Installation Job Aid for Avaya Virtual Services Platform 7200 Series

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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.

Safety messages

Caution:

To protect the switch against ESD damage, take the following measures before you connect data cables to the device:

- Always use antistatic wrist straps. Make sure you adjust the strap to provide good skin contact.
- Ensure that you properly ground work surfaces and equipment racks for protection against electrostatic discharge. You must connect the common point to the building ground wire. In a properly wired building, the nearest reliable ground is typically at the electrical outlet.
- Avoid contact between equipment and clothing. The wrist or ankle strap protects only the equipment from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Avoid touching any connector pins.
- Do not remove the wrist or ankle strap until the installation is complete.

Caution:

When you mount this device in a rack, do not stack units directly on top of one another. You must secure each unit to the rack with appropriate mounting brackets. Mounting brackets cannot support multiple units.

Caution:

If you are not installing a redundant power supply in the slot, be sure to keep the metal cover plate in place over the slot. Removing the cover plate impedes airflow and proper cooling of the unit.

Warning:

Disconnecting the power cord is the only way to turn off power to this device. Allow at least 30 seconds for the this device to fully power down before restoring power. Otherwise, this device might produce a core file during the reset leading to an extra delay during boot time.

Danger:

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.

Warning:

The lithium battery is not field replaceable. It should be removed and replaced by authorized personnel only. Contact Avaya Technical Support for assistance if the battery requires replacement.

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.

Technical specifications

The following table provides the technical specifications for the individual switches in this series. Ensure that the area where you install the switch and where it operates meets these requirements.

Warning:

To avoid bodily injury from hazardous electrical shock and current, never remove the top of the device. No user-serviceable components are inside.

Table 1: Physical specifications

Height	1.75 in. (4.4 cm) - 1U
Width	17.5 in. (44 cm) - 19” rack mountable
Depth	17.2 in. (43.6 cm)
Weight of VSP 7254XSQ	16 lb (7.25 kg)
Weight of VSP 7254XTQ	18.85 lb (8.55 kg)

Table continues…

Weight of 460W AC power supply unit (EC7205x1B-E6) or EC7205x1F-E6)	1.95 lb (.88 kg)
Weight of 800W AC power supply unit (EC8005x01-E6)	1.9 lb (0.862 kg)
Weight of 800W DC power supply unit (EC8005001-E6)	1.76 lb (0.8 kg)
Weight of Fan Tray Kit (includes 3 fan trays) (EC7200BTF-E6) or EC7200FTB-E6)	1.05 lb (0.47 kg)

Table 2: Environmental specifications

Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Operating Humidity	0 to 95 percent noncondensing
Storage Humidity	0 to 95 percent noncondensing
Maximum Operating Altitude	3,048m (10 000 feet) above sea level
Storage Altitude	0 to 12,192m (0 to 40,000ft) above sea level
Acoustic Noise	Less than or equal to 35 db at 21°C and less than or equal to 43 db at 50°C. The temperature is allowed to have ±3.5°C deviation around the threshold of 35C, (measurement methods based on ISO 7779).
Miscellaneous Operating Considerations	• No heat sources such as hot air vents or direct sunlight near the switch. • No sources of severe electromagnetic interference near the switch. • No excessive dust in the environment. • An adequate power source is within 6 feet (1.83 meters) of the switch. One 15-amp circuit is required for each power supply. • At least 2 inches (5.08 centimeters) of clearance on the front and back of the switch for ventilation. • Cables should be dressed to prevent blocking air flow.

Installing a power supply

The VSP 7254XSQ and the VSP 7254XTQ ship with a power supply, but it is not installed in the chassis. Refer to the following procedures to install either an AC or a DC power supply.

There are two power supply slots (PSU1 on the left side and PSU2 on the right).

- If you only have one power supply, you can install it in either PSU1 or PSU2.
- If you install a second power supply, neither one acts as a primary power supply. The two power supplies load share equally.

Important:

Avaya does not support installing a combination of AC-input and DC-input power supplies in the same chassis.

To install an AC power supply, see Installing an AC power supply.

To install a DC power supply, see Installing a DC power supply.

Installing an AC power supply

The VSP 7200 Series supports two field-replaceable power supplies. One comes with the switch and you can install a second power supply to provide redundancy and load sharing.

Important:

Refer to the following part numbers to ensure that you install the correct power supplies in the VSP 7254XSQ (fiber switch):

- EC7205A1B-E6 — 460W AC POWER SUPPLY BACK2FRONT COOLING (NO PC)
- EC7205A1F-E6 — 460W AC POWER SUPPLY FRONT2BACK COOLING (NO PC)
- EC7205B1B-E6 — 460W AC POWER SUPPLY BACK2FRONT COOLING (EU PC)
- EC7205B1F-E6 — 460W AC POWER SUPPLY FRONT2BACK COOLING (EU PC)
- EC7205C1B-E6 — 460W AC POWER SUPPLY BACK2FRONT COOLING (UK PC)
- EC7205C1F-E6 — 460W AC POWER SUPPLY FRONT2BACK COOLING (UK PC)
- EC7205D1B-E6 — 460W AC POWER SUPPLY BACK2FRONT COOLING (JP PC)
- EC7205D1F-E6 — 460W AC POWER SUPPLY FRONT2BACK COOLING (JP PC)
- EC7205E1B-E6 — 460W AC POWER SUPPLY BACK2FRONT COOLING (NA PC)
- EC7205E1F-E6 — 460W AC POWER SUPPLY FRONT2BACK COOLING (NA PC)
- EC7205F1B-E6 — 460W AC POWER SUPPLY BACK2FRONT COOLING (ANZ PC)
- EC7205F1F-E6 — 460W AC POWER SUPPLY FRONT2BACK COOLING (ANZ PC)

Refer to the following part numbers to ensure that you install the correct power supplies in the VSP 7254XTQ (copper switch):

- EC7205A0B-E6 — 800W AC POWER SUPPLY BACK2FRONT COOLING (NO PC)
- EC7205A0F-E6 — 800W AC POWER SUPPLY FRONT2BACK COOLING (NO PC)
- EC7205B0B-E6 — 800W AC POWER SUPPLY BACK2FRONT COOLING (EU PC)
- EC7205B0F-E6 — 800W AC POWER SUPPLY FRONT2BACK COOLING (EU PC)
- EC7205C0B-E6 — 800W AC POWER SUPPLY BACK2FRONT COOLING (UK PC)
- EC7205C0F-E6 — 800W AC POWER SUPPLY FRONT2BACK COOLING (UK PC)
- EC7205D0B-E6 — 800W AC POWER SUPPLY BACK2FRONT COOLING (JP PC)

- EC7205D0F-E6 — 800W AC POWER SUPPLY FRONT2BACK COOLING (JP PC)
- EC7205E0B-E6 — 800W AC POWER SUPPLY BACK2FRONT COOLING (NA PC)
- EC7205E0F-E6 — 800W AC POWER SUPPLY FRONT2BACK COOLING (NA PC)
- EC7205F0B-E6 — 800W AC POWER SUPPLY BACK2FRONT COOLING (ANZ PC)
- EC7205F0F-E6 — 800W AC POWER SUPPLY FRONT2BACK COOLING (ANZ PC)

Before you begin

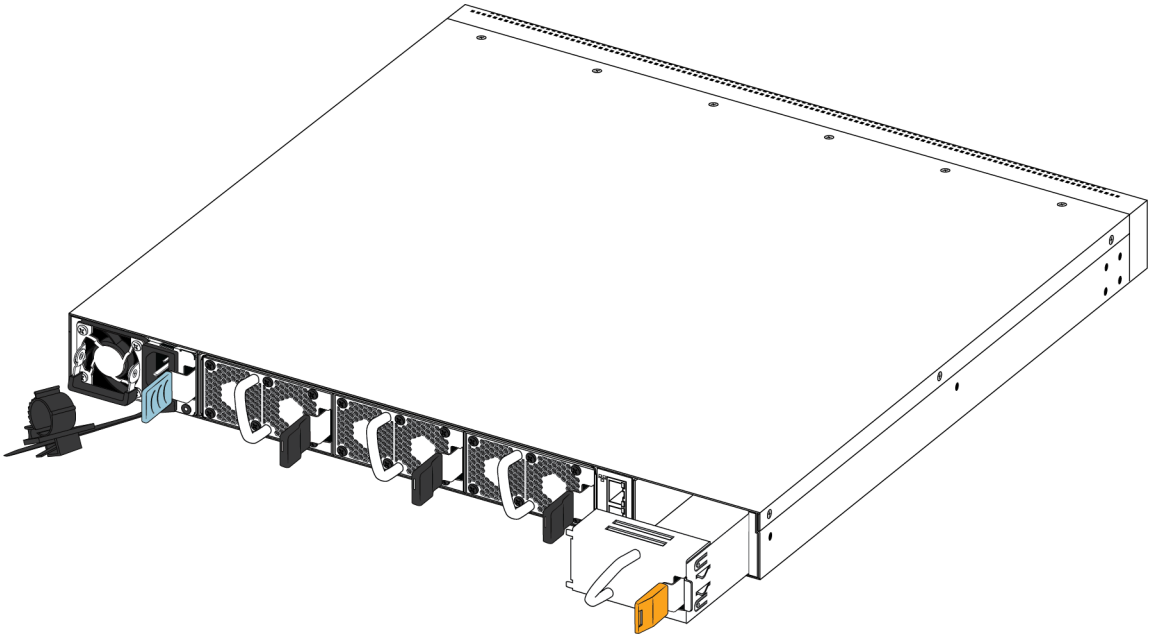
Remove the power cord before installing or removing the power supply.

Note:

The design of the latch mechanism that secures the power supply enforces this safety practice.

Procedure

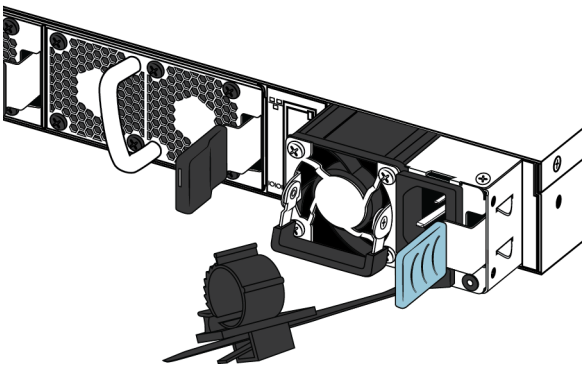
1. If there is a power supply cover, remove it and save for possible future use. To remove the cover, push the tab on the spring latch to the left and pull on the extraction handle.



Important:

If you only have one power supply installed, the other slot must be covered to ensure proper ventilation. If a power supply fails, replace it as soon as you can but leave it in place until you do. Leaving a power supply slot unpopulated impairs the ability of the fans to cool the chassis.

2. Slide the power supply into the slot.



3. Verify that the power supply is fully seated in the slot. The spring latch should engage and return to its original position.

   Note:

   The chassis design prevents an incorrect installation of a power supply. If you insert a power supply upside down, it will not fully insert.

4. Once you install a power supply, you can connect the AC power cord to the power supply on the back of the switch, and then connect the cord to an AC power outlet.

   Important:

   The VSP 7200 does not have an AC power switch. When you connect the power cord to a power supply and connect the cord to an AC power outlet, the switch powers up immediately.

   Warning:

   Disconnecting the AC power cord is the only way to turn off AC power to the VSP 7200. Allow at least 30 seconds for the VSP 7200 to fully power down before restoring power. Otherwise, the VSP 7200 might produce a core file during the reset leading to an extra delay during boot time. Always connect the AC power cord in a location that is quickly and safely accessible in case of an emergency.

5. Check the LED on the bottom right side of the power supply. Solid green indicates that power is operating normally. If it's off, check the connections.

   Important:

   You can hot swap power supplies while the switch is operational. One power supply is required for continued switch operation.

