Juniper Networks | Engineering Simplicity

EX4300 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 EX4300. We've simplified and shortened the installation and configuration steps, and included how-to videos. You'll learn how to install an AC-powered EX4300, 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 EX4300 Line of Ethernet Switches

The Juniper Networks® EX4300 Ethernet Switches are fixed-configuration platforms that can be deployed as standalone systems or as part of a Virtual Chassis switching architecture. The EX4300 switches are available in 24-port, 32-port, and 48-port models, with or without PoE+, with AC or DC power supplies, and with different airflow directions. EX4300 switches also provide uplink ports and a slot for installing an optional uplink module.

Model	10/100/1000BASE-T Ports	PoE/PoE+ Ports
EX4300-24T	24	0

(Continued)

Model	10/100/1000BASE-T Ports	PoE/PoE+ Ports
EX4300-24P	24	24
EX4300-48T	48	0
EX4300-48P	48	48
EX4300-48MP	24 (plus 24 100/1000/2500/5000/10000BASE-T ports)	48
EX4300-32F	32 100/1000BASE-X ports	0

In this guide, we show you how to install an AC-powered EX4300 switch with the fan modules and power supplies preinstalled. If you need instructions for installing fans, power supplies, and optional uplink modules, see the EX4300 Switch Hardware Guide.

EX4300-24T

EX4300-48T

EX4300-24P

EX4300-48P

EX4300-32F

EX4300-48MP

Install the EX4300

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- What Else Do I Need? | 3
- Install the EX4300 Switch in a Two-Post Rack | 4

You can install the EX4300 switch on a table or desktop, on a wall, or in a two-post or four-post rack. The mounting kit that ships in the box has the brackets you need to install the EX4300 switch in a two-post rack. We'll walk you through how to do that.

NOTE: If you want to install the switch on the wall or in a four-post rack, you'll need to order separate mounting kits. The four-post rack mount kit also has brackets for mounting the EX4300 switch in a recessed position in the rack.

What's in the Box?

- EX4300 switch
- An AC power cord appropriate for your geographical location
- Two mounting brackets and eight mounting screws

What Else Do I Need?

You'll need to provide the following:

- Four rack mount screws to secure the chassis to the rack
- A number two Phillips (+) screwdriver
- An electrostatic discharge (ESD) grounding strap
- A management host such as a laptop or desktop PC
- A serial-to-USB adapter (if your laptop or desktop PC doesn't have a serial port)
- Someone to help you secure the switch to the rack

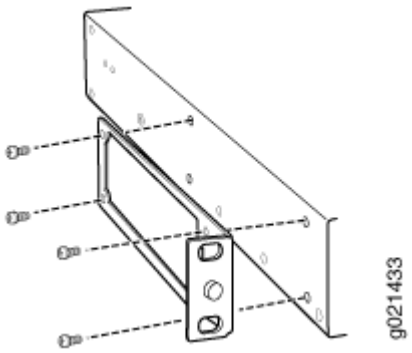
- An Ethernet cable with RJ-45 connectors attached and an RJ-45 to DB-9 serial port adapter

> **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.

