



Release Notes for Cisco IOS XR Software Release 3.3.4

March 29, 2008

Cisco IOS XR Software Release 3.3.4

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These release notes describe the features provided in Cisco IOS XR Software Release 3.3.4 and are updated as needed.

For a list of software caveats that apply to Cisco IOS XR Software Release 3.3.4, see the “[Caveats—Release 3.3.4](#)” section on page 10. The caveats are updated for every release and are located on the World Wide Web at www.cisco.com.

We recommend that you view the field notices for this release at the following location to see if your software or hardware platforms are affected: http://www.cisco.com/public/support/tac/fn_index.html.



Note

You can find the most current Cisco IOS XR software documentation on the World Wide Web at http://www.cisco.com/en/US/products/ps5845/tsd_products_support_series_home.html. These electronic documents may contain updates and modifications. See the “[Obtaining Documentation, Obtaining Support, and Security Guidelines](#)” section on page 15 for more information on obtaining Cisco documentation.

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Introduction

Cisco IOS XR software is a distributed operating system designed for continuous system operation combined with service flexibility and high performance.

Cisco IOS XR software provides the following features and benefits:

- **IP and Routing**—Supports a wide range of IPv4 and IPv6 services and routing protocols, such as Border Gateway Protocol (BGP), Intermediate System-to-Intermediate System (IS-IS), Open Shortest Path First (OSPF), IP Multicast, Routing Policy Language (RPL), and Hot Standby Router Protocol (HSRP)/Virtual Router Redundancy Protocol (VRRP) features.
- **Multiprotocol Label Switching (MPLS)**—Supports MPLS protocols, including Traffic Engineering (TE), Resource Reservation Protocol (RSVP), and Label Distribution Protocol (LDP).
- **Multicast**—Provides comprehensive IP Multicast software, including Source Specific Multicast (SSM). The Cisco CRS-1 router supports Bidirectional Protocol Independent Multicast (BIDIR-PIM).
- **Quality of Service (QoS)**—Supports rich QoS mechanisms, including policing, marking, queuing, dropping, and shaping. Additionally, the operating systems support Modular QoS CLI (MQC). MQC is used to configure various QoS features on various Cisco platforms.
- **Manageability**—Provides industry-standard management interfaces including modular command-line interface (CLI), Simple Network Management Protocol (SNMP), and native Extensible Markup Language (XML) interfaces.
- **Security**—Provides comprehensive network security features, including access control lists (ACLs), the routing authentications AAA and TACACS+, Secure Shell (SSH), and SNMPv3. Control plane protections integrated into line card ASICs include Global Time-to-Live Security Mechanism (GTSM), RFC 3682, and dynamic control plane protection (DCoPP).
- **Craft Works interface (CWI)**—The CWI is a client-side application used to configure and manage Cisco routers. The management and configuration features include fault, configuration, security, and inventory, with an emphasis on speed and efficiency. The CWI provides a context-sensitive graphical representation of the objects in a Cisco router, simplifying the process of configuring and managing the router. CWI allows you to log in to multiple routers and perform management tasks.
- **Availability**—Supports rich availability features such as fault containment, fault tolerance, fast switchover, link aggregation, and nonstop forwarding (NSF).

System Requirements

This section describes the system requirements for Cisco IOS XR Software Release 3.3.4, which is supported only on the Cisco CRS-1 router:

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**Note**

The Designated Shelf Controller (DSC) migration feature requires that both shelf route processors (RPs) are in the default SDR of the Cisco CRS-1 Multishelf System.

Feature Set Tables

Cisco IOS XR software is packaged in feature sets (also called *software images*). Each feature set contains a specific set of Cisco IOS XR Software Release 3.3.4 features. These features are delivered in a package called a *package installation envelope (PIE)*. [Table 1](#) and [Table 2](#) list the Cisco IOS XR software feature set matrix and associated PIE and TAR filenames available for Cisco IOS XR Software Release 3.3.4 supported on the Cisco CRS-1 router.

