



Release Notes for Cisco NCS 5000 Series Routers, IOS XR Release 7.9.2

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Network Convergence System 5000 Series Routers

The Network Convergence System 5000 Series offers a high-density, small-form-factor MPLS aggregation router for metro aggregation. It is designed to economically scale large enterprise, over-the-top (OTT), and service provider Data Center networking architectures.

The Cisco NCS 5000 Series is an extension to Cisco's routing platform portfolio enabling Service Providers and MPLS enabled data center architectures to offer elastic networks with improved business agility and simplified operations to deliver high-bandwidth mobile, video, and cloud services.

It can also operate as an extension shelf of Cisco ASR 9000 Series Aggregation Services Routers using Network Virtualization (nV) technology, consolidating multiple layers in the network and dramatically reducing operational costs.

The Cisco NCS 5000 series routers are small form factor dense aggregation systems. Powered by industry leading routing operation system, IOS-XR, the system also offers rich functions such as third party application hosting, machine-to-machine interface, telemetry and flexible package delivery.



Note Cisco IOS XR Release 7.9.2 is an Extended Maintenance Release of [Cisco IOS XR Release 7.9.1](#) for Cisco NCS 5000 Series routers. For more details on the Cisco IOS XR release model and associated support, see [Guidelines for Cisco IOS XR Software](#).

The Cisco NCS 5000 series router is not supported in the standalone mode in IOS XR Release.7.9.2. It is only supported as a satellite to the ASR 9000 Router. For information on satellite features, see Release Notes for Cisco ASR 9000 Series Routers, IOS XR Release 7.9.2.

What's New in Cisco IOS XR Release 7.9.2

Cisco IOS XR Release 7.9.2 is a maintenance release for Cisco NCS 5000 Series routers. There are no new software features or hardware introduced in this release.

For more details on the Cisco IOS XR release model and associated support, see [Guidelines for Cisco IOS XR Software](#).

Release 7.9.2 Packages

This table lists the Cisco IOS XR Software feature set matrix (packages) with associated filenames.

Table 1: Release 7.9.2 Packages for Cisco NCS 5000 Series Router

Composite Package		
Feature Set	Filename	Description

Cisco IOS XR IP Unicast Routing Core Bundle	ncs5k-mini-x.iso	Contains base image contents that includes: <ul style="list-style-type: none"> • Host operating system • System Admin boot image • IOS XR boot image • Alarm co-relation
Individually-Installable Optional Packages		
Feature Set	Filename	Description
Cisco IOS XR Manageability Package	ncs5k-mgbl-3.0.0.0-r792.x86_64.rpm	XML, Parser, HTTP Server, Telemetry, and gRPC.
Cisco IOS XR MPLS Package	ncs5k-mpls-3.1.0.0-r792.x86_64.rpm	Label Distribution Protocol (LDP), MPLS forwarding , MPLS operations , Administration and maintenance (OAM), Layer3-vpn, layer-2 vpn.
Cisco IOS XR MPLS RSVP TE package	ncs5k-mpls-te-rsvp-1.1.0.0-r792.x86_64.rpm	Supports MPLS RSVP-TE (Resource Reservation Protocol with Traffic Engineering extensions)
Cisco IOS XR Security Package	ncs5k-k9sec-3.2.0.0-r792.x86_64.rpm	Support for Encryption, Decryption, and Secure Shell (SSH)
Cisco IOS XR Multicast Package	ncs5k-mcast-2.2.0.0-r792.x86_64.rpm	Multicast routing protocols (PIM, IGMP, Auto-rp, BSR) and infrastructure (Multicast routing information Base), Multicast forwarding (m fwd)
Cisco IOS XR ISIS package	ncs5k-isis-2.2.0.0-r792.x86_64.rpm	Supports ISIS
Cisco IOS XR OSPF package	ncs5k-ospf-2.0.0.0-r792.x86_64.rpm	Supports OSPF

Caveats

These caveats are applicable for Cisco NCS 5000 Series Router:

Table 2: Cisco NCS 5000 Series Router Specific Bugs

Bug ID	Headline
CSCwe48642	BGP VPNv4 prefix with ATTR_SET is not installed in VRF routing table
CSCvw49101	Issues with replace pattern when interface is configured under dhcp ipv4

Important Notes

Upgrading Cisco IOS XR Software

Cisco IOS XR Software is installed and activated from modular packages, allowing specific features or software patches to be installed, upgraded, or downgraded without affecting unrelated processes. Software packages can be upgraded or downgraded on all supported card types, or on a single card (node).

Before starting the software upgrade, use the **show install health** command in the admin mode. This command validates if the statuses of all relevant parameters of the system are ready for the software upgrade without interrupting the system.



Note

- If you use a TAR package to upgrade from a Cisco IOS XR release prior to 7.x, the output of the **show install health** command in admin mode displays the following error messages:

```
sysadmin-vm:0_RSP0# show install health
. . . .
ERROR /install_repo/gl/xr -rw-r--r--. 1 8413 floppy 3230320 Mar 14 05:45 <platform>-isis-2.2.0.0-r702.x86_64
ERROR /install_repo/gl/xr -rwxr-x---. 1 8413 165 1485781 Mar 14 06:02 <platform>-k9sec-3.1.0.0-r702.x86_64
ERROR /install_repo/gl/xr -rw-r--r--. 1 8413 floppy 345144 Mar 14 05:45 <platform>-li-1.0.0.0-r702.x86_64
```

You can ignore these messages and proceed with the installation operation.

Production Software Maintenance Updates (SMUs)

A production SMU is a SMU that is formally requested, developed, tested, and released. Production SMUs are intended for use in a live network environment and are formally supported by the Cisco TAC and the relevant development teams. Software bugs identified through software recommendations or Bug Search Tools are not a basis for production SMU requests.

For information on production SMU types, refer the [Production SMU Types](#) section of the *IOS XR Software Maintenance Updates (SMUs)* guide.

Cisco IOS XR Error messages

To view, search, compare, and download Cisco IOS XR Error Messages, refer to the [Cisco IOS XR Error messages](#) tool.

Cisco IOS XR MIBs

To determine the MIBs supported by platform and release, refer to the [Cisco IOS XR MIBs](#) tool.

Related Documentation

The most current Cisco router documentation is located at the following URL:

<https://www.cisco.com/c/en/us/td/docs/iosxr/ncs-5000-series-routers.html>



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