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NN47211-301
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Installation Job Aid for Avaya Ethernet Routing Switch 5900 Series (NN47211-301, ver 03.01)

Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Notices

Notice paragraphs alert you about issues that require your attention. The following paragraphs describe the types of notices used in this guide.

 **Note:**

Notes provide tips and useful information regarding the installation and operation of Avaya products.

 **Electrostatic alert:**

ESD

ESD notices provide information about how to avoid discharge of static electricity and subsequent damage to Avaya products.

 **Caution:**

Caution notices provide information about how to avoid possible service disruption or damage to Avaya products.

 **Warning:**

Warning notices provide information about how to avoid personal injury when working with Avaya products.

 **Voltage:**

Danger — High Voltage notices provide information about how to avoid a situation or condition that can cause serious personal injury or death from high voltage or electric shock.

 **Danger:**

Danger notices provide information about how to avoid a situation or condition that can cause serious personal injury or death.

Safety messages

Safety messages are an important part of the technical documentation. The messages alert you to hazards to personnel and equipment and provide guidance for the safe operation of your equipment. Failure to comply with the safety messages could result in equipment damage and personal injury.

Following are the most common types of safety messages.

 **Warning:**

Installation must be performed by qualified service personnel only. Read and follow all warning notices and instructions marked on the product or included in the documentation.

 **Voltage:**

This equipment relies on the building's installation for overcurrent protection. Ensure that a fuse or circuit breaker no larger than 120 VAC/20 A or 240 VAC/16 A is used on the phase conductors.

 **Caution:**

This device is a Class A product. In a domestic environment, this device can cause radio interference, in which case the user may be required to take appropriate measures.

 **Caution:**

When mounting this device in a rack, do not stack units directly on top of one another in the rack. Each unit must be secured to the rack with appropriate mounting brackets. Mounting brackets are not designed to support multiple units.

 **Voltage:**

Use only power cords that have a grounding path. Without a proper ground, a person who touches the switch is in danger of receiving an electrical shock. Lack of a grounding path to the switch can result in excessive emissions.

 **Voltage:**

The ERS 5952GTS-PWR+ can draw up to 1900 Watts of power when two power supply units are installed and all 802.3at ports are operating at maximum power. In installations operating at 120 VAC, do not operate more than two power supplies from a single 120 VAC/20A circuit.

Warning:

Disconnecting the power cord is the only way to turn off power to this device. Always connect the power cord in a location that can be reached quickly and safely in case of an emergency.

Warning:

Fiber optic equipment can emit laser or infrared light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that fiber optic cables are connected to a light source.



Caution:

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

AC power cord specifications

The following section outlines the AC power cord specifications for various countries. Ensure that you use the correct cord for your location.

Table 1: International power cord specifications

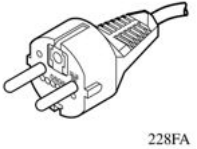
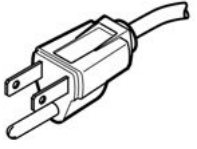
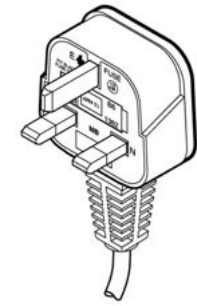
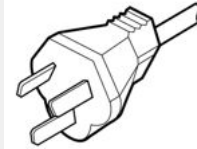
Country / Plug Specification	Specifications	Typical Plug
Continental Europe: <ul style="list-style-type: none">• CEE7 standard VII male plug• Harmonized cord (HAR marking on the outside of the cord jacket to comply with the CENELEC Harmonized Document HD-21)	<ul style="list-style-type: none">• 220 or 230 VAC• 50 Hz• Single Phase	 228FA
United States of America / Canada / Japan: <ul style="list-style-type: none">• NEMA5-15P male plug• UL-recognized (UL stamped on cord jacket)• CSA-certified (CSA label secured to the cord)	<ul style="list-style-type: none">• 100 or 120 VAC• 50 - 60 Hz• Single Phase	 227FA

Table continues...

Country / Plug Specification	Specifications	Typical Plug
United Kingdom: <ul style="list-style-type: none"> • BS1363 male plug with fuse • Harmonized cord 	<ul style="list-style-type: none"> • 240 VAC • 50 Hz • Single Phase 	 <p style="text-align: right;">229FA</p>
Australia: <ul style="list-style-type: none"> • AS3112-1981 male plug 	<ul style="list-style-type: none"> • 240 VAC • 50 Hz • Single Phase 	 <p style="text-align: right;">230FA</p>

Installation preparation

To prevent damage, handle the switch carefully by using the following guidelines:

- To prevent damage from electrostatic discharge, always wear an antistatic wrist strap connected to an ESD jack.
- Always place the switch on appropriate antistatic material.
- Support the switch from underneath with two hands. Do not touch components or connector pins with your hand, or damage can result.
- Do not over tighten screws. Tighten until snug. Do not use a power tool to tighten screws.

For information about technical specifications for the individual switches, see *Installing Avaya Ethernet Routing Switch 5900 Series*, NN47211-300.

Installing the switch

The switch installation for ERS 59100GTS and ERS 59100GTS-PWR+ are different from the other switch models in ERS 5900 Series. See the following procedures to install fan trays and power supplies, and switches in an equipment rack.

Installing the fan trays and power supply

Your switch supports a combination of field-replaceable power supplies and cooling fan trays. Depending on the switch model, two or four trays are included with your switch. You must install the fan trays and at least one power supply before using the switch. The optional power supply units can be installed for redundancy and load sharing.

The following figures show fan trays and power supply location:

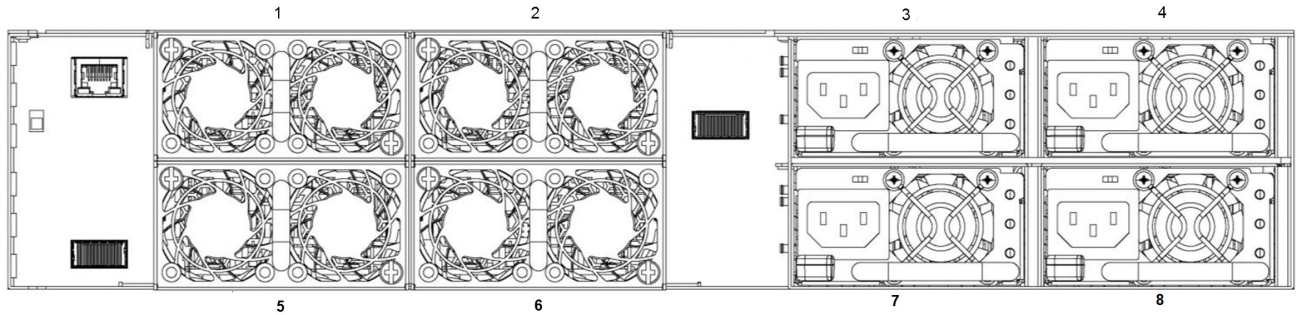


Figure 1: ERS 59100GTS and ERS 59100GTS-PWR+ rear panel

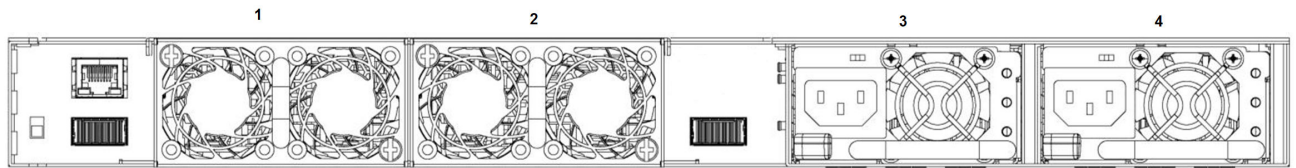


Figure 2: ERS 5900 Series rear panel

1	Fan Tray 2
2	Fan Tray 1
3	Power Supply Unit 1 (PS1)
4	Power Supply Unit 2 (PS2)
5	Fan Tray 4
6	Fan Tray 3
7	Power Supply Unit 3 (PS3)
8	Power Supply Unit 4 (PS4)

To install the fan trays and power supplies to your switch, use the following procedure.

! Important:

Supported cooling airflow directions are: front to back or back to front. The airflow direction of fan trays and power supplies are labelled and fixed. Ensure the fan trays and power supplies have the same direction of airflow.

The fan trays and power supplies do not support the ability to change their airflow direction. The first power supply determines the airflow direction.

In a single power supply installation, keep the blanking plate installed over the unused power supply slots for proper cooling. Avaya recommends you use PS1 (the left most power supply slot when viewed from the front) in a single power supply installation.

Before you begin

Verify that the fan trays and power supply are compatible—ensure that the airflow direction for all fans and power supplies match.

Procedure

1. Insert each fan tray into a rear fan tray slot.
2. Verify that each fan tray is fully seated in the slot and secure each fan tray with two thumb screws.
3. Insert each power supply into a rear power supply slot.

If a blanking plate covers the required power-supply slot, remove the plate before inserting the power supply.

4. Verify that each power supply is fully seated in the slot and securely clipped in place.

Example

The following figures show how to properly insert the cooling fan trays and power supplies into your switch.

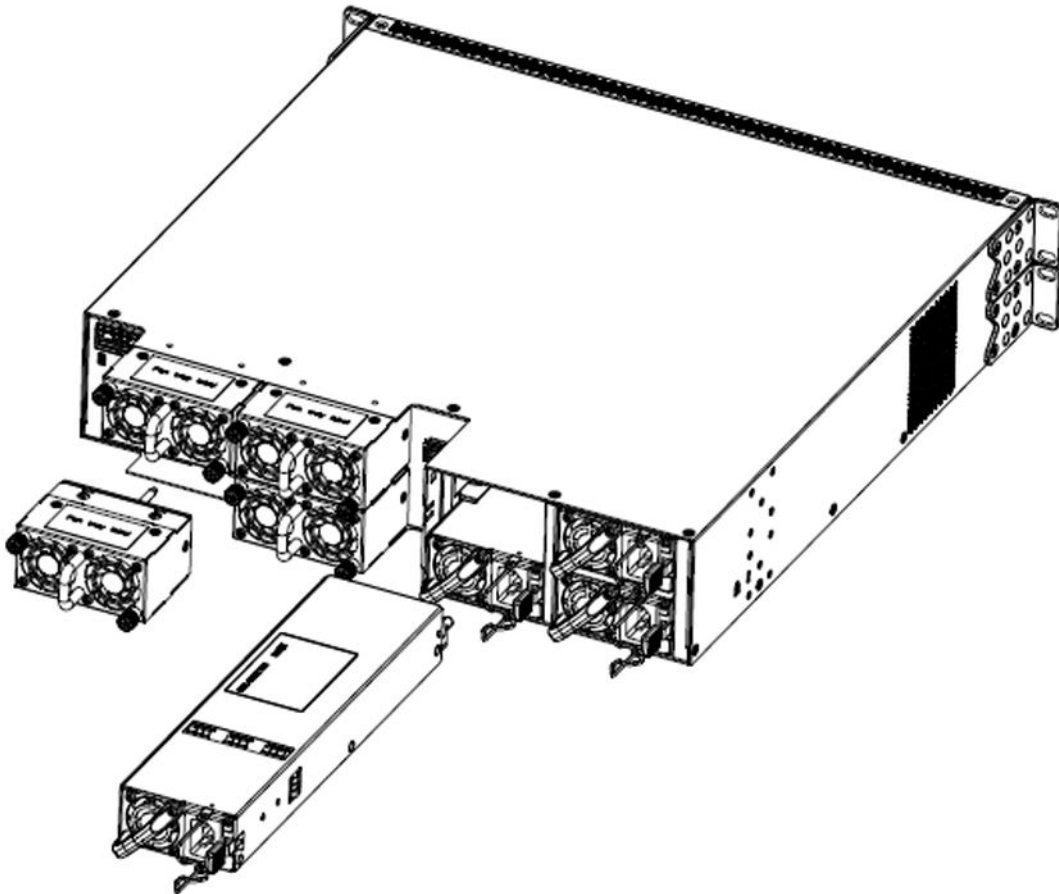


Figure 3: Installing the fan trays and power supplies in ERS 59100GTS and ERS 59100GTS-PWR+

