Replacing Components

- Replacing a Fan Module, on page 1
- Replacing a Power Supply Module, on page 2

Replacing a Fan Module

You can replace a fan module while the switch is operating, as long as you perform the replacement within one minute. If you cannot perform the replacement within one minute, leave the original fan module in the chassis to maintain the designed airflow until you have the replacement fan module on hand and can perform the replacement.

Caution If you are replacing a module during operations, verify the replacement fan module has the correct direction of airflow. This means that it has the **same airflow direction** as the other modules in the chassis. Also, verify that the airflow direction takes in air from a cold aisle and exhausts air to a hot aisle. Otherwise, the switch can overheat and shutdown.

If you are changing the airflow direction of all the modules in the chassis, shutdown the switch before replacing all the fan and power supply modules with modules using the other airflow direction. During operations, all of the modules must have the same direction of airflow.

Removing a Fan Module

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.

Procedure

Step 1 On the fan module that you are removing, press the two sides of the fan module handle together, and pull on the handles enough to unseat it from its connectors.

Step 2 Holding the handle, pull the module out of the chassis.

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.

Installing a Fan Module

Before you begin

- A fan slot must be open and ready for the new fan module to be installed.
- If the switch is operating, you must have a new fan module on hand and ready to install within one minute of removing the original fan module.
- The new fan module must have the **same airflow direction** as the other fan and power supply modules installed in the switch.

Procedure

Step 1 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.

Step 2 Slide the fan module into the slot until it clicks in place.

Step 3 Verify that the Status (STS) LED turns on and becomes green.

Replacing a Power Supply Module

The switch requires two power supplies for redundancy. With one power supply providing the necessary power for operations, replace the other power supply during operations as long as the new power supply has the same airflow direction as the other modules in the chassis.

Replace a power supply with another supported power supply that has the same power source type as the other installed power supply. Additionally, the airflow direction of the power supply must match or conform to the airflow direction of the installed fan modules. For the airflow direction used by the switch, see the coloring of the fan modules.

Replacing an AC Power Supply

Replace an AC power supply during operations as long as the other power supply provides power to the switch.

Before you begin

Note Determine the airflow direction by looking at the coloring of the latch on each power supply. AC power supplies with burgundy latches have port-side *intake* airflow direction AC power supplies with blue latches have port-side *exhaust* airflow direction.

- The replacement power supply must have the same wattage and airflow direction as the power supply being replaced. Do not mix AC, DC, HVAC/HVDC power supplies in the same switch.
- An AC power source must be within reach of the power cable that will be used with the replacement power supply. If you are using *n*+*n* power redundancy, there must be a separate power source for each power supply installed in the chassis.
- There must be an earth ground connection to the chassis that you are installing the replacement module. AC power supplies connected to AC power sources are automatically grounded through their power cable.

Procedure

Step 1 Remove an AC power supply.

a) Holding the plug for the power cable, pull the plug out from the power receptacle on the power supply and verify that both power supply LEDs are off.
b) Grasp the power supply handle while pressing the colored release latch towards the power supply handle.
c) Place your other hand under the power supply to support it while you slide it out of the chassis.

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

Step 2 Install the replacement power supply.

a) Holding the replacement power supply with one hand underneath the module and the other hand holding the handle, turn the power supply so that its release latch is on the right side and align the back end of the power supply (the end with the electrical connections) to the open power supply slot before carefully sliding the power supply all the way into the slot until it clicks into place.

Note
If the power supply does not fit into the open slot, turn the module over before sliding it carefully into the open slot.

b) 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, carefully press it all the way into the slot until it clicks in place.

c) Attach the power cable to the electrical outlet on the front of the power supply.
d) Make sure that the other end of the power cable is attached to the appropriate power source for the power supply.

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.

e) Verify that the power supply is operational by making sure that the power supply LED is green.

Replacing a High Voltage (HVAC/HVDC) Power Supply

Replace an HVACHVDC power supply during operations as long as the other power supply provides power to the switch.

Before you begin

- The replacement power supply must have the same wattage and airflow direction as the power supply being replaced. Do not mix AC, DC, HVAC/HVDC power supplies in the same switch.

Note Determine the airflow direction by looking at the coloring of the latch on each power supply. HVAC/HVDC power supplies have white latches. White latches indicate that they have dual airflow directional capability. Those power supplies automatically use the same airflow direction as the fan modules installed in the same switch.

