



Quantum DXi6800 & DXi690x Optional Interface Card Instructions

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DXi Interface Card Configuration Overview

The following card options are available for supported DXi6800 and DXi690x configurations:

DXi6800 / DXi6902 / DXi690x G1 Configurations

Card Option	Card Height	Description
Dual port 10 GbE (X520)	Low Profile	Provides two 10 GbE (SFP+) Ethernet ports for supported DXi6800, DXi6902, and DXi6900 G1 configurations (see Figure 1 below).
Quad port 1 GbE (i350)	Low Profile	Provides four 1 GbE (SFP+) Ethernet ports for supported DXi6800, DXi6902, and DXi6900 G1 configurations (see Figure 2 below).
Dual port 10 GBase-T (X540)	Full-Height	Provides two 10 GBase-T Ethernet ports for DXi6900 G1 configurations (see Figure 3 on the next page).

Figure 1: Optional X520 Dual Port 10 GbE Card (Low-Profile)

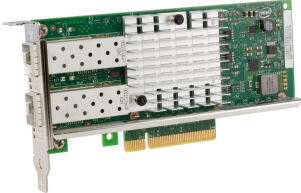
Illustration	Description
	Dual port 10 GbE card (X520) PN 9-02898-01 (Optical) PN 9-02898-02 (Twinax)

Figure 2: Optional i350 Quad Port 1 GbE Card (Low-Profile)

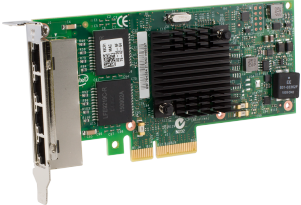
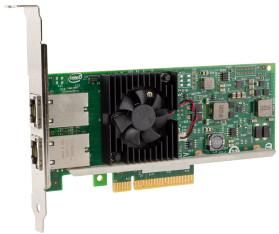
Illustration	Description
	Quad port 1 GbE card (i350) PN 9-02899-01

Figure 3: Optional X540 Dual Port 10 GBase-T Card (Full-Height)

Illustration	Description
	Dual port 10 GBase-T card (X540)
	PN 8-01445-03

DXi6900 G2 / DXi6900-S Configurations

Card Option	Card Height	Description
Dual port 10 GbE (X520)	Full-Height	Provides two 10 GbE (SFP+) Ethernet ports for supported DXi6900 G2 and DXi6900-S configurations (see Figure 4 below).
Dual port 10 GBase-T (X540)	Full-Height	Provides two 10 GBase-T Ethernet ports for DXi6900 G2 and DXi6900-S configurations (see Figure 5 on the next page).
Dual port 16 GB Fibre Channel	Full-Height	Provides two 16 GB Fibre Channel ports for DXi6900 G2 and DXi6900-S configurations (see Figure 6 on the next page).

Figure 4: Optional X520 Dual Port 10 GbE Card (Full-Height)

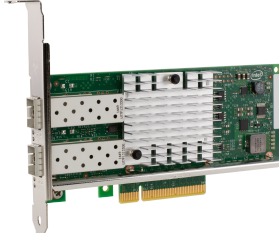
Illustration	Description
	Dual port 10 GbE card (X520)
	PN 8-01445-01 (Optical)
	PN 8-01445-02 (Twinax)

Figure 5: Optional X540 Dual Port 10 GBase-T Card (Full-Height)

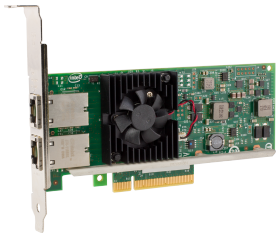
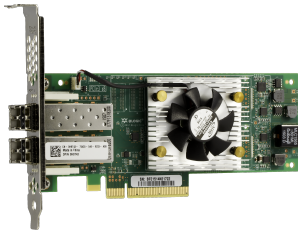
Illustration	Description
	Dual port 10 GBase-T card (X540) PN 8-01445-03

Figure 6: Optional Dual Port 16 GB Fibre Channel Card (Full-Height)

Illustration	Description
	Dual port 16 GB Fibre Channel card PN 8-01446-01

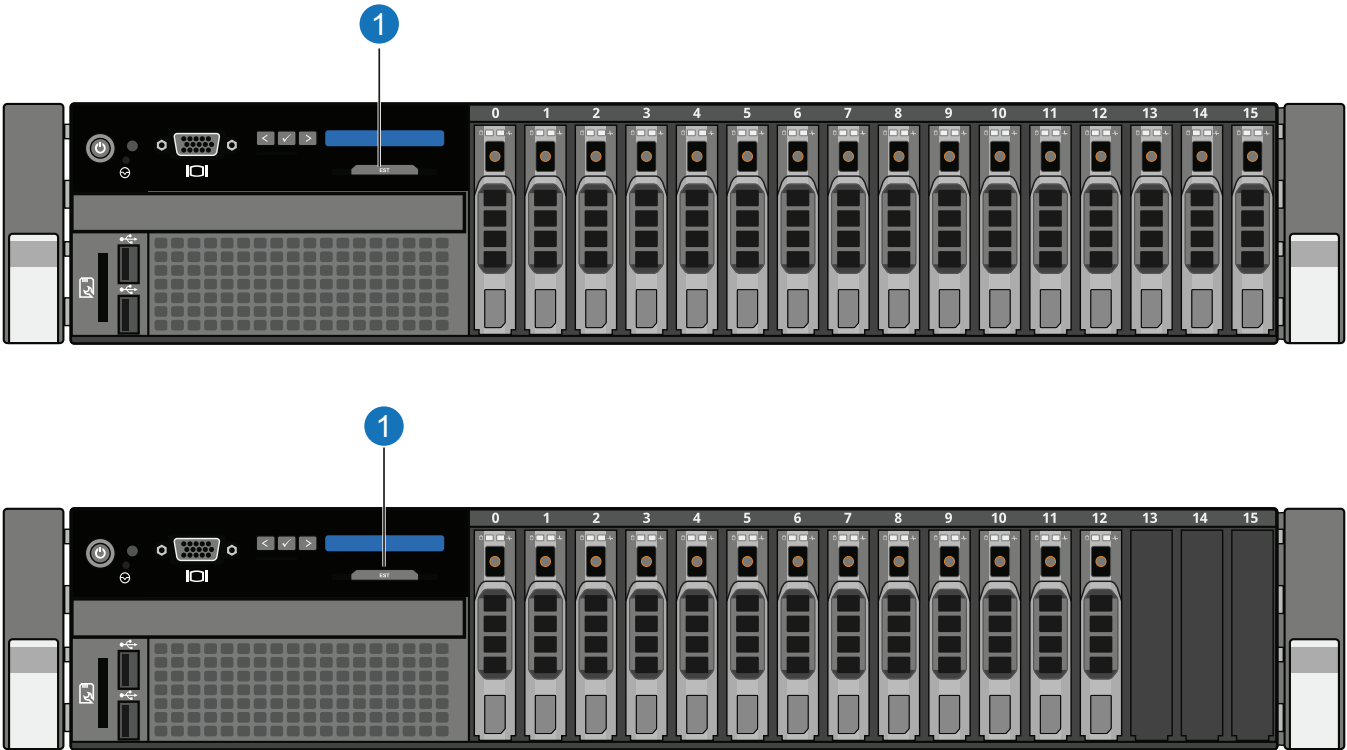
Note: If you are installing the optional card as part of a new DXi installation, do not use this instructions document. Instead, follow the instructions in the Installation Guide that came with your new DXi.

