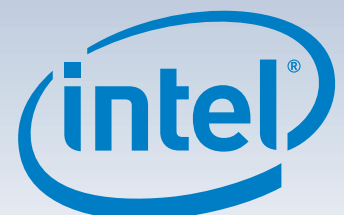


# Intel® Server Chassis P4000S Family Intel® Server System P4304BT Series Quick Installation User's Guide

Thank you for buying an Intel® Server Chassis or System. The following information will help you assemble your Intel® Server Chassis and install components.

If you are not familiar with ESD [Electrostatic Discharge] procedures used during system integration, see the complete ESD procedures described in your Service Guide.

This guide and other supporting documents are located on the web at:  
<http://www.intel.com/support>.



### Warning



Read all caution and safety statements in this document before performing any of the instructions. Also see the *Intel® Server Board and Server Chassis Safety Information* document at: <http://support.intel.com/support/motherboards/server/sb/cs-010770.htm> for complete safety information.

### Warning



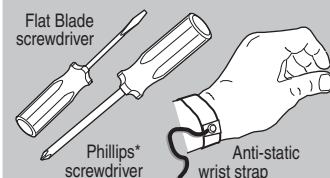
Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

### Caution



Observe normal ESD [Electrostatic Discharge] procedures during system integration to avoid possible damage to server board and/or other components.

### Tools Required



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## Intel® Server Chassis P400S Family Product Configuration

| Intel® Server System | System Fan            | Hard Drive        |                      | Power Supply  |
|----------------------|-----------------------|-------------------|----------------------|---------------|
|                      | Rear Fan<br>(92x38mm) | 4 x 3.5"<br>Fixed | 4 x 3.5"<br>Hot Swap | 365W<br>Fixed |
| P4304XXSFCN          | ■                     | ■                 |                      | ■             |
| P4304XXSHCN          | ■                     |                   | ■                    | ■             |

■ = Configuration Feature

## Intel® Server Chassis P400S Family Supported Board and Integrated System

| Intel® Server Chassis | Supported Intel® Server Board | Integrated Intel® Server System |
|-----------------------|-------------------------------|---------------------------------|
| P4304XXSFCN           | S1200BTL                      | P4304BTL SFCN                   |
|                       | S1200BTS                      | P4304BT S SFCN                  |
| P4304XXSHCN           | S1200BTL                      | P4304BTL SHCN                   |

# Table of Contents

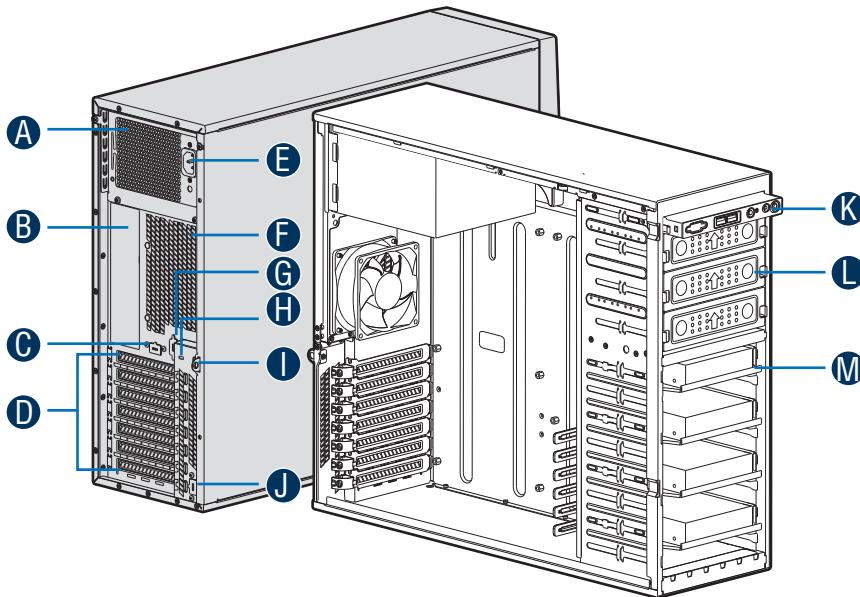
|   |    |
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# Chassis Overview

## Intel® Server Chassis P4304XXSFCN

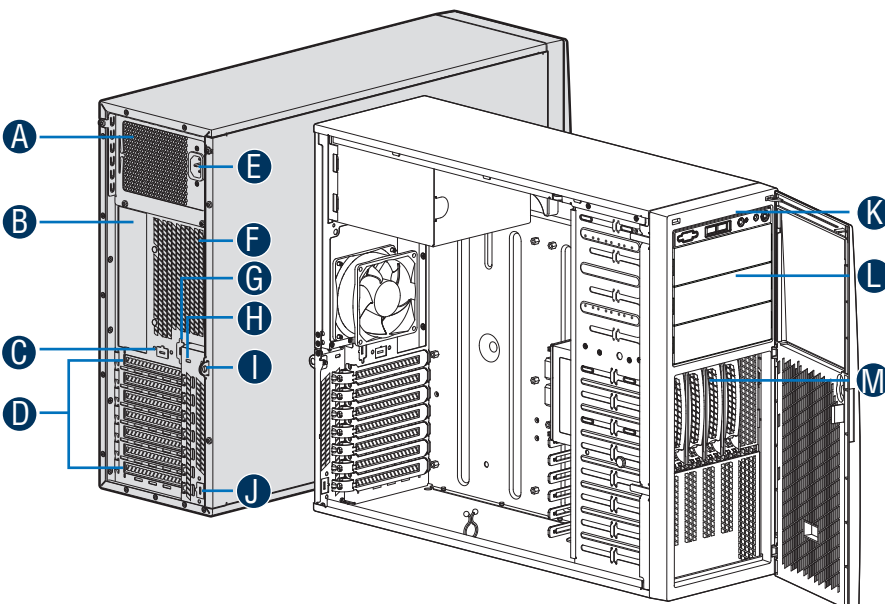
### Chassis Features and Components



- A** 365-W Fixed Power Supply
- B** I/O Ports
- C** Alternate RMM4 Knockout
- D** PCI Add-in Board Slot Covers
- E** AC Input Power Connector
- F** 92mm Chassis Rear Fan
- G** Alternate Serial Port Knockout
- H** A Kensington\* Cable Lock Mounting Hole
- I** Padlock Loop
- J** Alternate RMM4 Knockout
- K** Front Control Panel
- L** 5.25" Peripheral Bays
- M** Hard Drive Bays

