Documentation Suite Overview
Virtualized Service Router, Release 15.0

Introduction

The Nokia Virtualized Service Router (VSR) is a carrier grade network function virtualization (NFV) platform based on the industry-leading SR OS software that powers the 7750 SR and 7950 XRS routers. NFV enables network functions that previously depended on custom hardware to be deployed on commodity hardware using standard IT virtualization technologies.

This Documentation Suite Overview provides information about the following:

- Virtualized Service Router Concept
- Software documents in this documentation suite
- Accessing and searching the Documentation Center
- Searching for specific information in a document or in multiple documents
- Contact information

Virtualized Service Router Network Functions

The Nokia VSR supports the following network functions, which can be deployed in isolation or in combination with each other on a VSR system as determined by the software license:

- Application Assurance (AA)
- BGP Route Reflection (RR)
- Broadband Network Gateway (BNG)
- Data Center Gateway (DCGW)
- L2TP Network Server (LNS)
- MAP-T Border Relay (MAP-T BR)
- Network Address Translation (NAT)
- Provider Edge Router (PE)
- Security Gateway (SeGW)
- WLAN Gateway (WLAN-GW)
- Virtualized Residential Gateway (vRGW)

Software Documents in this Documentation Suite

The following tables list and describe the documents and the intended audience for each guide.

Table 1 lists and describes VSR installation, hardware, and setup information.

Table 2 lists and describes 7450 ESS, 7750 SR, and 7950 XRS guides for VSR feature configuration, as the same SR operating system is on the VM as on the 7750 SR and 7950 XRS hardware-based routers.

The guides are organized into functional chapters and provide concepts and descriptions of the implementation flow, as well as Command Line Interface (CLI) syntax and command usage.

Intended audience legend:

- **A**—Network architects and designers
- **B**—Installers and hardware maintenance technicians
- **C**—Network technicians, administrators, operators, and service providers

Table 1: VSR Guide

Document	Description	Intended Audience		
		A	B	C
VSR Installation and Setup Guide	This guide describes Nokia Virtualized Service Router (VSR) system architecture, functional overview, VSR features, and how to install and set up the VSR.	✓	✓	✓

Table 2: 7450 ESS, 7750 SR, and 7950 SRX Software Guides

Document	Description	Intended Audience		
		A	B	C
7450 ESS, 7750 SR, 7950 XRS, and VSR Acronyms Reference Guide	Provides expansions of acronyms found in the user guides.	✓	✓	✓
Advanced Configuration Guide — Parts I-III	These guides provide advanced configuration solutions and are a supplement to the other guides in this suite.	✓	✓	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Basic System Configuration Guide	Describes CLI usage, file system management, boot option file (BOF) configuration, configuring basic system management, node timing, and synchronization functions.	✓	✓	✓
7750 SR Gx AVPs Reference Guide	Describes Gx Attribute Value Pairs (AVPs).	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Interface Configuration Guide	Describes how to provision Input/Output Modules (IOMs), XMA Control Modules (XCMs), Media Dependent Adapters (MDAs), XRS Media Adapters (XMAs), and ports.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Layer 2 Services and EVPN Guide: VLL, VPLS, PBB, and EVPN	Describes Layer 2 service and Ethernet Virtual Private Network (EVPN) functionality and provides examples to configure and implement Virtual Leased Lines (VLLs), Virtual Private LAN Service (VPLS), Provider Backbone Bridging (PBB), and EVPN.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Layer 3 Services Guide: IES and VPRN	Describes Layer 3 service functionality and provides examples to configure and implement Internet Enhanced Services (IES) and Virtual Private Routed Network (VPRN) services.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR MPLS Guide	Describes how to configure Multiprotocol Label Switching (MPLS), Resource Reservation Protocol (RSVP), Generalized Multiprotocol Label Switching (GMPLS), and Label Distribution Protocol (LDP).	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Multicast Routing Protocols Guide	Provides an overview of multicast routing concepts and provides configuration examples for Internet Group Management Protocol (IGMP), Multicast Listener Discovery (MLD), Protocol Independent Multicast (PIM), Multicast Source Discovery Protocol (MSDP), Multipoint LDP, multicast extensions to BGP, and Multicast Connection Admission Control (MCAC).	✓	—	✓
7450 ESS, 7750 SR, and VSR Multiservice Integrated Service Adapter Guide	Describes services provided by integrated service adapters, such as Application Assurance, IPSec, ad insertion (ADI), and Network Address Translation (NAT).	✓	—	✓

Table 2: 7450 ESS, 7750 SR, and 7950 SRX Software Guides (Continued)

