Replacing or Installing Modules, Fan Trays, and Power Supplies

Preventing Electrostatic Damage

To prevent electrostatic damage (ESD) to electronic components, which include but are not limited to switch modules, that you handle, you must be sure that you are grounded while handling electronic components.

Before You Begin

The switch must be connected to the facility earth ground.

Step 1 Attach an ESD wristband to your arm and be sure that it touches your skin.

Step 2 Attach the alligator clip on the other end of the strap to the grounding cable for the switch or to the screws holding the grounding cable to the switch.

Step 3 Verify that the grounding cable is attached to the facility earth ground.

Installing or Replacing a Supervisor Module

The switch can operate with one or two supervisor modules installed in the chassis. If there are two supervisor modules, you can remove the standby supervisor and replace it with another supervisor of the same type as the installed supervisor (both must be either supervisor A modules or both must be supervisor B modules—do not mix supervisor types in the same chassis). If you start to remove the active supervisor, the switch automatically makes the other supervisor active and makes the module that you are removing the standby supervisor. If the switch has only one installed supervisor module, you can install the new supervisor in the empty supervisor slot during operations.

Warning **Statement 1029—**Blank Faceplates and Cover Panels

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Warning **Statement 1034—**Backplane Voltage

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing

Before You Begin

- You must wear an electrostatic discharge (ESD) wrist strap or other ESD protective device while handling modules.
- Prepare an antistatic surface or packing materials for each module that you remove from the chassis.

Step 1 Open the packaging for the new supervisor module, inspect the module for damage, and verify that the module is the same type as the other supervisor module installed in the chassis.
If the module is damaged, alert the Technical Assistance Center (TAC).

Step 2 If you are installing the module in an empty slot, remove the blank module that is already in that slot by unscrewing its captive screw and pulling it out of the slot. Go to Step 4.

Step 3 If you are replacing a module that is currently in the chassis, remove the existing module from the chassis by following these steps:

a) Disconnect and label the following cables from the module:

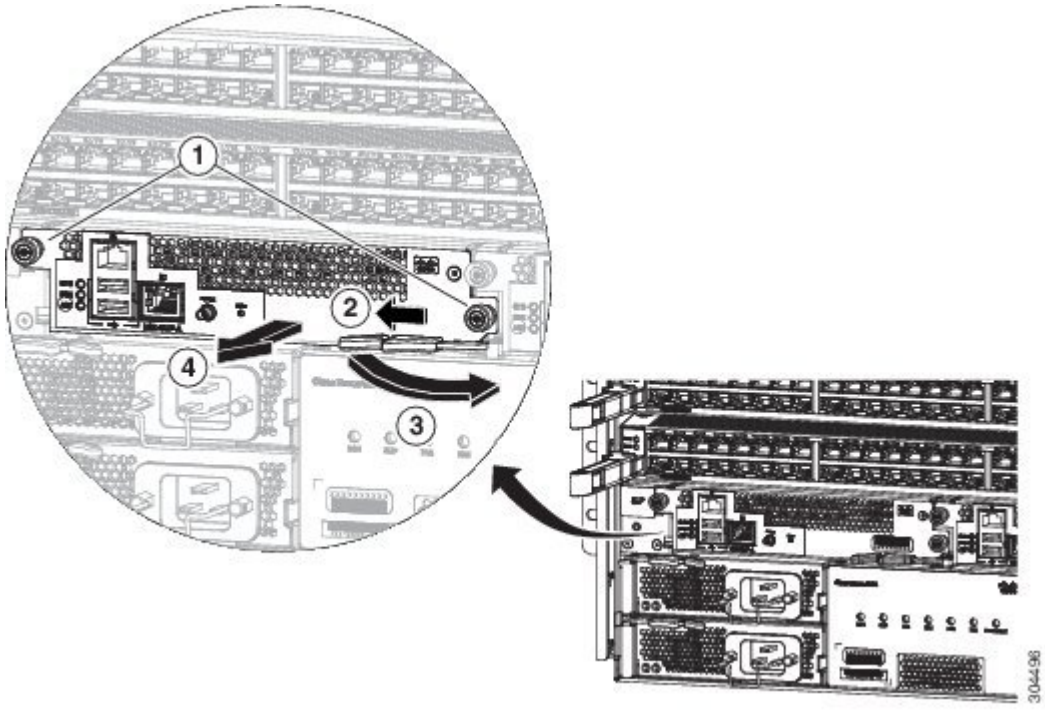
- Console cable
- Ethernet Management cable

b) If there are any external drives attached to the module through its USB ports, detach those drives.

c) Slide the middle section of the ejector handle toward the end of the handle and rotate the handle away from the front of the module (see Callouts 1 and 2 in the following figure).

The module unseats its connectors from the midplane and moves slightly out of the chassis.

Figure 1: Removing a Supervisor Module from a Chassis



1	Unscrew two captive screws until each one is no longer attached to the chassis.	3	Rotate the ejector lever away from the module.
2	Slide the middle handle toward the end of the ejector lever.	4	Pull on the lever to slide the module part way out of the chassis. Release the lever, hold the front of the module and pull the module all the way out of the chassis.

d) Use one hand to hold the front of the module, place your other hand under the module to support its weight, pull the module out of the chassis, and set the it on an antistatic surface or inside an antistatic bag.

Step 4 To install the new module, follow these steps:

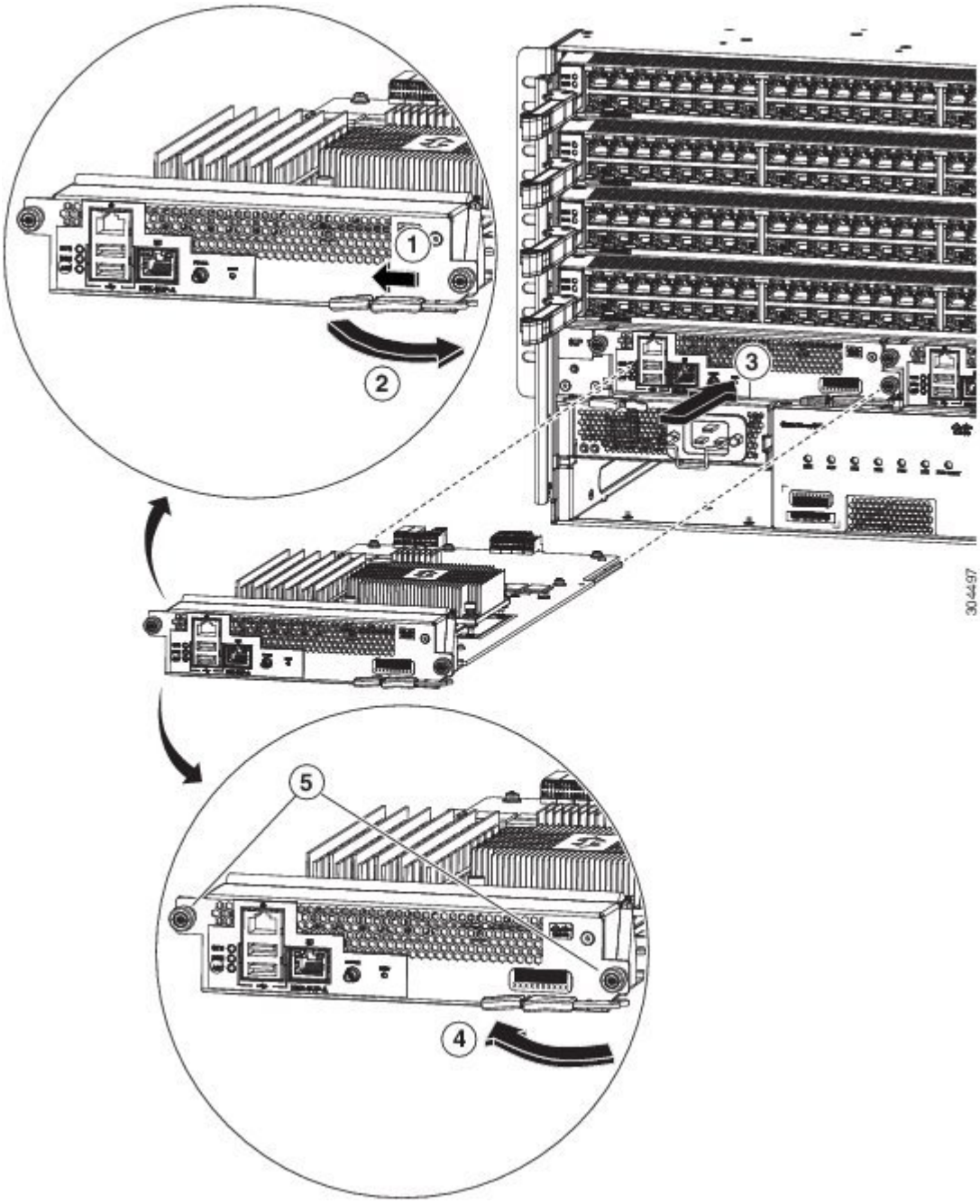
a) Pull the middle section of the ejector handle toward the end of the handle and rotate the handle away from the front of the module.
This action opens the lever so that the module can be fully inserted into the slot.

b) Hold the front of the module with one hand and place your other hand under the module to support its weight.

c) Align the back of the module to the guides in the open supervisor slot and slide the module all the way into the slot (see the following figure).

The module stops when its front is about 0.25 inches (0.6 cm) outside the front of the chassis.

Figure 2: Installing a Supervisor Module from a Chassis



1	Slide the middle handle toward the end of the ejector lever.	4	Rotate the ejector lever to the front of the chassis.

2	Rotate the ejector lever away from the module.	5	Secure the chassis to the chassis by screwing in two captive screws and tighten them to 8 in-lb (0.9 N·m) of torque.
3	Slide the back end of the module into the open supervisor slot.		

d) Rotate the lever all the way to the front of the chassis until it locks in place with a click.
Make sure that the other end of the lever engages behind the front of the slot so that the module fully seats onto the connectors on the midplane.

e) Screw in the two captive screws to secure the module to the chassis. Tighten the screws to 8 in-lb (0.9 N·m) of torque.

f) Attach the following cables to the module:

- Console cable—Attach to the Console port.
- Management cable—Attach to the Management Ethernet port.

g) Verify that the supervisor module LEDs turn on and appear as follows:

- The Status (STS) LED is green.
- The Active (ACT) LED is amber or green.

Installing or Replacing a System Controller Module

The switch can operate with one or two system controller modules installed in the chassis. You can replace one system controller module while there is another one installed in the chassis.

Warning **Statement 1029—**Blank Faceplates and Cover Panels

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Warning **Statement 1034—**Backplane Voltage

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing

Before You Begin

- You must wear an electrostatic discharge (ESD) wrist strap or other ESD protective device while handling modules.
- Prepare an antistatic surface or packing materials for each module that you remove from the chassis.

Step 1 Open the packaging for the new system controller module and inspect the module for damage.
If the module is damaged, alert the Technical Assistance Center (TAC).

Step 2 If you are installing the module in an empty slot, remove the blank module that is already in that slot by unscrewing its captive screw and pulling it out of the slot. Go to Step 4.

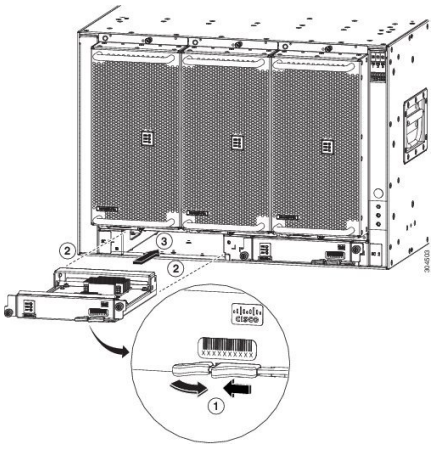
Step 3 If you are replacing a module that is currently in the chassis, remove the existing module from the chassis by following these steps:

a) Unscrew the two captive screws (one on the left side of the module and one on the right side) until the screws are no longer in contact with the chassis.
b) Slide and hold the middle handle on the ejector lever toward the end of the lever.
c) Rotate the ejector lever away from the front of the module.
As you rotate the lever, the module unseats from the midplane and moves slightly forward.
d) Use the lever to pull the module a couple of inches (about 5 cm) out of the slot.
e) Use one hand to hold the front of the module, place your other hand under the module to support its weight, pull the module out of the chassis, and set the it on an antistatic surface or inside an antistatic bag.

Step 4 To install the new module, follow these steps:

a) Slide and hold the middle handle on the ejector lever toward the end of the lever (see the following figure).

Figure 3: Removing a System Controller Module from a Chassis



1	Slide the middle handle on the ejector lever to the end of the lever and rotate the lever away from the module.	3	Rotate the ejector lever to the front of the module so that its locking knob grabs the chassis frame and seats the module on the midplane.
2	Slide the module all the way into the slot.		

b) Hold the front of the module with one hand and place your other hand under the module to support it.
c) Align the back of the module to the guides in the open controller slot and slide the module all the way into the slot. The module stops when its front is about 0.25 inches (0.6 cm) outside the front of the chassis.
d) Rotate the ejector lever all the way to the front of the chassis until it locks in place with a click. The module is fully seated on the midplane.
e) Screw in the two captive screws to secure the module to the chassis. Tighten each of these screws to 8 in-lb (0.9 N·m) of torque.
f) Verify that the Status (STS) LED turns on and becomes green.

Installing or Replacing an I/O Module

The switch can operate with one or more I/O modules installed in the chassis. If there is at least one I/O module installed and operating in the chassis, you can replace another I/O module or install a new I/O module in an empty I/O module slot.