## Intel® Server Chassis P4304XXSHCN

### Chassis Features and Components



- A** 365-W Fixed Power Supply
- B** I/O Ports
- C** Alternate RMM4 Knockout
- D** PCI Add-in Board Slot Covers
- E** AC Input Power Connector
- F** 92mm Chassis Rear Fan
- G** Alternate Serial Port Knockout
- H** A Kensington\* Cable Lock Mounting Hole
- I** Padlock Loop
- J** Alternate RMM4 Knockout
- K** Front Control Panel
- L** 5.25" Peripheral Bays
- M** 4 x 3.5" Hot-swap HDD Cage

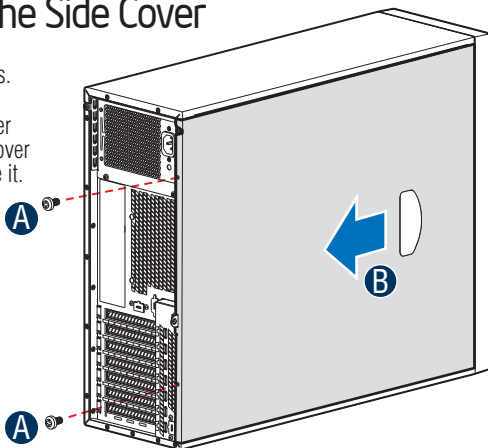
# General Installation Process

The installation instructions in this section are for general components of Intel® Server Chassis P400S family, but the illustrations are based on the Intel® Server Chassis P4304XXSFCN.

## 1 Remove the Side Cover

- A Remove the screws.
- B Slide the side cover back and lift the cover outward to remove it.

*Note:*  
A non-skid surface or a stop behind the chassis may be needed to prevent the chassis from sliding on your work surface.



## 2 Install Server Board

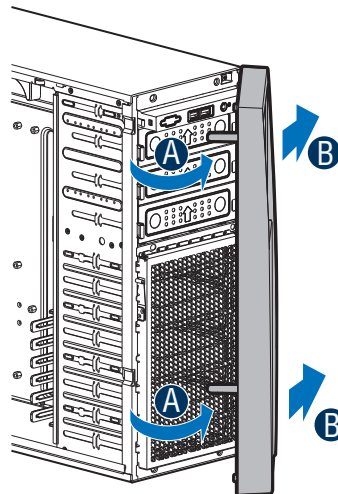
- If the server board is pre-installed, please follow the instructions in **Processor, Heat Sink, Memory Installation** section ( **Page 5** ) to install the Processor(s), Heat Sink(s) and Memory. Return to this section when finished.
- If the server board is to be installed, please use the **bumpers, standoffs** and **mounting screws** that came with your chassis, and open the Intel® Server Board box, then follow the instructions in the enclosed Intel® Server Board **Quick Start User's Guide** for server board installation and back panel I/O shield installation. Return to this section when finished.

## 3 Remove the Bezel Assembly



**CAUTION:** Do not rotate the bezel assembly more than 40° or you will damage the bezel hooks at the right side of the bezel assembly.

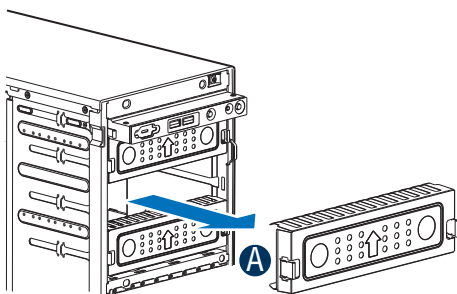
- A Release the two plastic tabs on the left side of the bezel assembly to disengage the tabs, and rotate the bezel assembly no more than 40 degrees outward.
- B At a 40-degree angle, push the bezel assembly away from the chassis.



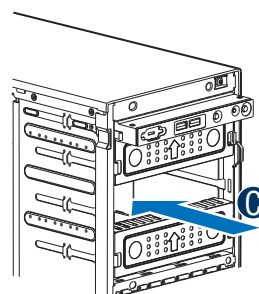
## 4 Install Hard Drive

See **Hard Drive Installation** Section ( **Page 7** ) for your Hard Drive Installation.

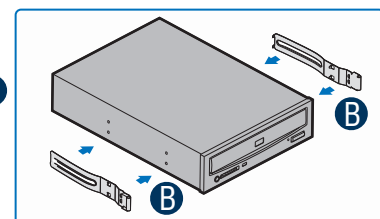
## 5 Install Tool-less CD-ROM or DVD-ROM Drive



- A Remove an EMI shield.



- B Attach slides to the DVD or CD-ROM drive by pressing the slides firmly into the side dimples on the DVD or CD-ROM drive.



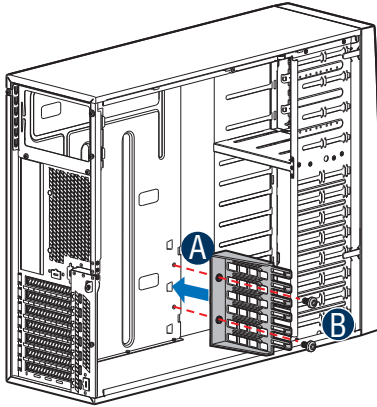
- C Insert the drive/slide assembly into the device bay until the slides lock into place.

# General Installation Process

## 6

### Install PCI Card Assembly

#### A. Install PCI Card Guide

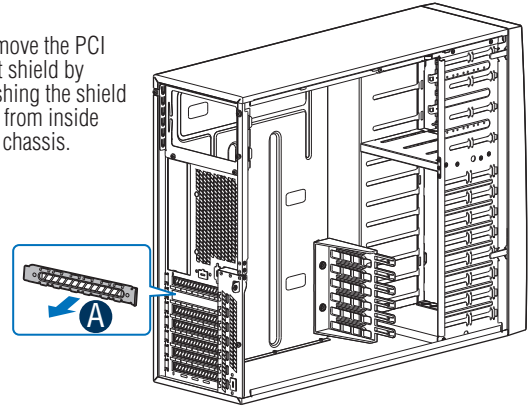


**NOTE:** Only needed when full length PCI card is plugged.

- A** Insert tabs on left side of PCI Card Guide into slots in chassis.
- B** Secure the PCI Card Guide with the screws.

