Juniper Networks | Engineering Simplicity

EX9204 Quick Start Guide

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RELEASE

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Step 1: Begin

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To install and perform initial configuration of a Juniper Networks EX9204 Ethernet Switch, you need:

- One small mounting shelf and 22 mounting screws (provided)
- Phillips (+) screwdrivers, numbers 1 and 2 (not provided)
- 7/16-in. (11-mm) torque-controlled driver or socket wrench (not provided)
- One mechanical lift (optional, not provided)
- Electrostatic discharge (ESD) wrist strap with cable (provided)
- 2.5-mm flat-blade (–) screwdriver (not provided)
- Power cord with a plug appropriate for your geographical location for each power supply (not provided)
- Ethernet cable with an RJ-45 connector attached (not provided)
- RJ-45 to DB-9 serial port adapter (not provided)
- Management host, such as a PC, with an Ethernet port (not provided)

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)

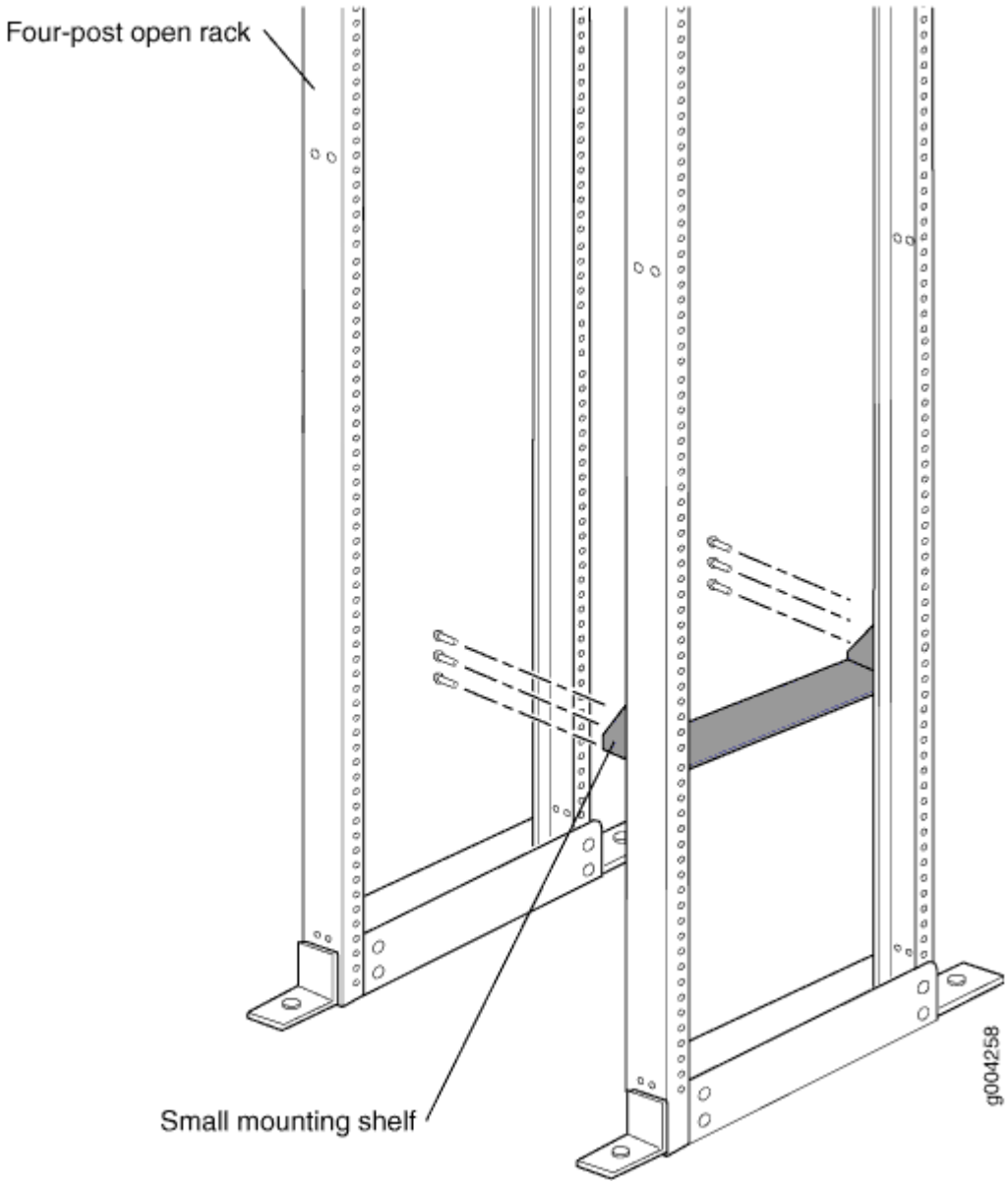
If you want to use RJ-45 to USB-A or RJ-45 to USB-C adapter you must have X64 (64-Bit) Virtual COM port (VCP) driver installed on your PC. See, https://ftdichip.com/drivers/vcp-drivers/ to download the driver.

