CSX4000 Series Hardware Guide

At a Glance

The Versa Cloud Services Switch (CSX) 4000 series appliances are next-generation software-defined LAN (SD-LAN) edge and access layer appliances that combine an Ethernet switch chipset with an x86-based processor subsystem. CSX4000 series appliances deliver carrier-grade reliability, line-rate Ethernet switching, and built-in x86-based computational power to provide enterprise-grade routing, SD-LAN services, and integrated security.

CSX4000 series appliances run Versa Operating System™ (VOS™) software, which provides comprehensive integrated security, including the following:

- NGFW, UTM, ZTNA
- On-premises ZTNA
- Next-generation software-defined access
- Fully secure software-defined perimeter
- Application intelligence and application policy–based forwarding capabilities
- Line-rate Layer 2 and Layer 3 forwarding and switching
- Scalable advanced routing
- Genuine multitenancy
- Big-data–based analytics

The CSX4000 series appliances with VOS software are ideal for enterprise branch and campus LAN edge deployments, offering natively built-in security and connectivity capabilities. The appliances enable secure, scalable, and reliable enterprise-wide LAN networking solutions.

Versa Networks management and control software, including Versa Director and Versa Analytics, support CSX4000 series appliances. Versa Director supports configuration, monitoring, and provisioning of CSX4000 series appliances, and Versa Analytics provides device, network, and security analytics. Managed service providers (MSPs) and enterprises of all sizes can deploy CSX4000 series appliances for scalable managed services.

CSX4000 series appliances deliver carrier-grade reliability, high performance, line-rate switching, and high computational capacity for enterprise-grade routing, SD-WAN, next-generation security, and uCPE scenarios. They are designed for deployment in large enterprise branches, campus sites, and data centers that require advanced secure SD-WAN along with comprehensive advanced application and cloud-intelligent SD-WAN services on-premises.

CSX4000 series appliances offer LAN edge or access and high-speed uplink ports to provide nonblocking, high-

performance LAN solutions. CSX4000 switching ports are highly scalable, and the Ethernet switch chipset provides single-rate Gigabit Ethernet and multirate Gigabit Ethernet ports with built-in Power over Ethernet ++ (PoE++) capabilities. CSX4000 LAN edge Ethernet switches offer 25/10 Gigabit Ethernet and 100 Gigabit Ethernet to provide high-speed connectivity to other network elements in the LAN environment.

CSX4000 series appliances have x86 processor computational capacity and high-capacity memory and storage that allow you to run VOS stateful functions in highly scalable forms. You can use the built-in computational capacity to host third-party virtual machines (VMs) and simplify network deployments, thus eliminating the need for consolidating multiple appliances and functions, such as additional compute blades, other standalone hardware platforms, and separate firewalls.

CSX4000 series appliances integrate a TPM chip with cryptographic acceleration to ensure the integrity and security of data, such as encryption and authentication keys. CSX4000 series appliances have a secure BIOS and secure boot capabilities.

CSX4000 series appliances provide the following features:

- Networking interfaces
  - Ethernet switching for CSX4300
    - 48 1-Gigabit Ethernet PoE++ (90 W) ports for LAN edge/access interfaces
    - Four SFP28 25/10-Gigabit Ethernet ports for switch interfaces
    - Two QSFP28 100-Gigabit Ethernet ports for switch interfaces
  - Ethernet switching for CSX4500
    - 12 PoE++ (90 W) 10/5/2.5/1-Gigabit Ethernet ports for LAN edge/access interfaces
    - 36 PoE++ (90 W) 2.5/1-Gigabit Ethernet ports for LAN edge/access interfaces
    - Four SFP28 25/10-Gigabit Ethernet ports for switch interfaces
    - Two QSFP28 100-Gigabit Ethernet ports for switch interfaces
- Management interfaces
  - One Gigabit Ethernet-over-copper dedicated management port
  - One RJ45 RS232 console port
- Two USB ports for plugging in external LTE or WiFi modems
- PoE source support on four Ethernet ports
- Two built-in wireless slots
- GPS connector for geographical location
- Internal hot-swappable AC power supply
- Fan for cooling
- Fixed chassis with no field-replaceable parts
- Desktop mount or rack-mountable in a 19-inch rack

CSX4000 Appliance Models

The CSX4000 series appliances are available in the following models:

- CSX4300—Powerful appliance for deployment in large enterprise branch or campus sites for networks that require advanced switching and routing, secure SD-WAN, and comprehensive application and cloud-intelligent SD-WAN services on-premises. The CSX4300 appliance has 64 GB of SSD storage.
- CSX4500—Higher-performance appliance for deployment in large enterprise branch, campus, or data center locations for networks that require advanced switching and routing, secure SD-WAN, and comprehensive advanced application and cloud-intelligent SD-WAN services on-premises. The CSX4500 appliance has 128 GB of SSD storage.

Chassis Views

The CSX4300 and CSX4500 series appliances are physically identical. The front panel is the side of the appliance with LEDs for status and power, a soft reset button, and ports. It also has integrated rack-mount ears for installation in standard 19-inch racks. This is the side that is visible when you install the appliance in an office environment. The rear panel has the hot-swappable power supply units, ground contact, and cooling fans. This is the rear side when you mount the appliance in a 19-inch rack.

CSX4000 Series Appliance Specifications

This article lists the chassis and regulatory compliance specifications for the Cloud Services Switch (CSX) 4000 series appliances. It also lists the certifications and export control classification numbers (ECCNs) for the appliances.

Chassis Specifications

CSX4300 Appliance

Table 1 lists the chassis specifications for a CSX4300 appliance.