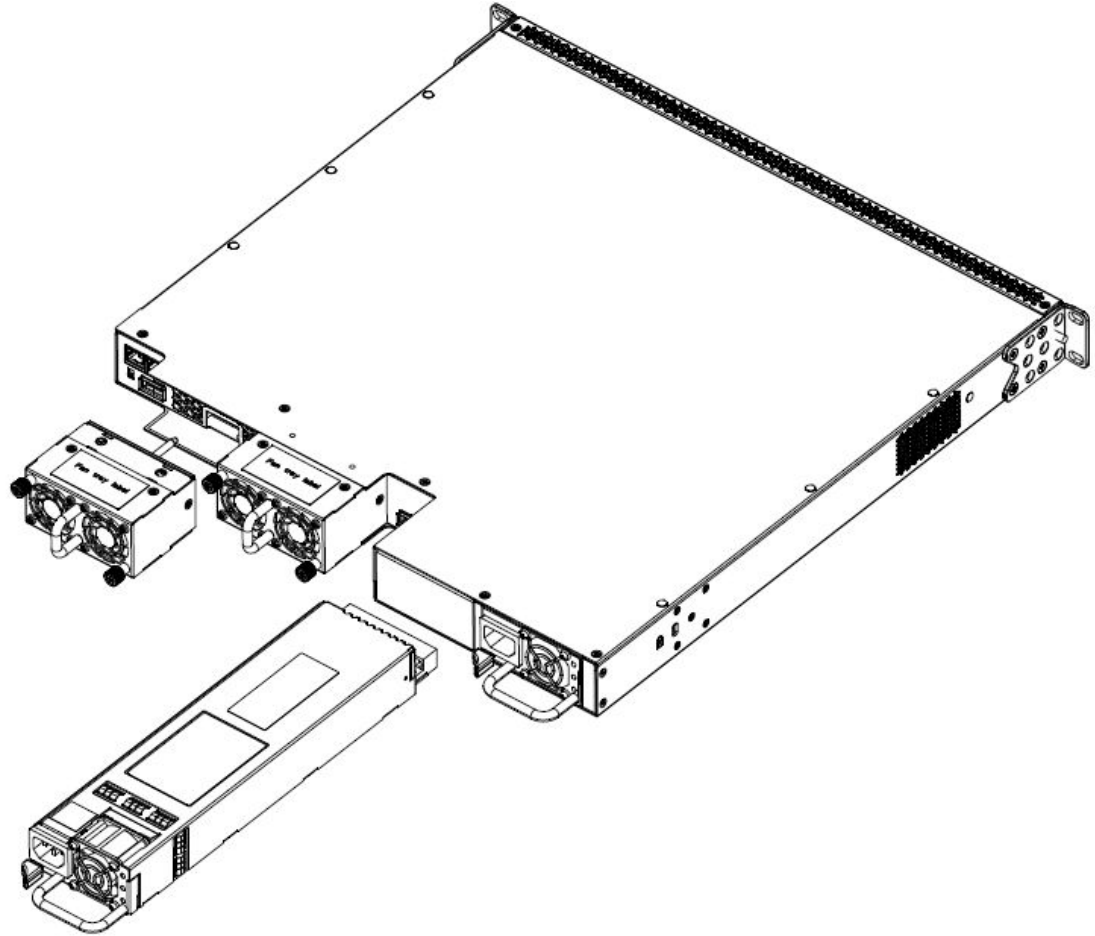


Figure 4: Installing the fan trays and power supplies in ERS 5900 Series

Next steps

After you install the two fan trays and at least one power supply, you can install and connect power to the switch.

Installing ERS 5900 Series in an equipment rack

About this task

Perform this procedure to install all switches in ERS 5900 Series except ERS 59100GTS and ERS 59100GTS-PWR+.

To install these switches, see [Installing ERS59100GTS and ERS59100GTS-PWR+ in an equipment rack](#) on page 12.

*** Note:**

It is recommended to install the switch in an equipment rack.

Before you begin

Tool requirements

- Phillips screwdriver to attach brackets to the switch and the switch to the rack.

Rack requirements

- Space of 2.8 inches (7.1 cm) for each switch is available in an E1A or 1EC standard 19 inch (48.2 cm) equipment rack and T1A 23 inch (58.5 cm) equipment rack.
- Appropriate rack space is available to accommodate 1U switch height (44 mm).
- Rack is bolted to the floor and braced if necessary.
- Rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.

* Note:

Avaya does not supply the bolts used to secure the switch to the rack. Ensure you obtain the appropriate bolts to secure the switch to your specific rack before you begin.

Procedure

1. Ensure power is disconnected from the switch.
2. Attach a bracket to each side of the switch with the included screws.

You have different options for front and rear mounting positions. Attach the brackets in the best position for your specific equipment rack.

