

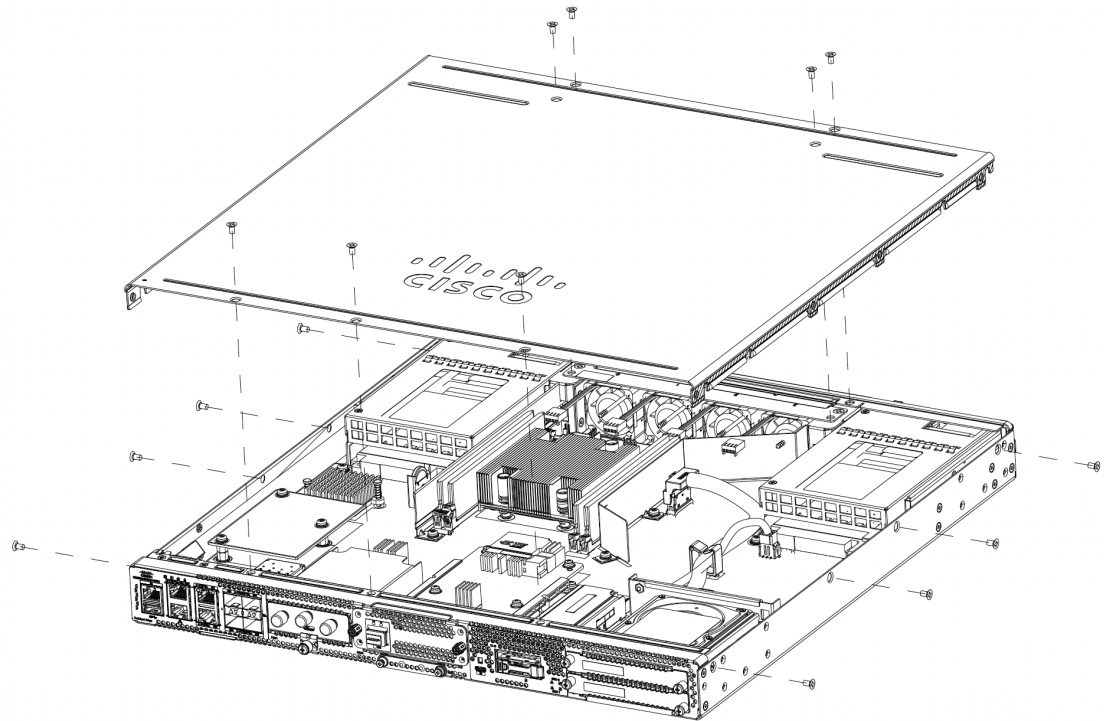


Install and Upgrade Field Replaceable Units

These are the steps to remove the chassis cover:

Removing and Replacing the Chassis Cover

Figure 1: Removing and Replacing the chassis cover



1. Confirm that the chassis is turned off and disconnected from the power supply or power supplies.
2. Place the chassis on a flat surface.
3. Remove the screws from the top of the chassis cover.
4. Remove screws from each side and from the top of the device as shown in the figure.

- Lift the chassis cover after you have removed all the screws.



Note To replace the chassis cover, place the cover evenly on the top of the device and use the screws to secure it to the device.

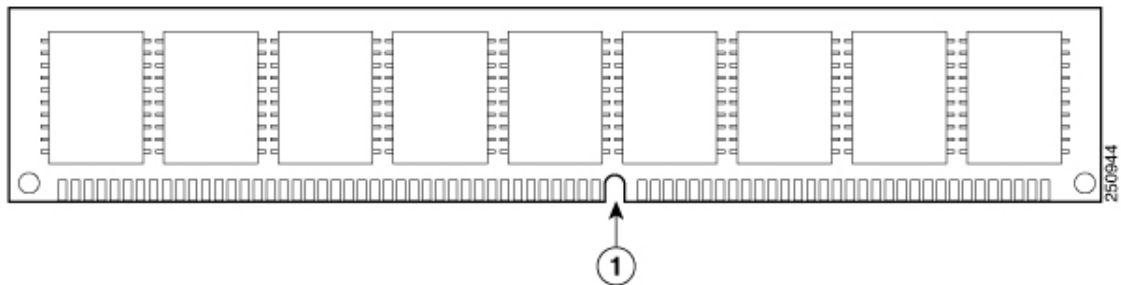
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Install a Dual In-line Memory Module (DIMM)

Before you begin

There are four DDR4 DIMM slots. DIMMs have a polarization notch on the connecting edge to prevent incorrect orientation of the module during insertion.

