JUNIPER NETWORKS | Engineering Simplicity

Day One+

ACX7509

IN THIS GUIDE

Step 1: Begin

IN THIS SECTION

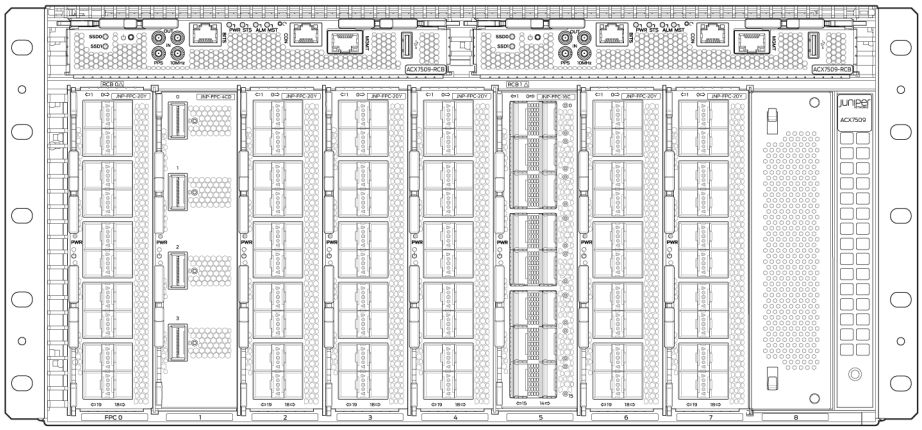
In this guide, we provide a simple, three-step path, to quickly get you up and running with the Juniper Networks® ACX7509 router. You'll learn how to install, power on, and configure basic settings for an AC-powered ACX7509 router.

If you need instructions to install a DC-powered ACX7509, see the ACX7509 Router Hardware Guide.

Meet the ACX7509

The Juniper Networks® ACX7509 is a high-performance and fully redundant (control plane and data plane) high-end aggregation router which supports IP services to service providers, web and enterprise networks. The ACX7509 also comes with several other capabilities that include segment routing, advanced timing, flexible licensing and a comprehensive set of features that are suited for 5G and cloud metro architectures.

The ACX7509 router with a 5-U form factor (occupies 6-U rack space with the cable management system) provides a throughput of 4.8 Tbps while maintaining a power-efficient footprint. It supports three types of Flexible PIC Concentrators (FPCs) which offer 1GbE, 10GbE, 25GbE, 40GbE, 50GbE, 100GbE, 200GbE, and 400GbE port speeds and MACsec–ready ports.



Install the ACX7509

IN THIS SECTION

What's in the Box?

Along with your ACX7509, you'll also find:

- An accessory kit which includes:
  - Warranty card
  - Media kit (USB flash drivers)
  - RJ-45 to DB-9 serial port adapter
  - RJ-45 Ethernet cable
  - RJ-45 Y-splitter cable

- AC power cord (country specific)
- Electrostatic discharge (ESD) wrist strap with cable

What Else Do I Need?

You'll need:

- A mechanical lift rated for 250 lb (113.4 kg) to mount the router
- Three people to help you secure the router to the rack
- A Phillips (+) screwdriver, number 2 or number 3, depending on the size of your rack-mount screws
- A management host such as a laptop or desktop PC
- A grounding cable: 4 AWG (21.1 mm^2) stranded wire should be rated 90° C or per local electrical code, with a Panduit LCD6-14A-L or equivalent lug attached

> **CAUTION:** Ensure that a licensed electrician has attached the appropriate grounding lug to your grounding cable. Using a grounding cable with an incorrectly attached lug can damage the router.

Install the ACX7509 in a Rack

Here's how to install the ACX7509 in a four-post rack:

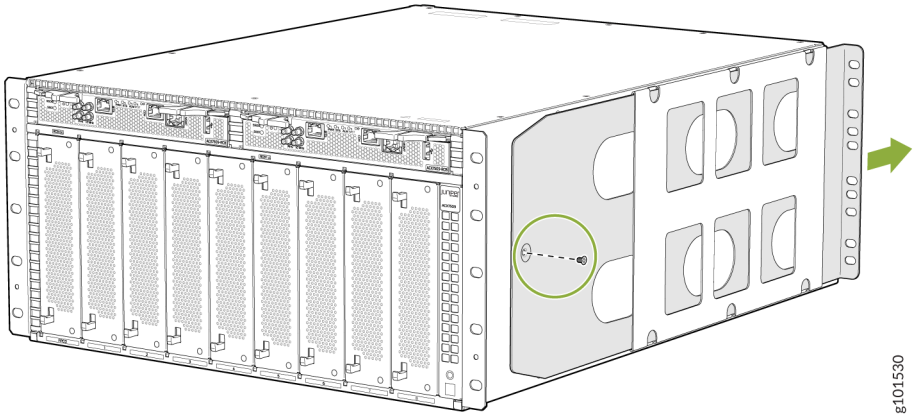
1. Review the General Safety Guidelines and Warnings.