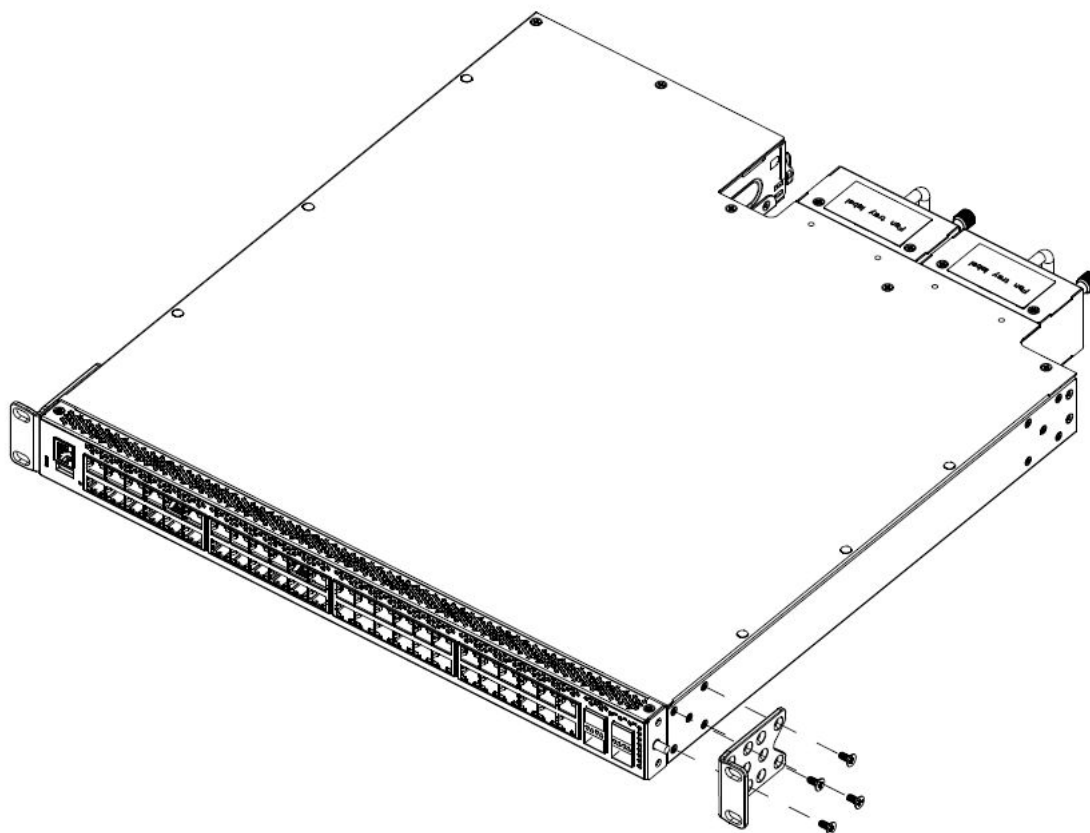


Figure 5: Front-mounted rack bracket installation

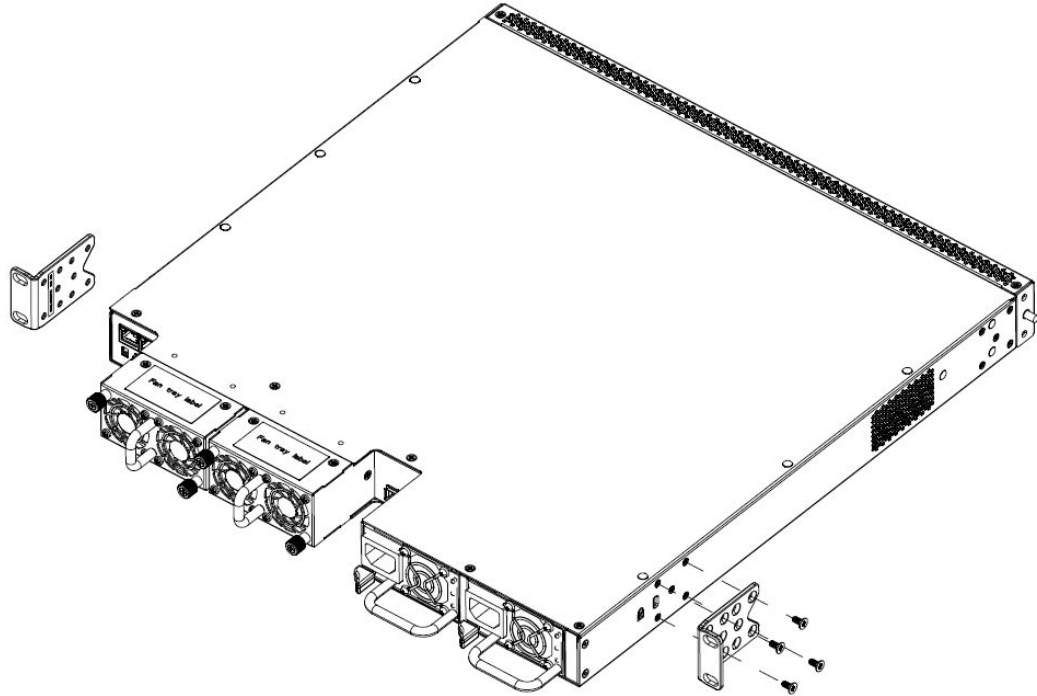


Figure 6: Rear-mounted rack bracket installation

3. Slide the switch into the rack.
4. Insert and tighten the rack mount screws.

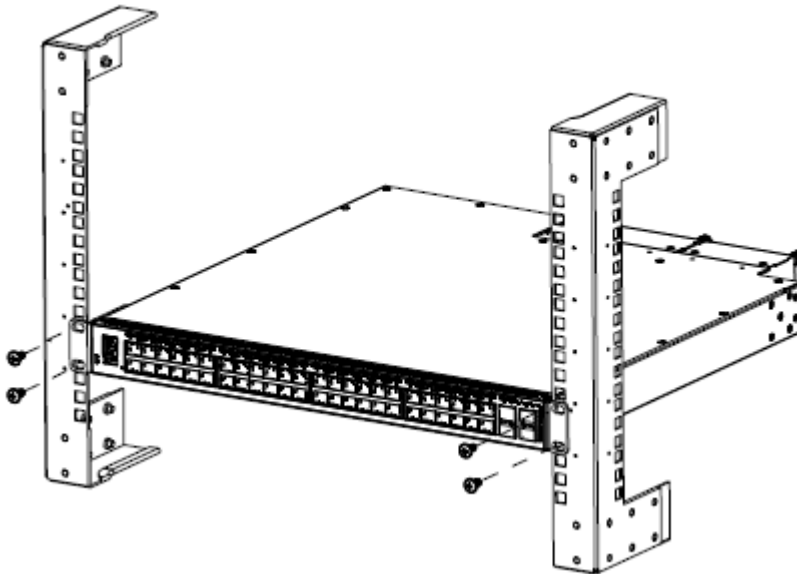


Figure 7: Front-mounted rack installation

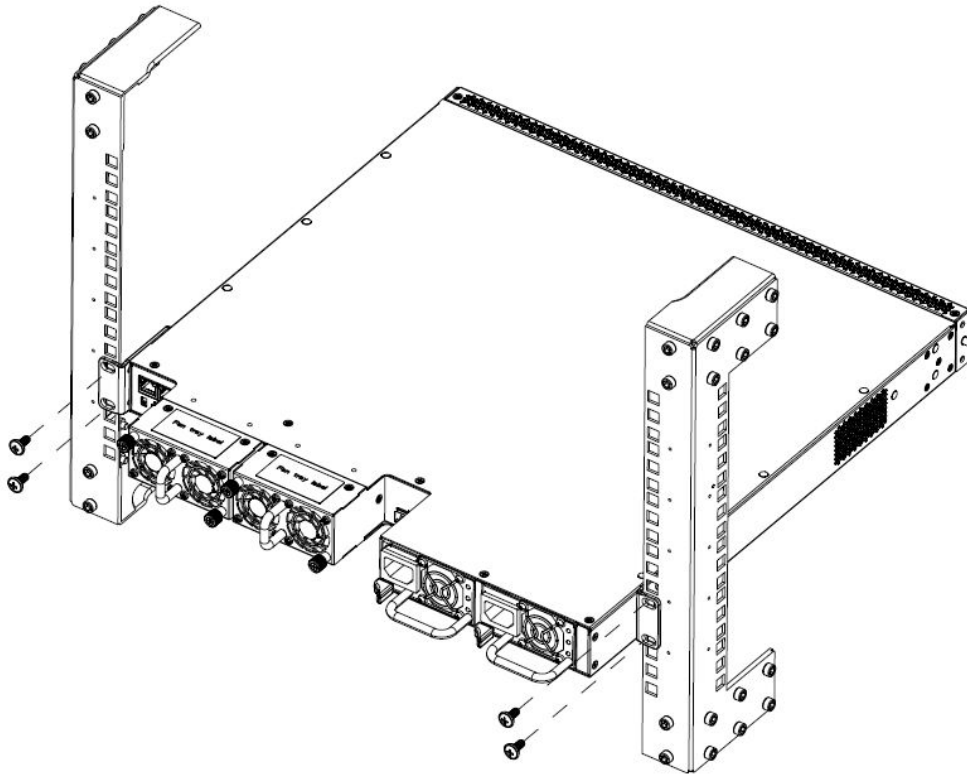


Figure 8: Rear-mounted rack installation

For four-post equipment rack installations, an optional four-post rack mounting kit (AL5911001-E6, sold separately) is available that includes adjustable rear brackets. For more information, see *Installing Avaya Ethernet Routing Switch 5900 Series*, NN47211-300.

