

# **Installing Virtual Services Platform 4850GTS Series**

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# **Chapter 1: Preface**

## **Purpose**

This guide provides information and instructions to install Extreme Networks Virtual Services Platform 4850GTS switch.

## **Training**

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- A description of any action(s) 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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- 3. Type the name of your company.
- 4. Type your email address.
- 5. Type your job title.
- 6. Select the industry in which your company operates.
- 7. Confirm your geographic information is correct.
- 8. Select the products for which you would like to receive notifications.
- 9. Click Submit.

# **Chapter 2: New in this document**

There are no feature-related changes for this release in *Installing the Virtual Services Platform 4850GTS Series*.

# **Chapter 3: Hardware models for VSP 4850GTS Series**

The following table describes the VSP 4850GTS Series hardware.

#### **Table 1: Hardware**

VSP 4000 model	Description	Part number
VSP 4850GTS	• 48 10/100/1000 Mbps RJ45 ports	EC4800A78-E6
	• 2 Combo 100/1000 Mbps ports	
	• 2 1/10 Gbps SFP+ ports	
	Base Software License	
	one (of two) field replaceable 300W PSUs supplied with the chassis	
VSP 4850GTS-PWR+	• 48 10/100/1000 Mbps 802.3at PoE+	EC4800A88-E6
	• 2 Combo 100/1000 Mbps SFP ports	
	• 2 1/10 Gbps SFP+ ports	
	Base Software License	
	one (of two) field replaceable 1000W PSUs supplied with the chassis	
VSP 4850GTS DC	• 48 10/100/1000 Mbps RJ45 ports	EC4800078-E6
	• 2 Combo 1/10 Gbps SFP ports	
	• 2 1/10 Gbps SFP+ ports	
	one (of two) field replaceable 300W DC PSUs supplied with the chassis	

## Note:

Power cords must be ordered separately. Ensure you order the correct power cord for your region. For more information, see Power cord types and order codes on page 11.

## VSP 4000 power supplies

The VSP 4000 supports both AC and DC power supplies. One power supply is installed in the system.

You can install a redundant power supply to support additional power requirements or to provide power redundancy.

The following table describes the VSP 4000-compatible AC and DC power supplies and their part numbers (order codes). All the power supplies are EUED RoHS 5/6 compliant.

## Note:

The 300-watt and 1000-watt AC power supplies use the IEC 60320 C16 AC power cord connector.

Use the order codes to order a replacement for the primary PSU or to order a redundant PSU for your VSP 4000 system.

## Note:

Power cords must be ordered separately. Ensure you order the correct power cord for your region. For more information, see Power cord types and order codes on page 11.

Table 2: Power supply order codes

VSP 4000 PSU	Usage	Part number
		(order code)
300W AC power supply	For use in the ERS 4626GTS, 4850GTS, VSP 4850GTS and WL8180, WL8180-16L wireless controllers.	AL1905A08-E5
Stackable 1000W AC POE+ power supply	For use in 4X00 PWR+.	AL1905A21-E6
1000W AC PoE+ power supply	For use with VSP 4450GTX-HT-PWR+	EC4005A03-E6
300W DC power supply	For use in the VSP 4850GTS-DC, ERS5698TFD, 5650TD, and 5632FD.	AL1905005-E5
	DC connector included.	

## Power cord types and order codes

To connect AC power to the switch, you need an appropriate AC power cord as described in the following table.

Table 3: Power cords for power distribution units

Order Code	Length	Power supply side connector	Power source side connector	Safety Approval
700512240	3 m	C15	C14	USA
700512242	3 m	C15	C14	International except Japan and Taiwan

Table 4: Power cords for use with C14 or C16 power supply side connector

Order Code	Description	Region
AA0020071-E6	Power cord 2.5 m IEC C15 to BS1363	United Kingdom
AA0020072-E6	Power cord 2.5 m IEC C15 to CEE 7/7	European Union
AA0020073-E6	Power cord 2.5 m IEC C15 to JIS 8303	Japan
AA0020074-E6	POWER CORD 2.0M IEC C15 TO NEMA 5-15P	United States/Canada
AA0020075-E6	Power cord 2.5 m IEC C15 to AS 3112	Australia
AA0020097-E6	Power cord 2.5 m IEC C15 to SANS 164-1 PLUG	South Africa
AA0020100-E6	Power cord 2.5 m IEC C15 to NBR 14136	Brazil
AA0020103-E6	Power cord 2.5 m IEC C15 to SEV 1011	Switzerland
AA0020105-E6	Power cord 2.5 m IEC C15 to CEI 23-16	Italy
AA0020106-E6	Power cord 2.5 m IEC C15 to SI-32	Israel
AA0020108-E6	Power cord 2.5M IEC C15 TO NEMA L6-15P Twist Lock	USA and Canada
AA0020109-E6	Power cord 2.5M IEC C15 TO BS-546	India
AA0020110-E6	Power cord 2.5M IEC C15 TO IRAM 2073	Argentina

## Important operational note

This section provides information to take into consideration to prevent system operation failure.

## Supported optical devices

Use optical devices to achieve high-bit-rate communications and long transmission distances.

## Small Form Factor Pluggable (SFP) transceivers

SFPs are hot-swappable input and output enhancement components designed to allow gigabit Ethernet ports to link with other gigabit Ethernet ports over various media types.

You can use various SFP (1 Gbps) and SFP+ (10 Gbps) to attain different line rates and reaches. The following table describes the SFPs including the reach provided by various SFPs.

## Important:

The attainable cable length can vary depending on the quality of the fiber-optic cable used.

## Small Form Factor Pluggable plus (SFP+) transceivers

SFP+ transceivers are hot-swappable input and output enhancement components that allow 10 gigabit connections. All Extreme Networks SFP+ transceivers use Lucent connectors (LC) to provide precision keying and low interface losses.

## Compatible transceivers

## Important:

It is recommended to use Extreme Networks-branded SFP and SFP+ transceivers as they have been through extensive qualification and testing. Extreme Networks will not be responsible for issues related to non-Extreme Networks branded transceivers.

The VSP 4850GTS operates in forgiving mode for SFP, and for coarse wave digital
multiplexing (CWDM) and dense wave digital multiplexing (DWDM) SFP+ transceivers.
This means that the switch will bring up the port operationally when using non-Extreme
Networks SFP, or SFP+ transceivers. Extreme Networks does not provide support for
operational issues related to these transceivers, but they will operate and the port link will
come up. The switch logs the device as an unsupported or unknown device.

For more information about SFP and SFP+ transceivers, including technical specifications and installation instructions, see *Installing Transceivers and Optical Components on VSP Operating System Software*.

## **Optical power considerations**

When you connect the device to collocated equipment, ensure that enough optical attenuation exists to avoid overloading the receivers of each device. You must consider the minimum attenuation requirement based on the specifications of third-party equipment. For more information about minimum insertion losses for optical products, see *Installing Transceivers and Optical Components on VSP Operating System Software*.