Determining the DXi6900 Model

You will need to determine if the DXi system is a DXi6900 G1, DXi6900 G2, or DXi6900-S. Model information is located on the pull-out information tag on the front of the Node (see [Figure 7 on the next page](#)).

- The DXi6900-S information tag includes "S" in the part number (see [Figure 8 on the next page](#)).
- The DXi6900 G2 information tag includes "G2" in the part number (see [Figure 9 on the next page](#)).
- The DXi6900 G1 information tag does not include "G1" in the part number (see [Figure 10 on page 6](#)).

Figure 7: DXi6900 Information Tag



1. Information Tag

Figure 8: DXi6900-S Information Tag



Figure 9: DXi6900 G2 Information Tag

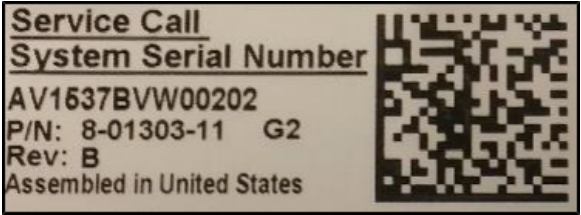
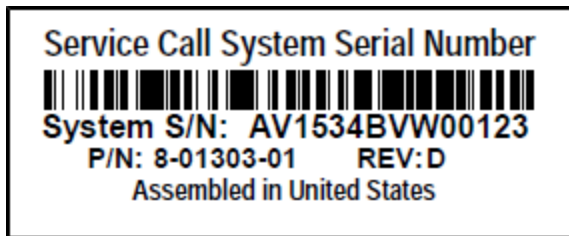



Figure 10: DXi6900 G1 Information Tag



Preparing for the Upgrade

 **WARNING:** To prevent the risk of electrical shock, bodily injury, or damage to the equipment, read all instructions and warnings in the Quantum Products System, Safety, and Regulatory Information Guide that shipped with your system. The guide is also available at: <http://quantum.com/cssp>

Before you install the optional card, make the following preparations:

- [Gathering Necessary Tools](#) [below](#)
- [Taking ESD Precautions](#) [below](#)

Gathering Necessary Tools

The following tools are required for the optional card installation:

- Small flat head screwdriver

Taking ESD Precautions

Some components within the DXi system contain static-sensitive parts. To avoid damaging these parts while performing installation procedures, always observe the following precautions:

- Keep static-sensitive parts in their original shipping containers until ready for installation.
- Do not place static-sensitive parts on a metal surface. Place them inside their protective shipping bag or on an antistatic mat.
- Wear anti-static wrist bands when unpacking and handling the units, and avoid touching connectors and other components.
- Dry climates and cold-weather heating environments have lower relative humidity and are more likely to produce static electricity.

Shutting down the System

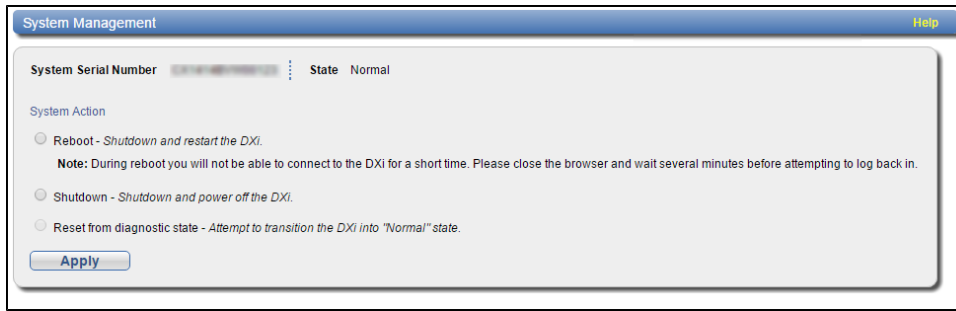
To shut down the system:

Caution: Before shutting down the DXi, make sure that all backup and replication jobs are finished, and that space reclamation activity is complete.

1. In the remote management console, navigate to the **Utilities > Reboot & Shutdown** page (see [Figure 11 below](#)).

Note: For information about accessing the remote management console, see the *User's Guide* for your DXi system.

Figure 11: Reboot & Shutdown Page



2. Select **Shutdown** and click **Apply**.
3. Close the browser window.
4. After the Node shuts down, turn off both power switches on the back of each Array or Expansion module (if any).

Note: For detailed information about shutting down Array or Expansion modules, see the *User's Guide* for your DXi system.

Opening the Node Cover

To remove the DXi Node from the rack and remove the top cover:

WARNING: Opening or removing the system cover when the system is on may expose you to a risk of electric shock.

Caution: Use appropriate ESD precautions, including the use of a grounding strap, when working inside the Node.

1. If installed, remove the front bezel by lifting the latch on the left side of the bezel.

New DXi Bezel

A new DXi bezel is available. Please contact your account sales manager to purchase additional new bezels.

