



# **Documentation Reference for VSP Operating System Software**

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# Chapter 1: Introduction

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## Purpose

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

- Avaya Virtual Services Platform 4000 Series
- Avaya Virtual Services Platform 7200 Series
- Avaya Virtual Services Platform 8000 Series

This document describes information regarding the suite of documents for VOSS switches. It also describes how the content is organized across the documents suite.

# Chapter 2: New in this document

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

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## Release 6.0

There is no feature-related change in *Documentation Reference*.

### Resources

Information about related resources is moved to the last chapter in this document.

# Chapter 3: Technical documentation changes

This chapter describes the new, restructured, and retired documents for VSP Operating System Software (VOSS).

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## New documents

### VOSS 6.0

The following documents are new in VOSS 6.0:

- *Configuring the SLA Mon™ Agent*
- *Configuring SPB-PIM Gateway*

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## Restructured documents

### Documentation title changes in VOSS 6.0

The following documents were restructured in VOSS Release 5.0. The table maps the old document title to the restructured document title.

**Table 1: Mapping of old document titles to restructured document titles**

Old document title	New document title
<i>Fault Management of Avaya Virtual Services Platform 4000 Series, NN46251-702 and Managing Faults on Avaya Virtual Services Platform 7200 Series and 8000 Series, NN47227-702</i>	<i>Monitoring Performance for VSP Operating System Software, NN47227-701</i>  The fault management content is moved to this document and the original documents made obsolete.

## Retired documents

The following documents were retired in VOSS Release 6.0:

- *Configuring VLANs and Spanning Tree on Avaya Virtual Services Platform 4000 Series*, NN46251-500
- *Configuring IP Multicast Routing Protocols on Avaya Virtual Services Platform 4000*, NN46251-504
- *Avaya Virtual Services Platform 4000 Configuration — IP Routing*, NN46251-505
- *Configuring OSPF and RIP on Avaya Virtual Services Platform 4000 Series*, NN46251-506
- *Administration for Avaya Virtual Services Platform 4000 Series*, NN46251-600
- *Security for Avaya Virtual Services Platform 4000 Series*, NN46251-601
- *Troubleshooting of Avaya Virtual Services Platform 4000 Series*, NN46251-700
- *Performance Management of Avaya Virtual Services Platform 4000 Series*, NN46251-701
- *Fault Management of Avaya Virtual Services Platform 4000 Series*, NN46251-702
- *Managing Faults on Avaya Virtual Services Platform 7200 Series and 8000 Series*, NN47227-702



# Chapter 4: Roadmap

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

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## 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 2: Product fundamentals documents**

Avaya 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>Using CLI and EDM</i>	This document describes how to navigate the command line interface, and how to use Enterprise Device Manager.
<i>Commands Reference for Avaya Virtual Services Platform 4000 Series, NN46251-104</i> <i>Commands Reference for Avaya Virtual Services Platform 7200 Series and 8000 Series, NN47227-104</i>	These documents provide default values and proper syntax of the command line interface commands.

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## Upgrades

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

**Table 3: Upgrades documents**

Avaya 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.

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## 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**

Avaya technical document	Description
<i>Installing Avaya Virtual Services Platform 4850GTS Series, NN46251-300</i>	This document provides procedures and conceptual information to install the VSP 4000 VSP4850GTS Series.
<i>Avaya Virtual Services Platform 4000 Series 4850GTS Series Quick Install Guide, NN46251-302</i>	This document provides quick installation instructions to install the VSP 4000 VSP4850GTS Series switch.
<i>Avaya Virtual Services Platform 4000 Series 4450GSX Quick Install Guide, NN46251-303</i>	This document provides quick installation instructions to install the VSP 4000 4450GSX-PWR+ switch.
<i>Installing Avaya Virtual Services Platform 4450GTX-HT-PWR+ Switch, NN46251-304</i>	This document provides procedures and conceptual information to install the VSP 4000 4450GTX-HTPWR+.
<i>Virtual Services Platform 4000 4450GTX-HT-PWR+ Quick Install Guide, NN46251-306</i>	This document provides quick installation instructions to install the VSP 4000 4450GTX-HTPWR+ switch.
<i>Installing Avaya Virtual Services Platform 4450GSX-PWR+ Switch, NN46251-307</i>	This document provides procedures and conceptual information to install the VSP 4000 4450GSX-PWR+.
<i>ERS 4850 to VSP 4000 Quick Conversion, NN46251-400</i>	This document provides procedures to convert an ERS 4850 to a VSP 4000 and a VSP 4000 to an ERS 4850.
<i>Installing the Avaya Virtual Services Platform 8000 Series, NN47227-300</i>	This document provides procedures and conceptual information to install the Avaya Virtual Services Platform 8000 Series.

