



ExtremeCloud OS ONE SD-WAN v30.26.2.0 Installation Guide

Appliance Setup and Configuration

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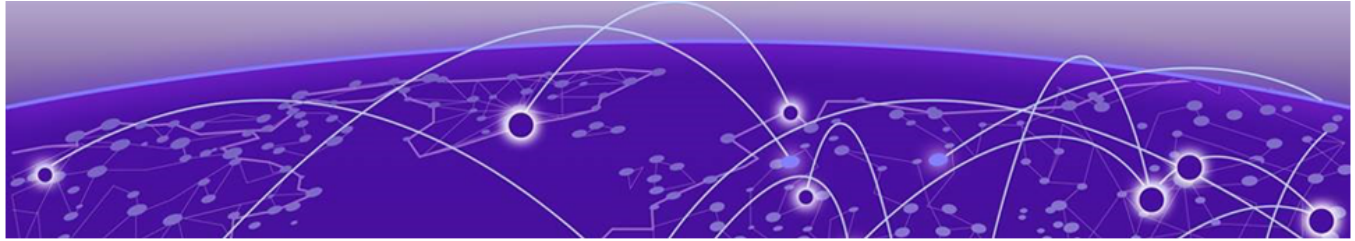


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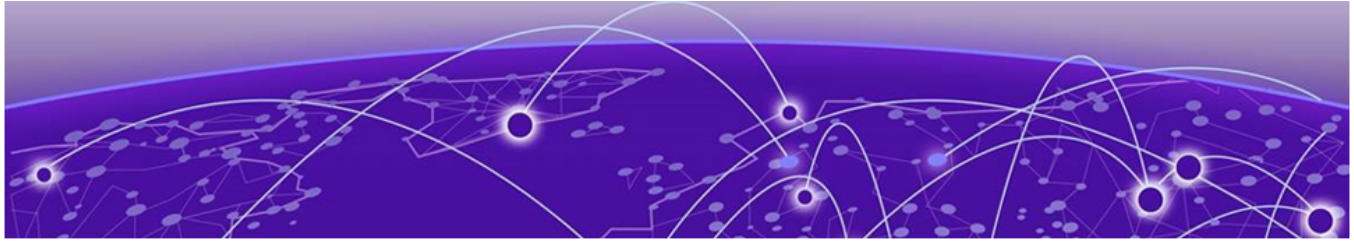
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Abstract

This installation guide for ExtremeCloud OS ONE SD-WAN version 30.26.2.0 provides detailed procedures for deploying, configuring, and validating ExtremeCloud OS ONE SD-WAN appliances, including the 40ax V2, 420ax, 2200ax-F, and 2200ax-T platforms. It describes the role of SD-WAN appliances in application visibility, traffic measurement, traffic control, dynamic WAN path selection, and communication with the Orchestrator management platform. The guide includes hardware installation requirements, rack-mounting procedures, power and console connectivity, management interface configuration, chassis management capabilities, LED status interpretation, and platform-specific operational characteristics. Key technical content covers chassis telemetry, temperature monitoring, power supply status reporting, fan behavior, reset button functionality, management port configuration, and physical-layer verification. Security and operational considerations include controlled access deployment environments, grounding requirements, UPS recommendations, firewall configuration for Orchestrator communication, and platform limitations such as unsupported SNMP traps and model-specific factory reset behavior. Troubleshooting guidance includes LED-based diagnostics, connectivity validation using ping tests, interface state verification, and hardware fault identification. Written for network administrators and deployment engineers, the guide offers step-by-step instructions, configuration examples, installation prerequisites, and maintenance procedures such as HDD/SSD replacement, enabling reliable deployment and operation of ExtremeCloud OS ONE SD-WAN appliances in enterprise WAN environments.



Preface

Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

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Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
screen displays	This typeface indicates command syntax, or represents information as it is displayed on the screen.
The words <i>enter</i> and <i>type</i>	When you see the word <i>enter</i> in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says <i>type</i> .
Key names	Key names are written in boldface, for example Ctrl or Esc . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del
<i>Words in italicized type</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
<i>italic text</i>	Italic text indicates variable content.
[]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ x y z }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, <i>member[member...]</i> .
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

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- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

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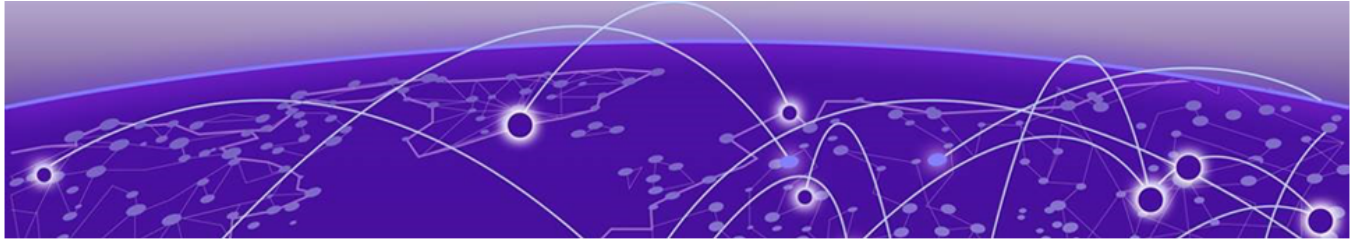
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Provide as much detail as possible including the publication title, topic heading, and page number (if applicable), along with your comments and suggestions for improvement.



