Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures

Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Overview

Figure 47: Mellanox GD4200 162-Port InfiniBand Switch Components (Front)



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Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Vertical Fan Module

Figure 48: Mellanox GD4200 162-Port InfiniBand Switch Components (Rear)



Related Topics Mellanox GD4200 162-Port InfiniBand Switch Specifications, on page 748

Replacing a Vertical Fan Module

Notice: You must install a new fan within two minutes of removing the old fan.

Notice: Although this is a hot swap component, Teradata requires that you use the FRU replacement procedure in Server Management Client.

Observe all servicing cautions and warnings.

Related Topics <u>Servicing Cautions and Warnings, on page 799</u>

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Vertical Fan Module LED



Figure 49: Vertical Fan Module LED

Vertical Fan Module LED:

- off = normal operation
- solid amber = failure in vertical fan

Preparing for the Procedure

- Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.
 - 1 Remove the new part from its packaging and place it on a static-free surface.
 - 2 Record the serial number and/or part number of the new part in the site equipment log.
 - 3 Access Server Management Client.
 - 4 <u>Using Server Management Client, open a maintenance window for the target</u> <u>component.</u>
 - 5 Using Server Management Client, initiate a FRU replacement procedure for the component.
 - 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status and verifies that all conditions for replacing the component have been met.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

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Removing a Vertical Fan Module





- 1 At the front of the cabinet, loosen the four captive screws on the top and bottom of the fan module.
- 2 Pull the fan module out of the switch.

Installing a Vertical Fan Module



Figure 51: Installing the Fan Module

- 1 Align the fan module with the opening on the chassis.
- 2 Slide the fan module into the slot and press until it clicks into place.

The vertical fan module LED is off.

³ Tighten the four captive screws on the top and bottom of the fan module to secure the fan module to the chassis.

Completing the Procedure

1 Return to Server Management Client and, in the FRU Replace window, click Ok.

The software checks the operational state of the component. This may take up to 15 minutes. If an error message appears, click Cancel and contact Teradata Customer Support.

- 2 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.
- 3 <u>Using the Server Management Client Tree View, check the operational state of the target chassis.</u>
- 4 Using Server Management Client, add a comment to the summary alert.

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- 5 Using Server Management Client, clear the summary alert.
- 6 Using Server Management Client, close the maintenance window.
- 7 Pack the replaced part according to Teradata Customer Support procedures, then return it to the service parts center or dispose of it locally.

Replacing a Horizontal Fan Module

Notice: You must install a new fan within two minutes of removing the old fan.

Notice: Although this is a hot swap component, Teradata requires that you use the FRU replacement procedure in Server Management Client.

Observe all servicing cautions and warnings.

Related Topics Servicing Cautions and Warnings, on page 799

Horizontal Fan Module LED

Figure 52: Horizontal Fan Module LED



Horizontal Fan Module LED:

- off = normal operation
- solid amber = failure in horizontal fan module

Preparing for the Procedure

Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.

- 1 Remove the new part from its packaging and place it on a static-free surface.
- 2 Record the serial number and/or part number of the new part in the site equipment log.
- 3 Access Server Management Client.
- 4 <u>Using Server Management Client, open a maintenance window for the target component.</u>

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- 5 Using Server Management Client, initiate a FRU replacement procedure for the component.
- 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status and verifies that all conditions for replacing the component have been met.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

Removing a Horizontal Fan Module

Figure 53: Removing a Horizontal Fan Module



- 1 At the front of the cabinet, loosen the four captive screws on the sides of the fan module.
- 2 Pull the fan module out of the switch.

Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Horizontal Fan Module

Installing a Horizontal Fan Module

Figure 54: Installing a Horizontal Fan Module



- 1 Align the fan module with the opening on the chassis.
- 2 Slide the fan module into the slot and press until it clicks into place.

The Horizontal Fan Module LED is off.

³ Tighten the four captive screws on the right and left of the fan module to secure the fan module to the chassis.

Completing the Procedure

1 Return to Server Management Client and, in the FRU Replace window, click Ok.

The software checks the operational state of the component. This may take up to 15 minutes. If an error message appears, click Cancel and contact Teradata Customer Support.

2 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.

- 3 <u>Using the Server Management Client Tree View, check the operational state of the target chassis.</u>
- 4 <u>Using Server Management Client, add a comment to the summary alert.</u>
- 5 Using Server Management Client, clear the summary alert.
- 6 Using Server Management Client, close the maintenance window.
- 7 Pack the replaced part according to Teradata Customer Support procedures, then return it to the service parts center or dispose of it locally.