Warning **Statement 1029—**Blank Faceplates and Cover Panels

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Warning **Statement 1034—**Backplane Voltage

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing

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.

Before You Begin

- You must wear an electrostatic discharge (ESD) wrist strap or other ESD protective device while handling modules.

- Prepare an antistatic surface or packing materials for each module that you remove from the chassis.

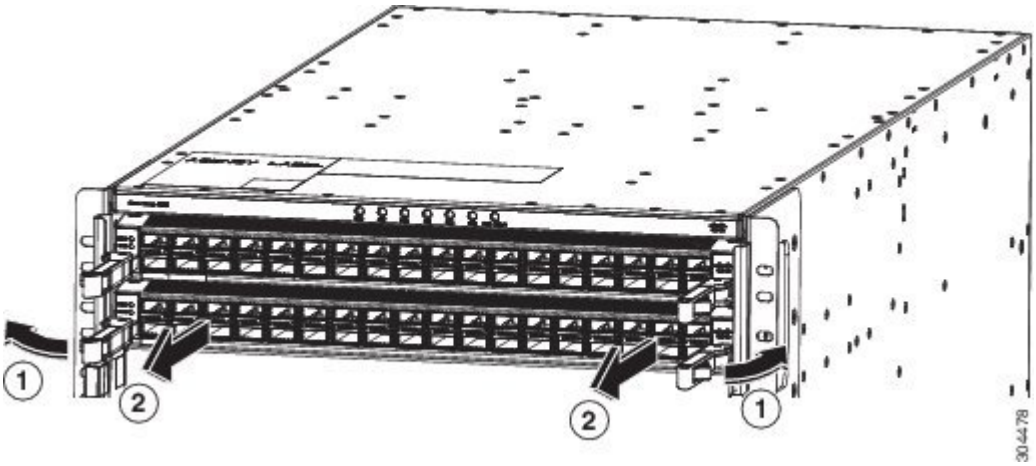
Step 1 Open the packaging for the new I/O module and inspect the module for damage.
If the module is damaged, contact the Technical Assistance Center (TAC).

Step 2 If you are installing the module in an empty slot, remove the blank module that is already in that slot by unscrewing its two captive screws and pulling it out of the slot. Go to Step 4.

Step 3 If you are replacing a module that is currently in the chassis, remove the existing module from the chassis by following these steps:

a) Disconnect and label each of the interface cables from the module.
b) Rotate each of the two ejector levers away from the center of the chassis (see the following figure).

Figure 4: Removing an I/O Module from the Chassis



1	Rotate the ejector handle on each end of the module away from the center of the chassis until they no longer hold onto the mounting bracket.	2	Pull each ejector handle to remove the module part way from the chassis.

The levers unlock themselves from the brackets on the side of the chassis.

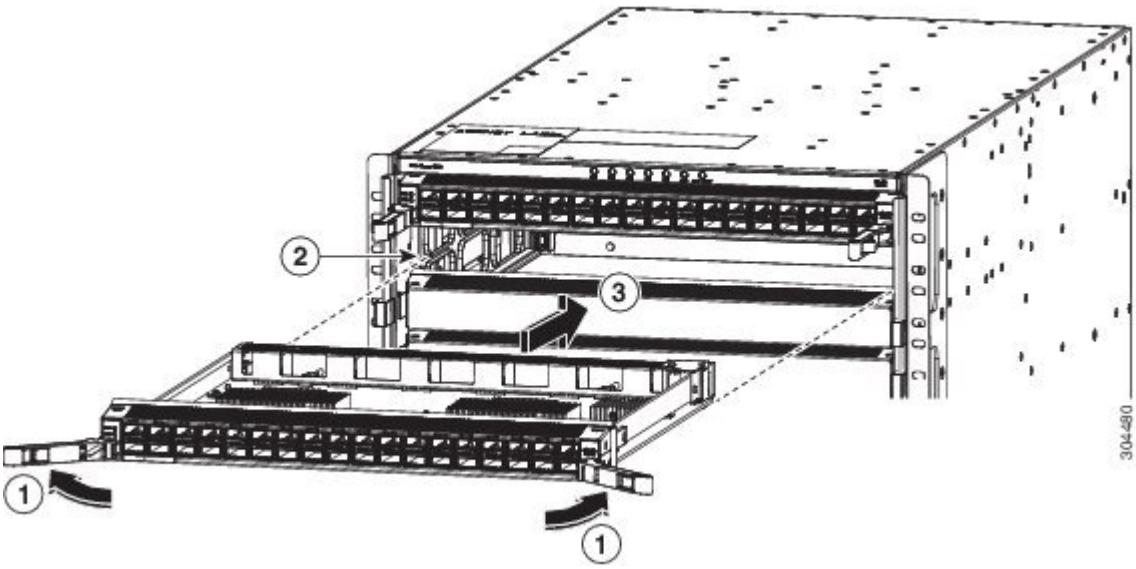
c) Use the levers to pull the module a couple of inches (about 5 cm) from the chassis.
d) Use one hand to hold the front of the module, place your other hand under the module to support its weight, pull it out of the chassis, and set it on an antistatic surface or inside an antistatic bag.

Step 4 To install the new module, follow these steps:

a) Rotate the end of each of the two ejector levers away from the center of the chassis.
b) Hold the front of the module with one hand and place your other hand under the module to support its weight.
c) Align the back of the module to the guides in the open I/O module slot and slide the module all the way into the slot (see the following figure).

The module stops when its front is about 0.25 inches (0.6 cm) outside the front of the chassis. The two levers move part way to the front of the chassis.

Figure 5: Inserting an I/O Module in the Chassis



1	Rotate the ejector handle on each end of the module away from the center of the chassis.	3	Slide the module all the way into the slot.
2	Align the bottom of the back of the module with tracks on either side of the slot.		

d) Rotate the ends of the two levers toward the center of the chassis.
When the levers point straight out from the chassis, their other ends should be locked onto the brackets on the side of the chassis.

As you rotate the levers, the front of the module moves all the way to the front of the chassis and the module fully seats on the midplane of the chassis.

e) Attach each interface cable to the appropriate port on the I/O module. Use the label on each cable to determine which port each cable attaches to.

f) Verify that the I/O module LEDs turn on and appear as follows:

- The Status (STS) LED turns on and becomes green.
- For each connected port, the port LED turns on and becomes green or amber.

Replacing a Fan Tray

You can remove a fan tray to either replace it with another fan tray or to replace a fabric modules located behind it.

The switch uses three fan trays but it can operate with two fan trays while you replace one or remove one to replace one of the fabric modules behind the fan tray. When you remove one fan tray, the other fan trays speed up their fans to maintain the designed airflow.

Note If you cannot replace a fan tray within three minutes, we recommend that you leave it in the chassis until you are ready to replace it.

Note If you remove more than one fan tray at a time during operations, the switch allows up to two minutes of operations before shutting down unless you replace extra missing fan trays within that time. If the switch senses an overtemperature condition when multiple fan trays are removed, the shutdown can occur in less than two minutes.