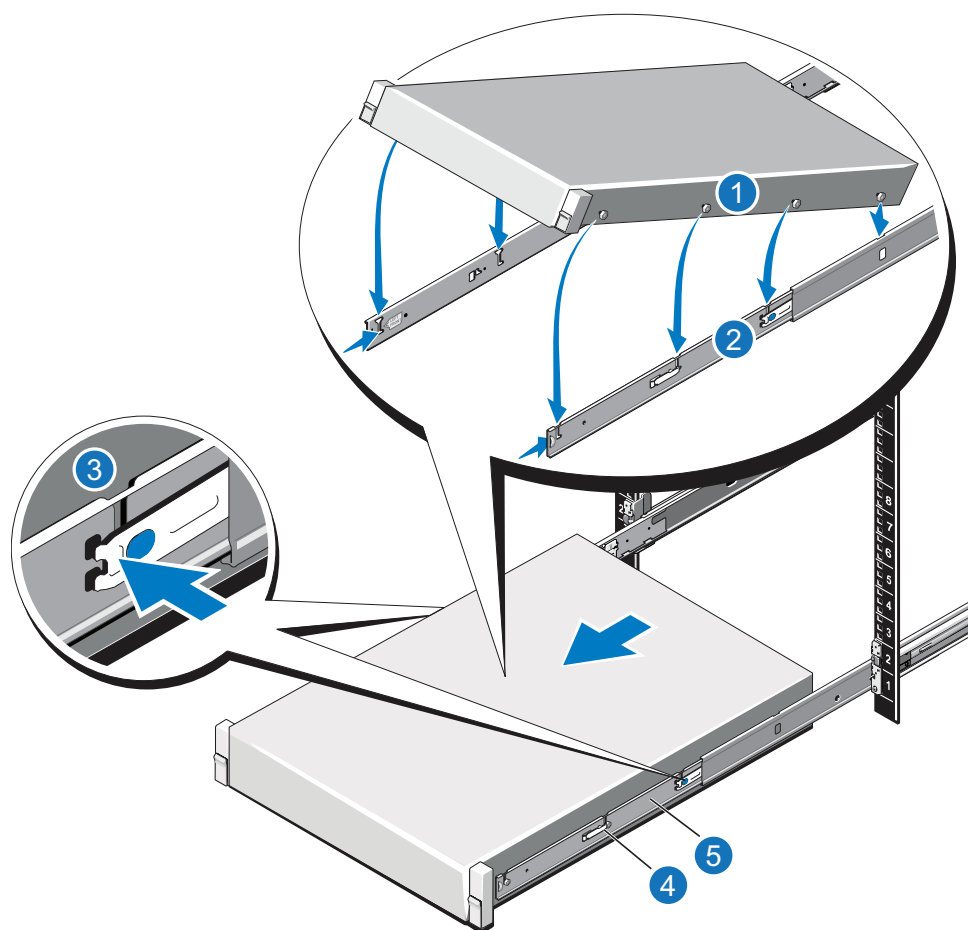


2. Disconnect all power, SAS, Ethernet, and Fibre Channel cables from the rear of the Node. Make sure to label the cables so they can be easily identified when they are re-connected to the Node after the upgrade procedure is complete.
3. Press the locking tab on either side of the Node, and pull the Node out from the rack until the inner rails lock.

i Note: If necessary, remove the optional screws securing the Node to the front of the rack (behind the locking tab).

4. Locate the lock levers on the sides of the inner rails (see [Figure 12 on the next page](#)). Unlock each lever by rotating it up to its release position.

Figure 12: Removing the DXi Node from the Rack



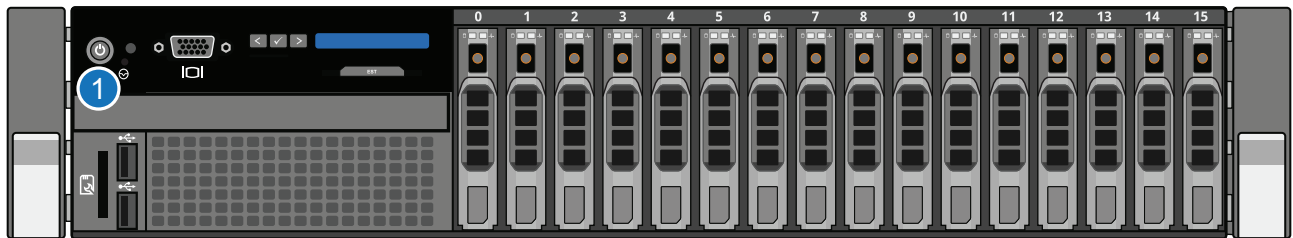
Item	Description
1	Rear rail standoffs
2	Rear rail J-slots
3	Slide-release lock button
4	Lock lever
5	Inner slide rails

5. Grasp the sides of the Node firmly and pull it forward until the rail standoffs are at the front of the J-slots.
6. Lift the Node up and away from the rack and place it on a flat, stable surface.

WARNING: The DXi6900 G1 Node (including hard drives) weighs 53.0 pounds (24.0 kg). The DXi6900 G2 Node (including hard drives) weighs 49.3 pounds (22.4 kg). The DXi6900-S Node (including hard drives) weighs **XX** pounds (**XX** kg). A minimum of two people are required to lift the chassis.

7. Press and hold the power button on the front of the Node for three seconds to fully drain the system of stored power prior to removing the cover (see [Figure 13 below](#)).

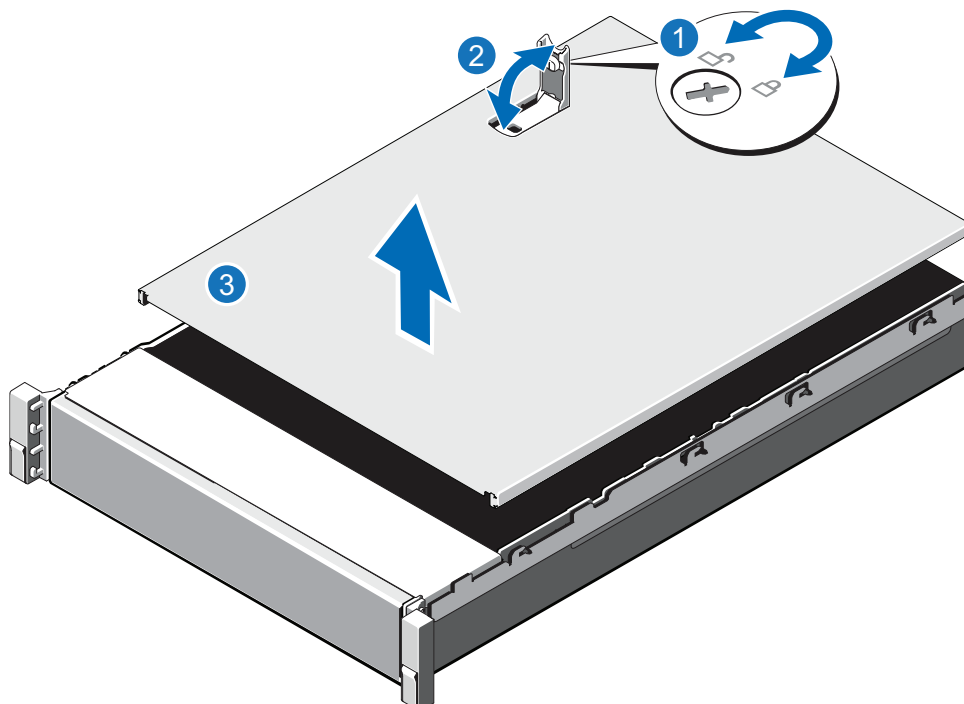
Figure 13: Node Power Button



1. Power Switch

8. On the Node cover, rotate the latch release lock counterclockwise to the unlocked position (see [Figure 14 below](#)).

