



Release Notes for Cisco NCS 560 Series Routers, Cisco IOS XR Release 26.3.1

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Cisco NCS 560 Series Routers, Release 26.3.1

Cisco IOS XR Release 26.3.1 is a new feature release for Cisco NCS 560 Series routers.

For more details on the Cisco IOS XR release model and associated support, see [Software Lifecycle Support Statement - IOS XR](#).

New software features

Table 1. New software features for NCS 560 Series Routers, Release 26.3.1

Product impact	Feature	Description
BGP		
Software Reliability	eBGP RT-constraint multipath	This feature enables more complete and resilient VPN route propagation in environments with redundant external peers, while preserving existing best-path behavior and operational consistency by extending RTC (route target constraint) processing on ASBRs (autonomous systems border routers). This is achieved by installing RT membership state on all qualified eBGP multipath neighbors instead of only the best-path neighbor.
Routing		
Software Reliability	Inter-area route propagation limits in IS-IS	This feature helps protect the network from excessive inter-area route propagation caused by misconfiguration or unexpected route growth by limiting the number of prefixes propagated between IS-IS levels. This feature, using the new maximum-propagated-prefixes command, allows operators to define propagation thresholds, receive early warnings, and optionally stop advertising additional prefixes when limits are exceeded.
Setup and Upgrade		
Upgrade	XR version formats for service packs and special releases	This enhancement introduces support for new XR release version formats for service pack (SP) and special release (SR) in the install infrastructure so that XR software can correctly recognize, compare, display, and validate SP and SR versions.
System Management		
Ease of Use	Configure device data privacy for Smart Licensing	Provides controls to suppress the device hostname and smart agent version in smart licensing usage reports.
System Monitoring		
Software Reliability	Persistent logging	This feature preserves the contents of the IOS XR logging buffer across node reloads, router reloads, and RP failovers. Syslog messages are written to both the in-memory logging buffer and a persistent file on local storage. After a reload or failover, the system restores the logging buffer from persistent storage so that retained log messages before the event and current logs, are displayed.
System Security		
Software Reliability	Gated shell access	Gated shell access requires consent token authorization for direct root shell access initiated through supported shell commands.

Product impact	Feature	Description
		You gain secure, auditable control over root shell access by requiring cryptographic Consent Token authorization before granting access. This feature persists your security settings across reloads and high-availability events, helping prevent unauthorized or accidental changes while retaining familiar shell workflows after authorization.
Software Reliability	SSH client strict host key check	You enhance SSH security by enforcing strict host key checking, allowing you to control how the SSH client handles new or changed server keys – accept, reject, or prompt for approval. Trusted host keys are stored system-wide and persist across reloads, ensuring consistent validation for your outbound SSH connections.

New hardware

There is no new hardware introduced in this release.

Changes in behavior

This section provides a brief description of the behavior changes introduced in this release.

- Deprecation of PCE NETCONF CLI

Starting with Cisco IOS XR Release 26.3.1, the PCE NETCONF CLI configuration is deprecated. Previously, you could configure NETCONF attributes directly for the Path Computation Element by using the `pce netconf` CLI commands. Because there is no actual operational use case for this configuration, it has been removed entirely. You do not need to perform any configuration migration or apply replacement commands, as there is no impact from this deprecation.

- Boolean values in gNMI path keys

Starting with Cisco IOS XR Release 26.3.1, Boolean list keys in gNMI Subscribe responses that use .proto or JSON_IETF encoding are represented by the canonical strings **true** and **false** instead of **1** and **0**. If your collector explicitly expects or compares the earlier numeric strings, update its parsing logic. You do not need to make any router configuration changes.

- Enable automatic Docker Daemon startup with Application Manager

The **appmgr docker start** command enables the Docker daemon to start automatically when Application Manager starts.

```
Router(config)# appmgr docker start
Router(config)# commit
```

- VRF Naming Restriction

Starting with Cisco IOS-XR Release 26.3.1, the uppercase name "DEFAULT" is reserved for the OpenConfig default network instance. You must choose a different name for any user-defined VRF. This restriction applies to global VRF configuration, interface VRF assignments, and dynamic-template VRF configurations across both CLI and YANG management interfaces. Before upgrading, you must rename or remove any user-defined VRF named "DEFAULT" to prevent startup configuration validation failures. Note that VRF names are case-sensitive; variations such as "Default" or "DEFAULT1" remain valid, and the system default VRF is not affected.

- Standards-compliant OpenConfig BGP identity values

Starting with Cisco IOS XR Release 26.3.1, selected OpenConfig BGP operational values use the module-qualified identity format, such as `openconfig-bgp-types:<identity>`, instead of `<identity>`. This format clearly identifies the YANG module defining each identity. These values include notification error codes and subcodes, `remove-private-AS` state, and supported capabilities. Clients and automation should process the module-qualified format.

- Default values restored after delete operations

Starting with Cisco IOS XR Release 26.3.1, deleting a leaf in a native YANG configuration container restores its defined default value, ensuring consistent configuration data in `show running-config` and `NETCONF get-config` output.

- Deprecation of the `show install packages` command family

Starting with Cisco IOS XR Release 26.3.1, the "show install packages..." family of commands such as the commands to show install packages information, `show install packages search`, and `show install packages` are marked as deprecated. For package names and repository information for uninstalled packages, use the **show install active**, **show install committed**, and **show install available** commands.

