

SRX 5600 Services Gateway Air Filter Installation Instructions

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This document describes how to remove and replace the air filter on a Juniper Networks SRX 5600 services gateway. The fan tray and the air filter make up the cooling system.

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Cooling System

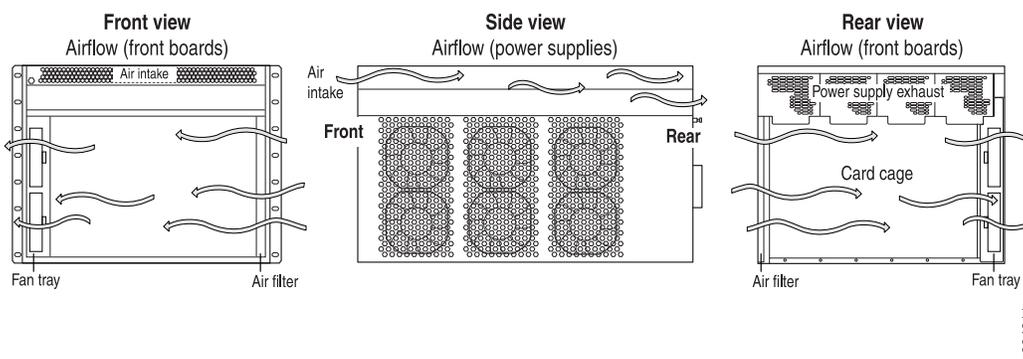
The cooling system consists of the following components:

- Fan tray
- Air filter

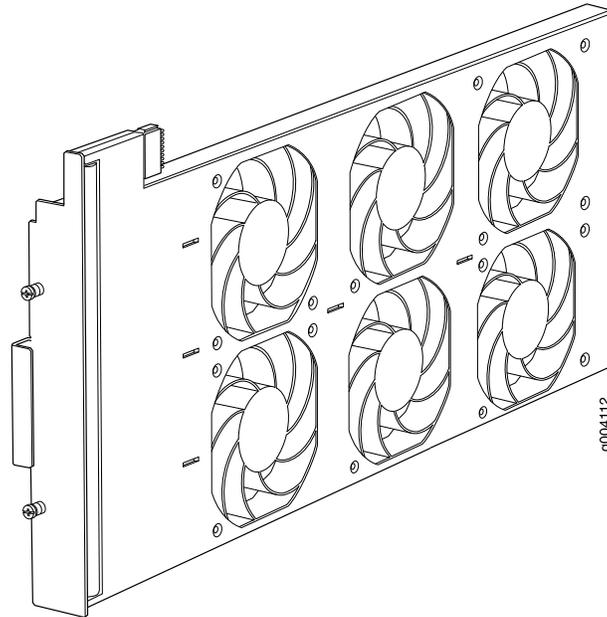
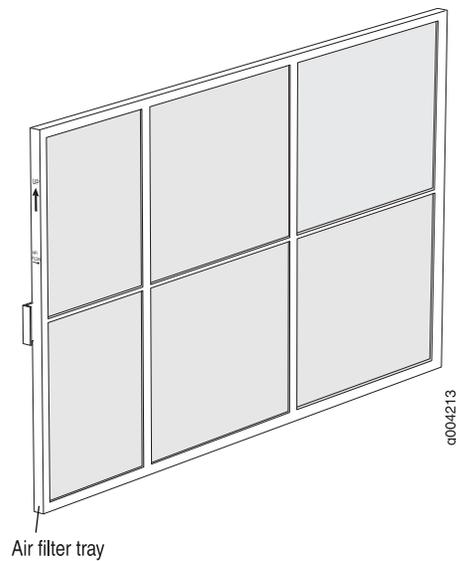
The cooling system components work together to keep all services gateway components within the acceptable temperature range (see Figure 1 on page 2, Figure 2 on page 3, and Figure 3 on page 3). The device has one fan tray and one air filter that install vertically in the rear of the device. The fan tray contains three fans.

The air intake to cool the chassis is located on the side of the chassis next to the air filter. Air is pulled through the chassis toward the fan tray, where it is exhausted out the side of the system. The air intake to cool the power supplies is located in the front of the device above the craft interface. The exhaust for the power supplies is located on the rear bulkhead power supplies.