Figure 14: Removing the Node Cover



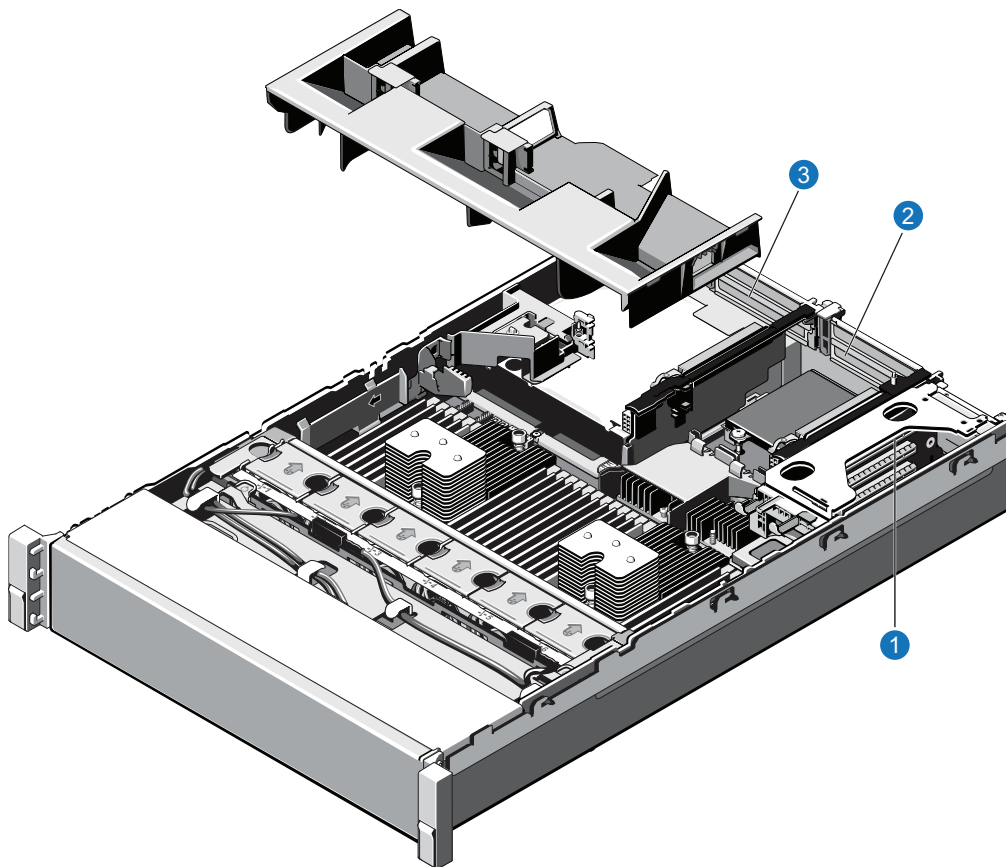
1. Latch release lock 2. Latch 3. Node cover

9. Lift the latch on top of the Node and slide the cover back.

10. Grasp the cover on both sides, and carefully lift the cover away from the Node.

Figure 15 below illustrates the interior of the DXi Node with the cover removed.

Figure 15: Inside the DXi Node



1 Expansion card riser 1

- Optional X520 network card (DXi6800, DXi6902, DXi6900 G1)
- Optional i350 network card (DXi6800, DXi6902, DXi6900 G1)

2 Expansion card riser 2

- Optional X520 network card (DXi6900 G2 and DXi6900-S)
- Optional X540 network card (DXi6900 G1, DXi6900 G2, and DXi6900-S)
- Optional 16 GB Fibre Channel card (DXi6900 G2 and DXi6900-S)

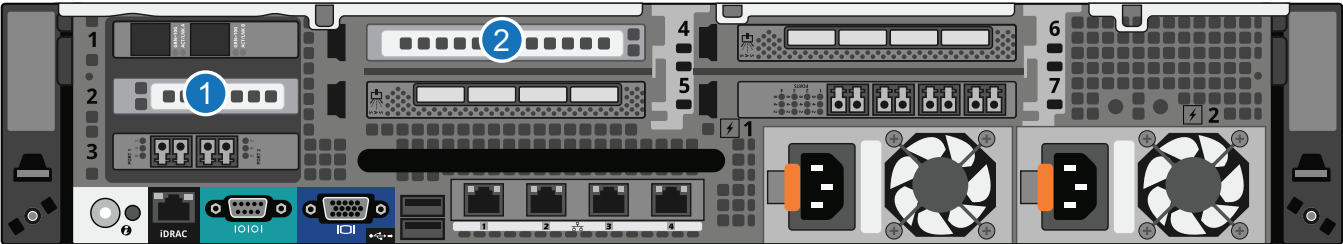
- 3
- Expansion card riser 3
- Optional X520 network card (DXi6900 G2 and DXi6900-S)
 - Optional X540 network card (DXi6900 G2 and DXi6900-S)
 - Optional 16 GB Fibre Channel card (DXi6900 G2 and DXi6900-S)

Installing the Optional Interface Cards

DXi6800, DXi6902, and DXi6900 G1 Cards

- The expansion cards in the DXi6800, DXi6902, and DXi6900 G1 Node are installed in PCIe slots located in expansion card riser 1.
- Install the optional card in slot 2 (see [Figure 16 below](#)).
- (DXi 6900 G1 only) Install the optional card in slot 4 (see [Figure 16 below](#)).

Figure 16: DXi6800 and DXi6900 G1 Optional Card Location



Item	Card Option(s)
1	Install optional i350 or X520 network card in slot 2. See Table 1 below for configuration options.
2	(DXi6900 G1 only) Install optional X540 network card in slot 4. See Table 1 below for configuration options.

Table 1: DXi6800, DXi6902, DXi6900 G1 Network Card Configuration Options

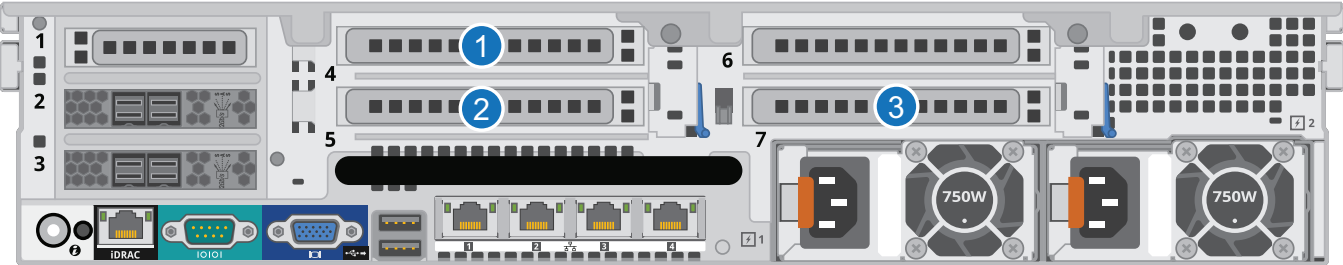
Option	PCI Slot 2	PCI Slot 4
101	2 x 10 Gb Ethernet	

Option	PCI Slot 2	PCI Slot 4
102	4 x 1 Gb Ethernet	
103		2 x 10 GBase-T Ethernet (DXi6900 G1 only)

DXi6900 G2 and DXi6900-S Cards

- The expansion cards in the DXi6900 G2 and DXi6900-S Node are installed in PCIe slots located in expansion card riser 2 and 3 (see [Figure 17 below](#)).
- Depending on your card configuration option, install the network card(s) in slots 4, 5, and 7 (see [Table 2 below](#))

Figure 17: DXi6900 G2 and DXi6900-S Optional Card Location



Item	Card Option(s)
1	Install optional X520, X540, or Fibre Channel card in slot 4. See Table 2 below for configuration options.
2	Install optional X520, X540, or Fibre Channel card in slot 5. See Table 2 below for configuration options.
3	Install optional X520, X540, or Fibre Channel card in slot 7. See Table 2 below for configuration options.

