Multi-Access Gateway – controller

Release 26.10

Guide to Documentation

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1 About this guide

This guide provides information about the Multi-Access Gateway – controller (MAG-c) user guides, including:

- software guides and other documents in this documentation suite
- accessing the documentation
- contact information

Use the MAG-c documentation suite in conjunction with the SR OS configuration guides. The SR OS guides describe SR OS service features that are supported by the MAG-c.

Note: The MAG-c software release is based on Release 20.10 of the 7750 SR OS, and inherits many, but not all, of the SR OS 20.10 features. The related SR OS configuration information is provided in the SR OS software user guides. The MAG-c software user guides describe features that are specifically supported by the MAG-c. See the *7450 ESS, 7750 SR, 7950 XRS, and VSR Documentation Suite Overview Card 20.10.R1* for more information about the SR OS user guides.

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2 MAG-c documentation suite

This documentation suite covers the software features and functionality of the MAG-c platform. The documentation suite describes topics such as software installation, functional overview, interface description, and technical reference.

Software guides

The software guides describe specific SR OS software functionality for the MAG-c platform. The guides are organized into functional chapters that describe concepts, implementation flow, and the command line interface (CLI) syntax and command usage. See Accessing documentation for information about accessing software guides.

Intended audience legend:

- A – network architects and designers
- B – installers
- C – network technicians, administrators, operators, and service providers

The following table describes the software guides in this documentation suite and the intended audience for each guide.

Table 1: MAG-c software guides

Document	Description	Intended audience		
		A	B	C
Overview				
MAG-c Overview Guide	Provides an overview of the Nokia control and user plane separation (CUPS) solution, including the MAG-c control plane (CP) functionality that controls the MAG-u, the converged name for any type of user plane (UP) functionality including a broadband network gateway (BNG) UP, a combined SGW-u + PGW-u, and a 5G UP function (UPF)	✓	✓	✓
Install and commission				
MAG-c Installation Guide	Describes how to install the MAG-c software and defines the prerequisites and procedures to install the MAG-c elements		✓	✓
Operate and maintain				

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Document	Description	Intended audience		
		A	B	C
MAG-c Control Plane Function Guide	Describes the Nokia CP functionality and provides concepts and descriptions of the implementation flow, CLI syntax, and command usage for the MAG-c solution	✓		✓
MAG-c Control Plane Function Advanced Configuration Guide	Provides feature and configuration explanations, CLI descriptions, and overall solutions for the CUPS CP functionality	✓		✓
MAG-c Security Best Practices and Hardening Guide	Provides an overview of the main security features of the MAG-c and configuration examples that focus on management, control, and data planes	✓	✓	✓
Monitor and troubleshoot				
MAG-c Log Events Reference Guide	Provides general information about log events			✓
MAG-c Log Events Search Tool	Provides general information about log events in a searchable HTML list			✓
MAG-c Troubleshooting Guide	Provides troubleshooting procedures for the MAG-c and describes commonly encountered problems and events		✓	✓
Reference				
MAG-c CLI Reference Guide	Describes CLI usage, all CLI commands, and the supported values and parameters for each command	✓	✓	✓
MAG-c KPI and KCI Counters Search Tool	Describes the supported KPI and KCI counters with associated modules and record types in a searchable HTML list			✓
MAG-c Per Call Measurement Data Guide	Describes the MAG-c PCMD including descriptions of PCMD record generation, format, information elements (IEs) and their value tables, CLI syntax, and command usage	✓		✓
MAG-c PFCP Interface Description Guide	Describes the applicability of the Packet Forwarding Control Protocol (PFCP) for fixed broadband access and the protocol extensions for the MAG-c			✓

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Document	Description	Intended audience		
		A	B	C
MAG-c RADIUS Attributes and IU Triggers	Describes all supported RADIUS attributes and RADIUS interim update (IU) triggers in a searchable HTML list			✓
MAG-c SBI IE Search Tool	Describes all the information elements (IEs) for the different Service Based Interface (SBI) services in a searchable HTML list			✓
MAG-c TPSDA Python 3 API	Describes the APIs used by Python developers to interact with various TPSDA protocols and applications on the MAG-c	✓		✓
7250 IXR, 7450 ESS, 7705 SAR Gen 2, 7750 SR, 7950 XRS, MAG-c, cMAG-c, and VSR Pay-as-You-Grow Licensing Reference Guide	Describes SR OS Pay-As-You-Grow licensing, including FP4 licensing upgrades	✓	✓	✓

Table 2: SR OS guides for operation of the Nokia BNG CUPS solution

Document	Description	Intended audience		
		A	B	C
7750 SR and VSR BNG CUPS User Plane Function Guide	Describes all aspects of the broadband network gateway (BNG) user plane function (UPF) in a BNG control and user plane separation (CUPS) system, and specifically the Nokia MAG-u as it operates with, and is managed by the MAG-c for the BNG CUPS solution	✓		✓

