Quantum DXi-Series: Optional Network Card Installation Instructions

The following network card options are available for supported DXi-Series configurations:

- **Dual port 10 GbE (X520) card** - Provides two 10 GbE (SFP+) Ethernet ports for supported DXi4xxx configurations (DXi4700 or higher), or for supported DXi6xxx configurations (DXi6800 or higher) (see Figure 1).

- **Quad port 1 GbE (i350) card** - Provides four 1 GbE Ethernet ports for supported DXi6xxx configurations (DXi6800 or higher) (see Figure 2).

Note: If you are installing the optional network 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.

Note: This document is not for use with DXi4500, DXi4600, DXi6500, or DXi6700 systems.

Figure 1 Optional X520 Dual Port 10 GbE Card

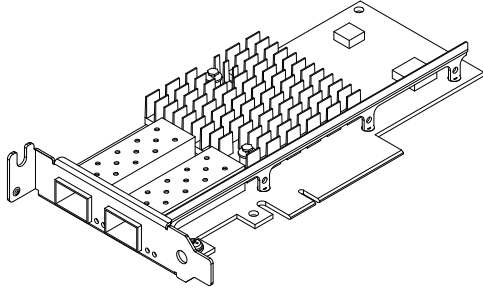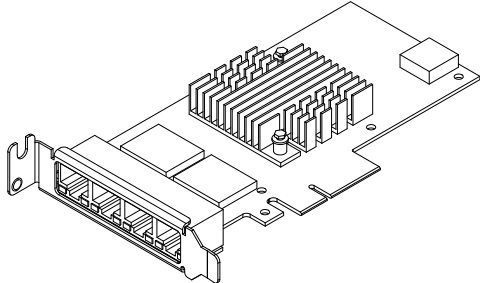| Illustration	Description
	Dual port 10 GbE card (X520) PN 9-02898-01 (Optical) PN 9-02898-02 (Twinax)

Figure 2 Optional i350 Quad Port 1 GbE Card	Illustration	Description
		Quad port 1 GbE card (i350) PN 9-02899-01

To install the optional network card, complete the following steps:

1
2
3
4
5
6

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 network card, make the following preparations:

- Gathering Necessary Tools
- Taking ESD Precautions

Gathering Necessary Tools

The following tools are required for the optional network 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.

Note: 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.
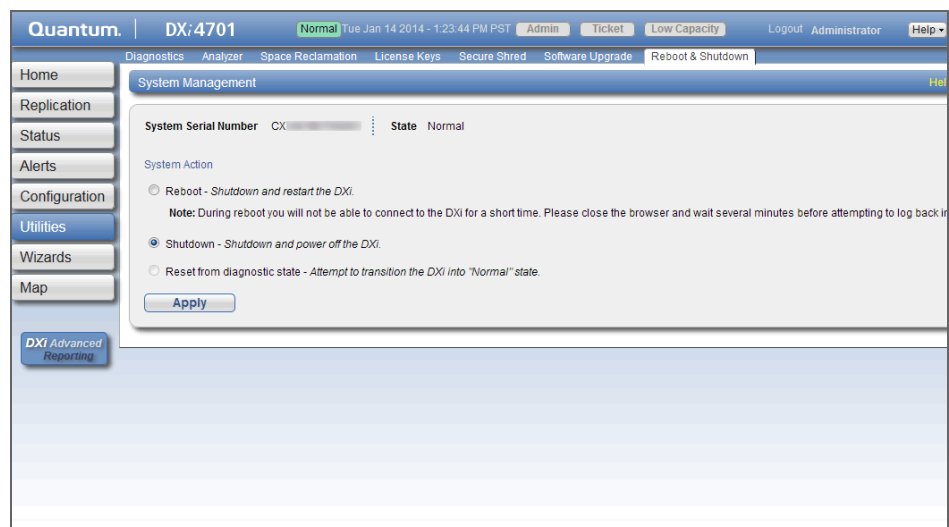
1 In the remote management console, navigate to the **Utilities > Reboot & Shutdown** page (see Figure 3).

