

Dell EMC PowerEdge C6400

Installation and Service Manual

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Dell EMC PowerEdge C6400 overview

The PowerEdge C6400 is an ultra-dense 2U enclosure that can support up to four independent two-socket (2S) sleds. The PowerEdge C6400 enclosure supports the following drive configurations:

- up to 24 x 2.5-inch SAS or SATA drives
- up to 8 x 2.5-inch NVMe drives, with 16 x 2.5-inch SAS or SATA drives
- up to 12 x 3.5-inch SAS or SATA drives
- diskless no backplane

Topics:

- [Supported configurations](#)
- [Front view of the Dell EMC PowerEdge C6400 enclosure](#)
- [Front view of the control panels](#)
- [Back view of the enclosure with sleds](#)
- [Sled to hard drive mapping](#)
- [Expander zoning](#)
- [Diagnostic indicators](#)
- [Locating the Service Tag of your system](#)
- [System information label](#)

Supported configurations

The PowerEdge C6400 system supports the following configurations:

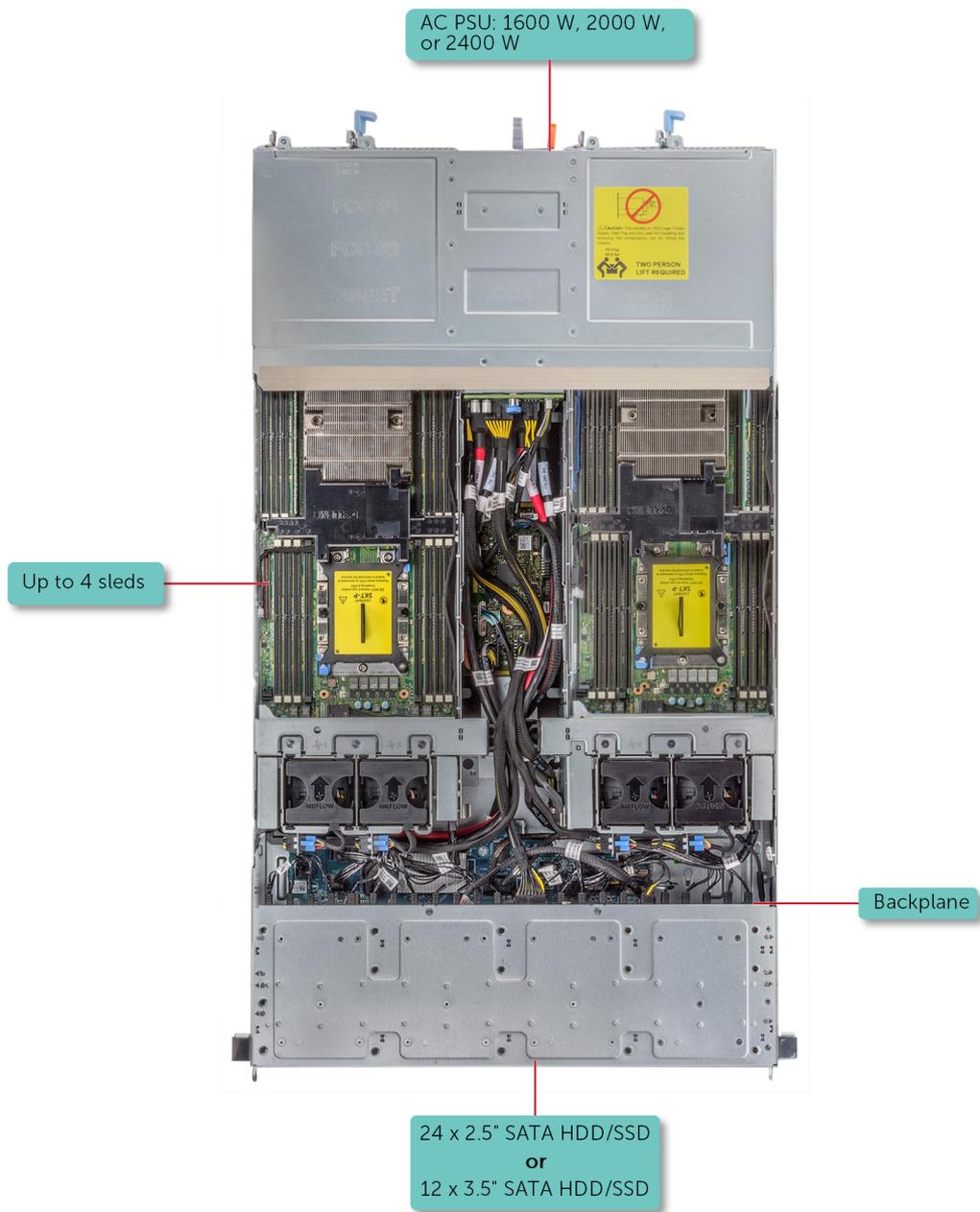


Figure 1. Supported configurations for PowerEdge C6400

Front view of the Dell EMC PowerEdge C6400 enclosure

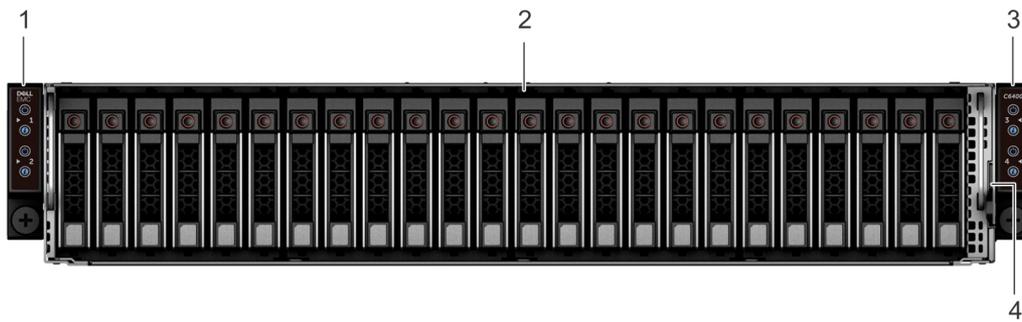


Figure 2. Front view of the enclosure with 24 x 2.5-inch drives

- | | | | |
|---|---------------------|---|-----------|
| 1 | Left control panel | 2 | Drive bay |
| 3 | Right control panel | 4 | EST tag |

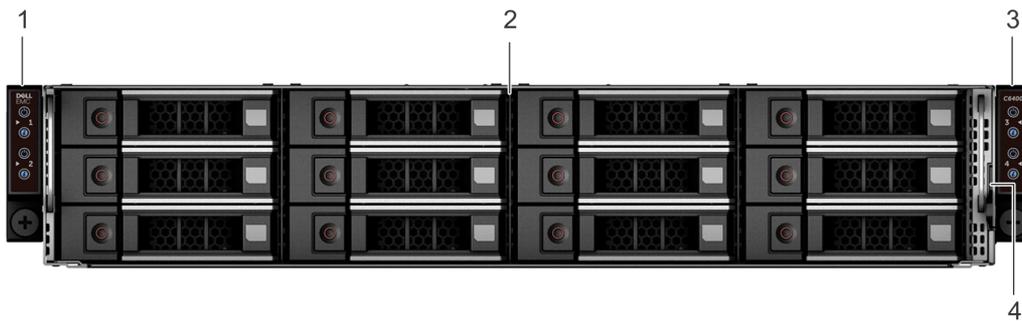


Figure 3. Front view of the enclosure with 12 x 3.5-inch drives

- | | | | |
|---|---------------------|---|-----------|
| 1 | Left control panel | 2 | Drive bay |
| 3 | Right control panel | 4 | EST tag |

Front view of the control panels

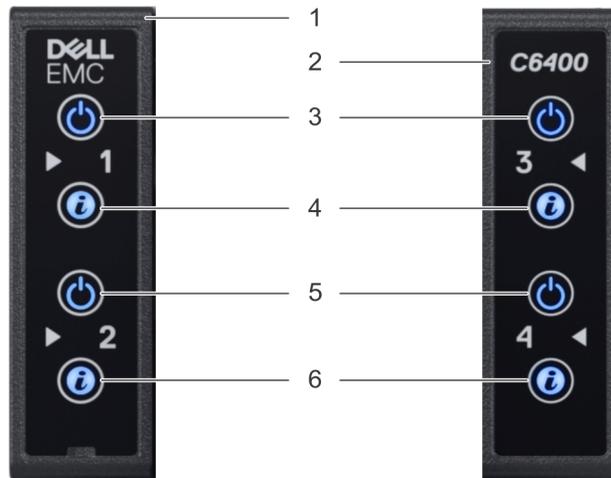


Figure 4. Front view of the left and right control panels

Table 1. Control panel

Item	Indicator or button	Icon	Description
1	Left control panel	-	The power-on indicator and system identification LED for sleds 1 and 2 are located on the left control panel.
2	Right control panel	-	The power-on indicator and system identification LED for sleds 3 and 4 are located on the right control panel.
3	Power-on indicator or system state indicator or power button for sleds 1 and 3		<p>Press the power button to turn the sled on or off.</p> <p>The power-on indicator turns amber when a critical system event occurs.</p> <p>NOTE: To gracefully shut down an ACPI-compliant operating system, press the power button.</p>
4	System identification button for sleds 1 and 3		<p>Press the system ID button:</p> <ul style="list-style-type: none"> To locate a particular sled within the enclosure. To turn the system ID on or off.

Item	Indicator or button	Icon	Description
			<p>NOTE: If the sled stops responding during POST, press and hold the system ID button (for more than five seconds) to enter the BIOS progress mode.</p>
5	Power-on indicator or system state indicator or power button for sleds 2 and 4		<p>Press the power button to turn the sled on or off.</p> <p>The power-on indicator turns amber when a critical system event occurs.</p>
6	System identification button for sleds 2 and 4		<p>Press the system ID button:</p> <ul style="list-style-type: none"> To locate a particular sled within the enclosure. To turn the system ID on or off. <p>NOTE: If the sled stops responding during POST, press and hold the system ID button (for more than five seconds) to enter the BIOS progress mode.</p>

Back view of the enclosure with sleds

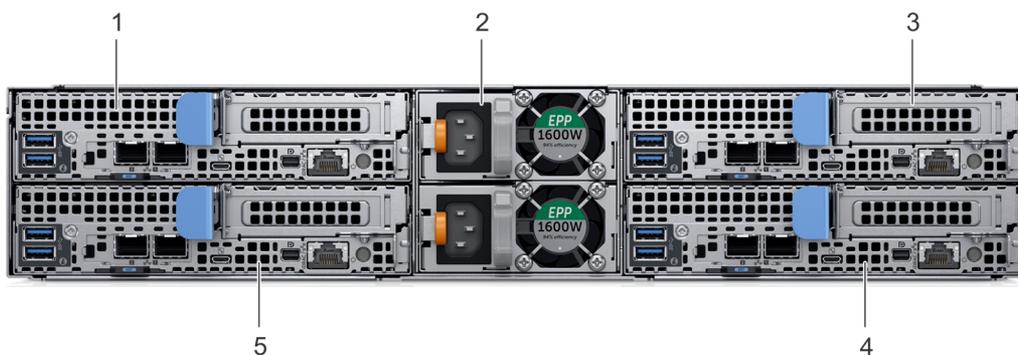


Figure 5. Back view of the enclosure with sleds

1	Sled 3	2	Power supply unit (2)
3	Sled 1	4	Sled 2
5	Sled 4		

Sled to hard drive mapping

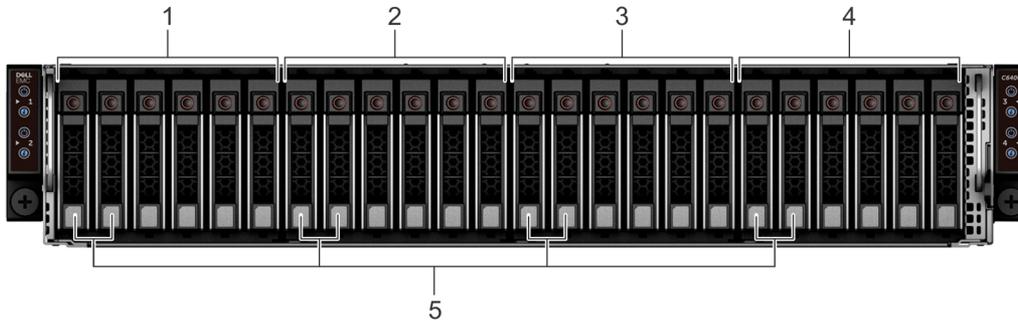


Figure 6. Sled to drive mapping for the enclosure with 24 x 2.5-inch drives

- | | | | |
|---|-------------------------------------|---|-------------------------------|
| 1 | Drives 0–5 mapped to sled 1 | 2 | Drives 6–11 mapped to sled 2 |
| 3 | Drives 12–17 mapped to sled 3 | 4 | Drives 18–23 mapped to sled 4 |
| 5 | (Optional) NVMe hard drive location | | |

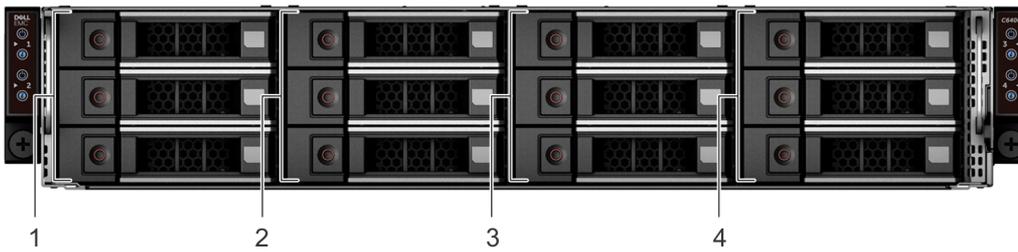


Figure 7. Sled to drive mapping for the enclosure with 12 x 3.5-inch drives

- | | | | |
|---|-----------------------------|---|------------------------------|
| 1 | Drives 0–2 mapped to sled 1 | 2 | Drives 3–5 mapped to sled 2 |
| 3 | Drives 6–8 mapped to sled 3 | 4 | Drives 9–11 mapped to sled 4 |

NOTE: The warranty of the drives are linked to the Service Tag of the corresponding sled.

Expander zoning

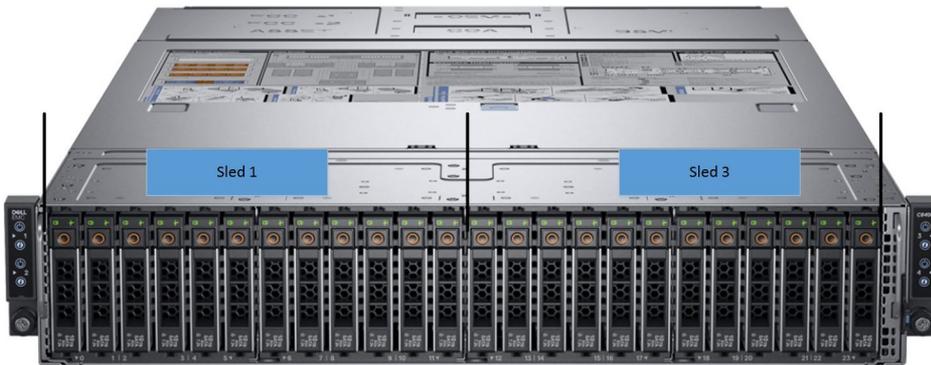
A SAS expander board allows higher, single-volume hard drive configurations. An integrated expander device expands each sleds hard drive footprint.

The Dell EMC PowerEdge C6400 enclosure allows four sleds to access a single expander controller at the same time. there are two zoning options available, they are:

- Up to 6 SAS/SATA device of each sled in Split Mode (6+6+6+6)



- Up to 12 SAS/SATA device of sled 1 and sled 3 in Zoning Mode (12+12)



NOTE:

- Install expander firmware 2.07 (X25-00) or later to support these configurations
- The expander mode works only with a PERC card, and is not supported by the onboard SATA controller.

Diagnostic indicators

The diagnostic indicators on the system indicate operation and error status.

Drive indicator codes

Each drive carrier has an activity LED indicator and a status LED indicator. The indicators provide information about the current status of the drive. The activity LED indicator indicates whether the drive is currently in use or not. The status LED indicator indicates the power condition of the drive.

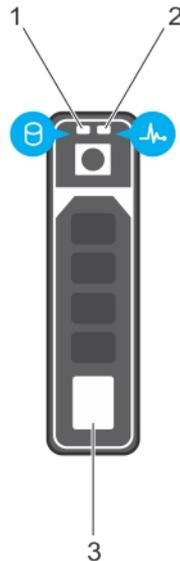


Figure 8. Drive indicators on the drive and the mid drive tray backplane

- 1 Drive activity LED indicator
- 2 Drive status LED indicator
- 3 Drive

NOTE: If the drive is in the Advanced Host Controller Interface (AHCI) mode, the status LED indicator does not turn on.

Table 2. Drive indicator codes

Drive status indicator code	Condition
Flashes green twice per second	Identifying drive or preparing for removal.
Off	Drive ready for removal. NOTE: The drive status indicator remains off until all drives are initialized after the system is turned on. Drives are not ready for removal during this time.
Flashes green, amber, and then turns off	Predicted drive failure.
Flashes amber four times per second	Drive failed.
Flashes green slowly	Drive rebuilding.
Solid green	Drive online.

Drive status indicator code	Condition
Flashes green for three seconds, amber for three seconds, and then turns off after six seconds	Rebuild stopped.

Power supply unit indicator codes

AC power supply units (PSUs) have an illuminated translucent handle that serves as an indicator. The indicator shows whether power is present or if a power fault has occurred.

NOTE: The 2400 W and 2000 W PSUs use a C19 or C20 connector. The 1600 W PSUs use a C13 or C14 connector.

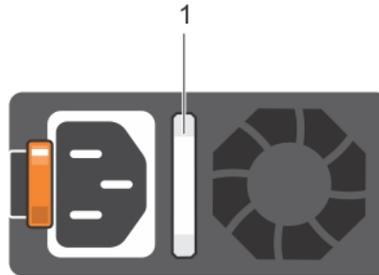


Figure 9. AC PSU status indicator

1 AC PSU status indicator/handle

Table 3. AC PSU status indicator codes

Power indicator codes	Condition
Green	A valid power source is connected to the PSU and the PSU is operational.
Blinking amber	Indicates a problem with the PSU.
Not illuminated	Power is not connected to the PSU.
Blinking green	When the firmware of the PSU is being updated, the PSU handle blinks green. <ul style="list-style-type: none"> CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs do not function.
Blinking green and turns off	When hot-plugging a PSU, the PSU handle blinks green five times at a rate of 4 Hz and turns off. This indicates a PSU mismatch with respect to efficiency, feature set, health status, or supported voltage. <ul style="list-style-type: none"> CAUTION: The PSUs must have the same type of label; for example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to turn the system on. CAUTION: When correcting a PSU mismatch, replace only the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must turn off the system. CAUTION: AC PSUs support both 240 V and 120 V input voltages with the exception of Titanium PSUs, which support only 240 V. When two identical PSUs receive different input voltages, they can output different wattages, and trigger a mismatch.

CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.

Locating the Service Tag of your system

Your system is identified by a unique Express Service Code and Service Tag number. The Express Service Code and Service Tag are found on the front of the enclosure by pulling out the EST tag. This information is used by Dell to route support calls to the appropriate personnel.

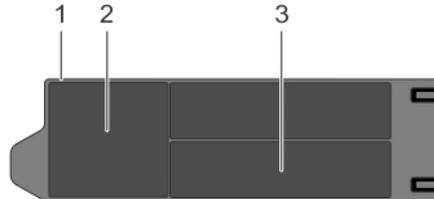


Figure 10. Locating the Service Tag of your system

- | | | | |
|---|----------------------------|---|---------------|
| 1 | Information tag (top view) | 2 | QR code label |
| 3 | Express Service Tag label | | |

System information label

This section shows the System Information labels that are also available on the inside of the system cover.

