



## **Release Notes for Cisco NCS 5000 Series Routers, IOS XR Release 6.5.2**

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Revised: June 9, 2023



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## Release Packages

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

## Software Features Introduced in this Release

### Auto-Reload of Line Cards after FPD Upgrade

This release introduces auto-reload support for line cards after FPD upgrade on and routers.

For more information about *Upgrading FPD*, see the *System Management Configuration Guide for Cisco and Series Routers*.

### Hitless Upgrade

This release introduces support for Hitless upgrade feature on NCS 5011. Hitless upgrade ensures that upgrade occurs without impacting any optics and forwarding ASIC state and software state is recovered as part of system restart.

For more information about *Hitless Upgrade*, see the *System Setup and Software Installation Guide for Cisco NCS 5000 Series Routers*.

### SR-TE On Demand Next Hops for L3VPN

On Demand Next hop (ODN) leverages upon dynamic SR-TE capabilities and supports the path computation element (PCE) capability to find and download the end to end path based on the requirements. Using the SR-TE On-Demand Next Hops for L3VPN feature, you can trigger automatic SR-TE tunnels on demand to route traffic based on specific constraints (for example delay and bandwidth) for the L3VPN service. In a large network, automatically computing path between nodes in different domains (autonomous systems) whenever necessary leads to operational simplicity and efficient large scale network aggregation.

## Deprecated Commands

- Starting from Cisco IOS XR Release 6.5.2, the **install update** command is not supported and is replaced with the **install source** new command .

The syntax of the **install source** command is:

```
install source repository [rpm]
```

- Starting from Cisco IOS XR Release 6.5.2, the **hw-module profile mfib statistics** command is not supported.

## Caveats

Caveats describe unexpected behavior in . Severity-1 caveats are the most critical caveats; severity-2 caveats are less critical.

### Cisco IOS XR Caveats

#### Caveats Specific to the

## 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.

The upgrade document is available along with the software images.

Cisco Software Manager (CSM) application provides an intuitive user interface to manage Cisco IOS XR installations, with pre-installation and post-installation checks and reports. CSM helps manage the process of software maintenance upgrades (SMUs) and service packs (SPs) on devices that run the Cisco IOS XR Software.

For information on how to use CSM, see [Cisco Software Manager User Guide](#).

## Other Important Information

## Related Documentation

### 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.

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- To obtain general networking, training, and certification titles, visit [Cisco Press](#).
- To find warranty information for a specific product or product family, access [Cisco Warranty Finder](#).

### Cisco Bug Search Tool

[Cisco Bug Search Tool](#) (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.



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