b. Enter the correct time and date in the System Setup **Time** and **Date** fields.
c. **Exit** the System Setup.
d. To test the newly installed battery, remove the system from the enclosure for at least an hour.
e. Reinstall the system into the enclosure after an hour.
f. Enter the System Setup and if the time and date are still incorrect, see Getting help section.

Optional internal USB card

Removing the internal USB card

Prerequisites

CAUTION: To avoid interference with other components in the server, the maximum permissible dimensions of the USB memory key are 15.9 mm wide x 57.15 mm long x 7.9 mm high.

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the expansion card risers.

Steps

1. Holding the blue tag, lift the internal USB card to disconnect from the connector on the system board.
2. Remove the USB memory key from the internal USB card.

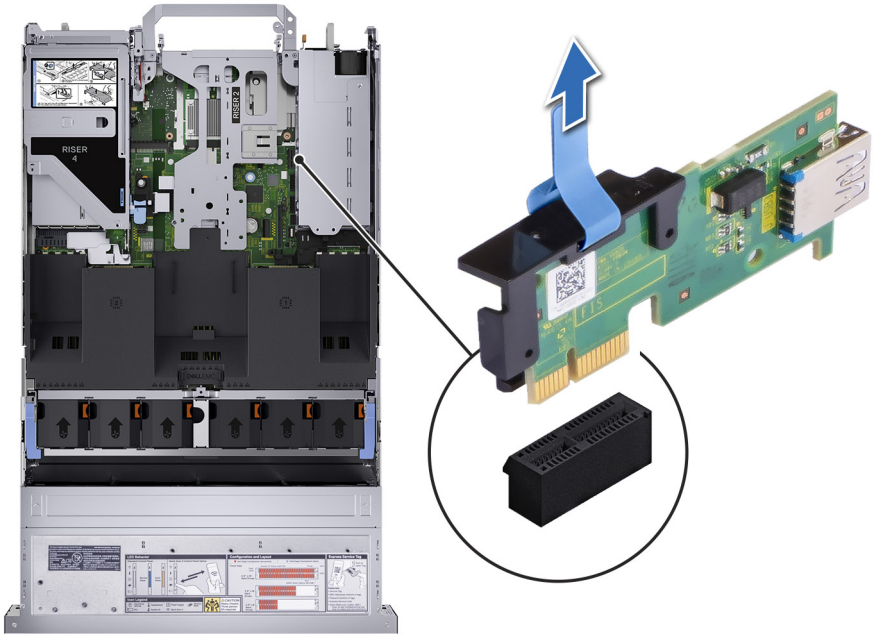

Figure 200. Removing the internal USB card

Next steps

1. Replace the internal USB card.

Installing the internal USB card

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.

2. Follow the procedure listed in Before working inside your system.
3. Remove the expansion card risers.

Steps

1. Connect the USB key to the internal USB card.

   NOTE: For information on the exact location of USB on system board, see System board jumpers and connectors section

2. Align the internal USB card with the connector on the system board and press firmly until the internal USB card is seated.

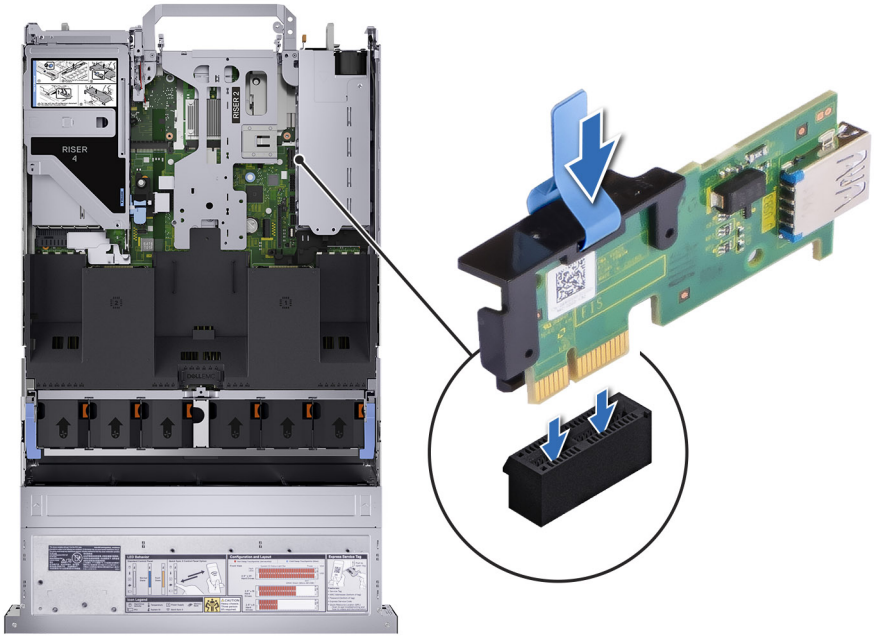

Figure 201. Installing the internal USB card

Next steps

1. Install the expansion card risers.
2. Follow the procedure listed in After working inside your system.
3. While booting, press F2 to enter **System Setup** and verify that the system detects the USB memory key.

Intrusion switch module

This is a service technician replaceable part only.

Removing the intrusion switch module

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the expansion card riser.

NOTE: Ensure that you note the routing of the cables as you remove them from the system board. Route the cable properly when you replace it to prevent the cable from being pinched or crimped

Steps

1. Disconnect the intrusion switch cable from the connector on the rear I/O board.

2. Using a Phillips #1 screwdriver, loosen the screw on the intrusion switch module.
3. Slide the intrusion switch module out of the slot on the system.

NOTE: The numbers on the image do not depict the exact steps. The numbers are for representation of sequence.

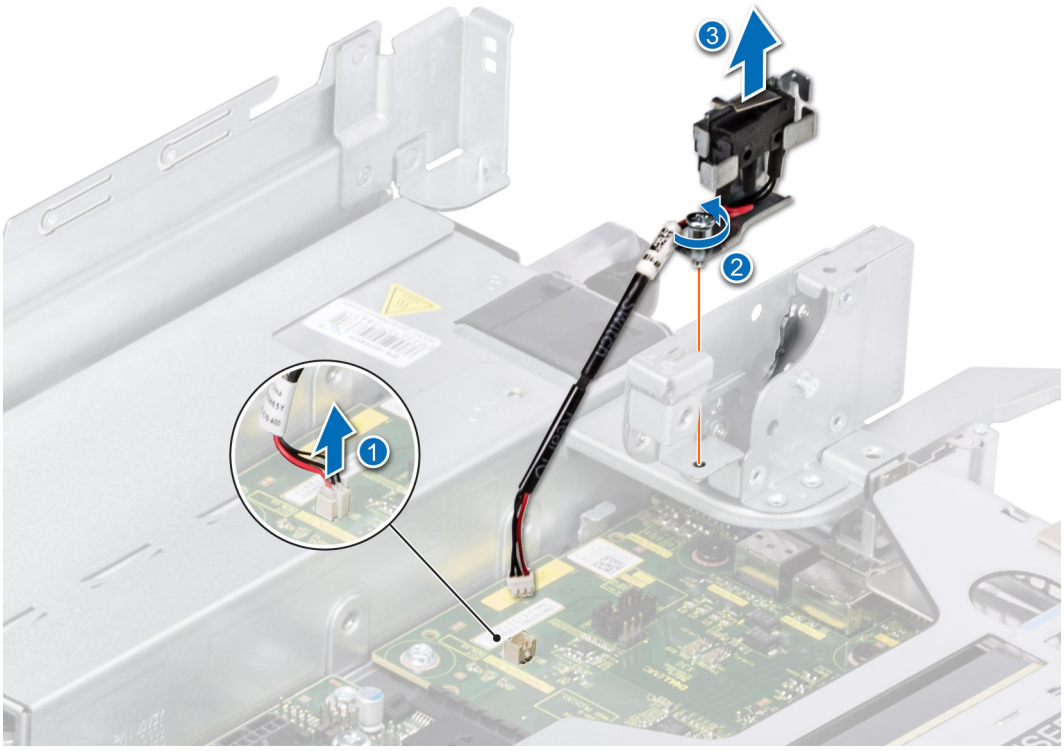

Figure 202. Removing the intrusion switch module

Next steps

1. Replace the intrusion switch module.

Installing the intrusion switch module

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in Before working inside your system.
3. Remove the expansion card riser.

NOTE: Ensure that you note the routing of the cables as you remove them from the system board. Route the cable properly when you replace it to prevent the cable from being pinched or crimped.

Steps

1. Align the guides on the intrusion switch module with the standoffs on the system.
2. Slide the intrusion switch module into the slot in the system until firmly seated.
3. Using a Phillips #1 screwdriver, tighten the screw on the intrusion switch module.
4. Connect the intrusion switch cable to the connector on the rear I/O board.

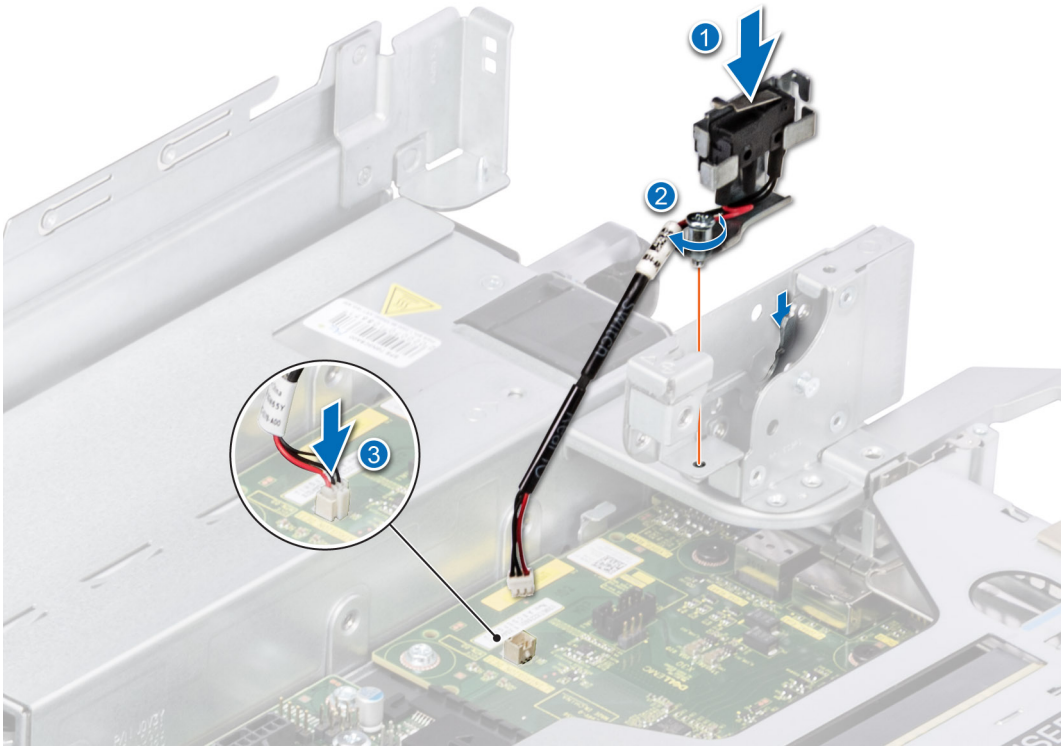

Figure 203. Installing the intrusion switch module

Next steps

1. Install the expansion card riser.
2. Follow the procedure listed in After working inside your system.

Optional OCP card

Removing the OCP card

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the expansion card riser.

Steps

1. Open the blue latch to disengage the OCP card.
2. Push the OCP card towards the rear end of the system to disconnect from the connector on the system board.
3. Slide the OCP card out of the slot on the system.

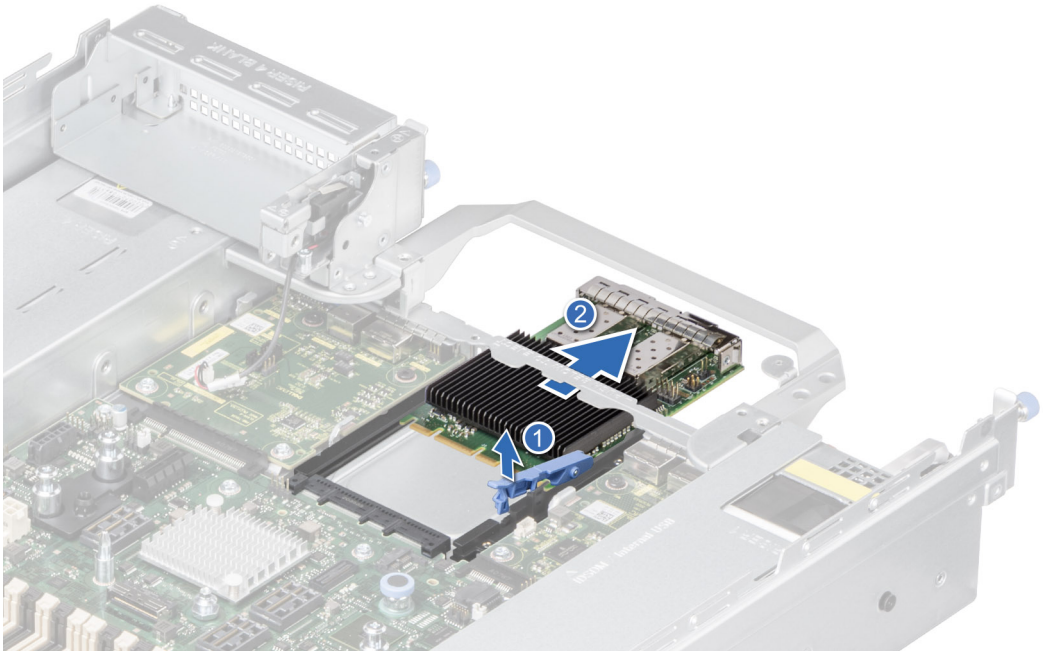

Figure 204. Removing the OCP card

4. If the OCP card is not going to be replaced, install a filler bracket .

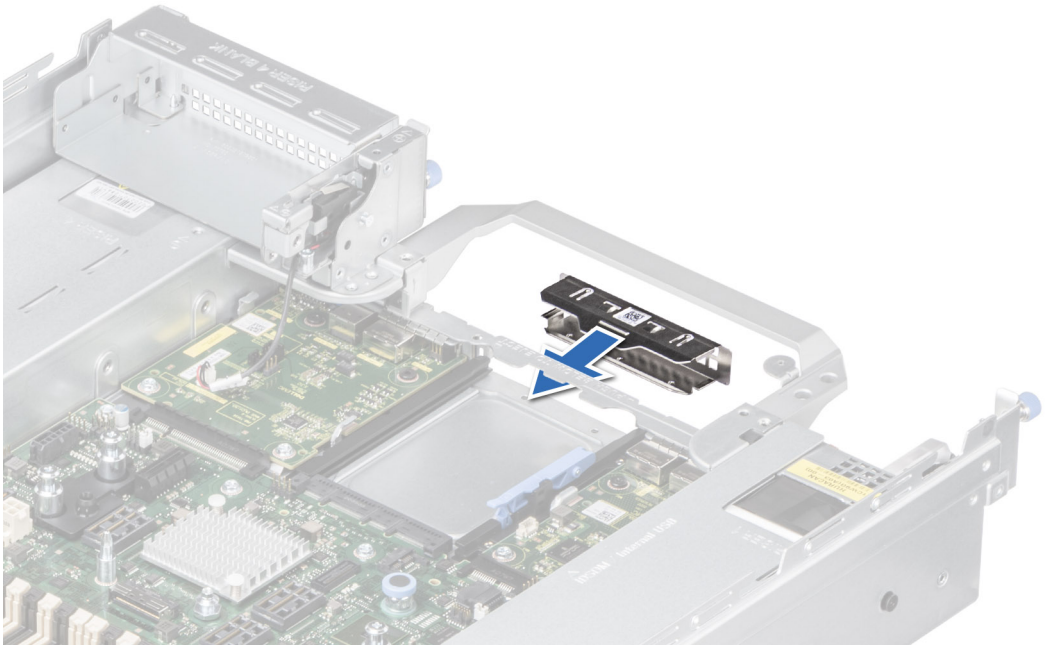

Figure 205. Installation of filler bracket

Next steps

1. Replace the OCP card.

Installing the OCP card

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.

2. Follow the procedure listed in the Before working inside your system.
3. Remove the expansion card riser.

CAUTION: Do not install GPUs, network cards, or other PCIe devices on your system that are not validated and tested by Dell. Damage caused by unauthorized and invalidated hardware installation will null and void the system warranty.

