Intel® Storage System SSR316MJ2 Backplane Board (FMJBACKPLANE)

Installation Guide

Order Number: C75951-001

Important Safety Instructions

Important Safety Instructions

Read all caution and safety statements in this document before performing any of the instructions. See *Intel Server Boards and Server Chassis Safety Information* at http://support.intel.com/support/motherboards/server/safecert.htm.

Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warn- und Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel-Serverplatinen und -Servergehäusen unter http://support.intel.com/support/motherboards/server/safecert.htm.

重要安全指导

在执行任何指令之前，请阅读本文档中的所有注意事项及安全声明。 和/或 http://support.intel.com/support/motherboards/server/safecert.htm 上的 *Intel Server Boards and Server Chassis Safety Information*（《Intel 服务器主板与服务器机箱安全信息》）。

Important Safety InstructionsConsignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez *Intel Server Boards and Server Chassis Safety Information* rendez-vous sur le site http://support.intel.com/support/motherboards/server/safecert.htm.

Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea *Intel Server Boards and Server Chassis Safety Information* en http://support.intel.com/support/motherboards/server/safecert.htm.

⚠ WARNINGS

Storage system power on/off: The push-button on/off power switch on the front panel of the storage system does not turn off the AC power. To remove AC power from the storage system, you must unplug the AC power cord from either the power supply or wall outlet.

Hazardous conditions—power supply: Hazardous voltage, current, and energy levels are present inside the power supply enclosure. There are no user-serviceable parts inside the power supply; servicing should only be done by technically qualified personnel.

Hazardous conditions—devices and cables: Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the storage system and disconnect telecommunications systems, networks, modems, and the power cord attached to the storage system before opening it. Failure to do so can result in personal injury or equipment damage.

Avoid injury: Lifting the storage system chassis and attaching it to the rack is a two-person job. If needed, use an appropriate lifting device. A fully loaded Intel® Storage System SSR316MJ2 weighs approximately 31.8 kg (70 lbs.).

⚠ CAUTIONS

Temperature: The operating temperature of the storage system, when installed in an equipment rack, must not go below 5 °C (41 °F) or rise above 35 °C (95 °F). Extreme fluctuations in temperature can cause a variety of problems in the storage system.

Ventilation: The equipment rack must provide sufficient airflow to the front of the storage system to maintain proper cooling. It must also include ventilation sufficient to exhaust a maximum of 1900 BTUs per hour for a fully loaded Intel® Storage System SSR316MJ2.

Disclaimer

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Revision History

Date	Revision Number	Modifications
Sept. 8, 2004	1.0	Initial release
Oct. 7, 2004	1.1	Minor edits

Contents

About the Backplane Board Assembly 7

Contents 7

Backplane Board Installation Procedures 8

Required Tools 8
Power Down System and Remove Chassis Cover 8
Unseat Hard Disk Drives from Hard Disk Drive Bays 9
Remove Front Panel Cables from Front Panel Board 10
Remove Phillips Screws from System Fan Assembly 11
Remove Fan Connectors from Baseboard 12
Remove Fan Assembly from the System and SATA Cables from the Host Bus Adapter Cards 13
Cut the Plastic Ties that House the SATA Cables 14
Remove I^2C Cables from Backplane Board 15
Remove Power Distribution Board Module Connectors from Backplane Board 16
Remove Backplane Board from the System 17
Install New Backplane Board 18
Re-connect Power Distribution Board Module Connectors to Backplane Board 19
Re-connect SATA Cables to HBA Cards 20
Re-connect the I^2C Cables 21
Re-insert Fan Assembly into System 22
Re-attach Fan Assembly to System 23
Re-attach System Fan Assembly Connectors to Baseboard 24
Re-seat Front Panel Board Cables 25
Re-seat Hard Disk Drives in Hard Disk Drive Bays 26
Finishing Up 27

Figures

Figure 1. Removing Chassis Cover 8

Figure 2. Unseat Hard Disk Drives and Hard Disk Drive Carriers 9

Figure 3. Removing Front Panel Cables 10
Figure 4. Removing Phillips Screws to Release the System Fan Assembly 11
Figure 5. Removing Fan Connectors from the Baseboard 12
Figure 6. Removing System Fan Assembly and SATA Cable Connectors 13
Figure 7. Cutting the Plastic Ties that House the SATA Cables 14
Figure 8. Removing the I^2C Cables from the Backplane Board 15
Figure 9. Removing the Power Distribution Board Module Connectors 16
Figure 10. Removing the Backplane Board from the System 17
Figure 11. Installing the New Backplane Board in the System 18
Figure 12. Re-Connecting the Power Distribution Board Module Connectors 19
Figure 13. Re-connecting the SATA Cables to the HBA Cards 20
Figure 14. Re-connecting the I^2C Cables 21
Figure 15. Re-inserting the Fan Assembly into the System 22
Figure 16. Re-attaching the Fan Assembly to the System 23
Figure 17. Re-attaching the System Fan Assembly Connectors 24
Figure 18. Re-seating Front Panel Board Cables 25
Figure 19. Re-seating Hard Disk Drives in Hard Disk Drive Bays 26
Figure 20. Re-attaching the Chassis Cover 27

About the Backplane Board Assembly

Enclosed is your new Intel® FMJBACKPLANE Backplane Board. The Intel® FMJBACKPLANE Backplane Board comes equipped with sixteen connected SATA cables.

NOTE

This document describes how to install the FMJBACKPLANE Backplane Board into the Intel® Storage System SSR316MJ2.

The FMJBACKPLANE Backplane Board is installed into the storage system just behind the hard disk drives, near the front portion of your system.

Contents

- Intel® FMJBACKPLANE Backplane Board Assembly

  The FMJBACKPLANE Backplane Board Assembly consists of the following:

  — FMJBACKPLANE Backplane Board mounted within metal housing

  — Pre-installed SATA Cables that are already connected to the Backplane Board

Backplane Board Installation Procedures

Required Tools

- Cross-head (Number 1 size Phillips*) screwdriver, maximum length 4 inches

Power Down System and Remove Chassis Cover

A. From within the Intel® Storage System Console, power down your system.
B. Remove both AC Power cords from the AC Power inputs on your system. See Figure 1.
C. Loosen the two thumb screws from the top of the chassis cover. See Figure 1.
D. Facing the front of the chassis, push the top cover rearward, and then lift it up to remove it.