To replace a fan tray, you must perform the following functions:

1. Remove the fan tray as explained in Removing a Fan Tray, on page 10.
2. If you need to replace a fabric module behind the removed fan tray, see Replacing a Fabric Module, on page 13
3. Install a fan tray as explained in Installing a Fan Tray, on page 12.

Warning **Statement 1034—**Backplane Voltage

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing

Removing a Fan Tray

Remove only one fan tray at a time during switch operations. If you remove more than one fan tray at a time, the switch will shut down within two minutes unless you replace the extra fan trays that you removed within that time.

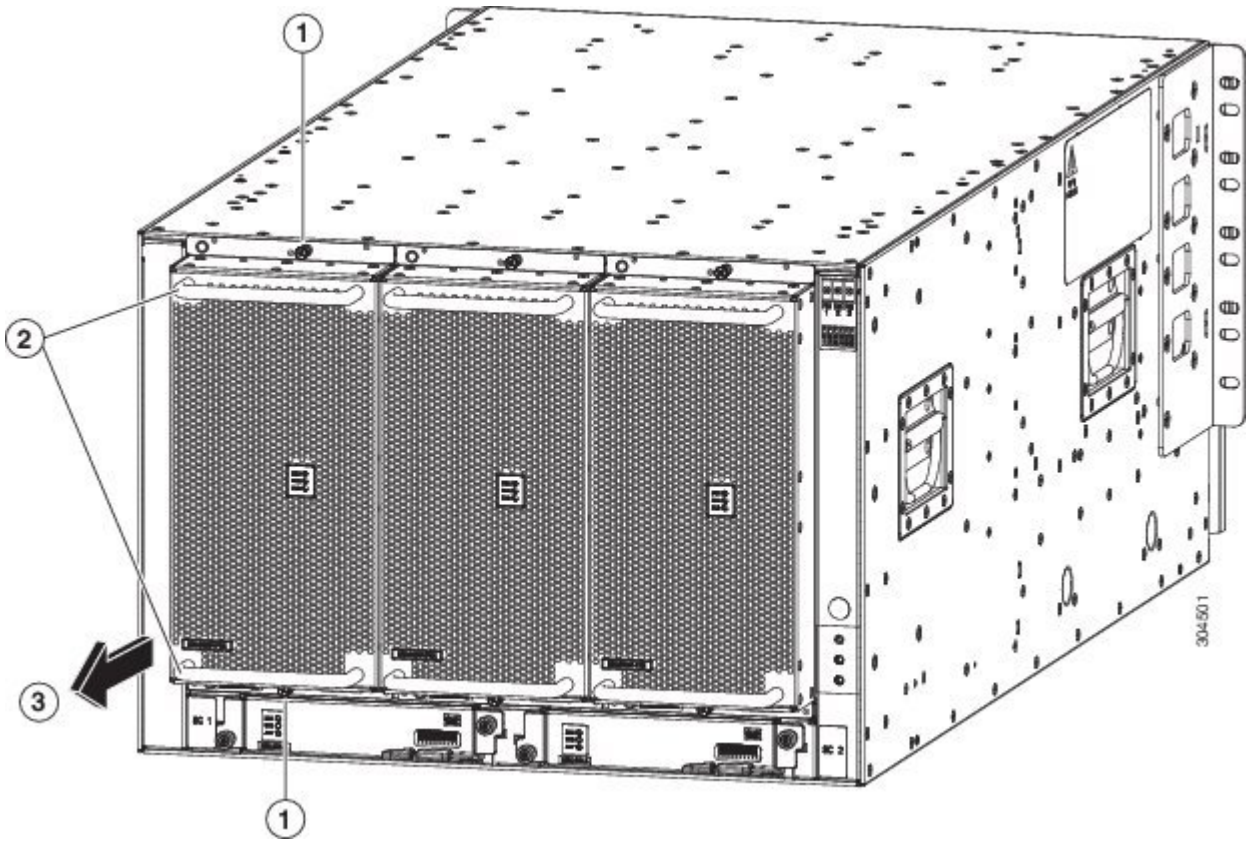
Before You Begin

- You must wear an electrostatic discharge (ESD) wrist strap or other ESD protective device while handling modules.
- Prepare an antistatic surface or packing materials for each module that you remove from the chassis.

- If you are replacing a fan tray, open the packaging for the new fan tray and inspect it for damage. If the module is damaged, contact the Technical Assistance Center (TAC) and wait until you have an undamaged fan tray to install.

Step 1 Unscrew the four captive screws on the front of the fan tray (one on each corner of the front of the fan tray) until each screw is free of the chassis (see Callout 1 in the following figure).

Figure 6: Removing a Fan Tray from the Chassis



1	Unscrew four captive screws (two at the top of the module and two at the bottom of the module).	3	Pull on the fan tray to slide it out of the chassis. Set the fan tray on an antistatic surface.
2	Hold the two fan tray handles with your two hands.		

Step 2 Hold both handles on the front of the fan tray with both of your hands and pull the fan tray out of the slot.

Step 3 Set the fan tray on antistatic material or inside an antistatic bag.

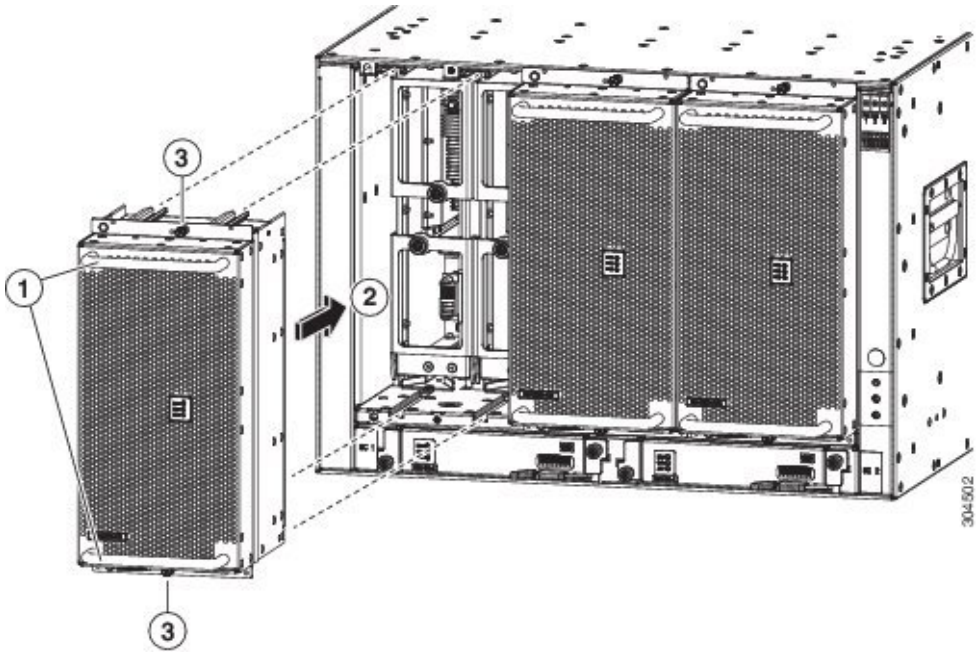
Installing a Fan Tray

Before You Begin

- Fan tray slot is open in the chassis.
- Fan tray is available for installation.
- If you were replacing a fabric module behind the open fan tray slot, that replacement operation is completed.