Steps

1. If installed, remove the filler bracket.

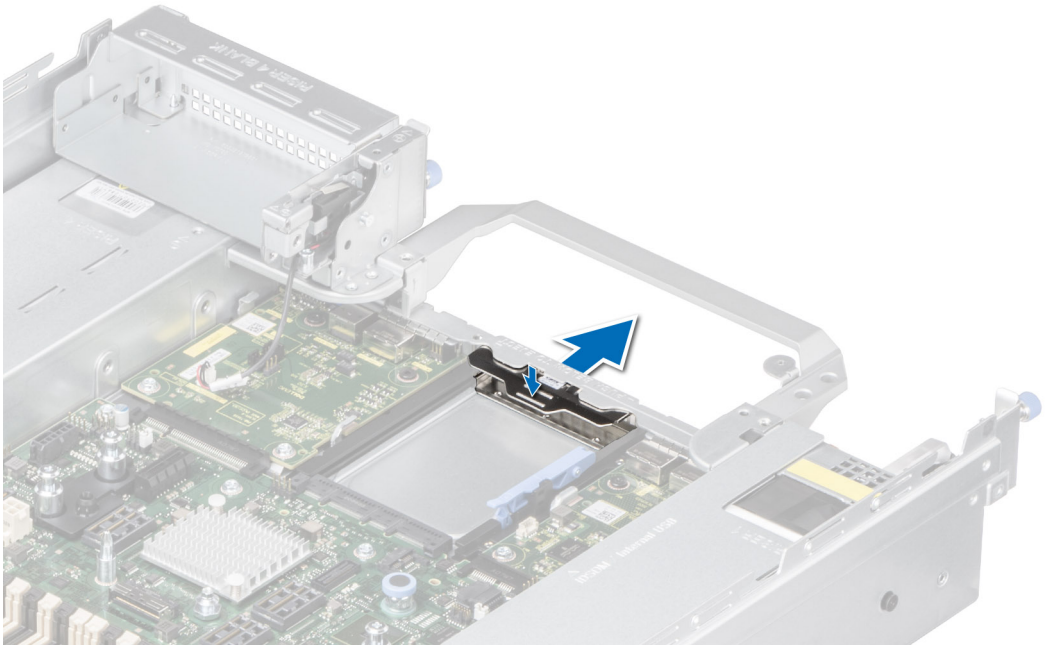

Figure 206. Removal of filler bracket

2. Open the blue latch on the system board.
3. Slide the OCP card into the slot in the system.
4. Push until the OCP card is connected to the connector on the system board.
5. Close the blue latch to lock the OCP card to the system.

NOTE: The numbers on the image do not depict the exact steps. The numbers are for representation of sequence.

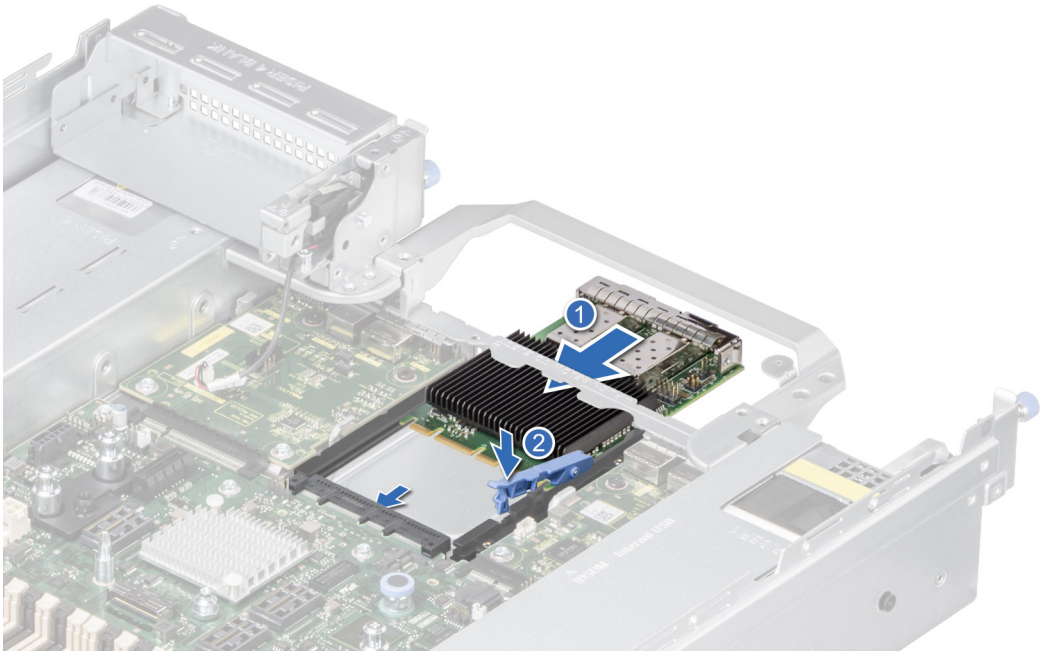

Figure 207. Installing the OCP card

Next steps

1. Install the expansion card riser.
2. Follow the procedure listed in After working inside your system.

Power supply unit

NOTE: While replacing the hot swappable PSU, after next server boot; the new PSU automatically updates to the same firmware and configuration of the replaced one. For updating to the latest firmware and changing the configuration, see the *Lifecycle Controller User's Guide* at iDRAC Manuals.

Hot spare feature

Your system supports the hot spare feature that significantly reduces the power overhead associated with the power supply unit (PSU) redundancy.

When the hot spare feature is enabled, one of the redundant PSUs is switched to the sleep state. The active PSU supports 100 percent of the system load, thus operating at higher efficiency. The PSU in the sleep state monitors output voltage of the active PSU. If the output voltage of the active PSU drops, the PSU in the sleep state returns to an active output state.

If having both PSUs active is more efficient than having one PSU in the sleep state, the active PSU can also activate the sleeping PSU.

The default PSU settings are as follows:

- If the load on the active PSU is more than 50 percent of PSU rated power wattage, then the redundant PSU is switched to the active state.
- If the load on the active PSU falls below 20 percent of PSU rated power wattage, then the redundant PSU is switched to the sleep state.

You can configure the hot spare feature by using the iDRAC settings. For more information, see the *iDRAC User's Guide* available at PowerEdge manuals.

Removing a power supply unit blank

Prerequisites

Follow the safety guidelines listed in the Safety instructions.

Steps

Pull the blank out of the system.

CAUTION: To ensure proper system cooling, the PSU blank must be installed in the second PSU bay in a non-redundant configuration. Remove the PSU blank only if you are installing a second PSU.

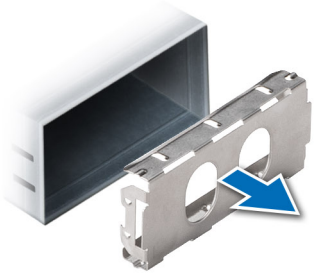

Figure 208. Removing a power supply unit blank

Next steps

1. Replace the PSU blank or install the PSU.

Installing a power supply unit blank

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
   NOTE: Install the power supply unit (PSU) blank only in the second PSU bay.
2. If required, Remove the PSU.

Steps

Align the PSU blank with the PSU bay and push it into the PSU bay until it clicks into place.

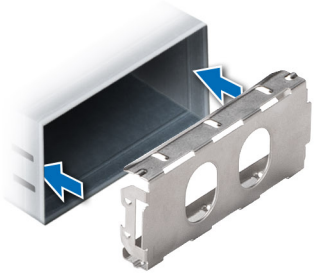

Figure 209. Installing a power supply unit blank

Removing a power supply unit adapter

Remove the PSU adapter, when installing PSU with 86 mm wide form factor.

Prerequisites

Follow the safety guidelines listed in the Safety instructions.

Steps

Using a Phillips #1 screwdriver, loosen the screw and remove the power supply unit adapter.

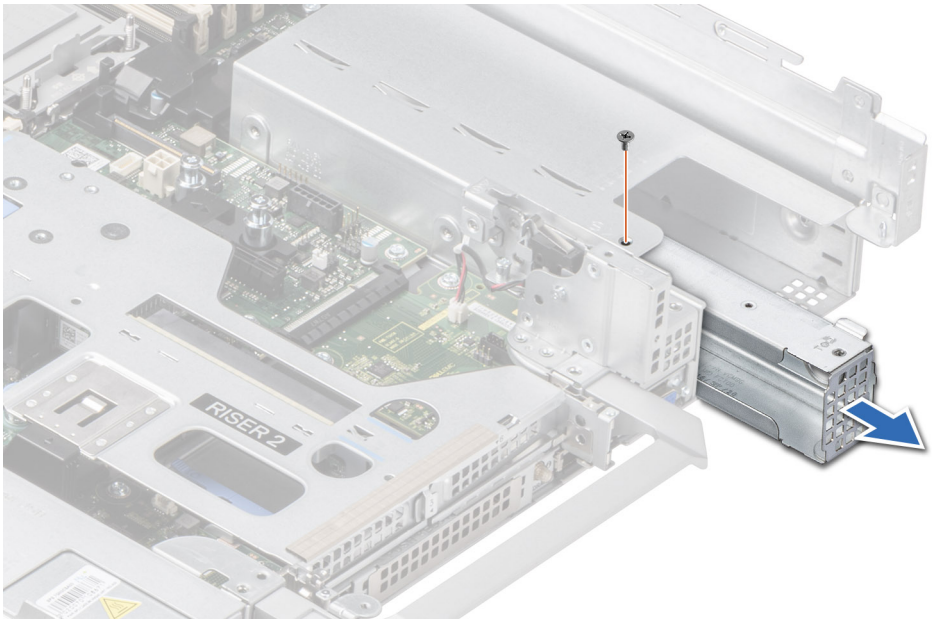

Figure 210. Removing a power supply unit adapter

Next steps

1. Replace the PSU adapter or Install the PSU.

Installing a power supply unit adapter

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. If required, Remove the PSU.

NOTE: Remove the PSU adapter, when installing PSU with 86 mm wide form factor.

Steps

1. Align and insert the power supply unit adapter.
2. Using a phillips #1 screwdriver, tighten the screw.

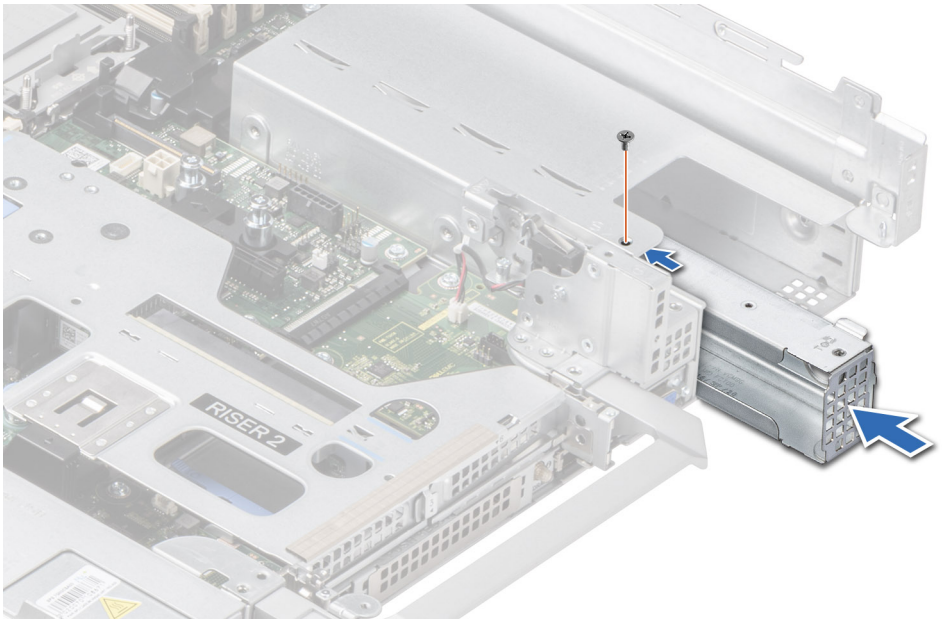

Figure 211. Installing a power supply unit adapter

Removing a power supply unit

Prerequisites

CAUTION: The system requires one power supply unit (PSU) for normal operation. On power-redundant systems, remove and replace only one PSU at a time in a system that is powered on.

1. Follow the safety guidelines listed in the Safety instructions.
2. Disconnect the power cable from the power outlet and from the PSU you intend to remove.
3. Remove the cable from the strap on the PSU handle.
4. Unlatch and lift or remove the optional cable management accessory if it interferes with the PSU removal.

   NOTE: For information about the cable management when the PSU is removed or installed while the system is in a rack, see the system's cable management arm documentation at PowerEdge Manuals.

Steps

Press the release latch and holding the PSU handle, slide the PSU out of the bay.

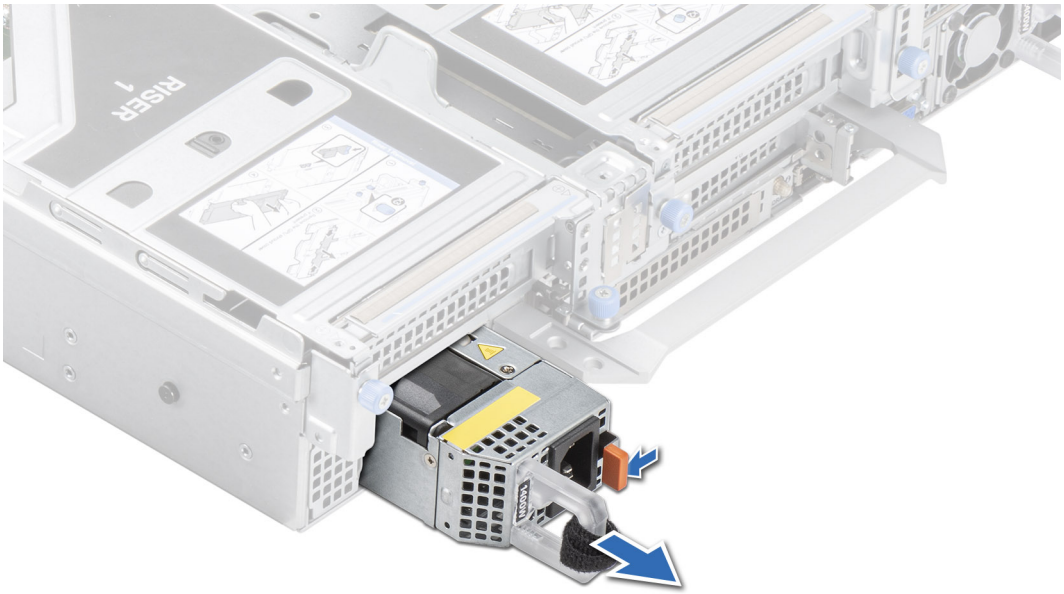

Figure 212. Removing a power supply unit

Next steps

1. Replace the PSU or install the PSU blank.

Installing a power supply unit

Prerequisites

1. Follow the safety guidelines listed in the 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.
3. Remove the PSU blank.

Steps

Slide the PSU into the PSU bay until the release latch snaps into place.

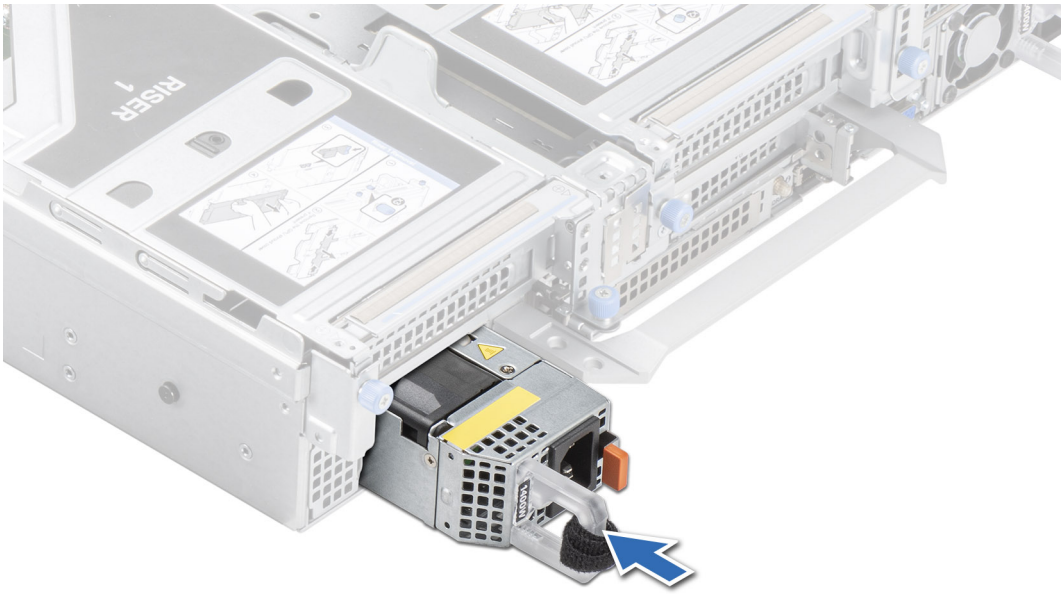

Figure 213. Installing a power supply unit

Next steps

1. If you have unlatched or removed the cable management accessory, re-install or relatch it. For information about the cable management when the PSU is removed or installed while the system is in the rack, see the system's cable management accessory documentation at PowerEdge Manuals.
2. 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. The PSU status indicator turns green to indicate that the PSU is functioning properly.

Wiring instructions for a DC power supply unit

Your system supports up to two –(48–60) V DC power supply units (PSUs).

NOTE: For equipment using –(48–60) V DC power supply units (PSUs), a qualified electrician must perform all connections to DC power and to safety grounds. Do not attempt connecting to DC power or installing grounds yourself. All electrical wiring must comply with applicable local or national codes and practices. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow all safety instructions that came with the product.

CAUTION: Wire the unit with copper only, unless otherwise specified, use only 10 American Wire Gauge (AWG) wire rated minimum 90ºC for source and return. Protect the –(48–60) V DC (1 wire) with a branch circuit over-current protection rated 50 A for DC with a high interrupt current rating.

CAUTION: Connect the equipment to a –(48–60) V DC supply source that is electrically isolated from the AC source (reliably grounded –(48–60) V DC SELV source). Ensure that the –(48–60) V DC source is efficiently secured to earth (ground).