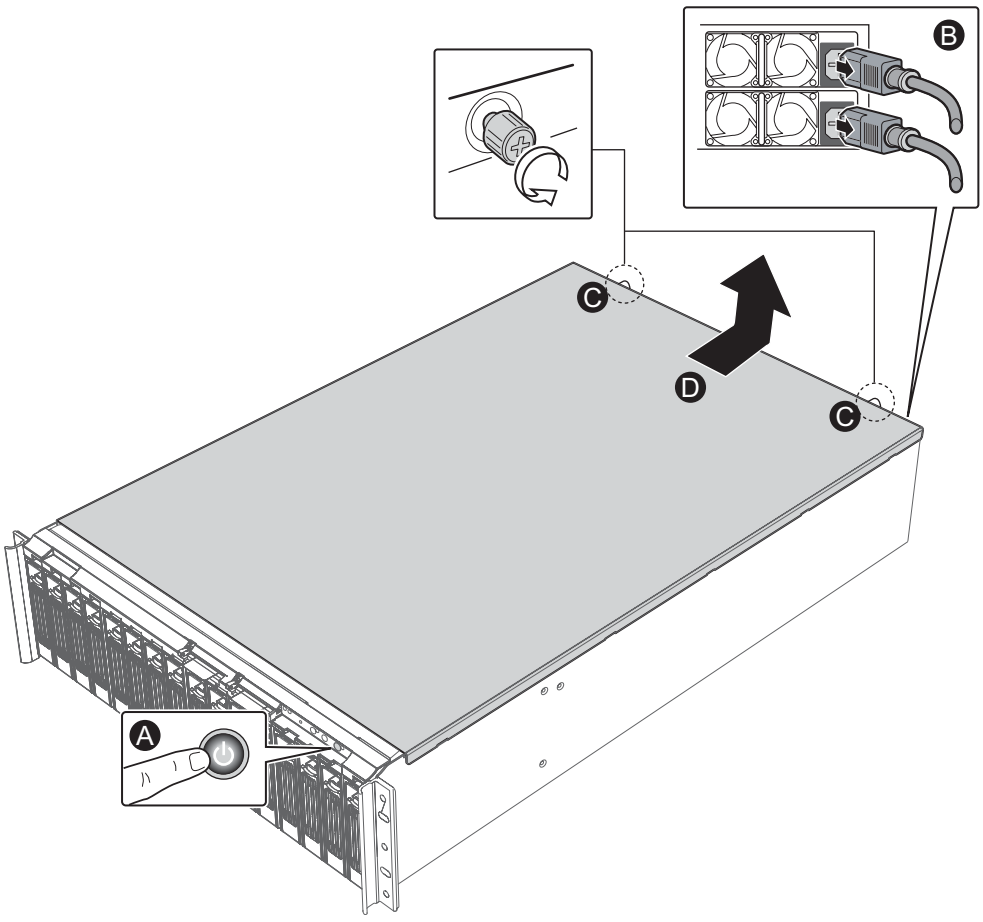

Figure 1. Removing Chassis Cover

Unseat Hard Disk Drives from Hard Disk Drive Bays

A. Pressing down on the hard disk drive handle release mechanisms, unlatch the handle on the hard disk drives and hard disk drive carriers. See Figure 2.
B. Rotate the hard disk drive and hard disk drive carrier handles downward. See Figure 2.
C. Slide the hard disk drives and hard disk drive carriers at least halfway out of the hard disk drive bays. See Figure 2. It is not necessary to completely remove the hard disk drives from the bays.

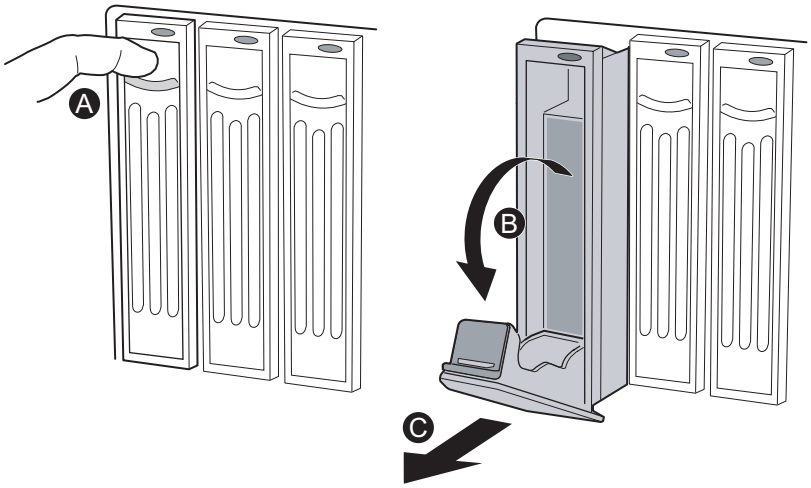

Figure 2. Unseat Hard Disk Drives and Hard Disk Drive Carriers

NOTE: If a hard disk is completely removed from the Storage System Console, it must be re-installed into the exact same drive bay. Refer to the Intel® Storage System SSR316MJ2 Quick Start User's Guide for more details.

Remove Front Panel Cables from Front Panel Board

A. Remove the Primary IDE Cable labeled J5 from its receptacle on the front panel board. See Figure 3.
B. Remove the Secondary IDE Cable labeled J3 from its receptacle on the front panel board. See Figure 3.
C. Remove the Front Panel Cable labeled J1 from its connector receptacle on the front panel board. See Figure 3.
D. Remove the front panel power connector from its connector receptacle on the front panel board. See Figure 3.

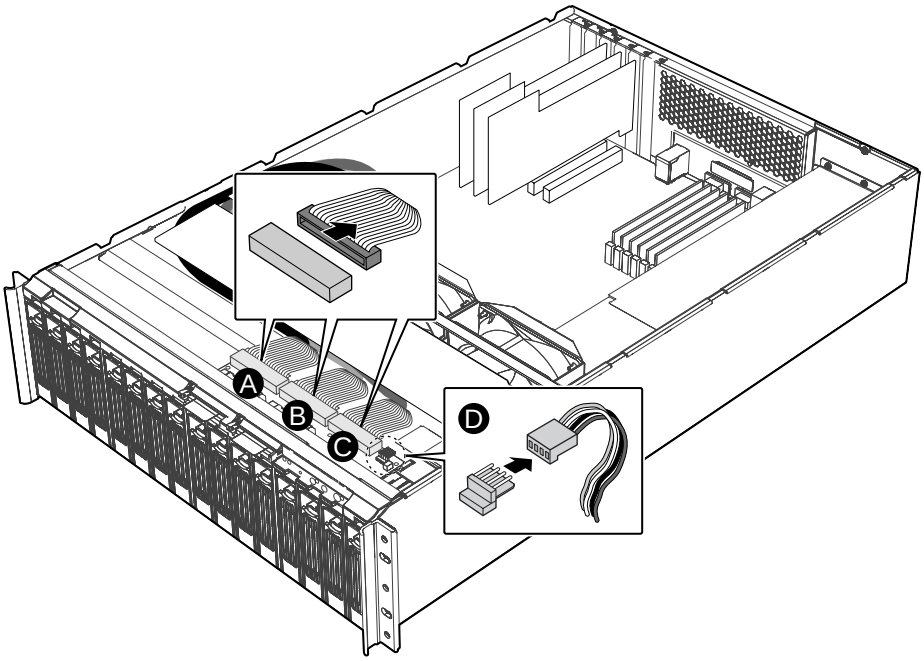

Figure 3. Removing Front Panel Cables

Remove Phillips Screws from System Fan Assembly

A. Using a Number 1 size Phillips Screwdriver, remove the Phillips screw on each side of the system that holds the system fan assembly in place. See Figure 4. Set these screws aside. They will be re-installed later.