Introduction

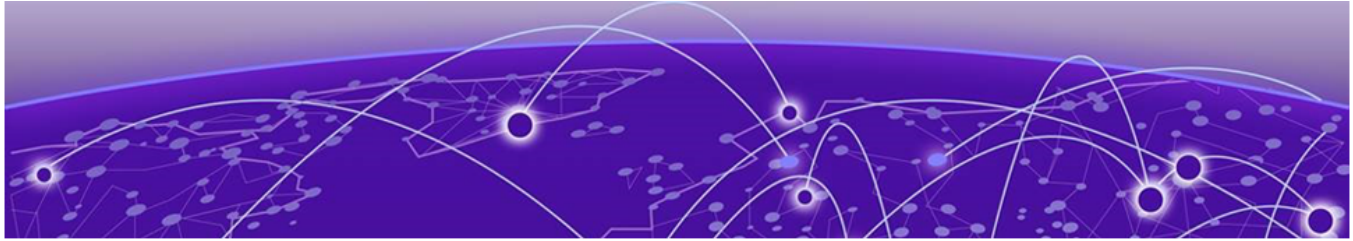
[Configuration Summary of ExtremeCloud OS ONE SD-WAN Appliance](#) on page 10

This guide describes the installation and configuration tasks required for the following ExtremeCloud OS ONE SD-WAN Appliance models: 40ax V2, 420ax, 2200ax-F and 2200ax-T, which support ExtremeCloud OS ONE SD-WAN 26.1.0.

Configuration Summary of ExtremeCloud OS ONE SD-WAN Appliance

In the ExtremeCloud OS ONE SD-WAN, the appliances are deployed within end-users' networks to handle traffic measurement, control, and dynamic WAN selection. This setup ensures Application Visibility.

To deliver these services, the appliances monitor and process every IP packet before and after it traverses the WAN. They also communicate with other ExtremeCloud OS ONE SD-WAN appliances in the domain and with the Orchestrator (Central Management Software).



Chassis Management Overview

[Port and System LED Indicators](#) on page 13

ExtremeCloud OS ONE SD-WAN platforms provide chassis information such as power supply (PSU), fan, and thermal status through platform-specific hardware mechanisms. The level of chassis visibility available in the CLI depends on the underlying platform design.

ExtremeCloud OS ONE SD-WAN displays only the chassis information that each platform exposes. As a result, the available telemetry and supported CLI options vary across models.

2200ax-F and 2200ax-T

The platforms provide chassis data through the onboard management controller. ExtremeCloud OS ONE SD-WAN reads the available data and displays the supported information. LED information, PSU current, power, and voltage values does not appear.

40ax V2 and 420ax

The platforms provide limited chassis telemetry. ExtremeCloud OS ONE SD-WAN displays only the PSU status because each platform contains a single PSU and the system operates only when the PSU functions correctly. Because of these platform characteristics, the CLI shows only the supported options and outputs. The following table summarizes the supported chassis information and CLI commands for each platform.

The 40ax V2 and 420ax platforms display CPU and system temperature sensor values in the CLI. The level of threshold visibility differs by model.

- 420ax – Displays CPU warning and critical temperature thresholds.
- 40ax V2 – Displays n/a for warning, critical, and shutdown threshold fields in the CLI. The system database records these values as 0.



Note

SNMP traps are not supported on SD-WAN platforms.

Option	SR	40ax V2	420ax	2200ax-F and 2200ax-T
Fan Information	Available	Not Available	Not Available	Available
LED Information	Available	Not Available	Not Available	Not Available

Option	SR	40ax V2	420ax	2200ax-F and 2200ax-T
PSU Information	Available	Available (status only). Current, power, and voltage values are not supported	Available (status only). Current, power, and voltage values are not supported	Available (status only). Current, power, and voltage values are not supported
Thermal Sensor Information	Available	Available	Available	Available
show sysinfo fan	Available	Not Available	Not Available	Available
show sysinfo led	Available	Not Available	Not Available	Not Available
show sysinfo sensor all/cpu	Available	Available	Available	Available
show sysinfo inventory	Available	Information Not Available	Information Not Available	Information Not Available
show sysinfo all	Available	Available	Available	Available
show sysinfo chassis	Available	Available	Available	Available
show sysinfo media	Available	Not applicable	Not applicable	Not applicable

Platform	Sensor	Current Temperature	Warning Temperature	Critical Temperature	Shutdown Temperature
40ax V2	CPU	Available	Not available	Not available	Not available
	System	Available	Not available	Not available	Not available
420ax	CPU	Available	Available	Available	Not available
	System	Available	Not available	Not available	Not available
2200ax-F and 2200ax-T	CPU	Available	Not available	Available	Available
	System	Available	Not available	Available	Available
	Peripherals	Available	Not available	Available	Available

- Warning Temperature – Indicates the normal operating temperature threshold.
- Critical Temperature – Indicates that the system is approaching an unsafe temperature that could cause hardware damage or failure.
- Shutdown Temperature – Indicates the temperature at which the system shuts down to prevent hardware damage.

The platforms do not initiate automatic shutdown or fault actions when warning or critical thresholds are crossed.

Fan Behavior

Fan operation differs by platform model.

40ax V2

- The fan operates at a constant speed.
- The platform does not include a smart fan controller.
- Fan speed does not change based on system temperature.

420ax

- The smart fan controller adjusts fan speed based on CPU temperature.
- Fan behavior starts at 60°C and reaches full speed at 90°C.

Port and System LED Indicators

Port and system LED indicators on supported SD-WAN appliance platforms help you verify link status, port speed, and system health during troubleshooting.

Port LED Indicators

Port LEDs provide information about link activity and port speed. The LED behavior and color depend on the platform model and the negotiated interface speed.

- Link/Activity LEDs indicate if a physical link is established and if traffic is present on the port.
- Speed LEDs indicate the operational speed of the port after auto-negotiation.
- Not all platforms support all port speeds, unsupported speeds are marked as Not supported or N/A in the tables.

Use the illuminates to interpret port LED behavior by platform.

Table 4: Port Link and Speed LEDs

Platform	LED	10G	1G	100M	10M
40ax V2	Link/Activity	N/A	Amber	Amber	Amber
	Speed	N/A	Orange	Green	Off
420ax	Link/Activity	N/A	Amber	Amber	Amber
	Speed	N/A	Orange	Green	Off
Note: On WAN3, the Link/Activity LED turns on when traffic is present.					
2200ax-F	Link/Activity	Green	Green	N/A	N/A
	Speed	Green	Amber	N/A	N/A
2200ax-T	Link/Activity	N/A	Green	N/A	N/A
	Speed	N/A	Ports 1 to 4: Green Port 5: Orange	Ports 1 to 4: Orange Port 5: Green	Off

System LED Indicators

System LEDs provide information about the overall operational state of the appliance. These LEDs help you quickly determine whether the device has powered on successfully, completed the boot process, or encountered a hardware related issue.