Step 1 Use both of your hands to hold the two handles on the front of the fan tray that you are installing.

Figure 7: Installing a Fan Tray in the Chassis



1	Hold the two fan tray handles with your two hands.	3	Screw in four captive screws and tighten each screw to 8 in-lb (0.9 N·m) of torque.
2	Position the back of the fan tray to the open fan tray slot. The pins on the top and bottom of the fan tray should align to holes in the chassis and the two sets of rails on the top of the fan tray should align to two sets of tracks on the top of the open slot. Slide the fan tray all the way into the slot.		

Step 2 Position the fan tray with its rear (the side with the electrical connectors at the opening for the fan tray slot in the chassis.

Step 3 Align the two tracks on the top of the fan tray with the two sets of rails at the top of the open fan tray slot in the chassis.

Step 4 Slide the fan tray all the way into the slot until the front of the fan tray touches the chassis.
Make sure that the four captive screws on the front of the fan tray align with the four screw holes in the chassis.

Step 5 Screw in the four captive screws to secure the fan tray to the chassis. Tighten the screws to 8 in-lb (0.9 N·m) of torque.

Step 6 Verify that the fan tray STATUS LED turns on and becomes green.

Replacing a Fabric Module

The switch uses either three or six fabric modules but you can replace a fabric module while others are operating. To replace a fabric module, you must do each of the following:

- Shutdown the fabric module being replaced.
- Remove the fan tray covering the fabric module in the chassis.
- Remove the fabric module.
- Install the new fabric module.
- Reinstall the fan tray over the fabric module.
- Activate the fabric module.

To maintain the designed airflow while you remove the fan tray, the fans in the other fan trays increase their speed. During operations, we recommend that you remove only one fan tray at a time and replace that fan tray within three minutes to avoid the possibility of having the switch overheat and shut down. If you remove more than one fan tray at a time, the switch will shut down if you do not replace the extra missing fan trays within two minutes (the shutdown can occur earlier if an overtemperature condition occurs).

Note If the switch does not have all of the fabric slots filled, fill them as indicated in the following table and insert blank filler plates in the open slots. If you do not fill the recommended slots with fabric modules, some of the fans will not power up.

Table 1: Fabric Module Slots to Fill

Number of Fabric Modules	Slots to be Filled
1 (Not allowed)	N.A.
2 (Not recommended)	N.A.
3 (Minimum recommended number)	22, 24, and 26
4	22, 23, 24, and 26

Number of Fabric Modules	Slots to be Filled
5	21, 22, 23, 24, and 26, or 22, 23, 24, 25, and 26
6 (Fully populated)	21, 22, 23, 24, 25, and 26

To replace a fabric module, you must perform these operations, which are explained in the topics that follow:

1. Remove the fan tray that covers the fabric module that you are replacing.
2. Shutdown and remove the fabric module.
3. Install the new fabric module.
4. Install the fan tray over the new fabric module.

Warning **Statement 1034—**Backplane Voltage

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing

Removing a Fabric Module

Before You Begin

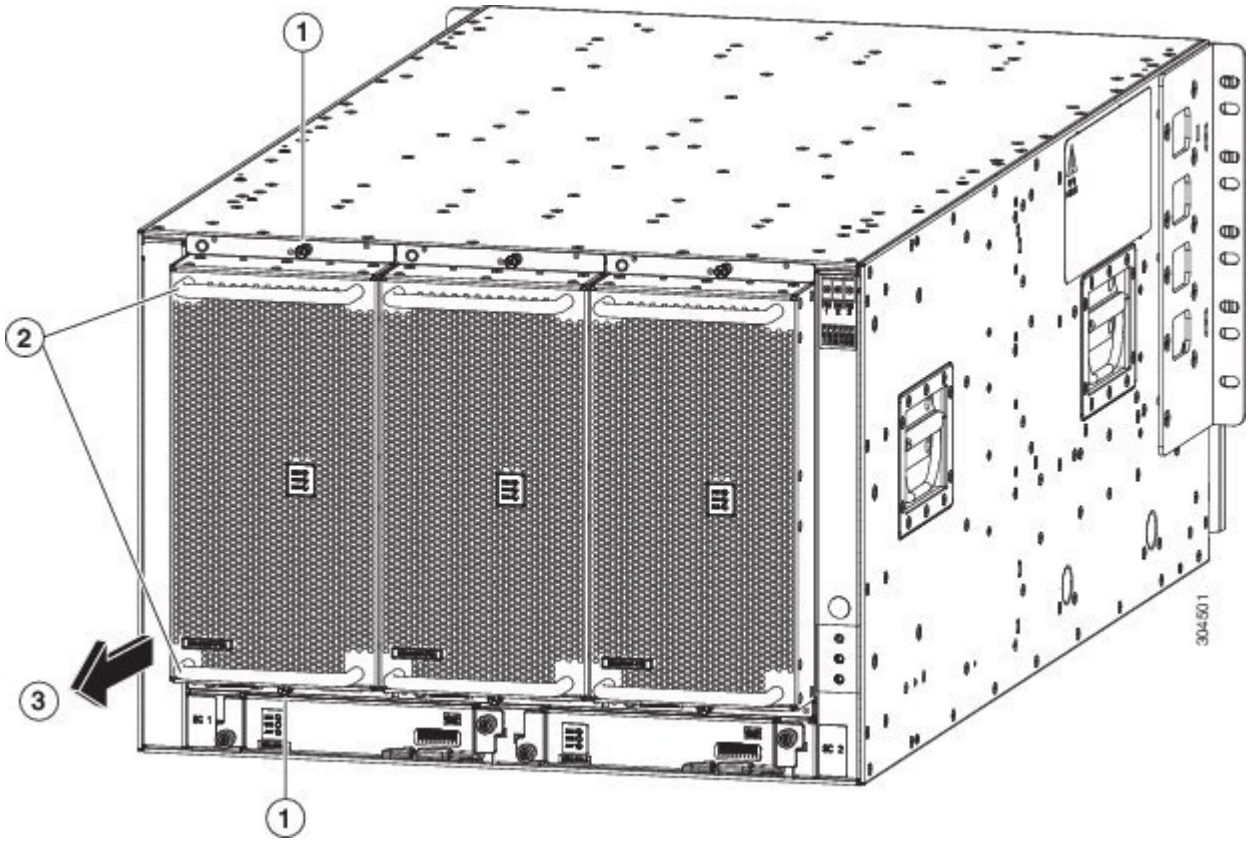
- You must wear an electrostatic discharge (ESD) wrist strap or other ESD protective device while handling modules.
- Prepare an antistatic surface or packing materials for each module that you remove from the chassis.
- You must remove the fan tray that covers the fabric module that you are removing (see t_n95xx_remove_fan_tray.xml.