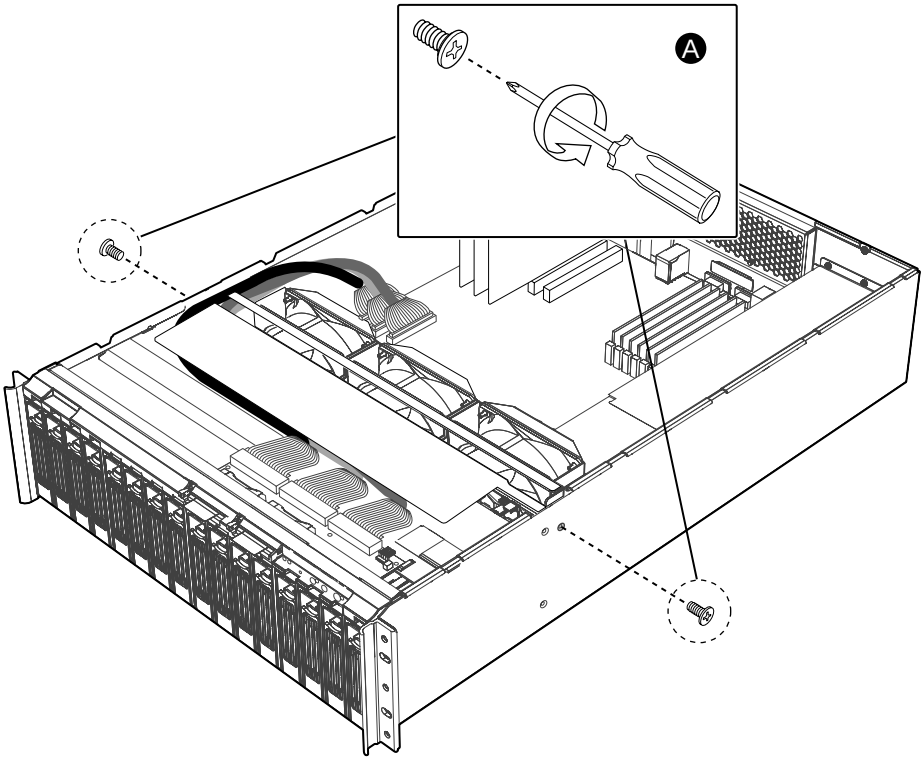

Figure 4. Removing Phillips Screws to Release the System Fan Assembly

Remove Fan Connectors from Baseboard

A. Remove the wire connector for Fan 3 from the baseboard. See Figure 5.
B. Remove the wire connector for Fan 4 from the baseboard. See Figure 5.
C. Remove the wire connector for Fan 5 from the baseboard. See Figure 5.

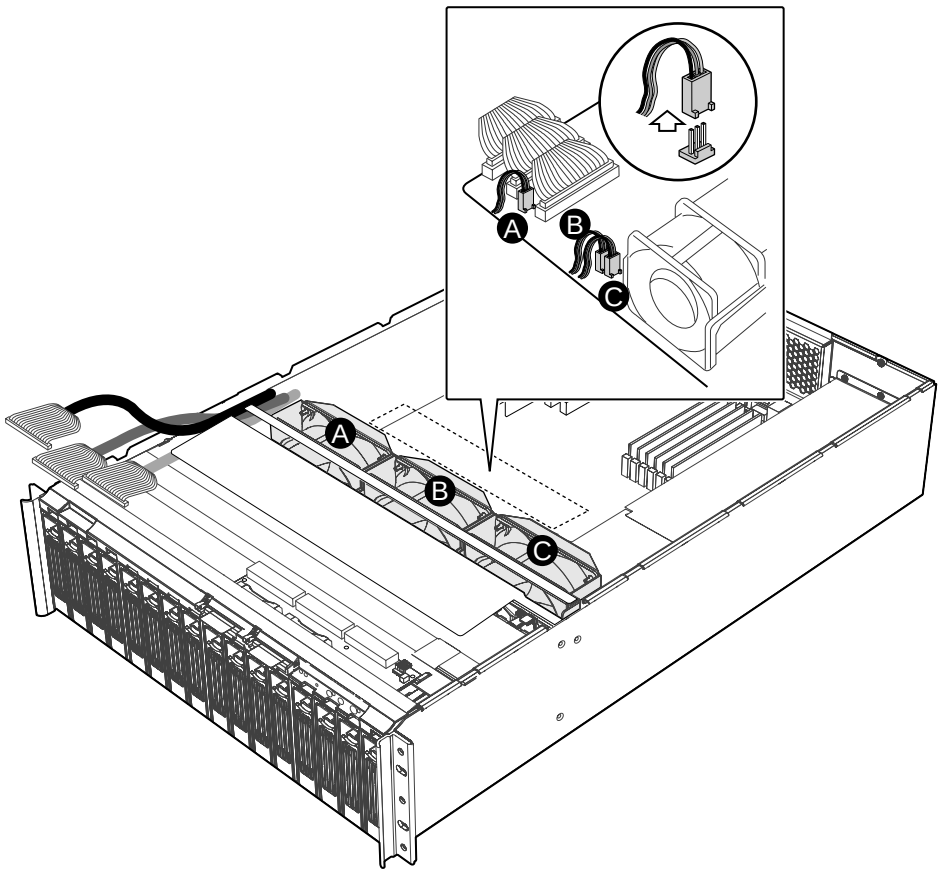

Figure 5. Removing Fan Connectors from the Baseboard

Remove Fan Assembly from the System and SATA Cables from the Host Bus Adapter Cards

A. Simultaneously pull up on both sides of the system and remove the fan assembly from the storage system. Set the system fan assembly on a static-free surface. See Figure 6.
B. Carefully remove the 16 SATA Cable connectors from the three SATA Host Bus Adapter Cards near the back of the system. See Figure 6.