*Table continues...*

Avaya technical document	Description
<i>Installing Transceivers and Optical Components on VSP Operating System Software</i> , NN47227-301	This document provides conceptual information and procedures to install SFP, SFP+, and QSFP+ transceivers.
<i>Avaya Virtual Services Platform 8000 Series Quick Install Guide</i> , NN47227-302	This document provides quick installation instructions to install the VSP 8000 Series hardware and software.
<i>Quick Install Guide for Avaya Virtual Services Platform 7200 Series</i> , NN47228-300	This document provides quick installation instructions to install the Avaya Virtual Services Platform 7200 Series.
<i>Installing the Avaya Virtual Services Platform 7200 Series</i> , NN47228-302	This document provides procedures and conceptual information to install the Avaya Virtual Services Platform 7200 Series.

**Table 5: Installation and commissioning Job Aid documents**

Avaya technical document	Description
<i>Installation Job Aid (English) for Virtual Services Platform 4000 4450GTX-HT-PWR+</i> , NN46251-305	This document provides job aids to install the VSP 4000 4450GTX-HT-PWR+.
<i>Installation Job Aid (English) for Avaya Virtual Services Platform 4000 Series 4850GTS</i> , NN46251-308	This document provides job aids to install the VSP 4000 VSP4850GTS Series.
<i>Installation Job Aid (English) for Avaya Virtual Services Platform 4000 Series 4450GSX-PWR+</i> , NN46251-309	This document provides job aids to install the VSP 4000 4450GSX-PWR+ .
<i>Installation Job Aid for Avaya Virtual Services Platform 7200 Series</i> , NN47228-301	This document provides job aids to install the Avaya Virtual Services Platform 7200 Series.

**Table 6: Installation and commissioning reference documents**

Avaya technical document	Description	
<i>Avaya Virtual Services Platform 4000 Series Regulatory Guide</i> , NN46251-105 <i>Regulatory Reference for Avaya Virtual Services Platform 8000 Series</i> , NN47227-105 <i>Regulatory Reference for Avaya Virtual Services Platform 7200 Series</i> , NN47228-101	These documents provide information about regulatory conformities and compliance.	
<i>Locating the latest software and product release notes for Avaya Virtual Services Platform 4000 Series</i> , NN46251-106 <i>Locating Software and Release Notes for Avaya Virtual Services Platform 8000 Series</i> , NN47227-106 <i>Locating Software and Release Notes for Avaya Virtual Services Platform 7200 Series</i> , NN47228-100		These documents ship with their respective VOSS components.

## 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**

Avaya technical document	Description
<i>Getting Started with Avaya PLDS for Avaya Networking Products</i> , NN46199-300	This document is not product-specific and is intended to be referred to by all products that support PLDS.  The Avaya Product Licensing and Delivery System (PLDS) provides customers, Avaya Partners, distributors, and Avaya Associates with tools for managing license entitlements and electronic delivery of software and related license files.
<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 enables you to configure services and applications, manage accounting and billing, and perform routine maintenance of hardware and software for the product.

**Table 8: Operations documents**

Avaya technical documents	Description
<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 Avaya Virtual Services Platform 7200 Series and 8000 Series with Network Load Balancer clusters.