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

Figure 3 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.

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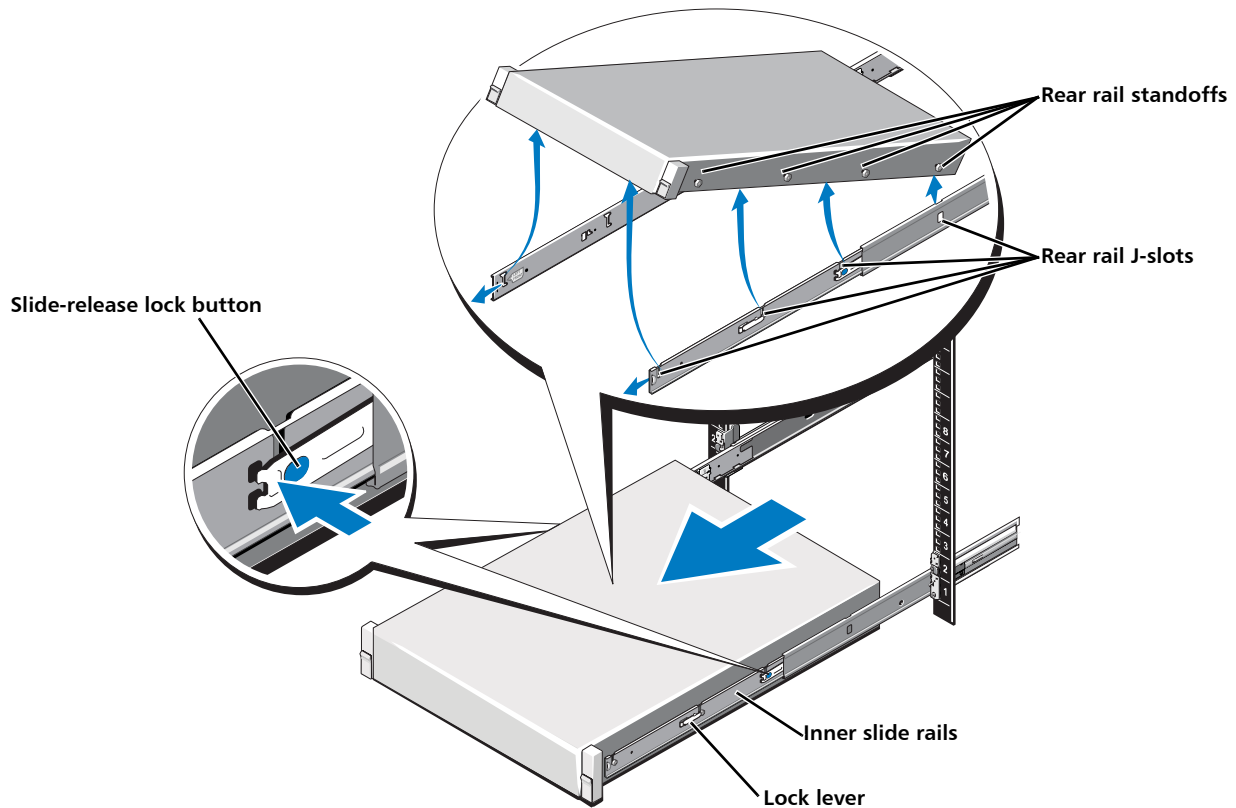
> **Note:** If necessary, remove the optional screws securing the Node to the front of the rack (behind the locking tab).