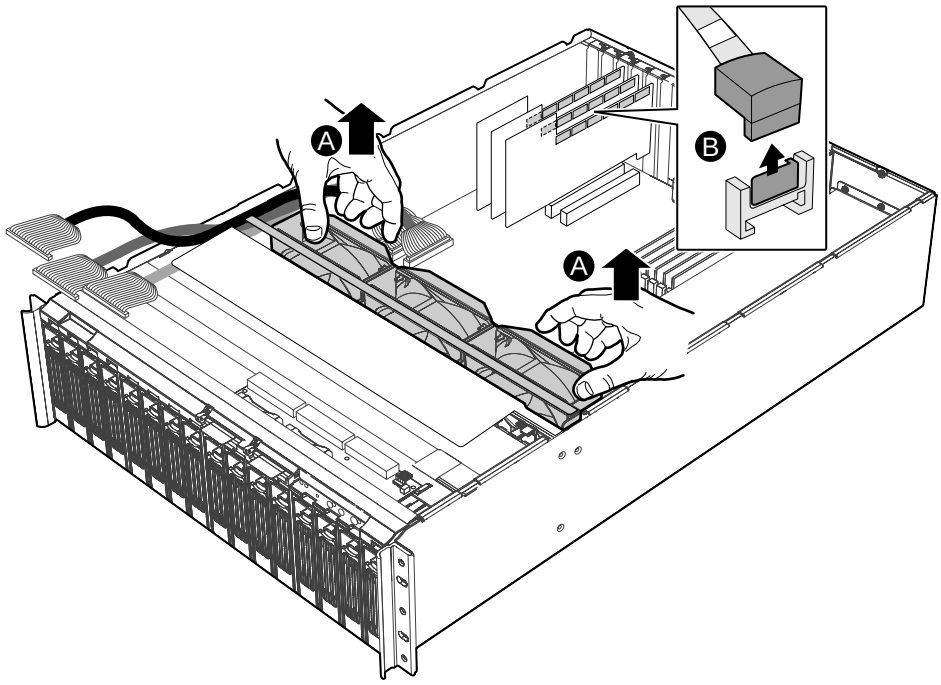

Figure 6. Removing System Fan Assembly and SATA Cable Connectors

Cut the Plastic Ties that House the SATA Cables

A. Cut the plastic cable ties that bundle the SATA Cables. See Figure 7.

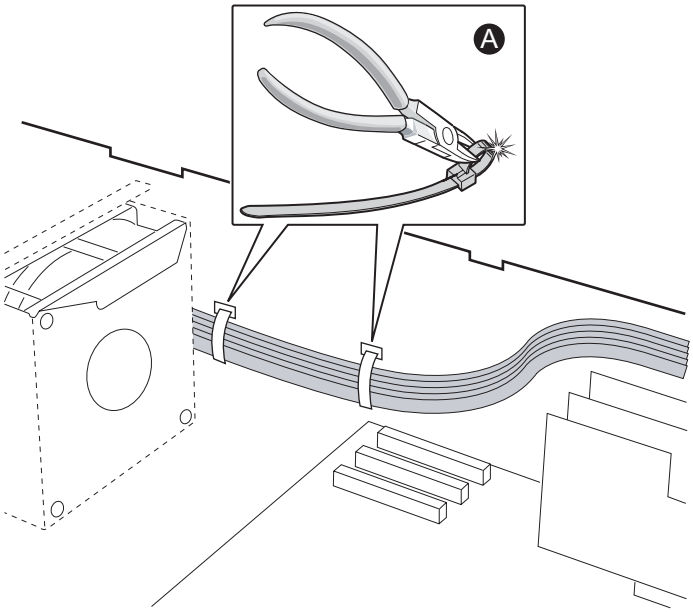

Figure 7. Cutting the Plastic Ties that House the SATA Cables

Remove I²C Cables from Backplane Board

A. Make a note of the header positions of the three I²C Cable connectors. After installation of the SATA Cables has been completed, you will re-connect these connectors to the same headers. Carefully remove the I²C Cable connector labeled JP4 from its I²C Cable header on the backplane board. Carefully remove the I²C Cable connector labeled SL2J6 from its I²C Cable header in the HBA Card set. See Figure 8.
B. Carefully remove the I²C Cable connector labeled JP6 from its I²C Cable header on the backplane board. Carefully remove the I²C Cable connector labeled SL3J6 from its I²C Cable header in the HBA Card set. See Figure 8.
C. Carefully remove the I²C Cable connector labeled JP7 from its I²C Cable header on the backplane board. Carefully remove the I²C Cable connector labeled SL4J6 from its I²C Cable header in the HBA Card set. See Figure 8. Set the I²C Cable connectors on a static-free surface.

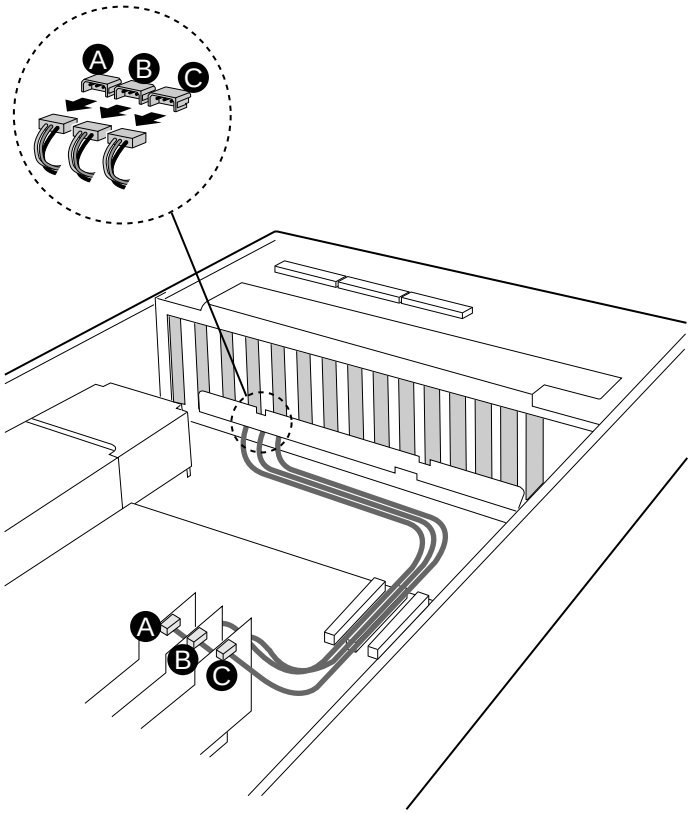

Figure 8. Removing the I²C Cables from the Backplane Board

Remove Power Distribution Board Module Connectors from Backplane Board

A. Carefully remove the two 12-pin Power Distribution Board Module connectors from the backplane board. See Figure 9.

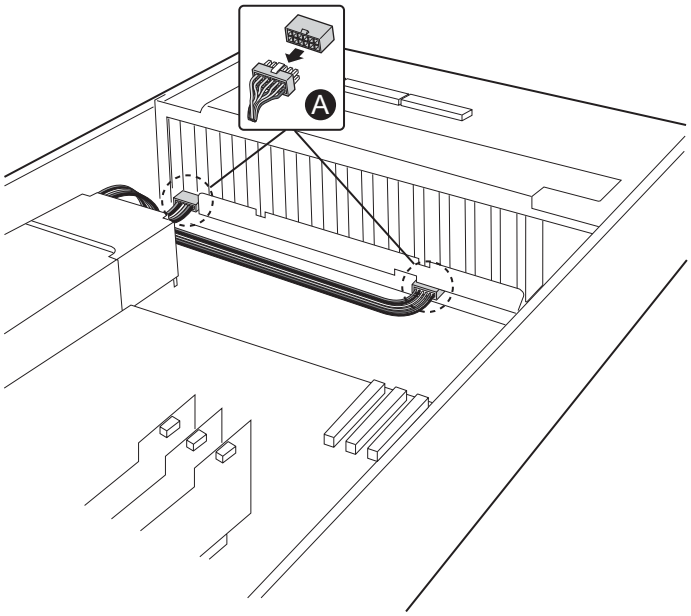

Figure 9. Removing the Power Distribution Board Module Connectors

Remove Backplane Board from the System

A. Using a Number 1 size Phillips Screwdriver, remove the two Phillips screws on each side of the system that hold the backplane board to the side of the chassis. See Figure 10. Set these screws aside. They will be re-installed later.
B. Using a Number 1 size Phillips Screwdriver, remove the four Phillips screws from the steel lip that holds the backplane board in place. See Figure 10. Set these screws aside. They will be re-installed later.
C. Carefully remove the backplane board from the storage system. Pay attention to sharp edges on the backplane board. See Figure 10.