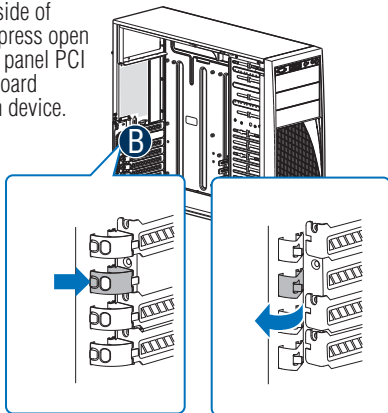
#### B. Install PCI Add-in Boards

- A** Remove the PCI slot shield by pushing the shield out from inside the chassis.



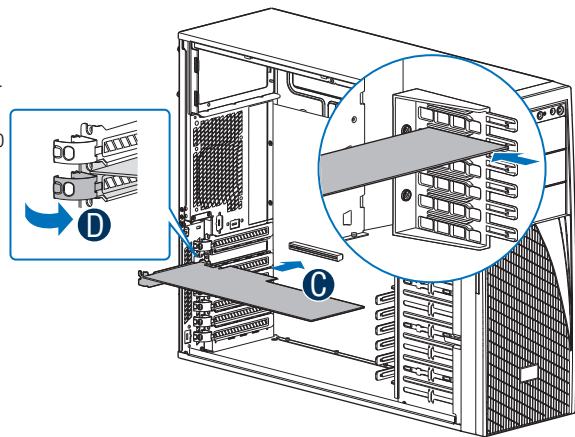
### Install PCI Card Assembly ... Continued

- B** From inside of chassis, press open the back panel PCI add-in board retention device.



- C** While holding the PCI add-in board by its top edge or upper corners, firmly press the add-in board into the expansion slot.

- D** Close the PCI add-in board retention device.



## 7

### Complete Server Board Cabling Connections

See your Intel® Server Board **Quick Start User's Guide** or **Service Guide** for server board cable connections.

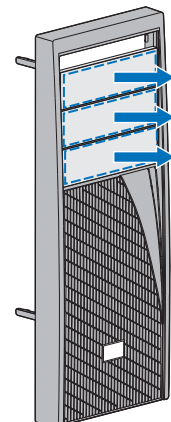
See Platform Cabling diagram in **Server Board Cabling Connections** section ( **Page 8-10** ) for your server board to chassis cable connections.

Return to this section when finished .

## 8

### Remove Filler Panels

Remove the bezel filler panels for each drive you have installed. Release plastic tabs located at back side of bezel and pull out filler panels from front.

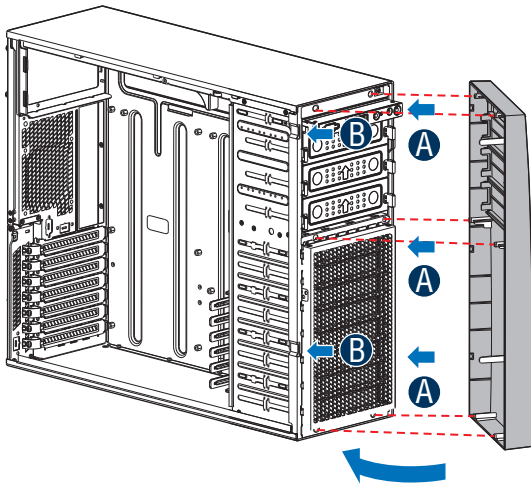


# General Installation Process

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## Install Front Bezel Assembly

- A Engage three plastic bezel hooks into the raised metal slots at the chassis edge. *Keep the right edge of front bezel align tightly with the right edge of the Chassis.*
- B Rotate the bezel assembly toward the chassis and latch the two plastic tabs on the left side of the bezel assembly to the chassis.

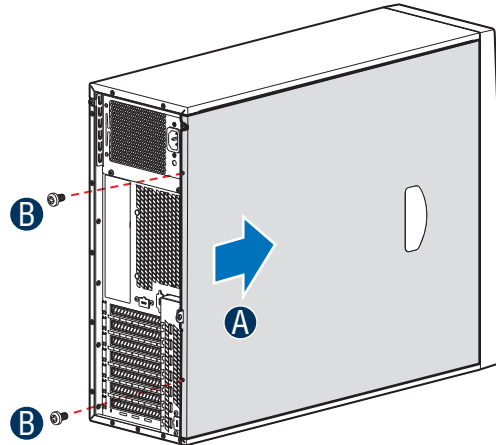


10

## Install Side Cover

- A Slide the chassis cover on the chassis.
- B Secure the chassis cover with the screws.

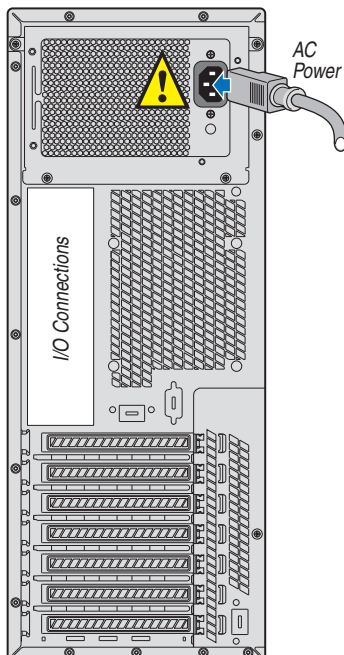
**CAUTION:** This chassis must be operated with the SIDE COVERS installed to ensure proper cooling.



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## Finishing Up

1. See your Intel® Server Board Quick Start User's Guide to connect your keyboard, mouse, video, and other I/O cables.
2. Connect the AC power cable last.



