Release Notes for Cisco 8000 Series Routers, IOS XR Release 25.2.21

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Cisco 8000 Series Routers, IOS XR Release 25.2.21

Cisco IOS XR Release 25.2.21 is an extended maintenance release of Cisco IOS XR Release 25.2.2 for Cisco 8000 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 Software Lifecycle Support Statement - IOS XR.

New software features

There are no new software features introduced in this release.

New hardware

There are no new hardware introduced in this release.

Changes in behavior

There are no changes in behavior.

Open issues

Table 1. Open issues for Cisco 8000 Series Routers, Release 25.2.21

Bug ID	Description
CSCwo66752	Temporary NSR flaps occur for some BGP sessions after RPFO

Known issues

There are no known issues in this release.

Compatibility

Compatibility Matrix for EPNM and Crosswork with Cisco IOS XR Software

The compatibility matrix lists the version of EPNM and Crosswork that are supported with Cisco IOS XR software in this release.

Table 2. Compatibility matrix for Cisco 8000 Series Routers, Release 25.2.21

Cisco IOS XR	Crosswork	EPNM
Release 25.2.21	Crosswork Optimization Engine 6.0	Evolved Programmable Network Manager 8.1.1

Upgrade and downgrade paths

To view all supported Cisco IOS XR Software upgrades from the current version according to the support data installed on the running system, enter the **show install upgrade-matrix running** command:

```
Router# show install upgrade-matrix running
Matrix: XR version: 25.2.21, File version: 1.0, Version: N/A
```

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```
The upgrade matrix indicates that the following system upgrades are supported from the
current XR version:

From To Restrictions
---------- ---------- -------------------------------------------------------
25.2.21 24.1.2 Target fixes; Caveats; Replace performed via reimage
25.2.21 24.2.11 Target fixes; Caveats; Replace performed via reimage
25.2.21 24.2.2 Target fixes; Caveats; Replace performed via reimage
25.2.21 24.2.20 Caveats; Replace performed via reimage
25.2.21 24.2.203 Caveats; Replace performed via reimage
25.2.21 24.2.204 Caveats; Replace performed via reimage
25.2.21 24.2.206 Caveats; Replace performed via reimage
25.2.21 24.2.207 Caveats; Replace performed via reimage
25.2.21 24.2.209 Caveats; Replace performed via reimage
25.2.21 24.2.21 Caveats; Replace performed via reimage
25.2.21 24.2.210 Caveats; Replace performed via reimage
25.2.21 24.3.1 Target fixes; Caveats; Replace performed via reimage
25.2.21 24.3.2 Target fixes; Caveats; Replace performed via reimage
25.2.21 24.3.20 Caveats; Replace performed via reimage
25.2.21 24.4.1 Caveats; Replace performed via reimage
25.2.21 24.4.2 Caveats; Replace performed via reimage
25.2.21 25.1.1 Caveats; Replace performed via reimage
25.2.21 25.1.2 Caveats; Replace performed via reimage
25.2.21 25.2.1 Caveats; Replace performed via reimage
25.2.21 25.2.2 Caveats; Replace performed via reimage
25.2.21 25.3.1 Caveats; Replace performed via reimage
25.2.21 25.4.1 Caveats; Replace performed via reimage
25.2.21 25.4.2 Caveats; Replace performed via reimage
25.2.21 26.1.1 Caveats; Replace performed via reimage
25.2.21 7.10.2 Target fixes; Caveats; Replace performed via reimage
25.2.21 7.11.2 Target fixes; Caveats; Replace performed via reimage
25.2.21 7.11.21 Target fixes; Caveats; Replace performed via reimage

Add the from and to versions to the end of the CLI command, for data on versions with
additional restrictions

For example, to display restrictions for the 25.2.21->24.1.2 upgrade, use
'show install upgrade-matrix running 25.2.21 24.1.2'
```

Software version

Log in to the router and enter the **show version** command:

```
RP/0/RP0/CPU0# show version
Fri Apr  3 00:44:21.733 PDT
```

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```
Cisco IOS XR Software, Version 25.2.21 LNT
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Build Information:
 Built By     : cisco
 Built On     : Thu Apr 02 22:03:46 UTC 2026
 Build Host   : iox-ucs-065
 Workspace    : /auto/srcarchive11/prod/25.2.21/8000-aarch64/ws/
 Version      : 25.2.21
 Label        : 25.2.21

cisco 8000 (CN9130H board )
cisco 8011-4G24Y4H-I (CN9130H board ) processor with 16GB of memory
PE11-Glandon uptime is 20 minutes
Cisco 8011 Series Fixed 1RU Router 4x100G, 24x1/10/25G, 4xCu
```

Supported hardware

Table of supported hardware components and the minimum required software versions.

Table 3. Supported hardware for Cisco 8010 Series Routers

Part Number	Description	Support Initially Provided in IOS XR Release
Cisco 8010 Series Routers - Chassis		
8011-4G24Y4H-I	Cisco 8010 1 RU Fixed System - 4 QSFP28 100GbE, 24 SFP28 25GbE, and 4 RJ-45 100MbE	Release 25.1.1
Cisco 8010 Series Routers - Power Supply Unit (PSU)		
PWR-400-AC	Cisco 400W AC Power Module	Release 25.1.1
PWR-400-DC	Cisco 400W DC Power Module	Release 25.1.1

Table 4. Supported hardware for Cisco 8200 Series Routers

Part Number	Description	Support Initially Provided in IOS XR Release
Cisco 8200 Series Routers - Chassis		
8201-SYS	Cisco 8200 1 RU Fixed System - 24 QSFP56-DD 400GbE and 12 QSFP28 100GbE	Release 7.0.12
8202-SYS	Cisco 8200 2 RU Fixed System - 12 QSFP56-DD 400GbE and 60 QSFP28 100GbE	Release 7.3.1

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Part Number	Description	Support Initially Provided in IOS XR Release
8201-32FH	Cisco 8200 1 RU Fixed System - 32 QSFP56-DD 400GbE	Release 7.3.15
8201-24H8FH	Cisco 8200 1 RU Fixed System - 8 QSFP56-DD 400GbE and 24 QSFP28 100GbE	Release 7.7.1
8202-32FH-M	Cisco 8200 2 RU Fixed System - 32 QSFP56-DD 400GbE with MACsec	Release 7.5.2
8212-48FH-M	Cisco 8200 2 RU Fixed System - 24 QSFP-DD 800G or 48 QSFP56-DD 400GbE with MACsec	Release 24.3.1
Cisco 8200 Series Routers - Power Supply Unit (PSU)		
PSU1.4KW-ACPI	Cisco 1.4KW AC Power Module with Port-side Air Intake	Release 7.0.12
PSU1.4KW-ACPE	Cisco 1.4KW AC Power Module with Port-side Air Exhaust	Release 7.0.12
PSU2KW-ACPI	Cisco 2KW AC Power Module with Port-side Air Intake	Release 7.3.1
PSU2KW-ACPE	Cisco 2KW AC Power Module with Port-side Air Exhaust	Release 7.3.1
PSU3KW-HVPI	Cisco 3KW HV AC/DC Power Supply Unit	Release 7.5.3

Table 5. Supported hardware for Cisco 8600 Series Routers

Part Number	Description	Support Initially Provided in IOS XR Release
Cisco 8600 Series Routers - Chassis		
8608	Cisco 8600 7 RU Centralized System	Release 7.10.1
Cisco 8600 Series Routers - Modular Port Adapters (MPA)		
86-MPA-14H2FH-M	Cisco 8608 MPA - 2 QSFP-DD 400GbE and 14 QSFP / 16 QSFP 100GbE	Release 7.10.1
86-MPA-24Z-M	Cisco 8608 MPA - 24 SFP56 10/25/50 GbE	Release 7.10.1
86-MPA-4FH-M	Cisco 8608 MPA - 4 QSFP-DD 400GbE	Release 7.10.1
Cisco 8600 Series Routers - Power Supply Unit (PSU)		
PSU3.2KW-ACPI	Cisco 3.2-kW AC Power Supply Unit	Release 7.10.1
PSU3.2KW-DCPI	Cisco 3.2-kW DC Power Supply Unit	Release 7.10.1
PSU4.3KW-HVPI	Cisco 4.3KW HV AC/DC Power Supply Unit	Release 7.10.1