Table 1 Cisco CRS-1 Supported Feature Sets (Cisco IOS XR Software Release 3.3.4 PIE Files)

Feature Set	Filename	Description
Composite Package		
Cisco IOS XR IP Unicast Routing Core Bundle	comp-hfr-mini.pie-3.3.4	Contains the required core packages, including OS, Admin, Base, Forwarding, Modular Services Card, and Routing packages.
Optional Individual Packages¹		
Cisco IOS XR Manageability Package	hfr-mgbl-p.pie-3.3.4	CORBA agent, XML Parser, HTTP server, SNMP Agent, and Alarm correlation.
Cisco IOS XR MPLS Package	hfr-mpls-p.pie-3.3.4	MPLS-TE, LDP, MPLS Forwarding, MPLS OAM, LMP, OUNI, and RSVP.
Cisco IOS XR Multicast Package	hfr-mcast-p.pie-3.3.4	Multicast Routing Protocols (PIM, MSDP, IGMP, Auto-RP), Tools (SAP, MTrace), and Infrastructure (MRIB, MURIB, MFWD), and BIDIR.
Cisco IOS XR Security Package	hfr-k9sec-p.pie-3.3.4	Support for Encryption, Decryption, IPSec, SSH, SSL, and PKI.
Cisco IOS XR Diagnostic Package	hfr-diags-p.pie-3.3.4	Diagnostic utilities, both online and offline, for Cisco IOS XR routers.
Cisco IOS XR Documentation Package	hfr-doc.pie-3.3.4	Manual pages for Cisco IOS XR CLI commands.
Cisco IOS XR FPD Package	hfr-fpd.pie-3.3.4	Firmware for ROM Monitor and Shared Port Adapters (SPA) supported in Cisco IOS XR software.

1. Packages are installed individually.

Table 2 Cisco CRS-1 Supported Feature Sets (Cisco IOS XR Software Release 3.3.4 TAR Files)

Feature Set	Filename	Description
Cisco IOS XR IP/MPLS Core Software	CRS-1-iosxr-3.3.4.tar	Tar file containing: <ul style="list-style-type: none"> • Cisco IOS XR Diagnostic Package • Cisco IOS XR Documentation Package • Cisco IOS XR FPD Package • Cisco IOS XR IP Unicast Routing Core Bundle • Cisco IOS XR Manageability Package • Cisco IOS XR MPLS Package • Cisco IOS XR Multicast Package
Cisco IOS XR IP/MPLS Core Software 3DES	CRS-1-iosxr-k9-3.3.4.tar	Tar file containing: <ul style="list-style-type: none"> • Cisco IOS XR Diagnostic Package • Cisco IOS XR Documentation Package • Cisco IOS XR FPD Package • Cisco IOS XR IP Unicast Routing Core Bundle • Cisco IOS XR Manageability Package • Cisco IOS XR MPLS Package • Cisco IOS XR Multicast Package • Cisco IOS XR Security Package

Memory Requirements

The minimum memory requirements for Cisco CRS-1 routers running Cisco IOS XR Software Release 3.3.4 are:

- 2-GB memory on the route processors (RPs)
- 1-GB memory on the modular services cards (MSCs)

Hardware Supported

Cisco IOS XR Software Release 3.3.4 supports Cisco CRS-1 routers. All hardware features are supported by Cisco IOS XR software, subject to the memory requirements specified in the [“Memory Requirements”](#) section on page 4.

Table 3 lists the hardware components supported on the Cisco CRS-1 and the minimum software versions required. See the [“Determining the Software Version”](#) section on page 8.