*Table continues...*

Avaya technical documents	Description
<p><i>Configuration - QoS and ACL-Based Traffic Filtering Avaya Virtual Services Platform 4000 Series, NN46251-502</i></p> <p><i>Configuring QoS and ACL-Based Traffic Filtering</i></p>	<p>These 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.</p>
<p><i>Configuring IP Multicast Routing Protocols</i></p>	<p>This document describes conceptual and procedural information to administer and configure IP Multicast Routing protocols.</p>
<p><i>Configuring IPv4 Routing</i></p>	<p>This document provides instructions to configure general routing operations.</p>
<p><i>Configuring OSPF and RIP</i></p>	<p>This document provides procedures and conceptual information to administer and configure Open Shortest Path First and the Routing Information Protocol.</p>
<p><i>Configuring Link Aggregation, MLT, SMLT, and vIST</i></p>	<p>This document describes how to configure and manage link aggregation and MultiLink Trunking.</p>
<p><i>Configuring IPv6 Routing on VSP Operating System Software, NN47227-507</i></p>	<p>This document provides instructions to configure IPv6 routing operations. Operations include TCP and UDP, DHCP Relay, VRRP, static routes, OSPFv3, and RSMLT.</p>
<p><i>Configuring BGP Services</i></p>	<p>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).</p>
<p><i>Configuring Avaya Fabric Connect on VSP Operating System Software, NN47227-510</i></p>	<p>This document provides instructions to configure SPBM operations on VOSS. Operations include Shortest Path Bridging MAC (SPBM), Intermediate System to Intermediate System (IS-IS) and Connectivity Fault Management (CFM).</p>
<p><i>Configuring SPB-PIM Gateway</i></p>	<p>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.</p>

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## Fault and performance management

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

**Table 9: Fault and performance management documents**

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

# Chapter 5: Text conventions

This section describes the text conventions used throughout the VSP Operating System Software (VOSS) documentation suite.

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## Plain Courier text

Plain Courier text indicates command names, options, and text that you must enter.

Example: Enter `show ip route`.

Plain Courier text also indicates command syntax and system output, for example, prompts and system messages.

Example: `Error: Invalid command syntax [Failed][2013-03-22 13:37:03.303-04:00]`

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## Bold text

**Bold** text indicates the GUI object name you must act upon.

Example: Click **OK**.

Example: On the **Tools** menu, choose **Options**.

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## Special messages

A special message identifies a risk associated with an action. A special message can also explain how to avoid or reduce the risk. The following are examples of the different types of special messages and the purposes they serve.

### **Important:**

This special message draws your attention to key information that does not carry with it the risk of personal injury, death, system failure, service interruption, loss of data, damage to equipment, or electrostatic discharge.

 **Voltage:**

**Risk of injury or death from high voltage or electric shock**

This special message indicates where an immediate hazard exists that, if not avoided, can result in serious personal injury or death through high voltage or electric shock.

 **Danger:**

**Risk of serious personal injury or death**

This special message signals where an immediate hazard exists that, if not avoided, can result in minor or moderate personal injury.

 **Warning:**

**Risk of equipment damage**

This special message warns that a potential hazard exists that, if not avoided, can result in harm to hardware or equipment.

 **Caution:**

**Risk of system failure, service interruption, loss of data, or harm to software**

This special message cautions against practices that are not safe or are potential hazards not covered by danger or warning messages.

 **Electrostatic alert:**

**Risk of service loss from electrostatic discharge**

This special message indicates the risk of electrostatic discharge from electrostatic-discharge sensitive (ESDS) devices. It cautions the user to observe precautions for handling ESDS devices.

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## Angle brackets

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.

Example: If the command syntax is `cfm maintenance-domain maintenance-level <0-7>`, you can enter `cfm maintenance-domain maintenance-level 4`.

---

## Braces

Braces ({ }) indicate required elements in syntax descriptions. Do not type the braces when you enter the command.

Example: If the command syntax is `ip address {A.B.C.D}`, you must enter the IP address in dotted, decimal notation.