NOTE: A readily accessible disconnect device that is suitably approved and rated shall be incorporated in the field wiring.

Input requirements

- Supply voltage: –(48–60) V DC

- Current consumption: 32 A (maximum)

Kit contents

- Dell part number 6RYJ9 terminal block or equivalent (1)
- #6-32 nut equipped with lock washer (1)

Required tools

Wire-stripper pliers capable of removing insulation from size 10 AWG solid or stranded, insulated copper wire.

NOTE: Use alpha wire part number 3080 or equivalent (65/30 stranding).

Required wires

- One UL 10 AWG, 2 m maximum (stranded) black wire [–(48–60) V DC].
- One UL 10 AWG, 2 m maximum (stranded) red wire (V DC return).
- One UL 10 AWG, 2 m maximum, green with a yellow stripe, stranded wire (safety ground).

Assembling and connecting safety ground wire

Prerequisites

NOTE: For equipment using –(48–60) V DC power supply units (PSUs), a qualified electrician must perform all connections to DC power and to safety grounds. Do not attempt connecting to DC power or installing grounds yourself. All electrical wiring must comply with applicable local or national codes and practices. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow all safety instructions that came with the product.

Steps

1. Strip the insulation from the end of the green or yellow wire, exposing approximately 4.5 mm (0.175 inches) of copper wire.
2. Using a hand-crimping tool (Tyco Electronics, 58433-3 or equivalent), crimp the ring-tongue terminal (Jeeson Terminals Inc., R5-4SA or equivalent) to the green and yellow wire (safety ground wire).
3. Connect the safety ground wire to the grounding post on the back of the system by using a number 6-32 nut that is equipped with a locking washer.

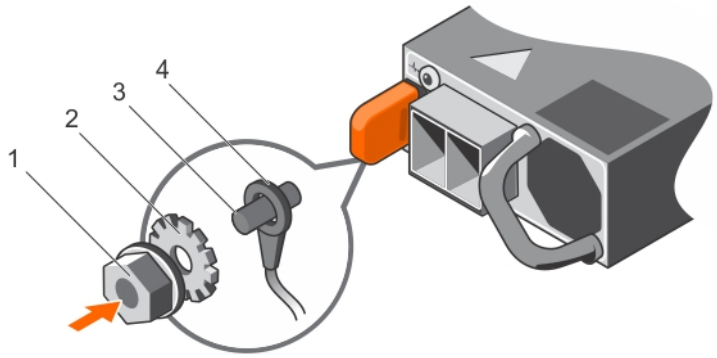

Figure 214. Assembling and connecting the safety ground wire

1. #6-32 nut
2. spring washer
3. grounding post
4. safety ground wire

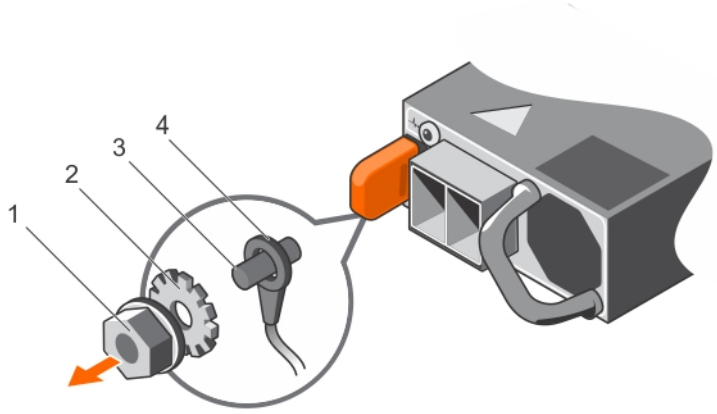

Figure 215. Removing the safety ground wire

1. #6-32 nut
2. spring washer
3. grounding post
4. safety ground wire

Assembling DC input power wires

Prerequisites

NOTE: For equipment using –(48–60) V DC power supply units (PSUs), a qualified electrician must perform all connections to DC power and to safety grounds. Do not attempt connecting to DC power or installing grounds yourself. All electrical wiring must comply with applicable local or national codes and practices. Damage due to servicing that is not authorized by Dell is not covered by your warranty. Read and follow all safety instructions that came with the product.

Steps

1. Strip the insulation from the ends of the DC power wires, exposing approximately 13 mm (0.5 inches) of copper wire.

   NOTE: Reversing polarity when connecting DC power wires can permanently damage the power supply or the system.

2. Insert the copper ends into the mating connectors and tighten the captive screws at the top of the mating connector using a Phillips number 2 screwdriver.

   NOTE: To protect the power supply from electrostatic discharge, the captive screws must be covered with the rubber cap before inserting the mating connector into the power supply.

3. Rotate the rubber cap clockwise to fix it over the captive screws.
4. Insert the mating connector into the power supply.

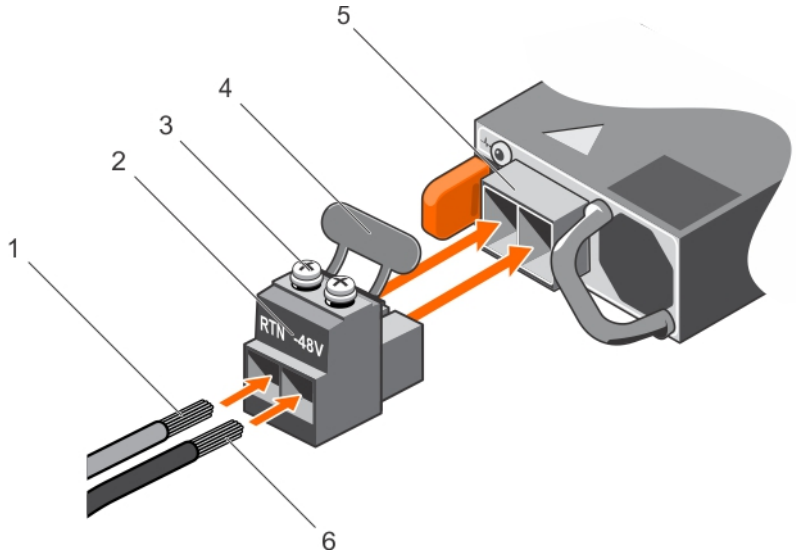

Figure 216. Assembling the DC Input Power Wires

1. DC wire RTN
2. DC power connector
3. captive screw (2)
4. rubber cap
5. DC power socket
6. DC wire –48 V

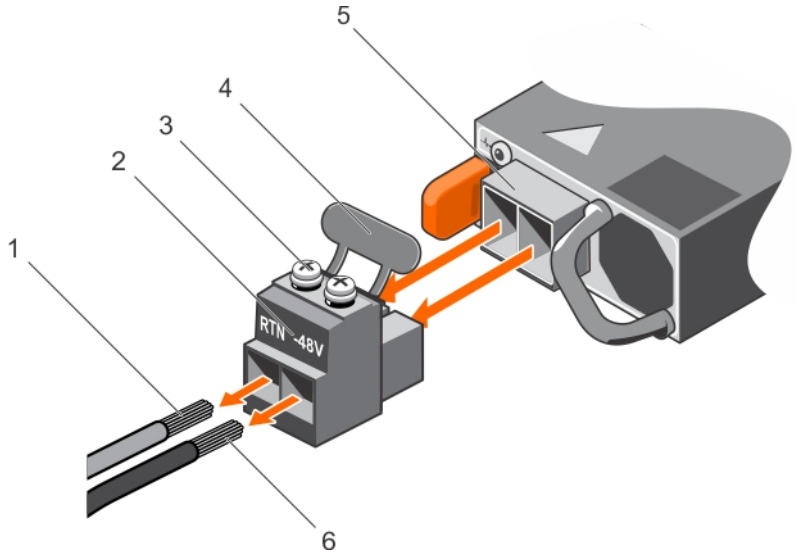

Figure 217. Removing the DC Input Power Wires

1. wire RTN
2. DC power connector
3. captive screw (2)
4. rubber cap
5. DC power socket
6. wire –48 V

Trusted Platform Module

This is a service technician replaceable part only.

Upgrading the Trusted Platform Module

Removing the TPM

Prerequisites

NOTE:

- Ensure the operating system is compatible with the TPM version you are installing.
- Ensure that you download and install the latest BIOS firmware on your system.
- Ensure that the BIOS is configured to enable UEFI boot mode.

CAUTION: The TPM plug-in module is cryptographically bound to that particular system board after it is installed. When the system is powered on, any attempt to remove an installed TPM plug-in module breaks the cryptographic binding, and the removed TPM cannot be installed on another system board. Ensure any keys you have stored on the TPM have been securely transferred.

Steps

1. Locate the TPM connector on the system board. For more information, see System board connectors.
2. Press to hold the module down and remove the screw using the security Torx 8-bit shipped with the TPM module.
3. Slide the TPM module out from its connector.
4. Push the plastic rivet away from the TPM connector and rotate it 90° counterclockwise to release it from the system board.
5. Pull the plastic rivet out of its slot on the system board.

Installing the TPM

Steps

1. To install the TPM, align the edge connectors on the TPM with the slot on the TPM connector.
2. Insert the TPM into the TPM connector such that the plastic rivet aligns with the slot on the system board.
3. Press the plastic rivet until the rivet snaps into place.
4. Replace the screw that secures the TPM to the system board.

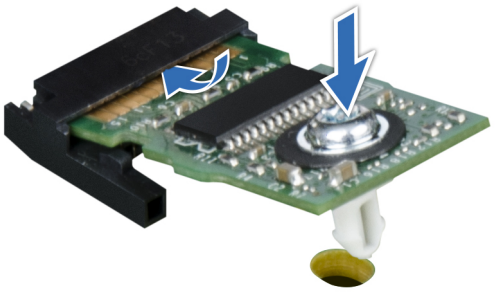

Figure 218. Installing the TPM

Initializing TPM for users

Steps

1. Initialize the TPM.
   For more information, see Initializing the TPM for users.
2. The **TPM Status** changes to **Enabled, Activated**.

Initializing the TPM 1.2 for users

Steps

1. While booting your system, press F2 to enter System Setup.
2. On the **System Setup Main Menu** screen, click **System BIOS** > **System Security Settings**.
3. From the **TPM Security** option, select **On with Preboot Measurements**.
4. From the **TPM Command** option, select **Activate**.
5. Save the settings.
6. Restart your system.

Initializing the TPM 2.0 for users

Steps

1. While booting your system, press F2 to enter System Setup.
2. On the **System Setup Main Menu** screen, click **System BIOS** > **System Security Settings**.
3. From the **TPM Security** option, select **On**.
4. Save the settings.
5. Restart your system.

System board

This is a service technician replaceable part only.

Removing the system board

Prerequisites

CAUTION: If you are using the Trusted Platform Module (TPM) with an encryption key, you may be prompted to create a recovery key during program or System Setup. Be sure to create and safely store this recovery key. If you replace this system board, you must supply the recovery key when you restart your system or program before you can access the encrypted data on your drives.

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the following components:
   a. Air shroud
   b. Cooling fan cage assembly
   c. Side wall bracket
   d. Processor and heat sink module or Liquid cooling module
   e. Memory modules
   f. R1 and R3 paddle cards (if installed)
   g. BOSS S2 module
   h. Expansion card risers

i. GPU air shroud (if installed)
j. IDSDM module (if installed)
k. Internal USB card (if installed)
l. OCP card (if installed)
m. Serial COM port (if installed)
n. VGA port (if installed)
o. Power supply units (PSU)
p. Rear drive module
q. Disconnect all cables from the system board.

CAUTION: Take care not to damage the system identification button while removing the system board from the system.

Steps

1. Using the system board holder and plunger, slide the system board towards the front of the system.
2. Lift the system board out of the chassis.

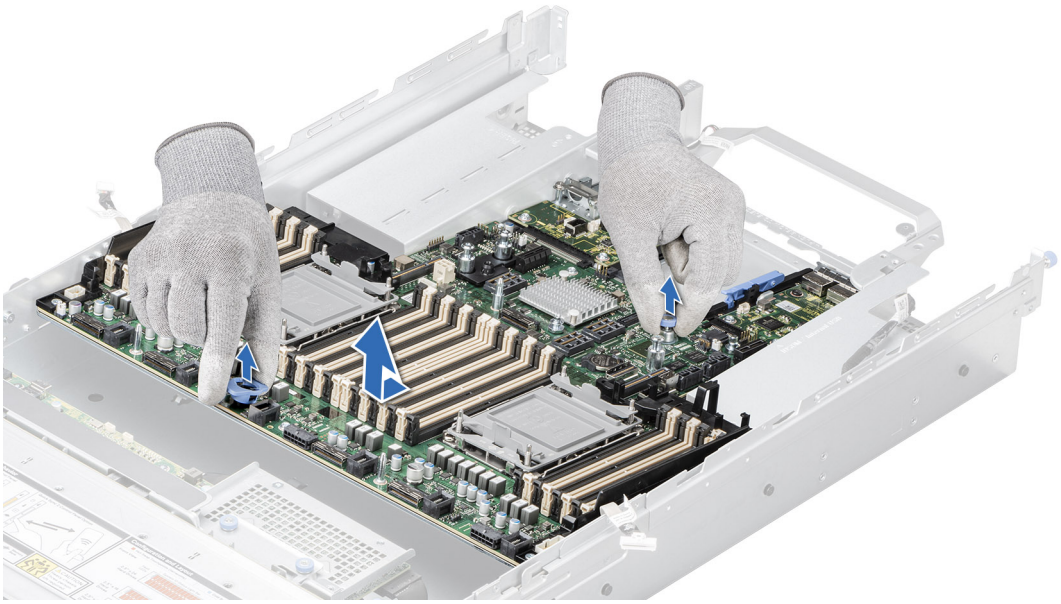

Figure 219. Removing the system board

Next steps

1. Install the system board.

Installing the system board

Prerequisites

NOTE: Before replacing the system board, replace the old iDRAC MAC address label in the Information tag with the iDRAC MAC address label of the replacement system board.

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in Before working inside your system.
3. If you are replacing the system board, remove all the components that are listed in the removing the system board section.

Steps

1. Unpack the new system board assembly.

CAUTION: Do not lift the system board by holding a memory module, processor, or other components.

CAUTION: Take care not to damage the system identification button while placing the system board into the chassis.

2. Holding the system board holder and plunger, lower the system board into the system.
3. Slide the system board towards the rear of the chassis until the connectors are firmly seated in the slots.

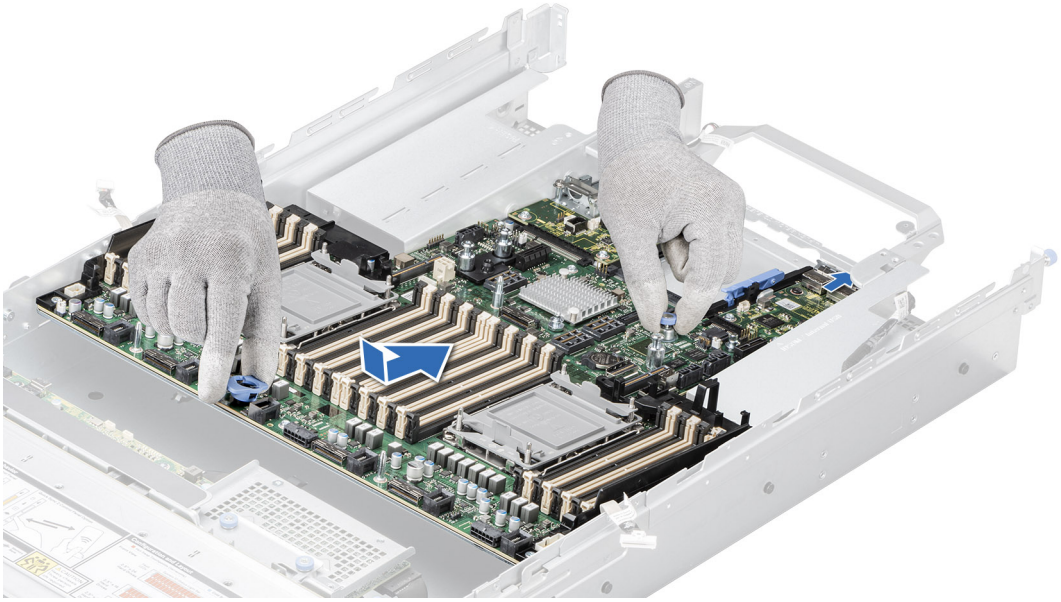

Figure 220. Installing the system board

Next steps

1. Replace the following components:
   a. Trusted Platform Module (TPM)
      NOTE: The TPM Module must be replaced only while installing new system board.
   b. IDSDM module (if removed)
   c. Internal USB card (if removed)
   d. OCP card (if removed)
   e. Processor and heat sink or Liquid cooling module
   f. Memory modules
   g. R1 and R3 paddle cards (if removed)
   h. GPU air shroud (if removed)
   i. Expansion card risers
   j. BOSS S2 module
   k. Serial COM port (if removed)
   l. VGA port (if removed)
   m. Cooling fan cage assembly
   n. Side wall bracket
   o. Air shroud
   p. Rear drive module
   q. Power supply units (PSU)
2. Reconnect all cables to the system board.
   NOTE: Ensure that the cables inside the system are routed along the chassis wall and secured using the cable securing bracket.
3. Ensure that you perform the following steps:
   a. Use the Easy Restore feature to restore the Service Tag. See the Restoring the system by using the Easy Restore feature section.
   b. If the service tag is not backed up in the backup flash device, enter the system service tag manually. See the Manually update the Service Tag by using System Setup section.

c. Update the BIOS and iDRAC versions.
d. Re-enable the Trusted Platform Module (TPM). See the Upgrading the Trusted Platform Module section.