AC power supply specifications

The VSP 7254XSQ comes with an 460 W AC power supply and you can install a secondary power supply for redundancy.

The VSP 7254XTQ comes with an 800 W AC power supply and you can install a secondary power supply for redundancy.

Important:

You must have either a power supply or a power supply cover in each bay to ensure proper ventilation. Leaving a power supply bay unpopulated or uncovered impairs the ability of the fans to cool the chassis.

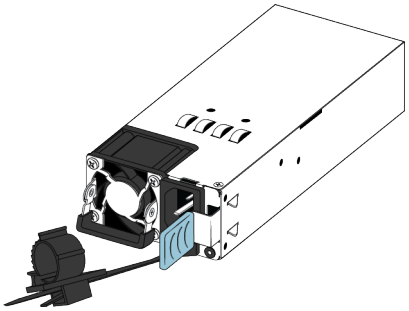


Figure 1: AC power supply

The AC power supplies use an IEC 60320 C16 AC power cord connector. The AC power cord is in close proximity to the hot air exhaust, and supports high operating temperatures.

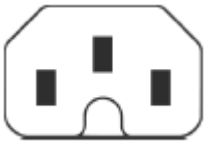


Figure 2: IEC 60320 C16 connector

The following table describes the regulatory AC power specifications for the VSP 7200 switches. Note that regulatory power specifications are based on the maximum rated capacity of the power supplies and are not based on typical power consumption, which is typically lower.

Table 3: 460 W AC power specifications

	7254XSQ
Input Current:	460 W/90 or 460/180 @88%, 5.8 A maximum at low input voltage 2.9 A maximum at high input voltage
Input Voltage (rms):	100–127 V or 200–240 V, 47–63 Hz (50–60 Hz nominal)
Power Consumption:	460 W maximum
Thermal Rating:	1570 BTU/Hr maximum

Table continues…

	7254XSQ
Inrush Current:	55 A maximum
Turn on Condition:	5–400 ms delay after application of AC power
Important: The output rise time, from 10 to 90 percent, is 70 ms maximum and monotonic under all defined input and output conditions.	
Efficiency:	85 percent minimum

Table 4: 800 W AC power specifications

	7254XTQ
Input Current:	9.9–4.79 A
Input Voltage (rms):	100–240 V, 47–63 Hz
Power Consumption:	800 W maximum
Thermal Rating:	2730 BTU/Hr maximum
Inrush Current:	40 A maximum
Turn on Condition:	1 second maximum after application of AC power
Important: The output rise time, from 10 to 90 percent, is 50 ms maximum and monotonic under all defined input and output conditions.	
Efficiency:	70 percent minimum

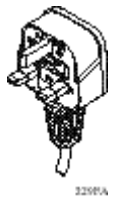
AC power cord specifications

To connect AC power to the switch, you need an appropriate AC power cord as described in the following table, also see the following table for plug specifications.

Table 5: International power cord specifications

Country and Plug Specification	Specifications	Typical Plug
Continental Europe: • 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)	• 220 or 230VAC • 50 Hz • Single phase	
United States of America, Canada, and Japan: • NEMA5-15P male plug • UL-recognized (UL stamped on cord jacket) • CSA-certified (CSA label secured to the cord)	• 100 or 120VAC • 50–60 Hz • Single phase	

Table continues…

Country and Plug Specification	Specifications	Typical Plug
United Kingdom: • BS1363 male plug with fuse • Harmonized cord	• 240VAC • 50 Hz • Single phase	
Australia: • AS3112-1981 male plug	• 240VAC • 50 Hz • Single phase	

Danger:

Using power cords with a proper grounding path

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.

Installing a DC power supply

Important:

Avaya does not support installing a combination of AC-input and DC-input power supplies in the same chassis.

The VSP 7200 Series supports two field-replaceable 800 W DC power supplies. One comes with the switch and you can install a second power supply to provide redundancy and load sharing.

There are two power supply slots (PSU1 on the left side and PSU2 on the right).

Important:

Refer to the following part numbers to ensure that you install the correct power supplies in your switch. Both the VSP 7254XSQ (fiber switch) and the VSP 7254XTQ (copper switch) use the same DC power supply models:

- EC720500B-E6 — 800 W DC POWER SUPPLY BACK2FRONT COOLING
- EC8005001-E6 — 800 W DC POWER SUPPLY FRONT2BACK COOLING

- If you only have one power supply, you can install it in either PSU1 or PSU2.
- If you install a second power supply, neither one acts as a primary power supply. The two power supplies load share equally.

Before you begin

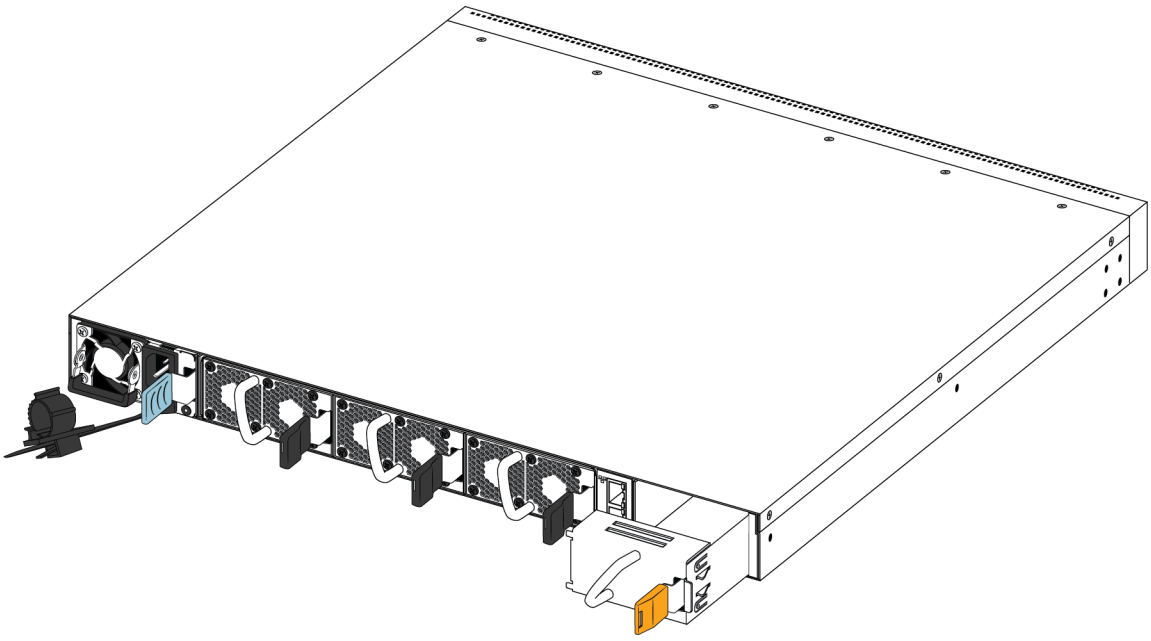
Remove the power cord before installing or removing the power supply.

Note:

The design of the latch mechanism that secures the power supply enforces this safety practice.

Procedure

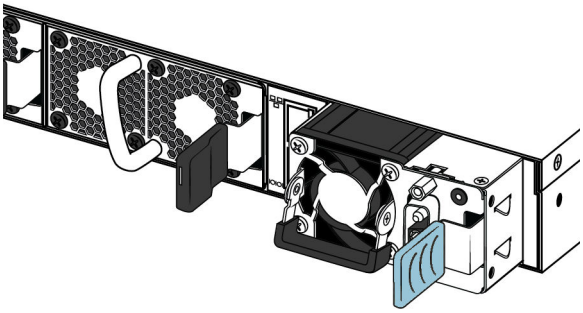
1. If there is a power supply cover, remove it and save for possible future use. To remove the cover, push the tab on the spring latch to the left and pull on the extraction handle.



Important:

If you only have one power supply installed, the other slot must be covered to ensure proper ventilation. If a power supply fails, replace it as soon as you can but leave it in place until you do. Leaving a power supply slot unpopulated impairs the ability of the fans to cool the chassis.

2. Slide the power supply into the slot.



3. Verify that the power supply is fully seated in the slot. The spring latch should engage and return to its original position.

Note:

The chassis design prevents an incorrect installation of a power supply. If you insert a power supply upside down, it will not fully insert.

Important:

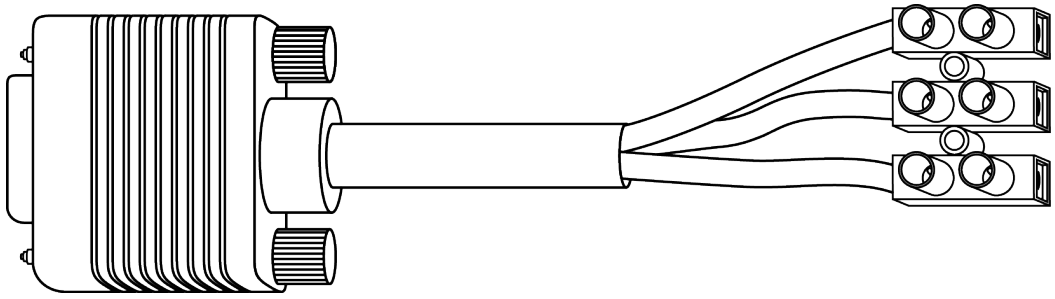
The VSP 7200 does not have a power switch. When you connect the DC power source to the DC power supply wiring assembly and then plug the DC power supply wiring assembly into the DC power supply, the switch powers up immediately.

Warning:

Disconnecting the DC power supply wiring assembly from the power supply is the only way to turn off DC power to the VSP 7200. Allow at least 30 seconds for the VSP 7200 to fully power down before restoring power. Otherwise, the VSP 7200 might produce a core file during the reset leading to an extra delay during boot time.

4. Once you install a power supply, use the following steps to connect the DC power supply wiring assembly:

   a. Avaya supplies a DC power supply wiring assembly to connect the DC power supply to the DC input power source.

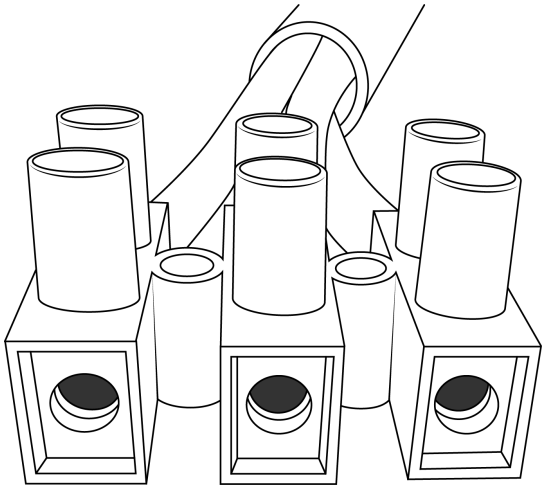


   b. Refer to the tag attached to the DC power supply wiring assembly to insert the cables into their appropriate connectors.

Voltage:

Ensure that the positive and negative power inputs are connected to the correct connectors and that the switch is properly grounded before connecting it to a power source.

c. Use a screwdriver to terminate the cables to the DC power supply wiring assembly.



d. Connect the DC power supply wiring assembly to the DC power supply and screw it in to secure the connection.

5. Check the LED on the top right side of the power supply. If it is off, the power supply is not operating. If it is green, the power supply is operating normally. The following table describes all the LED states.

Table 6: DC power supply LED states

Color and Status	Description
Off	There is no DC power to either power supply.
Green (steady)	There is output and the power supply is operating normally.
Green (blinking)	The power supply is present, but its output is standby voltage (12VSB).
Amber (steady)	SHUTDOWN: The power supply is not supplying power to the switch because the power cord is unplugged or the power supply shutdown for faults such as a fan failure or exceeding limits for Over Current Protection (OCP) or Over Voltage Protection (OVP).
Amber (blinking)	WARNING: The power supply continues to operate, but there are one or more warning events such as high temp, high power, high current, or a slow fan.

