Before you start

Confirm that you have the following tools and cables:

- Phillips #2 screwdriver
- Console cable that matches the console connector on the switch (DB-9 or RJ-45)
- Electrostatic discharge (ESD) cable

Unpack the equipment and verify package content

Note: Observe ESD precautions when unpacking.

3 Verify power supply unit (PSU) specifications

The VSP 4000 4450GSX series switch supports two field-replaceable AC or DC PSUs. One PSU is supplied with the chassis that can fully power the VSP 4000 system. The AC PSU can fully power the system including all PoE+ ports.

Optionally order a redundant PSU for redundancy and load sharing.

VSP 4000 4450GSX series AC power specifications for VSP 4450GSX-PWR:

<table>
<thead>
<tr>
<th>Primary PSU</th>
<th>Redundant PSU (to be ordered if required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000-watt AC PoE+ power supply (replacement order code: AL190571-6E)</td>
<td>1000-watt AC PoE+ power supply (order code: AL190571-6E)</td>
</tr>
</tbody>
</table>

Note: The 1000-watt AC power supply uses the IEC 60320 C16 AC power cord connector.

1. If a blanking plate covers the required power supply slot, remove the blanking plate before attempting to insert the power supply.
2. Insert the power supply into a rear power supply slot as illustrated.
3. Verify that each power supply is fully seated in the slot. Secure the power supply with the two thumb screws.

Note: The switch chassis can prevent an incorrect installation of a power supply. If you insert a power supply upside down, it will not fully insert and the thumb screws will not engage.

4. After you install a power supply, connect AC or DC power.

5 Mount the VSP 4000 switch

Caution: To protect the VSP 4000 switch against ESD damage, do the following before you connect the data cables to the device:

- Use anti-static wrist straps. Ensure that the strap has good skin contact. Do not remove the wrist or ankle strap until the installation is complete.
- Ensure that you properly ground work surfaces and equipment racks.
- Avoid contact between equipment and clothing.
- Avoid touching the connector pins.

a. Table or shelf mounting
1. If you mount the VSP 4000 switch on a table or shelf, attach the included rubber footpads as indicated. The surface must support the combined weight of the switch and attached cables (15 to 20 pounds [7 to 9 kilograms]).
2. Set the device on a flat surface near a power source. Allow at least 2 inches (5.1 cm) of space on all sides for proper air flow, and at least 5 inches (12.7 cm) at the back for proper power cord clearance.

b. Rack mounting
Prepare the rack:
1. Allocate 1U of vertical space for each switch in an EIA or IEC-standard 19-inch (48.2-centimeter) equipment rack.

Ensure that the equipment rack is stable and securely attached to a permanent structure.
2. Ground the rack 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. Avaya recommends using a filter or surge suppressor.

Mount the switch:
1. Attach an L-bracket to each side of the switch using the #2 Phillips screwdriver as illustrated.
2. Slide the switch into the rack as illustrated. Insert and tighten the rack-mount screws.

For more details on installing the VSP 4000, see *Installing the Avaya Virtual Services Platform 4000 VSP4450GSX series (NN46251-307).*

4 (Optional) Install redundant PSU

Use this procedure to optionally install a redundant power supply.

Note: The switch ships with a filler panel in the second power supply position. This filler panel must stay in place if you do not intend to install a second power supply. Each power supply bay must be populated with either a cover or a power supply for proper airflow management.
**Power up**

1. Connect the power cord to the back of the switch, and then plug the other end of the cord into a power outlet.

**Note:** You will need two power cords if you have installed a redundant PSU.

**Warning:** You must use a power cord set approved for the 4000 Series switch and the power receptacle type in your country.

2. Check the front-panel LEDs as the device powers on to be sure the PWR LED is lit. If not, check whether the power cord is plugged in correctly. The switch will power on immediately when it is connected to a suitable power source.

**Install SFP and SFP+ transceivers**

1. Remove the transceiver from the protective packaging.

2. Grasp the transceiver (SFP/SFP+) between your thumb and forefinger.

3. Insert the transceiver into the proper SFP/SFP+ slot on the switch as illustrated. Apply a light pressure to the transceiver until it clicks and locks into position in the slot.