2. Wrap and fasten one end of the ESD grounding strap around your bare wrist, and connect the other end to a site ESD point.

3. Decide which end of the router you want to place at the front of the rack. Position the router so that the **AIR OUT** labels are facing the hot aisle.

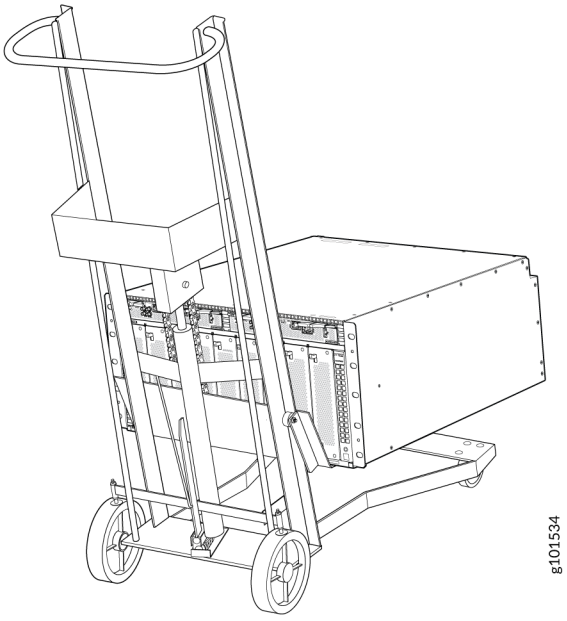
4. Using a Phillips screwdriver, remove the screws on each side of the chassis that holds the rear mounting-blades to the chassis.

5. Slide the mounting blades out of the channels.

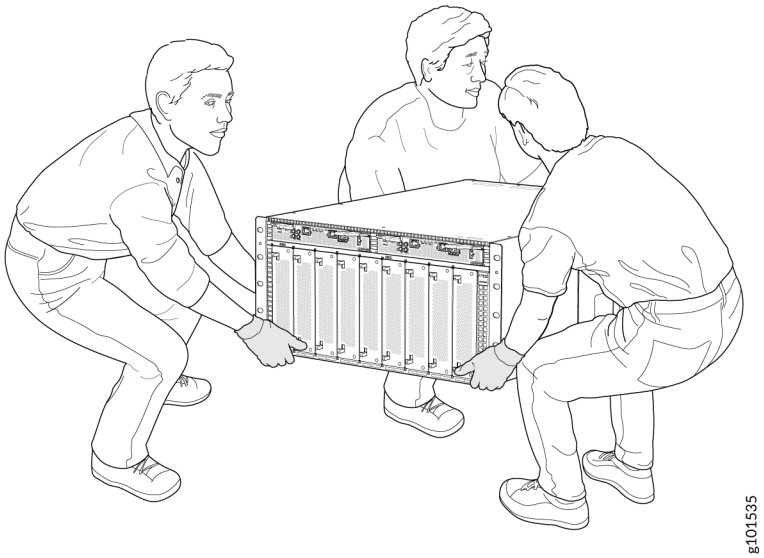


6. Perform one of the following steps:

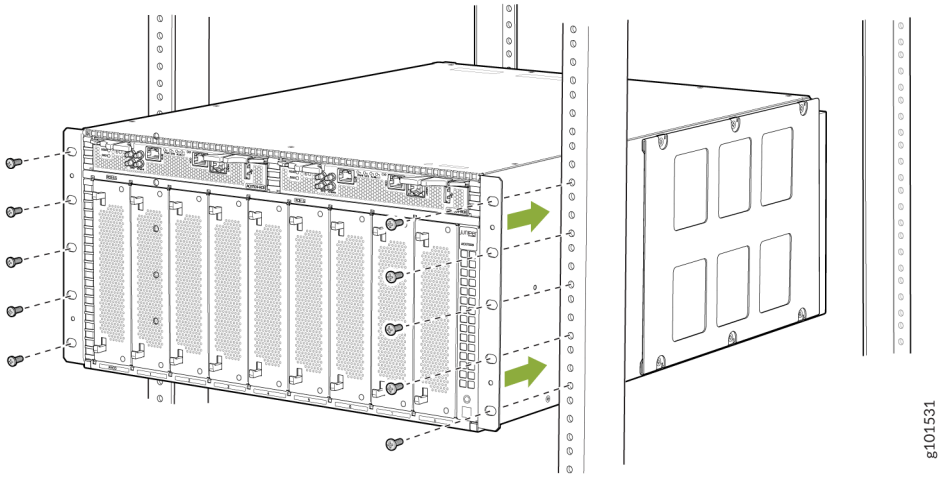
   - Use a mechanical lift to position the ACX7509 in the rack so that the chassis flanges contact the rack rails and the flange's holes are aligned with the rack holes.