Figure 1: Airflow Through the Chassis



The host subsystem monitors the temperature of the services gateway components. When the device is operating normally, the fans function at lower than full speed. If a fan fails or the ambient temperature rises above a threshold, the speed of the remaining fans is automatically adjusted to keep the temperature within the acceptable range. If the ambient maximum temperature specification is exceeded and the system cannot be adequately cooled, the Routing Engine shuts down the system by disabling output power from each power supply.

Figure 2: Fan Tray**Figure 3: Air Filter**

Replacing the Air Filter

The services gateway has one air filter that installs vertically in the rear of the chassis. The air filter is hot-insertable and hot-removable.

The air filter is located in the rear of the chassis on the left side. The air filter weighs approximately 1 lb (0.5 kg).

To replace an air filter, use the following procedures:

- Removing an Air Filter on page 4
- Installing the Air Filter on page 5

Removing an Air Filter



CAUTION: Do not run the services gateway for more than a few minutes without the air filter in place.

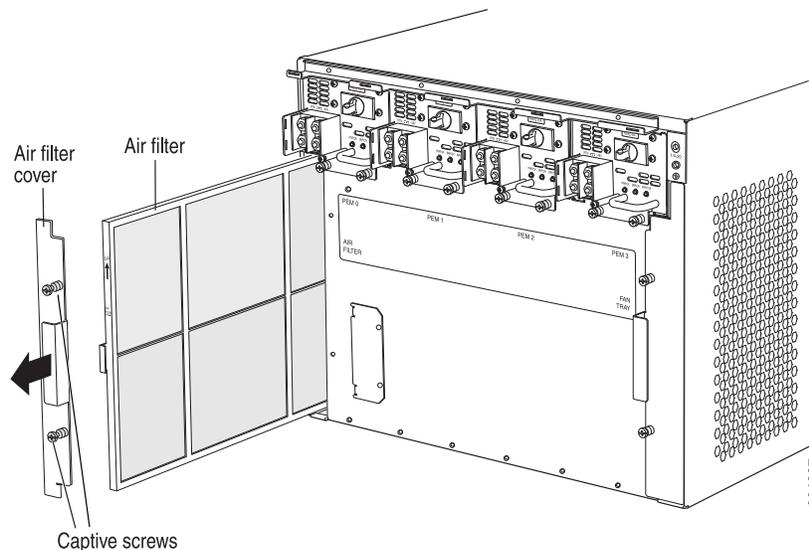


CAUTION: Always keep the air filter in place while the device is operating, except during replacement. Because the fans are very powerful, they could pull small bits of wire or other materials into the device through the unfiltered air intake. This could damage the services gateway components.

To remove the air filter (see Figure 4 on page 4):

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. Loosen the captive screws on the air filter cover.
3. Remove the air filter cover.
4. Slide the air filter out of the chassis.

Figure 4: Removing the Air Filter

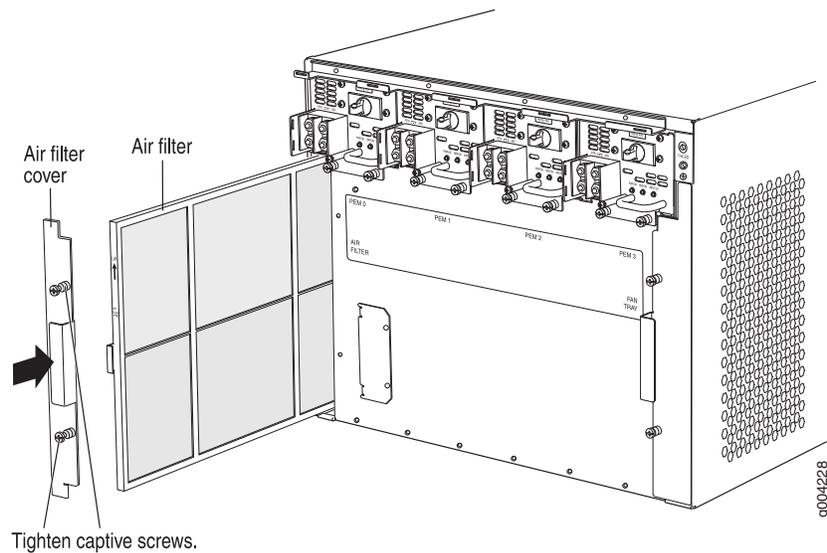


Installing the Air Filter

To install the air filter (see Figure 5 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. Locate the up arrow and ensure that the air filter is right side up.
3. Slide the air filter straight into the chassis until it stops.
4. Align the captive screws of the air filter cover with the mounting holes on the chassis.
5. Tighten the captive screws on the air filter cover.