Replacing a Power Supply

Notice: Although this is a hot swap component, Teradata requires that you use the FRU replacement procedure in Server Management Client.

Observe all servicing cautions and warnings.

Related Topics Servicing Cautions and Warnings, on page 799

Power Supply Numbering



Figure 55: Power Supply Numbering

Power Supply LEDs

Figure 56: Power Supply LEDs



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AC LED:

- solid green = AC power is present
- off = power failure

DC LED:

- solid green = DC power is present
- off = power failure

Preparing for the Procedure

- Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.
 - 1 Remove the new part from its packaging and place it on a static-free surface.
 - 2 Record the serial number and/or part number of the new part in the site equipment log.
 - 3 Access Server Management Client.
 - 4 Using Server Management Client, open a maintenance window for the target component.
 - 5 <u>Using Server Management Client, initiate a FRU replacement procedure for the</u> <u>component.</u>
 - 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status and verifies that all conditions for replacing the component have been met.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

Removing a Power Supply

Notice: Replace only one power supply at a time. The other power supply must be operational.





- 1 Unplug the power cord from the power supply.
- 2 Loosen the two captive screws securing the power supply to the chassis.
- 3 Pull the power supply out of the chassis.

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Installing a Power Supply

Figure 58: Installing a Power Supply



- 1 Slide the power supply into the chassis until it clicks into place.
- 2 Tighten the two captive screws to secure the power supply to the chassis.
- 3 Plug the power cord into the power supply.

Power supply LEDs on the chassis management board and power supply are green.

Completing the Procedure

1 Return to Server Management Client and, in the FRU Replace window, click Ok.

The software checks the operational state of the component. This may take up to 15 minutes. If an error message appears, click Cancel and contact Teradata Customer Support.

- 2 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.
- 3 <u>Using the Server Management Client Tree View, check the operational state of the target chassis.</u>

- 4 <u>Using Server Management Client, add a comment to the summary alert.</u>
- 5 <u>Using Server Management Client, clear the summary alert.</u>
- 6 <u>Using Server Management Client, close the maintenance window.</u>
- 7 Pack the replaced part according to Teradata Customer Support procedures, then return it to the service parts center or dispose of it locally.

Replacing a Line Board

Notice: Although this is a hot swap component, Teradata requires that you use the FRU replacement procedure in Server Management Client.

Observe all servicing cautions and warnings.

Related Topics Servicing Cautions and Warnings, on page 799 Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Line Board

Line Board Numbering



Figure 59: Line Board Numbering for a 162-Port Switch

Switch_0120

Line Board LEDs

Figure 60: Line Board LEDs for a 162-Port Switch



Power LED:

- Solid green = line board voltage levels are normal
- Off = no power to line board

Card ready LED:

• Solid green = line board ready

- Slowly blinking green = line board loading
- Quickly blinking green = line board problem
- Off = line board not ready

Info LED

Chassis locator LED for identifying the chassis during service:

- Blinking blue = chassis attention required
- Off = no attention required

Port status LEDs

Link LED:

- Solid green = indicates physical link is up
- Blinking = errors
- Off = no link detected

Data LED:

- Solid amber = indicates logical link is up
- Blinking = activity

Preparing for the Procedure

- Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.
 - 1 Remove the new part from its packaging and place it on a static-free surface.
 - 2 Record the serial number and/or part number of the new part in the site equipment log.
 - 3 Access Server Management Client.
 - 4 <u>Using Server Management Client, open a maintenance window for the target</u> <u>component.</u>
 - 5 Using Server Management Client, initiate a FRU replacement procedure for the component.
 - 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status, verifies that all conditions for replacing the component have been met, and enables the locator LED.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Line Board

Removing a Line Board

Figure 61: Removing a Line Board in a 162-Port Switch



- 1 Unplug the power cords from the switch AC inlets.
- 2 Verify that all of the network cables on the line board are labeled appropriately.
- 3 Disconnect all of the network cables from the line board.
- 4 Loosen the captive screws on either side of the line board.
- 5 Pull the two levers on the line board out and apart from each other and slide the line board out of the switch.

Installing a Line Board



Figure 62: Installing a Line Board in a 162-Port Switch

- 1 Align the line board with the opening on the chassis.
- 2 Slide the line board into the slot and push the levers toward the board until it clicks into place.
- 3 Tighten the two captive screws to secure the line board to the chassis.
- 4 Connect the network cables to the appropriate ports on the new line board.

