Installing the Virtual Services Platform
4450GTX-HT-PWR+
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August 2018

Installing the Virtual Services Platform 4450GTX-HT-PWR+
Chapter 1: Preface

Purpose
This guide provides information and instructions to install a Extreme Networks Virtual Services Platform 4450GTX-HT-PWR+ switch.

Training
Ongoing product training is available. For more information or to register, you can access the Web site at www.extremenetworks.com/education/.

Providing Feedback to Us
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• Content errors or confusing or conflicting information.
• Ideas for improvements to our documentation so you can find the information you need faster.
• Broken links or usability issues.

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• GTAC (Global Technical Assistance Center) for Immediate Support
  - Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact
- Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.

• **GTAC Knowledge** – Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.

• **The Hub** – A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

• **Support Portal** – Manage cases, downloads, service contracts, product licensing, and training and certifications.

Before contacting Extreme Networks for technical support, have the following information ready:

• Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products

• A description of the failure

• 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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About this task
You can modify your product selections at any time.

Procedure
1. In an Internet browser, go to http://www.extremenetworks.com/support/service-notification-form/.
2. Type your first and last name.
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 4450GTX-HT-PWR*+. 
Chapter 3: Hardware models

The following table describes the VSP 4450GTX-HT-PWR+ hardware.

Table 1: Hardware

<table>
<thead>
<tr>
<th>VSP 4000 model</th>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSP 4450GTX-HT-PWR+</td>
<td>• 48 10/100/1000 Mbps RJ45 ports with 802.3at PoE+</td>
<td>EC4400A03-E6</td>
</tr>
<tr>
<td></td>
<td>• 2 Combo 100/1000 Mbps SFP ports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• 2 1/10 Gbps SFP+ ports with MACsec capable PHY</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Base Software License</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• one (of two) field replaceable 1000W PSUs supplied with the chassis</td>
<td></td>
</tr>
</tbody>
</table>

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.

Management port

Extreme Networks Virtual Services Platform 4000 Series requires one port to be configured as the management port. This port separates user traffic from management traffic in highly sensitive environments, such as brokerages and insurance agencies. By using this dedicated network to manage the switch, and by configuring access policies (if you enable routing), you can manage the switch in a secure fashion. You can also use terminal servers to access the console port on the CP module.

If you must access the switch, it is recommended that you use the console port. The switch is always reachable, even if an issue occurs with the in-band network management interface.
### Platform power supplies

The Virtual Services Platform 4450GTX-HT-PWR+ model supports two field-replaceable AC power supplies. One power supply is supplied with the chassis.

You can install a redundant power supply to support load sharing or to provide power redundancy.

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

**Note:**

The 1000W AC power supply uses 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>
<thead>
<tr>
<th>VSP 4000 PSU</th>
<th>Usage</th>
<th>Part number (order code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000W AC POE+ power supply</td>
<td>For use in VSP 4450GTX-HT-PWR+ model.</td>
<td>EC4005A03-E6</td>
</tr>
</tbody>
</table>

### 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>
<thead>
<tr>
<th>Order Code</th>
<th>Length</th>
<th>Power supply side connector</th>
<th>Power source side connector</th>
<th>Safety Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>700512240</td>
<td>3 m</td>
<td>C15</td>
<td>C14</td>
<td>USA</td>
</tr>
<tr>
<td>700512242</td>
<td>3 m</td>
<td>C15</td>
<td>C14</td>
<td>International except Japan and Taiwan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Description</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA0020071-E6</td>
<td>Power cord 2.5 m IEC C15 to BS1363</td>
<td>United Kingdom</td>
</tr>
</tbody>
</table>

Table continues…
Supported optical devices

Use optical devices to achieve high bit-rate communications and long transmission distances. The following section describes the supported optical devices on the VSP 4000 system.

⚠️ Important:

The Extreme Networks SFP (1GigE) devices that are supported on the VSP 4850GTS can be used on the VSP 4450GTX-HT-PWR+ switch as they are certified and qualified as high temperature devices. However, if you use a non-high temperature SFP+ device, the device is logged as an unsupported high temperature device.

Extreme Networks recommends using SFP and SFP+ transceivers as they have been through extensive qualification and testing.

Extreme Networks will not be responsible for issues related to third party transceivers.