Important:

You can hot swap power supplies while the switch is operational. One power supply is required for continued switch operation.

DC power supply specifications

The VSP 7200 comes with one 800 W DC power supply and you can install a secondary power supply for redundancy.

Important:

You must have either a power supply or a power supply cover in each bay to ensure proper ventilation. Leaving a power supply bay unpopulated or uncovered impairs the ability of the fans to cool the chassis.

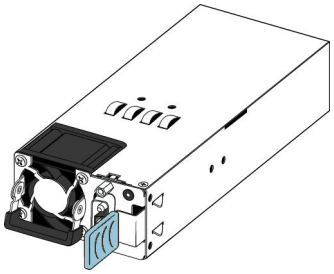


Figure 3: DC power supply

The 800 W DC power supply uses a DC power supply wiring assembly to connect the power supply to the DC power source.

The following table describes the regulatory DC power specifications for the VSP 7200 switch. Note that regulatory power specifications are based on the maximum rated capacity of the power supplies and are not based on typical power consumption, which is typically lower.

Table 7: DC power specifications

	VSP 7254XSQ or 7254XTQ
Input Current:	24–16 A
Input Voltage (rms):	40.5 to 60 VDC
Power Consumption:	800 W maximum
Temperature:	Operating range: 0 to 50 ºC Non-operating range: -40 to 70 ºC
Inrush Current:	50 A maximum
Turn on Condition:	500 ms maximum after application of DC power
Important: 12 V output rise time, from 10 to 90 percent, must be the maximum of 70 ms and monotonic under all defined input and output conditions.	
Efficiency:	• 88% minimum at 100% load level • 92% minimum at 50% load level • 88% minimum at 20% load level • 80% minimum at 10% load level

Installing a fan tray

The VSP 7200 comes with three 12–V fan trays for either front-to-back or back-to-front air flow switch cooling.

Important:

Make sure the air flow direction of your power supplies matches the same direction for your fan trays.

Refer to the following part numbers to ensure that you install the correct fan trays in your switch. Both the VSP 7254XSQ (fiber switch) and the VSP 7254XTQ (copper switch) use the same fan tray models:

- EC7200BTF-E6 — 12 V BACK2FRONT SPARE FAN TRAYS (INC 3 FAN TRAY KITS)
- EC7200FTB-E6 — 12 V FRONT2BACK SPARE FAN TRAYS (INC 3 FAN TRAY KITS)

There are sensors inside the chassis that monitor the temperature. These sensors send information to a controller that automatically regulates the fan speed to maintain the proper temperature. If any sensor exceeds its threshold, an alarm is sent. When the temperature cools by 2° below the threshold, the alarm clears.

Use this procedure if a fan fails and you have to replace it.

Important:

All three fans must be installed at all times to ensure proper ventilation. If a fan fails, replace it as soon as you can but leave it in place until you do. Leaving a fan bay unpopulated impairs the ability of the remaining fans to cool the chassis.

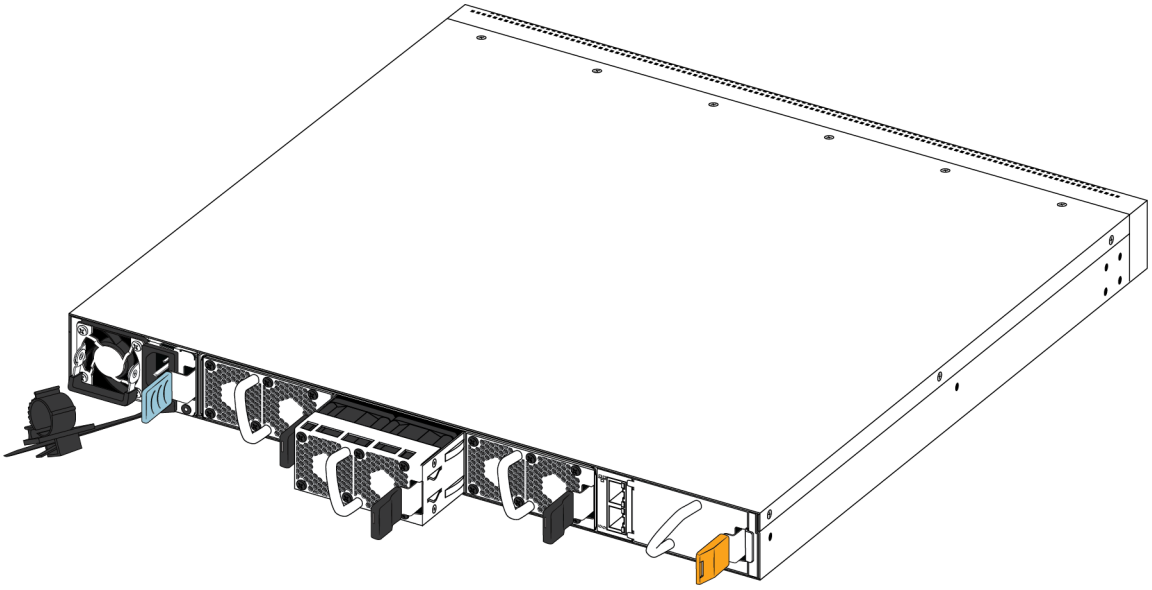
Procedure

1. Check the Fan LED on the front of the chassis. Solid green indicates that all fan trays are operating normally. Blinking amber indicates that a fan tray failed.
2. Enter the following command to determine which fan tray failed.

   ```
   show sys-info fan
   ```

   This command shows the status of each fan tray: `up`, `down`, or `Not Present` when a fan is removed.

3. Remove the fan tray that failed by pushing the tab on the spring latch to the left and pulling on the fan's extraction handle.



4. Insert the new fan tray into the chassis.

   Important:

   You can hot swap fan trays while the switch is operational.

5. Verify that the fan tray is fully seated in the chassis. The spring latch should engage and return to its original position.
6. Enter the following command to check the temperature sensors inside the switch.

   ```
   show sys-info temperature
   ```

Example

Check the status of the fan trays.

```
VSP-7254XSQ:1>show sys-info fan
Fan Info :
Fan Id     Fan Status      Fan Type
---------------------------------------
1          up              regularSpeed
2          up              regularSpeed
3          up              regularSpeed
```

Check the internal temperature of the switch.

```
VSP-7254XSQ:1>show sys-info temperature
Temperature Info :
    CPU Temperature    MAC Temperature    PHY1 Temperature    PHY2 Temperature
         26                 29                 24                  27
```

Installing the VSP 7200 in an equipment rack

Note:

The instructions in this section apply to all switches in the Avaya Virtual Services Platform 7200 Series and Avaya Virtual Services Platform 8000 Series. The illustrations show the VSP 8200 as an example, but the instructions apply to any switch in these series.

There are two ways to install the VSP 7200 in an equipment rack. Refer to one of the following sections:

- Slide Rack Mount Kit-This is a separately ordered option that you can use to install your switch in equipment racks that range from 300mm to 900mm deep. For installation instructions, see Using the optional slide rack mount kit.
- Brackets-The switch comes with brackets that you can install on the chassis. For installation instructions, see Using the supplied brackets.

Before you begin

- Ensure that there is enough rack space to accommodate a 2RU switch (8.8 cm).
- The rack is bolted to the floor and braced if necessary.
- The 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.

About this task

Caution:

When you mount the device in a rack, do not stack units directly on top of one another. You must secure each unit to the rack with the appropriate mounting brackets. Mounting brackets cannot support multiple units.

Using the optional slide rack mount kit

The Universal Slide Rack Mount Kit is adjustable so that you can install your switch in equipment racks of different sizes. Use the following procedures to install your switch in equipment racks with a depth from 300mm to 900mm.

This kit is a separately ordered item (Part # EC8011002).

For instructions see:

- Installing slides in a 300mm-600mm equipment rack
- Installing slides in a 600mm-900mm equipment rack
- Important notice about rack safety
- Removing the switch from an equipment rack

Warning:

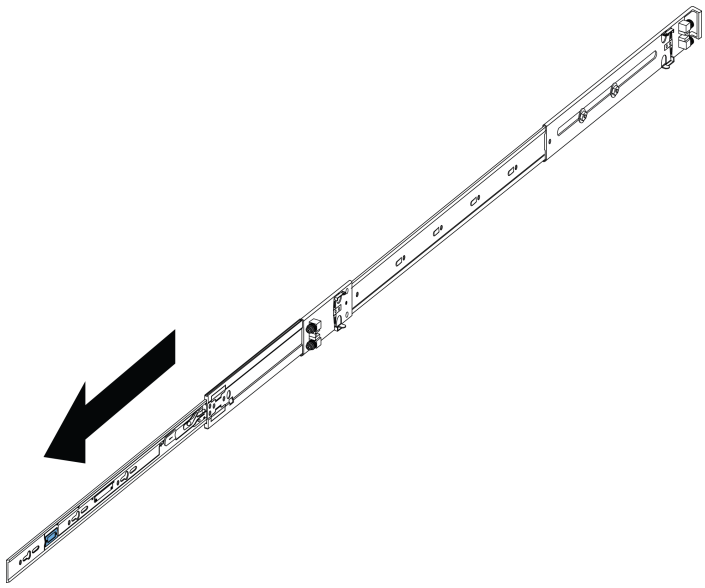
If you pull the switch all the way out on the slide rails, there is a danger of the rack tipping over. For more information and guidelines, see Important notice about rack safety.

Installing slides in a 300mm-600mm equipment rack

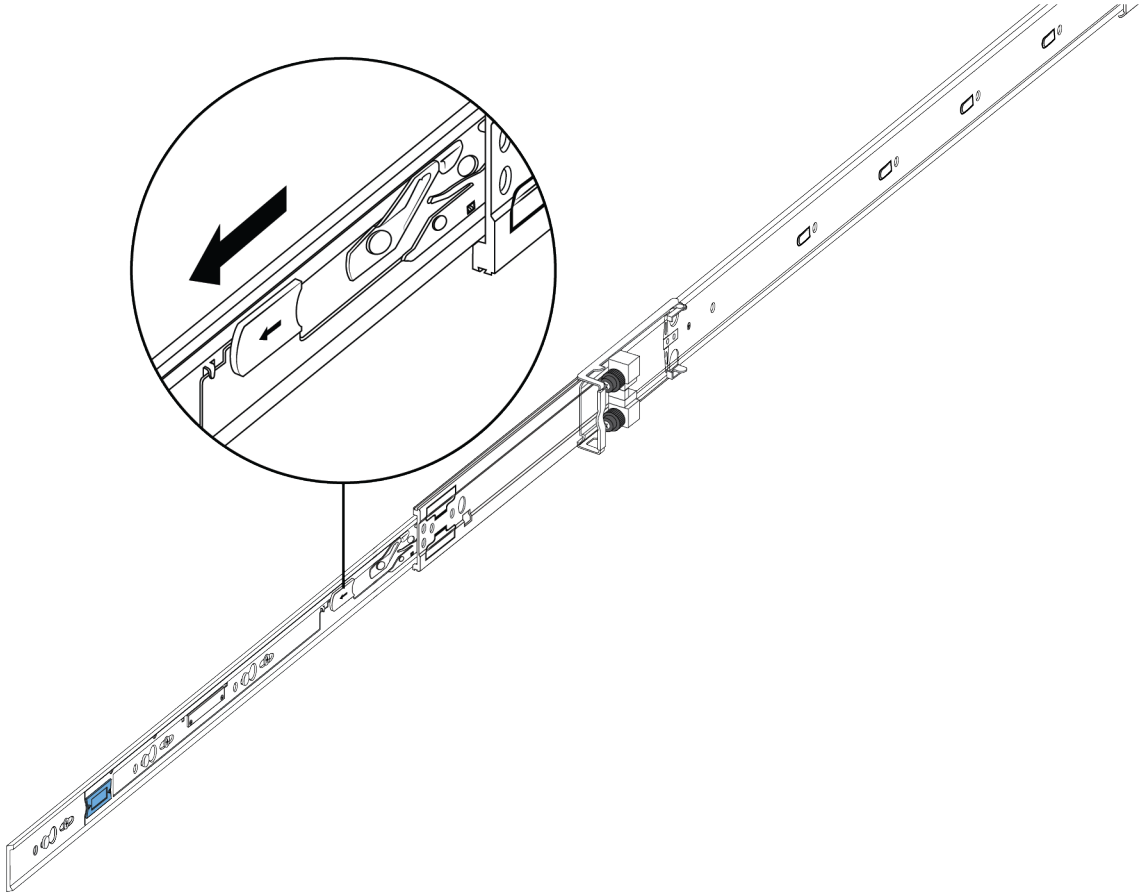
Use the following procedure to install your switch in an equipment rack with a depth between 300mm and 600mm.

