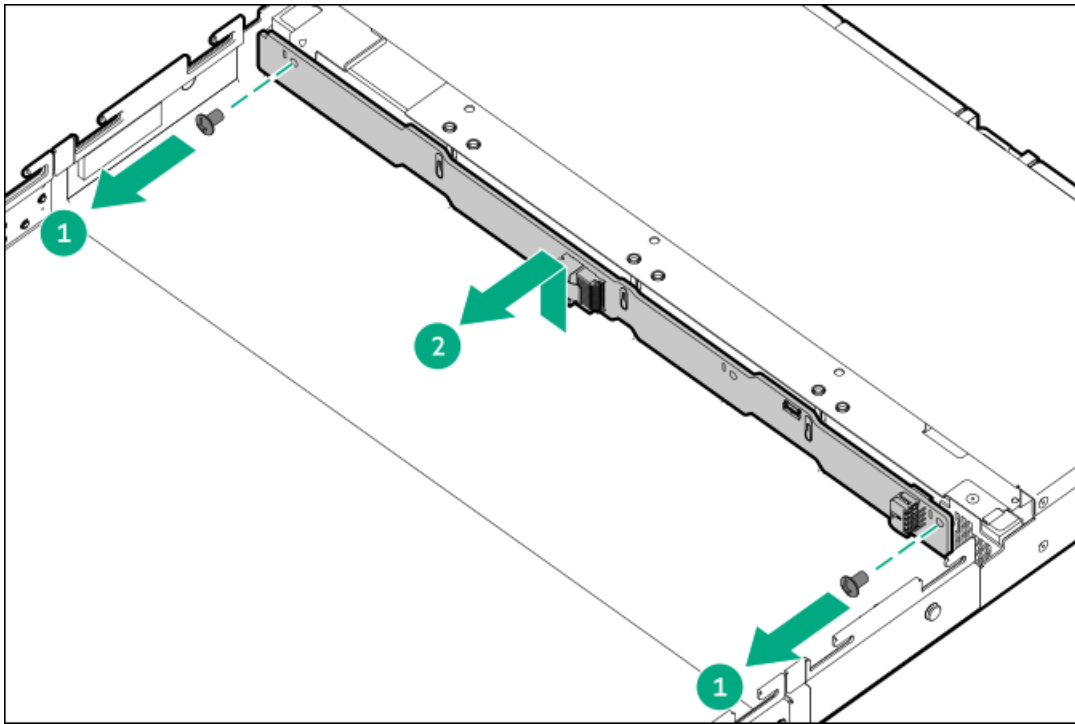
To replace the component, reverse the removal procedure.

Removing and replacing the 4 LFF drive backplane

Procedure

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

Note where each drive is located.
6. If installed, remove the Smart Storage Battery.
7. Disconnect all cables from the drive backplane.
8. Remove the drive backplane.



Results

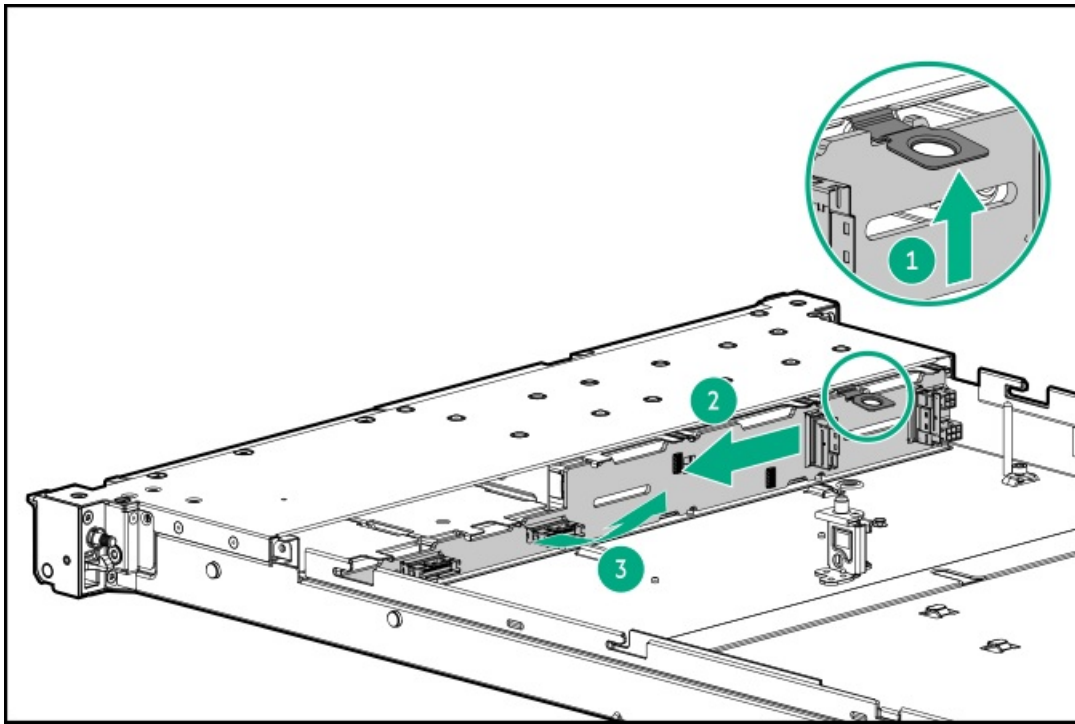
To replace the component, reverse the removal procedure.

Removing and replacing the EDSFF drive backplane

Procedure

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

Note where each drive is located.
6. If installed, remove the Smart Storage Battery.
7. Disconnect and remove all cables from the drive backplane.
8. Remove the drive backplane.



Results

To replace the component, reverse the removal procedure.

Removing and replacing the 8 SFF drive backplane

About this task

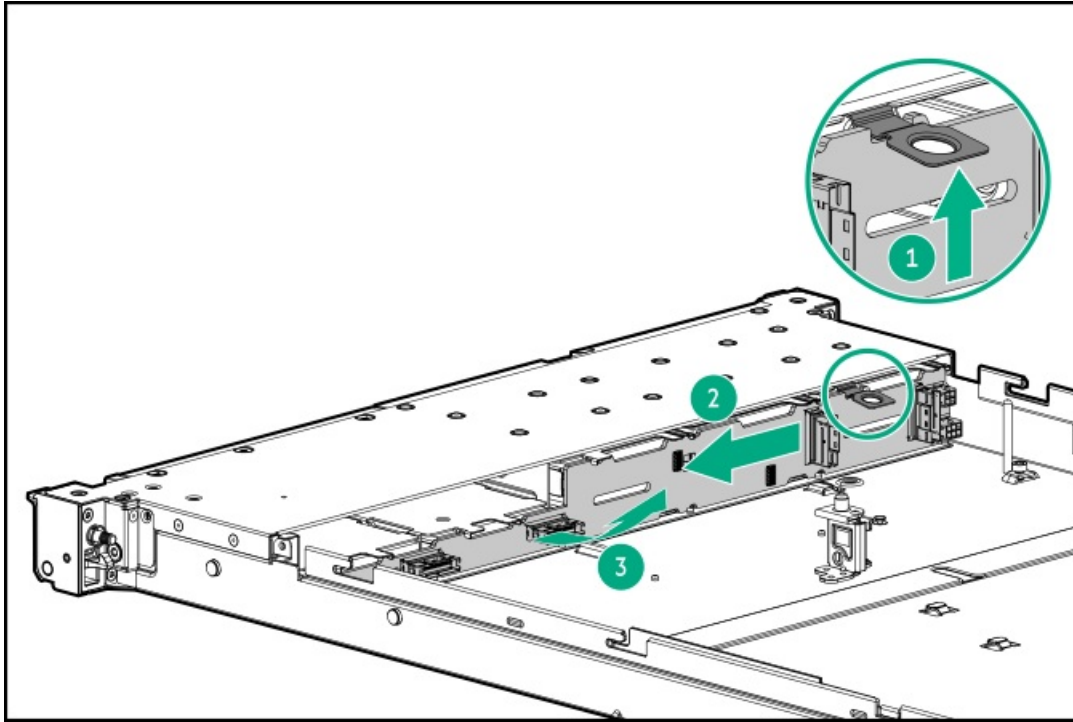
https://sketchfab.com/models/10076a77c0c244c5a8f5d783e4cbd90b/embed?ui_infos=0&ui_watermark=0&ui_help=0&ui_vr=0&ui_settings=0&ui_inspector=0&ui_hint=2&ui_color=01a982&ui_theme=dark&autostart=1&camera=0

Procedure

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

Note where each drive is located.
6. If installed, remove the Smart Storage Battery.
7. Disconnect and remove all cables from the drive backplane.

8. Remove the drive backplane.



Results

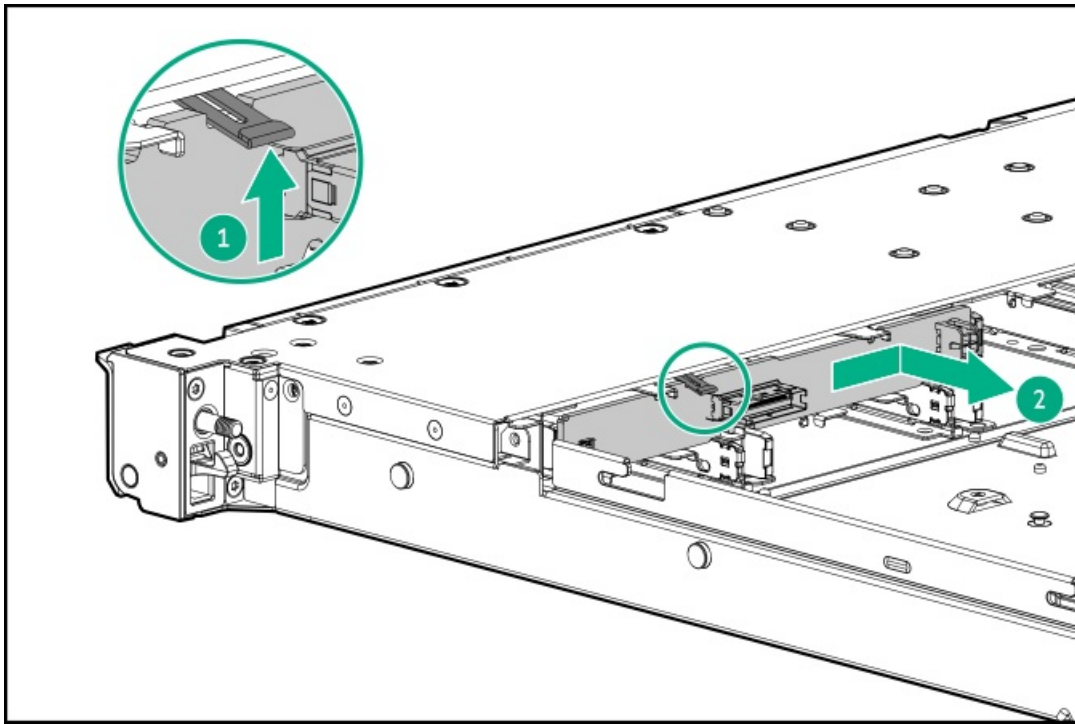
To replace the component, reverse the removal procedure.

Removing and replacing the 2 SFF drive backplane

Procedure

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

Note where each drive is located.
6. If installed, remove the Smart Storage Battery.
7. Disconnect and remove all cables from the drive backplane.
8. Remove the drive backplane.



Results

To replace the component, reverse the removal procedure.

Removing and replacing the system board

Prerequisites

You need:

- A T-30 Torx driver
- Note where all drives, controllers, DIMMs, cables, and other options are installed.
- Note the serial and product IDs



CAUTION

Be sure to have the BitLocker recovery key/password prior to replacing the system board. If you do not have the key/password, you will need to re-install the OS.



CAUTION

Do not use One-button secure erase (OBSE). OBSE should only be used to decommission or repurpose a system. **This option erases all data. Be sure to disconnect any drives, SANs, NAS, or other shared/external storage devices that you do not want erased.**

About this task

https://support.hpe.com/hpesc/public/videoDisplay?videoid=vpseg00005209en_us&noframe

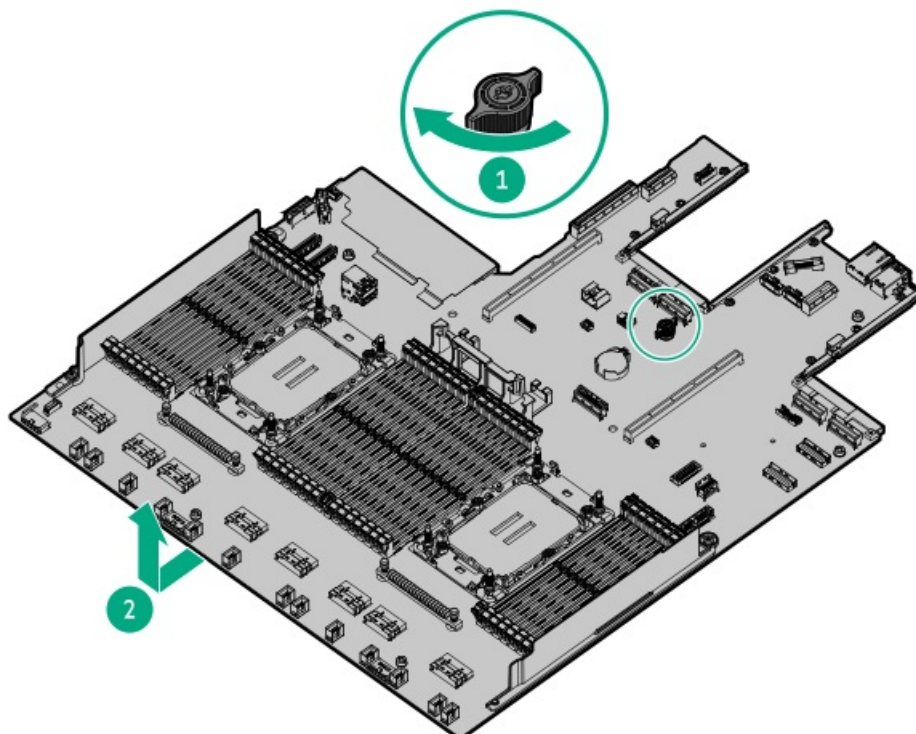
Procedure

1. Power down the server.

2. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
3. Do one of the following:
 - a. Extend the server from the rack.
 - b. Remove the server from the rack.
4. Remove all power supplies.
5. Remove the access panel.
6. Take note of port numbers and cables connections to risers and the system board.
7. Disconnect and remove all cables that are connected to risers or the system board.
8. Remove all riser cages.
9. Remove the controller.
10. Remove all fans.
11. Remove the OCP adapter.
12. Remove all DIMMs.

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

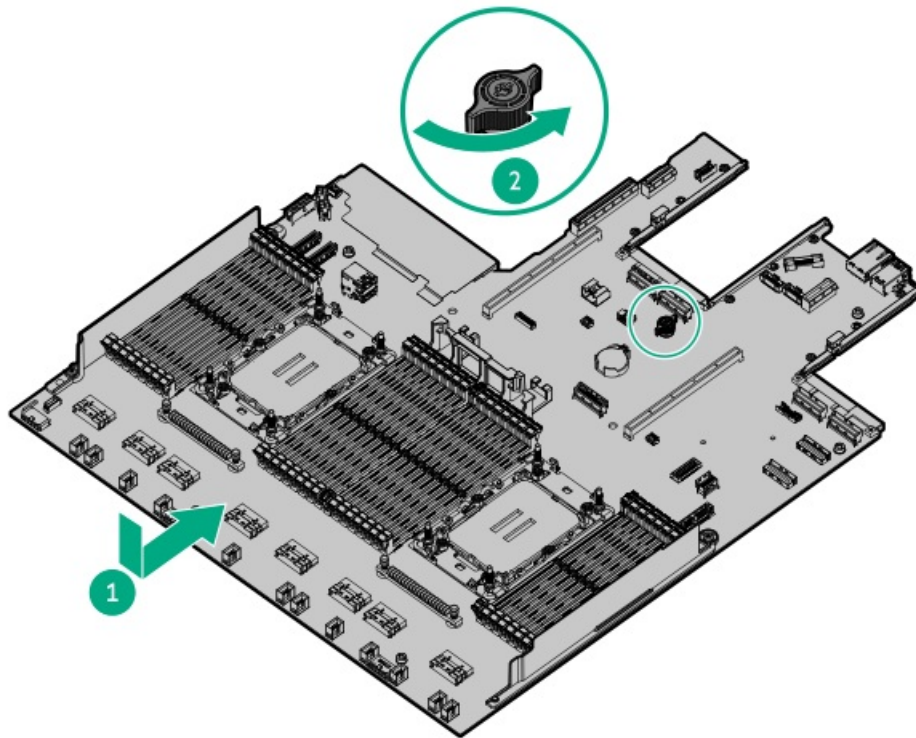
13. Do the following:
14. Remove the processor heatsink assembly.
15. Loosen the system board thumbscrew, and then remove the system board.



Results

To replace the component:

1. Install the spare system board.



2. Install all components removed from the failed system board.
Be sure to install the DIMMs in the same DIMM slots as the failed system board.
3. Install the access panel.
4. Install the power supplies.
5. Power up the server.

After you replace the system board:

1. Update the server serial number and product ID.
2. Update all firmware to the same versions as before.
3. Re-enter any Secure Boot Keys previously added in the Secure Boot configuration.



CAUTION

(For Microsoft Windows only) After replacing the system board, Hewlett Packard Enterprise recommends using BitLocker Recovery to restore the OS and access drive data. The recovery key/password previously generated during the initial server installation and BitLocker setup is required to enter Recovery Mode.

For more information about BitLocker Recovery, see the [Microsoft website](#).

Subtopics

[Re-entering the server serial number and product ID](#)

[Reconfiguring the system date and time settings](#)

Re-entering the server serial number and product ID

About this task

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

Procedure

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

The following warning appears:

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

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

The following warning appears:

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

7. Type the product ID, and then press **Enter**.
8. From the System Utilities screen, select System Configuration > BIOS/Platform Configuration (RBSU) > Date and Time.
9. Reconfigure the system date and time settings.

Results

The installation procedure is complete.

Reconfiguring the system date and time settings

Procedure

1. Access the UEFI System Utilities. During POST, press **F9**.
2. From the System Utilities screen, select System Configuration > BIOS/Platform Configuration (RBSU) > Date and Time.
3. Select a setting, and then complete your entry.
 - Date (mm-dd-yyyy)—Enter the date in a month-day-year (mm-dd-yyyy) format.
 - Time (hh:mm:ss)—Enter the time in a 24-hour format (hh:mm:ss) format.
 - Hour Format—Select either a 12- or 24-hours format. (This setting is supported in Gen10 Plus and later servers.)
 - Time Format
 - Coordinated Universal Time (UTC)—Calculates the time stored in the hardware real-time clock (RTC) from the associated Time Zone setting.
 - Local Time—Removes the use of the Time Zone setting. This option is useful for addressing interaction issues in Windows

operating systems set in legacy BIOS boot mode.

- Time Zone—Select the time zone for the system.
- Daylight Savings Time
 - Enabled—Adjusts the local time displayed by one hour for Daylight Savings Time.
 - Disabled—Does not adjust the local time displayed for Daylight Savings Time.

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

The server automatically reboots.

Troubleshooting

Subtopics

[Troubleshooting resources](#)

Troubleshooting resources

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

- Troubleshooting Guide for HPE ProLiant Gen11 servers provides procedures for resolving common problems and comprehensive courses of action for fault isolation and identification, issue resolution, and software maintenance.

<https://www.hpe.com/info/gen11-troubleshooting>

- Integrated Management Log Messages for HPE ProLiant Gen10, Gen10 Plus, and Gen11 servers and HPE Synergy provides IML messages and associated troubleshooting information to resolve critical and cautionary IML events.

<https://www.hpe.com/info/Troubleshooting-IML-en>

Component identification

Subtopics

[Front panel components](#)

[Front panel LEDs and buttons](#)

[Rear panel components](#)

[Rear panel LEDs](#)

[System board components](#)

[Drive boxes and numbering](#)

[Hot-plug fans](#)

[HPE Basic Drive LED definitions](#)

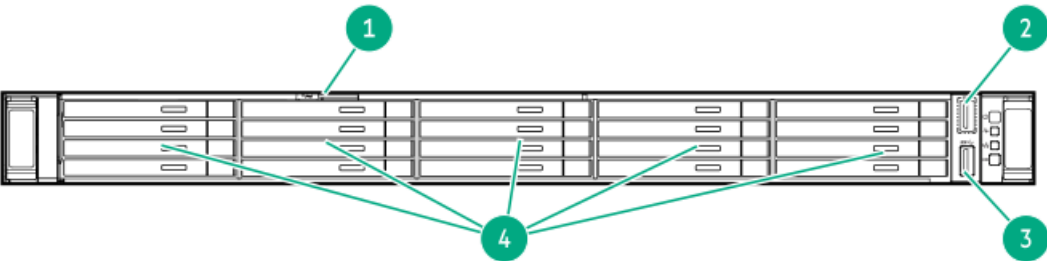
[EDSFF SSD LED definitions](#)

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

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

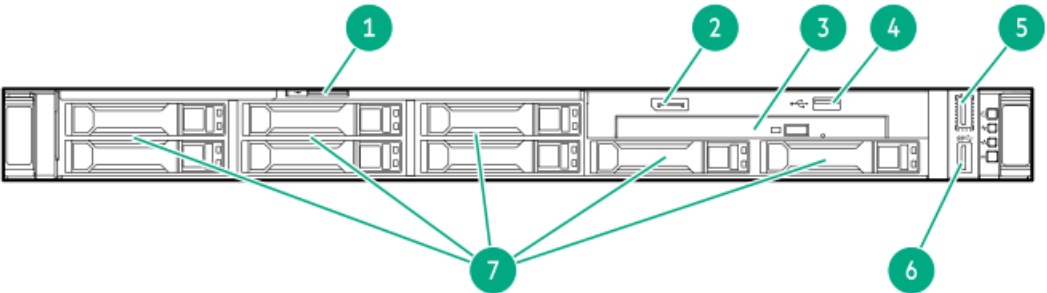
Front panel components

EDSFF



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

SFF

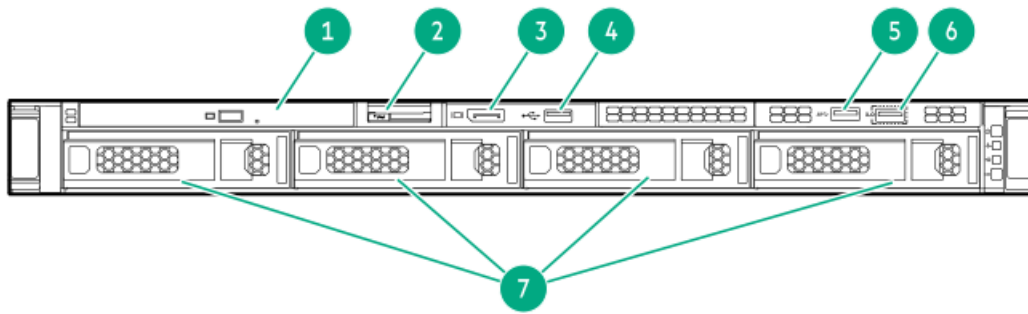


Item	Description
1	Serial number/iLO information pull tab
2	Display port (optional) ¹
3	Optical drive (optional) ¹
4	USB 2.0 port (optional) ¹
5	iLO Service Port ²
6	USB 3.2 Gen 1 port
7	Drive bays

¹ This option can be replaced by 2SFF drive bays.