Document	Description	Intended Audience		
		A	B	C
7450 ESS, 7750 SR, 7950 XRS, and VSR OAM and Diagnostics Guide	Describes how to configure features such as service mirroring and Lawful Intercept (LI), and how to use the Operations, Administration and Management (OAM) and diagnostics tools.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Log Events Guide	Provides general information about log events.	✓	✓	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Quality of Service Guide	Describes how to configure Quality of Service (QoS) policy management.	✓	—	✓
7750 SR and VSR RADIUS Attributes Reference Guide	Describes all supported RADIUS Authentication, Authorization, and Accounting attributes.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Router Configuration Guide	Describes logical IP routing interfaces and associated attributes such as IP addresses, as well as IP and MAC-based filtering, Virtual Router Redundancy Protocol (VRRP), and Cflowd.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Services Overview Guide	Provides a general overview of functionality provided by the routers and describes how to configure service parameters such as Service Access Points (SAPs), Service Distribution Points (SDPs), customer information, and user services.	✓	—	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR System Management Guide	Describes system security features, SNMP and NETCONF features, and event and accounting logs. It covers basic tasks such as configuring management access filters, passwords, and user profiles.	✓	✓	✓
7450 ESS, 7750 SR, and VSR Triple Play Service Delivery Architecture Guide	Describes the Triple Play Service Delivery Architecture (TPSDA) support and provides examples to configure and implement various protocols and services.	✓	—	✓
7450 ESS and 7750 SR Troubleshooting Guide	Provides troubleshooting procedures for the Nokia SR-series routers. The guide describes commonly encountered problems and events; it does not cover every potential troubleshooting scenario that might occur in the field.	—	✓	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Unicast Routing Protocols Guide	Provides an overview of unicast routing concepts and provides configuration examples for Routing Information Protocol (RIP), Open Shortest Path First (OSPF), Intermediate-system-to-intermediate-system (IS-IS), and Border Gateway Protocol (BGP) routing protocols, and for route policies.	✓	—	✓

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Other Documents in this Documentation Suite

- Documentation Suite Overview Virtualized Service Router, Release 15.0 (this document)
- Documentation Suite Overview Service Router Portfolio, Release 15.0
- VSR Release Notes
- SR OS Software Release Notes
- SR OS AA Protocols and Applications (spreadsheet)
- Application Assurance (AA) Protocols and Application Support

Using the Documentation Center

Use the following procedure to access any of the guides mentioned in this document or to access a zipped file of the complete set of software guides:

1. Open a browser and navigate to: Customer Documentation Welcome Page

   The Documentation Center appears. By default, the products are listed by the most accessed.

2. Click on 7750 SR, 7450 ESS, 7950 XRS, or VSR in the list. The documentation web page for that product appears. The most recent documents are listed by default.

3. The different search and sorting options on the documentation web page allow you to:
   - filter or sort the documents
   - search for documents by specific title words or document numbers
   - search for specific text in documents (Full Text search)

     Notes:
   - A Full Text search searches for text in PDF files only.
   - To search for phrases in a Full Text search, type the phrase within quotation marks; for example, "synchronous Ethernet".
   - To remove the search filter or sorting options, click Reset.

4. Select a document by clicking the associated icon on the right:
   - PDF icon
   - HTML icon
   - Zip Collection icon

Note: If the document is restricted, a key is displayed beside the document number, indicating that you must log in and enter your user name and password. If you cannot access the document after logging in, your account does not have permission to access the document. Contact your Nokia technical support representative.

If you do not have a user name and password, you can request one from the Documentation Center web page. A link is also available to provide feedback about the web page.

Searching for specific information in a document or in multiple documents

You can use Adobe Reader, Release 6.0 or later, to search one or more PDF files for a term.

Note: The PDF files that you search must be in the same folder or sub folder.

1. From the Adobe Reader main menu, choose Edit > Search or Advanced Search. The Search panel opens.
   - To search for a term in the current document, click on the In the current document radio button.
   - To search for a term in multiple documents, click on the All PDF Documents in radio button and choose the folder in which to search using the drop-down menu.

2. Enter the term to search for. Select one or more of the following search criteria, if required:
   - Whole words only
   - Case-Sensitive
   - Include Bookmarks
   - Include Comments

3. Click on the Search button. Adobe Reader displays the search results.

   You can expand the entries for each file by clicking on the + symbol.

Documentation support

If you have questions or comments about this documentation suite, contact:

Customer Documentation Feedback

Technical support

Customer support representatives are available to assist you 24 hours a day, 7 days a week. For a list of regional contact telephone and fax numbers, see:

Product Support Portal