Procedure

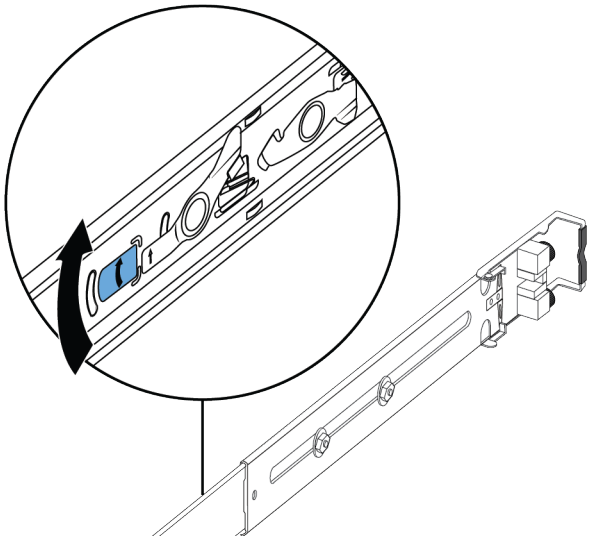
1. Disconnect the power cord from the switch.
2. Use the following steps to detach the chassis rail from the slide's rack rail:
   a. Pull the inner chassis rail and slide it out as far as you can.



   b. Slide the white release lock in the direction of the arrow stamped on the lock.

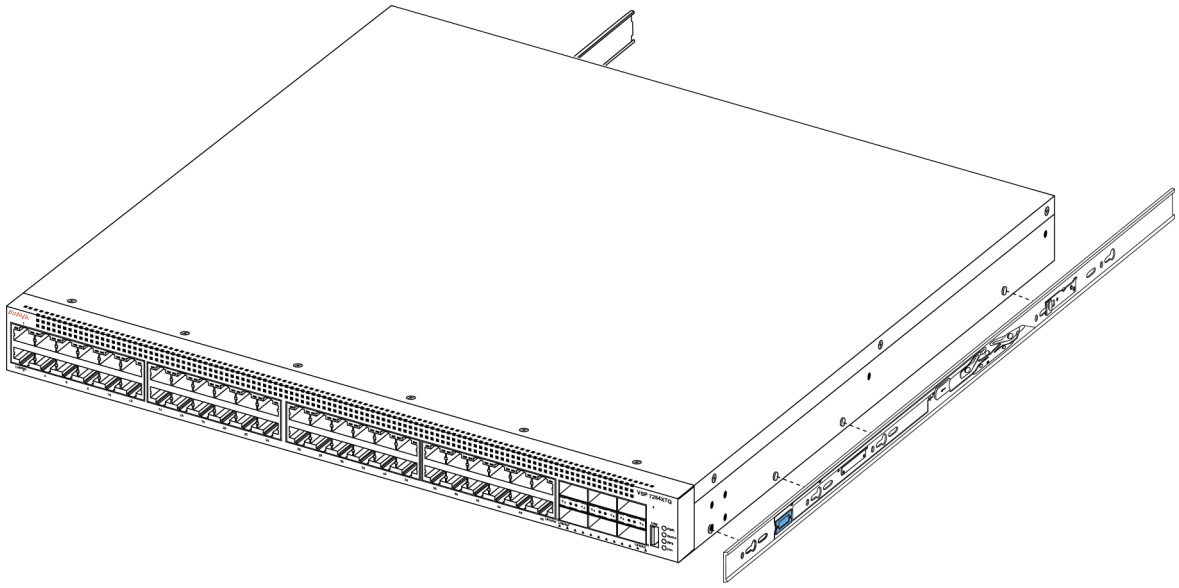


3. Lift the locking mechanism on the rack rail to slide the outer section back into the main section.

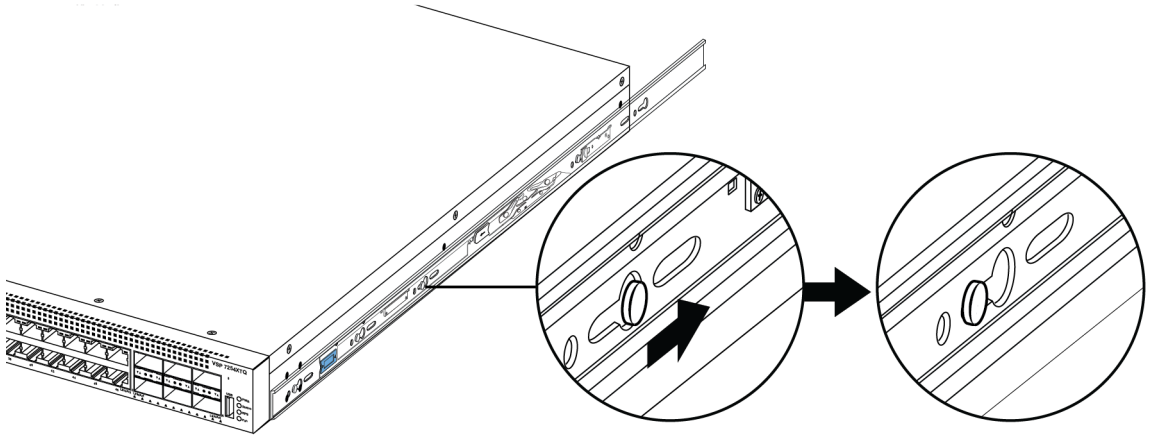


4. Use the following steps to attach the chassis rail to the chassis:

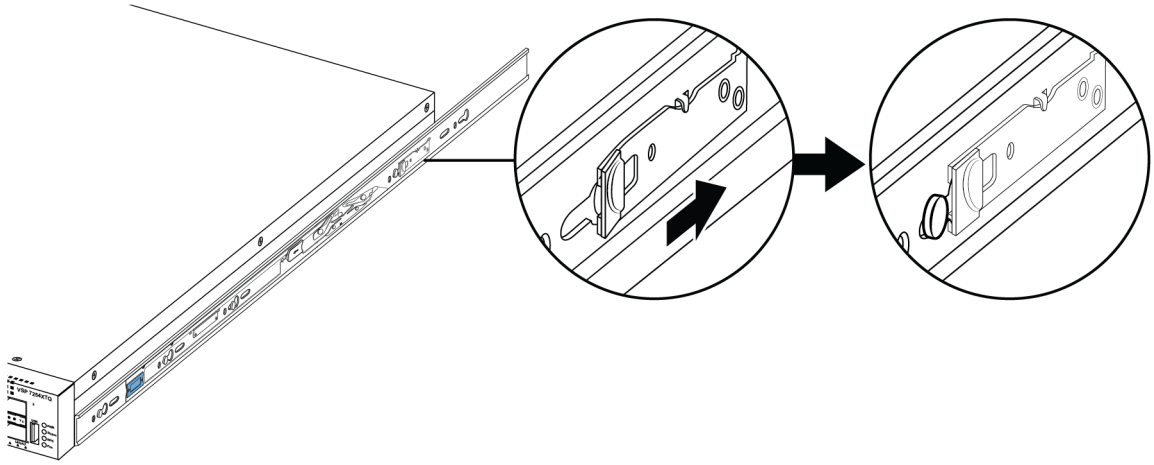
   a. Orient the chassis rail with the blue release lock towards the front and position the rail over the standoffs on the chassis.



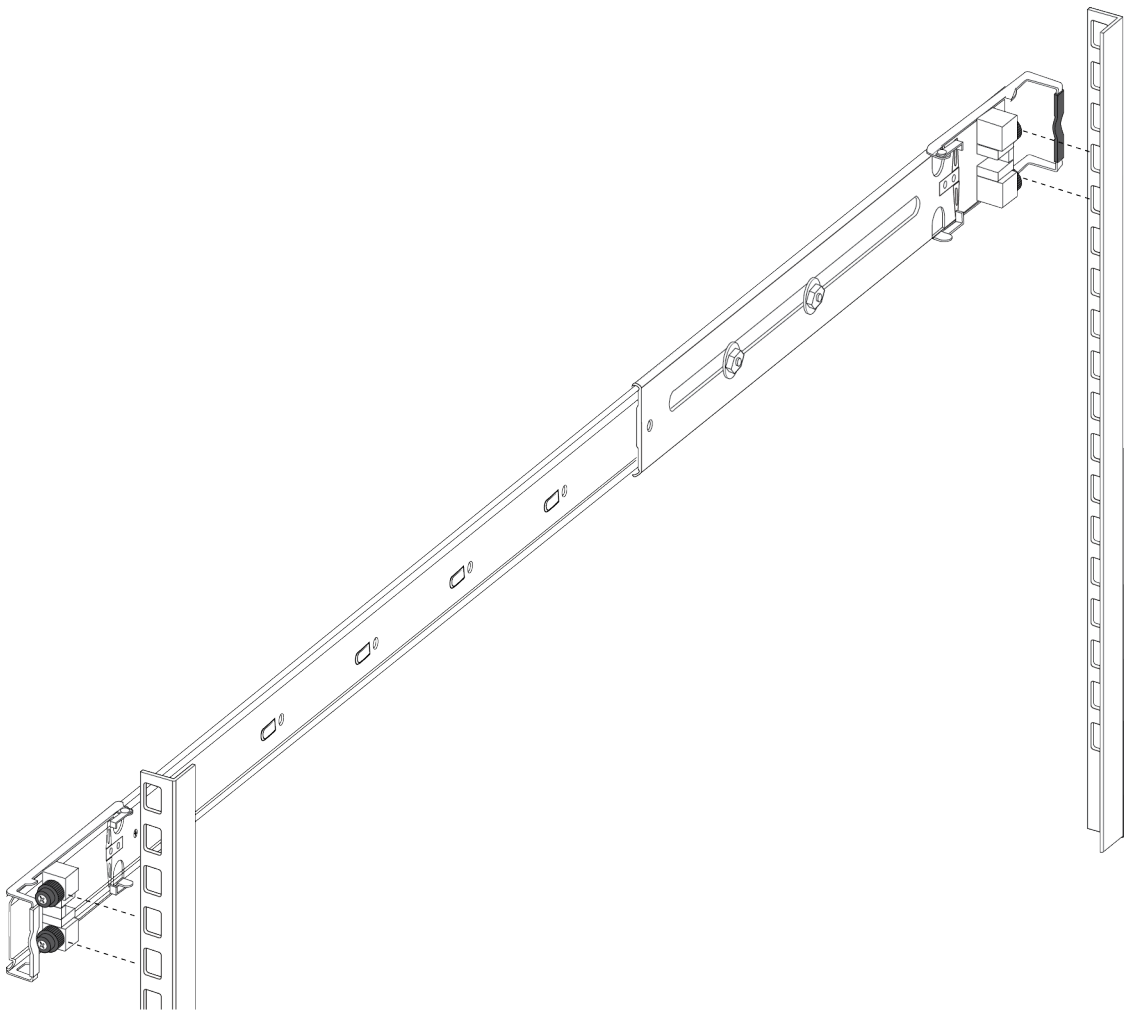
   b. Slide the chassis rail to the rear until the rail locks into the standoffs.



