

What's New for Cisco IOS XE Cupertino 17.9.x

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What's New in Hardware for Cisco IOS XE Cupertino 17.9.8

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.8

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.7

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.7

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.6

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.6

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.5a

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.5a

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.4a

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.4a

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 Cupertino 17.9.4

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.4

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.3

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.3

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.2a

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.2a

There are no new software features introduced for this release.

What's New in Hardware for Cisco IOS XE Cupertino 17.9.1

There are no new hardware features introduced for this release.

What's New in Software for Cisco IOS XE Cupertino 17.9.1

Feature	Description
Carrier Ethernet	
Application of QoS Policies on ITU-T Y.1731 Egress Packets	You can now apply QoS policies on Y.1731 egress packets. Operations, Administration, and Maintenance (OAM) functions and mechanisms for Ethernet-based networks are defined in ITU-T Y.1731. With this implementation, you can prioritize OAM traffic; for example, prioritizing operational information used to detect faults and determining network performance.

Feature	Description
Custom Idle Pattern	You can configure idle pattern manually on CEM circuits and verify if it's stable and transmitted to the other end in alarm conditions. You can configure on all CEM PWs in a T1/E1 circuit. Supported on the following IMs on CESoPSN circuits with both partial and full time slots. • ASR 900 48 port T1/E1 Interface Module • ASR 900 48 port DS3/E3 Interface Module • 1-port OC481/ STM-16 or 4-port OC-12/OC-3 / STM-1/STM-4 + 12-Port T1/E1 + 4-Port T3/E3 CEM Interface Module • ASR 900 Combo 8-Port SFP GE and 1-Port 10 GE 20G Interface Module These idle pattern numbers are used for tracking purposes.
Layer 2 Control Protocol Enhancements	Layer 2 Control Protocols (L2CP) propagate the MAC address control information to determine which parts of a network the router should forward, tunnel, peer, or discard information. For the RSP2 and RSP3 modules, this release supports **forward** and **discard** options for the following protocols: • MRP Block • Cisco BPDU • Cisco STP UplinkFast • Cisco CFM For the RSP3 module, this release supports **forward** , **discard** , and **tunnel** options for the following protocols: • DOT1X • MMRP • MVRP
Cisco ASR 900 Router Series	
Persistent Bandwidth for 8-port 10 Gigabit Ethernet Interface module (A900-IMA8Z)	This feature persistently retains the configured bandwidth value of the interface for 8-port 10 Gigabit Ethernet Interface module (A900-IMA8Z) across triggers such as interface shut or no-shut, IM reload, Stateful Switchover (SSO), and so on.
IOT Interface Modules	
Hitless Switching on C37.94 Interface Module	Hitless switching protection describes the ability to switch between the active and backup paths without losing packets when an active path fails. This feature ensures uninterrupted continuous service and maintains an extremely high-reliability rating.

Feature	Description
IP Multicast: Multicast	
Support for MVPN Bidirectional PIM	This release extends the support of bidirectional PIM over MVPN. This feature is only supported on profile 1 MVPN or default MDT - MLDP MP2MP - PIM C-mcast signaling. This feature is only supported on Cisco RSP3 module.
OCx CEM Interface Module	
MLPPP ACR support for IPv4 or IPv6 Interworking Multiservice Gateway (iMSG)	MLPPP ACR is supported for IPv4 or IPv6 iMSG on: • ASR 900 1-Port OC-192 or 8-Port Low Rate CEM 20G Bandwidth Interface Module (A900-IMA1Z8S-CXMS) Now, you can increase the bandwidth of a specific OCx port using MLPPP. The restrictions for MLPPP interworking are applicable to iMSG ACR.
QoS Support on Serial Interfaces	QoS is supported on serial interfaces. You can apply service policies on egress of L3 terminated serial interfaces with both HDLC and PPP encapsulation. By implementing QoS policies on serial interfaces you can shape, classify, or prioritize the data.
MPLS Basic	
Support for Co-routed Inter-area Flex-LSP Tunnels	Flex LSPs (also called Associated Bidirectional LSPs) now support inter-area co-routed tunnels. With this implementation, we meet the specific requirements of network operators to create on-demand tunnels by defining an explicit path across different areas.
Segment Routing	
LSR Support for Autoroute Announce SR Policies	This feature enables Label Switch Routing (LSR) and thus helps to forward labeled (EOS0, EOS1) traffic over three or four labeled segment routing autoroute static tunnels.
Support of BGP PIC for Short LCM Policies	This feature introduces the support of BGP Prefix Independent Convergence (PIC) and helps you to enable BGP PIC core and BGP PIC edge for short local congestion mitigation (LCM) policies. This feature helps to minimise the convergence time after a network failure. You should only configure LCM policies or the SR policies with 0, 1, and 2 SR labels.
YANG Model Support for QoS Service Group	Cisco YANG now supports QoS Service Groups. Service-Groups allow you to add service instances to groups and apply service policies. You can configure the definition of the service-group and apply the service-group to an interface. With this implementation, you can quickly deploy QoS mechanisms, such as creating a class for email traffic.
IPv6: RFC 8200 Compliance	Improvements have been made to the Cisco IOS XE platforms to maintain compliance with IETF standards as specified for the Internet Protocol, Version 6 (IPv6) in RFC 8200. The enhancements bring in improved security and better handling of IP packets with fragments.

Feature	Description
Show tech-support Enhancements	
Show tech-support Enhancements	The **show tech-support** now supports generic commands to provide better debuggability. The **show tech-support platform cef** command now displays IPv4 address information. For more information, see Cisco IOS Configuration Fundamentals Command Reference.