Figure 2: DIMM Showing Polarization Notch

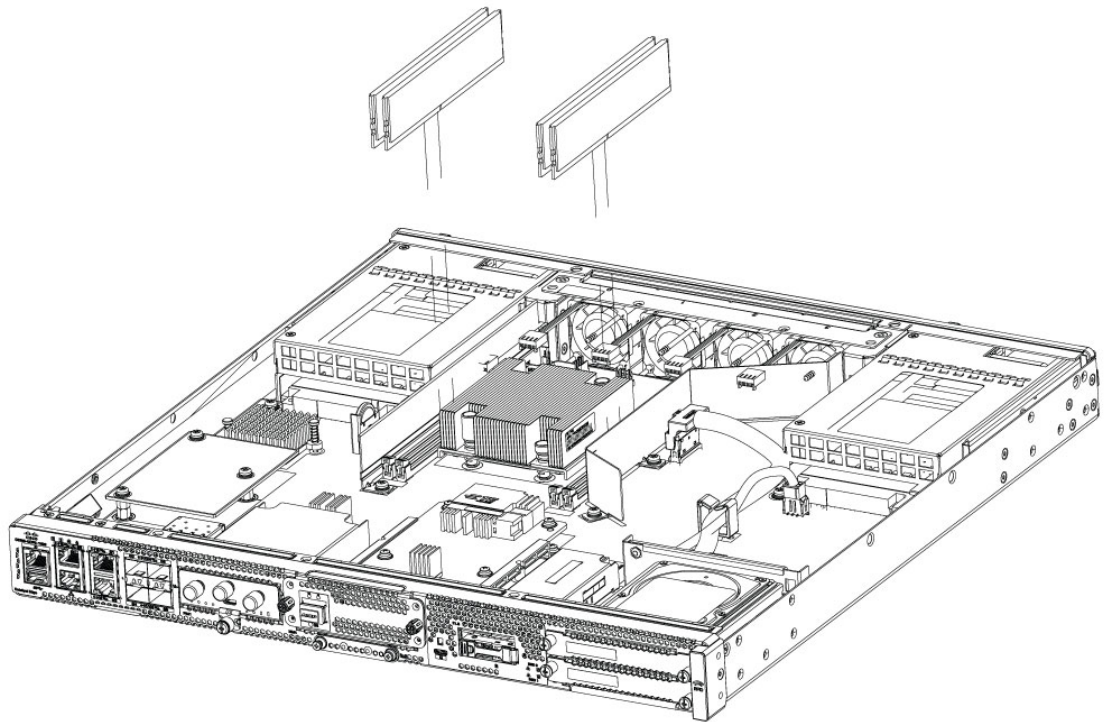


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Polarization Notch

These are the steps to install a DIMM:

1. Remove the chassis cover.
2. Locate the DIMM slots on the device. There are four DIMM slots in the chassis and you can install the DIMM module on any of the slots.
3. Make sure that both latches on the DIMM connector are in the open position.

Figure 3: DIMM orientation

4. Orient the DIMM so that the polarization notch lines up with the polarization key on the connector.
5. Insert the DIMM into the connector.
6. Replace the chassis cover.

Removing a DIMM

These are the steps to remove a DIMM:

1. Remove the chassis cover.
2. Locate the DIMM module on the device. Refer to the [Chassis-Internal](#) section to identify and locate the DIMM module.
3. Pull the latches away from the DIMM at both ends to lift the DIMM slightly. Pull the DIMM out of the socket.
4. Place the DIMM in an antistatic bag to protect it from ESD damage.
5. Replace the chassis cover.

