



## Replacing Modules

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## Replacing a Fan Tray

The fan tray is designed to be removed and replaced while the system is operating without causing an electrical hazard or damage to the system if the replacement is performed within one minute.

If you do not have the appropriate replacement fan tray, leave the original fan tray in its slot to preserve the designed airflow for the switch until you have the replacement fan module.



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**Caution** The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

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To replace a fan tray, follow these steps:

### Before you begin

- Verify that you have an ESD wrist strap or other device to prevent ESD damage for components that you touch.
- Verify that you have an antistatic surface or bag for placing the fan module that you remove from the chassis.
- Verify that the replacement fan tray has the correct direction of airflow (it has the same coloring as the other fan and power supply modules in the same chassis).

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**Step 1** Remove the fan tray that you are replacing as follows:

- a) Loosen the captive screws on the fan tray by turning them counterclockwise, using a flat-blade or number 1 Phillips screwdriver if required.
- b) Grasp the captive screws of the fan tray and pull it outward.

- c) Pull the fan tray clear of the chassis and set it on an antistatic surface or repack it in packing materials.

**Step 2** Install the replacement fan tray as follows:

- a) Hold the fan tray with the sheet metal flange holding the connector on the bottom.
- b) Place the fan tray into the front chassis cavity so it rests on the chassis, and then push the fan tray into the chassis as far as it can go until the captive screw makes contact with the chassis.
- c) Tighten the captive screw.
- d) Listen for the fans if the device is powered on. You should immediately hear them operating. If you do not hear them, ensure that the fan tray is inserted completely in the chassis and the faceplate is flush with the outside surface of the chassis.
- e) Verify that the LED is green. If the LED is not green, one or more fans are faulty. If this problem occurs, contact your customer service representative for a replacement part.

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## Replacing a 1 (RU) Fan Module

The fan module is designed to be removed and replaced while the system is operating without causing an electrical hazard or damage to the system if the replacement is performed within one minute.

If you do not have the appropriate replacement fan module, leave the original fan module in its slot to preserve the designed airflow for the switch until you have the replacement fan module. The module number can be found on the chassis.



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**Caution** The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

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### Before you begin

- Verify that you have an ESD wrist strap or other device to prevent ESD damage for components that you touch.
- Verify that you have an antistatic surface or bag for placing the fan module that you remove from the chassis.
- Verify that the replacement fan module has the correct direction of airflow (it has the same coloring as the other fan and power supply modules in the same chassis).

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**Step 1** Attach an ESD wrist strap or other ESD device to your body and an earth ground to prevent ESD damage.

You can attach the ESD device to any earth ground or grounded object, such as a grounded rack or ground connection on a chassis.

**Step 2** Remove the fan module that you are replacing as follows:

- a) On the fan module that you are removing, press the two sides of the fan module handle next to where it connects to the fan module and pull on the handles enough to unseat the module from its connectors.
- b) Holding the handle, pull the module out of the chassis and set it on an antistatic surface or in an antistatic bag.

**Caution** Do not touch the electrical connectors on the back side of the module and prevent anything else from coming into contact with and damaging the connectors.

**Step 3** Install the replacement fan module as follows:

- a) Holding the fan module by its handle, align the back of the fan module (the side with the electrical connectors) to the open fan slot in the chassis.
- b) Slide the fan module into the slot until it clicks in place.
- c) Verify that the Status (STS) LED turns on and becomes green.

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## Replacing a 2 (RU) Fan Module

The fan module is designed to be removed and replaced while the system is operating without causing an electrical hazard or damage to the system if the replacement is performed within one minute.

If you do not have the appropriate replacement fan module, leave the original fan module in its slot to preserve the designed airflow for the switch until you have the replacement fan module. The module number can be found on the chassis.



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**Caution** The fans might still be turning when you remove the fan assembly from the chassis. Keep fingers, screwdrivers, and other objects away from the openings in the fan assembly's housing.

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### Before you begin

- Verify that you have an ESD wrist strap or other device to prevent ESD damage for components that you touch.
- Verify that you have an antistatic surface or bag for placing the fan module that you remove from the chassis.
- Verify that the replacement fan module has the correct direction of airflow (it has the same coloring as the other fan and power supply modules in the same chassis).

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**Step 1** Attach an ESD wrist strap or other ESD device to your body and an earth ground to prevent ESD damage.

You can attach the ESD device to any earth ground or grounded object, such as a grounded rack or ground connection on a chassis.

**Step 2** Remove the fan module that you are replacing as follows:

- a) Depending on which type of fan module that you are removing, either press the two sides of the fan module handle next to where it connects to the fan module, or loosen the captive screws by turning them counterclockwise using a flat-blade or number 1 Phillips screwdriver, and pull on the handles enough to unseat the module from its connectors.
- b) Holding the handle, pull the module out of the chassis and set it on an antistatic surface or in a antistatic bag.

**Caution** Do not touch the electrical connectors on the back side of the module and prevent anything else from coming into contact with and damaging the connectors.

