

What's New for Cisco IOS XE Dublin 17.10.x

This chapter describes the new hardware and software features supported in Cisco IOS XE Dublin 17.10.x.

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

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What's New in Hardware for Cisco IOS XE Dublin 17.10.1

There are no Hardware features for this release.

What's New in Software for Cisco IOS XE Dublin 17.10.1

Feature	Description
Carrier Ethernet	
Tagged packet support using Link Layer Discovery Protocol (LLDP)	LLDP now supports tagged packet transmission over a service instance with dot1q encapsulation. LLDP advertises information about themselves to their network neighbors, and store the information they discover from other devices. Though both these transmitted frames go through the same physical interface, they can be uniquely identified by the information advertised in the Port ID Type-Length-Value (TLV). Use the **show lldp neighbors** and **show lldp entry** <> command outputs for neighboring device details.
CEM	
Frame Relay Configuration extended to RSP2 Module	You can configure frame relay on the iMSG serial interface for the following interface modules: • 1-port OC-48/STM-16 or 4-port OC-12/OC-3 / STM-1/STM-4 + 12-port T1/E1 + 4-port T3/E3 CEM interface module

Feature	Description
Multilink Frame Relay (MFR) for IP Interworking	You can configure MFR encapsulation on serial interface for IPv4 and IPv6 interworking for the following interface modules: • 1 port OC-48/STM-16 or 4 port OC-12/OC-3 / STM-1/STM-4 + 12 port T1/E1 + 4 port T3/E3 CEM Interface Module (A900-IMA3G-IMSG) • 1-Port OC-192 or 8-Port Low Rate CEM 20G Bandwidth Interface Module (A900-IMA1Z8S-CXMS) Multiple physical interfaces can be combined into a single bundle, and this frame relay interface supports more bandwidth than that is available from any single physical interface. The ease to add or remove physical interfaces dynamically so that you can modify the total bandwidth available on that interface. The resilience that is provided when multiple physical interfaces are provisioned on a single bundle so that when some of the physical interfaces fail, the bundle continues to support the frame relay service.
QoS on Layer 3-terminated MLPPP Interface	You can configure QoS features such as classification, shaping, queuing, bandwidth, and weighted random early detection on the layer 3-terminated MLPPP interfaces at the egress direction for the following interface modules: • 1 port OC-48/STM-16 or 4 port OC-12/OC-3 / STM-1/STM-4 + 12 port T1/E1 + 4 port T3/E3 CEM Interface Module (A900-IMA3G-IMSG) • 1-Port OC-192 or 8-Port Low Rate CEM 20G Bandwidth Interface Module (A900-IMA1Z8S-CXMS)
Chassis	
Enable DHCP Snooping Option 82 for RSP3	You can enable DHCP snooping option-82 on the Cisco RSP3 module using the **sdm prefer enable_dhcp_snoop** command. This feature provides additional security information to the relay agent that the information is from the trusted port.
Limitation on using BDI_MTU Template	When using the templates **SR 5 label push** and **SR PFP** together, do not use the **BDI_MTU** template. If the **BDI_MTU** template is used, then the router may crash continuously, this is applicable from release Cisco IOS XE Amsterdam 17.1.1 to Cisco IOS XE Cupertino 17.9.1. Starting from release Cisco IOS XE Dublin 17.10.1, during such situation, the router automatically reverts the **BDI_MTU** template change and performs an additional reboot. For more information, see Restrictions for the SDM Template.
IP	

