Features and Important Notes for Cisco IOS Release 15.2(4)S

These release notes describe the following topics:

New and Changed Information

This section lists the new hardware and software features supported by Cisco IOS Release 15.2S and contains the following subsections:

New Hardware Features in Cisco IOS Release 15.2(4)S6

There are no new hardware features in Cisco IOS Release 15.2(4)S6.

New Software Features in Cisco IOS Release 15.2(4)S6

There are no new software features in Cisco IOS Release 15.2(4)S6.

New Hardware Features in Cisco IOS Release 15.2(4)S5

There are no new hardware features in Cisco IOS Release 15.2(4)S5.

New Software Features in Cisco IOS Release 15.2(4)S5

There are no new software features in Cisco IOS Release 15.2(4)S5.

New Hardware Features in Cisco IOS Release 15.2(4)S4

There are no new hardware features in Cisco IOS Release 15.2(4)S4.

New Software Features in Cisco IOS Release 15.2(4)S4

There are no new software features in Cisco IOS Release 15.2(4)S4.

New Hardware Features in Cisco IOS Release 15.2(4)S3

There are no new hardware features in Cisco IOS Release 15.2(4)S3.

New Software Features in Cisco IOS Release 15.2(4)S3

There are no new software features in Cisco IOS Release 15.2(4)S3.

New Hardware Features in Cisco IOS Release 15.2(4)S2

This section describes new and changed features in Cisco IOS Release 15.2(4)S2. Some features may be new to Cisco IOS Release 15.2(4)S2 but were released in earlier Cisco IOS software releases. Some features may have been released in earlier Cisco IOS software releases and have been changed in Cisco IOS Release 15.2(4)S2. To determine if a feature is new or changed, see the feature information table at the end of the feature module for that feature. Links to feature modules are included. If a feature does not have a link to a feature module, that feature is documented only in the release notes, and information about whether the feature is new or changed will be available in the feature description provided.

CISCO7613-S

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/routers/7600/Hardware/Chassis_Installation/7600_Series_Router_Installation_Guide/osr_over.html

Trifecta-ASA

Platform: Cisco 7600

For detailed information about this feature, see the documents at the following URLs:

http://www.cisco.com/en/US/docs/routers/7600/Hardware/15_0s/7600_hwd.html

http://www.cisco.com/en/US/docs/routers/7600/Hardware/Hardware_Guides/7600_Series_Router_Module_Guide/asasm.html

New Software Features in Cisco IOS Release 15.2(4)S2

There are no new software features in Cisco IOS Release 15.2(4)S2.

New Hardware Features in Cisco IOS Release 15.2(4)S1

There are no new hardware features in Cisco IOS Release 15.2(4)S1.

New Software Features in Cisco IOS Release 15.2(4)S1

There are no new software features in Cisco IOS Release 15.2(4)S1.

New Hardware Features in Cisco IOS Release 15.2(4)S

This section describes new and changed features in Cisco IOS Release 15.2(4)S. Some features may be new to Cisco IOS Release 15.2(4)S but were released in earlier Cisco IOS software releases. Some features may have been released in earlier Cisco IOS software releases and have been changed in Cisco IOS Release 15.2(4)S. To determine if a feature is new or changed, see the feature information table at the end of the feature module for that feature. Links to feature modules are included. If a feature does not have a link to a feature module, that feature is documented only in the release notes, and information about whether the feature is new or changed will be available in the feature description provided.

8x10G High Density ES+ Line Card for Cisco 7600

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/routers/7600/Hardware/Module_and_Line_Card_Installation_Guides/ES40_Line_Card_Installation_Guide/es40_hw_install_guide.html

12-in-1 Serial SPA Support on Cisco 7600-SIP400

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76_4xt.html

T1/E1 Support on Cisco ME 3600X-24CS

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/sw_T1-E1.html

New Software Features in Cisco IOS Release 15.2(4)S

This section describes new and changed features in Cisco IOS Release 15.2(4)S. Some features may be new to Cisco IOS Release 15.2(4)S but were released in earlier Cisco IOS software releases. Some features may have been released in earlier Cisco IOS software releases and have been changed in Cisco IOS Release 15.2(4)S. Links to feature modules are included. If a feature listed does not have a link to a feature module, that feature is documented only in the release notes, and information about whether the feature is new or changed will be available in the feature description provided.