# **Chapter 4: Preinstallation checklist**

Before you install the VSP 4850GTS, VSP 4850GTS-DC, and VSP 4850GTS-PWR+, make sure that you complete the tasks in the preinstallation checklist.

No.	Task	Description	~
1.	Review the technical specification for the switch. Make sure that the area where you install the switch and where it will operate meet the requirements.	For the physical, electrical, and environmental specifications, see <u>Technical specifications</u> on page 20.	
2.	Verify the power supply unit (PSU) specifications. Optionally order a redundant PSU to provide redundancy	See <u>AC power supply specifications</u> on page 32 or <u>DC power supply specifications</u> on page 32.	
	and load sharing.	To order redundant PSUs, see <u>Hardware</u> models for VSP 4850GTS Series on page 10 for part numbers.	
3.	Make sure that you have the following tools and cables:	See <u>Cable requirements for the Virtual</u> <u>Services Platform 4000</u> on page 26.	
	Phillips #2 screwdriver		
	RJ45 console port cable		
	• ESD cable		
4.	Unpack the equipment.	Observe ESD precautions when you unpack the equipment. See <u>Electrostatic discharge</u> on page 19.	
5.	Verify the contents of the shipped package.	See <u>Package contents</u> on page 22 for a description of the components that are provided with the switch. If any components are missing, contact support at <a href="http://www.extremenetworks.com/support">http://www.extremenetworks.com/support</a> .	
6.	Make sure that the power cord has the correct country-specific termination.		
7.	Prepare the rack.	Ensure that there is enough rack space to accommodate a 2RU switch (8.8 cm).	
		Ensure that the rack is bolted to the floor and braced if necessary.	

Table continues...

No.	Task	Description	7
		Ensure that the rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.	

# Chapter 5: Installing the VSP 4000 4850GTS Series

## Installation checklist

Use this checklist to install the VSP 4850GTS series.

No.	Task	Description	•
1.	Install the VSP 4850GTS series.	You can install the switch in two ways:  Installing the Virtual Services Platform 4000 on a table or shelf on page 23  Installing the Virtual Services Platform 4000 in an equipment rack on page 24	
2.	Install the primary or redundant power supply.  Important:  Extreme Networksdoes not support a combination of ACinput and DC-input power supplies in the same chassis.	For the procedure to install the power supply, see Installing the Virtual Services Platform 4000 power supply on page 30.	
4.	Check the LEDs to verify the installation.	For a description of the LEDs, see <u>LED state</u> <u>definitions</u> on page 36.	

## **Installation fundamentals**

The following section describes the installation fundamentals for the VSP 4850GTS series.

The VSP 4850GTS series consists of the following models:

- VSP 4850GTS
- VSP 4850GTS DC
- VSP 4850GTS-PWR+

#### VSP 4850GTS series models

The VSP 4850GTS series models consist of:

- 48 10/100/1000 Mbps ports
  - RJ45 for the VSP 4850GTS and VSP 4850GTS DC models
  - 802.3at PoE+ for the VSP 4850GTS-PWR+ model
- Two Combo 1000/1000 Mbps SFP ports
  - These ports support copper and fiber on the same switch port. Only one medium type can be active at any time.
  - There is an RJ45 connector and an SFP slot for each Combo port. A cable can be inserted into either or both medium types.
  - Fiber connections take precedence over copper.
  - Configuration for the port is applicable to both medium types. For example, auto-negotiation configuration applies to both the copper and fiber ports.
- Two 1/10 Gbps SFP+ ports



Figure 1: VSP 4850GTS

1. VSP 4000 USB device with USB device cover



#### Caution:

To ensure proper operation, the USB FLASH drive must remain inserted in all models of VSP 4850 (factory built and converted from ERS 4850), with the cover installed for additional protection against removal. The USB FLASH drive on the VSP 4850 switch is uniquely bound to the system it was first used on and cannot be transferred to a different switch.

- 2. Switch LEDs
- 3. 10/100/1000 Mbps ports (LEDs above ports)
- 4. Combo 100/1000 Mbps SFP slots. Supports Extreme Networks 1 Gbps SFPs and 100 Mbps low speed SFPs.
- 5. 1/10 Gbps SFP+ slots. Supports Extreme Networks 1 Gbps SFPs and 10 Gbps SFP+s.
- 6. Console port

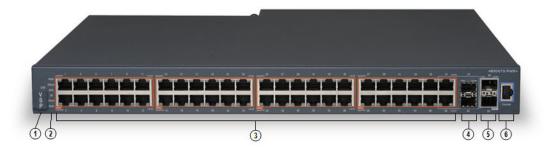


Figure 2: VSP 4850GTS-PWR+

1. VSP 4000 USB device with USB device cover



#### Caution:

To ensure proper operation, the USB FLASH drive must remain inserted in all models of VSP 4850 (factory built and converted from ERS 4850), with the cover installed for additional protection against removal. The USB FLASH drive on the VSP 4850 switch is uniquely bound to the system it was first used on and cannot be transferred to a different switch.

- 2. Switch LEDs
- 3. 10/100/1000 Mbps PoE+ ports (LEDs above ports)
- 4. Combo 100/1000 Mbps SFP slots. Supports Extreme Networks 1G SFPs and 100 Mbps low-speed SFPs.
- 5. 1/10 Gbps SFP+ slots. Supports Extreme Networks 1 Gbps SFPs and 10 Gbps SFP+s.
- 6. Console port

## Converting ERS 4850 to VSP 4000

This section lists information on Extreme Networks switch conversion supported in this release.



### Important:

Switch conversion is applicable only to the Virtual Services Platform 4000 Series. Currently, only the conversion of an ERS 4850 switch to a VSP 4000 switch is supported.

## ERS 4850 and VSP 4000 quick conversion



## Note:

ERS 4850 and VSP 4000 conversion kit (part number EC4810003–3.0) has reached End-Of-Sale; however, it is still supported for anyone who has purchased it.

You can convert an ERS 4850 switch to a VSP 4000 switch, if there is a network requirement.

#### USB considerations for factory supplied and converted VSP 4000 switches



## Warning:

The USB FLASH drive on all models of VSP 4850 (factory built and converted from ERS 4850) must be treated as a permanent non-removable part of the switch and must NEVER be removed from the switch to ensure proper operation. Additionally, the USB cover must be installed to ensure additional protection against removal. The USB FLASH drive on the VSP 4850 switch is uniquely and permanently bound to the operating system of the switch it is first used on and cannot be transferred to a different switch. Removal (and reinsertion) of the USB FLASH drive from the switch is not supported as it can permanently compromise the switch functionality and render it non-functional.

On a converted VSP 4000 switch, you can also use the CLI to perform a conversion back to the ERS 4850.

For the conversion to be successful, you must ensure that you have satisfied the hardware and software criteria on the system being converted. For more information, see ERS 4850 to VSP 4000 Quick Conversion.