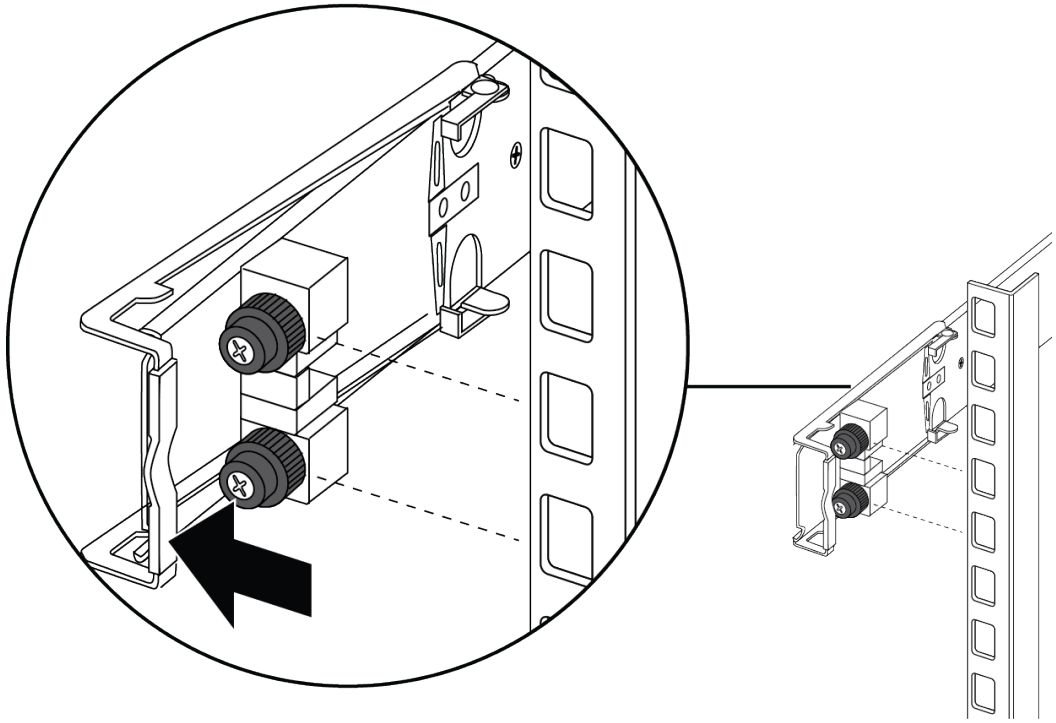
   c. Make sure the safety tab locks into place.



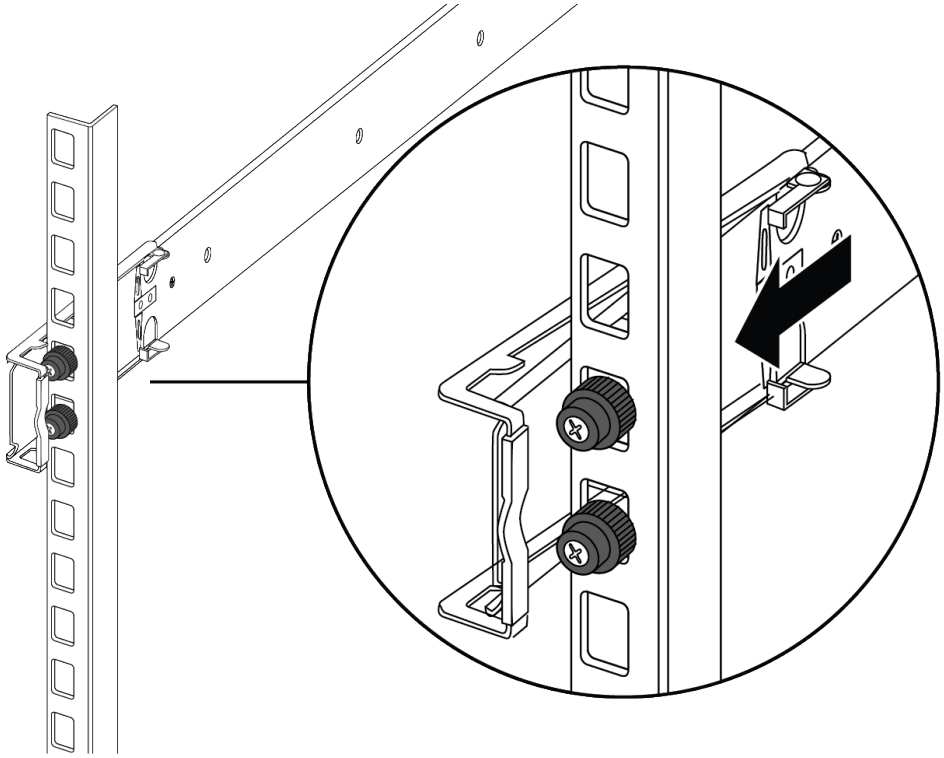
5. Use the following steps to secure the rack rails to the frame:
    a. Orient the rack rail so that the end with the black latch is facing front.
    b. Adjust the length of the rack rail so it fits the rack depth by loosening the two screws on the rack rail, adjusting the length, and then tightening the screws.



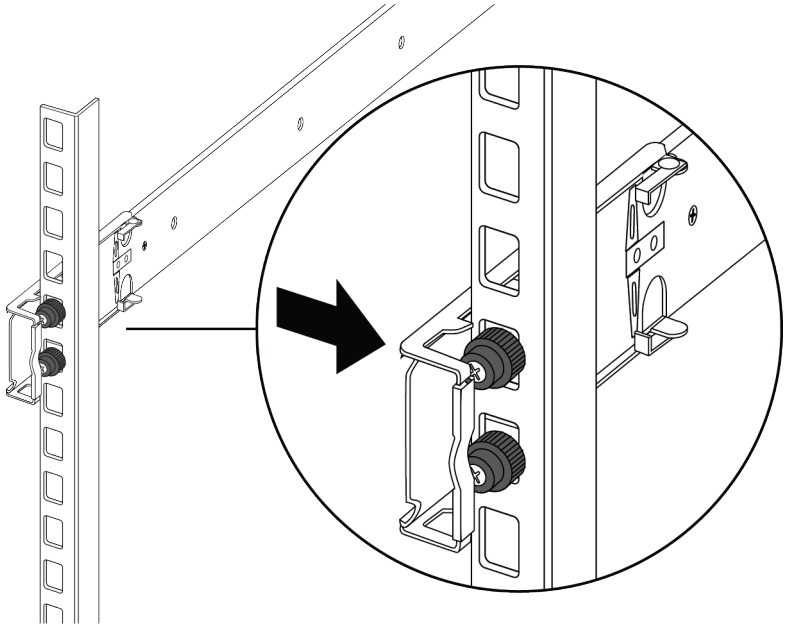
c. Push the end of the front bracket assembly so it opens up.



d. Insert the bracket pins into the desired holes in the frame.



e. Close the bracket assembly so that it wraps around the frame and locks into place.

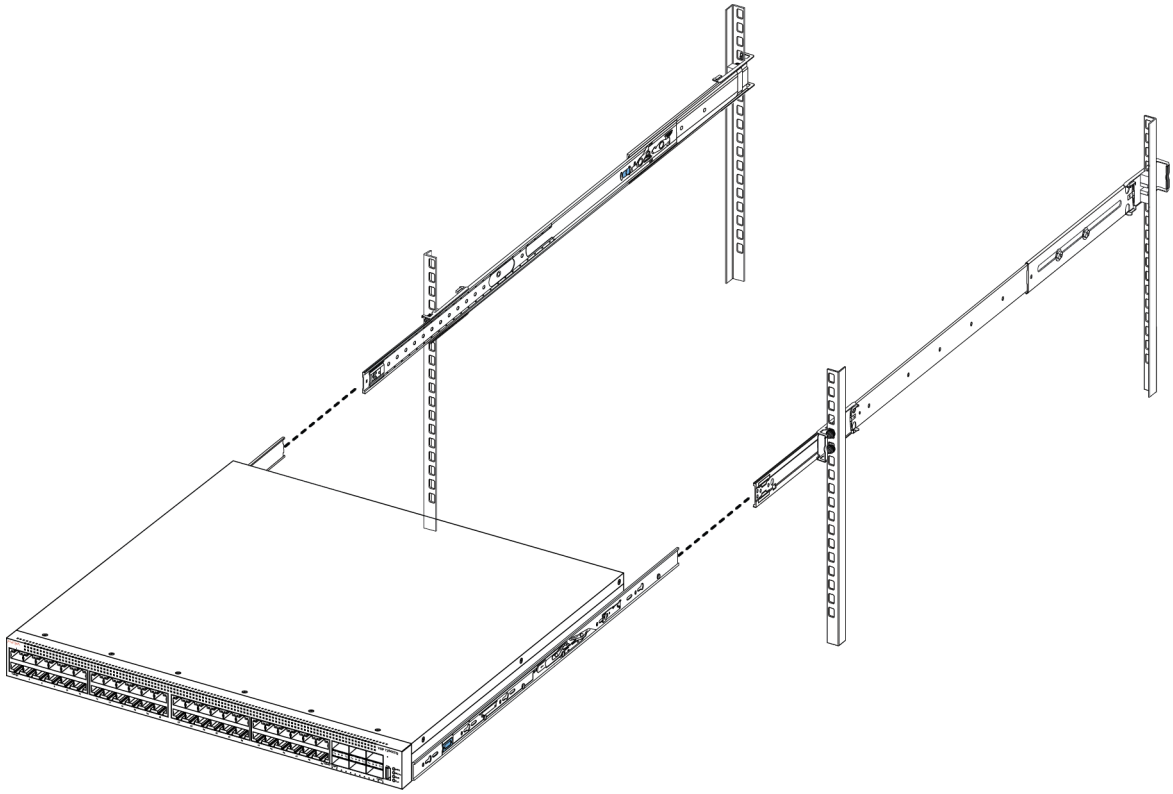


f. Repeat the above steps on the rear bracket.

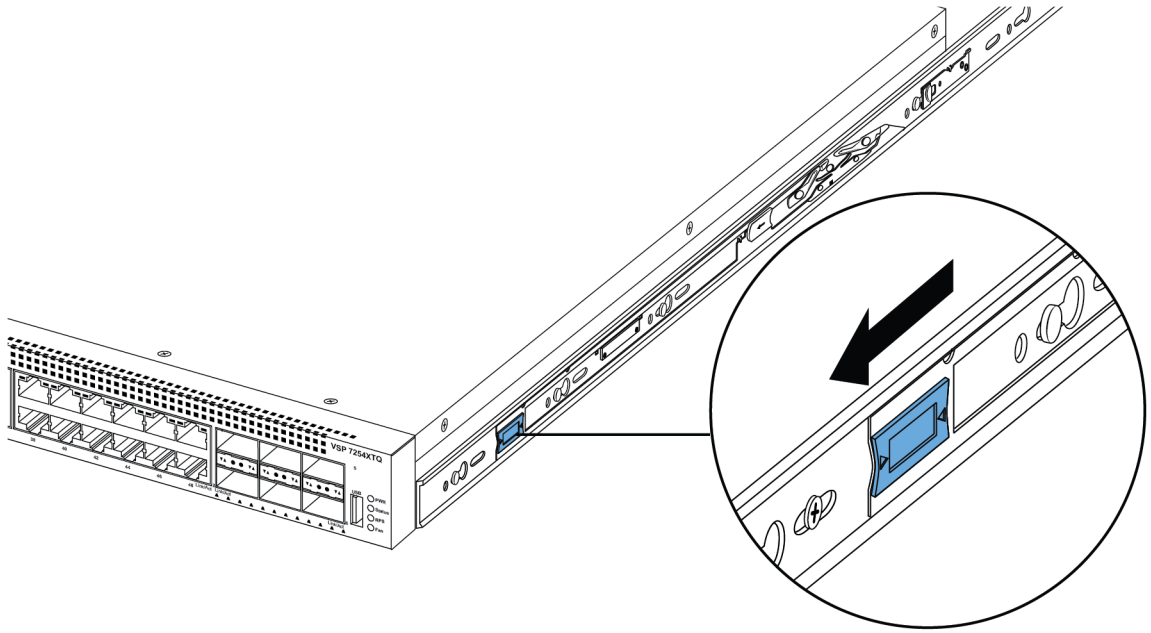
g. Repeat these steps for the rack rail on the other side of the frame.