Notice: Do not plug in the power cords at this time.

Completing the Procedure

At the rear of the cabinet, plug the power cords into the switch AC inlets.
 The switch takes approximately 2-3 minutes to start up.

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- 2 Return to Server Management Client and, in the FRU Replace window, click Ok.
- 3 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.
- 4 Download the firmware image from TSS.
- 5 <u>Configure the SWS as a remote SCP Host.</u>
- 6 <u>Update the firmware image.</u>
- 7 Check the firmware version against the version on the redundant GD-4X00 switch.

If the other switch has a different version, update the firmware image on the redundant switch.

8 <u>Using the Server Management Client Tree View, verify that the operational state of the chassis is OK.</u>

It may take up to 10 minutes with several automatic reboots for the switch state to reach OK.

- 9 Using Server Management Client, add a comment to the summary alert.
- 10 <u>Using Server Management Client, clear the summary alert.</u>
- 11 <u>Using Server Management Client, close the maintenance window.</u>
- 12 Pack the replaced part according to Teradata Customer Support procedures, then return it to the service parts center or dispose of it locally.

Replacing a Spine Board

Notice: Although this is a hot swap component, Teradata requires that you use the FRU replacement procedure in Server Management Client.

Observe all servicing cautions and warnings.

Related Topics Servicing Cautions and Warnings, on page 799

Spine Board Numbering



Figure 63: Spine Board Numbering for a 162-Port Switch

Spine Board LEDs





Power LED:

- Solid green = spine board operating normally
- Off = power failure to the board

Card ready LED:

- Solid green = card ready
- Off = card not ready
- Blinking slowly = card loading
- Blinking quickly = card problem

Info LED:

Chassis locator LED for identifying the chassis during service.

- Off = no attention required
- Blinking blue = chassis attention required

Nine pairs, link and activity state LEDs:

- Solid green = physical link at port
- Off = no link detected
- Blinking green = errors detected
- Blinking amber = data activity present

Preparing for the Procedure

Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.

- 1 Remove the new part from its packaging and place it on a static-free surface.
- 2 Record the serial number and/or part number of the new part in the site equipment log.
- 3 Access Server Management Client.
- 4 <u>Using Server Management Client, open a maintenance window for the target</u> <u>component.</u>
- 5 <u>Using Server Management Client, initiate a FRU replacement procedure for the component.</u>
- 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status, verifies that all conditions for replacing the component have been met, and enables the locator LED.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Spine Board

Removing a Spine Board



Figure 65: Removing a Spine Board in a 162-Port Switch

- 1 Unplug the power cords from the switch AC inlets.
- 2 Loosen the captive screws on top and bottom of the spine board.
- ³ Pull the two levers on the spine board out and apart from each other, then slide the spine board out of the switch.

Installing a Spine Board



Figure 66: Installing a Spine Board in a 162-Port Switch

- 1 Align the spine board with the opening on the chassis.
- 2 Slide the spine board into the slot and push the levers toward the board until it clicks into place.
- 3 Tighten the two captive screws to secure the spine board to the chassis.Note: Do not plug in the power cords at this time.

Completing the Procedure

At the rear of the cabinet, plug the power cords into the switch AC inlets.
 The switch takes approximately 2-3 minutes to start up.

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- 2 Return to Server Management Client and, in the FRU Replace window, click Ok.
- 3 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.
- 4 Download the firmware image from TSS.
- 5 <u>Configure the SWS as a remote SCP Host.</u>
- 6 <u>Update the firmware image.</u>
- 7 Check the firmware version against the version on the redundant GD-4X00 switch.

If the other switch has a different version, update the firmware image on the redundant switch.

8 <u>Using the Server Management Client Tree View, verify that the operational state of the chassis is OK.</u>

It may take up to 10 minutes with several automatic reboots for the switch state to reach OK.

- 9 Using Server Management Client, add a comment to the summary alert.
- 10 <u>Using Server Management Client, clear the summary alert.</u>
- 11 <u>Using Server Management Client, close the maintenance window.</u>
- 12 Pack the replaced part according to Teradata Customer Support procedures, then return it to the service parts center or dispose of it locally.

Replacing a Chassis Management Board

Notice: Although this is a hot swap component, Teradata requires that you use the FRU replacement procedure in Server Management Client.

Observe all servicing cautions and warnings.