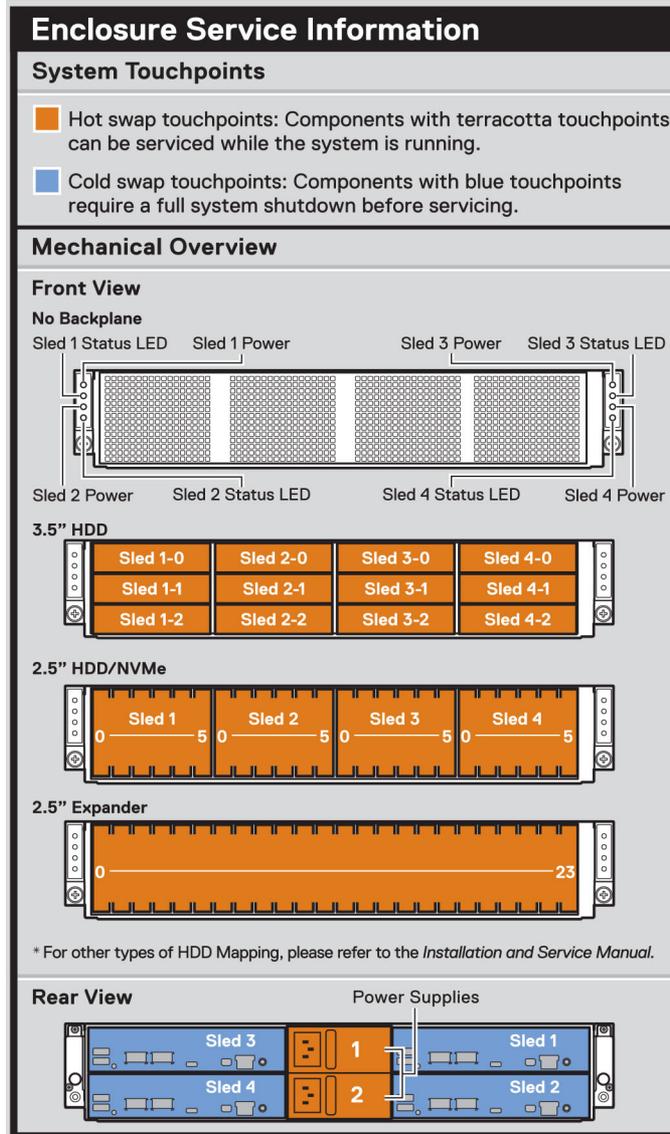


Figure 11. System touchpoints

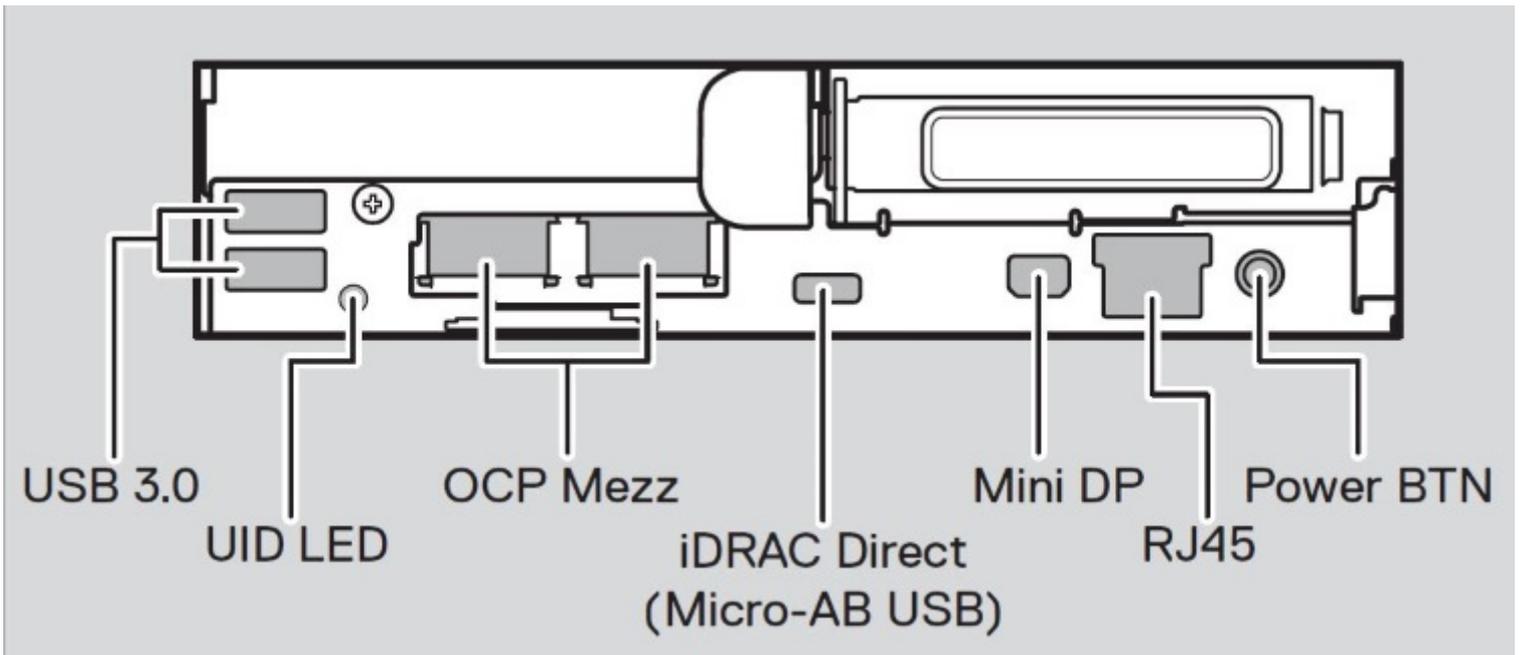


Figure 12. System information label for the sled

Documentation resources

This section provides information about the documentation resources for your system.

To view the document that is listed in the documentation resources table:

- From the Dell EMC support site:
 - a Click the documentation link that is provided in the Location column in the table.
 - b Click the required product or product version.

i | NOTE: To locate the product name and model, see the front of your system.

 - c On the Product Support page, click **Manuals & documents**.
- Using search engines:
 - Type the name and version of the document in the search box.

Table 4. Additional documentation resources for your system

Task	Document	Location
Setting up your system	<p>For more information about installing and securing the system into a rack, see the Rail Installation Guide included with your rack solution.</p> <p>For information about setting up your system, see the <i>Getting Started Guide</i> document that is shipped with your system.</p>	Dell.com/poweredgemanuals
Configuring your system	<p>For information about the iDRAC features, configuring and logging in to iDRAC, and managing your system remotely, see the Integrated Dell Remote Access Controller User's Guide.</p> <p>For information about understanding Remote Access Controller Admin (RACADM) subcommands and supported RACADM interfaces, see the RACADM CLI Guide for iDRAC.</p> <p>For information about Redfish and its protocol, supported schema, and Redfish Eventing implemented in iDRAC, see the Redfish API Guide.</p> <p>For information about iDRAC property database group and object descriptions, see the Attribute Registry Guide.</p>	Dell.com/poweredgemanuals
	<p>For information about earlier versions of the iDRAC documents.</p> <p>To identify the version of iDRAC available on your system, on the iDRAC web interface, click ? > About.</p>	Dell.com/idracmanuals
	For information about installing the operating system, see the operating system documentation.	Dell.com/operatingsystemmanuals

Task	Document	Location
Managing your system	For information about systems management software offered by Dell, see the Dell OpenManage Systems Management Overview Guide.	Dell.com/poweredgemanuals
	For information about setting up, using, and troubleshooting OpenManage, see the Dell OpenManage Server Administrator User's Guide.	Dell.com/openmanagemanuals > OpenManage Server Administrator
	For information about installing, using, and troubleshooting Dell OpenManage Essentials, see the Dell OpenManage Essentials User's Guide.	Dell.com/openmanagemanuals > OpenManage Essentials
	For information about installing and using Dell SupportAssist, see the Dell EMC SupportAssist Enterprise User's Guide.	Dell.com/serviceabilitytools
	For information about partner programs enterprise systems management, see the OpenManage Connections Enterprise Systems Management documents.	Dell.com/openmanagemanuals
Working with the Dell PowerEdge RAID controllers	For information about understanding the features of the Dell PowerEdge RAID controllers (PERC), Software RAID controllers, or BOSS card and deploying the cards, see the Storage controller documentation.	Dell.com/storagecontrollermanuals
Understanding event and error messages	For information about the event and error messages generated by the system firmware and agents that monitor system components, see the Error Code Lookup.	Dell.com/qr1
Troubleshooting your system	For information about identifying and troubleshooting the PowerEdge server issues, see the Server Troubleshooting Guide.	Dell.com/poweredgemanuals

Technical specifications

The technical and environmental specifications of your system are outlined in this section.

Topics:

- [Dimensions of the Dell EMC PowerEdge C6400 enclosure](#)
- [Chassis weight](#)
- [Supported operating systems](#)
- [PSU specifications](#)
- [Chassis management board specifications](#)
- [Drives and storage specifications](#)
- [Midplane specifications](#)
- [Environmental specifications](#)

Dimensions of the Dell EMC PowerEdge C6400 enclosure

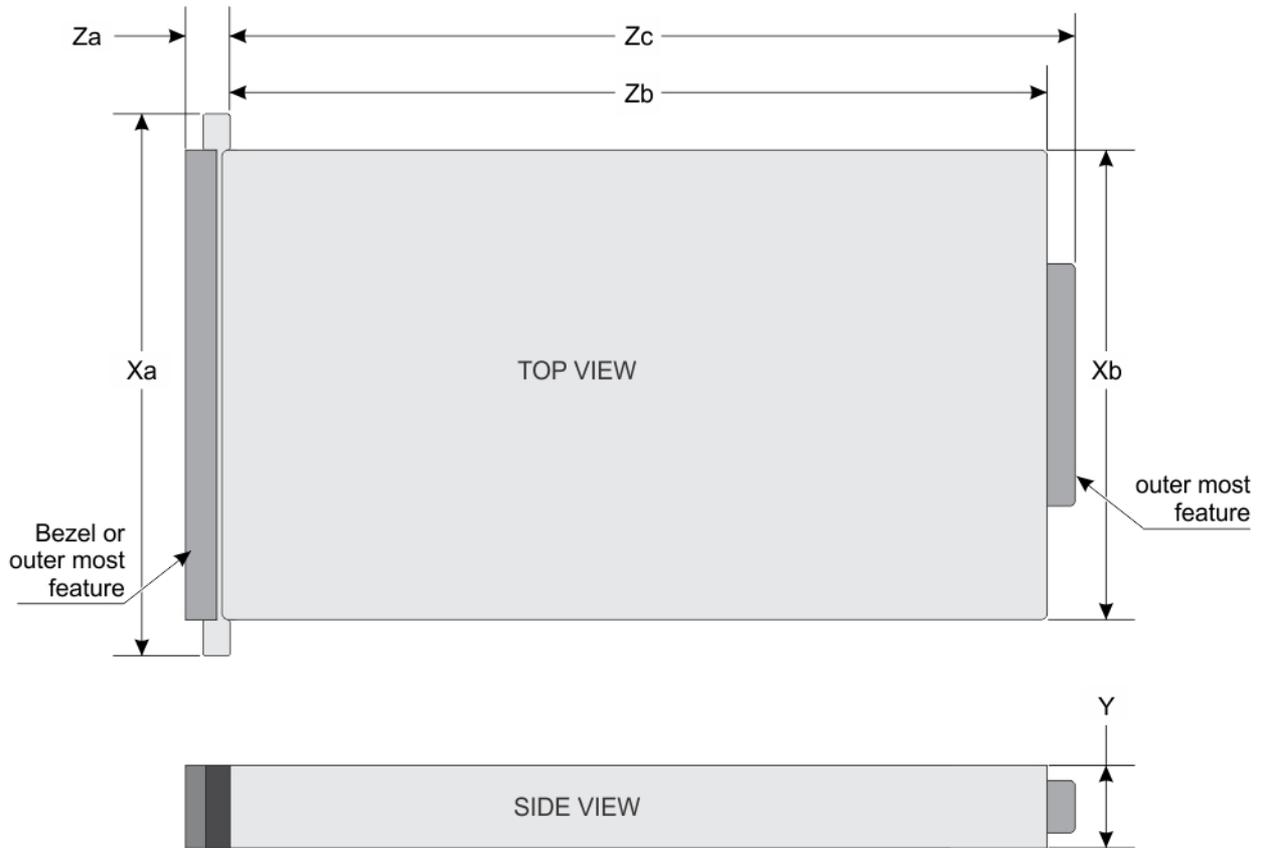


Figure 13. Dimensions of PowerEdge C6400 enclosure

Table 5. Dimensions of the PowerEdge C6400 enclosure

Xa	Xb	Y	Za	Zb	Zc
482.6 mm (19 inches)	448 mm (17.63 inches)	86.8 mm (3.41 inches)	26.8 mm (1.05 inches)	763.2 mm (30.28 inches)	797.3 mm (31.38 inches)

Chassis weight

Table 6. Chassis weight of the Dell EMC PowerEdge C6400 enclosure with PowerEdge C6420 sleds

System	Maximum weight (with all sleds and drives)
12 x 3.5-inch hard drive systems	43.62 Kg (96.16 lb)
24 x 2.5-inch hard drive systems	41.46 Kg (91.40 lb)
No backplane systems	34.56 Kg (76.19 lb)

Supported operating systems

The Dell EMC PowerEdge C6400 supports the following operating systems:

- Red Hat Enterprise Linux
- SUSE Linux Enterprise Server
- Microsoft Windows Server with Hyper-V
- Canonical Ubuntu LTS
- VMware ESXi
- Citrix XenServer

NOTE: For more information about the specific versions and additions, see <https://www.dell.com/support/home/drivers/supportedos/poweredge-c6400>

PSU specifications

The Dell EMC PowerEdge C6400 enclosure supports two AC power supply units (PSUs).

Table 7. PSU specifications

PSU wattage	Class	Heat dissipation (maximum)	Frequency	Voltage	Maximum input current
2400 W AC	Platinum	9000 BTU/hr	50/60 Hz	100–240 V AC, autoranging	14 A–16 A
2000 W AC	Platinum	7500 BTU/hr	50/60 Hz	100–240 V AC, autoranging	11.5 A
1600 W AC	Platinum	6000 BTU/hr	50/60 Hz	100–240 V AC, autoranging	10 A

NOTE: Heat dissipation is calculated using the PSU wattage rating.

NOTE: This system is also designed to connect to the IT power systems with a phase to phase voltage not exceeding 240 V.

NOTE: If a system with 2400 W AC PSU operates at low line 100–120 V AC, then the power rating per PSU is derated to 1400 W.

NOTE: If a system with 2000 W AC PSU operates at low line 100–120 V AC, then the power rating per PSU is derated to 1000 W.

NOTE: If system with 1600 W AC PSU operates at low line 100–120 V AC, then the power rating per PSU is derated to 800 W.

Chassis management board specifications

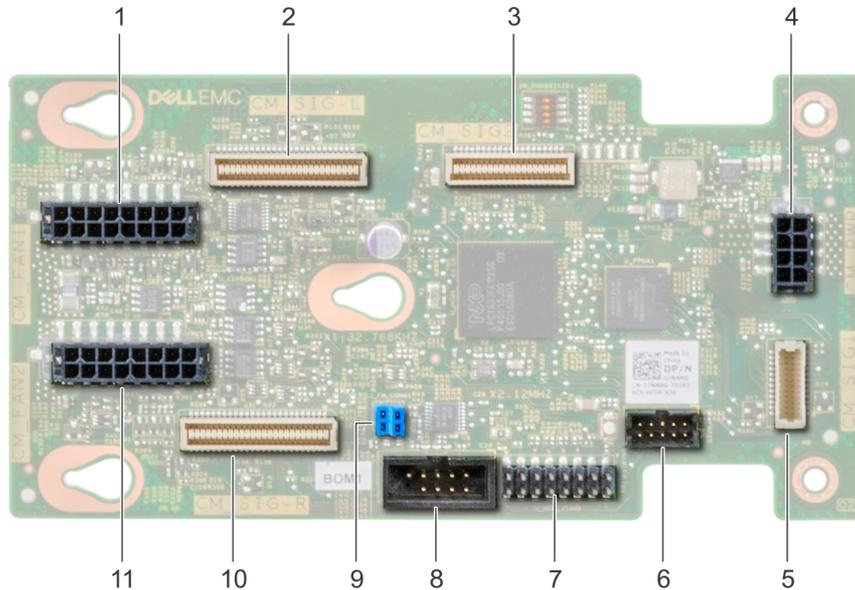


Figure 14. Chassis management board specifications

- | | | | |
|----|--|----|---|
| 1 | Fan cage 1 connector for fans 1 and 2 | 2 | Left midplane signal cable |
| 3 | Chassis management board signal cable to backplane | 4 | Chassis management board power connector from PIB |
| 5 | Chassis management board signal cable to PIB | 6 | FPGA connector |
| 7 | MCU connector | 8 | COM connector |
| 9 | Firmware jumpers | 10 | Right midplane signal cable |
| 11 | Fan cage 2 connector for fans 3 and 4 | | |

Drives and storage specifications

The Dell EMC PowerEdge C6400 enclosure supports SAS and SATA hard drives and Solid State Drives (SSDs).

Table 8. Supported drive options for the Dell EMC PowerEdge C6400 enclosure

Maximum number of drives in the enclosure	Maximum number of drives assigned per sled
12 x 3.5-inch drive systems	Three SAS or SATA hard drives and SSDs per sled
24 x 2.5-inch drive systems	Six SAS or SATA hard drives and SSDs per sled
24 x 2.5-inch drive systems with NVMe	The NVMe backplane supports either of these configurations: <ul style="list-style-type: none"> • Two NVMe drives and four SAS or SATA hard drives and SSDs per sled • Six SAS or SATA hard drives and SSDs per sled
M.2 SATA drive (optional)	The supported capacity of the M.2 SATA card is 120 GB <p>NOTE: The M.2 SATA card can be installed on the x16 riser slot (slot 5).</p>

Maximum number of drives in the enclosure

microSD card (optional) for boot (up to 64 GB)

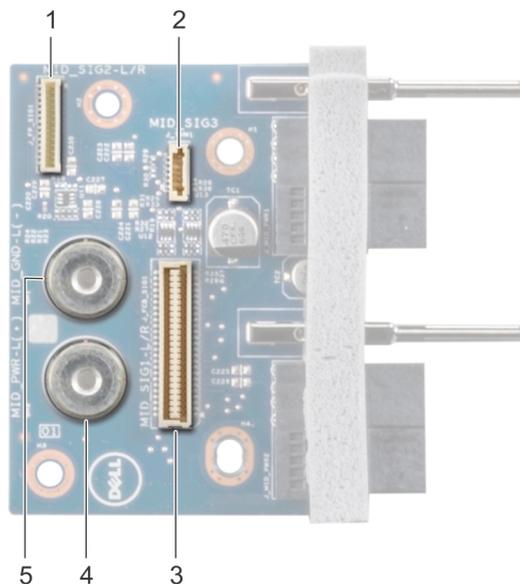
Maximum number of drives assigned per sled

One on each PCIe riser of each sled

Table 9. Supported RAID options with M.2 SATA drives

Options	Single M.2 SATA drive without RAID	Dual M.2 SATA drives with hardware RAID
Hardware RAID	No	Yes
RAID Mode	N/A	RAID 1
Number of drives supported	1	2
Supported CPUs	CPU 1	CPU 1 and CPU 2

Midplane specifications

**Figure 15. Midplane specifications**

- | | | | |
|---|--|---|--------------------------------------|
| 1 | Midplane signal connector 2 | 2 | Thermal sensor cable connector |
| 3 | Chassis management board cable connector | 4 | Midplane +12 V power cable connector |
| 5 | Midplane power cable ground connector | | |

Environmental specifications

The sections below contains information about the environmental specifications of the system.

NOTE: For additional information about environmental certifications, please refer to the Product Environmental Datasheet located with the Manuals & Documents on Dell.com/poweredge/manuals

Temperature specifications

Table 10. Temperature specifications

Temperature	Specifications
Storage	–40°C to 65°C (–40°F to 149°F)
Continuous operation (for altitude less than 950 m or 3117 ft)	10°C to 35°C (50°F to 95°F) with no direct sunlight on the equipment.
Fresh air	For information about fresh air, see Expanded Operating Temperature section.
Maximum temperature gradient (operating and storage)	20°C/h (36°F/h)

NOTE: Some configurations require a lower ambient temperature for more information, see the [Standard operating temperature specifications](#).

Relative humidity specifications

Table 11. Relative humidity specifications

Relative humidity	Specifications
Storage	5% to 95% RH with 33°C (91°F) maximum dew point. Atmosphere must be non-condensing at all times.
Operating	10% to 80% relative humidity with 29°C (84.2°F)

Maximum vibration specifications

Table 12. Maximum vibration specifications

Maximum vibration	Specifications
Operating	0.26 Grms at 5 Hz to 350 Hz (all operation orientations).
Storage	1.88 Grms at 10 Hz to 500 Hz for 15 min (all six sides tested).

Maximum shock specifications

Table 13. Maximum shock specifications

Maximum shock	Specifications
Operating	24 executed shock pulses 6 G in the positive and negative x, y, z axis for up to 11 ms (four pulses on each side of the system).
Storage	Six consecutively executed shock pulses of 71 G in the positive and negative x, y, z axes for up to 2 ms (one pulse on each side of the system).

Maximum altitude specifications

Table 14. Maximum altitude specifications

Maximum altitude	Specifications
Operating	3048 m (10,000 ft)
Storage	12,000 m (39,370 ft)

Operating temperature de-rating specifications

Table 15. Operating temperature

Operating temperature de-rating	Specifications
Up to 35°C (95°F)	Maximum temperature is reduced by 1°C/300 m (1°F/547 ft) above 950 m (3,117 ft).
35°C to 40°C (95°F to 104°F)	Maximum temperature is reduced by 1°C/175 m (1°F/319 ft) above 950 m (3,117 ft).
40°C to 45°C (104°F to 113°F)	Maximum temperature is reduced by 1°C/125 m (1°F/228

Particulate and gaseous contamination specifications

Table 16. Particulate contamination specifications

Particulate contamination	Specifications
Air filtration	Data center air filtration as defined by ISO Class 8 per ISO 14644-1 with a 95% upper confidence limit.
<p>NOTE: This condition applies only to data center environments. Air filtration requirements do not apply to IT equipment designed to be used outside a data center, in environments such as an office or factory floor.</p> <p>NOTE: Air entering the data center must have MERV11 or MERV13 filtration.</p>	
Conductive dust	Air must be free of conductive dust, zinc whiskers, or other conductive particles.
<p>NOTE: This condition applies to data center and non-data center environments.</p>	
Corrosive dust	Air must be free of corrosive dust.
Residual dust present in the air must have a deliquescent point less than 60% relative humidity.	
<p>NOTE: This condition applies to data center and non-data center environments.</p>	

Table 17. Gaseous contamination specifications

Gaseous contamination	Specifications
Copper coupon corrosion rate	<300 Å/month per Class G1 as defined by ANSI/ISA71.04-1985.
Silver coupon corrosion rate	<200 Å/month as defined by AHSRAE TC9.9.
<p>NOTE: Maximum corrosive contaminant levels measured at ≤50% relative humidity.</p>	

Standard operating temperature specifications

- NOTE:**
 - 1 Not available: Indicates that the configuration is not offered by Dell EMC.
 - 2 Not supported: Indicates that the configuration is not thermally supported.
- NOTE:** All components including the DIMMs, communication cards, M.2 SATA, and PERC cards can be supported with sufficient thermal margin if the ambient temperature is equal to or below to the maximum continuous operating temperature listed in these tables with the exception of the Mellanox DP LP card.

Table 18. Standard operating temperature specifications

Standard operating temperature	Specifications
Temperature ranges (for altitude less than 950 m or 3117 ft)	10°C to 35°C (50°F to 95°F) with no direct sunlight on the equipment.

NOTE: Some configurations require a lower ambient temperature. For more information see the following tables.