Table 3 Cisco CRS-1 Supported Hardware and Minimum Software Requirements

Component	Part Number	Min. Software Version Required
Cisco CRS-1 Series 16-Slot Line Card Chassis		
Cisco CRS-1 16-Slot Line Card Chassis	CRS-16-LCC	3.2
Cisco CRS-1 Fan Tray for 16-Slot LCC	CRS-16-LCC-FAN-TR	3.2
Cisco CRS-1 16-Slot Fabric Card / Single	CRS-16-FC/S	3.2
Cisco CRS-1 Fan Controller for 16-Slot Line Card Chassis	CRS-16-LCC-FAN-CT	3.2
Cisco CRS-1 16-Slot Route Processor	CRS-16-RP	3.2
Cisco CRS-1 Memory Module 2 GB	CRS-MEM-2G	3.2
Cisco CRS-1 PCMCIA Flash Disk 1 GB	CRS-FLASH-DISK-1G	3.2
Cisco CRS-1 Modular Services Card	CRS-MSC	3.2
Cisco CRS-1 LCC Front AC Power Panel	CRS-16-ACGRILLE	3.2
Cisco CRS-1 LCC Front DC Power Panel	CRS-16-DCGRILLE	3.2
Cisco CRS-1 16-Slot Alarm Board	CRS-16-ALARM	3.2
Cisco CRS-1 AC Delta Power Shelf for 16-Slot LCC	CRS-16-LCC-PS-ACD	3.2
Cisco CRS-1 AC Wye Power Shelf for 16-Slot LCC	CRS-16-LCC-PS-ACW	3.2
Cisco CRS-1 DC Power Shelf for 16-Slot LCC	CRS-1-LCC-PS-DC	3.2
Cisco CRS-1 4xOC-192/STM64 POS/DPT Interface Module/V5	4OC192-POS/DPT-V5	3.2
Cisco CRS-1 4xOC-192/STM64 POS/DPT Interface Module/SR	4OC192-POS/DPT-SR	3.2
Cisco CRS-1 4xOC-192/STM64 POS/DPT Interface Module/IR	4OC192-POS/DPT-IR	3.2
Cisco CRS-1 4xOC-192/STM64 POS/DPT Interface Module/LR	4OC192-POS/DPT-LR	3.2
Cisco CRS-1 16xOC-48/STM16 POS/DPT Interface Module	16OC48-POS/DPT	3.2
Cisco CRS-1 2.5 G SFP LR Optic	POM-OC48-LR2-LC-C	3.2
Cisco CRS-1 2.5 G SFP SR Optic	POM-OC48-SR-LC-C	3.2
Cisco CRS-1 Line Card Chassis Front Doors	CRS-16-LCC-DRS-F	3.2
Cisco CRS-1 Line Card Chassis Front Cable Mgmt	CRS-16-LCC-FRNT	3.2
Cisco CRS-1 LCC Expanded Front Cable Mgmt	CRS-16-LCC-FRNT-E	3.2
Cisco CRS-1 Line Card Chassis Rear Cable Mgmt	CRS-16-LCC-BCK-CM	3.2
Cisco CRS-1 Line Card Chassis Rear Doors	CRS-16-LCC-DRS-R	3.2
Cisco CRS-1 Lift for LCC 16 and FCC	CRS-16-LIFT/B	3.2
Cisco CRS-1 Series 8-Slot Line Card Chassis		
Cisco CRS-1 8-Slot Line Card Chassis	CRS-8-LCC	3.2
Cisco CRS-1 Fan Tray for 8-Slot Line Card Chassis	CRS-8-LCC-FAN-TR	3.2
Cisco CRS-1 Line Card Chassis Filter Pack	CRS-8-LCC-FILTER	3.2
Cisco CRS-1 AC Pwr Rectifier for 8-Slot LCC	CRS-8-AC-RECT	3.2

Table 3 Cisco CRS-1 Supported Hardware and Minimum Software Requirements (continued)