System LEDs typically indicate:

- Power status
- Boot and operational state
- Disk activity
- Network activity
- Hardware fault conditions, such as power supply, fan, or thermal issues

2200ax-F and 2200ax-T Platforms

On 2200ax-F and 2200ax-T platforms, system LEDs indicate power, disk, LAN activity, and fault conditions. Blinking LEDs generally indicate active operations or attention-required states.

LED	Description
Power	Green when the device is powered on
Hard Disk	Blinks during disk access
LAN 1	Blinks on activity
LAN 2	Blinks on activity
'i' Power Fail / Over Heat / Fan Fail	Blinks when one PSU is plugged into the chassis but is not powered on Note: This does not turn green if both PSUs are up and running.

40ax V2 and 420ax Platforms

On 40ax V2 and 420ax platforms, system LEDs provide visibility into the boot process and hardware status. A green status LED indicates that the system has completed boot successfully, while a red status LED indicates a boot failure.

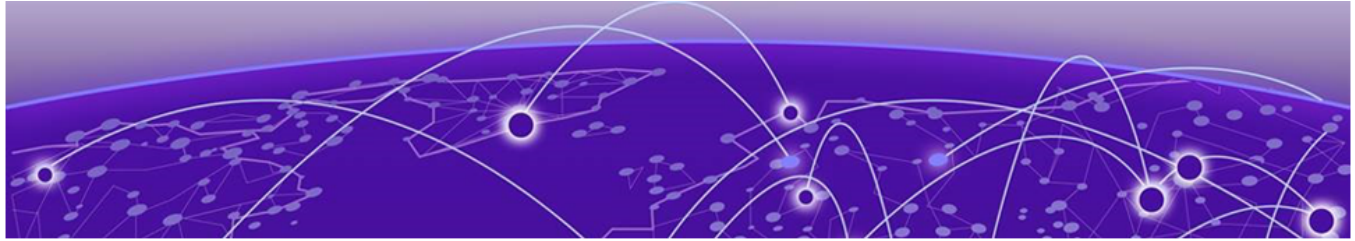
	40ax V2	420ax
LAN Bypass 1	Off	Off
LAN Bypass 2	Off	Off
Power	Green	Green
Status	Green – Boot complete Red – Boot failure	Green – Boot complete Red – Boot failure
Hard Disk	Blink on access	Blink on access

Reset Button Behavior

ExtremeCloud OS ONE SD-WAN appliances include a Reset button that can be used to reboot the device or restore factory default settings depending on the platform and the duration of the button press.

- A short press (less than 10 seconds) reboots the appliance on all supported platforms.
- A long press (10 seconds or more) performs the following actions:
 - 40ax V2 and 420ax platforms – Reboots the appliance and restores the factory default configuration.
 - 2200ax-F and 2200ax-T platforms – Reboots the appliance only. Factory reset using the reset button is not supported.

On 2200ax platforms, the reset button action is handled by the onboard management controller (BMC), which supports only device reboot functionality. As a result, factory reset through a long press is not available on these platforms.



Appliance Model 40ax V2

- [What's in the Box?](#) on page 16
- [Installation in a Rack](#) on page 17
- [Installing the Appliance in a Rack](#) on page 17
- [Connections](#) on page 18
- [40ax V2 Setup](#) on page 20

This chapter describes the characteristics and hardware elements of the 40ax V2 appliance. It also explains the different connection modes according to the available appliance connectors.



Figure 1: Appliance 40ax V2 with a Hard Disk

What's in the Box?

P/N	Description	Quantity
8913047-00	ZW00083 ipe-40ax-V2-base	1
8913048-00	ZV00231 AC/DC ipe40series V1/V2 12V/60W	1
9037614-00	ZV00292 DOC FAST INSTALL SD-WAN	1
9037615-00	ZV00261 DOC DIRECTIVES IPE040so-040axV2	1
8913043-00	ZV00051 Cable CONSOLE 30ax/40axV2	1
8913044-00	ZV00028 Cable ETH UTP CAT5E Crossed	2
8913049-00	ZV00230 MEC 1U BRACKET 40ax black	2
8913050-00	ZV00069 VSP KIT SCREW BAY 19"	1
8913051-00	ZV00329 VSP SCREW BLACK	4
8913045-00	ZV00266 Power Cord C13/C14	1

For a description of the cables provided, see [Connections](#).

**Warning**

Do not immediately power on an appliance that has been stored at a low or high temperature. Wait until the appliance temperature has reached the ambient temperature before connecting it to the power supply.

Installation in a Rack

Install the appliance 4Oax V2 in a rack. You can also lay the appliance on a table. Make sure it lays flat and it is stable.

**Warning**

Whatever method of installation is used, do not obstruct the ventilation openings on the front and rear panels of the case.

Choose a suitable location for the rack unit that will hold your appliance:

- Situated in a clean, dust-free, well-ventilated area.
- Avoid areas where heat, electrical noise, and electromagnetic fields are generated.
- Place it near a grounded power outlet.

Installing the Appliance in a Rack

A rack mounting kit is provided to mount the appliance in a 19-inch rack (1 U). It is made of a pair of brackets and four Phillips (cross-shaped) screws.

Depending on the position of the brackets, the controls and connections may be located either at the front or rear of the rack.

A Phillips screwdriver #2 is required to fix the appliance to the rack mounting kit.

1. Unstick the four rubber feet from the bottom of the case.

2. Screw the two brackets to the appliance with the four screws provided.

Depending on the position of the brackets on the appliance, the controls and connections can be located either at the front or at the rear of the rack.