Table 19. Maximum continuous operating temperature for non-fabric dual processor configuration

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
205W	8180	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8	Not supported			20°C/68.0°F	21°C/69.8°F	21°C/69.8°F	21°C/69.8°F	21°C/69.8°F	30°C/86°F	
	8180M	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8	Not supported			20°C/68.0°F	21°C/69.8°F	21°C/69.8°F	21°C/69.8°F	21°C/69.8°F	30°C/86°F	
	8168	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8	Not supported			20°C/68.0°F	21°C/69.8°F	21°C/69.8°F	21°C/69.8°F	21°C/69.8°F	30°C/86°F	
200W	6154	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8	Not supported			20°C/68.0°F	21°C/69.8°F	22°C/71.6°F	22°C/71.6°F	22°C/71.6°F	22°C/71.6°F	30°C/86°F
	6150	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not supported			30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	35°C/95°F	35°C/95°F
165W	6146	CPU1: JYKMM CPU2: V2DRD	CPU1: 6 CPU2: 8	Not supported			30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	35°C/95°F	35°C/95°F
	8176	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not supported			30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	35°C/95°F	35°C/95°F
	8176	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not supported			30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	30°C/86°F	35°C/95°F	35°C/95°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
	8176M	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	8170M	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	8170	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
150W	6144	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8	Not supported			30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
150W	6148	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not supported			30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	6142	CPU1: FMM2 M CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	6136	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	8164	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	8160M	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
	8160	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
140W	6132	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not supported			30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	6152	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	6140M	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	6140	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8				30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
130W	6134	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not supported	25°C/ 77°F	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
125W	6126	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	8153	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	6138	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
6130		CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
115W	6128	CPU1: FMM2M CPU2: V2DRD	CPU1: 6 CPU2: 8	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
105W	5122	CPU1: FMM2M CPU2: V2DRD	CPU1: 6 CPU2: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	5120	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	5118	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
85W	5115	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	4116	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	4114	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	4112	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
4110		CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
4108		CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
3106		CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
3104		CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
70W	4109T	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F

Table 20. Maximum continuous operating temperature for fabric dual processor configuration

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
173W	8176F	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8			Not applicable			22°C/ 71.6°F	22°C/ 71.6°F	25°C/ 77°F	25°C/ 77°F	30°C/ 86°F
165W	8170F	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8			Not applicable			25°C/ 77°F	25°C/ 77°F	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F
160W	8160F	CPU1: FMM2 M 	CPU1: 6 CPU2: 8			Not applicable			25°C/ 77°F	25°C/ 77°F	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure	
		CPU2: V2DRD												
	6148F	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8						25°C/ 77°F	25°C/ 77°F	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	
	6142F	CPU1: FMM2 M CPU2: V2DRD	CPU1: 6 CPU2: 8						25°C/ 77°F	25°C/ 77°F	25°C/ 77°F	30°C/ 86°F	30°C/ 86°F	
135W	6138F	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8	Not applicable						30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F
	6130F	CPU1: JYKMM CPU2: V2DRD	CPU1: 8 CPU2: 8						30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	
	6126F	CPU1: FMM2 M CPU2: V2DRD	CPU1: 8 CPU2: 8						30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	

Table 21. Maximum continuous operating temperature for non-fabric single processor configuration

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
205W	8180	CPU1: FMM2 M	CPU1: 6	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	8180M	CPU1: FMM2 M	CPU1: 6	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	8168	CPU1: FMM2 M	CPU1: 6	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
200W	6154	CPU1: FMM2M	CPU1: 6	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
165W	6150	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	6146	CPU1: FMM2M	CPU1: 6	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	8176	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	8176M	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	8170M	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
8170	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	
155W	6144	CPU1: FMM2M	CPU1: 6	30°C/ 86°F	30°C/ 86°F	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
150W	6148	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	6142	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	
	6136	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	
	8164	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	
	8160M	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	
	8160	CPU1: JYKMM	CPU1: 8	30°C/ 86°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	
140W	6132	CPU1: JYKMM	CPU1: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	6152	CPU1: JYKMM	CPU1: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F
	6140M	CPU1: JYKMM	CPU1: 8	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	35°C/ 95°F	

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
	6140	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
130W	6134	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
125W	6126	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	8153	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	6138	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	6130	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
115W	6128	CPU1: FMM2 M	CPU1: 6	30°C/86°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
105W	5122	CPU1: FMM2 M	CPU1: 6	30°C/86°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	5120	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	5118	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
85W	5115	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	4116	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	4114	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	4112	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	4110	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	4108	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
	3106	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F

TDP (W)	Processor model number	Supported heat sinks	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
	3104	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F
70W	4109T	CPU1: JYKMM	CPU1: 8	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F	35°C/95°F

Table 22. Maximum continuous operating temperature for fabric single processor configuration

TDP (W)	Processor model number	Max DIMM count per CPU	12x 3.5-inch HDDs enclosure	8x 3.5-inch HDDs enclosure	4x 3.5-inch HDDs enclosure	24x 2.5-inch HDDs enclosure	20x 2.5-inch HDDs enclosure	16x 2.5-inch HDDs enclosure	12x 2.5-inch HDDs enclosure	8x 2.5-inch HDDs enclosure	4x 2.5-inch HDDs enclosure	No back plane enclosure
173W	8176F	CPU1: 6										
165W	8170F	CPU1: 6										
160W	8160F	CPU1: 6										
	6148F	CPU1: 6										
	6142F	CPU1: 6						Not applicable				
135W	6138F	CPU1: 8										
	6130F	CPU1: 8										
	6126F	CPU1: 8										

Table 23. Configuration Restrictions with Mellanox ConnectX-4 EDR Dual Port Card with Active (Optical) connectivity

CPU TDP	3.5-inch chassis			2.5' Chassis				No Backplane	
	12x HDDs	8x HDDs	4x HDDs	24x HDDs	16x HDDs	8x HDDs	4x Hdds	N/A	
205W								23	
200W				Not supported				23	
173W			Not supported				24	24	28
165W				24	25	25	26	29	
160W				24	25	26	26	30	
155W		Not supported		24	25	26	26	30	
150W				26	27	28	28	31	
140W		23	25	28	29	29	30	33	
135W	Not supported	24	25	29	30	30	31	33	
130W		24	26	30	31	31	31	34	

	3.5-inch chassis				2.5' Chassis				No Backplane
125W	20	25	27	30	31	32	32	35	
115W	21	27	28	32	33	34	34	>35	
113W	21	27	28	32	33	34	34	>35	
105W	22	28	30	34	35	>35	>35	>35	
85W	23	32	33	>35	>35	>35	>35	>35	
70W	25	34	>35	>35	>35	>35	>35	>35	

Expanded operating temperature specifications

Table 24. Expanded operating temperature

Expanded operating temperature	Specifications
Continuous operation	<p>5°C to 40°C at 5% to 85% RH with 29°C dew point.</p> <p>NOTE: Outside the standard operating temperature (10°C to 35°C), the system can operate continuously in temperatures as low as 5°C and as high as 40°C.</p> <p>For temperatures between 35°C and 40°C, de-rate maximum allowable temperature by 1°C per 175 m above 950 m (1°F per 319 ft).</p>
≤ 1% of annual operating hours	<p>–5°C to 45°C at 5% to 90% RH with 29°C dew point.</p> <p>NOTE: Outside the standard operating temperature (10°C to 35°C), the system can operate down to –5°C or up to 45°C for a maximum of 1% of its annual operating hours.</p> <p>For temperatures between 40°C and 45°C, de-rate maximum allowable temperature by 1°C per 125 m above 950 m (1°F per 228 ft).</p>

NOTE: When operating in the expanded temperature range, system performance may be impacted.

NOTE: When operating in the expanded temperature range, ambient temperature warnings may be reported in the System Event Log.

Fresh Air Operation

Fresh Air operation restrictions

- Processors with a TDP greater than 105 W are not supported.
- Support for processors of 85 W and below without PERC restrictions
- 3.5" HDD configuration is not supported.
- 114 mm heat sink is required for the processor in CPU1 socket.
- Intel Ethernet Server Adapter X710-DA2 for Open Compute Project (OCP) is not supported.
- X8 M.2 SATA card is not supported.
- NVMe SSD is not supported.
- PCIe cards with power rating greater than 25 W are not supported.
- LRDIMMs are not supported.
- Support only for CPU's with wattages up to 105 W without the PERC H330 and H730P.

Installing and removing enclosure components

Topics:

- Safety instructions
- Before working inside your system
- After working inside your system
- Recommended tools
- Inside the enclosure
- Dell EMC PowerEdge C6420 sled
- Drives
- Power supply units
- System cover
- Backplane cover
- Cooling fans
- Power interposer board
- Chassis management board
- Linking board
- Midplane
- Drive cage
- Backplanes and expander board
- Control panel
- Thermal sensor board

Safety instructions

- ⚠ WARNING:** Whenever you need to lift the system, get others to assist you. To avoid injury, do not attempt to lift the system by yourself.
- ⚠ WARNING:** Opening or removing the system cover while the system is powered on may expose you to a risk of electric shock.
- ⚠ CAUTION:** Do not operate the system without the cover for a duration exceeding five minutes. Operating the system without the system cover can result in component damage.
- ⚠ CAUTION:** Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that are shipped with your product.
- ℹ NOTE:** It is recommended that you always use an antistatic mat and antistatic strap while working on components inside the system.
- ⚠ CAUTION:** To ensure proper operation and cooling, all bays in the system and system fans must be always populated with a component or a blank.

Before working inside your system

Prerequisite

Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Power off the system, including all attached peripherals.
- 2 Disconnect the system from the electrical outlet and disconnect the peripherals.
- 3 If applicable, remove the system from the rack.
For more information, see the *Rack Installation Guide* at Dell.com/poweredge manuals.
- 4 Remove the system cover.

After working inside your system

Prerequisite

Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Install the system cover.
- 2 If applicable, install the system into the rack.
For more information, see the *Rack Installation Guide* at Dell.com/poweredge manuals.
- 3 Reconnect the peripherals and connect the system to the electrical outlet.
- 4 Power on the attached peripherals and then turn on the system.

Recommended tools

You need the following tools to perform the removal and installation procedures:

- Phillips #1 screwdriver
- Phillips #2 screwdriver
- 1/4 inch flat head screwdriver
- Wrist grounding strap
- ESD mat

Inside the enclosure

 **CAUTION:** This system must be operated with the system cover installed to ensure proper cooling.

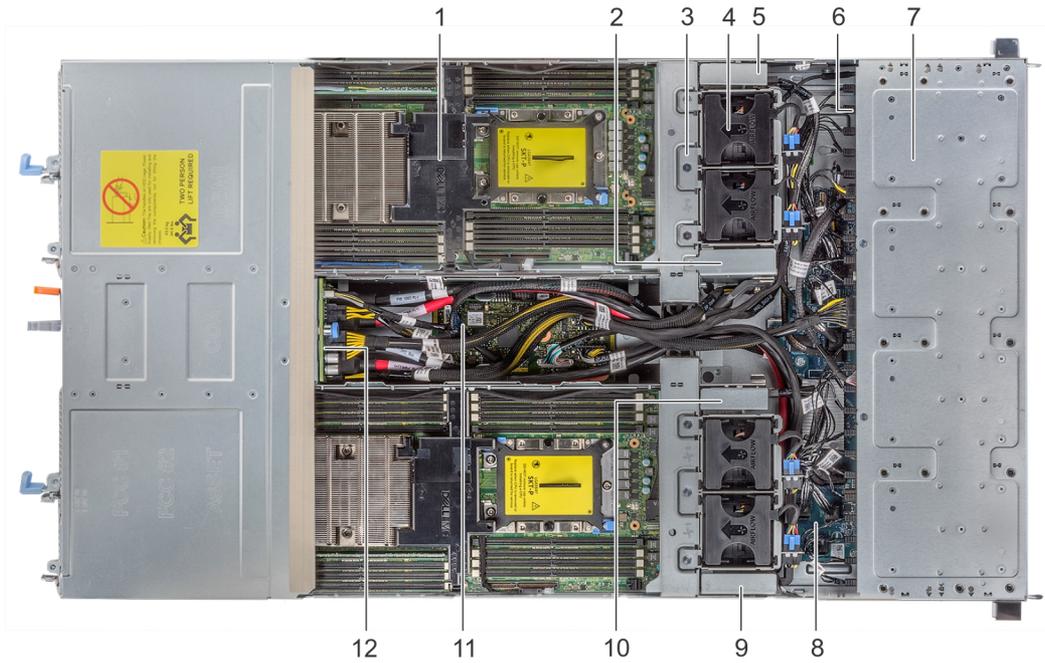


Figure 16. Inside the Dell EMC PowerEdge C6400 enclosure

- | | | | |
|----|--------------------------|----|------------------------|
| 1 | Sled | 2 | Right midplane |
| 3 | Fan cage (2) | 4 | Fan (4) |
| 5 | Right linking board | 6 | Backplane |
| 7 | Drive cage | 8 | Expander board |
| 9 | Left midplane | 10 | Left linking board |
| 11 | Chassis management board | 12 | Power interposer board |

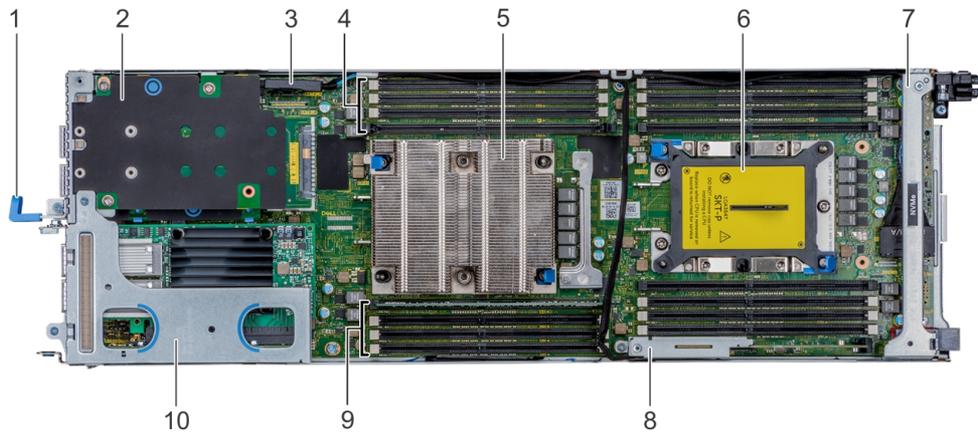


Figure 17. Inside the PowerEdge C6420 sled

- | | | | |
|---|---------------------------------|----|--|
| 1 | Sled pull handle | 2 | Mezzanine card |
| 3 | SATA connector | 4 | Memory slot (4) |
| 5 | CPU1 processor heat sink module | 6 | CPU2 processor heat sink module socket |
| 7 | Supporting bracket | 8 | M.2 SATA riser |
| 9 | Memory slot (4) | 10 | PCIe expansion card riser assembly |

Dell EMC PowerEdge C6420 sled

Removing a sled

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [Before working inside your enclosure](#).

NOTE: The process of removing a sled blank is similar to removing a sled.

Step

Press the retaining latch and using the sled pull handle, slide the sled out of the enclosure horizontally, ensuring that the sled is supported from beneath.

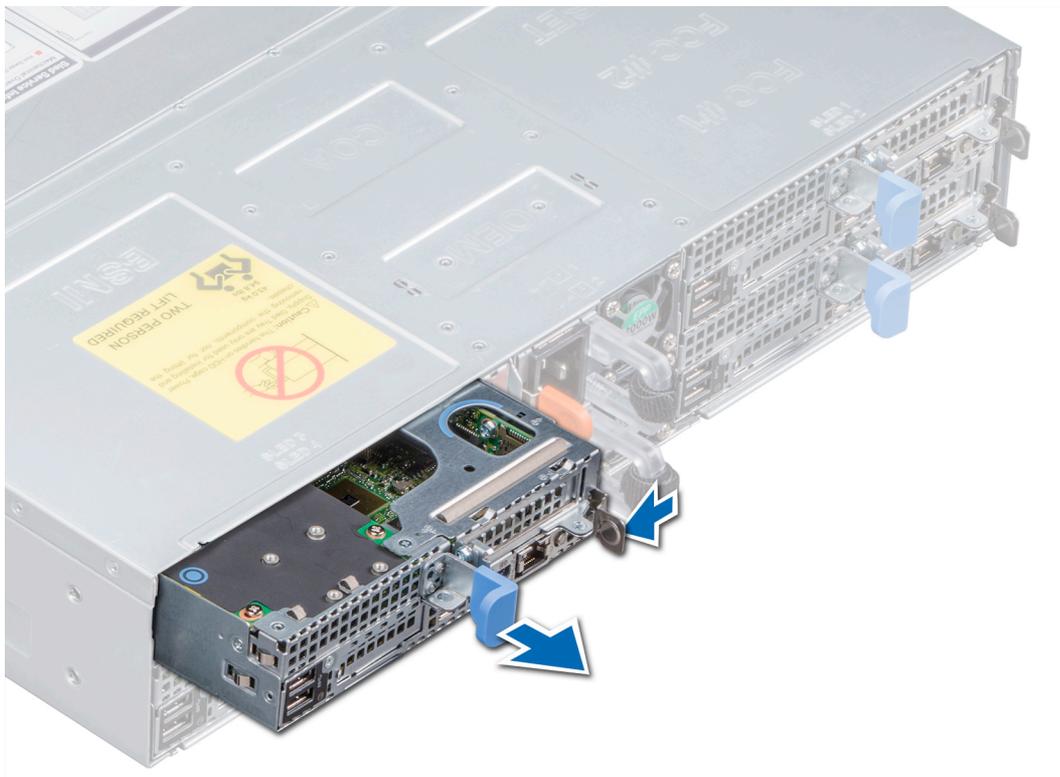


Figure 18. Removing a sled

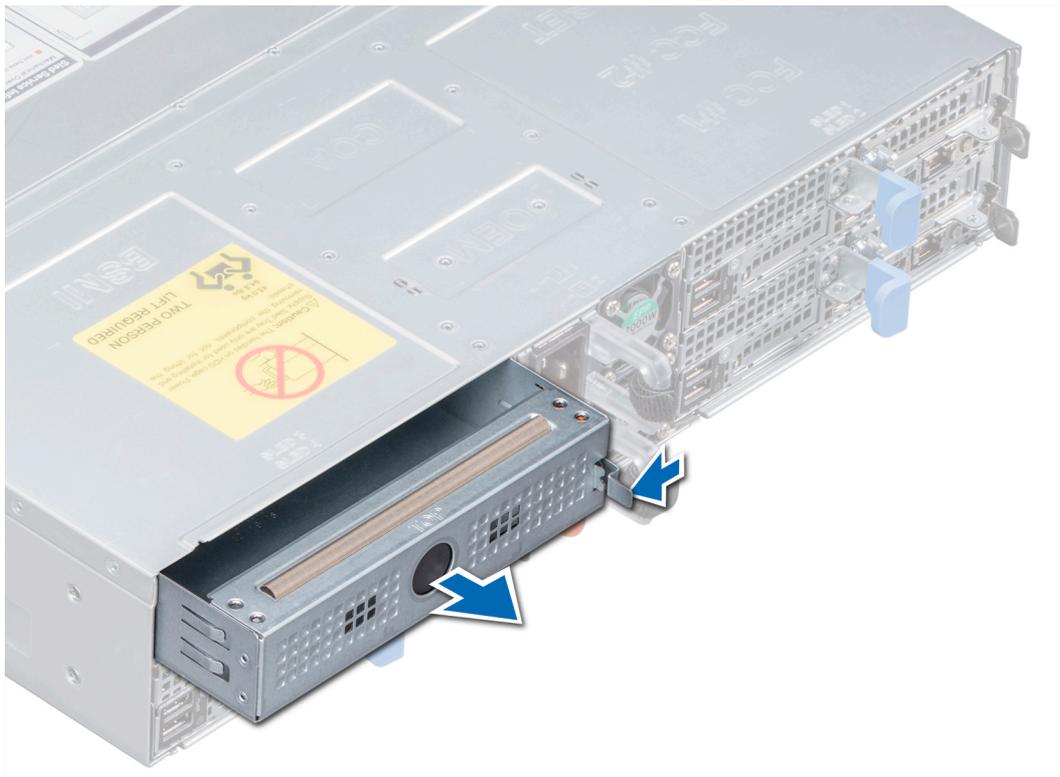


Figure 19. Removing a sled blank

Next step

- 1 Install the sled into the enclosure.

NOTE: If the sled is not being replaced immediately, a sled blank must be installed to ensure proper cooling of the system.

Installing a sled

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 If installed, [remove the sled blank](#).

Step

Slide the sled into the enclosure horizontally, ensuring that the sled is supported from beneath until it locks into place.

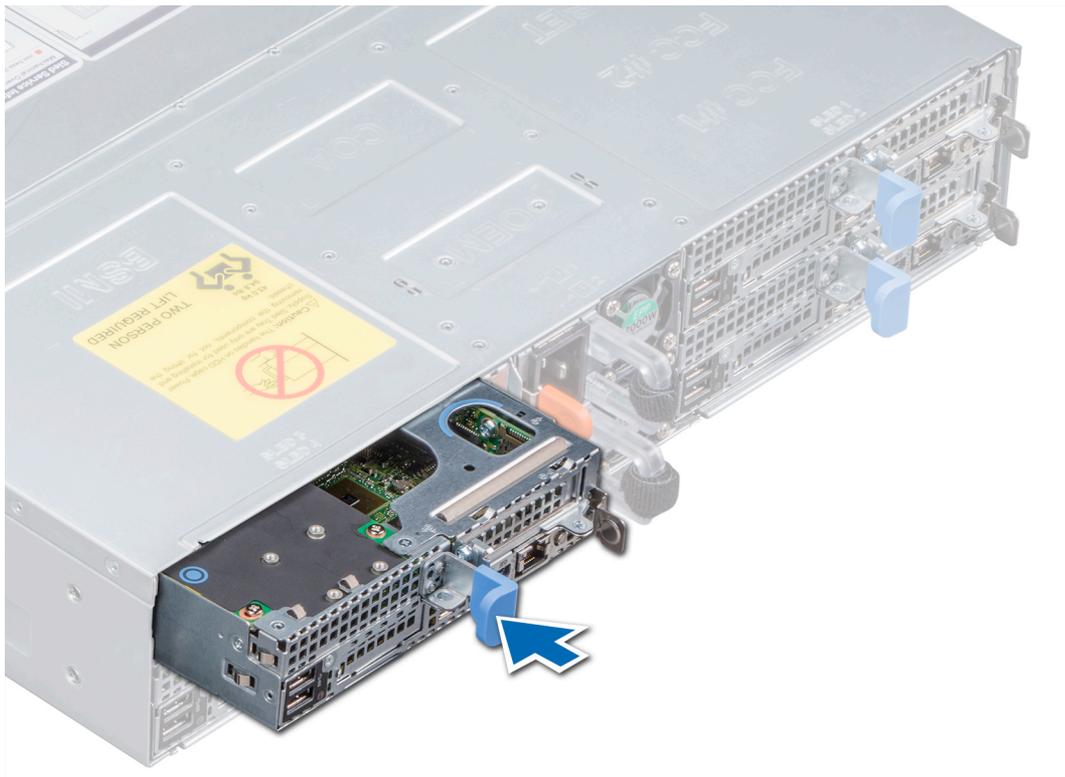


Figure 20. Installing a sled

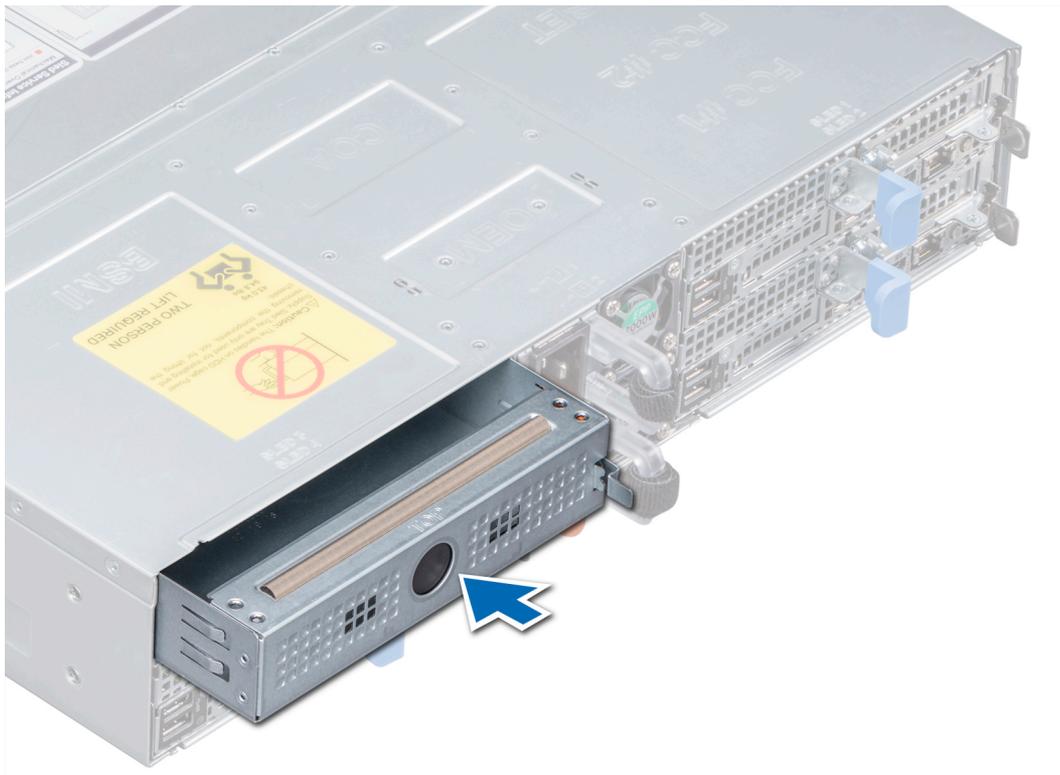


Figure 21. Installing a sled blank

Next step

- 1 Follow the procedure listed in [After working inside your enclosure.](#)

NOTE: To add the Service Tag of the system board to match the Service Tag of the physical node, contact Dell Technical Support.

