



Documentation Reference for VOSS

Release 8.0 (VOSS)
9035639
January 2019

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Chapter 1: About this Document

Purpose

This document provides information on features in VSP Operating System Software (VOSS). VOSS runs on the following product families:

- Extreme Networks VSP 4000 Series
- Extreme Networks VSP 7200 Series
- Extreme Networks VSP 7400 Series
- Extreme Networks VSP 8000 Series (includes VSP 8200 and VSP 8400 Series)
- Extreme Networks VSP 8600 Series

Conventions

This section discusses the conventions used in this guide.

Text Conventions

The following tables list text conventions that can be used throughout this document.

Table 1: Notice Icons






Icon	Alerts you to...
 Important:	A situation that can cause serious inconvenience.
 Note:	Important features or instructions.
 Tip:	Helpful tips and notices for using the product.
 Danger:	Situations that will result in severe bodily injury; up to and including death.
 Warning:	Risk of severe personal injury or critical loss of data.

Table continues...


Icon	Alerts you to...
 Caution:	Risk of personal injury, system damage, or loss of data.

Table 2: Text Conventions

Convention	Description
Angle brackets (< >)	<p>Angle brackets (< >) indicate that you choose the text to enter based on the description inside the brackets. Do not type the brackets when you enter the command.</p> <p>If the command syntax is <code>cfm maintenance-domain maintenance-level <0-7></code>, you can enter <code>cfm maintenance-domain maintenance-level 4</code>.</p>
Bold text	<p>Bold text indicates the GUI object name you must act upon.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Click OK. • On the Tools menu, choose Options.
Braces ({ })	<p>Braces ({ }) indicate required elements in syntax descriptions. Do not type the braces when you enter the command.</p> <p>For example, if the command syntax is <code>ip address {A.B.C.D}</code>, you must enter the IP address in dotted, decimal notation.</p>
Brackets ([])	<p>Brackets ([]) indicate optional elements in syntax descriptions. Do not type the brackets when you enter the command.</p> <p>For example, if the command syntax is <code>show clock [detail]</code>, you can enter either <code>show clock</code> or <code>show clock detail</code>.</p>
Ellipses (...)	<p>An ellipsis (...) indicates that you repeat the last element of the command as needed.</p> <p>For example, if the command syntax is <code>ethernet/2/1 [<parameter> <value>]...</code>, you enter <code>ethernet/2/1</code> and as many parameter-value pairs as you need.</p>
<i>Italic Text</i>	<p>Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles that are not active links.</p>

Table continues...

Convention	Description
Plain Courier Text	<p>Plain Courier text indicates command names, options, and text that you must enter. Plain Courier text also indicates command syntax and system output, for example, prompts and system messages.</p> <p>Examples:</p> <ul style="list-style-type: none"> • <code>show ip route</code> • <code>Error: Invalid command syntax</code> <code>[Failed][2013-03-22 13:37:03.303</code> <code>-04:00]</code>
Separator (>)	<p>A greater than sign (>) shows separation in menu paths.</p> <p>For example, in the Navigation tree, expand the Configuration > Edit folders.</p>
Vertical Line ()	<p>A vertical line () separates choices for command keywords and arguments. Enter only one choice. Do not type the vertical line when you enter the command.</p> <p>For example, if the command syntax is <code>access-policy by-mac action { allow deny }</code>, you enter either <code>access-policy by-mac action allow</code> or <code>access-policy by-mac action deny</code>, but not both.</p>

Documentation and Training

To find Extreme Networks product guides, visit our documentation pages at:

Current Product Documentation www.extremenetworks.com/documentation/

Archived Documentation (for earlier versions and legacy products) www.extremenetworks.com/support/documentation-archives/

Release Notes www.extremenetworks.com/support/release-notes

Hardware/Software Compatibility Matrices <https://www.extremenetworks.com/support/compatibility-matrices/>

White papers, data sheets, case studies, and other product resources <https://www.extremenetworks.com/resources/>

Training

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For more information, visit www.extremenetworks.com/education/.

Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

[Extreme Portal](#) Search the GTAC (Global Technical Assistance Center) knowledge base, manage support cases and service contracts, download software, and obtain product licensing, training, and certifications.

[The Hub](#) A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

[Call GTAC](#) For immediate support: 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

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

Subscribing to Service Notifications

You can subscribe to email notifications for product and software release announcements, Vulnerability Notices, and Service Notifications.

1. Go to www.extremenetworks.com/support/service-notification-form.
2. Complete the form with your information (all fields are required).
3. Select the products for which you would like to receive notifications.



Note:

You can modify your product selections or unsubscribe at any time.

4. Click **Submit**.

Providing Feedback to Us

Quality is our first concern at Extreme Networks, and we have made every effort to ensure the accuracy and completeness of this document. We are always striving to improve our documentation and help you work better, so we want to hear from you! We welcome all feedback but especially want to know about:

- 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.

If you would like to provide feedback to the Extreme Networks Information Development team, you can do so in two ways:

- Use our short online feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at documentation@extremenetworks.com.

Please provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Chapter 2: New in this Document

The following sections detail what is new in *Documentation Reference*.

New Documents

The following documents are new:

- [VSP 7400 Series Switches: Hardware Installation Guide](#)
- [VSP 7400 Series Switches Quick Reference](#)

Obsolete Document

Installing Transceivers and Optical Components on VSP Operating System Software is obsolete. For information about transceivers and other optical components, see [Extreme Networks Pluggable Transceivers Installation Guide](#).

Removed Chapters

Three chapters are removed from this document to remove obsolete information and reduce duplication.

Restructured Documents

Configuring User Interfaces and Operating Systems is renamed and restructured to reorganize information and add new information.

Chapter 3: Roadmap

Use this section as a guide to find information to perform work involving the VSP Operating System Software (VOSS).

Product Fundamentals

Product fundamentals documentation contains information that is relevant to multiple job functions, and overview and reference information about the product and the product documentation.

Table 3: Product fundamentals documents

Technical document	Description
<i>Documentation Reference</i>	This document contains an overview of the documentation suite and explains how to use task-based documentation.
<i>Quick Start Configuration</i>	This document provides instructions to perform initial provisioning of the software.
<i>Configuring User Interfaces and Operating Systems</i>	This document describes how to navigate the command line interface and how to use Enterprise Device Manager to configure your switch, as well and information about operating systems that run on the switch.
<i>CLI Commands Reference</i>	This document provides default values and proper syntax of the command line interface commands.

Upgrades

Upgrades documentation enables you to upgrade hardware and software from one release to another for the product.

Table 4: Upgrades documents

Technical document	Description
<i>Release Notes</i>	This document describes new features and important information about the latest release. Release notes include a list of known issues (including workarounds where appropriate) and a list of fixed issues. This document also describes known limitations and expected behaviors that may first appear to be issues.

Installation and Commissioning

Installation and commissioning documentation enables you to install the product hardware and software and perform the initial configuration.

Table 5: Installation and commissioning documents

Technical document	Description
VSP 4000 Series	
<i>Installing the Virtual Services Platform 4450GSX-PWR+</i>	This document provides procedures and conceptual information to install the VSP 4000 4450GSX-PWR+.
<i>Installing the Virtual Services Platform 4450GTX-HT-PWR+</i>	This document provides procedures and conceptual information to install the VSP 4000 4450GTX-HTPWR+.
<i>Installing the Virtual Services Platform 4850GTS Series</i>	This document provides procedures and conceptual information to install the VSP 4000 VSP4850GTS Series.
<i>Virtual Services Platform 4450GSX Quick Install Guide</i>	This document provides quick installation instructions to install the VSP 4000 4450GSX-PWR+ switch.
<i>Virtual Services Platform 4450GTX-HT-PWR+ Quick Install Guide</i>	This document provides quick installation instructions to install the VSP 4000 4450GTX-HTPWR+ switch.
<i>Virtual Services Platform 4850GTS Series Quick Install Guide</i>	This document provides quick installation instructions to install the VSP 4000 VSP4850GTS Series switch.
VSP 7200 Series	
<i>Installing the Virtual Services Platform 7200 Series</i>	This document provides procedures and conceptual information to install the Virtual Services Platform 7200 Series.