Table 1: CSX4300 Appliance Chassis Specifications

Item	Specification
Services and Slot Density	
1-Gigabit Ethernet RJ-45 RS232 serial console port	1
1-Gigabit Ethernet copper management port	1
1-Gigabit Ethernet Power over Ethernet (PoE)++ (90 W) ports for LAN edge/access interfaces	48

Item	Specification
25/10-Gigabit Ethernet SFP28 ports for switch interfaces	4
100-Gigabit Ethernet QSFP28 ports for switch interfaces	2
External USB ports (USB 2.0)	1 (2)
LTE wireless interfaces	2
SSD	64 GB (128 GB)
TPM	Yes
Cryptographic acceleration	Built-in hardware crypto offload engine
Power supply	Field replaceable, redundant, and hot-swappable 2 x 1000 W (115 VAC) or 1200 W (230 VAC) PSU
Power Specifications	
AC input voltage	100–240 Volts
AC input line frequency	50–60 Hz
Maximum power rating	1000 W or 1200 W
Chassis Physical Specifications	
Height	1.73" (44 mm)
Width	17.32" (440 mm)
Depth	18.50" (470 mm)
Weight	16.91 lb (7.67 kg)
Rack height	1 RU
Package Specifications	
Height	9.64" (245 mm)
Width	23.62" (600 mm)
Depth	28.34" (720 mm)
Weight	19.84 lb (9 kg)
Operating Conditions	

Item	Specification
Temperature	0°C to 45°C (32°F to 113°F) at sea level
Humidity	15% to 90% non-condensing
System cooling	Front-to-back cooling with FRU fans with built-in 3+1 redundancy
Acoustic noise level	Idle: 52.3 dBA Full load: 66.8 dBA
Storage Conditions	
Temperature	–20°C to 70°C (–4°F to 158°F) at sea level
Humidity	15% to 90%

CSX4500 Appliance

Table 2 lists the chassis specifications for a CSX4500 appliance.

Table 2: CSX4500 Chassis Specifications

Item	Specification
Services and Slot Density	
1-Gigabit Ethernet RJ-45 RS232 serial console port	1
1-Gigabit Ethernet copper management port	1
10/5/2.5/1-Gigabit Ethernet PoE++ (90 W) ports for LAN edge/access interfaces	12
2.5/1-Gigabit Ethernet PoE++ (90 W) ports for LAN edge/access interfaces	36
25/10-Gigabit Ethernet SFP28 ports for switch interfaces	4
100-Gigabit Ethernet QSFP28 ports for switch interfaces	2
External USB ports (USB 2.0)	1 (2)
LTE wireless interfaces	2
SSD	128 GB

Item	Specification
TPM	Yes
Cryptographic acceleration	Built-in hardware crypto offload engine
Power supply	Field replaceable, redundant, and hot-swappable 2 x 1000 W (115 VAC) or 1200 W (230 VAC) PSU
Power Specifications	
AC input voltage	100–240 Volts
AC input line frequency	50–60 Hz
Maximum power rating	1000 W or 1200 W
Power supply efficiency rating	Platinum (80 Plus) or better
Chassis Physical Specifications	
Height	1.73" (44 mm)
Width	17.32" (440 mm)
Depth	18.50" (470 mm)
Weight	16.91 lb (7.67 kg)
Rack height	1 RU
Package Specifications	
Height	9.64" (245 mm)
Width	23.62" (600 mm)
Depth	28.34" (720 mm)
Weight	19.84 lb (9 kg)
Operating Conditions	
Temperature	0°C to 45°C (32°F to 113°F) at sea level
Humidity	15% to 90% non-condensing
System cooling	Front-to-back cooling with FRU fans with built-in 3+1 redundancy

Item	Specification
Acoustic noise level	Idle: 52.3 dBA Full load: 66.8 dBA
Storage Conditions	
Temperature	–20°C to 70°C (–4°F to 158°F) at sea level
Humidity	15% to 90%

Regulatory Compliance

Table 3 lists the regulatory compliance specifications for the CSX4000 series appliance.

Table 3: CSX4000 Series Regulatory Compliance Specifications

Item	Specification
Safety	2014/35/EU • UL/CSA62368-1 • IEC60950-1 • IEC62368-1
Security	TPM 2.0
EMC	FCC Part 15, Class A (US), CE (EU), CB (IEC)
Environmental	RoHS 2.0

Certifications

CSX4000 series appliances comply with the certificates listed in Table 4.

Table 4: CSX4000 Series Certifications

Region	Certifications
European Union	Safety and EMC

Region	Certifications
	• EN 60950-1:2005 • EN 62368-1:2014 • CE—EU Directive 2014/35/EU 2014/30/EU
Japan	VCCI—CISPR 32:2016 Class A
United States	EMI and wireless • FCC 47 CFR Part 15, Subpart B, Class A • ANSI C63.4-2014

Export Control Information

Table 5 lists the ECCN, HTS, and CCATS numbers for a CSX4000 series appliance.

Table 5: ECCN, HTS, and CCATS Numbers

Item	ECCN Number	HTS Number	CCATS Number	Versa Use of Item
Embedded SSL software module	5E002	8542310000	G161333	SSL VPN proxy
IPsec toolkit used by Versa Operating System™ (VOS™) devices	5D002	8542310000	G161333	IPsec cryptographic module
Hardware-based encryption and decryption	5A002U	8542310001	G156910L1	CSX4000 appliance

Restriction-Level Information

A CSX4000 series appliance complies with the restriction level listed in Table 6.

Table 6: CSX4000 Series Restriction Level Information

Versa Product	ECCN Number	HTS Number	CCATS Number	Export Classification Details	Encryption Status	Encryption Eligibility
CSX4000 series appliances	5A002A	8517620090	G193234	CSX4000 export classification number assigned by BIS	Restricted	740.17(A) and (B)(2)(i)(A)

Front and Rear Panel Components

This article describes the front and rear panel components of a Cloud Services Switch (CSX) 4000 series appliance. For the exact location of these components on the appliance, see At a Glance.

Front Panel

The front panel of a CSX4000 series appliance has a power button, a reset button, and six status LEDs located in two rows.

LEDs

Status LEDs provide the operational status of the appliance, interfaces, and Bluetooth, WLAN, and LTE connections. Table 1 lists the LEDs, their colors and states, and the status they indicate.

Table 1: Front Panel LEDs in a CSX4000 Series Appliance

LED	Color	Status
Power	Green	• Off—Appliance is not powered on. • Green—Appliance is powered on.
Status	Green, Red	• Off—Appliance hardware is up, but there is a problem with the configuration or software. • Solid green—Controller

LED	Color	Status
		connection is up and running, and probes and control plane packets are being transmitted. • Blinking green—Controller connection is in the process of being established. • Solid red—Controller or CA has rejected this appliance, there is a certificate mismatch, or the appliance is unreachable. • Blinking red—Controller is unreachable or unresponsive.
Cloud	Green, Red	Currently not supported.
Wireless	White	• Off—Wireless module is not installed. • Solid white—Wireless module is up and running. • Blinking white—Wireless module is booting.
LTE	White	• Off—LTE module not installed or not connected. • Solid white—LTE module is up and running. • Blinking white—LTE module is connecting.