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

Figure 4 Removing the DXi
Node from the Rack

Rear rail standoffs

Rear rail J-slots

Slide-release lock button

Inner slide rails

Lock lever

5 Grasp the sides of the Node firmly and pull it forward until the rail standoffs are at the front of the J-slots.

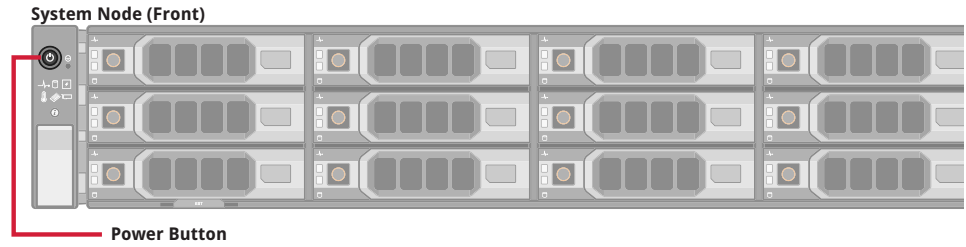**6** Lift the Node up and away from the rack and place it on a flat, stable surface.

> **WARNING:** The DXi Node (including hard drives) weighs more than 50 pounds (22.7 kg). A minimum of two people are required to lift the chassis.
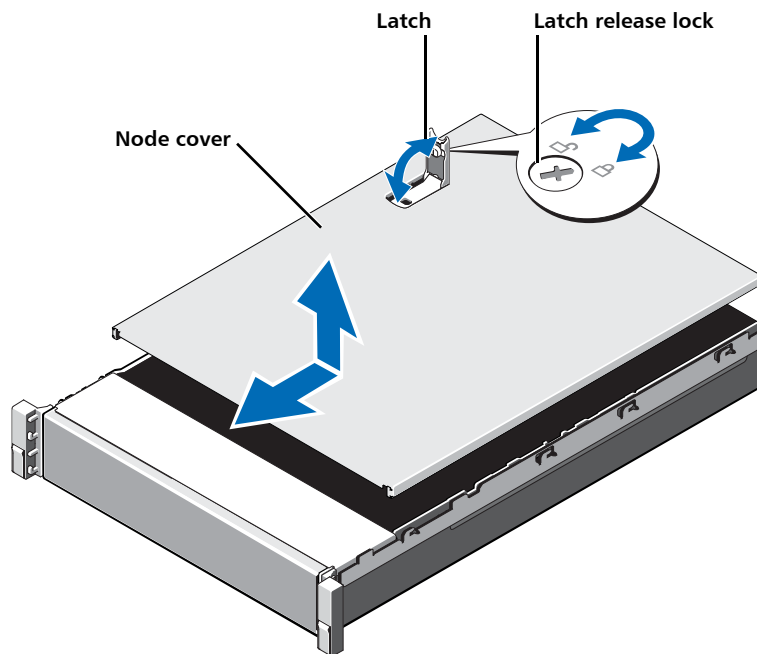
7 Press and hold the power button on the front of the Node for three seconds to fully drain the system of stored power prior to removing the cover (see Figure 5).

Figure 5 Node Power Button

System Node (Front)