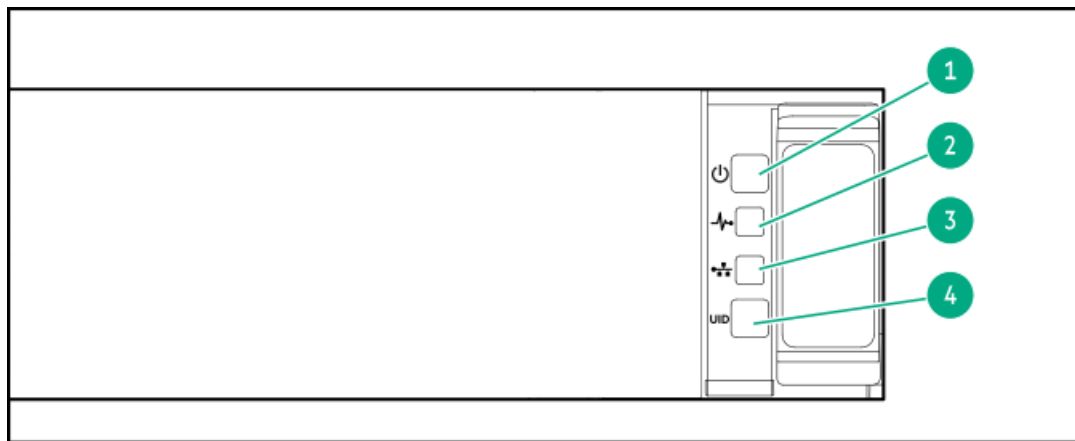
² The operating system does not recognize this port as a USB port.

LFF



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

Front panel LEDs and buttons



Item	Description	Status
1	Power On/Standby button and system power LED ¹	Solid green = System on Flashing green = Performing power on sequence Solid amber = System in standby Off = No power present ¹
2	Health LED ¹	Solid green = Normal Flashing green = iLO is rebooting. Flashing amber = System degraded Flashing red = System critical ²
3	NIC status LED ¹	Solid green = Link to network Flashing green = Network active Off = No network activity
4	UID button/LED ³	Solid blue = Activated Flashing blue: • 1 Hz = Remote management or firmware upgrade in progress • 4 Hz = iLO manual reboot sequence initiated • 8 Hz = iLO manual reboot sequence in progress - Off = Deactivated

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

Subtopics

[UID button functionality](#)

[Front panel LED power fault codes](#)

[Systems Insight Display LEDs](#)

[Systems Insight Display combined LED descriptions](#)

UID button functionality

The UID button can be used to identify a specific server in a rack or display the Server Health Summary when the server will not power on. For more information, see the latest HPE iLO User Guide on the [Hewlett Packard Enterprise website](#).

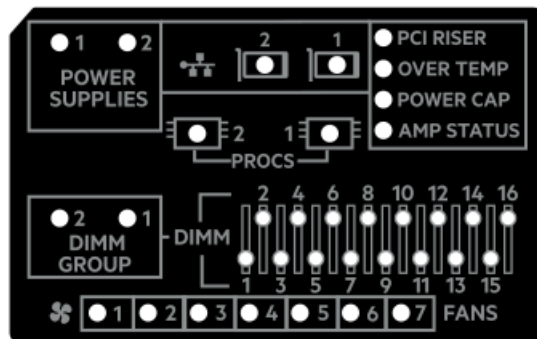
Front panel LED power fault codes

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

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

Systems Insight Display LEDs

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



Description	Status
Processor LEDs	Off = Normal Amber = Failed processor
DIMM LEDs	Off = Normal Amber = Failed DIMM or configuration issue
DIMM group LEDs	Off = Normal Amber = Failed DIMM group or configuration issue
Fan LEDs	Off = Normal Amber = Failed fan or missing fan
NIC LEDs ¹	Off = No link to network Solid green = Network link Flashing green = Network link with activity If power is off, the front panel LED is not active. For status, see Rear panel LEDs .
Power supply LEDs	Off = Normal Solid amber = Power subsystem degraded, power supply failure, or input power lost.
PCI riser LED	Off = Normal Amber = Incorrectly installed PCI riser cage
Over temp LED	Off = Normal Amber = High system temperature detected
Power cap LED	Off = System is in standby, or no cap is set. Solid green = Power cap applied
AMP ² Status LED	Off = AMP modes disabled Solid green = AMP mode enabled Solid amber = Failover Flashing amber = Invalid configuration

¹ Embedded NIC ports are not equipped on the server. NIC LEDs on the Systems Insight Display will flash based on the network adapter port activity. In the case of a dual-port adapters, only NIC LED 1 and 2 will illuminate to correspond with the activity of the respective network ports.

² To configure Advanced Memory Protection, see the latest [UEFI System Utilities user guide](#).

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

Systems Insight Display combined LED descriptions

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

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

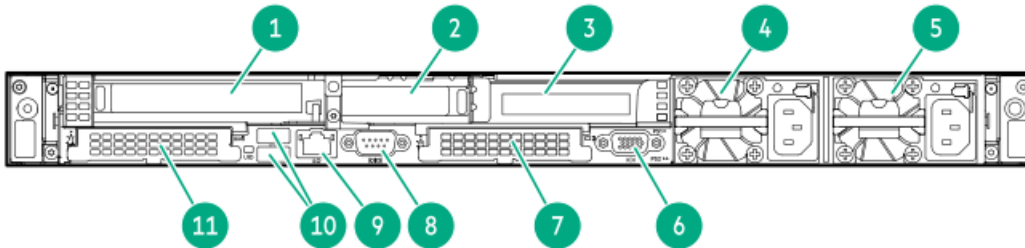
Systems Insight Display LED and color	Health LED	System power LED	Status
Processor (amber)	Red	Amber	One or more of the following conditions might exist: - Processor in socket X has failed. - Processor X is not installed in the socket. - Processor X is unsupported. - ROM detects a failed processor during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



IMPORTANT

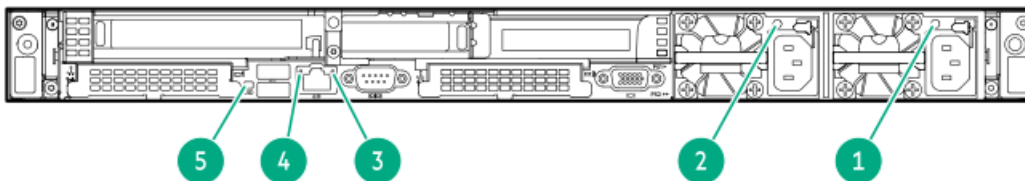
If more than one DIMM slot LED is illuminated, further troubleshooting is required. Test each bank of DIMMs by removing all other DIMMs. Isolate the failed DIMM by replacing each DIMM in a bank with a known working DIMM.

Rear panel components



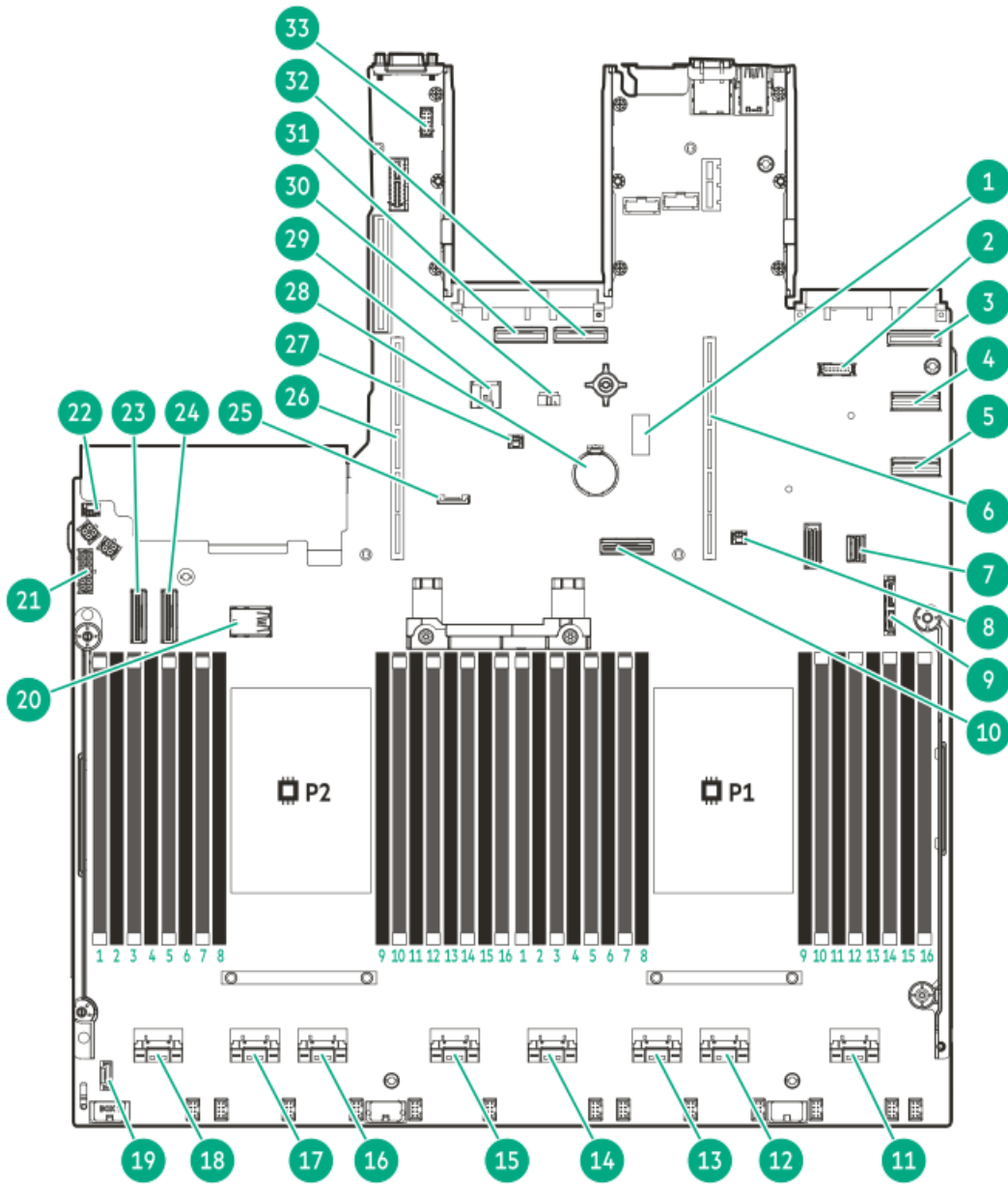
Item	Description
1	Slot 1 PCIe5
2	Slot 2 PCIe5
3	Slot 3 PCIe5 (optional - requires second processor)
4	Power supply 2 (PS2)
5	Power supply 1 (PS1)
6	Video (VGA) port
7	OCP 3.0 slot 15
8	Serial port (optional)
9	iLO Management Port
10	USB 3.2 Gen 1 ports
11	OCP 3.0 slot 14

Rear panel LEDs



Item	Description	Status
1	Power supply 1 LED	Solid green = Normal Off = One or more of the following conditions exists: • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit.
2	Power supply 2 LED	Solid green = Normal Off = One or more of the following conditions exists: • AC power unavailable • Power supply failed • Power supply in standby mode • Power supply exceeded current limit.
3	iLO/standard NIC activity LED	Solid green = Activity exists. Flashing green = Activity exists. Off = No activity exists.
4	iLO/standard NIC link LED	Solid green = Link exists. Off = No link exists.
5	UID LED	Solid blue = Identification is activated. Flashing blue = System is being managed remotely. Off = Identification is deactivated.

System board components



Item	Description
1	System maintenance switch
2	Front DisplayPort/USB 2.0 connector
3	OCP slot 14 port 2
4	LP SlimSAS port 2
5	LP SlimSAS port 1
6	Primary riser connector
7	Front I/O connector & USB 3.2 Gen 1 port
8	OCP slot 14 backup power connector
9	SATA optical port
10	Socket 1 MCIO port 1
11-18	x8 SlimSAS ports ¹
19	Cooling module connector
20	Internal USB ports ²
21	Drive backplane power connector
22	Chassis Intrusion Detection switch connector
23	Socket 2 MCIO connector 2
24	Socket 2 MCIO connector 1
25	SID connector
26	Secondary riser connector
27	OCP slot 15 backup power connector
28	System battery
29	Energy pack connector
30	NS204i-u power connector
31	OCP slot 15 port 1
32	OCP slot 15 port 2
33	Serial port connector

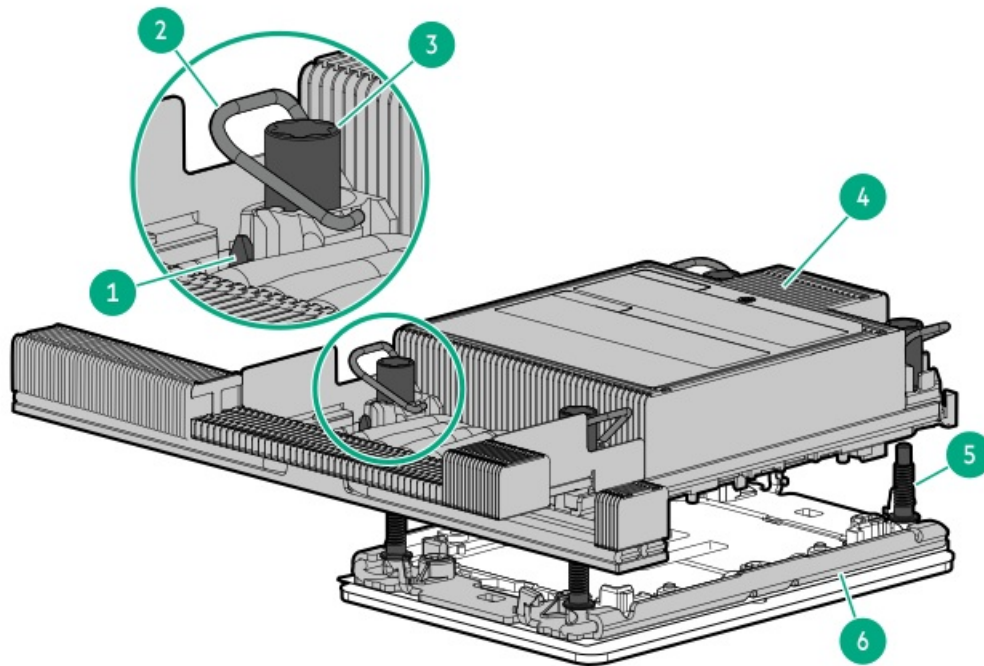
- ¹ The SlimSAS ports are numbered 1B-4B, 1A-4A from left to right. B is for processor 2 and A is for processor 1.
- ² Top = USB 3.2 Gen 1 port, Bottom = USB 2.0 port

Subtopics

[Heatsink and processor socket components](#)
[Closed-loop liquid cooling heatsink components](#)
[System maintenance switch descriptions](#)
[DIMM label identification](#)
[DIMM slot locations](#)

Heatsink and processor socket components

A high-performance heatsink is shown. Your heatsink might look different.



Item	Description
1	Processor carrier latches
2	Heatsink latches
3	Heatsink nuts
4	Processor-heatsink module ¹
5	Alignment screws
6	Bolster plate

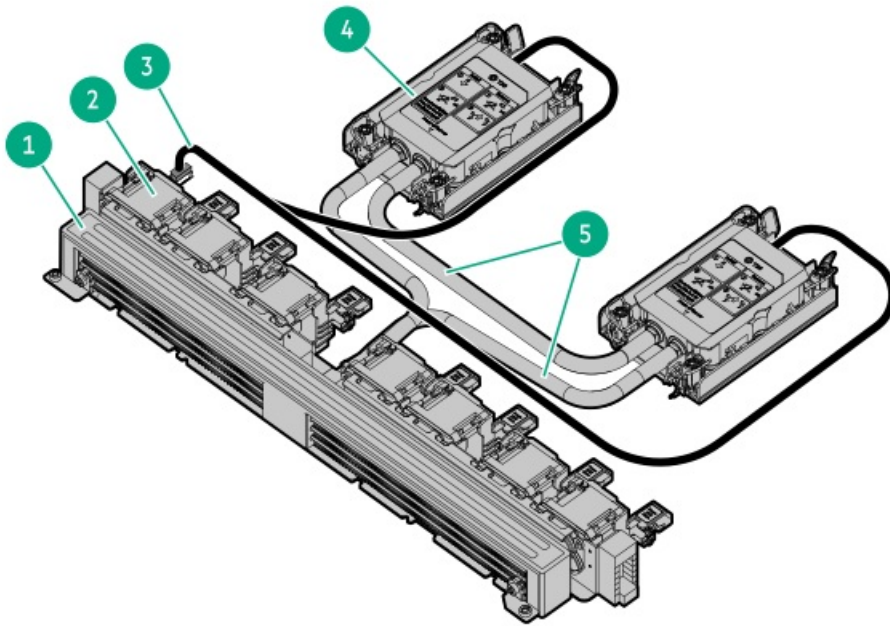
¹ This module consists of the heatsink attached to the processor that is already secured in its carrier.

Closed-loop liquid cooling heatsink components



IMPORTANT

- Maximum Usage Limitation Reminder:** The closed-loop liquid cooling heatsink used in this server is subject to a Maximum Usage Limitation not to exceed five (5) years of operation. After reaching this five (5) years limit, it is required that the liquid cooling heatsink be replaced. Parts and components that Hewlett Packard Enterprise determines have reached or exceeded their Maximum Usage Limitation will not be provided, repaired, or replaced under a warranty or service contract. Contact your local HPE sales representative for additional information.
- The tubes of the liquid cooling heatsink are prefilled with coolant. In the unlikely event of a spill or leak of this server coolant, follow the recommended procedure in Appendix I: Server coolant spill response of the server maintenance guide:
<https://www.hpe.com/info/dl360gen11-msg>



Item	Description
1	Radiator
2	Fans
3	Signal cable
4	Pump-cold plate ¹
5	Coolant tubes

¹ The liquid cooling heatsink has two pumps for redundancy.

System maintenance switch descriptions

Position	Default	Function
S1 ¹	Off	- Off—iLO security is enabled. - On—iLO security is disabled.
S2	Off	Reserved
S3	Off	Reserved
S4	Off	Reserved
S5 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	Off	Reserved
S9	Off	Reserved
S10	Off	Reserved
S11	Off	Reserved
S12	Off	Reserved

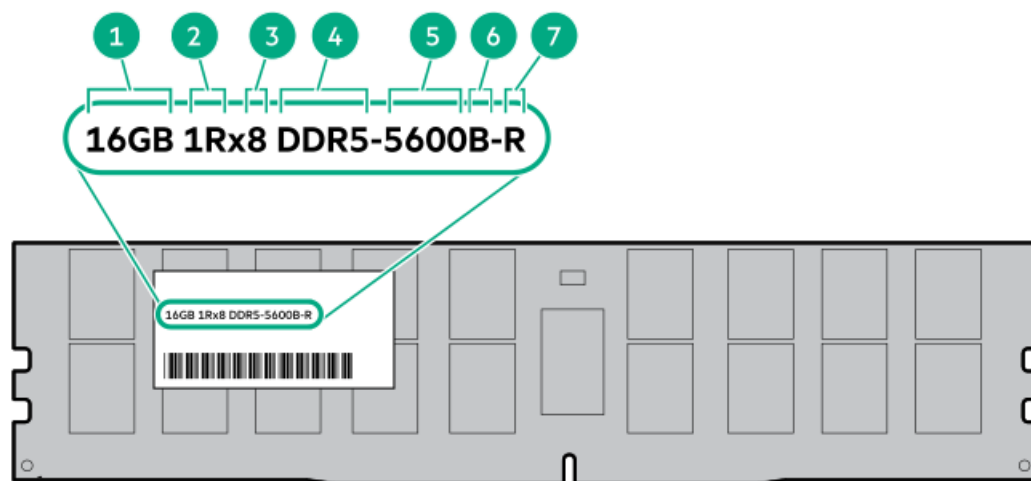
- ¹ To access the redundant ROM, set S1, S5, and S6 to On.
- ² When the system maintenance switch position 6 is set to the On position, the system is prepared to restore all configuration settings to their manufacturing defaults.
- ³ When the system maintenance switch position 6 is set to the On position and Secure Boot is enabled, some configurations cannot be restored. For more information, see [Configuring the server](#).

DIMM label identification

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

For more information about product features, specifications, options, configurations, and compatibility, see the [HPE DDR5 SmartMemory QuickSpecs](#):

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

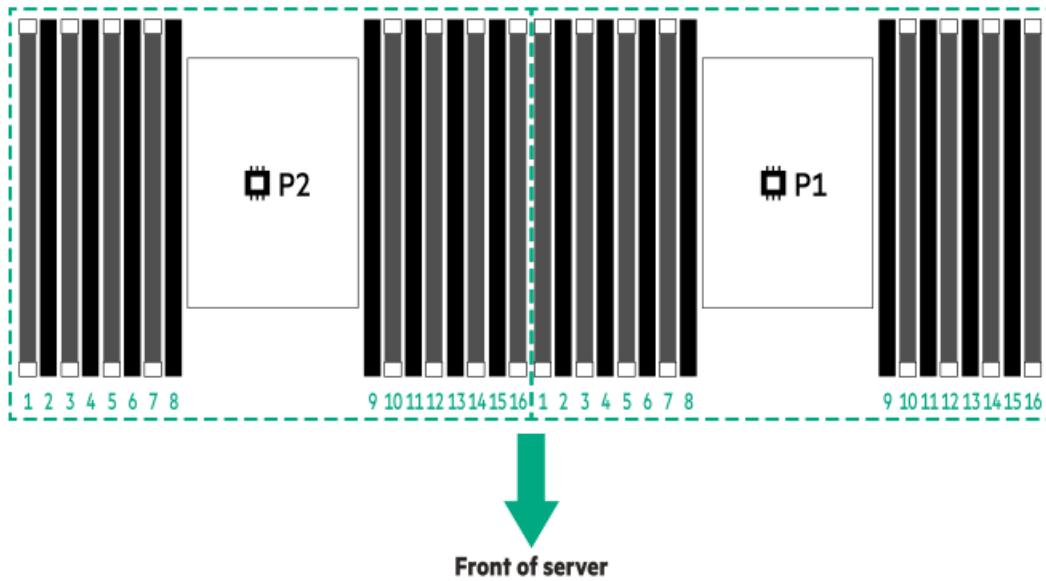


Item	Description	Example
1	Capacity ¹	16 GB
		32 GB
		64 GB
		128 GB
		256 GB
2	Rank	1R—Single rank
		2R—Dual rank
		4R—Quad rank
		8R—Octal rank
3	Data width on DRAM	x4—4-bit
		x8—8-bit
4	Memory generation	PC5—DDR5
5	Maximum memory speed ¹	4800 MT/s
		5600 MT/s
6	CAS latency	B—42-42-42
		B—50-42-42 (for 128 GB and 256 GB capacities)
7	DIMM type	E—UDIMM (unbuffered with ECC)
		R—RDIMM (registered)

¹ The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.