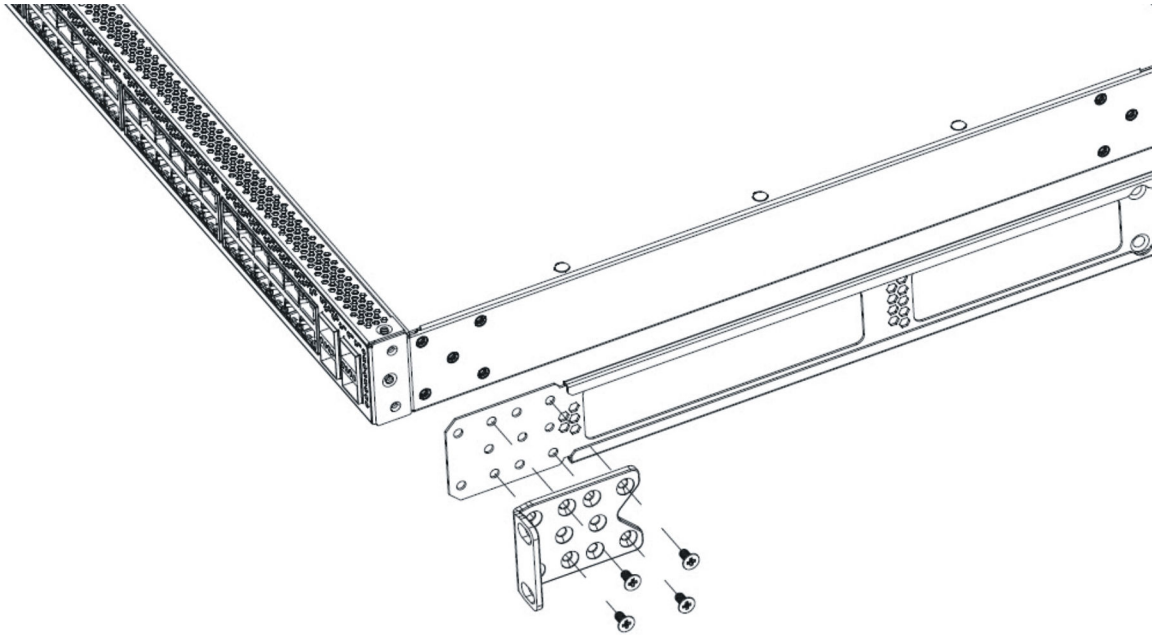


Figure 9: Rack mount attachment screws

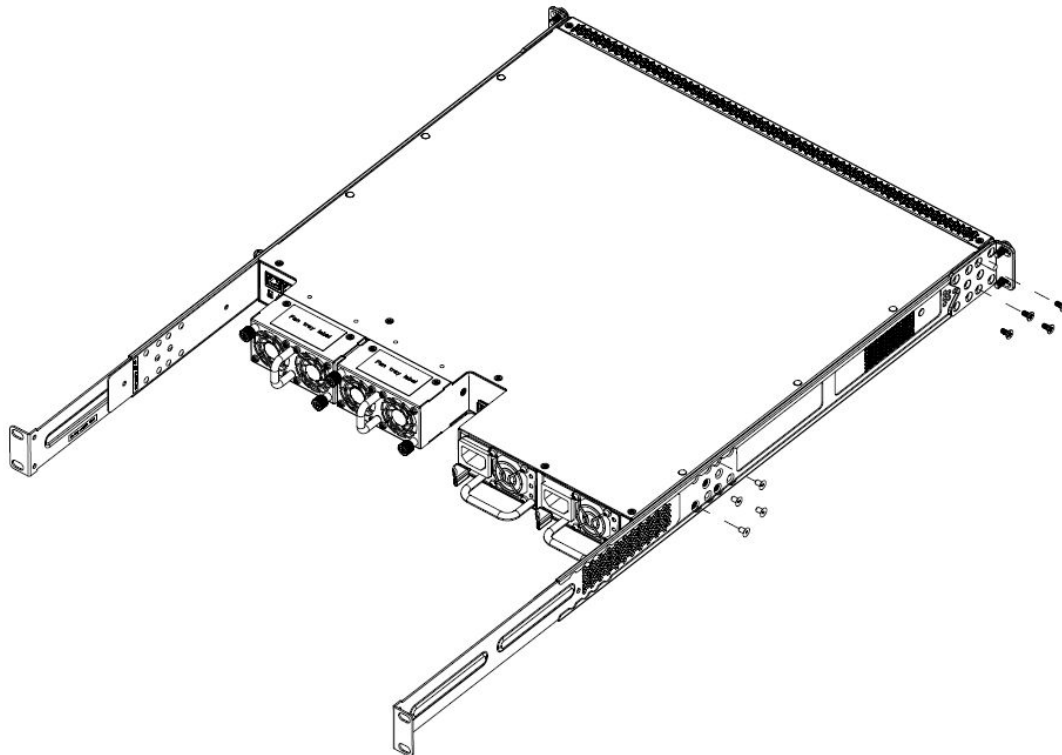


Figure 10: Optional four-post rack mount brackets

5. Slide the switch into the rack.

6. Fasten the switch to the equipment rack with rack mount screws.

For four-post equipment rack installations, fasten the switch to the equipment rack with rack mount screws on all four corners.

7. Verify that the switch is securely fastened to the rack.

You can proceed with the installation by connecting power and network connections to the switch.

Installing ERS 59100GTS and ERS 59100GTS-PWR+ in an equipment rack

About this task

Perform this procedure to Install ERS 59100GTS and ERS 59100GTS-PWR+ in an equipment rack.

To install other switches in ERS 5900 Series, see [Installing ERS 5900 Series in an equipment rack](#) on page 7.

Before you begin

Tool requirements

- Phillips screwdriver to attach brackets to the switch and the switch to the rack.

Rack requirements

- Space of 2.8 inches (7.1 cm) for each switch is available in an E1A or 1EC standard 19 inch (48.2 cm) equipment rack and T1A 23 inch (58.5 cm) equipment rack.
- Appropriate rack space is available to accommodate 2U switch height (88.5 mm).
- Rack is bolted to the floor and braced if necessary.
- Rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.

Note:

Avaya does not supply the bolts used to secure the switch to the rack. Ensure you obtain the appropriate bolts to secure the switch to your specific rack before you begin.

Procedure

1. Ensure power is disconnected from the switch.
2. Attach a bracket to each side of the switch with the included screws.

You have different options for front and rear mounting positions. Attach the brackets in the best position for your specific equipment rack.