- Step 3** Install the replacement fan module as follows:
- Hold the fan module by its handle, align the back of the fan module (the side with the electrical connectors) to the open fan slot in the chassis.
  - Slide the fan module into the slot until it clicks in place. Tighten screws if applicable.
  - Verify that the Status (STS) LED turns on and becomes green.
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## Replacing an AC Power Supply

You can replace an AC power supply during operations so long as there is another power supply installed and operating during the replacement. The switch requires only one power supply for operations, so you can hot swap the redundant power supply during operations. If there is only one power supply installed in the chassis, you can replace it by installing the new power supply in the open power supply slot before removing the other power supply. The module number can be found on the chassis.

### Before you begin

- Verify that you have an ESD wrist strap or other device to prevent ESD damage to the components that you touch.
  - Verify that you have an antistatic surface or bag for placing the power supply module that you remove from the chassis.
  - Verify that the replacement power supply module has the correct direction of airflow (it has the same coloring as the other fan and power supply modules in the same chassis). Otherwise the switch can overheat and shut down.
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- Step 1** Attach an ESD wrist strap or other ESD device to your body and an earth ground to prevent ESD damage.

You can attach the ESD device to any earth ground or grounded object, such as a grounded rack or ground connection on a chassis.

- Step 2** Remove the power supply as follows:

- Pull the power cord out from the power receptacle on the power supply to be removed and verify that the OK LED turns off.
- Remove the power supply from the chassis by pushing and holding its thumb latch to the left and pulling the power supply part way out of the chassis.
- Place your other hand under the power supply to support it while you slide it out of the chassis.  
Either place the power supply on an antistatic surface or pack it in its packing materials.
- If the power supply slot is to remain empty, install a blank power supply filler panel (part number N2200-P-BLNK).

- Step 3** Install the replacement power supply as follows:

- Hold the replacement power supply with one hand underneath the module and the other hand holding the handle, align the back end of the power supply (the end with the electrical connections) to the open power supply slot and slide the power supply all the way into the slot until it clicks into place.
- Test the installation by trying to pull the power supply out of the slot without using the release latch.

If the power supply does not move out of place, it is secured in the slot. If the power supply moves, press it all the way into the slot until it clicks in place.

**Step 4** Connect the new power supply to an AC power source as follows:

- a) Attach the power cable to the electrical outlet on the front of the power supply.
- b) Connect the other end of the power cable to an AC power source.
  - For no power redundancy, connect one power supply to one power source.
  - For n+1 redundancy, connect two power supplies to one or two power sources.
  - For n+n redundancy, connect each of two power supplies to a different power source.

**Note** Depending on the outlet receptacle on your power distribution unit, you might need the optional jumper cable to connect the switch to your outlet receptacle.

- c) Verify that the power supply is operational by checking that the power supply OK LED is green.

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## Replacing a DC Power Supply

You can replace a DC power supply during operations so long as there is another power supply installed and operating during the replacement. The switch requires only one power supply for operations, so you can hot swap the redundant power supply during operations. If there is only one power supply installed in the chassis, you can replace it by installing the new power supply in the open power supply slot and making it operational before removing the other power supply. The module number can be found on the chassis.



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**Warning** **Statement 1034**—Backplane Voltage

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

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### Before you begin

- Verify that you have an ESD wrist strap or other device to prevent ESD damage to the components that you touch.
- Verify that you have an antistatic surface or antistatic bag for placing the power supply module that you remove from the chassis.
- Verify that the replacement power supply module has the same direction of airflow as the other modules in the same chassis. Otherwise the switch can overheat and shut down.
- Verify that the circuit breaker for the DC power source is turned off.

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**Step 1** Attach an ESD wrist strap or other ESD device to your body and an earth ground to prevent ESD damage.

You can attach the ESD device to any earth ground or grounded object, such as a grounded rack or ground connection on a chassis.

**Step 2** Verify that the DC power source is turned off at a circuit breaker.

**Step 3** Remove the DC power supply that needs to be replaced as follows:

- a) Turn off the circuit breaker for the power source to the power supply that you are replacing.  
Verify that the OK LED turns off.
- b) Unclip and remove the clear plastic cover that prevents access to the positive and negative terminals on the DC power supply.
- c) Unfasten the positive power cable from the right terminal.
- d) Unfasten the negative power cable from the left terminal.
- e) Replace the clear plastic cover that prevents access to the terminals.
- f) Press the thumb latch to disengage the power supply from the chassis and use the handle to pull it part way out of the chassis.
- g) Place your other hand under the power supply to support it while you slide it out of the chassis. Place the power supply on an antistatic surface.
- h) If the power supply bay is to remain empty, install a blank power supply filler panel (N2200-P-BLNK).

**Step 4** Install the replacement DC power supply as follows:

- a) Hold the replacement power supply by the handle and position it so that the thumb latch is on the right, and then slide it all the way into the power supply bay (the thumb latch will click), ensuring that the power supply is fully seated in the bay.
  - b) If there is a clear plastic cover that prevents your access to the terminals, unclip it and remove it from the chassis.
  - c) Fasten the negative cable to the left terminal.
  - d) Fasten the positive cable to the right terminal.
  - e) Clip the clear plastic cover over the terminals to prevent accidental touching of the terminals.
  - f) Turn on the power at the circuit breaker.
  - g) Verify the power supply operation by checking that the OK LED is green.
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