Power Button

8 On the Node cover, rotate the latch release lock counterclockwise to the unlocked position (see Figure 6).

Figure 6 Removing the Node Cover
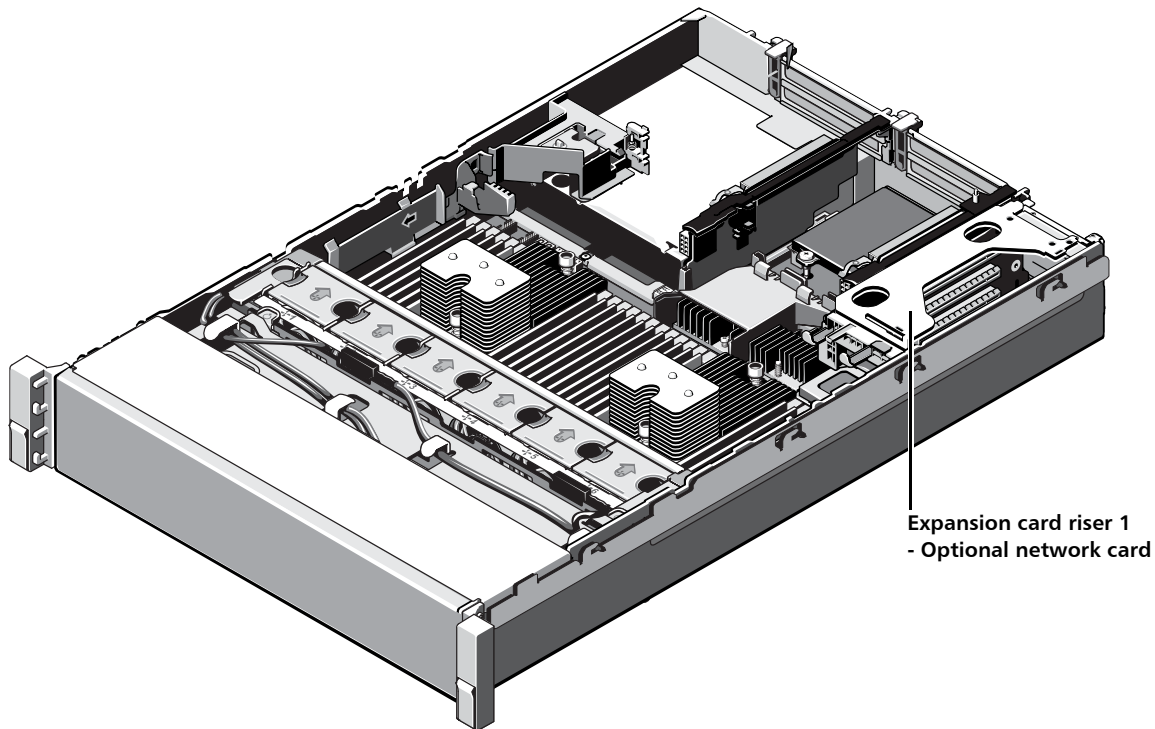
Latch **Latch release lock**

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 7 illustrates the interior of the DXi Node with the cover removed.

Figure 7 Inside the DXi Node

**Expansion card riser 1
- Optional network card**

Installing the Optional Network Card

The expansion cards in the DXi Node are installed in PCIe slots located in three expansion card risers. Install the optional network card in the correct slot in expansion card riser 1 (see Figure 8):

- **Supported DXi4xxx Models (DXi4700 and higher)** - Install the optional network card in slot 1

- **Supported DXi6xxx Models (DXi6800 and higher)** - Install the optional network card in slot 2
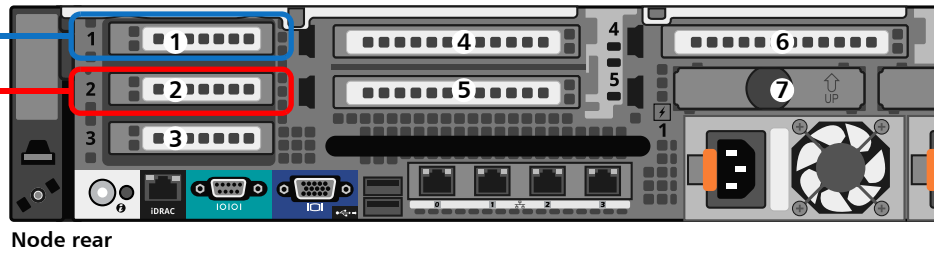
Note: Depending on the model, your DXi may include additional expansion cards compared to what is shown in Figure 8.