Power Button

Pressing the power on/standby button on the front panel of a CSX4000 series appliance turns on the power.

To turn the power off, use one of the following methods:

- Press and release the power on/standby button. This method initiates a controlled shutdown of applications and the operating system before the appliance enters standby mode.
- Press and hold the power on/standby button for 4 seconds or more. This method forces the appliance to enter

standby mode without exiting the application and the operating system. If an application stops responding, you can use this method to force a shutdown.

Reset Button

The Reset button on the front panel of a CSX4000 series appliance resets the appliance to the factory-default settings. The reset functionality depends on the number of times you press the button within a span of 30 seconds, as described in Table 3. In between each press of the reset button, you must pause for a second to register the key press.

The Reset button is recessed so that it is not accidentally pressed while the appliance is operational.

To press the Reset button, use a sharp, narrow tool.

Table 3: Reset Button Press Behavior

Number of Presses	Behavior
2	Reset the appliance to the factory-default snapshot.
4	Reset the appliance to the branch prestaging configuration.
6	Reset the appliance to the branch staging configuration.
8	Reset the appliance to branch post-staging configuration.

Reset the Appliance from the CLI

You can reset the appliance to the factory-default configuration by issuing the **request system reset** CLI command. To do this, your first connect to the appliance through the serial console port or by using SSH.

The factory-default reset procedure can take up to 20 minutes to complete. Do not power off the appliance during this time.

To reset an appliance to the factory-default configuration:

1. To connect to the appliance through the serial console port, see Configure a Management Console To Connect to a CSX4000 Appliance.
2. To connect to the appliance using SSH, connect your PC to the management port of the appliance. The management port has the default static IP address 10.10.10.10/24. Configure the PC IP address to any IP from this segment, for example, 10.10.10.1/24. Open an SSH session to the appliance using its IP address, 10.10.10.10.
3. Log in to the appliance using the username "admin" and the password "versa123".
4. Start the CLI:

   ```
   % cli
   ```

5. Issue the following command to reset the configuration to the factory default. If the current software version on the appliance is the same as that of the factory reset snapshot, the procedure takes about 10 minutes to complete. If the software versions are different, the procedure takes about 20 minutes to complete. Do not power off the appliance during the process.

   ```
   # request system reset
   ```

6. Verify that all Versa services are running by issuing the **vsh status** command from the Linux bash CLI. The following is a sample output of this command. If all the services are shown as stopped, issue the **vsh start** command from the Linux bash CLI to start them manually.

   ```
   # vsh status
   versa-service    is Running, [*] process 6784
   versa-infmgr     is Running, [-] process 5623
   versa-rfd        is Running, [-] process 5838
   versa-vmod       is Running, [-] process 5839
   versa-ip2user    is Running, [-] process 5844
   versa-imgr       is Running, [-] process 5848
   versa-acctmgrd   is Running, [-] process 5845
   versa-fltrmgr    is Running, [-] process 5648
   versa-vstated    is Running, [-] process 5625
   versa-addrmgrd   is Running, [-] process 5857
   versa-rt-cli-xfm is Running, [-] process 5798
   versa-rtd        is Running, [-] process 5827
   versa-dhcpd      is Running, [-] process 5620
   versa-eventd     is Running, [-] process 5843
   versa-vrrpd      is Running, [-] process 5643
   versa-dnsd       is Running, [-] process 5646
   versa-ppmd       is Running, [-] process 5793
   versa-snmp-xform is Running, [-] process 5800
   versa-certd      is Running, [-] process 5849
   versa-ntpd       is Running, [*] process 5612
   versa-dhclient6  is Running, [-] process 5807
   versa-redis      is Running, [-] process 6927
   versa-av-redis   is Running, [-] process 5003
   versa-spackmgr   is Running, [-] process 5832
   versa-monit      is Running, [*] process 6078
   versa-confd      is Running, [*] process 4798
   versa-fail2ban   is Running, [*] process 6093
   versa-auditd     is Running, [*] process 6116
   versa-nodejs     is Running, [-] process 5775
   ```

7. Power off the appliance:

   ```
   # sudo poweroff
   ```

Rear Panel

The rear panel of a CSX4000 series appliance has the following components:

- Two hot-swappable power supply units (PSUs), each 1000 W (115 VAC) or 1200 W (230 VAC), that provide 1+1 redundancy with front-to-back airflow.

- Front-to-back cooling with three FRU fans that provide 2+1 redundancy
- One ground contact

Power Supply and Airflow

This article describes the AC power supply and airflow requirements for Cloud Services Switch (CSX) 4000 series appliances.

AC Power Supply

By default, CSX4000 series appliances ship with field-replaceable, redundant, and hot-swappable 1000 W (115 VAC) or 1200 W (230 VAC) AC power supply units (PSUs). The power supplies are modular and can be removed from the appliance.

Table 1 describes the AC power supply specifications for each power supply unit.

Table 1: CSX4000 AC Power Supply Specifications

Item	Specification
AC input voltage	100–240 V
AC input line frequency	50–60 Hz
Power type	Field replaceable 1+1 redundant
PSU	Field replaceable unit (FRU) 1000 W or 1200 W, hot-swappable

Airflow Requirements

The CSX4000 series appliances have 2+1 redundant fans, which are hot swappable in the field. The fans provide front-to-back cooling.

Installation Guidelines

This article provides general safety standards and warnings related to installing or connecting a Cloud Services Switch (CSX) 4000 series appliance.

General Safety Guidelines

Caution: Before installing or removing a CSX4000 series appliance, ensure that the appliance chassis is electrically

connected to ground. When you are installing or removing an appliance, ensure that you wear an ESD grounding wrist strap. To put the ESD grounding strap on properly, attach it to an ESD point and then place the other end of the strap around your bare wrist, making good skin contact. Failure to use an ESD grounding strap could damage the appliance.

- Install the CSX4000 series appliance in compliance with the following local, national, and international electrical codes:
  - United States—National Fire Protection Association (NFPA 70), United States National Electrical Code.
  - Other countries—International Electromechanical Commission (IEC) 60364, Part 1 through Part 7. Evaluated to the TN power system.
  - Canada—Canadian Electrical Code, Part 1, CSA C22.1.
- Locate the emergency power-off switch in the installation area. In case of an electrical accident, turn off the power quickly.
- Disconnect power to the appliance before installing or removing it.
- Disconnect power from the circuit that is being used for the appliance.
- If hazardous conditions exist, do not work alone.
- If you are working under conditions that might be hazardous to the eyes, wear safety glasses or goggles.