6. Use the following steps to install the switch in the equipment rack to complete the installation:

   a. Insert the chassis rails on the switch into the rack rails on the frame.



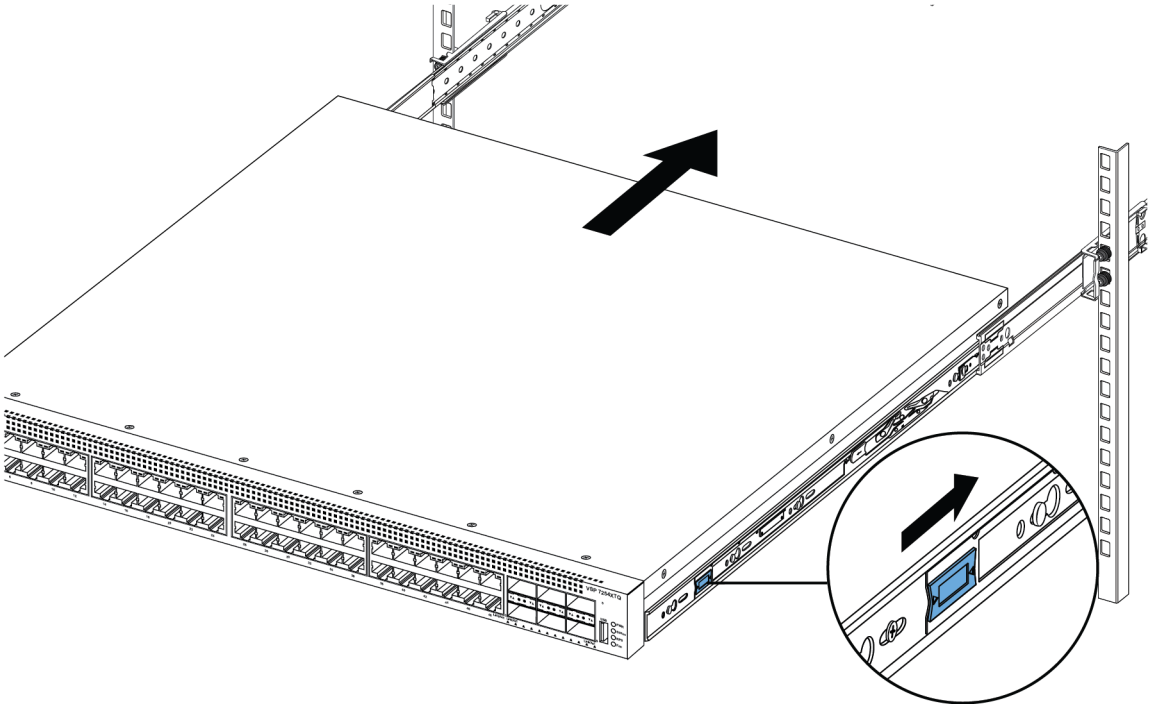
b. Pull the blue locks on the chassis rails towards the front and slide the switch into the frame.



Note:

After you install the switch in a rack, slide it out until the lock (shown above) engages.

To slide the switch back into the rack, push the blue locks on the chassis rails towards the back and slide the switch into the frame.



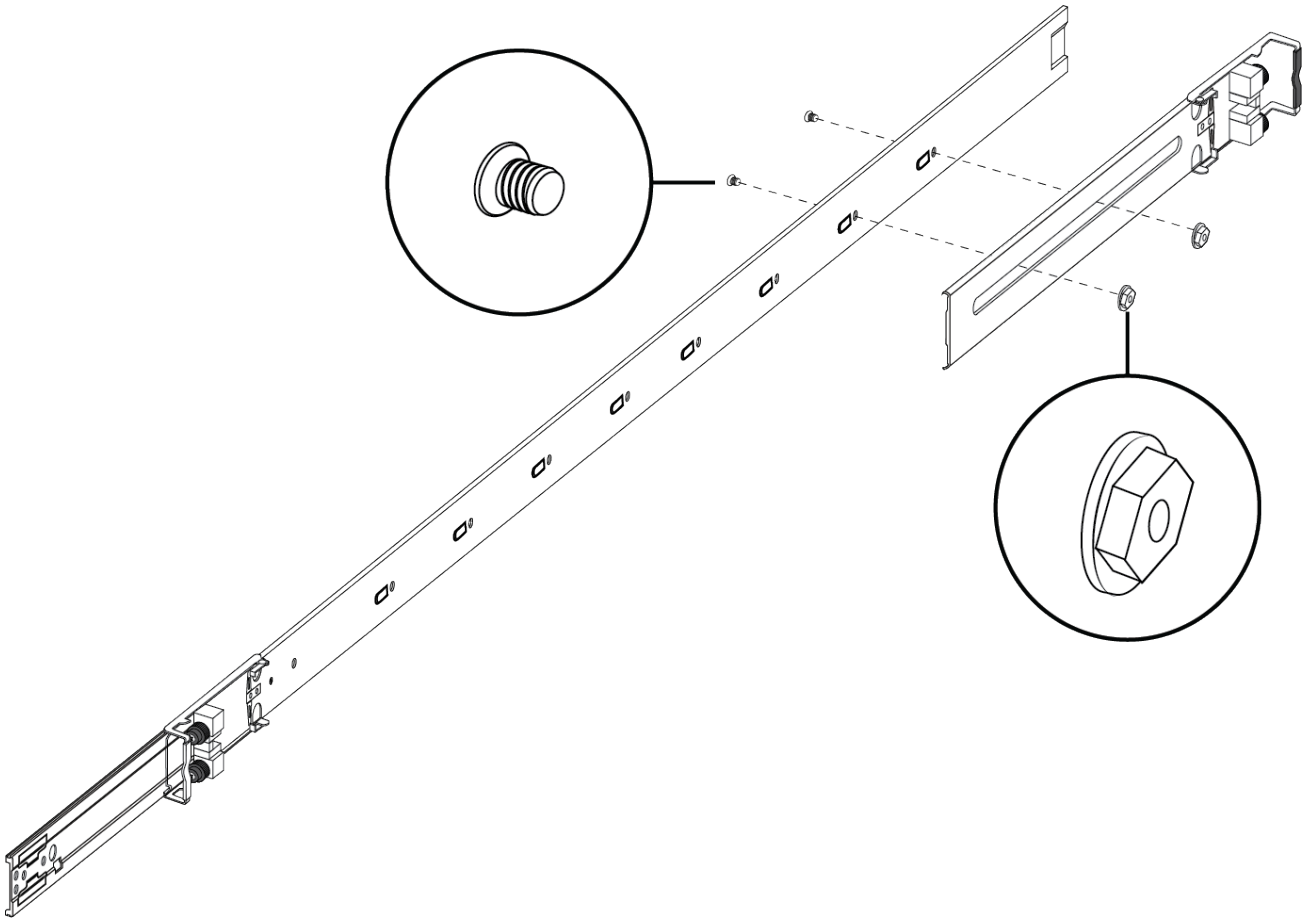
7. Connect power and network connections to the switch.

Installing slides in a 600mm-900mm equipment rack

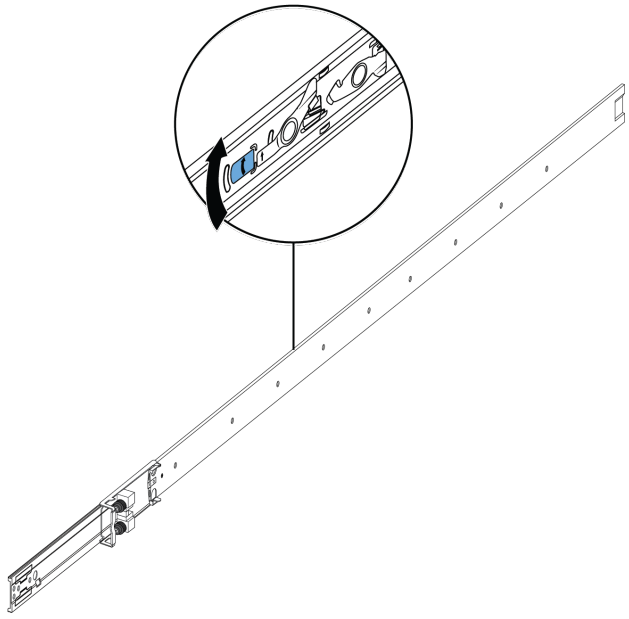
Use the following procedure to install your switch in an equipment rack with a depth between 600mm and 900mm.

Procedure

1. Disconnect the power cord from the switch.
2. Detach the chassis rail from the slide's rack rail. (See Step 2 of Installing slides in a 300mm-600mm equipment rack.)
3. Lift the locking mechanism on the rack rail to slide the outer section back into the main section. (See Step 3 of the 300mm-600mm instructions.)
4. Attach the chassis rail to the chassis. (See Step 4 of the 300mm-600mm instructions.)
5. Remove the two screws and nuts securing the short rear bracket to the rack rail. This bracket is for 300mm-600mm equipment racks only and is not used in this installation. Save the bracket for possible future use.



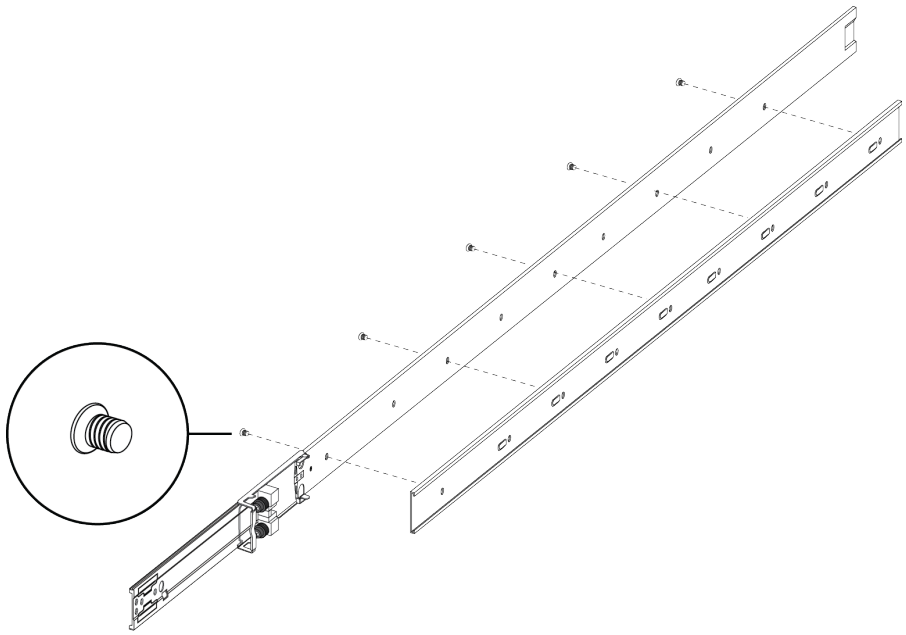
6. Use the bag with 10 countersink screws and following steps to attach the supporting plates to the rack rails:
    a. Push the release lock up and slide the middle rail out as far as possible.