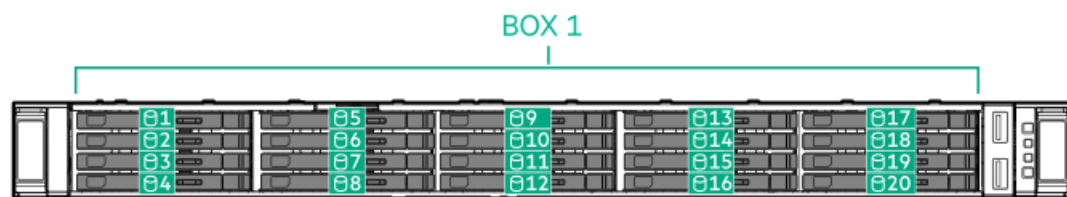
DIMM slot locations

DIMM slots are numbered sequentially (1 through 16) for each processor.



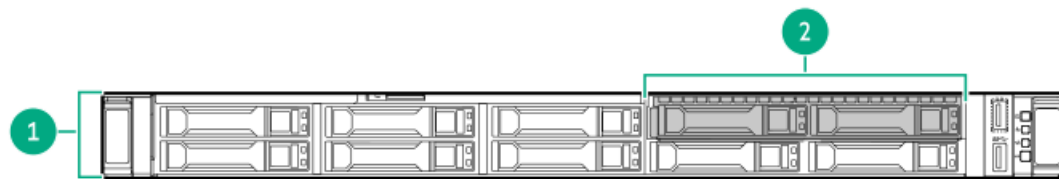
Drive boxes and numbering

E3.S drive bay numbering



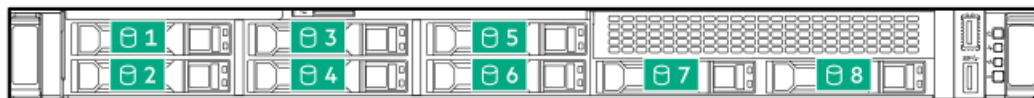
In the E3.S drive configuration, all drives belong to the same box 1.

SFF drive boxes



Item	Description
1	Box 1
2	Box 2

8 SFF drive bay numbering

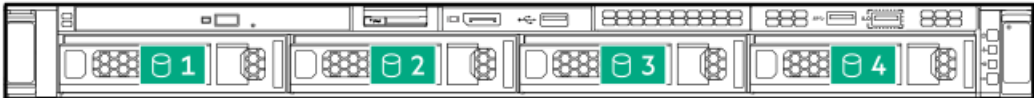


8 SFF + 2 SFF drive bay numbering



4 LFF drive box and bays

All LFF drives are in box 1.



Hot-plug fans



CAUTION

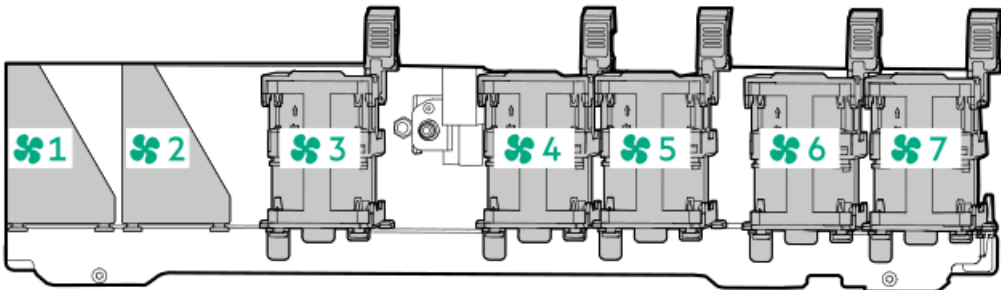
To avoid damage to server components, fan blanks must be installed in fan bays 1 and 2 in a single-processor configuration.



CAUTION

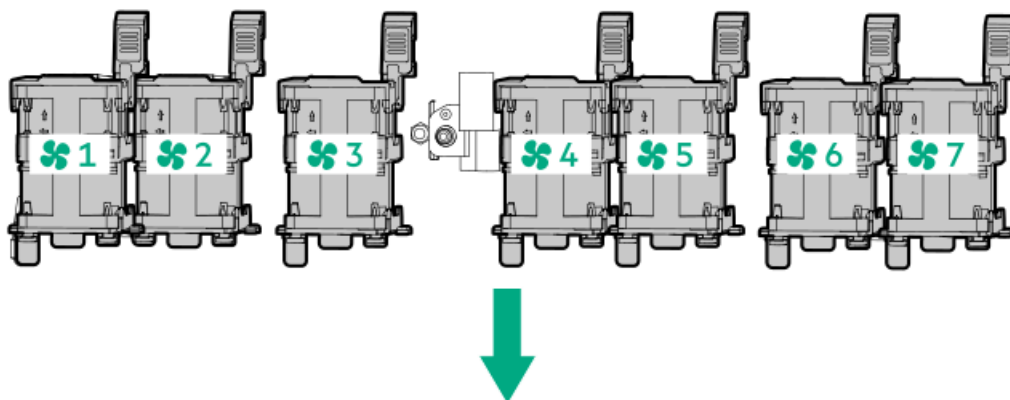
To avoid damage to the equipment, do not operate the server for extended periods of time if the server does not have the optimal number of fans installed. Although the server might boot, Hewlett Packard Enterprise does not recommend operating the server without the required fans installed and operating.

One-processor configuration



Front of server

Fan bay 1	Fan bay 2	Fan bay 3	Fan bay 4	Fan bay 5	Fan bay 6	Fan bay 7
Fan blank	Fan blank	Fan	Fan	Fan	Fan	Fan



Fan bay 1 Fan bay 2 Fan bay 3 Fan bay 4 Fan bay 5 Fan bay 6 Fan bay 7

Fan Fan Fan Fan Fan Fan Fan

The server operates at variable fan speeds. The fans operate at a minimum speed until a temperature change requires the fan speed to increase and cool the server. If a single rotor fan fails, redundancy is lost. If two single rotor fans or one dual rotor fan fails, the server initiates a shutdown. The server shuts down during the following temperature-related scenarios:

- At POST and in the OS, iLO performs an orderly shutdown if a cautionary temperature level is detected. If the server hardware detects a critical temperature level before an orderly shutdown occurs, the server performs an immediate shutdown.
- When the Thermal Shutdown feature is disabled in the BIOS/Platform Configuration (RBSU), iLO does not perform an orderly shutdown when a cautionary temperature level is detected. Disabling this feature does not disable the server hardware from performing an immediate shutdown when a critical temperature level is detected.



CAUTION

A thermal event can damage server components when the Thermal Shutdown feature is disabled in the BIOS/Platform Configuration (RBSU).

High-performance fans are required for ASHRAE-compliant configurations. For more information on ASHRAE, see the Hewlett Packard Enterprise website <https://www.hpe.com/servers/ASHRAE>.

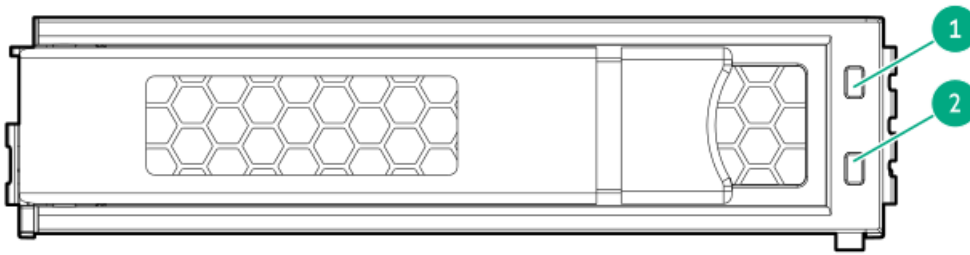
HPE Basic Drive LED definitions

The HPE Basic drive carrier has the following LEDs:

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

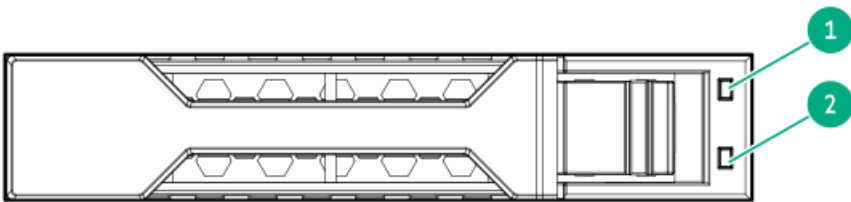
LFF low-profile drive carrier

The LFF low-profile drive carrier supports hot-plug SAS or SATA.



SFF basic drive carrier

The SFF basic drive carrier supports hot-plug SAS, SATA, or U.3 NVMe.



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

EDSFF SSD LED definitions

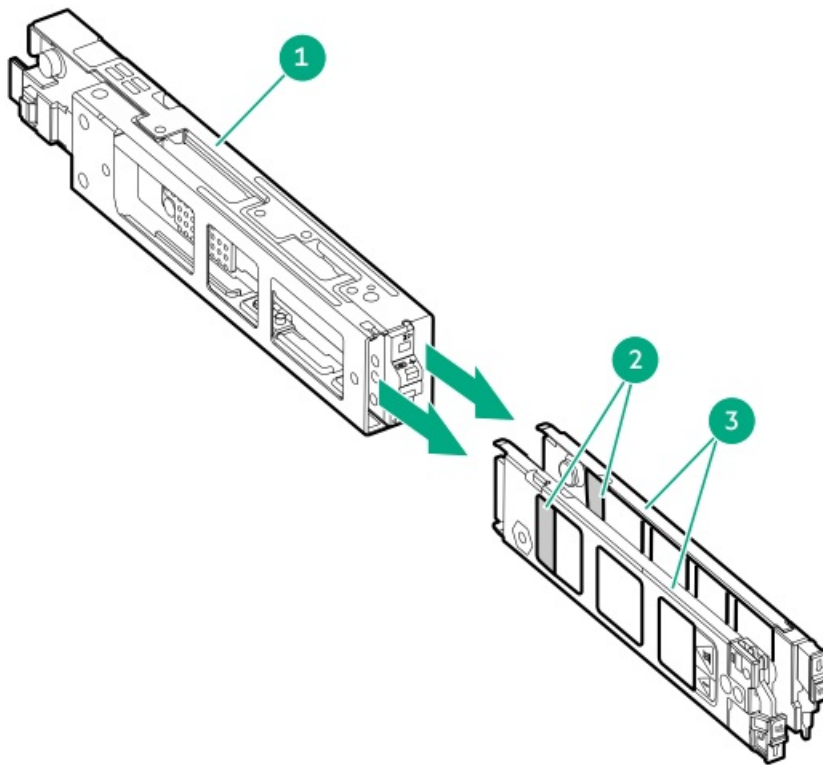
This server supports hot-plug Enterprise and Data Center Standard Form Factor (EDSFF) drives. Specifically, E3.S PCIe5 NVMe SSDs. The EDSFF drive carrier has two LEDs:

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



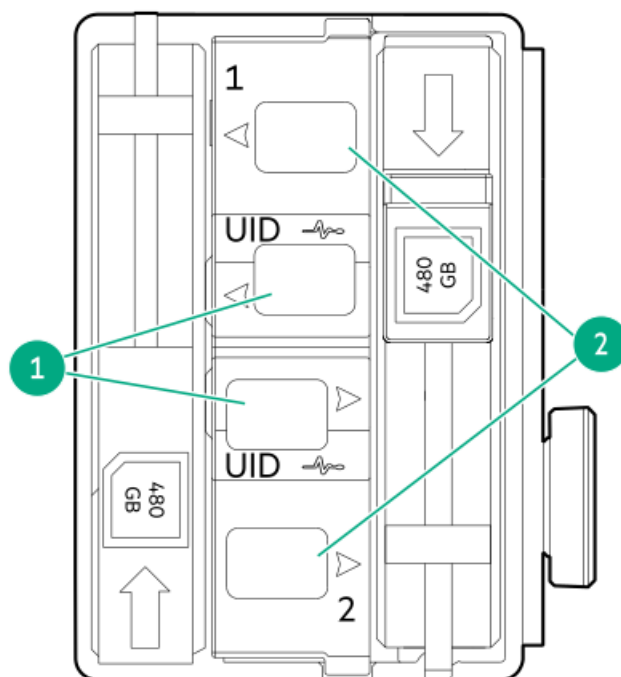
Item	LED	State	Definition
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		Flashing amber (1 flash per second)	A predictive failure alert has been received for this drive. Replace the drive as soon as possible.
		Off	The drive is operating normally and not being identified by a management application.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

HPE NS204i-u Boot Device components



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

HPE NS204i-u Boot Device LED definitions



Item	LED	Status	Definition
1	Fault/Locate	Solid amber	Drive has failed, unsupported, or invalid.
		Solid blue	Drive is operating normally and being identified by a management application.
		Flashing amber/blue (1 flash per second)	Drive has failed, or a predictive failure alert is received for the drive. The drive has also been identified by a management application.
		Flashing amber (1 flash per second)	Drive predictive failure alert is received. Replace the drive as soon as possible.
		Off	Drive is operating normally and is not identified by a management application.
2	Online/Activity	Solid green	Drive is online and has no activity.
		Flashing green (1 flash per second)	Drive is doing one of the following: - Rebuilding or performing a RAID - Erasing
		Flashing green (4 flashes per second)	Drive is operating normally and has activity.
		Off	Drive is not configured by a RAID controller or is a spare drive.

Cabling

Subtopics

[Cabling guidelines](#)

[Cabling diagrams](#)

Cabling guidelines

Observe the following:

- For cable option kits, see the product QuickSpecs.
- For cable spare part numbers, see the Illustrated parts catalog in the maintenance and service guide.
- Some diagrams show alphabetical callouts such as A, B, C, etc. These callouts correspond to labels near the connectors on the cable.
- Some cables have more than one connector, such as a Y-cable, but not all connectors are used.
- The cable colors in the cabling diagrams used in this chapter are for illustration purposes only.
- Observe all guidelines when working with server cables.

Before connecting cables

- Note the port labels on the PCA components. Not all these components are used by all servers:
 - System board ports
 - Drive and power supply backplane ports
 - Expansion board ports (controllers, retimers, adapters, expanders, risers, and similar boards)
- Note the label near each cable connector. This label indicates the destination port for the cable connector.

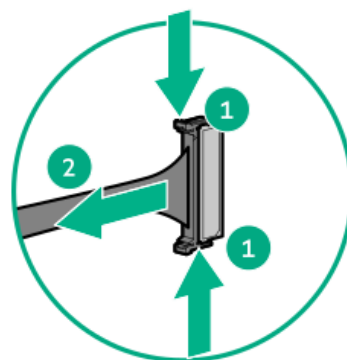
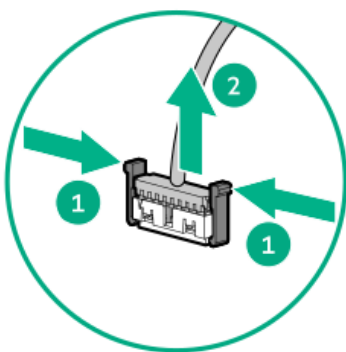
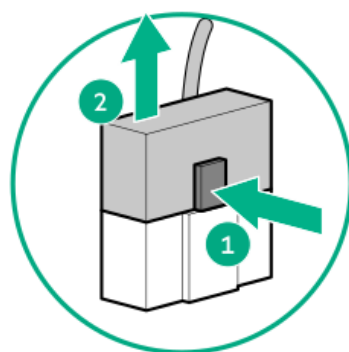
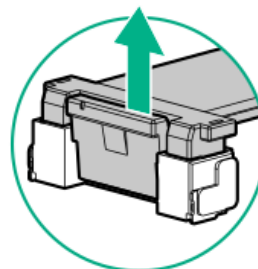
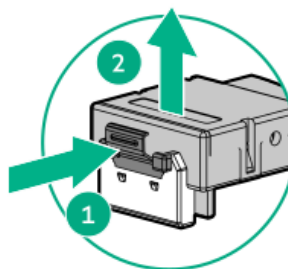
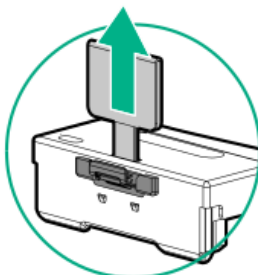
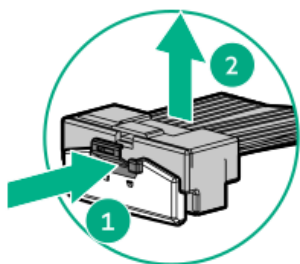
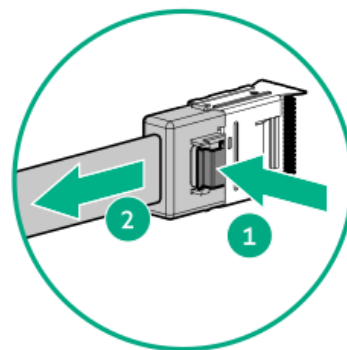
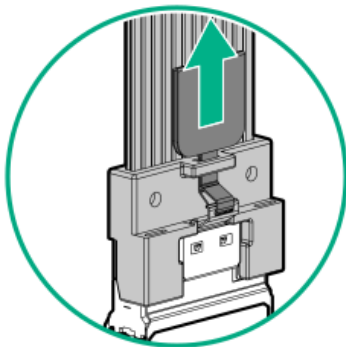
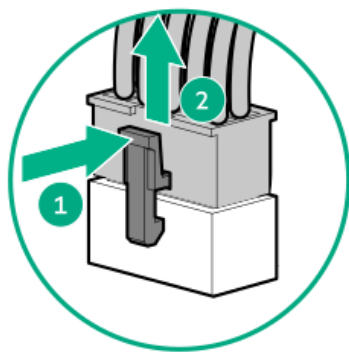
- Some data cables are prebent. Do not unbend or manipulate the cables.
- To prevent mechanical damage or depositing oil that is present on your hands, and other contamination, do not touch the ends of the connectors.

When connecting cables

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

When disconnecting cables

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



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

Cabling diagrams

Observe the following:

Table 1. SFF cables

Component cabling	Cable part number
EDSFF drive backplane cabling	<u>P48965-001</u>
	<u>P48966-001</u>
	<u>P48967-001</u>
	<u>P48968-001</u>
8SFF drive backplane cabling	<u>P43732-001</u>
	<u>P45610-001</u>
	<u>P43730-001</u>
	<u>P43733-001</u>
	<u>P43731-001</u>
	<u>P45612-001</u>
	<u>P45613-001</u>
	<u>P45614-001</u>
	<u>P45615-001</u>
	<u>P45616-001</u>
	<u>P45617-001</u>
	<u>P48960-001</u>
	<u>P48963-001</u>
	<u>P48964-001</u>
2SFF drive backplane cabling	<u>P43737-001</u>
	<u>P43738-001</u>
	<u>P45607-001</u>
	<u>P45611-001</u>
	<u>P45608-001</u>
	<u>P48961-001</u>
OCP bandwidth upgrade cabling	<u>P43734-001</u>
	<u>P43734-001</u>
	<u>P43735-001</u>
	<u>P43736-001</u>

Table 2. LFF cables

Component cabling	Cable part number
4LFF drive backplane cabling	<u>P43728-001</u>
	<u>P48958-001</u>
	<u>P48970-001</u>

Table 3. NS204i cables

Component cabling	Cable part number
NS204i-u boot device cabling	<u>P54087-001</u>
	<u>P54092-001</u>
	<u>P54088-001</u>
	<u>P48956-001</u>

Table 4. Power cables

Component cabling	Cable part number
Power cabling	P43726-001
	P43729-001
	869667-001
Right ear power switch cable	P43727-001
Smart storage battery cabling	P45618-001

Table 5. IO cables

Component cabling	Cable part number
LFF display cable	P45619-001
SFF display cable	P45620-001
Serial cable	P45623-001
Intrusion detection cable	P47751-001
Systems Insight Display cable	P48971-001
LFF Optical Disc Display cable	P45621-001
SFF Optical Disc Display cable	P45622-001

Subtopics

[EDSFF drive backplane cabling](#)

[8 SFF drive backplane cabling](#)

[2 SFF drive backplane cabling](#)

[4 LFF drive backplane cabling](#)

[NS204i-u cabling](#)

[OCP bandwidth enablement](#)

[Power cabling](#)

[IO cabling](#)

[Systems Insight Display cabling](#)

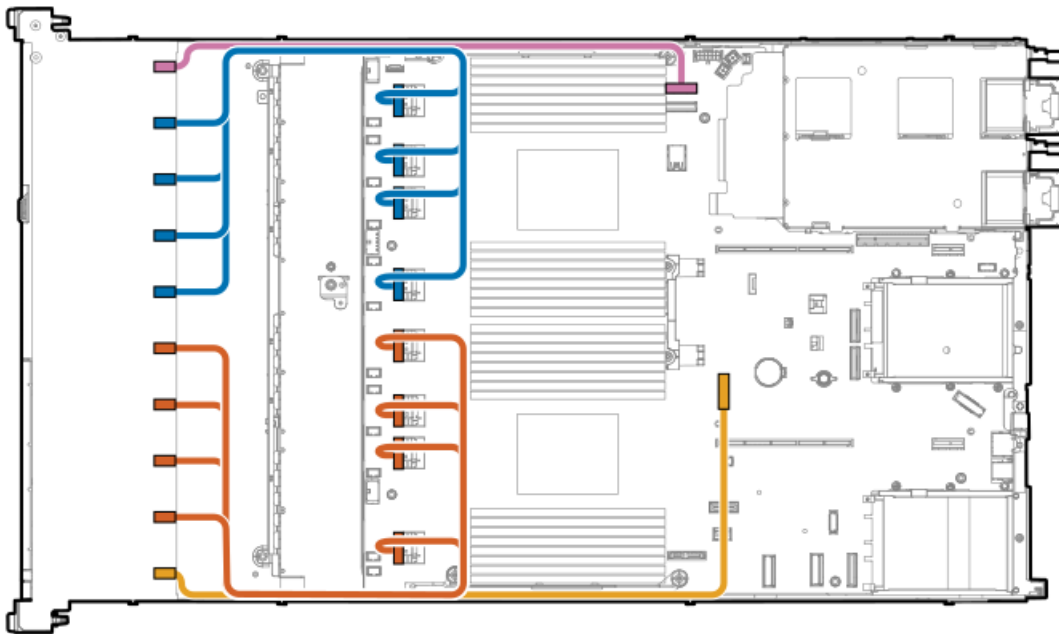
[Intrusion detection switch cabling](#)