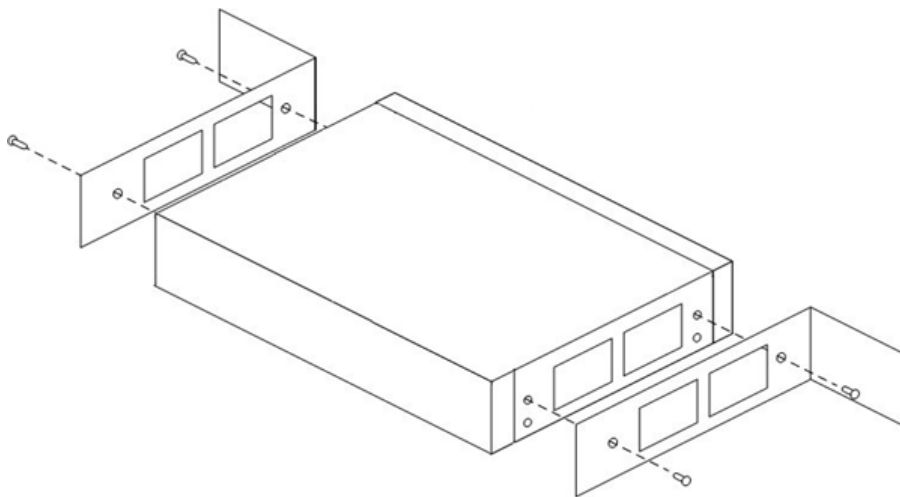


Figure 2: Bracket Installation

3. Screw the assembly's brackets to the rack uprights.
4. Place the power supply unit in a stable position and screw the power connector to the appliance.



Caution

Leave a free space of 1U between the appliance and the other equipment, if these are hot.

Connections

Main Power Connection

The provided power supply unit lead is connected to:

- A grounded power source
- The DC JACK socket on the rear panel of the appliance

The power connector can be secured to the DC JACK socket by screwing its threaded collar onto the socket.

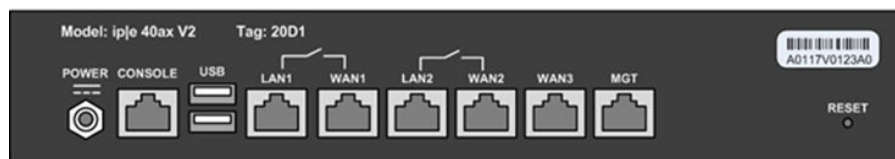


Figure 3: 40ax V2 Rear Panel

Console Connection

The console connection is used to locally configure the appliance with a laptop or PC (first installation for instance).

Connect the console cable (supplied) to:

- The Console socket (RJ45 connector) on the rear panel of the appliance.
- The appropriate socket (DB9 connector) on the station.



Note

The console cable is labeled "CONSOLE" and is different from the other cables. Make sure you are using the correct cable.

Router Auxiliary Port Connection

Instead of using a direct connection between a station and the appliance's console port, it is possible to connect through a Cisco router's auxiliary port, thus allowing the user to take control of the appliance via the router in case of network problems.

Connect the supplied router auxiliary port cable to:

- The Console socket on the rear panel of the appliance,
- The auxiliary port on the router.

Configuration of a Cisco router:

Configure the auxiliary port (`conf term`, `line aux 0`, `transport input all`), check the port (`show line`), and add 2000 when using Telnet — e.g. if the port used is 65, connect to the appliance typing `telnet <router_IP_address> 2065` on the station.



Note

The router auxiliary port cable is labeled "ROUTER" and is different from the other cables. Make sure you are using the correct cable.

Configuring the Management Port

The following is a code example to configure the management port.

```
device# config terminal
device(config)# int management 0
device config-if-mgmt-0)# ip address xxx.xxx.xx.xx/xx
device(config)#end
device# show interface management 0
management 0 Admin state UP Operational state UP
MTU 1514 bytes
Hardware is Ethernet mac address 00:0x:xx:xx:xx:xx
Current Speed 1G, Duplex: Full
Description: Management 0
DHCPv4 Enabled [ xxx.xxx.xx.xx/ ]
DHCPv6 Disabled

Redundancy Mode: balance-rr (RME) cpu-path
active -path:
primary- path:
```

```
all-paths:
Statistics
  LastClear: 0s
Input:
  Total pkts: 342804
  Discard pkts: 0
  Error pkts: 0
  CRC Errors: 0
  MCast pkts: 0
  Octets: 3674266
Out:
  Total pkts: 33046
  Discard pkts: 0
  Errors pkts: 0
  MCast pkts: 0
  Octets: 3674266
Rate Info:
  Input: 0.008401 Mbits/sec, 9 pkts/sec 1000000000 speed 0.00% of line-rate
  Output: 0.005520 Mbits/sec, 5 pkts/sec 1000000000 speed 0.00% of line-rate
```

4Oax V2 Setup

This section describes the main configuration steps of the appliance.

Powering Up

The appliance is powered up as soon as it is connected to the power supply. The Power LED on the front panel comes on.

On the appliance front panel:

- The **Status** LED becomes green when the appliance is active. It goes red in case of an alarm.
- The **LINK/ACT** LEDs are on the corresponding active interfaces.

For the appliance to communicate with the Orchestrator, make sure the following is true:

- The appliance IP address can be seen by the Orchestrator.
- All firewalls are programmed to allow communication.

Checking the Configuration

After you have configured the appliance, check the following:

Checking the Appliance State and the Physical Layer

To check the appliance state and the Physical layer, you can check the LEDs on the front panel of the appliance.

