Release Notes for Cisco NCS 5000 Series Routers, IOS XR Release 7.5.1

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.

The Cisco NCS 5000 series router is not supported in the standalone mode in IOS XR Release 7.5.1. 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 7.5.1.

Release 7.5.1 Packages

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

Table 1: Release 7.5.1 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: • 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-r751.x86_64..rpm	XML, Parser, HTTP Server, Telemetry, and gRPC.
Cisco IOS XR MPLS Package	ncs5k-mpls-3.1.0.0-r751.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-r751.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-r751.x86_64.rpm	Support for Encryption, Decryption, and Secure Shell (SSH),
Cisco IOS XR Multicast Package	ncs5k-mcast-2.2.0.0-r751.x86_64.rpm	Multicast routing protocols (PIM, IGMP, Auto-rp, BSR) and infrastructure (Multicast routing information Base) , Multicast forwarding (mfwd)
Cisco IOS XR ISIS package	ncs5k-isis-2.2.0.0-r751.x86_64.rpm	Supports ISIS
Cisco IOS XR OSPF package	ncs5k-ospf-2.0.0.0-r751.x86_64.rpm	Supports OSPF

Caveats

Table 2: NCS 5000 Series Router Specific Bugs

Bug ID	Headline
CSCvz53722	Commit replace failed with message " 'OSPFV3' detected the 'resource not available' condition".
CSCwa19042	Login banner text leaf (line) is missed on Cisco-IOS-XR-um-banner-cfg when the total characters in text exceeds 1015.
CSCwa09471	[NCS 5000] Mac address list is missing in show l2vpn forwarding bridge-domain mac-address output.

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.