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by using one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be collocated or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement

This equipment complies with CE and FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm (8") between the radiator and your body.

Warning: Operation of this equipment in a residential environment could cause radio interference.

Warning: Operation of this equipment is for indoor use only.

Prepare the Site for Installation

To prepare your site for installing a Cloud Services Switch (CSX) 4000 series appliance, follow the guidelines and requirements listed in this article.

Site Preparation Guidelines

- Install the appliance in an enclosed and secure environment, and allow only authorized personnel to access the device.
- Keep the area around the appliance free from dust.
- Follow ESD prevention procedures to avoid any damage to the appliance.
- When planning your site for installing a CSX4000 series appliance in a 19-inch rack, keep in mind that the front side of the rack is the cool area, and the rear side is where hot air exits from the fan. Ensure that there is space on the rear side of the appliance to allow air to exit from the fan.

Environmental Requirements

- Ensure that the area in which you operate the appliance has adequate air circulation so that the cooling system functions normally. Ambient air temperature may not be sufficient to cool the chassis to acceptable operating temperatures without adequate circulation.
- Avoid temperature extremes.
- High-humidity conditions can cause moisture to penetrate into the chassis. The appliance can operate in relative humidity of 10 percent to 85 percent, non-condensing.

Rack Requirements

You can mount a CSX4300 or CSX4500 series appliance in a 19-inch, four-post rack using slide rails. Table 1 lists the rack requirements.

Table 1: Rack Requirements for a CSX4000 Series Appliance

Requirement	Guidelines
Rack type	Use a 19-inch four-post rack that has bracket holes spaced at 1-RU (1.75 in. or 4.45 cm) increments and that has panels strong enough to support the weight of the appliance.
Rack size	Comply with the size and strength standards of a 19-inch rack. Ensure that the rack rails are spaced wide enough to accommodate the external dimensions of the appliance chassis. Ensure that the spacing of rails and the adjacent racks allow for proper clearance around the appliance and the rack.
Rack firmly secured to building structure	Secure the rack to floor brackets and to ceiling brackets to ensure maximum stability.

Airflow Requirements

When planning your site for installing a CSX4000 series appliance in a 19-inch rack, keep in mind that the front side of the rack is the cool area, and the rear side is where hot air exits from the fan. Ensure that there is space on the rear side of the appliance to allow air to exit from the fan.

When placing a CSX4000 series appliance on a desk, ensure that there is space on the rear side of the appliance to allow air to exit from the fan. Also ensure that the vents on the side of the unit are never blocked, to allow hot air to flow out of the appliance. Covering the vents prevents heat from dissipating out of the appliance, which can cause the chassis to overheat and then shut down.

Install a CSX4000 Series Appliance

This article provides instructions about how to unpack a Cloud Services Switch (CSX) 4000 series appliance and how to install it.

CSX4000 series appliances have integrated faceplate rack-mount ears for installation into standard 19-inch racks. When you install a CSX4000 series appliance in a 19-inch rack, allow a minimum of 1-RU space on each side of the appliance to allow hot air to flow out of the appliance.

When placing a CSX4000 series appliance on a desk, ensure that the vents on the side of the unit are never blocked, to allow hot air to flow out of the appliance. Covering the vents prevents heat from dissipating out of the appliance, which can cause the chassis to overheat and then shut down.

Unpack a CSX4000 Series Appliance

The CSX4000 series appliance is packed in a plastic bag, and it is shipped in a cardboard carton, secured with foam

packing material. The carton also contains an accessory box. It is recommended that you unpack the appliance only when you are ready to install it.

To unpack a CSX4000 series appliance:

1. Open the top flaps of the cardboard carton.
2. Remove from the box the foam packing material holding the appliance and the accessories in place.
3. Remove the accessory box and the appliance from the foam packing material.
4. Remove the accessories from the accessories box.
5. Verify the components against the packing list that is included in the box.

Note: It is recommended that you save the shipping carton and packing material when unpacking the appliance, in case you need to later move the appliance or return it. See How To Return Hardware.

Packing List for a CSX4000 Series Appliance

The cardboard carton in which a CSX4000 series appliance is shipped contains a packing list. Check the packing list against the parts that you receive in the shipping carton.

Table 1 lists the parts that are shipped with a CSX4300 or CSX4500 appliance.

Table 1: Parts Shipped with a CSX4300 or CSX4500 Appliance

Components	Quantity
CSX4300 or CSX4500 appliance chassis	1
Power cable (U.S. only)	1
Console cable USB to RJ-45	1
Rear-post brackets	2
Rear-post bracket ears	2
Screws for ear locking	2
Screws for rack mounting	4 (size M6)
Screws	20 (size M4)

Warning: This equipment is not suitable for use in locations where children are present.

Mount a CSX4300 or CSX4500 Appliance in a Rack

You can mount a CSX4300 or CSX4500 appliance in a four-post, 19-inch rack.

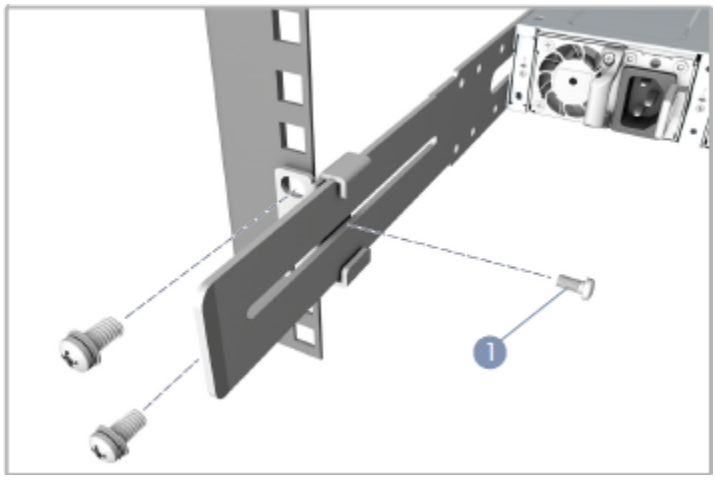
To mount the appliance, ensure that you have the following tools:

- Number 2 Phillips (+) screwdriver
- Tape measure

To mount a CSX4300 or CSX4500 appliance in a four-post, 19-inch rack:

1. Place the appliance chassis on a flat, stable surface.
2. Check the internal dimensions of the rack with a tape measure. The appliance is 43.8 mm wide (about 17.24 inches) and must fit within the mounting posts.
3. Attach the two rear post brackets to the appliance chassis using a minimum of six M4 screws that are shipped with the appliance. Use the rack screws to secure the switch in the rack.