LED Type	Normal Operation	In Case of Problem
Power LED	Steady green	Off: Check that the appliance is connected to the mains. Flashing green: The appliance is not synchronized. Red: - The appliance processing capability has been exceeded. The appliance will not be measuring or controlling the traffic; use a higher model of appliance. - The LAN port is down; check the LAN LINK LED. - The WAN port is down; check the WAN LINK LED.
Status LED	Steady green: The appliance has been configured and enabled in ExtremeCloud SD-WAN.	Off: The appliance is not configured or enabled in ExtremeCloud SD-WAN.
HDD LED	Any state: The state of this LED does not matter.	
WAN LINK/ACT LED	Blinking amber	Off: The Ethernet port is down; check with WAN 100/1000 LED. There is no traffic crossing the appliance. (This may be normal if installed on an inactive link.)
WAN 100/1000 LED	Amber: Connected to Ethernet 1000 base TX segments Green: Connected to Ethernet 100 base TX segments Off: Connected to Ethernet 10 base TX segments	Off: - Normal if connected to Ethernet 10 base TX segments - Indicates port failure if connected to Ethernet 1000 base TX or 100 base TX segments - Check the Ethernet cable being used on the WAN interface (must be a crossover cable) - Check the connection to the CPE router - Check the CPE port state

Checking IP Connectivity

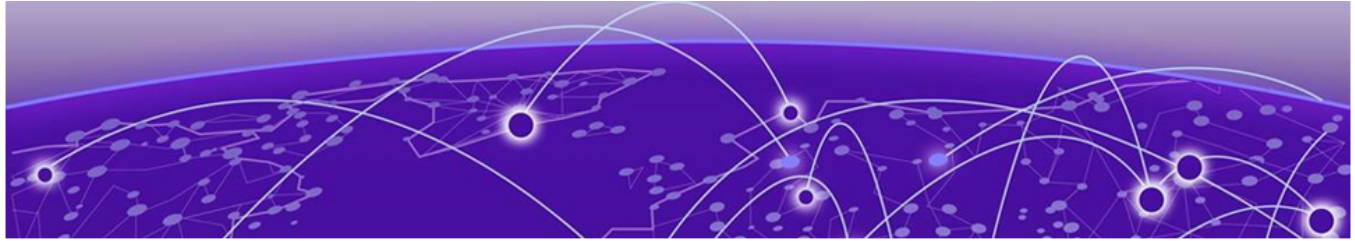
Use the Ping <ip address> command to verify connectivity.

```
C:\Users\dgo>ping xxx.xxx.xx.xx

Pinging xxx.xxx.xx.xx with 32 bytes of data:
Reply from xxx.xxx.xx.xx: bytes=32 time=48ms TTL=60
Reply from xxx.xxx.xx.xx: bytes=32 time=48ms TTL=60
```

```
Reply from xxx.xxx.xx.xx: bytes=32 time=67ms TTL=60
Reply from xxx.xxx.xx.xx: bytes=32 time=45ms TTL=60
Ping statistics for xxx.xxx.xx.xx:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 45ms, Maximum = 67ms, Average = 52ms

C:\Users\dgo>
```



Appliance Model 420ax

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- [Connections](#) on page 26
- [420ax Setup](#) on page 27

This chapter describes the characteristics and hardware elements of the appliance. It also explains the different connection modes according to the available appliance connectors.



Figure 4: Appliance 420ax Single Model

What's in the Box?

P/N	Description	Quantity
8913055-00	ZW00096 ipe-420ax-base	1
9037614-00	ZV00292 DOC FAST INSTALL SD-WAN	1
9037616-00	ZV00296 DOC DIRECTIVES IPE420ax	1
8913043-00	ZV00051 Cable CONSOLE 30ax/40axV2	1
8913044-00	ZV00028 Cable ETH UTP CAT5E Crossed	2
8913045-00	ZV00266 Power Cord C13/C14	1

A straight cable (category 5 cable, max. length 100 m) is also required, to connect to the LAN, but not supplied.

For a description of the cables provided, see [Connections](#).

**Warning**

Do not immediately power on an appliance that has been stored at a low or high temperature. Wait until the appliance temperature has reached the ambient temperature before connecting it to the power supply.

Installation in a Rack

Install the appliance 420ax in a rack. You can also lay it on a table. Make sure it lays flat, and it is stable.

**Warning**

Whatever method of installation is used, do not obstruct the ventilation openings of the case.

Choose a suitable location for the rack unit that will hold your appliance. It should be situated in a clean, dust-free and well-ventilated area. Avoid areas where heat, electrical noise, and electromagnetic fields are generated. You will also need it placed near a grounded power outlet.

Preparing for Setup

The box that your appliance was shipped in should include four mounting screws that you will use to install the appliance into the rack.

The only tool that you need is a screwdriver.

Choosing a Setup Location

- Leave enough clearance in front of the rack to enable you to open the front door completely (~60 cm / 25 inches).
- Leave approximately 75 cm / 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.

Install this product in a Restricted Access Location (for example, dedicated equipment rooms, service closets, and similar environments).

Rack Precautions

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In a single rack installation, stabilizers should be attached to the rack.
- In multiple rack installations, the racks should be coupled together.
- Always make sure that the rack is stable before extending a component from the rack.
- You should extend one component at a time only. The rack may become unstable if you extend two or more components simultaneously.

General Precautions

- Review the electrical and general safety precautions that came with your appliance.
- Determine the placement of each component in the rack.
- Install the heaviest component on the bottom of the rack first, and then work up.
- Use a regulating, uninterruptible power supply (UPS) to protect the appliance from power surges, voltage spikes, and to keep your system operating in case of a power failure.
- Allow the hard drives and power supply modules to cool before touching them.
- To maintain proper cooling, keep the rack's front door closed, as well all panels and all components on the servers, unless they are being serviced.

Rack Mounting Considerations

- **Ambient Operating Temperature:** If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the appliance in an environment compatible with the maximum rated ambient temperature (TMRA).
- **Reduced Airflow:** Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.
- **Mechanical Loading:** Equipment should be mounted into a rack so that hazardous conditions do not arise due to uneven mechanical loading.
- **Circuit Overloading:** Consideration should be given to the connection of the appliance to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Reliable Ground:** A reliable ground must be always maintained. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (for example, the use of power strips and other devices).

Rack Mounting Instructions

There are a variety of rack units on the market, which means that the assembly procedure may differ slightly. You should also refer to the installation instructions that came with the rack unit that you are using.

Installing the Appliance into a Rack

1. Make sure you have the four mounting screws required to mount the appliance into the rack, and the screwdriver.
2. Hold the appliance upright and align the holes of its brackets with the holes of the rack.
3. Insert the mounting screws into the holes in the front of the appliance's brackets and through the holes in the rack and screw them securely.