Table continues...

Technical document	Description
<i>Quick Install Guide for Virtual Services Platform 7200 Series</i>	This document provides quick installation instructions to install the Virtual Services Platform 7200 Series.
VSP 7400 Series	
VSP 7400 Series Switches: Hardware Installation Guide	This document provides procedures and conceptual information to install the VSP 7400 Series.
VSP 7400 Series Switches Quick Reference	This document provides quick installation instructions to install the VSP 7400 Series.
VSP 8000 Series	
<i>Installing the Virtual Services Platform 8000 Series</i>	This document provides procedures and conceptual information to install the Virtual Services Platform 8000 Series.
<i>Virtual Services Platform 8000 Series Quick Install Guide</i>	This document provides quick installation instructions to install the VSP 8000 Series hardware and software.
VSP 8600 Series	
<i>Installing the Virtual Services Platform 8600</i>	This document provides procedures and conceptual information to install the Extreme Networks Virtual Services Platform 8600.
<i>Chassis Quick Installation Guide for Virtual Services Platform 8600</i>	This document provides quick installation instructions and commissioning for the Virtual Services Platform 8600.
<i>Module Installation Poster for Virtual Services Platform 8600</i>	This document provides quick installation instructions for the Virtual Services Platform 8600 I/O and control (IOC) and switch fabric (SF) modules.
All Products	
Extreme Networks Pluggable Transceivers Installation Guide	This guide provides descriptions of the pluggable transceiver modules supported by Extreme Networks switches and routers, along with information about how to install and use them.

Table 6: Installation and commissioning Job Aid documents

Technical document	Description
<i>Installation Job Aid for the Virtual Services Platform 4450GSX-PWR+</i>	This document provides job aids to install the VSP 4450GSX-PWR+.
<i>Installation Job Aid for the Virtual Services Platform 4850GTS</i>	This document provides job aids to install the VSP 4850GTS.
<i>Installation Job Aid for Virtual Services Platform 7200 Series</i>	This document provides job aids to install the VSP 7200 Series.
<i>Installation Job Aid for Virtual Services Platform 8200</i>	This document provides job aids to install the VSP 8200.

Table continues...

Technical document	Description
<i>Installation Job Aid for Virtual Services Platform 8400</i>	This document provides job aids to install the VSP 8400.
<i>Installation Job Aid for Virtual Services Platform 8600</i>	This document provides job aids to install the VSP 8600 Series.

Table 7: Installation and commissioning reference documents

Technical document	Description
<i>Virtual Services Platform 4000 Series Regulatory Guide</i> <i>Regulatory Reference for Virtual Services Platform 7200 Series</i> <i>Regulatory Reference for Virtual Services Platform 8000 Series</i> <i>Regulatory Reference for Virtual Services Platform 8600</i>	These documents provide information about regulatory conformities and compliance.
<i>Locating the latest software and product release notes for Virtual Services Platform 4000 Series</i> <i>Locating Software and Release Notes for Virtual Services Platform 7200 Series</i> <i>Locating Software and Release Notes for Virtual Services Platform 8000 Series</i> <i>Locating Software and Release Notes for Virtual Services Platform 8600</i>	These documents ship with their respective VOSS components.
<i>Minimum Software Requirements to Support Virtual Services Platform 8400 ESMs</i>	This document provides the minimum software release for each module in the VSP 8400.
<i>Read Me First—Important Notes and Minimum Software Requirements for Virtual Services Platform 8600 Modules</i>	This document provides important information to read before you install modules in the VSP 8600 Series, and also provides the minimum software release for each IOC and SF module.