## **Electrostatic discharge**

This section provides information and procedures to prevent electrostatic discharge during installation.

## Preventing electrostatic discharge damage

Electrostatic discharge (ESD) is a discharge of stored static electricity that can damage equipment and impair electrical circuitry. Electrostatic voltages can result from friction including, pulling cabling through conduits, walking across carpeted areas, and building static charge in clothing. When you improperly handle electronic components, ESD damage occurs and can result in complete or intermittent failures. While networking equipment is commonly designed and tested to withstand common mode ESD events, voltage can sometimes discharge to some connector pins, which can potentially damage the networking equipment.



#### Caution:

To protect the VSP 4000 against ESD damage, take the following measures before you connect data cables to the device:

- Always use antistatic wrist straps. Make sure you adjust the strap to provide good skin contact.
- Ensure that you properly ground work surfaces and equipment racks for protection against electrostatic discharge. You must connect the common point to the building ground wire. In a properly wired building, the nearest reliable ground is typically at the electrical outlet.

- Avoid contact between equipment and clothing. The wrist or ankle strap protects only the equipment from ESD voltages on the body; ESD voltages on clothing can still cause damage.
- Avoid touching any connector pins.
- Do not remove the wrist or ankle strap until the installation is complete.

## Preventing electrostatic damage in new cable installations

With new cable installations, you are recommended to use an ESD discharge cable to reduce the potential for damage from static, that can build up in cables. The following figure illustrates an ESD cable.

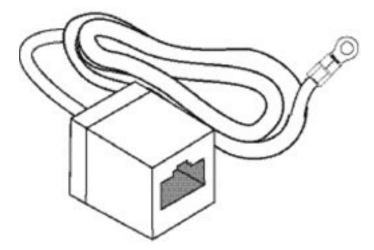


Figure 3: Job aid

To install the ESD discharge cable, perform this procedure.

- 1. Connect the ground lug on the ESD discharge cable to a safe and suitable earth ground.
- 2. Connect all RJ45 cable connectors to the female RJ45 connector of the ESD discharge cable for at least 5 seconds, and then connect each RJ45 cable connector to the switch.
- 3. Leave cables connected to the networking equipment. After you connect cables to networking equipment, the cables do not build up charge.

## **Technical specifications**

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

## **Marning:**

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

**Table 5: Physical specifications** 

Specifications	4850GTS	4850GTS-DC	4850GTS-PWR+
Height	4.4 cm. – 1RU	4.4 cm. – 1RU	4.4 cm. – 1RU
Width	44 cm.	44 cm.	44 cm.
Depth	43.68 cm.	43.68 cm.	43.68 cm.
Weight	11.48 Kg	11.48 Kg	11.98 Kg
MTBF rating	chassis – 311,104 hours	chassis – 311,104 hours	chassis – 214,542
	300 W AC power supply –	300 W DC power supply –	hours
	1,929,349 hours	782,296 hours	1000 W AC power
			supply – 860,175 hours

## **Environmental requirements**

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

Table 6: Virtual Services Platform 4000 environmental requirements

Environmental requirement	Virtual Services Platform 4000 models
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Operating and Storage Humidity	0 to 95 percent noncondensing
Maximum Operating Altitude	3,048m (10 000 feet) above sea level
Altitude	0 to 3,048m (0 to 10,000ft) above sea level
Storage Altitude	0 to 12,192m (0 to 40,000ft) above sea level
Acoustic Noise	Less than or equal to 45 db at 35°C and less than or equal to 57 db at 50°C. The temperature is allowed to have ±3.5°C deviation around the threshold of 35C, (measurement methods based on ISO 7779).
Miscellaneous Operating Considerations	No heat sources such as hot air vents or direct sunlight near the switch.
	No sources of severe electromagnetic interference near the switch.
	No excessive dust in the environment.

Table continues...

Environmental requirement	Virtual Services Platform 4000 models
	An adequate power source is within 6 feet (1.83 meters) of the switch.  One 15-amp circuit is required for each power supply.
	At least 2 inches (5.08 centimeters) of clearance on each side of the switch unit for ventilation.
	Adequate clearance at the front and rear of the switch for access to cables.

## **Marning:**

To avoid bodily injury from hazardous electrical shock and current, never remove the top of the device. No user-serviceable components are inside. For a translation of this statement, see Translations of safety messages on page 43.

## **Airflow direction**

Airflow direction in the VSP 4850GTS, the VSP 4850GTS DC, and the VSP 4850GTS-PWR+ is from left to right (as viewed from the front). Cool air enters the chassis through an air inlet at the left of the chassis, which cools the device. Warm air exits through the exhaust at the right.

## Package contents

The following describes the components that are provided with each switch. If any components are missing, contact the switch vendor.

- 1. VSP 4850GTS switch with one power supply installed.
- 2. Rack-mounting hardware that includes:
  - Rack-mount brackets
  - Screws to attach brackets to the switch
  - Screws to attach the switch to the equipment rack
- 3. Rubber footpads.
- 4. Documentation that includes the following:
  - a. Locating the latest software and product release notes for Virtual Services Platform 4000 Series
  - b. Virtual Services Platform 4000 Series Regulatory Guide
  - c. Virtual Services Platform 4850GTS Series Quick Install Guide
  - d. The China RoHS paper

Note:

Cable trays can be provided as an option.

Note:

Power cords must be ordered separately. Ensure you order the correct power code for your region. For more information, see Power cord types and order codes on page 11.

## Installing the Virtual Services Platform 4000 on a table or shelf

You can install a single VSP 4000 switch on any flat surface. The surface must support the combined weight of the switch and attached cables (from 15 and 20 pounds [7 to 9 kilograms]).

To install an VSP 4000 on a table or shelf, perform this procedure.



## Caution:

Do not place an Extreme NetworksEthernet Power Supply Unit or Ethernet Redundant Power Supply on top of an VSP 4000. The switch housing of an VSP 4000 cannot support the weight of these units. For a translation of this statement, see Translations of safety messages on page 43.

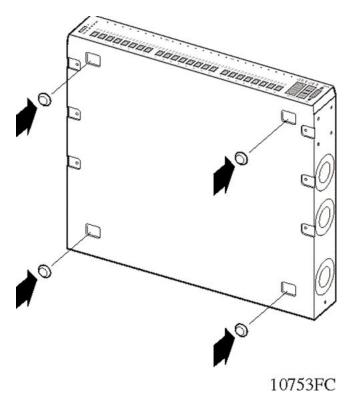
1. Remove the screws that hold the USB cover but do *not* remove the USB cover.



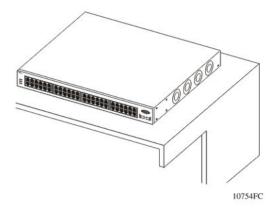
## Caution:

To ensure proper operation, the USB FLASH drive must remain inserted in all models of VSP 4850 (factory built and converted from ERS 4850), with the cover installed for additional protection against removal. The USB FLASH drive on the VSP 4850 switch is uniquely bound to the system it was first used on and cannot be transferred to a different switch.