Table 2: DXi6900 G2 Network Card Configuration Options


Caution: The PCI slot location for each card must be followed in each configuration option.

PCI Slot 4	PCI Slot 5	PCI Slot 7
Not Used	2 x 16 Gb Fibre Channel	Not Used
Not Used	2 x 16 Gb Fibre Channel	2 x 16 Gb Fibre Channel
2 x 16 Gb Fibre Channel	2 x 16 Gb Fibre Channel	2 x 16 Gb Fibre Channel
2 x 10 Gb Ethernet *	Not Used	Not Used

PCI Slot 4	PCI Slot 5	PCI Slot 7
2 x 10 Gb Ethernet *	Not Used	2 x 10 Gb Ethernet *
2 x 10 Gb Ethernet *	2 x 10 Gb Ethernet *	2 x 10 Gb Ethernet *
2 x 10 Gb Ethernet *	2 x 16 Gb Fibre Channel	Not Used
2 x 10 Gb Ethernet *	2 x 16 Gb Fibre Channel	2 x 16 Gb Fibre Channel
2 x 10 Gb Ethernet *	2 x 16 Gb Fibre Channel	2 x 10 Gb Ethernet *
* 2 x 10 Gb Ethernet = 2 x 10 GbE (SFP+) or 2 x 10 GBase-T Ethernet ports		

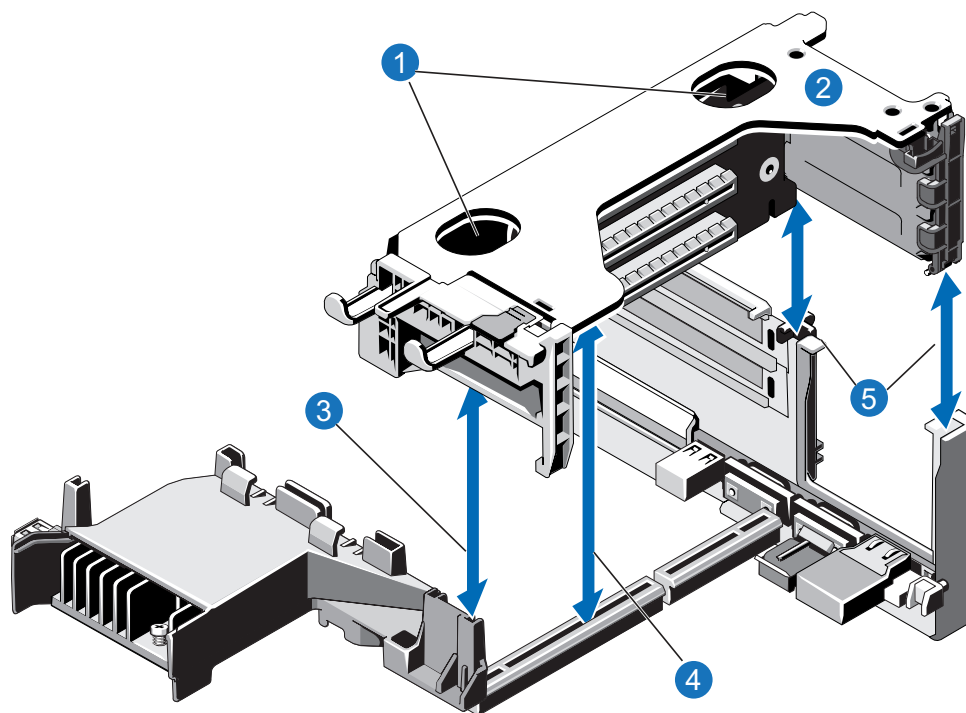
DXi6800 / DXi6902 / DXi6900 G1: Installing Optional Cards

To install the optional i350 or X520 network card in the DXi6800, DXi6902, and DXi6900 G1 Node:

 **Caution:** Use appropriate ESD precautions, including the use of a grounding strap, when performing this procedure.

1. Holding the touch points, lift the expansion card riser 1 from the riser connector on the system board (see [Figure 18 on the next page](#)).

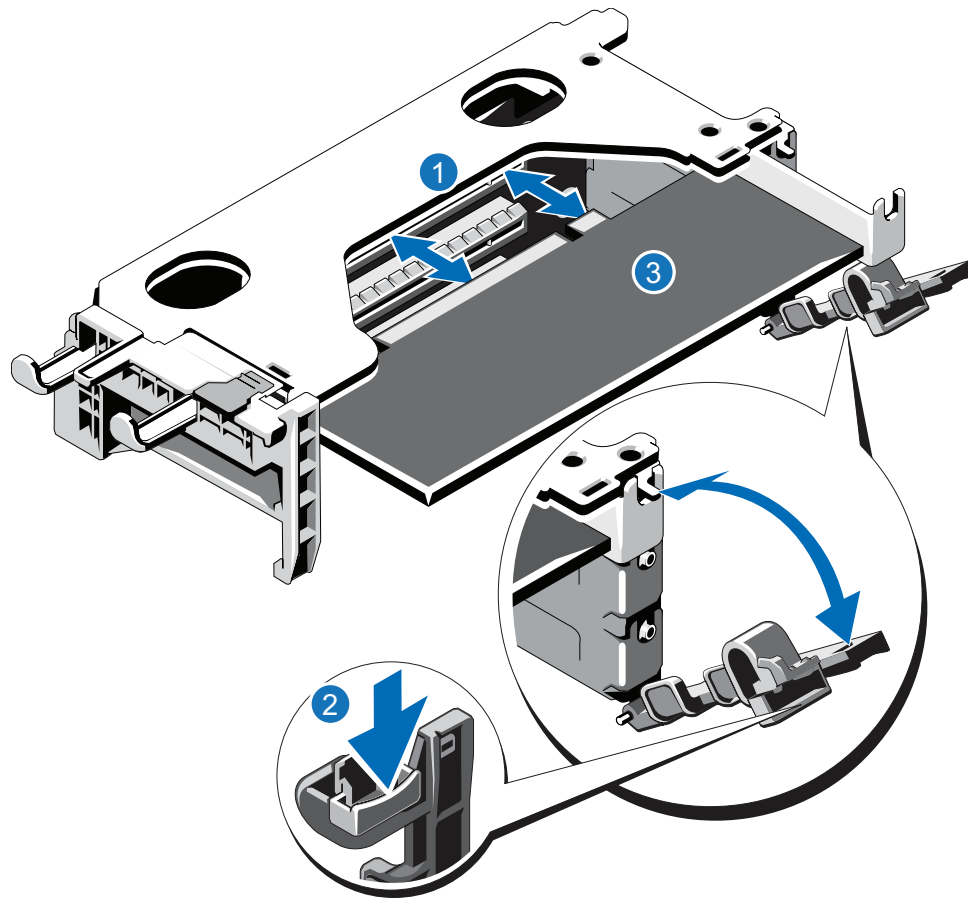
Figure 18: Removing and Installing the Expansion Card Riser 1