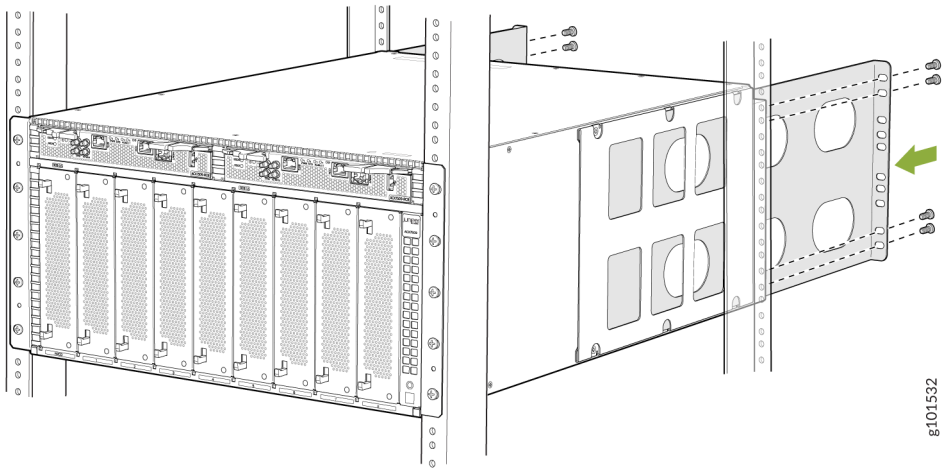
- With one person on each side and the third person to support the rear, hold on to the bottom of the chassis, and carefully lift the chassis and position it in the rack so that the chassis flanges contact the rack rails and the flange's holes are aligned with the rack holes.



7. Continue to support the ACX7509 in place. Starting at the bottom, attach the chassis to the rack by installing mounting screws through the flange and rack hole. Tighten the screws with the Phillips screwdriver.



8. Continue holding the router in place. Slide the mounting blades into the channels on either side of the chassis.



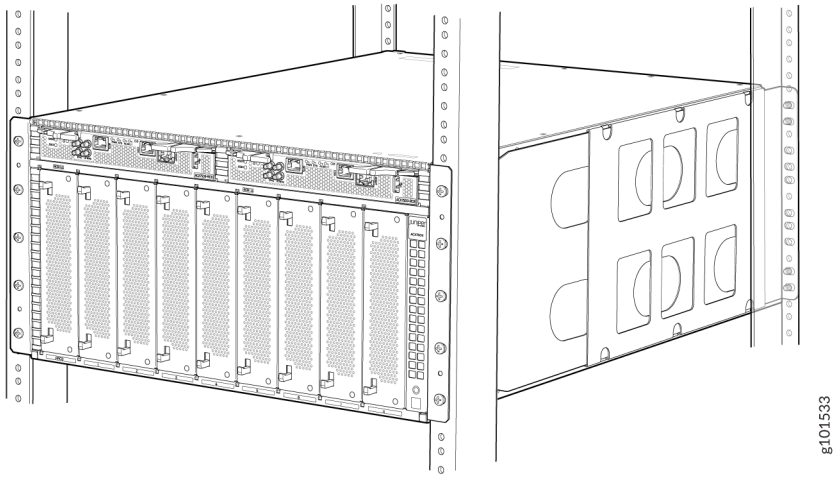
9. Secure the mounting blades to the rack rails using the rack moun\

   t screws (and cage nuts and washers, if your rack requires them).