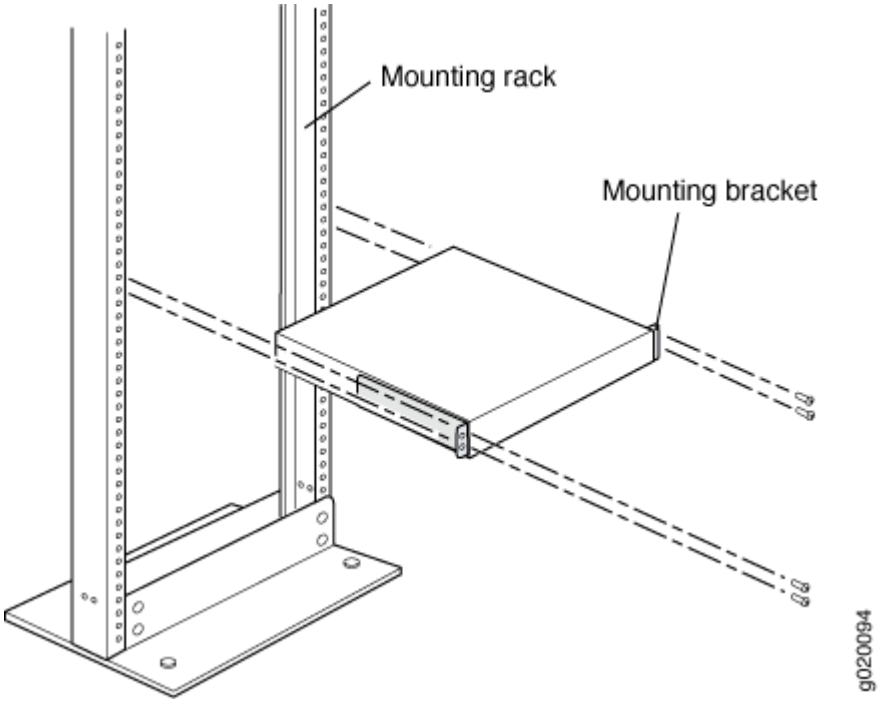
Install the EX4300 Switch in a Two-Post Rack

1. Review 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. Attach the mounting brackets to the sides of the EX4300 switch using the eight screws and a screwdriver.

   You'll notice there are three locations on the side panel where you can attach the mounting brackets: front, center, and rear. Attach the mounting brackets to the location that best suits where you want the EX4300 switch to sit in the rack.



4. Lift the EX4300 switch and position it in the rack. Line up the bottom hole in each mounting bracket with a hole in each rack rail, making sure the EX4300 switch is level.



5. While you're holding the EX4300 switch in place, have someone insert and tighten the rack mount screws to secure the mounting brackets to the rack rails. Make sure to tighten the screws in the two bottom holes first and then tighten the screws in the two top holes next.
6. Check that the mounting brackets on each side of the rack are level.

Power On

Now you're ready to connect the EX4300 switch to a dedicated AC power source. The switch comes with the AC power cord for your geographic location.

Here's how to connect the EX4300 switch to AC power:

1. Wrap and fasten one end of an ESD wrist strap around your bare wrist, and connect the other end of the strap to the ESD point on the switch.
2. On the rear panel, connect the retainer clip and power cord to the AC power socket (see Figure 1 on page 6 and Figure 2 on page 7):
   a. Push the end of the retainer strip into the hole next to the AC power socket until it snaps into place.
   b. Press the small tab on the retainer strip to loosen the loop.
   c. Slide the loop until you have enough space to insert the power cord coupler into the AC power socket.
   d. Plug in the power cord to the power socket on the switch.
   e. Slide the loop toward the power supply until it is snug against the base of the coupler.
   f. Press the tab on the loop and draw out the loop into a tight circle.

Figure 1: Connecting AC Power to an EX4300 Switch (Except the EX4300-48MP)