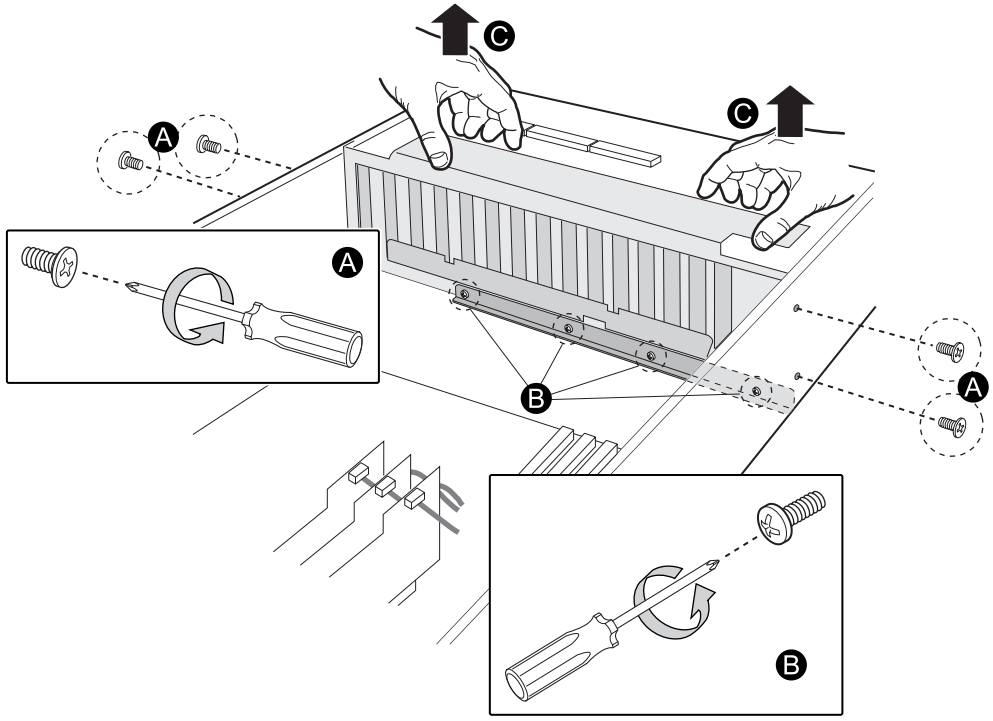

Figure 10. Removing the Backplane Board from the System

Install New Backplane Board

A. Insert the new Intel® FMJBACKPLANE Backplane Board and sheet metal shroud combined unit into the system. Align the holes on the bottom of the Backplane Board sheet metal shroud onto the protruding blue pegs on the floor of the chassis. Snap the Backplane Board and sheet metal shroud into place.
B. Align the screw holes on the backplane board with the screws holes on the steel lip. Using a Number 1 size Phillips Screwdriver, screw in the four Phillips screws into the steel lip and the backplane board until the backplane board is installed. See Figure 11.
C. Align the screw holes on the side of the chassis with the screws holes on the backplane sheet metal shroud. Using a Number 1 size Phillips Screwdriver, screw in the two Phillips screws into each side of the system until the backplane board is installed. See Figure 11.

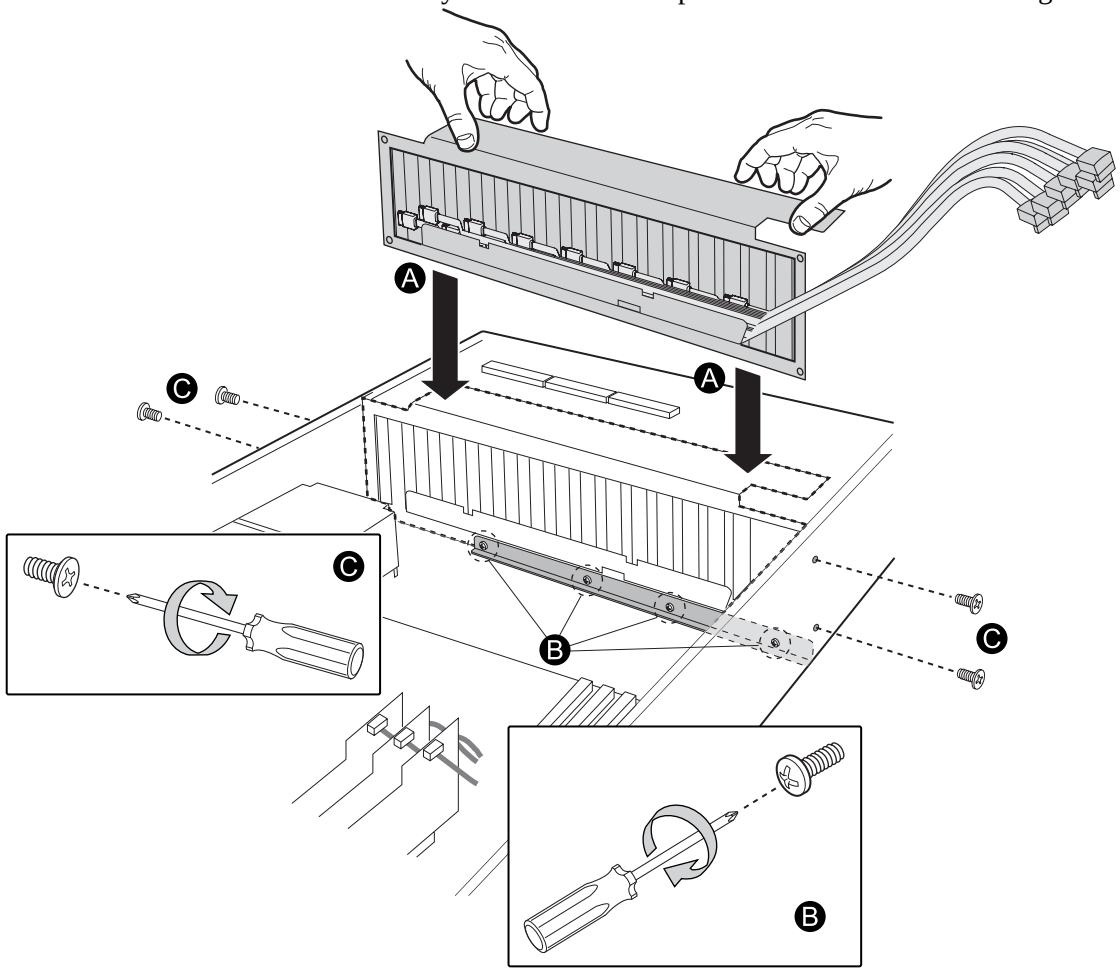

Figure 11. Installing the New Backplane Board in the System

Re-connect Power Distribution Board Module Connectors to Backplane Board

A. Carefully re-connect the two 12-pin Power Distribution Board Module connectors to the backplane board. See Figure 12.

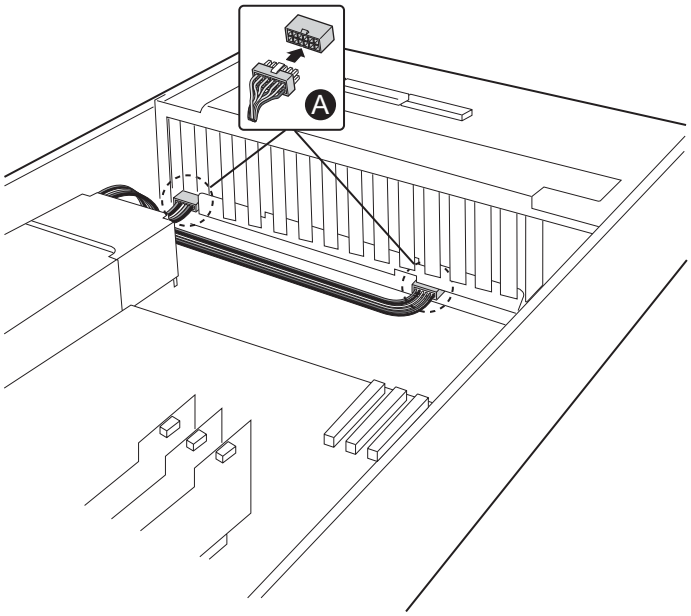

Figure 12. Re-Connecting the Power Distribution Board Module Connectors

Re-connect SATA Cables to HBA Cards

A. Carefully re-connect the 16 SATA Cable connectors to the three SATA Host Bus Adapter Cards. Ensure that the SATA Cables are routed to the outside of the Host Bus Adapter Cards. See Figure 13.
B. Insert new plastic cable ties through the steel links on the side of the chassis where the SATA Cables are normally routed. Bundle the SATA Cables in the same way they were originally bundled and snap the ties tight into place around the cables. Wrap new plastic cable ties around the SATA Cables in the other spots where the original plastic cable ties were cut, and snap the ties tight into place around the cables. See Figure 13. A total of seven new plastic cable ties should be used. Route the SATA Cables along the side of the chassis in the same way that the original SATA Cables were routed. The cables remain on the chassis side of the Host Bus Adapter Cards and connect to the cards from the chassis side.

