



# About Cisco IOS XR Software Documentation for Release 3.0

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This document discusses the objectives, audience, organization, and conventions of Cisco IOS XR software documentation. It also provides sources for obtaining documentation, obtaining technical assistance, and obtaining additional publications and information from Cisco Systems.

The following sections are found in this document:

- [Documentation Objectives, page 1](#)
- [Audience, page 1](#)
- [Documentation Organization for Cisco IOS XR Software for Release 3.0, page 2](#)
- [Document Conventions, page 5](#)
- [Obtaining Documentation, page 6](#)
- [Obtaining Technical Assistance, page 6](#)
- [Obtaining Additional Publications and Information, page 8](#)
- [Documentation Feedback, page 8](#)

## Documentation Objectives

Cisco IOS XR software documentation describes the tasks and commands necessary to configure and maintain a Cisco Carrier Routing System (CRS-1). The configuration guides described in the “[Configuration Guides](#)” section on [page 3](#) are not comprehensive, but focus on the new or revised tasks that users need to know in order to configure Cisco IOS XR software and that differ from those in the Cisco IOS software.

## Audience

The Cisco IOS XR software documentation set is intended primarily for users who configure and maintain a CRS-1 router but who may not be familiar with the tasks, the relationship between tasks, or the Cisco IOS XR software commands necessary to perform particular tasks. The Cisco IOS XR software documentation set is also intended for those users experienced with Cisco IOS software who need to know about new features, new configuration options, and new software characteristics in Cisco IOS XR Software for Release 3.0.

# Documentation Organization for Cisco IOS XR Software for Release 3.0

The Cisco IOS XR documentation set provides configuration guides, command references, and supporting documents. It differs from other Cisco software major releases in these respects:

- Documents are delivered online, in PDF and HTML formats, and are not orderable as printed books.
- Cisco IOS XR software for Release 3.0 provides online documents for each technology area.
- All command references present commands in alphabetical order, providing organizational consistency among the books and making all commands easier to locate.

## Master Index

A master index provides indexing information for the Cisco IOS software documentation set. The master index for the command references provides a quick way for you to find a command when you know the command name but not which module contains the command. When you use the online master indexes, you can click the page number for an index entry and go to that page in the online document.

## Supporting Documents and Resources

The following types of documents support the Cisco IOS XR software for Release 3.0:

- [Command References, page 2](#)
- [Configuration Guides, page 3](#)
- [Crafts Works Interface Documents, page 4](#)
- [Supporting Documents, page 4](#)

## Command References

The following command references support the Cisco IOS XR software documentation set:

- *Cisco IOS XR Interface and Hardware Component Command Reference*—This document provides command syntax and usage guidelines for the commands used to configure physical and virtual interfaces, and additional hardware component types.
- *Cisco IOS XR IP Addresses and Services Command Reference*—This document provides command syntax and usage guidelines for the commands for the following technologies: Address Resolution Protocol (ARP), access lists, Cisco Express Forwarding (CEF), Dynamic Host Configuration Protocol (DHCP), Local Packet Transport Services (LPTS), network IPv4 and IPv6 stacks, prefix lists, quality of service (QoS), and transport stacks.
- *Cisco IOS XR MPLS Command Reference*—This document provides command syntax and usage guidelines for Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP), traffic engineering (TE), forwarding, Resource Reservation Protocol (RSVP), and Optical User Network Interface (O-UNI) features.
- *Cisco IOS XR Multicast Command Reference*—This document provides command syntax and usage guidelines for the multicast routing protocols that include Protocol Independent Multicast (PIM), Internet Group Management Protocol (IGMP), and Multicast Source Discovery Protocol (MSDP).