2. Attach the included rubber footpads on the bottom of the switch at the locations indicated.



3. Set the switch on a table or shelf as illustrated below. Allow at least 2 inches (5.1 centimeters) on each side for proper ventilation and at least 5 inches (12.7 centimeters) at the back for power cord clearance.



# Installing the Virtual Services Platform 4000 in an equipment rack

To install an VSP 4000 switch in an equipment rack, perform this procedure.

Prerequisites for installing the Virtual Services Platform 4000 in an equipment rack:

- Ensure that you have a space of 1.75 inches (4.45 centimeters) in height for each switch in an EIA or IEC-standard 19-inch (48.2-centimeter) equipment rack.
- The rack is bolted to the floor and braced if necessary.
- The rack is grounded to the same grounding electrode used by the power service in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.



## Caution:

When you mount the device in a rack, do not stack units directly on top of one another. You must secure each unit to the rack with the appropriate mounting brackets. Mounting brackets cannot support multiple units. For a translation of this statement, see Translations of safety messages on page 43.

Remove the screws that hold the USB cover but do not remove the USB cover.



#### Caution:

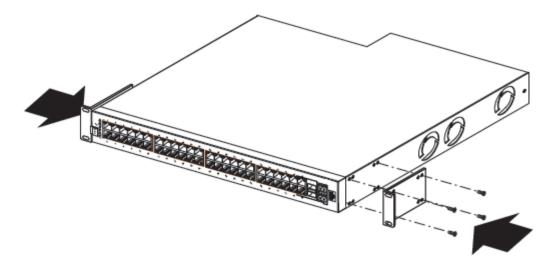
To ensure proper operation, the USB FLASH drive must remain inserted in all models of VSP 4850 (factory built and converted from ERS 4850), with the cover installed for additional protection against removal. The USB FLASH drive on the VSP4850 switch is uniquely bound to the system it was first used on and cannot be transferred to a different switch.

2. Attach the L-bracket to each side of the switch using a #2 Phillips screwdriver as illustrated below.

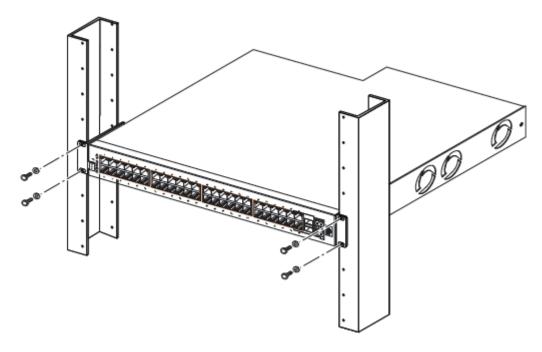


#### Important:

On a factory-supplied 4850GTS series switch, ensure that the L-bracket goes over the USB cover.



3. Slide the switch into the rack as illustrated.



4. Insert and tighten the rack-mount screws.

## Cable requirements for the Virtual Services Platform 4000

The following table describes the cables required for the VSP 4000 switch.

**Table 7: Switch cable requirements** 

Required Cable	Description
10/100/1000BASE-T Ports	The interconnect cabling must conform to the Cat5e, Cat6, or Cat6e specification of the Commercial Building Telecommunications Cabling Standard, ANSI/TIA/EIA 568-B fitted with an RJ45 Module jack.
10/100BASE-TX Ports	The interconnect cabling for 10BASE-T Ethernet must conform to Cat3, Cat4, Cat5 (or better) UTP cabling for distances up to 100 meters.
	The interconnect cabling for 100BASE-TX Fast Ethernet must conform to Cat5 (or better) UTP cabling for distances up to 100 meters.
100BASE-FX Ports	The interconnect cabling must conform to 50/125 or 62.5/125 micron multimode fiber-optic cabling for distances up to 3 kilometers.

Table continues...

Required Cable	Description	
	Note:	
	100BASE-FX Transceivers are supported in SFP ports only, and not in SFP+ ports.	
Console Port	Varies depending on the user device. The VSP 4000 has an RJ45 female connector, so a serial cable with RJ45 connectors, or a serial cable with a DB-9 female connector on one end and an RJ45 on the other is appropriate. The maximum length for the console port cable is 25 feet (8.3 meters).	
SFP Transceiver Ports	Varies with the installed SFP transceiver. See the documentation shipped with the SFP transceiver for specifications.	
USB Port	The USB port is usable with a USB drive for file transfer of config files, log files and software images.	

# Installation and removal of Small Form Factor Pluggable (SFP) transceivers

The following section describes how to install and remove Small Form Factor Pluggable (SFP) transceivers in the Virtual Services Platform 4000 Series switches. For more information about SFP transceiver use and designation, see *Installing Transceivers and Optical Components on VSP Operating System Software*.

## **Installing SFP transceivers**

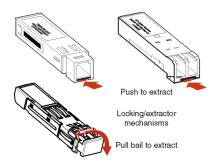
Install SFP transceivers by performing this procedure.

- 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.
- 5. Remove the dust cover from the transceiver optical bores.

## **Removing SFP transceivers**

Remove SFP transceivers by performing this procedure.

- Disconnect the network fiber cable from the transceiver.
- 2. Use the locking mechanism on the transceiver to release it. The locking mechanism varies from model to model as illustrated below.



- 3. Slide the transceiver from the module slot.
- 4. If the transceiver does not slide easily from the module slot, use a gentle side-to-side rocking motion while firmly pulling the transceiver from the slot.
- 5. Attach a dust cover over the fiber-optic bores and store the transceiver in a safe place until you need it.
  - **!** Important:

Discard transceivers in accordance with the proper laws and regulations.

## **RJ45** connector pin assignments

The following section describes the connector pin assignments for the RJ45 connectors in the Virtual Services Platform 4000 Series switches.

# Connector pin assignments for VSP 4000 switches 4850GTS-PWR + and 4450GSX-PWR+

The following table describes the Power over Ethernet Plus RJ45 connector pin assignments in the VSP 4000 4850GTS-PWR+ and the VSP 4000 4450GSX-PWR+.

Table 8: PWR+ RJ-45 connector pin assignments

Connector	Pin Number	Signal	Description
	1	RX+/power-	Receive Data+/power–
HIIIII	2	RX-/power-	Receive Data-/power-
87654321	3	TX+/power+	Transmit Data+/power+
P4n4EA	4	Not applicable	Not applicable
	5	Not applicable	Not applicable
	6	TX-/power+	Transmit Data-/power+
	7	Not applicable	Not applicable
	8	Not applicable	Not applicable

## **!** Important:

The VSP 4000 PWR+ models use pins 1, 2, 3, and 6 for PoE+, and is compliant with Type 2 (MDI-X) in IEEE802.3at.

## **Console port pin assignments**

The following table describes the console port pin assignments in the VSP 4000.

## **!** Important:

VSP 4000 supports only CLI Quickstart use on the console port.