4. Check the front-panel LEDs when it is connected to a suitable power source.

**Commissioning the VSP 4000**

1. Connect the console cable to the VSP 4000

Console port cabling specifications

Ensure the use of Category 5E or higher specification cabling for 1 Gbps/1000 Mbps operation. RJ-45 console port cabling and their Product Engineering Codes (PEC) are as follows:

<table>
<thead>
<tr>
<th>PEC</th>
<th>Name</th>
<th>Short Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL201102D-EE</td>
<td>Avaya RJ-45DB-9 CONSOLE CABLE</td>
<td>The VSP 4000 has an RJ-45 female connector, so a serial cable with RJ-45 connectors, or a serial cable with a DB-9 female connector on one end and an RJ-45 on the other is required. The maximum length for the console port cable is 25 feet (7.6 meters).</td>
</tr>
<tr>
<td>AL201102A-EE</td>
<td>AVAYA RED DB-9 FEMALE TO RJ-45 ADAPTOR</td>
<td>Converts DB-9 male to RJ-45 serial. The adapter can be used for PC or device with DB-9 male console port. Also, can be used with Category 5 RJ-45 straight cable to provide console connection.</td>
</tr>
<tr>
<td>AL201102B-EE</td>
<td>AVAYA BLUE DB-9 MALE TO RJ-45 ADAPTOR</td>
<td>Converts DB-9 female to RJ-45 serial. This adapter can be used to convert DB-9 of AL2011013-EE console cable to RJ-45.</td>
</tr>
</tbody>
</table>

On your VSP 4000 switch, the console port is the RJ-45 port marked 10101 at the far right end on the front panel. Use an RJ-45 to DB-9 cable to connect the switch console port to your management terminal. Use adapters to provide different connection options. The maximum length of a console cable is 25 feet (7.6 meters). The following tables describe the RJ-45 and DB-9 console port pin-out information. You can use the pin-out information to verify or create a console cable for use with your maintenance terminal.

### RJ-45 console port pin assignments

<table>
<thead>
<tr>
<th>Connector</th>
<th>Pin Number</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Carrier detect (not used)</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Transmit data (TXD)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Receive data (RXD)</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Data terminal ready (not used)</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Signal ground (GND)</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>Not used</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Request to send (not used)</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Not used</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>Ring indicator (not used)</td>
</tr>
</tbody>
</table>

### Recommended reading

- **Recommended Reading**
  - Administration (NN47227-600)
  - Release Notes (NN47227-401)
  - Software (NN47227-600)
  - Software (NN47227-100)
  - Installation (NN46251-307)
  - Quick Start Configuration, NN47227-102
  - Documentation Reference, NN47227-100
  - Locating the latest Software and product Release Notes (NN46251-106)
  - Regulatory Information (NN46251-105)

**Shutdown the VSP 4000**

1. Enter the Privileged EXEC command mode: enable

2. Shut down the VSP 4000:

   ```
   sys shutdown
   ```

3. Before you unplug the power cord, wait until you see the following message: System Halted, OK to turn off power.

For more information on this and other administration procedures, see Administering VSP Operating System Software (NN47227-600).

**Terminal emulation settings**

- **Flow Control:** None
- **Data Bits:** 8
- **Stop Bits:** 1
- **Parity:** None
- **Baud Rate:** 9600 bps
- **Terminal emulation program to VT100 or VT100/ANSI.**

**Configure an in-band VLAN and a management IP interface for the VLAN**

1. Configure an in-band VLAN and a management IP interface for the VLAN

   ```
   VSP-4450GSX(config)#vlan create 20 name Avaya
   VSP-4450GSX(config)#vlan members add 20 1/4
   VSP-4450GSX(config)#interface vlan 20
   VSP-4450GSX(config)#ip address 47.17.123.85 255.255.255.0
   ```

   **Note:** In the following procedure you create a VLAN with ID 20 and name Avaya.

2. Add VLAN members:

   ```
   VSP-4450GSX(config)#vlan members add 20 1/4
   ```

3. Configure a management IP interface for the VLAN

   ```
   VSP-4450GSX(config)#interface vlan 20
   ```

   **For more information, go to [http://support.avaya.com](http://support.avaya.com) and download the following VSP 4000 guides:**

   - Regulatory Information (NN46251-105)
   - Locating the latest Software and product Release Notes (NN46251-106)
   - Documentation Reference, NN47227-100
   - Installation (NN46251-307)
   - Quick Start Configuration, NN47227-102
   - Release Notes (NN47227-401)
   - Administration (NN47227-600)