Component	Part Number	Min. Software Version Required
Cisco CRS-1 DC Power Entry Module for 8-Slot LCC	CRS-8-DC-PEM	3.2
Cisco CRS-1 AC & DC Power Module Filter for 8-Slot LCC	CRS-8-PWR-FILTER	3.2
Cisco CRS-1 AC Delta PDU for CRS-8 LCC	CRS-8-LCC-PDU-ACD	3.2
Cisco CRS-1 AC Wye PDU for CRS-8 LCC	CRS-8-LCC-PDU-ACW	3.2
Cisco CRS-1 DC PDU for CRS-8 LCC	CRS-8-LCC-PDU-DC	3.2
Cisco CRS-1 8-Slot Fabric Card / Single	CRS-8-FC/S	3.2
Cisco CRS-1 8-Slot Fabric Card Blank	CRS-8-FC-BLANK	3.2
Cisco CRS-1 8-Slot Fabric Handle	CRS-8-FC-HANDLE	3.2
CRS-FCC= Cisco CRS-1 Series Fabric Card Chassis Only	CRS-FCC=	3.2
CRS-1 Fabric Chassis AC Delta Power Kit	CRS-FCC-ACD-KIT	3.2
CRS-1 Fabric Chassis AC Grille	CRS-FCC-ACGRILLE	3.2
CRS-1 Fabric Chassis AC-Wye Power Kit	CRS-FCC-ACW-KIT	3.2
CRS Fabric Chassis DC Power Kit	CRS-FCC-DC-KIT	3.2
CRS-1 Fabric Chassis DC Power Grille	CRS-FCC-DCGRILLE	3.2
CRS Fabric Chassis Lift Bracket	CRS-FCC-LIFT-BRKT	3.2
CRS Fabric Chassis OIM Modules	CRS-FCC-OIM-1S=	3.2
Cisco CRS-1 Series FC Chassis Shelf/Fan/Enet cntr	CRS-FCC-SC-GE=	3.2
CRS-1 Fabric Chassis AC Intake Grille	CRS-FCC-ACGRILLE=	3.2
CRS-1 Fabric Chassis DC Intake Grille	CRS-FCC-DCGRILLE=	3.2
Cisco CRS-1 Series Fan Tray for FCC	CRS-FCC-FAN-TR=	3.2
CRS-1 Fabric Card Chassis Fan Tray Filters	CRS-FCC-FILTER=	3.2
CRS-1 Fabric Chassis Front Cosmetic Kit	CRS-FCC-FRNT-CM=	3.2
Cisco CRS-1 Series Fabric Card Chassis Fiber Module LED	CRS-FCC-LED=	3.2
Cisco CRS-1 Series DC Power Shelf for FCC	CRS-FCC-PS-DC=	3.2
CRS-1 Fabric Chassis Rear Cosmetic Kit	CRS-FCC-REAR-CM=	3.2
CRS-LIFT Brackets for Fabric Chassis	CRS-FCC-LIFT-BRKT=	3.2
CRS Fabric Chassis OIM Module	CRS-FCC-OIM-1S	3.2
CRS-1 Fabric Chassis AC Delta Power Supply	CRS-FCC-PS-ACD	3.2
CRS-1 Fabric Chassis AC Wye Option	CRS-FCC-PS-ACW	3.2
CRS-1 Fabric Chassis DC Power Option	CRS-FCC-PS-DC	3.2
Cisco CRS-1 Series Fabric Card Chassis Switch Fabric Card	CRS-FCC-SFC=	3.2
Cisco CRS-1 8-Slot Route Processor	CRS-8-RP	3.2
Cisco CRS-1 8-Slot Route Processor Blank	CRS-8-RP-BLANK	3.2
Cisco CRS-1 8-Slot Route Processor Handle	CRS-8-RP-HANDLE	3.2
Cisco CRS-1 8x10 GbE Interface Module/LR	8-10GBE	3.2

Table 3 Cisco CRS-1 Supported Hardware and Minimum Software Requirements (continued)

Component	Part Number	Min. Software Version Required
10GBASE-LR XENPAK Module for CRS-1	CRS-XENPAK10GB-LR	3.2
Cisco CRS-1 4xOC-192/STM64 POS/DPT Interface Module/LR	4OC192-POS/DPT-LR	3.2
Cisco CRS-1 1xOC-768/STM256 POS Interface Module/SR	1OC768-POS-SR	3.2
Cisco Carrier 1 Series SPA Interface Processor 40G	CRS1-SIP-800	3.2
Cisco 1-Port OC-192c/STM-64c POS/RPR Shared Port Adapter with XFP Optics	SPA-OC192POS-XFP	3.2
Cisco 8-Port Gigabit Ethernet Shared Port Adapter	SPA-8X1GE	3.2
Cisco 4-Port OC-3 Shared Port Adapter	SPA-4XOC3-POS	3.2
Cisco 10-GBASE-LR XENPAK Module for CRS-1	CRS-XENPAK10GB-LR	3.3.3, 3.4.0
Cisco 10-GBASE Extended Range XENPAK Module for SMF	XENPAK-10GB-ER+=	3.3.3, 3.4.0
Cisco 10-GBASE Long Range XENPAK Module for SMF	XENPAK-10GB-LR+=	3.3.3, 3.4.0
10GBASE-DWDM XENPAK	CRS-XENPAK10GB-DWDM	3.2.2
Cisco CRS-1 8-Port OC-12 Shared Port Adapter	SPA-8XOC12-POS	3.3.0
ITU grid 4X10G PLIM	4-10GE-ITU/C	3.3.0
ITU grid 40G PLIM	1OC768-ITU/C	3.3.0
Cisco CRS-1 Distributed Route Processor	CRS-DRP	3.3.0
Cisco CRS-1 Distributed Route Processor Revision B	CRS-DRP-B	3.3.3
Cisco CRS-1 16-slot route processor	CRS-16-RP-B	3.3.0
Cisco CRS-1 8-Slot Install Kit	CRS-8-INSTALL-KT	N/A
Cisco CRS-1 8-Slot Fork Lift Tube	CRS-8-LIFT-TUBE	N/A
Cisco CRS-1 8-Slot Front Badge Panel	CRS-8-BDG-PANEL	N/A
Cisco CRS-1 8-Slot Front Inlet Grill	CRS-8-FRNT-GRILL	N/A
Cisco CRS-1 8-Slot Horizontal Install Rails	CRS-8-HRZ-RAILS	N/A