Figure 5: Installing the Air Filter



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:

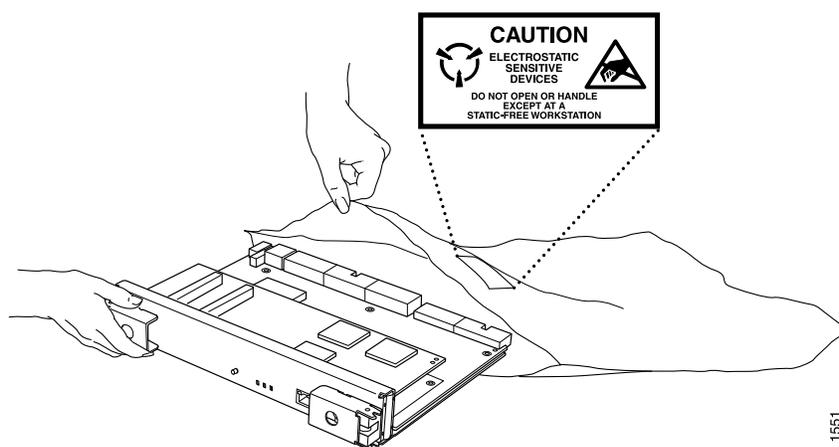
- Always use an ESD wrist strap or ankle strap, and verify that it is in direct contact with your skin.



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 7 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 6 on page 6). If you are returning a component, place it into an electrostatic bag before packing it.

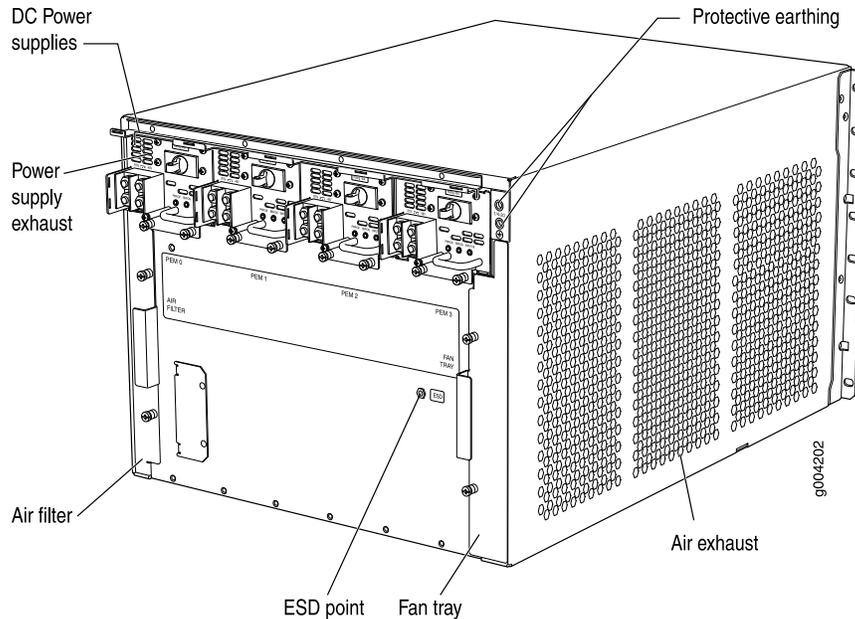
Figure 6: Placing a Component into an Electrostatic Bag



Electrostatic Discharge Point

Figure 7 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 7: Rear View of a Fully Configured DC-Powered SRX 5600 Services Gateway Chassis



List of Technical Publications

Table 1 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 1: 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—530-023494-01 Revision 01 Initial release.

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