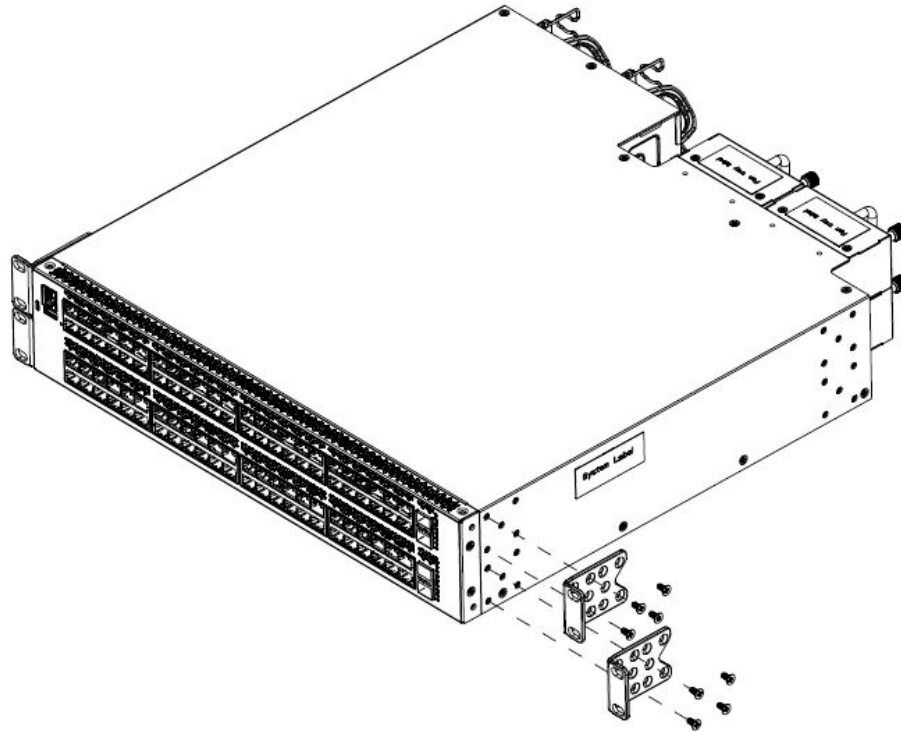


Figure 11: Front-mounted rack bracket installation

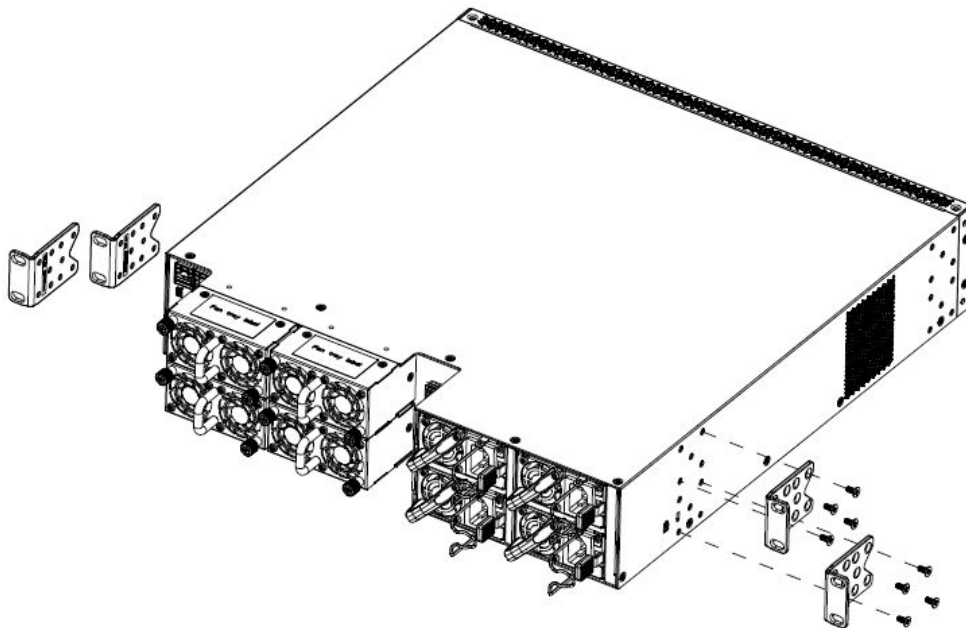


Figure 12: Rear-mounted rack bracket installation

3. Slide the switch into the rack.

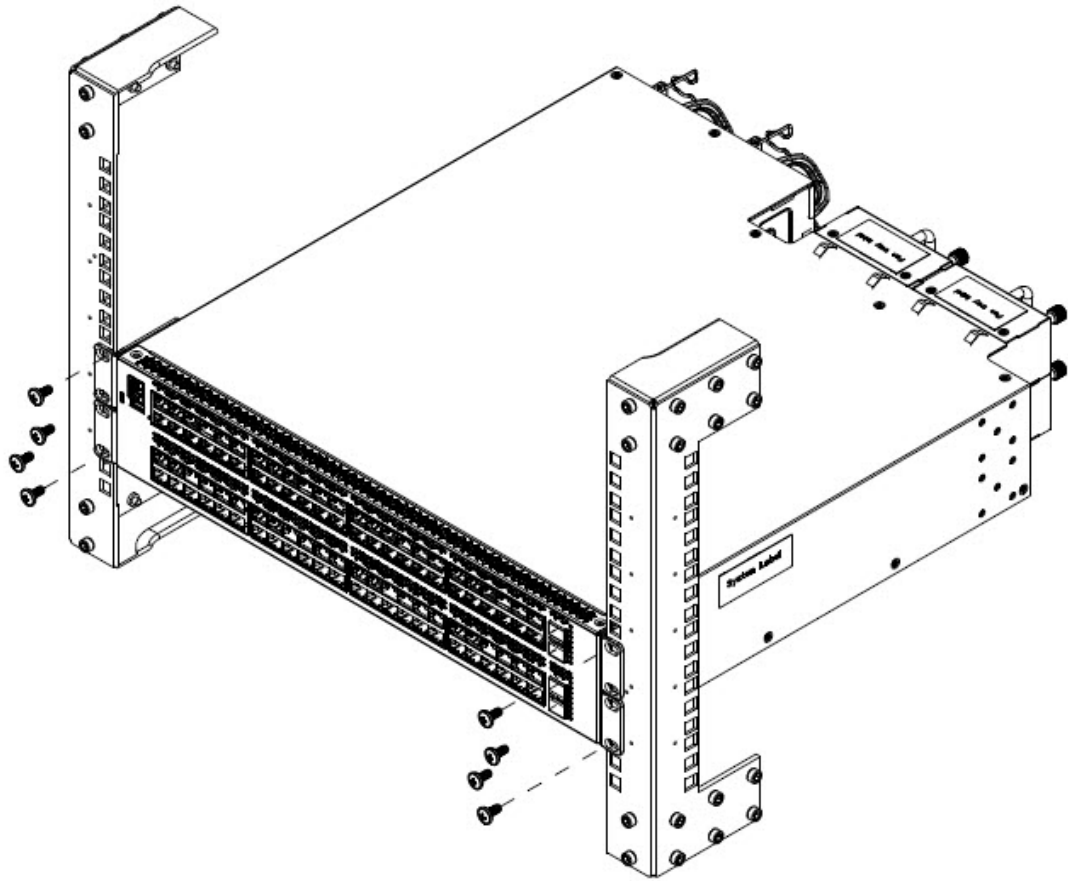


Figure 13: Front-mounted rack installation

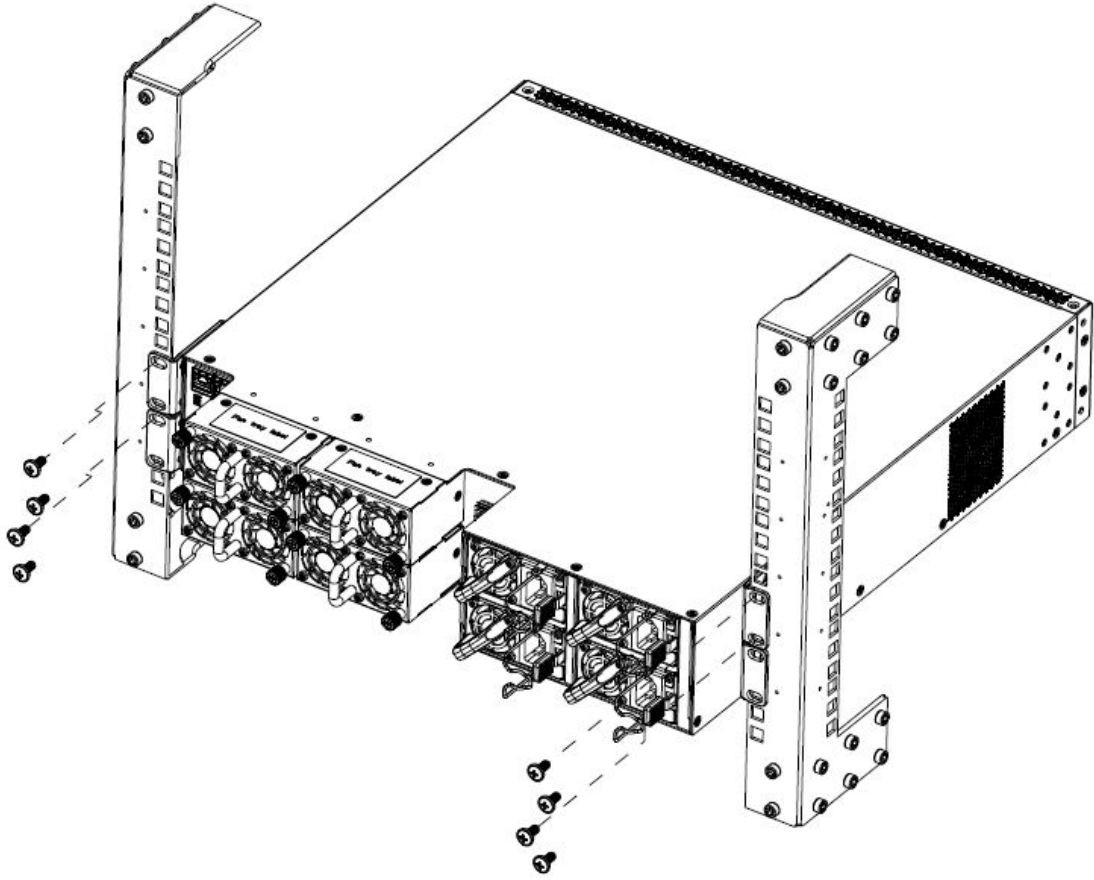


Figure 14: Rear-mounted rack installation

4. Insert and tighten the rack mount screws.
5. Verify that the switch is securely fastened to the rack.
6. For four-post equipment rack installations, an optional four-post rack mounting kit (AL5911001-E6, sold separately) is available that includes adjustable rear brackets.

Attach a front bracket to each guide bracket with four M2 x 3-millimeter-long flathead machine screws.