Table 9: DB-9 Console port pin assignments

Connector	Pin Number	Signal	
1 /5	1	Carrier detect (not used)	
● \ 00000 } ●	2	Transmit Data (TXD)	
لم	3	Receive Data (RXD)	
6 9 94TEM	4	Data terminal ready (not used)	
	5	Signal ground (GND)	
	6	Not used	
	7	Request to send (not used)	
	8	Not used	
	9	Ring indicator (not used)	

Table 10: RJ45 Console port pin assignments

Connector	Pin Number	Signal
	1	Ready to send (RTS) — optional
	2	Data terminal ready (DTR) — optional, can swap or link with pin 8
87654321	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

## Installing the Virtual Services Platform 4000 power supply

You must install at least one power supply before using the switch. VSP 4000 models support two field replaceable external power supplies. If supported, you can install an optional second power supply for redundancy, load sharing, or to provide additional PoE+ power budget.

#### About this task

Perform the following procedure to install an external power supply into your switch.

## Note:

VSP 4000 hardware can vary. This procedure only applies to hardware models with field replaceable power supplies.

## Important:

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

#### **Procedure**

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

## Note:

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

4. After you install a power supply, you can proceed with connecting AC power.

## Note:

Do not connect an AC and DC power supply in the same chassis. Load sharing may be affected.

## Important:

You can hot swap power supplies while the switch is operational. One power supply is required for continued switch operation. PoE+ load reductions can occur if you remove one power supply while the switch is operating with dual power supplies.

#### Related links

VSP 4000 power supply power specification on page 31

## VSP 4000 power supply power specification

The VSP 4000 supports two external field-replaceable power supplies. One power supply ships with the chassis. You can install a secondary power supply to provide redundancy and load sharing, and to add Power over Ethernet Plus (PoE+) power budget on PWR+ models.

## 300 W AC power supply

The VSP 4850GTS supports 300 W AC power supplies.



Figure 4: 300 W AC power supply

#### Connector

The 300 W and 1000 W AC power supplies use an IEC 60320 C16 AC power cord connector. The AC power cord is in close proximity to the hot-air exhaust, and supports high operating temperatures.

The 1000 W AC power supplies use an IEC 60320 C16 AC power cord connector. The AC power cord is in close proximity to the hot-air exhaust, and supports high operating temperatures.



Figure 5: IEC 60320 C16 connector

## **Power over Ethernet Plus specifications**

Table 11: VSP 4850GTS and 4850GTS-PWR+ models

Maximum PoE+ W	Average PoE+ W on 50 port model
855 W with one power supply	15.4 W (802.3af)
1855 W with two power supplies	17.8 W (802.3.at) — One power supply
	32.4 W (802.3at) — Two power supplies

- VSP 4850GTS-PWR+ can support 802.3af 15.4 W on each port with one power supply installed. You can add a second power supply for redundancy.
- VSP 4850GTS-PWR+ can support 802.3at 32.4 W on each port with two power supplies installed. PoE+ power reduces to an average of 17.8W on each port with one power supply.

Table 12: VSP 4450GSX-PWR+ model

Maximum PoE+ W	Average PoE+ W on 12 ports
835 W with one power supply	17.8 W or 32.4 W (802.3.at) — One power supply
1835 W with two power supplies	

## **AC** power supply specifications

The following table describes the regulatory AC power specifications for the Virtual Services Platform 4000 Series 4850GTS and 4850GTS-PWR+ switches. The regulatory power specifications are based on the maximum rated capacity of the power supplies and are not based on typical power consumption which is lower.

Table 13: AC power specifications for 4850GTS series

Specifications	4850GTS	4850GTS-PWR+
Input Current	5A/2.5 A	12A/6A
Input Voltage (rms)	100 to 240 VAC at 50 to 60 Hz	100 to 240 VAC at 50 to 60 Hz
Power Consumption	94.6 W maximum	248 W maximum
Thermal Rating	323 BTU/hr maximum	508 BTU/hr maximum
Inrush Current	40 A maximum	70 A maximum
Turn on Condition	1 second maximum after application of AC power	1 second maximum after application of AC power
Important:		
12-volt output rise time, from 10 to 90 percent, must be the maximum of 50 ms and monotonic under all defined input and output conditions.		

## DC power supply specifications

The following table describes the DC power supply specifications for the 4850GTS-DC model.

70 percent minimum

Efficiency

70 percent minimum

Table 14: DC power supply specifications

Specifications	4850GTS-DC
Output power	300 W
Input voltage	48 V DC
Input current	10 A
Output voltage	12 V DC
Output current	25 A

# **Connect AC power**

This section explains power cord specifications and how to connect AC power.

## **Power cord specifications**

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

Table 15: International power cord specifications

Country and Plug Specification	Specifications	Typical Plug
Continental Europe:	• 220 or 230VAC	
CEE7 standard VII male plug	• 50 Hz	
Harmonized cord (HAR marking on the outside of the cord jacket to comply with the CENELEC Harmonized Document HD-21)	Single phase	22804
United States of America, Canada, and Japan:	• 100 or 120VAC	
NEMA5-15P male plug	• 50–60 Hz	
UL-recognized (UL stamped on cord jacket)	Single phase	I I I I I I I I I I I I I I I I I I I
CSA-certified (CSA label secured to the cord)		46.15/9
United Kingdom:	• 240VAC	3
BS1363 male plug with fuse	• 50 Hz	
Harmonized cord	Single phase	2259'A
Australia:	• 240VAC	
AS3112-1981 male plug	• 50 Hz	S S
	Single phase	25.00%



## A Danger:

## Using power cords with a proper grounding path

Use only power cords that have a grounding path. Without a proper ground, a person who touches the switch is in danger of receiving an electrical shock. Lack of a grounding path to the switch can result in excessive emissions. For a translation of this statement, see Translations of safety messages on page 43.

## Connect power to the rear panel

Connect the AC power cord to the rear of the switch, and then connect the cord to an AC power outlet. The following figure shows how to connect the AC power cord to the switch rear panel.

## **Important:**

The VSP 4000 series has no AC power switch. When you connect the power cord to a suitable, energized AC power outlet, the switch powers up immediately.

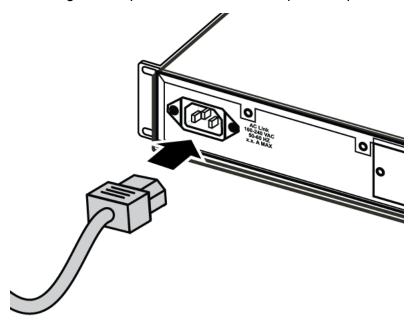


Figure 6: Connecting AC power to the rear panel



## Warning:

Disconnecting the AC power cord is the only way to turn off AC power to the VSP 4000. Always connect the AC power cord in a quickly and safely accessible location in case of an emergency. For a translation of this statement, see Translations of safety messages on page 43.