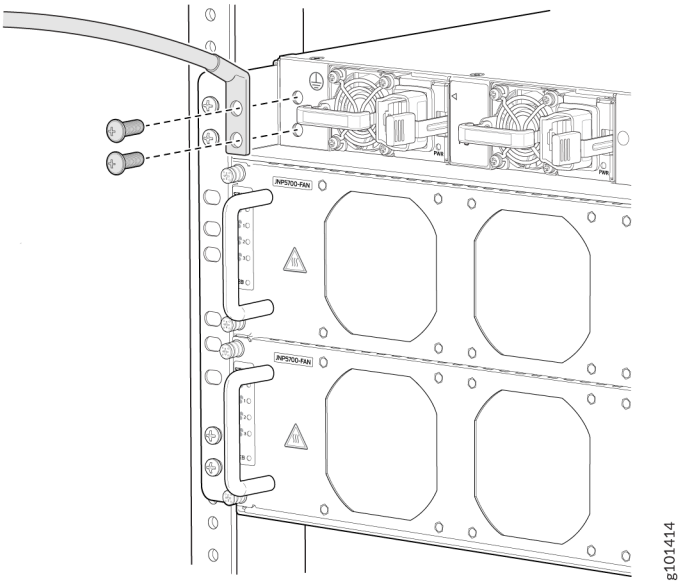
10. Visually inspect the alignment of the chassis. Make sure the router is level and the mounting screws on each side of the rack are aligned.

    If you've installed the chassis properly in the rack, all the mounting screws on one side of the rack are aligned with the mounting screws on the opposite side, and the router is level.

> **NOTE:** If you have unused ports, plug them using dust covers to prevent dust from entering the router.



11. Remove the M6 pan head screws from the chassis and secure the grounding lug and attached cable to the chassis with the M6 pan head screws. The earthing terminal is on the rear side of the chassis.



12. Connect the other end of the grounding cable to a proper earth ground, such as the rack.

13. Dress the grounding cable. Ensure that it doesn't touch or block access to other device components, and that it doesn't drape where people could trip over it.

Power On

Now that you've installed your ACX7509 in the rack and grounded the chassis, you're ready to connect it to power.

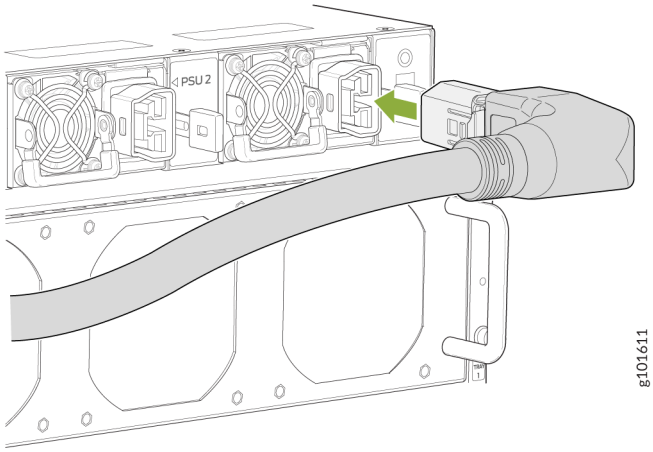
The ACX7509 router supports redundant AC/HDVC or DC power supplies that are pre-installed at the factory. In this guide, we show you how to connect AC power for AC power installations. See the ACX7509 Router Hardware Guide for information on DC power installation.

The AC-powered ACX7509 router comes with four AC power supplies preinstalled on the rear of the device.

1. Wrap and fasten one end of the ESD grounding strap around your bare wrist, and connect the other end to one of the ESD grounding points on the router.

2. Ensure that the power supplies are fully inserted in the chassis and the latches are secure.

3. Plug the power cords into the power sockets of each AC power supply.



4. If the AC power outlet has a power switch, turn it off.

> **NOTE:** The router powers on as soon as you connect it to power. The ACX7509 doesn't have a power switch.

5. Plug in each power cord to an AC power outlet.

> **WARNING:** Ensure that the power cord does not block access to router components or drape where people can trip on it.

6. If the AC power outlet has a power switch, turn it on.

7. Verify that the AC LED on the power supply is lit green. If the LED is lit steadily amber or is blinking amber, disconnect the power supply from the power source, and replace the power supply (see Maintain the ACX7509 Power Supplies in the ACX7509 Router Hardware Guide). Do not remove the power supply until you have a replacement power supply ready.

Step 2: Up and Running

IN THIS SECTION

Now that the ACX7509 is powered on, let's do some initial configuration to get it up and running on the network. It's simple to configure and manage the ACX7509 using the CLI.

Plug and Play

The ACX7509 router ships with factory-default settings that enable plug-and-play operation. These settings load as soon as you power on the router.