The controls and connections of the appliance will be located at the front of the rack.

Connections

All the connectors on the front panel are clearly labeled.



Figure 5: 420ax Front Panel

The power connector is on the rear side and has no label.



Figure 6: 420ax Rear Panel

Mains Power Connection

The mains lead supplied is connected to:

- A grounded mains power source
- The power socket on the rear panel of the appliance

Console Connection

The console connection is used to locally configure the appliance with a laptop or PC (first installation for instance).

Connect the supplied console cable to:

- The Console socket on the front panel of the appliance
- The appropriate socket on the station.



Note

The console cable is different from the other cables. Make sure you are using the right cable.

Router Auxiliary Port Connection

Instead of using a direct connection between a station and the appliance console port, it is possible to connect through a Cisco router's auxiliary port, thus allowing the user to take control of the appliance via the router in case of network problem for instance.

Connect the router auxiliary port cable (supplied) to:

- The Console socket on the front panel of the appliance
- The auxiliary port on the router

Configuration of a Cisco router: configure the auxiliary port (conf term, line aux 0, transport input all), check the port (show line) and add 2000 when using Telnet —

e.g. if the port used is 65, connect to the appliance typing `telnet <router_IP_address> 2065` on the station.

Replacement of the SATA HDD/SDD Trays

The right part of the front panel of the case hosts two 2.5" SATA HDD/SSD trays. These trays can be replaced.



Warning

Do not remove these trays when the appliance is powered on.

1. Switch the appliance off.
2. Extract the tray to be replaced.
3. Insert the new tray into the appropriate slot, according to the diagram located on the tray.
4. Switch the appliance on.

The two SATA HDD/SSD trays are mandatory pieces of equipment, since the operating system and configuration files are loaded on them.

420ax Setup

This section describes the main configuration steps of the appliance.

Powering Up

Power up the appliance by plugging the AC power cable into the Mains Connection Socket. The **POWER** LED comes on.

On the appliance front panel, the other network LEDs (STATUS, HDD, ..., LAN, WAN, etc.) come on according to existing connections.

For the appliance to communicate with the Orchestrator, make sure the following is true:

- The appliance IP address can be seen by the Orchestrator.
- All firewalls are programmed to allow communication.

Checking the Configuration

After you have configured the appliance, check the following:

Checking the Appliance State and the Physical Layer

To check the appliance state and the Physical layer, you can check the LEDs on the front panel of the appliance.

LED Type	Normal Operation	In Case of Problem
Power LED	Steady green	- If off, check that the appliance is connected to the mains. - If flashing green, the appliance is not synchronized. - If red: - The appliance processing capability has been exceeded. While in this state, the appliance is neither measuring or controlling the traffic. You should use a higher model of appliance on that link. - Or the LAN port is down. Check the LAN LINK/ACT LED. - Or the WAN port is down. Check the WAN LINK/ACT LED.
Status LED	Steady green if the appliance has been configured and enabled in ExtremeCloud SD-WAN.	Off otherwise.
HDD LED	State does not matter.	
LINK/ACT LED (LAN1 port)	Blinking green	If off: - Either the Ethernet port is down: Check the LAN1 SPD LED. - Or there is no traffic crossing the appliance (it may be normal if it is installed on a link which is not yet active).
SPD LED (LAN1 port)	- Amber (if connected to an Ethernet 1000 base TX segment) - Green (if connected to an Ethernet 100 base TX segment) - Off (if connected to an Ethernet 10 base TX segment) It should be blinking if traffic is crossing the appliance.	- If off, it can be normal if connected to an Ethernet 10 base TX segment, but it can also indicate a port failure when connected to an Ethernet 1000 base TX or 100 base TX segment. - Check the Ethernet cable being used on the LAN interface. (It must be a straight cable.) - Check the connection to the switch (or to the hub). - Check the switch (or hub) port state.

Checking IP Connectivity

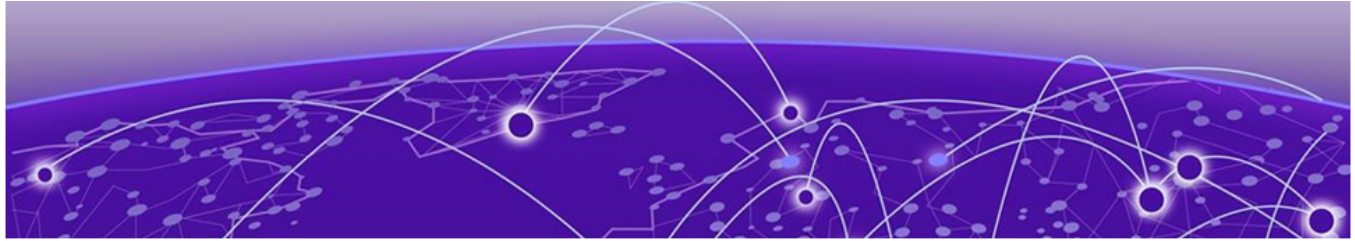
Use the Ping <ip address> command to verify connectivity.

```
C:\Users\dgo>ping xxx.xxx.xx.xx

Pinging xxx.xxx.xx.xx with 32 bytes of data:
Reply from xxx.xxx.xx.xx: bytes=32 time=48ms TTL=60
Reply from xxx.xxx.xx.xx: bytes=32 time=48ms TTL=60
```

```
Reply from xxx.xxx.xx.xx: bytes=32 time=67ms TTL=60
Reply from xxx.xxx.xx.xx: bytes=32 time=45ms TTL=60
Ping statistics for xxx.xxx.xx.xx:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 45ms, Maximum = 67ms, Average = 52ms

C:\Users\dgo>
```



Appliance Model 2200ax-F / 2200ax-T

[What's in the Box?](#) on page 30

[Installation in a Rack](#) on page 31

[Preparing for Setup](#) on page 31

[Rack Mounting Instructions](#) on page 32

The 2200ax-F and 2200ax-T appliances share the same hardware characteristics and installation procedure. The installation steps described in this section apply to both models unless otherwise specified.