6PE Support

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/sw6vpe.html

BFD—BFD Hardware Offload Support

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swbfd.html

BFD: BGP Multihop Client Support

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-multihop-cbit.html

BFD Hardware Offload for Cisco 7600

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URLs:

http://www.cisco.com/en/US/docs/ios/iproute_bfd/configuration/guide/irb_bfd.html

http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap4.html

BFD Single Hop Authentication

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bfd/configuration/15-2s/irb-bfd-shop-auth.html

BGP—Add Path

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-additional-paths.html

BGP—Attribute Filter and Enhance Attribute Error Handling

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-attribute-filter.html

BGP Diverse Path Using Diverse-Path-RR

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg_diverse_path.html

BGP: Graceful Shutdown

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-grace-shut.html

BGP IPv6 Client for Single Hop BFD

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-neighor.html

BGP IPv6 PIC Edge and Core for IP/MPLS

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg_ipv6_pic_edge.html

BGP—mVPN BGP sAFI 129—IPv4

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-mvpn-safi.html

BGP—mVPN sAFI 129—IPv6

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-mvpn-safi-ipv6.html

BGP—Origin AS Validation

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-origin-as.html

BGP Per Neighbor Graceful Restart Configuration

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-1sg/irg-grace-restart-neighbor.html

BGP RT Constrained Route Distribution

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-rt-filter.html

BGP Support for 4-Byte ASN

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-1sg/irg-4byte-asn.html

BGP Support for Dual AS Configuration for Network AS Migrations

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-1sg/irg-dual-as.html

BGP Support for IP Prefix Export from a VRF Table into the Global Table

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-prefix-export.html

BGP—Unified MPLS iBGP Client

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-unif-mpls-ibgp.html

Bidirectional MPLS-TP LSP

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swmp_transport_profile.html

Circuit Emulation over Packet Switched Network

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swpseudowire.html

Cisco-BGP-MIBv2

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-mibv2.html

DHCP—DHCPv6 Guard

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URLs:

http://www.cisco.com/en/US/docs/ios-xml/ios/ipaddr_dhcp/configuration/15-2s/ip6-dhcpv6-guard.html

http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/IPv6_Security.html

Distributed Frame Relay—Multilink (FRF.16)

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios/wan/configuration/guide/wan_dst_ml_fr.html

Dynamic ARP Inspection

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swdynarp.html

EIGRP IPv6 MIBs

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_eigrp/configuration/15-2s/ire-mib.html

EIGRP Loop-Free Alternate Fast Reroute

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_eigrp/configuration/15-2s/ire-ipfrr.html

EVC MIB

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/release/notes/ol27619.html

HSRP Aware PIM

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/ipmulti_pim/configuration/15-2s/imc_hsrp_aware.html

IGMP Snooping

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/ipmulti_igmp/configuration/15-2s/imc_igmp_snoop.html

IKEv2 Site-to-Site

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/sec_conn_ike2vpn/configuration/15-2s/sec-cfg-ikev2-flex.html

IP Tunnel—SSO Cisco 7600

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap13.html

IPSLA Support for Ethernet Synthetic Loss Measurement in Y1731

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swy1731pm.html

IPv6—Destination Guard

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URLs:

http://www.cisco.com/en/US/docs/ios-xml/ios/ipv6/configuration/15-2s/ipv6-dest-guard.html

http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/IPv6_Security.html

IPv6 Port Access Control List

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/Configuring_IPv6_PACL.html

IPv6 Router Advertisement Guard

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URLs:

http://www.cisco.com/en/US/docs/ios-xml/ios/ipv6/configuration/15-2s/ip6-ra-guard.html

http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/IPv6_Security.html

IPv6 VPN over MPLS

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/sw6vpe.html

IPv6 VRF-Aware PBR Next-Hop Enhancement

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l3_vpns/configuration/15-2s/mp-mltvrf-slct-pbr.html

IS-IS BFD TLV

Platform: Cisco 7200

The IS-IS Bidirectional Forwarding Detection (BFD) Tag Length Value (TLV) feature provides a faster method to detect a loss of an IS-IS adjacency. Before, when an IS-IS adjacency reached the UP state (and therefore could be used for forwarding), a BFD session needed to be established with that neighbor. Now, a BFD session is maintained as long as the hello holddown timer for the neighbor does not expire, which is new for BFD TLV. The BFD session is only deleted if the neighbor hello times out. If BFD signals to IS-IS that a session has gone DOWN, the adjacency associated with that session will transition to DOWN state. Once the BFD session goes back UP, the adjacency state can transition back to an UP state.