Related Topics Servicing Cautions and Warnings, on page 799

Chassis Management Board LEDs



Figure 67: Chassis Management Board LED indicators

Chassis temperature (Orange) LED:

- On = over-temperature fault
- Off = temperature OK

Power (Green) LED:

- On = board voltage levels are normal
- Off = fault in power to board

PSU OK (Green) LED:

- Off = no power to switch
- On = switch power OK
- Blinking = fault in at least one of the power supplies

Fabric Manager (Green) LED:

- On = Fabric Manager is active
- Off = Fabric Manager is not active

Info LED:

Chassis locator LED for identifying the chassis during service.

- Off = no attention required
- Blinking blue = chassis attention required

Fans (Green) LED - Display's the health of the fan unit.

- On = fault in vertical and/or horizontal fan unit
- Off = all fans OK

Device Manager (Green) LED:

- On = Device Manager is active
- Off = Device Manager is not active

Preparing for the Procedure

Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.

1 Remove the new part from its packaging and place it on a static-free surface.

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- 2 Record the serial number and/or part number of the new part in the site equipment log.
- 3 Access Server Management Client.
- 4 <u>Using Server Management Client, open a maintenance window for the target component.</u>
- 5 <u>Using Server Management Client, initiate a FRU replacement procedure for the component.</u>
- 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status, verifies that all conditions for replacing the component have been met, and enables the locator LED.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

Removing a Chassis Management Board



Figure 68: Removing a Chassis Management Board

- 1 Unplug the power cords from the switch AC inlets.
- 2 Unplug the network cable from the chassis management board.
- ³ Loosen the captive screws on either side of the chassis management board.
- 4 Pull the lever on the management board, and slide the chassis management board out of the switch.

Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Chassis Management Board

Installing a Chassis Management Board





- 1 Align the chassis management board with the opening on the chassis.
- 2 Slide the chassis management board into the slot and push the lever toward the board until it clicks into place.
- 3 Tighten the two captive screws to secure the chassis management board to the chassis.
- 4 Connect the network cable to the chassis management board.

Notice: Do not plug in the power cords at this time.

Completing the Procedure

At the rear of the cabinet, plug the power cords into the switch AC inlets.
 The switch takes approximately 2-3 minutes to start up.

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- 2 Return to Server Management Client and, in the FRU Replace window, click Ok.
- 3 <u>Use the Bootp/DHCP Packet Monitor in Server Management Web Services to obtain the MAC addresses for the chassis.</u>
- 4 Return to Server Management Client and, in the FRU Replace window, click Ok.
- 5 <u>Using the CMIC Configuration Editor, replace the old primary MAC address with the</u> <u>new one, then return to the FRU Replace window and click Ok.</u>
- 6 Remove the power cords from the AC inlets.

The switch powers down.

7 Plug the power cords into the switch AC inlets.

The switch takes approximately 2-3 minutes to start up.

- 8 Return to Server Management Client and, in the FRU Replace window, click Ok.
- 9 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.
- 10 Download the firmware image from TSS.
- 11 <u>Configure the SWS as a remote SCP Host.</u>
- 12 Update the firmware image.
- 13 Check the firmware version against the version on the redundant GD4X00 switch.

If the other switch has a different version, update the firmware image on the redundant switch.

- 14 <u>Stage the Chassis Management board to reset the switch to factory defaults.</u>
- 15 <u>Reset the root and administrative password.</u>
- 16 Name the switch.
- 17 <u>Using the Server Management Client Tree View, verify that the operational state of the chassis is OK.</u>

It may take up to 10 minutes for the switch state to reach OK.

- 18 <u>Using Server Management Client, add a comment to the summary alert.</u>
- 19 Using Server Management Client, clear the summary alert.
- 20 Using Server Management Client, close the maintenance window.
- 21 Pack the replaced part according to Teradata Customer Support procedures, then return it to the service parts center or dispose of it locally.

Replacing a Mellanox GD4200 162-Port InfiniBand Switch

- Caution: Because this component is heavy, a lift is recommended for this portion of the procedure. If a lift is not available, two persons are required.
- Notice: A large static-free workspace is required to perform this procedure.

Observe all servicing cautions and warnings.

Related Topics <u>Servicing Cautions and Warnings, on page 799</u>

Preparing for the Procedure

- Notice: Wear an anti-static wrist strap attached to an unpainted metal surface on the rack or chassis when handling parts.
 - 1 Remove the new part from its packaging and place it on a static-free surface.
 - 2 Record the serial number and/or part number of the new part in the site equipment log.
 - 3 Access Server Management Client.
 - 4 <u>Using Server Management Client, open a maintenance window for the target component.</u>
 - 5 <u>Using Server Management Client, initiate a FRU replacement procedure for the component.</u>
 - 6 In the FRU Replace window, click Ok to advance to the replacement step.