Software Compatibility

Cisco IOS XR Software Release 3.3.4 is compatible with the following Cisco CRS-1 systems:

- Cisco CRS-1 8-Slot Line Card Chassis
- Cisco CRS-1 16-Slot Line Card Chassis



Note

The Cisco CRS-1 4-Slot Line Card Chassis requires Cisco IOS XR Software Release 3.4.0 and, therefore *cannot* operate with Cisco IOS XR Software Release 3.3.4.

Determining the Software Version

To determine the version of Cisco IOS XR software running on your router, log in to the router and enter the **show version** command:

Step 1 Establish a Telnet session with the router.

Step 2 Enter the **show version** command:

```
RP/0/RP0/CPU0:router# show version

Cisco IOS XR Software, Version 3.3.4[00]
Copyright (c) 2007 by cisco Systems, Inc.

ROM: System Bootstrap, Version 1.43(20061109:045749) [CRS-1 ROMMON],

neo-1 uptime is 7 hours, 33 minutes
System image file is "disk0:hfr-os-mbi-3.3.4/mbihfr-rp.vm"

cisco CRS-16/S (7455) processor with 4194304K bytes of memory.
7455 processor at 800Mhz, Revision 3.4

21 Packet over SONET/SDH network interface(s)
21 SONET/SDH Port controller(s)
8 TenGigabitEthernet/IEEE 802.3 interface(s)
2 Ethernet/IEEE 802.3 interface(s)
8 GigabitEthernet/IEEE 802.3 interface(s)
2043k bytes of non-volatile configuration memory.
38079M bytes of hard disk.
1000592k bytes of ATA PCMCIA card at disk 0 (Sector size 512 bytes).

Configuration register on node 0/RP1/CPU0 is 0x102
Package active on node 0/RP1/CPU0:
hfr-diags, V 3.3.4[00], Cisco Systems, at disk0:hfr-diags-3.3.4
  Built on Thu Apr  5 01:13:16 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-mgbl, V 3.3.4[00], Cisco Systems, at disk0:hfr-mgbl-3.3.4
  Built on Thu Apr  5 01:05:45 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-mcast, V 3.3.4[00], Cisco Systems, at disk0:hfr-mcast-3.3.4
  Built on Thu Apr  5 01:11:21 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-mp1s, V 3.3.4[00], Cisco Systems, at disk0:hfr-mp1s-3.3.4
  Built on Thu Apr  5 01:08:21 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-rout, V 3.3.4[00], Cisco Systems, at disk0:hfr-rout-3.3.4
  Built on Thu Apr  5 01:11:37 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-k9sec, V 3.3.4[00], Cisco Systems, at disk0:hfr-k9sec-3.3.4
  Built on Thu Apr  5 00:59:18 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-1c, V 3.3.4[00], Cisco Systems, at disk0:hfr-1c-3.3.4
  Built on Thu Apr  5 01:11:48 PST 2007
  By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-fwdg, V 3.3.4[00], Cisco Systems, at disk0:hfr-fwdg-3.3.4
```

```

Built on Thu Apr  5 01:11:34 PST 2007
By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-admin, V 3.3.4[00], Cisco Systems, at disk0:hfr-admin-3.3.4
Built on Thu Apr  5 01:11:42 PST 2007
By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-base, V 3.3.4[00], Cisco Systems, at disk0:hfr-base-3.3.4
Built on Thu Apr  5 01:12:06 PST 2007
By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

hfr-os-mpi, V 3.3.4[00], Cisco Systems, at disk0:hfr-os-mpi-3.3.4
Built on Thu Apr  5 01:11:52 PST 2007
By edde-bld1 in /vws/aga/production/3.3.4/hfr/workspace for c2.95.3-p8

