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New Features in Cisco IOS XE 3.8S Releases

This chapter provides information about the new features introduced in the Cisco IOS XE Release 3.8S.

This chapter includes the following sections:

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- [New Hardware Features in Cisco IOS XE Release 3.8\(1\)S, page 1](#)
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New HardwareFeatures in Cisco IOS XE Release 3.8(2)S

The IOS XE 3.8(2)S Release for the Cisco ASR 903 Router does not introduce any new hardware features.

New Hardware Features in Cisco IOS XE Release 3.8(1)S

The IOS XE 3.8(1)S Release for the Cisco ASR 903 Router does not introduce any new hardware features.

New Hardware Features in Cisco IOS XE Release 3.8(0)S

The IOS XE 3.8(0)S Release for the Cisco ASR 903 Router introduces the following hardware features:

Release 3.8(0)S introduces support for the following SFPs:

- GLC-FE-100BX-U
- GLC-FE-100BX-D
- GLC-FE-100LX

- GLC-FE-100FX
- ONS-XC-10G-EP30.33
- XFP10GER-192IR-L
- XFP10GLR-192SR-L
- XFP-10GZR-OC192LR

For more information about how to configure these SFPs, see:

http://www.cisco.com/en/US/partner/docs/interfaces_modules/transceiver_modules/installation/note/OL_24246.html

http://www.cisco.com/en/US/partner/products/hw/modules/ps5455/tsd_products_support_series_home.html

New Software Features in Cisco IOS XE Release 3.8(2)S

The IOS XE 3.8(2)S Release for the Cisco ASR 903 Router does not introduce any new software features.

New Software Features in Cisco IOS XE Release 3.8(1)S

Release 3.8(1) introduces support for the following software features:

- uRPF Loose Mode—This release introduces support for Unicast Reverse Path Forwarding (uRPF) Loose mode. For more information about this feature, see http://www.cisco.com/en/US/docs/ios-xml/ios/sec_data_urpf/configuration/xr-3s/sec-unicast-rpf-loose-mode.html

New Software Features in Cisco IOS XE Release 3.8(0)S

Release 3.8(0) introduces support for the following software features:

- Automatic Protection Switching—This release introduces support for Automatic protection switching (APS) for link failure protection on SONET networks. For more information, see <http://www.cisco.com/en/US/docs/routers/asr903/feature/guide/APS.html>
- ATM IMA on OC-3 Interfaces—This release introduces support for ATM IMA on the OC-3 interface module. For more information about this feature, see the *Cisco ASR 903 Router Chassis Configuration Guide, Release 3.8*.
- BFD Support on TDM interfaces—Release 3.8 introduces support for BFD on TDM interfaces. This feature does not introduce any new CLI.
- BFD Support for HSRP—This release extends Bidirectional Forwarding Detection support in order to send failure notifications using the Hot Standby Router Protocol (HSRP). For more information about this feature, see http://www.cisco.com/en/US/products/ps11610/products_installation_and_configuration_guides_list.html
- BFD Timer Improvements—Release 3.8 introduces support for 3.3ms timers for offloaded IPv4 BFD traffic.

- BGP PIC—This release introduces support for BGP Prefix-Independent Convergence (PIC). This feature improves BGP convergence after a network failure. This convergence is applicable to both core and edge failures and can be used in both IP and MPLS networks. The BGP PIC Edge for IP and MPLS-VPN feature creates and stores a backup/alternate path in the routing information base (RIB), forwarding information base (FIB), and Cisco Express Forwarding so that when a failure is detected, the backup/alternate path can immediately take over, thus enabling fast failover. For more information, see http://www.cisco.com/en/US/partner/docs/ios-xml/ios/iproute_bgp/configuration/xs-asr903/irg-xe-3s-asr903-book.html
- VPLS BGP Signaling—This release introduces support for VPLS BGP Signaling. The two primary functions of the Virtual Private LAN Service (VPLS) control plane are autodiscovery and signaling. The VPLS BGP Signaling feature enables you to use BGP as both an autodiscovery and a signaling protocol for VPLS. For more information, see http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/xs-asr903/irg-vpls-bgp-sig.html
- E-LMI PE Support—This release introduces support for Ethernet Local Management Interface (LMI) at the Provider Edge (PE). For more information about this feature, see <http://www.cisco.com/en/US/docs/ios-xml/ios/cether/configuration/xs-asr903/ce-elmi-pe.html>
- IP SLA Y.1731 SLM Feature Enhancements—This release introduces support for IP SLA SLM enhancements as described in the Y.1731 standard. For more information about this feature, see http://www.cisco.com/en/US/docs/ios-xml/ios/ipsla/configuration/xs-asr903/sla_y1731_demand.html
- IS-IS Support for BFD over IPv6—This release introduces support for BFD on IS-IS IPv6 connections. For more information about this feature, see http://www.cisco.com/en/US/products/ps11610/products_installation_and_configuration_guides_list.html
- LACP Min-Links—This release introduces support for Etherchannel Min-Links, a minimum threshold for the number of links in an Etherchannel before the it becomes active. For more information about this feature, see <http://www.cisco.com/en/US/docs/ios-xml/ios/cether/configuration/xs-asr903/ce-ieee-link-bndl-xe.html>
- Microwave Adaptive Bandwidth—This release introduces support for Microwave Adaptive Bandwidth with G.8032 and CFM. For more information about this feature, see <http://www.cisco.com/en/US/docs/ios-xml/ios/cether/configuration/xs-asr903/ce-cfm-adapt-bandwidth.html>
- MPLS on PoS Interfaces—Release 3.8 introduces support for MPLS on Packet over SONET (PoS) interfaces. For more information about this feature, see the *Cisco ASR 903 Router Chassis Configuration Guide, Release 3.8*.
- MPLS-TP MIB—This release introduces support for the MPLS-TP MIB. For more information about using MIBs, see [MIB Support, page 4](#).
- MPLS-TP Pseudowire Support—This release introduces support for MPLS-TP on ATM and TDM pseudowires. For more information, see the *Cisco ASR 903 Router Chassis Configuration Guide, Release 3.8* and http://www.cisco.com/en/US/docs/ios-xml/ios/mp_basic/configuration/xs-asr903/mp-mpls-tp.html
- OC-3 MLPPP QoS Support—Release 3.8 introduces support for QoS policies on egress MLPPP interfaces on the optical interface module.