The software checks the component status, verifies that all conditions for replacing the component have been met, and enables the locator LED.

Note: If an error message appears, click Cancel. Resolve the issue, then reinitiate the FRU replacement procedure.

Removing a Mellanox GD4200 162-Port InfiniBand Switch

Caution: Because this component is heavy, a lift is recommended for this portion of the procedure. If a lift is not available, two people are required.

Note: The chassis replacement procedure requires that all spine boards, all leaf boards and the chassis management board from the existing chassis be installed in the new chassis.



Figure 70: Removing a Mellanox GD4200 InfiniBand Switch

- 1 Unplug the power cords from each of the power supply AC inlets.
- 2 At the rear of the cabinet, make sure all network cables are labeled.
- 3 Unplug the network cables.
- 4 Remove the power supplies and label them:
 - a Label each power supply as used.
 - b Loosen the two captive screws securing each power supply to the chassis.
 - c Pull each power supply out of the chassis.
 - d Set two power supplies aside for reuse and package the other two for return or disposal.
- 5 Remove the line boards:
 - a Loosen the two captive screws securing each line board to the chassis.
 - b Starting from the top line board, carefully pull the levers out and apart to remove each line board out of the chassis.
 - c Set the line boards aside for reuse by carefully placing them on a static-free surface to avoid damage.
- 6 Remove the chassis management board:
 - a Label the chassis management board as original.
 - b Loosen the two captive screws securing the chassis management board to the chassis.

- c Carefully pull the lever out on the chassis management board and remove the board from the chassis.
- d Set the chassis management board aside for reuse. Place it on a static-free surface.
- 7 At the front of the cabinet, remove the vertical fan module:
 - a Mark the vertical fan module as used.
 - b Loosen the four captive screws securing the vertical fan module to the chassis.
 - c Pull the vertical fan module out of the chassis.
 - d Package the vertical fan module for return or disposal.
- 8 Remove the spine boards:
 - a Loosen the two captive screws securing each spine board to the chassis.
 - b Carefully pull the levers out and apart to remove each of the four spine boards out of the chassis.
 - c Set the spine boards aside for reuse by carefully placing them on a static-free surface to avoid damage.
- 9 Remove the horizontal fan module:
 - a Mark the horizontal fan module as used.
 - b Loosen the four captive screws securing the horizontal fan module to the chassis.
 - c Pull the horizontal fan module out of the chassis.
 - d Prepare the horizontal fan module for disposal.
- 10 Remove the chassis from the cabinet:
 - a Loosen the nut securing the ground lug and remove the ground wire from the chassis. Set the nut aside for reuse.
 - Remove the top four rack screws on each side of the switch that secure the switch to the front of the cabinet.
 Set the screws aside for reuse.
- Notice: Do not remove the three bottom rack screws from each side the switch. Doing so will result in damage to the rails.
 - c Using a lift or help from an additional person, carefully push the switch out from the rear of the cabinet while supporting the underside of the switch to prevent it from falling out, then slide the switch out of the cabinet and onto the lift or other surface.
 - d Set the chassis aside for return or disposal.

Preparing a Mellanox GD4200 162-Port InfiniBand Switch for Installation

- Caution: Because this component is heavy, a lift is recommended for this portion of the procedure. If a lift is not available, two persons are required.
 - 1 Position the replacement switch on a working surface or use a lift to raise the replacement switch chassis to a comfortable working position.
 - 2 At the back of the switch, remove the two power supplies:
 - a Label each of the power supplies as *new*.
 - b Loosen the two captive screws securing each power supply to the chassis.
 - c Pull each power supply out of the chassis.
 - d Put the power supplies aside for reuse.
 - 3 Remove the chassis management board:
 - a Loosen the two captive screws securing the chassis management board to the chassis.
 - b Label the chassis management board as new.
 - c Carefully pull the lever out on the management board and remove the board from the chassis.
 - d Package the management board for reuse, return, or disposal.
 - 4 At the front of the switch, remove the vertical fan module:
 - a Label the vertical fan module as *new*.
 - b Loosen the four captive screws securing the vertical fan module to the chassis.
 - c Pull the vertical fan module out of the chassis.
 - d Put the vertical fan module aside for reuse.
 - 5 Remove the horizontal fan module:
 - a Label the horizontal fan module as *new*.
 - b Loosen the four captive screws securing the horizontal fan module to the chassis.
 - c Pull the horizontal fan module out of the chassis.
 - d Put the horizontal fan module aside for reuse.
 - 6 Remove the filler panels from the four spine board slots.
 - 7 Remove the filler panels from the nine line board slots.