For a given IS-IS topology, IS-IS determines if BFD is usable for a given neighbor on that topology. BFD is not usable when BFD is enabled on both sides and the BFD session is down. When there are multiple BFD sessions enabled for different address families, such as IPv4 and IPv6, if BFD is not usable for any address family, then BFD is consider not usable for the entire adjacency on that topology. For example, if both IPv4 and IPv6 BFD are enabled for single topology, if either the IPv4 BFD session is down or IPv6 BFD session is down, the neighbor state will be set to DOWN state. If BFD is not enabled for a given address family, then BFD is considered usable for that address family.

For single topology mode, the neighbor state is down when either the IPv4 or IPv6 BFD session is not BFD usable, that is, if BFD is enabled on both sides and the BFD session is DOWN. If BFD is not enabled on either side, BFD will be set to TRUE. For multi-topology mode, IS-IS adjacency will be in UP state as long as any topology is UP. However, the neighbor for the topology where BFD is consider not usable is considered down for that specific topology. For example, if both IPv4 and IPv6 BFD are enabled, and the IPv4 session is DOWN and IPv6 session is UP, then the IS-IS adjacency is still UP. In this case, the IPv4 neighbor is considered DOWN and ipv6 neighbor is considered UP.

IS-IS IPv6 Administrative Tag

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_isis/configuration/15-2s/ip6-route-isis-adm-tag.html

IS-IS IPv6 Client for BFD

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bfd/configuration/15-2s/ip6-bfd-isis-client.html

ITU-T G.8032 Ethernet Ring Protection Switching

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/cether/configuration/15-2s/ce-g8032-ering-pro.html

L2VPN: PW Status for Static PWs

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swmp_transport_profile.html

L2VPN Static to Dynamic PW Interconnection and PW Preferred Path for MPLS-TP Tunnels

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swmp_transport_profile.html

Low Cost DWDM XFP Support

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/routers/7600/Hardware/15_0s/7600_hwd.html

MPLS TE Static IPv6 Routes Over MPLS TE IPv4 Tunnels

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/mp_te_path_setup/configuration/15-2s/mp-te-static-ipv6-over-ipv4-tunnels.html

MPLS TP: IP-Less Configuration of MPLS TP Tunnels

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swmp_transport_profile.html

MPLS-TP OAM: Continuity Check via BFD

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swmp_transport_profile.html

MPLS-TP OAM: GACH

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swmp_transport_profile.html

MPLS-TP OAM: Ping/Trace

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swmp_transport_profile.html

MPLS-TP Path Protection

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swmp_transport_profile.html

MPLS-TP: PW Redundancy for Static PWs

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swmp_transport_profile.html

MPLS VPN—L3VPN over GRE

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URLs:

http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l3_vpns/configuration/15-2s/mp-vpn-gre.html

http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap6.html

MVPN

Platform: Cisco ME 3600X, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S configuration/guide/swmcast.html

MVPNv6

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/mvpn.html

NTPv4 MIB

Platform: Cisco 7200, Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/bsm/configuration/15-2s/bsm-ntpv4-mib.html

OSPF TTL Security Check

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/ configuration/guide/swospf_ttl.html

OSPFv3 MIB

Platform: Cisco 7200, Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_ospf/configuration/15-2s/iro-ospfv3-mib.html

OSPFv3 NSR

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_ospf/configuration/15-2s/iro-ospfv3-nsr.html

OSPFv3 Retransmission Limits

Platform: Cisco 7200, Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_ospf/command/iro-cr-book.html

OSPFv3 RFC 3101 Support

Platform: Cisco 7200, Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_ospf/configuration/15-2s/iro-cfg.html