4. If you are not using Easy restore, import your new or existing iDRAC Enterprise license. For more information, see the Integrated Dell Remote Access Controller User's Guide.
5. Follow the procedure listed in After working inside your system.

Restoring the system using Easy Restore

The Easy Restore feature enables you to restore your service tag, license, UEFI configuration, and the system configuration data after replacing the system board. All data is backed up in a backup flash device automatically. If BIOS detects a new system board, and the service tag in the backup flash device, BIOS prompts the user to restore the backup information.

About this task

Below is a list of options/steps available:

- Restore the service tag, license, and diagnostics information, press **Y**
- Navigate to the Lifecycle Controller based restore options, press **N**
- Restore data from a previously created **Hardware Server Profile**, press **F10**

  NOTE: When the restore process is complete, BIOS prompts to restore the system configuration data.
- Restore data from a previously created **Hardware Server Profile**, press **F10**
- To restore the system configuration data, press **Y**
- To use the default configuration settings, press **N**
- **NOTE:** After the restore process is complete, system reboots.

LOM card and rear I/O board

Removing the LOM card and rear I/O board

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the system board.

   NOTE: The procedure to remove the liquid cooling rear I/O board and rear I/O boards is same.

Steps

1. Using a Phillips # 2 screwdriver, remove the screws that secure the LAN on Motherboard (LOM) card and rear I/O board to the system board.
2. Holding the edges, pull the LOM card or rear I/O board to disconnect from the connector on the system board.

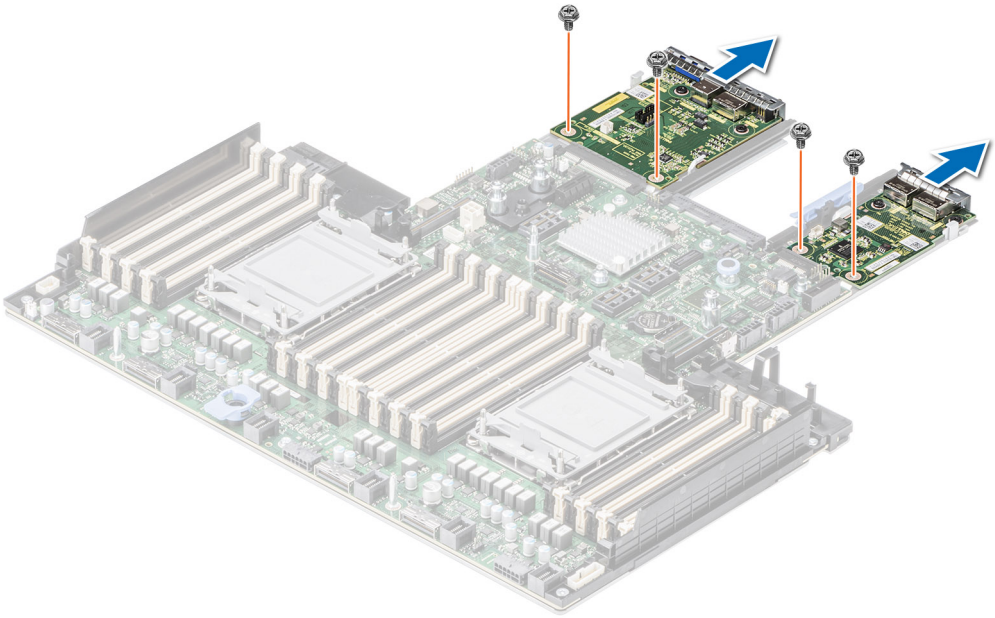

Figure 221. Removing the LOM card and rear I/O board

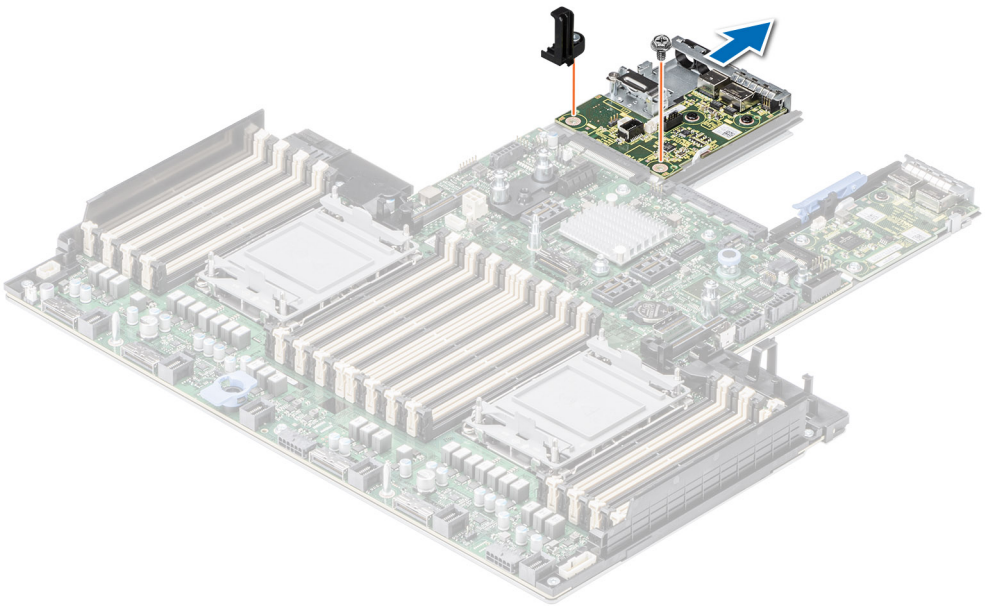

Figure 222. Removing liquid cooling rear I/O board

Next steps

1. Replace the LOM card and rear I/O board.

Installing the LOM card and rear I/O board

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the system board.

NOTE: The procedure to install the liquid cooling rear I/O board and rear I/O boards is same.

Steps

1. Align the connectors and slots on the LOM card or rear I/O board with the connector and standoffs on the system board.
2. Press the LOM card or rear I/O board until firmly seated on the system board connector.
3. Using a Phillips #2 screwdriver, secure the LOM card or rear I/O board to the system board with screws.

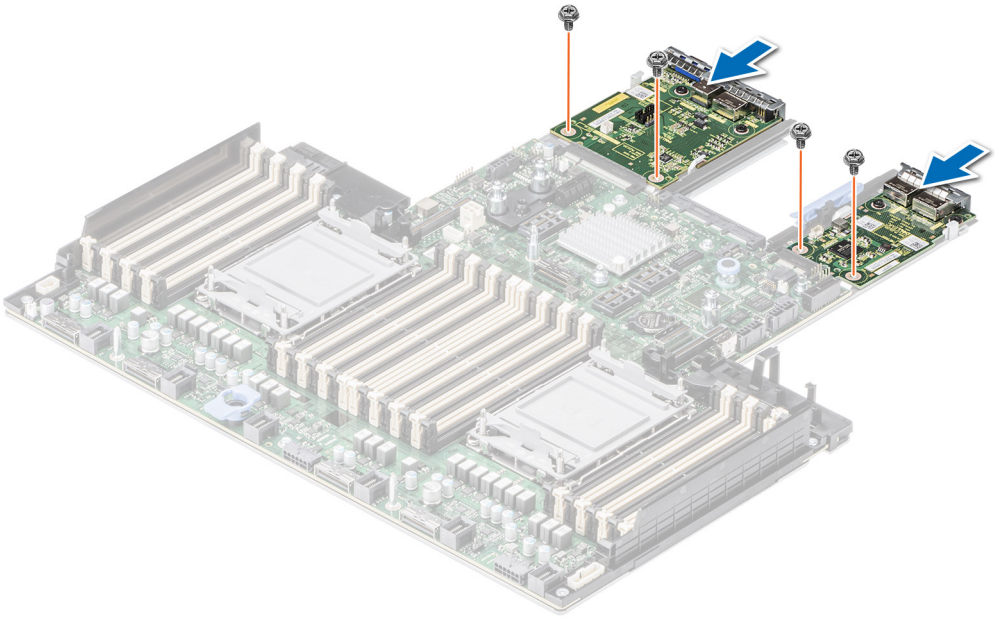

Figure 223. Installing the LOM card and rear I/O board

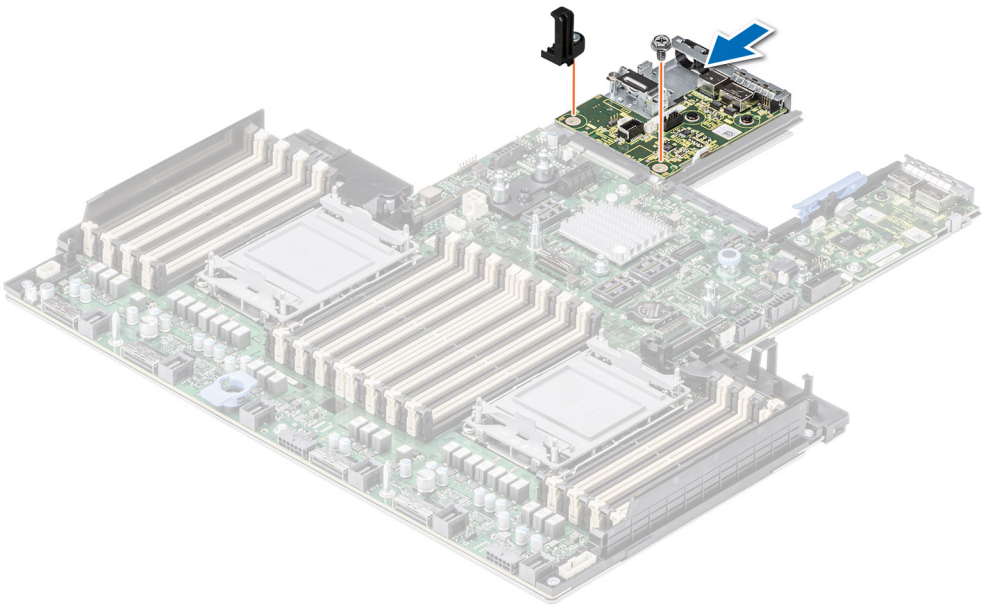

Figure 224. Installing the liquid cooling rear I/O board

Next steps

1. Install the system board.
2. Follow the procedure listed in After working inside your system.

Control panel

This is a service technician replaceable part only.

Removing the right control panel

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the drive backplane cover.
4. If installed, remove the air shroud or remove the GPU air shroud.
5. Remove the cooling fan cage assembly.
6. Remove the side wall bracket.

Steps

1. Using the Phillips #1 screwdriver, remove the screws that secures the right control panel and cable cover to the system.
2. Remove the cable cover away the system.
3. Disconnect the right control panel cable and the VGA cable from the connectors on the system board.
4. Holding the cable, slide the right control panel out of the system.

NOTE: Observe the routing of the cable as you remove the right control panel from the system.

NOTE: The numbers on the image do not depict the exact steps. The numbers are for representation of sequence.

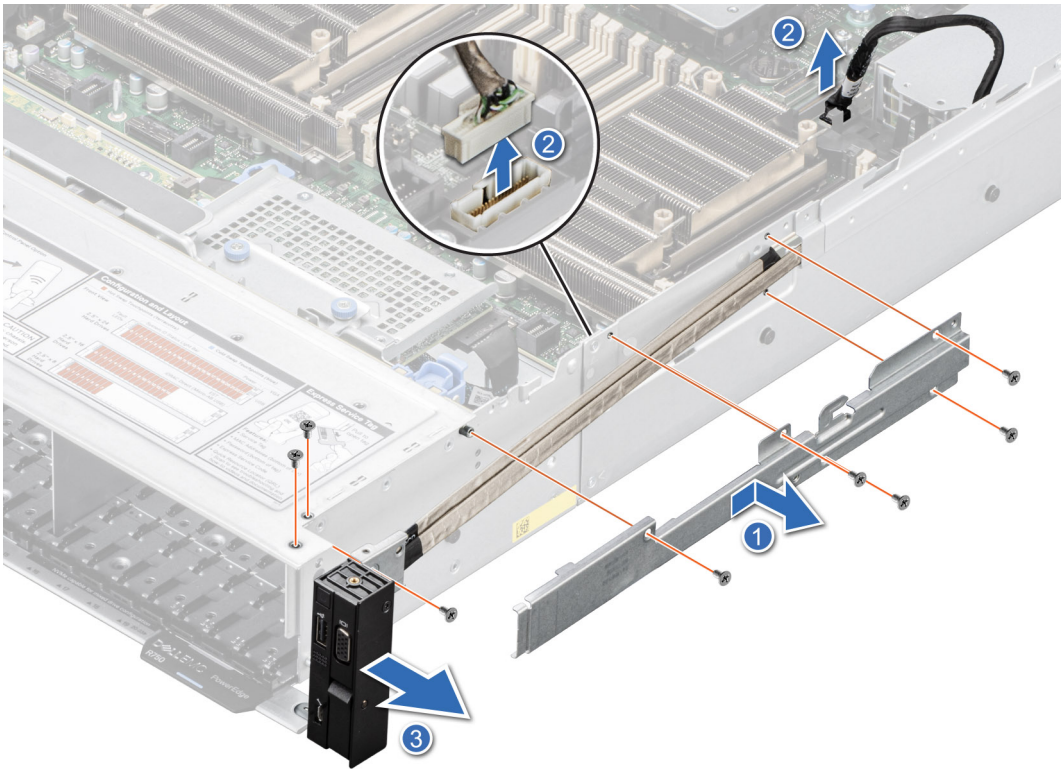

Figure 225. Removing the right control panel

Next steps

1. Replace the right control panel.

Installing the right control panel

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the drive backplane cover.
4. If installed, remove the air shroud or remove the GPU air shroud.
5. Remove the cooling fan cage assembly.
6. Remove the side wall bracket.

Steps

1. Align and slide the right control panel into the slot on the system.
2. Route the right control panel cable through the side wall of the system.
3. Align and slide the right control panel cable cover in the slot on the system.

   NOTE: Route the cable properly to prevent the cable from being pinched or crimped.

4. Connect the right control panel cable and VGA cable to the connectors on the system board.
5. Using the Phillips #1 screwdriver, tighten the screws that secures the right control panel and the cable cover to the system.

   NOTE: The numbers on the image do not depict the exact steps. The numbers are for representation of sequence.

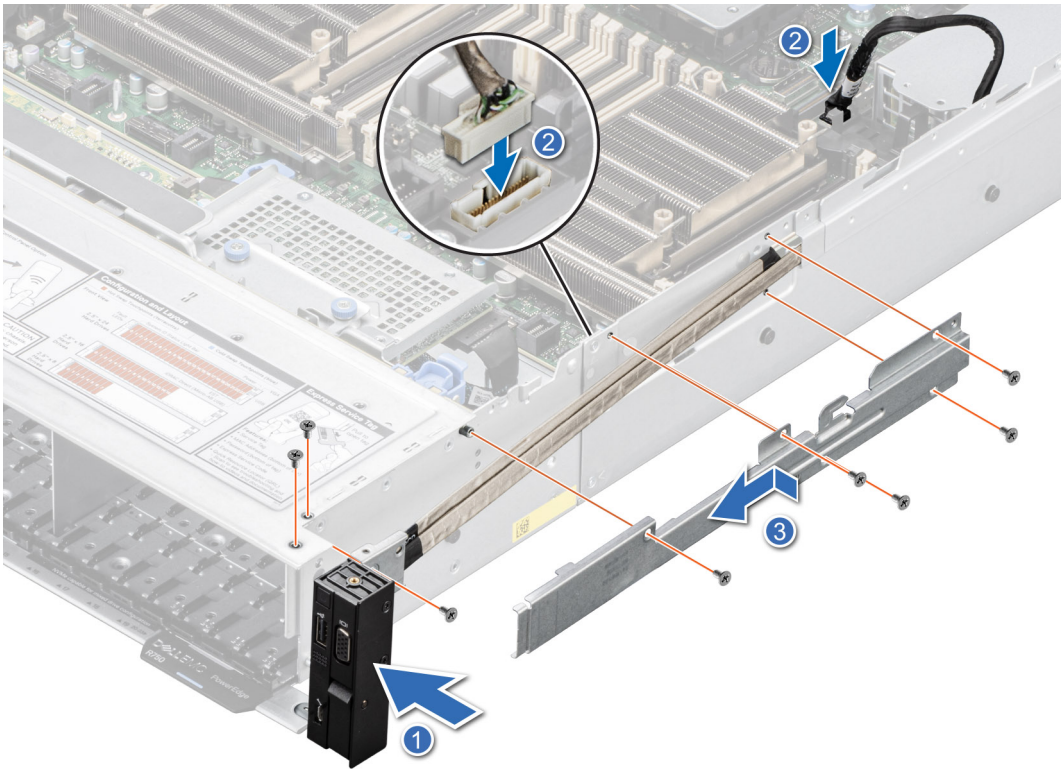

Figure 226. Installing the right control panel

Next steps

1. Install the side wall bracket.
2. Install the cooling fan assembly.
3. Install the drive backplane cover.
4. If removed, install the air shroud or install the GPU air shroud.
5. Follow the procedure listed in After working inside your system.