Install the Mounting Shelf in a Rack

The following table specifies the holes in which you insert cage nuts and screws to install the mounting hardware required (an x indicates a mounting hole location). The hole distances are relative to one of the standard U divisions on the rack. The bottom of all mounting shelves is at 0.02 in. (0.05 cm) above a U division.

Holes	Distance Above U Division	Mounting Shelf
4	2.00 in. (5.1 cm) 1.14 U	X
3	1.51 in. (3.8 cm) 0.86 U	X
2	0.88 in. (2.2 cm) 0.50 U	X
1	0.25 in. (0.6 cm) 0.14 U	X

1. If needed, install cage nuts in the holes as specified in the table.
2. On the back of each rack rail, partially insert a mounting screw into the lowest hole specified in the table.
3. Install the mounting shelf on the back of the rack rails. Rest the bottom slot of each flange on a mounting screw.
4. Insert screws into the open holes in each flange of the mounting shelf.
5. Tighten all the screws completely.



Mount the Switch

NOTE: An empty chassis weighs approximately 52.02lb (23.60 kg) and a fully loaded chassis weighs approximately 128.08 lb (58.1 kg). We strongly recommend that you use a mechanical lift or have at least three persons to lift the chassis, and remove all the components from the chassis before mounting.

NOTE: While mounting multiple units on a rack, mount the heaviest unit at the bottom and mount the other units from the bottom to the top in decreasing weight order

1. Safely remove all components—power supplies, Switch Fabric (SF) module, fan tray, air filter, and line cards—from the chassis.
2. Ensure that the rack is properly secured to the building in its permanent location.
3. Ensure that a mounting shelf is installed to support the weight of the chassis.
4. Position the chassis in front of the rack, centering it in front of the mounting shelf.
5. Lift the chassis approximately 0.75 in. (1.9 cm) above the surface of the mounting shelf, and position it as close as possible to the shelf.
6. Carefully slide the chassis onto the mounting shelf so that the bottom of the chassis and the mounting shelf overlap by approximately 2 in. (5.08 cm).
7. Slide the chassis further until the mounting brackets touch the rack rails. The shelf ensures that the holes in the mounting brackets and the front-mounting brackets of the chassis align with the holes in the rack rails.
8. Install a mounting screw into each of the open mounting holes aligned with the rack, starting from the bottom. Ensure that all the mounting screws on one side of the rack are aligned with the m
9. Reinstall the chassis components. Ensure that all empty slots are covered with a blank panel before operating the switch.

Connect Power to the Switch

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Connecting EX9204 to AC power

NOTE: Do not mix AC and DC power supplies in the same switch.

1. Attach an ESD wrist strap to your bare wrist, and connect the strap to the ESD points on the chassis.
2. Set the power switch of the AC power supply to the **OFF** (**0**) position.
3. Insert the coupler end of the power cord into the AC power cord inlet on the AC power supply faceplate.
4. Insert the power cord plug into the power source outlet and switch on the dedicated customer site circuit breaker.
5. Set the power switch of the AC power source outlet to the **ON** (**|**) position.
6. Set the power switch of the AC power supply to the **ON** (**|**) position and verify that the **AC OK** and the **DC OK** LEDs are on and steadily lit green, and the **PS FAIL** LED is not lit.

Connecting EX9204 to DC power

For each power supply:

WARNING: Ensure that the input circuit breaker is open so that the cable leads will not become active while you are connecting DC power.

1. Attach an ESD grounding strap to your bare wrist, and connect the strap to one of the ESD points on the chassis.
2. Set the power switch on the power supply faceplate to the **OFF** (**0**) position.
3. Remove the clear plastic cover from the terminal studs on the faceplate.
4. Verify that the DC power cables are correctly labeled before making connections to the power supply. In a typical power distribution scheme where the return (RTN) is connected to chassis ground at the battery plant, you can use a multimeter to verify the resistance of the –48 V and RTN DC cables to chassis ground:
   - Cable with large resistance (indicating an open circuit) to chassis ground is –48 V.
   - Cable with low resistance (indicating a closed circuit) to chassis ground is RTN.

CAUTION: You must ensure that power connections maintain the proper polarity. The power source cables might be labeled (+) and (–) to indicate their polarity. There is no standard color coding for DC power cables. The color coding used by the external DC power source at your site determines the color coding for the leads on the power cables that attach to the terminal studs on each power supply.

