Juniper Networks | Engineering Simplicity

EX4600 Quick Start

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RELEASE

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Step 1: Begin

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In this guide, we provide a simple, three-step path, to quickly get you up and running with your new EX4600. We've simplified and shortened the installation and configuration steps, and included how-to videos. You'll learn how to install an AC-powered EX4600, power it up, and configure basic settings.

NOTE: Are you interested in getting hands-on experience with the topics and operations covered in this guide? Visit Juniper Networks Virtual Labs and reserve your free sandbox today! You'll find the Junos Day One Experience sandbox in the stand alone category. EX switches are not virtualized. In the demonstration, focus on the virtual QFX device. Both the EX and QFX switches are configured with the same Junos commands.

Meet the EX4600

The Juniper Networks® EX4600 offers a compact, highly scalable, high-performance 10GbE solution for enterprise campus distribution deployments as well as low-density data center top-of-rack environments. A single EX4600 can support up to 72 10GbE ports (using 10GbE breakout cables on 40GbE fixed ports) at line rate. In addition, Virtual Chassis technology makes it easy to scale the network while reducing management complexity. By adding switches to a Virtual Chassis configuration, you can grow the number of switch ports without increasing the number of devices to manage.

The base EX4600 model has:

- 24 fixed small form-factor pluggable (SFP) or SFP+ access ports
- Four fixed quad SFP+ (QSFP+) high-speed uplinks
- Two power supplies

- Five fan modules
- Management interface ports: RJ-45 console (**CON**) port, RJ-45 management Ethernet port (**CO**), SFP management Ethernet port (**C1**), and a USB port
- Two expansion slots for optional expansion modules

The EX4600 is available in AC-powered or DC-powered models with air-flow in or air-flow out cooling. You can install the switch in a four-post rack. In this guide, we show you how to install an AC-powered EX4600 in a four-post rack. If you need instructions for installing a DC-powered EX4600, see the EX4600 Ethernet Switch Hardware Guide.

Install the EX4600

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Let's get going and install the EX4600 in a four-post rack.

What's in the Box?

- EX4600 switch with two power supplies and five fan modules pre-installed
- Two power cords appropriate for your geographic location
- Rack mount kit

The rack mount kit contains one pair of mounting rails, one pair of mounting blades, and 12 flat-head Phillips mounting screws.

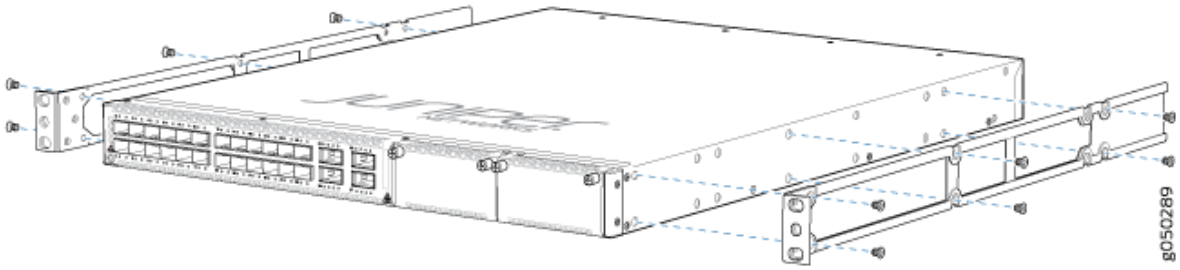
What Else Do I Need?

- Someone to help you secure the switch to the rack
- A number two Phillips (+) screwdriver
- Eight rack mount screws
- Cage nuts and washers, if your rack requires them
- Grounding lug and attached cable
- Two 10-32 x 0.25 screws with #10 split-lock washers
- An electrostatic discharge (ESD) grounding strap
- Management host, such as a laptop or desktop PC
- Serial-to-USB adapter (if your laptop or desktop PC doesn't have a serial port)
- An Ethernet cable with RJ-45 connectors attached and an RJ-45 to DB-9 serial port adapter

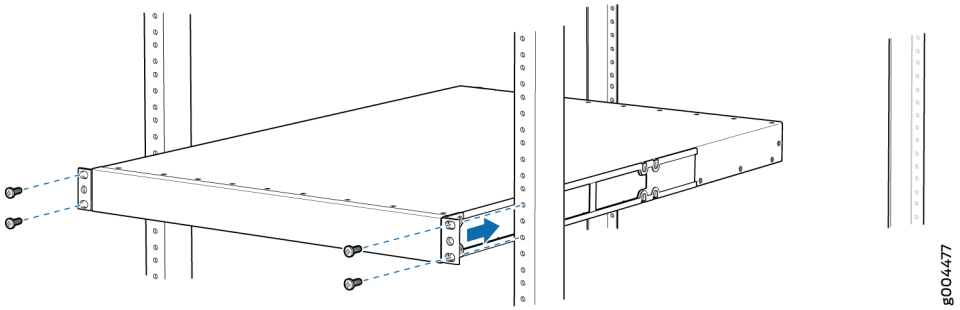
> **NOTE**: We no longer include the RJ-45 console cable with the DB-9 adapter as part of the device package. If the console cable and adapter are not included in your device package, or if you need a different type of adapter, you can order the following separately:
>
> - RJ-45 to DB-9 adapter (JNP-CBL-RJ45-DB9)
> - RJ-45 to USB-A adapter (JNP-CBL-RJ45-USBA)
> - RJ-45 to USB-C adapter (JNP-CBL-RJ45-USBC)
>
> If you want to use RJ-45 to USB-A or RJ-45 to USB-C adapter you must have X64 (64-Bit) Virtual COM port (VCP) driver installed on your PC. See, https://ftdichip.com/drivers/vcp-drivers/ to download the driver.

