



# **Documentation Reference for Avaya Ethernet Routing Switch 4000 Series**

Release 5.7  
NN47205-101  
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# Chapter 1: Introduction

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## Purpose

This document provides information on the Documentation Reference for the Avaya Ethernet Routing Switch 4000 Series Documentation for Release 5.7.

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## Related resources

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## Documentation

For a list of the documentation for this product, see *Documentation Reference for Avaya Ethernet Routing Switch 4000 Series*, NN47205–101.

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## Training

Ongoing product training is available. For more information or to register, see <http://avaya-learning.com/>.

Enter the course code in the **Search** field and click **Go** to search for the course.

Course code	Course title
8D00020E	Stackable ERS and VSP Products Virtual Campus Offering

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Videos are available on the Avaya support site, listed under the video document type, and on the Avaya-run channel on YouTube.

To find videos on the Avaya support site, select the product name, and check the *videos* checkbox to see a list of available videos.

 **Note:**

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To find the Avaya Mentor videos on YouTube, go to <http://www.youtube.com/AvayaMentor> and perform one of the following actions:

- Enter a key word or key words in the Search Channel to search for a specific product or topic.
- Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the site.

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## Searching a document collection

On the Avaya Support website, you can download the documentation library for a specific product and software release to perform searches across an entire document collection. For example, you can perform a single, simultaneous search across the collection to quickly find all occurrences of a particular feature. Use this procedure to perform an index search of your documentation collection.

### Before you begin

- Download the documentation collection zip file to your local computer.
- You must have Adobe Acrobat or Adobe Reader installed on your computer.

### Procedure

1. Extract the document collection zip file into a folder.
2. Navigate to the folder that contains the extracted files and open the file named *<product\_name\_release>.pdx*, for example, *ers4000\_5.7x.pdx*.
3. In the Search dialog box, select the option **In the index named *<product\_name\_release>.pdx***.
4. Enter a search word or phrase.
5. Select any of the following to narrow your search:
  - Whole words only
  - Case-Sensitive
  - Include Bookmarks
  - Include Comments

6. Click **Search**.

The search results show the number of documents and instances found. You can sort the search results by Relevance Ranking, Date Modified, Filename, or Location. The default is Relevance ranking.

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# Chapter 2: New in this release

The following sections detail what is new in Avaya Ethernet Routing Switch 4000 Series Documentation for Release 5.7.

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## Features

This section describes what's new in this document for Avaya Ethernet Routing Switches 4000 Series Release 5.7.

The following documents are added for ERS 4000 Release 5.7:

- *Locating Documentation and Regulatory Reference for Avaya Ethernet Routing Switch 4000 Series*, NN47205-100—contains information about locating documentation and regulatory messages applicable to the Avaya Ethernet Routing Switch 4000 Series.
- *Quick Start Configuration for Avaya Ethernet Routing Switch 4000 Series*, NN47205-104—contains instructions to connect and initially configure the Avaya Ethernet Routing Switch 4000 Series.
- *ACLI Commands Reference for Avaya Ethernet Routing Switch 4000 Series*, NN47205-105—provides default values and proper syntax for the Avaya Command Line Interface (ACLI) commands.
- *Quick Installation of Avaya Ethernet Routing Switch 4000 Series*, NN47205-302—provides instructions to install the Avaya Ethernet Routing Switch 4000 Series in an equipment rack or on a shelf and prepare for network connectivity.
- Notices, safety messages, and the installation preparation details for English and other languages are removed from the Regulatory Guide and are available in the following new documents:
  - *Installation Job Aid (English) for Avaya Ethernet Routing Switch 4000 Series*, NN47205-303
  - *Installation Job Aid (Deutsch) for Avaya Ethernet Routing Switch 4000 Series*, NN47205-303-DT
  - *Installation Job Aid (Espanol) for Avaya Ethernet Routing Switch 4000 Series*, NN47205-303-ES-XL
  - *Installation Job Aid (Francais) for Avaya Ethernet Routing Switch 4000 Series*, NN47205-303-FR

- *Installation Job Aid (Portugues do Brasil) for Avaya Ethernet Routing Switch 4000 Series*, NN47205-303-PT

- *Configuring Avaya VENA Fabric Connect on Avaya Ethernet Routing Switch 4000 Series*, NN47205-507—provides procedures and conceptual information to configure Shortest Path Bridging MAC.