Table 6. Supported hardware for Cisco 8700 Series Routers

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Part Number	Description	Support Initially Provided in IOS XR Release
Cisco 8700 Series Routers - Chassis		
8711-32FH-M	Cisco 8700 1 RU Fixed System - 16 QSFP-DD800 and 16 QSFP56-DD	Release 24.3.1
8712-MOD-M	Cisco 8700 2 RU Fixed System	Release 24.4.1
Cisco 8700 Series Routers - Modular Port Adapters (MPA)		
8K-MPA-4D	Cisco 8712 MPA - 4 QSFP-DD 400GbE	Release 24.4.1
8K-MPA-16H	Cisco 8712 MPA - 16 QSFP-28 100GbE	Release 24.4.1
8K-MPA-16Z2D	Cisco 8712 MPA - 2 QSFP-DD 400GbE, 2 QSFP-DD 200GbE, and 16 SFP 50GbE	Release 24.4.1
8K-MPA-18Z1D	Cisco 8712 MPA - 1 QSFP-DD 400 GbE and 18 zSFP56+ 50GbE	Release 25.1.1
Cisco 8700 Series Routers - Power Supply Unit (PSU)		
PSU2KW-ACPI	Cisco 8711-32FH-M PSU - 2KW AC Power Module with Port-side Air Intake	Release 24.3.1
PSU2KW-ACPE	Cisco 8711-32FH-M PSU - 2KW AC Power Module with Port-side Air Exhaust	Release 24.3.1
PSU2KW-DCPI	Cisco 8711-32FH-M PSU - 2KW DC Power Module with Port-side Air Intake	Release 24.3.1
PSU2KW-DCPE	Cisco 8711-32FH-M PSU - 2KW DC Power Module with Port-side Air Exhaust	Release 24.3.1
PSU2KW-DCPI	Cisco 8712-MOD-M PSU - 2KW 48V DC Power Module with Port-side Air Intake	Release 24.4.1
PSU2KW-DCPE	Cisco 8712-MOD-M PSU - 2KW 48V DC Power Module with Port-side Exhaust	Release 24.4.1
PSU2KW-ACPI	Cisco 8712-MOD-M PSU - 2KW AC Power Module with Port-side Air Intake	Release 24.4.1
PSU2KW-ACPE	Cisco 8712-MOD-M PSU - 2KW AC Power Module with Port-side Exhaust	Release 24.4.1

Table 7. Supported hardware for Cisco 8800 Series Routers

Part Number	Description	Support Initially Provided in IOS XR Release
Cisco 8800 Series Routers - Chassis		
8804-SYS	Cisco 8800 Modular System - 10 RU with 4 Line Card Slots	Release 7.3.2
8808-SYS	Cisco 8800 Modular System - 16 RU with 8 Line Card Slots	Release 7.0.12
8812-SYS	Cisco 8800 Modular System - 21 RU with 12 Line Card Slots	Release 7.0.12
8818-SYS	Cisco 8800 Modular System - 33 RU with 18 Line Card Slots	Release 7.0.14

