

# About This Guide

This preface provides the following guidelines for using the *JUNOScope Software User Guide* and related Juniper Networks, Inc., technical documents:

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## Objectives

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This guide provides a reference for you to install, set up, and use the JUNOScope software. The JUNOScope software is a Juniper Networks network management application that lets you configure and monitor Juniper Networks routers on your network.



**NOTE:** This guide documents Release 8.1 of the JUNOS Internet software. For additional information about the JUNOS software—either corrections to or information that might have been omitted from this guide—see the software release notes at <http://www.juniper.net/beta/>.

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## Supported Routing Platforms

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For the features described in this manual, the JUNOScope software currently supports the following routing platforms:

- J-series
- M-series
- T-series

## Audience

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This guide is designed for the JUNOScope software administrator and those who have access to manage Juniper Networks J-series, M-series, or T-series routing platforms.

To use this guide, you should have good UNIX (Solaris) system administration skills, database administration skills (MySQL), an understanding of the JUNOS command-line interface (CLI), and a knowledge of the JUNOScript application programming interface (API).

In addition, you need a broad understanding of networks in general, the Internet in particular, networking principles, and network configuration. You must also be familiar with one or more of the following Internet protocols:

- Border Gateway Protocol (BGP)
- Distance Vector Multicast Routing Protocol (DVMRP)
- Intermediate System-to-Intermediate System (IS-IS)
- Internet Control Message Protocol (ICMP) router discovery
- Internet Group Management Protocol (IGMP)
- Multiprotocol Label Switching (MPLS)
- Open Shortest Path First (OSPF)
- Protocol-Independent Multicast (PIM)
- Resource Reservation Protocol (RSVP)
- Routing Information Protocol (RIP)
- Simple Network Management Protocol (SNMP)

Personnel operating the equipment must be trained and competent; must not conduct themselves in a careless, willfully negligent, or hostile manner; and must abide by the instructions provided by the documentation.

## Documentation Conventions

Table 1 defines notice icons used in this guide.

**Table 1: Notice Icons**



Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.

Table 2 defines the text and syntax conventions used in this guide.

**Table 2: Text and Syntax Conventions (1 of 2)**

Convention	Element	Example
<b>Bold sans serif typeface</b>	Represents text that you type.	To enter configuration mode, type the configure command: <code>user@host&gt; <b>configure</b></code>
Fixed-width typeface	Represents output on the terminal screen.	<code>user@host&gt; <b>show chassis alarms</b></code> <code>No alarms currently active</code>
<i>Italic typeface</i>	<ul style="list-style-type: none"> <li>■ Introduces important new terms.</li> <li>■ Identifies book names.</li> <li>■ Identifies RFC and Internet draft titles.</li> </ul>	<ul style="list-style-type: none"> <li>■ A policy <i>term</i> is a named structure that defines match conditions and actions.</li> <li>■ <i>JUNOS System Basics Configuration Guide</i></li> <li>■ RFC 1997, <i>BGP Communities Attribute</i></li> </ul>
<i>Italic sans serif typeface</i>	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] <code>root@# <b>set system domain-name</b> domain-name</code>
Sans serif typeface	Represents names of configuration statements, commands, files, and directories; IP addresses; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> <li>■ To configure a stub area, include the stub statement at the [edit protocols ospf area <i>area-id</i>] hierarchy level.</li> <li>■ The console port is labeled CONSOLE.</li> </ul>
< > (angle brackets)	Enclose optional keywords or variables.	<code>stub &lt;default-metric <i>metric</i>&gt;;</code>
(pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	<code>broadcast   multicast</code> <code>(<i>string1</i>   <i>string2</i>   <i>string3</i>)</code>
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	<code>rsvp { # Required for dynamic MPLS only</code>
[ ] (square brackets)	Enclose a variable for which you can substitute one or more values.	<code>community name members [ <i>community-ids</i> ]</code>