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## Other changes

See the following sections for information about changes that do not apply to new features.

### Book title change

The book title and their references are modified. Following are the modified titles:

- *Documentation Reference for Avaya Ethernet Routing Switch 4000 Series*, NN47205-101
- *Using ACLI and EDM on Avaya Ethernet Routing Switch 4000 Series*, NN47205-102
- *Installing Avaya Ethernet Routing Switch 4000 Series*, NN47205-300
- *Installing Transceivers and Optical Components on Avaya Ethernet Routing Switch 4000 Series*, NN47205-301
- *Release Notes for Avaya Ethernet Routing Switch 4000 Series*, NN47205-400
- *Configuring Systems for Avaya Ethernet Routing Switch 4000 Series*, NN47205-500
- *Configuring VLANs, Spanning Tree, and Multi-Link Trunking on Avaya Ethernet Routing Switch 4000 Series*, NN47205-501
- *Configuring System Monitoring on Avaya Ethernet Routing Switch 4000 Series*, NN47205-502
- *Configuring Quality of Service on Avaya Ethernet Routing Switch 4000 Series*, NN47205-504
- *Configuring Security on Avaya Ethernet Routing Switch 4000 Series*, NN47205-505
- *Configuring IP Routing and Multicast on Avaya Ethernet Routing Switch 4000 Series*, NN47205-506
- *Troubleshooting Avaya Ethernet Routing Switch 4000 Series*, NN47205-700

# Chapter 3: Roadmap

This section is a roadmap for the Avaya Ethernet Routing Switch 4000 Series documentation. Use this section to find the correct document for the task you need to perform.

Avaya Ethernet Routing Switch 4000 Series technical documents are structured with an emphasis on the tasks you perform.

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## Customer documentation packaging

Avaya technical documents are organized according to job functions. Following are the job functions:

- [Product Fundamentals](#) on page 13
- [Installation and Commissioning](#) on page 14
- [Upgrades and Patches](#) on page 15
- [Operations](#) on page 16
- [Administration and Security](#) on page 17
- [Fault and Performance Management](#) on page 17

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## Product Fundamentals

Product Fundamentals documentation includes product overview and information that applies to all areas of the product.

**Table 1: Avaya Ethernet Routing Switch 4000 Series product fundamentals documents**

Document title	Description
<i>Locating Documentation and Regulatory Reference for Avaya Ethernet Routing Switch 4000 Series, NN47205-100</i>	This document provides information about locating documentation and regulatory messages applicable to the Avaya Ethernet Routing Switch 4000 Series.
<i>Documentation Reference for Avaya Ethernet Routing Switch 4000 Series, NN47205-101</i>	This document contains an overview of the documentation suite and explains how to use task-based documentation.

Document title	Description
<i>Using ACLI and EDM on Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-102	This document provides instructions to use the Avaya Ethernet Routing Switch 4000 Series user interfaces, including Avaya command line interface (ACLI) and Enterprise Device Manager (EDM), and includes procedures to use configuration files.
<i>ACLI Commands Reference for Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-505	This document provides default values and proper syntax for the Avaya Command Line Interface (ACLI) commands.

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## Installation and Commissioning

Installation and Commissioning documentation includes information that supports initial installation and commissioning (initial configuration) activities, including preparation, processes, safety requirements, and instructions for rollback procedures.

The following table describes Avaya Ethernet Routing Switch 4000 Series installation and commissioning documents.