Figure 8 Optional Network
Card Location

**Supported DXi4xxx models -
Install network card in slot 1**

**Supported DXi6xxx models -
Install network card in slot 2**

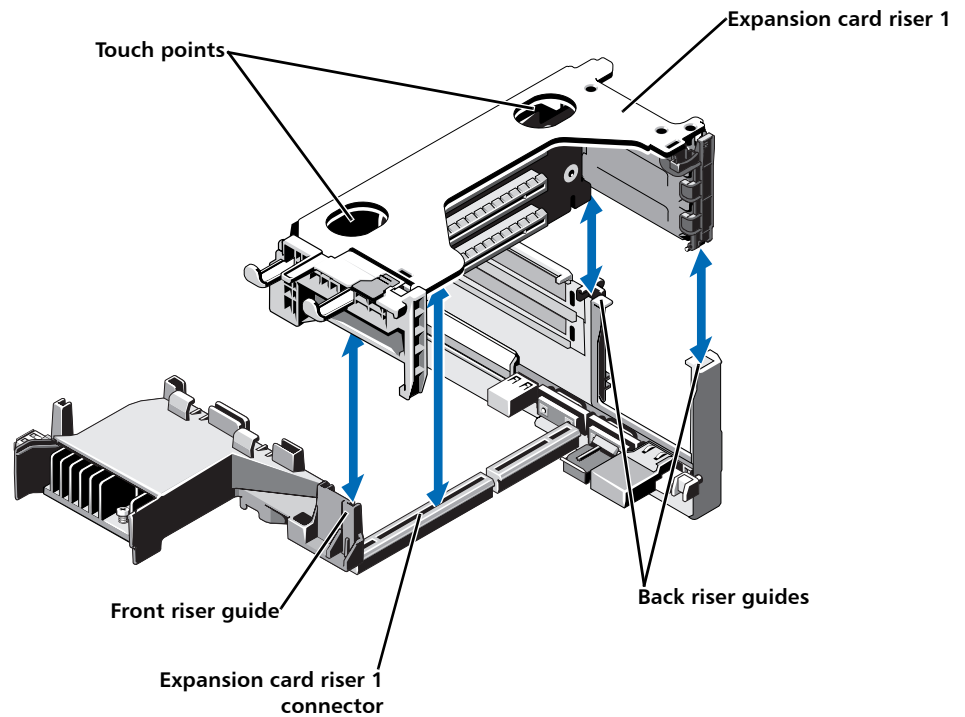
Node rear

To install the optional network card in the DXi 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 9).

Figure 9 Removing and
Installing the Expansion Card
Riser 1

Expansion card riser 1

Touch points

Front riser guide

Back riser guides

Expansion card riser 1
connector

2 Press the tab to release the expansion card latch and rotate the latch away from the expansion card riser (see Figure 10).
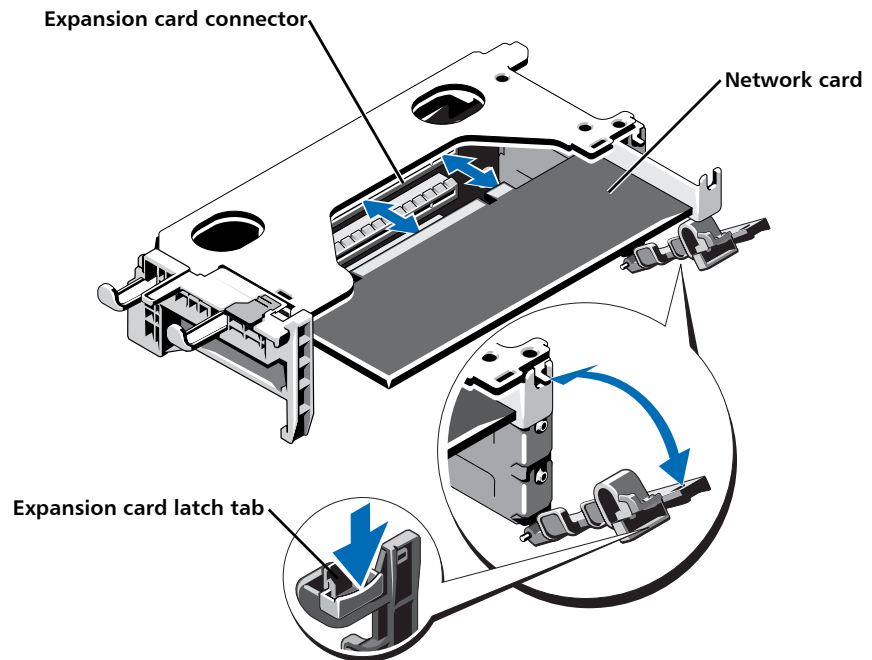
Note: Depending on the DXi model, one or more expansion cards may already be installed in expansion card riser 1. Do not remove any installed cards from expansion card riser 1.