Drives

CAUTION: Before attempting to remove or install a drive while the system is running, see the documentation for the storage controller card to ensure that the host adapter is configured correctly.

CAUTION: Do not turn off or restart your system while a drive is being formatted. Doing so can cause a drive failure.

When you format a drive, allow enough time for the formatting to complete. Be aware that high-capacity drives can take a long time to format.

Removing a drive carrier

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Using the management software, prepare the drive for removal.
If the drive is online, the green activity or fault indicator flashes while the drive is turning off. When the drive indicators are off, the drive is ready for removal. For more information, see the documentation for the storage controller.

- ⚠ **CAUTION:** Before attempting to remove or install a drive while the system is running, see the documentation for the storage controller card to ensure that the host adapter is configured correctly to support drive removal and insertion.
- ⚠ **CAUTION:** Mixing drives from previous generations of PowerEdge servers is not supported.
- ⚠ **CAUTION:** To prevent data loss, ensure that your operating system supports drive installation. See the documentation supplied with your operating system.

Steps

- 1 Press the release button to open the drive carrier release handle.
- 2 Holding the handle, slide the drive carrier out of the drive slot.



Figure 22. Removing a drive carrier

Next steps

- 1 Follow the procedure listed in [After working inside your enclosure.](#)
- 2 [Install a drive carrier.](#)
- 3 If you are not replacing the drive immediately, insert a drive blank in the empty drive slot to maintain proper system cooling.

Installing a drive carrier

Prerequisites

- ⚠ **CAUTION:** Before attempting to remove or install a drive while the system is running, see the documentation for the storage controller card to ensure that the host adapter is configured correctly to support drive removal and insertion.
- ⚠ **CAUTION:** Mixing drives from previous generations of PowerEdge servers is not supported.
- ⚠ **CAUTION:** Combining SAS and SATA drives in the same RAID volume is not supported.
- ⚠ **CAUTION:** When installing a drive, ensure that the adjacent drives are fully installed. Inserting a drive carrier and attempting to lock its handle next to a partially installed carrier can damage the partially installed carrier's shield spring and make it unusable.
- ⚠ **CAUTION:** To prevent data loss, ensure that your operating system supports hot-swap drive installation. See the documentation supplied with your operating system.
- ⚠ **CAUTION:** When a replacement hot swappable drive is installed and the system is powered on, the drive automatically begins to rebuild. Ensure that the replacement drive is blank or contains data that you wish to overwrite. Any data on the replacement drive is immediately lost after the drive is installed.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 If applicable, [remove the drive blank](#).

Steps

- 1 Press the release button on the front of the drive carrier to open the release handle.
- 2 Insert the drive carrier into the drive slot and slide until the drive connects with the backplane.
- 3 Close the drive carrier release handle to lock the drive in place.



Figure 23. Installing a drive carrier

Removing a drive blank

The procedure for removing 2.5-inch and 3.5-inch drive blanks is identical.

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions](#).

△ CAUTION: To maintain proper system cooling, all empty drive slots must have drive blanks installed.

△ CAUTION: To maintain proper system cooling, drive blanks must be installed in all empty drive slots.

△ CAUTION: Mixing drive blanks from previous generations of PowerEdge servers is not supported.

Step

Press the release button, and slide the drive blank out of the drive slot.

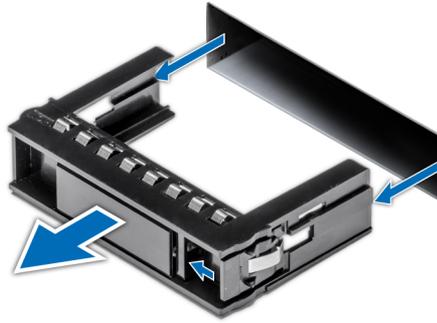


Figure 24. Removing a drive blank

Next step

- 1 Install a drive or a drive blank.

Installing a drive blank

The procedure for installing 2.5-inch and 3.5-inch drive blanks is identical.

Prerequisite

- 1 Follow the safety guidelines listed in [Safety instructions](#).

⚠ CAUTION: Mixing drive blanks from previous generations of PowerEdge servers is not supported.

Step

Insert the drive blank into the drive slot, and push the blank until the release button clicks into place.

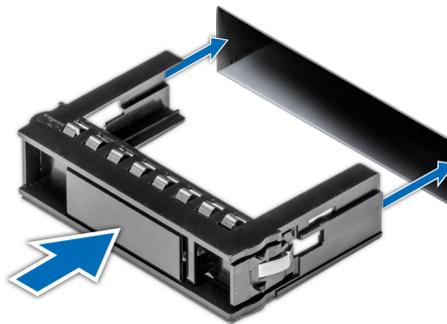


Figure 25. Installing a drive blank

Removing the drive from the drive carrier

Prerequisite

- 1 Follow the safety guidelines listed in [Safety instructions](#).

⚠ CAUTION: Mixing drives from previous generations of PowerEdge servers is not supported.

Steps

- 1 Using a Phillips #1 screwdriver, remove the screws from the slide rails on the drive carrier.
- 2 Lift the drive out of the drive carrier.



Figure 26. Removing the drive from the drive carrier

Next step

- 1 If applicable, [install the drive into the drive carrier](#).

Installing a drive into the drive carrier

Prerequisites

⚠ **CAUTION:** Mixing drive carriers from other generations of PowerEdge servers is not supported.

ℹ **NOTE:** When installing a drive into the drive carrier, ensure that the screws are torqued to 4 in-lbs.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Insert the drive into the drive carrier with the connector end of the drive towards the back of the carrier.
- 2 Align the screw holes on the drive with the screws holes on the drive carrier.
When aligned correctly, the back of the drive is flush with the back of the drive carrier.
- 3 Using a Phillips #1 screwdriver, secure the drive to the drive carrier with screws.



Figure 27. Installing a drive into the drive carrier

Power supply units

CAUTION: The PSUs must have the Extended Power Performance (EPP) label. Mixing PSUs (even the PSUs that have the same power rating) from previous generations of PowerEdge servers is not supported. Mixing PSUs results in a PSU mismatch condition or failure to turn the system on.

Your system supports two 2400 W, 2000 W, or 1600 W AC PSUs.

NOTE: For more information, see the [Technical specifications](#) section.

Fault tolerant redundancy

Policy Budgeting

Fault Tolerant Redundancy is a hybrid redundancy mode which uses the power capacity limits of a single Power Supply Unit for Power Budget Checks, similar to Grid Redundancy, but enforces added performance limiting after redundancy is lost. It is only fully supported with FC640 modular sleds. Previous generation modular sleds will still work with Fault Tolerant Redundancy enabled, but they will treat it identically to Grid Redundancy.

When the maximum potential power needs of installed chassis components exceeds the capacity of a single Power Supply, the Chassis Management Controller (CMC) will deny power on to further chassis components. The Power Budget Checks for Fault Tolerant Redundancy ensure that the Shared Infrastructure Chassis will remain operational in the event of maximum potential workload conditions at the time of an AC Grid or PSU Supply failure. Using the maximum potential is a conservative target that ensures continued operation across the wide range of potential customer workloads for a given configuration

Policy philosophy

Similar to Grid Redundancy, Fault Tolerant Redundancy is a conservative redundancy policy that ensures that the Shared Infrastructure Chassis and all installed components will remain operational with no risk of shutdown in the event of an AC Grid or Power Supply failure

even when all installed components are simultaneously running at their worst case power consumption. New for Fault Tolerant Redundancy is a limit on peak performance that occurs when redundancy is lost. Fault Tolerant Redundancy is able to maintain the same conservative standards of redundancy as traditional Grid Redundancy by limiting peak power after redundancy is lost to levels which will fit within the surviving Power Supply.

Policy control

As with all Redundancy Policies, while the two Power Supplies remain healthy, load is shared evenly between them and the capacity of both Power Supplies is made available for use. In the event of an AC Grid or Power Supply failure, Power Controls will rapidly engage to restrict the power consumption of the chassis and ensure that consumption is restricted to what a single Power Supply can support. In addition to controls used with all Redundancy Policies, Fault Tolerant Redundancy also implements additional performance limiting functionality which restricts the peak power after redundancy loss.

For a fully loaded chassis running at maximum potential power this can result in some observed performance reduction as the chassis Power Control limits are enforced. In practice, customer workloads are often not at the maximum potential power and so practical performance reduction during an AC Grid or Power Supply failure is often minor or even completely unnoticeable.

Power-on behavior after fault

In the event of an AC Grid or Power Supply failure, new chassis components will be allowed to power on provided that the maximum potential power of the newly installed chassis components does not exceed the capacity of a single Power Supply when evaluated by the chassis Power Budget Checks. This means that, while customers will note a chassis "Critical" state due to the loss of redundancy, they will observe no difference in which chassis components are allowed to power on (both before and after a redundancy fault). This is because in both cases, the chassis Power Budget Checks use the capacity of only a single Power Supply. This is a key difference from the other Shared Infrastructure Chassis Redundancy Policies.

Logging behavior

As with all Redundancy Policies, when a Power Supply Unit fails, a log message will be generated. For the Fault Tolerant Redundancy policy, a log message will also be recorded to note a "Loss of Redundancy". This message indicates that the system is continuing to operate in a Non-Redundant state, and action is necessary to either restore power to a failed AC Grid or replace a failed Power Supply Unit. Details in log messages make it possible to distinguish between these two cases. Finally, in the event that power on of a chassis component is denied due to a Power Budget Check, the denial will be logged both in CMC logs and iDRAC logs (in the case of compute sleds).

Removing a power supply unit

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Disconnect the power cable from the power source and from the PSU you intend to remove, and then remove the cable from the strap on the PSU handle.

Step

Press the orange release latch and slide the PSU out of the system by using the PSU handle.

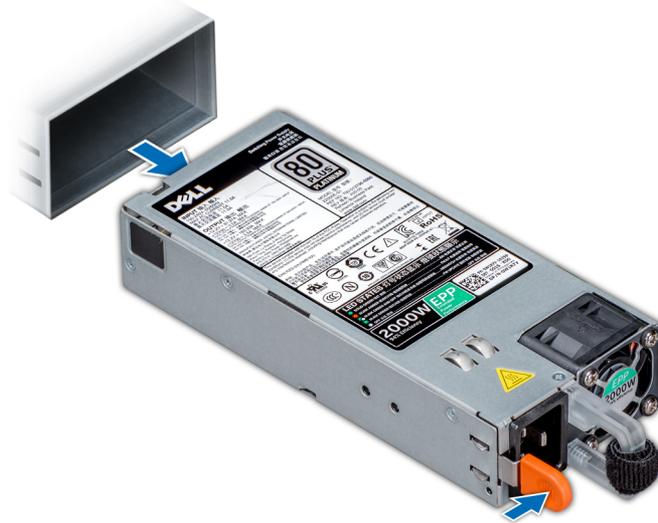


Figure 28. Removing a power supply unit

Next step

Install the PSU or install the PSU blank

Installing a power supply unit

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 For systems that support redundant PSU, ensure that both the PSUs are of the same type and have the same maximum output power.

NOTE: The maximum output power (shown in watts) is listed on the PSU label.

Step

Slide the PSU into the system until the PSU is fully seated and the release latch snaps into place.



Figure 29. Installing a power supply unit

Next step

- 1 Connect the power cable to the PSU, and plug the cable into a power outlet.

CAUTION: When connecting the power cable to the PSU, secure the cable to the PSU with the strap.

NOTE: When installing, hot swapping, or hot adding a new PSU, wait for 15 seconds for the system to recognize the PSU and determine its status. The PSU redundancy may not occur until discovery is complete. Wait until the new PSU is discovered and enabled before you remove the other PSU. The PSU status indicator turns green to signify that the PSU is functioning properly.

System cover

Removing the system cover

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Turn off each sled in the system, including all the attached peripherals.
- 3 Disconnect the system from the electrical outlet and disconnect the peripherals.

Steps

- 1 Press and hold the cover release latch lock down.
- 2 With your palm on one of the traction pads, slide the system cover toward the rear of the system.
- 3 Lift the cover from the system.

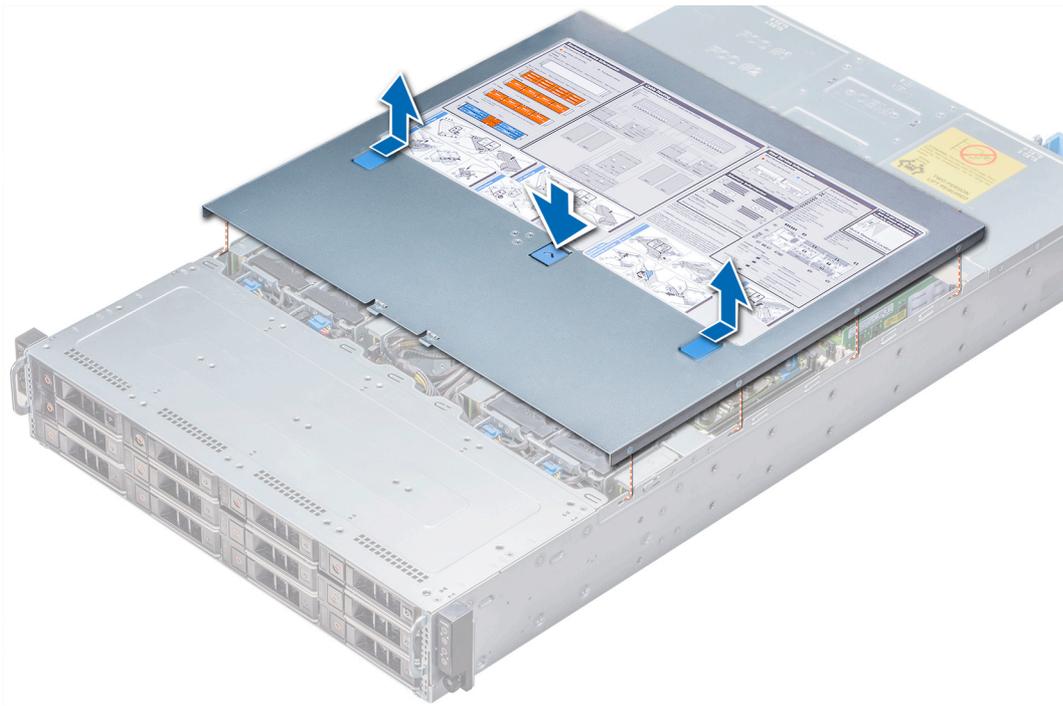


Figure 30. Removing the system cover

Next step

- 1 [Install the system cover.](#)

Installing the system cover

Prerequisite

⚠ CAUTION: Many repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow the safety instructions that are shipped with your product.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Step

Place the system cover on the chassis, and slide it to the front of the chassis until it locks into place.



Figure 31. Installing the system cover

Next steps

- 1 Reconnect the system to the electrical outlet.
- 2 Turn on each sled in the system, including all the attached peripherals.

Backplane cover

Removing the backplane cover

Prerequisites

ⓘ | NOTE: This procedure is not applicable for enclosures with the 3.5-inch hard drive configuration.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [Before working inside your enclosure](#).

Steps

- 1 Using the Phillips #1 screwdriver, remove the screws that secure the backplane cover to the enclosure.
- 2 Slide the backplane cover toward the back of the enclosure and lift the cover away.

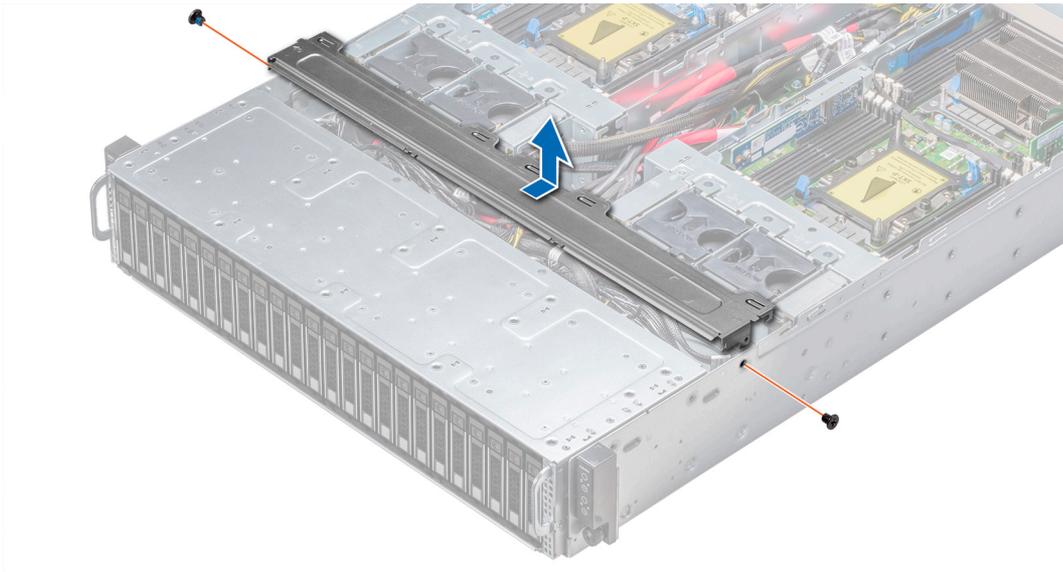


Figure 32. Removing the backplane cover

Next step

- 1 [Install the backplane cover.](#)

Installing the backplane cover

Prerequisite

- 1 Follow the safety guidelines listed in [Safety instructions.](#)

Steps

- 1 Align the screw holes on the backplane cover with the screw holes on the chassis by sliding the cover toward the front of the enclosure.
- 2 Using the Phillips #1 screwdriver, tighten the screws to secure the backplane cover to the enclosure.

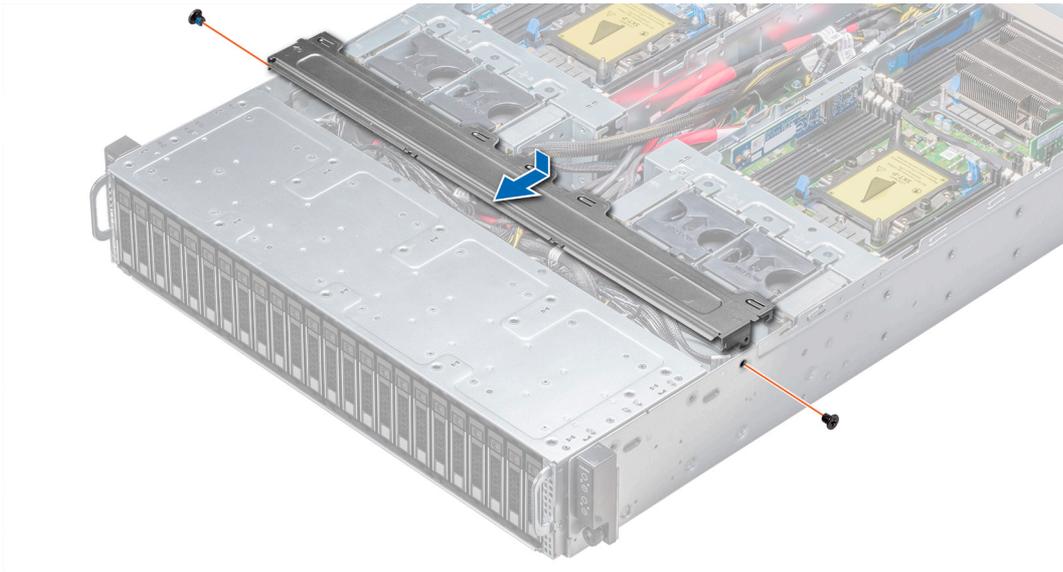


Figure 33. Installing the backplane cover

Next step

- 1 Follow the procedure listed in [After working inside your enclosure](#).

Cooling fans

Removing a cooling fan

Prerequisites

⚠ WARNING: Do not attempt to operate the system without the cooling fans.

⚠ WARNING: The cooling fan spins for some time after the system is powered down. Allow the fan to stop spinning before removing it from the system.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [Before working inside your enclosure](#).

Step

Disconnect the fan cable from the connector on the cooling fan cage and lift the fan out.