**CAUTION:** power supply requires a 16-gauge power cord.

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## Install Software

- BIOS, Drivers, and Operating System Install

**A. Confirm BIOS Version:** Look on the Server/System Management screen in the BIOS Setup Utility to determine the installed BIOS version. Compare this to the versions at: <http://www.intel.com/support>  
If new versions are available, update the BIOS on your server. See the User Guide on the Intel® Server Deployment Toolkit CD for update instructions.

**B. Configure your RAID Controller:** Use the instructions provided with the RAID controller.

**C. Install your Operating System:** Use the instructions provided with the RAID controller and with the operating system.

**D. Install Operating System Drivers:** With the operating system running, insert the Intel® Server Deployment Toolkit CD. If using a Microsoft® Windows® operating system, the Express Installer will autorun and allow you to select the appropriate drivers to install. On other operating systems, browse the CD folders to locate and install the driver files.



# Processor, Heat Sink, Memory Installation

Follow below instructions for step 2 on page 2, then return to step 3 on page 2 when finish this section.

## Intel® Server Board S1200BT Series

### 2a

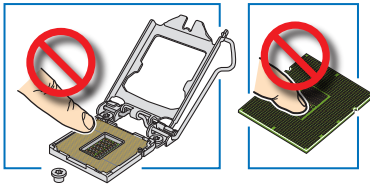
### Install the Processor(s)

#### Cautions:

**A** When removing the protective cover, DO NOT TOUCH the gold socket pins.

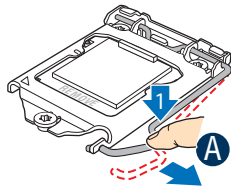
**B** To avoid damage, DO NOT DROP the cover onto the socket pins or components.

**C** When unpacking a processor, hold by the edges only to avoid touching the gold contact pins.

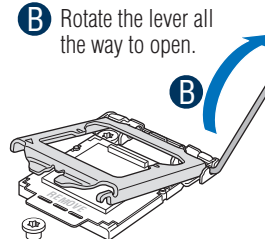


#### A. Open the Socket Lever

**A** Push the lever handle down and away from the socket to release it.

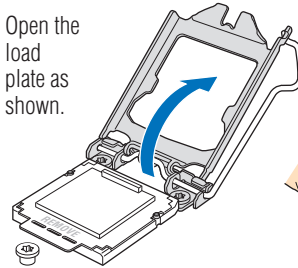


**B** Rotate the lever all the way to open.



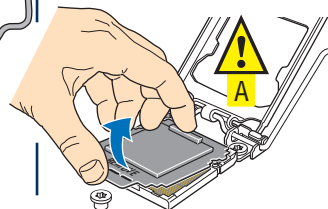
#### B. Open the Load Plate

Open the load plate as shown.



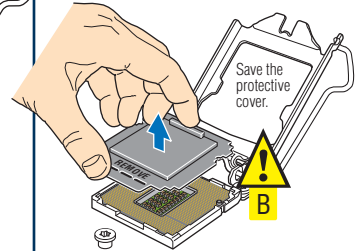
#### C. Disengage the Cover

Place thumb and finger as shown and tilt up slightly at front.



#### D. Remove the Cover

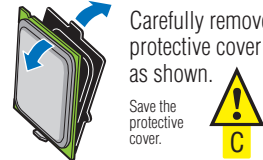
Carefully lift the cover straight up as shown.



#### E. Unpack the Processor

Carefully remove protective cover as shown.

Save the protective cover.



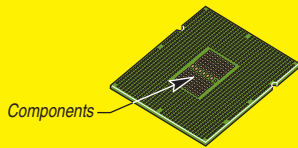
### Install the Processor(s) ... continued

#### F. Install the Processor

**CAUTION:** The underside of the processor has components that may damage the socket pins if installed improperly.

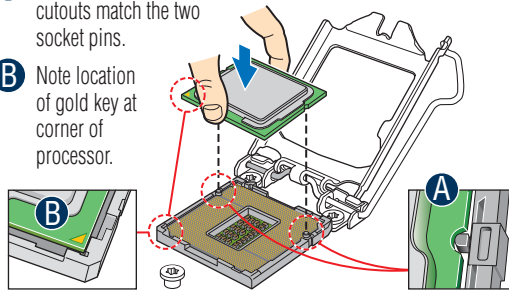
Processor must align correctly with the socket opening before installation.

**DO NOT DROP** processor into socket!



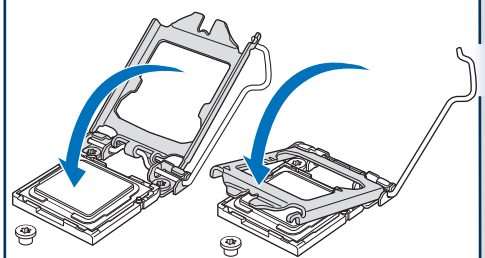
**A** Orient the processor with the socket so that the processor cutouts match the two socket pins.

**B** Note location of gold key at corner of processor.



#### G. Close the Load Plate

Carefully lower the load plate over the processor.

