

Maintaining the Server

- Replacing Power Supplies, on page 1

Replacing Power Supplies

The server can have one or two Titanium 80PLUS rated power supplies. When two power supplies are installed they are redundant as 1+1 by default, but they also support cold redundancy mode. Cold redundancy (CR) suspends power delivery on one or more power supplies and forces the remainder of the load to be supplied by the active PSU(s). As a result, total power efficiency is improved by best utilizing the PSU efficiency when compared to load characteristics.

- See also Power Specifications for more information about the power supplies.

This section includes procedures for replacing AC and DC power supply units. See Replacing AC Power Supplies, on page 1.

- Replacing DC Power Supplies, on page 2
- Installing DC Power Supplies (First Time Installation), on page 4
- Grounding for DC Power Supplies, on page 5

Replacing AC Power Supplies

Note If you have ordered a server with power supply redundancy (two power supplies), you do not have to power off the server to replace a power supply because they are redundant as 1+1.

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

Procedure

Step 1 Remove the power supply that you are replacing or a blank panel from an empty bay:

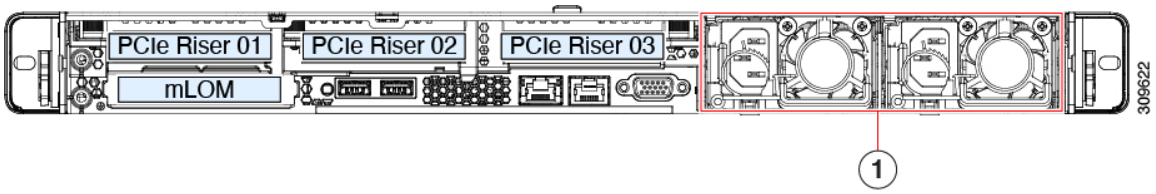
a) Perform one of the following actions:

- If your server has only one power supply, shut down and remove power from the server.
- If your server has two power supplies, you do not have to shut down the server.

b) Remove the power cord from the power supply that you are replacing.
c) Grasp the power supply handle while pinching the release lever toward the handle.
d) Pull the power supply out of the bay.

Step 2 Install a new power supply:

a) Grasp the power supply handle and insert the new power supply into the empty bay.
b) Push the power supply into the bay until the release lever locks.
c) Connect the power cord to the new power supply.
d) Only if you shut down the server, press the Power button to boot the server to main power mode.



Power Supply location.

Replacing DC Power Supplies

Note This procedure is for replacing DC power supplies in a server that already has DC power supplies installed. If you are installing DC power supplies to the server for the first time, see Installing DC Power Supplies (First Time Installation), on page 4.

Warning **A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.**

Statement 1022

Warning **This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.**

Statement 1045

Warning **Installation of the equipment must comply with local and national electrical codes.**

Statement 1074

Note If you are replacing DC power supplies in a server with power supply redundancy (two power supplies), you do not have to power off the server to replace a power supply because they are redundant as 1+1.

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

Procedure

Step 1 Remove the DC power supply that you are replacing or a blank panel from an empty bay:

a) Perform one of the following actions:

- If you are replacing a power supply in a server that has only one DC power supply, shut down and remove power from the server.
- If you are replacing a power supply in a server that has two DC power supplies, you do not have to shut down the server.

b) Remove the power cord from the power supply that you are replacing. Lift the connector securing clip slightly and then pull the connector from the socket on the power supply.

c) Grasp the power supply handle while pinching the release lever toward the handle.

d) Pull the power supply out of the bay.

Step 2 Install a new DC power supply:

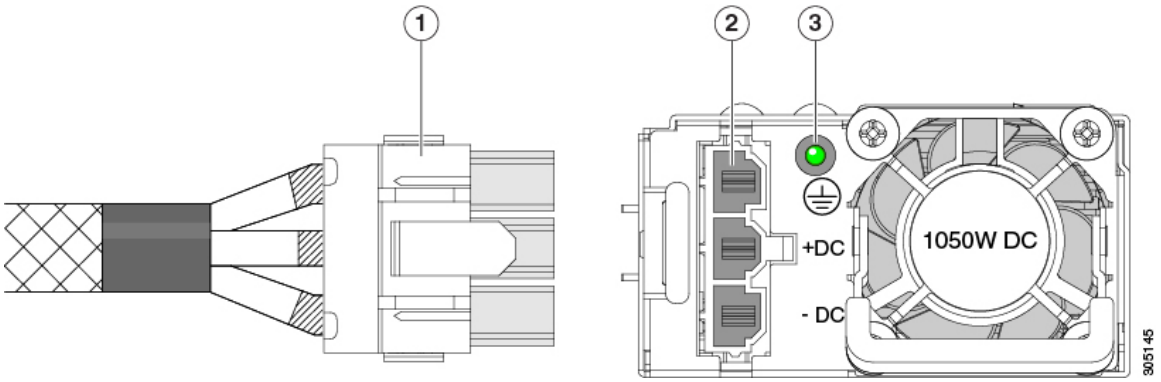
a) Grasp the power supply handle and insert the new power supply into the empty bay.

b) Push the power supply into the bay until the release lever locks.

c) Connect the power cord to the new power supply. Press the connector into the socket until the securing clip clicks into place.

d) Only if you shut down the server, press the Power button to boot the server to main power mode.

