



Ethernet Routing Switch 4000 Series

Quick Installation for Avaya Ethernet Routing Switch 4000 Series

You can download all documents referenced in this Quick Installation Guide at www.avaya.com. You do not require a support contract to download documents. When downloading documentation, select the specific software version. Depending on your hardware model, your switch can appear different than the figures shown in this guide.

Note: The ERS 4800 model is delivered with 5.8.0 or higher agent software. Release 5.8 is not compatible with the ERS 4500 series products.

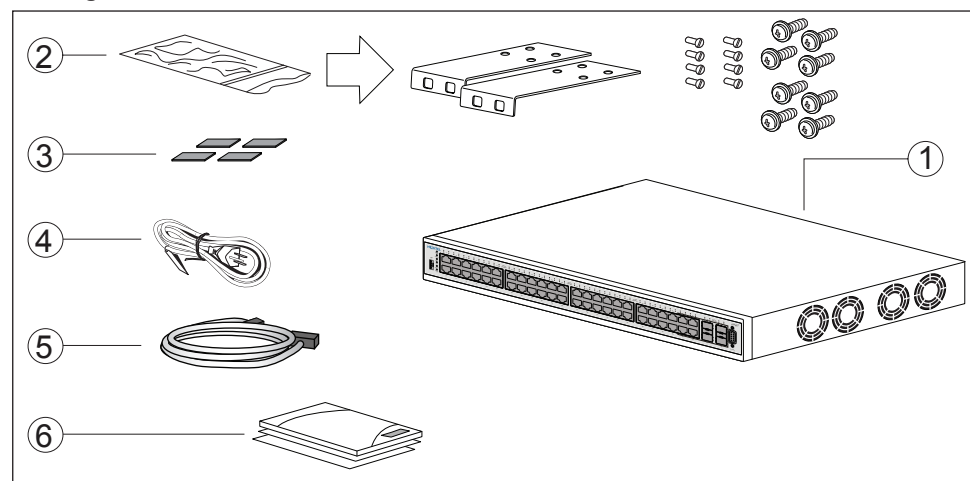
1 Before you start

Confirm that you have the following tools and package contents:

Tools Required:

- Phillips #2 screwdriver
- Console cable to match the console connector on the switch (RJ-45)
- Console cable or Ethernet cable (if using the default IP address to access the device for configuration)

Package Contents:



1. Avaya Ethernet Routing Switch 4800 Series.
2. Rack-mounting hardware that includes:
 - Rack-mount brackets (2)
 - Screws to attach brackets to the switch (8)
 - Screws to attach the switch to the equipment rack (2x4)
3. Rubber footpads.
4. AC power cord. (Note: A power cord is not included for the A variant of the switch)
5. Standard 1.5 foot (46 cm) stacking cable.
6. Documentation includes the Base software license kit, Quick Install poster, and Regulatory documents.
7. Field replaceable power supply already installed in the switch.

Note: Two field replaceable power supplies are supported for models ERS 4826GTS, ERS 4826GTS-PWR+, ERS 4850GTS, and ERS 4850GTS-PWR+. One power supply is already installed.

Note: Be sure to order Direct Attach cables and SFP or SFP+ Transceivers if required.

Model	Primary PSU	Optional Secondary PSU
ERS 4826GTS, ERS 4850GTS	300w AC power supply (replacement order code: AL1905?03-E5)	300w AC power supply (order code: AL1905?03-E5)
ERS 4826GTS-PWR+, ERS 4850GTS-PWR+	1000w AC supply (replacement order code: AL1905?21-E6)	1000w AC power supply (order code: AL1905?21-E6)

2

a. (Optional) Prepare the rack

1. Provide the equivalent of one rack of vertical space for each switch in an EIA or IEC-standard 19-inch (48.2-centimeter) equipment rack.
2. Ensure that the equipment rack is stable and securely attached to a permanent structure.
3. 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.

b. When you install the switch into a network, ensure to use the following cables:

- Category 5E or higher specification cabling must be used for 1 Gbps/1000 Mbps operation.
- RJ-45 and DB-9 console port cables and adaptors are as follows:

PEC Code	Name	Short Description
AL2011022-E6	Avaya RJ-45/DB-9 CONSOLE CABLE	1.8m cable with DB-9 Female for terminal/PC on one end and RJ-45 for device console port connectivity on the other.
AL2011020-E6	AVAYA RED DB-9 FEMALE TO RJ-45 ADAPTOR	Converts DB-9 MALE to RJ-45 serial port. The adaptor 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.