- *Cisco IOS XR Routing Command Reference*—This document provides command syntax and usage guidelines to configure and monitor Border Gateway Protocol (BGP), Intermediate System-to-Intermediate System (IS-IS), Open Shortest First Path (OSPF), Routing Information Base (RIB) routing protocols, and static routing.
- *Cisco IOS XR System Management Command Reference*—This document provides command syntax and usage guidelines for the following technology areas: alarm logs and logging correlation, Cisco Discovery Protocol (CDP), configuration management, fault management, file system, manageability, Network Time Protocol (NTP), performance management, process and memory management, Simple Network Management Protocol (SNMP), software package management, system logging, and terminal services.
- *Cisco IOS XR System Security Command Reference*—This document provides command syntax and usage guidelines for the following technology areas: Internet Key Exchange (IKE), IP Security (IPSec), Public Key Infrastructure (PKI), Secure Shell (SSH), Secure Socket Layer (SSL), authentication, authorization, and accounting (AAA), and Software Authentication Manager (SAM).
- *Cisco IOS XR Task ID Reference Guide*—This is a compendium of Task ID information for all commands that require specific Task IDs in order to be used. It also includes an explanation of Task IDs.

## Configuration Guides

The following configuration guides support the Cisco IOS XR software documentation set:

- *Cisco IOS XR Interface and Hardware Component Configuration Guide*—This document provides interface configuration and management information for the Cisco CRS-1 Series Carrier Routing System. This guide describes a variety of global interfaces that are not described in individual guides. In Release 3.0, this guide describes the following types of interfaces: packet-over-SONET (POS), SONET, Ethernet, null and loopback virtual interfaces, Tunnel-ipsec (but not Tunnel-TE, which is covered in the *Cisco IOS XR MPLS Configuration Guide*), VLANs, and management.
- *Cisco IOS XR IP Addresses and Services Configuration Guide*—This document provides concepts and configuration tasks for the following technologies: ARP, access lists, CEF, DHCP, LPTS, network IPv4 and IPv6 stacks, prefix lists, QoS, and transport stacks.
- *Cisco IOS XR MPLS Configuration Guide*—This document provides concepts and configuration tasks for the following technologies: MPLS LDP, TE, forwarding, RSVP, and O-UNI features.
- *Cisco IOS XR Multicast Configuration Guide*—This document provides concepts and configuration tasks for the following technologies: PIM, IGMP, and MSDP.
- *Cisco IOS XR Routing Configuration Guide*—This document provides concepts and configuration tasks for the following technologies: BGP, IS-IS, OSPF, and RIB protocols and static routing.
- *Cisco IOS XR System Management Configuration Guide*—This document provides concepts and configuration tasks for the following technologies: alarm logs and logging correlation, CDP, fault management, logging services, NTP, performance management, physical and virtual terminals, and SNMP.
- *Cisco IOS XR System Security Configuration Guide*—This document provides concepts and configuration tasks for the following technologies: IKE, IPSec, PKI, SSH, SSL, AAA, and SAM.

## Crafts Works Interface Documents

The following Crafts Works Interface documents support the Cisco IOS XR software documentation set:

- *Cisco Craft Works Interface Quick Start Guide*—This document provides a brief overview of the Craft Works Interface (CWI), and describes procedures for setting up the router and CWI, and establishing a connection between the CWI and router.
- *Cisco Craft Works Interface Configuration Applications User Reference*—This document provides a description of configuration applications in the CWI, including detailed field descriptions.
- *Cisco Craft Works Interface Configuration Guide*—This document provides a task-based overview about how to manage, monitor, configure, and troubleshoot the Cisco CRS-1 series router from the remote CWI client.
- *Cisco Craft Works Interface User Interface Guide*—This document provides a description of CWI desktops, applications, menus, toolbars, status icons, dialog boxes, and application options and features. General procedures that are common to all applications within the CWI are also provided.

