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EX3400-24P

EX3400-48P

EX3400-24T

EX3400-48T

Juniper NETWORKS EX3400 Ethernet Switch Instruction Manual

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Contents

Juniper NETWORKS EX3400 Ethernet Switch Instruction Manual

EX3400-24P

EX3400-48P

EX3400-24T

EX3400-48T

Step 1: Begin

In this guide, we provide a simple, three-step path, to quickly get you up and running with your new EX3400. We've simplified and shortened the installation and configuration steps, and included how-to videos. You'll learn how to install an AC-powered EX3400, 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 EX3400 Ethernet Switch

The Juniper Networks EX3400 Ethernet Switches are a cost-effective solution for today's most demanding converged data, voice, and video enterprise access networks. The fixed-configuration 1-RU switches are perfect for campus wiring closet deployments. They offer levels of performance and management previously available only with high-end access switches.

The EX3400 switches support Power over Ethernet (PoE) and Power over Ethernet Plus (PoE+) ports for powering attached network devices.

You can interconnect up to 10 EX3400 switches to form a Virtual Chassis and thus manage these switches as a single logical device.

In this guide, we show you how to install the following EX3400 AC-powered switch models:

• EX3400-24T: 24 10/100/1000BASE-T ports, four SFP+ uplink ports

• EX3400-24P: 24 10/100/1000BASE-T PoE/PoE+ ports, four SFP+ uplink ports
• EX3400-48T: 48 10/100/1000BASE-T ports, four SFP+ uplink ports
• EX3400-48P: 48 10/100/1000BASE-T PoE/PoE+ ports, four SFP+ uplink ports

EX3400-24P   EX3400-48P

EX3400-24T   EX3400-48T

Install the EX3400 Switch

You can install the EX3400 switch on a desk or table, on a wall, or in a two-post or four-post rack. The accessory kit that ships in the box has the brackets you need to install the EX3400 switch in a two-post rack. In this guide, we walk you through how to do that.

NOTE: If you want to mount the switch on a wall or in a four-post rack, you'll need to order a wall mount or rack mount kit. The four-post rack mount kit also has brackets for mounting the EX3400 switch in a recessed position in the rack.

What's in the Box?

- EX3400 switch
- An AC power cord appropriate for your geographical location
- Two mounting brackets and eight mounting screws
- Power cord retainer clip

What Else Do I Need?
You'll also need:

- Someone to help you secure the switch to the rack
- Mounting screws to secure the EX3400 to the rack
- A number two Phillips (+) screwdriver
- A serial-to-USB adapter (if your laptop 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 a DB-9 to RJ-45 cable or a DB-9 to RJ-45 adapter with a CAT5E copper cable as part of the device package. If you require a console cable, you can order it separately with the part number JNP-CBL-RJ45-DB9 (DB-9 to RJ-45 adapter with a CAT5E copper cable).

Install the EX3400 in a Two-Post Rack

1. Review General Safety Guidelines and Warnings.
2. Attach the mounting brackets to the sides of the EX3400 switch using the eight screws that came in the box and the 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 EX3400 switch to sit in the rack.

3. Lift the EX3400 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 EX3400 switch is level.
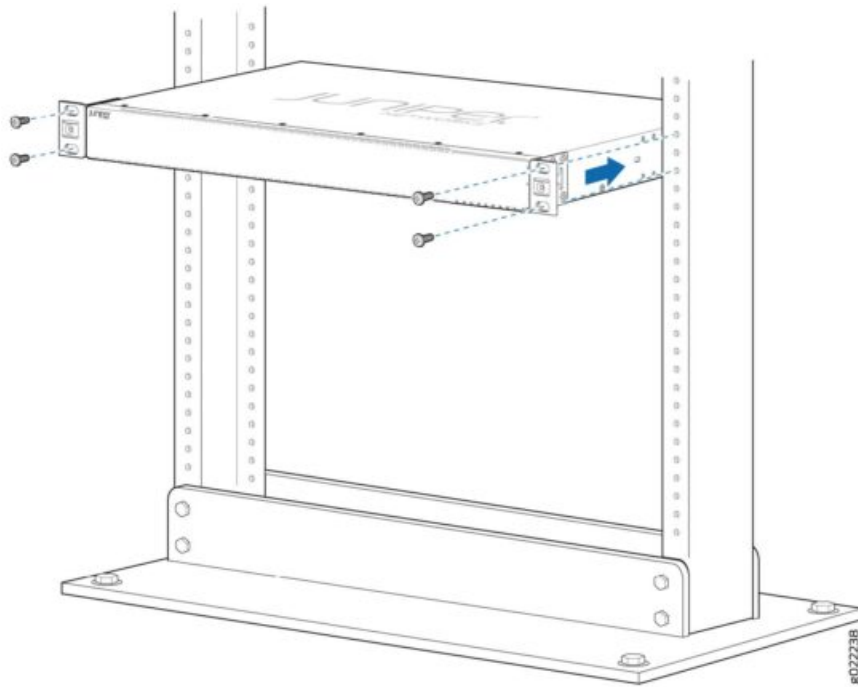
4. While you're holding the EX3400 switch in place, have someone insert and tighten the rack mount screws to secure the mounting brackets to the rack rails. Make sure to tighten the screws in the two bottom holes first and then tighten the screws in the two top holes.
5. Check that the mounting brackets on each side of the rack are level.
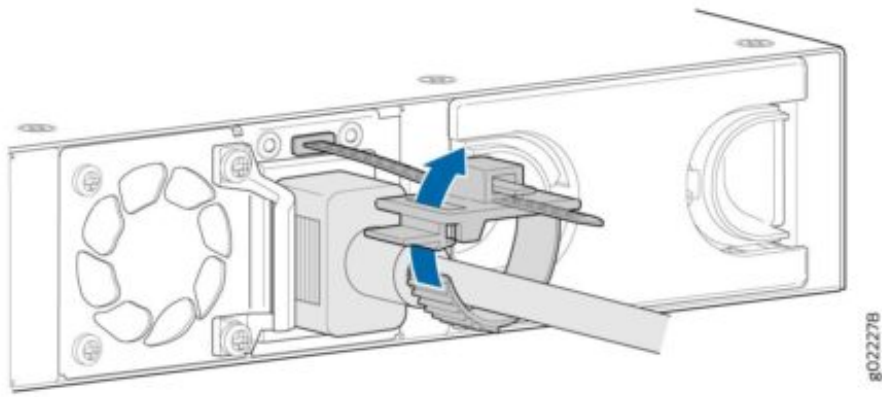
Power On
Now you're ready to connect the EX3400 switch to a dedicated AC power source. The switch comes with the AC power cord for your geographic location.
Here's how to connect an EX3400 switch to AC power:

1. On the rear panel, connect the power cord retainer clip to the AC power supply:
a. Push the end of the power cord retainer strip into the slot above the power cord socket until the strip snaps into place. Ensure that the loop in the retainer strip faces the power cord. The power cord retainer clip extends out of the chassis by 3 in. (7.62 cm).
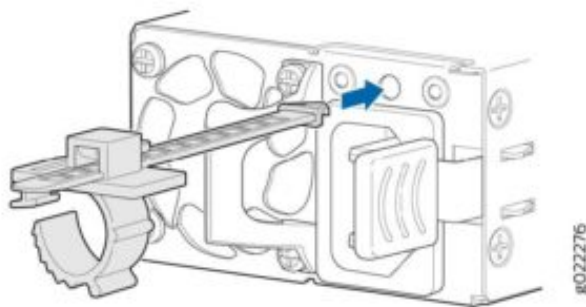
b. Press the small tab on the retainer strip to loosen the loop. Slide the loop until there is enough space to insert the power cord coupler into the power cord socket.
c. Plug in the power cord to the power cord socket.
d. Slide the loop toward the power supply until it is snug against the base of the coupler.
e. Press the tab on the loop and draw out the loop into a tight circle.

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

3. Plug in the power cord to the AC power outlet.

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

The EX3400 switch powers up as soon you connect it to power. It doesn't have a power switch. When the SYS LED on the front panel is lit solid green, the switch is ready to use.

Step 2: Up and Running

Now that the EX3400 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 EX3400 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

EX3400 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 Ethernet switching and storm control on all interfaces

• Sets Power over Ethernet (PoE) on all RJ-45 ports of models that provide PoE and PoE+

• Enables the following protocols:

• Internet Group Management Protocol (IGMP) snooping

• Rapid Spanning Tree Protocol (RSTP)

• Link Layer Discovery Protocol (LLDP)

• Link Layer Discovery Protocol-Media Endpoint Discovery (LLDP-MED)

These settings are loaded as soon as you power on the EX3400 switch. If you want to see what's in the factory-default configuration file for your EX3400 switch, see EX3400 Switch Default Configuration.

Customize the Basic Configuration Using the CLI

Have these values handy before you begin customizing 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 EX3400 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 EX3400 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

Congratulations! Now that you've done the initial configuration, your EX3400 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

If you want to	Then
Jump in and start configuring your EX Series switch with the Junos OS CLI	Start with the Day One+ for Junos OS guide
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 EX3400 switches	Visit EX3400 Documentation in the Juniper Networks TechLibrary
Find more in-depth information about installing your EX3400 series switch	Browse through the EX3400 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 EX3400 and describes how to install and deploy it	Watch the EX3400 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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Juniper NETWORKS EX3400 Ethernet Switch [pdf] Instruction Manual
EX3400, EX3400 Ethernet Switch, Ethernet Switch, Switch

References

- **Juniper Networks Inc. - Sign In**
- **EX3400 Ethernet Switch Overview and Deployment**

- **J** **Get Started with Free Juniper Training**
- **Contrail Archives | Juniper Networks**
- **Contrail Archives | Juniper Networks**
- **Junos OS - TechLibrary - Juniper Networks**
- **Getting Started with Junos OS | Junos OS | Juniper Networks**
- **Installing Software on EX Series Switches | Junos OS | Juniper Networks**
- **EX3400 Switch Hardware Guide | Juniper Networks**
- **General Safety Guidelines and Warnings | Juniper Networks**
- **Configuring Junos OS on the EX3400 | Juniper Networks**
- **Juniper Licensing User Guide | Licensing | Juniper Networks**
- **Activate Your Licenses | Licensing | Juniper Networks**
- **Overview of EX Series Switches and the Juniper Mist Cloud | Juniper Networks**
- **EX3400 Documentation | Juniper Networks**
- **EX2300 Documentation | Juniper Networks**
- **Security Design Center | Juniper Networks**
- **User Manual**