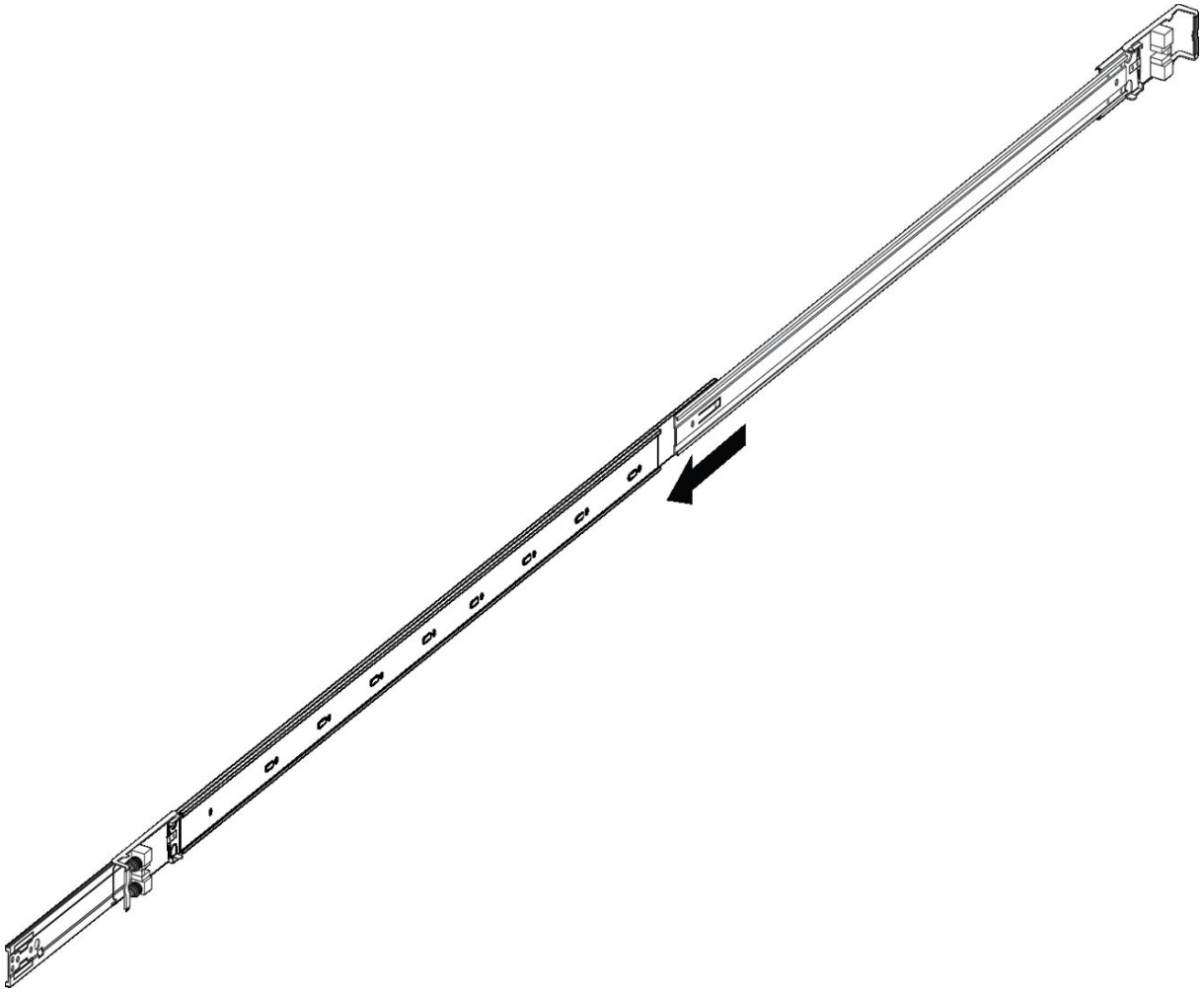
b. Orient the supporting plate over the holes in the rack rail.

c. Install the first two screws on one end.

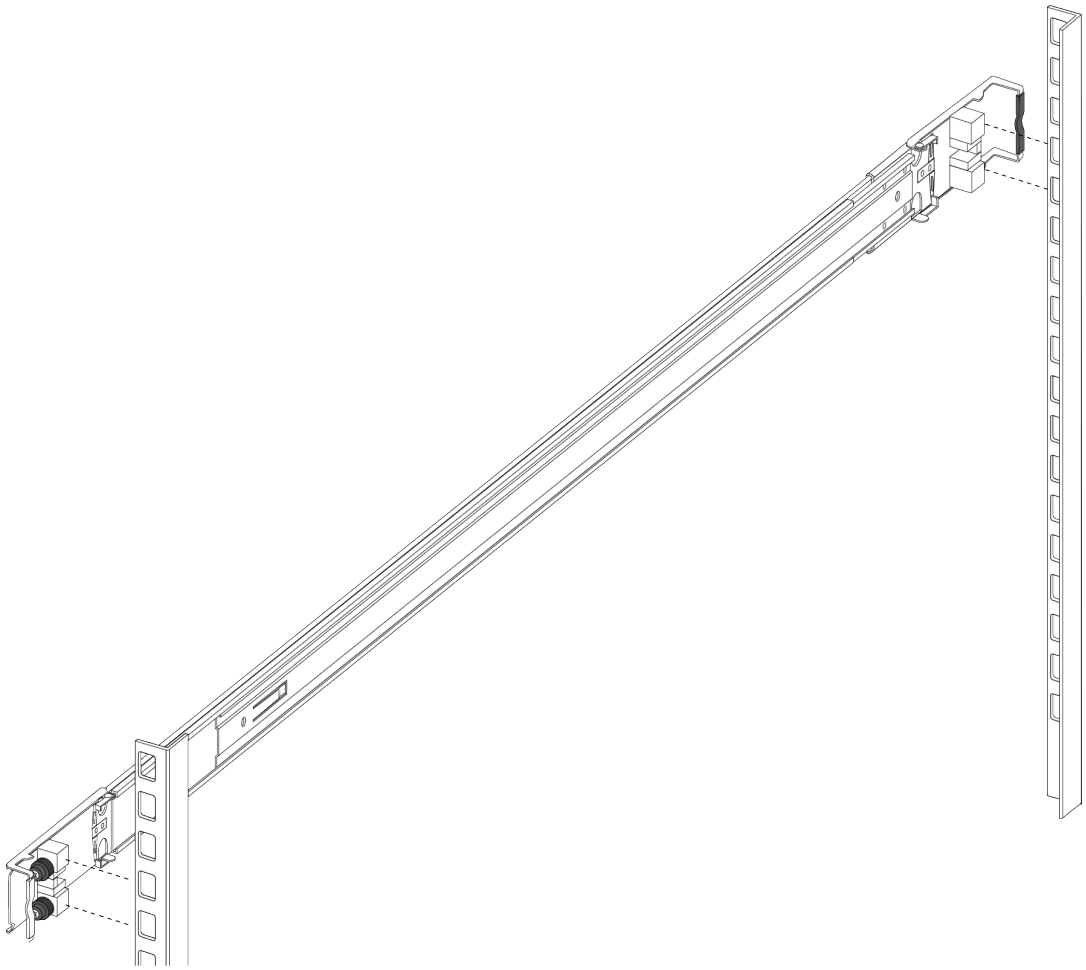
d. Lift the locking mechanism and slowly slide the rail back into the main assembly. This exposes a “window” over the screw holes so you can install the remaining three screws one at a time.



7. Insert the long rack rail bracket into the supporting plate.



8. Use the following steps to secure the rack rails to the frame:
    a. Orient the rack rail so that the end with the black latch is facing front.
    b. Push the end of the front bracket assembly so it opens up.
    c. Insert the bracket pins into the desired holes in the frame.
    d. Close the bracket assembly so that it wraps around the frame and locks into place.



e. Repeat the above steps on the rear bracket.

f. Repeat these steps for the rack rail on the other side of the frame.

9. Install the switch in the equipment rack to complete the installation. (See Step 6 of the 300mm-600mm instructions.)

   a. Insert the chassis rails on the switch into the rack rails on the frame.

   b. Pull the blue locks on the chassis rails towards the front and slide the switch into the frame.

Note:

After you install the switch in a rack, slide it out until the lock (shown above) engages.

To slide the switch back into the rack, push the blue locks on the chassis rails towards the back and slide the switch into the frame.

10. Connect power and network connections to the switch.

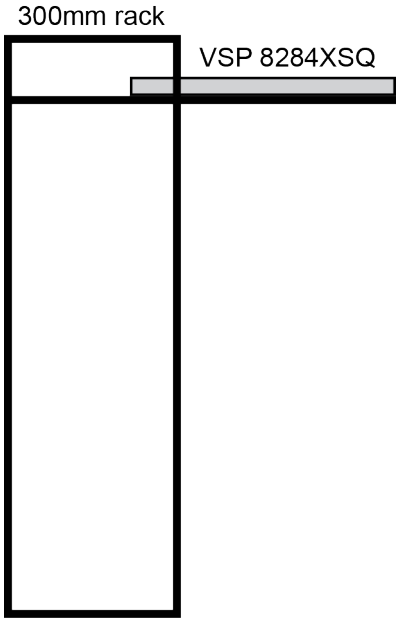
Important notice about rack safety

One prerequisite to installing the switch in an equipment rack is to bolt the equipment rack to the floor. This section emphasizes the safety issue if you do not bolt the rack to the floor.

Warning:

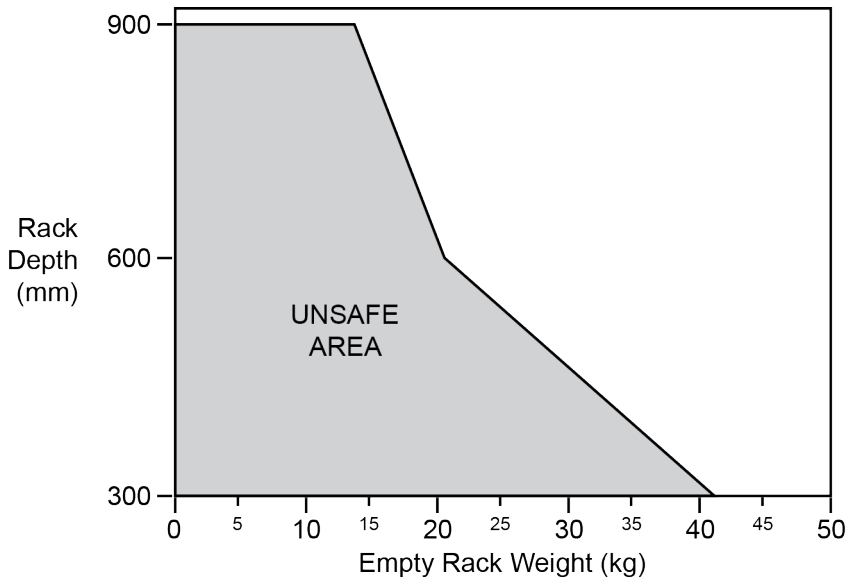
If you pull the chassis all the way out on the slide rails, there is a danger of the rack tipping over.

This can happen if your equipment rack is not bolted to the floor and there are no other devices installed as shown in the following figure. To avoid this danger, refer to the guidelines in the graph below the figure.