- An HVAC/HVDC power source must be within reach of the power cable that will be used with the replacement power supply. If you are using *n*+*n* power redundancy, there must be a separate power source for each power supply installed in the chassis.
- There must be an earth ground connection to the chassis in which you are installing the replacement power supply. HVAC/HVDC power supplies connected to AC power sources are automatically grounded by their power cable when connected to the power supply and AC power source. HVAC/HVDC power supplies connected to DC power sources have Saf-D-Grid power cables with three connectors on the power source end--you connect one of those connectors to the earth ground.

Procedure

Step 1 Remove an HVAC/HVDC power supply.

a) Turn off the circuit breaker for the power feed to the power supply that you are replacing.

Be sure that the LEDs turn off on the power supply that you are removing.

b) Remove the power cable from the power supply by pressing the tab on the top of the Anderson Power SAF-D-Grid connector and pull the cable and connector out of the power supply.
c) Grasp the power supply handle while pressing the colored release latch towards the power supply handle.
d) Place your other hand under the power supply to support it while you slide it out of the chassis.

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

Step 2 Install the replacement power supply.

a) Holding the replacement power supply with one hand underneath the module and the other hand holding the handle, turn the power supply so that its release latch is on the right side and align the back end of the power supply (the end with the electrical connections) to the open power supply slot before carefully sliding the power supply all the way into the slot until it clicks into place.

Note
If the power supply does not fit into the open slot, turn the module over before sliding it carefully into the open slot.

b) 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, carefully press it all the way into the slot until it clicks in place.

c) Attach the Saf-D-Grid end of the power cable to the electrical outlet on the front of the power supply.
d) Make sure that the other end of the power cable is attached to the appropriate power source for the power supply.
   - For an HVAC power source, plug the other end of the power cable into the power source.
   - For a HVDC power source, verify that the circuit breaker is turned off and then connect each of the three cable connectors to the appropriate DC and grounding terminals on the power source. If there is a cover plate for the DC terminals, install the plate to prevent accidental contact with the terminals.

e) If using an HVDC power source, turn on the circuit breaker for the power source.
f) Verify that the power supply is operational by making sure that the power supply LED is green.

Replacing a DC Power Supply

Replace a DC power supply during operations so long as the other power supply provides power to the switch.

Before you begin

- Replace a power supply with the same wattage and airflow direction as the power supply being replaced. Do not mix AC, DC, HVAC/HVDC power supplies in the same switch.

Note Determine the airflow direction by looking at the coloring of the latch on each power supply. AC power supplies with burgundy latches have port-side *intake* airflow direction. AC power supplies with blue latches have port-side *exhaust* airflow direction.

- A DC power source must be within reach of the power cables that will be used with the replacement power supply. If you are using *n*+*n* power redundancy, there must be a separate power source for each power supply installed in the chassis.
- There must be an earth ground connection to the chassis in which you are installing the replacement power supply. If the switch is mounted properly in a grounded rack then there is no need to ground the PSU. Some DC power supplies connected to DC power sources have three power cables (two for DC power and one for grounding). Some, like the (NXA-PDC-1100W) only have two power cables (both for DC power).
- We recommend 8-AWG wire for DC installation in the U.S.

- All DC power supplies have reverse polarity protection. When you inadvertently connect the input power (+) to the DC PSU's – terminal and the input power – to the DC PSU's (+) terminal, the PSU will not be damaged and will operate fine after the input power feeds are correctly wired.

Procedure

Step 1 Remove a DC power supply.

a) Turn off the circuit breaker for the power feed to the power supply that you are replacing.

Be sure that the LEDs turn off on the power supply that you are removing.

b) Remove the DC power connector block from the power supply.

1. Push the orange plastic button on the top of the connector block inward toward the power supply.
2. Pull the connector block out of the power supply.

c) Grasp the power supply handle while pressing the release latch towards the power supply handle.

d) Place your other hand under the power supply to support it while you slide it out of the chassis.

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

Step 2 Install the replacement power supply.

a) Holding the replacement power supply with one hand underneath the module and the other hand holding the handle, turn the power supply so that its release latch is on the right side and align the back end of the power supply (the end with the electrical connections) to the open power supply slot before carefully sliding the power supply all the way into the slot until it clicks into place.

Note
If the power supply does not fit into the open slot, turn the module over before sliding it carefully into the open slot.

b) 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, carefully press it all the way into the slot until it clicks in place.

c) Attach the power connector block end of the power cable to the electrical outlet on the front of the power supply.

d) Turn on the circuit breaker for the power source.

e) Verify that the power supply is operational by making sure that the power supply LED is green.