Small Form Factor Pluggable (SFP) transceivers

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

You can use various SFP (1Gb/s) and SFP+ (10Gb/s) 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 SFP+ transceivers use Lucent connectors (LC) to provide precision keying and low interface losses.
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, NN47227-301.

Compatible transceivers

⚠ Important:

Extreme Networks recommends using SFP and SFP+ transceivers as they have been through extensive qualification and testing. Extreme Networks will not be responsible for issues related to third party transceivers.

- The VSP 4450GTX-HT-PWR+ 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 third party 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 the optical products, see Installing Transceivers and Optical Components on VSP Operating System Software.
# Chapter 4: Preinstallation checklist

Before you install the VSP 4450GTX-HT-PWR+, make sure that you complete the tasks in the preinstallation checklist.

<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>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.</td>
<td>For the physical, electrical, and environmental specifications, see <a href="#">Technical specifications</a> on page 19.</td>
</tr>
<tr>
<td>2.</td>
<td>Verify the power supply unit (PSU) specifications. Optionally order a redundant PSU to provide redundancy and load sharing.</td>
<td>See <a href="#">AC power supply specifications</a> on page 29. To order redundant PSUs, see <a href="#">Hardware models</a> on page 10 for part numbers.</td>
</tr>
<tr>
<td>3.</td>
<td>Make sure that you have the following tools and cables:</td>
<td>See <a href="#">Cable requirements for the VSP 4000</a> on page 24.</td>
</tr>
<tr>
<td></td>
<td>• Phillips #2 screwdriver</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• RJ45 console port cable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ESD cable</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Unpack the equipment.</td>
<td>Observe ESD precautions when you unpack the equipment. See <a href="#">Electrostatic discharge</a> on page 17.</td>
</tr>
<tr>
<td>5.</td>
<td>Verify the contents of the shipped package.</td>
<td>See <a href="#">Package contents</a> on page 20 for a description of the components that are provided with the switch. If any components are missing, contact Extreme Networks support.</td>
</tr>
<tr>
<td>6.</td>
<td>Make sure that the power cord has the correct country-specific termination.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Prepare the rack.</td>
<td>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. Ensure that the rack is grounded to the same grounding electrode used by the power service</td>
</tr>
</tbody>
</table>

*Table continues…*
<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>in the area. The ground path must be permanent and must not exceed 1 Ohm of resistance from the rack to the grounding electrode.</td>
</tr>
</tbody>
</table>
Chapter 5: Installing the VSP 4450GTX-HT-PWR+

Installation checklist

Use this checklist to install the VSP 4450GTX-HT-PWR+.

<table>
<thead>
<tr>
<th>No.</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1.  | Install the VSP 4450GTX-HT-PWR+. | You can install the switch in two ways:  
• Installing the Virtual Services Platform 4000 on a table or shelf on page 21  
• Installing the Virtual Services Platform 4000 in an equipment rack on page 22 |
| 2.  | Install the primary or redundant power supply. | Important: A combination of AC-input and DC-input power supplies in the same chassis is not supported.  
For the procedure to install power supply, see Installing the VSP 4000 Series PWR power supply on page 27. |
| 3.  | Check the LEDs to verify the installation. | For a description of the LEDs, see Check Light Emitting Diode (LED) on VSP 4000 on page 32. |

Installation fundamentals

The following section describes the installation fundamentals for the VSP 4450GTX-HT-PWR+ model.

**VSP 4450GTX-HT-PWR+ model**

The VSP 4450GTX-HT-PWR+ model consists of:

1. 48 10/100/1000 Mbps RJ45 ports with PoE+
2. 2 Combo 100/1000 Mbps SFP ports supporting fiber or copper connection
3. 2 1/10 Gbps SFP+ ports for fiber or copper connection

Figure 1: VSP 4450GTX-HT-PWR+

1. USB 2.0 port

**Note:**

The VSP 4450GTX-HT-PWR+ model does not require a USB device in the USB port for normal operation. The USB port can be used for file transfer of configs and logs using a USB drive.