c. Stacking cables

PEC Code	Description (all are RoHS compliant)
AL4518001-E6	4000-SSC HiStack Stacking Cable 46cm (1.5ft) for Ethernet Routing Switch 4500 or 4800 series (for use as spare).
AL4518002-E6	4000-SSC HiStack Stacking Cable 1.5m (5ft) for Ethernet Routing Switch 4500 or 4800 series (spare or for use as return cable for resiliency).
AL4518003-E6	4000-SSC HiStack Stacking Cable 3m (10ft) for Ethernet Routing Switch 4500 or 4800 series (spare or for use as return cable for resiliency).
AL4518004-E6	4000-SSC HiStack Stacking Cable 5m (16.4ft) for Ethernet Routing Switch 4500 or 4800 series (spare or for use as return cable for resiliency).

3 Mounting options

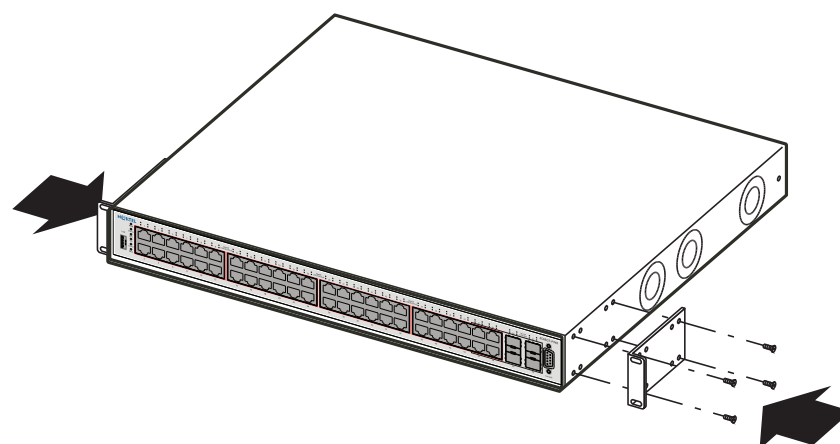
Table or shelf mounting

If you are mounting the ERS 4800 switch on a table or shelf, attach the rubber feet on the underside of the switch by placing a pad near each corner.

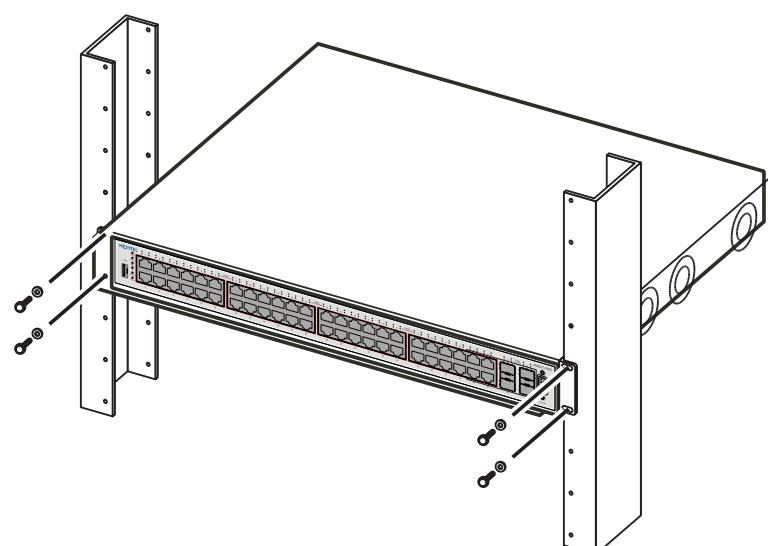
Set the device on a flat surface near an AC power source, making sure there is at least 2 inches (5.1 cm) of space on all sides for proper air flow, and at least 5 inches (12.7 cm) at the back for power cord clearance.

4 Rack mounting

1. Attach a bracket to each side of the switch.



2. Slide the switch into the rack.



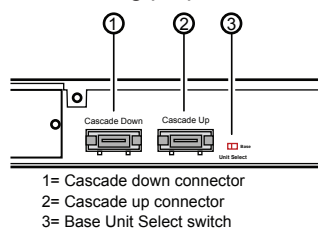
3. Insert and tighten the rack-mount screws.