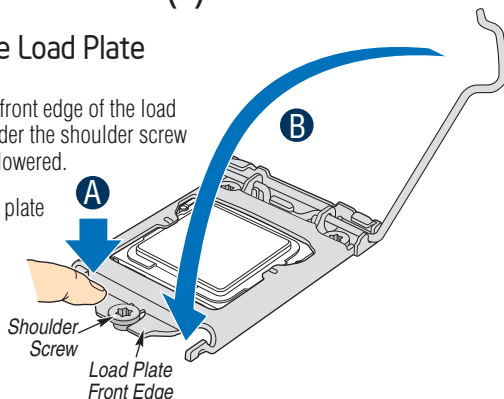


### Install the Processor(s) ... continued

#### H. Engage the Load Plate

**A** Make sure the front edge of the load plate slides under the shoulder screw as the lever is lowered.

**B** Close the load plate locking lever.

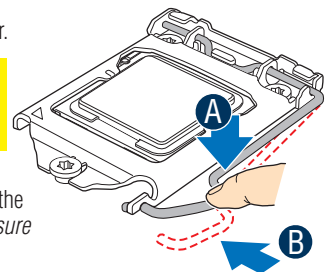


#### I. Latch the Locking Lever

**A** Push down on the locking lever.

**CAUTION:** DO NOT damage the server board with the tip of the locking lever.

**B** Slide the tip of the lever under the notch in the load plate. Make sure the lever is securely latched.



# Processor, Heat Sink, Memory Installation

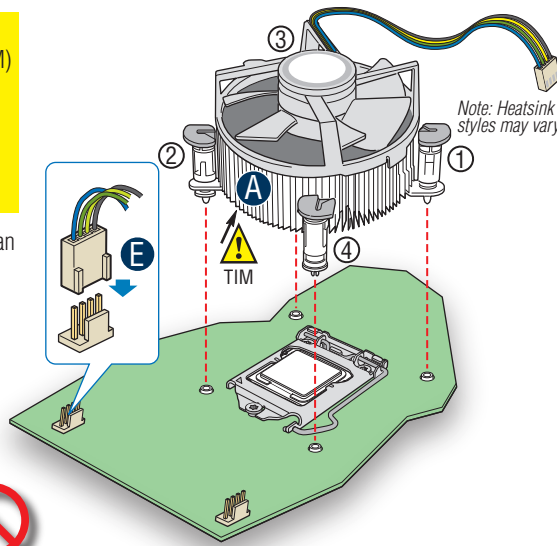
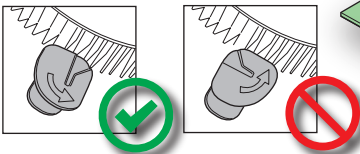
## 2b

### Install Active Heat Sink(s)

**CAUTION:** The heat sink has thermal interface material (TIM) on the underside of it. Use caution so that you do not damage the thermal interface material. Use gloves to avoid sharp edges.

Use the following procedure to install an active heat sink to your server board:

- A** Make sure the screwdriver slot at the top of each fastener is rotated **perpendicular** to the blades of the heat sink as shown.

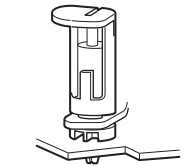


- B** Align heat sink with holes in board and lower assembly to board. Snaps go through holes in server board.

**Repeat B-D for each fastener in the numerical order shown at left.**



- C** Press downward on top of cap.



- D** Fastener snaps into final position.

- E** Plug the fan cable into the CPU fan header.

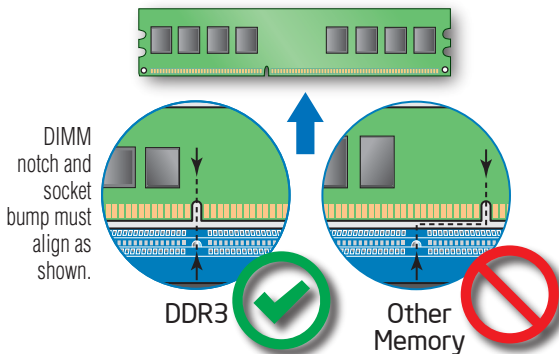
## 2c

### Install DIMM Memory Modules

#### DDR3 DIMM Memory Identification:

**CAUTION:** Observe normal ESD (ElectroStatic Discharge) procedures to avoid possible damage to system components.

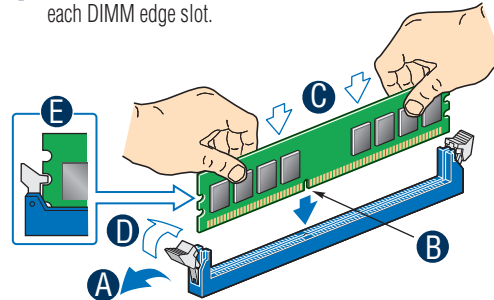
This server board supports up to 4 DDR3 1066/1333 ECC UDIMM. Non-ECC memory is NOT supported by this server board.



#### To Install DIMMs:

**CAUTION:** Avoid touching contacts when handling or installing DIMMs.

- Open both DIMM socket levers.
- Note location of alignment notch.
- Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
- Push down firmly on the DIMM until it snaps into place and both levers close.
- IMPORTANT!** Visually check that each latch is fully closed and correctly engaged with each DIMM edge slot.



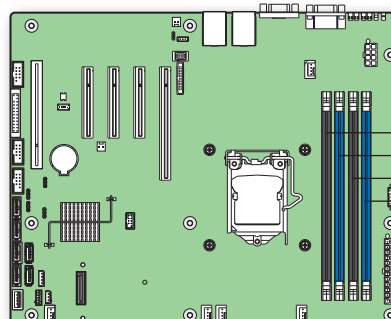
### Install DIMM Memory Modules ... Continued

Memory Type: Minimum of one 1 GB, DDR3 1066/1333 MHz ECC UDIMM.

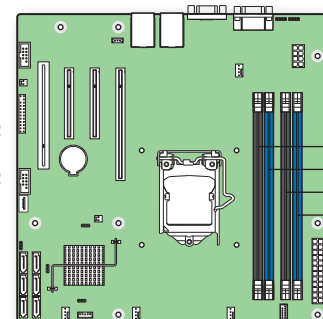
Note: For additional memory configurations, see the Technical Product Specification on the Intel® Server Deployment Toolkit CD that accompanied your Intel® Server Board S1200BT, or go to: <http://www.intel.com/support/motherboards/server>.

Memory sizing and configuration is supported only for qualified DIMMs approved by Intel®. For a list of supported memory, see the tested memory list at <http://serverconfigurator.intel.com/default.aspx>.

#### Memory Configurations and Population Order:



Intel® Server Board S1200BTL Shown



Intel® Server Board S1200BTS Shown

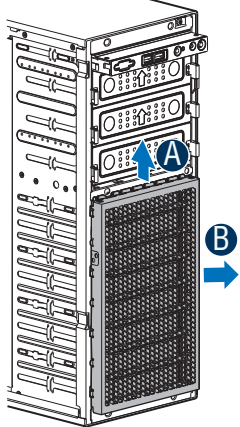
# Hard Drive Installation

Follow below Instructions for step **4** on **page 2**, then return to step **5** on **page 2** when finish this section.