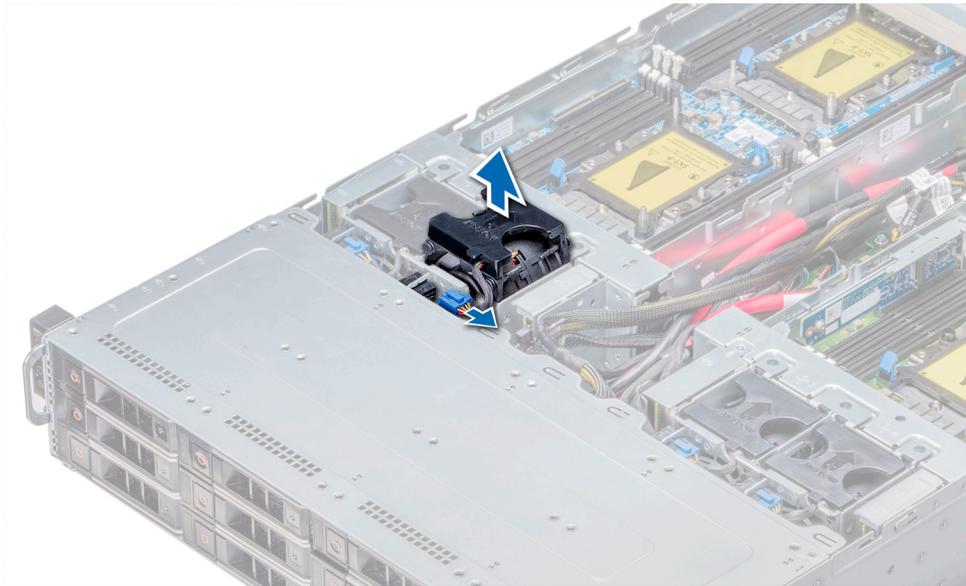


Figure 34. Removing a cooling fan

Next steps

- 1 [Install a cooling fan.](#)
- 2 For more information about the fan status, see the management software.

Installing a cooling fan

Prerequisite

- 1 Follow the safety guidelines listed in [Safety instructions.](#)

Steps

- 1 Align the cooling fan with the fan slot on the cooling fan cage, and push the cooling fan until it is firmly seated.
- 2 Connect the fan cable to the connector on the cooling fan cage.

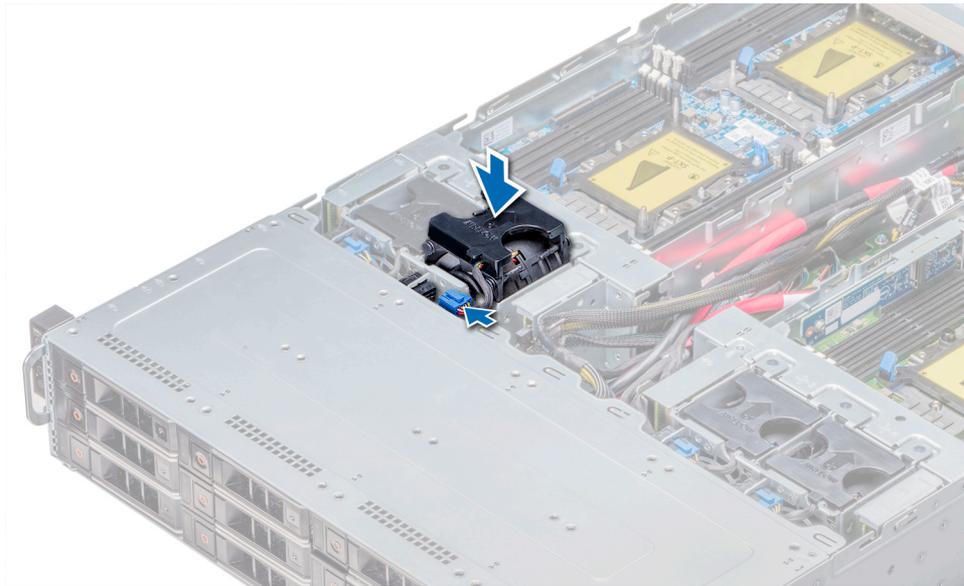


Figure 35. Installing a cooling fan

Next steps

- 1 Follow the procedure listed in [After working inside your enclosure](#).
- 2 Check the management software to see if the fan is rotating at the optimal speed.

Removing the cooling fan cage

Prerequisites

⚠ WARNING: Do not attempt to operate the system without the cooling fans.

⚠ WARNING: The cooling fan spins for some time after the system is powered down. Allow the fan to stop spinning before removing it from the system.

📌 NOTE: Observe the routing of the cables when removing them from the system. Route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [Before working inside your enclosure](#).
- 3 [Remove the cooling fans](#).

Steps

- 1 Disconnect the fan power cable from the chassis management board.
- 2 Lift the cooling fan cage out of the chassis.

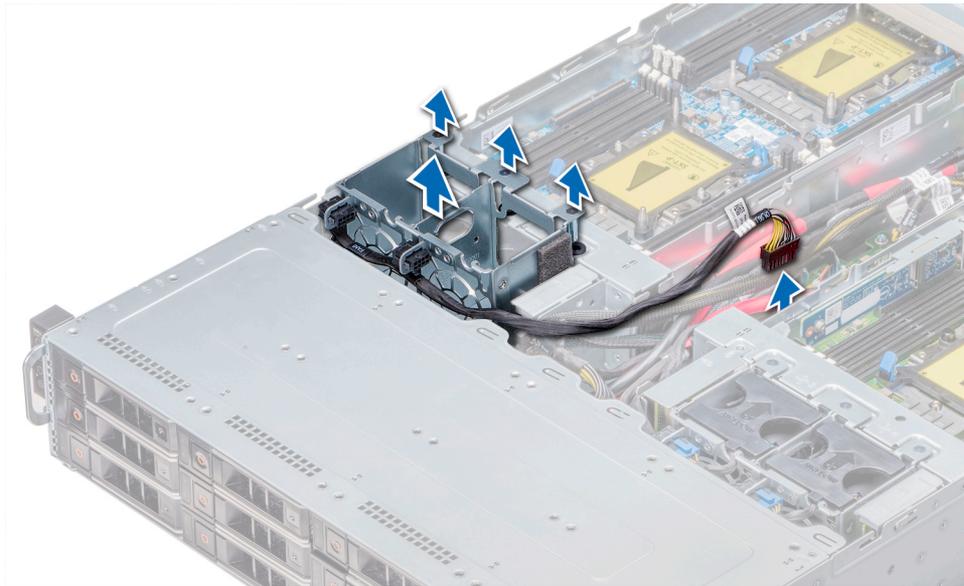


Figure 36. Removing the cooling fan cage

Next step

- 1 Install the cooling fan cage.

Installing the cooling fan cage

Prerequisites

⚠ WARNING: Do not attempt to operate the system without the cooling fans.

📌 NOTE: Observe the routing of the cables when removing them from the system. Route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Align the guide pins on the cooling fan cage with the guide holes on the chassis.
- 2 Install the fan cage onto the chassis, and push until it is firmly seated on the guide holes.
- 3 Connect the fan power cable to the connector on the chassis management board.
To prevent the cable from being damaged, route this cable properly.

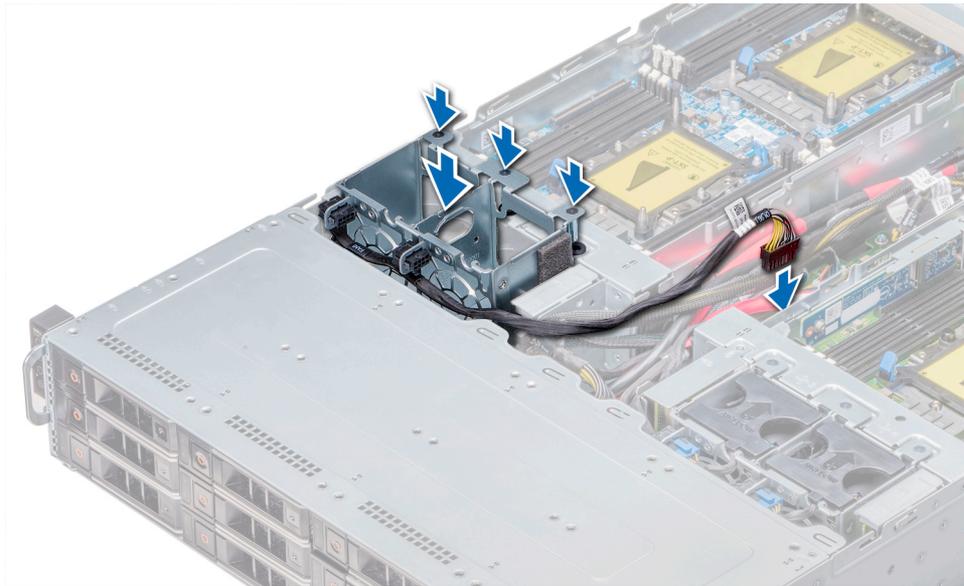


Figure 37. Installing the cooling fan cage

Next steps

- 1 [Install the cooling fans.](#)
- 2 Follow the procedure listed in [After working inside your enclosure.](#)
- 3 Check the management software to see if all the fans are rotating at the optimal speed.

Power interposer board

Removing the power interposer board

Prerequisites

⚠ WARNING: Allow the power interposer board (PIB) to discharge after you power off the system. Handle the PIB by the edges and avoid touching the contact surfaces of the connectors.

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove the power supply units.](#)
- 4 Disconnect all the cables from the PIB except for the midplane power cables.

Steps

- 1 To release the PIB from the lock on the chassis, pull the blue release latch.
- 2 Holding the release latch, lift the PIB up and away from the guide hooks on the chassis.
- 3 Using the Phillips #2 screwdriver, remove the screws that secure the midplane power cables to the PIB.

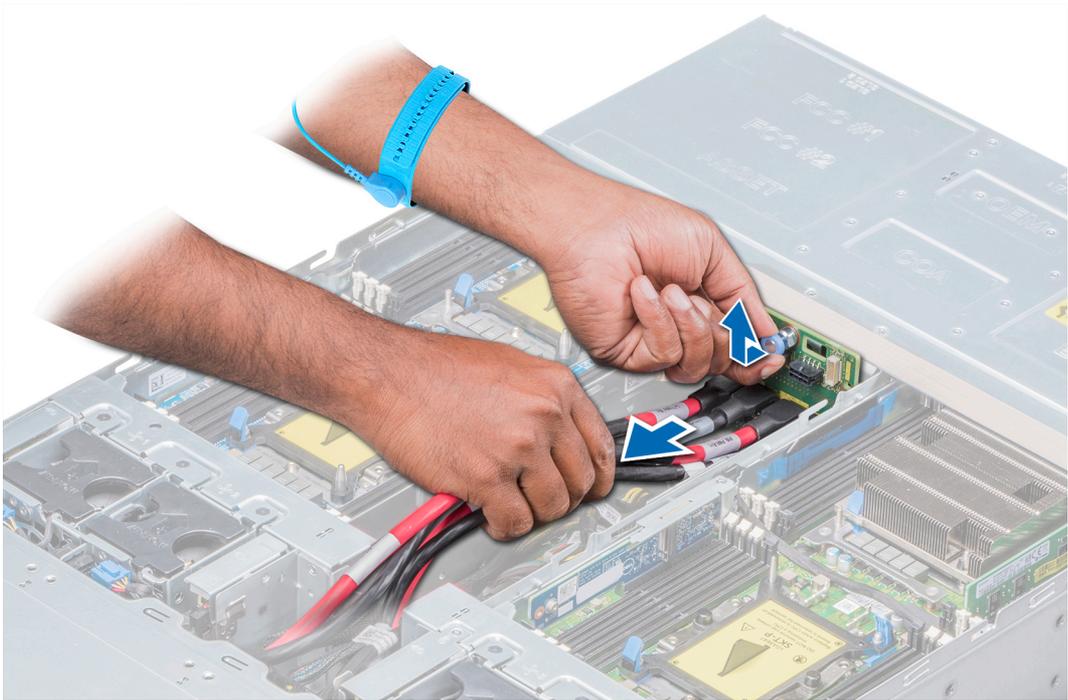


Figure 38. Removing the PIB

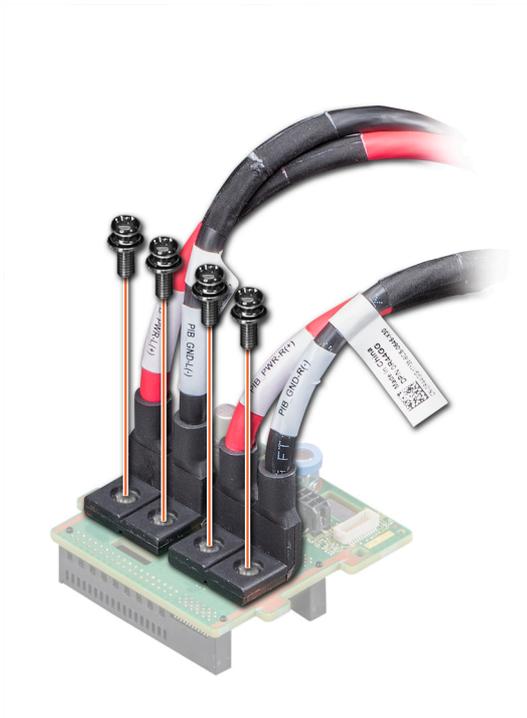


Figure 39. Removing the midplane power cables from the PIB

Next step

- 1 Install the PIB.

Installing the power interposer board

Prerequisite

⚠ WARNING: Allow the power interposer board (PIB) to discharge after you power off the system. Handle the PIB by the edges and avoid touching the contact surfaces of the connectors.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Using the Phillips #2 screwdriver, replace the screws that secure the midplane power cable to the PIB.

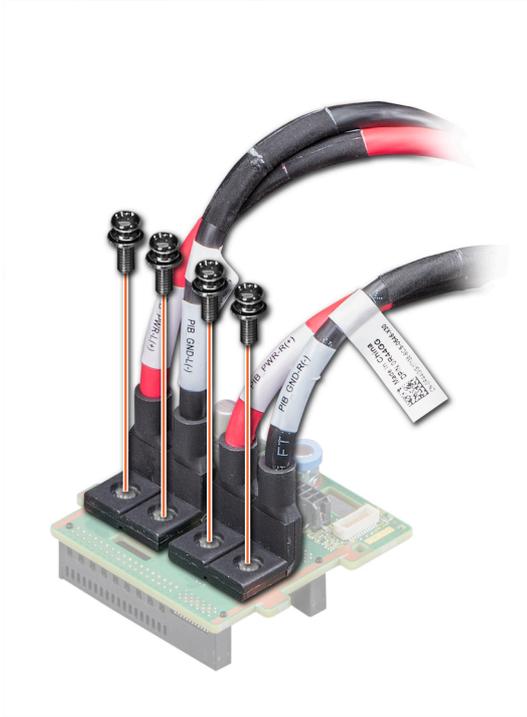


Figure 40. Installing the midplane power cables to the PIB

- 2 Align and insert the PIB on the guide hooks on the chassis.
- 3 Push the PIB down to secure it with the lock on the chassis.

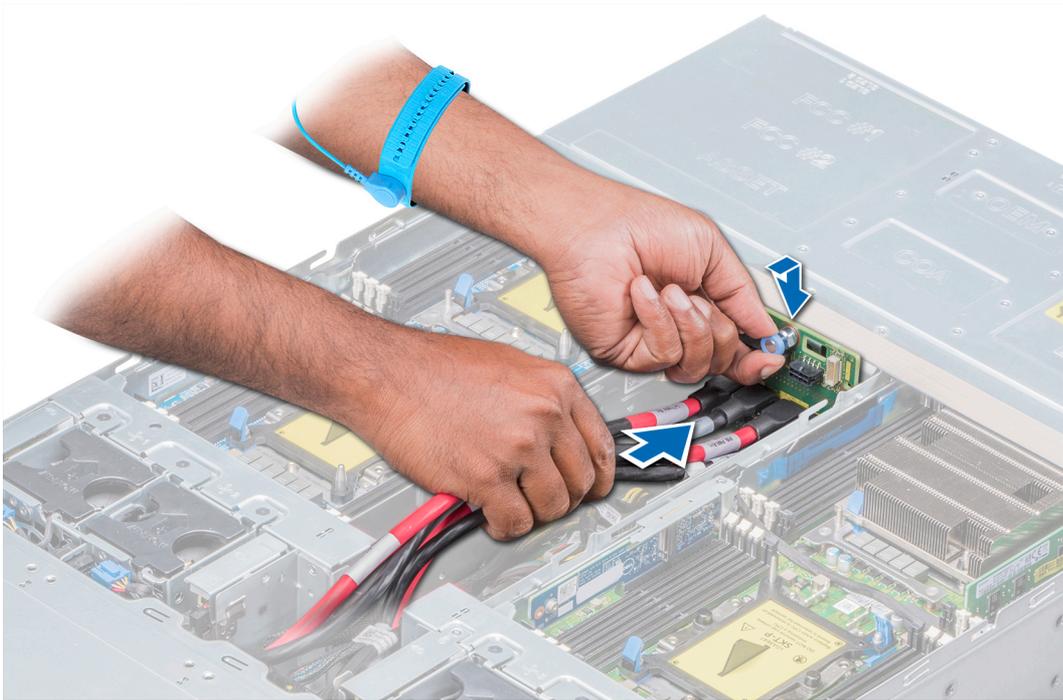


Figure 41. Installing the PIB

Next steps

- 1 Reconnect all the disconnected cables.
- 2 [Install the power supply units.](#)
- 3 Follow the procedure listed in [After working inside your enclosure.](#)

Chassis management board

Removing the chassis management board

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove the power supply units.](#)
- 4 [Remove the power interposer board.](#)
- 5 Disconnect all the cables that are connected to the chassis management board.

Steps

- 1 Using the Phillips #2 screwdriver, remove the two screws that secure the chassis management board to the chassis.
- 2 Sliding the board toward the front of the enclosure, lift the board away after the guide slots are free of the standoffs.

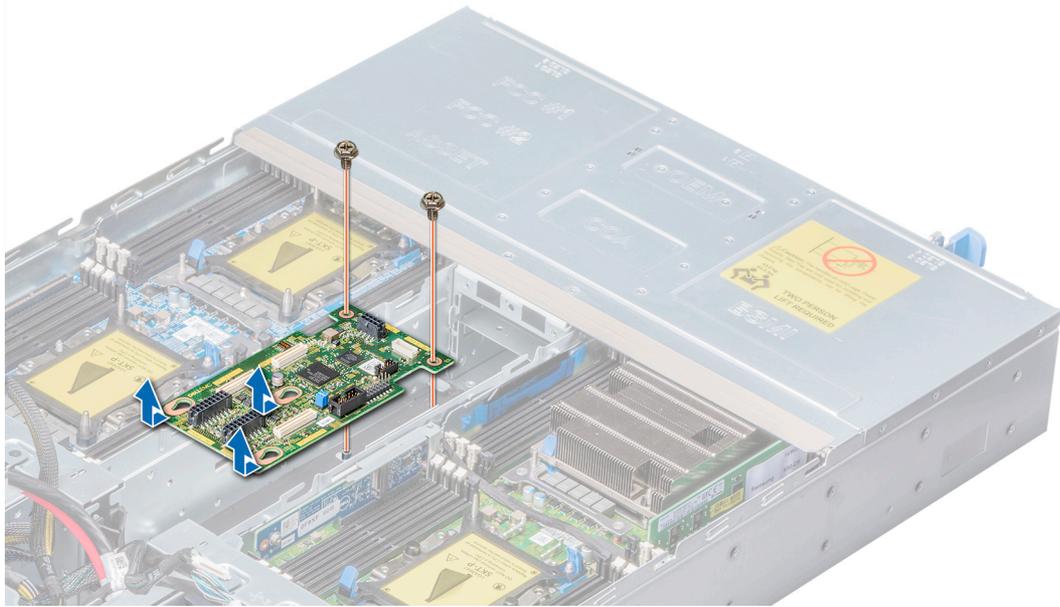


Figure 42. Removing the chassis management board

Next step

- 1 [Install the chassis management board.](#)

Installing the chassis management board

Prerequisite

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Insert the chassis management board into the enclosure, aligning the guide slots with the standoffs on the chassis.
- 2 Push the board toward the back of the enclosure to align the screw holes on the board and standoffs chassis.
- 3 Using the Phillips #2 screwdriver, replace the screws to secure the board in place.

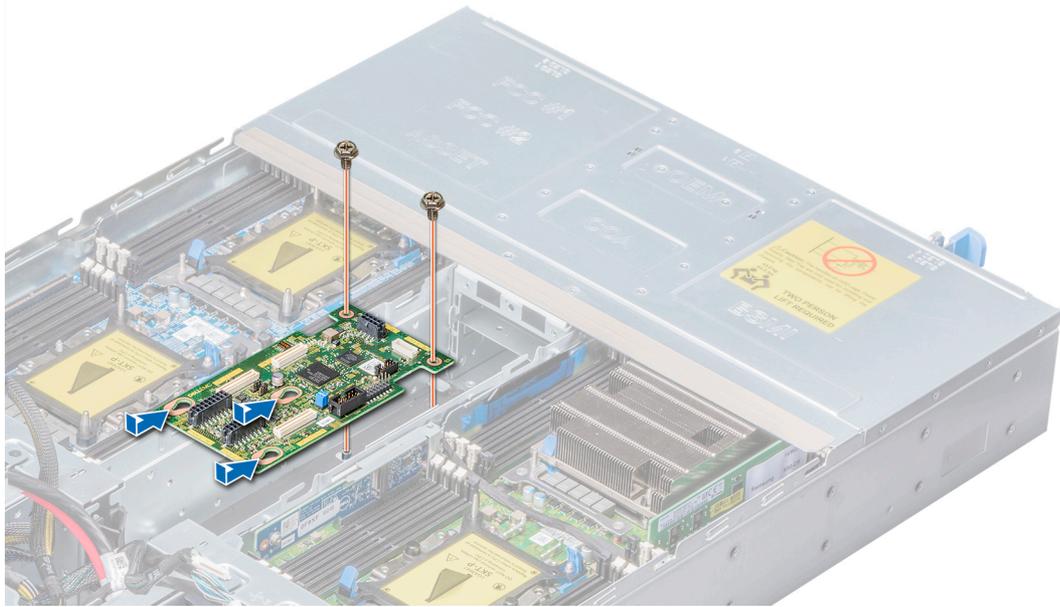


Figure 43. Installing the chassis management board

Next steps

- 1 Reconnect all the disconnected cables.
- 2 [Install the power interposer board.](#)
- 3 [Install the power supply units.](#)
- 4 Follow the procedure listed in [After working inside your enclosure.](#)

Linking board

Removing the linking board

Prerequisites

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove all the sleds from the enclosure.](#)
- 4 [Remove the fan cage.](#)

Steps

- 1 Using the Phillips #1 screwdriver, remove the screw that secures the linking board to the enclosure.
- 2 Lift the linking board out of the enclosure.
- 3 Disconnect all the attached cables.