[Serial port cabling](#)

[Smart storage battery/capacitor cabling](#)

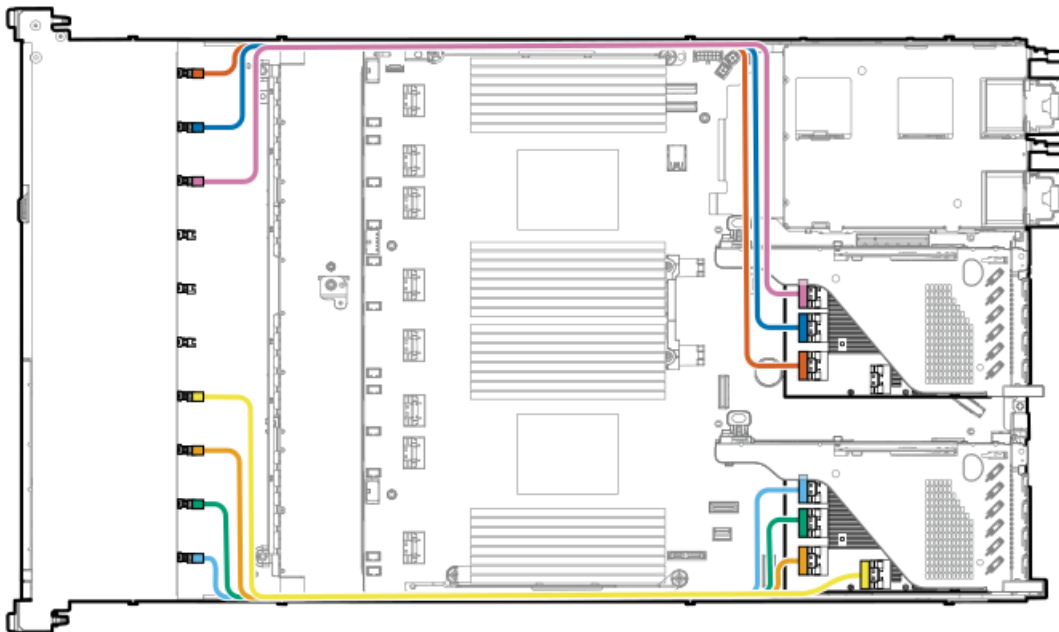
EDSFF drive backplane cabling

20 EDSFF drive configuration to system board



Cable part number	Color	From	To
P48965-001	Pink	Drive backplane	System board
P48966-001	Blue	Drive backplane	System board
P48967-001	Orange	Drive backplane	System board
P48968-001	Yellow	Drive backplane	System board

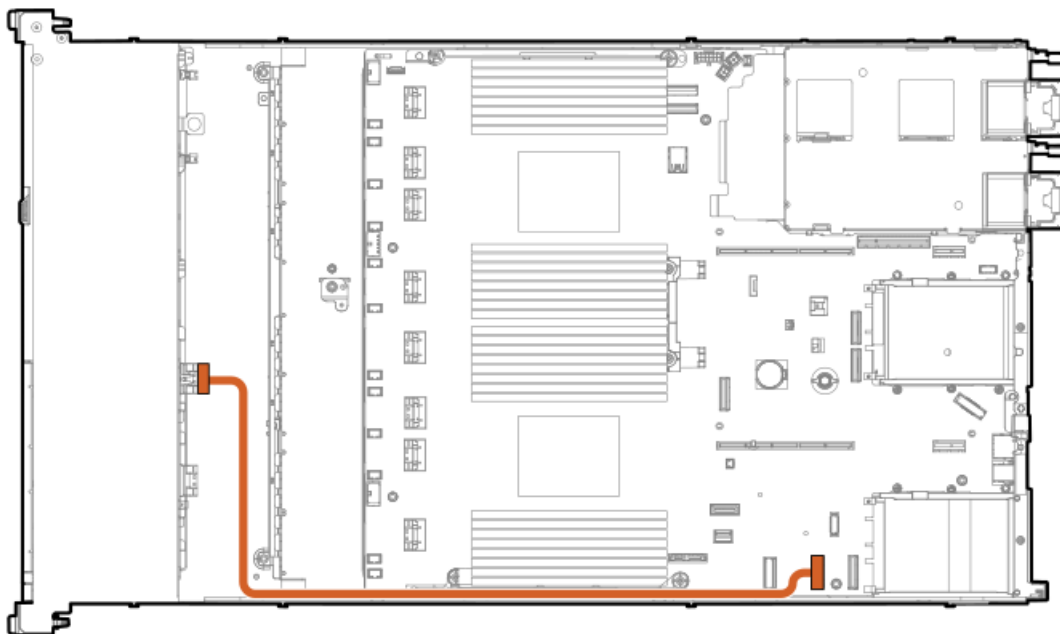
14 EDSFF drive configuration to two SR932i-p controllers



Cable part number	Color	From	To
P70648-001	Dark orange	Drive backplane	SR932i-p port 4
P70648-001	Blue	Drive backplane	SR932i-p port 3
P70648-001	Pink	Drive backplane	SR932i-p port 2
P70647-001	Yellow	Drive backplane	SR932i-p port 4
P70646-001	Light orange	Drive backplane	SR932i-p port 3
P70646-001	Green	Drive backplane	SR932i-p port 2
P70646-001	Light blue	Drive backplane	SR932i-p port 1

8 SFF drive backplane cabling

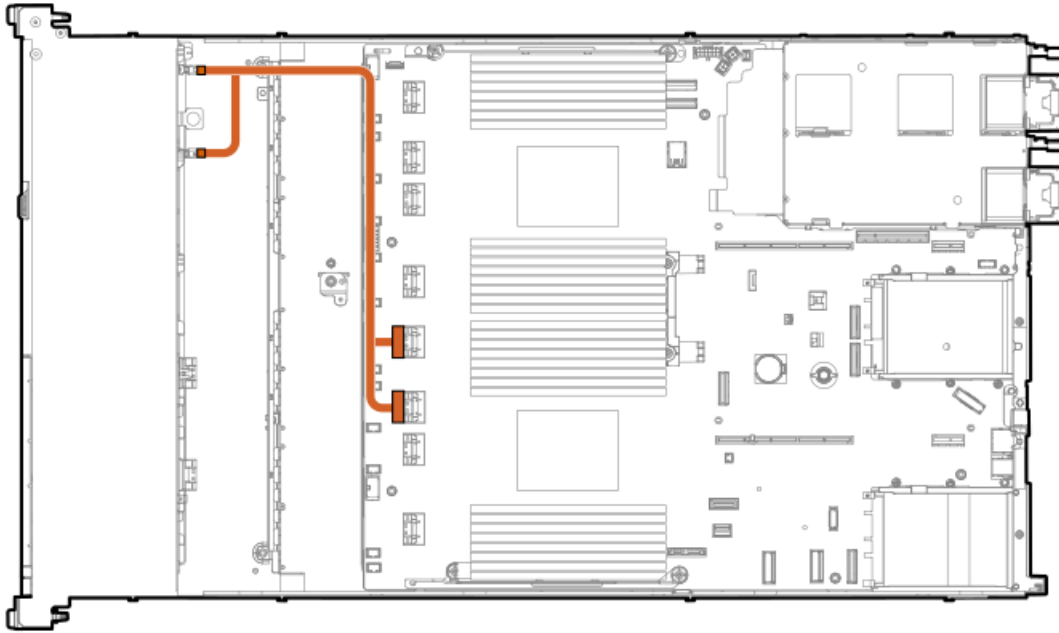
8 SFF box 1: System board



Cable part number	Color	From	To
P43732-001 ¹	Orange	Drive backplane	System board

¹ Option kit: P48895-B21

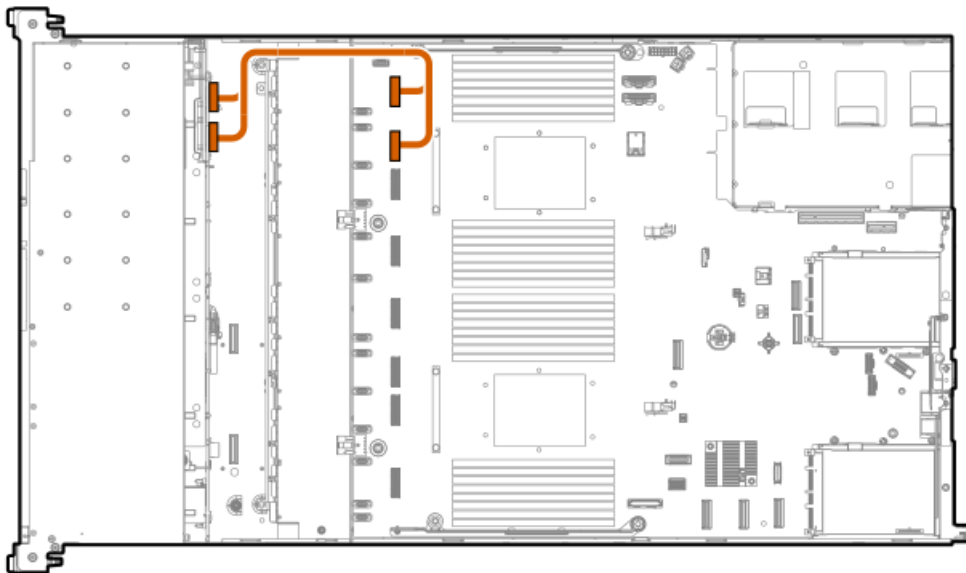
8 SFF box 1: System board (unbalanced, CPU1)



Cable part number	Color	From	To
P43730-001 ¹	Orange	Drive backplane	System board

¹ Option kit: P48897-B21

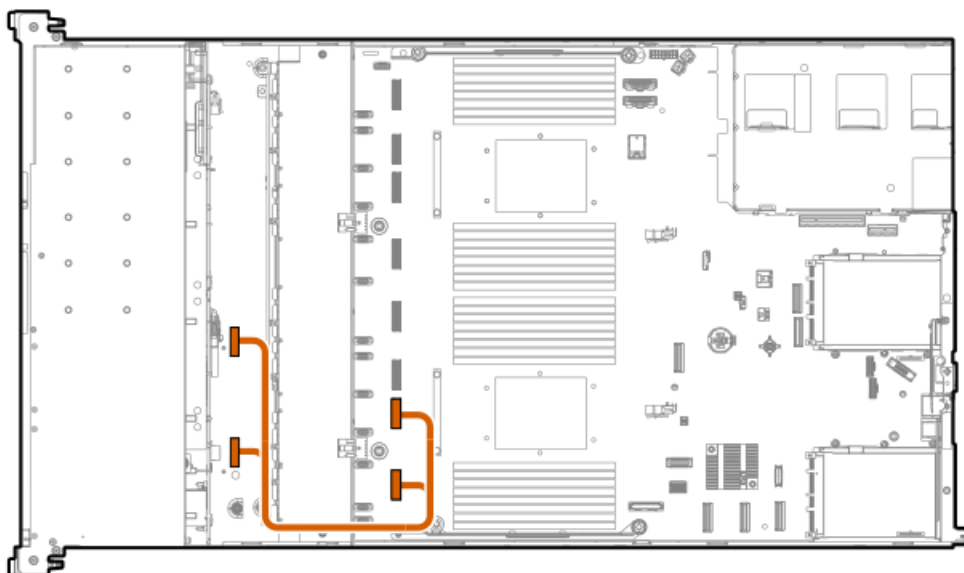
8 SFF box 1: System board (balanced, CPU1/CPU2)



Cable part number	Color	From	To
P43733-001 ¹	Orange	Drive backplane	System board

¹ Option kit: P48896-B21

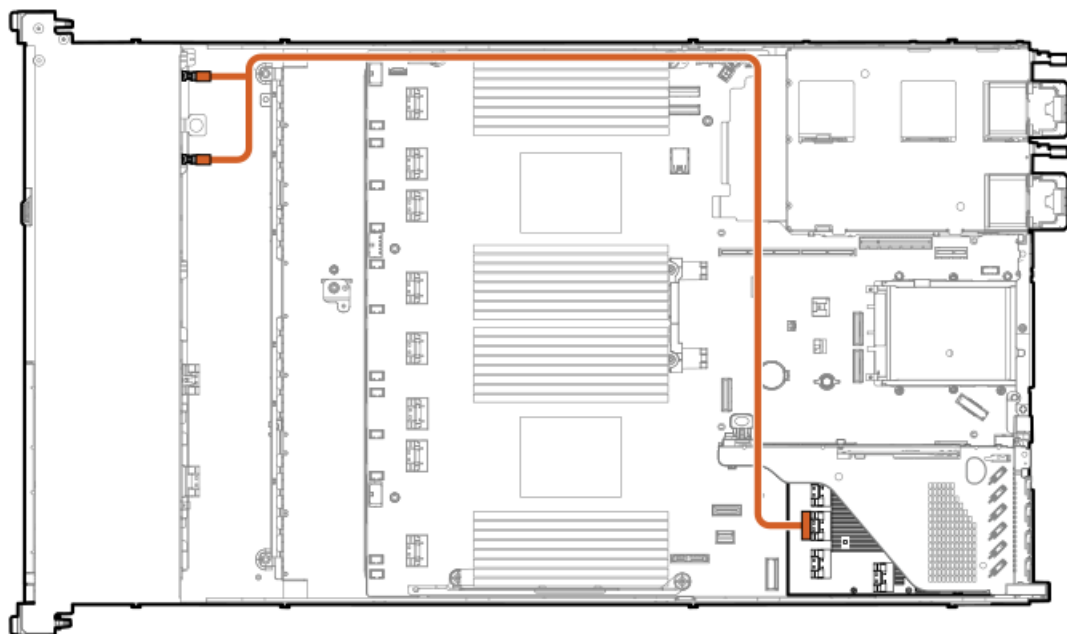
8 SFF box 1: System board



Cable part number	Color	From	To
P43731-001 ¹	Orange	Drive backplane	System board

¹ Option kit: P48896-B21

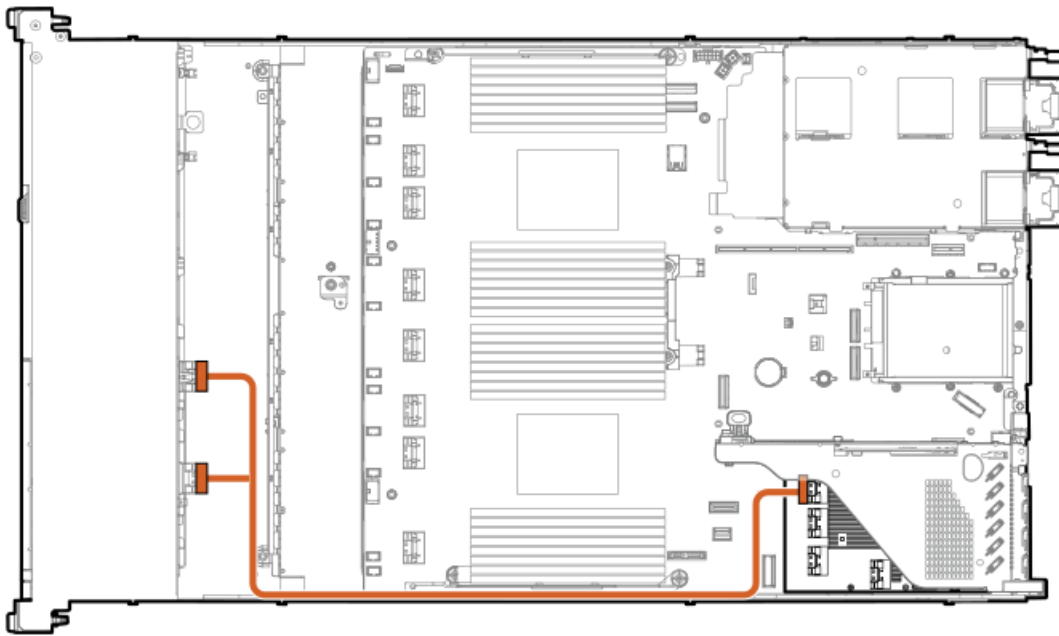
8 SFF box 1: Primary type-p controller



Cable part number	Color	From	To
P45616-001 ¹	Orange	Drive backplane	Primary type-p controller

¹ Option kit: P48909-B21

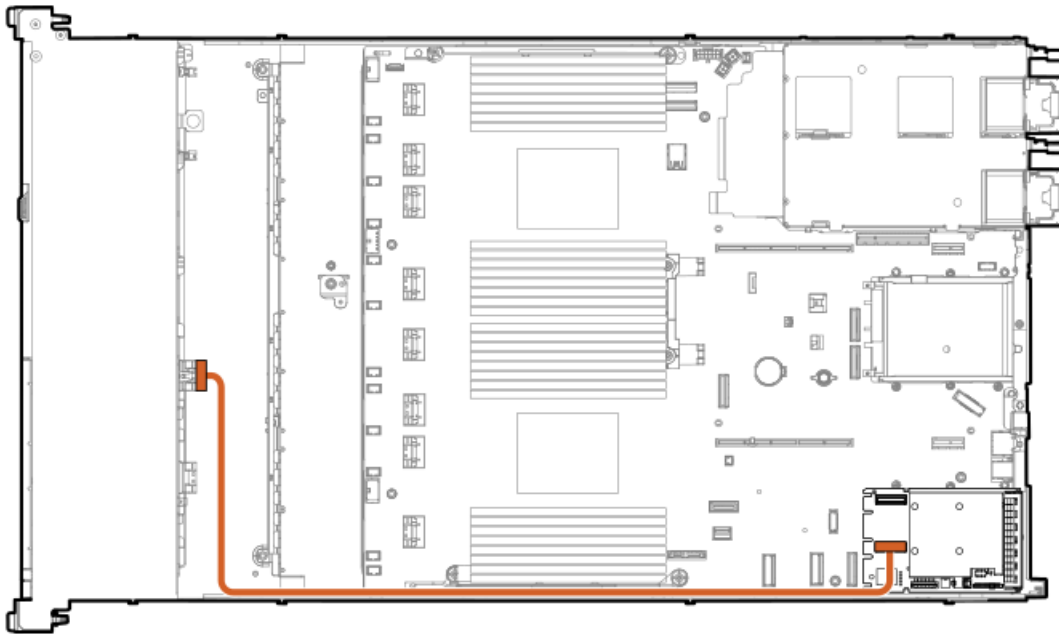
8 SFF box 1: Primary type-p controller



Cable part number	Color	From	To
P45617-001 ¹	Orange	Drive backplane	Primary type-p controller

¹ Option kit: P48909-B21

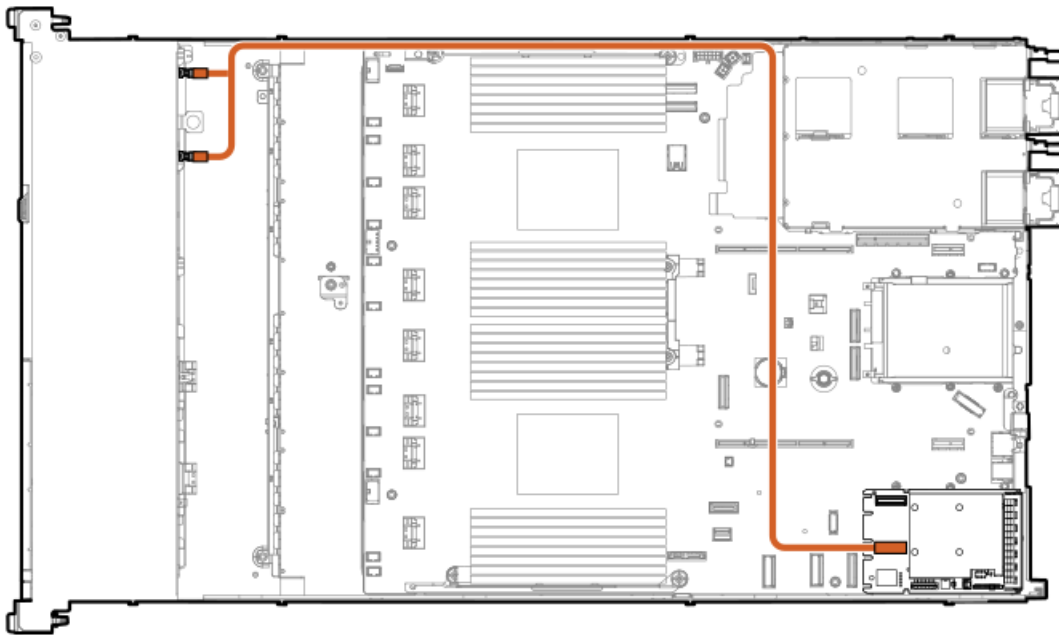
8 SFF box 1: Primary type-o controller



Cable part number	Color	From	To
P48960-001 ¹	Orange	Drive backplane	Primary type-o controller

¹ Option kit: P52416-B21

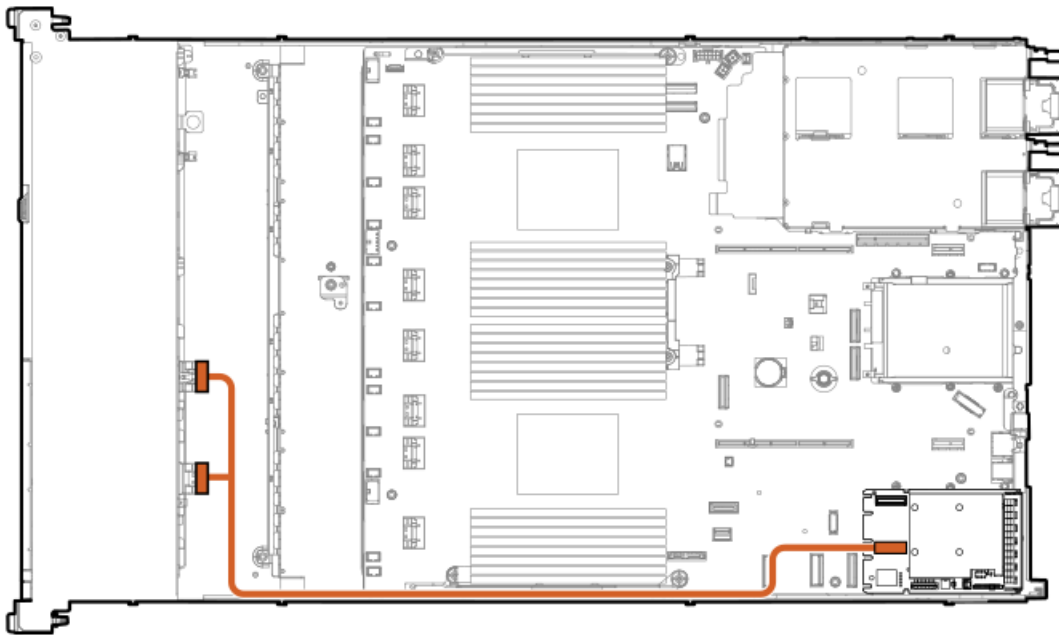
8 SFF box 1: Primary type-o controller



Cable part number	Color	From	To
P48963-001 ¹	Orange	Drive backplane	Primary type-o controller