Install the appliance 2200ax-F / 2200ax-T in a rack. You can also lay it on a table. Make sure it lays flat and is stable.



Warning

Whatever installation method is used, do not obstruct the ventilation openings on the front and rear panels of the case.

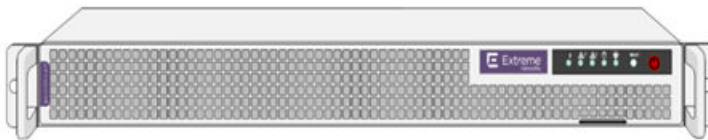


Figure 7: Appliance Model 2200ax-F and 2200ax-T Model Series

What's in the Box?

P/N	Description	Quantity
IPE-2200AXF-BASE / IPE-2200AXT-BASE	IPE APPL ipe-2200ax-F BASE or IPE APPL ipe-2200ax-T BASE (depending on the model)	1
9037498-01	MAN DIRECTIVES IPE 2200AX	1
9037614-00	ZV00292 DOC FAST INSTALL SD-WAN	1
8913056-00	ZV00025 Cable CONSOLE 40ax/400ax/ 2000ax	1
8913057-00	ZV00266 Power Cord C13/C14	2
8913059-00	ZV00263 VSP KIT SCREW 1U SUPERMICRO	1
8913060-00	ZV00262 MEC LONG SLIDERS 1U SM	2

Installation in a Rack

Choose a suitable location for the rack unit that will hold your appliance. It should be situated in a clean, dust-free and well-ventilated area. Avoid areas where heat, electrical noise, and electromagnetic fields are generated. You will also need it placed near a grounded power outlet.

Preparing for Setup

Please read this section in its entirety before you begin the installation procedure outlined in the sections that follow.

Choosing a Setup Location

Consider the following when choosing a setup location:

- Leave enough clearance in front of the rack to enable you to open the front door completely (~60 cm / 25 inches).
- Leave approximately 75 cm / 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing.
- This product is for installation only in a Restricted Access Location (dedicated equipment rooms, service closets and similar environments).

Rack Precautions

Take the following precautions when setting up the rack:

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In single rack installation, stabilizers should be attached to the rack.
- In multiple rack installations, the racks should be coupled together.
- Always make sure the rack is stable before extending a component from the rack.
- You should extend only one component at a time. Extending two or more simultaneously may cause the rack to become unstable.

Appliance Precautions

Take the following precautions when setting up the appliance:

- Review the electrical and general safety precautions that came with the components you are adding to your chassis.
- Determine the placement of each component in the rack before you install the rails.
- Install the heaviest component on the bottom of the rack first and then work up.
- Use a regulating, uninterruptible power supply (UPS) to protect the appliance from power surges, voltage spikes and to keep your system operating in case of a power failure.
- Allow the hard drives and power supply modules to cool before touching them.
- Always keep the rack's front door, all panels and components on the appliance closed when not servicing, to maintain proper cooling.

Rack Mounting Considerations

Consider the following when mounting the appliance in the rack:

- **Ambient Operating Temperature:** If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the appliance in an environment compatible with the maximum rated ambient temperature (TMRA).
- **Reduced Airflow:** Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.
- **Mechanical Loading:** Equipment should be mounted into a rack so that hazardous conditions do not arise due to uneven mechanical loading.
- **Circuit Overloading:** Consideration should be given to the connection of the appliance to the power supply circuitry and the effect that any possible overloading of circuits might have on overcurrent protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Reliable Ground:** A reliable ground must be always maintained. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (for example, the use of power strips, and other devices).

Rack Mounting Instructions



Note

The appliance chassis can be used normally with or without a rack.

This section provides information on installing the appliance into a rack unit with the rails provided. There are a variety of rack units on the market, which may mean the assembly procedure will differ slightly. You should also refer to the installation instructions that came with the rack unit you are using.

The chassis package includes two sets of rack rails, one set for the right side of the chassis and one for the left. Each set includes the outer rail pieces that attach to the rack. The outer rails accept an inner rail that is pre-attached directly to the chassis.



Important

The rackmount kit included with the IPE-2200 appliance supports rack from **26"** to **33.5"** deep.

If your rack depth is outside this range, use a compatible alternative rackmount kit.

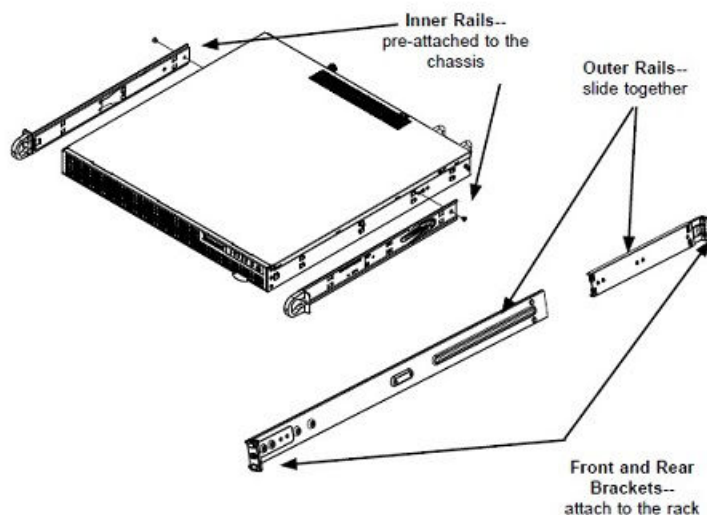


Figure 8: Assembling Outer Rails

Assembling the Outer Rails

Each outer rail comes in two sections that must be assembled before mounting onto the rack.

1. Identify the left and right outer rails by examining the ends, which bend outward. Match the left front outer rail with the left rear outer rail and the same for the right rails.
2. Align the round post in the rear rail (B) with the round hole at the end of the slot in the front rail (A) and slide the front section into the rear section.