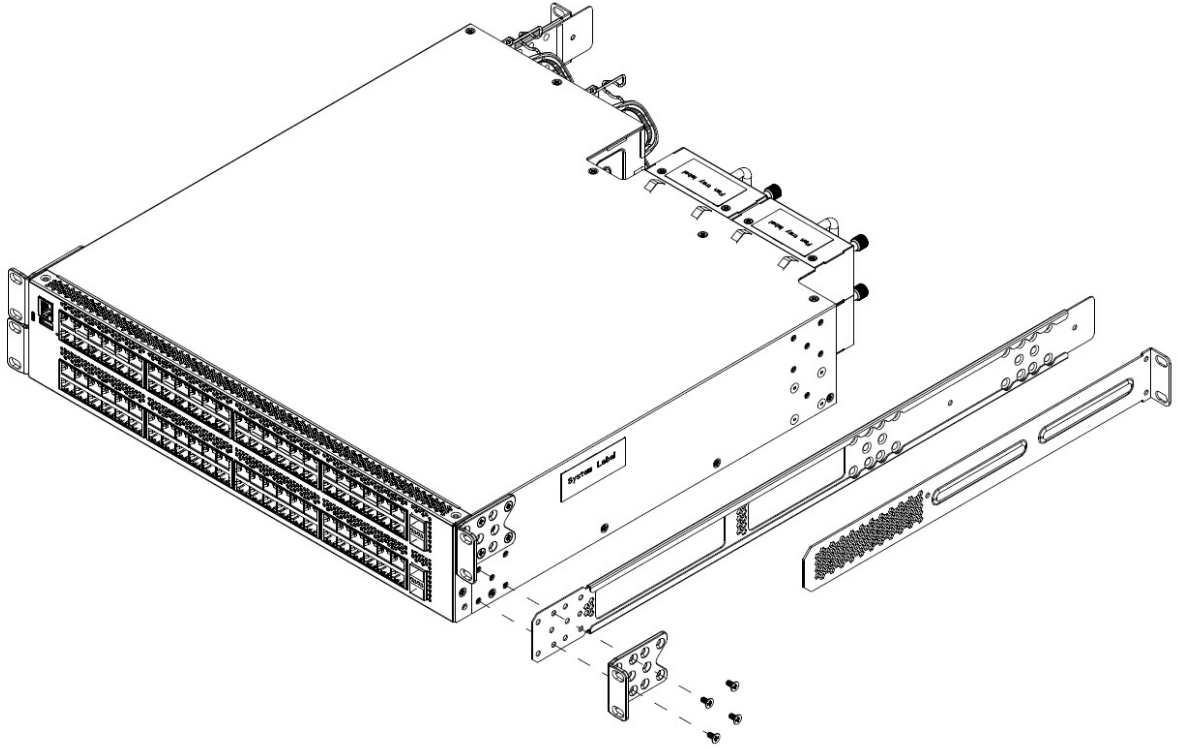


Figure 15: Rack mount attachment screws

7. Attach the guide brackets to the switch chassis.

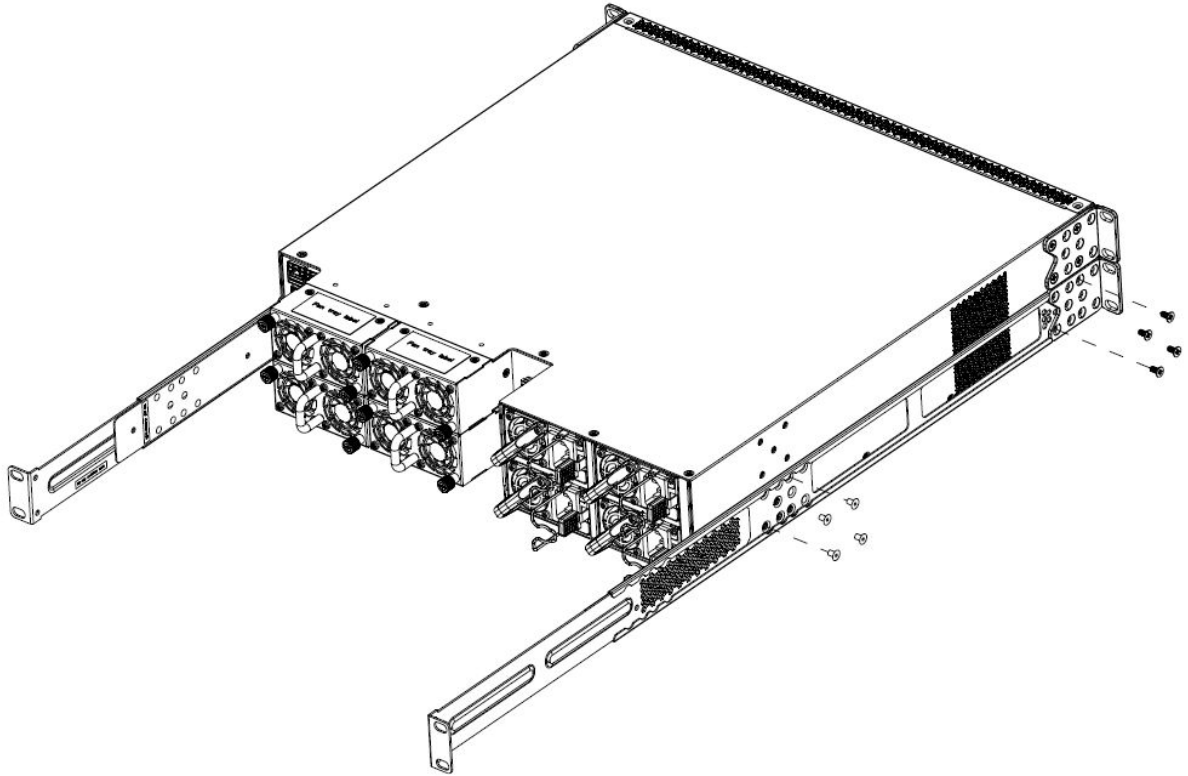


Figure 16: Optional four-post rack mount brackets

8. Slide the switch into the rack.
9. Fasten the switch to the equipment rack with rack mount screws.
10. For four-post equipment rack installations, fasten the switch to the equipment rack with rack mount screws on all four corners.
11. Verify that the switch is securely fastened to the rack.

You can proceed with the installation by connecting power and network connections to the switch.

Connecting AC power

The Ethernet Routing Switch 5900 Series does not have a power switch. When you connect the AC power cord to a suitable AC power outlet, the switch powers up immediately.

Connect the AC power cord to the back of the switch, and then connect the cord to a power outlet. Ensure that you use the correct power cord for the switch and power supply.

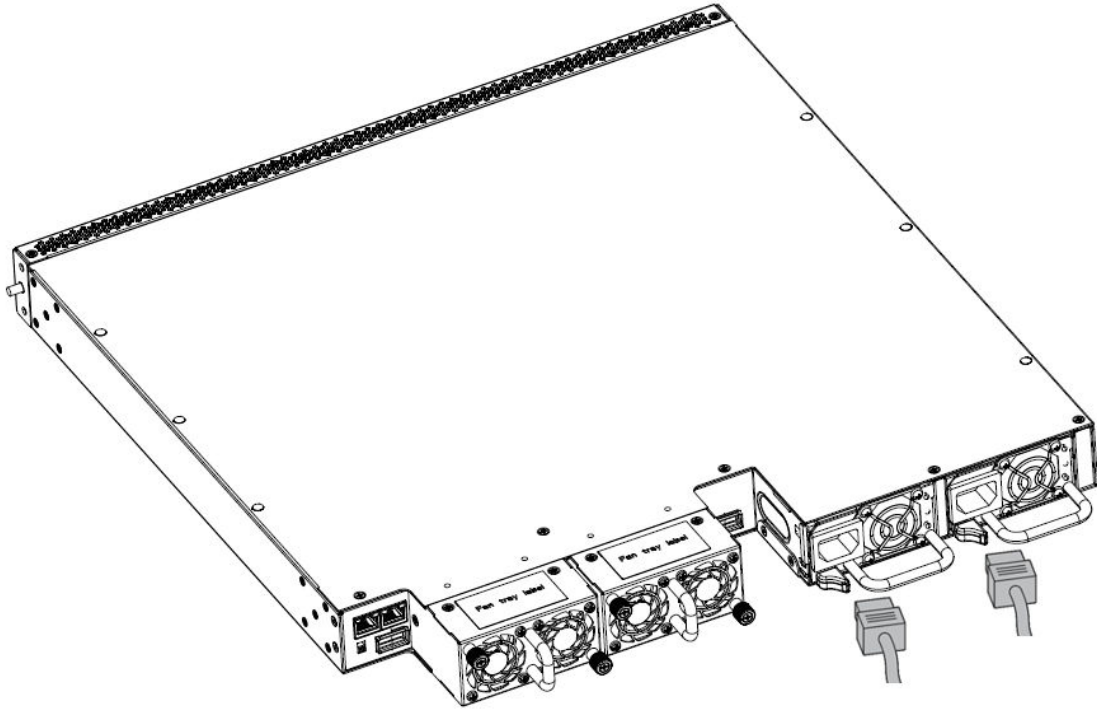


Figure 17: Connecting the AC power cord to the Ethernet Routing Switch 5900 Series