Figure 1: Attach the Mounting Ears to a CSX4000 Series Appliance



5. Lock the position of the rear post bracket ears using the included position-locking screws. You can adjust the rear post bracket ears to fit different rack depths, from 56 cm to 75 cm.

Connect a CSX4000 Series Appliance

This article describes how to connect a Cloud Services Switch (CSX) 4000 series appliance to an AC power source and to a management console.

Versa Networks recommends that you use an uninterruptible power strategy that prevents power interruptions. A UPS can isolate unpredictable power outages or blackouts, brownouts, lightning, power surges, or spikes.

Step 1: Connect AC Power to a CSX4000 Series Appliance

Before you begin connecting AC power to a CSX4000 series appliance, ensure that you have the following:

- Electrostatic discharge (ESD) wrist strap.
- An AC power cord is shipped with the appliances only for U.S. customers. Each power supply has a C14 plug that allows you to plug in standard power cords with C13 termination. The other end of the cord must have appropriate NEMA 5-15 local plug.

To connect a CSX4000 series appliance to an AC power source:

1. Attach one end of the ESD grounding strap to your bare wrist, and connect the other end to the ESD point on the rack.
2. Plug the C13 end of the AC power cord into the CSX4000 series appliance power supply (C14).

3. Plug the NEMA 5-15 end of the AC power cord into an AC power source outlet.

Step 2: Configure a Serial Management Console to Connect to a CSX4000 Series Appliance

The CSX4000 series appliances are equipped with an RJ45 serial console port.

To connect to the console port, use the RJ45-to-USB serial console supplied with the appliance:

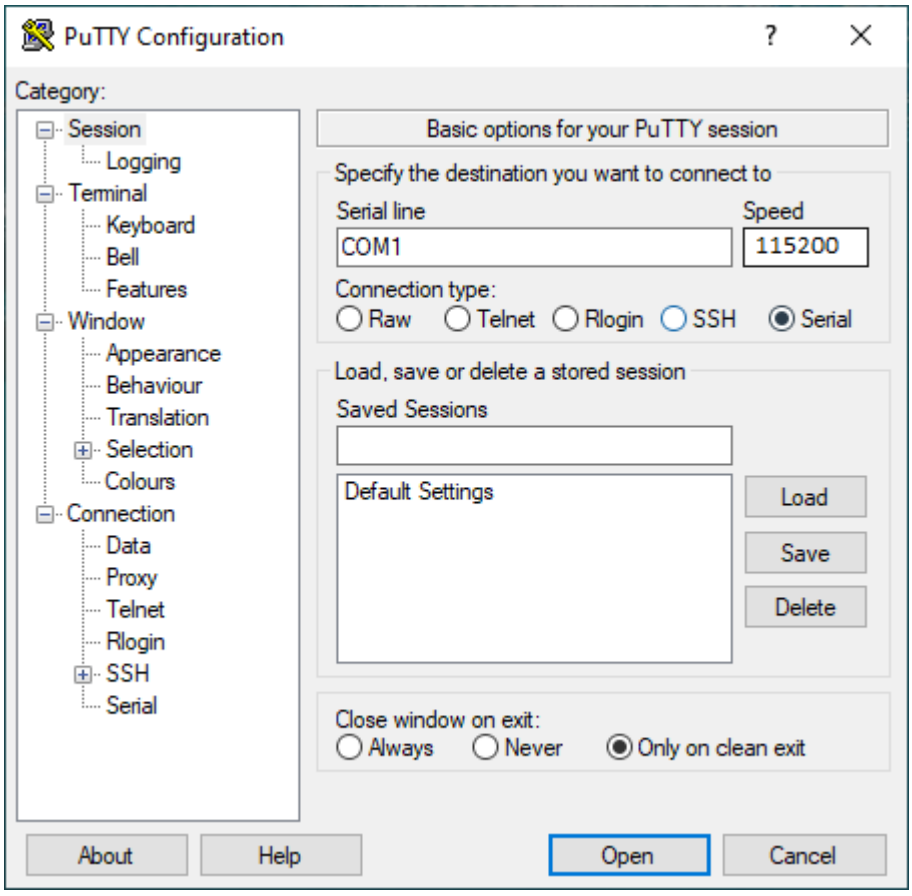
1. Plug the RJ45 end of the console cable into the console port located on the rear panel of the CSX4000 series appliance.
2. Plug the USB end of the console cable into the management console (that is, the laptop).

To communicate with the appliance, you must have a terminal emulation program, such as PuTTY, running on your system. When you set up the connection, use the following default console port settings:

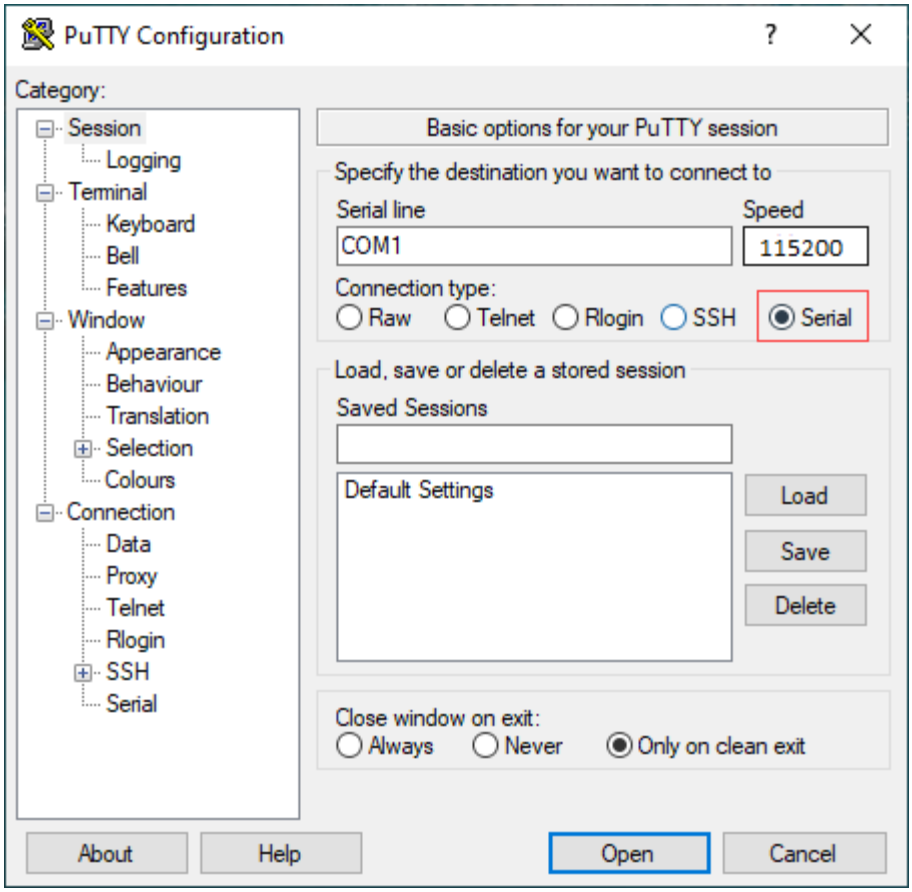
- Speed (baud)—115200
- Data bits—8
- Stop bits—1
- Parity—None
- Flow control—None