## Caution:

Before you unplug the AC power cord, always perform the following shutdown procedure. This procedure flushes any pending data to ensure data integrity.

1. Enter the Privileged EXEC command mode:

enable

2. Shutdown the VSP 4000:

sys shutdown

- 3. When prompted, enter y to confirm system shut down.
- 4. Before you unplug the power cord, wait until you see the following message:

System Halted, OK to turn off power.

## **Example**

```
VSP-4450GSX-PWR+:1>enable
VSP-4450GSX-PWR+:1#sys shutdown
Are you sure you want shutdown the system? Y/N (y/n) ? y
CP1 [03/24/14 18:39:04.932:UTC] 0x00010813 00000000 GlobalRouter HW INFO
System shutdown initiated from CLI
CP1 [03/24/14 18:39:06.000] LifeCycle: INFO: Stopping all processes
CP1 [03/24/14 18:39:08.000] LifeCycle: INFO: All processes have stopped
CP1 [03/24/14 18:39:08.000] LifeCycle: INFO: All applications shutdown,
starting power down sequence
INIT: Sending processes the TERM signal
Stopping OpenBSD Secure Shell server: sshdno /usr/sbin/sshd found; none
killed
cat: can't open '/proc/mtd': No such file or directory
cat: can't open '/proc/mtd': No such file or directory
Stopping vsp...
mount: no /proc/mounts
mount: can't find /mnt/cfgfs/ in /etc/fstab
/etc/rc0.d/K25vsp: line 441: /mnt/cfgfs/timestamp: Read-only file system
umount: can't open '/proc/mounts'
sed: /proc/mounts: No such file or directory
sed: /proc/mounts: No such file or directory
sed: /proc/mounts: No such file or directory
Deconfiguring network interfaces... done.
```

```
Stopping syslogd/klogd: no syslogd found; none killed

Sending all processes the TERM signal...

Sending all processes the KILL signal...

hwclock: can't open '/dev/misc/rtc': No such file or directory

/etc/rc0.d/S25save-rtc.sh: line 5: /etc/timestamp: Read-only file system

Unmounting remote filesystems...

Stopping portmap daemon: portmap.

Deactivating swap...

Unmounting local filesystems...

[695413.959234] Power down.

[695413.989531] System Halted, OK to turn off power
```

## **LED** state definitions

The figures and tables in the following sections describe the LEDs on the Virtual Services Platform 4000 Series switches. The tables describe LED operation for a switch that finishes the power-on self-test.

#### Related links

Front panel LEDs on page 36
Switch LED state indicators on page 38
Port LED state indicators on page 39

## **Front panel LEDs**

The following diagrams illustrate the components on the front panels of the VSP 4000 switches.

For detailed explanations of the states indicated by each front panel LED type, see the following sections:

- Port LED state indicators on page 39.
- Switch LED state indicators on page 38.



Figure 7: VSP 4850GTS

- 1. VSP 4000 USB drive with USB cover
- 2. Switch LEDs
- 3. 10/100/1000 Mbps ports (LEDs above ports)
- 4. Combo 100/1000 Mbps SFP slots. Supports Extreme Networks1 Gbps SFPs and 100 Mbps low-speed SFPs.
- 5. 1/10 Gbps SFP+ slots. Supports Extreme Networks 1 Gbps SFPs and 10 Gbps SFP+s.
- 6. Console port



Figure 8: VSP 4850GTS-PWR+

- 1. VSP 4000 USB drive with USB cover
- 2. Switch LEDs
- 3. 10/100/1000 Mbps PoE+ ports (LEDs above ports)
- 4. Combo 100/1000 Mbps SFP slots. Supports Extreme Networks 1 Gbps SFPs and 100 Mbps low speed SFPs.
- 5. 1/10 Gbps slots. Supports Extreme Networks 1 Gbps SFPs and 10 Gbps SFP+s.
- 6. Console port



## Warning:

Fiber optic equipment can emit laser or infrared light that can injure your eyes. Never look into an optical fiber or connector port. Always assume that fiber-optic cables are connected to a light source. For a translation of this statement, see Translations of safety messages on page 43.

## **Related links**

**LED state definitions** on page 36

## **Switch LED state indicators**

The following table describes the main switch LED state indications provided by LED color and fluctuation cues.



Indicator states are applicable to all models of VSP 4000 switches.

Table 16: Switch LED state indicators

Label	Color and Status	Description	
PWR	Green (solid)	The switch is receiving power either from the primary or secondary power supply. Normal operation.	
	Off	The switch is not receiving power and not operating.	
Status	Green (solid)	During start-up: The power-on self-test (POST) is complete and the switch is operating normally.	
		After start-up: The switch is running the agent code successfully.	
	Green (blinking)	The switch is loading the agent software code.	
	Amber (solid)	The switch encountered an error when running the diagnostic software.	
	Amber (blinking)	The switch is booting and running diagnostic software. Normal activity during boot process.	
	Off	The switch failed the power-on self-test (POST) or failed to load the agent code.	
RPS	Green (solid)	The switch is connected to a redundant power supply unit (RPS) or a secondary external power supply, and is operating normally.	
	Green (blinking)	The switch is connected to a secondary power supply, but the power input is disconnected.	
	Amber (solid)	The power supply in slot 1 or slot 2 was removed after operating.	
	Amber (blinking)	The power supply in slot 1 or slot 2 is present, but not supplying power to the switch.	
	Off	No power to secondary power supply. The switch is not connected to an RPS or secondary power supply. The RPS is not supplying power, or the DC/DC module is not supplying power	

## **Related links**

**LED state definitions** on page 36

## Port LED state indicators

This section describes the port LED state indicators by color and fluctuation cues.

## Note:

Indicator states are applicable to all models of VSP 4000 switches.

The following list describes the three port LEDs:

- Activity indicates the level of activity on the link.
- Link indicates the presence of an Ethernet link.
- Speed indicates the port speed (for example, 10 Mbps, 100 Mbps, 1000 Mbps).

**Table 17: RJ45 Port LED state indicators** 

Label	Color and Status	Description
Speed/PoE+	Green, Blink	The port is set to operate at 1000 Mbps with PoE.
	Green, Steady	The port is set to operate at 1000 Mbps without PoE +.
	Amber, Blink	The port is set to operate at 100 Mbps with PoE+.
	Amber, Steady	The port is set to operate at 100 Mbps without PoE +.
	Amber, Green Pulse	The port is experiencing a PoE+ error.
	Off	When the Link/Activity LED is green and the Speed LED is off, the port is set to operate at 10 Mbps for all models.
Link / Activity	Green, Steady	The link established but no data activity exists.
	Green, Blink	The link is established and data activity exists (the blink rate indicates the level of activity).
	Green, Slow Blink	The port is administratively disabled.
	Off	Local/remote fault.

Table 18: SFP/SFP+ transceiver Port LED state indicators

Label	Color and Status	Description
In Use	Green, Blink	Not applicable.
	Green, Steady	The SFP port and the transmit port are active.
	Amber, Blink	Not applicable.