**Table 2: Avaya Ethernet Routing Switch 4000 Series installation and commissioning documents**

Document title	Description
<i>Quick Start Configuration for Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-104	This document provides instructions to connect and initially configure the Avaya Ethernet Routing Switch 4000 Series switch for your network.
<i>Installing Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-300	This document provides instructions to install the Avaya Ethernet Routing Switch 4000 Series 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.
<i>Installing Transceivers and Optical Components on Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-301	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.
<i>Quick Installation of Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-302	This document provides instructions to install the Avaya Ethernet Routing Switch 4000

Document title	Description
	Series in an equipment rack or on a shelf and prepare for network connectivity.
<i>Installation Job Aid (English) for Avaya Ethernet Routing Switch 4000 Series, NN47205-303</i>	This document provides instructions to install the Avaya Ethernet Routing Switch 4000 Series in English. The document also includes safety messages and power connection instructions.
<i>Installation Job Aid (Deutsch) for Avaya Ethernet Routing Switch 4000 Series, NN47205-303-DT</i>	This document provides instructions to install the Avaya Ethernet Routing Switch 4000 Series in Deutsch. The document also includes safety messages and power connection instructions.
<i>Installation Job Aid (Espanol) for Avaya Ethernet Routing Switch 4000 Series, NN47205-303-ES-XL</i>	This document provides instructions to install the Avaya Ethernet Routing Switch 4000 Series in Espanol. The document also includes safety messages and power connection instructions.
<i>Installation Job Aid (Francais) for Avaya Ethernet Routing Switch 4000 Series, NN47205-303-FR</i>	This document provides instructions to install the Avaya Ethernet Routing Switch 4000 Series in Francais. The document also includes safety messages and power connection instructions.
<i>Installation Job Aid (Portugues do Brasil) for Avaya Ethernet Routing Switch 4000 Series, NN47205-303-PT</i>	This document provides instructions to install the Avaya Ethernet Routing Switch 4000 Series in Portugues. The document also includes safety messages and power connection instructions.
<i>Configuring Systems for Avaya Ethernet Routing Switch 4000 Series, NN47205-500</i>	This document provides instructions to perform basic configuration of the Avaya Ethernet Routing Switch 4000 Series 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, BootP, Domain Name System, PoE, and LLDP.

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## Upgrades and Patches

Upgrades and Patches documentation includes information to upgrade software and hardware components.

The Avaya Ethernet Routing Switch 4000 Series documentation suite does not contain a separate document for Upgrades and Patches. For information about changing switch software, see *Configuring Systems on Avaya Ethernet Routing Switch 4000 Series*, NN47205–500.

Information about updating switch software also appears in *Release Notes for Avaya Ethernet Routing Switch 4000 Series*, NN47205-400

The following table describes Avaya Ethernet Routing Switch 4000 Series upgrades and patches documents.

**Table 3: Avaya Ethernet Routing Switch 4000 Series upgrades and patches documents**

Document title	Description
<i>Release Notes for Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-400	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.

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## Operations

Operations documents include information that supports tasks related to configuration (post-commissioning) of services or applications, routine maintenance of hardware or software, and accounting or billing activities.

The following table describes Avaya Ethernet Routing Switch 4000 Series operations documents.

**Table 4: Avaya Ethernet Routing Switch 4000 Series operations documents**

Document title	Description
<i>Configuring VLANs, Spanning Tree, and Multi-Link Trunking on Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-501	This document describes procedures and conceptual information to configure VLANs, Spanning Tree, Link Aggregation Control Protocol, and Multi-Link Trunking on the Avaya Ethernet Routing Switch 4000 Series.
<i>Configuring Quality of Service on Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-504	This document provides procedures and conceptual information to configure Quality of Service on the Avaya Ethernet Routing Switch 4000 Series.
<i>Configuring IP Routing and Multicast on Avaya Ethernet Routing Switch 4000 Series</i> , NN47205-506	This document provides procedures and conceptual information to configure IP routing features on the Avaya Ethernet

Document title	Description
	Routing Switch 4000 Series, including static routes, Proxy ARP, DHCP Relay, and UDP forwarding. It also provides procedures and conceptual information to manage multicast traffic using IGMP snooping.
<i>Configuring Avaya VENA Fabric Connect on Avaya Ethernet Routing Switch 4000 Series, NN47205-507</i>	This document provides procedures and conceptual information to configure Shortest Path Bridging MAC.

