

What's New for Cisco IOS XE Bengaluru 17.6.x

This chapter describes the new hardware and software features supported in Cisco IOS XE Bengaluru 17.6.x.

For information on features supported for each release, see Feature Compatibility Matrix.

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What's New in Software for Cisco IOS XE Bengaluru 17.6.8

There are no software features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.8

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.7

There are no software features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.7

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.6a

There are no new features in this release. This release provides a fix for CSCwh87343: Cisco IOS XE Software Web UI Privilege Escalation Vulnerability. For more information, see cisco-sa-iosxe-webui-privesc-j22SaA4z.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.6a

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.6

There are no software features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.6

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.5

There are no software features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.5

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.4

There are no software features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.4

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.3

There are no software features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.3

There are no hardware features for this release.

What's New in Software for Cisco IOS XE Bengaluru 17.6.2

Feature	Description
T3/E3 CEM Interface Module	
Channelize the T3 interface into E1 lines	Support for the T3 interface to be channelized into 21 E1 lines.
Quality of Service	
Inter-cos bursting support	This feature introduces color-blind mode of policer operation that is supported on routers with single-rate policer (1R2C) and two-rate policer (2R3C) policing types. With this feature, all policers are supported on color-blind mode with the new template.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.2

There are no hardware features for this release.

What's New in Hardware for Cisco IOS XE Bengaluru 17.6.1

The 14-port serial interface module (A900-IMASER14A/S) is supported with additional slots on the Cisco A900-RSP3C-400-S, A900-RSP3C-200-S, A900-RSP2A-128 and A900-RSP2A-64 platforms.

For more information, see the Cisco ASR 903 and ASR 903U Aggregation Services Router Hardware Installation Guide and Cisco ASR 907 Router Hardware Installation Guide.

What's New in Software for Cisco IOS XE Bengaluru 17.6.1

Feature	Description
LAN Switching	
G.8032 Support for IEEE 802.1Q EFPs	This feature supports G.8032 Ethernet ring protection for IEEE 802.1Q Ethernet Flow Points (EFPs). Prior to this release, G.8032 Ethernet ring protection for IEEE 802.1Q was supported only for Trunk Ethernet Flow Points (TEFPs).
Layer 2	
802.1AE WAN MACsec for 1GE and 10GE A900-IMA8CS1Z-M	The WAN MACsec and MKA feature introduce MACsec support on WAN and uplink support and pre-shared key support for the MACsec Key Agreement protocol (MKA). The WAN MACsec supports 1GE and 10GE interfaces for A900-IMA8CS1Z-M interface module.
IP Routing: BFD	
Micro BFD over LAG Convergence Optimization	Starting with 17.6.x release, the convergence for port-channel failures with Fast Reroute (FRR) is less than 50 milliseconds, when min-links is configured and equal to the total-links available under the port-channel. This feature is supported on the Cisco RSP3 module.
MPLS Layer 2 VPNs	
Remote LFA for MLDP	Remote Loop-Free Alternate (RLFA) based Fast Reroute (FRR) improves LFA coverage. When used with Multicast Label Distribution Protocol (MLDP) for IPv4, there is no need for an extra protocol in the control plane.
First Hop Redundancy Protocols	
Support for BFD, sub-second fast hello for VRRPv3 convergence and re-convergence	This feature supports VRRP failover such that the fault is detected by the VRRP-BFD client within the configured value – when the connection to the remote interface IP address fails. This feature is supported on both the Cisco RSP2 and RSP3 modules.
CEM Generic	
Test Access Port (TAP) or Test Access Digroup (TAD)	Support for Test access port or digroup (TAP/TAD) in the following aspects: • Non-intrusive monitoring for both receive and transmit directions. • Split and terminate cross connection for intrusive testing in both directions. The TAP feature helps in monitoring and debugging purpose.
Support for TSoP SSFP Dejitter Buffer Tuning	TSoP SSFP Dejitter Buffer Tuning is applicable only for T1 smart SFP.
Network Management	