Figure 10 Installing the Optional Network Card in Riser 1

Expansion card connector

Network card

Expansion card latch tab

3 Remove the metal slot cover from sliding it out of the correct slot:

- **Supported DXi4xxx Models (DXi4700 and higher)** - Remove the metal cover from slot 1

- **Supported DXi6xxx Models (DXi6800 and higher)** - Remove the metal cover from slot 2

4 Holding the 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. Make sure the card is inserted into the correct slot:

- **Supported DXi4xxx Models (DXi4700 and higher)** - Install the optional network card in slot 1

- **Supported DXi6xxx Models (DXi6800 and higher)** - Install the optional network card in slot 2

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 9).

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.)
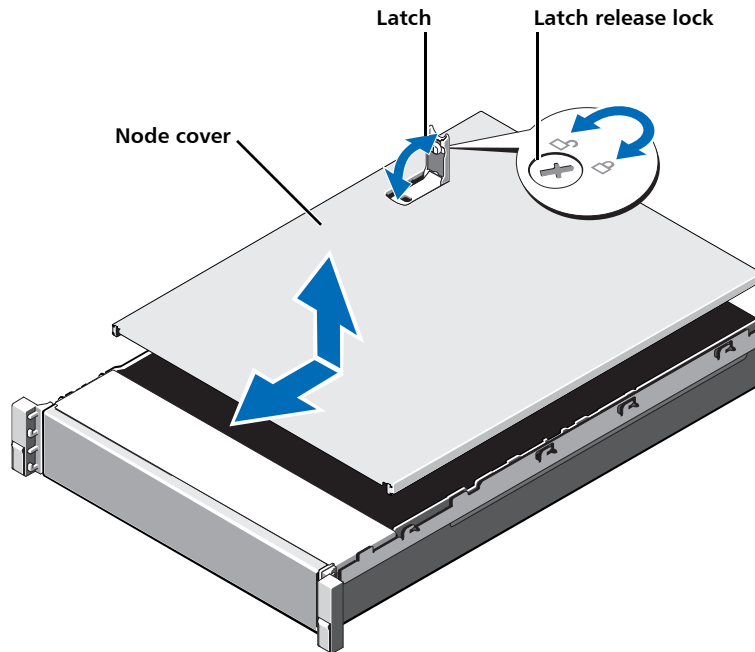
Closing the Node Cover