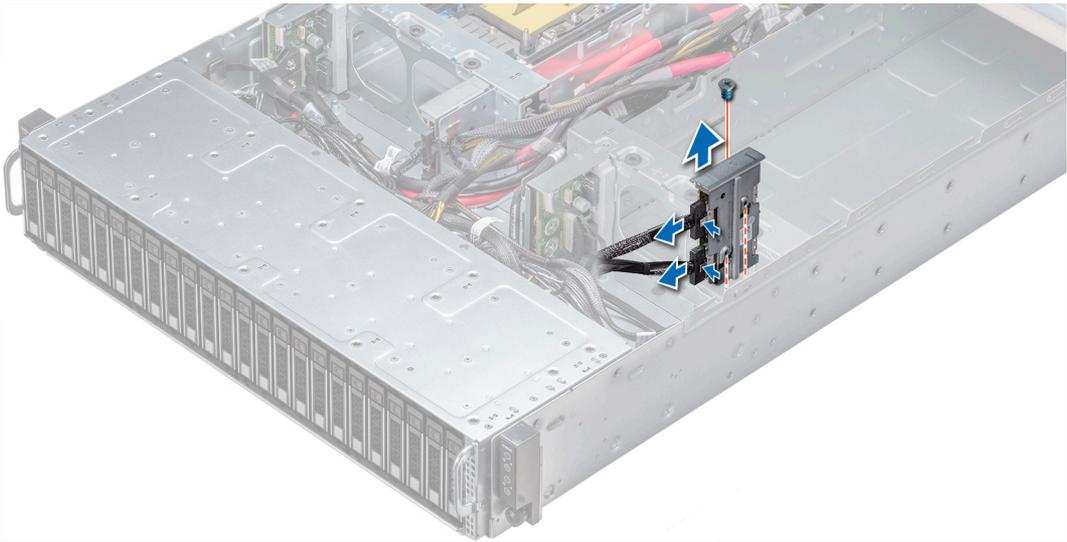


Figure 44. Removing the right linking board

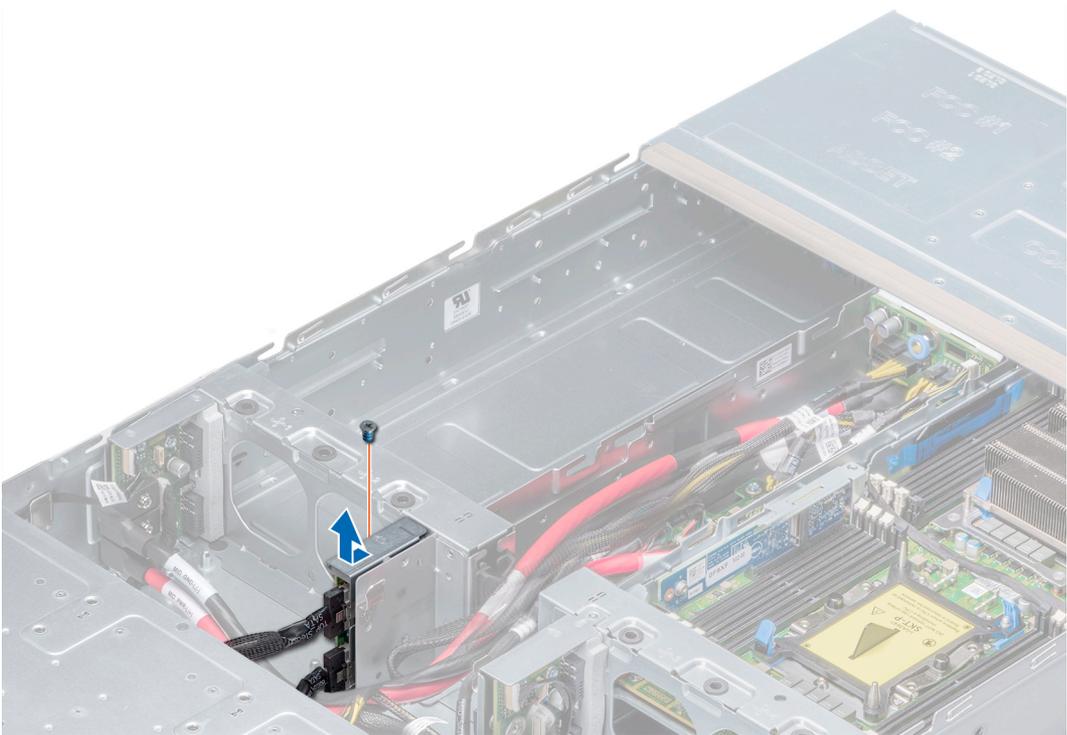


Figure 45. Removing the left linking board

Next step

- 1 Install the linking board.

Installing the linking board

Prerequisite

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Reconnect all the disconnected cables to the linking board.
- 2 Align the board with the standoff on the chassis and slide the board into place.
- 3 Using a Phillips #1 screwdriver, replace the screw on the linking board to secure the board in place.

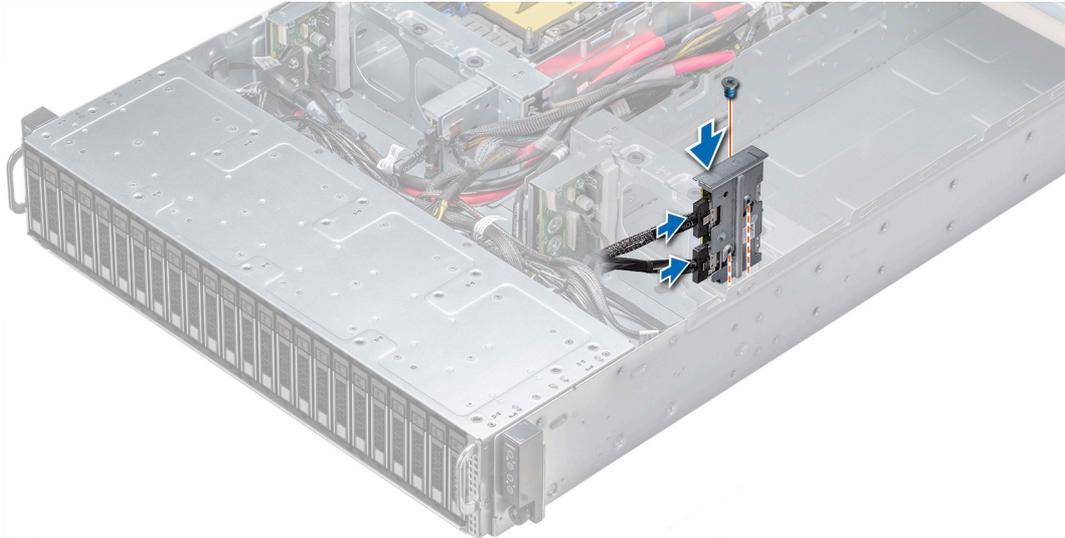


Figure 46. Installing the right linking board

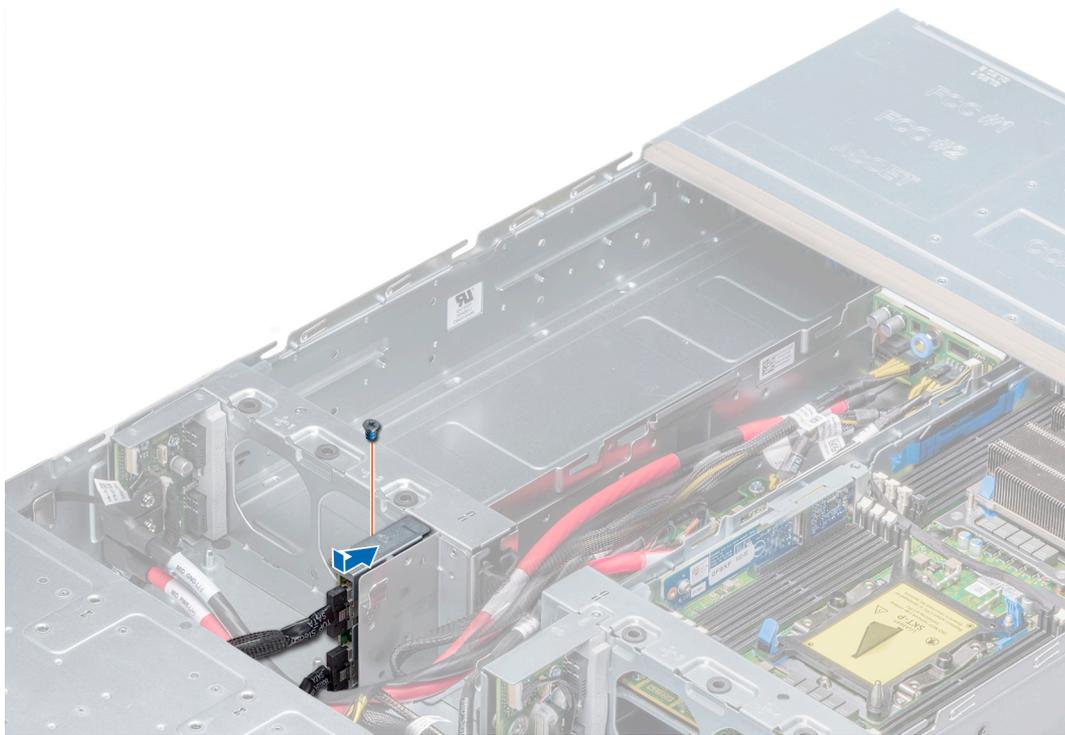


Figure 47. Installing the left linking board

Next steps

- 1 Install the fan cage.
- 2 Install the sleds into the enclosure.
- 3 Follow the procedure listed in [After working inside your enclosure](#).

Midplane

Removing the right midplane

Prerequisites

① **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. Route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [After working inside your enclosure](#).
- 3 Remove all the sleds from the enclosure.
- 4 Remove the cooling fan cage.
- 5 Disconnect all the connected cables.

Steps

- 1 Using the Phillips #1 screwdriver, remove the screws that secure the midplane to the chassis.
- 2 Lift the midplane out of the chassis.
- 3 Using the Phillips #1 screwdriver, remove the screws that secure the power cables to the midplane.

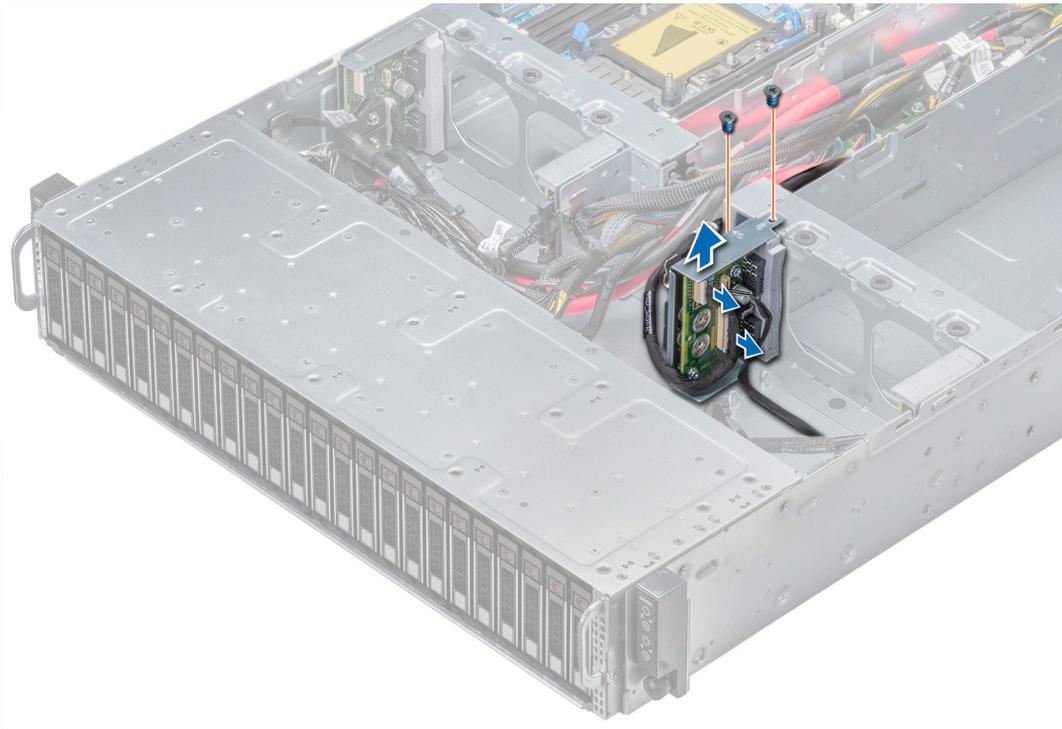


Figure 48. Removing the right midplane

Next step

- 1 Install the right midplane.

Installing the right midplane

Prerequisite

① **NOTE:** You must route the cables properly on the chassis to prevent them from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Using the Phillips #1 screwdriver, connect and secure the power cables to the midplane.
- 2 Place the midplane into the chassis.
- 3 Using the Phillips #1 screwdriver, tighten the screws that secure the midplane to the chassis.

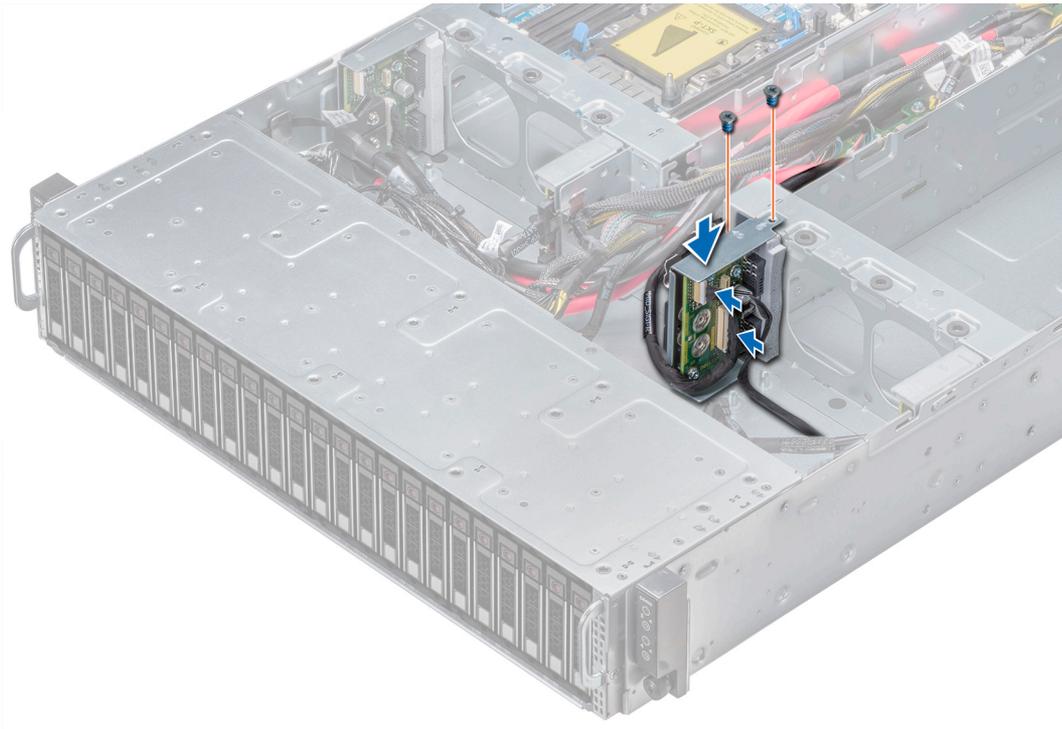


Figure 49. Installing the right midplane

Next steps

- 1 Reconnect all the disconnected cables.
- 2 [Install the cooling fan cage.](#)
- 3 [Install the sleds into the enclosure.](#)
- 4 Follow the procedure listed in [After working inside your enclosure.](#)

Removing the left midplane

Prerequisites

① **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. Route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove all the sleds from the enclosure.](#)
- 4 [Remove the cooling fan cage.](#)
- 5 Disconnect all the connected cables.

Steps

- 1 Using the Phillips #1 screwdriver, remove the screws that secure the midplane.
- 2 Slide and lift the midplane out of the chassis.
- 3 Using the Phillips #1 screwdriver, remove the screws that secure the power cables to the midplane.

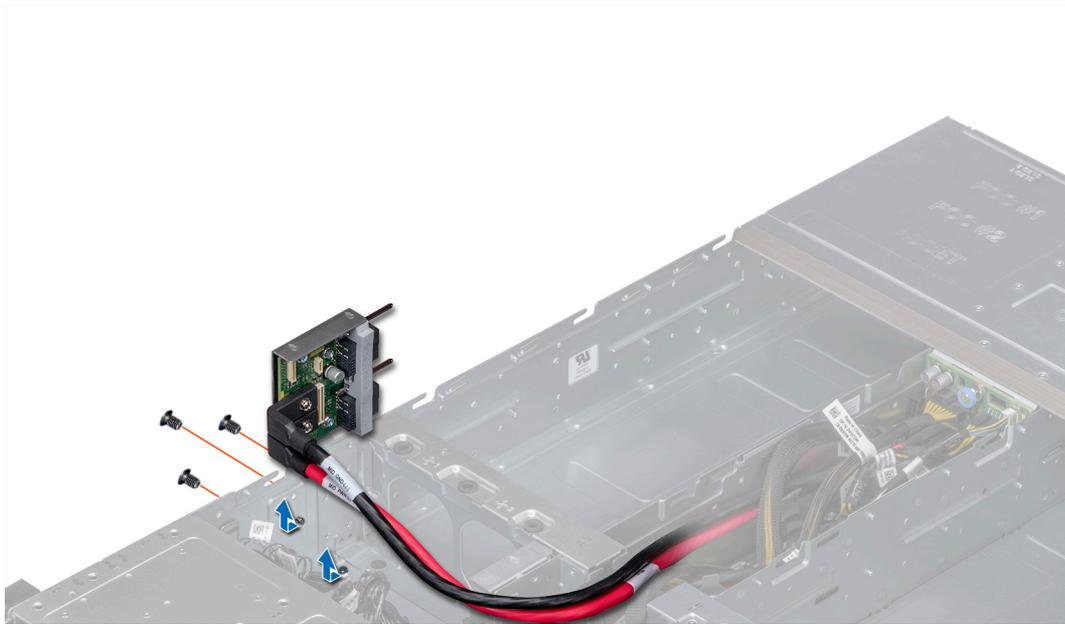


Figure 50. Removing the left midplane

Next step

- 1 [Install the midplanes.](#)

Installing the left midplane

Prerequisite

NOTE: You must route the cables properly on the chassis to prevent them from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Using the Phillips #1 screwdriver, connect and secure the power cables to the midplane.
- 2 Place the midplane into the chassis.
- 3 Using the Phillips #1 screwdriver, secure the midplane to the chassis with the screws.

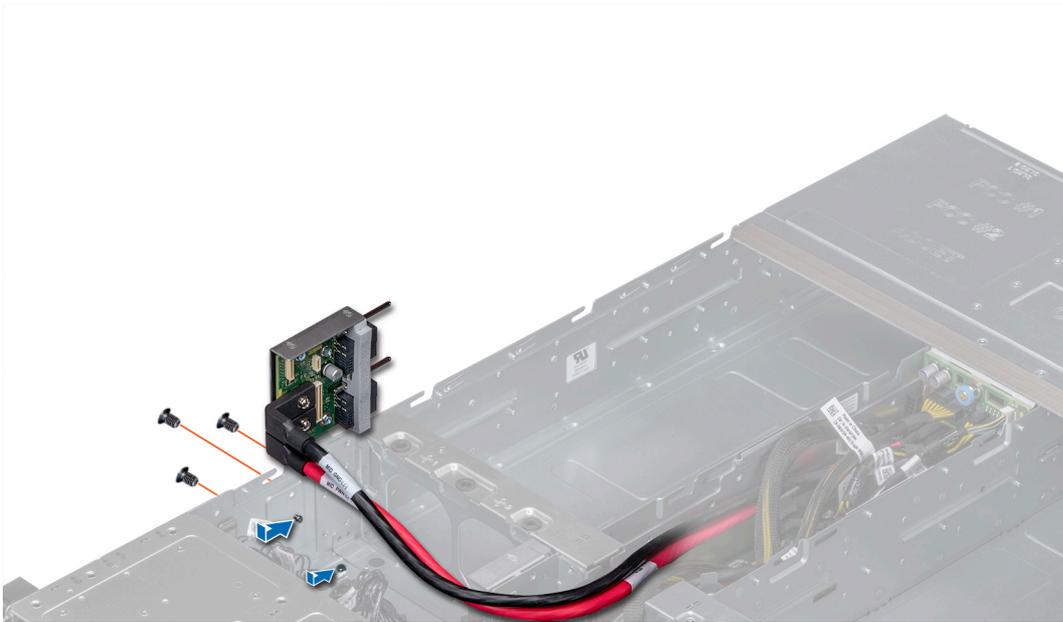


Figure 51. Installing the left midplane

Next steps

- 1 Connect all the disconnected cables.
- 2 [Install the cooling fan cage.](#)
- 3 Follow the procedure listed in [After working inside your enclosure..](#)

Midplane power cable routing

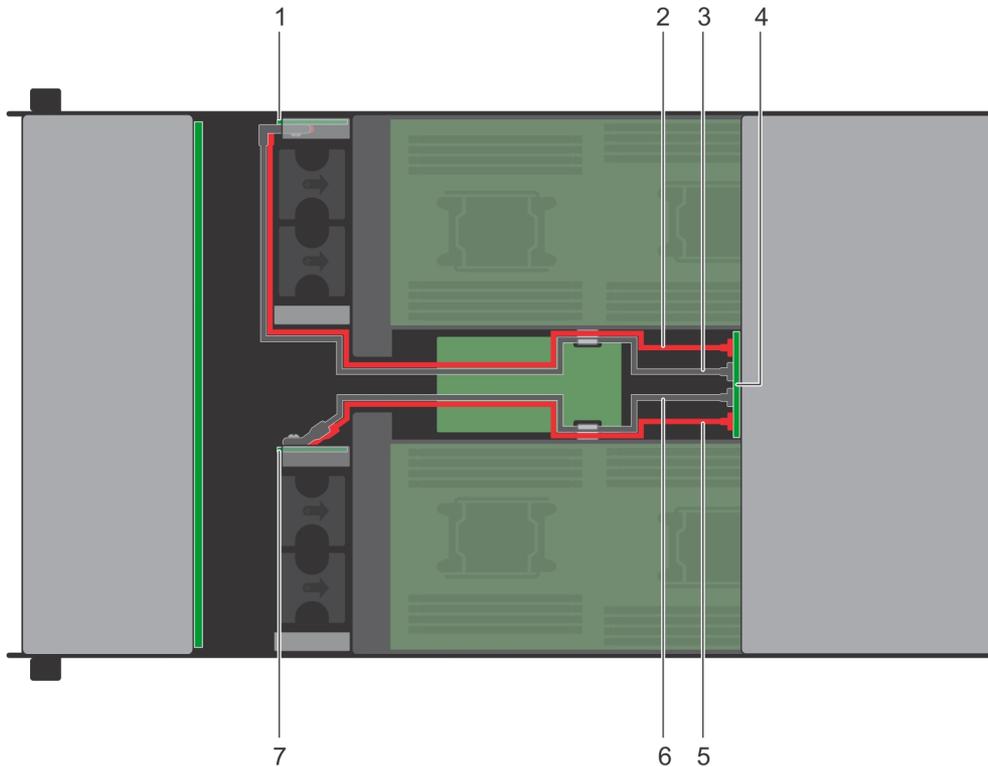


Figure 52. Midplane power cable routing from power interposer board

- | | | | |
|---|--------------------------------------|---|-------------------------------------|
| 1 | left midplane | 2 | +12 V power cable for left midplane |
| 3 | GND cable for left midplane | 4 | power interposer board |
| 5 | +12 V power cable for right midplane | 6 | GND cable for right midplane |
| 7 | right midplane | | |

Drive cage

Removing the 2.5 inch drive cage

Prerequisites

- ⚠ **CAUTION:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
 - ⚠ **CAUTION:** You must note the number of each drive and temporarily label them before removal so that you can replace them in the same locations.
 - 📌 **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.
- 1 Follow the safety guidelines listed in [Safety instructions](#).
 - 2 Follow the procedure listed in [Before working inside your enclosure](#).