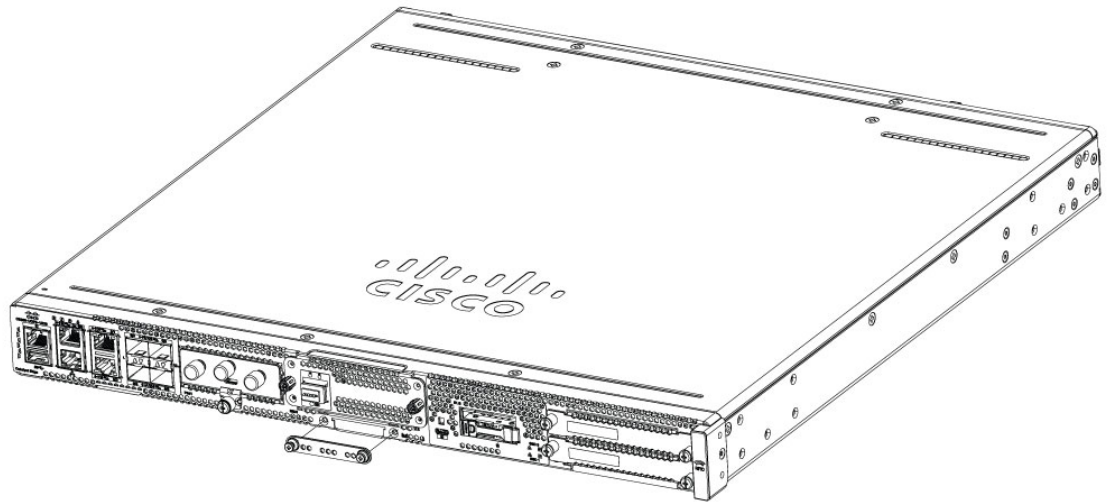
Installing the M.2 Storage Module

The M.2 storage modules come with different storage capacities and can be replaced through the front panel if required.

These are the steps to upgrade the M.2 storage module:

1. Power off of the system before replacing M.2.
2. Locate the M.2 storage module slot. Refer to [Chassis - Front Panel](#) to identify and locate the module.

Figure 4: M.2 storage module slot



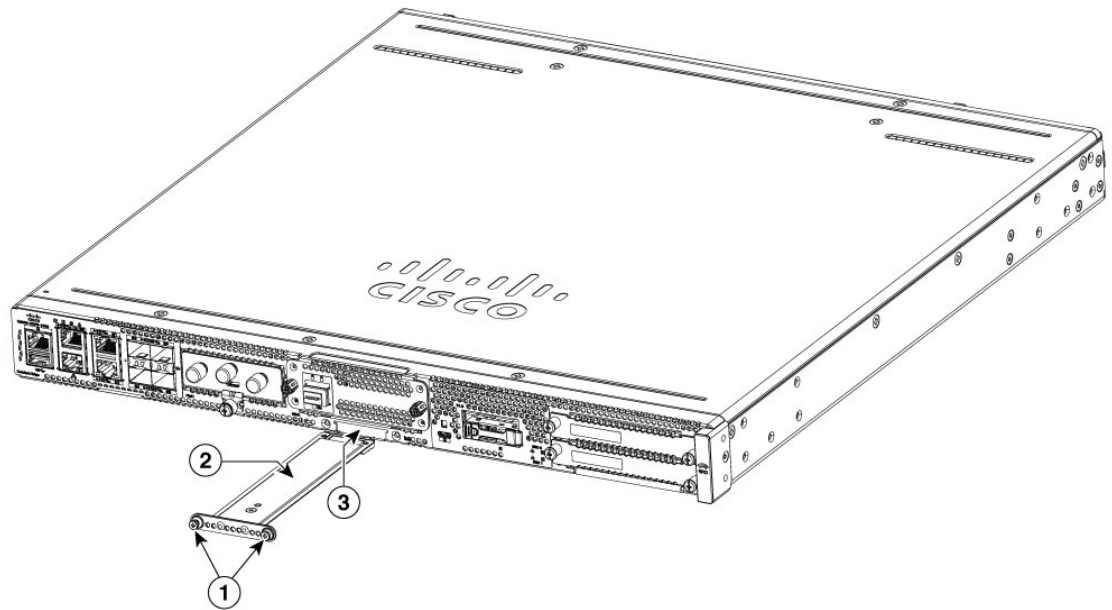
3. Loosen the screws that secures the M.2 blank cover or existing M.2 module in the slot. Remove the blank cover or existing module.



