



# Manual Plan for the *Cisco IOS XR Interface and Hardware Component Configuration Guide*, Release 3.5

Version 1

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Prepared by: Molly McGuire, mmaguire@cisco.com,  
408-525-2559  
Organization: RTG Documentation and Training  
Date: December 15, 2006

## Approvals

Review Instructions: Please review this plan by **January 3, 2007**, and return your hard copy mark ups or email comments to mmaguire@cisco.com. In your email response, please note the page number and section for each comment.

**Reviewed and approved with email  
comments:** \_\_\_\_\_ **Date:** \_\_\_\_\_

*Return only this cover sheet.*

**Reviewed and approved with hard copy  
comments:** \_\_\_\_\_ **Date:** \_\_\_\_\_

*Return this entire package.*

## Purpose

The purpose of this document is to identify the new and changed features to be documented in Release 3.5 of the *Cisco IOS XR Interface and Hardware Component Configuration Guide*, identify responsible Subject Matter Experts (SMEs), and schedule SME technical reviews.

This documentation plan for the *Cisco IOS XR Interface and Hardware Component Configuration Guide* includes the following sections:

- [Document Description, page -2](#)
- [Intended Audience, page -3](#)
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This documentation plan should be used in conjunction with the *R3.5 IOS XR SW Document Project Schedule PDF*. (Filename:R3.5\_IOSXR\_SW\_Doc\_Schedule.pdf Doc No: EDCS-TBD)

Location:

[http://wwwin-eng.cisco.com/Eng/OIBU/Q/HFR\\_User\\_Docs/HFR\\_SW\\_DocPlans\\_and\\_Tracking/R3.5/](http://wwwin-eng.cisco.com/Eng/OIBU/Q/HFR_User_Docs/HFR_SW_DocPlans_and_Tracking/R3.5/)

## Document Description

This manual plan describes the work to be done to create the *Cisco IOS XR Interface and Hardware Component Configuration Guide* for Release 3.5 of the Cisco CRS-1 and Cisco 12000 Series routers.

## Deliverable Type

The deliverable manual is the *Cisco IOS XR Interface and Hardware Component Configuration Guide*. This is a product configuration guide that will be available in PDF and HTML format on CCO and CDC. Printed copies will not be orderable.

## Goal of the Deliverable

The configuration guide provides detailed configuration procedures and information for the features supported by the interface and hardware components of the Cisco CRS-1 and Cisco 12000 Series routers.

## Intended Audience

The target audience for this publication consists of installation technicians and network operators or administrators who are responsible for the configuration of Cisco CRS-1 and Cisco 12000 Series routers.

The target audience for this publication should understand basic telecommunication and networking principles and terminology, and should have hands-on experience in installing telecommunications equipment.

## Document Organization

This section identifies the document organization, book owner, module owners, estimated page counts, and filenames.

[Table 1](#) identifies the book owner, estimated page count, CCIM path, and page designator.

**Table 1** *Cisco IOS XR Interface and Hardware Component Configuration Guide*

Document title:	<i>Cisco IOS XR Interface and Hardware Component Configuration Guide</i>
Writer:	Molly McGuire
Estimated page count:	<ul style="list-style-type: none"><li>• prior to FCS = 409</li><li>• page count post-FCS = 429</li><li>• total new pages = 20</li></ul>
Documentum path:	TD / migration / ios_xr_sw / iosxr_35 / interfaces / configuration / guide
CCIM path:	/ cc / td / doc /IOSXR/ IOS XR R35 / c3.5 Interfaces