```

Other Firmware Code

The following firmware code is supported by the Cisco CRS-1 router:

- The minimum ROMMON version required for this release is 1.45. For detailed information on ROMMON specifications, see http://www.cisco.com/web/Cisco_IOS_XR_Software/index.html.



Note

Before you upgrade a Cisco CRS-1 system to Cisco IOS XR Software Release 3.3.4 or a later release, make sure that ROM Monitor software is version 1.45 or a later version on all RPs and all nodes on the router. If the router comes up with an incompatible version of the ROM Monitor, the standby RP or other nodes might fail to boot.

In addition, Cisco CRS-1 multishelf systems should be upgraded to ROMMON version 1.45 before being upgraded to Cisco IOS XR Software Release 3.3.4 to ensure that RPs receive the correct rack number assignments during system boot.

- The minimum CPUCNTRL version required for this release is 2.07.

For detailed information on ROMMON, see *Cisco IOS XR ROM Monitor Guide*.

New and Changed Information

No new software or hardware features are introduced in Cisco IOS XR Software Release 3.3.4.

Installation Notes

In certain countries, use of these products might be prohibited and subject to laws, regulations, or licenses, including requirements applicable to the use of the products under telecommunications and other laws and regulations; customers must comply with all such applicable laws in the countries in which they intend to use the products.

Follow the instructions provided by Cisco for all card removal and replacement (fabric cards, line cards, fan controller and RP, and so on) to avoid impact to traffic. See the *Cisco IOS XR Getting Started Guide* for procedures.

If you intend to test beyond the combined maximum configuration tested and published by Cisco, contact your Cisco representative to discuss how to engineer a large-scale configuration maximum for your testing.

Caveats—Release 3.3.4

This section lists the caveats for Cisco IOS XR Software Release 3.3.4. Caveats describe unexpected behavior in Cisco IOS XR software releases. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious.

The caveats are listed as follows:

- **CSCeh42441**

Basic Description: IMD does not clean notification queue during deregistration.

Symptom: ISIS related trace backs are the VLAN interfaces of an LC after that LC reloads.

Conditions: These traceback messages are seen only on the VLAN interfaces and do not consistently occur. This issue is very rare.

Workaround: No external workaround needed. These messages stop by themselves, and there is no system impact.

- **CSCsc05163**

Basic Description: The CISCO-FLASH-MIB is not sending traps after someone performs an online insertion and removal (OIR) on the flash device. SNMP traps `ciscoFlashDeviceInsertedNotif` and `ciscoFlashDeviceRemovedNotif` are not supported.

Symptom: SNMP traps are not sent when a flash card is inserted or removed.

Conditions: All cases.

Workaround: None.

- **CSCsd32597**

Basic Description: BGP Routing failure in next-hop registrations.

Symptom: This error message is seen after we do a redundancy switchover.

Conditions: This message is seen only one time after doing a redundancy switchover.

Workaround: No workaround necessary. This message has no system impact.

- **CSCse08168**

Basic Description: After a reload, RADIUS does not find the source interface.

Symptom: The source interface does not seem to take effect upon reload or RP failover.

Conditions: This happens for software interfaces such as Loopback. Using physical interfaces does not appear to cause the problem.

Workaround: Restart the RADIUS process.

- **CSCse41524**

Basic Description: An SNMPD core dump occurs during the committing of the community.

Symptom: Process SNMPD fails when the community string is configured or during router reload with a startup configuration containing SNMP-specific configurations.