Note The disk used in M.2 is also the boot disk. If you replace the M.2 disk, you must reinstall Cisco NFVIS operating system once again.

4. Plug in the new M.2 storage module in the same location and secure it with the screws.

Figure 5: M.2 storage module slot opened



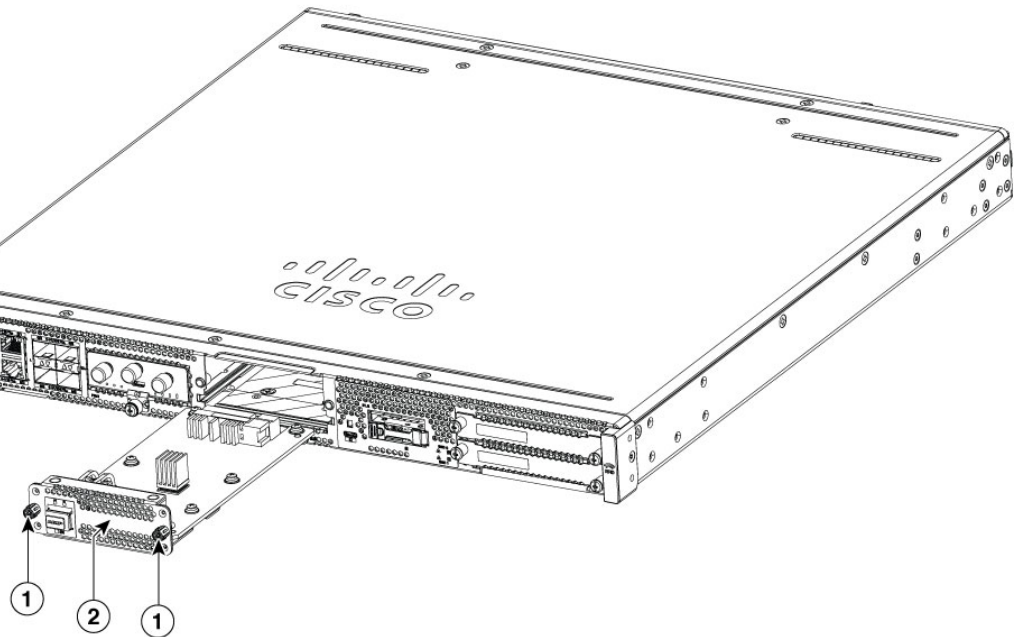
1 Securing screws (torque 3.9 - 5.4 in-lbs)	2	M.2 module orientation with metal carrier on top, M.2 module underneath
3 Chassis cutout prevents M.2 installation in wrong orientation		

Installing and Removing a Network Interface Module (NIM)

These are the steps to install a NIM:

1. Locate the NIM slot on the front panel.
2. Loosen the screws to remove NIM blank cover.
3. Insert the NIM into the slot.
4. Tighten the screws to secure the NIM in the slot.

Figure 6: Securing the NIM in the slot



1	Screws
2	NIM face

These are the steps to remove a NIM:

1. If the NIM is up and running, issue the following command to shut down the NIM gracefully before removing it:

```
hw-module subslot slot 0/2 stop
```



Caution If you do not shut down the NIM gracefully before removing it, the NIM card could get damaged.

2. Locate the NIM slot on the front panel.
3. Loosen the screws that secure the NIM.
4. Gently pull out the NIM from the slot.

All module slots must have a module or blank installed for the product to remain unaffected by thermal activity and for safety purposes.