Removing the left control panel

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the drive backplane cover.
4. If installed, remove the air shroud or remove the GPU air shroud.
5. Remove the cooling fan cage assembly.
6. Remove the side wall bracket.

Steps

1. Using the Phillips #1 screwdriver, remove the screws that secures the left control panel and the cable cover to the system.
2. Remove the cable cover away the system.
3. Disconnect the control panel cable from the connector on the system board.
4. Holding the cable, slide the left control panel out of the system.

NOTE: Observe the routing of the cable as you remove the right control panel from the system.

NOTE: The numbers on the image do not depict the exact steps. The numbers are for representation of sequence.

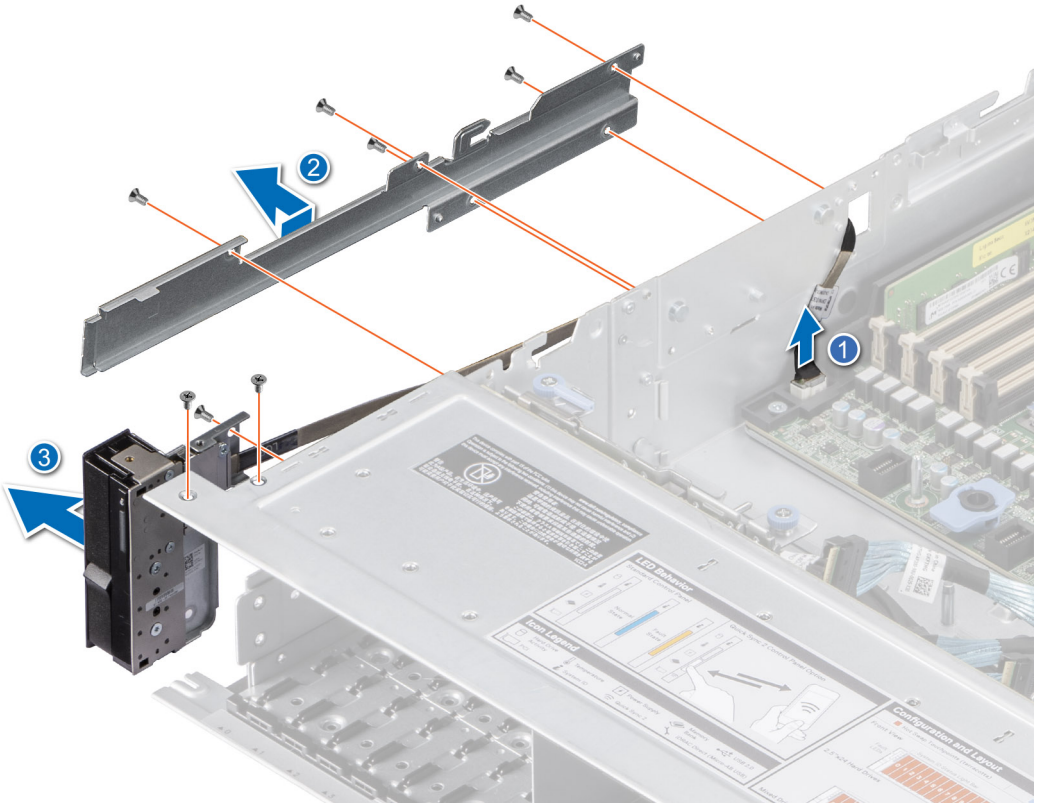

Figure 227. Removing the left control panel

Next steps

1. Replace the left control panel.

Installing the left control panel

Prerequisites

1. Follow the safety guidelines listed in the Safety instructions.
2. Follow the procedure listed in the Before working inside your system.
3. Remove the drive backplane cover.
4. If installed, remove the air shroud or remove the GPU air shroud.
5. Remove the cooling fan cage assembly.
6. Remove the side wall bracket.

Steps

1. Align and slide the left control panel in the slot on the system.
2. Route the left control panel cable through the side wall of the system.
3. Align and slide the left control panel cable cover in the slot on the system.

   NOTE: Route the cable properly to prevent the cable from being pinched or crimped.

4. Connect the left control panel cable to the connector on the system board .
5. Using the Phillips #1 screwdriver, tighten the screws to secures the left control panel and the cable cover to the system.

   NOTE: The numbers on the image do not depict the exact steps. The numbers are for representation of sequence.

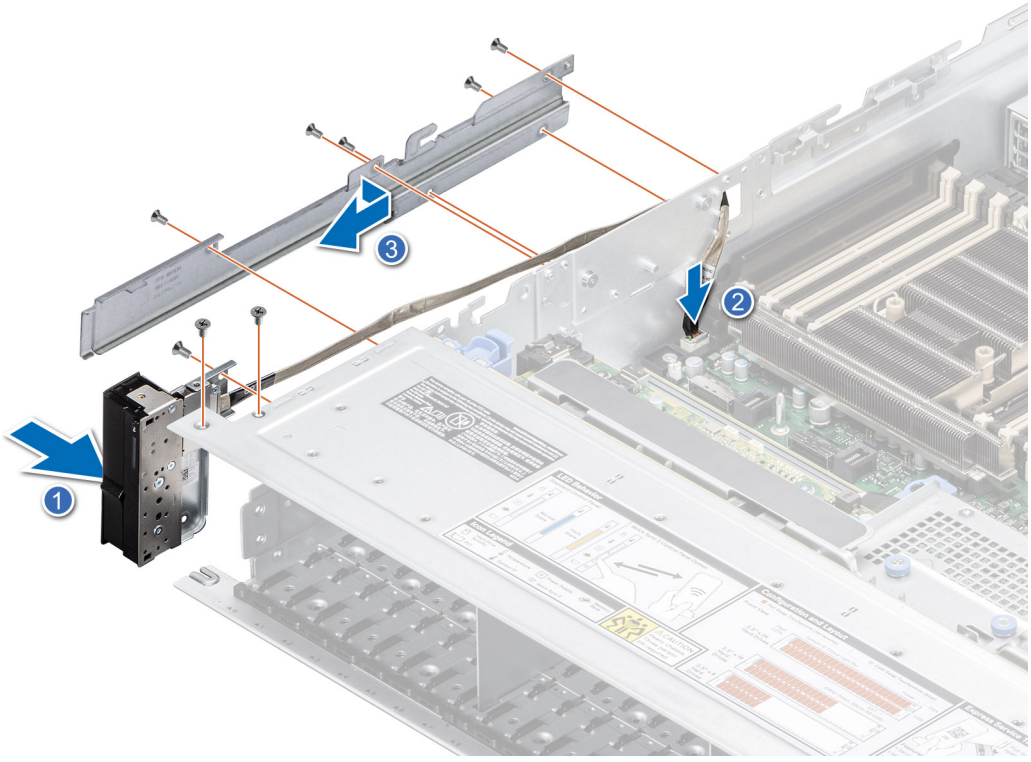

Figure 228. Installing the left control panel

Next steps

1. Install the side wall bracket.
2. Install the cooling fan cage assembly.
3. Install the drive backplane cover.
4. If removed, install the air shroud or install the GPU air shroud.
5. Follow the procedure listed in After working inside your system.

6

Upgrade Kits

The table lists the available After Point Of Sale [APOS] kits.

Table 76. Upgrade kits

Kits	Related links to service instructions
Bezel	See Installing the front bezel
Boss	See Installing the M.2 SSD module
BOSS S2	See Installing the BOSS S2 controller card module
Embedded management (IDSDM)	See IDSDM kit
GPU	See GPU kit
Accelerator enablement kit	See GPU kit
Hard drives	See Installing the drive
Hard drives SSD	See Installing the drive into the carrier
Memory	See Installing a memory module
Network cards (Standard PCIe adapter LP/FH)	See Installing the LOM card and rear I/O board
Network cards (OCP)	See Installing the OCP card
PCIe SSD card	See Installing the drive
Power cords	N/A
Power supplies	See Installing a power supply unit
Quick sync	N/A
SD cards	See Installing the MicroSD card
TPM	See Upgrading the Trusted Platform Module
Processor enablement thermal kits	See Installing the processor
Internal USB 3.0 card	See Internal USB card kit
Serial COM port daughter card	See Installing the serial COM port
VGA port for liquid cooling system	See Installing the VGA port
Cables	N/A
Fans	See Installing a fan
Heat sink	See Installing a processor heat sink module
Risers	See Installing the expansion riser
Rail	N/A
CMA	N/A
DPU card	See Installing an expansion card
MIC card	See Installing an expansion card
NVDIMM BBU	See BBU Installation

Topics:

Management Interface Card (MIC) kit

The Management Interface Card (MIC) is a small card designed to enable NC-SI communication with the server BMC. The MIC needs to be plugged in the LOM slot of the server and connects to the BMC NC-SI instead of the LOM.

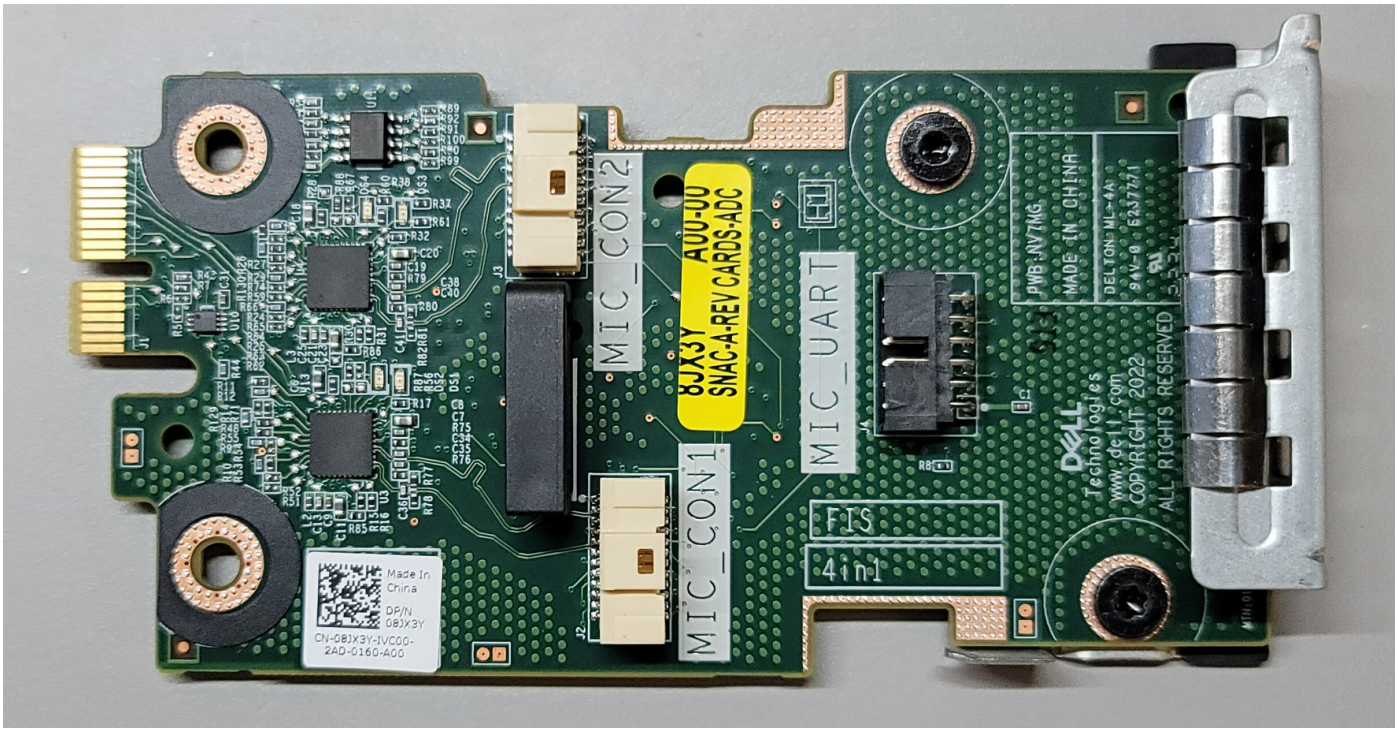

Figure 229. Management Interface Card (MIC)

The Management Interface Card (MIC) has three connectors. One connector, silkscreened MIC_UART, for the UART cable connecting the MIC Card and the Rear IO board, and two connectors, silkscreened MIC_CON1 and MIC_CON2, for the NC-SI MIC cables connecting the MIC card to each Dell DPU. See the cable routing diagram for MIC for more information.

Removing and installing the MIC

The removal and installation steps for the MIC are similar to the LOM card. Please see the remove and install steps of the LOM card for more information.

CAUTION: Due to the high level of installation complexity, this card and cables must be installed through Dell Deployment Services; to place an order, call a Dell Sales representative. (SKU: 825-5220 or 853-6650).

BOSS S2 module kit

The BOSS S2 module supports up to two M.2 SSDs.

NOTE: To enable the BOSS S2 module in the system, ensure that the BIOS firmware version is 1.5.5 and iDRAC firmware version is 4.30.30.30 or later.

Before you begin the installation or removal process, follow the safety guidelines and before working inside the system instructions.

Table 77. BOSS S2 module kit components

R750 (quantity)	Components in kit
NA	BOSS cover
1	M3 x 0.05 x 4.5 mm screws
1	BOSS signal cable
1	BOSS power cable
1	BOSS-S2 module
1 or 2*	BOSS-S2 card carrier
1 or 2*	M.2 SSD
2	M.2 240 GB information label
2	M.2 480 GB information label
1	BOSS card filler
1	Tech sheet

To remove the BOSS blank :

1. Power off the system and remove the system cover.
2. Use a screwdriver to push out the blank from the BOSS S2 module bay.

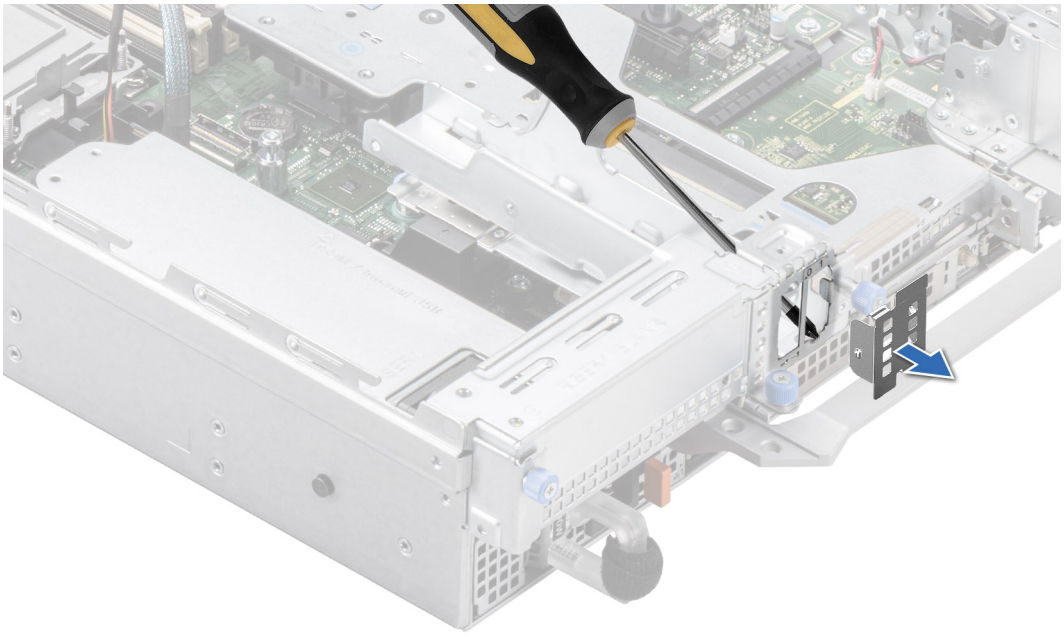

Figure 230. Removing the BOSS S2 module blank

To install the BOSS blank:

1. Align the blank with the BOSS S2 module bay and push it into the bay until it clicks into place.

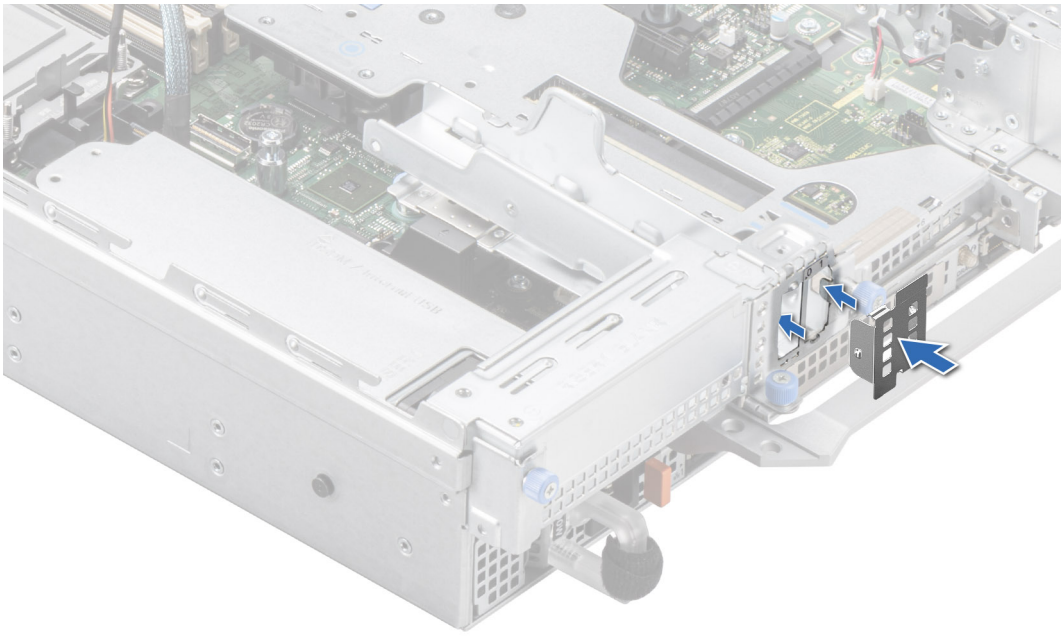

Figure 231. Installing the BOSS S2 module blank

To install the BOSS S2 module:

1. Install the BOSS S2 module . To install the BOSS S2 , see installing the BOSS S2 module steps 1 to 5.
2. Install the M.2 SSD. To install the M.2 SSD, see installing the BOSS S2 module steps 6 to 10.