**Table 1** *Cisco IOS XR Interface and Hardware Component Configuration Guide*

<b>Document title:</b>	<i>Cisco IOS XR Interface and Hardware Component Configuration Guide</i>
<b>Page designator</b>	HC
<b>File names</b>	<ul style="list-style-type: none"> <li>• Book file (hc35book.fmb)</li> <li>• Title Page (hc35titl.fm)</li> <li>• Table of Contents (hc35bkTOC.fmc)</li> <li>• Preface (hc35prf.fm)</li> <li>• Introduction (hc35int.fm)</li> <li>• Configuring SONET Controllers on Cisco IOS XR Software (hc35sone.fm)</li> <li>• Configuring Dense Wavelength Division Multiplexing Controllers on Cisco IOS XR Software (hc35dwdm.fm)</li> <li>• Configuring Clear Channel T3/E3 Controllers and Channelized T3 Controllers on Cisco IOS XR Software (hc35t3e3.fm)</li> <li>• Configuring Ethernet Interfaces on Cisco IOS XR Software (hc35gige.fm)</li> <li>• Configuring 802.1Q VLAN Subinterfaces on Cisco IOS XR Software (hc35vlan.fm)</li> <li>• Configuring Packet-over-SONET/SDH Interfaces on Cisco IOS XR Software (hc35pos.fm)</li> <li>• Configuring SRP Interfaces on Cisco IOS XR Software (hc35srp.fm)</li> <li>• Configuring Serial Interfaces on Cisco IOS XR Software (hc35srl.fm)</li> <li>• Configuring ATM Interfaces on Cisco IOS XR Software (hc35atm.fm)</li> <li>• Configuring Loopback and Null Interfaces on Cisco IOS XR Software (hc35loop.fm)</li> <li>• Configuring Link Bundling on Cisco IOS XR Software (hc35bund.fm)</li> <li>• Configuring Tunnel Interfaces on Cisco IOS XR Software (hc35tunn.fm)</li> <li>• Preconfiguring Physical Interfaces on Cisco IOS XR Software(hc35prec.fm)</li> <li>• Advanced Configuration and Modification of the Management Ethernet Interface on Cisco IOS XR Software (hc35mana.fm)</li> <li>• Configuring Bidirectional Forwarding Detection on Cisco IOS XR Software (hc35bfd.fm)</li> <li>• Configuring PPP Authentication on Cisco IOS XR Software (hc35ppp.fm)</li> <li>• Configuring Frame Relay Services on Cisco IOS XR Software (hc35fr.fm)</li> <li>• Configuring NetFlow on Cisco IOS XR Software (hc35nf.fm)</li> <li>• Upgrading FPD Cisco IOS XR Software (hc35fpd.fm)</li> <li>• Index (hc35bkIX.fmx)</li> </ul>

## Schedule for the Release 3.5 Docs

Table 2 shows the sequence of work planned and the approximate milestones associated with the line items. All content for each line item shall be included in time for the specified milestone.

**Table 2** *Work Plan and Milestones for Project*

Content Type	Content	Milestone
New	Write New Sections	12/21/2006 through 02/12/2007
Updated	Fix Doc Bugs	12/21/2006 through 05/11/2007
Updated	Beta 1 Technical and Editorial Review Begins	02/12/2007
Updated	Beta 1 Technical and Editorial Review Complete	02/23/2007
Updated	Beta 1 Docs published to secure site	03/02/2007
Updated	Final Technical and Editorial Review Begins	04/27/2007
Updated	Final Technical and Editorial Review Complete	05/04/2007
Updated	Information cut-off	05/04/2007
Updated	All technical sign-offs and editing complete	5/11/2007
Production	Publish and verify files online	05/14/2007 through 05/16/2007
Production	Final files appear on internal server	05/16/2007
Production	Build Final PDF	05/18/2007
Production	CCIM Production	05/19/2007 through 05/20/2007
Post- Production	Final FCS Date	05/21/2007

## Numbers of New and Revised Pages and Sections

1. 10 new sections, resulting in about 20 new pages.
2. 45 changed/updated sections/subsections.

## Assumptions and Dependencies

Note the following assumptions and dependencies regarding the documentation:

- A complete and accurate feature list is available, which lists the responsible DE managers and functional specs.
- Functional specs, detailing what commands are new or modified, are available at the start of the project.
- Timely approval of this plan and staffing requirements.
- Availability of subject matter experts (SMEs).
- Timely feedback from engineering, release engineering, product marketing, and SME groups at technical review, and final review.
- Access to the Cisco CRS-1 and Cisco 12000 Series prototype systems.
- Accurate output examples provided by DevTest.
- The writer will use FrameMaker to author the documentation and transition to XML tools if it is required during the project. If the IOS XR writing team is required to use a script to transition to XML, the CRS-1 writing team will use the same script for CRS-1 docs.
- Timely communication of schedule and content changes by release program management.
- Accurate, complete, and finalized list of features and marketing definition of feature content of packages.
- Adherence to information cutoff dates so the writer can complete drafts by milestone dates.



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### Note

Since the PIMs tool is not completely reliable, the writer will still rely on engineers and specs for much of the information pertaining to Release 3.5.