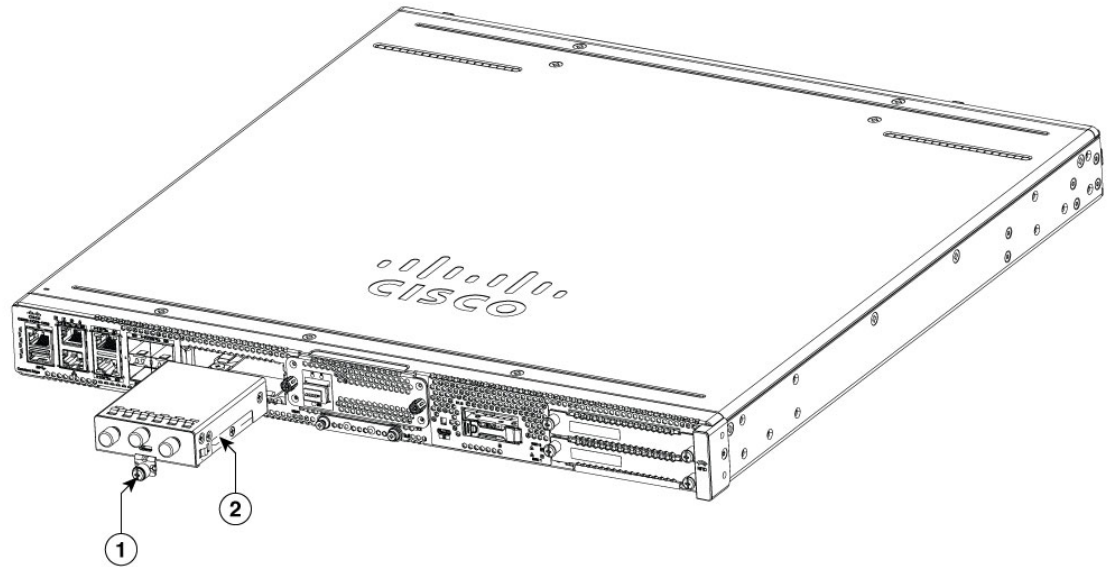
Installing Pluggable Interface Module

To insert the PIM into the router, do these steps:

1. Insert and then gently push the PIM into the pluggable slot until firmly seated in the slot.

2. Tighten the screw.

Figure 7: PIM slot



1	Securing screw	2	PIM module
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Installing Drive Bays

If you have not ordered drives, the drive bay slot is closed with a blank cover.

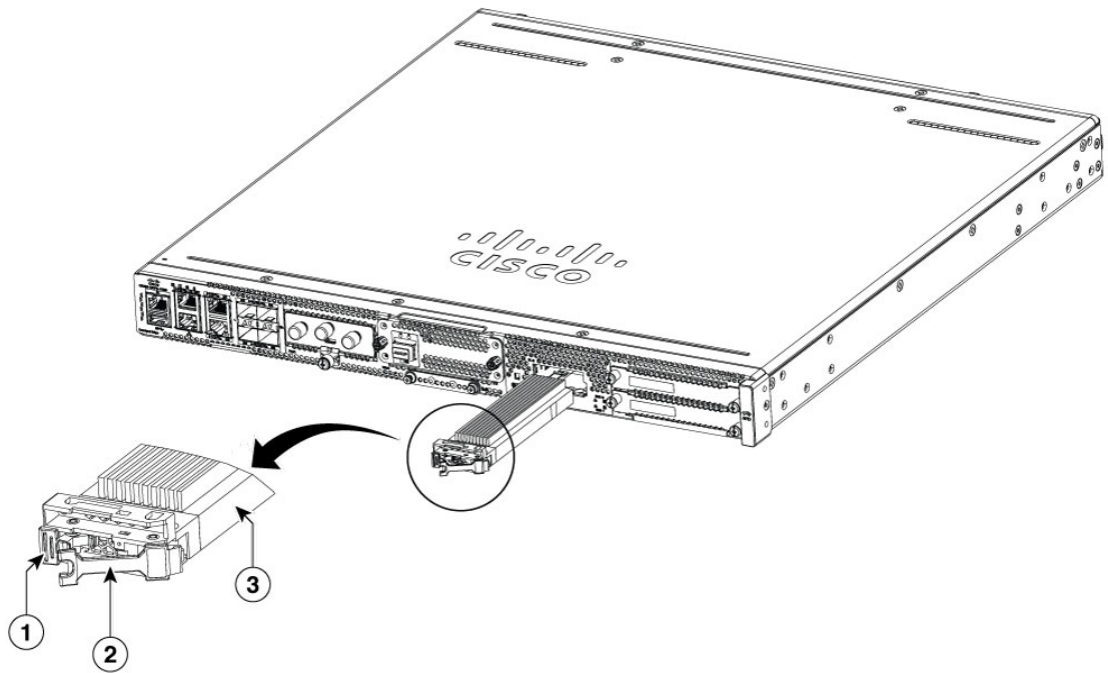
These are the steps to install a drive in a drive bay using E1.S Modules:



Note The drive bay is in the front panel of the device. If you do not install drives in the drive bays, keep them closed with blank covers.

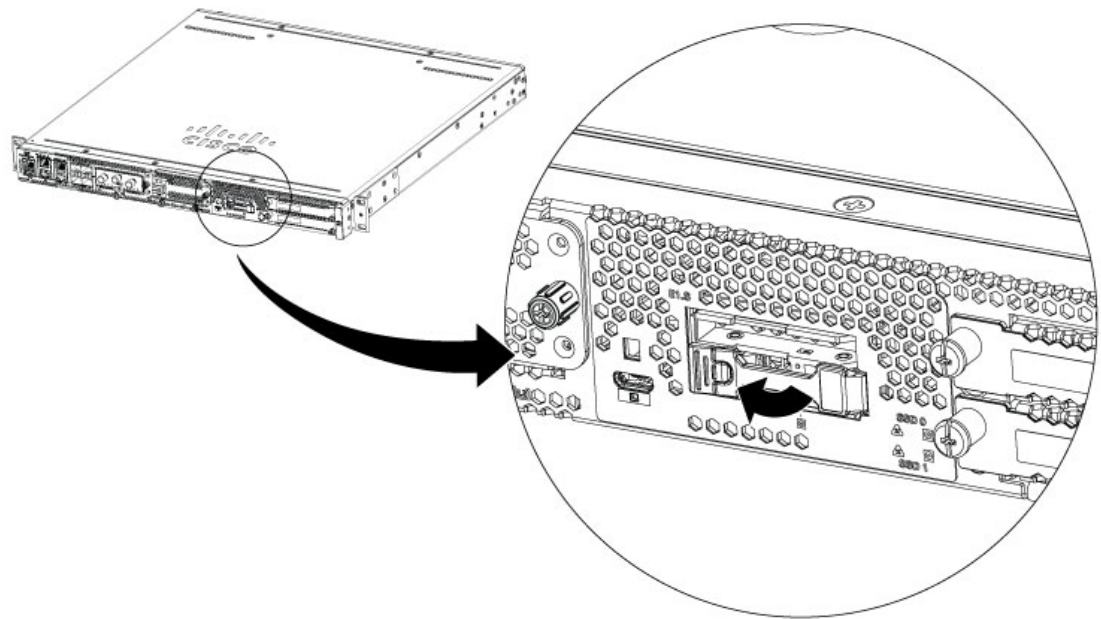
1. Remove the filler in the E1.S slot
2. Press the latch-release button on the E1.S module so that the latch springs to the open position.
3. Slide the E1.S module in the slot and push forward until the module seats in the connector.
4. To secure the module in the chassis, close the latch until it catches the latch-release button.