Table continues...

Label	Color and Status	Description
	Amber, Steady	SFP Installed—TX Port Inactive
	Off	No SFP transceiver is present.
Link / Activity	Green, Blink	Activity exists on the port.
	Green, Slow Blink	Software disabled this port.
	Green, Steady	The link is operating normally.
	Off	No link exists.

## Note:

- If you connect two ports explicitly set for different speeds (for example one configured as 10BASE-T and the other as 100BASE-TX) the port link LED may indicate a link, but the switch does not establish a link. Connect ports using the same set speed or use autonegotiation on each switch.
- The port Link/Activity LEDs graphically represented in EDM are always steady once a link is established. They do not blink to reflect port traffic activity.

## Note:

When you remove an optic or a copper or fiber cable from Combo ports (47 and 48) in VSP 4850GTS or VSP 4850GTS-PWR, the port Link/Activity LEDs graphically represented in EDM do not reflect the correct LED status on the switch. The port Link/Activity LEDs in EDM remain solid green even after an automatic refresh of EDM. You must logout and login to EDM to see the correct LED status.

#### **Related links**

LED state definitions on page 36

## Viewing hardware information

#### About this task

Perform the following procedure to view system status and technical information about the VSP 4850GTS hardware components. You can view information about the switch (such as location), chassis (type, serial number, and base MAC address), temperature, power supplies, fans, cards, system errors, port locks, topology status, and message control information.

## **Procedure**

- 1. Log on to the switch to enter User EXEC mode.
- 2. View hardware information:

```
show sys-info [card | fan | led | power | temperature | uboot | usb]
```

### **Example**

## Viewing hardware information on VSP 4850GTS-PWR+ switch:

```
VSP-4850GTS-PWR+:1>show sys-info
General Info :
           SysDescr
                             : VSP-4850GTS-PWR+ (w.x.y.z) HW Base: ERS 4850
           SysName : VSP-4850GTS-PWR+ (W.X.Y.Z) HW Base: ER:
SysName : VSP-4850GTS-PWR+
SysUpTime : 0 day(s), 00:04:19
SysContact : http://www.extremenetworks.com/contact/
           SysLocation: 9 Northeastern Blvd, Salem, NH. 03079
Chassis Info:
           Chassis : 4850GTS-PWR+
ModelName : 4850GTS-PWR+
BrandName : Extreme Networks.
Serial# : 12JP442H70GH
H/W Revision : 10
H/W Config : none
Part Number : AL4800A88-E6
           NumSlots : 1
NumPorts : 50
BaseMacAddr : 24:d9:21:dd:44:00
MacAddrCapacity : 256
System MTU : 1950
Card Info :
           Slot# CardType
                                                   Serial#
                                                                                Part#
                                                                                                          Oper Admin Power
                                                                                                      Status Status State
                1 4850GTS-PWR+ 12JP442H70GH AL4800A88-E6
                                                                                                            up up
Temperature Info :
 Chassis Temperature
Power Supply Info :
           Ps#1 Status : UP
Ps#1 Type : AC
Ps#1 Description : AC-DC-54V-1000W
Ps#1 Serial Number: LBNNTMDT200NPC
           Ps#1 Version : --
Ps#1 Part Number : 325220-A.01
           Ps#2 Status
                              : empty
           Total Power Available : 1000 watts
           Total Power Usage : 145 watts
Fan Info :
               Description OperStatus OperSpeed AirflowDir
Tray 1 Fan 1 up mediumSpeed left-right
Tray 1 Fan 2 up mediumSpeed left-right
Tray 1 Fan 3 up mediumSpeed left-right
LED Info :
           LED#1 Label : PWR
           LED#1 Status : GreenSteady
           LED#2 Label : Status
           LED#2 Status : GreenSteady
           LED#3 Label : Rps
           LED#3 Status : Off
           LED#4 Label : Up
           LED#4 Status : UnSupported
```

```
LED#5 Label : Down
          LED#5 Status : UnSupported
          LED#6 Label : Base
          LED#6 Status : UnSupported
USB Info :
          Vendor Id : 196d
Manufacturer : InnoDisk
Product Id : 0201
Product Name : Nano
                     : 02.50
          Serial Number: 000000000077
          Max Current : 500 mA
System Error Info :
          Send Login Success Trap : false
Send Authentication Trap : false
          Error Code : 0
Error Severity : 0
Port Lock Info :
          Status : off
          LockedPorts :
Message Control Info :
         Action : suppress-msg
Control-Interval : 5
Max-msg-num : 5
Status : disable
Configuration Operation Info Since Boot Up:
Last Change: 0 day(s), 00:02:26
Last Vlan Change: 0 day(s), 00:02:26
Last Statistic Reset: 0 day(s), 00:00:00
Current Uboot Info :
VU-Boot 2012.04-00001-g6a10a19 (Apr 18 2014 - 16:22:07)MPC83XX
```

## Variable definitions

Use data in the following table to use the show sys-info command.

Variable	Value
card	Displays information about the device. Includes type, serial number, and assembly date.
fan	Displays information about installed cooling ports.
led	Displays LED information in detail.
power	Displays information about installed power supplies.
temperature	Displays temperature information.
uboot	Displays uboot details.
usb	Displays USB information.

# **Chapter 6: Translations of safety messages**

## Caution:

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

## Important:

## Achtung:

Wenn diese Einheit in einem Rack montiert wird, muß ein gewisser Abstand zur nächsten Einheit gelassen werden. Jede Einheit muß mit geeignetem Befestigungsmaterial gesichert werden. Das Befestigungsmaterial ist nicht für die gleichzeitige Befestigung mehrerer Einheiten geeignet.

## **!** Important:

Si vous installez le module dans une baie, ne l'empilez pas directement sur un autre. Chaque module doit être fixé à sa propre baie à l'aide des supports de montage appropriés. Ces supports ne sont pas conçus pour résister à plusieurs modules.

## Important:

#### Precautión:

Cuando monte este dispositivo en un bastidor, no apile las unidades directamente una encima de otra. Cada unidad debe fijarse en el bastidor con las abrazaderas de montaje adecuadas. Las abrazaderas de montaje no están diseñadas para sostener varias unidades.

## **Important:**

Se il dispositivo viene installato in un rack, non impilare le unità direttamente una sull'altra. Ogni unità deve essere fissata al rack con le staffe di montaggio appropriate. Le staffe di montaggio non sono state progettate per supportare più unità.



**警告**: 在机架中安装此设备时,请勿将多个部件叠放在机架中。必须用合适的 安装托架将各个部件固定在机架中。安装托架无法支撑多个部件。



注意:この装置をラックに設置する場合は、ラック内のコニットを直接積み重 ねないようにしてください。各ユニットは専用の取り付けブラケットでラック に固定する必要があります。取り付けプラケットは複数のユニットを支えるよ うには設計されていません。



注意:在機箱中掛載此裝置時,請不要直接在機箱中的另一個裝置上直接堆放裝置。 每一装置都必須使用適當的掛載托架以固定在機架中。掛載托架不能用來支撐多個 装置・

## Caution:

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

## **!** Important:

## Achtung:

Wenn Sie kein Modul im Schacht verwenden, muß die Metallabdeckung über dem Schacht montiert sein. Eine Entfernung der Abdeckung führt zu einer Verschlechterung der Luftzirkulation und damit zu einer nicht ausreichenden Kühlung der Einheit.