¹ Option kit: P52416-B21

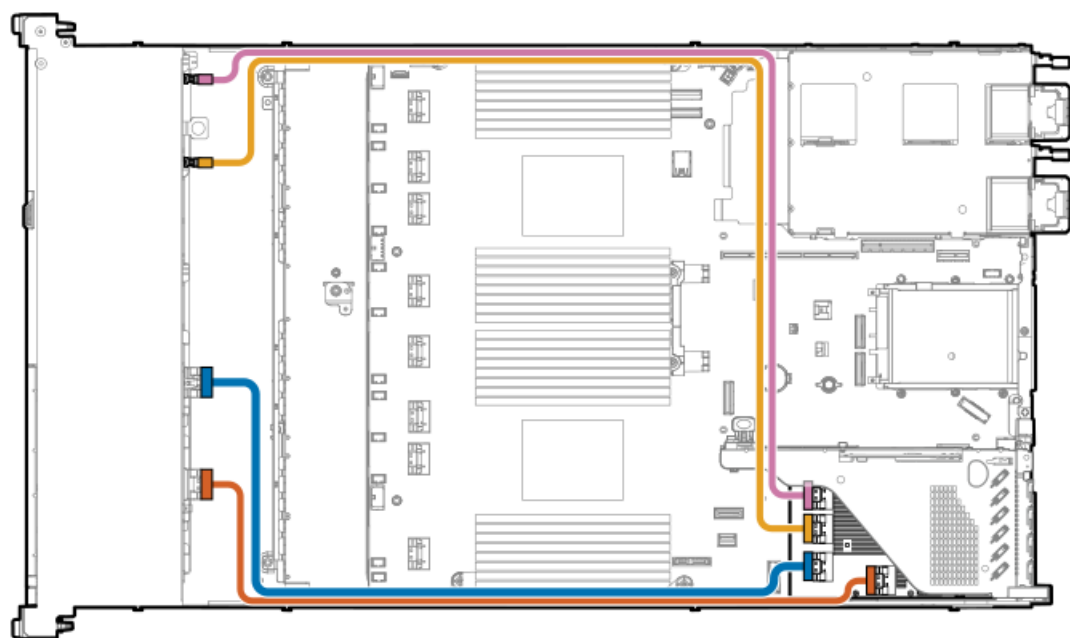
8 SFF box 1: Primary type-o controller



Cable part number	Color	From	To
P48964-001 ¹	Orange	Drive backplane	Primary type-o controller

¹ Option kit: P52416-B21

8 SFF box 1: Primary type-p controller

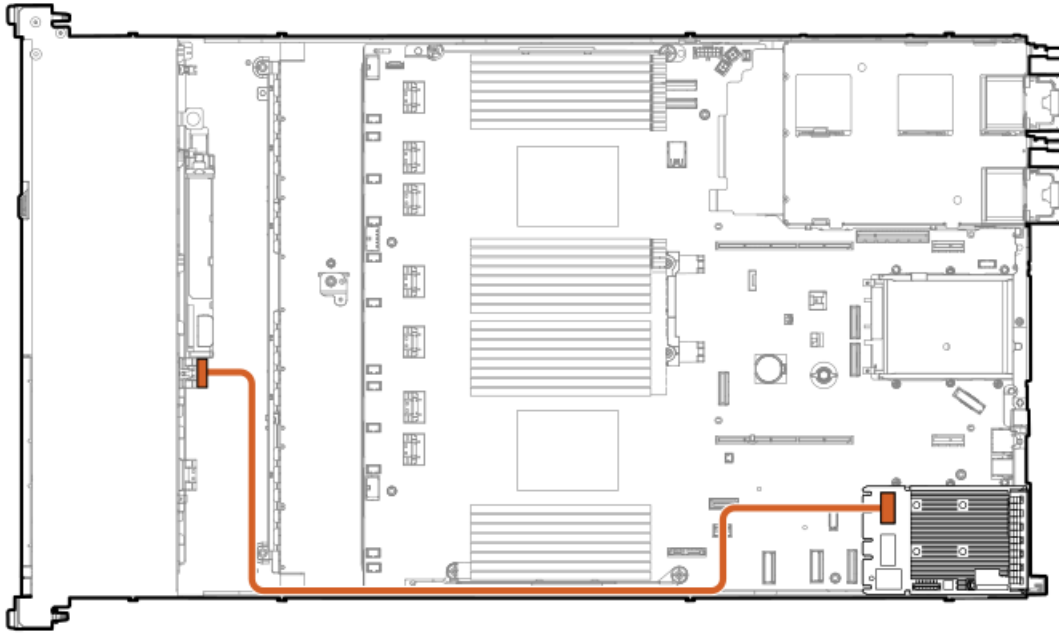


Cable part number	Color	From	To
P45612-001 ¹	Pink	Drive backplane	Primary type-p controller
P45613-001	Yellow	Drive backplane	Primary type-p controller
P45614-001	Blue	Drive backplane	Primary type-p controller
P45615-001	Orange	Drive backplane	Primary type-p controller

¹ Option kit: P48909-B21

8 SFF box 1: Primary type-o controller



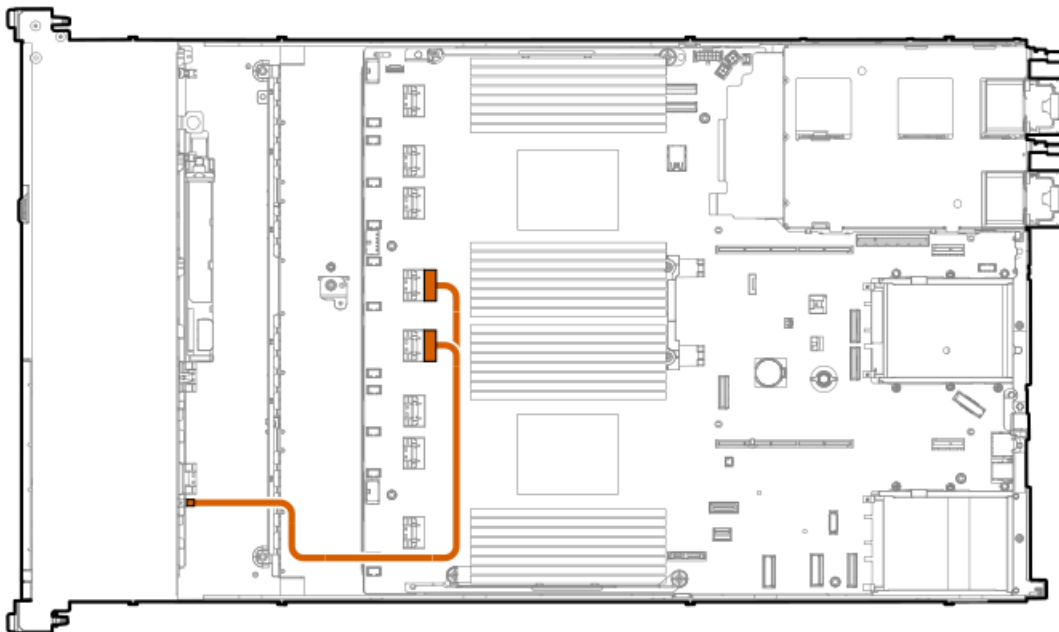


Cable part number	Color	From	To
P45610-001 ¹	Orange	Drive backplane	Primary type-o controller

¹ Option kit: P48909-B21

2 SFF drive backplane cabling

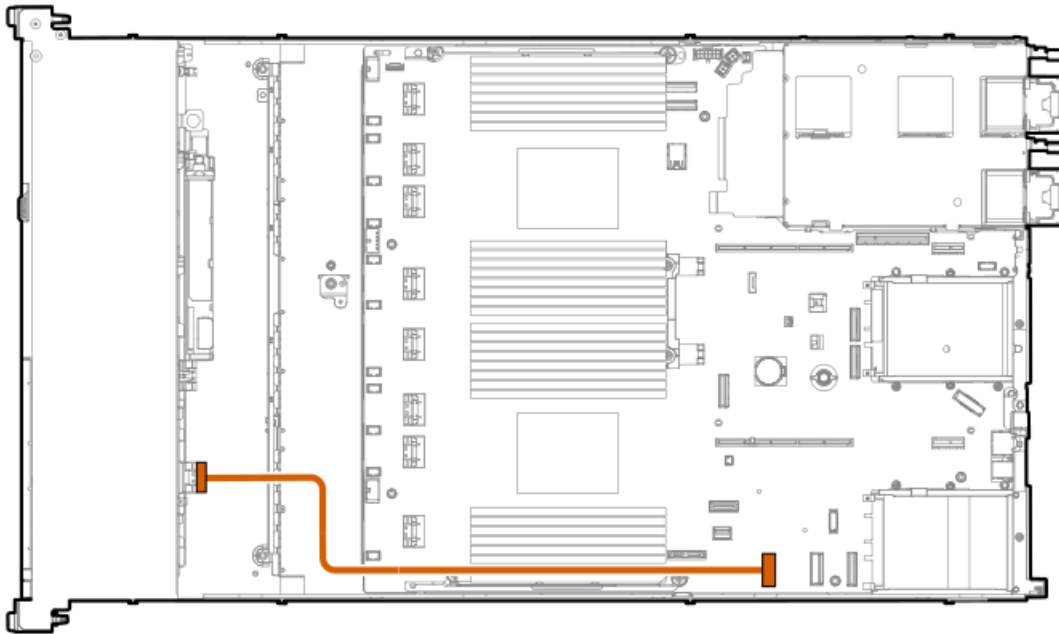
2 SFF side-by-side: System board



Cable part number	Color	From	To
P43737-001 ¹	Orange	2 SFF backplane	System board SlimSAS port

¹ Option kit: P48899-B21

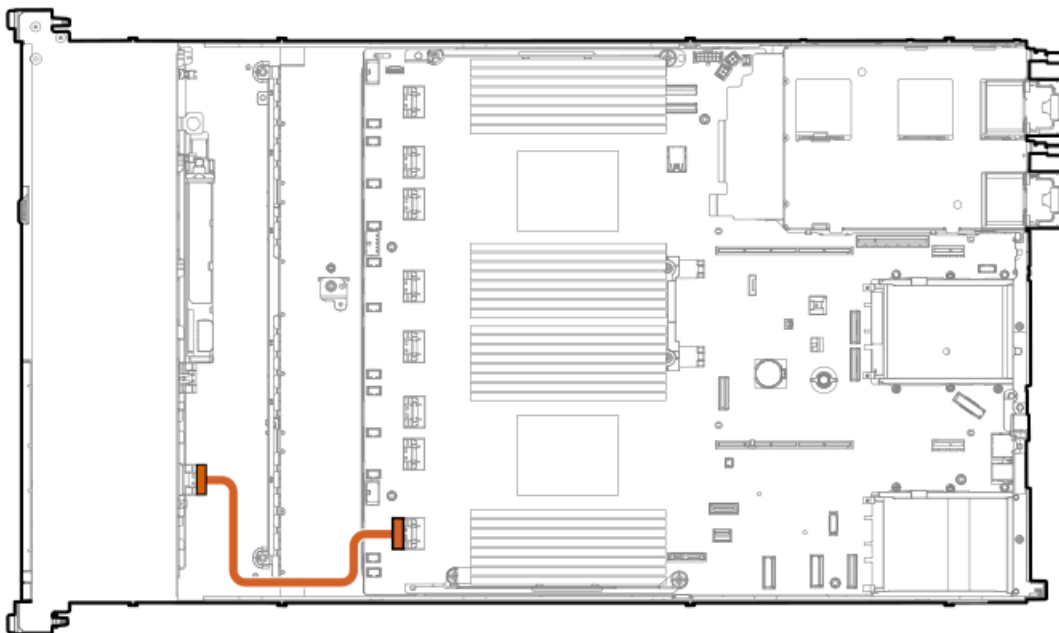
2 SFF side-by-side: System board



Cable part number	Color	From	To
P43738-001 ¹	Orange	2 SFF backplane	System board SlimSAS port 1

¹ Option kit: P48899-B21

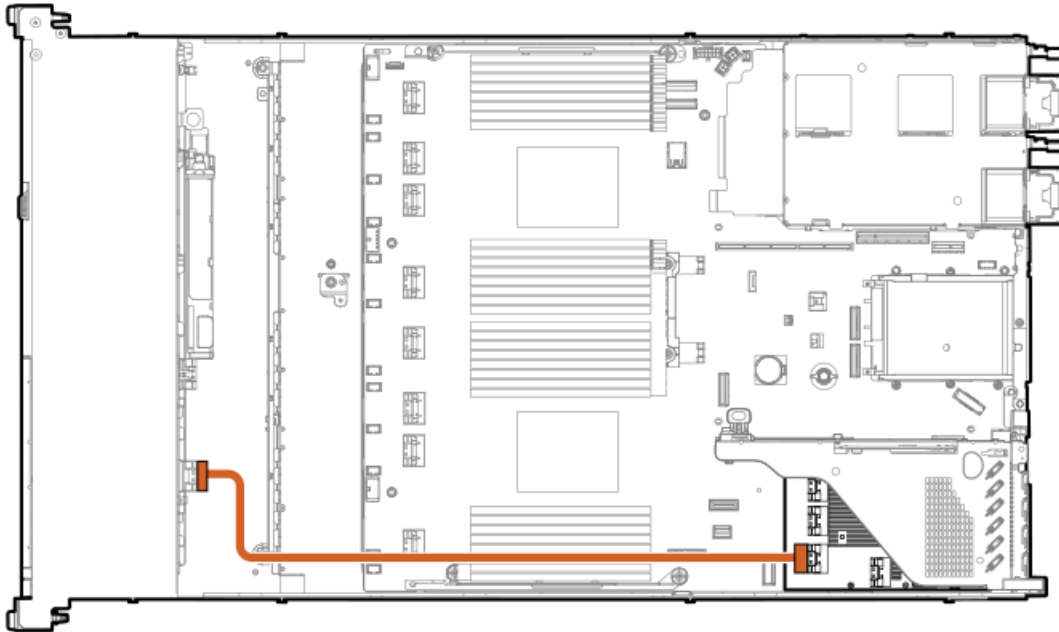
2 SFF side-by-side: System board



Cable part number	Color	From	To
P45607-001 ¹	Orange	2 SFF backplane	System board SlimSAS port

¹ Option kit: P48899-B21

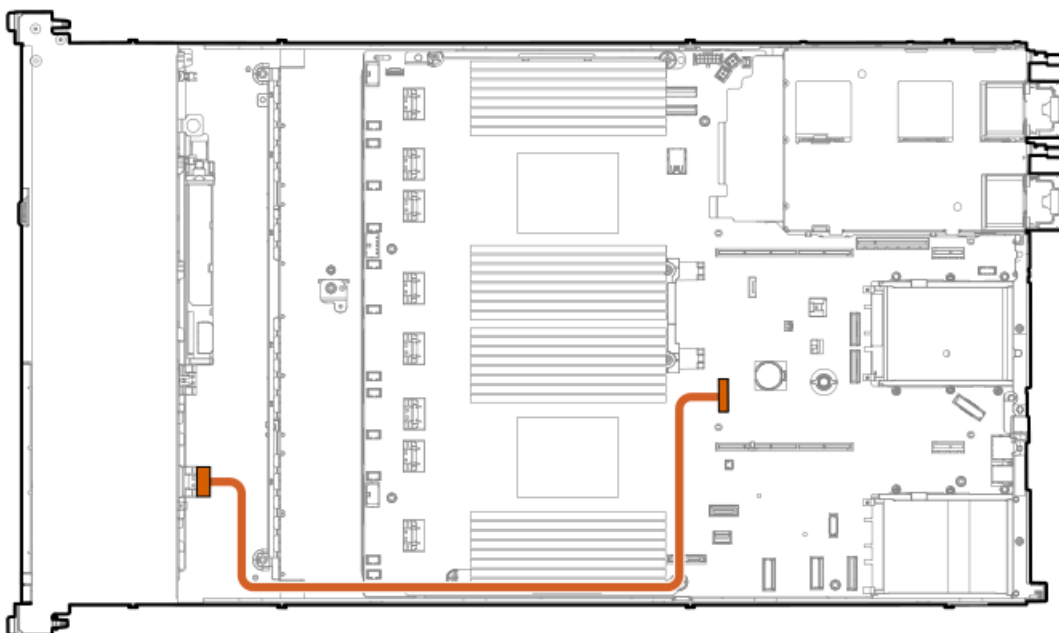
2 SFF side-by-side: Primary type-p controller



Cable part number	Color	From	To
P45611-001 ¹	Orange	2 SFF backplane	Primary type-p controller

¹ Option kit: P48910-B21

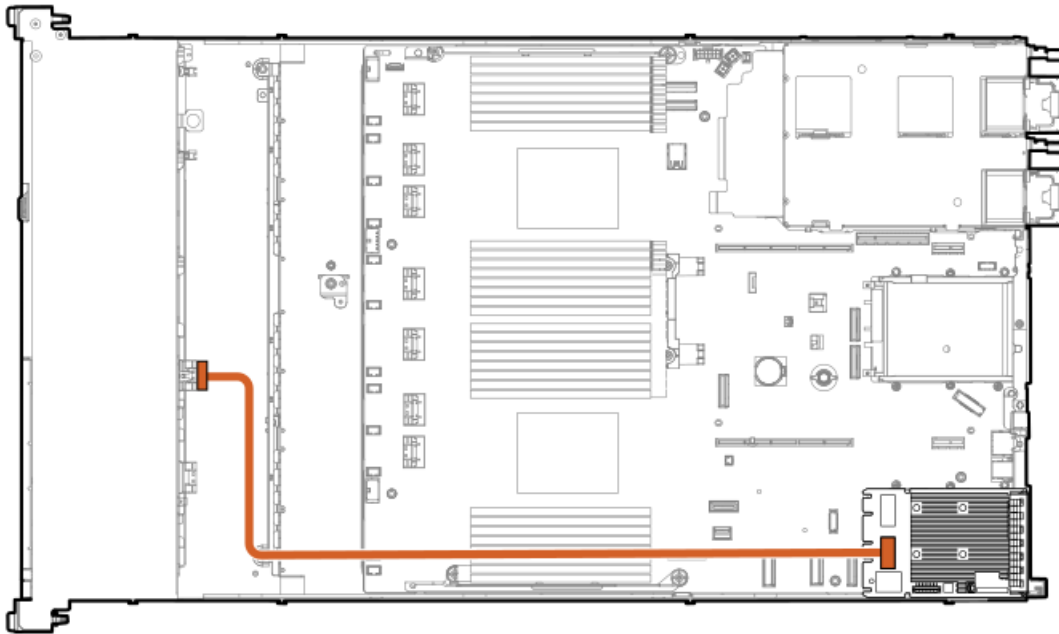
2 SFF side-by-side: Rear MCIO port



Cable part number	Color	From	To
P45608-001 ¹	Orange	2 SFF backplane	CPU1 MCIO port 1

¹ Option kit: P48899-B21

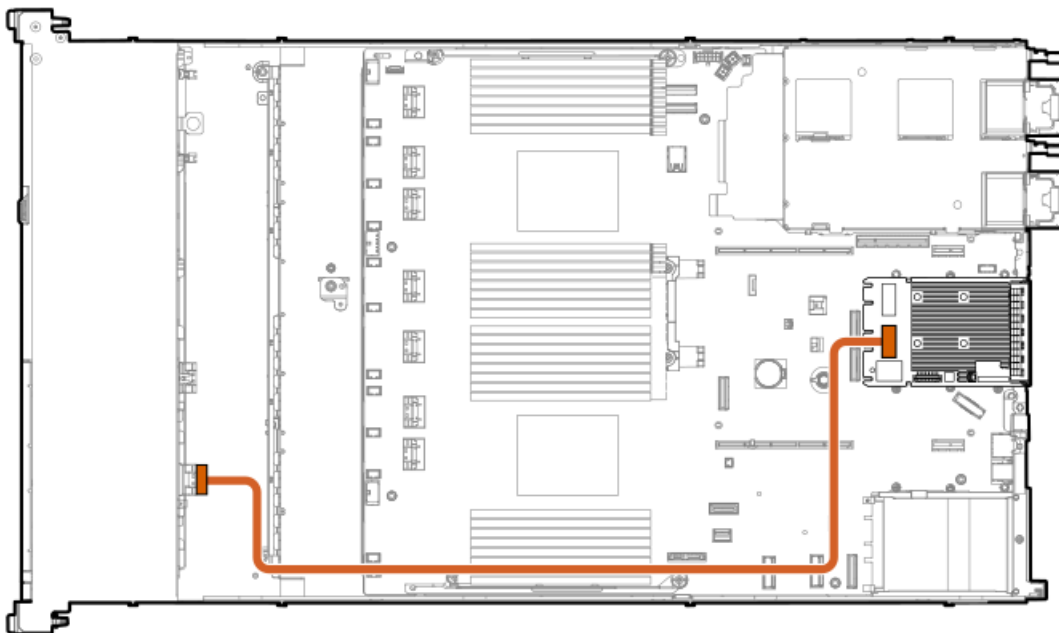
2 SFF side-by-side: Primary type-o controller



Cable part number	Color	From	To
P48962-001 ¹	Orange	2 SFF backplane	OCP slot 14 port 1