## Fixed Hard Drive Installation

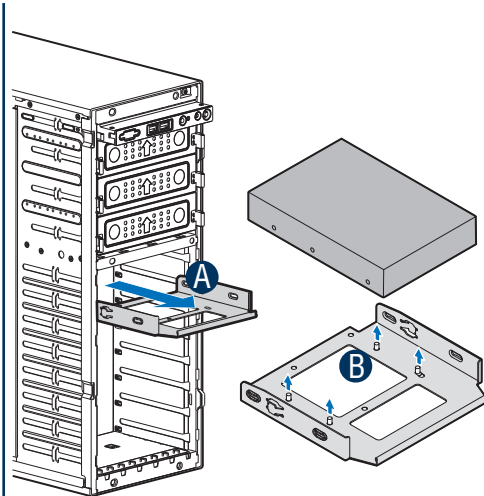
**4**

### A. Remove the EMI shield



- A** Lift the EMI shield.
- B** move EMI shield outward from the chassis.

### B. Install the Hard Drive

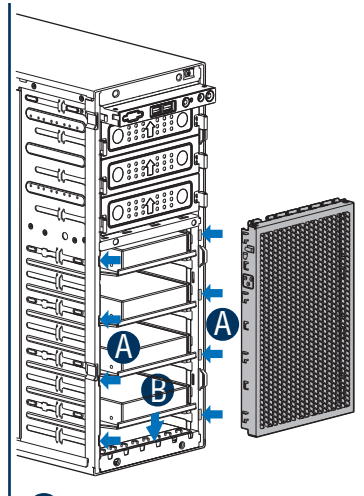


- A** Pull out the HDD carrier tray.
- B** Secure the HDD on the HDD carrier tray with screws.
- C** Insert the HDD carrier tray into chassis.



**CAUTION:** HDDs should be placed evenly in the slots, an empty slot is needed between every two HDDs.

### C. Install the EMI shield

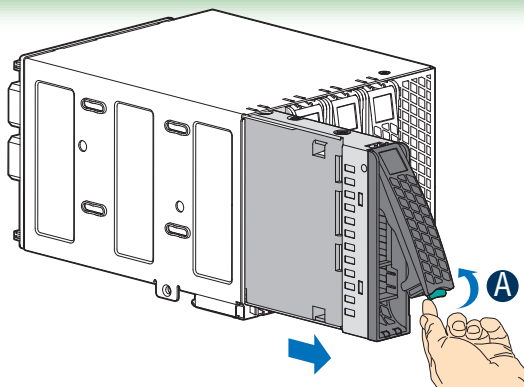


- A** Fit the edges of the EMI Shield against the sides of the chassis.
- B** While pressing the EMI Shield, slide the EMI Shield downwards until the latches on the EMI Shield are engaged with the chassis.

## Hot-Swap Hard Drive Installation

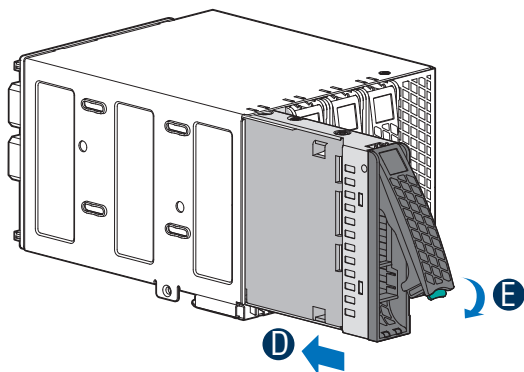
**4**

- A** Remove the drive carrier by pressing the **green** button and opening the lever. Then slide the carrier out.

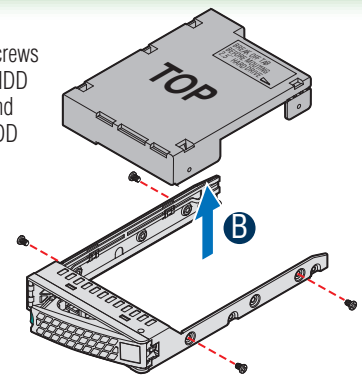


- D** With the lever open, insert the hard disk drive assembly into the cage opening and push until the locking lever engages.

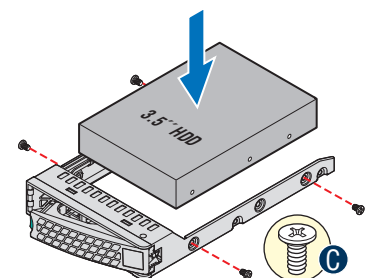
- E** Push in the lever to lock it into place.



- B** Remove the four screws securing the 2.5" HDD interface bracket and remove the 2.5" HDD interface bracket.



- C** Install the hard disk drive using the same four screws as shown. Make sure the connector end of the drive matches the backplane connector.