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## 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 interface [gigabitethernet]`, you can enter either `show ip interface` or `show ip interface gigabitethernet`.

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## 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.

Example: *Release Notes*

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## Separator

A greater than sign ( > ) shows separation in menu paths.

Example: In the Navigation tree, open the following folders: **Configuration > Edit**.

---

## 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.

Example: If the command syntax is `access-policy by-mac action { allow | deny } ,` you enter either `access-policy by-mac action allow` or `access-policy by-mac action deny`, but not both.

# Chapter 6: Modular, task-based information

Modular, task-based information is organized by specific principles of structure, information type, and task focus. The documentation is based upon the tasks that the user must perform to fulfill their job function. The sequence and dependencies among the tasks is represented in work flows and task flows. The tasks are supported by conceptual and reference information.

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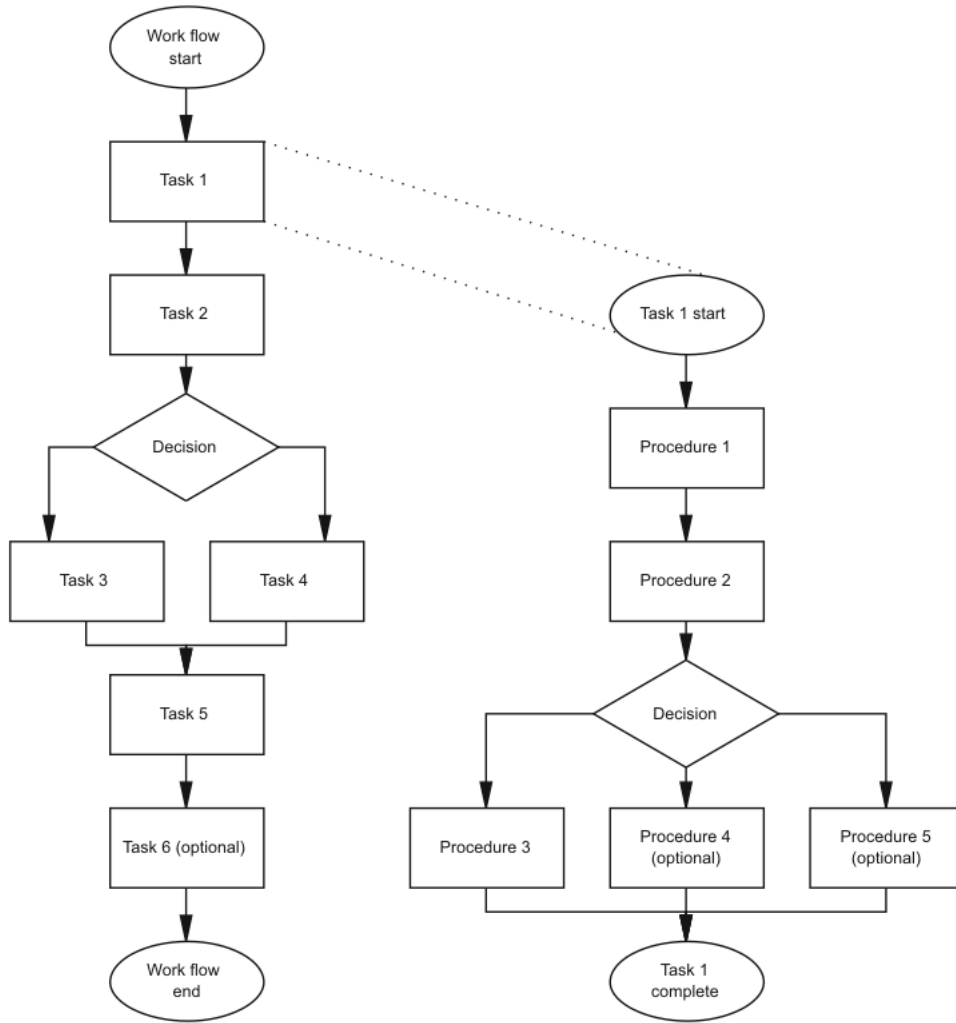
## Work flows and task flows

Task-based documentation emphasizes procedural information. Flowcharts provide the primary navigation to tasks and procedures whenever there is a required order and flow to the actions you must perform to complete a given job.