OSPFv3 VRF-Lite/PE-CE

Platform: Cisco 7200

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_ospf/command/iro-cr-book.html

PIM Allow RP

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/ipmulti_pim/configuration/15-2s/imc_pim_allowrp.html

Policy Based Routing

Platform: Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swqos.html

SAToP over MPLS

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_2_S/chassis/configuration/guide/swclocking.html

Synchronous Ethernet: ESMC and SSM

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/chassis/configuration/guide/swclocking.html

Synthetic Frame Loss Measurement

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swy1731pm.html

Table Map QoS Functionality Phase 2

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swqos.html

TTL Security Support for OSPFv3 on IPv6

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_ospf/configuration/15-2s/iro-ttl-sec-ospfv3.html

UDP-SLB IPv6 Support

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/ios-xml/ios/slb/configuration/15-2s/slb-15-2s-book.html

V2 POS SPA Support on Cisco 7600

Platform: Cisco 7600

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76ovwpos.html

VPLS over MPLS-TP

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swmp_transport_profile.html

VRRP MIB— RFC2787

Platform: Cisco ME 3600X, Cisco ME 3600X-24CX, Cisco ME 3800X

For detailed information about this feature, see the document at the following URL:

http://www.cisco.com/en/US/docs/switches/metro/me3600x_3800x/software/release/15.2_4_S/configuration/guide/swvrrp.html

MIBs

To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use the Cisco MIB Locator found at the following URL:

http://tools.cisco.com/ITDIT/MIBS/servlet/index

If the Cisco MIB Locator does not support the MIB information that you need, you can obtain a list of supported MIBs and download MIBs from the Cisco MIBs page at the following URL:

http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml

To access the Cisco MIB Locator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

http://tools.cisco.com/RPF/register/register.do

Important Notes

The following sections contain important notes about Cisco IOS Release 15.2S:

- Cisco IOS Behavior Changes, page 25
- Deferrals, page 29
- Field Notices and Bulletins, page 29

Cisco IOS Behavior Changes

Behavior changes describe the minor modifications to the way a device works that are sometimes introduced in a new software release. These changes typically occur during the course of resolving a software defect and are therefore not significant enough to warrant the creation of a standalone document. When behavior changes are introduced, existing documentation is updated with the changes described in these sections.

Behavior changes are provided for the following releases:

- Cisco IOS Release 15.2(4)S3, page 25
- Cisco IOS Release 15.2(4)S2, page 26
- Cisco IOS Release 15.2(4)S1, page 27

Cisco IOS Release 15.2(4)S3

The following behavior changes were introduced in Cisco IOS Release 15.2(4)S3:

- Position of MP_REACH attribute in attributes list of BGP updates.

  Old Behavior: If the BGP Enhanced Attribute Error Handling feature is enabled, BGP places the MP_REACH attribute (attribute 14) at the beginning of the attributes list while formatting an update. If the feature is not enabled, BGP places the MP_REACH attribute at the end of the attributes list, which makes handling a malformed update more difficult for neighbor routers that are doing enhanced error handling.

New Behavior: Whether or not the BGP Enhanced Attribute Error Handling feature is enabled, BGP places the MP_REACH attribute (attribute 14) at the beginning of the attributes list while formatting an update. Enhanced error handling can function much more easily when the MP_REACH attribute is at the beginning of the attributes list.

- The SME default editor behavior is improved.

  Old Behavior: When a command of editor-type editor is configured, the router would copy the default profile to the default editor if the default editor was not modified.

  New Behavior: The editor-type editor command only changes the editor-type but never copies default profiles to default editors. If users want to reuse previous profile configurations, they can use the test sbc profile-to-editor sip which helps to generate editor configurations from the profile.

- Initial INVITE with 0.0.0.0 call flow is supported.

  Old Behavior: Initial INVITE with 0.0.0.0 is not supported unless ACK contains valid a IP address.

  New Behavior: This call flow is supported.

  Additional Information:

  http://www.cisco.com/en/US/docs/ios-xml/ios/voice/sip/configuration/15-mt/voi-sip-rfc.html#GUID-B6E5879A-D5DC-4E2C-BC97-AC927985E10E

- Transmission of IPsec Dummy Packets per RFC 4303

  Old Behavior: IOS devices do not conform to RFC 4303.