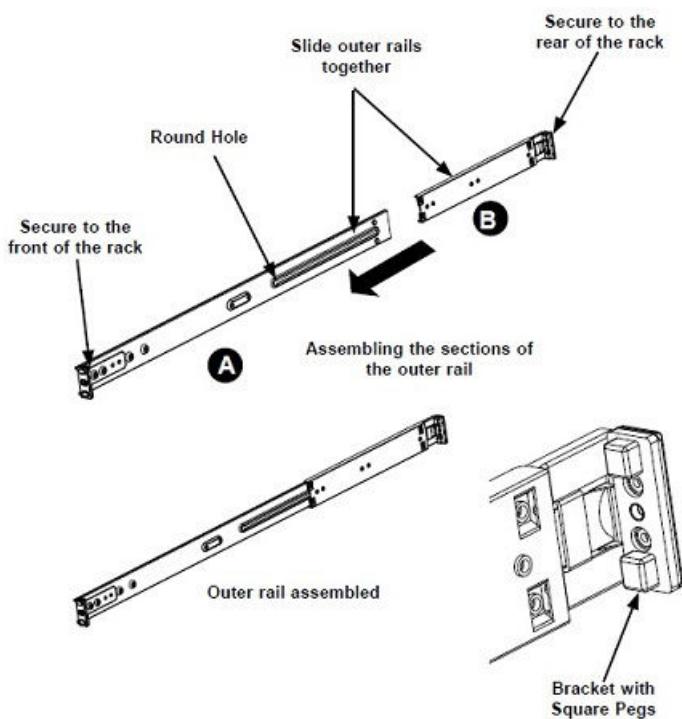


Figure 9: Assembling Outer Rail Sections

Installing the Outer Rails onto the Rack

Each end of the assembled outer rail includes a bracket with square pegs to fit into your rack holes. If you have an older rack with round holes, these brackets must be removed, and you must use screws to secure the rail to the rack.

1. Align the square pegs on the front end of the rail with the square holes on the front of the rack (C). Push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack. Keep the rail horizontal.
2. Adjust the rail to reach the full depth of your rack.
3. Align the square pegs on the rear end of the rail to the holes on the rack (D) and push the rail into the rack until the quick release bracket snaps into place, securing the rail to the rack.
4. Repeat the procedure for the other outer rail assembly.

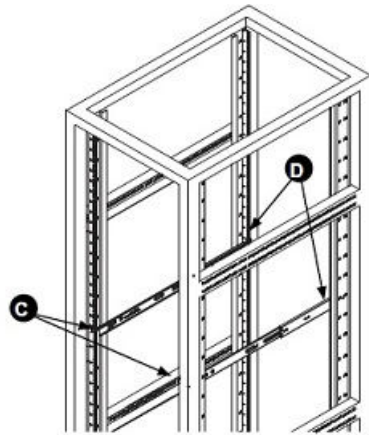


Figure 10: Installing Outer Rails on Rack



Note

The figure above is for illustrative purposes only. Always install servers at the bottom of the rack first.

Sliding the Appliance onto the Rack Rails

1. Align the chassis rails with the front of the rack rails.
2. Slide the chassis rails into the rack rails, keeping the pressure even on both sides. The spring latch engages when the chassis is part way in. Push the appliance completely into the rack.

3. Insert and tighten the thumbscrews that hold the front of the appliance to the rack.

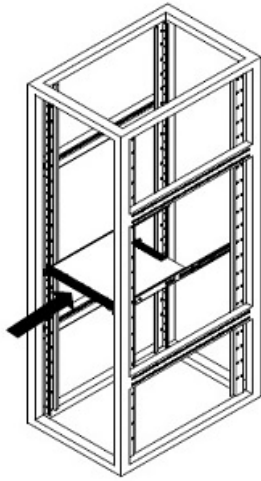


Figure 11: Slide Appliance onto Rack



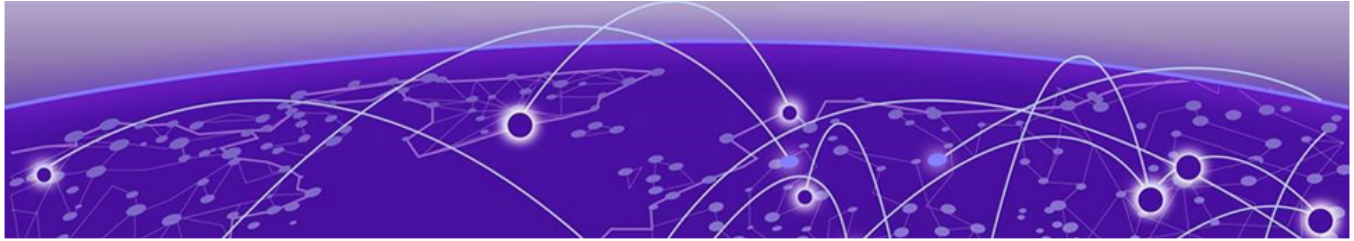
Note

The figure above is for illustrative purposes only. Always install servers at the bottom of the rack first.



Warning

Do not pick up the appliance with the front handles. They are designed to pull the system from a rack only.



Technical Support

[General Information](#) on page 36

This chapter explains how to get support from Extreme Networks Support teams.



Warning

Do not attempt to repair the equipment yourself. Do not remove ExtremeCloud SD-WAN Appliances covers and casings. This would void any warranty.

General Information

Refer to your support and maintenance contract for details about the services provided. If you encounter a problem with your system, contact your supplier for technical assistance.

You can also obtain support and additional information from the ExtremeCloud OS ONE SD-WAN Support website. The website provides access to the Public Knowledge Database, technical notes, FAQs, the latest updates and developments, ExtremeCloud OS ONE SD-WAN software downloads, and tools to create and track support tickets.

An account is created on demand.

When contacting technical support, provide the following information:

- Name, address, telephone number and the name of your company.
- ExtremeCloud OS ONE SD-WAN license number, see the **About** window in the SD-WAN Domain Configuration software, field **Reference**.
- Name, version and serial number of the products you are using.
- The operating system version of the ExtremeCloud OS ONE SD-WAN Domain Configuration software server.
- A description of the installed configuration and the configuration files.
- A detailed description of the problem encountered.