- Recommended workflows for removing or deactivating bug fixes

The `show install fixes deactivate` command is no longer the recommended workflow for removing or deactivating a bug fix. Select one of the following workflows based on the software images and rollback points available in your environment:

1. Use `install rollback` when a previous rollback point exists where the same Cisco IOS XR version was loaded without the bug fix.
2. Use `show install rollback ?` to identify a suitable rollback point.
3. Use `install replace` when a suitable previous golden ISO image is available without the bug fix.
4. If no previous rollback point or suitable golden ISO image exists, build a new golden ISO image with the desired set of fixes.
5. If the golden ISO build fails or still includes the unwanted bug fix, the desired set of fixes cannot be built with the available fixes. Contact Cisco Support for a new version of the unwanted fix.

Open issues

There are no open issues in this release.

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 Release in this release.

Table 2. Compatibility matrix for Cisco NCS 560 Series Routers, Release 26.3.1

Cisco IOS XR	Crosswork	EPNM
Release 26.3.1	Cisco Crosswork Network Controller 6.0	Evolved Programmable Network Manager 8.1.1

System requirements

Use the **show hw-module fpd** command in EXEC and Admin mode to view the hardware components with their current FPD version and status. The hardware status must be Current, and the running and programmed versions must match. You can also use the **show fpd package** command in Admin mode to check the fpd versions.

Software version

To verify the software version running on the router, use show version command in the EXEC mode.

```
Router# show version
Thu Sep 10 19:26:53.835 IST
Cisco IOS XR Software, Version 26.3.1
Copyright (c) 2013-2026 by Cisco Systems, Inc.

Build Information:
Built By : swtools
Built On : Thu Sep 10 03:43:52 PDT 2026
Built Host : iox-lnx-054
Workspace : /auto/srcarchive13/prod/26.3.1/ncs560/ws
Version : 26.3.1
Location : /opt/cisco/XR/packages/
Label : 26.3.1-iso

cisco NCS-560 () processor
System uptime is 57 minutes
```

Supported software packages

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

Visit the [Cisco Software Download page](#) to download the Cisco IOS XR software images.

Feature Set	Filename	Description
Cisco IOS XR IP Unicast Routing Core Bundle	ncs560-mini-x-26.3.1.iso	Contains base image contents that includes: Host operating system System Admin boot image IOS XR boot image BGP packages OS Admin Base Forwarding Modular Services Card Routing SNMP Agent Alarm Correlation
Cisco IOS XR Manageability Package	ncs560-mgbl-1.0.0.0-r2631.x86_64.rpm	Telemetry, Extensible Markup Language (XML), Parser, and HTTP server packages, NETCONF, YANG Models, gRPC.
Cisco IOS XR OSPF package	ncs560-ospf-1.0.0.0-r2631.x86_64.rpm	Supports OSPF
Cisco IOS XR Security Package	ncs560-k9sec-1.0.0.0-r2631.x86_64.rpm	k9sec is needed for IPsec or MACsec and Dot1x and for basic crypto services such as Decryption, Secure Shell (SSH), Secure Socket Layer (SSL), and Public-key infrastructure (PKI).
Multicast Package	ncs560-mcast-1.0.0.0-r2631.x86_64.rpm	Supports Multicast Supports Automatic Multicast Tunneling (AMT), IGMP Multicast Listener Discovery (MLD), Multicast Label Distribution Protocol (MLDP), Multicast Source Discovery Protocol (MSDP) and PIM.
Cisco IOS XR ISIS package	ncs560-isis-1.0.0.0-r2631.x86_64.rpm	Supports Intermediate System to Intermediate System (IS-IS).
Cisco IOS XR USB Boot Package	ncs560-usb_boot-26.3.1.zip	Supports Cisco IOS XR USB Boot Package
Cisco IOS XR MPLS Package	ncs560-mpls-1.0.0.0-r2631.x86_64.rpm ncs560-mpls-te-rsvp-1.0.0.0-r2631.x86_64.rpm	Supports MPLS and MPLS Traffic Engineering (MPLS-TE) RPM. Label Distribution Protocol (LDP), MPLS Forwarding, MPLS Operations, Administration, and Maintenance (OAM), Link Manager Protocol (LMP), Optical User Network Interface (OUNI) and Layer-3 VPN. Cisco IOS XR MPLS-TE and RSVP Package MPLS Traffic Engineering (MPLS-TE) and Resource Reservation Protocol (RSVP).
Cisco IOS XR LI Package	ncs560-li-1.0.0.0-r2631.x86_64.rpm	Lawful Intercept
Cisco IOS XR EIGRP Package	ncs560-eigrp-1.0.0.0-r2631.x86_64.rpm	(Optional) Includes EIGRP protocol support software

Related resources

Table 3. Related resources

Document	Description
Ask AI about this product	Provides access to Cisco product documentation for checking feature support details.
Cisco feature finder	An interactive tool that assists in locating features introduced across Cisco IOS XR releases and platforms.
Cisco IOS XR error messages	Search by release number, error strings, or compare release numbers to view a detailed repository of error messages and descriptions.
Cisco IOS XR MIBs	Select the MIB of your choice from a drop-down to explore an extensive repository of MIB information.
Cisco NCS 560 documentation	CCO Documentation for Cisco NCS 560 Series Routers
Feature deprecation and removal details	Outlines the features currently supported by each operating system.
Feature deprecation phasing out insecure capabilities	Provides a list of insecure features and protocols that are scheduled for systematic deprecation and eventual removal from specified Cisco products.
Feature removal and suggested alternatives	Details the reasons why certain features or protocols are deemed insecure and offers secure alternatives when available.
Smart licensing	Information about Smart Licensing Using Policy solutions and their deployment on IOS XR Routers.
Transceiver Module Group (TMG) compatibility matrix	Search by product family, product ID, data rate, reach, cable type, or form factor to determine the transceivers that Cisco hardware device supports.
YANG data models	A user-friendly reference designed to easily explore and understand the various data models supported in Cisco IOS XR platforms and releases.
Yang data models in Github	Repository containing the folders with yang data models introduced and enhanced in every IOS XR release.

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