To connect a management console to a CSX4000 series appliance:

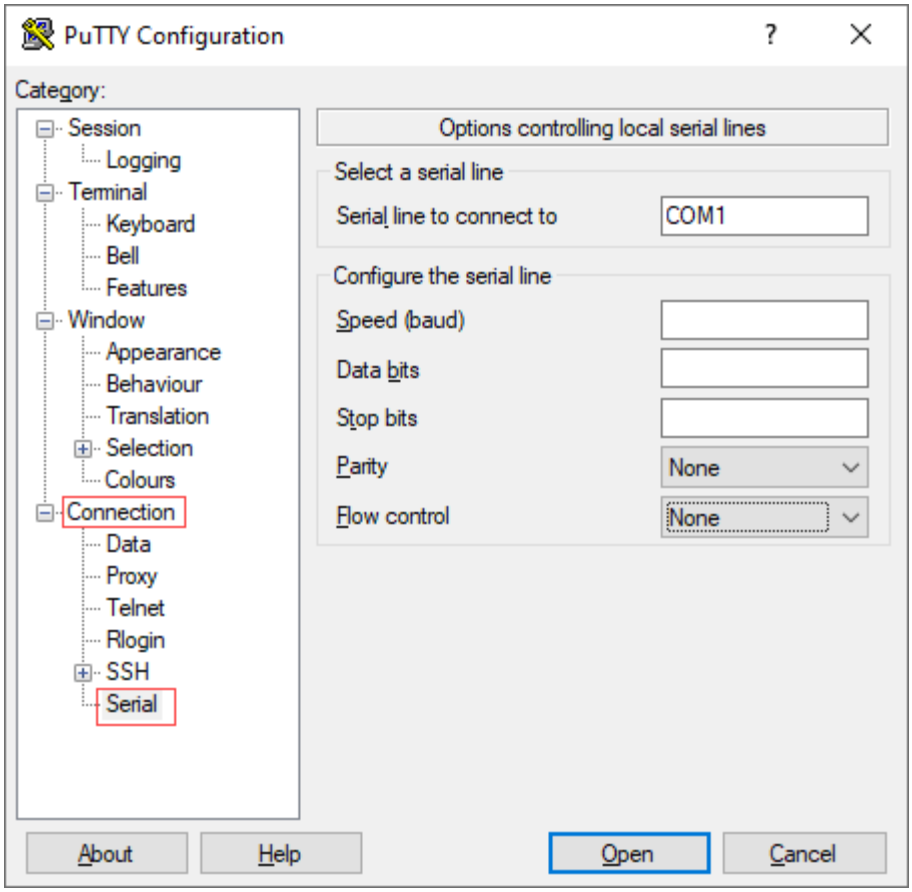
1. Open the PuTTY application. The PuTTY configuration window displays.



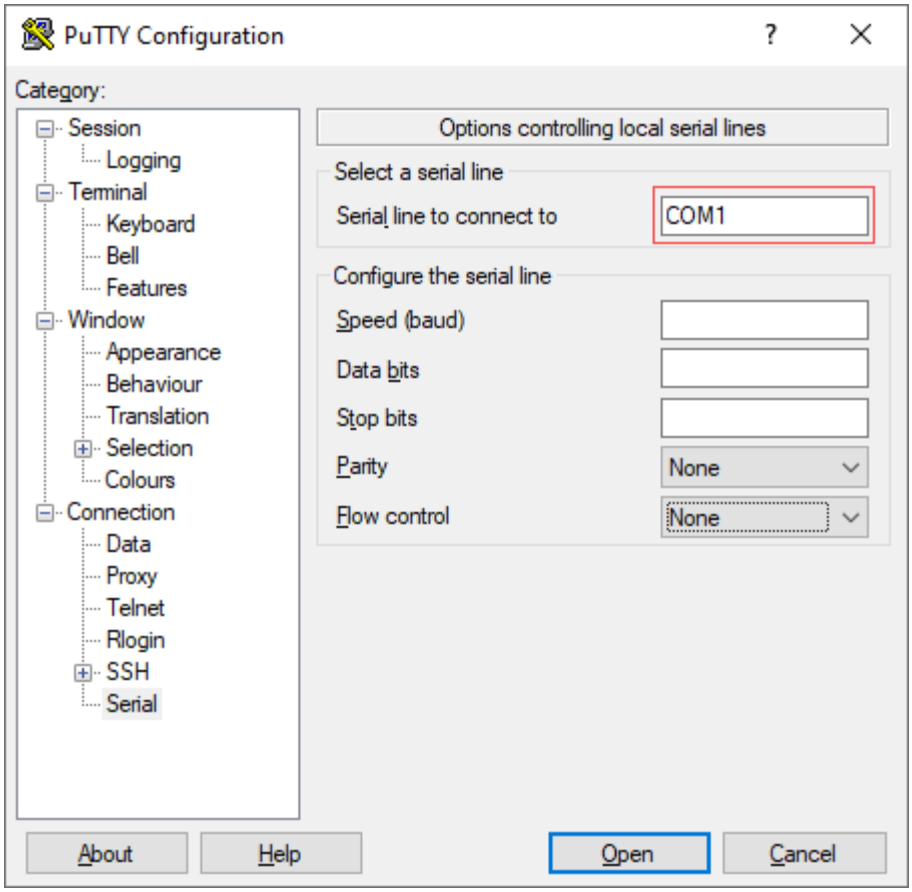
2. In the Category navigation pane, click Session, and then in the Connection Type menu, click Serial.