Figure 8: Inserting the E1.S module in the slot



1	Latch-release button
2	Latch (shown in open position)
3	E1.S Module

Figure 9: Securing the E1.S module in the chassis



Note Keep the drive bays covered when there are no drives installed in the slot

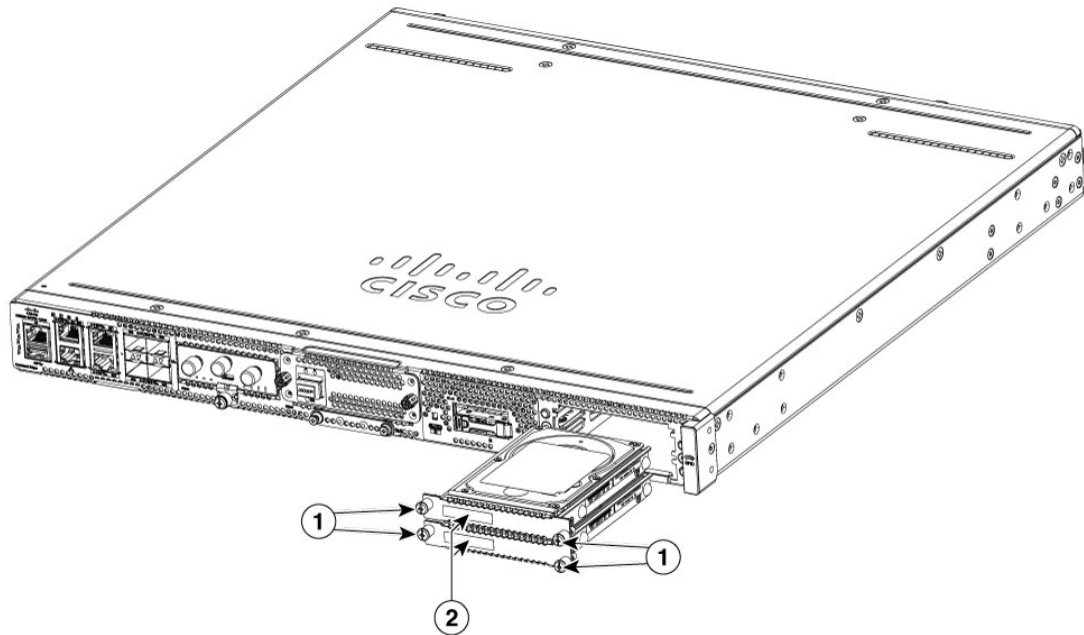
SSD 2.5-inches Drives



Note The drive bays are in the front panel of the device. The bays are closed with a cover if there are no drives in the slots.

1. Remove the blank in the SSD slot
2. Install the drive into the slot and push forward until the drive seats in the connector
3. To secure the drives in the chassis, secure the screws on each side of the drive faces