**Table 2: Text and Syntax Conventions (2 of 2)**

Convention	Element	Example
Indentation and braces ( { } )	Identify a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop <i>address</i> ; retain; } } }
; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
<b>J-Web GUI Conventions</b>		
<b>Bold typeface</b>	Represents J-Web graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none"> <li>■ In the Logical Interfaces box, select <b>All Interfaces</b>.</li> <li>■ To cancel the configuration, click <b>Cancel</b>.</li> </ul>
> (bold right angle bracket)	Separates levels in a hierarchy of J-Web selections.	In the configuration editor hierarchy, select <b>Protocols &gt; Ospf</b> .

## JUNOScope User Interface Elements

When describing dialog box elements, this manual uses the following terminology:

- Check box—A square box within a dialog box that you can select or clear to turn an option on or off.
- Command button—A rectangular button that starts an operation. A command button with ellipsis ( . . . ) means that another dialog box will appear with additional information that you must select before the operation can be completed.
- Dialog box—A software user interface element that contains buttons and other elements to let you provide the information required to perform an operation.
- Display box—A type of dialog box that displays the contents of a file or the differences between the contents of two files.
- Display field—An area in a dialog box that displays information necessary to perform a an operation or a command.
- Drop-down list box—A closed version of a list box with a down arrow. Click the down arrow to display the list items.
- Text box—An area within a dialog box where you can type text or numbers required to perform an operation or a command.
- Option button—A round button that lets you select one item from a group of items. You can select only one button from a group of option buttons.
- Table—Items of information that are arranged by rows and columns.

- Window—The software user interface display area or page layout. A window can be divided into panes or boxes to display different information.
- Wizard—A series of dialog boxes that enable you to complete a process. For instance, the agenda wizard in Microsoft Word will prompt you to fill in the blanks until your task is complete.

## Related Juniper Networks Documentation

Table 3 lists the software and hardware guides and release notes for the supported Juniper Networks routing platforms and describes the contents of each document. Table 4 lists the books included in the *Network Operations Guide* series.

**Table 3: Technical Documentation for Supported Routing Platforms (1 of 3)**

Document	Description
<b>JUNOS Internet Software Configuration Guides</b>	
<i>Class of Service</i>	Provides an overview of the class-of-service (CoS) functions of the JUNOS software and describes how to configure CoS features, including configuring multiple forwarding classes for transmitting packets, defining which packets are placed into each output queue, scheduling the transmission service level for each queue, and managing congestion through the random early detection (RED) algorithm.
<i>CLI User Guide</i>	Describes how to use the JUNOS command-line interface (CLI) to configure, monitor, and manage Juniper Networks routing platforms. This material was formerly covered in the <i>JUNOS System Basics Configuration Guide</i> .
<i>Feature Guide</i>	Provides a detailed explanation and configuration examples for several of the most complex features in the JUNOS software.
<i>High Availability</i>	Provides an overview of hardware and software resources that ensure a high level of continuous routing platform operation and describes how to configure high availability (HA) features such as nonstop routing (NSR) and graceful Routing Engine switchover (GRES).
<i>MPLS Applications</i>	Provides an overview of traffic engineering concepts and describes how to configure traffic engineering protocols.
<i>Multicast Protocols</i>	Provides an overview of multicast concepts and describes how to configure multicast routing protocols.
<i>Network Interfaces</i>	Provides an overview of the network interface functions of the JUNOS software and describes how to configure the network interfaces on the routing platform.
<i>Network Management</i>	Provides an overview of network management concepts and describes how to configure various network management features, such as SNMP and accounting options.
<i>Policy Framework</i>	Provides an overview of policy concepts and describes how to configure routing policy, firewall filters, forwarding options, and cflowd.
<i>Routing Protocols</i>	Provides an overview of routing concepts and describes how to configure routing, routing instances, and unicast routing protocols.
<i>Secure Configuration Guide for Common Criteria and JUNOS-FIPS</i>	Provides an overview of secure Common Criteria and JUNOS-FIPS protocols for the JUNOS Internet software and describes how to install and configure secure Common Criteria and JUNOS-FIPS on a routing platform.
<i>Services Interfaces</i>	Provides an overview of the services interfaces functions of the JUNOS software and describes how to configure the services interfaces on the routing platform.