Customize the Basic Configuration

You can easily customize the factory-default configuration with just a few commands. Initially, you'll need to make changes through the console port. After you configure the management port, you can access the ACX7509 using SSH and make additional configuration changes. You can always revert to the factory-default configuration whenever you want.

Have the following information ready before you begin customizing the router:

- Hostname
- Root authentication password
- Management port IP address
- Default gateway IP address
- IP address and prefix length of remote prefixes
- (Optional) SNMP read community, location, and contact information

1. Verify that the following default serial port settings are configured on your laptop or desktop PC:
   - Baud Rate—9600
   - Flow Control—None
   - Data—8
   - Parity—None
   - Stop Bits—1
   - DCD State—Supported

   NOTE: When console is supported with DCD, TOD functionality cannot be supported. Console without DCD and TOD can be simultaneously supported when you use a Y cable.

2. Connect the console (**CON**) port on the ACX7509 to a laptop or PC using the supplied RJ-45 cable and RJ-45 to DB-9 adapter. You'll find the console (**CON**) port on the router's Routing Control Board (RCB).

   NOTE: If your laptop or desktop PC doesn't have a serial port, use a serial-to-USB adapter (not provided).

3. At the Junos OS login prompt, type **root** to log in.

   You don't need to enter a password. If the software boots before you connect your laptop or desktop PC to the console port, you might need to press the Enter key for the prompt to appear.

   ```
   login: root
   ```

4. Start the CLI.

   ```
   root@% cli
   ```

5. Enter configuration mode.

   ```
   root> configure
   ```

6. Add a password to the root administration user account.

   ```
   [edit]
   root@# set system root-authentication plain-text-password
   New password: password
   Retype new password: password
   ```

7. (Optional) Configure the name of the router. If the name includes spaces, enclose the name in quotation marks (“ ”).

   ```
   [edit]
   root@# set system host-name host-name
   ```

8. Configure the default gateway.

   ```
   [edit]
   root@# set system management-instance
   root@# set routing-instances mgmt_junos routing-options static route prefix/prefix-length next-hop
   default-gateway-ip-address
   ```

9. Configure the IP address and prefix length for the router management interface.

   ```
   [edit]
   root@# set interfaces re0:mgmt-0 unit 0 family inet address ip-address/prefix-length
   ```

CAUTION: Although the CLI permits you to configure two management Ethernet interfaces within the same subnet, only one interface is usable and supported.

NOTE: You’ll find the management ports, **em0** or **re0:mgmt-0** (**MGMT** for RJ-45 connections) and **em1** (also labeled **MGMT** for fiber connections), on the front of the router's RCBs.

10. (Optional) Configure the static routes to remote prefixes with access to the management port.

```
[edit]
root@# set routing-options static route remote-prefix next-hop destination-ip retain no-readvertise
```

11. Enable services such as SSH and Telnet.

> **NOTE:** You won't be able to log in to the router as the **root** user through Telnet. You can only log in as root through SSH.

```
[edit]
root@# set system services telnet
```

12. Commit the configuration to activate it on the router.

```
[edit]
root@# commit
```

Step 3: Keep Going

IN THIS SECTION

Congratulations! You've completed the initial steps to get your ACX7509 up and running. Let's keep going and learn more about what you can do with the ACX7509 router.

What's Next

Now that you've done the initial configuration, here's some things you might want to do next.

If you want to	Then
Configure the ACX7509 with the Junos OS Evolved CLI	Start with the Day One+ for Junos OS Evolved guide
Setup user accounts	See User Accounts Overview
Configure backup routers	See Understanding Backup Routers
Manage software upgrades for your ACX7509	See Software Installation and Upgrade Overview

General Information

If you want to	Then
See all documentation available for the ACX7509	See the ACX7509 Documentation in the Juniper Networks TechLibrary
Stay up-to-date about new and changed features, and known and resolved issues	See the Junos OS Evolved Release Notes

Learn With Videos

Our video library continues to grow! We've created many, many videos that demonstrate how to do everything from install your hardware to configure advanced Junos OS Evolved network features. Here are some great video and training resources that will help you expand your knowledge of Junos OS Evolved.

If you want to	Then
Get short and concise tips and instructions that provide quick answers, clarity, and insight into specific features and functions of Juniper technologies	See Learning with Juniper on Juniper Networks main YouTube page
Learn how to install and configure your Juniper Networks devices	Check out our free Web-based training videos at Hardware Installation and Configuration Videos
View a list of the many free technical trainings we offer at Juniper	Visit the Getting Started page on the Juniper Learning Portal