5. Remove the nut and washer from each of the terminal studs.
6. Secure each power cable lug to the terminal studs, first with the flat washer, then with the split washer, and then with the nut. Apply between 23 lb-in. (2.6 Nm) and 25 lb-in. (2.8 Nm) of torque to each nut. Do not overtighten the nut. (Use a 7/16 in. [11 mm] torque-controlled driver or socket wrench.)

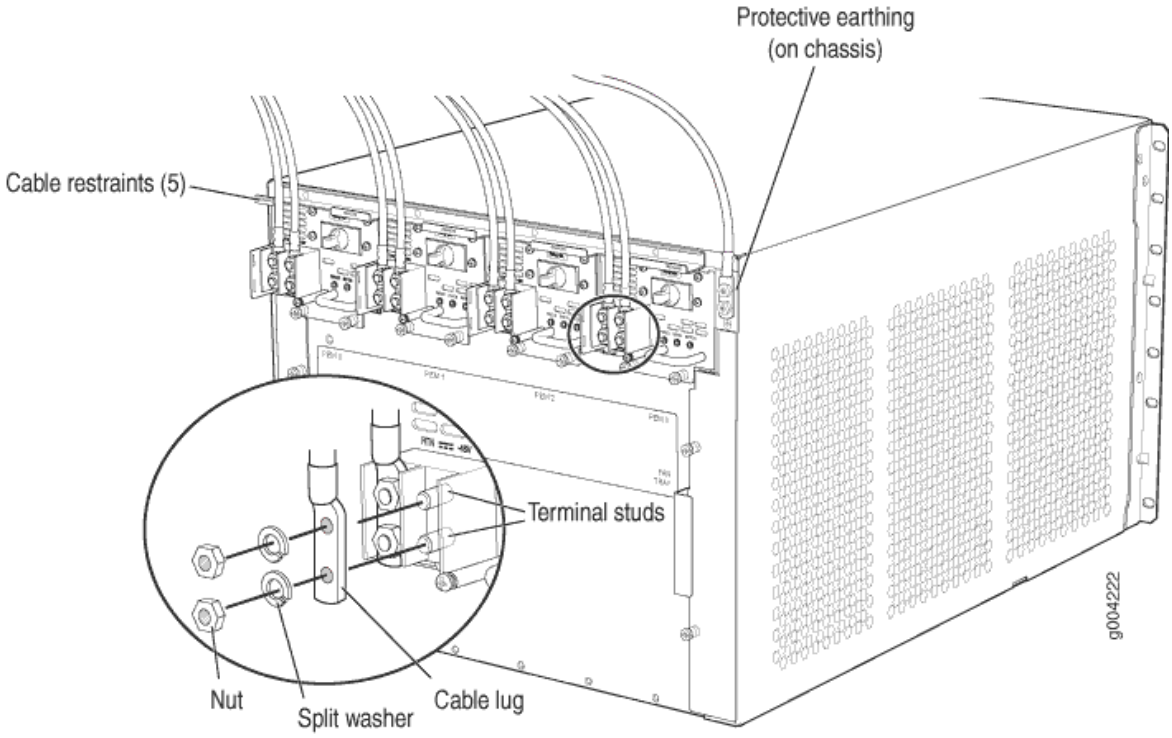
- Secure the positive (+) DC source power cable lug to the **RTN** terminal.
- Secure the negative (–) DC source power cable lug to the **–48** V terminal.

> ⚠ **CAUTION**: Ensure that each power cable lug seats flush against the surface of the terminal block as you tighten the nuts. Ensure that each nut is properly threaded into the terminal stud. Before tightening each nut that you insert into the terminal stud, ensure that you are able to spin the nut freely with your fingers. Applying installation torque to the nut when improperly threaded might damage the terminal stud.

> ⚠ **CAUTION**: The maximum torque rating of the terminal studs on the DC power supply is 36 lb-in. (4.0 Nm). Excessive torque can damage the terminal studs. Use only a torque-controlled driver or socket wrench to tighten nuts on the DC power supply terminal studs.

> **NOTE**: The DC power supplies in **PEM0** and **PEM1** must be powered by dedicated power feeds derived from feed A, and the DC power supplies in **PEM2** and **PEM3** must be powered by dedicated power feeds derived from feed B. This configuration provides the commonly deployed A/B feed redundancy for the system.

7. Replace the clear plastic cover over the terminal studs on the faceplate.
8. Verify that the power cabling is correct. Ensure that cables do not touch or block access to switch components, and do not drape where people could trip on them.
9. Switch on the dedicated customer site circuit breakers and verify that the INPUT OK LED on the power supply is lit green.
10. Set the power switch of the DC power supply to the **ON** (—) position and verify that the **PWR OK**, **BRKR ON**, and **INPUT OK** LEDs are steadily lit green.