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

---

**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.

![ESD cable](image)

**Figure 2: 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.

⚠️ **Warning:**

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**

<table>
<thead>
<tr>
<th>Specifications</th>
<th>4450GTX-HT-PWR+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>8.8 cm. – 2RU</td>
</tr>
<tr>
<td>Width</td>
<td>44 cm.</td>
</tr>
<tr>
<td>Depth</td>
<td>36.8 cm.</td>
</tr>
<tr>
<td>Weight</td>
<td>23.1 lbs (10.48 kg) with 1 PSU, PSU weight – 3.1 lbs (1.4 kg)</td>
</tr>
<tr>
<td>MTBF rating</td>
<td>chassis – 224,500 hours</td>
</tr>
<tr>
<td></td>
<td>1000 W AC power supply – 860,175 hours</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Environmental requirement</th>
<th>Virtual Services Platform 4000 models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>0°C to 70°C (32°F to 158°F), continuous operation</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to 85°C (-40°F to 185°F)</td>
</tr>
<tr>
<td>Operating and Storage Humidity</td>
<td>0 to 95 percent noncondensing</td>
</tr>
<tr>
<td>Maximum Operating Altitude</td>
<td>3,048m (10 000 feet) above sea level</td>
</tr>
<tr>
<td>Altitude</td>
<td>0 to 3,048m (0 to 10,000ft) above sea level</td>
</tr>
<tr>
<td>Storage Altitude</td>
<td>0 to 12,192m (0 to 40,000ft) above sea level</td>
</tr>
<tr>
<td>Acoustic Noise</td>
<td>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 35°C, (measurement methods based on ISO 7779).</td>
</tr>
</tbody>
</table>

*Table continues…*
### Environmental requirement

<table>
<thead>
<tr>
<th>Miscellaneous Operating Considerations</th>
<th>Virtual Services Platform 4000 models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No heat sources such as hot air vents or direct sunlight near the switch.</td>
<td>• No sources of severe electromagnetic interference near the switch.</td>
</tr>
<tr>
<td>• No excessive dust in the environment.</td>
<td>• An adequate power source is within 6 feet (1.83 meters) of the switch. One 15-amp circuit is required for each power supply.</td>
</tr>
<tr>
<td>• At least 2 inches (5.08 centimeters) of clearance on each side of the switch unit for ventilation.</td>
<td>• Adequate clearance at the front and rear of the switch for access to cables.</td>
</tr>
</tbody>
</table>

⚠️ **Warning:**

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 39.

### Airflow direction

The airflow direction in the VSP 4450GTX-HT-PWR+ for the top half of the switch, where the components exist, 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.

The airflow direction for the bottom half of the VSP 4450GTX-HT-PWR+, where the power supplies exist, is from front to back. The chassis draws in cool air from the front of the chassis, and hot air exits at the rear.

### Package contents

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

1. VSP 4450GTX-HT-PWR+ 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 4450GTX-HT-PWR+ Quick Install Guide*
   d. The China RoHS paper

5. **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 a VSP 4000 on a table or shelf, perform this procedure.

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

   ![Rubber footpads diagram](image)

2. 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 the VSP 4000 switch in an equipment rack, perform this procedure.

Prerequisites for installing the VSP 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 39.

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

3. 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

<table>
<thead>
<tr>
<th>Required Cable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/100/1000BASE-T Ports</td>
<td>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.</td>
</tr>
<tr>
<td>10/100BASE-TX Ports</td>
<td>The interconnect cabling for 10BASE-T Ethernet must conform to Cat3, Cat4, Cat5 (or better) UTP cabling for distances up to 100 meters.</td>
</tr>
<tr>
<td></td>
<td>The interconnect cabling for 100BASE-TX Fast Ethernet must conform to Cat5 (or better) UTP cabling for distances up to 100 meters.</td>
</tr>
<tr>
<td>100BASE-FX Ports</td>
<td>The interconnect cabling must conform to 50/125 or 62.5/125 micron multimode fiber-optic cabling for distances up to 3 kilometers.</td>
</tr>
<tr>
<td></td>
<td>✪ Note: 100BASE-FX Transceivers are supported in SFP ports only, and not in SFP+ ports.</td>
</tr>
<tr>
<td>Console Port</td>
<td>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).</td>
</tr>
<tr>
<td>SFP Transceiver Ports</td>
<td>Varies with the installed SFP transceiver. See the documentation shipped with the SFP transceiver for specifications.</td>
</tr>
<tr>
<td>USB Port</td>
<td>The USB port is usable with a USB drive for file transfer of config files, log files and software images.</td>
</tr>
</tbody>
</table>

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.

1. 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.