5 Stacking

The Avaya Ethernet Routing Switch 4800 Series provides fail-safe stackability. You can connect up to eight 4800 Series devices in a stack to provide uninterrupted connectivity for up to 400 ports. The stack is managed as single unit, using the IP address of the base unit.

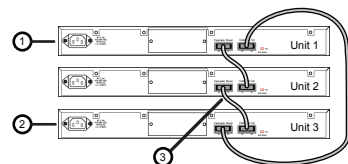
ERS4800 series rear panel

The switch back panel provides a Base Unit Select switch, Cascade Down connector, and Cascade Up connector for stacking purposes as shown below:



Base Unit Select switch – used to designate the base unit in a stack. When set to the RIGHT position, this unit acts as the Base Unit for the stack

Cascade Down and Cascade Up connectors – used connect a switch to the next unit in the stack through a cascade cable. Connect one end of the Cascade Down cable to the Cascade Up connector of the next switch in the stack (shown in the simple two-switch stack connection block diagram below):



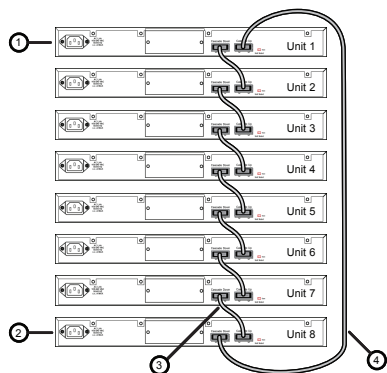
Simplified Stacking diagram
1= Base unit
2= Last unit
3= Cascade/Stack Cable

To create a stack connection, order the appropriate Avaya Ethernet Routing Switch 4000 Series cascade cables to ensure fail-safe stacking. For stacking three or more units (maximum eight units per stack), order the 5 ft, 10 ft, 14 ft or 16.4 ft cables as applicable (see “Before You Start” – step 4 for Order Codes).

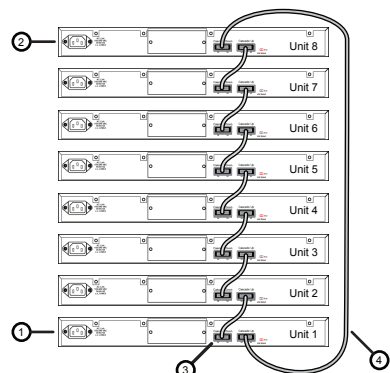
1. Ensure that all switches for the stack are rack mounted.
2. Slide the Base Unit Select switches on the back of the units to the appropriate position, depending on whether they are a base unit or non-base unit:
 - **Base Unit** (Unit 1) - Slide the Base Unit Select switch to the RIGHT
 - **Non-Base Unit** (Units 2-8) - Slide the Base Unit Select switch to the LEFT
 Because stack parameters are associated with the base unit, the physical stack order depends on the base unit position and whether you configure the stack cascade up (stack up) or cascade down (stack down). This designation depends on the stack cabling arrangement.

IMPORTANT: Avaya recommends you to use a Cascade Down configuration.

3. Connect stacking cables as required for a Cascade Up (stack up) or Cascade Down (stack down) configuration as shown below:



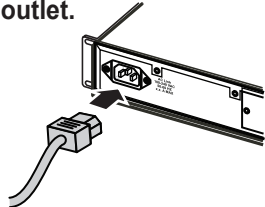
Cascade Down (Stack Down) configuration
1= Base unit
2= Last unit
3= Cascade/Stack Cable
4= Cascade/Stack Cable (Return cable to make stack resilient. Use longer stack cable if required.)



Cascade Up (Stack Up) configuration
1= Base unit
2= Last unit
3= Cascade/Stack Cable
4= Cascade/Stack Cable (Return cable to make stack resilient. Use longer stack cable if required.)

6 Powering Up

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



Warning: You must use a power cord set approved for the 4800 Series switch and the power receptacle type in your country.

Check the front-panel LEDs as the device powers on to be sure the PWR LED is lit. If not, check if the power cord is plugged in correctly.

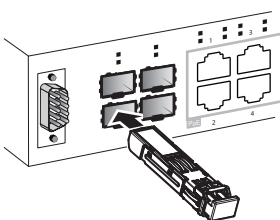
The switch will power on immediately when it is connected to a suitable AC power source.