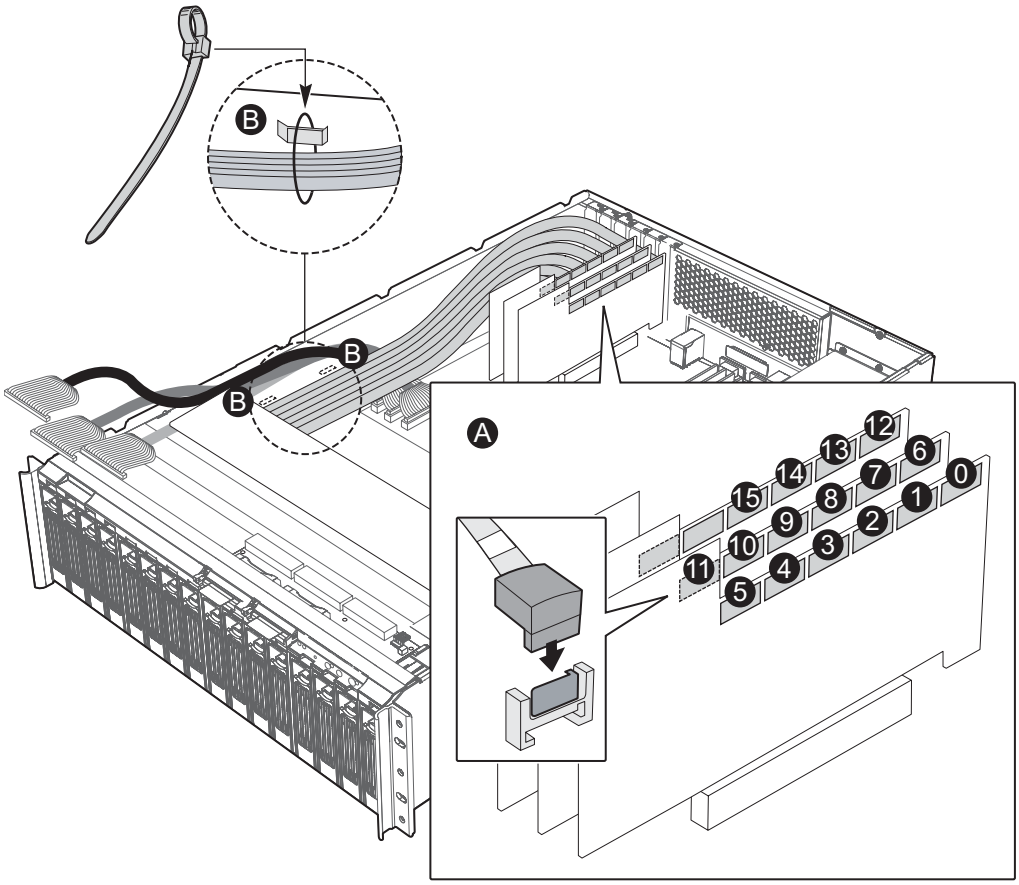

Figure 13. Re-connecting the SATA Cables to the HBA Cards

Re-connect the I²C Cables

A. Carefully re-connect the I²C Cable connector labeled JP4 to its header on the backplane board. Carefully re-connect I²C Cable connector labeled SL2J6 to its header in the HBA Card set. See Figure 14.
B. Carefully re-connect the I²C Cable connector labeled JP6 to its header on the backplane board. Carefully re-connect I²C Cable connector labeled SL3J6 to its header in the HBA Card set See Figure 14.
C. Carefully re-connect the I²C Cable connector labeled JP7 to its header on the backplane board. Carefully re-connect I²C Cable connector labeled SL4J6 to its header in the HBA Card set See Figure 14.

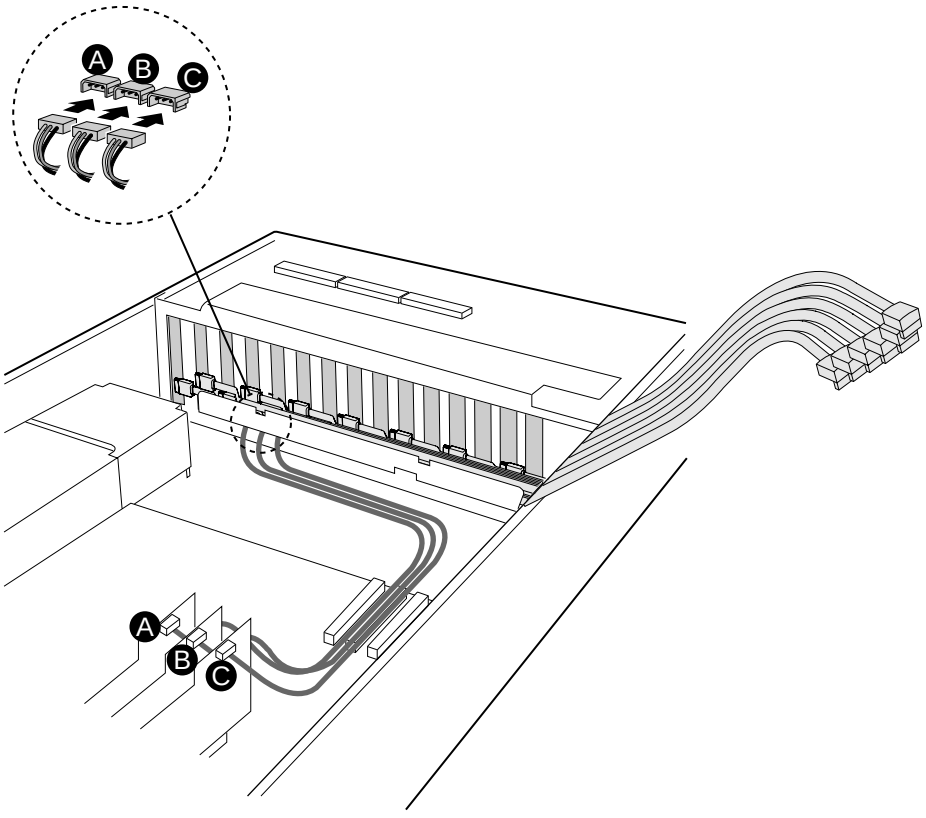

Figure 14. Re-connecting the I²C Cables

Re-insert Fan Assembly into System

A. Remove any slack wires away from the space that is occupied by the system fan assembly. Align the holes on the bottom edge of the system fan assembly with the blue plastic brackets on the bottom of the chassis. Move the system fan assembly into place. See Figure 15.