**NOTE:** Return to step **5** on **page 2** when finish this section.

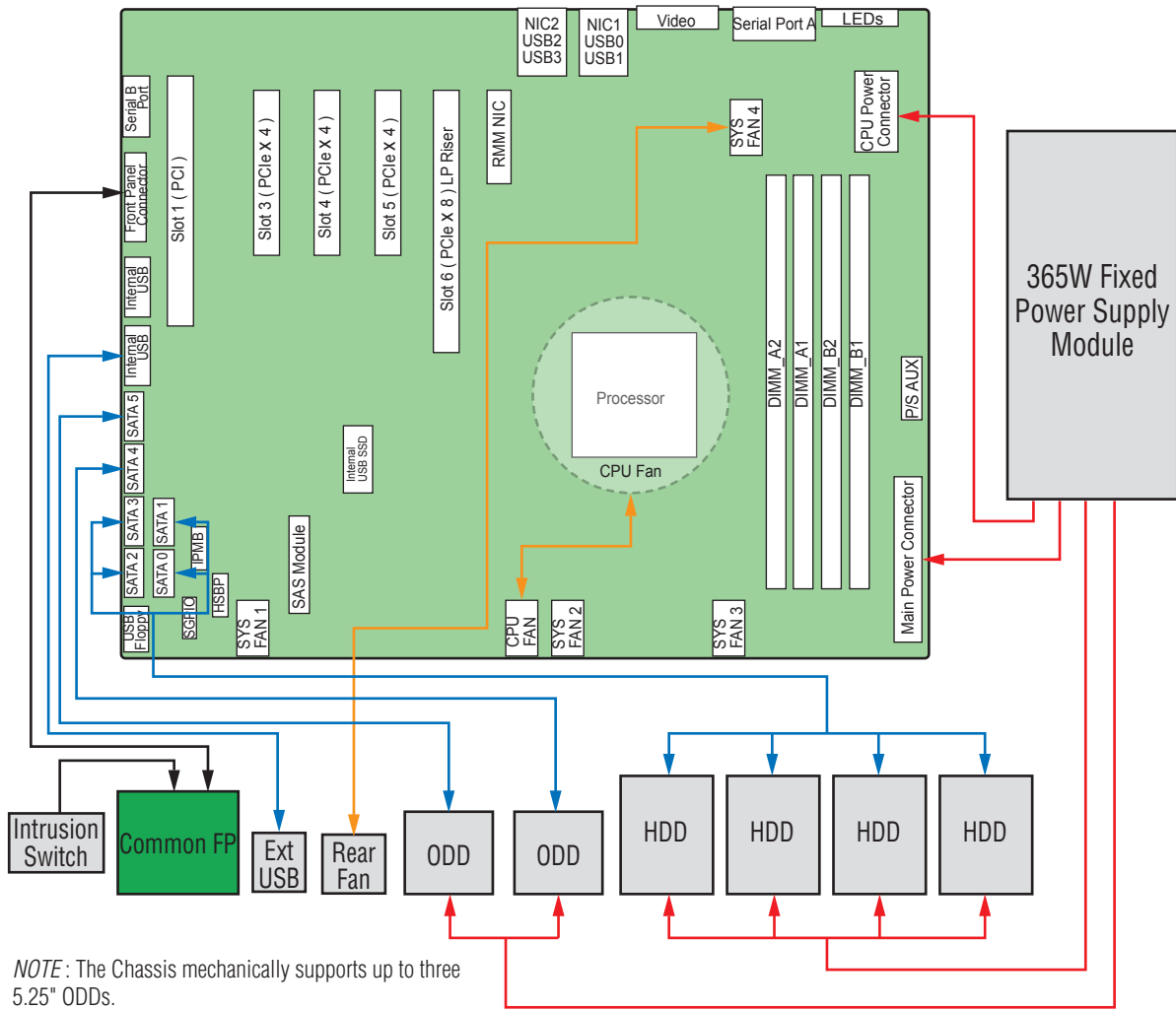
# Server Board Cabling Connections

Follow below Instructions for step **7** on **page 3**, then return to step **8** on **page 3** when finish this section.

## Intel® Server Board S1200BTL

**7**

### Intel® Server Board S1200BTL To Intel® Server Chassis P4304XXSFCN



**NOTE:** Return to step **8** on **page 3** when finish this section.

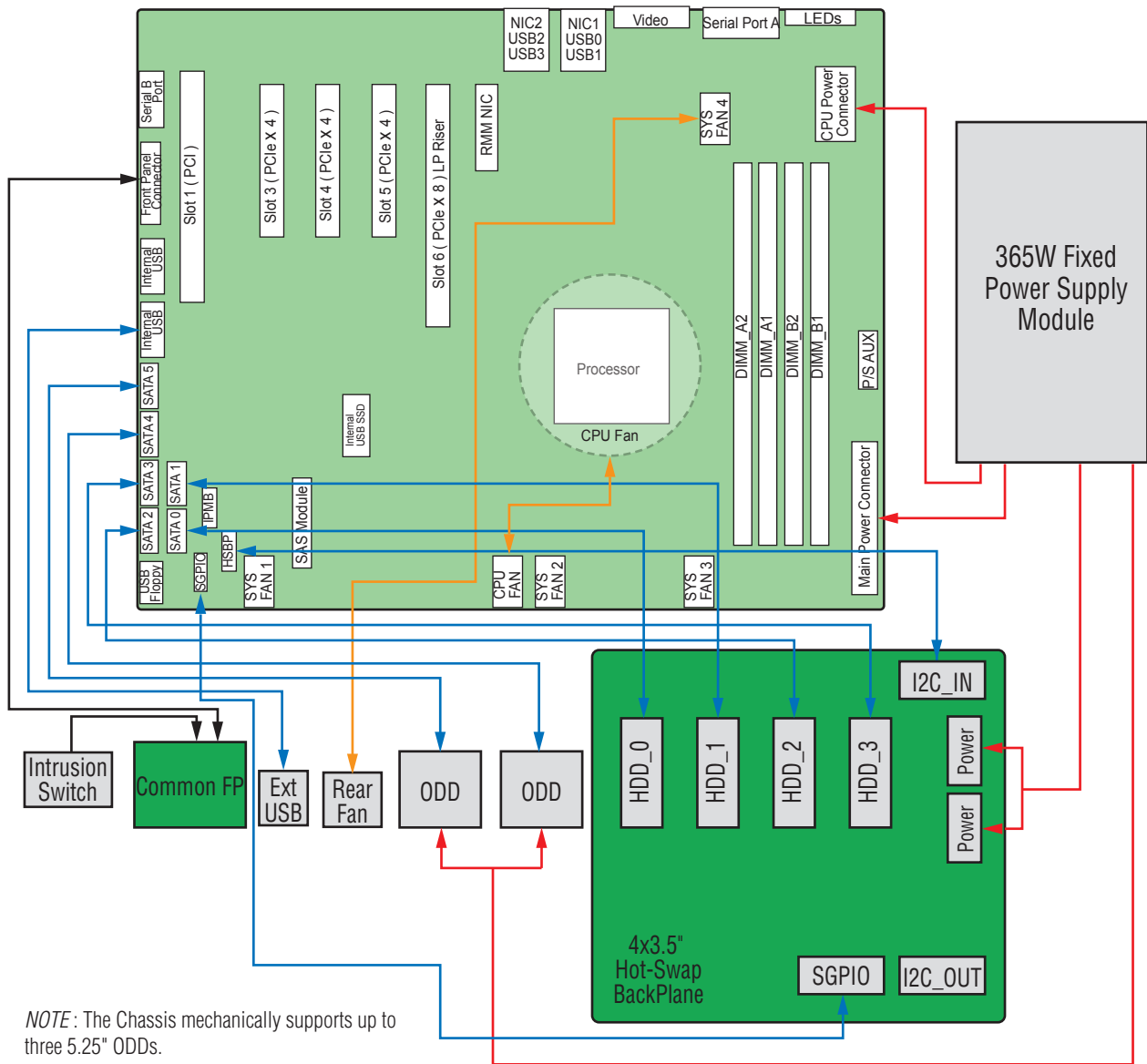
# Server Board Cabling Connections

Follow below Instructions for step **7** on **page 3**, then return to step **8** on **page 3** when finish this section.