Installing a Mellanox GD4200 162-Port InfiniBand Switch

Caution: Because this component is heavy, a lift is recommended for this portion of the procedure. If a lift is not available, two persons are required.

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Note: The chassis replacement procedure requires that all spine boards, all line boards and the chassis management board from the replaced chassis be reinstalled into the new chassis.



Figure 71: Installing a Mellanox GD4200 InfiniBand Switch Chassis (Front)



Figure 72: Installing a Mellanox GD4200 InfiniBand Switch Chassis (Rear)

- 1 Install the switch chassis in the cabinet:
 - a Using a lift or help from an additional person, carefully position the switch onto the rails and slide it into the cabinet.
 - b At the front of the cabinet, install the eight rack screws securing the switch to the cabinet.

Use the rack screws that were set aside during removal.

- c Install the ground wire to the chassis lug and tighten the nut securing the ground. Use the nut that was set aside during removal.
- 2 Install the spine boards:
 - a Carefully push each spine board into position and push the levers together to secure the boards into the chassis.

Use the spine boards that were set aside during removal.

- b Tighten the two captive screws securing each spine board to the chassis.
- 3 Install the fan modules:
 - a Install both fan modules into the chassis.

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Use the fan modules marked new during preparation.

- b Tighten the four captive screws securing each fan module to the chassis.
- 4 At the rear of the cabinet, install the power supplies:
 - a Install each power supply into the chassis.

Use the two *new* power supplies removed during preparation and two of the power supplies marked *used* during removal of the chassis.

- b Tighten the two captive screws securing each power supply to the chassis.
- 5 Install the line boards:
 - a Starting from the bottom line board, carefully push each line board into position, then push the levers together and secure the board into the chassis.
 Use the line boards that were set aside during removal.
 - b Tighten the two captive screws securing each line board to the chassis.
- 6 Install the chassis management board and filler plate:
 - Carefully push the chassis management board into position in the left-hand management board slot, then push the lever in to secure the board into the chassis.
 Use the chassis management board that was marked *original* and set aside during removal.
 - b Tighten the two captive screws securing the chassis management board to the chassis.
 - c Install the filler panel covering the unused chassis management board slot. Use the filler panel set aside for reuse.
 - d Tighten the two captive screws securing the filler panel to the chassis.
- 7 Connect the network cables to the appropriate ports in the new switch.

Note: Do not plug in the power cords at this time.

Completing the Procedure

1 At the rear of the cabinet, Plug the power cords into the switch AC inlets.

The switch takes approximately 2-3 minutes to start up.

2 Return to Server Management Client and, in the FRU Replace window, click Ok.

Note: Because this procedure requires re-using the chassis management board and the existing line and spine boards, the CMIC configuration and update of firmware is not necessary. Click OK through these FRU Replace windows.

The software checks the operational status of the component. If an error message appears, click Cancel and contact a Customer Service Representative.

3 When the Replace FRU confirmation dialog box appears, click Ok to close the FRU replacement session in Server Management Client.

- 4 <u>Using the Server Management Client Tree View, check the operational state of the target chassis.</u>
- 5 <u>Using Server Management Client, add a comment to the summary alert.</u>
- 6 <u>Using Server Management Client, clear the summary alert.</u>
- 7 <u>Using Server Management Client, close the maintenance window.</u>
- 8 Package the remaining parts according to the following conditions:
 - After replacing the chassis, determine if the unused parts from the new InfiniBand switch chassis are to be kept on site as future spares. Do not return these parts to the service center. Do not add these parts to the recorded local inventory.
 - If these parts are not to be used as future spares, dispose of them locally according to Teradata Customer Services procedure and local regulations.
 - If instructed to return the InfiniBand switch chassis for failure analysis, package and ship the switch to Teradata. Otherwise, dispose of the chassis locally according to Teradata Customer Services procedure and local regulations.

Chapter 5 Mellanox GD4200 162-Port InfiniBand Switch Hardware Servicing Procedures Replacing a Mellanox GD4200 162-Port InfiniBand Switch