Step 1 If you are replacing a fabric module, open the packaging for the new module and inspect it for damage.
If the module is damaged, alert the Technical Assistance Center (TAC) and stop this replacement process until you have an undamaged module to install.

Step 2 Remove the fan tray that covers the fabric module by following these steps:

a) Unscrew the four captive screws on the front of the fan tray (one on each corner of the front of the fan tray) until each screw is free of the chassis (see Callout 1 in the following figure).

Figure 8: Removing a Fan Tray from the Chassis



1	Unscrew four captive screws (two at the top of the module and two at the bottom of the module).	3	Pull on the fan tray to slide it out of the chassis. Set the fan tray on an antistatic surface.
2	Hold the two fan tray handles with your two hands.		

b) Hold both handles on the front of the fan tray with both of your hands and pull the fan tray out of the slot.
c) Set the fan tray on antistatic material or inside an antistatic bag.

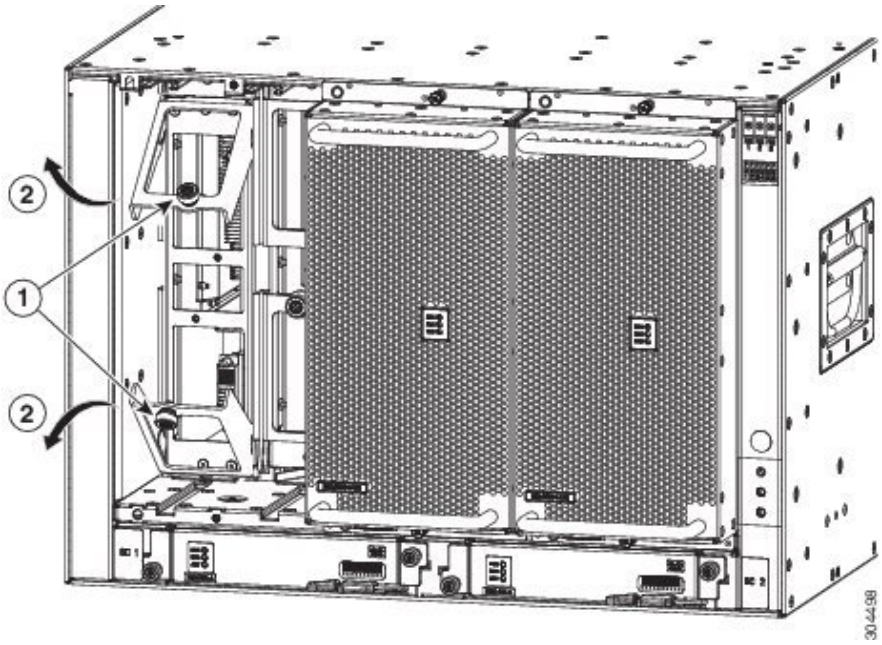
Step 3 To prevent a loss of packets during operations, shut down the fabric module as follows: .

a) Enter the **poweroff module** *slot_number* command. Input a slot number between 21 and 26 (labeled as FM 1 to FM 6 on the chassis).
b) Verify that the Fabric LED for the slot that you specified turns off.

Step 4 Remove the fabric module that you are replacing by following these steps:

a) Unscrew the screw on the center of each of the two handles on the fabric module (see Callout 1 in the following figure).

Figure 9: Unlocking a Fabric Module from its Slot in the Chassis

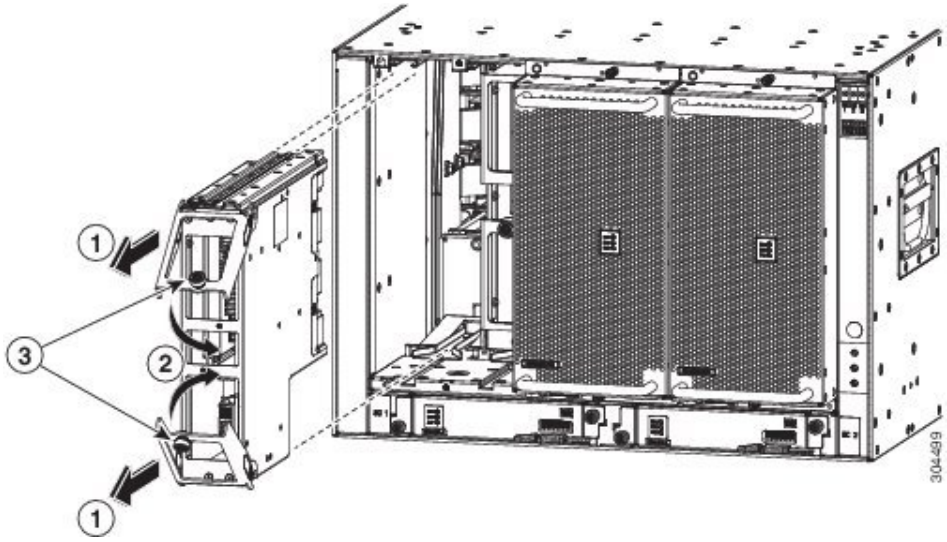


1	Unscrew two captive screws (one on each ejector handle).	2	Rotate both ejector handles away from the front of the fabric module.

b) Rotate the two handles at least 30 degrees so that the other end of each handle no longer holds the module in the slot (see Callout 2 in the previous figure).

c) With each of the two handles in your two hands, pull the module a couple of inches (about 5 cm) out of the slot (see the following figure).

Figure 10: Removing a Fabric Module from the Chassis



1	Pull on both handles to partially remove the fabric module from the chassis	3	Screw in the two captive screws (one on each handle) to the module. Tighten each of these screws to 8 in-lb (0.9 N·m) of torque.
2	Rotate both ejector handles to the front of the module.		

d) Rotate both handles back to the front of the module until they click in place. Fasten each handle to the module using the captive screw on the back of the handle. Tighten the screw to 8 in-lb (0.9 N·m) of torque (see Callouts 2 and 3 in the previous figure).
e) Place one hand under the fabric module to support its weight, place your other hand on the front of the module, and slide the module out of the slot.
f) Rotate the module 90 degrees and lay it flat on an antistatic surface or in an antistatic bag.

What to Do Next

You are ready to install a fabric module into the open slot (see t_n95xx_install_fabric.xml.