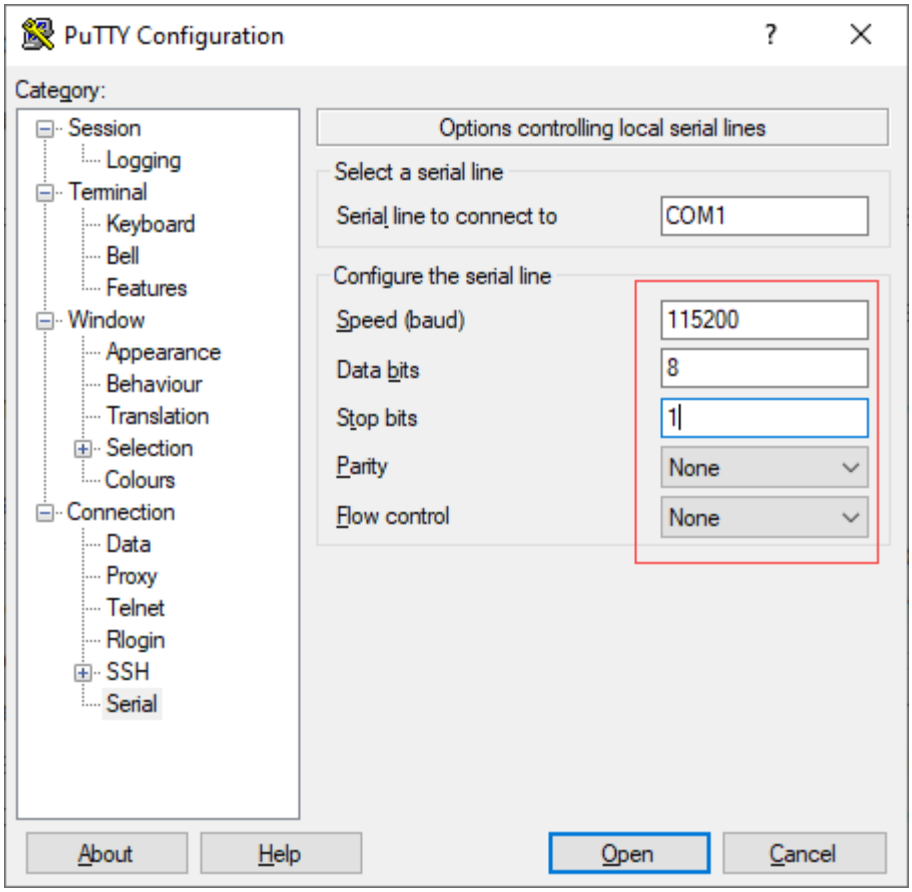
3. In the Category navigation pane, click Connection > Serial. The Options Controlling Local Serial Lines page displays.



4. In the Serial Line To Connect To field, enter the COM port to which your device is connected. The default COM port is COM1.