## Supporting Documents

The following documents support the Cisco IOS XR software documentation set:

- *Cisco CRS-1 Series Carrier Routing System Getting Started Guide*—This document provides an introduction to the Cisco IOS XR software command-line interface (CLI) and describes basic router configuration and maintenance tasks, including package file upgrades and the procedure for online insertion and removal (OIR) of fabric cards.
- *Cisco CRS-1 Series Carrier Routing System XML API Guide*—This document provides an overview of the Cisco IOS XR software's extensible markup language (XML) application programming interface (API) used to develop external management applications for the Cisco CRS-1 router, as specified by Cisco IOS XR XML schemas.
- *Release Notes for Cisco IOS XR Software, Release 3.0*—This document provides an overview of the Cisco IOS XR software including, feature sets, system requirements, installation notes, and caveats.
- *Cisco IOS, Cisco IOS XR, and Catalyst Operating System Software Release Notes*—This document provides procedures to access the release notes on Cisco.com.
- *Cisco IOS XR Network Examples, Release 3.0*—This document provides a variety of examples of network views based on different routing protocols. The networks consist of Cisco CRS-1 routers running IOS XR software and Cisco GSR 12000 routers running IOS. Each example refers to a figure that applies in all examples and contains the output of the **show running config** command.
- RFCs—RFCs are standards documents maintained by the Internet Engineering Task Force (IETF). Cisco IOS software documentation references supported RFCs when applicable. The full text of referenced RFCs may be obtained on the World Wide Web at <http://www.rfc-editor.org/>.
- MIBs—MIBs are used for network monitoring. To locate and download MIBs for selected platforms, Cisco IOS XR releases, and feature sets, use Cisco MIB Locator found at the following: <http://www.cisco.com/go/mibs>

# Document Conventions

Within Cisco IOS XR software documentation, the term *router* refers to the Carrier Routing System (CRS-1) router.

The Cisco IOS XR documentation set uses the following conventions:

Convention	Description
^ or Ctrl	The ^ and Ctrl symbols represent the Control key. For example, the key combination ^D or Ctrl-D means hold down the Control key while you press the D key. Keys are indicated in capital letters but are not case sensitive.
router or system	A Carrier Routing System (CRS-1) router.
<i>string</i>	A string is a nonquoted set of characters shown in italics. For example, when setting an SNMP <i>community</i> string to <i>public</i> , do not use quotation marks around the string or the string will include the quotation marks.

Command syntax descriptions use the following conventions:

Convention	Description
<b>bold</b>	Bold text indicates commands and keywords that you enter literally as shown.
<i>italics</i>	Italic text indicates arguments for which you supply values.
[x]	Square brackets enclose an optional element (keyword or argument).
	A vertical line indicates a choice within an optional or required set of keywords or arguments.
[x   y]	Square brackets enclosing keywords or arguments separated by a vertical line indicate an optional choice.
{x   y}	Braces enclosing keywords or arguments separated by a vertical line indicate a required choice.

Nested sets of square brackets or braces indicate optional or required choices within optional or required elements. For example:

Convention	Description
[x {y   z}]	Braces and a vertical line within square brackets indicate a required choice within an optional element.

Examples use the following conventions:

Convention	Description
screen	Examples of information displayed on the screen are set in Courier font.
<b>bold screen</b>	Examples of text that you must enter are set in Courier bold font.
< >	Angle brackets enclose text that is not printed to the screen, such as passwords.
!	An exclamation point at the beginning of a line indicates a comment line. (Exclamation points are also displayed by the Cisco IOS XR software for certain processes.)
[ ]	Square brackets enclose default responses to system prompts.

The following conventions are used to attract the attention of the reader:

**Caution**

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

**Note**

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

**Timesaver**

Means the *described action saves time*. You can save time by performing the action described in the paragraph.

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. This section explains how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

### Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

<http://www.cisco.com/tac>

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

<http://www.cisco.com/tac/caseopen>

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

## TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Cisco.com

Cisco.com offers a suite of interactive, networked services that let you access Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com provides a broad range of features and services to help you with these tasks:

- Streamline business processes and improve productivity
- Resolve technical issues with online support

- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

To obtain customized information and service, you can self-register on Cisco.com at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Go to this URL to visit the company store:

<http://www.cisco.com/go/marketplace/>

- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

<http://cisco.com/univercd/cc/td/doc/pcat/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

<http://www.cisco.com/en/US/learning/index.html>

## Documentation Feedback

You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

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