---

### 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 8: DB–9 Console port pin assignments**

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

**Table 9: RJ45 Console port pin assignments**

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

Virtual Services Platform power supply power specification

The VSP 4450GTX-HT-PWR+ supports two external field replaceable power supplies. One power supply ships with the chassis. You can install a secondary power supply to provide redundancy, load sharing, and to add Power over Ethernet Plus (PoE+) power budget on PWR+ models.
1000W AC power supply
VSP 4450GTX-HT-PWR+ supports dual 54V 1000W Power over Ethernet Plus (PoE+) AC power supplies.

⚠️ Important:
Ensure that you use only 1000W power supplies (both primary and secondary) on VSP 4450GTX-HT-PWR+ models.

Figure 3: 1000W AC power supply

Connector
The 1000W AC power supply uses 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 4: IEC 60320 C16 connector

Power over Ethernet Plus specifications

Table 10: VSP 4450GTX-HT-PWR+ model

<table>
<thead>
<tr>
<th></th>
<th>0°C to 50°C</th>
<th>50°C to 70°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 PSU</td>
<td>860W</td>
<td>400W</td>
</tr>
<tr>
<td>2 PSU</td>
<td>1660W</td>
<td>832W</td>
</tr>
</tbody>
</table>
Table 11: VSP 4450GTX-HT-PWR+ model with 1 PSU

<table>
<thead>
<tr>
<th></th>
<th>0°C to 50°C</th>
<th>50°C to 70°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE support on</td>
<td>48 ports</td>
<td>23 ports</td>
</tr>
<tr>
<td>PoE+ support on</td>
<td>26 ports</td>
<td>13 ports</td>
</tr>
</tbody>
</table>

Table 12: VSP 4450GTX-HT-PWR+ model with 2 PSUs

<table>
<thead>
<tr>
<th></th>
<th>0°C to 50°C</th>
<th>50°C to 70°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoE support on</td>
<td>48 ports</td>
<td>48 ports</td>
</tr>
<tr>
<td>PoE+ support on</td>
<td>48 ports</td>
<td>26 ports</td>
</tr>
</tbody>
</table>

- VSP 4450GTX-HT-PWR+ can support 802.3af 17.8W or 32.4W on each port with one power supply installed. You can add a second power supply for redundancy.

### AC power supply specifications

The following table describes the regulatory AC power specifications for the VSP 4450GTX-HT-PWR+ switch. 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

<table>
<thead>
<tr>
<th></th>
<th>4450GTX-HT-PWR+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Current:</td>
<td>16.66A/8.33A</td>
</tr>
<tr>
<td>Input Voltage (rms):</td>
<td>100 to 240VAC at 50 to 60 Hz</td>
</tr>
<tr>
<td>Power Consumption:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Without PoE+</td>
</tr>
<tr>
<td></td>
<td>- Typical: 100W</td>
</tr>
<tr>
<td></td>
<td>- Maximum: 145W</td>
</tr>
<tr>
<td></td>
<td>• With PoE+</td>
</tr>
<tr>
<td></td>
<td>- Typical power utilization depends on the number of ports using PoE+</td>
</tr>
<tr>
<td></td>
<td>- Maximum: 553.4W</td>
</tr>
<tr>
<td>Thermal Rating:</td>
<td>341.2 BTU/Hr typical and 494.8 BTU/Hr maximum</td>
</tr>
<tr>
<td>Inrush Current:</td>
<td>70A maximum</td>
</tr>
<tr>
<td>Turn on Condition:</td>
<td>1 second maximum after application of AC power</td>
</tr>
<tr>
<td>Efficiency:</td>
<td>70 percent minimum</td>
</tr>
</tbody>
</table>