Feature	Description
Improved IPv6 Forwarding Failure Notification	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 fix some common causes of IPv6 forwarding faults and notify the sender about undelivered packets to a specified target. Notifications are received as log messages that can be accessed by enabling the following debugging command: **debug ipv6** Using the notifications, you can effectively troubleshoot IPv6 forwarding issues.
Support for Disabling GARP	You can now disable Gratuitous ARPs (GARP) on your router. A GARP is an ARP request that is normally unneeded according to the ARP specification (RFC 826), however is useful in specific cases such as : • Updating ARP mapping • Announcing a node's existence • Redundancy GARP is disabled by default, and is enabled using the ip arp gratuitous arp local command. You can choose to ignore the GARPs using the **ip arp gratuitous ignore** command. For more information, see Cisco IOS IP Addressing Services Command Reference.
IP SLAs	
SADT over VC when Access Interface is Down	You can perform Service Activation and Deactivation (SADT) over Virtual Circuit (VC) even when access interface is down.
Layer 2	
MACsec support with SyncE for 1GE and 10GE A900-IMA8CS1Z-M Interface Module	You can now configure MACSec encryption on Synchronized Ethernet (SyncE) interfaces that send and receive Ethernet Synchronization Message Channel (ESMC) packets. The MACSec header is added to the ESMC packets to secure data on the physical media. Also, MACSec encryption prevents the higher-layer protocols' traffic from being compromised.
Licensing	
Licensing Commands on Btrace	The **debug license** command is no longer supported with Licensing. Use the **set platform software trace ios** command to collect trace messages. For more information, see Software Activation Configuration Guide (Cisco IOS XE ASR 900 Series).
Programmability	

Feature	Description
Telemetry for Monitoring Optical Transceivers	The **Cisco-IOS-XE-transceiver-oper** data model contains a collection of YANG definitions for monitoring optical transceivers. Maintaining certain parameters such as the voltage, temperature, or current at a desired level ensures optimal performance of optical modules. You can now subscribe to receive telemetry data, periodically, for debugging issues related to these parameters. Based on the telemetry data, you can mitigate problems such as elevated temperatures, which can have a significant effect on the performance of optical modules.
Quality of Service	
4x Priority Queue support on RSP3 modules	In certain networks, more than two priority levels are required as traffic with more than two priorities need to be scheduled on priority basis and in certain condition you need to have more than one priority queue per level. Now the priority level is enhanced from 2 to 4. You can now configure up to four priority levels and apply the same priority levels on more than one class-map by enabling **enable_4x_priority** template. This feature is supported on the Cisco RSP3 module.
Ingress QoS Support on EFPs under a Port Channel	You can now configure 8K ingress policy maps on 8K Ethernet Flow Points (EFPs) or service instances under a port channel (8K EFPs are supported for each ASIC). There should be a one-to-one mapping between an ingress QoS policy and an EFP.
Show tech-support Enhancements	
Show tech-support Enhancements	The **show tech-support** command now supports generic commands to provide better debuggability. The **show tech-support platform bfd** command displays debug information on BFD sessions. The **show tech-support platform multicast** command displays debug information for multicast sessions. Additional Trunk EFP (TEFP) and Bridge-domain commands are added to **show tech-support** and **show tech-support platform** commands on the router. For more information, see Cisco IOS Configuration Fundamentals Command Reference.
System Logging	
Clear User Files from Bootflash on Factory Reset with "No Service Password Recovery" Configuration Enabled	During recovery mechanism from no-service password recovery configuration, when you attempt to boot with default configurations (Press CTRL+C and "yes"), this feature helps in removing the user files from bootflash along with the startup-configuration. It prevents the malicious users from accessing configuration files that are stored in the bootflash. All the required system files and software images are retained in the bootflash during the erase operation. This feature provides additional security by removing all user files from bootflash during factory reset. It prevents the malicious users from accessing configuration files that are stored in bootflash. This feature is applicable for Cisco ASR 900 series routers.
YANG Support	

Feature	Description
YANG Model Support for L2VPN Operations	The **Cisco-IOS-XE-l2vpn-oper** native model is a collection of YANG definitions for L2VPN services operational data. The leaves and lists present in the following sensor paths are now supported: • Cisco-IOS-XE-l2vpn-oper\l2vpn-oper-data\l2vpn-services\l2vpn-xconnect • Cisco-IOS-XE-l2vpn-oper\l2vpn-oper-data\l2vpn-services\l2vpn-atom-vc-info With this model, you can get the L2VPN service name, service type, interface name, peer address, status, encapsulation type, and virtual circuit ID by using a NETCONF RPC. In earlier releases, you could perform this action by using the following CLIs: • **show l2vpn service xconnect peer** *peer_id* **vcid** *vcid* • **show l2vpn atom vc** **Note** The **show l2vpn atom vc details** command is not supported in this release.