Feature	Description
Ingress and Egress Flexible NetFlow	Flexible NetFlow allows you to monitor the traffic from access circuit on an L2VPN and L3VPN network. In addition to monitoring traffic in routed and ethernet service interfaces, you can now monitor traffic in VRF enabled L2 VFI (virtual forwarding interfaces) and cross-connect services. This feature is not supported with the RSP3 module. It is only supported with the RSP2 module.
Upgrading the Software on the Cisco ASR 900 Series Routers	
Secure eUSB Configuration	Use the **platform secure-cfg** command to provide enhanced security to the routers.
IP Routing	
Establish GRE Tunnel over VRF Routes	This feature establishes GRE tunnels over Virtual Route Forward (VRF) routes. This feature is not supported with the Cisco RSP3 module. It is only supported with the Cisco ASR RSP2 module.
System Logging	
Cisco Secure Development Lifecycle—Factory Reset	This feature removes all the customer-specific data that stored on the device since the time of its shipping. Data erased includes configurations, log files, boot variables, core files, and credentials like FIPS-related keys. Cisco Secure Development Lifecycle (CSDL) is a repeatable and measurable proces designed to increase Cisco product resiliency and trustworthiness. The following new commands are introduced: • **factory-reset all** • **factory reset keep-licensing-info** • **factory-reset all secure 3-pass DoD 5220.22-M** For information on the commands, Cisco IOS Configuration Fundamentals Command Reference.
Segment Routing	
EVPN-IRB DHCP v4 and v6 Relay over Segment Routing	This feature introduces a specialised implementation of DHCP packets to support DHCPv4 and DHCPv6 in an EVPN Fabric with Distributed Anycast Gateways (DAGs) on the same Virtual Routing and Forwarding (VRF). It also avoids DHCP discovery packet floods across the fabric. The flooding suppression feature is also enhanced to intercept multicast or broadcast DHCP packets when DHCP relay is configured on the DAG to perform the required action and localize the scope of the service. This feature is not supported with Cisco ASR RSP3 module. It is only supported with Cisco ASR RSP2 module.

Feature	Description
IS-IS Flexible Algorithm Include Affinity Support	This feature supports "include-any" and "include-all" affinities in IS-IS. Prior to Cisco IOS XE Bengaluru 17.6.1 release, only Flexible Algorithm affinity "exclude-any" was supported.
OSPF Flexible Algorithm (Ph2): Topology-Independent Loop-Free Alternate (TI-LFA) Path	This feature allows you to configure the Loop-Free Alternate (LFA) and TI-LFA backup or repair paths for a Flexible Algorithm. The backup path is computed based on the constraints and metrics of the primary path. Prior to Cisco IOS XE Bengaluru 17.6.1, OSPF Flexible Algorithm supported only the primary path.
SR-PCE: Enabling SR PM Delay or Liveness for PCE-Initiated Policies	This feature enables the Path Computation Element (PCE) that can provision a Segment Routing Traffic Engineering (SR-TE) policy to mitigate link congestion. Prior to this release, you could only enable PM link and delay measurement using CLI-based policies. Starting with this release, you can also use PCE to enable PM link and delay measurement.
Stitching of Subnet Route from EVPN to L3VPN	This feature introduces the collpased spine and border leaf node in the network topology of single homing DAGs with symmetric IRB, inter-subnet layer 3 traffic within fabric and inter-subnet layer 3 stitching through layer 3 border gateway. The hosts participating in fabric IRB are directly attached with the collapsed spine and border leaf node. This feature is not supported with Cisco ASR RSP3 module. It is only supported with Cisco ASR RSP2 module.
Programmability	
FQDN Support for gRPC Subscriptions	With the introduction of the FQDN Support for gRPC Subscriptions feature, along with IP addresses, FQDN can also be used for gRPC subscriptions. Platforms: Cisco Catalyst 9200 Series Switches, Cisco ASR 900 Series Aggregation Services Routers (RSP2) Cisco Catalyst 9800-40 Series Wireless Controllers, Cisco Catalyst 9800-80 Series Wireless Controllers
YANG Model Support for **show mpls ldp neighbor** Command	This feature enables you to display the status of LDP sessions from YANG models.
YANG Model support for **show mpls tr tunnel** command	This feature enables you to verify the show mpls traffic engineering tunnel command to check the status from YANG models.
YANG Model support for RSVP Commands	You can use the interface BDI 10 and ip rsvp bandwidth percent 4 commands to configure the RSVP bandwidth on a BDI interface from YANG. You can configure, modify and verify different bandwidth values using these commands.
YANG Model support for IPSLA Operating Model for Y1731	You can check the history interval statistics of delay operations like DMM, DMMv1 and 1DM, and loss operations like LMM and SLM using the Netconf-yang command to enable YANG data collection.

Feature	Description
YANG Model support for QoS Overhead Accounting	QoS Overhead Accounting feature enables a particular port to consider a particular number of bits that are removed from the packet when the egress packet is re-edited. The traffic scheduler allows more bits than the configured rate at the port, without exceeding the number of bytes that is configured on a port. Yang QOS Overhead accounting configuration model supports the configuration on the router accounting on router from yang/Netconf protocol.
YANG Model support for alarm profile configurations	This feature enables you to configure the alarm profile on the interface through native YANG models that run on Cisco IOS XE.
YANG Model support for Shared Risk Link Groups (SRLG) Group Identification (GID) configurations	Shared Risk Link Groups (SRLG) Group Identification (GID) configurations can be enabled on YANG using the srlg gid command. Multiple groups and interfaces can be enabled on the interface mode.

YANG Data Models—For the list of Cisco IOS XE YANG models available with this release, navigate to https://github.com/YangModels/yang/tree/master/vendor/cisco/xe/1761

Revision statements embedded in the YANG files indicate if there has been a model revision. The README.md file in the same GitHub location highlights changes that have been made in the release.

For more information, see *Programmability Configuration Guide, Cisco IOS XE Bengaluru 17.6.x*.