## 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 14: International power cord specifications**

<table>
<thead>
<tr>
<th>Country and Plug Specification</th>
<th>Specifications</th>
<th>Typical Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental Europe:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• CEE7 standard VII male plug</td>
<td>• 220 or 230VAC</td>
<td></td>
</tr>
<tr>
<td>• Harmonized cord (HAR marking on the outside of the cord jacket to comply with the CENELEC Harmonized Document HD-21)</td>
<td>• 50 Hz</td>
<td><img src="image" alt="3292x" /></td>
</tr>
<tr>
<td>• 220 or 230VAC</td>
<td>• Single phase</td>
<td></td>
</tr>
<tr>
<td>United States of America, Canada, and Japan:</td>
<td></td>
<td><img src="image" alt="3277x" /></td>
</tr>
<tr>
<td>• NEMA5-15P male plug</td>
<td>• 100 or 120VAC</td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• UL-recognized (UL stamped on cord jacket)</td>
<td>• 50–60 Hz</td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• CSA-certified (CSA label secured to the cord)</td>
<td>• Single phase</td>
<td></td>
</tr>
<tr>
<td>United Kingdom:</td>
<td></td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• BS1363 male plug with fuse</td>
<td>• 240VAC</td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• Harmonized cord</td>
<td>• 50 Hz</td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• Single phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia:</td>
<td></td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• AS3112-1981 male plug</td>
<td>• 240VAC</td>
<td><img src="image" alt="3265x" /></td>
</tr>
<tr>
<td>• 50 Hz</td>
<td><img src="image" alt="3265x" /></td>
<td></td>
</tr>
<tr>
<td>• Single phase</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⚠️ **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 39.

**Connect power to the front panel**

Connect the AC power cord to the front 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 front 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 5: Connecting AC power to the front 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 39.

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
Installing the VSP 4450GTX-HT-PWR+

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.
Front panel LEDs

The following diagram illustrates the components on the front panels of the VSP 4450GTX-HT-PWR+ switch.

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

- **Switch LED state indicators** on page 33
- **Port LED state indicators** on page 34

![Figure 6: VSP 4450GTX-HT-PWR+](image)

1. USB 2.0 port
2. Switch LEDs
3. 10/100/1000 Mbps RJ45 ports with PoE+ (LEDs above ports)
4. 100/1000 Mbps Combo SFP slots. Supports 1 Gbps SFPs and 100 Mbps low speed SFPs
5. 1/10 Gbps SFP+ ports
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 39.

Switch LED state indicators

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

⚠️ **Note:**

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

**Table 15: Switch LED state indicators**

<table>
<thead>
<tr>
<th>Label</th>
<th>Color and Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Green (solid)</td>
<td>The switch is receiving power either from the primary or secondary power supply. Normal operation.</td>
</tr>
</tbody>
</table>
### Port LED state indicators

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

**Note:**
Indicator states are applicable to the 4450GTX-HT-PWR+ model 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 Mb/s, 100 Mb/s, 1000 Mb/s).

<table>
<thead>
<tr>
<th>Label</th>
<th>Color and Status</th>
<th>Description</th>
</tr>
</thead>
</table>
| **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. |
Table 16: RJ45 Port LED state indicators

<table>
<thead>
<tr>
<th>Label</th>
<th>Color and Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed/PoE+</td>
<td>Green, Blink</td>
<td>The port is set to operate at 1000 Mbps with PoE.</td>
</tr>
<tr>
<td></td>
<td>Green, Steady</td>
<td>The port is set to operate at 1000 Mbps without PoE+.</td>
</tr>
<tr>
<td></td>
<td>Amber, Blink</td>
<td>The port is set to operate at 100 Mbps with PoE+.</td>
</tr>
<tr>
<td></td>
<td>Amber, Steady</td>
<td>The port is set to operate at 100 Mbps without PoE+.</td>
</tr>
<tr>
<td></td>
<td>Amber, Green Pulse</td>
<td>The port is experiencing a PoE+ error.</td>
</tr>
<tr>
<td>Off</td>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Label</th>
<th>Color and Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link / Activity</td>
<td>Green, Steady</td>
<td>The link established but no data activity exists.</td>
</tr>
<tr>
<td></td>
<td>Green, Blink</td>
<td>The link is established and data activity exists (the blink rate indicates the level of activity).</td>
</tr>
<tr>
<td></td>
<td>Green, Slow Blink</td>
<td>The port is administratively disabled.</td>
</tr>
<tr>
<td>Off</td>
<td></td>
<td>Local/remote fault.</td>
</tr>
</tbody>
</table>

Table 17: SFP/SFP+ transceiver Port LED state indicators

<table>
<thead>
<tr>
<th>Label</th>
<th>Color and Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Use</td>
<td>Green, Blink</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>Green, Steady</td>
<td>The SFP/SFP+ port and the transmit port are active.</td>
</tr>
<tr>
<td></td>
<td>Amber, Blink</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>Amber, Steady</td>
<td>SFP/SFP+ Installed—TX Port Inactive</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No SFP/SFP+ transceiver is present.</td>
</tr>
<tr>
<td>Link / Activity</td>
<td>Green, Blink</td>
<td>Activity exists on the port.</td>
</tr>
<tr>
<td></td>
<td>Green, Slow Blink</td>
<td>Software disabled this port.</td>
</tr>
<tr>
<td></td>
<td>Green, Steady</td>
<td>The link is operating normally.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>No link exists.</td>
</tr>
</tbody>
</table>