## Intel® Server Board S1200BTL

**7**

### Intel® Server Board S1200BTL To Intel® Server Chassis P4304XXSHCN



**NOTE:** Return to step **8** on **page 3** when finish this section.

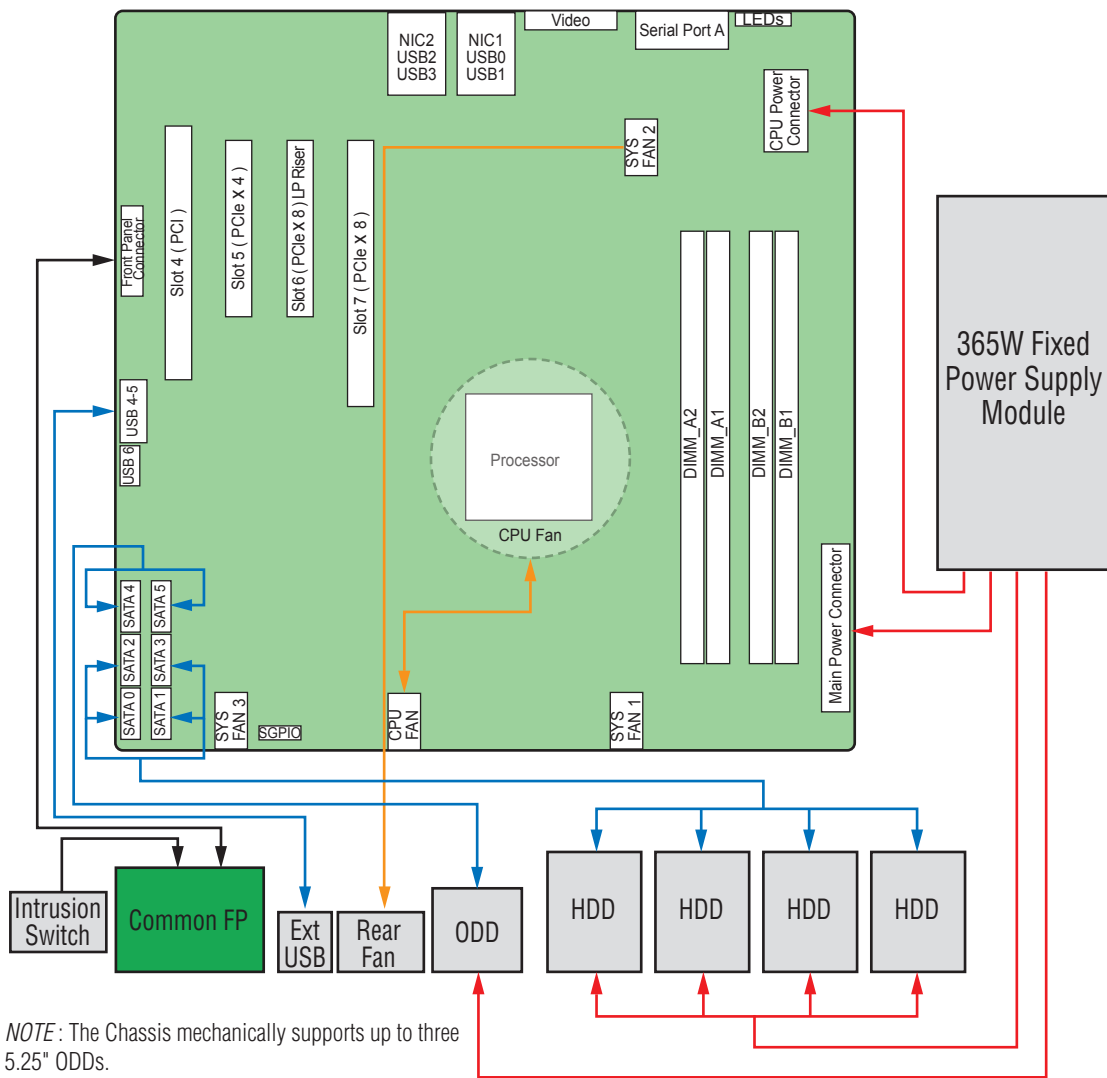
# Server Board Cabling Connections

Follow below Instructions for step **7** on **page 3**, then return to step **8** on **page 3** when finish this section.

## Intel® Server Board S1200BTS

7

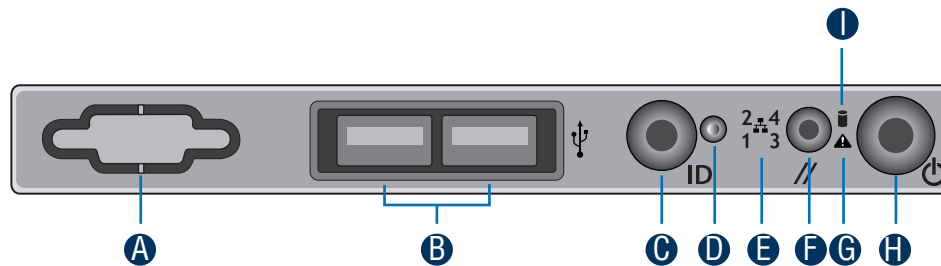
### Intel® Server Board S1200BTS To Intel® Server Chassis P4304XXSFCN



**NOTE:** Return to step **8** on **page 3** when finish this section.

# Front Panel Controls and Indicators

## Front Panel Controls and Indicators



**A** Reservation(Optional VGA/Serial Port)

**B** USB Connectors

**C** ID Button with ID LED Integrated

**D** NMI Button

**E** NIC LED

**F** System Reset Button

**G** System Status LED

**H** System Power Button with Power LED

**I** HDD Activity LED

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