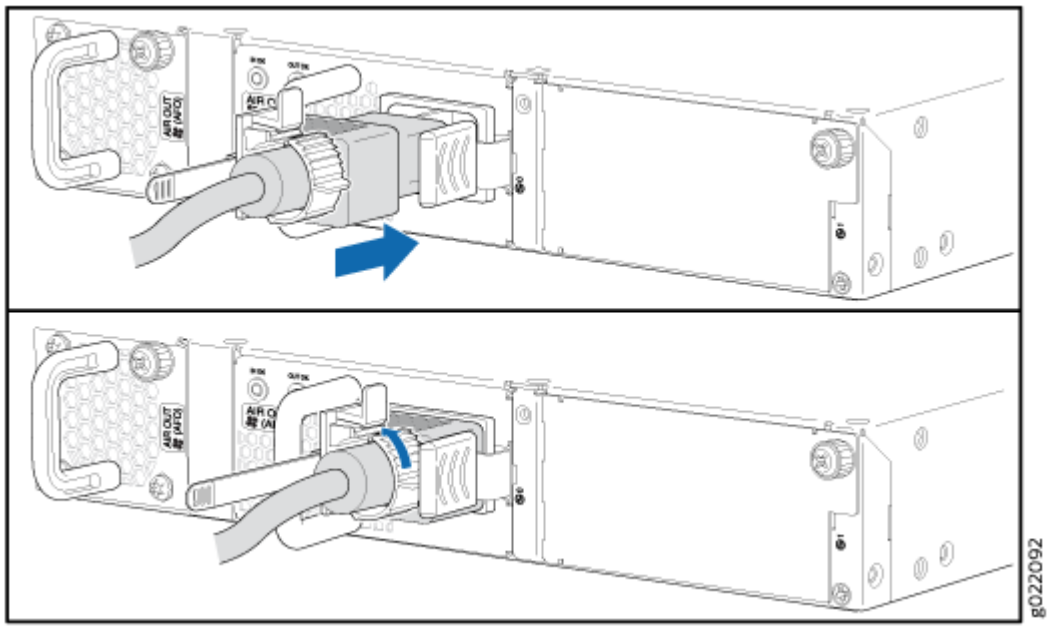
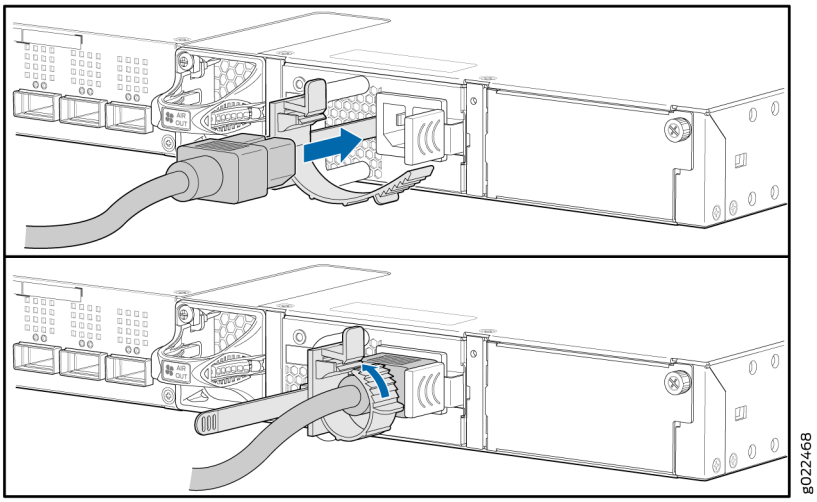


Figure 2: Connecting Power to an EX4300-48MP Switch



3. If the AC power source outlet has a power switch, turn it off.
4. Plug in the AC power cord to the AC power source outlet.
5. If the AC power source outlet has a power switch, turn it on.
6. Check to see that the **IN OK** and the **OUT OK** LEDs on each power supply are lit green.

   If the **OUT OK** LED is lit amber, turn off the AC power source outlet or unplug the switch. You'll need to replace the power supply. See Removing an AC Power Supply from an EX4300 System.

Step 2: Up and Running

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Now that the EX4300 switch is powered on, let's do some initial configuration to get the switch up and running on your network. It's simple to provision and manage the EX4300 switch and other devices on your network. Choose the configuration tool that's right for you:

- Juniper Mist. To use Mist, you'll need an account on the Mist Cloud Platform. See Overview of Connecting Mist Access Points and Juniper EX Series Switches.

- Juniper Networks Contrail Service Orchestration (CSO). To use CSO, you'll need an authentication code. See SD-WAN Deployment Overview in the Contrail Service Orchestration (CSO) Deployment Guide.
- CLI commands

Plug and Play

The EX4300 switches already have factory-default settings configured right out of the box to make them plug-and-play devices. The default settings are stored in a configuration file that:

- Sets values for system parameters such as `syslog` and `commit`
- Configures Ethernet switching on all interfaces
- Enables IGMP snooping
- Enables the LLDP and RSTP protocols

These settings load as soon as you power on the EX4300 switch. If you want to see what's in the factory-default configuration file for your EX4300 switch, see EX4300 Switch Default Configuration.