- 3 Remove the backplane cover.
- 4 Remove the fan cages.
- 5 If applicable, disconnect the backplane and expander board cables from the linking board and chassis management board.
- 6 Remove all the drives.

Steps

- 1 Using the Phillips #1 screwdriver, remove the screws that secure the drive cage to the chassis.
- 2 Slide the drive cage to the unlock position.
- 3 Lift the drive cage away from the enclosure.

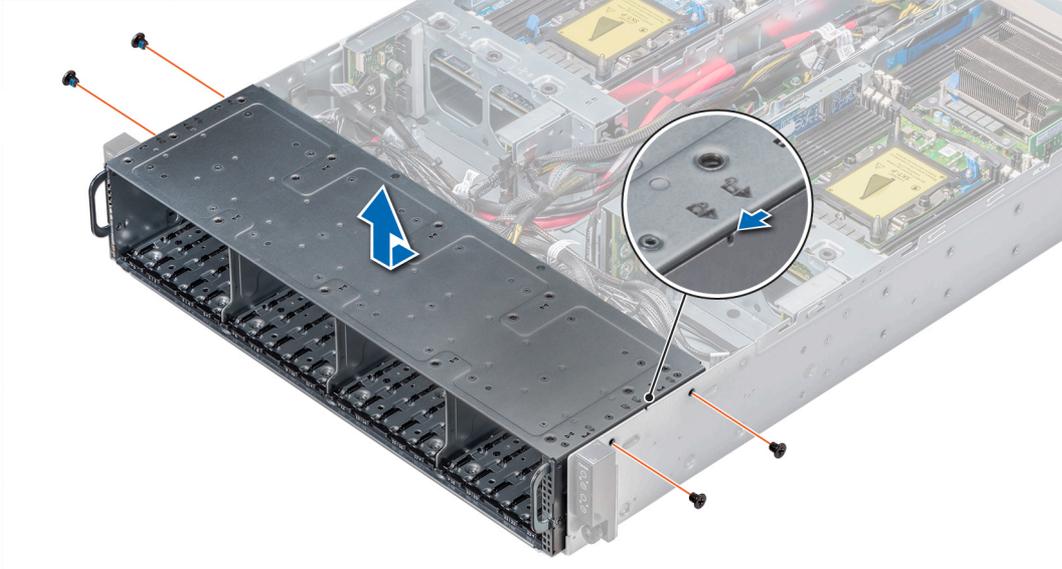


Figure 53. Removing the 2.5-inch drive cage

Next step

- 1 Install the 2.5-inch drive cage.

Installing the 2.5 inch drive cage

Prerequisites

- ⚠ **CAUTION:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
- ⚠ **CAUTION:** You must note the number of each drive and temporarily label them before removal so that you can replace them in the same locations.

Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Insert the drive cage into the enclosure, aligning the cage with the standoffs on the chassis.
- 2 Slide the drive cage toward the lock position.
- 3 Reconnect all the cables that were disconnected from the backplane.
- 4 Using the Phillips #1 screwdriver, secure the drive cage in place with screws.

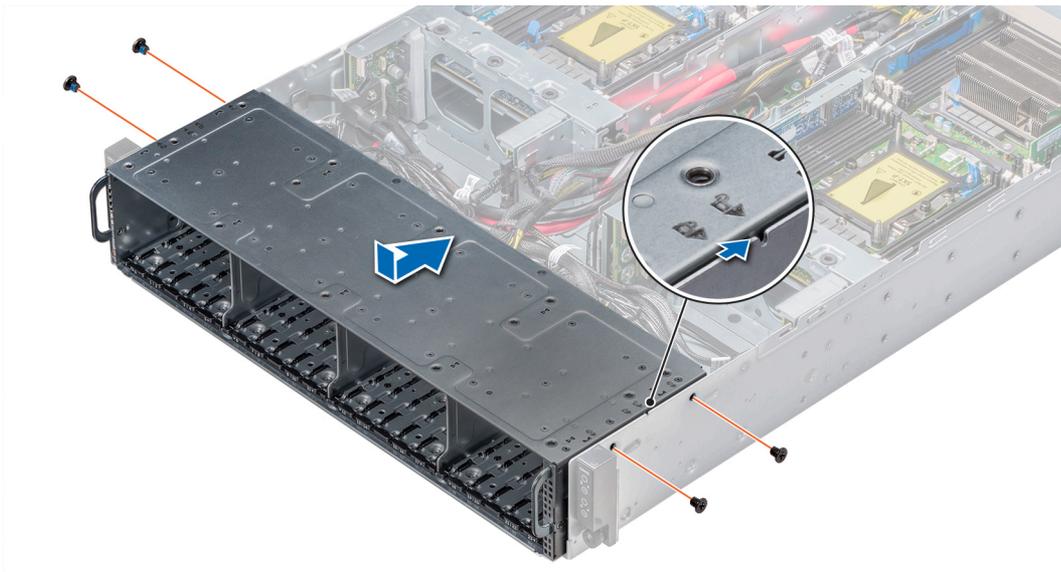


Figure 54. Installing the 2.5-inch drive cage

Next steps

- 1 If applicable, reconnect all the cables that were disconnected from the linking board and chassis management board.
- 2 [Install the removed drives.](#)
- 3 [Install the fan cage.](#)
- 4 [Install the backplane cover.](#)
- 5 Follow the procedure listed in [After working inside your enclosure.](#)

Removing the 3.5 inch drive cage

Prerequisites

- ⚠ **CAUTION:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
- ⚠ **CAUTION:** You must note the slot number of each drive and temporarily label them before removal so that you can replace them in the same slots.
- 📘 **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove the fan cages.](#)
- 4 Disconnect the backplane cables from the linking board and chassis management board.
- 5 [Remove all the drives.](#)

Steps

- 1 Using the Phillips #1 screwdriver, remove the screws that secure the drive cage to the chassis.
- 2 Slide the drive cage to the unlock position.
- 3 Hold and lift the drive cage up.
- 4 Lift the drive cage away from the enclosure.

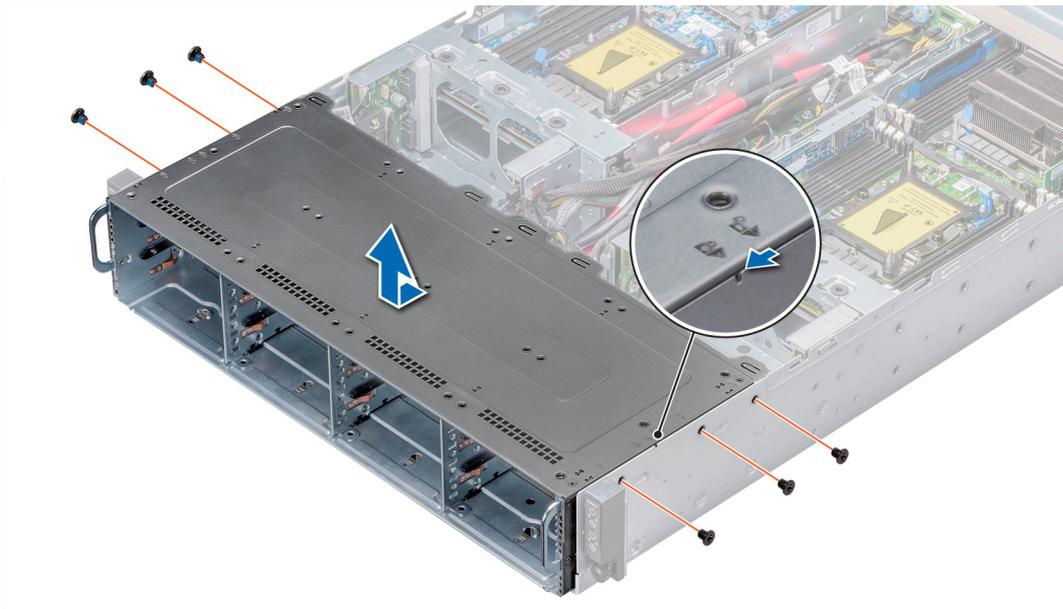


Figure 55. Removing the 3.5-inch drive cage

Next step

- 1 [Install the 3.5-inch drive cage.](#)

Installing the 3.5 inch drive cage

Prerequisites

- ⚠ **CAUTION:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
- ⚠ **CAUTION:** You must note the number of each drive and temporarily label them before removal so that you can replace them in the same locations.

Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Insert the drive cage into the enclosure, aligning the drive cage with the standoffs on the chassis.
- 2 Slide the drive cage toward the lock position.
- 3 Using the Phillips #1 screwdriver, secure the drive cage in place with screws.

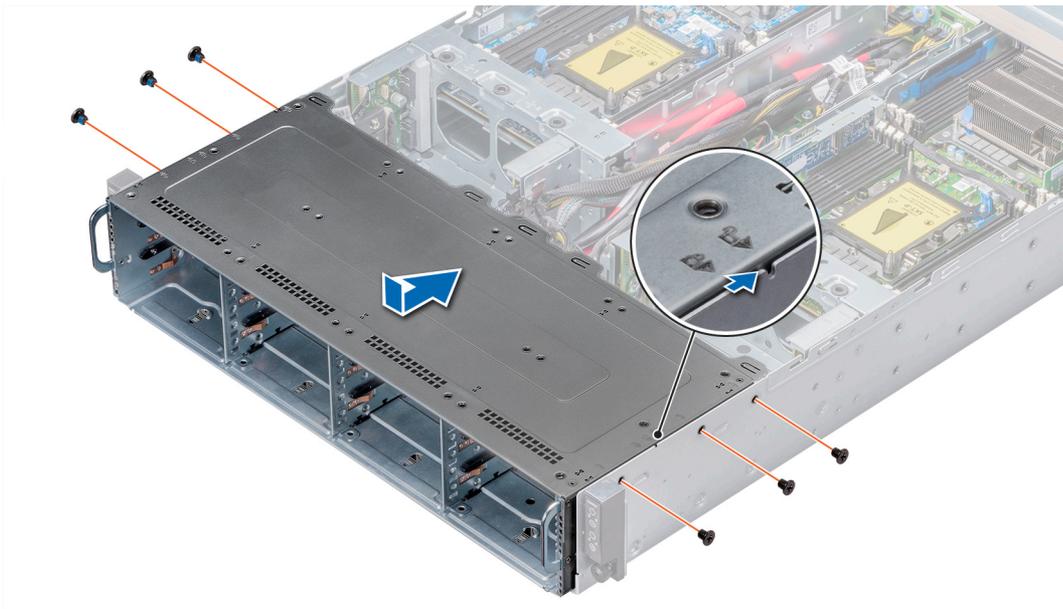


Figure 56. Installing the 3.5-inch drive cage

Next steps

- 1 Reconnect all the backplane cables that were disconnected from the linking board and chassis management board.
- 2 [Install all the drives.](#)
- 3 [Install the fan cages.](#)
- 4 Follow the procedure listed in [After working inside your enclosure.](#)

Backplanes and expander board

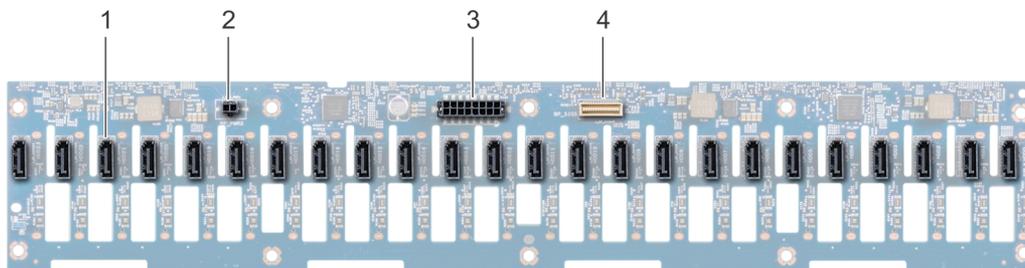


Figure 57. 24 x 2.5-inch backplane

- | | |
|--|--|
| <ol style="list-style-type: none"> 1 SATA connector (24) 3 Backplane power connector | <ol style="list-style-type: none"> 2 Expander power connector 4 Backplane signal connector |
|--|--|

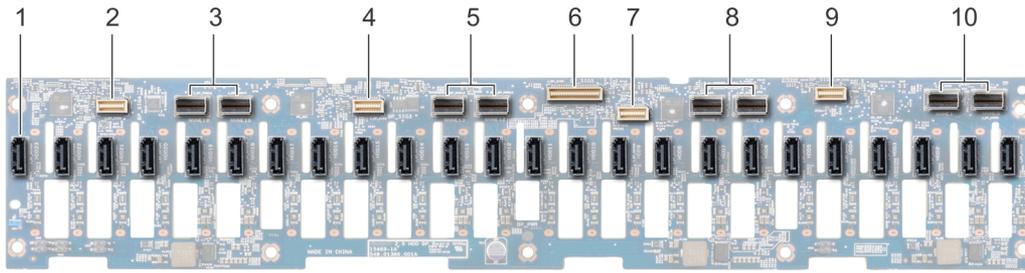


Figure 58. 24 x 2.5-inch NVMe backplane

- | | | | |
|---|--|----|--|
| 1 | SATA connector (24) | 2 | Signal cable to sled 4 |
| 3 | NVMe ports 19 and 18 connect to sled 4 | 4 | Signal cable to sled 3 |
| 5 | NVMe ports 13 and 12 connect to sled 3 | 6 | Connector for chassis management board cable |
| 7 | Signal cable to sled 2 | 8 | NVMe ports 7 and 6 connect to sled 2 |
| 9 | Signal cable to sled 1 | 10 | NVMe ports 1 and 0 connect to sled 1 |

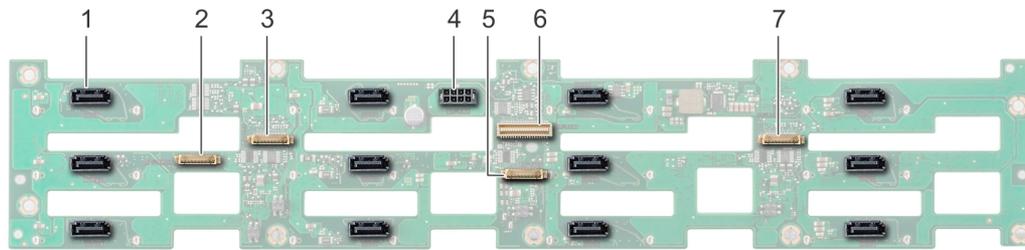


Figure 59. 12 x 3.5-inch backplane

- | | | | |
|---|--|---|--|
| 1 | SATA connector (12) | 2 | Backplane signal cable to sled 4 connector |
| 3 | Backplane signal cable to sled 3 connector | 4 | Backplane power connector |
| 5 | Backplane signal cable to sled 2 connector | 6 | Backplane signal cable connector |
| 7 | Backplane signal cable to sled 1 connector | | |

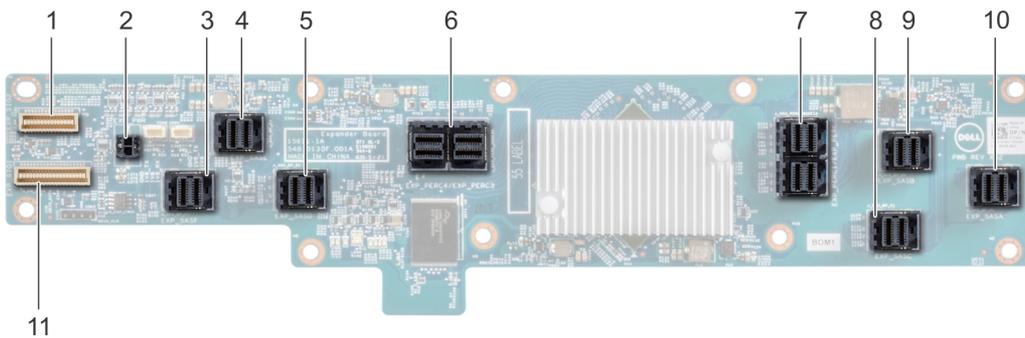


Figure 60. Expander board

- | | | | |
|---|---|----|---|
| 1 | Expander signal cable connector 2 | 2 | Power connector |
| 3 | SAS expander F connector | 4 | SAS expander E connector |
| 5 | SAS expander D connector | 6 | PERC 3 expander and PERC 4 expander connector |
| 7 | PERC 1 expander and PERC 2 expander connector | 8 | SAS expander C connector |
| 9 | SAS expander B connector | 10 | SAS expander A connector |

Removing the backplane

Prerequisites

-  **CAUTION:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
-  **CAUTION:** You must note the slot number of each drive and temporarily label them before removal so that you can replace them in the same slots.
-  **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [Before working inside your enclosure](#).
- 3 [Remove the drive cage](#).
- 4 Disconnect all the cables from the backplane.

Steps

- 1 Orient the drive cage so that the drive bays are facing down.
- 2 Using the Phillips #2 screwdriver, remove the screws that secure the backplane to the drive cage.
- 3 Lift the backplane away from the drive cage.

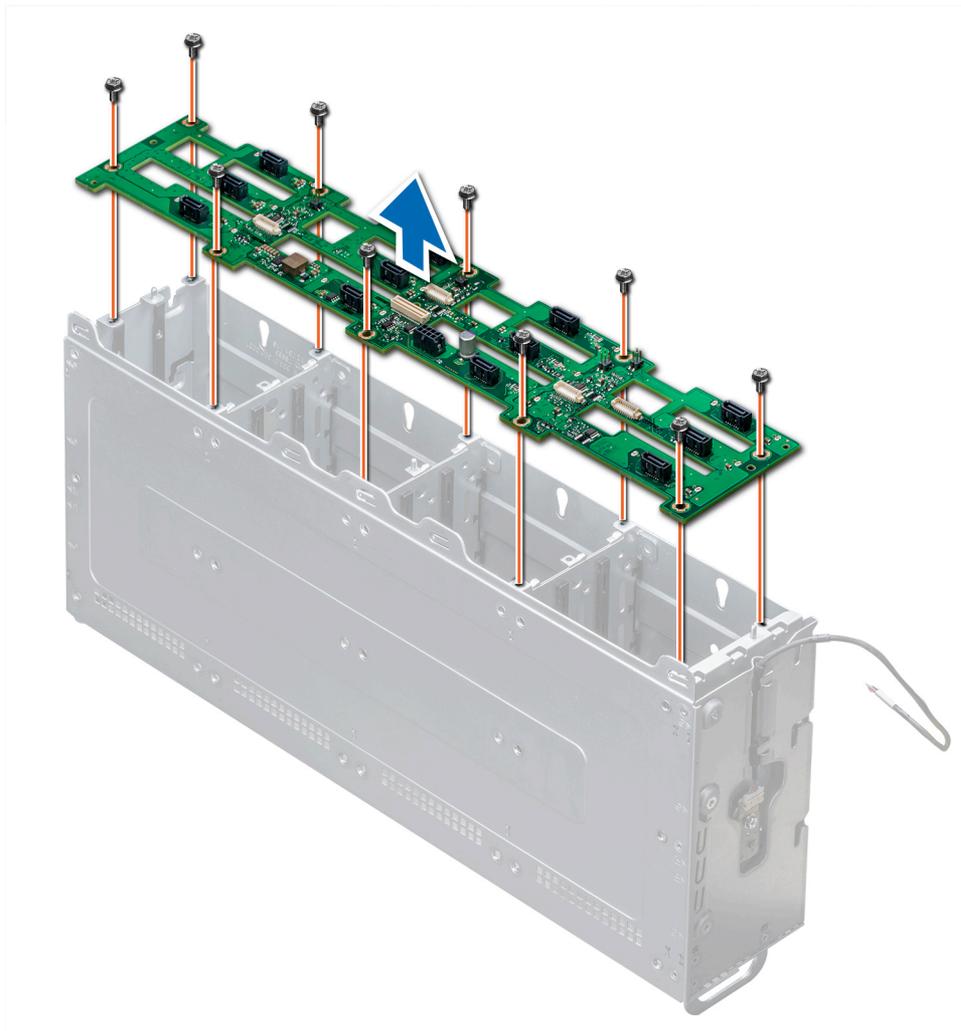


Figure 61. Removing the backplane

Next step

- 1 Install the backplane.

Installing the backplane

Prerequisites

⚠ CAUTION: You must note the slot number of each drive and temporarily label them before removal so that you can replace them in the same slots.

ℹ NOTE: Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.

Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Orient the drive cage so that the drive bays are facing down.
- 2 Place the backplane on the drive cage, aligning the screw holes on the backplane with the holes on the drive cage.

- Using the Phillips #2 screwdriver, replace the screws to secure the backplane to the drive cage.