¹ Option kit: P48910-B21

2 SFF side-by-side: Secondary type-o controller

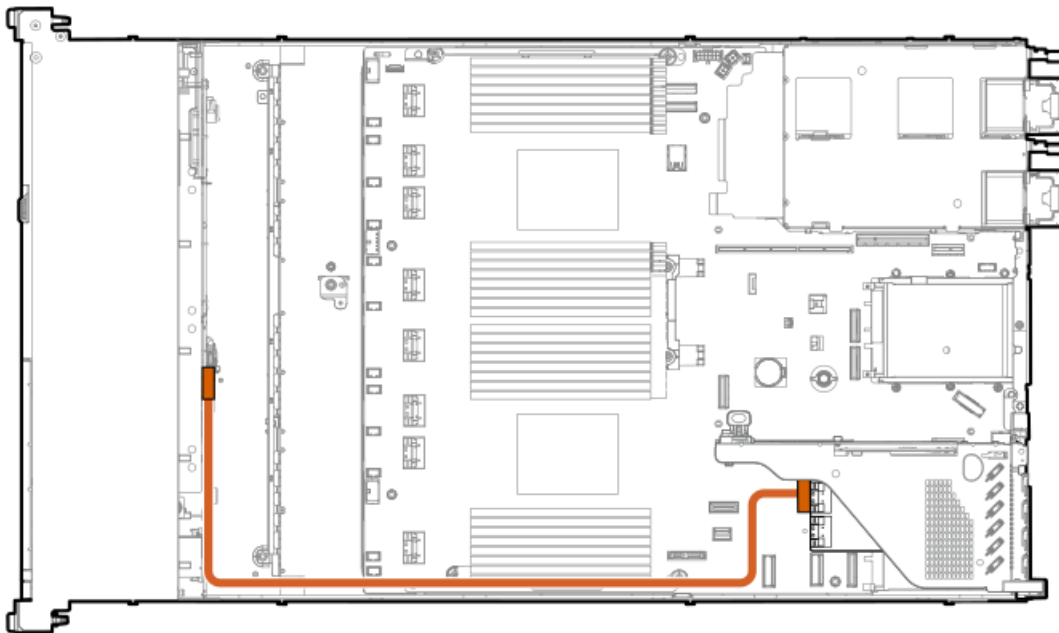


Cable part number	Color	From	To
P48961-001 ¹	Orange	2 SFF backplane	OCP slot 15 port 1

¹ Option kit: P48910-B21

4 LFF drive backplane cabling

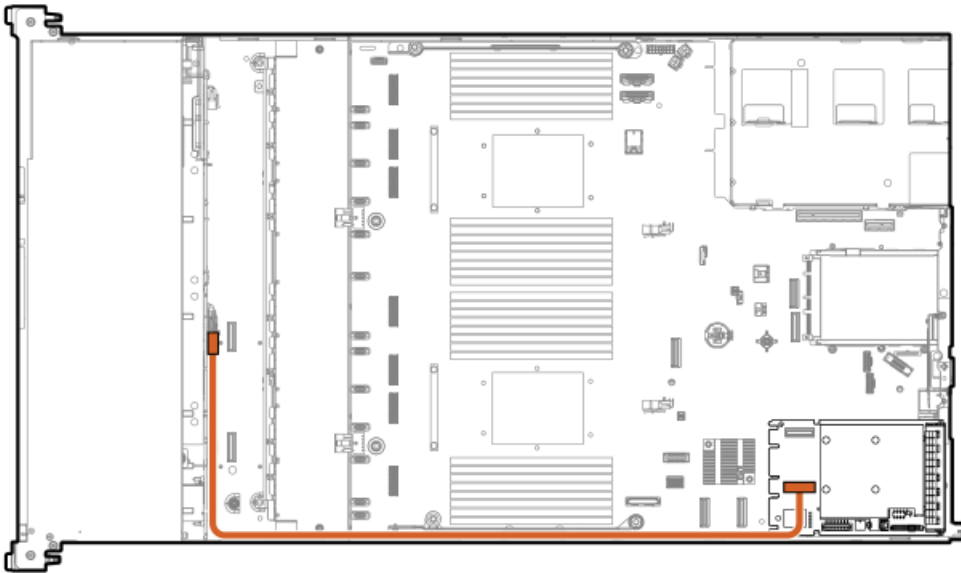
4 LFF box 1: Primary type-p controller



Cable part number	Color	From	To
P48970-001 ¹	Orange	Drive backplane	Primary type-p controller port 1

¹ Option kit: P48913-B21

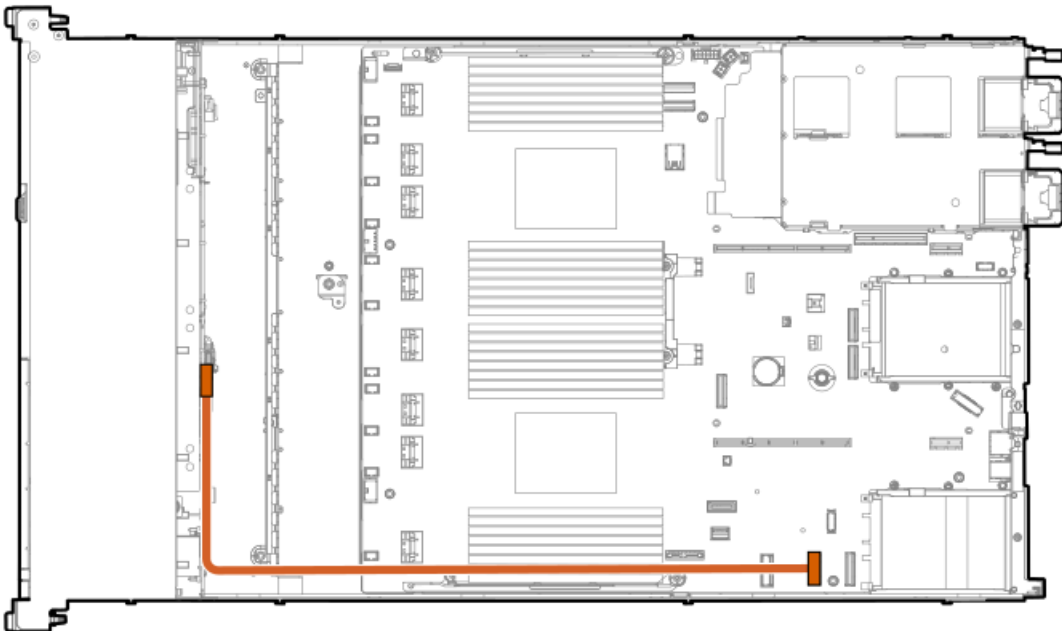
4 LFF box 1: Primary type-o controller



Cable part number	Color	From	To
P48958-001 ¹	Orange	Drive backplane	Primary type-o controller port 1

¹ Option kit: P48913-B21

4 LFF box 1: System board

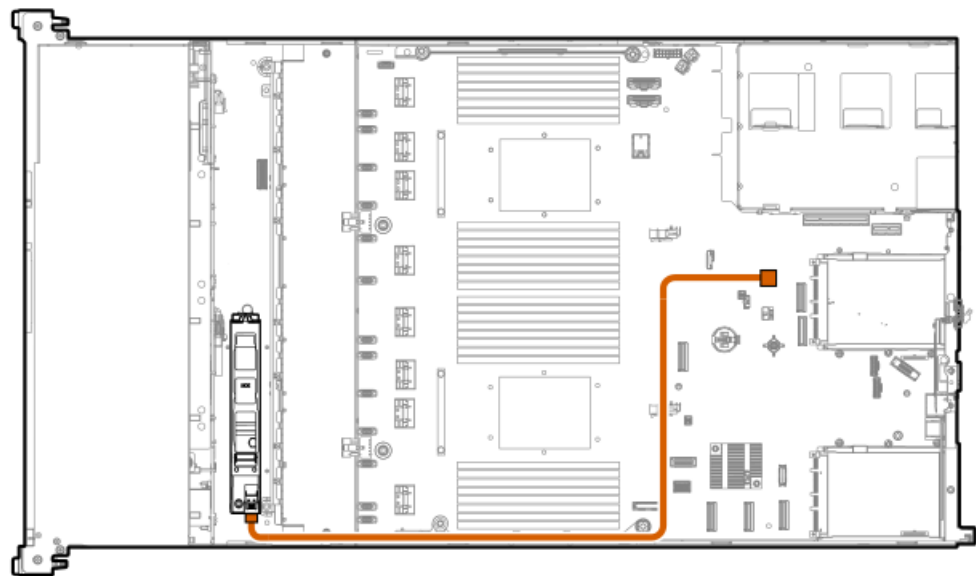


Cable part number	Color	From	To
P43728-001 ¹	Orange	Drive backplane	System board

¹ Option kit: P51897-B21

NS204i-u cabling

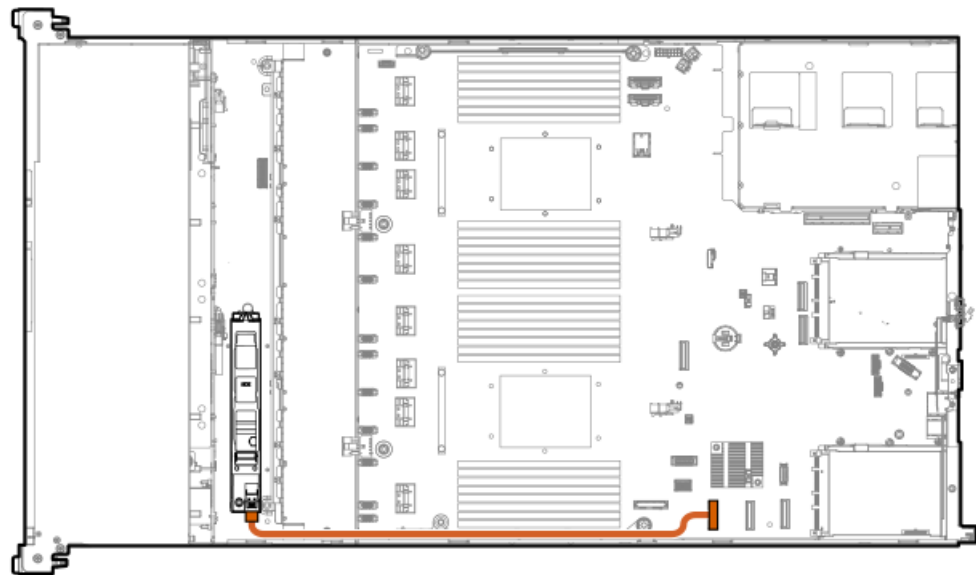
Internal NS204i-u power



Cable part number	Color	From	To
P48956-001 ¹	Orange	NS204i-u boot device	System board

¹ Option kit: P48920-B21

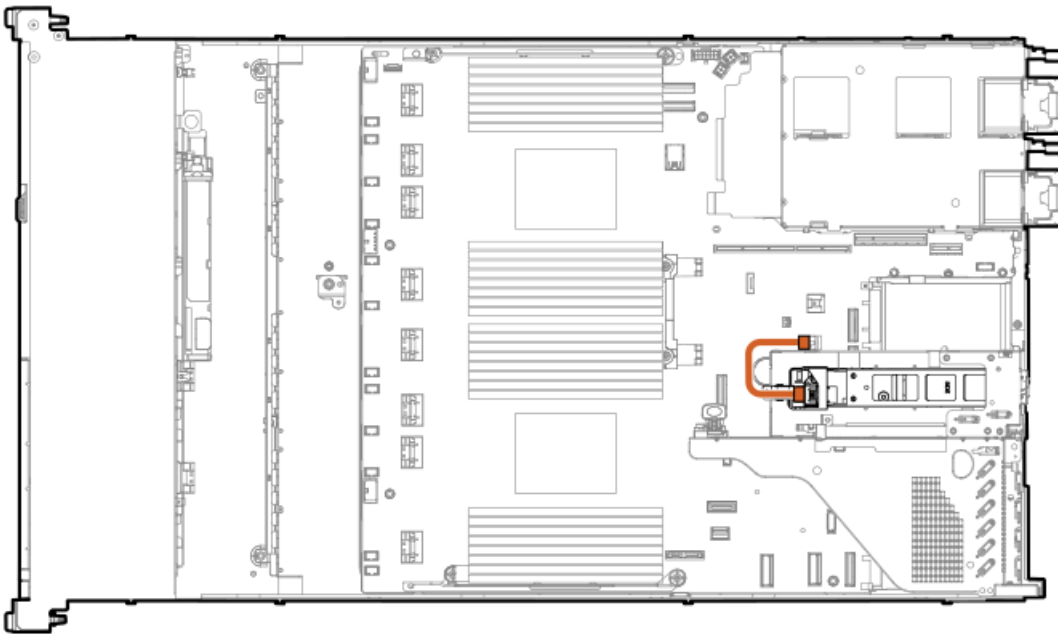
Internal NS204i-u data



Cable part number	Color	From	To
P54092-001 ¹	Orange	NS204i-u boot device	System board

¹ Option kit: P48920-B21

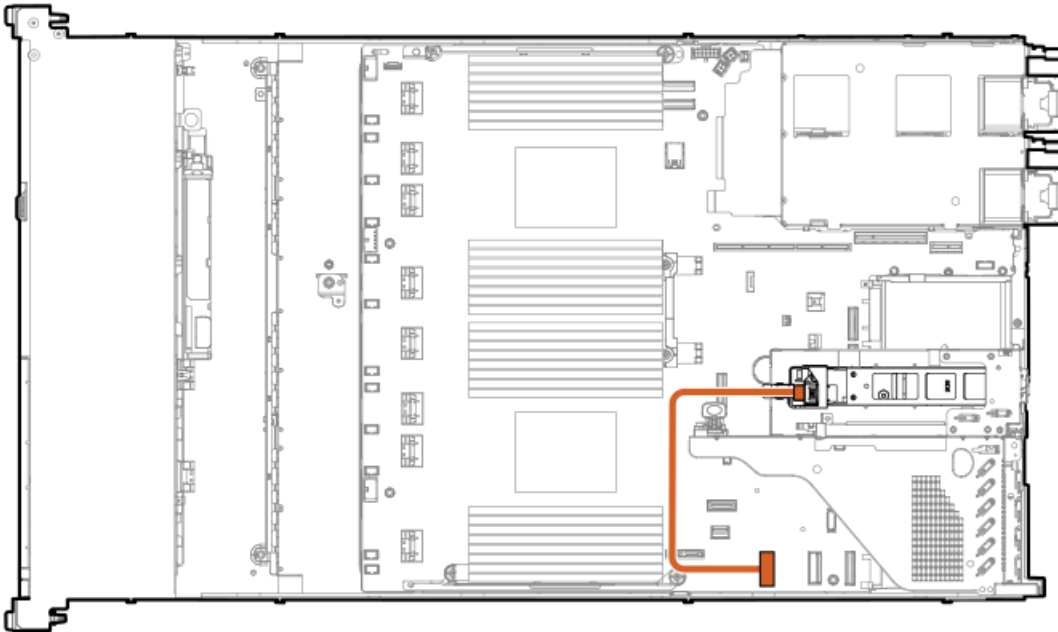
Riser cage NS204i-u power



Cable part number	Color	From	To
P54088-001 ¹	Orange	NS204i-u boot device	System board

¹ Option kit: P54702-B21

Riser cage NS204i-u data

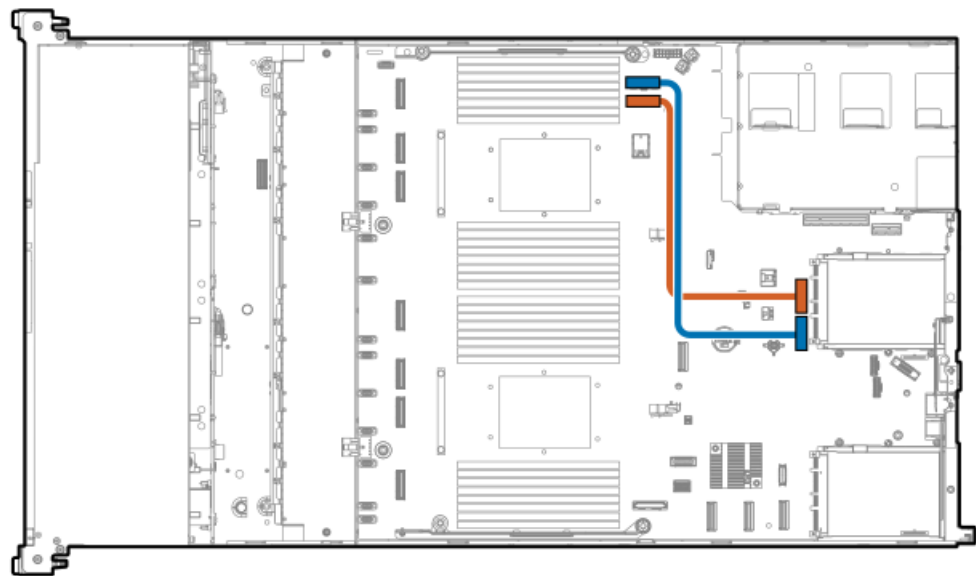


Cable part number	Color	From	To
P54087-001 ¹	Orange	NS204i-u boot device	System board

¹ Option kit: P54702-B21

OCP bandwidth enablement

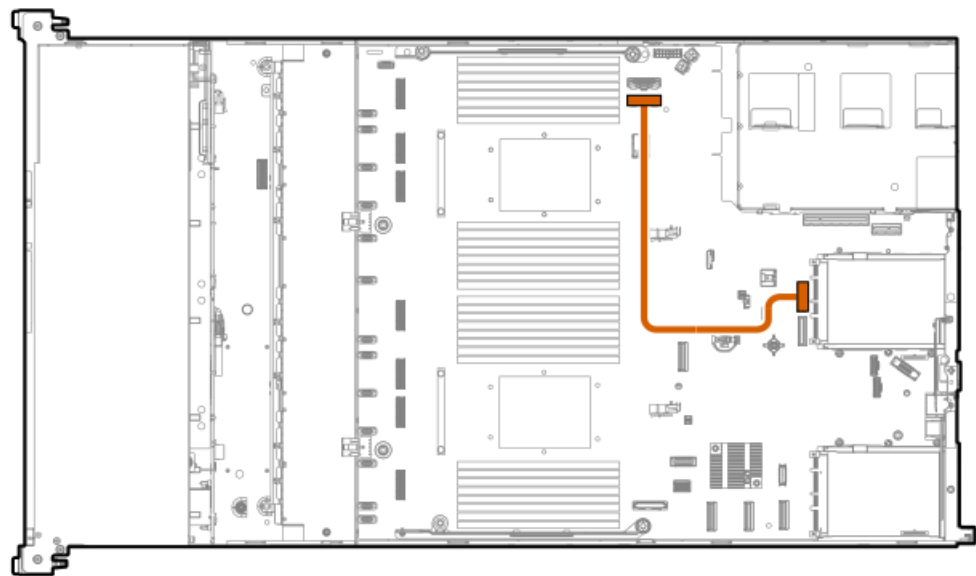
OCP2 x16 enablement



Cable part number	Color	From	To
P43734-001 ¹	Orange	OCP slot 15 port 1	Socket 2 MCIO connector 1
	Blue	OCP slot 15 port 2	Socket 2 MCIO connector 2

¹ Option kit: P48830-B21

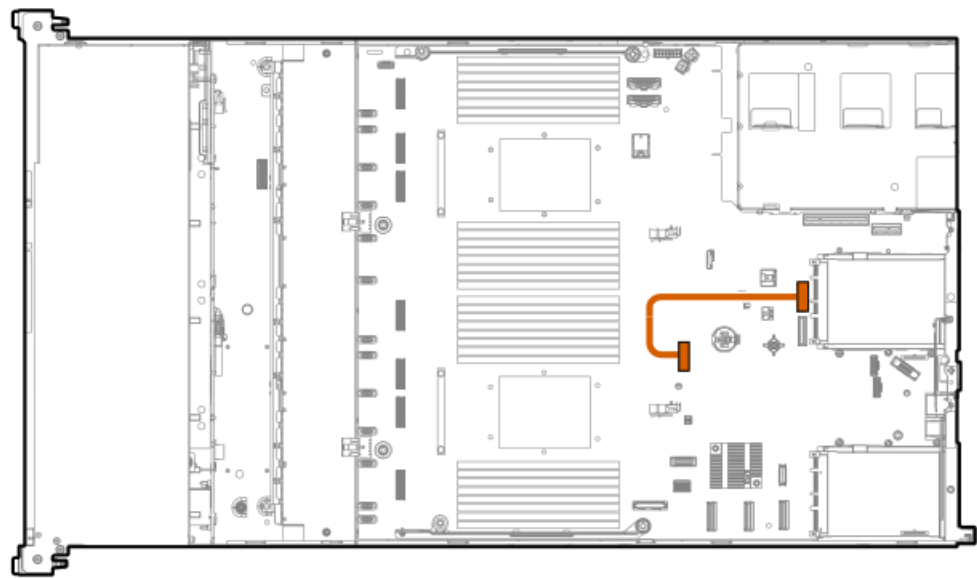
CPU2 to OCP2 x8 enablement



Cable part number	Color	From	To
P43734-001 ¹	Orange	OCP slot 15 port 1	Socket 2 MCIO connector 1

¹ Option kit: P48830-B21

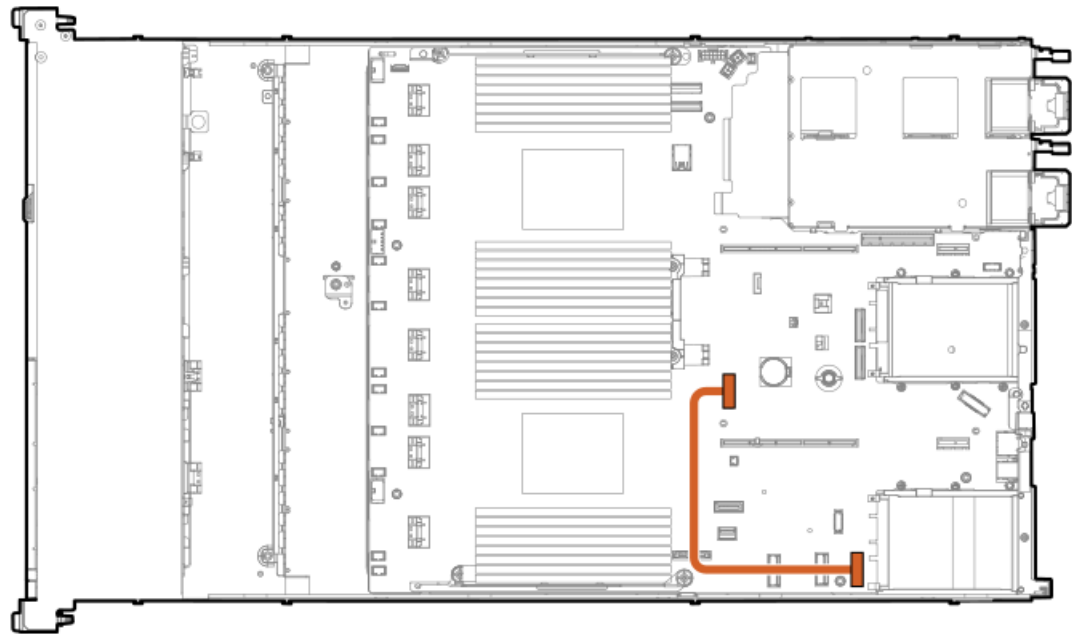
CPU1 to OCP2 x8 enablement



Cable part number	Color	From	To
P43735-001 ¹	Orange	OCP slot 15 port 1	Socket 1 MCIO port 1