Rack It

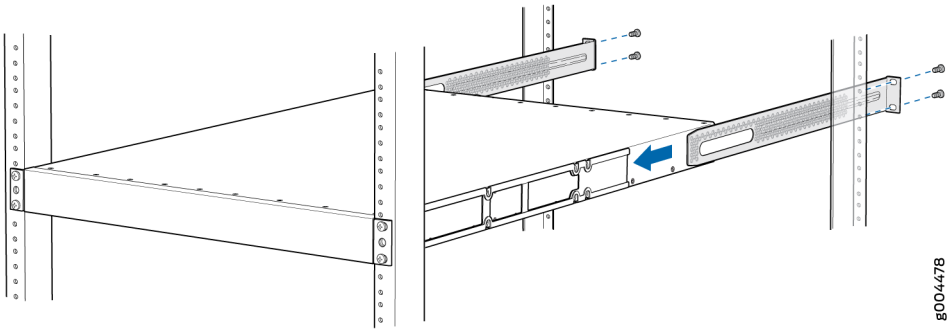
1. Review General Safety Guidelines and Warnings.
2. Wrap the ESD grounding strap around your bare wrist and ground yourself to an ESD point or to the rack.
3. Decide which end of the switch you want to place at the front of the rack: the field-replaceable unit (FRU) end or the port end. Position it in the rack so that the **AIR IN** labels on the power supplies are next to the cold aisle, and the **AIR OUT** labels on the power supplies are next to the hot aisle.
4. Attach the mounting rails to each side of the switch using the supplied flat-head mounting screws.



5. Lift the switch and position it in the rack. Line up the bottom hole in each mounting rail with a hole in each rack rail, making sure the switch is level.
6. While you're holding the switch in place, have a second person insert and tighten the rack mount screws to secure the mounting rails to the rack rails. Make sure they tighten the screws in the two bottom holes first, and then tighten the screws in the two top holes.



7. Continue holding the switch in place and have the second person slide the mounting blades into the mounting rail grooves.
8. Screw the mounting blades to the rack using the rack mount screws (and cage nuts and washers, if your rack requires them).

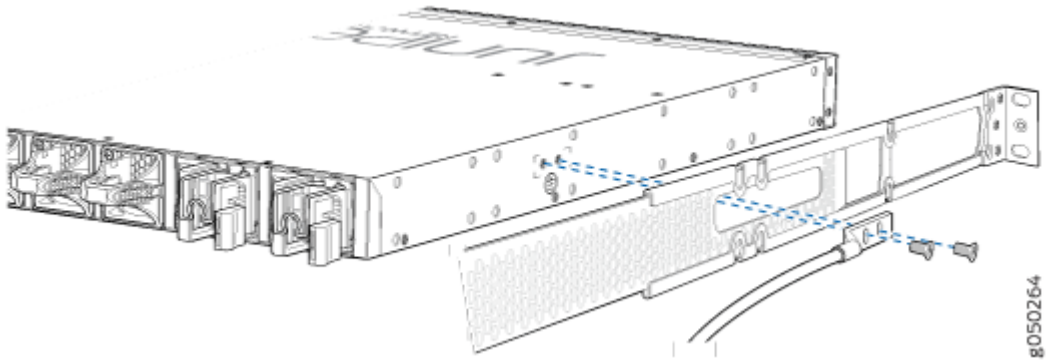


9. Double-check that the mounting brackets on each side of the rack are level.

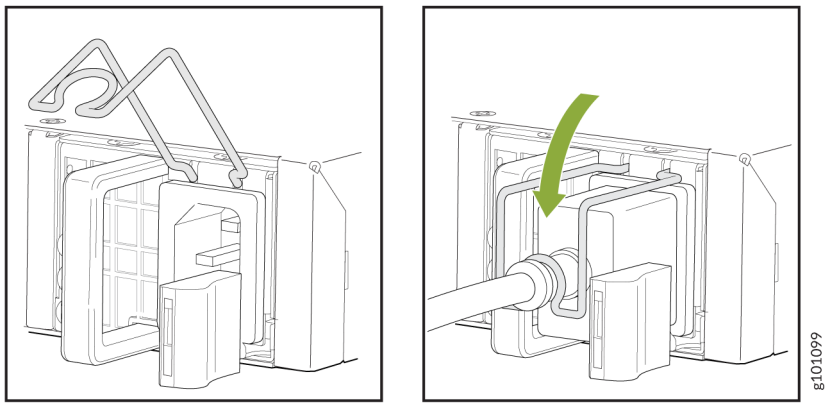
Power On

Now that you've installed your EX4600 in the rack, you're ready to connect it to power.