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Part Number	Description	Support Initially Provided in IOS XR Release
Cisco 8800 Series Routers - Route Processors		
8800-RP	Cisco 8800 Route Processor - 4 Core	Release 7.0.12
8800-RP2	Cisco 8800 Route Processor - 8 Core	Release 7.11.1
Cisco 8800 Series Routers - Fabric Modules		
8808-FC	Cisco 8808 System Fabric Module - Q100-based fabric modules with 14.4T per LC slot	Release 7.0.12
8812-FC	Cisco 8812 System Fabric Module - Q100-based fabric modules with 14.4T per LC slot	Release 7.0.12
8818-FC	Cisco 8818 System Fabric Module - Q100-based fabric modules with 14.4T per LC slot	Release 7.0.14
8808-FC0	Cisco 8808 System Fabric Module - Q200-based fabric modules with 14.4T per LC slot	Release 7.3.15
8818-FC0	Cisco 8818 System Fabric Module - Q200-based fabric modules with 14.4T per LC slot	Release 7.3.16
8804-FC0	Cisco 8804 System Fabric Module - Q200-based fabric modules with 14.4T per LC slot	Release 7.3.16
8808-FC1	Cisco 8808 System Fabric Module - F100-based fabric modules with 28.8T per LC slot	Release 24.2.1
8804-FC1	Cisco 8804 System Fabric Module - F100-based fabric modules with 28.8T per LC slot	Release 25.1.1
Cisco 8800 Series Routers - Line Cards		
8800-LC-48H	Cisco 8800 Line Card with MACsec - Q100 ASIC based 4.8 Tbps line card	Release 7.0.12
8800-LC-36FH	Cisco 8800 Line Card - Q100 ASIC based 14.4 Tbps line card	Release 7.0.12
88-LC0-36FH	Cisco 8800 Line Card - Q200 ASIC based 14.4 Tbps line card	Release 7.3.15
88-LC0-36FH-M	Cisco 8800 Line Card with MACsec- Q200 ASIC based 14.4 Tbps line card	Release 7.3.15
88-LC0-34H14FH	Cisco 8800 Line Card - Q200 ASIC based 9 Tbps line card	Release 7.3.3 Release 7.5.1
88-LC1-36EH	Cisco 8800 Line Card - P100 ASIC based 28.8 Tbps line card	Release 24.2.11
88-LC1-12TH24FH-E	Cisco 8800 Line Card - P100 ASIC based 12 Tbps line card	Release 24.3.1
88-LC1-52Y8H-EM	Cisco 8800 Line Card - P100 ASIC based 3.7 Tbps line card	Release 24.3.1
Cisco 8800 Series Routers - Power Supply Unit (PSU)		

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Part Number	Description	Support Initially Provided in IOS XR Release
PSU4.8KW-DC100	4.8KW 48V 100A DC Power Supply	Release 7.3.2
PSU6.3KW-HV	6.3KW AC/HVAC/HVDC Power Supply	Release 7.0.12
PSU6.3KW-20A-HV	6.3KW AC/HVAC/HVDC Power Supply-20A	Release 7.0.12

Supported software packages

Overview of Cisco IOS XR software

The Cisco IOS XR software is composed of a base image (ISO) that provides the XR infrastructure. The ISO image is made up of a set of packages (also called RPMs). These packages are of three types:

- A mandatory package that is included in the ISO
- An optional package that is included in the ISO
- An optional package that is not included in the ISO

Visit the Cisco Software Download page to download the Cisco IOS XR software images.

View installed software packages

To determine the Cisco IOS XR Software packages installed on your router, log in to the router and enter the **show install active** command. To view the optional and bug fix RPM packages, first install the package and use the **show install active summary** command.

To know about all the RPMs installed including XR, OS and other components use the **show install active all** command.

Flexible software modularity

The software modularity approach provides a flexible model that allows you to install a subset of IOS XR packages on devices based on your individual requirements. All critical components are modularized as packages so that you can select the features that you want to run on your router.

Determine firmware support

To determine firmware support on your router, log in to the router and enter **show fpd package** command.

Related resources

Table 8. Related resources

Resource	Description
Smart licensing	Provides information about Smart Licensing Using Policy solutions and their deployment on IOS XR routers.
Cisco 8000 documentation	Provides CDC documentation for Cisco 8000 series routers.
Transceiver Module Group (TMG) compatibility matrix	Allows searching by product family, product ID, data rate, reach, cable type, or form factor to determine the transceivers that Cisco hardware device supports.

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Resource	Description
Cisco IOS XR Error messages	Allows searching by release number, error strings, or comparing release numbers to view a detailed repository of error messages and descriptions.
Cisco IOS XR MIBs	Allows selecting the MIB of your choice from a drop-down to explore an extensive repository of MIB information.
Yang data models in GitHub	Provides yang data models introduced and enhanced in every IOS XR release.
Recommended release	Provides a general guide in case of upgrading IOS XR routers or new deployments that involve IOS XR routers.

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