Step 2: Up and Running

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Set Parameter Values

Before you begin:

- Ensure that the switch is powered on.
- Set these values in the console server or PC: baud rate—9600; flow control—none; data—8; parity—none; stop bits—1; DCD state—disregard.

- For management console, connect the **CON** port of the Routing Engine (RE) module to the PC using the RJ-45 to DB-9 serial port adapter (not provided).
- For Out-of-Band management, connect the **ETHERNET** port of the RE module to the PC using an RJ-45 cable (not provided).

Perform the Initial Configuration

Configure the software:

1. Login as a “root” user with the CLI and enter the configuration mode.

```
root@#
```

2. Set the root authentication password.

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

You can also set an encrypted password or an SSH public key string (DSA or RSA) instead of a clear-text password.

3. Configure the name of the host. If the name includes spaces, enclose the name in quotation marks (“ ”).

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

4. Create a user account.

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

5. Set the user account class to `super-user`.

```
[edit]
root@# set system login user user-name class super-user
```

6. Configure the IP address and prefix length for the switch Ethernet interface.

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

7. Configure the IP address and prefix length for the switch Ethernet interface.

```
[edit]
root@#  set interfaces fxp0 unit 0 family inet address address/prefix-length
```

8. Configure the IP address of a DNS server.

```
[edit]
root@# set system name-server address
```

9. (Optional) Configure the static routes to remote subnets with access to the management port.

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

10. Configure the telnet service at the `[edit system services]` hierarchy level.

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

11. (Optional) Configure additional properties by adding the necessary configuration statements.
12. Commit the configuration and exit the configuration mode.

NOTE: To reinstall Junos OS, boot the switch from the removable media. Do not insert the removable media during normal operations. The switch does not operate normally when it is booted from the removable media.

Step 3: Keep Going

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See the complete EX9204 documentation at https://www.juniper.net/documentation/product/en_US/ex9204.

Safety Warnings Summary

This is a summary of safety warnings. For a complete list of warnings, including translations, see the EX9204 documentation at https://www.juniper.net/documentation/product/en_US/ex9204.

WARNING: Failure to observe these safety warnings can result in personal injury or death.

- Before removing or installing components of a switch, attach an ESD strap to an ESD point, and place the other end of the strap around your bare wrist to avoid. Failure to use an ESD strap could result in damage to the switch.
- Permit only trained and qualified personnel to install or replace switch components.
- Perform only the procedures described in this quick start and the EX Series documentation. Other services must be performed only by authorized service personnel.
- Before installing the switch, read the planning instructions in the EX Series documentation to ensure that the site meets power, environmental, and clearance requirements for the switch.
- Before connecting the switch to a power source, read the installation instructions in the EX Series documentation.

- For the cooling system to function properly, the airflow around the chassis must be unrestricted. Allow at least 6 in. (15.2 cm) of clearance between side-cooled switches. Allow 2.8 in. (7 cm) between the side of the chassis and any non-heat-producing surface such as a wall.
- Installing the EX9204 switch without using a mechanical lift requires three persons to lift the switch onto the mounting shelf. Before lifting the chassis, remove the components. To prevent injury, keep your back straight and lift with your legs, not your back. Do not lift the chassis by the power supply handles.
- Mount the switch at the bottom of the rack if it is the only unit in the rack. When mounting the switch in a partially filled rack, mount the heaviest unit at the bottom of the rack and mount the others from bottom to top in order of decreasing weight.
- When you install the switch, always connect the ground wire first and disconnect it last.
- Wire the DC power supply using the appropriate lugs. When connecting power, the proper wiring sequence is ground to ground, +RTN to +RTN, then –48 V to –48 V. When disconnecting power, the proper wiring sequence is –48 V to –48 V, +RTN to +RTN, then ground to ground.
- If the rack has stabilizing devices, install them in the rack before mounting or servicing the switch in the rack.
- Before installing or after removing an electrical component, always place it component-side up on an antistatic mat placed on a flat, stable surface or in an antistatic bag.
- Do not work on the switch or connect or disconnect cables during electrical storms.
- Before working on equipment that is connected to power lines, remove jewelry, including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or become welded to the terminals.

Power Cable Warning (Japanese)

The attached power cable is only for this product. Do not use this cable for another product.

注意

附属の電源コードセットはこの製品専用です。
他の電気機器には使用しないでください。

Contacting Juniper Networks

For technical support, see:

http://www.juniper.net/support/requesting-support.html

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