



New Features

This chapter describes the new hardware and software features supported on the Cisco ASR 920 Series Routers for this release.

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New Hardware Features in Cisco IOS XE Everest 16.6.9

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.9

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest 16.6.8

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.8

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest 16.6.7

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.7

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest 16.6.6

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.6

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest 16.6.5

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.5

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest 16.6.4

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.4

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest Release 16.6.3

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.3

There are no new software features in this release.

New Hardware Features in Cisco IOS XE Everest Release 16.6.2

There are no new hardware features in this release.

New Software Features in Cisco IOS XE Everest 16.6.2

- **VLAN Behavior on Trunk EFP**

You can configure a new type of trunk EFP called Trunk EFP (TEFP) with encapsulation from bridge domain (BD). All the BDs configured on the switch are part of the VLAN list of the encapsulated TEF. The TEF is encapsulated using the **encapsulation dot1q from-bd** command. For more information, see [Trunk EFP Support](#).

New Hardware Features in Cisco IOS XE Everest Release 16.6.1

- **Support for Cisco ASR-920U-12SZ-IM Router**



Note All software features supported on the Cisco ASR-920-12SZ-IM Router are also supported on the Cisco ASR-920U-12SZ-IM Router.

The Cisco ASR-920U-12SZ-IM Router has four 10G SFP+ ports, four 1G SFP ports, eight 1G Copper ports and four 1G/10G Dual Rate ports, with redundant AC or DC power supplies.

The following interface modules are supported on the Cisco ASR-920U-12SZ-IM router:

- A900-IMA6EM (E&M)
- A900-IMASER14A/S (Serial IM)
- A900-IMA4C3794 (C37.94)

For more information, see the [Cisco ASR-920-12SZ-IM and Cisco ASR-920U-12SZ-IM Aggregation Services Router Hardware Installation Guide](#)

New Software Features in Cisco IOS XE Everest 16.6.1

• 1 PPS Pulse Width Configuration

On the Cisco ASR-920-12SZ-IM router, the 1 PPS pulse bandwidth can be changed from the default value of 500 milliseconds to up to 20 microseconds. For more information, see [Configuring Clocking and Timing](#).

• IP SLA Statistics UDP Jitter

Time stamping for sender (T1, T4) and receiver (T3, T2) is now performed by hardware, instead of software to improve the accuracy of jitter and latency measurements. For more information, see [IP SLAs Configuration Guide Cisco IOS XE Everest 16.6.1](#).

• IP Source Guard

An IP source guard filters a source IP address on a layer 2 port and prevents malicious hosts from impersonating a legitimate host. The feature uses dynamic DHCP snooping and static IP source binding to match IP addresses to hosts on untrusted layer 2 access ports. For more information, see [IP Addressing: DHCP Configuration Guide Cisco IOS XE Everest 16.6.1 \(Cisco ASR 920 Series\)](#)

• Microwave Adaptive Code Modulation Enhancement

A new ITU-T G.8031/Y.1731 Ethernet Bandwidth Notification Message (ETH-BNM) is used to notify the change of bandwidth of link from the microwave radio to the Ethernet switch. If the node receives the bandwidth information, it triggers the EEM script and takes action on the signal degradation to provide optimal bandwidth. For information, see the [Carrier Ethernet Configuration Guide Cisco IOS XE Everest 16.6.1 \(Cisco ASR 920 Series\)](#).

• PVST+/RPVST+

Cisco ASR routers can use the per-VLAN spanning-tree plus (PVST+) protocol based on the IEEE 802.1D standard and Cisco proprietary extensions, or the rapid per-VLAN spanning-tree plus (rapid-PVST+) protocol based on the IEEE 802.1w standard. For more information, see [LAN Switching Configuration Guide Cisco IOS XE Everest 16.6.1](#).

• Segment Routing Enhancement

Effective this release, Segment Routing feature is enhanced to include SR-TE On Demand LSP, SR-TE On Demand Next Hop, OAM Support, and Dynamic PCC. For more information, see [Segment Routing for Cisco IOS XE Everest 16.6.1](#).

• Segment Routing – Traffic Engineering

Segment Routing – Traffic Engineering (SR-TE) provides a simple, automated, and scalable architecture to engineer traffic flows in a network. For more information, see [Segment Routing for Cisco IOS XE Everest 16.6.1](#).