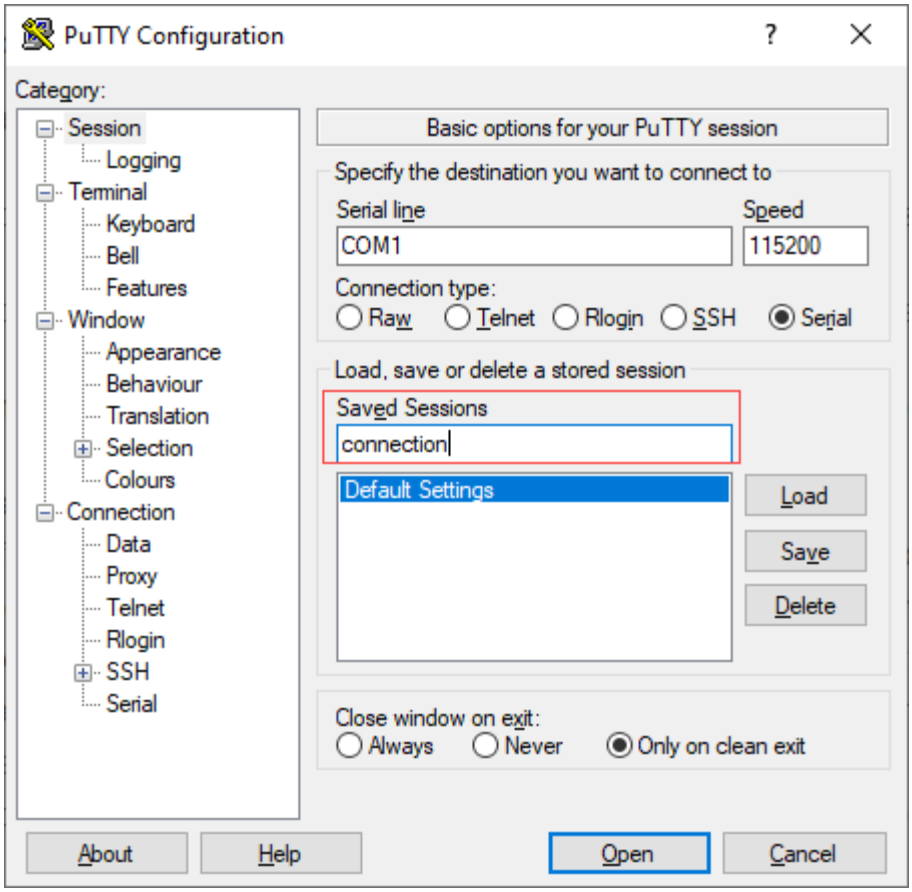


5. In the Configure the Serial Line section, enter the following information.

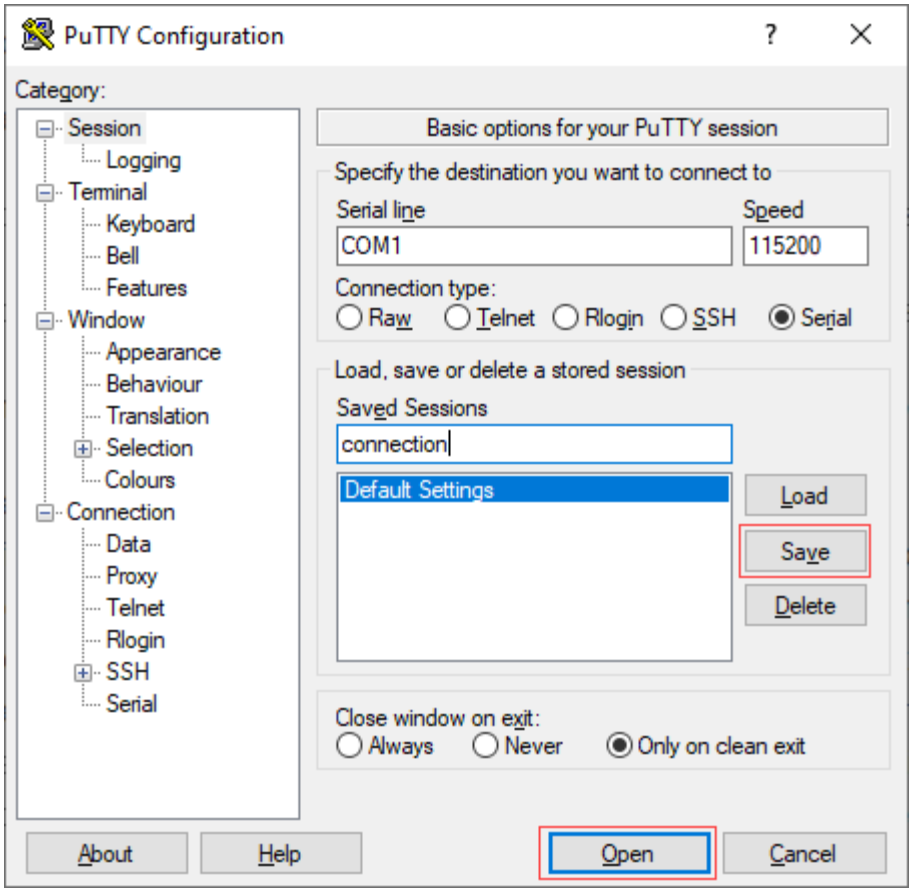


- In the Speed (Baud) field, enter the digital transmission speed. For CSX4000 series appliance, the speed must be 115200 baud.
- In the Data bits field, enter the number of data bits used for each character. The recommended value is 8.
- In the Stop bits field, enter the number of bits to send at the end of every character. The recommended value is 1.
- In the Parity field, select None. This is the method of detecting errors in transmission.
- In the Flow Control field, select None. This is the method of preventing data overflow.

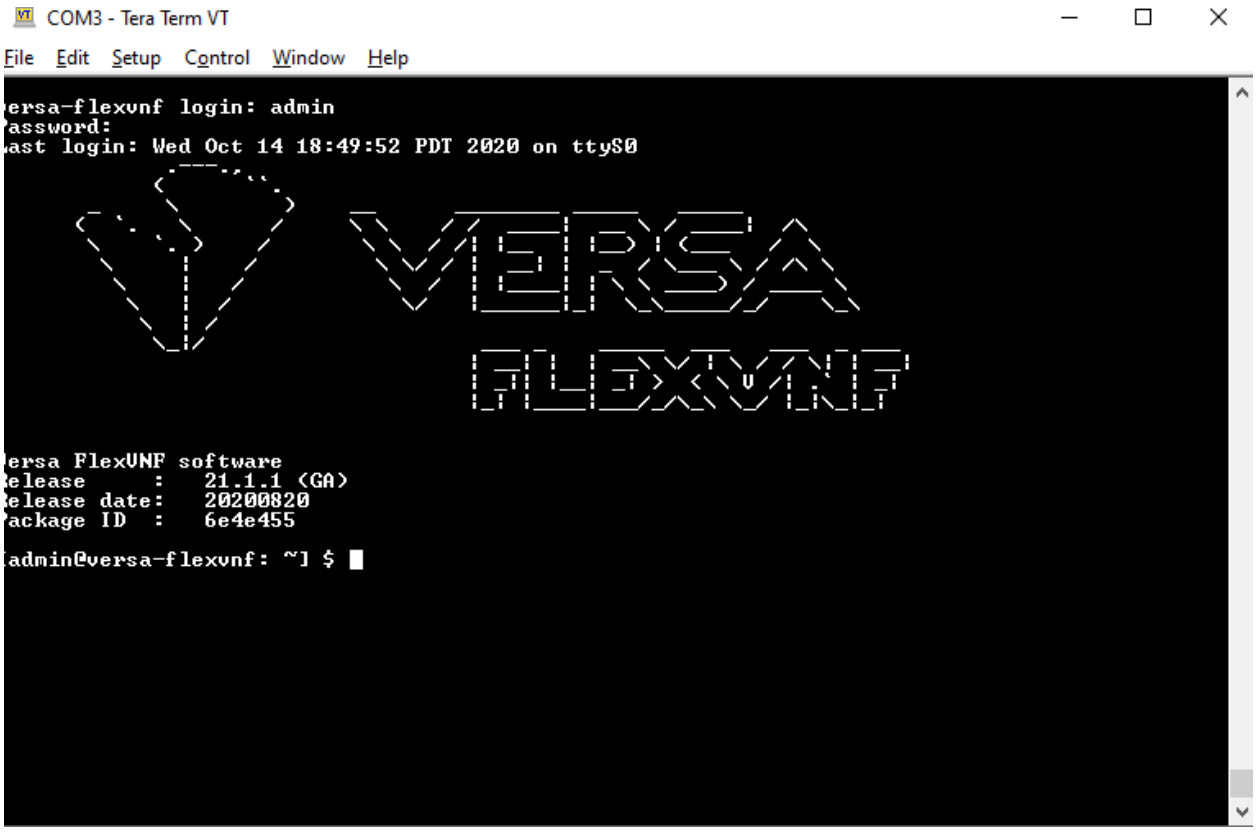
6. Optionally, in the Category navigation pane, click Session, and then in the Saved Sessions field, enter a name to save the session settings.



7. Click Save.
8. To open the session, click Open.



9. Log in to the appliance CLI with the username "admin" and the password "versa123".



Step 3: Connect a CSX4000 Series Appliance to a Network Management Console

You can deploy and manage a CSX4000 series appliance from a Director or Concerto node. While you can configure and manage the appliance using a management console, it is recommended that you do so from the Director or Concerto node.

You can perform monitoring and troubleshooting from the CLI on the CSX4000 series appliance'. To access the CLI, connect the appliance to the management console using a cable with an RJ-45 connector. Plug the RJ45 connector into the console port on the CSX4000 series appliance, and plug the other end of the cable into the console server or into a management console.