¹ Option kit: P51911-B21

OCP1 x16 enablement

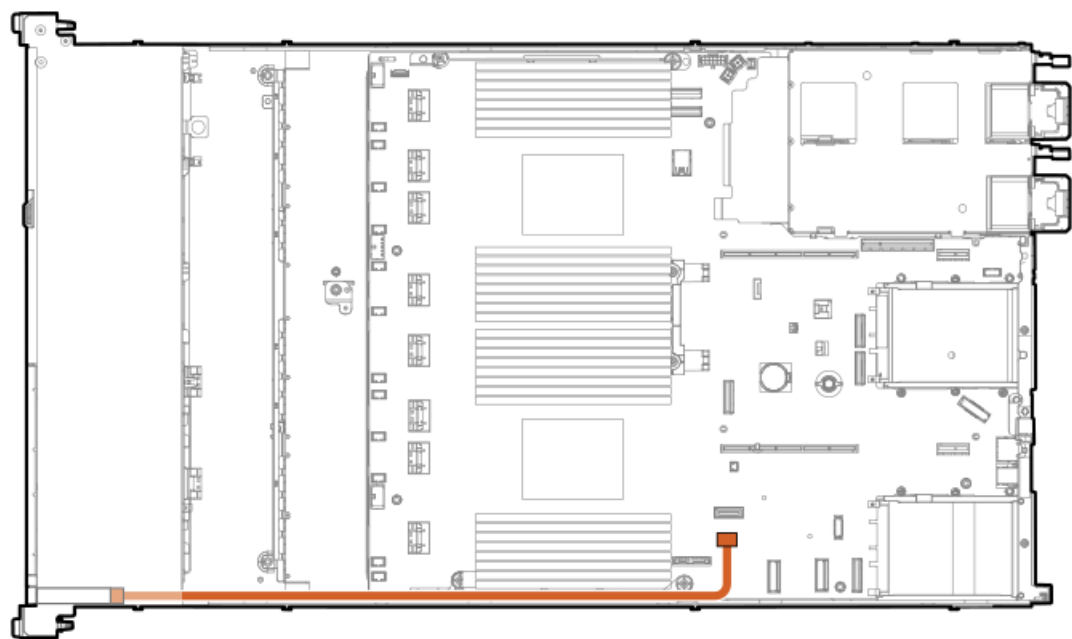


Cable part number	Color	From	To
P43736-001 ¹	Orange	OCP slot 14 port 2	Socket 1 MCIO port 1

¹ Option kit: P48827-B21

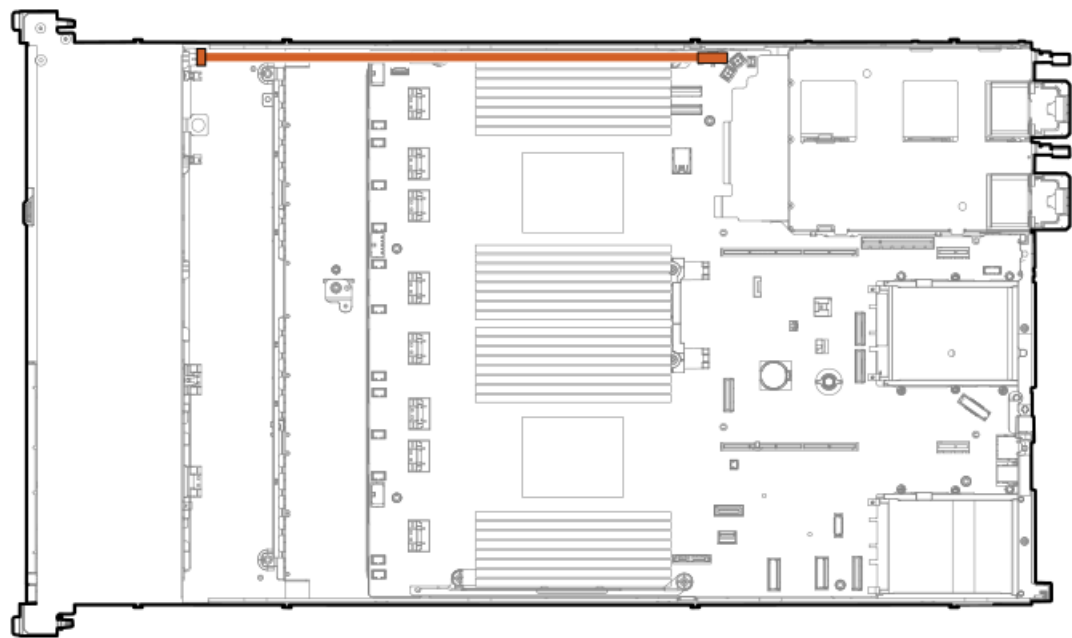
Power cabling

Power switch



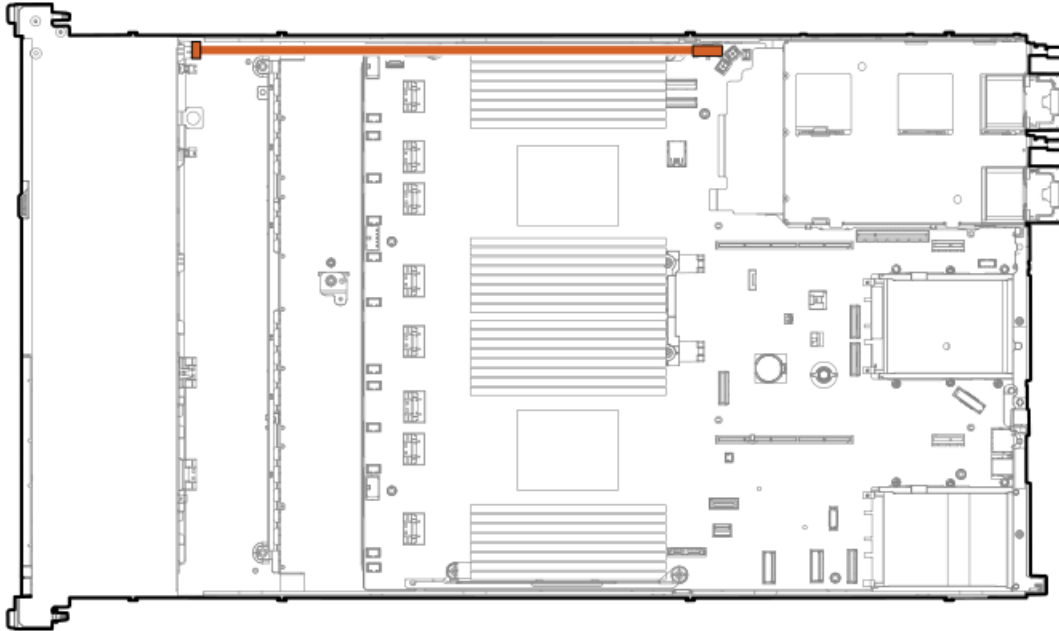
Cable part number	Color	From	To
P43727-001	Orange	Power switch	System board

EDSFF backplane power



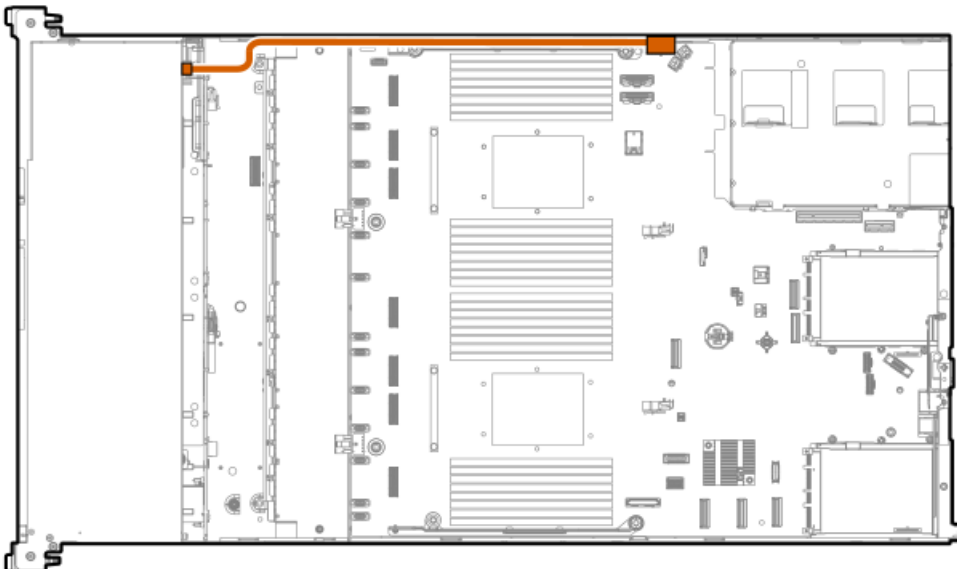
Cable part number	Color	From	To
P48965-001	Orange	EDSFF backplane	System board

4 LFF backplane power



Cable part number	Color	From	To
P43726-001	Orange	4 LFF backplane	System board

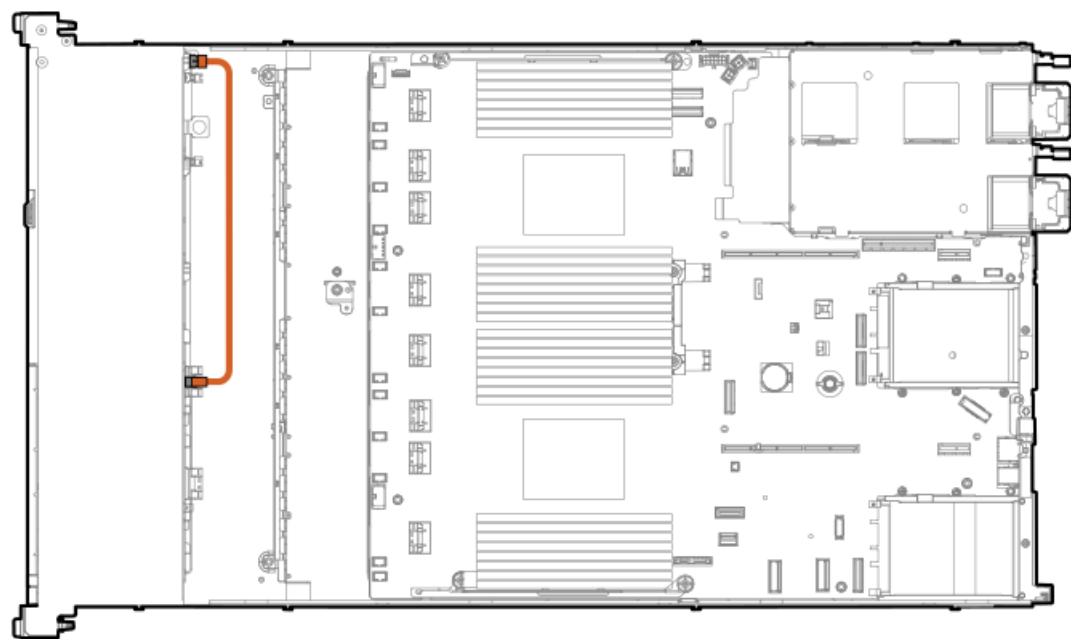
8 SFF backplane power



Cable part number	Color	From	To
P43729-001 ¹	Orange	8 SFF backplane	System board

¹ Option kit: P48895-B21

2 SFF backplane power

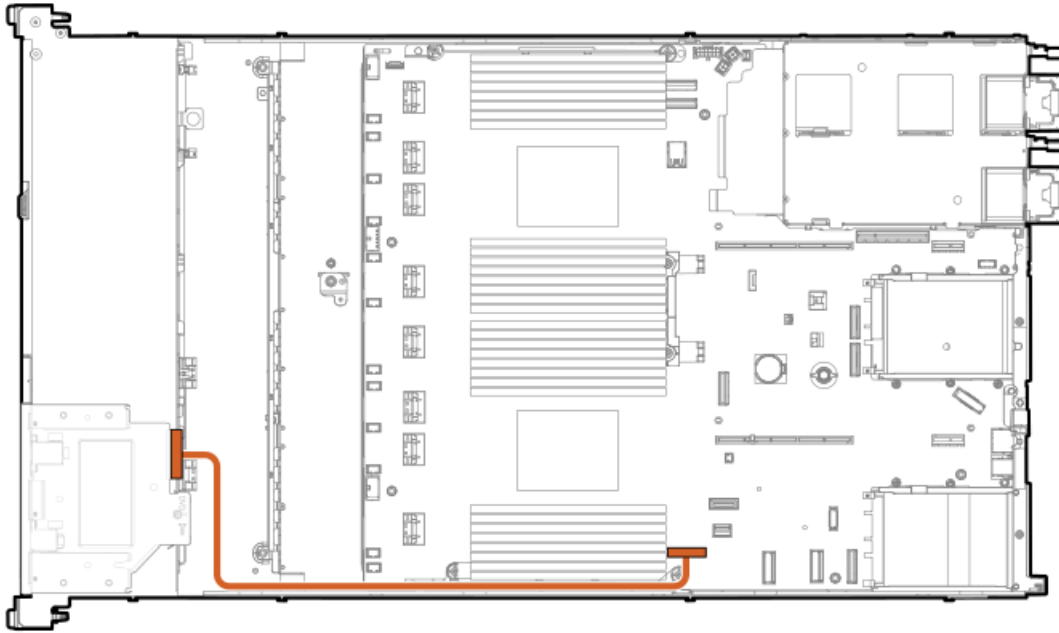


Cable part number	Color	From	To
869667-001 ¹	Orange	2 SFF backplane	8 SFF backplane

¹ Option kit: P48899-B21

IO cabling

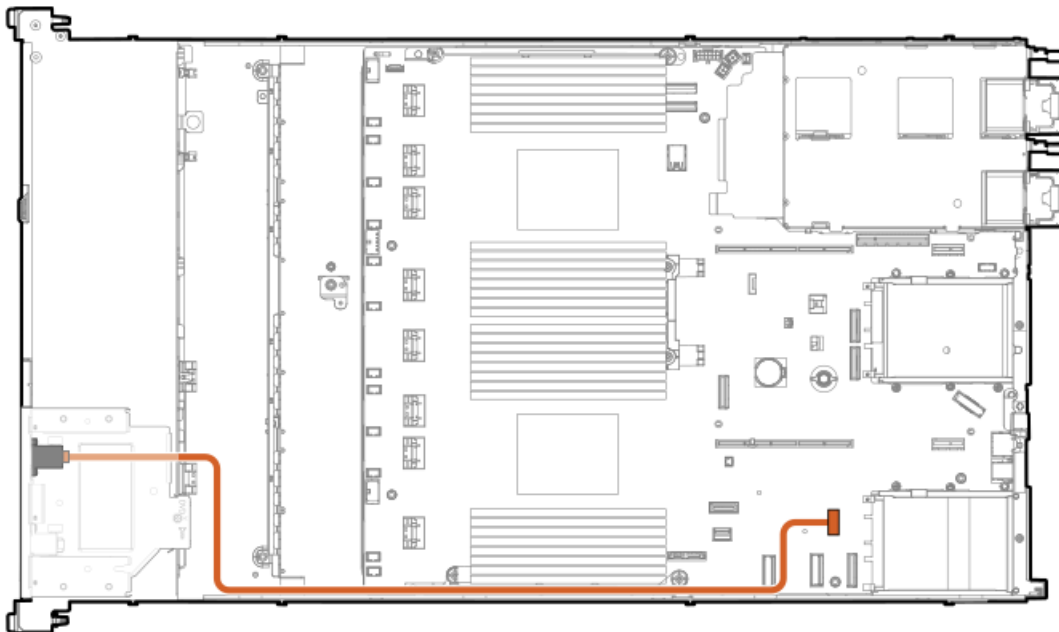
SFF optical disk drive cabling



Cable part number	Color	From	To
P45622-001 ¹	Orange	SFF optical disk drive	System board

¹ Option kit: P48926-B21

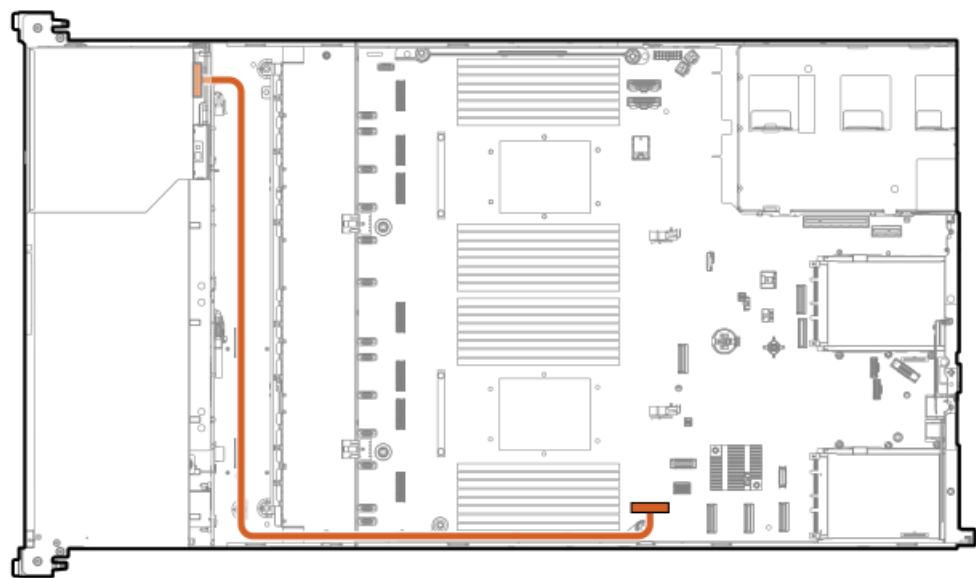
SFF front display cabling



Cable part number	Color	From	To
P45620-001 ¹	Orange	SFF front display	System board

¹ Option kit: P48926-B21

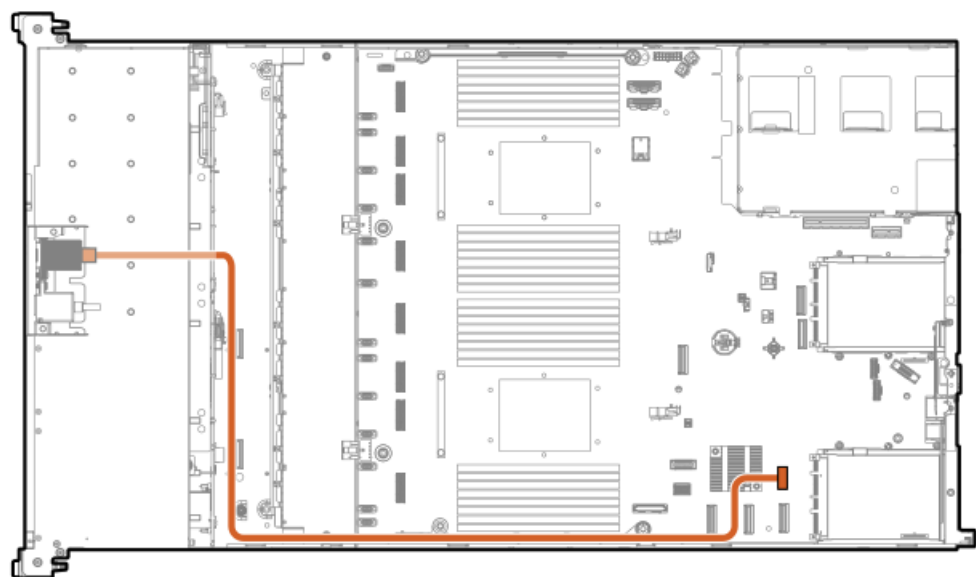
LFF optical disk drive cabling



Cable part number	Color	From	To
P45621-001 ¹	Orange	LFF optical disc drive	System board

¹ Option kit: P48914-B21

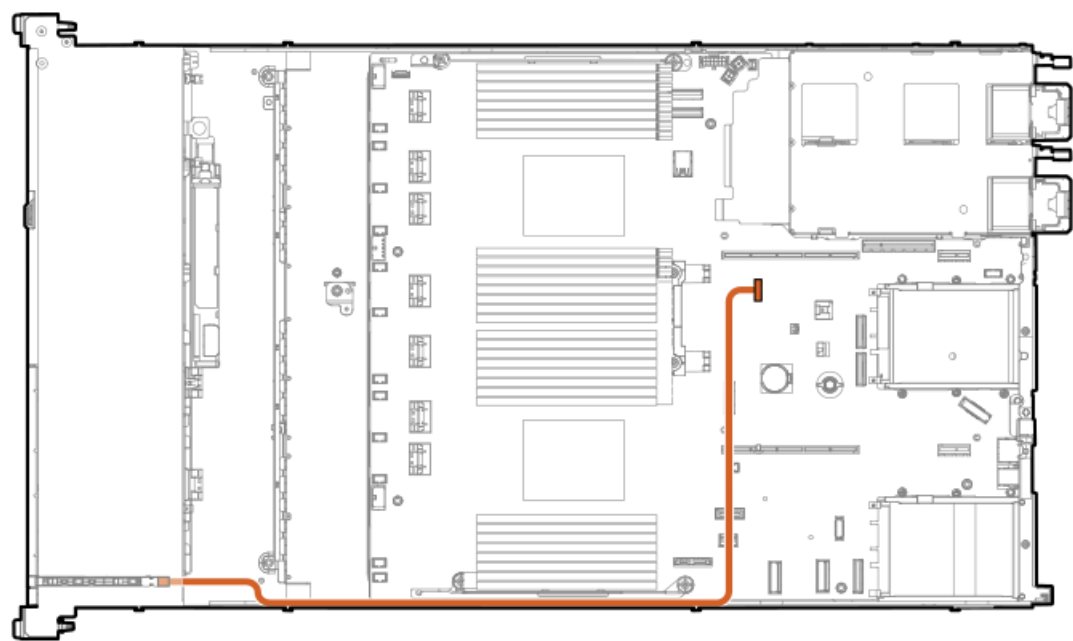
LFF front display port/USB cabling



Cable part number	Color	From	To
P45619-001 ¹	Orange	Display port	System board

¹ Option kit: P48928-B21

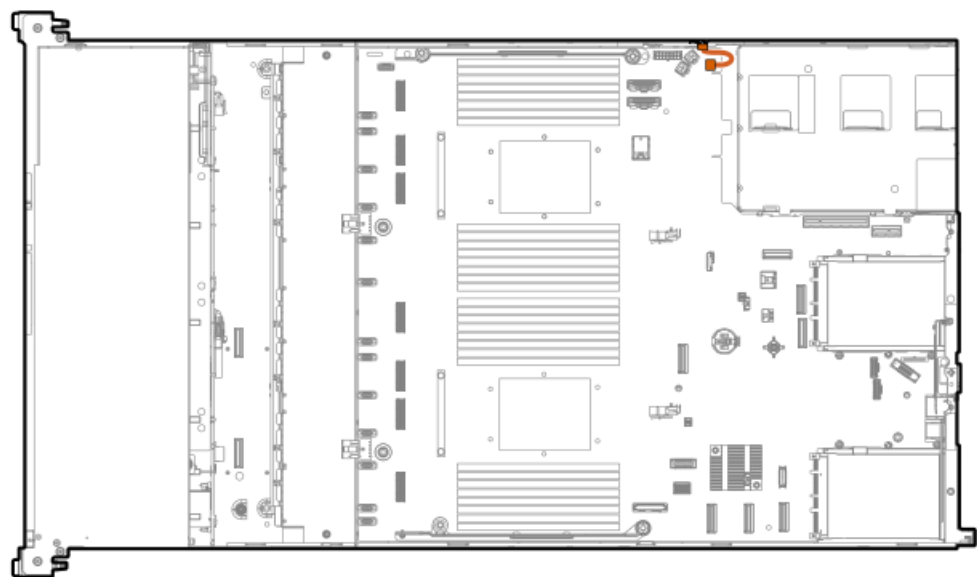
Systems Insight Display cabling



Cable part number	Color	From	To
P48971-001 ¹	Orange	Systems Insight Display module	System board

