

SRX 5600 Services Gateway AC Power Supply Installation Instructions

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This document describes how to remove and replace an AC power supply on a Juniper Networks SRX 5600 services gateway.

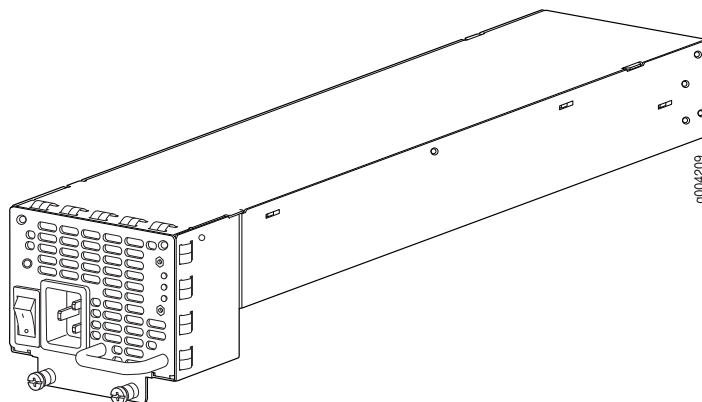
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AC Power Supply

Each AC power supply weighs approximately 5.0 lb (2.3 kg) and consists of one AC appliance inlet, an AC switch, a fan, and LEDs to monitor the status of the power supply. Figure 1 on page 2 shows the power supply. Each inlet requires a dedicated AC power feed and a dedicated 15 A (250 VAC) circuit breaker.

Figure 1: AC Power Supply



For more information about the AC power specifications, see the *SRX 5600 Services Gateway Hardware Guide*.



WARNING: The services gateway is pluggable type A equipment installed in a restricted-access location. It has a separate protective earthing terminal (sized for UNC 1/4-20 ground lugs) provided on the chassis in addition to the grounding pin of the power supply cord. This separate protective earthing terminal must be permanently connected to earth.

AC Power Supply Configurations

The SRX 5600 services gateway supports either the low-line (110V) AC power configuration or the high-line (220V) AC power configuration.

- In the low-line (110 V) AC power configuration, the SRX 5600 contains three or four AC power supplies (see Figure 1 on page 2), located horizontally at the rear of the chassis in slots **PEM0** through **PEM3** (left to right). Each AC power supply provides power to all components in the services gateway. When three power supplies are present, they share power almost equally within a fully populated system. Four AC power supplies provide full power redundancy. If one power supply fails or is removed, the remaining power supplies assume the entire electrical load without interruption. Three power supplies provide the maximum configuration with full power for as long as the device is operational. The low-line configuration requires three power supplies and the fourth power supply provides redundancy.
- In the high-line (220 V) AC power configuration, the SRX 5600 services gateway contains two or four AC power supplies (see Figure 1 on page 2), located

horizontally at the rear of the chassis in slots **PEM0** through **PEM3** (left to right). In a high-line AC power configuration, each AC power supply provides power to all components in the services gateway. When two or more power supplies are present, they share power almost equally within a fully populated system. Four AC power supplies provide full power redundancy. If one power supply fails or is removed, the remaining power supplies assume the entire electrical load without interruption. Two power supplies provide the maximum configuration with full power for as long as the device is operational. In the two-PEM high-line configuration, slots **PEM0** and **PEM1** or **PEM2** and **PEM3** are used. The high-line configuration requires two power supplies, with the third and fourth providing redundancy.

AC Power Supply LEDs

Each AC power supply faceplate contains three LEDs that indicate the status of the power supply (see Table 1 on page 3). The power supply status is also reflected in two LEDs on the craft interface. In addition, a power supply failure triggers the red alarm LED on the craft interface.

Table 1: AC Power Supply LEDs

Label	Color	State	Description
AC OK	Amber	Off	AC power input voltage is below 78 VAC.
	Green	On	AC power input voltage is within 78–264 VAC.
DC OK	Green	Off	DC power outputs generated by the power supply are not within the normal operating ranges.
		On	DC power outputs generated by the power supply are within the normal operating ranges.
PS FAIL	Red	Off	Power supply is functioning normally.
		On	Power supply is not functioning normally and its output voltage is out of regulation limits. Check AC OK and DC OK LEDs for more information.

Removing an AC Power Supply

The power supplies are located at the rear of the chassis. Each AC power supply weighs approximately 5.0 lb (2.3 kg).



CAUTION: Do not leave a power supply slot empty for more than 30 minutes while the services gateway is operational. For proper airflow, the power supply must remain in the chassis, or a blank panel must be used in an empty slot.

