



Documentation Reference for Ethernet Routing Switch 4900 and 5900 Series

Release 7.7
9035781 Rev.AA
June 2019

© 2017-2019, Extreme Networks, Inc.
All Rights Reserved.

Legal Notice

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see: www.extremenetworks.com/company/legal/trademarks

Open Source Declarations

Some software files have been licensed under certain open source or third-party licenses. End-user license agreements and open source declarations can be found at: www.extremenetworks.com/support/policies/software-licensing

Contents

Chapter 1: About this Document	4
Purpose.....	4
Conventions.....	4
Text Conventions.....	4
Documentation and Training.....	6
Getting Help.....	7
Providing Feedback to Us.....	8
Chapter 2: New in this document	9
Chapter 3: Roadmap	10
Product Fundamentals.....	10
Installation and Commissioning.....	11
Upgrades.....	12
Operations.....	12
Administration and Security.....	12
Fault and Performance Management.....	13

Chapter 1: About this Document

This section discusses the purpose of this document, the conventions used, ways to provide feedback, additional help, and information regarding other Extreme Networks publications.

Purpose

This document provides information on features in the following products:

- Extreme Networks Ethernet Routing Switch 4900 Series
- Extreme Networks Ethernet Routing Switch 5900 Series

This document describes information regarding the suite of documents for Ethernet Routing Switch 4900 and 5900 Series. It also describes how the content is organized across the document suite.

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.

Table continues...




Icon	Alerts you to...
 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.
 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>

Table continues...

Convention	Description
<i>Italic Text</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles that are not active links.
Plain Courier Text	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. Examples: <ul style="list-style-type: none"> • show ip route • Error: Invalid command syntax [Failed][2013-03-22 13:37:03.303 -04:00]
Separator (>)	A greater than sign (>) shows separation in menu paths. For example, in the Navigation tree, expand the Configuration > Edit folders.
Vertical Line ()	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. 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.

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 for Ethernet Routing Switch 4900 and 5900 Series](#).

Obsolete Document

Installing Transceivers and Optical Components on Ethernet Routing Switch 4900 and 5900 Series is obsolete. For more 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

The following documents are restructured to reorganization information:

- [Configuring Fabric Connect on Ethernet Routing Switch 4900 and 5900 Series](#)
- [Configuring IP Routing and Multicast on Ethernet Routing Switch 4900 and 5900 Series](#)
- [Configuring Security on Ethernet Routing Switch 4900 and 5900 Series](#)
- [Configuring System Monitoring on Ethernet Routing Switch 4900 and 5900 Series](#)
- [Configuring VLANs, Spanning Tree, and MultiLink Trunking on Ethernet Routing Switch 4900 and 5900 Series](#)
- [Quick Start Configuration for Ethernet Routing Switch ERS 4900 and 5900 Series](#)
- [Using CLI and EDM on Ethernet Routing Switch 4900 and 5900 Series](#)

Chapter 3: Roadmap

Use this section as a guide to find information to perform work involving the Ethernet Routing Switch (ERS) series.

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

Document title	Description
Regulatory Reference for Ethernet Routing Switch 4900 Series Regulatory Reference for Ethernet Routing Switch 5900 Series	This document provides information about regulatory messages.
Documentation Reference for Ethernet Routing Switch 4900 and 5900 Series	This document contains an overview of the documentation suite and explains how to use task-based documentation.
Using CLI and EDM on Ethernet Routing Switch 4900 and 5900 Series	This document provides instructions to use the user interfaces, including Command Line Interface (CLI) and Enterprise Device Manager (EDM), and includes procedures to use configuration files.
Command Line Interface Reference for Ethernet Routing Switch 4900 and 5900 Series	This document provides default values and proper syntax for the CLI commands.
Locating the Latest Product Software and Release Notes for Ethernet Switch 4900 Series Locating the Latest Product Software and Release Notes for Ethernet Switch 5900 Series	This document provides information about locating the documentation and software.

Installation and Commissioning

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

Table 4: Installation and commissioning documents

Document title	Description
Quick Start Configuration for Ethernet Routing Switch ERS 4900 and 5900 Series	This document provides instructions to connect and initially configure the switch for your network.
Installing Ethernet Routing Switch 5900 Series Installing Ethernet Routing Switch 4900 Series	This document provides instructions to install the switch in an equipment rack (individually or in a stack) or on a shelf. It also provides instructions to perform the initial IP configuration on the switch using CLI, BootP, or the IP.CFG file. It also provides instructions to verify the switch status using the front-panel LEDs.
Extreme Networks Pluggable Transceivers Installation Guide	This document provides instructions to install small form factor pluggable transceivers, 10 Gigabit small form factor pluggable transceivers, and includes specifications for these hardware components.
Ethernet Routing Switch 4900 Series Quick Install Guide Ethernet Routing Switch 5900 Series Quick Install Guide Ethernet Routing Switch 59100 Series Quick Install Guide	This document provides instructions to install the switch in an equipment rack or on a shelf and prepare for network connectivity.
Installation Job Aid for Ethernet Routing Switch 4900 Series Installation Job Aid for Ethernet Routing Switch 5900 Series	This document provides instructions to install the switch in English. The document also includes safety messages and power connection instructions.
Configuring Systems on Ethernet Routing Switch 4900 and 5900 Series	This document provides instructions to perform basic configuration of the switch including procedures to configure the switch IP address after hardware installation. It also provides instructions to configure system-level features such as stacking, feature licensing, Simple Network Time Protocol (SNTP), BootP, Domain Name System, Power over Ethernet (PoE), and Layer Discovery Protocol (LLDP).

Upgrades

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

Table 5: Upgrades documents

Document title	Description
Release Notes for Ethernet Routing Switch 4900 and 5900 Series	This document describes new features and important information about the latest release. Release Notes includes a list of known issues (including workarounds where appropriate) and a list of fixed issues.

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 6: Operations documents

Document title	Description
Configuring VLANs, Spanning Tree, and MultiLink Trunking on Ethernet Routing Switch 4900 and 5900 Series	This document describes procedures and conceptual information to configure VLANs, Spanning Tree, Link Aggregation Control Protocol, and Multi-Link Trunking.
Configuring Quality of Service on Ethernet Routing Switch 4900 and 5900 Series	This document provides procedures and conceptual information to configure Quality of Service.
Configuring IP Routing and Multicast on Ethernet Routing Switch 4900 and 5900 Series	This document provides procedures and conceptual information to configure IP routing features on the switch, including static routes, Proxy ARP, DHCP Relay, and UDP forwarding. It also provides procedures and conceptual information to manage multicast traffic using IGMP and MLD snooping.
Configuring Fabric Connect on Ethernet Routing Switch 4900 and 5900 Series	This document provides procedures and conceptual information to configure Shortest Path Bridging MAC.

Administration and Security

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

Table 7: Administration and security documents

Document title	Description
Configuring Security on Ethernet Routing Switch 4900 and 5900 Series	This document provides procedures and conceptual information to administer and configure security features for the switch, including MAC-based security, RADIUS, EAPOL, SSH, and IPv6 First Hop Security (FHS).

Fault and Performance Management

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

Table 8: Fault and performance management documents

Document title	Description
Configuring System Monitoring on Ethernet Routing Switch 4900 and 5900 Series	This document provides information about system diagnostics tools including syslog, Remote Monitoring, port mirroring, and displaying port and chassis statistics.
Troubleshooting Ethernet Routing Switch 4900 and 5900 Series	This document describes common problems and error messages and the techniques to resolve them.