Installing a Fabric Module

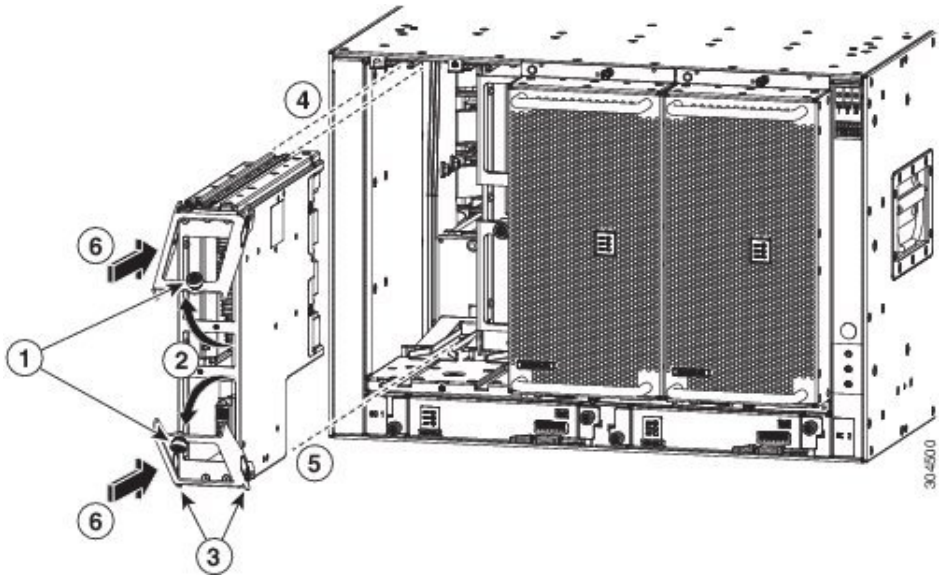
Before You Begin

- You must wear an electrostatic discharge (ESD) wrist strap or other ESD protective device while handling modules.
- Prepare an antistatic surface or packing materials for each module that you remove from the chassis.

Step 1 Place one hand on the front of the module and turn the module 90 degrees so that the electrical connectors are on the bottom.

Step 2 Unscrew the two captive screws (one on each ejector handle) and rotate the ejector handles away from the chassis (see Callouts 1 and 2 in the following figure). Be sure that the locking posts on the top and bottom of the chassis (see Callout 3) rotate into the module so that the module can slide fully into the slot.

Figure 11: Installing a Fabric Module in a Chassis



1	Unscrew two captive screws (one on each ejector handle).	4	Align the rails on the top of the module to the track on the top of the open slot.
2	Rotate both ejector handles away from the front of the module.	5	Align the bottom of the module so that it slides into the tracks on the bottom of the open slot.
3	Be sure that the locking posts fully rotate down into the module	6	Slide the module all the way into the slot.

Step 3 Fit the guide rails on the top of the module into the track on the top of the slot and make sure that the guide bar on the bottom of the module goes into the module guide at the bottom of the slot.

Step 4 Slide the module all the way into the slot.

Step 5 Rotate both ejector levers to the front of the chassis and be sure that the module is locked to the top and bottom of the slot.

Step 6 Screw in the captive screw on each of the two levers so that each lever is locked in place on the module. Tighten each screw to 8 in-lb (0.9 N·m) of torque.

Step 7 Power up the fabric module as follows:

a) Enter the **poweroff module** command. Input a slot number between 21 and 26 (labelled as FM 1 through FM 6 on the chassis).

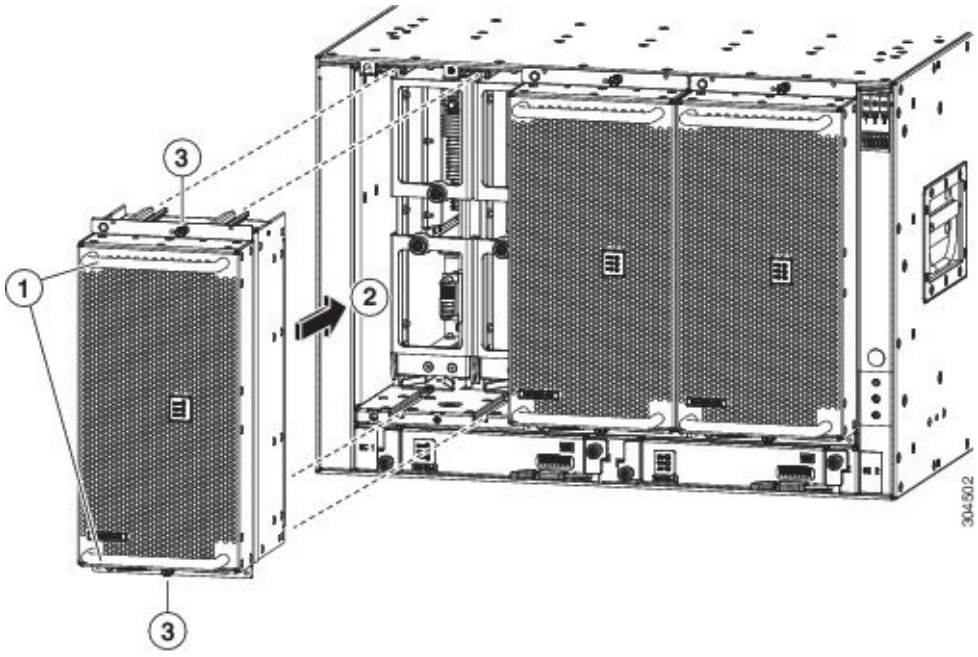
b) Verify that the Fabric LED for the slot that you specified turns on.

Note If you did not use the **poweroff module** command to shut down the original fabric module before removing it, do not use the **no poweroff module** command (the module will begin to power up as soon as you connect it to an AC power source and the chassis).

Step 8 Replace the fan module over the replaced fabric module by following these steps:

a) Use both of your hands to hold the two handles on the front of the fan tray that you are installing.

Figure 12: Installing a Fan Tray in the Chassis



1	Hold the two fan tray handles with your two hands.	3	Screw in four captive screws and tighten each screw to 8 in-lb (0.9 N·m) of torque.

2	Position the back of the fan tray to the open fan tray slot. The pins on the top and bottom of the fan tray should align to holes in the chassis and the two sets of rails on the top of the fan tray should align to two sets of tracks on the top of the open slot. Slide the fan tray all the way into the slot.		

b) Position the fan tray with its rear (the side with the electrical connectors at the opening for the fan tray slot in the chassis.
c) Align the two tracks on the top of the fan tray with the two sets of rails at the top of the open fan tray slot in the chassis.
d) Slide the fan tray all the way into the slot until the front of the fan tray touches the chassis.
Make sure that the four captive screws on the front of the fan tray align with the four screw holes in the chassis.
e) Screw in the four captive screws to secure the fan tray to the chassis. Tighten the screws to 8 in-lb (0.9 N·m) of torque.
f) Verify that the fan tray and fabric module STATUS LEDs (on the fan tray) turn on and become green.

What to Do Next

You are ready to reinstall the fan tray that covers the newly installed fabric module.

Installing a 3-kW AC Power Supply

The number of 3-kW power supplies that you install depends on the power requirements of the switch and the power mode that you are using. To determine the power requirements of the switch, see the Power Requirements section.