Item	Description
1	Touch points
2	Expansion card riser 1
3	Front riser guide
4	Expansion card riser 1 connector
5	Back riser

2. Press the tab to release the expansion card latch and rotate the latch away from the expansion card riser (see [Figure 19 on the next page](#)).

Figure 19: Installing the Optional Network Card in Riser 1



1. Expansion card connector 2. Expansion card latch tab 3. Network Card

3. Remove the metal slot cover from slot 2 by sliding it out of the slot.
4. Holding the optional network card by its edges, position the card so that the card edge connector aligns with the expansion card connector.
5. Insert the card edge connector firmly into the expansion card connector until the card is fully seated.
6. Close the expansion card latch.
7. Holding the touch points, insert the expansion card riser 1 into the riser connector on the system board (see [Figure 18](#) on the previous page).
8. (Optical 10 GbE option only) Insert an SFP+ unit into each 10 GbE port on the X520 card. (The SFP+ units are included with the optional 10 GbE network card.)

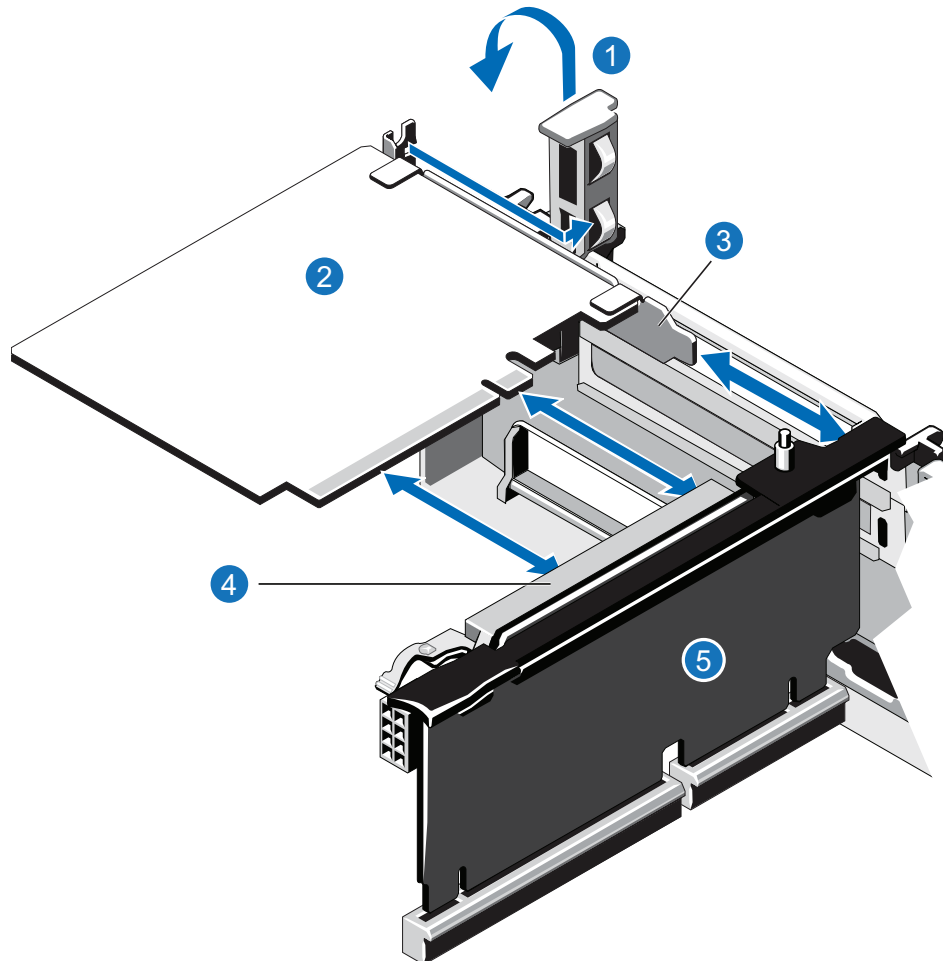
To install the optional X540 network card in the DXi6900 G1 Node:

Caution: Use appropriate ESD precautions, including the use of a grounding strap, when performing this procedure.

1. Lift the expansion card latch out of the slot (see [Figure 20](#) below).

The expansion card latch is located to the right of PCIe slots as you face the rear of the Node. The latch will remain attached to the system.

Figure 20: Installing an Optional Card in Riser 2



1. Expansion card latch (blue) 2. Network card 3. Metal slot cover
4. Expansion card connector 5. Expansion card riser 2

2. Remove the metal slot covers from the slots by sliding it out of the slot.
3. Holding the network card by its edges, position the card so that the connector on the card aligns with the expansion card connector on the riser.
4. Insert the card-edge connector firmly into the expansion card connector until the card is fully seated.
5. Push the expansion card latch down to lock the card in place.