Figure 10: Installing the SSD 2.5-inches drives

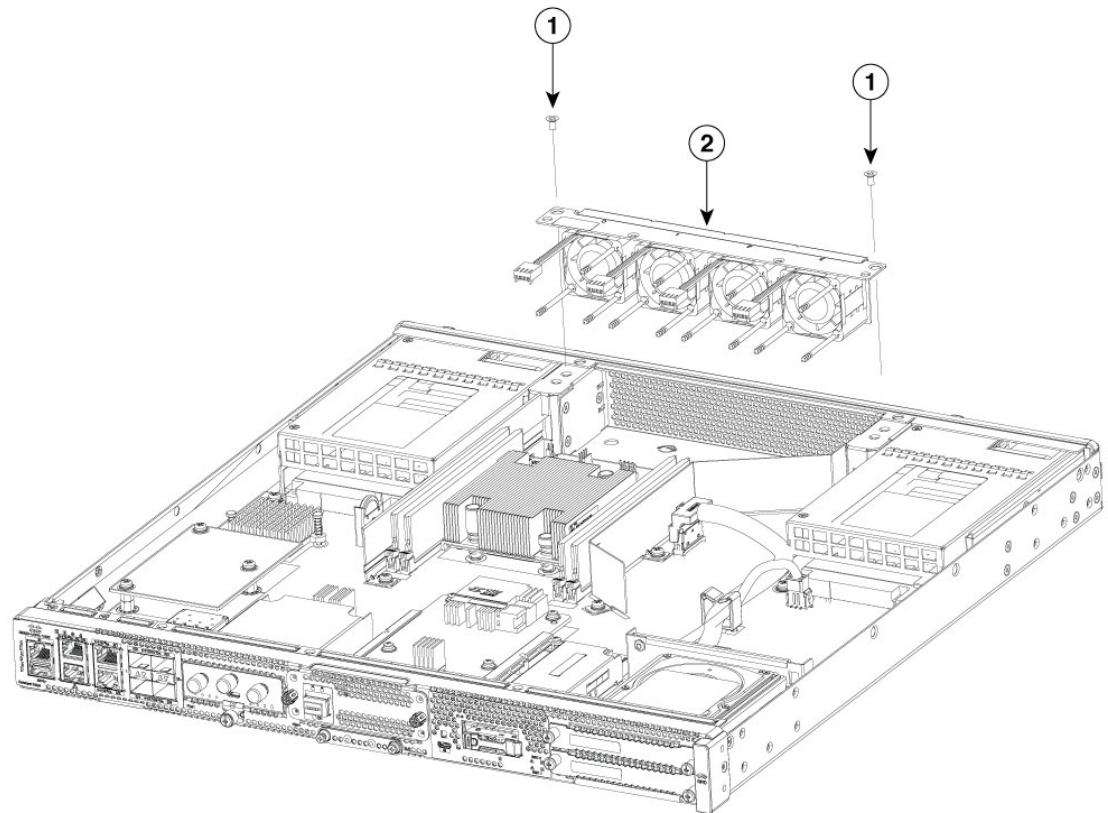


1	Screws
2	SSD 2.5" Drives

Replace (Remove and Install) Fan Tray

1. Remove the top cover.
2. Remove the two screw that secure the fan tray in the chassis.
3. Disconnect the fan cables from the motherboard.
4. Remove the fan tray by lifting up out of the chassis.
5. To install, perform these operations in reverse.

Figure 11: Removing/Installing the fan tray



1	Screws
2	Fan tray

Remove Small Form Pluggable Modules

Follow these steps to remove a Small Form Pluggable (SFP) from the device:

Procedure

Step 1 Read the Safety Warnings section and disconnect the power supply before you perform any module replacement.

Step 2 Disconnect all cables from the SFP.

Warning **Statement 1051**—Laser Radiation

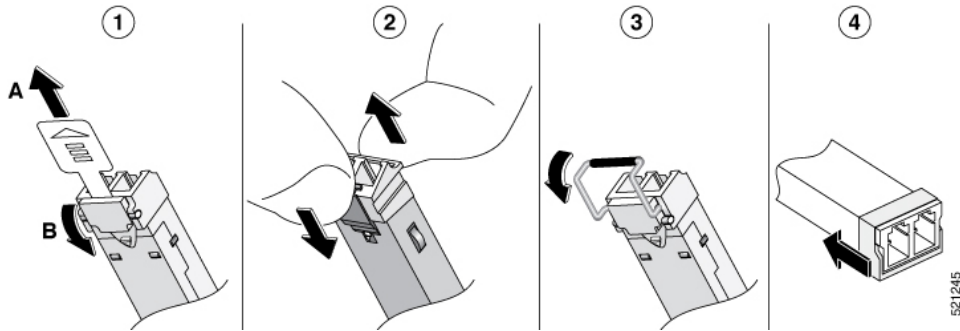
Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments.

Caution The latching mechanism used on many SFPs locks the SFP into place when cables are connected. Do not pull on the cabling in an attempt to remove the SFP.

Step 3 Disconnect the SFP latch.

Note SFP modules use various latch designs to secure the module in the SFP port. Latch designs are not linked to SFP model or technology type. For information on the SFP technology type and model, see the label on the side of the SFP.

Figure 12: Disconnecting SFP Latch Mechanisms



1	Sliding latch	3	Bale-clasp latch
2	Swing and slide latch	4	Plastic collar latch

Tip Use a pen, screwdriver, or other small straight tool to gently release a bale-clasp handle if you cannot reach it with your fingers.

Step 4 Grasp the SFP on both sides and remove it from the device.