If your rack meets the following guidelines and you pull the chassis all the way out, the rack is in danger of tipping over:

- 900mm equipment rack that weighs less than 14kg
- 600mm equipment rack that weighs less than 21kg
- 300mm equipment rack that weighs less than 42kg



Removing the switch from an equipment rack

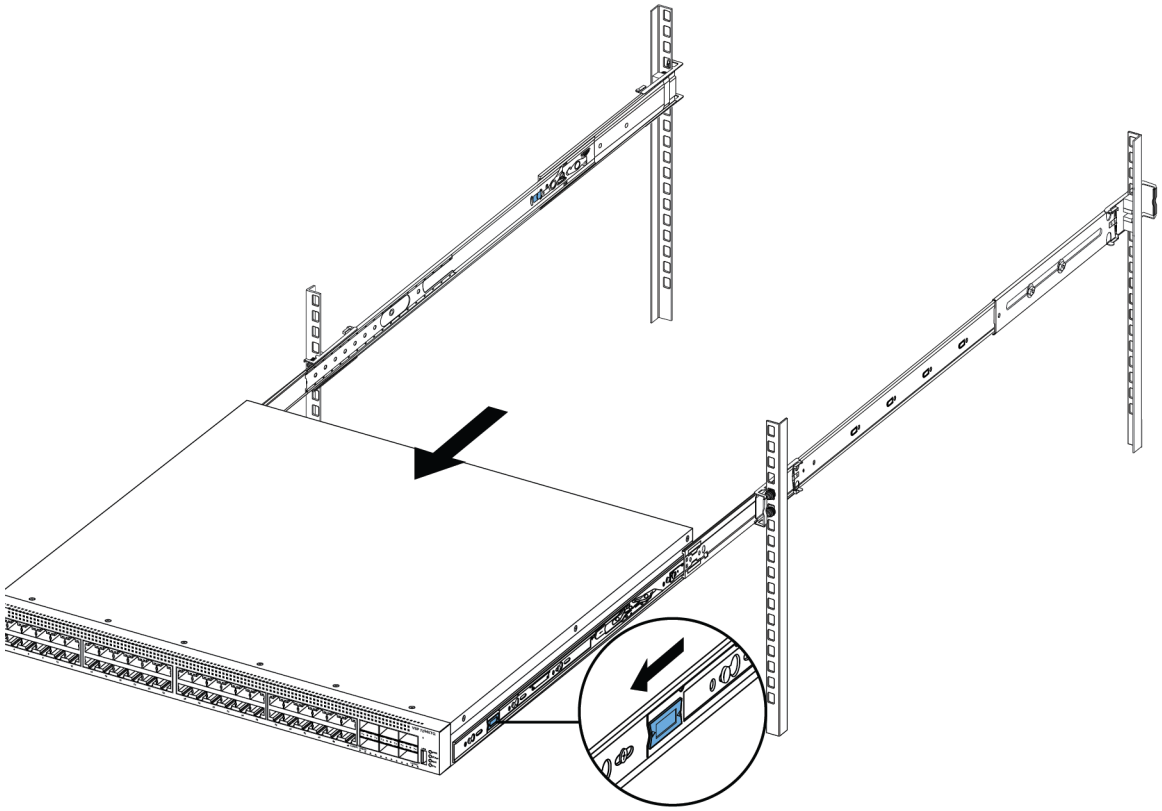
Follow these steps if you have to remove the switch from an equipment rack.

Important:

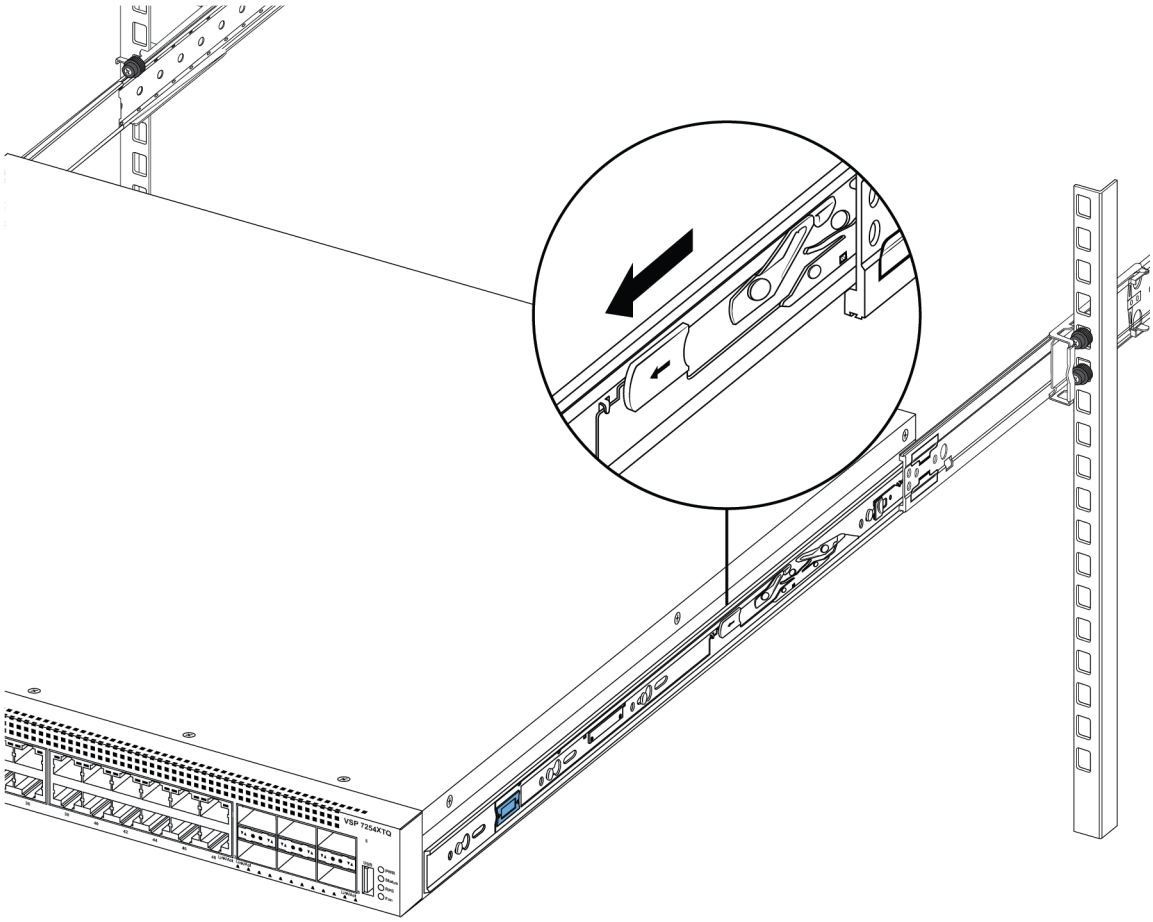
This procedure requires two people.

Procedure

1. Disconnect the power cord from the switch.
2. Slide the switch out until the lock engages.



3. While the person standing in back of the chassis slides both of the white release locks (one on each side of the chassis) towards the front, the person standing in front of the chassis pulls the chassis out of the rack.



Using the supplied brackets

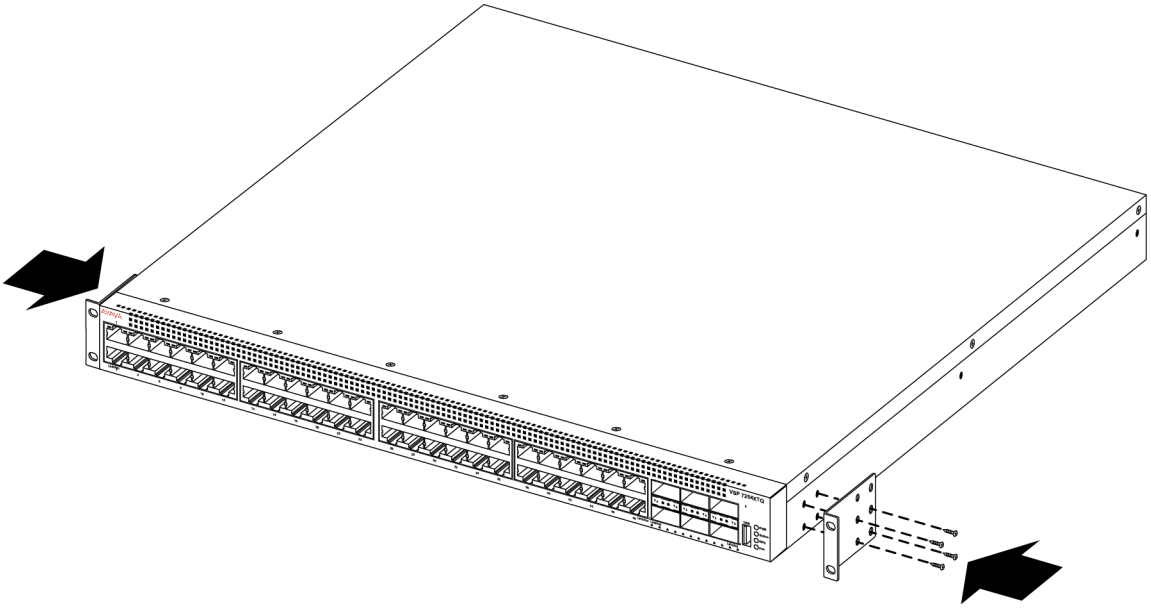
This procedure describes how to install the switch in an equipment rack using the supplied brackets. The brackets secure the chassis and prevent it from sliding around during vibration or when inserting or extracting transceivers.

⚠ Caution:

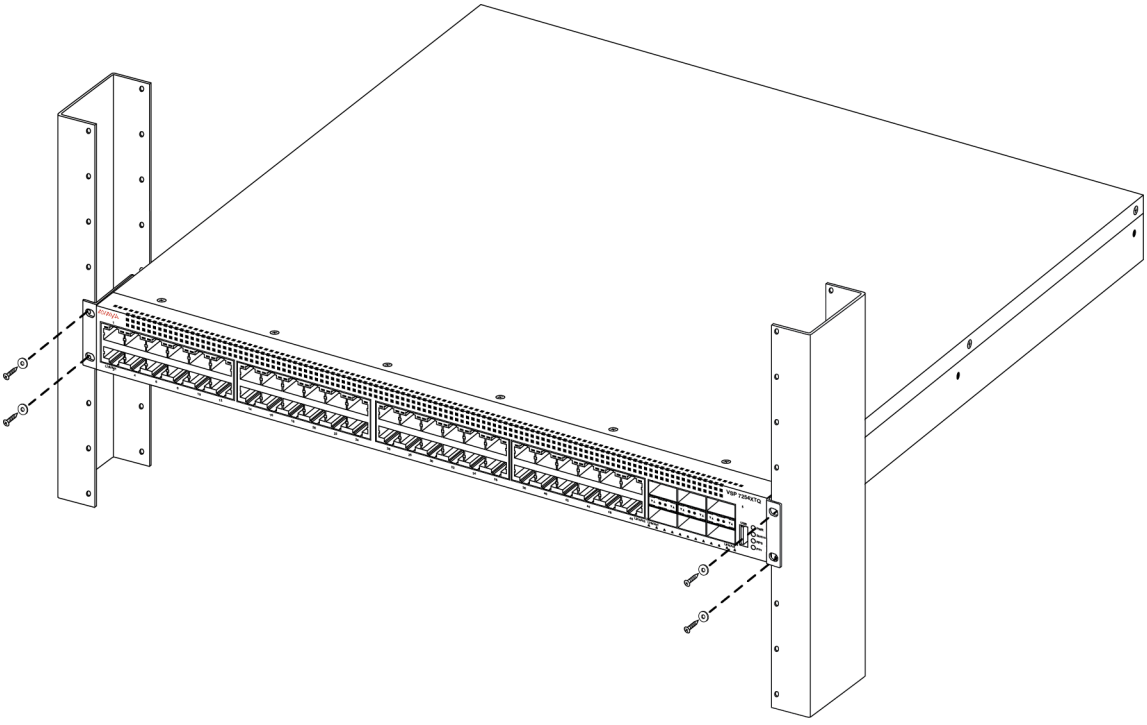
Do not mount the chassis in a rack without using a customer-supplied tray under the chassis. The chassis weight will cause damage to a rack, especially in an environment with vibration or in an earthquake prone area.

Procedure

1. Disconnect the power cord from the switch.
2. Attach a bracket to each side of the switch using a #2 Phillips screwdriver as illustrated below.



3. Slide the switch onto a shelf or tray in the rack.



4. Insert and tighten the rack-mount screws.
5. Verify that the switch is securely fastened to the rack.
6. Connect power and network connections to the switch.