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## Unknowns and Risks

The following list describes unknown issues that might affect my schedule and the number of person weeks it will take to complete the *Cisco IOS XR Interface and Hardware Component Configuration Guide*:

1. Possibility of new commands may be created by engineering during the release resulting in additional documentation.
2. Possibility of modifications made to existing commands may be created by engineering during the release schedule. CLI changes made late in the schedule may require additional time. If required extra time is not provided, the changes will not make it into the documentation.
3. Possibility of feature-creeps, feature changes, and feature slips in late stages of schedule.
4. Possibility of yet unknown differences between common IOS XR commands and tasks on Cisco CRS-1 and Cisco 12000 Series routers. These differences will have to be noted within the documentation.

## Lab Needs

The following equipment is necessary to properly document Release 3.5 of the *Cisco IOS XR Interface and Hardware Component Configuration Guide*.

- Access to a CRS-1 router/prototype
- Access to a Cisco 12000 Series router/prototype

# Development Time Estimates

Table 3 lists the tasks and topics to be documented in the *Cisco IOS XR Interface and Hardware Component Configuration Guide*.

**Table 3** Tasks and Topics to Be Documented

Module	Task	Current Page Count	Estimated Page Count at FCS
Introduction	<ul style="list-style-type: none"> <li>• Update Introduction chapter (draft 1 already written) and incorporate comments.</li> <li>• Verify chapter via technical review.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	2	2
Configuring SONET Controllers on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Write new section and procedures for configuring Channelized SONET Controllers.</li> <li>• Add the following new hardware:               <ul style="list-style-type: none"> <li>– OC3 (Sphinx) and OC 12 (Gladiator) POS SPA</li> <li>– 1 port OC3 Prowler SPA (channelized to DS0, which supports serial interface s.)</li> <li>– 1 port OC48 Chopper SPA (channelized to DS3)</li> <li>– OC12 Chopper SPA (channelized to DS0)</li> </ul> </li> <li>• Add new section for BERT configuration.</li> <li>• Update <b>show controller sonet</b> command to reflect channelized controller.</li> <li>• Incorporate new example for “Configuring a Channelized SONET Controller.”</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	18	30
Configuring Dense Wavelength Division Multiplexing Controllers on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	16	16

**Table 3** *Tasks and Topics to Be Documented (continued)*

Module	Task	Current Page Count	Estimated Page Count at FCS
Configuring Clear Channel T3/E3 Controllers and Channelized T3 Controllers on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update <b>show controller t3</b> command output to include system time.</li> <li>• Update <b>show controller t1</b> command output to include system time.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	34	35
Configuring Ethernet Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update history table with CRS Fugu Ethernet SPA (5/8/10 GE SPA)</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	24	26
Configuring 802.1Q VLAN Subinterfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update chapter to include <b>dot1advlan/tag</b> command and MAC-in-Mac description.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits</li> </ul>	16	18
Configuring POS Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Change chapter name from “Configuring POS Interfaces on Cisco IOS XR Software” to “Configuring Packet-over-SONET/SDH Interfaces on Cisco IOS XR Software”</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	24	24
Configuring SRP Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	24	24
Configuring Serial Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update serial interface chapter with MLPPP encapsulation information.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	26	30

**Table 3** *Tasks and Topics to Be Documented (continued)*

<b>Module</b>	<b>Task</b>	<b>Current Page Count</b>	<b>Estimated Page Count at FCS</b>
Configuring ATM Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits</li> </ul>	34	34
Configuring Loopback and Null Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	10	10
Configuring Link Bundling on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update link bundling chapter with relevant multilink interface information</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	24	28
Configuring Tunnel Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update chapter to distinguish it from L2TP tunnels chapter.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	10	12
Preconfiguring Physical Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	8	8
Advanced Configuration and Modification of the Management Ethernet Interface on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	16	16
Configuring Bidirectional Forwarding Detection on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	18	18
Configuring PPP Authentication on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	24	24

**Table 3** *Tasks and Topics to Be Documented (continued)*

Module	Task	Current Page Count	Estimated Page Count at FCS
Modifying the default Frame Relay Configuration on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• No known changes</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	14	14
Configuring Netflow on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Update affected sections and commands with IPv6 sampling support on all interface types.</li> <li>• Update sampling rates to include IPV6 rate of up to 20,000 packets per second per line card.</li> <li>• Add examples for IPV6 sampled Netflow.</li> <li>• TDB: Remove this chapter from the interfaces doc and into a System Management Configuration Guide,” in into it’s own doc.</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	20	25
Upgrading FPD Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Move this chapter to the “Upgrading and Managing Cisco IOS XR Software” chapter of the “System Management Guide.”</li> <li>• Verify all commands, tasks, and examples.</li> <li>• Secure technical signoff.</li> <li>• Incorporate edits.</li> </ul>	12	12

Table 4 shows the estimated person weeks and hours for the *Cisco IOS XR Interface and Hardware Component Configuration Guide*.