Figure 1: Replacing DC Power Supplies



1 Keyed cable connector (CAB-48DC-40A-8AWG)	3 PSU status LED
2 Keyed DC input socket	-

Installing DC Power Supplies (First Time Installation)

Note This procedure is for installing DC power supplies to the server for the first time. If you are replacing DC power supplies in a server that already has DC power supplies installed, see Replacing DC Power Supplies, on page 2.

Warning **A readily accessible two-poled disconnect device must be incorporated in the fixed wiring.**

Statement 1022

Warning **This product requires short-circuit (overcurrent) protection, to be provided as part of the building installation. Install only in accordance with national and local wiring regulations.**

Statement 1045

Warning **Installation of the equipment must comply with local and national electrical codes.**

Statement 1074

Note Do not mix power supply types or wattages in the server. Both power supplies must be identical.

Caution As instructed in the first step of this wiring procedure, turn off the DC power source from your facility's circuit breaker to avoid electric shock hazard.

Procedure

Step 1 Turn off the DC power source from your facility's circuit breaker to avoid electric shock hazard.

Note
The required DC input cable is Cisco part CAB-48DC-40A-8AWG. This 3-meter cable has a 3-pin connector on one end that is keyed to the DC input socket on the power supply. The other end of the cable has no connector so that you can wire it to your facility's DC power.

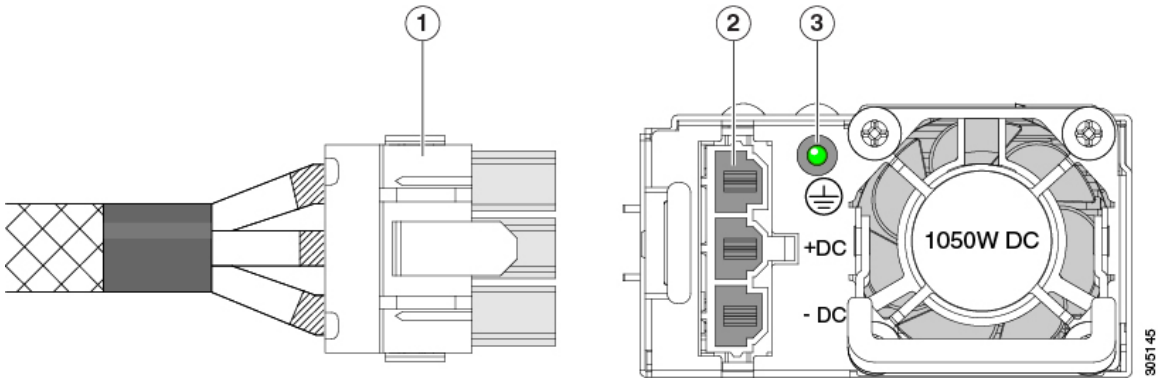
Step 2 Wire the non-terminated end of the cable to your facility's DC power input source.

Step 3 Connect the terminated end of the cable to the socket on the power supply. The connector is keyed so that the wires align for correct polarity and ground.

Step 4 Return DC power from your facility's circuit breaker.

Step 5 Press the Power button to boot the server to main power mode.

Figure 2: Installing DC Power Supplies



1	Keyed cable connector (CAB-48DC-40A-8AWG)	3	PSU status LED
2	Keyed DC input socket		-

Step 6 See Installation Grounding, page 3-66 for information about additional chassis grounding.

Grounding for DC Power Supplies

AC power supplies have internal grounding and so no additional grounding is required when the supported AC power cords are used.

When using a DC power supply, additional grounding of the server chassis to the earth ground of the rack is available. Two screw holes for use with your dual-hole grounding lug and grounding wire are supplied on the chassis rear panel.



Note The grounding points on the chassis are sized for 10-32 screws. You must provide your own screws, grounding lug, and grounding wire. The grounding lug must be dual-hole lug that fits 10-32 screws. The grounding cable that you provide must be 14 AWG (2 mm), minimum 60° C wire, or as permitted by the local code.