**Table 3: Technical Documentation for Supported Routing Platforms (2 of 3)**

Document	Description
<i>Software Installation and Upgrade Guide</i>	Provides a description of JUNOS software components and packaging, and includes detailed information about how to initially configure, reinstall, and upgrade the JUNOS system software. This material was formerly covered in the <i>JUNOS System Basics Configuration Guide</i> .
<i>System Basics</i>	Describes Juniper Networks routing platforms, and provides information about how to configure basic system parameters, supported protocols and software processes, authentication, and a variety of utilities for managing your router on the network.
<i>VPNs</i>	Provides an overview and describes how to configure Layer 2 and Layer 3 virtual private networks (VPNs), virtual private LAN service (VPLS), and Layer 2 circuits. Provides configuration examples.
<b>JUNOS References</b>	
<i>Hierarchy and RFC Reference</i>	Describes the JUNOS configuration mode commands. Provides a hierarchy reference that displays each level of a configuration hierarchy, and includes all possible configuration statements that can be used at that level. This material was formerly covered in the <i>JUNOS System Basics Configuration Guide</i> .
<i>Interfaces Command Reference</i>	Describes the JUNOS software operational mode commands you use to monitor and troubleshoot interfaces.
<i>Routing Protocols and Policies Command Reference</i>	Describes the JUNOS software operational mode commands you use to monitor and troubleshoot routing protocols and policies, including firewall filters.
<i>System Basics and Services Command Reference</i>	Describes the JUNOS software operational mode commands you use to monitor and troubleshoot system basics, including commands for real-time monitoring and route (or path) tracing, system software management, and chassis management. Also describes commands for monitoring and troubleshooting services such as CoS, IP Security (IPSec), stateful firewalls, flow collection, and flow monitoring.
<i>System Log Messages Reference</i>	Describes how to access and interpret system log messages generated by JUNOS software modules and provides a reference page for each message.
<b>J-Web User Guide</b>	
<i>J-Web Interface User Guide</i>	Describes how to use the J-Web GUI to configure, monitor, and manage Juniper Networks routing platforms.
<b>JUNOS API and Scripting Documentation</b>	
<i>JUNOScript API Guide</i>	Describes how to use the JUNOScript application programming interface (API) to monitor and configure Juniper Networks routing platforms.
<i>JUNOS XML API Configuration Reference</i>	Provides reference pages for the configuration tag elements in the JUNOS XML API.
<i>JUNOS XML API Operational Reference</i>	Provides reference pages for the operational tag elements in the JUNOS XML API.
<i>JUNOS Configuration and Diagnostic Automation Guide</i>	Describes how to use the commit script and self-diagnosis features of the JUNOS software. This guide explains how to enforce custom configuration rules defined in scripts, how to use commit script macros to provide simplified aliases for frequently used configuration statements, and how to configure diagnostic event policies.
<i>NETCONF API Guide</i>	Describes how to use the NETCONF API to monitor and configure Juniper Networks routing platforms.
<b>JUNOS Comprehensive Index and Glossary</b>	
<i>Comprehensive Index and Glossary</i>	Provides a complete index of all JUNOS software books, the <i>JUNOScript API Guide</i> , and the <i>NETCONF API Guide</i> . Also provides a comprehensive glossary.
<b>JUNOScope Documentation</b>	
<i>JUNOScope Software User Guide</i>	Describes the JUNOScope software GUI, how to install and administer the software, and how to use the software to manage routing platform configuration files and monitor routing platform operations.