Estimation assumptions:

- One Person Week = 40 hours.
- Estimated new pages = 20

**Table 4** *Estimated Person Weeks Needed for Project*

	<b>Content</b>	<b>Priority</b>	<b>Hours</b>
<b>New Content</b>	10 New sections	1	40
<b>Updated Content</b>	45 Updated modules	1	90
	Fix Doc Bugs	1	TBD
	Perform chapter-by-chapter verification	2	40
<b>Production (Post FCS)</b>			
	Total Estimated Project Person Hours:	—	170
	Total Estimated Project person weeks:	—	<b>4.25</b>

# Contributors

Table 5 lists the contacts and reviewers for the *Cisco IOS XR Interface and Hardware Component Configuration Guide*.

**Table 5** Contributors

Module	Contact
Introduction	<ul style="list-style-type: none"><li>• Chris Cornwall (ccornwal)</li><li>• Spank McCoy (smccoy)</li><li>• Lazarus Slater (lazaruss)</li><li>• Robert Wilton (rwilton)</li><li>• iosxr-training (mailer list)</li></ul>
Configuring SONET Controllers on Cisco IOS XR Software	<ul style="list-style-type: none"><li>• Anand Parthasarathy (agirish)</li><li>• Chris Cornwall (ccornwal)</li><li>• Shyam Maniyar (smaniyar)</li><li>• Spank McCoy (smccoy)</li><li>• Lazarus Slater (lazaruss)</li><li>• Jim Xu (yax)</li><li>• iosxr-training (mailer list)</li></ul>
Configuring DWDM Controllers on Cisco IOS XR Software	<ul style="list-style-type: none"><li>• Spank McCoy (smccoy)</li><li>• Hong Li (hongli)</li><li>• Anand Parthasarathy (agirish)</li><li>• Lazarus Slater (lazaruss)</li><li>• Humayun Sohel (hsohel)</li><li>• Yan-Lin Xu (yaxu)</li><li>• q-dwdm-sw(mailer list)</li><li>• iosxr-training (mailer list)</li></ul>

**Table 5 Contributors (continued)**

Module	Contact
Configuring Clear Channel T3/E3 Controllers and Channelized T3 Controllers on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Mohan Babu (mbabu)</li> <li>• Min-Sik Jun (mjun)</li> <li>• Shiv Kumar (shikumar)</li> <li>• Praful Lalchandani (praful)</li> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Abdelhafid Seddouki (hseddouk)</li> <li>• Naresh Sharma (nasharma)</li> <li>• Brian Shoda (bshoda)</li> <li>• Gino Suri (gsuri)</li> <li>• Robin Wong (rswong)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Ethernet Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Chris Cornwall (ccornwal)</li> <li>• Thomas Dalton (thdalton)</li> <li>• Shrikant B. Deshpande (sdeshpan)</li> <li>• Spank McCoy (smccoy)</li> <li>• Anand Parthasarathy (agirish)</li> <li>• Christophe Rene (crene)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Ashok Thirunarayanan (ashokt)</li> <li>• Balaji Venkatraman (balajiv)</li> <li>• Phong Vo (phvo)</li> <li>• Jing Wang (jingwan)</li> <li>• Robert Wilton (rwilton)</li> <li>• iox-ether-dev (mailer list)</li> <li>• iosxr-training (mailer list)</li> </ul>

**Table 5 Contributors (continued)**

Module	Contact
Configuring VLAN Subinterfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Mythili Annamraju (mythili)</li> <li>• Chris Cornwall (ccornwal)</li> <li>• Shrikant Deshpande (sdeshpan)</li> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Christophe Rene (crene)</li> <li>• Ashok Thirunarayanan (ashokt)</li> <li>• Phong Vo (phvo)</li> <li>• Robert Wilton (rwilton)</li> <li>• Pinar Yilmaz (pinar@cisco.com)</li> <li>• iox-vlan-dev (mailer list)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Packet-over-SONET/SDH Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Anand Parthasarathy (agirish)</li> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Serial Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Mohan Babu (mbabu)</li> <li>• Carol Gal (cgal)</li> <li>• Spank McCoy (smccoy)</li> <li>• Jason McCullough (jasonm)</li> <li>• Abdelhafid Seddouki (heddouk)</li> <li>• Brian Shoda (bshoda)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Gino Suri (gsuri)</li> <li>• Robin Wong (rswong)</li> <li>• Praful Lalchandani (praful)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring SRP Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Christophe Rene (crene)</li> <li>• Mike Taillon (mtaillon)</li> <li>• Richard Vallee (rvallee)</li> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• iosxr-training (mailer list)</li> </ul>