## **!** Important:

Si vous n'installez pas le module dans une baie, veillez à laisser la plaque métallique sur la baie. Si vous la retirez, l'aération du module ne peut pas s'effectuer correctement.

## Important:

#### Precaution:

Si no instala ningún módulo en la ranura, asegúrese de mantener la placa de la cubierta de metal en la misma. Si la retira, impedirá que el aire circule y la unidad se refrigere adecuadamente.

## Important:

## Attenzione:

Se nello slot non vengono installati moduli, assicurarsi di mantenere la piastra di copertura metallica in sede sopra lo slot. La rimozione della piastra impedisce la ventilazione e il corretto raffreddamento dell'unità.



注意:この装置をラックに設置する場合は、ラック内のユニットを直接積み重 ねないようにしてください。各ユニットは専用の取り付けブラケットでラック に固定する必要があります。取り付けブラケットは複数のユニットを支えるよ うには設計されていません。



注意:スロットにモジュールを取り付けない場合は、スロットにある金属製の カバープレートが外れないように注意してください。カバープレートを動かす と気流が妨げられ、適切なユニット冷却が行われなくなります。



注意:如果您未在插槽中安裝模組,請確定金屬殼板正確地蓋在插槽上。移除殼板 會阻礙空氣流通以及裝置的適當冷卻度。



**警告**:如果您不打算在该插槽中安装任何模块,请务必使金属盖板正确地盖住 该插槽。如果取下盖板,将妨碍通风及部件散热。



**警告**:この装置の電源は、電源コードを抜かない限り切断できません。緊急の 場合にすばやく安全に切断できる場所に電源コードを接続してください。



警告:若要關閉此裝置的電源,拔掉插頭是唯一的方法。 為了因應緊急狀況,請將 電源線連接到可以快速插拔的地方。

## Warning:

Disconnecting the AC power cord is the only way to turn off AC power to this device. Always connect the AC power cord in a quickly and safely accessible location in case of an emergency.

## Important:

#### Warnung:

Das Gerät kann nur durch Ziehen des Netzsteckers ausgeschaltet werden. Schließen Sie das Netzkabel an einer Steckdose an, die in Notfällen schnell und sicher zugänglich ist.

## **Important:**

#### Avertissement:

Pour mettre le module hors tension, vous devez impérativement déconnecter le cordon d'alimentation. En outre, vous devez dégager un espace minimal dans la zone de câblage pour pouvoir y accéder facilement en cas d'urgence.



**警告:** 断开交流电源线是切断本设备的交流电源的唯一方法。交流电源线一定要 ,连接到在紧急时刻可以快速安全地接触到的位置。

## Important:

#### Advertencia:

Para apagar el dispositivo debe desenchufar el cable. Conecte siempre el cable de alimentación a una toma segura y de fácil acceso por si se produjera alguna situación de emergencia.

## **Important:**

#### Avviso:

L'unico modo per disattivare questo dispositivo consiste nello scollegare il cavo di alimentazione. Collegare sempre il cavo di alimentazione ad una presa che sia facilmente e rapidamente accessibile in caso di emergenza.

## Danger:

Use only power cords that have a grounding path. Without a proper ground, a person who touches the switch is in danger of receiving an electrical shock. Lack of a grounding path to the switch can result in excessive emissions.

## Important:

#### Vorsicht:

Verwenden Sie nur Netzkabel mit Schutzerdung. Ohne ordnungsgemäße Schutzerdung besteht für Personen, die den Switch berühren, die Gefahr eines elektrischen Schlages. Eine nichtvorhandene Schutzerdung kann zu sehr starken Abstrahlungen führen.

## A Danger:

N'utilisez que des cordons d'alimentation équipés de trajet de mise à la terre. Sans mise à la terre adaptée, vous risquez de recevoir une décharge électrique en touchant le commutateur. Par ailleurs, l'absence de trajet de mise à la terre peut générer des émissions excessives.

## **Important:**

## Peligro:

Utilice únicamente cables de alimentación con toma de tierra. De lo contrario, al tocar el interruptor puede recibir una descarga eléctrica. Si no hay un circuito de toma de tierra en el enchufe, puede producirse un exceso de emisiones.

## **Important:**

#### Pericolo:

Utilizzare esclusivamente cavi di alimentazione dotati di un percorso per la messa a terra. Senza un'adequata messa a terra, chiunque tocchi lo switch corre il rischio di ricevere una scossa elettrica. L'assenza di un percorso per la messa a terra verso lo switch può comportare un eccesso di emissioni.



危険:接地経路を持つ電源コードを必ず使用するようにしてください。適切な 接地がない状態でスイッチに触ると、感電する危険性があります。また、ス イッチへの接地経路がないと、過度な放電を引き起こす可能性があります。



危险:请仅使用接地的电源线。如果电源线不接地或接地不当,接触交换机 的人员可能会受到电击。如果交换机不接地,则可能导致放电过量。

#### **Warning:**

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

## **!** Important:

#### Warnung:

Die Lithiumbatterie kann nicht vor Ort ausgetauscht werden. Die Batterie darf nur von entsprechend befugtem Personal entfernt und ausgetauscht werden. Muss die Batterie ersetzt werden, wenden Sie sich bitte an den Technischen Support von Extreme Networks.

## | Important:

#### **Avertissement:**

La batterie au lithium n'est pas remplaçable sur site. Elle ne peut être enlevée et remplacée que par du personnel qualifié. Veuillez prendre contact avec le support technique d'Extreme Networks si la batterie doit être remplacée.

## **!** Important:

### 警告:

□□池不支持□□更□, 只有授□人□才能□行拆卸和更□。 如果您需要更□□池, □□系 Extreme Networks 技□支持部□□求帮助。

## **!** Important:

#### Advertencia:

La batería de litio no puede sustituirse en campo. La extracción y sustitución debe ser realizada exclusivamente por personal autorizado. Comuníquese con el Soporte técnico de Extreme Networks si necesita asistencia para cambiar la batería.

## **!** Important:

## Aviso:

A bateria de lítio não é substituível em campo. Só deve ser removida e substituída por pessoal autorizado. Entre em contato com o Suporte Técnico da Extreme Networks para obter assistência, se a bateria precisar de substituição.

## **Important:**

## Предупреждение:

Литиевые аккумуляторы не подлежат самостоятельной замене в условиях эксплуатации. Их может извлекать и заменять только аттестованный персонал. Если требуется замена аккумулятора, обратитесь в службу технической поддержки Extreme Networks.