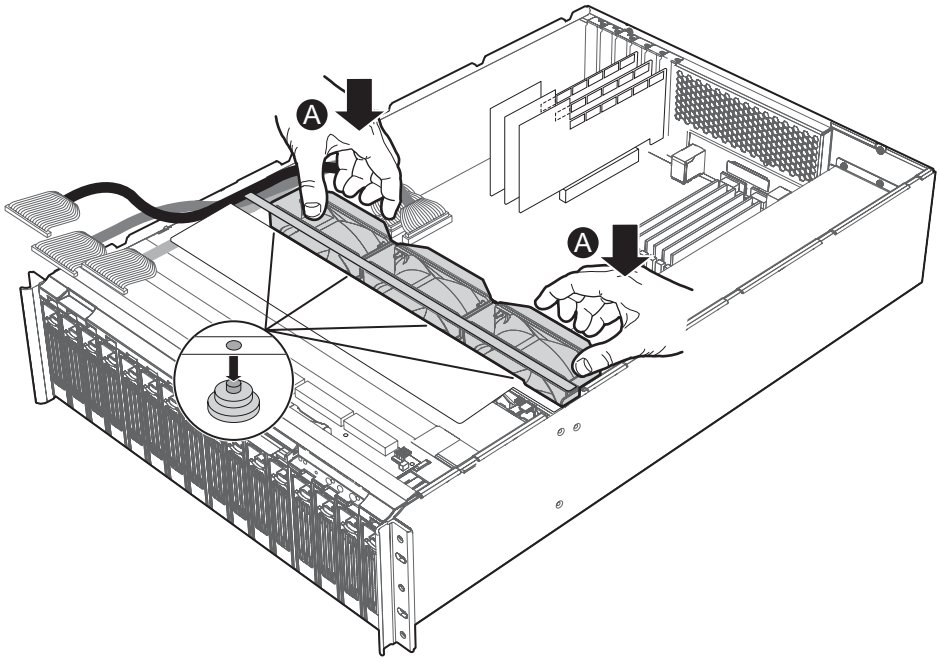

Figure 15. Re-inserting the Fan Assembly into the System

Re-attach Fan Assembly to System

A. Using a Number 1 size Phillips Screwdriver, screw in the one Phillips screw on each side of the system into place until the system fan assembly is mounted in the chassis. See Figure 16.

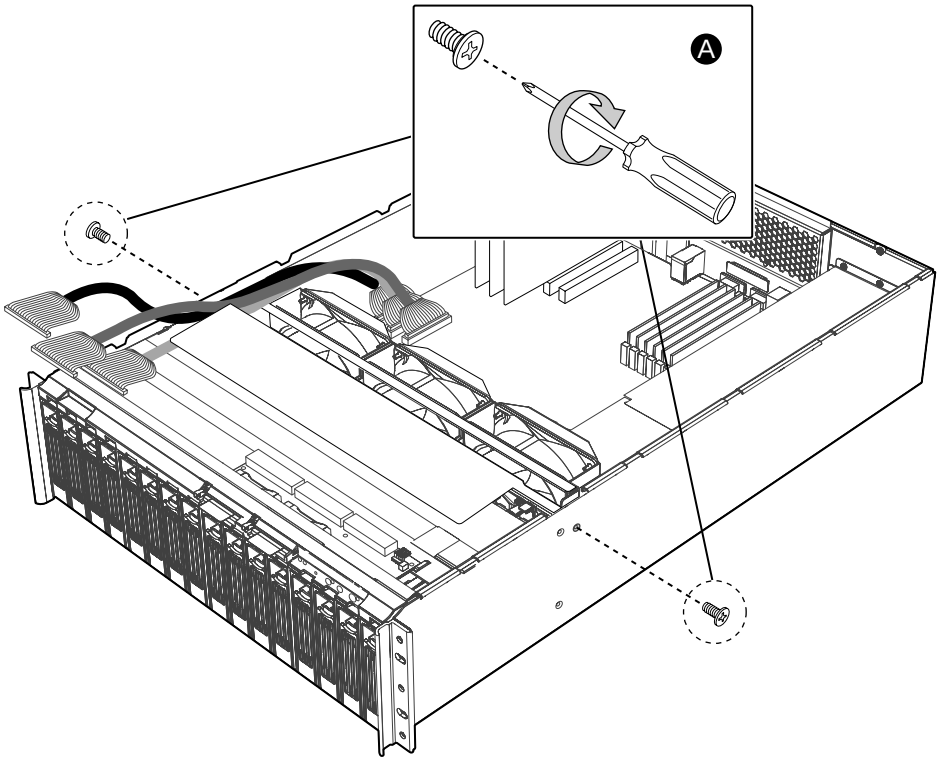

Figure 16. Re-attaching the Fan Assembly to the System

Re-attach System Fan Assembly Connectors to Baseboard

A. Re-connect the wire connector for Fan 3 to the baseboard. See Figure 17.
B. Re-connect the wire connector for Fan 4 to the baseboard. See Figure 17.
C. Re-connect the wire connector for Fan 5 to the baseboard. See Figure 17.

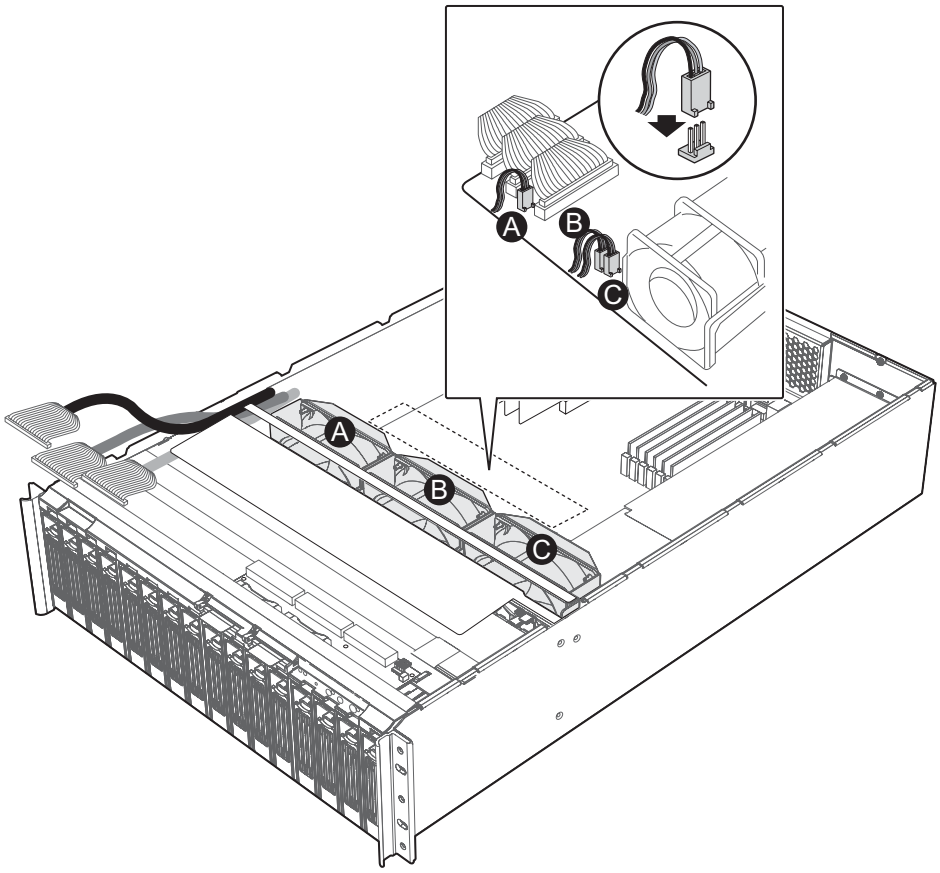

Figure 17. Re-attaching the System Fan Assembly Connectors

Re-seat Front Panel Board Cables

Once you have inserted and attached the new backplane board in your system, re-seat the front panel board cables. Complete the following steps.