**Table 5 Contributors (continued)**

Module	Contact
Configuring ATM Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Spank McCoy (smccoy)</li> <li>• Kasi Nalamalapu (kasi)</li> <li>• Syed Nawaz (snawaz)</li> <li>• Jason F McCullough (jasonm)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Phong Vo (phvo)</li> <li>• Muhammad Durrani</li> <li>• Anil Lal</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Loopback and Null Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Link Bundling on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Yehuda Bamnolker (ybamnolk)</li> <li>• Neil Ketley (nketley)</li> <li>• Spank McCoy (smccoy)</li> <li>• Jorge Serpa (jserpa)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Anthony Toole (atoole)</li> <li>• q-dot3ad-internal (mailer list)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Tunnel Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Anand Parthasarathy (agirish)</li> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• iosxr-training (mailer list)</li> </ul>
Preconfiguring Physical Interfaces on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Spank McCoy (smccoy)</li> <li>• Christophe Rene (crene)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Robert Wilton (rwilton)</li> <li>• Jim Xu (yax)</li> <li>• iosxr-training (mailer list)</li> </ul>

**Table 5 Contributors (continued)**

Module	Contact
Advanced Configuration and Modification of the Management Ethernet Interface on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Bill Benson (bibenson)</li> <li>• Sai Ramamoorthy (sai)</li> <li>• Mala Devlin (mdevlin)</li> <li>• Yasser Gadallah (yasser)</li> <li>• Cary Hayward (cahaywar)</li> <li>• Rob Haworth (rhaworth)</li> <li>• Haresh Kheskani (haresh)</li> <li>• Spank McCoy (smccoy)</li> <li>• Nasser Noei (nnoei)</li> <li>• Vinod Peris (vperis)</li> <li>• Jennifer Robinson (jerobins)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• Scott Yow (syow)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Bidirectional Forwarding Detection on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Spank McCoy (smccoy)</li> <li>• Jean-Marc Simard (jesimard)</li> <li>• David Toscano (dtoscano)</li> <li>• Jason F McCullough (jasonm)</li> <li>• Syed Nawaz (snawaz)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• q-bfd-coders (mailer list)</li> <li>• iosxr-training (mailer list)</li> </ul>
Configuring Frame Relay Services on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Spank McCoy (smccoy)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• iosxr-training (mailer list)</li> </ul>

**Table 5 Contributors (continued)**

Module	Contact
Configuring NetFlow on Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Mythili Annamraju (mythili)</li> <li>• Yehuda Bamnolker (ybamnolk)</li> <li>• Leo Chan (lcchan)</li> <li>• Ryan Dundas (ryan)</li> <li>• Ashok Thirunarayanan (ashokt)</li> <li>• Hari Krishna (hakrishna)</li> <li>• Spank McCoy (smccoy)</li> <li>• Siva Perumalla (sivap)</li> <li>• Ganesh Sadasivan (gsadasiv)</li> <li>• Jorge Serpa (jserpa)</li> <li>• Lazarus Slater (lazaruss)</li> <li>• iosxr-training (mailer list)</li> <li>• q-netflow-dev (mailer list)</li> </ul>
Upgrading FPD Cisco IOS XR Software	<ul style="list-style-type: none"> <li>• Shirish Joshi (shirjosh)</li> <li>• Hong Li (hongli)</li> <li>• Jianbo Li (ljb)</li> <li>• Chi-Heng Lu (luislu)</li> <li>• Sanjeev Tyagi (sanjtyag)</li> <li>• Man Sang Wong (mansonw)</li> <li>• Robin Wong (rswong)</li> </ul>

## Allocated Resources

Resources allocated to this project are as follows:

- One Editor (Judith Billingsley)
- One writer (Molly McGuire)

The following resources, are required to give input into the deliverable:

- SMEs— [for reviews]
- Engineers— [for reviews and feature clarification]
- Program Managers— [for scheduling]
- Release Managers— [for scheduling]