**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 auto-negotiation 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.
Viewing hardware information

About this task
Perform the following procedure to view system status and technical information about the VSP 4450GTX-HT-PWR+ 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]
   ```

Example
Viewing hardware information on VSP 4450GTX-HT-PWR+ switch:

```
VSP-4450GTX-HT-PWR+:1>show sys-info
General Info :
 SysDescr     : VSP-4450GTXHT-PWR+ (w.x.y.z)
 SysName      : VSP-4450GTXHT-PWR+
 SysUpTime    : 0 day(s), 00:05:40
 SysContact   : http://www.extremenetworks.com/contact/
 SysLocation  : 9 Northeastern Blvd,Salem,NH. 03079

Chassis Info :
 Chassis            : 4450GTXHT-PWR+
 ModelName          : 4450GTXHT-PWR+
 BrandName          : Extreme Networks.
 Serial#            : SDNIVSP4450B020
 H/W Revision       : R0B
 H/W Config         : none
 Part Number        :
 NumSlots           : 1
 NumPorts           : 50
 BaseMacAddr        : b0:ad:aa:55:1b:00
 MacAddrCapacity    : 256
 System MTU         : 1950

Card Info :
 Slot#  CardType          Serial#            Part#             Oper   Admin  Power
       Status  State
 1 4450GTXHT-PWR+  SDNIVSP4450B020               --               up      up     on

Temperature Info :
 Chassis Temperature
 32

Power Supply Info :
 Ps#1 Status      : UP
 Ps#1 Type        : AC
 Ps#1 Description : AC-DC-54V-1000W
 Ps#1 Serial Number: LBNNTMP83000H
 Ps#1 Version     : --
 Ps#1 Part Number : 700508300
 Ps#2 Status      : empty
 Total Power Available : 1000 watts
 Total Power Usage   : 145 watts
```
Fan Info:

<table>
<thead>
<tr>
<th>Description</th>
<th>OperStatus</th>
<th>OperSpeed</th>
<th>AirflowDir</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tray 1 Fan 1</td>
<td>up</td>
<td>mediumSpeed</td>
<td>left-right</td>
</tr>
<tr>
<td>Tray 1 Fan 2</td>
<td>up</td>
<td>mediumSpeed</td>
<td>left-right</td>
</tr>
<tr>
<td>Tray 1 Fan 3</td>
<td>up</td>
<td>mediumSpeed</td>
<td>left-right</td>
</tr>
<tr>
<td>Tray 1 Fan 4</td>
<td>up</td>
<td>mediumSpeed</td>
<td>left-right</td>
</tr>
<tr>
<td>Tray 1 Fan 5</td>
<td>up</td>
<td>mediumSpeed</td>
<td>left-right</td>
</tr>
</tbody>
</table>

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

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), 00:02:22
- Last Vlan Change: 0 day(s), 00:02:22
- Last Statistic Reset: 0 day(s), 00:00:00

Current Uboot Info:

VU-Boot 2012.04-00002-g6fb1c26 (Apr 26 2017 - 13:37:44) bld=17042617

Variable definitions

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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>card</td>
<td>Displays information about the device. Includes type, serial number, and assembly date.</td>
</tr>
</tbody>
</table>

Table continues...
<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>fan</td>
<td>Displays information about installed cooling ports.</td>
</tr>
<tr>
<td>led</td>
<td>Displays LED information in detail.</td>
</tr>
<tr>
<td>power</td>
<td>Displays information about installed power supplies.</td>
</tr>
<tr>
<td>temperature</td>
<td>Displays temperature information.</td>
</tr>
<tr>
<td>uboot</td>
<td>Displays uboot details.</td>
</tr>
</tbody>
</table>
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:
Precaución:
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なには設計されていません。
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.
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.

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.

⚠️ 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'adeguata 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.

⚠️ 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:

⚠️ Important:

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

警告:

锂池不支持更
锂，只最授人能	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.