NOTE: Installing the BOSS S2 card carrier does not require the system to be powered off. System shutdown is only required when installing the BOSS S2 controller card module.

To remove the BOSS S2 controller card module:

1. Power off the system and remove the system cover.
2. Remove the M.2 SSD. To remove the M.2 SSD, see removing the BOSS S2 module steps 1 to 4.
3. Remove the BOSS S2 module. To remove the BOSS S2 controller card module, see removing the BOSS S2 module steps 5 to 8.
4. Install the BOSS S2 module blank.

NOTE: Removal of the BOSS S2 card carrier does not require the system to be powered off. System shutdown is only required when removing the BOSS S2 module.

NOTE: Disconnect the BOSS signal cable and the BOSS power cable before lifting the module from the system.

GPU kit

The GPU FL and HL kits are available for the Customer. Depending on the kit ordered, the respective components are available.

CAUTION: Do not install GPUs, network cards, or other PCIe devices on your system that are not validated and tested by Dell. Damage caused by unauthorized and invalidated hardware installation will null and void the system warranty.

WARNING: Consumer-Grade GPU should not be installed or used in the Enterprise Server products.

Table 78. Components in the full length (FL) GPU kit

Components	GPU FL GOLD kit		GPU FL SLVR kit	
	Details	**Quantity**	**Details**	**Quantity**
Risers	Riser configuration 2-1, 3-1[1], or 4-1^	3 x FL risers (R1A or R1C, R4A) + 3 x HL risers (R2A, R3A, or R3B[#])	Riser configuration 2-1, 3-1[1], or 4-1^	3 x FL risers (R1A or R1C, R4A) + 3x HL risers (R2A, R3A, or R3B[#])
Shroud	GPU shroud	1	GPU shroud	1
Fans	GOLD HPR	6	SLVR HPR	6
Heat sinks	T-type heat sink for processor 1 and processor 2	2	T-type heat sink for processor 1 and processor 2	2
Cables	Power cable[$]	2x (6+2)-pin power cables, 2 x 8-pin power cables, 16-pin power cables.	Power cable	2x (6+2)-pin power cables, 2 x 8-pin power cables, 16-pin power cables.
Foam	Mylar foam	1	Mylar foam	1
FL - Full Length, HL - Half Length, HPR - High Performance, SLVR - Silver				

NOTE: ^ Refer to expansion card installation guidelines for more information about riser configuration supported for the system.

NOTE: # The Riser R3B is shipped with the GPU FL kit, however riser R3B does not support GPU.

NOTE: 1 The configuration 3-1 supports GPU only on slots 2 and 7.

NOTE: $ Use power cable PN CXV0X for NVIDIA H100/L40 in slot 2 and power cable PN FGTM1 for H100/L40 in slot 7. The NVIDIA H100/L40 power cable is 450 W capable.

Table 79. Components in the half length (HL) GPU kit

Components	GPU HL GOLD kit		GPU HL SLVR kit	
	Details	**Quantity**	**Details**	**Quantity**
Risers	Riser configuration 2-2 or 4-2^	8 x HL risers (R1A or R1C, R2A, R3A, or R3B, R4A)	Riser configuration 2-2 or 4-2^	8 x HL risers (R1A or R1C, R2A, R3A, or R3B, R4A)
Shroud	GPU shroud	1	GPU shroud	1
Fans	GOLD HPR	6	SLVR HPR	6
Heat sinks	T-type heat sink for processor 1 and processor 2	2	T-type heat sink for processor 1 and processor 2	2
Cables	N/A	0	N/A	0

Table 79. Components in the half length (HL) GPU kit (continued)

Components	GPU HL GOLD kit		GPU HL SLVR kit	
	Details	Quantity	Details	Quantity
Foam	Mylar foam	1	Mylar foam	1
HL - Half Length, HPR - High Performance, SLVR - Silver				

NOTE: ^ Refer to expansion card installation guidelines for more information about riser configuration supported for the system.

Before you begin, follow the **safefy guidelines** and **before working inside the system** instructions.

1. Remove the standard cooling fans and install the High performance (silver grade) fan or high-performance (gold grade) fan cooling fans.

   NOTE: Refer to the cooling fan and foam requirement matrix for the cooling fan and foam requirement for different configurations.

   ### Table 80. Cooling fan and foam requirement matrix

System configuration	Cooling fan		Foam requirement	
	w/GPU	w/GPU + Barlow Pass DIMM	w/GPU	w/GPU + Barlow Pass DIMM
8 x 2.5-inch NVMe	HPR SLVR	HPR GOLD	No	Yes
16 x 2.5-inch SAS/SATA	HPR GOLD	HPR GOLD	Yes	Yes
16 x 2.5-inch NVMe	HPR GOLD	HPR GOLD	Yes	Yes
24 x 2.5-inch SAS/SATA	HPR GOLD	HPR GOLD	Yes	Yes
16 x 2.5-inch SAS/SATA + 8 x 2.5-inch NVMe	HPR GOLD	HPR GOLD	Yes	Yes
HPR - High Performance, SLVR - Silver				

   NOTE: For more information about supported cooling fans matrix, see the thermal restriction section in Dell EMC PowerEdge R750 Technical Specifications on the product documentation page.

   NOTE: 12 x 3.5 inch and rear drive configuration systems do not support GPU card.

2. Remove the heat sink and install the required t-type heat sink.

   NOTE: All GPU cards require t-type heat sink and GPU shroud, irrespective of the length.

3. Remove the air shroud and install the GPU air shroud.
4. Remove the GPU air shroud top cover.

   NOTE: The GPU air shroud top cover is part of the GPU air shroud.

5. Remove the GPU air shroud filler.
6. Install the GPU.

   NOTE: See expansion card installation guidelines to know about risers and slots that support GPU.

   NOTE: For information about riser slot location on the system board, see the System board jumpers and connectors topic.

7. If applicable, connect the power cables to the GPU. To know the connectors for GPU on the system board, see the System board jumpers and connectors topic.

   Refer to the GPU power cable matrix to know about the requirement of cable for the GPU.

Table 81. GPU power cable matrix

Category	Supported GPUs	Type	Vendor	Cable	Cable quantity
GPU	NVIDIA T4 and A2	HH and HL (FH and LP brackets)	NVIDIA	Not required	Not required
GPU	Intel ATS-M75	HH and HL (FH and LP brackets)	Intel	Not required	Not required
GPU	NVIDIA M10, A10, A30, A40, A16, A100, and A800	FH and FL	NVIDIA	8 pin cable	1 piece per GPU riser
GPU	NVIDIA H100, L40	FH and FL	NVIDIA	16 pin cable	1 piece per GPU riser
HH - Half Height, HL - Half Length, FH - Full Height, FL - Full Length					

NOTE: Maximum of two double width GPUs with power cables or a maximum of eight single width GPUs are supported in a system.

8. Install the full length expansion card riser or half height expansion card riser. See GPU kit components table for supported GPU risers.
9. Install the GPU air shroud filler.
10. Install the GPU air shroud top cover.
11. Install the foam on the system cover. To install the foam,
    a. Place the system cover with the System Information Label (SIL) side facing up.
    b. For easier handling, peel off a small section of the adhesive cover and align the foam with the system cover.
    c. Remove rest of the adhesive cover, and install foam on the system cover.
    d. Press along the length of the foam to ensure that it is firmly affixed to the system cover.

Figure 232. Installing Mylar foam on the system cover

After installing, follow the After working inside the system instructions.

IDSDM kit

The IDSDM kit contains one IDSDM card. For installation procedure of IDSDM, see installing the IDSDM module section.

NOTE: Ensure to install the IDSDM module in the IDSDM/USB card port and not in the J_R3_PCIE_PWR connector port.

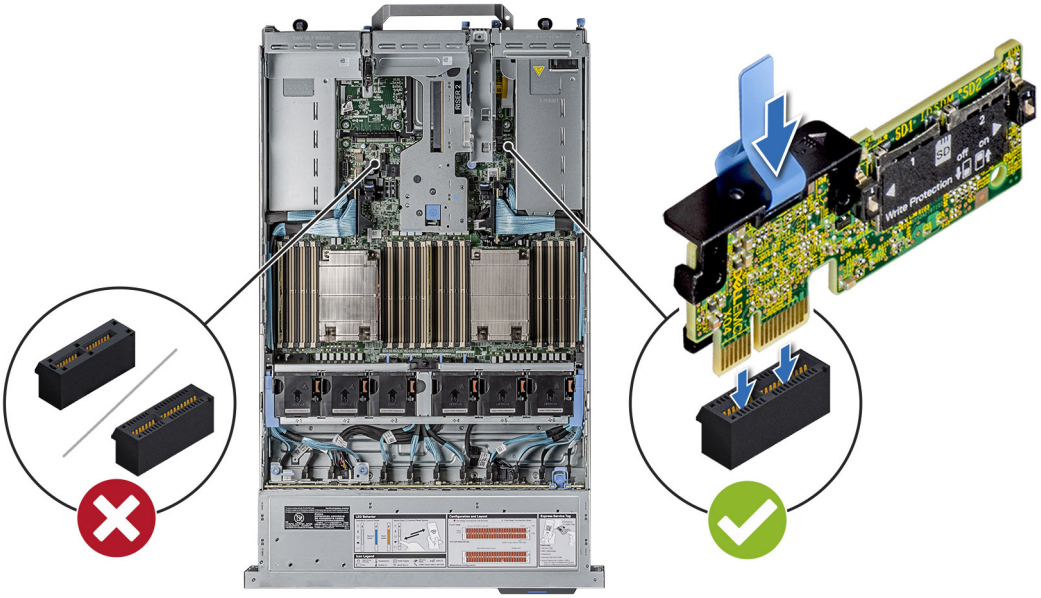

Figure 233. IDSDM port information

Internal USB card kit

The internal USB card kit contains one internal USB card. For installation of internal USB card, see installing the internal USB card section.

NOTE: Ensure to install the internal USB card in the IDSDM/USB card port and not in the J_R3_PCIE_PWR connector port.

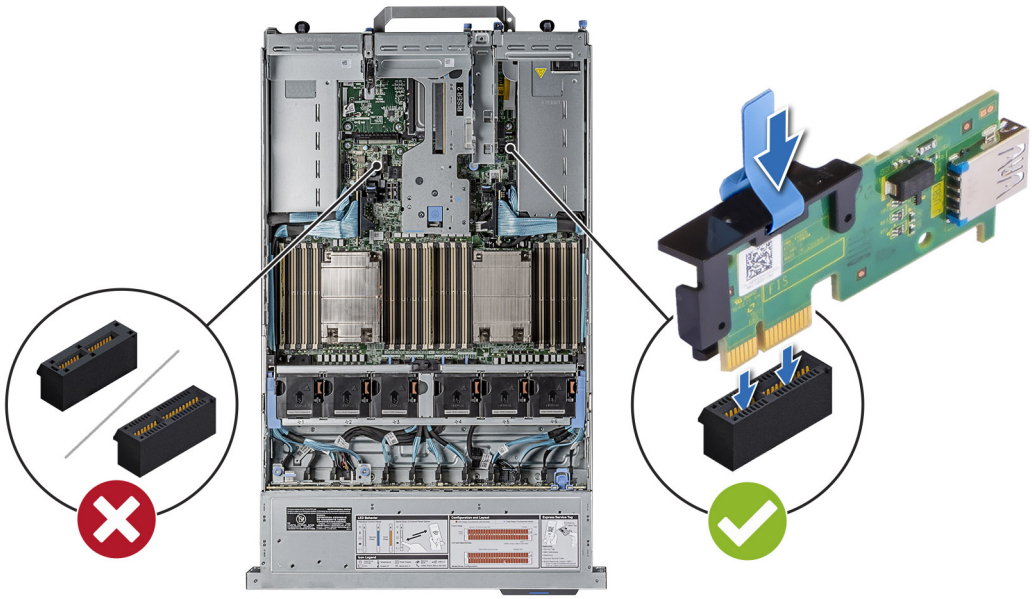

Figure 234. Internal USB card port information

Serial COM port kit

The serial COM port kit contains the components listed in the table.

Table 82. Serial COM port kit

Components	Quantity
Serial COM port card	1
Cable	1

For installation procedure of the serial COM port, see serial COM port section.

VGA port kit

The VGA port kit contains the components listed in the table.

Table 83. VGA port kit

Components	Quantity
VGA port card	1
Cable	1

For installation procedure of the VGA port, see VGA port section.

DPU kit

A DPU Kit contains one Network card, without power cable, except for the Nvidia Mellanox 100Gb Dell DPU kit. The Nvidia Mellanox 100Gb Dell DPU kit contains one Network card and one power cable.

Dell DPU card requires the MIC kit. However the partner DPU does not require the MIC kit.

1. Install the Dell DPU card in Riser 1A Slot 2..
2. For Nvidia Mellanox 100 Gb Dell DPU power connector, interface the power cable to the system board SIG_PWR_0 power connector.
3. Install the MIC and cables as indicated in the MIC kit section.

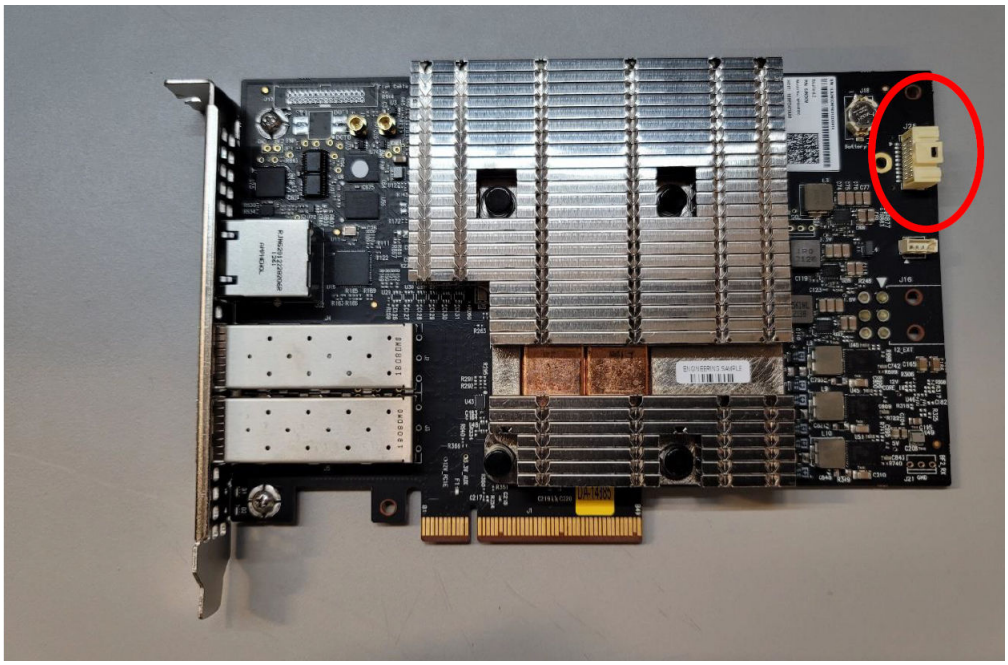

Figure 235. Front View of the DPU card

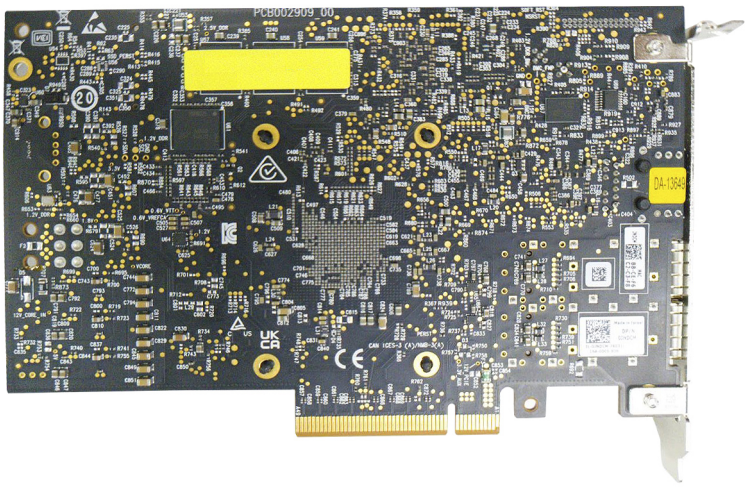

Figure 236. Rear view of the DPU card

NOTE: Mellanox Bluefield2 25Gbe card supports only Nvidia Channel FW and Channel Driver, and does not support Dell FW/Driver SWB DUP updates.