7 Installing SFP and SFP+ transceivers

Before installing SFP and SFP+ transceivers, ensure the switch is up, fully booted, and operating normally. Verify that the SFP or SFP+ transceivers and network cabling support your network configuration.

Install SFP transceivers by performing this procedure.

1. Remove the transceiver from the protective packaging.
2. Verify that the transceiver is the correct model for the network configuration.
3. Grasp the transceiver between your thumb and forefinger.
4. Insert the transceiver into the proper module on the switch. Apply a light pressure to the transceiver until it clicks and locks into position in the module.



Setting IP parameters using the console port and CLI quick start

To set IP parameters using the console port and CLI Quickstart, perform the following tasks:

8 Connect the console cable to the ERS 4800

The console port uses the RJ-45 port outlined with a blue border. Use an RJ-45 to DB-9 cable, or a DB-9 to DB-9 serial cable to connect the switch console port to your management terminal. Adapters are available to provide different connection options. The maximum length of a console cable is 25 feet (8.3 meters). The following table describes the RJ-45 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

Connector	Pin Number	Signal
	1	Ready to send (RTS) — optional, can swap or link with pin 8
	2	Data terminal ready (DTR)
	3	Transmit data (TXD) — mandatory
	4	Carrier detect (DCD) — optional
	5	Ground (GND) — mandatory
	6	Receive data (RXD) — mandatory
	7	Data set ready (DSR) — optional
	8	Clear to send (CTS) — optional, can swap or link with pin 1

1. Connect the console cable from the terminal to the console port of the switch to allow initial configuration. Any terminal or PC with the appropriate terminal emulator can be used as the management station.

Terminal emulation settings

Property	Value
Baud Rate	9600 bps
Data Bits	8
Stop Bits	1
Parity	None
Flow Control	None

2. Set the terminal protocol on the terminal or terminal emulation program to VT100 or VT100/ANSI.
3. Connect to the switch using the terminal or terminal emulation application.
4. The Avaya switch banner appears when you connect to the switch through the Console port. There is no default password for the switch for CLI console access. Enter **Ctrl+Y** and type the following CLI commands:
 - enable
 - install

5. The CLI Quickstart welcome screen helps you enter the information requested at each prompt.

Note: The ERS 4800 uses the default IP address of 192.168.1.1/24 if the switch does not get its IP address from another source.

```
#####
Welcome to the 4850GTS-PWR+ setup utility.
You will be requested to provide the switch basic connectivity settings.
After entering the requested info, the configuration will be applied and
stored into the switch NVRAM.
#####
Once the basic connectivity settings are applied, additional configuration
can be done using the available management interfaces.
Use Ctrl+C to abort the configuration at any time.
#####
Please provide the Quick Start VLAN <1-4094> [1]:
Please provide the in-band IP Address[172.16.120.20]:
Please provide the in-band sub-net mask[255.255.255.0]:
Please provide the Default Gateway[172.16.120.1]:
Please provide the Read-Only Community String[*****]:
Please provide the Read-Write Community String[*****]:
Please provide the in-band IPV6 Address/Prefix length[::/0]:
Please provide the in-band IPV6 Default Gateway[::]:
#####
Basic switch parameters have now been configured and saved.
#####
```

9 Connecting to the ERS 4800 embedded Web UI

1. Connect a Laptop/PC to any Ethernet port and ensure that the PC has an IP address configured within the same IP subnet as the switch management IP address.
 2. Start your web browser, such as Internet Explorer or Firefox.
 3. Enter switch management IP address in the URL field and press Enter (for example; 192.168.1.1).
 4. The switch summary screen appears on your browser. Use the navigation tree on the left to select switch configuration options.
- Note:** You do not need login credentials.

ACLI boot and factory-default commands:

boot - reboot the switch
 boot default - reboot and use the factory default configuration
 boot partial-default - reboot and use the partial factory default configuration
 restore factory-default - reset the switch to factory default configuration

Recommended reading

For more information, go to <http://support.avaya.com> and download the following ERS 4000 guides:

- Locating Documentation (NN47205-106)
- Regulatory Reference (NN47205-100)
- Documentation Reference for Avaya Ethernet Routing Switch 4000 Series (NN47205-101)
- Installing Avaya Ethernet Routing Switch 4000 Series (NN47205-300)
- Quick Start Configuration (NN47205-104)
- Configuring Systems (NN47205-500)
- Release Notes (NN47205-400)

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<http://support.avaya.com>

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