Administration and Security

Administration and security documentation supports the configuration and management of systems data, resources, users, and security for the product.

Table 8: Administration and security documents

Technical document	Description
<i>Administering</i>	This document provides procedures and conceptual information to administer base system-level topics such as Domain Name System, network clock synchronization, and network time protocol. It also describes important administration procedures to upgrade software, save configurations and shutdown, restart or reset the VOSS switches.
<i>Configuring Security</i>	This document provides procedures and conceptual information to administer and configure security features for the VOSS switches.

Operations

Operations documentation provides information that enables you to configure services and applications, manage accounting and billing, and perform routine maintenance of hardware and software for the product.

Table 9: Operations documents

Technical document	Description
<i>Configuring VXLAN Gateway</i>	This document contains procedural and conceptual information to help you configure and manage VXLAN Gateway on supported platforms.
<i>Configuring VLANs, Spanning Tree, and NLB</i>	This document describes how to configure VLANs, Multiple Spanning Tree Protocol, and Rapid Spanning Tree Protocol. This document also includes information about how to configure the switches with Network Load Balancer clusters.
<i>Configuring QoS and ACL-Based Traffic Filtering</i>	The QoS documents provide procedures and conceptual information to administer and configure Quality of Service. These documents describe filters (access control lists, access control entries), policing, shaping, and DiffServ.
<i>Configuring IP Multicast Routing Protocols</i>	This document describes conceptual and procedural information to administer and configure IP Multicast Routing protocols.
<i>Configuring IPv4 Routing</i>	This document provides instructions to configure general routing operations.

Table continues...

Technical document	Description
<i>Configuring OSPF and RIP</i>	This document provides procedures and conceptual information to administer and configure Open Shortest Path First and the Routing Information Protocol.
<i>Configuring Link Aggregation, MLT, SMLT, and vIST</i>	This document describes how to configure and manage link aggregation and MultiLink Trunking.
<i>Configuring IPv6 Routing</i>	This document provides instructions to configure IPv6 routing operations. Operations include TCP and UDP, DHCP Relay, VRRP, static routes, OSPFv3, and RSMLT.
<i>Configuring BGP Services</i>	This document describes the conceptual and procedural information to configure Border Gateway Protocol (BGP) services on VSP Operating System Software (VOSS). This includes the configuration of internal BGP (iBGP) and external BGP (eBGP).
<i>Configuring Fabric Basics and Layer 2 Services</i>	This document provides instructions to configure SPBM operations on VOSS. Operations include Shortest Path Bridging MAC (SPBM), Intermediate System to Intermediate System (IS-IS).
<i>Configuring Fabric Layer 3 Services</i>	This document describes the conceptual and procedural information to configure IPv4 and IPv6 shortcuts, routes, policies and redistribution. Operations include Unicast configuration of Layer 3 Virtual Services Network (VSN).
<i>Configuring Fabric Multicast Services</i>	This document describes the conceptual and procedural information to configure PIM Gateway to provide multicast interdomain communication between an SPB network and a Protocol Independent Multicast-Sparse Mode (PIM-SM) network.

Fault and performance management

Fault and performance management documentation enables you to manage faults, and measure and optimize the performance of the product.

Table 10: Fault and performance management documents

Technical documents	Description
<i>Troubleshooting</i>	This document describes common problems and error messages with the techniques to resolve them

Table continues...

Technical documents	Description
	<p>as well as information about traps and command logging.</p> <p>This document also provides information about troubleshooting tools.</p>
<i>Monitoring Performance</i>	<p>This document provides information about switch management tools, the dynamic network applications feature, and graphing of port and chassis statistics.</p> <p>This document also provides information about how to prevent faults and improve the performance of the product, including configuration procedures for link state change, key health indicators, and logs and traps.</p>
<i>Configuring the SLA Mon Agent</i>	<p>This document provides conceptual and procedural information to perform end-to-end network Quality of Service (QoS) validation and to distribute monitoring devices.</p>