Work flows and task flows are flowcharts that illustrate which tasks or procedures and decisions occur in an activity. The flowcharts guide you through any type of activity on the product, whether it is initial installation, configuration, upgrades, routine maintenance, or troubleshooting.

Each flowchart provides the prerequisites and links to the tasks or procedures that you need to perform. Always follow the work flows and task flows so that you perform the required procedures in the correct order.

To understand the relationship between work flows, task flows, and procedures, see the following figure.



**Figure 1: Work flows, task flows, and procedures in task-based documentation**

# Chapter 7: Resources

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## Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

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## Documentation

See *Documentation Reference* for a list of documentation for all VOSS products.

For installation and initial setup information of the Open Networking Adapter (ONA), refer to the Quick Install Guide that came with your ONA.

 **Note:**

The ONA works only with the Avaya Virtual Services Platform 4000 Series.

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## Training

Ongoing product training is available. For more information or to register, you can access the Web site at <http://avaya-learning.com/>.

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## Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

## About this task

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

## Procedure

- To find videos on the Avaya Support website, go to <http://support.avaya.com> and perform one of the following actions:
  - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.
  - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
- To find the Avaya Mentor videos on YouTube, go to [www.youtube.com/AvayaMentor](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 website.

### **Note:**

Videos are not available for all products.

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## Searching a documentation 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`.
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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## Subscribing to e-notifications

Subscribe to e-notifications to receive an email notification when documents are added to or changed on the Avaya Support website.

### About this task

You can subscribe to different types of general notifications, for example, Product Correction Notices (PCN), which apply to any product or a specific product. You can also subscribe to specific types of documentation for a specific product, for example, Application & Technical Notes for Virtual Services Platform 7000.

### Procedure

1. In an Internet browser, go to <https://support.avaya.com>.
2. Type your username and password, and then click **Login**.
3. Under **My Information**, select **SSO login Profile**.
4. Click **E-NOTIFICATIONS**.
5. In the GENERAL NOTIFICATIONS area, select the required documentation types, and then click **UPDATE**.

**GENERAL NOTIFICATIONS**  
1/5 Notifications Selected

End of Sale and/or Manufacturer Support Notices	<input type="checkbox"/>
Product Correction Notices (PCN)	<input checked="" type="checkbox"/>
Product Support Notices	<input type="checkbox"/>
Security Advisories	<input type="checkbox"/>
Services Support Notices	<input type="checkbox"/>

**UPDATE >>**

6. Click **OK**.
7. In the **PRODUCT NOTIFICATIONS** area, click **Add More Products**.

**PRODUCT NOTIFICATIONS** Add More Products

Show Details **1 Notices**

8. Scroll through the list, and then select the product name.
9. Select a release version.
10. Select the check box next to the required documentation types.

PRODUCTS	My Notifications
Virtual Services Platform 7000	
Virtualization Provisioning Service	
Visual Messenger™ for OCTEL® 250/350	
Visual Vectors	
Visualization Performance and Fault Manager	
Voice Portal	
Voice over IP Monitoring	
W310 Wireless LAN Gateway	
WLAN 2200 Series	
WLAN Handset 2200 Series	

VIRTUAL SERVICES PLATFORM 7000	
Select a Release Version	
All and Future	
Administration and System Programming	<input type="checkbox"/>
Application Developer Information	<input type="checkbox"/>
Application Notes	<input type="checkbox"/>
Application and Technical Notes	<input checked="" type="checkbox"/>
Declarations of Conformity	<input type="checkbox"/>
Documentation Library	<input checked="" type="checkbox"/>
<b>SUBMIT &gt;&gt;</b>	

11. Click **Submit**.