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 chassis.
2. Secure the grounding lug and attached cable to the chassis using two 10-32 x 0.25 screws with #10 split-lock washers. Attach the lug to the chassis through the left rail and blade assembly.



3. Connect the other end of the grounding cable to a proper earth ground, such as the rack. Dress the grounding cable and 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.
4. Plug in the coupler end of the AC power cord to the AC power cord inlet on each of the switch's power supplies.
5. Push the power cord retainer onto the power cord.



6. If the AC power source outlet has a power switch, turn it off.
7. Plug in the power cord to the AC power source outlet.
8. If the AC power source outlet has a power switch, turn it on.

   The EX4600 powers up as soon as you connect it to power; there is no power switch. When the AC and DC LEDs on each power supply are solid green, the EX4600 is ready to use.

Step 2: Up and Running

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Now that the EX4600 is powered on, let's do some initial configuration to get it up and running on the network. It's simple to provision and manage the EX4600 using the CLI.

Plug and Play

The EX4600 switch ships with factory-default settings that enable plug-and-play operation. These settings load as soon as you power on the switch.

Customize the Basic Configuration

You can easily customize the factory-default configuration using CLI commands. You can revert to the factory-default configuration whenever you want.

Have the following information handy before you begin customizing switch settings:

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

1. Verify that the serial port settings for your laptop or desktop PC are set to the default:
   - Baud Rate—9600
   - Flow Control—None

- Data—8
- Parity—None
- Stop Bits—1
- DCD State—Disregard

2. Connect the console (**CON**) port on the switch's management panel to a laptop or desktop PC using the RJ-45 cable and RJ-45 to DB-9 adapter (not provided).

> **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 booted before you connected the laptop or desktop 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 for 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 switch. 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 routing-options static route default next-hop address
```

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

```
[edit]
root@# set interfaces em0 unit 0 family inet address address/prefix-length
```

NOTE: Although the CLI lets you configure two management Ethernet interfaces within the same subnet, only one interface is usable and supported at any point in time.

NOTE: The management ports, em0 (labeled **C0**), and em1 (labeled **C1**), are on the switch's management panel.

10. 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-ipretain no-
readvertise
```

11. Enable Telnet service.

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

NOTE: When Telnet is enabled, you cannot log in to the EX4600 through Telnet using root credentials. Root login is allowed only for SSH access.

12. Commit the configuration. Your changes become the active configuration for the switch.

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

Step 3: Keep Going

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Congratulations! Now that you've done the initial configuration, your EX4600 switch is ready to use. Here are some things you can do next:

What's Next?

If you want to	Then
Download, activate, and manage your software licenses to unlock additional features for your EX series switch	See Activate Junos OS Licenses in the Juniper Licensing Guide
Configure essential user access features such as login classes, user accounts, access privilege levels, and user authentication methods	See the User Access and Authentication Administration Guide for Junos OS
Configure SNMP, RMON, Destination Class Usage (DCU) and Source Class Usage (SCU) data, and accounting profiles	See the Network Management and Monitoring Guide
Configure essential security services	See the Security Services Administration Guide
Configure time-based protocols for your network devices running Junos OS	See the Time Management Administration Guide

(Continued)

If you want to	Then
See, automate, and protect your network with Juniper Security	Visit the Security Design Center
Get hands-on experience with the procedures covered in this guide	Visit Juniper Networks Virtual Labs and reserve your free sandbox. You'll find the Junos Day One Experience sandbox in the stand alone category. EX switches are not virtualized. In the demonstration, focus on the virtual QFX device. Both the EX and QFX switches are configured with the same Junos commands.

General Information

If you want to	Then
See all documentation available for the EX4600	See the EX4600 Documentation in the Juniper Networks TechLibrary
Find more in-depth information about how to install and configure the EX4600	See the EX4600 Switch Hardware Installation Guide
Stay up-to-date on new and changed features and known and resolved issues	See Junos OS Release Notes
Manage software upgrades on your EX Series switch	See Installing Software on EX Series Switches

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 network features. Here are some great video and training resources that will help you expand your knowledge of Junos OS.

If you want to	Then
View a Web-based training video which provides an overview of the EX4600 and describes how to install and deploy it	Watch the EX4600 Ethernet Switch Overview and Deployment (WBT) video
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
View a list of the many free technical trainings we offer at Juniper	Visit the Getting Started page on the Juniper Learning Portal

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