¹ Option kit: P48927-B21

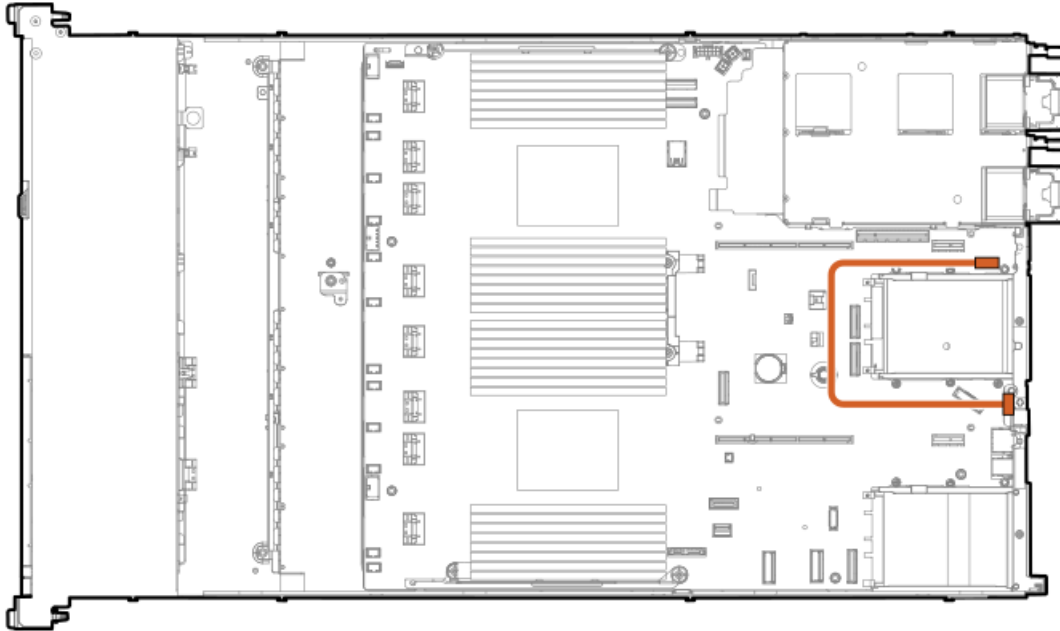
Intrusion detection switch cabling



Cable part number	Color	From	To
P47751-001 ¹	Orange	Intrusion detection switch	System board

¹ Option kit: P48922-B21

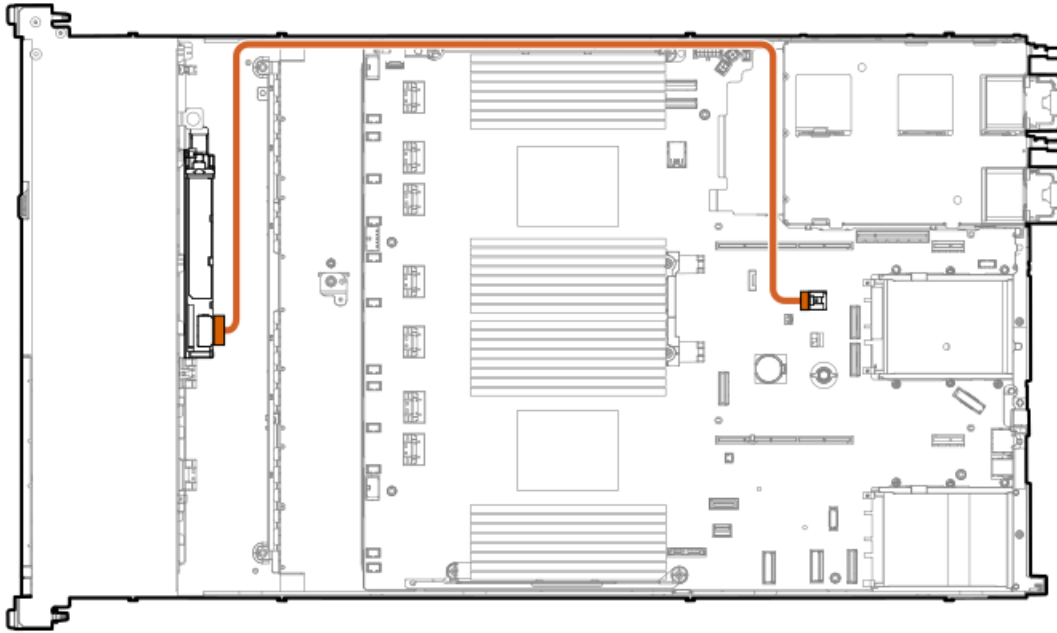
Serial port cabling



Cable part number	Color	From	To
P45623-001 ¹	Orange	Serial port	System board

¹ Option kit: P48921-B21

Smart storage battery/capacitor cabling



Cable part number	Color	From	To
P45618-001 ¹	Orange	Smart storage battery or capacitor	System board

¹ Option kit: P48918-B21

Configuration resources

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

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

Subtopics

- [Updating firmware or system ROM](#)
- [Configuring the server](#)
- [Configuring storage controllers](#)
- [Deploying an OS](#)
- [Configuring security](#)
- [Server management](#)
- [Managing Linux-based high performance compute clusters](#)

Updating firmware or system ROM

To	Use
Download service packs	Service Pack for ProLiant (SPP) https://www.hpe.com/servers/spp/download
Deploy service packs to a single server	Smart Update Manager (SUM) https://www.hpe.com/info/sum-docs
Deploy service packs to multiple servers	HPE OneView https://www.hpe.com/support/oneview-docs
Updating iLO or system firmware in a single server or multiple servers	iLO user guide https://www.hpe.com/support/ilo6
• Enable policy-based management of server or server group firmware for distributed server infrastructure • Monitor server compliance with a configured firmware baseline • Receive automatic iLO firmware updates • Receive baseline update alerts	HPE GreenLake for Compute Ops Management https://www.hpe.com/info/com-docs

Configuring the server

To configure	Use
Single server (GUI)	- Intelligent Provisioning https://www.hpe.com/info/intelligentprovisioning/docs - iLO remote console or web interface https://www.hpe.com/support/ilo6 - UEFI System Utilities https://www.hpe.com/info/UEFI-manuals - HPE GreenLake for Compute Ops Management https://www.hpe.com/info/com-docs
Single server (scripting)	- RESTful Interface Tool https://www.hpe.com/support/restfulinterface/docs - Python iLO Redfish Library (python-ilorest-library) https://github.com/HewlettPackard/python-ilorest-library - Scripting Tools for Windows Powershell https://www.hpe.com/info/powershell/docs - iLO RESTful API https://hewlettpackard.github.io/ilo-rest-api-docs/ - HPE GreenLake for Compute Ops Management API https://developer.greenlake.hpe.com/
Multiple servers (either UI or scripting)	- HPE OneView ¹ https://www.hpe.com/support/oneview-docs - HPE GreenLake for Compute Ops Management https://www.hpe.com/info/com-docs Server settings: Define server-specific parameters such as firmware baselines, and then apply them to server groups. Server groups: Organize servers into custom-defined sets with associated server settings, and then apply group-specific policies to create a consistent configuration across the servers in the group.

¹ For servers running HPE OneView, do not use another tool, such as iLO, to delete or change certain settings. For more information about using HPE OneView and iLO to manage the same server, see the iLO user guide at <https://www.hpe.com/support/ilo6>.

Configuring storage controllers

Controller type	Documentation
SR controllers	—
Gen11	HPE SR Gen11 Controller User Guide https://hpe.com/support/SR-Gen11-UG
Gen10	HPE Smart Array SR Controller Gen10 User Guide https://www.hpe.com/support/SR-Gen10-UG
MR controllers	—
Gen11	HPE MR Gen11 Controller User Guide https://hpe.com/support/MR-Gen11-UG
Cross-generation MR guides	- HPE MR Storage Administrator User Guide https://www.hpe.com/support/MRSA - HPE MR StorCLI User Guide https://www.hpe.com/support/StorCLI
Software RAID	Intel VROC for HPE Gen11 User Guide https://hpe.com/support/VROC-Gen11-UG

Deploying an OS

For a list of supported operating systems, see the HPE Servers Support & Certification Matrices:

<https://www.hpe.com/support/Servers-Certification-Matrices>

To	See
Configure the server to boot from a SAN	HPE Boot from SAN Configuration Guide https://www.hpe.com/info/boot-from-san-config-guide
Configure the server to boot from a PXE server	UEFI System Utilities User Guide for HPE ProLiant Gen11 Servers and HPE Synergy https://www.hpe.com/support/UEFIGen11-UG-en
Deploy an OS using iLO virtual media	iLO user guide https://www.hpe.com/support/ilo6
Deploy an OS using Intelligent Provisioning	Intelligent Provisioning user guide https://www.hpe.com/info/intelligentprovisioning/docs

Configuring security

To	See
Implement server security best practices.	- HPE Compute Security Reference Guide https://www.hpe.com/info/server-security-reference-en - HPE iLO 6 Security Technology Brief https://www.hpe.com/support/ilo6-security-en
Configure and use the Server Configuration Lock feature on HPE Trusted Supply Chain servers and other servers that have the Server Configuration Lock feature enabled.	Server Configuration Lock User Guide for HPE ProLiant servers and HPE Synergy https://www.hpe.com/info/server-config-lock-UG-en

Server management

To monitor	See
Single server	HPE iLO https://www.hpe.com/support/ilo6
Multiple servers	HPE OneView https://www.hpe.com/support/oneview-docs
Single or multiple servers	HPE GreenLake for Compute Ops Management https://www.hpe.com/info/com-docs

Managing Linux-based high performance compute clusters

To	Use
Provision, manage, and monitor clusters.	HPE Performance Cluster Manager https://www.hpe.com/support/hpcm_manuals
Optimize your applications.	HPE Performance Analysis Tools https://www.hpe.com/info/perftools
Optimize software library for low latency and high bandwidth, both on-node and off-node, for point-to-point and collective communications.	HPE Cray Programming Environment User Guide https://www.hpe.com/info/cray-pe-user-guides

Safety, warranty, and regulatory information

Subtopics

[Regulatory information](#)

[Warranty information](#)

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>

Subtopics

[Notices for Eurasian Economic Union](#)

[Turkey RoHS material content declaration](#)

[Ukraine RoHS material content declaration](#)

Notices for Eurasian Economic Union



Manufacturer and Local Representative Information

Manufacturer information:

Hewlett Packard Enterprise Company, 1701 E Mossy Oaks Road, Spring, TX 77389 U.S.

Local representative information Russian:

- **Russia**
ООО "Хьюлетт Паккард Энтерпрайз", Российская Федерация, 125171, г. Москва, Ленинградское шоссе, 16А, стр.3, Телефон: +7 499 403 4248 Факс: +7 499 403 4677
- **Kazakhstan**
ТОО «Хьюлетт-Паккард (К)», Республика Казахстан, 050040, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7, Телефон/факс: + 7 727 355 35 50

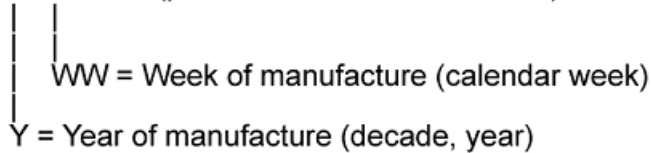
Local representative information Kazakh:

- **Russia**
ЖШС "Хьюлетт Паккард Энтерпрайз", Ресей Федерациясы, 125171, Мәскеу, Ленинград тас жолы, 16А блок 3, Телефон: +7 499 403 4248 Факс: +7 499 403 4677
- **Kazakhstan**
ЖШС «Хьюлетт-Паккард (К)», Қазақстан Республикасы, 050040, Алматы қ., Бостандық ауданы, Әл-Фараби даңғ ылы, 77/7, Телефон/факс: +7 727 355 35 50

Manufacturing date:

The manufacturing date is defined by the serial number.

CCSYWWZZZZ (product serial number format)



If you need help identifying the manufacturing date, contact tre@hpe.com.

Turkey RoHS material content declaration

Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur

Ukraine RoHS material content declaration

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

Warranty information

To view the warranty information for your product, see the [warranty check tool](#).

Specifications

Subtopics

[Environmental specifications](#)

[Mechanical specifications](#)

[Power supply specifications](#)

[Hot-plug power supply calculations](#)

Environmental specifications

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

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

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

- 5°C to 10°C (41°F to 50°F) and 35°C to 40°C (95°F to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3048 m (10,000 ft).
- 40°C to 45°C (104°F to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3048 m (10,000 ft).

The approved hardware configurations for this system are listed on the [Hewlett Packard Enterprise website](#).

Mechanical specifications

Specification	Value
Height	4.29 cm (1.69 in)
Depth, SFF	75.31 cm (29.65 in)
Depth, LFF	77.30 cm (30.43 in)
Width	43.46 cm (17.11 in)
Weight, SFF minimum	14.50 kg (32 lb)
Weight, SFF maximum	21 kg (46 lb)
Weight, LFF minimum	14.50 kg (32 lb)
Weight, LFF maximum	22 kg (48 lb)

Power supply specifications

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

- [HPE 800 W Flex Slot Platinum Hot-plug Low Halogen Power Supply](#)
- [HPE 1000 W Flex Slot Titanium Hot-plug Power Supply](#)
- [HPE 1600 W Flex Slot Platinum Hot-plug Low Halogen Power Supply](#)

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

Subtopics

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

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

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

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

Specification	Value
Input requirements	—
Rated input voltage	100 VAC to 127 VAC 200 VAC to 240 VAC 240 VDC for China only
Rated input frequency	50 Hz to 60 Hz Not applicable to 240 VDC
Rated input current	9.4 A at 100 VAC 4.5 A at 200 VAC 3.8 A at 240 VDC for China only
Maximum rated input power	940 W at 100 VAC 900 W at 200 VAC 897 W at 240 VDC for China only
BTUs per hour	3067 at 100 VAC 2958 at 200 VAC 2949 at 240 VAC for China only
Power supply output	—
Rated steady-state power	800 W at 100 VAC to 127 VAC input 800 W at 100 VAC to 240 VAC input 800 W at 240 VDC input for China only
Maximum peak power	800 W at 100 VAC to 127 VAC input 800 W at 100 VAC to 240 VAC input 800 W at 240 VDC input for China only

HPE 1000 W Flex Slot Titanium Hot-plug Power Supply

Specification	Value
Input requirements	—
Rated input voltage	100 VAC to 127 VAC 200 VAC to 240 VAC 240 VDC for China
Rated input frequency	50 Hz to 60 Hz
Rated input current	11.3 A at 100 VAC 6.1 A at 200 VAC
Maximum rated input power	1130 W at 100 VAC 1090 W at 200 VAC
BTUs per hour	3764 at 100 VAC 3629 at 200 VAC
Power supply output	—
Rated steady-state power	1000 W at 100 VAC to 127 VAC 1000 W at 200 VAC to 240 VAC input
Maximum peak power	1000 W at 100 VAC to 127 VAC 1000 W at 200 VAC to 240 VAC

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

Specification	Value
Input requirements	—
Rated input voltage	200 VAC to 240 VAC 240 VDC for China only
Rated input frequency	50 Hz to 60 Hz
Rated input current	8.7 A at 200 VAC 7.5 A at 230 VAC 7.2 A at 240 VDC
Maximum rated input power	1734 W at 200 VAC 1720 W at 240 VAC
BTUs per hour	5918 at 200 VAC 5891 at 230 VAC
Power supply output	—
Rated steady-state power	1600 W at 200 VAC to 240 VAC input 1600 W at 240 VDC input
Maximum peak power	2200 W for 1 ms (turbo mode) at 200 VAC to 240 VAC input

Hot-plug power supply calculations

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

Appendix I: Server coolant spill response

Subtopics

[Eye and skin protection](#)

[Server coolant leak](#)

Eye and skin protection

The coolant used in the liquid cooling heatsink is a mixture of purified water and ethylene glycol with additional additives for corrosion resistance. Observe the following when cleaning up a coolant leak:

- The coolant might cause slight temporary eye irritation.
 - To prevent any accidental eye contact with the coolant, use safety glasses with side shields.
 - If eye contact occurs, immediately flush eye with plenty of water. If any discomfort persists, seek medical attention.
- The coolant might cause slight temporary skin irritation.
 - Use hand protection in the form of chemically resistant gloves when cleaning up coolant leak.
 - If gloves are not worn, wash hands with plenty of water after cleanup.

Server coolant leak

Symptom

Spill or leak of the electrically conductive server coolant from the liquid cooling heatsink.

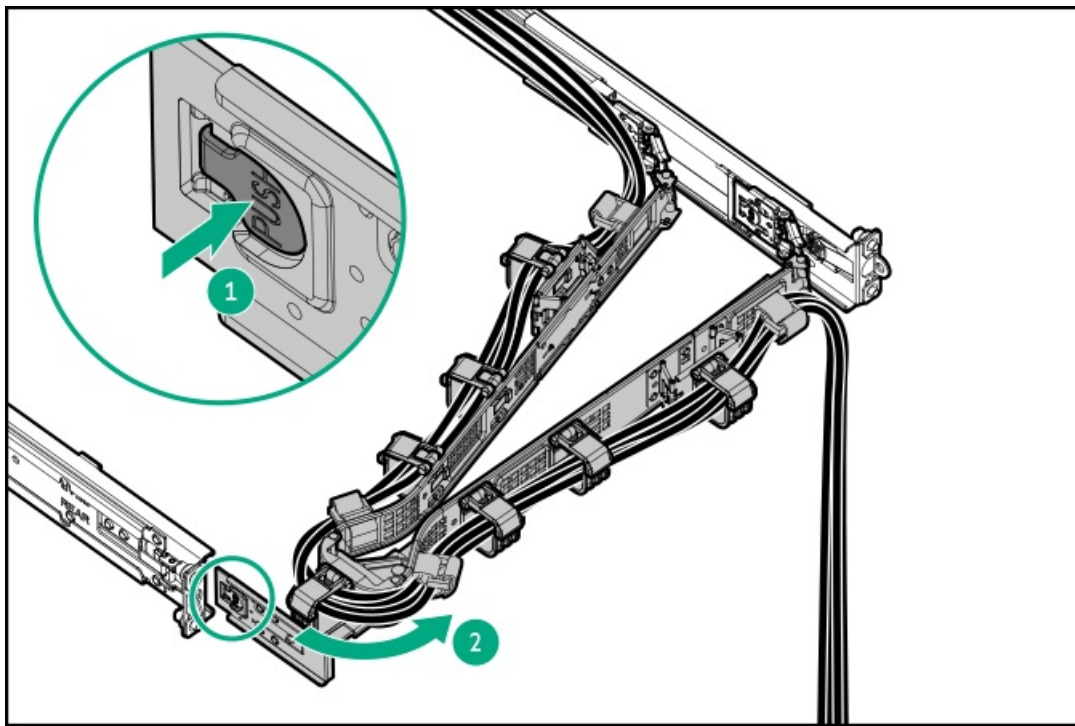
Cause

The supply tube of the liquid cooling heatsink is damaged.

Action

Prepare the server for coolant leak cleanup

1. Have the following items ready for the coolant leak cleanup:
 - Dry paper towels or any absorbent material intended for cleaning up chemical spill
 - Container to collect the leaked coolant
2. [Power down the server.](#)
3. If installed, open the cable management arm.



4. Remove all power:
 - a. Disconnect each power cord from the power source.
 - b. Disconnect each power cord from the server.
5. Disconnect all peripheral cables from the server.
6. Remove the server from the rack.
7. Place the server on a flat, level work surface.

Locate the spilling point of the coolant leak

8. Observe proper eye and skin protection.
9. Remove the access panel.
10. Look for any potential contact between the coolant and any of the internal cables and components, especially power connectors.
11. Locate the spilling point of the coolant leak.
12. Cover the spilling point with a dry absorbent material.
13. Remove the liquid cooling heatsink.

Clean up the coolant leak

14. Use a dry absorbent material to clean the coolant leak.
15. Wring the absorbed coolant into a container.
16. Fill the container with tap water and dispose the residue in accordance with local safety requirements.
17. Use paper towels to dry the spilled area.
18. Use plenty of fresh water to clean the container used to collect the leaked coolant.
19. Dispose the used absorbent material and paper towels in accordance with local safety requirements.

Replacing damaged components

20.  **WARNING**
Water and electricity combined pose a significant safety hazard. Hardware electrical components that have been in contact with the spilled coolant might be damaged.

To ensure a functional and safe server operation, identify and replace all damaged components.

Websites

General websites

Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix

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

Storage white papers and analyst reports

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

For additional websites, see Support and other resources.

Storage websites

Support and other resources

Subtopics

[Accessing Hewlett Packard Enterprise Support](#)

[HPE product registration](#)

[Accessing updates](#)

[Remote support](#)

[Warranty information](#)

[Regulatory information](#)

[Documentation feedback](#)

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

HPE product registration

To gain the full benefits of the Hewlett Packard Enterprise Support Center and your purchased support services, add your contracts and products to your account on the HPESC.

- When you add your contracts and products, you receive enhanced personalization, workspace alerts, insights through the dashboards, and easier management of your environment.
- You will also receive recommendations and tailored product knowledge to self-solve any issues, as well as streamlined case creation for faster time to resolution when you must create a case.

To learn how to add your contracts and products, see <https://www.hpe.com/info/add-products-contracts>.

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>

My HPE Software Center

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

- To subscribe to eNewsletters and alerts:

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

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

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



IMPORTANT

Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Account set up with relevant entitlements.

Remote support

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

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

HPE Get Connected

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

HPE Tech Care Service

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

HPE Complete Care Service

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

Warranty information

To view the warranty information for your product, see the [warranty check tool](#).

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:

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

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

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

Documentation feedback

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