Conditions: Intermittent.

Workaround: Reapply the SNMP configurations.

- **CSCsh27207**

Basic Description: Unable to resolve recursive VPN label for a prefix and an RP failover.

Symptom: Traffic not passing in the topology of LDP over TE-Tunnel after RP FO.

Conditions: After RP FO or executing **reload location all**.

Workaround: There are three workarounds for the issue:

1. Specify a nonzero next hop in a static route through tunnel. For example,

```
router static
  address-family ipv4 unicast
    172.16.1.7/32 tunnel-te306 172.16.0.8
  !
!
```

2. Remove the static route (without using the first workaround) and then add it back.

3. Enter **proc restart mpls_lsd**.

- **CSCsh38707**

Basic Description: Admin diagnostic configurations are lost after router reload.

Symptom:

After a router reload, admin diagnostic configurations are lost from the running configuration, and admin diagnostic configurations are listed under failed startup configurations.

For example, before reload (all commands are in admin mode) **show running-config** displays this output:

```
Building configuration...
<some non-diagnostic configs>
diagnostic schedule location 0/1/CPU0 test all daily 13:25
<some more non-diagnostic configs>
```

After reload (all commands are in admin mode) **show running-config** displays this output:

```
Building configuration...
<some non-diagnostic configs>
<some more non-diagnostic configs>
```

Entering **show configuration failed startup** displays this output:

```
!!21:08:17 UTC Wed Jan 10 2007
!! CONFIGURATION FAILED DUE TO SYNTAX/AUTHORIZATION ERRORS
diagnostic schedule location 0/1/CPU0 test all daily 13:25
```

Conditions: This can happen only after router reload or after DSC migration in a Multishelf system, if the diagnostic PIE is activated and the diagnostic configurations have been applied.

Workaround: To recover the originally configured and intended diagnostic behavior, the user must re-apply the failed configurations manually.

Using the example above (all commands are in admin mode):

```
RP/0/RP0/CPU0:router(admin)# config
RP/0/RP0/CPU0:router(admin)# diagnostic schedule location 0/1/CPU0
RP/0/RP0/CPU0:router(admin)# test all daily 13:25 commit
RP/0/RP0/CPU0:router(admin)# exit
```

- **CSCsh68927**

Basic Description: Exception kernel memory kernel not seen in running config.

Symptom: The **show running config** command does not show the kernel memory dumper command although it has been configured.

Conditions: Configuring and committing **exception kernel memory kernel filepath harddisk:/K**.

Workaround: None. The command works when configured but does not show up in the running configuration.

- **CSCsi11157**

Basic Description: Initiation of 32+ telnet sessions causes high CPU usage.

Conditions: High CPU usage may occur when multiple Telnet sessions are brought up and torn down.

Workaround: None. To avoid high CPU usage, do not bring up and tear down Telnet sessions in quick succession. Be mindful of scripting.

- **CSCsi24808**

Basic Description: Devc-vty traceback message.

Conditions: Message appears when there are multiple Telnet/SSH sessions that log in and out of the router at the same time.

Workaround: None. These messages can be safely ignored.

- **CSCsi35546**

Basic Description: CRS-DIAG-DIAG-3-SW_ ERROR traceback msg.

Conditions: Message occurs on router running Cisco IOS XR software after warm reload.

Workaround: None. These messages can be safely ignored.

Upgrading Cisco IOS XR Software

The following URL links to online information that describes how to upgrade Cisco IOS XR software on the Cisco CRS-1 system from earlier releases to Release 3.3.4:

- http://www.cisco.com/web/Cisco_IOS_XR_Software/index.html.



Note

Before you install or upgrade the software, you *must* upgrade the ROM Monitor software to the correct version. If a Cisco CRS-1 system running Cisco IOS XR Software Release 3.3.4 is brought up with the incorrect ROM Monitor software, the standby RP fails to boot and an error message appears. For information on correct ROM Monitor software on a single-shelf router, see “Upgrading and Downgrading ROM Monitor Software on Cisco CRS-1 Routers” in *Cisco IOS XR ROM Monitor Guide*.

**Note**

Nodes do not have to be reloaded to accept the new ROM Monitor software as nodes are reloaded during the course of the upgrade process.