- Multicast on T1/E1 and Optical Interfaces—Release 3.8 introduces support for multicast on T1/E1 and OC-3 interface modules. For more information about multicast, see http://www.cisco.com/en/US/products/ps11610/products_installation_and_configuration_guides_list.html.
- Network Virtualization Service—This Release introduces support for the Satellite Network Virtualization (nV) service or the Satellite Switching System, which enables you to configure a topology in which satellite devices complement one or more Cisco ASR 9000 Series routers in order to collectively realize a single virtual switching system. In this system, the satellite switches act under the management control of the Cisco ASR 9000 Series Aggregation Services Routers. The complete configuration and management of the satellite chassis and features is performed through the control plane and management plane of the Cisco ASR 9000 Series Router. For more information about how to configure nV on the ASR 9000 and the satellite devices, see http://www.cisco.com/en/US/partner/docs/routers/asr9000/software/asr9k_r4.2/interfaces/configuration/guide/hc42satl.html
- Packet over SONET—This release introduces support for Packet over SONET (PoS) interfaces on the OC-3 interface module. For more information on how to configure PoS interfaces, see the *Cisco ASR 903 Chassis Configuration Guide, Release 3.8*.
- QoS on PoS Interfaces—Release 3.8 introduces support for QoS features on egress PoS interfaces using MLPPP bundles. For more information about configuring QoS on MLPPP interfaces, see the *Cisco ASR 903 Chassis Configuration Guide, Release 3.8*.
- QoS Features—Release 3.8 introduces support for the following QoS features:
 - **queue-limit percent** command— Allows you to specify the queue limit (size) for a class in as a percentage value.
 - Higher Queue Limit Size— Release 3.8 extends the maximum byte value *queue-limit-size* argument used with the **queue-limit** command. The previous maximum value was 491520 bytes; the new value is 2 MB.
 - Release 3.8 enhances the **show policy-map interface** command to display the default queue-limit.

For more information about the Release 3.8 QoS features, see the QoS chapter of the *Cisco ASR 903 Chassis Configuration Guide, Release 3.8*.

- SONET Mode—This release introduces support for SONET mode on the OC-3 interface module. For more information on how to configure PoS interfaces, see the *Cisco ASR 903 Chassis Configuration Guide, Release 3.8*.
- Synthetic Frame Loss Measurement—This release introduces support for Synthetic Frame Loss Measurement for Ethernet OAM. For more information about this feature, see http://www.cisco.com/en/US/docs/ios-xml/ios/ipsla/configuration/xs/asr903/sla_mether3_y1731.html
- TCP path MTU Support—This release introduces support for BGP TCP Path MTU Discovery. For more information about this feature, see http://www.cisco.com/en/US/docs/ios/iproute_bgp/configuration/guide/irg_neighbor.html
- Telecom Profile Support—Release 3.8 introduces support for telecom profiles, which allow you to configure a network clock to use the G.8265.1 recommendations for establishing PTP sessions, determining the best master clock, handling SSM, and mapping PTP classes. For information about how to configure telecom profiles, see the *Cisco ASR 903 Chassis Configuration Guide, Release 3.8*.
- Trunk EFPs on Port-Channel Interfaces—This release adds support for trunk EFPs on port-channel interfaces, as shown in the following configuration:

!

```
interface port-channel 4
 service instance 1 ethernet
   encapsulation untagged
   l2protocol peer lacp
   bridge-domain 1
 !
 service instance trunk 10 ethernet
   encapsulation dot1q <>
   rewrite ingress tag pop 1 symmetric
   bridge-domain from-encapsulation
 !
```

For more information about configuring EFP interfaces, see the [Configuring Ethernet Virtual Connections on the Cisco ASR 903 Router](#).

- Y.1731 enhancements—This release introduces support for Y.1731 on-demand and concurrent features. For more information about this feature, see <http://www.cisco.com/en/US/partner/docs/ios-xml/ios/cether/configuration/xs/asr903/ce-y1731-perfmon.html>