Battery Backup Unit Installation

1. Connect the NVDIMM battery power and signal cables to the connectors on the system board.

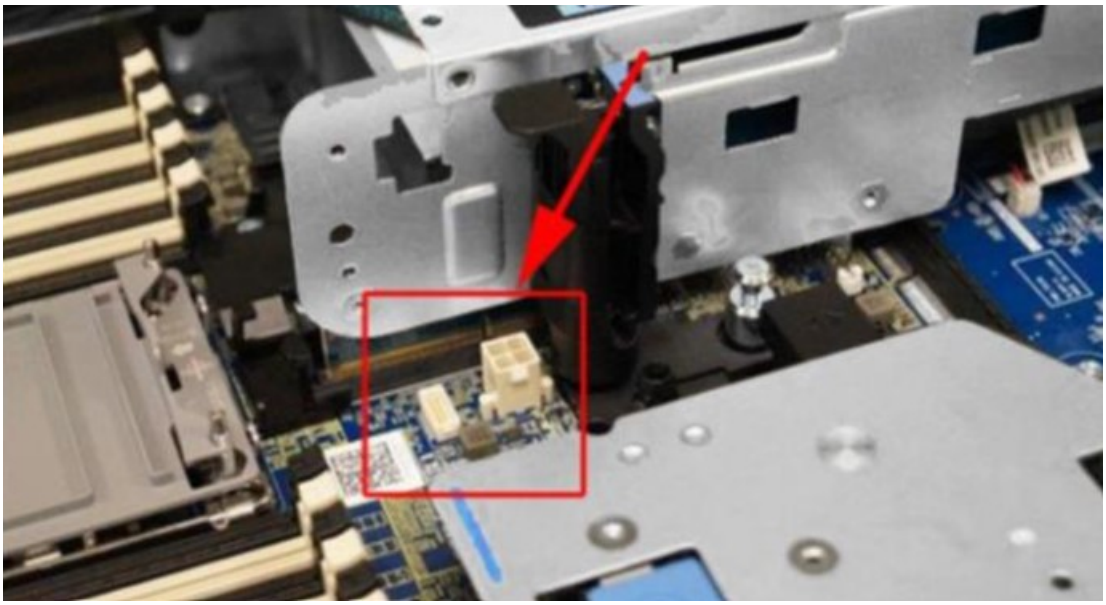

Figure 237. Connect power and signal cables to system board

2. Connect power and signal cables to NVDIMM Battery.

Figure 238. Connect power and signal cables to NVDIMM battery

3. Align and place the battery on the air shroud.

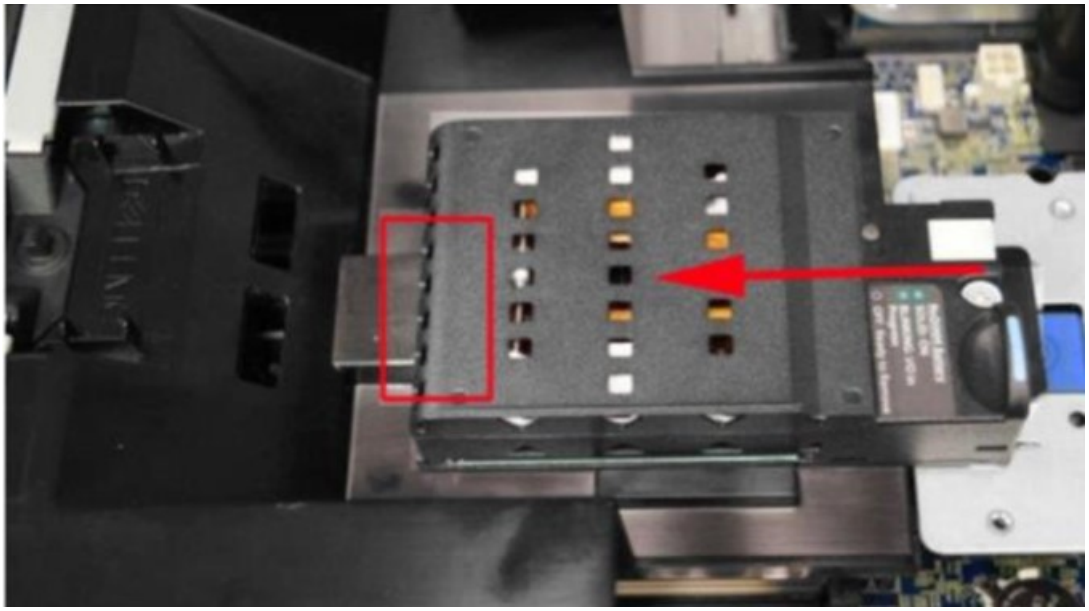

Figure 239. Installing the battery on the air shroud

4. Using a Phillips 2 screwdriver, tighten the thumb screw on the battery.

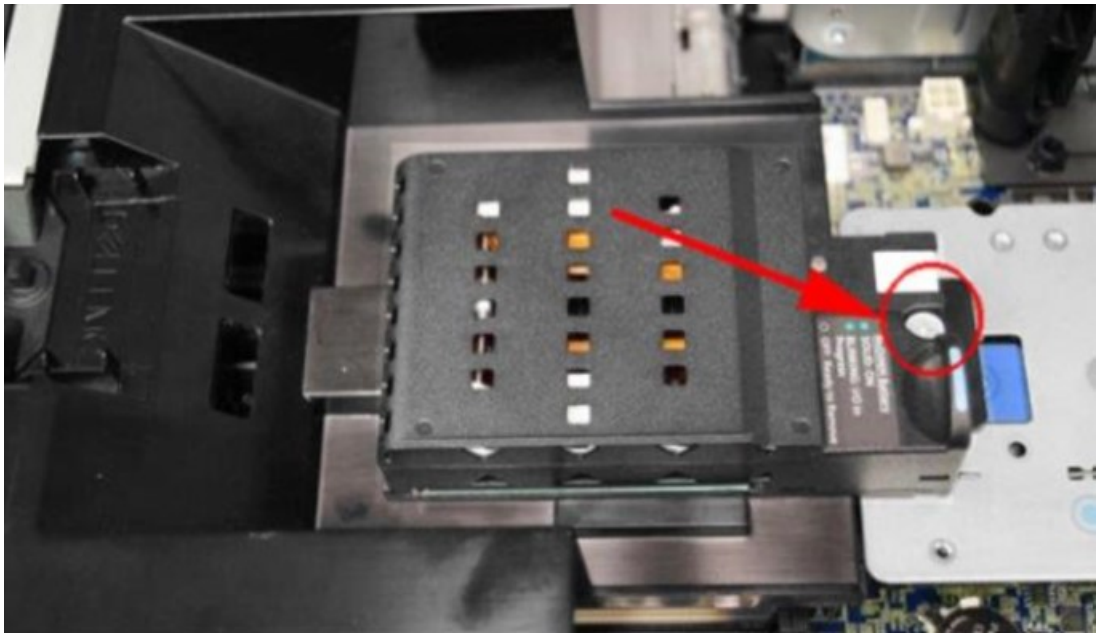

Figure 240. Tightening the thumb screw on the battery

NOTE: Ensure the battery pack does not fail due to over discharge caused by not being charged for an extended period.

7

Jumpers and connectors

This section provides essential and specific information about jumpers and switches. It also describes the connectors on the various boards in the system. Jumpers on the system board help to disable the system and reset the passwords. To install components and cables correctly, you must be able to identify the connectors on the system board.

Topics:

System board connectors

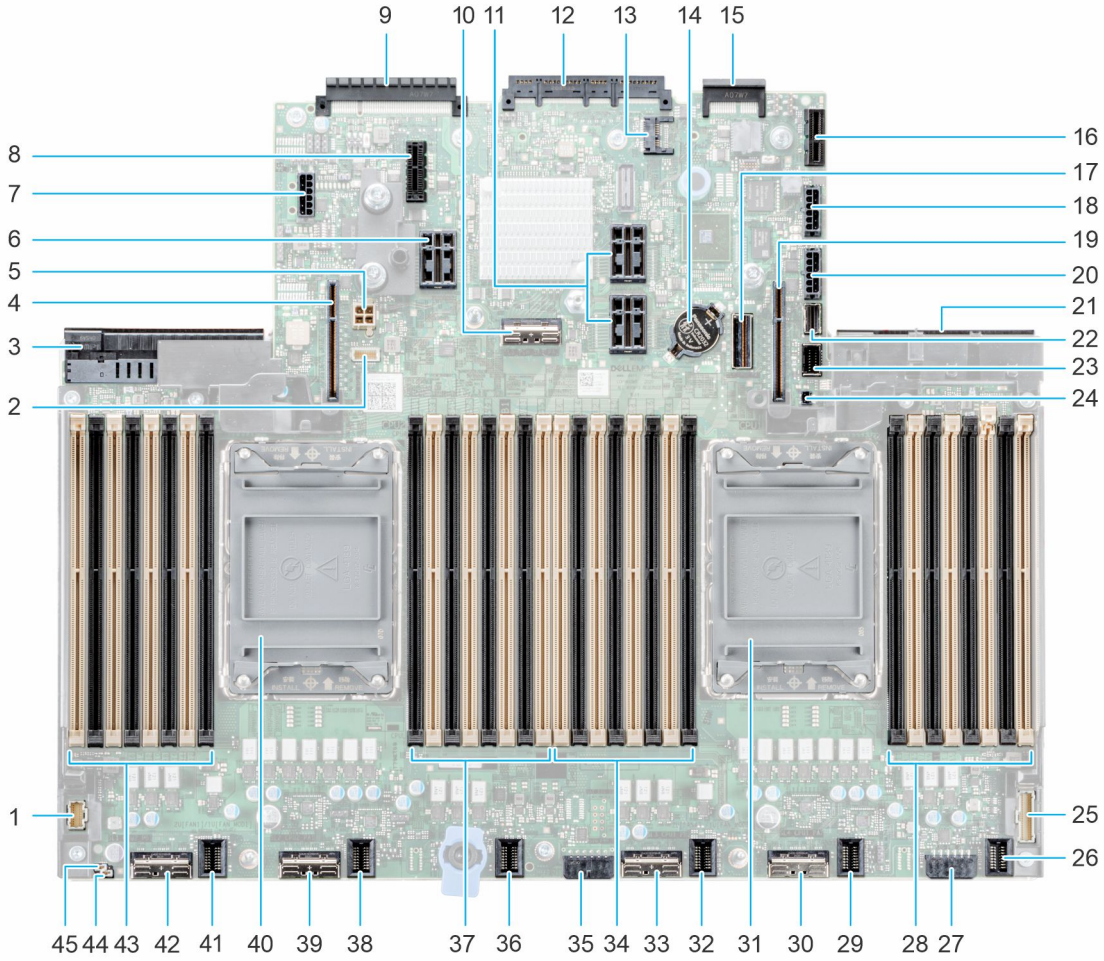

Figure 241. System board jumpers and connectors

Table 84. System board jumpers and connectors

Item	Connector	Description
1.	LFT_CP	Left control panel connector
2.	BAT_SIG	NVDIMM battery signal

Table 84. System board jumpers and connectors (continued)

Item	Connector	Description
3.	PSU 2	Power supply unit 2
4.	IO_RISER4 (CPU2)	Riser 4
5.	BAT_PWR_2U	NVDIMM battery power
6.	IO_RISER3 (CPU2)	Riser 3
7.	SIG_PWR_3	Power connector 3 - use for GPU only
8.	J_R3_PCIE_PWR	PCIe riser 3 power
9.	Rear I/O connector	Rear I/O connector
10.	SL5_PCH_SA3_PA3	SATA connector 5
11.	IO_RISER2_A (CPU1) and IO_RISER2_B (CPU2)	Riser 2
12.	OCP NIC 3.0 connector	OCP NIC 3.0 connector
13.	J_TPM	TPM connector
14.	Coin cell battery	Coin cell battery
15.	LOM	LOM connector
16.	IDSDM/Internal USB	IDSDM/Internal USB connector
17.	SL7_CPU1_PA5	PCIe connector 7
18.	SIG_PWR_4	Power connector 4 - use for GPU only
19.	IO_RISER1 (CPU1)	Riser 1
20.	SIG_PWR_0	Power connector 0 - use for GPU only/ Rear BP
21.	PSU 1	Power supply unit 1
22.	SL6_PCH_PA4	PCIe connector 6
23.	FRONT_VIDEO	Front VGA
24.	BOSS_PWR	BOSS card power
25.	RGT_CP	Right control panel connector
26.	2U[FAN6]	Fan 6
27.	SIG_PWR_2	Power connector 2 - use for GPU only
28.	A11, A3, A15, A7, A9, A1, A13, A5	DIMM for CPU 1 channels A, B, C, D
29.	2U[FAN5]	Fan 5
30.	SL4_CPU1_PA2	PCIe connector 4
31.	CPU 1	Processor 1
32.	2U[FAN4]	Fan 4
33.	SL3_CPU1_PB2	PCIe connector 3
34.	A6, A14, A2, A10, A8, A16, A4, A12	DIMMs for CPU 1 channels E, F, G, H
35.	SIG_PWR_1	Power connector 1 - use for BP only
36.	2U[FAN3]	Fan 3
37.	B11, B3, B15, B7, B9, B1, B13, B5	DIMM for CPU 2 channels A, B, C, D
38.	2U[FAN2]	Fan 2
39.	SL2_CPU2_PA1	PCIe connector 2

Table 84. System board jumpers and connectors (continued)

Item	Connector	Description
40.	CPU 2	Processor 2
41.	2U[FAN1]	Fan 1
42 .	SL1_CPU2_PB1	PCIe connector 1
43.	B6, B14, B2, B10, B8, B16, B4, B12	DIMMs for CPU 2 channels E, F, G, H
44.	NVRAM_CLR	NVRAM_CLR (Jumpers)
45.	PWRD_EN	PWRD_EN (Jumpers)

System board jumper settings

For information about resetting the password jumper to disable a password, see the Disabling a forgotten password section.

Table 85. System board jumper settings

Jumper	Setting	Description
PWRD_EN		The BIOS password feature is enabled.
		The BIOS password feature is disabled. The BIOS password is now disabled and you are not allowed to set a new password.
NVRAM_CLR		The BIOS configuration settings are retained at system boot.
		The BIOS configuration settings are cleared at system boot.

CAUTION: You should be cautious when changing the BIOS settings. The BIOS interface is designed for advanced users. Any changes in the setting might prevent your system from starting correctly and may even result in data loss.

Disabling a forgotten password

The software security features of the system include a system password and a setup password. The password jumper enables or disables password features and clears any password(s) currently in use.

Prerequisites

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.

Steps

1. Power off the system and all attached peripherals. Disconnect the system from the electrical outlet, and disconnect the peripherals.
2. Remove the system cover.
3. Move the jumper on the system board from pins 2 and 4 to pins 4 and 6.
4. Replace the system cover.

NOTE: The existing passwords are not disabled (erased) until the system boots with the jumper on pins 4 and 6. However, before you assign a new system and/or setup password, you must move the jumper back to pins 2 and 4.

NOTE: If you assign a new system and/or setup password with the jumper on pins 4 and 6, the system disables the new password(s) the next time it boots.

5. Reconnect the peripherals and connect the system to the electrical outlet, and then power on the system.
6. Power off the system.
7. Remove the system cover.
8. Move the jumper on the system board from pins 4 and 6 to pins 2 and 4.
9. Replace the system cover.
10. Reconnect the peripherals and connect the system to the electrical outlet, and then power on the system.
11. Assign a new system and/or setup password.

8

System diagnostics and indicator codes

This section describes the diagnostic indicators on the system front panel that displays the system status during system startup.

Topics:

Status LED indicators

NOTE: The indicators display solid amber if any error occurs.

Figure 242. Status LED indicators

Table 86. Status LED indicators and descriptions

Icon	Description	Condition	Corrective action
	Drive indicator	The indicator turns solid amber if there is a drive error.	• Check the System Event Log to determine if the drive has an error. • Run the appropriate Online Diagnostics test. Restart the system and run embedded diagnostics (ePSA). • If the drives are configured in a RAID array, restart the system, and enter the host adapter configuration utility program.
	Temperature indicator	The indicator turns solid amber if the system experiences a thermal error (for example, the ambient temperature is out of range or there is a fan failure).	Ensure that none of the following conditions exist: • A cooling fan has been removed or has failed. • System cover, air shrouds, or back filler bracket has been removed. • Ambient temperature is too high. • External airflow is obstructed. If the problem persists, see the Getting help section.

Table 86. Status LED indicators and descriptions (continued)

Icon	Description	Condition	Corrective action
	Electrical indicator	The indicator turns solid amber if the system experiences an electrical error (for example, voltage out of range, or a failed power supply unit (PSU) or voltage regulator).	Check the System Event Log or system messages for the specific issue. If it is due to a problem with the PSU, check the LED on the PSU. Reseat the PSU. If the problem persists, see the Getting help section.
	Memory indicator	The indicator turns solid amber if a memory error occurs.	Check the System Event Log or system messages for the location of the failed memory. Reseat the memory module. If the problem persists, see the Getting help section.
	PCIe indicator	The indicator turns solid amber if a PCIe card experiences an error.	Restart the system. Update any required drivers for the PCIe card. Reinstall the card. If the problem persists, see the Getting help section. **NOTE:** For more information about the supported PCIe cards, see the Expansion card installation guidelines section.