**Note**

If you are upgrading to Cisco IOS XR Software Release 3.3.4 from Cisco IOS XR Software Release 3.3.2 (or earlier release) and there is a NetFlow configuration, you will likely encounter CSCek43987. Reapply the NetFlow configuration by using the **load config failed startup** and **commit** commands after the router reboots from the upgrade. For further details, refer to the Release Notes enclosure for CSCek43987.

Changes to the Format of the File System

For Cisco IOS XR Software Release 3.3.4, changes were made to the format of the file system that is used to store the router configuration files. When upgrading from earlier software releases, the following behavior can occur:

- On the first upgrade from Cisco IOS XR Software Release 3.3.1 (or earlier release) to Cisco IOS XR Software Release 3.3.4, the Cisco IOS XR Software Release 3.3.4 creates new format configuration files based on the contents of the old format files, which were left behind by the Cisco IOS XR Software Release 3.3.1 (or earlier release). Included in the files, which are created in this way, are those that contain the persistent copy of the router configuration that is used to restore the running configuration. The history of changes to the running configuration, however, is not recreated. This means that after the upgrade, it is not possible to view or roll back any changes previously contained in the configuration history.
- If the router is subsequently downgraded back to Cisco IOS XR Software Release 3.3.1 (or earlier release), the default behavior is to restore the router running configuration by using the old format configuration files left behind from the last time Cisco IOS XR Software Release 3.3.1 (or earlier release) was running. This means that any changes to the running configuration made while Cisco IOS XR Software Release 3.3.4 was running are lost.

To prevent this from happening, use the following command before performing the downgrade operation:

```
delete disk0:/config/running/commitdb/*
```

**Note**

Substitute the appropriate device name for disk0: if an alternate boot device is being used.

This forces the Cisco IOS XR Software Release 3.3.1 (or earlier release) to create old format configuration files based on the contents of the new-format files left behind by Cisco IOS XR Software Release 3.3.4. Included in the files, which are created in this way, are those that contain the persistent copy of the router configuration that is used to restore the running configuration. The history of changes to the running configuration, however, is not recreated. This means that after the downgrade, it is not possible to view or roll back any changes previously contained in the configuration history.

- If the router is again upgraded to Cisco IOS XR Software Release 3.3.4, the default behavior is to restore the router running configuration by using the new format configuration files left behind from the last time Cisco IOS XR Software Release 3.3.4 was running. This means that any changes to the running configuration made while Cisco IOS XR Software Release 3.3.1 (or earlier release) was running are lost.

To prevent this from happening, use the following command before performing the repeat upgrade operation:

```
delete disk0:/config/lr/running/commitdb/*
```



Note Substitute with the appropriate device name for disk0: if an alternate boot device is being used.

This forces the Cisco IOS XR Software Release 3.3.4 to create new format configuration files that are based on the contents of the old format files left behind by Cisco IOS XR Software Release 3.3.1 (or earlier release), during the first upgrade.

Troubleshooting

For information on troubleshooting Cisco IOS XR software, see *Cisco IOS XR Getting Started Guide*.

Related Documentation

The following sections describe the documentation available for the Cisco CRS-1 router. These documents consist of hardware and software installation guides, Cisco IOS XR software configuration and command references, feature modules, and other documents.

Documentation is available as electronic documents, which are available online on Cisco.com.

Use the release notes with the hardware and software user documentation found at applicable URLs:

- [Hardware Documents, page 14](#)
- [Software Documents, page 14](#)

Hardware Documents

You can find the most current hardware documentation at the following URL:

http://www.cisco.com/en/US/products/ps5763/tsd_products_support_series_home.html

Software Documents

The Cisco IOS XR software documentation set consists of the Cisco IOS XR software configuration guides and command references, a getting started guide, and other supporting documents. See the *About Cisco IOS XR Software Documentation for Release 3.3.0* for a list of Cisco IOS XR software documentation for Release 3.3.4.

You can find the most current software documentation at the following URL:

http://www.cisco.com/en/US/products/ps5845/tsd_products_support_series_home.html

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information about how to obtain documentation or support, on how to provide documentation feedback, for security guidelines, as well as on recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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