A. Re-seat the Front Panel Cable labeled J1 into its receptacle on the front panel board. See Figure 18.
B. Re-seat the Secondary IDE Cable labeled J3 into its receptacle on the front panel board. See Figure 18.
C. Re-seat the Primary IDE Cable labeled J5 into its receptacle on the front panel board. See Figure 18.
D. Re-seat the front panel power connector into its receptacle on the front panel board. See Figure 18.

NOTE: The color of the mesh sheath of the Primary IDE Cable is blue. The blue Primary IDE Cable connects to the blue Front Panel Board connector receptacle. The color of the mesh sheath of Secondary IDE Cable is white. The white Primary IDE Cable connects to the grey Front Panel Board connector receptacle. The color of the mesh sheath of Front Panel Cable is black. The black Primary IDE Cable connects to the black Front Panel Board connector receptacle.

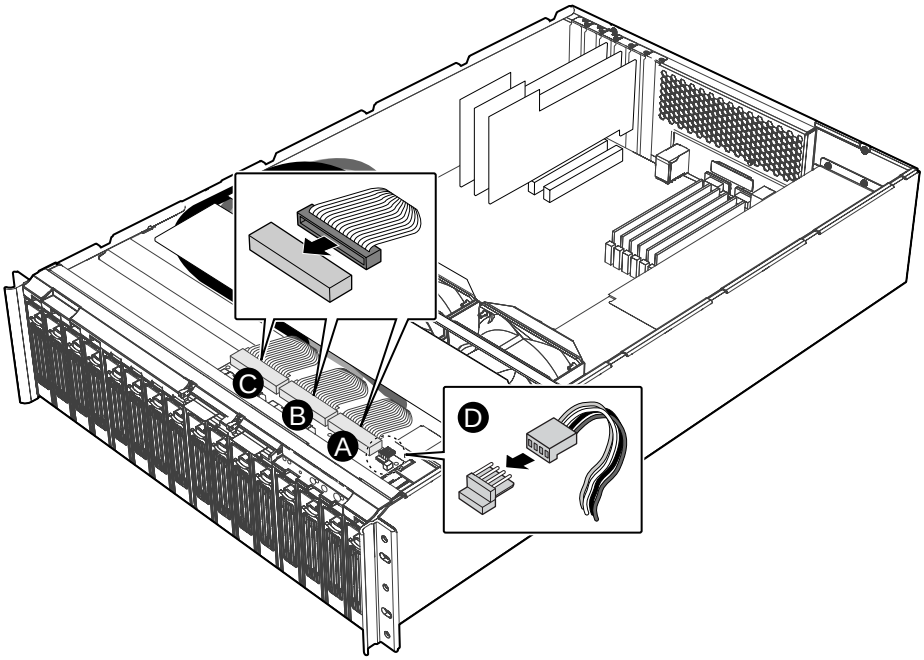

Figure 18. Re-seating Front Panel Board Cables

Re-seat Hard Disk Drives in Hard Disk Drive Bays

A. Re-seat all sixteen hard disk drives in the hard disk drive bays located on the front of the system. Slide all sixteen drives into the bays as far as they can go. See Figure 19.
B. Use the handles to lock the drives into the bays. See Figure 19.

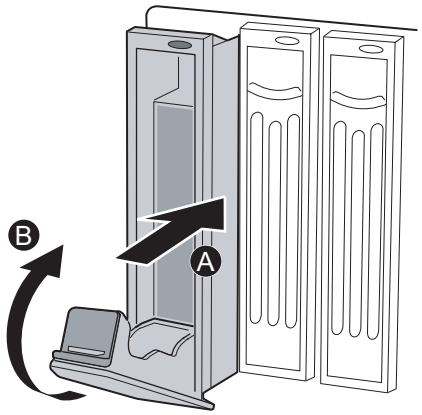

Figure 19. Re-seating Hard Disk Drives in Hard Disk Drive Bays

Finishing Up

A. Facing the front of the system, insert the chassis cover into its slot. Push the top cover forward, until it reaches the front of the system. See Figure 20.
B. Tighten the two thumb screws on the back of the chassis cover. See Figure 20.
C. Re-attach the AC power cables. See Figure 20.
D. You can now power on the Intel® Storage System Console. See Figure 20.

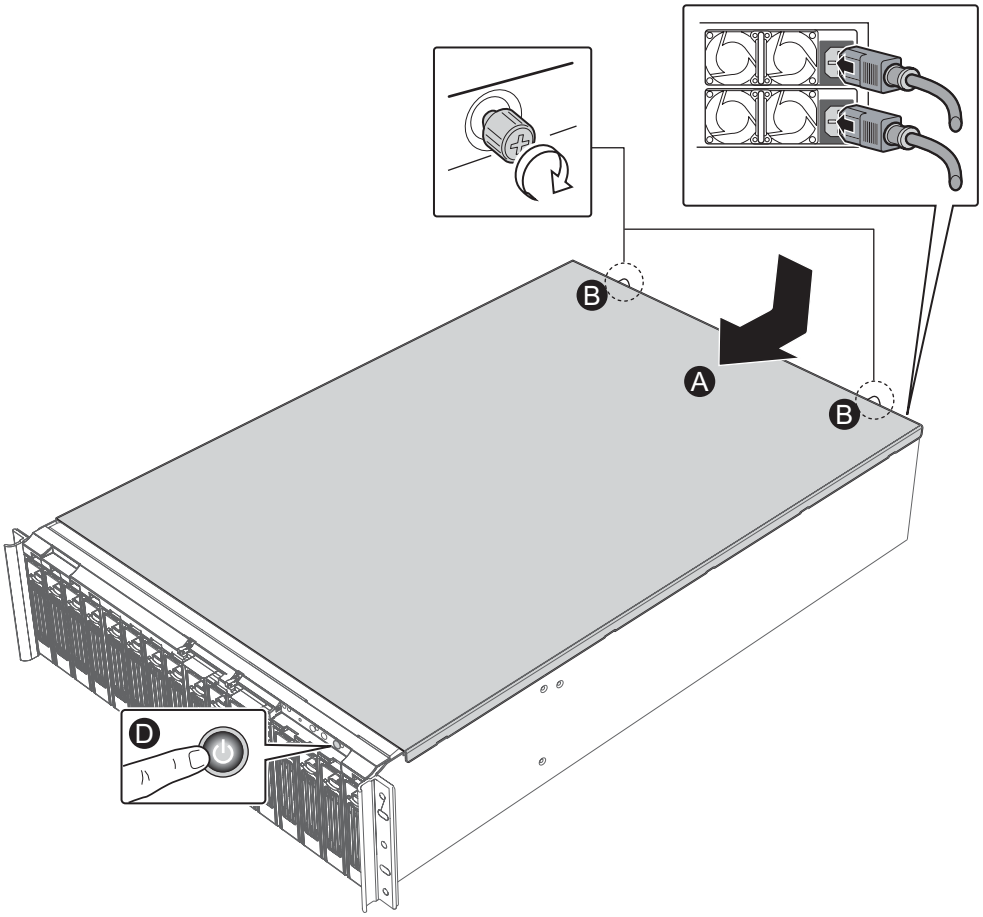

Figure 20. Re-attaching the Chassis Cover