If you are using only one power source for combined mode or power-supply (*n*+1) redundancy mode, you can install the power supplies in any of the power supply slots on the chassis. If you are using two power sources for input-source (grid or *n*+*n*) redundancy mode, you must connect the power supplies in slots 1 and 2 to one power source and the power supplies in slots 3 and 4 to the other power source. With input-source redundancy mode, divide the power supplies evenly between the first four slots and the last four slots so that the amount of redundant power for the switch equals the amount of available power for the switch.

Warning **Statement 1034—**Backplane Voltage

Hazardous voltage or energy is present on the backplane when the system is operating. Use caution when servicing

Warning **Statement 1029—**Blank Faceplates and Cover Panels

Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.

Before You Begin

- The AC power source must be installed within reach of the power cables.
- The AC power source must meet the power specifications required by the switch.
- There are one or two AC power sources available. If using input-source (grid or *n*+*n*) redundancy, there must be two power sources available. Otherwise, only one power source is required.

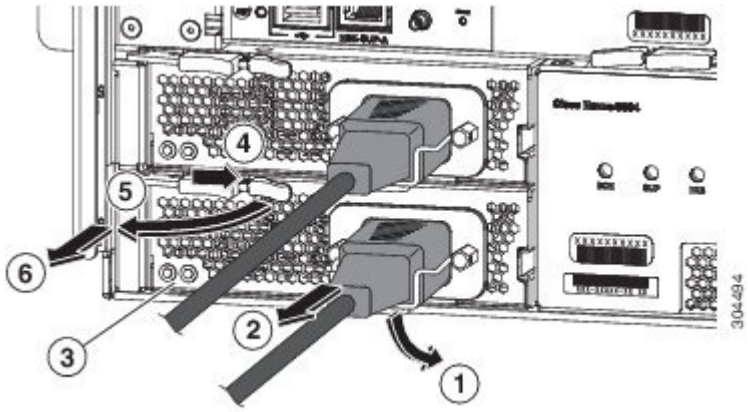
Step 1 Open the packaging for the new 3-kW AC power supply and inspect the module for damage.
If the module is damaged, contact the Technical Assistance Center (TAC).

Step 2 If you are installing the module in an empty slot, remove the blank filler plate that is already in that slot by unscrewing its captive screw and pulling it out of the slot. If you are using the combined power mode (no power redundancy) or power-supply (*n*+1) redundancy, you can use any power supply slot in the chassis. If you are using input-source (grid or *n*+*n*) redundancy mode, you must be sure that you are inserting the power supply in a slot used for the desired power supply (the power supplies in slots 1 and 2 must be connected to one power source and the power supplies in slots 3 and 4 must be connected to the other power source). Go to Step 4.

Step 3 If you are replacing a power supply that is currently in the chassis, remove the existing module from the chassis by following these steps:

a) Disconnect the power cable from the power supply and verify that the output and input LEDs turn off.
b) Slide the middle of the ejector lever down to the end of the lever and rotate the lever up so that its other end no longer holds onto the chassis (see the following figure).
The power supply unlocks from the chassis and moves out slightly.

Figure 13: Removing a Power Supply from the Chassis



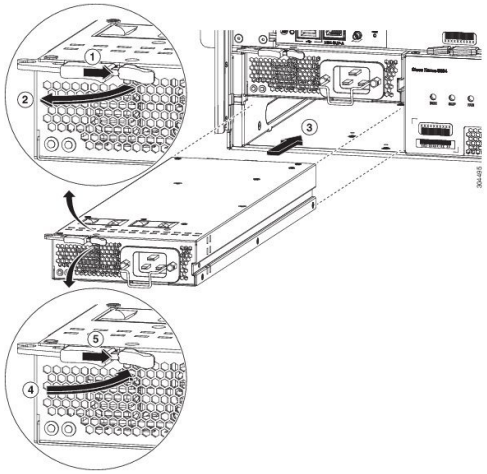
1	Rotate the cable retention clip off of the power cable plug.	4	Slide and hold the middle handle on the ejector lever toward the end of the lever.
2	Pull the power cable plug out of the receptacle.	5	Rotate the ejector lever away from the module.
3	Verify that the OK LED turns off.	6	Pull on the ejector lever to slide the power supply partially (2 inches [5 cm]) out of the chassis. Hold the front of the power supply and pull it all the way out of the chassis.

c) Pull on the lever to move the power supply about 2 inches (5 cm) out of the slot.
d) Place one hand on the front of the power supply and your other hand under the power supply to support its weight.
e) Pull the module out of the slot and place it on an antistatic surface or inside an antistatic bag.

Step 4 To install the new power supply, follow these steps:

a) Ensure that the power supply is not connected to an AC power source. If it is connected to a power source, remove the power cable from the power supply and wait at least five seconds before doing the next step.
b) Hold the front of the module with one hand and place your other hand under the module to support its weight.
c) Rotate the power supply 90 degrees so that the power receptacle is positioned on the lower front side and so that the back of the power supply is oriented to slide into the open power supply slot.
d) Slide the guide bracket that is located on the top of the power supply into the track at the top of the power supply slot. Slide the power supply all the way into the slot.
The front of the power supply will be about 0.25 inches (0.6 cm) outside the chassis.
e) Slide the handle on the middle of the power supply ejector handle about 0.25 inches (0.6 cm) and rotate the lever away from the front of the power supply while pushing the power supply all the way into the chassis (see the following figure).

Figure 14: Installing a Power Supply in a Chassis



1	Slide and hold the middle handle on the ejector lever toward the end of the lever.	4	Slide the rear end of the power supply all the way into the slot and press the ejector lever toward the front of the power supply to lock it in the slot.
2	Rotate the ejector lever away from the module.	5	Rotate the lever to the front of the power supply and verify that the power supply is locked into its slot by trying to pull it out.
3	Make sure that the locking knob has rotated into the power supply and cannot prevent the power supply from sliding all the way into the chassis slot.		

f) Rotate the ejector lever toward the front of the power supply and be sure that the other end of the lever locks into the chassis.
   The lever should click when you rotate it all the way to the front of the power supply. Be sure that the power supply is fully inserted into the slot (the front of the power supply should be even with the surface of the chassis) and securely in place.
g) Attach the power cable to the power receptacle on the power supply and rotate the power cable holder onto the plug on the cable.
h) Make sure that the other end of the power cable is attached to the AC power source in one of the following ways:
   - If you are using the combined power mode or the power supply redundancy mode, you must connect the power cable to the same power source as used by the other power supplies in the same switch.
   - If you are using the input-power source (grid or *n*+*n*) redundancy mode, you must connect the power cable to the same power source as used by the other power supplies in the same set of power supply slots in the chassis. The power cables for slots 1 and 2 must be connected to one power source and the power cables in slots 3 and 4 must be connected to another power source.

i) Verify that the OK LED turns on and eventually becomes green.