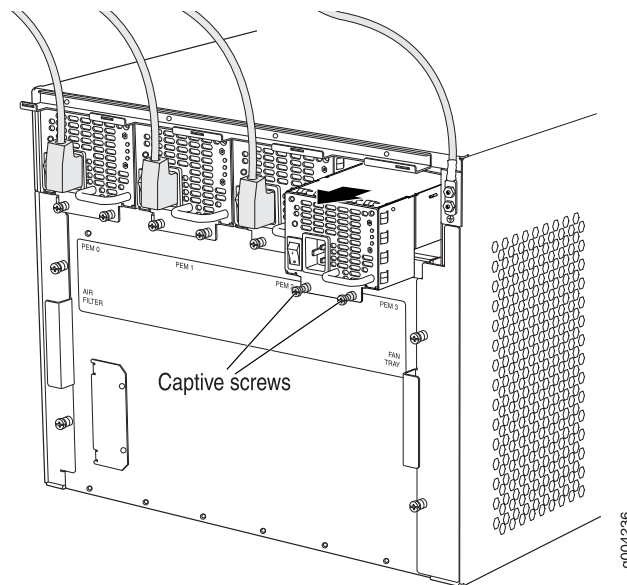


NOTE: After powering off a power supply, wait at least 60 seconds before turning it back on.

To remove an AC power supply (see Figure 2 on page 4):

1. Switch off the dedicated facility circuit breaker for the power supply, and remove the power cord from the AC power source. Follow the ESD and disconnection instructions for your site.
2. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the strap to one of the ESD points on the chassis. For more information about ESD, see “Preventing Electrostatic Discharge Damage” on page 6.
3. Move the AC switch next to the appliance inlet on the power supply to the off position (O).
4. Unscrew the captive screws on the bottom edge of the power supply.
5. Remove the power cord from the power supply.
6. Pull the power supply straight out of the chassis.

Figure 2: Removing an AC Power Supply

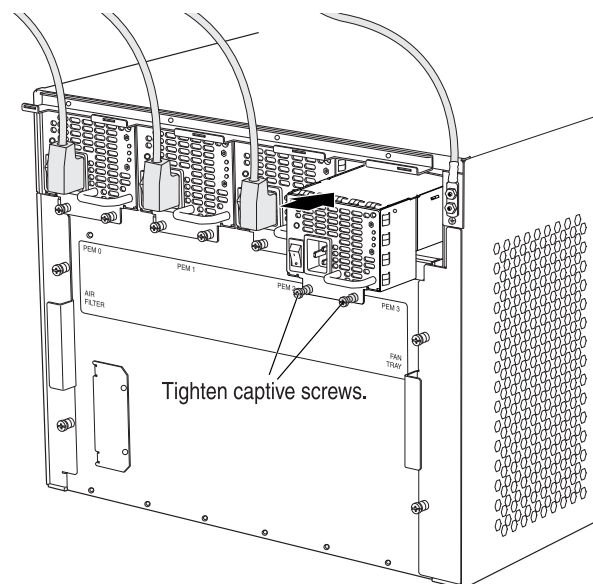


Installing an AC Power Supply

To install an AC power supply (see Figure 3 on page 5):

1. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the strap to one of the ESD points on the chassis. For more information about ESD, see “Preventing Electrostatic Discharge Damage” on page 6.
2. Move the AC switch next to the appliance inlet on the power supply to the off position (O).
3. Using both hands, slide the power supply straight into the chassis until the power supply is fully seated in the chassis slot. The power supply faceplate should be flush with any adjacent power supply faceplates.
4. Tighten both captive screws at the bottom of the power supply.
5. Attach the power cord to the power supply.
6. Route the power cord along the cable restraint towards the left or right corner of the chassis. If needed to hold the power cord in place, thread plastic cable ties, which you must provide, through the openings on the cable restraint.
7. Attach the power cord to the AC power source, and switch on the dedicated facility circuit breaker for the power supply. Follow the ESD and connection instructions for your site.
8. Move the AC switch next to the appliance inlet on the power supply to the on position (|) and observe the status LEDs on the power supply faceplate. If the power supply is correctly installed and functioning normally, the AC OK and DC OK LEDs light steadily, and the PS FAIL LED is not lit.

Figure 3: Installing an AC Power Supply



Preventing Electrostatic Discharge Damage

Many services gateway hardware components are sensitive to damage from static electricity. Some components can be impaired by voltages as low as 30 V. You can easily generate potentially damaging static voltages whenever you handle plastic or foam packing material or if you move components across plastic or carpets. Observe the following guidelines to minimize the potential for electrostatic discharge (ESD) damage, which can cause intermittent or complete component failures:

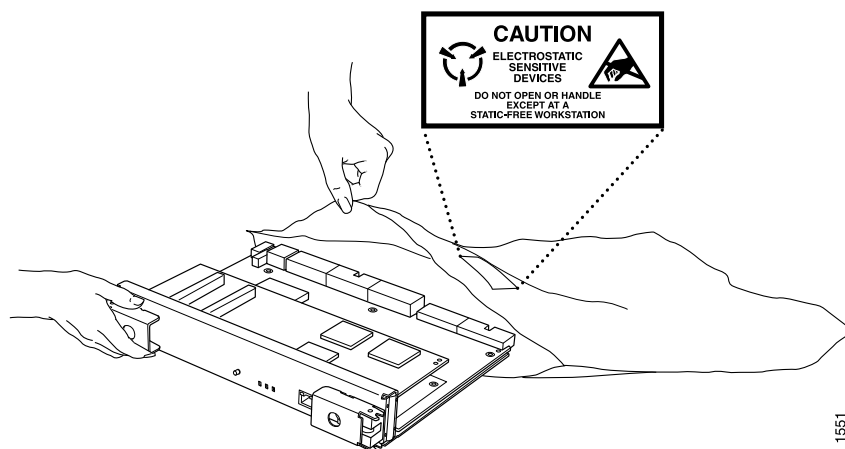
- Always use an ESD wrist strap or ankle strap, and verify that it is in direct contact with your skin.



CAUTION: For safety, periodically check the resistance value of the ESD strap. The measurement should be in the range of 1 to 10 Mohms.

- When handling any component that has been removed from the chassis, verify that the equipment end of your ESD strap is attached to one of the ESD points on the chassis, which are shown in Figure 5 on page 7.
- Avoid contact between the component and your clothing. ESD voltages emitted from clothing can still damage components.
- When removing or installing a component, always place it component-side up on an antistatic surface, in an antistatic card rack, or into an electrostatic bag (see Figure 4 on page 6). If you are returning a component, place it into an electrostatic bag before packing it.

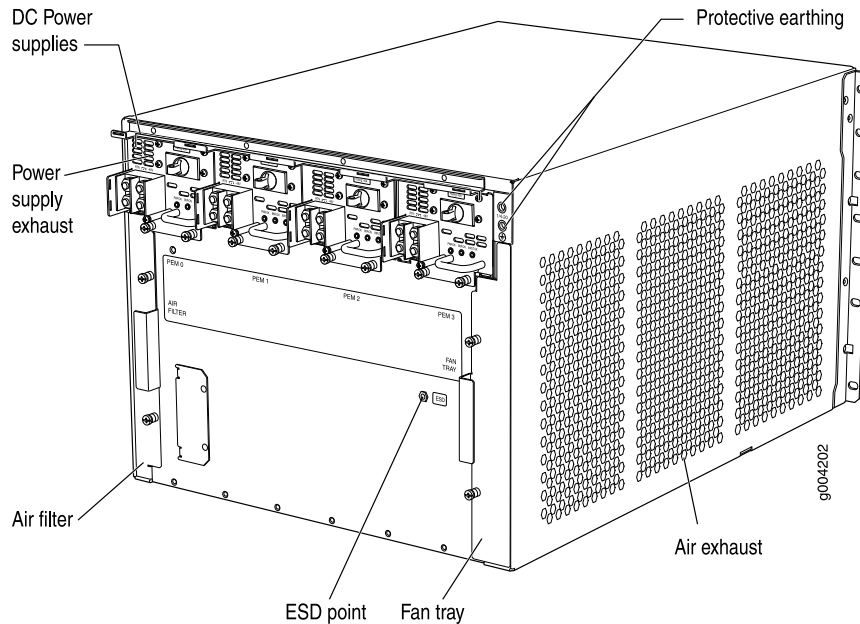
Figure 4: Placing a Component into an Electrostatic Bag



Electrostatic Discharge Point

Figure 5 on page 7 shows the location of the ESD point on the rear of the chassis. The illustration shows a DC-powered device, but the location is the same in AC-powered devices.

Figure 5: Rear View of a Fully Configured DC-Powered SRX 5600 Services Gateway Chassis



List of Technical Publications

Table 2 on page 7 lists the hardware guides and release notes for Juniper Networks SRX-series services gateways and describes the contents of each document. All documents are available at <http://www.juniper.net/techpubs/>.

Table 2: Technical Documentation for Supported Devices

Book	Description
Hardware Documentation	
<i>SRX 5600 Services Gateway Hardware Guide</i>	Describes how to install, maintain, and troubleshoot the services gateway and components. Each services gateway type has its own hardware guide.
Release Notes	
<i>JUNOS Software for SRX-series Services Gateway Release Notes</i>	Summarizes new features and known problems for a particular release of JUNOS software on SRX-series services gateways, including J-Web interface features and problems. The release notes also contain corrections and updates to the manuals and software upgrade and downgrade.

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or JNASC support contract, or are covered under warranty, and need postsales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the JTAC User Guide located at <http://www.juniper.net/customers/support/downloads/710059.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC Hours of Operation —The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://www.juniper.net/alerts/>
- Join and participate in the Juniper Networks Community Forum: <http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool located at <https://tools.juniper.net/SerialNumberEntitlementSearch/>.

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <http://www.juniper.net/cm/>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, visit us at <http://www.juniper.net/support/requesting-support.html>.

Revision History

August 2008—530-023486-01 Revision 01 Initial release.

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