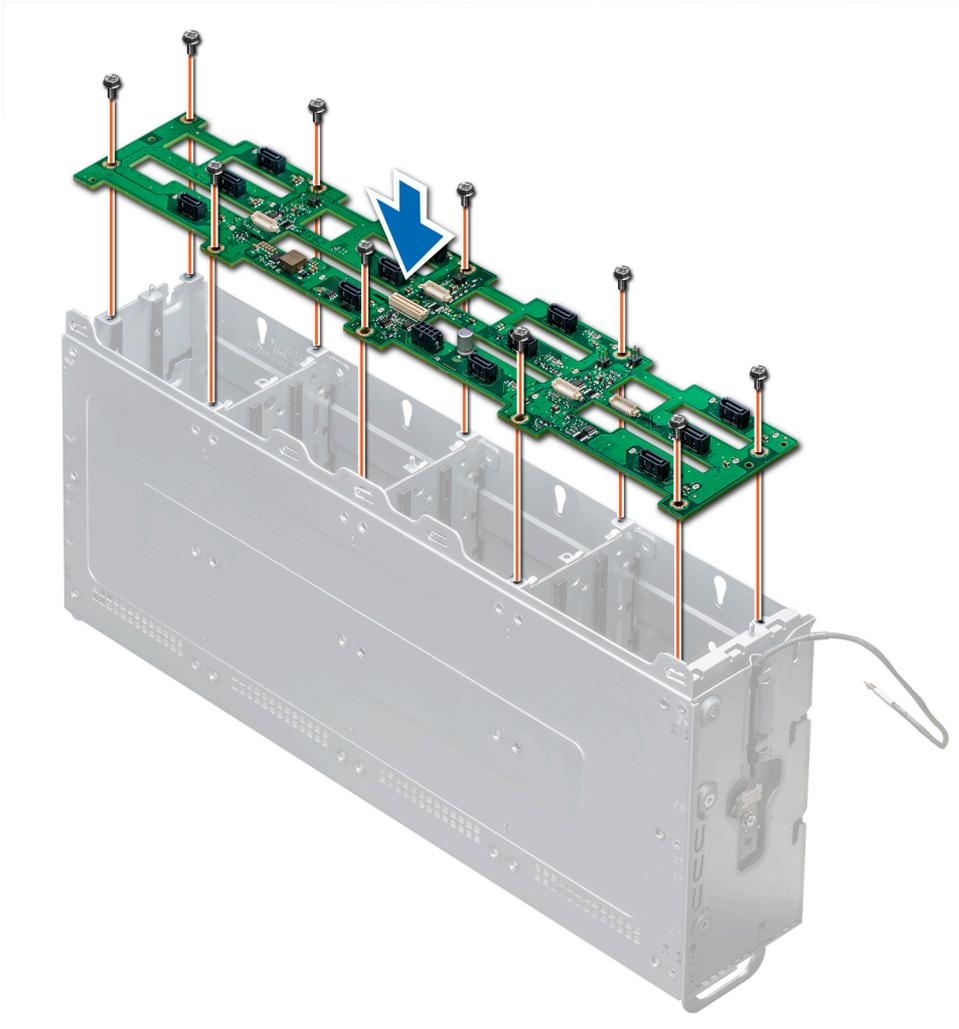


Figure 62. Installing the backplane

Next steps

- Reconnect all the disconnected cables.
- [Install the drive cage into the enclosure.](#)
- Follow the procedure listed in [After working inside your enclosure.](#)

Removing the backplane expander board

Prerequisites

- NOTE:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
- NOTE:** Observe the routing of the cable on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.
- NOTE:** The backplane expander board is only available with 24 x 2.5-inch drives with NVMe configuration.

- 1 Follow the safety guidelines listed in [Safety instructions](#).
- 2 Follow the procedure listed in [Before working inside your enclosure](#).
- 3 [Remove the drive cage](#).
- 4 Disconnect all the cables from the backplane expander board.

Steps

- 1 Using the Phillips #2 screwdriver, remove the screws that secure the backplane expander board to the drive cage.
- 2 Lift the backplane expander board out of the enclosure.

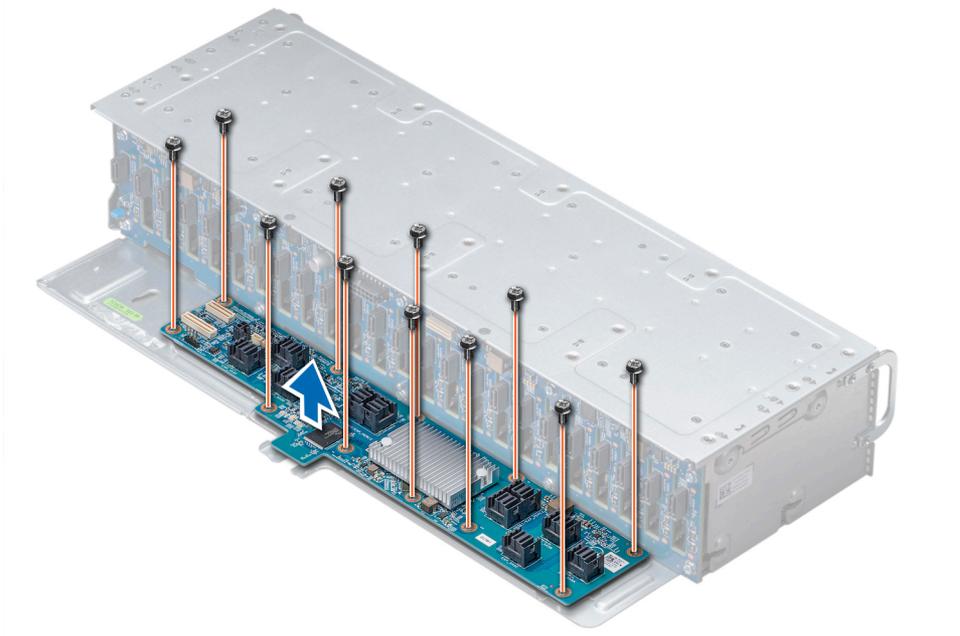


Figure 63. Removing the backplane expander board

Next step

- 1 [Install the backplane expander board](#).

Installing the backplane expander board

Prerequisites

- ① **NOTE:** Observe the routing of the cable on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.
- ① **NOTE:** The backplane expander board is only available with 24 x 2.5-inch drives with NVMe configuration.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Install the backplane expander board into the enclosure, aligning the screw holes on the board with the holes on the drive cage.
- 2 Using the Phillips #2 screwdriver, secure the backplane expander board to the chassis.



Figure 64. Installing the backplane expander board

Next steps

- 1 Reconnect all the disconnected cables.
- 2 [Install the drive cage.](#)
- 3 Follow the procedure listed in [After working inside your enclosure.](#)

Control panel

Removing the control panel

Prerequisites

NOTE: Observe the routing of the cables on the enclosure as you remove them. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove all the drives.](#)
- 4 Disconnect all the backplane cables from the linking board and chassis management board.
- 5 [Remove the drive cage from the enclosure.](#)
- 6 Disconnect control panel cables from the midplane.

Steps

- 1 Using the Phillips #1 screwdriver, remove the screws that secure the control panel assembly to the enclosure.
- 2 Remove the cable from the cable retention clips.
- 3 Lift the control panel assembly away.

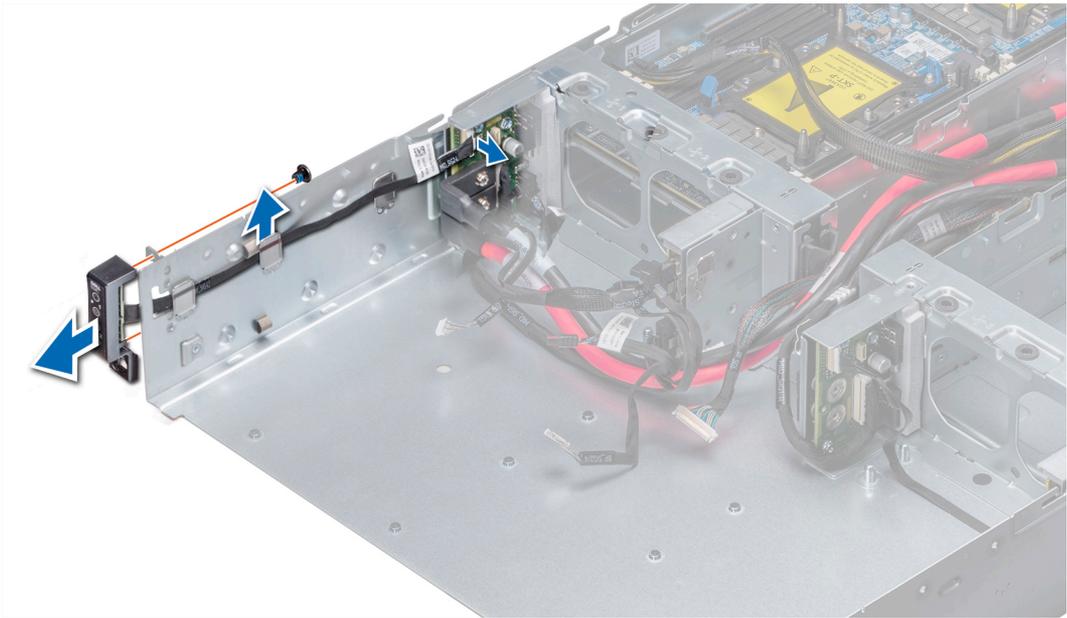


Figure 65. Removing the left control panel assembly

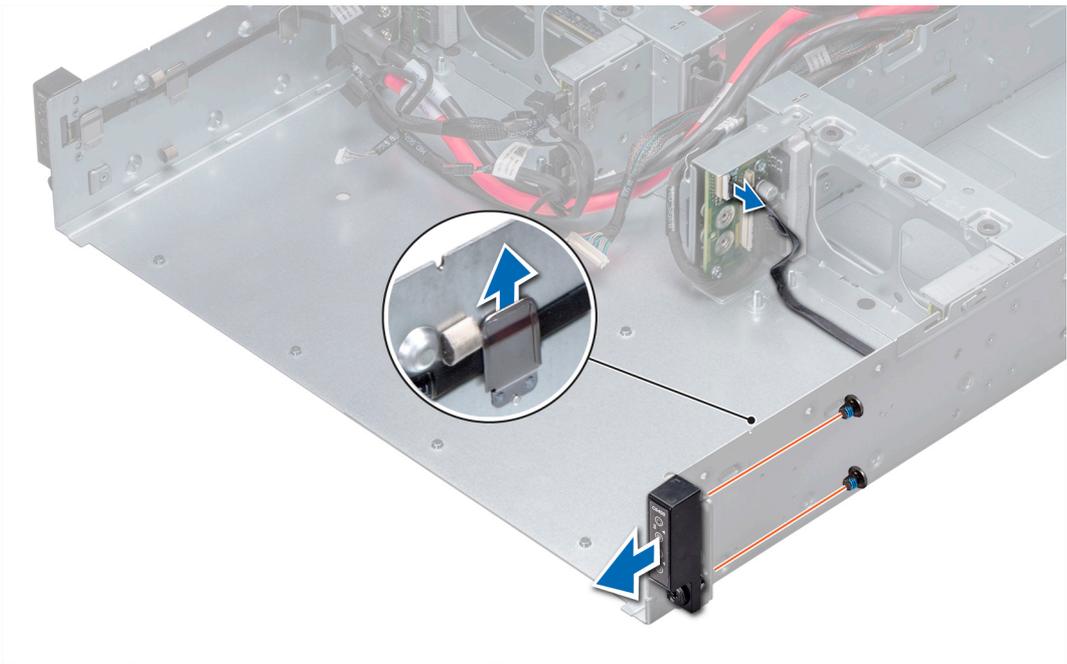


Figure 66. Removing the right control panel assembly

Next step

- 1 Install the control panel assembly.

Installing the control panel

Prerequisites

- ① **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.
- ① **NOTE:** Additional tape may be required to secure the cables.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Route the control panel cable through the cable retention clips.
- 2 Install the control panel assembly and secure it in place with screws.

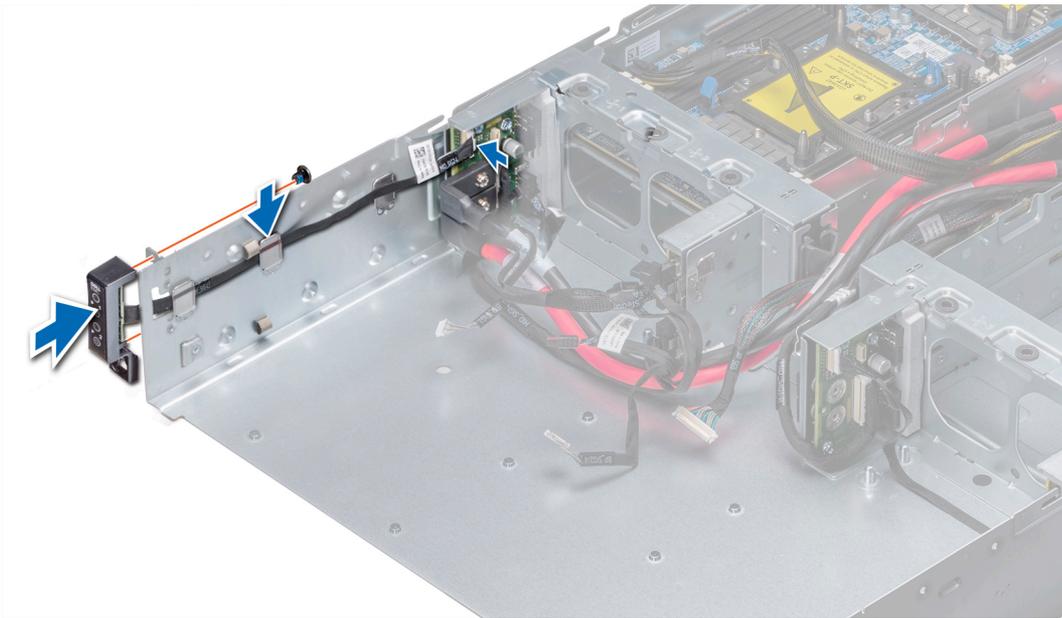


Figure 67. Installing the left control panel

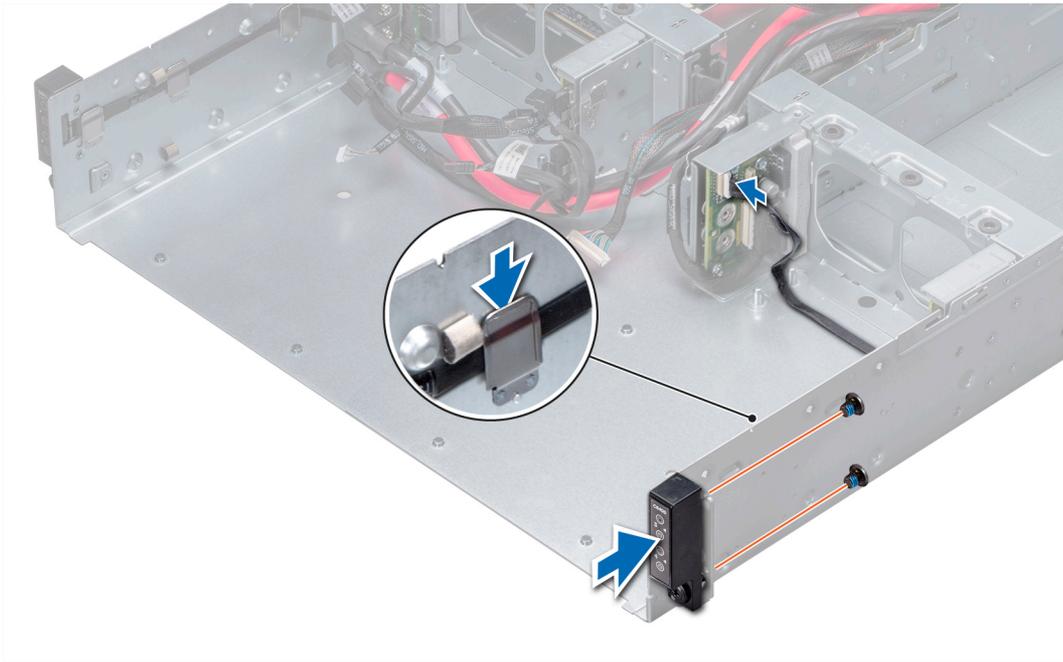


Figure 68. Installing the right control panel

Next steps

- 1 Reconnect the control panel cable to the midplane.
- 2 [Install the drive cage into the enclosure.](#)
- 3 Reconnect all the disconnected backplane cables.
- 4 [Install all the removed drives.](#)
- 5 Follow the procedure listed in [After working inside your enclosure.](#)

Thermal sensor board

Removing the thermal sensor board

Prerequisites

- ⚠ **CAUTION:** To prevent damage to the drives and backplane, you must remove the drives from the system before removing the backplane.
- ⚠ **CAUTION:** You must note the number of each drive and temporarily label them before removal so that you can replace them in the same locations.
- 📌 **NOTE:** Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly when you replace them to prevent the cables from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions.](#)
- 2 Follow the procedure listed in [Before working inside your enclosure.](#)
- 3 [Remove all the drives.](#)
- 4 Disconnect all the cables from the backplane.
- 5 Disconnect the control panel cable from the midplane.
- 6 [Remove the drive cage from the chassis.](#)

Steps

- 1 Using the Phillips #1 screwdriver, remove the screw that secures the thermal sensor board assembly to the drive cage.
- 2 Disconnect the cable from the sensor board assembly.
- 3 Remove the screw that secures the sensor board to the drive cage, and lift the board away.

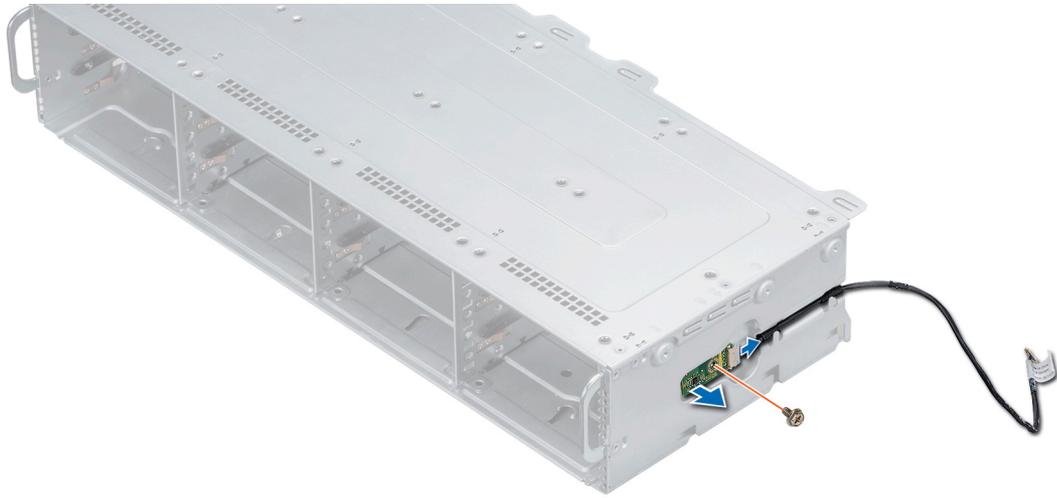


Figure 69. Removing the sensor board

Next step

- 1 [Install the sensor board.](#)

Installing the thermal sensor board

Prerequisite

NOTE: Observe the routing of the cables on the chassis as you remove them from the system. You must route these cables properly on the chassis to prevent them from being pinched or crimped.

- 1 Follow the safety guidelines listed in [Safety instructions](#).

Steps

- 1 Install the thermal sensor board into the sensor board holder, and using the Phillips #1 screwdriver, secure it to the holder.
- 2 Connect the cable to the sensor board assembly.
- 3 Install the sensor board assembly into the drive cage.
- 4 Replace the screw that secures the sensor board assembly to the drive cage.



Figure 70. Installing the sensor board assembly

Next steps

- 1 [Replace the drive cage into the chassis.](#)
- 2 [Connect all the cables to the backplane.](#)
- 3 [Connect the control panel cables to the midplane.](#)
- 4 [Install the drives.](#)
- 5 [Follow the procedure listed in *After working inside your enclosure.*](#)

Getting help

Topics:

- [Contacting Dell EMC](#)
- [Documentation feedback](#)
- [Accessing system information by using QRL](#)
- [Receiving automated support with SupportAssist](#)
- [Recycling or End-of-Life service information](#)

Contacting Dell EMC

Dell EMC provides several online and telephone based support and service options. If you do not have an active internet connection, you can find contact information about your purchase invoice, packing slip, bill, or Dell EMC product catalog. Availability varies by country and product, and some services may not be available in your area. To contact Dell EMC for sales, technical assistance, or customer service issues:

- 1 Go to Dell.com/support/home.
- 2 Select your country from the drop-down menu on the lower right corner of the page.
- 3 For customized support:
 - a Enter your system Service Tag in the **Enter your Service Tag** field.
 - b Click **Submit**.The support page that lists the various support categories is displayed.
- 4 For general support:
 - a Select your product category.
 - b Select your product segment.
 - c Select your product.The support page that lists the various support categories is displayed.
- 5 For contact details of Dell EMC Global Technical Support:
 - a Click [Global Technical Support](#).
 - b The **Contact Technical Support** page is displayed with details to call, chat, or e-mail the Dell EMC Global Technical Support team.

Documentation feedback

You can rate the documentation or write your feedback on any of our Dell EMC documentation pages and click **Send Feedback** to send your feedback.

Accessing system information by using QRL

You can use the Quick Resource Locator (QRL) located on the information tag in the front of the C6400, to access the information about the Dell EMC PowerEdge C6400.

Prerequisites

Ensure that your smartphone or tablet has the QR code scanner installed.

The QRL includes the following information about your system:

- How-to videos
- Reference materials, including the Installation and Service Manual, LCD diagnostics, and mechanical overview
- Your system service tag to quickly access your specific hardware configuration and warranty information
- A direct link to Dell to contact technical assistance and sales teams

Steps

- 1 Go to Dell.com/qrl and navigate to your specific product or
- 2 Use your smartphone or tablet to scan the model-specific Quick Resource (QR) code on your system or in the Quick Resource Locator section.

Quick Resource Locator for C6400 and C6420 systems



Figure 71. Quick Resource Locator for PowerEdge C6400 and C6420 systems

Receiving automated support with SupportAssist

Dell EMC SupportAssist is an optional Dell EMC Services offering that automates technical support for your Dell EMC server, storage, and networking devices. By installing and setting up a SupportAssist application in your IT environment, you can receive the following benefits:

- **Automated issue detection** — SupportAssist monitors your Dell EMC devices and automatically detects hardware issues, both proactively and predictively.
- **Automated case creation** — When an issue is detected, SupportAssist automatically opens a support case with Dell EMC Technical Support.
- **Automated diagnostic collection** — SupportAssist automatically collects system state information from your devices and uploads it securely to Dell EMC. This information is used by Dell EMC Technical Support to troubleshoot the issue.
- **Proactive contact** — A Dell EMC Technical Support agent contacts you about the support case and helps you resolve the issue.

The available benefits vary depending on the Dell EMC Service entitlement purchased for your device. For more information about SupportAssist, go to Dell.com/supportassist.

Recycling or End-of-Life service information

Take back and recycling services are offered for this product in certain countries. If you want to dispose of system components, visit Dell.com/recyclingworldwide and select the relevant country.