**Table 3: Technical Documentation for Supported Routing Platforms (3 of 3)**

Document	Description
<b>J-series Services Router Documentation</b>	
<i>Getting Started Guide</i>	Provides an overview, basic instructions, and specifications for J-series Services Routers. The guide explains how to prepare your site for installation, unpack and install the router and its components, install licenses, and establish basic connectivity. Use the <i>Getting Started Guide</i> for your router model.
<i>Basic LAN and WAN Access Configuration Guide</i>	Explains how to configure the interfaces on J-series Services Routers for basic IP routing with standard routing protocols, ISDN backup, and digital subscriber line (DSL) connections.
<i>Advanced WAN Access Configuration Guide</i>	Explains how to configure J-series Services Routers in virtual private networks (VPNs) and multicast networks, configure data link switching (DLSw) services, and apply routing techniques such as policies, stateless and stateful firewall filters, IP Security (IPSec) tunnels, and class-of-service (CoS) classification for safer, more efficient routing.
<i>Administration Guide</i>	Shows how to manage users and operations, monitor network performance, upgrade software, and diagnose common problems on J-series Services Routers.
<b>M-series and T-series Hardware Documentation</b>	
<i>Hardware Guide</i>	Describes how to install, maintain, and troubleshoot routing platforms and components. Each platform has its own hardware guide.
<i>PIC Guide</i>	Describes the routing platform PICs. Each platform has its own PIC guide.
<b>Release Notes</b>	
<i>JUNOS Release Notes</i>	Summarize new features and known problems for a particular software release, provide corrections and updates to published JUNOS, JUNOScript, and NETCONF manuals, provide information that might have been omitted from the manuals, and describe upgrade and downgrade procedures.
<i>Hardware Release Notes</i>	Describe the available documentation for the routing platform and the supported PICs, and summarize known problems with the hardware and accompanying software. Each platform has its own release notes.
<i>JUNOScope Software Release Notes</i>	Contain corrections and updates to the published JUNOScope manual, provide information that might have been omitted from the manual, and describe upgrade and downgrade procedures.
<i>J-series Services Router Release Notes</i>	Briefly describe the J-series Services Router features, identify known hardware problems, and provide upgrade and downgrade instructions.

**Table 4: JUNOS Internet Software Network Operations Guides (1 of 2)**

Book	Description
<i>Baseline</i>	Describes the most basic tasks for running a network using Juniper Networks products. Tasks include upgrading and reinstalling JUNOS software, gathering basic system management information, verifying your network topology, and searching log messages.
<i>Interfaces</i>	Describes tasks for monitoring interfaces. Tasks include using loopback testing and locating alarms.
<i>MPLS</i>	Describes tasks for configuring, monitoring, and troubleshooting an example MPLS network. Tasks include verifying the correct configuration of the MPLS and RSVP protocols, displaying the status and statistics of MPLS running on all routers in the network, and using the layered MPLS troubleshooting model to investigate problems with an MPLS network.

**Table 4: JUNOS Internet Software Network Operations Guides (2 of 2)**

Book	Description
<i>MPLS Log Reference</i>	Describes MPLS status and error messages that appear in the output of the <code>show mpls lsp extensive</code> command. The guide also describes how and when to configure Constrained Shortest Path First (CSPF) and RSVP trace options, and how to examine a CSPF or RSVP failure in a sample network.
<i>Hardware</i>	Describes tasks for monitoring M-series and T-series routing platforms.

## Documentation Feedback

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We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. Send your comments to [techpubs-comments@juniper.net](mailto:techpubs-comments@juniper.net), or fill out the documentation feedback form at <http://www.juniper.net/techpubs/docbug/docbugreport.html>. If you are using e-mail, be sure to include the following information with your comments:

- Document name
- Document part number
- Page number
- Software release version

## Requesting Support

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For technical support, open a support case using the Case Manager link at <http://www.juniper.net/beta/> or call 1-888-314-JTAC (from the United States, Canada, or Mexico) or 1-408-745-9500 (from elsewhere).