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## Administration and Security

Administration and Security documentation includes information that supports tasks performed by operations personnel, which relate to network administration or product security, including the configuration and management of systems data and users. The documentation also includes the management and protection of resources from unauthorized or detrimental access and use.

The following table describes Avaya Ethernet Routing Switch 4000 Series administration and security documents.

**Table 5: Avaya Ethernet Routing Switch 4000 Series administration and security documents**

Document title	Description
<i>Configuring Security on Avaya Ethernet Routing Switch 4000 Series, NN47205-505</i>	This document provides procedures and conceptual information to administer and configure security features for the Avaya Ethernet Routing Switch 4000 Series, including MAC-based security, RADIUS, EAPOL, and SSH.

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## Fault and Performance Management

Fault and Performance Management documents include information that supports the tasks performed by operations personnel, which relate to managing or preventing faults, troubleshooting, and monitoring and improving the performance of the network or product

The following table describes Avaya Ethernet Routing Switch 4000 Series fault and performance management documents.

**Table 6: Avaya Ethernet Routing Switch 4000 Series fault and performance management documents**

Document title	Description
<i>Configuring System Monitoring on Avaya Ethernet Routing Switch 4000 Series, NN47205-502</i>	This document provides information about system diagnostics tools including syslog, Remote Monitoring, port mirroring, and displaying port and chassis statistics.
<i>Troubleshooting Avaya Ethernet Routing Switch 4000 Series, NN47205-700</i>	This document describes common problems and error messages and the techniques to resolve them.

# Chapter 4: Information quality

Avaya technical documents are tested by subject matter experts (SMEs) throughout the product development lifecycle. SMEs from Design, Product Verification (PV), Product Line Management (PLM), Verification Office (VO), and Avaya Client Services (ACS), all contribute to document quality.

Avaya releases technical documents in the early stages of development that have not completed all testing milestones, on a limited basis. Documents that have not completed testing bear a Draft watermark on every page to indicate that the content they contain may change as the product is refined and document testing is completed. Draft documents are not widely available.



# Chapter 5: Text conventions

This chapter describes the text conventions used in the Avaya Ethernet Routing Switch 4000 Series documentation.

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## Angle brackets

Indicates that you choose the text to enter based on the description inside the brackets. Do not type the brackets when entering the command.

Example: If the command syntax is `ping <ip_address>`, you enter `ping 192.32.10.12`.

---

## Bold or Bold Courier text

**Bold** or **Bold Courier** text indicates command names. Example 2 displays how the text that you type appears. Example 3 displays how file paths appear.

### Example

Use the `info` command.

### Example

Enter `show ip {alerts|routes}`.

### Example

**Protocols > IP** identifies the IP command on the Protocols menu.

---

## Braces

Braces (`{ }`) indicate required elements in syntax descriptions where more than one option is available. You must choose only one option. Do not type the braces when you enter the command.

Example: If the command syntax is `show ip {alerts|routes}`, you must enter either `show ip alerts` or `show ip routes`, but not both.

---

## Brackets

Brackets ([ ]) indicate optional elements in syntax descriptions. Do not type the brackets when you enter the command.

Example: If the command syntax is `show ip interfaces [-alerts]`, you can enter either `show ip interfaces` or `show ip interfaces -alerts`.

---

## Ellipses

An ellipsis (...) indicates that you repeat the last element of the command as needed.

Example: If the command syntax is `ethernet/2/1 [ <parameter> <value> ] . . .`, you enter `ethernet/2/1` and as many parameter-value pairs as you need.