DXi6900 G2 and DXi6900-S: Installing Optional Cards

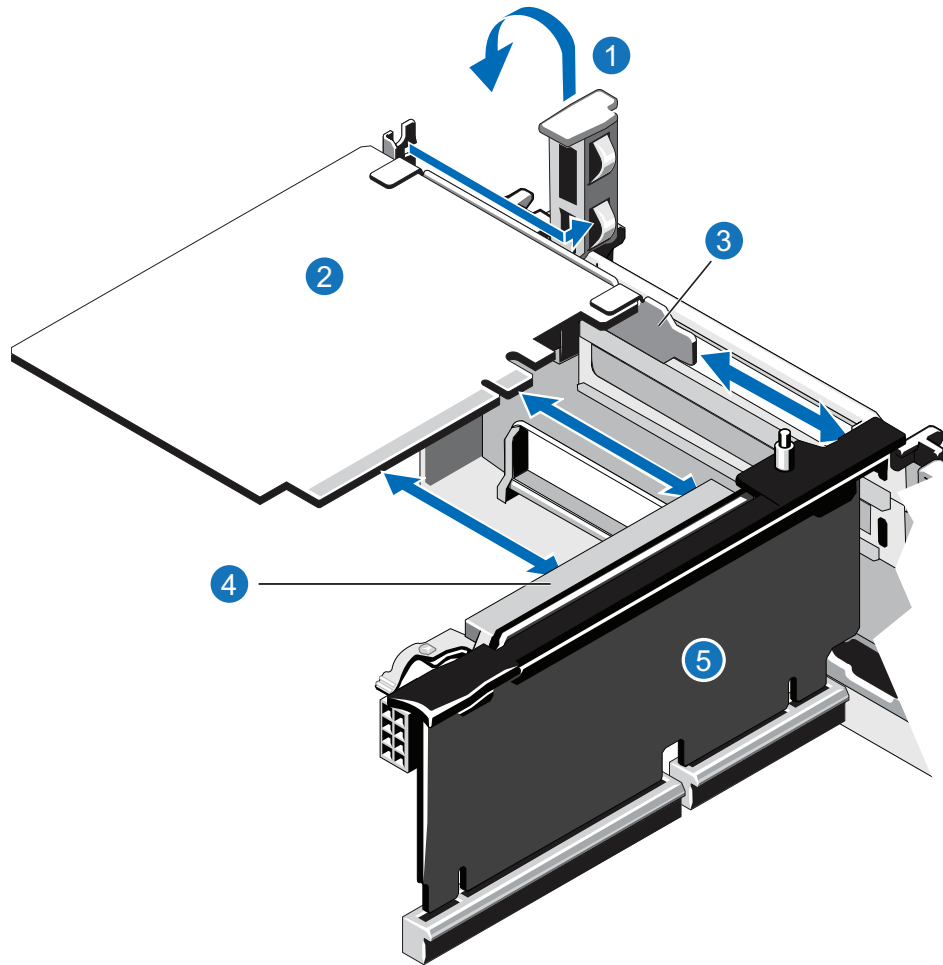
To install an optional X520, X540, or 16 GB Fibre Channel card in the DXi6900 G2 and DXi6900-S Node:

Caution: Use appropriate ESD precautions, including the use of a grounding strap, when performing this procedure.

1. Lift the expansion card latch out of the slot (see [Figure 20 on the previous page](#)).

The expansion card latch is located to the right of PCIe slots as you face the rear of the Node. The latch will remain attached to the system.

Figure 21: Installing an Optional Card in Riser 2 or 3



1. Expansion card latch (blue) 2. Network card 3. Metal slot cover
4. Expansion card connector 5. Expansion card riser 2 or 3

2. Remove the metal slot covers from the slots by sliding it out of the slot.
3. Holding the network card by its edges, position the card so that the connector on the card aligns with the expansion card connector on the riser.

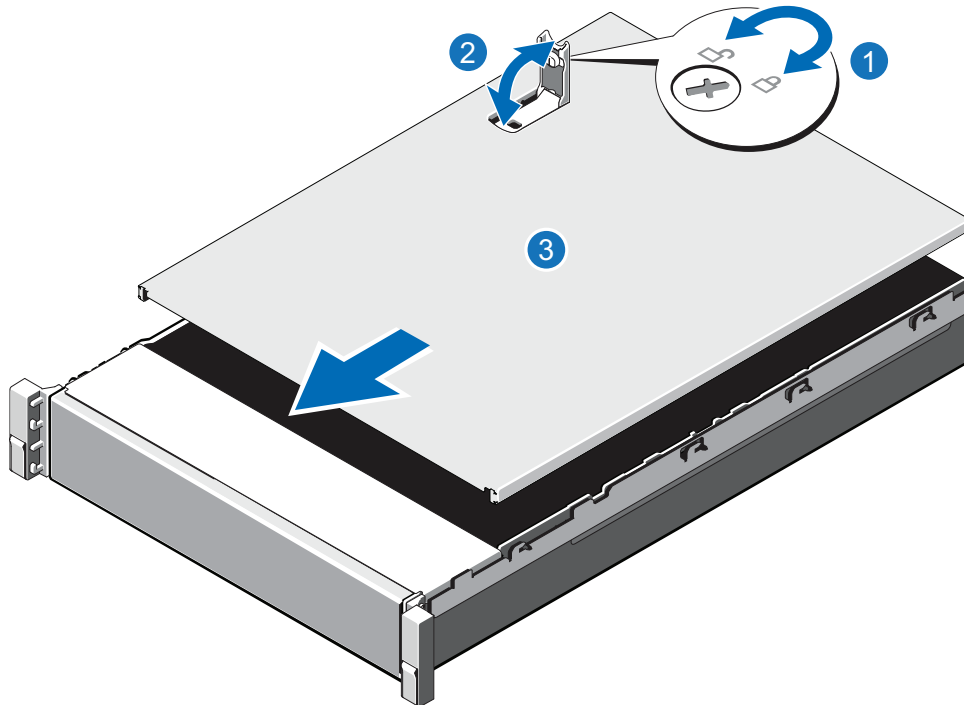
4. Insert the card-edge connector firmly into the expansion card connector until the card is fully seated.
5. Push the expansion card latch down to lock the card in place.
6. (Optical 10 GbE option only) Insert an SFP+ unit into each 10 GbE port on the X520 card. (The SFP+ units are included with the optional 10 GbE network card.)

Closing the Node Cover

To close the DXi6900 Node cover:

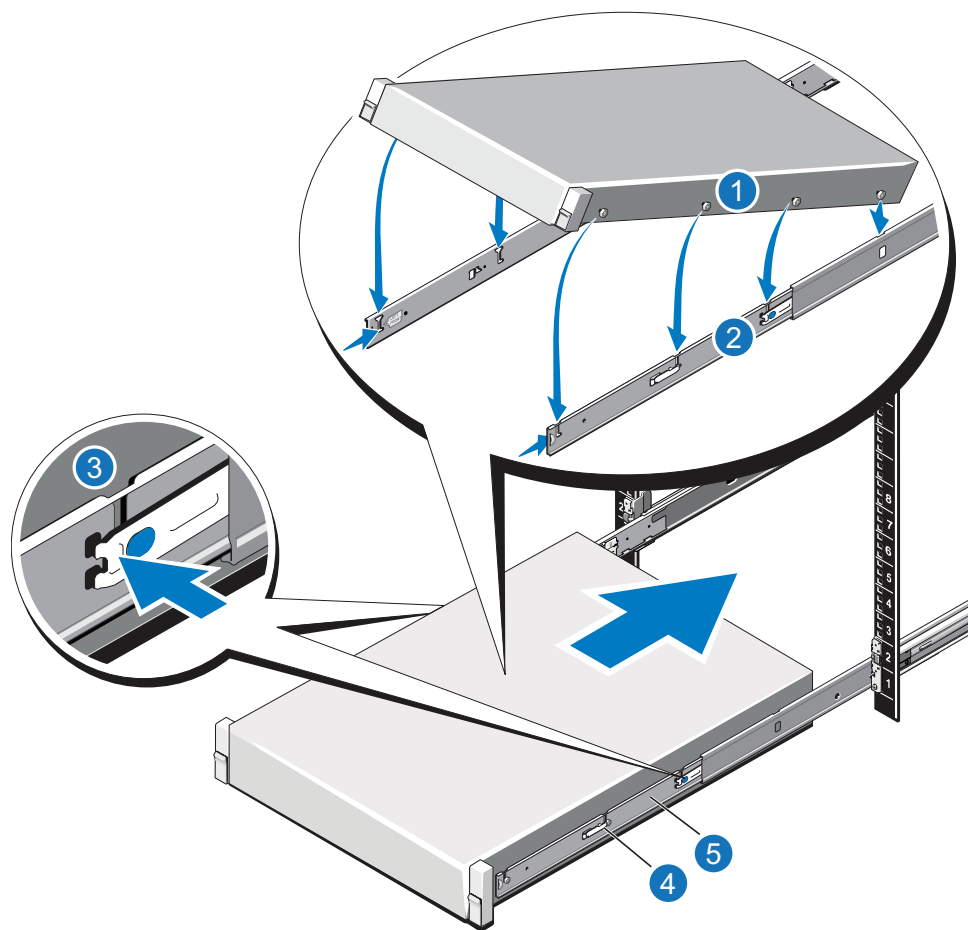
1. Lift the latch on the cover (see [Figure 22 below](#)).

Figure 22: Replacing the Node Cover



1. Latch release lock 2. Latch 3. Node cover

2. Place the cover onto the Node chassis and offset the cover slightly back so that it clears the chassis hooks and lays flush on the chassis.
3. Push down the latch to move the cover into the closed position.
4. Rotate the latch release lock in a clockwise direction to secure the cover.
5. Pull the inner slide rails out of the rack until they lock into place (see [Figure 23 on the next page](#)).

Figure 23: Installing the DXi Node in the Rack

Item	Description
1	Rear rail standoffs
2	Rear rail J-slots
3	Slide-release lock button
4	Lock lever
5	Inner slide rails

6. Locate the rear rail standoff on each side of the Node and lower them into the rear J-slots on the slide assemblies.
7. Rotate the Node downward until all the rail standoffs are seated in all four of the J-slots.
8. Press the slide-release lock buttons on both rails and slide the Node into the rack. (Make sure the Node is squarely aligned with the rack as you slide it in.)
9. If applicable, replace the front bezel by inserting the right side of the bezel into the slots on the Node and

then snapping the left side of the bezel into place.

10. Reconnect all power, SAS, Ethernet, and Fibre Channel cables on the rear of the Node.

Note: For detailed system cabling information, see the *Installation Guide* for your DXi system.

11. Connect Ethernet cables to the ports on the new network card:
 - **Quad port 1 GbE (i350) card** - Connect up to four 1 GbE cables.
 - **Dual port 10 GbE (X520) card** - Connect up to two 10 GbE cables per card (optical or Twinax).
 - **Dual port 10 GBase-T (X540) card** - Connect up to two CAT6 cables per card.
 - **Dual port 16 Gb Fibre Channel card** - Connect up to two cables per card.

Turning on the System

To turn on the system:

1. Turn on each Array or Expansion module (if any):

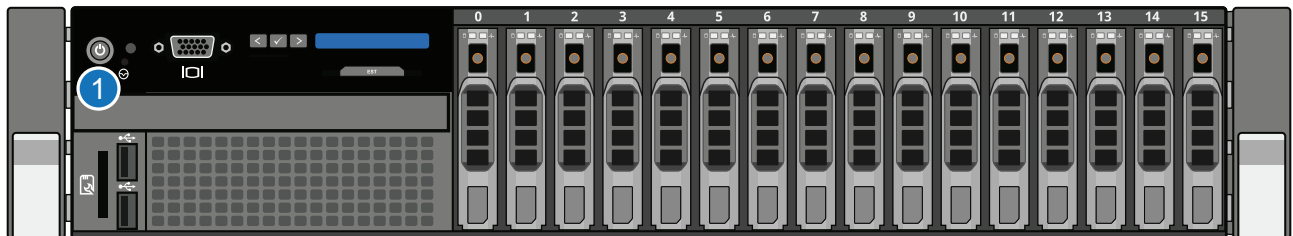
For detailed information about turning on Array or Expansion modules, see the User's Guide for your DXi system.

Supported DXi6xxx Models (DXi6800 and higher)

- First, turn on both power switches on the back of each Expansion module (EBOD). Wait until the seven segment display on the rear of the module displays 00 (approximately 60 seconds).
- Then, turn on both power switches on the back of each Array module (RBOD). Wait until the seven segment display on the rear of the module displays 99 (approximately 120 seconds).

2. Press the power button on the front of the Node (see [Figure 24 below](#)). Wait for the system to boot. (This can take up to 30 minutes.)

Figure 24: Node Power Button



1. Power Switch

3. Navigate to the **Configuration > System > Network** page in the remote management console and

verify that the new network ports are available to the DXi.

The new ports should display under **Bonding Details** and **Interface Details**. They should also display on the Backpanel Locations diagram at the bottom of the page.

The numbering of the new ports differs depending on the DXi model and the type of card added (see [Table 1 below](#) and [Table 2 below](#)):

Table 1: DXi6800, DXi6902, DXi6900 G1 Ports

Dual port 10 GbE (X520) card	The new ports are numbered E4 and E5.
Quad port 1 GbE (i350) card	The new ports are numbered E4, E5, E6, and E7.
Dual port 10 GBase-T (X540) card	The new ports are numbered E6 and E7 (DXi6900 G1 only).

Table 2: DXi6900 G2 and DXi6900-S Ports

Dual port 10 GbE (X520) card	Depending on configuration, the new ports are numbered from E4 up to E9
Dual port 10 GBase-T (X540) card	Depending on configuration, the new ports are numbered from E4 up to E9

4. (DXi6900 G2 and DXi6900-S Fibre Channel Card Installation Only) Navigate to the **Configuration > System > FC Initiators & Targets** page in the remote management console and verify that the new Fibre Channel ports are available to the DXi.

Dual port 16 GB Fibre Channel card	Depending on configuration, the new ports are numbered from F0 to F5.
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Note: The current network configuration is not changed when adding the additional network card. To make use of the additional Ethernet ports, edit the settings on the **Network** page as needed.