Customize the Basic Configuration Using the CLI

Have these values handy before you begin to customize settings for the switch:

- Hostname
- Root authentication password
- Management port IP address
- Default gateway IP address
- (Optional) DNS server and SNMP read community

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 port on the EX4300 switch to a laptop or desktop PC using the Ethernet cable and the RJ-45 to DB-9 serial port adapter (not provided). 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.

> **NOTE**: EX switches running current Junos software are enabled for Zero Touch Provisioning (ZTP). However, when you configure an EX switch for the very first time, you'll need to disable ZTP. We show you how to do that here. If you see any ZTP-related messages on the console, just ignore them.

```
FreeBSD/arm (w) (ttyu0):
login: root
```

4. Start the CLI.

```
root@:RE:0% cli
{master:0} root>
```

5. Enter configuration mode.

```
 {master:0} root> configure
{master:0}[edit]
root#
```

6. Delete the ZTP configuration. Factory default configurations can vary over different releases. You may see a message that the statement does not exist. Don't worry, it's safe to proceed.

```
{master:0}[edit]
root# delete chassis auto-image-upgrade
```

7. Add a password to the root administration user account. Enter a plain-text password, an encrypted password, or an SSH public key string. In this example, we show you how to enter a plain-text password.

```
{master:0}[edit]
root# set system root-authentication plain-text-password
New password: password
Retype new password: password
```

8. Activate the current configuration to stop ZTP messages on the console.

```
{master:0}[edit]
root# commit
configuration check succeeds
commit complete
```

9. Configure the hostname.

```
{master:0}[edit]
root# set system host-name name
```

10. Configure the IP address and prefix length for the management interface on the switch. As part of this step, you remove the factory default DHCP setting for the management interface.

```
{master:0}[edit]
root# delete interfaces vme unit 0 family inet dhcp
root# set interfaces vme unit 0 family inet address address/prefix-length
```

NOTE: The management port `vme` (labeled **MGMT**) is on the front panel of the EX4300 switch.

11. Configure the default gateway for the management network.

```
{master:0}[edit]
root# set routing-options static route 0/0 next-hop address
```

12. Configure the SSH service. By default the root user cannot login remotely. In this step you enable the SSH service and also enable root login via SSH.

```
{master:0}[edit]
root# set system services ssh root-login allow
```

13. Optional: Configure the IP address of a DNS server.

```
{master:0}[edit]
root# set system name-server address
```

14. Optional: Configure an SNMP read community.

```
{master:0}[edit]
root# set snmp community community_name
```

15. Optional: Continue customizing the configuration using the CLI. See the Getting Started Guide for Junos OS for more details.
16. Commit the configuration to activate it on the switch.

```
{master:0}[edit]
root# commit
```

17. When you've finished configuring the switch, exit configuration mode.

```
{master:0}[edit]
root# exit
{master:0}
root@name
```

Step 3: Keep Going

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Congratulations! Now that you've done the initial configuration, your EX4300 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 roles and authentication methods	See Understanding Roles and Services for Junos OS in Common Criteria and FIPS in the Common Criteria Evaluated Configuration Guide for EX4300 Devices guide
Configure administrative credentials and permissions	See Understanding the Associated Password Rules for an Authorized Administrator in the Common Criteria Evaluated Configuration Guide for EX4300 Devices guide
Configure SSH and console connection	See Configuring a System Login Message and Announcement in the Common Criteria Evaluated Configuration Guide for EX4300 Devices 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 EX4300 switch	Visit EX4300 Documentation in the Juniper Networks TechLibrary
Find more in-depth information about installing and configuring the EX4300 switch	Browse through the EX4300 Switch Hardware 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 EX4300 and describes how to install and deploy it	Watch the EX4300 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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