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## Italic text

*Italic* text indicates book titles or new terms followed by a definition.

Example: *Release Notes for Avaya Ethernet Routing Switch 4000 Series*, NN47205-400.

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## Plain Courier text

`Plain Courier` text indicates system output, for example, prompts and system messages.

Example: `Set Trap Monitor Filters`

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## Separator

A separator ( > ) shows menu paths.

Example: **Protocols > IP** identifies the IP command on the Protocols menu.

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## Vertical bar

A vertical bar ( | ) separates choices for command keywords and arguments. Enter only one choice. Do not type the vertical line when you enter the command.

Example: If the command syntax is **show ip {alerts|routes}**, you enter either `show ip alerts` or `show ip routes`, but not both.

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## cr convention

In ACLI procedures, when you see <cr> as an option for a command, you can press the Enter key on your keyboard to execute the command.



# Chapter 6: Task-based information

Task-based information, a quick reference for using the Avaya Ethernet Routing Switch 4000 Series task-based documentation, describes the structure of task-based information and how it can be used most effectively.

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## Task-based documentation

Task-based documentation is a new way of packaging customer information in a structured, task-centric format.

Task-based documentation focuses on what the user must do and the sequence in which to perform tasks.

The goal is to make Avaya documentation easy to find, easy to use, timely, and accurate.

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## How to use task-based documentation

In task-based documentation, procedural information is included in the document. Conceptual and reference information is provided, and the user is guided on how to use conceptual and reference material by identified prerequisites or direct links and references.

The user navigates the information by following the flows that are provided for tasks and procedures.

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## Task flow overview

Task flows are flowcharts that illustrate which procedures and decisions are involved to complete an activity.

The task flows guide you through activities to use the Avaya Ethernet Routing Switch 4000 Series, whether it is configuration, upgrading, installation, maintenance, or troubleshooting.

Each flow provides the prerequisites and links to the tasks or procedures.

To perform or refer to a procedure, always follow the task flow. Following the task flows ensures that you meet all the requirements for successful completion of the task.

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## Work flows, task flows, and procedures

Work flows, task flows, and procedures have similar elements to maintain consistency and usability. Each of the following sections have a specific function:

- [Purpose statements](#) on page 26
- [Prerequisites](#) on page 26
- [Work flows or task flows](#) on page 26
- [Procedure steps](#) on page 26
- [Example procedures](#) on page 27
- [Variable definitions](#) on page 27
- [Job aid](#) on page 27

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### Purpose statements

Purpose statements explain why or when you would perform a work flow, task, or procedure and impact.

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### Prerequisites

Prerequisites list everything you must do or understand before you start the workflow, task, or procedure. Prerequisites can include tasks that should already be completed, risks, confirmation of system status, required knowledge, time estimates or limitations, and links to supporting information.

The prerequisite section is omitted if no required prerequisites exist.

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### Work flows or task flows

This section is the flow chart diagram that represents the task flow with navigational links to the tasks or procedures in the flow.

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### Procedure steps

Procedures provide numerical steps that help you perform the procedure. Each step is a single action.

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## Example procedures

Some procedures use examples to show how to correctly perform the procedure with realistic settings.

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## Variable definitions

Variable definitions provide the possible values, ranges, or definitions of variables used in the procedure steps.

If variables are not used in the procedure; then the variables definition section is omitted.

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## Job aid

Job aids provide information help to successfully perform the procedure.

A job aid is only used when required.

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## Task-based documentation terms

The following table describes task-based documentation terms.

Term	Description
Work flow	A high or top-level group of tasks.
Task or task flow	A logical group of procedures represented as a single action in a flowchart diagram. Complex tasks can be divided into simpler tasks or subtasks.
Procedure	A logical group of single action steps in a task.
Step	A single action performed in a procedure.
Variable	A placeholder in procedure steps representing a value or definition.

Restructuring Avaya technical documents into a task-based format is an ongoing initiative. The documentation for some Avaya products is already converted to the new format.