To close the DXi Node cover:
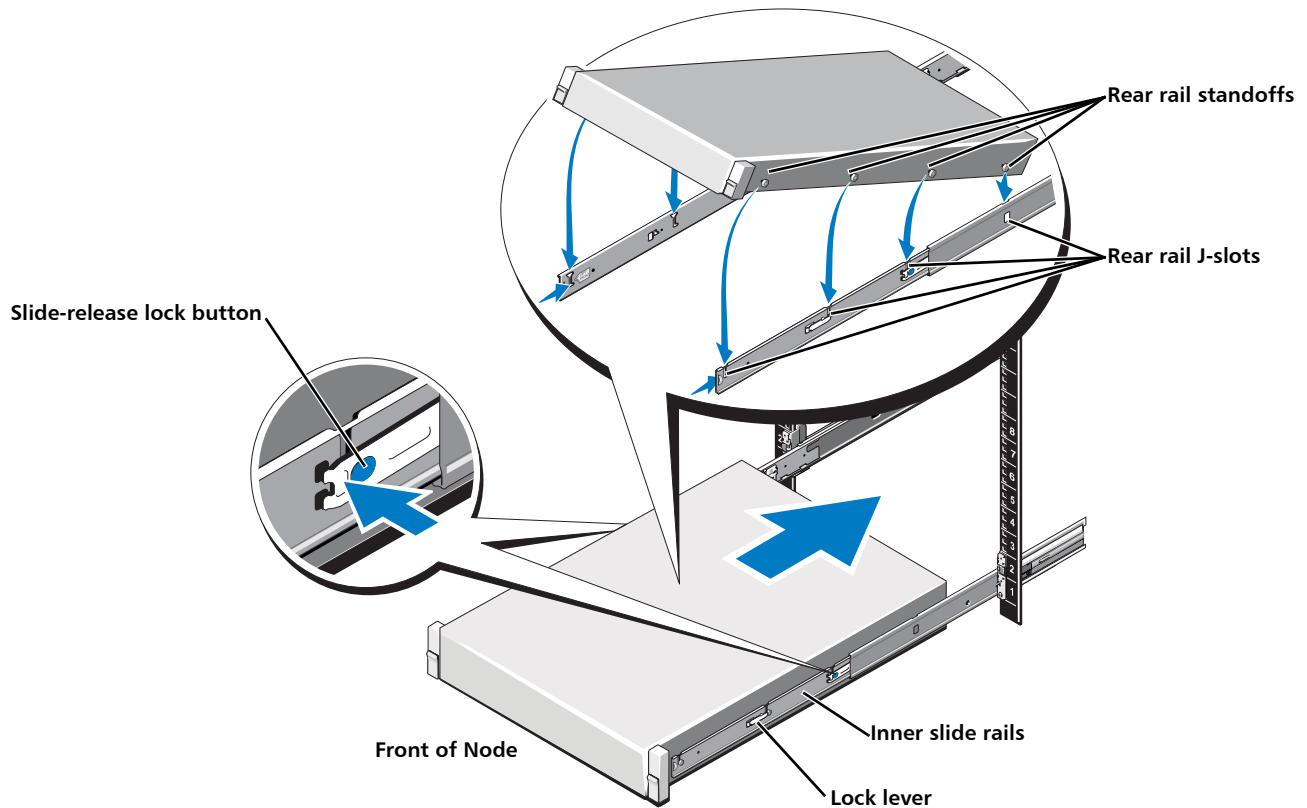
1 Lift the latch on the cover (see Figure 11).

Figure 11 Replacing the 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 12).

Figure 12 Installing the DXi
Node in the Rack

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:

• **Dual port 10 GbE (X520) card** - Connect up to two 10 GbE cables (optical or Twinax).

• **Quad port 1 GbE (i350) card** - Connect up to four 1 GbE cables.

Turning On the System

To turn on the system:

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

> **Note:** For detailed information about turning on Array or Expansion modules, see the *User's Guide* for your DXi system.
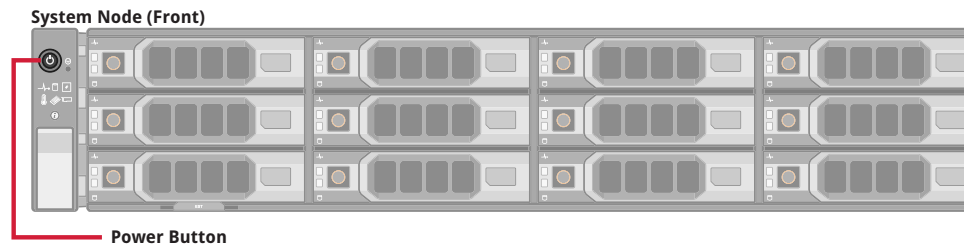
- **Supported DXi4xxx Models (DXi4700 and higher)** - Turn on both power switches on the back of each Expansion module (JBOD). Wait 30 seconds for the Expansion modules to initialize.

- **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). Wait for the system to boot. (This can take up to 30 minutes.)

Figure 13 Node Power Button

System Node (Front)

Power Button

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:

- **Dual port 10 GbE (X520) card** - The new ports are numbered E4 and E5 (DXi4xxx systems) or E6 and E7 (DXi6xxx systems).

- **Quad port 1 GbE (i350) card** - The new ports are numbered E6, E7, E8, and E9 (DXi6xxx systems).

> **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.