Table 3: SR OS Release 20.10 user guides relevant to the basic routing operations of the MAG-c

Document	Description	Intended audience		
		A	B	C
7250 IXR, 7450 ESS, 7705 SAR Gen 2, 7750 SR, 7950 XRS, and VSR Acronyms Reference Guide	Provides expansions of acronyms found in the user guides	✓	✓	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Basic System Configuration Guide	Describes file system management boot option file (BOF) configuration, basic system management configuration, node timing, and synchronization functions	✓	✓	✓

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Document	Description	Intended audience		
		A	B	C
7450 ESS, 7750 SR, 7950 XRS, and VSR Interface Configuration Guide	Describes how to provision input and output modules (IOMs) XMA control modules (XCMs), media dependent adapters (MDAs), XRS ,media adapters (XMAs), connectors, and ports	✓		✓
7250 IXR, 7450 ESS, 7705 SAR Gen 2, 7750 SR, 7950 XRS, and VSR Log Events Guide	Provides general information about log events	✓	✓	✓
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 maintenance (OAM) and diagnostics tools	✓		✓
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 System Management Guide	Describes system security features, SNMP and NETCONF features, and event and accounting logs and tasks such as configuring management access filters, passwords, and user profiles	✓	✓	✓
7450 ESS and 7750 SR Troubleshooting Guide	Describes troubleshooting procedures for the 7450 ESS and 7750 SR routers including commonly encountered problems and events		✓	✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Unicast Routing Protocols Guide	Provides unicast routing concepts and configuration examples for routing information protocol (RIP), open shortest path first (OSPF), intermediate-system-to-intermediate-system (IS-IS), and border gateway protocol (BGP), as well as information and examples for route policies	✓		✓
7450 ESS, 7750 SR, 7950 XRS, and VSR Classic CLI Command Reference Guide	Describes classic CLI commands and their supported values and parameters	✓	✓	✓

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MAG-c appliance guide

The MAG-c appliance guide describes the specific installation and configuration for the MAG-c appliance. See Accessing documentation for information about accessing the MAG-c appliance guide.

Intended audience legend:

- A – network architects and designers
- B – installers
- C – network technicians, administrators, operators, and service providers

The following table describes the MAG-c appliance guide in this documentation suite and the intended audience for it.

Table 4: MAG-c appliance guide

Document	Description	Intended audience		
		A	B	C
Install and commission				
MAG-c Appliance Installation and Deployment Guide	Describes how to install, configure, and deploy the MAG-c appliance		✓	✓

Release Notes and Features Release Reference

The *MAG-c Release Notes* are not included with the MAG-c software documentation package. See Accessing documentation for information about accessing the Release Notes.

The Features Release Reference is no longer updated. The feature description in the "New features and enhancements" section of the *MAG-c Release Notes* indicates if the feature requires support on the 7750 Service Router (7750 SR) and Virtualized Service Router (VSR).

The Nokia customer documentation team has introduced the RN Navigator, an online tool for quickly finding information in the Release Notes. The RN Navigator can be accessed online at https://documentation.nokia.com/rn-navigator/products/. A customer account login is required.

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3 Accessing documentation

The Nokia MAG-c customer documentation can be accessed through WebHelp or through the Nokia Documentation Center.

The *MAG-c Installation Guide*, the *MAG-c Troubleshooting Guide*, the *MAG-c Appliance Installation and Deployment Guide*, the *MAG-c Security Best Practices and Hardening Guide*, *MAG-c Release Notes* in the MAG-c documentation set are restricted (authentication is required).

The unrestricted MAG-c user guides can be accessed using a search engine. For best results, search using the term "MAG-c" followed by the current release and any applicable keywords.

Note: Depending on your account permissions and login status, you may not be authorized to display or download restricted guides (indicated by a lock or key symbol). If the guide remains locked after a valid login, contact a Nokia technical support representative to check your account permissions.

The MAG-c software documentation is available in the following formats:

- WebHelp HTML
- downloadable HTML library (WebHelp format)
- PDFs of each guide
- a ZIP file of all PDFs in the documentation suite

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4 Technical support

Customer support representatives are available to assist you 24 hours a day, 7 days a week. To contact Technical Support, visit the Nokia Support portal: https://customer.nokia.com/support/s/.

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5 How to give feedback on documentation

You can use the following methods to report issues with the documentation, including errors or areas that need clarification, or to provide suggestions for improvement:

- **email**

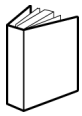
  Send your feedback in an email to documentation.feedback@nokia.com. Include the guide name, topic, and release.

- **online WebHelp**

  In the online WebHelp click the feedback icon next to the topic title. Use the pop-up to provide your comments about the topic.

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