System health and system ID indicator codes

The system health and system ID indicator is located on the left control panel of the system.

Figure 243. System health and system ID indicator

Table 87. System health and system ID indicator codes

System health and system ID indicator code	Condition
Solid blue	Indicates that the system is powered on, is healthy, and system ID mode is not active. Press the system health and system ID button to switch to system ID mode.
Blinking blue	Indicates that the system ID mode is active. Press the system health and system ID button to switch to system health mode.
Solid amber	Indicates that the system is in fail-safe mode. If the problem persists, see the Getting help section.
Blinking amber	Indicates that the system is experiencing a fault. Check the System Event Log for specific error messages. For information about the event and error messages generated by the system firmware and agents that monitor system components, go to QRL > **Look Up** > **Error Code**, type the error code, and then click **Look it up**.

iDRAC Quick Sync 2 indicator codes

iDRAC Quick Sync 2 module (optional) is located on the left control panel of the system.

Table 88. iDRAC Quick Sync 2 indicators and descriptions

iDRAC Quick Sync 2 indicator code	Condition	Corrective action
Off (default state)	Indicates that the iDRAC Quick Sync 2 feature is powered off. Press the iDRAC Quick Sync 2 button to power on the iDRAC Quick Sync 2 feature.	If the LED fails to power on, reseat the left control panel flex cable and check. If the problem persists, see the Getting help section.
Solid white	Indicates that iDRAC Quick Sync 2 is ready to communicate. Press the iDRAC Quick Sync 2 button to power off.	If the LED fails to power off, restart the system. If the problem persists, see the Getting help section.
Blinks white rapidly	Indicates data transfer activity.	If the indicator continues to blink indefinitely, see the Getting help section.
Blinks white slowly	Indicates that firmware update is in progress.	If the indicator continues to blink indefinitely, see the Getting help section.
Blinks white five times rapidly and then powers off	Indicates that the iDRAC Quick Sync 2 feature is disabled.	Check if iDRAC Quick Sync 2 feature is configured to be disabled by iDRAC. If the problem persists, see the Getting help section. PowerEdge manuals or *Dell OpenManage Server Administrator User's Guide* at OpenManage Manuals.
Solid amber	Indicates that the system is in fail-safe mode.	Restart the system. If the problem persists, see the Getting help section.
Blinking amber	Indicates that the iDRAC Quick Sync 2 hardware is not responding properly.	Restart the system. If the problem persists, see the Getting help section.

iDRAC Direct LED indicator codes

The iDRAC Direct LED indicator lights up to indicate that the port is connected and is being used as a part of the iDRAC subsystem.

You can configure iDRAC Direct by using a USB to micro USB (type AB) cable, which you can connect to your laptop or tablet. Cable length should not exceed 3 feet (0.91 meters). Performance could be affected by cable quality. The following table describes iDRAC Direct activity when the iDRAC Direct port is active:

Table 89. iDRAC Direct LED indicator codes

iDRAC Direct LED indicator code	Condition
Solid green for two seconds	Indicates that the laptop or tablet is connected.
Blinking green (on for two seconds and off for two seconds)	Indicates that the laptop or tablet connected is recognized.

Table 89. iDRAC Direct LED indicator codes (continued)

iDRAC Direct LED indicator code	Condition
LED Indicator off	Indicates that the laptop or tablet is unplugged.

LCD panel

The LCD panel provides system information, status, and error messages to indicate if the system is functioning correctly or requires attention. The LCD panel is used to configure or view the iDRAC IP address of the system. For information about the event and error messages generated by the system firmware and agents that monitor system components, go to QRL > **Look Up** > **Error Code**, type the error code, and then click **Look it up**..

The LCD panel is available only on the optional front bezel. The optional front bezel is hot pluggable.

The status and conditions of the LCD panel are outlined here:

- The LCD backlight is white during normal operating conditions.
- If there is an issue, the LCD backlight turns amber and displays an error code followed by descriptive text.

  NOTE: If the system is connected to a power source and an error is detected, the LCD turns amber regardless of whether the system is powered on or off.
- When the system powers off and there are no errors, the LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to power it on.
- If the LCD panel stops responding, remove the bezel and reinstall it.

  If the problem persists, see Getting help.
- The LCD backlight remains off if LCD messaging is powered off using the iDRAC utility, the LCD panel, or other tools.

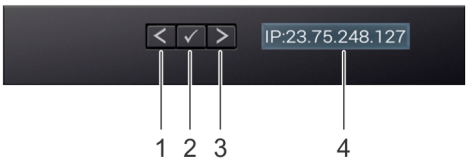

Figure 244. LCD panel features

Table 90. LCD panel features

Item	Button or display	Description
1	Left	Moves the cursor back in one-step increments.
2	Select	Selects the menu item highlighted by the cursor.
3	Right	Moves the cursor forward in one-step increments. During message scrolling: • Press and hold the right button to increase scrolling speed. • Release the button to stop. **NOTE:** The display stops scrolling when the button is released. After 45 seconds of inactivity, the display starts scrolling.
4	LCD display	Displays the system information, status, and error messages or iDRAC IP address.

Viewing Home screen

The **Home** screen displays user-configurable information about the system. This screen is displayed during normal system operation when there are no status messages or errors. When the system turns off and there are no errors, LCD enters the standby mode after five minutes of inactivity. Press any button on the LCD to turn it on.

Steps

1. To view the **Home** screen, press one of the three navigation buttons (Select, Left, or Right).
2. To navigate to the **Home** screen from another menu, complete the following steps:
   a. Press and hold the navigation button till the up arrow is displayed.
   b. Navigate to the **Home** icon using the up arrow.
   c. Select the **Home** icon.
   d. On the **Home** screen, press the **Select** button to enter the main menu.

Setup menu

NOTE: When you select an option in the Setup menu, you must confirm the option before proceeding to the next action.

Table 91. Setup menu

Option	Description
iDRAC	Select **DHCP** or **Static IP** to configure the network mode. If **Static IP** is selected, the available fields are **IP**, **Subnet (Sub)**, and **Gateway (Gtw)**. Select **Setup DNS** to enable DNS and to view domain addresses. Two separate DNS entries are available.
Set error	Select **SEL** to view LCD error messages in a format that matches the IPMI description in the SEL. This enables you to match an LCD message with an SEL entry. Select **Simple** to view LCD error messages in a simplified user-friendly description. For information about the event and error messages generated by the system firmware and agents that monitor system components, go to QRL > **Look Up** > **Error Code**, type the error code, and then click **Look it up**..
Set home	Select the default information to be displayed on the **Home** screen. See View menu section for the options and option items that can be set as the default on the **Home** screen.

View menu

NOTE: When you select an option in the View menu, you must confirm the option before proceeding to the next action.

Table 92. View menu

Option	Description
iDRAC IP	Displays the **IPv4** or **IPv6** addresses for iDRAC9. Addresses include **DNS** (**Primary** and **Secondary**), **Gateway**, **IP**, and **Subnet** (IPv6 does not have Subnet).
MAC	Displays the MAC addresses for **iDRAC**, **iSCSI**, or **Network** devices.
Name	Displays the name of the **Host**, **Model**, or **User String** for the system.
Number	Displays the **Asset tag** or the **Service tag** for the system.
Power	Displays the power output of the system in BTU/hr or Watts. The display format can be configured in the **Set home** submenu of the **Setup** menu.
Temperature	Displays the temperature of the system in Celsius or Fahrenheit. The display format can be configured in the **Set home** submenu of the **Setup** menu.

NIC indicator codes

Each NIC on the back of the system has indicators that provide information about the activity and link status. The activity LED indicator indicates if data is flowing through the NIC, and the link LED indicator indicates the speed of the connected network.

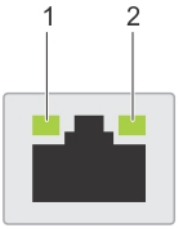

Figure 245. NIC indicator codes

1. Link LED indicator
2. Activity LED indicator

Table 93. NIC indicator codes

NIC indicator codes	Condition
Link and activity indicators are off.	Indicates that the NIC is not connected to the network.
Link indicator is green, and activity indicator is blinking green.	Indicates that the NIC is connected to a valid network at its maximum port speed, and data is being sent or received.
Link indicator is amber, and activity indicator is blinking green.	Indicates that the NIC is connected to a valid network at less than its maximum port speed, and data is being sent or received.
Link indicator is green, and activity indicator is off.	Indicates that the NIC is connected to a valid network at its maximum port speed, and data is not being sent or received.
Link indicator is amber, and activity indicator is off.	Indicates that the NIC is connected to a valid network at less than its maximum port speed, and data is not being sent or received.
Link indicator is blinking green, and activity is off.	Indicates that the NIC identity is enabled through the NIC configuration utility.

Power supply unit indicator codes

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

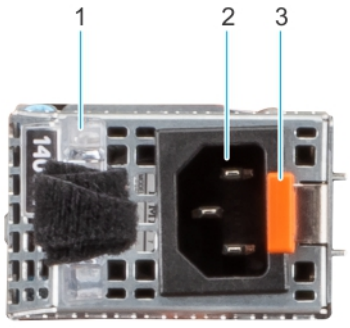

Figure 246. AC PSU status indicator

1. AC PSU handle
2. Socket
3. Release latch

Table 94. AC and DC PSU status indicator codes

Power indicator codes	Condition
Green	Indicates that a valid power source is connected to the PSU and the PSU is operational.
Blinking amber	Indicates an issue with the PSU.
Not powered on	Indicates that the power is not connected to the PSU.
Blinking green	Indicates that the firmware of the PSU is being updated. **CAUTION: Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs will not function.**
Blinking green and powers off	When hot-plugging a PSU, it blinks green five times at a rate of 4 Hz and powers off. This indicates a PSU mismatch due to efficiency, feature set, health status, or supported voltage. **CAUTION: If two PSUs are installed, both 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 power on the system.** **CAUTION: If two PSUs are used, they must be of the same type and have the same maximum output power.** **CAUTION: When correcting a PSU mismatch, replace the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and an unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must power off the system.** **CAUTION: When two identical PSUs receive different input voltages, they can output different wattage, and trigger a mismatch.** *For example a 1100W PSU connected to a High-Line AC (HLAC) 200Vac-240Vac input, it will output 1100W. But if a second 1100W PSU in the same system is connected to a Low Line 100-120Vac input, it will only output 1050W, triggering a mismatch.*

Drive indicator codes

The LEDs on the drive carrier indicate the state of each drive. Each drive carrier has two LEDs: an activity LED (green) and a status LED (bicolor, green/amber). The activity LED blinks whenever the drive is accessed.

Figure 247. Drive indicators on the drive and the mid drive tray backplane

1. Drive activity LED indicator
2. Drive status LED indicator
3. Drive capacity label

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

NOTE: Drive status indicator behavior is managed by Storage Spaces Direct. Not all drive status indicators may be used.

Table 95. Drive indicator codes

Drive status indicator code	Condition
Blinks green twice per second	Indicates that the drive is being identified or preparing for removal.
Off	Indicates that the drive is ready for removal. **NOTE:** The drive status indicator remains off until all drives are initialized after the system is powered on. Drives are not ready for removal during this time.
Blinks green, amber, and then powers off	Indicates that there is an unexpected drive failure.
Blinks amber four times per second	Indicates that the drive has failed.
Blinks green slowly	Indicates that the drive is rebuilding.
Solid green	Indicates that the drive is online.
Blinks green for three seconds, amber for three seconds, and then powers off after six seconds	Indicates that the rebuild has stopped.

Using system diagnostics

If you experience an issue with the system, run the system diagnostics before contacting Dell Technologies for technical assistance. The purpose of running system diagnostics is to test the system hardware without using additional equipment or risking data loss. If you are unable to fix the issue yourself, service and support personnel can use the diagnostics results to help you solve the issue.

Dell Embedded System Diagnostics

NOTE: The Dell Embedded System Diagnostics is also known as Enhanced Pre-boot System Assessment (ePSA) diagnostics.

The Embedded System Diagnostics provide a set of options for particular device groups or devices allowing you to:

- Run tests automatically or in an interactive mode
- Repeat tests
- Display or save test results
- Run thorough tests to introduce additional test options to provide extra information about the failed device(s)
- View status messages that inform you if tests are completed successfully
- View error messages that inform you of issues encountered during testing

Running the Embedded System Diagnostics from the Dell Lifecycle Controller

Steps

1. When the system is booting, press F10.
2. Select **Hardware Diagnostics** → **Run Hardware Diagnostics**.
   The **ePSA Pre-boot System Assessment** window is displayed, listing all devices detected in the system. The diagnostics start executing the tests on all the detected devices.

Running the Embedded System Diagnostics from Boot Manager

Run the Embedded System Diagnostics (ePSA) if your system does not boot.

Steps

1. When the system is booting, press F11.
2. Use the up arrow and down arrow keys to select **System Utilities** > **Launch Diagnostics**.
3. Alternatively, when the system is booting, press F10, select **Hardware Diagnostics** > **Run Hardware Diagnostics**.
   The **ePSA Pre-boot System Assessment** window is displayed, listing all devices detected in the system. The diagnostics starts executing the tests on all the detected devices.

System diagnostic controls

Table 96. System diagnostic controls

Menu	Description
Configuration	Displays the configuration and status information of all detected devices.
Results	Displays the results of all tests that are run.
System health	Provides the current overview of the system performance.
Event log	Displays a time-stamped log of the results of all tests run on the system. This is displayed if at least one event description is recorded.

9

Getting help

Topics:

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 How to Recycle and select the relevant country.

Contacting Dell Technologies

Dell provides online and telephone based support and service options. If you do not have an active internet connection, you can find Dell contact information on your purchase invoice, packing slip, bill or Dell product catalog. The availability of services varies depending on the country and product, and some services may not be available in your area. To contact Dell for sales, technical assistance, or customer service issues follow these steps:

Steps

1. Go to Dell Support.
2. Select your country from the drop-down menu on the lower right corner of the page.
3. For customized support:
   a. Enter the system Service Tag in the **Enter a Service Tag, Serial Number, Service Request, Model, or Keyword** field.
   b. Click **Search**.
   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 Global Technical Support:
   a. Click Contact Technical Support.
   b. The **Contact Technical Support** page is displayed with details to call, chat, or e-mail the Dell Global Technical Support team.

Accessing system information by using QRL

You can use the Quick Resource Locator (QRL) located on the information tag in the front of the R750 system, to access information about Dell Technologies PowerEdge R750. There is also another QRL for accessing product information located on the back of the system cover.

Prerequisites

Ensure that your smartphone or tablet has a 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
- The system service tag to quickly access the specific hardware configuration and warranty information
- A direct link to Dell to contact technical assistance and sales teams

Steps

1. Go to QRL, and navigate to your specific product or
2. Use your smart phone 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 PowerEdge R750 system

Figure 248. Quick Resource Locator for PowerEdge R750 system

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 SupportAssist.

10

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 Technologies support site:
  1. Click the documentation link that is provided in the Location column in the table.
  2. Click the required product or product version.

     NOTE: To locate the model number, see the front of your system.
  3. On the Product Support page, click **Documentation**.
- Using search engines:
  - Type the name and version of the document in the search box.

Table 97. Additional documentation resources for your system

Task	Document	Location
Setting up your system	For more information about installing and securing the system into a rack, see the Rail Installation Guide included with your rail solution. For information about setting up your system, see the *Getting Started Guide* document that is shipped with your system.	PowerEdge manuals
Configuring your system	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. For information about understanding Remote Access Controller Admin (RACADM) subcommands and supported RACADM interfaces, see the RACADM CLI Guide for iDRAC. For information about Redfish and its protocol, supported schema, and Redfish Eventing implemented in iDRAC, see the Redfish API Guide. For information about iDRAC property database group and object descriptions, see the Attribute Registry Guide. For information about Intel QuickAssist Technology, see the Integrated Dell Remote Access Controller User's Guide.	PowerEdge manuals
	For information about earlier versions of the iDRAC documents. To identify the version of iDRAC available on your system, on the iDRAC web interface, click **?** > **About**.	idrac manuals

Table 97. Additional documentation resources for your system (continued)

Task	Document	Location
	For information about installing the operating system, see the operating system documentation.	Operating System Manuals
	For information about updating drivers and firmware, see the Methods to download firmware and drivers section in this document.	Drivers
Managing your system	For information about systems management software offered by Dell, see the Dell OpenManage Systems Management Overview Guide.	PowerEdge manuals
	For information about setting up, using, and troubleshooting OpenManage, see the Dell OpenManage Server Administrator User's Guide.	OpenManage Manuals > OpenManage Server Administrator
	For information about installing and using Dell SupportAssist, see the Dell SupportAssist Enterprise User's Guide.	serviceability tools
	For information about partner programs enterprise systems management, see the OpenManage Connections Enterprise Systems Management documents.	OpenManage Manuals
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.	Storage Controller Manuals
Understanding event and error messages	For information about the event and error messages generated by the system firmware and agents that monitor system components, go to QRL > **Look Up** > **Error Code**, type the error code, and then click **Look it up**.	QRL
Troubleshooting your system	For information about identifying and troubleshooting the PowerEdge server issues, see the Server Troubleshooting Guide.	PowerEdge manuals