## Functional Specifications and References

Table 6 lists the available functional specifications and reference materials related to the CRS-1 and Cisco 12000 Series router interface and hardware component commands

**Table 6** Cisco IOS XR Release 3.5 Software Functional Specs and Reference Docs

Feature	EDCS No.	Spec Title
<b>Netflow Enhancements: Sampled Netflow for IPv6 (CRS-1)</b>		
	EDCS-404350	<i>IOS XR Forwarding PRD</i>
	EDCS-535722	<i>IPv6 Sampled NetFlow for IOS-XR Release 3.5</i>
<b>MAC-in-MAC (CRS-1)</b>		
	EDCS-551521	<i>IOS XR Ethernet Services PRD</i>
	EDCS-546838	<i>CRS IOS-XR EOMPLS support for 802.1ah MAC in MAC</i>
<b>Online Diagnostics (CRS)</b>		
	EDCS-413905	<i>IOS XR Diagnostics Product Requirements Document</i>
	EDCS-450132	<i>GOLD-XR Functional Specification</i>
	EDCS-525493	<i>Online Fabric Diagnosis Test for Gold XR - SW Functional and Design Spec</i>
	EDCS-537388	<i>Scratch Register Test for GOLD-XR SW Functional and Design Spec</i>
	EDCS-537624	<i>ROMMON Version Test for GOLD-XR SW Functional and Design Spec</i>
	EDCS-538131	<i>Filesystem and Disk Test for GOLD-XR SW Func and Design Spec</i>
<b>10G WAN Phy SPA (CRS)</b>		
	EDCS-489837	<i>CRS Fugu Ethernet SPA Driver</i>
<b>SPA:1xChOC48 -&gt; DS3 &amp; 1xChOC12 -&gt; DS0 (Chopper) (GSR)</b>		
	EDCS-465441	<i>CHOC Interfaces PRD for IOS-XR</i>
	EDCS-512876	<i>GSR IOX Chopper SPA Software Functional Specification</i>

**Table 6 Cisco IOS XR Release 3.5 Software Functional Specs and Reference Docs (continued)**

Feature	EDCS No.	Spec Title
<b>SPA: 2,4 and 8 xOC12 POS &amp; 4 and 8 xOC3 POS (Gladiator) (GSR)</b>		
	EDCS-255568	<i>Sphinx SPA PRD</i>
	EDCS-420929	<i>Gladiator OC3/OC12 POS SPA Software Functional Specification</i>
<b>1xChOC3/STM1 - Prowler (GSR)</b>		
	EDCS-465441	<i>CHOC Interfaces PRD for IOS-XR</i>
	EDCS-507598	<i>Prowler SPA on IOX Software Functional Specifications</i>
	EDCS-508646	<i>IOX Sonet Channelization Functional Specification</i>
<b>Sampled Netflow for IP lookup in MPLS Netflow (GSR)</b>		
	EDCS-404350	<i>IOS XR Forwarding PRD</i>
	EDCS-537776	<i>Sampled MPLS IPv4 NF on c12k Engine 3 &amp; 5 in IOX - FS &amp; DS</i>
<b>LFI (GSR)</b>		
	EDCS-465964	<i>IOS XR Low Speed Link Efficiency PRD</i>
	EDCS-487545	<i>IOS XR MLPPP c12000 Platform Dependent Functional Specification</i>
<b>L2TPv3-L2TPv3 based L2VPN Ethernet, FR and ATM attachment circuits PPP, HDLC attachment circuits IP Routed Interworking (PI)</b>		
	EDCS-512231	<i>IOS-XR L2TPv3 for Pseudowires PRD</i>
	EDCS-524131	<i>IOX L2TPv3 PI Software Functional Specification</i>
	EDCS-511259	<i>L2TPv3 on Cisco XR 12000 Software Functional Specification</i>
<b>PFI Client migration (PI)</b>		
	TBD	TBD
<b>3.5.0 Plan of Record Feature List</b>		
	EDCS-512277	<i>XR3.5 Plan or Record Feature List</i>

# Preliminary Document Outline

The following outline shows a preliminary TOC for the *Cisco IOS XR Interface and Hardware Component Configuration Guide*.



## Note

Sections that appear in **pink** are new.

Section that appear in **red** will be updated for Release 3.5.

Section that appear in **blue** will be verified on the Cisco CRS-1 and Cisco 12000 Series routers, if applicable, and updated as necessary.

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