  New Behavior: IOS devices conform to RFC 4303 to enable transmitting dummy packets.

  Additional Information:

  Cisco IOS Security Command Reference: Commands A to C
  http://www.cisco.com/en/US/docs/ios-xml/ios/security/a1/sec-a1-cr-book.html

  Cisco IOS Security Command Reference: Commands S to Z
  http://www.cisco.com/en/US/docs/ios-xml/ios/security/s1/sec-s1-cr-book.html

- A new command of sck-pool-size was added to configure the SIP socket control buffer size.

  Old Behavior: SIP calls with TCP control-depleted stub control buffer.

  New Behavior: A new command of sck-pool-size was added to configure the SIP socket control buffer size.

Cisco IOS Release 15.2(4)S2

The following behavior changes were introduced in Cisco IOS Release 15.2(4)S2:

- A new keyword is added to the **hw-module slot** (7600) command.

  Old Behavior: The **mp-recovery-enable** keyword is not available for the **hw-module slot** command.

  New Behavior: The **mp-recovery-enable** keyword is available.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios-xml/ios/interface/command/ir-f1.html#GUID-642623C0-B2E7-4C48-8163-534377F38142

- The NHRP syslog error message includes the IP address of the node where the error originates

  Old Behavior: The NHRP syslog error message does not include the IP address of the node where the error originates, the source NBMA, and the destination address.

  New Behavior: The NHRP syslog error message includes the IP address of the node where the error originates, the source NBMA, and the destination address.

Additional Information:
http://cisco.com/en/US/docs/ios-xml/ios/sec_conn_dmvpn/configuration/15-s/sec-conn-dmvpn-tun-mon.html

- A CLI "rtp-media-loop count" is introduced to control the maximum loop count before media packets are dropped.

  Old Behavior: For IP-IP calls, there was no mechanism to limit the number of possible media loops before the media packets are dropped.

  New Behavior: A CLI "rtp-media-loop count" is provisioned globally under voice service voip configuration mode to control the maximum loop count before media packets are dropped.

  Addtional Information: http://www.cisco.com/en/US/docs/ios-xml/ios/voice/vcr3/vcr-r1.html

- The **interworking vlan** command for VPLS is now working.

  Old Behavior: The **interworking vlan** command does not work, which causes traffic failure.

  New Behavior: The **interworking vlan** command is now working. However, you must enter the **clear mpls ldp neighbor *** command before using the **interworking vlan** command the first time.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l2_vpns/configuration/15-s/mp-l2vpn-intrntwkg.html

Cisco IOS Release 15.2(4)S1

The following behavior changes were introduced in Cisco IOS Release 15.2(4)S1:

- The **show aaa servers** command output displays estimated Outstanding/throttled access/accounting transactions.

  Old Behavior: Outstanding access transactions are left unprocessed on RADIUS server.

  New Behavior: The **show aaa servers** command output displays the number of access, authorization, and accounting requests and estimated outstanding/throttled access/accounting transactions that are being processed. The **clear aaa counters servers all** command clears all counters except estimated outstanding/throttled access/accounting transactions. These values will automatically reduce.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios-xml/ios/security/s1/sec-cr-s2.html#GUID-971F25CD-9424-4B5C-8B64-C344CBA0977D

  http://www.cisco.com/en/US/docs/ios-xml/ios/security/a1/sec-cr-c1.html#GUID-68BC9DC6-282E-4192-A4D1-B9DE80AD26A7

- The **snmp-server enable traps atm snmp-walk-serial** command, which is used to include missing ATM VC SNMP MIB objects of cAal5VccEntry type, is introduced.

  Old Behavior: Some ATM VC SNMP MIB objects of cAal5VccEntry type are not displayed when you use the snmpwalk application.

  New Behavior: The missing ATM VC SNMP MIB objects are displayed.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios-xml/ios/snmp/command/nm-snmp-cr-book.htm

- BGP Processing of the Removal of Private AS Numbers from AS Path.

  Old Behavior: When the **neighbor remove-private-as** command is configured and a route-map without a continue clause is configured, the processing order is:

  1. neighbor remove-private-as processing

2. set as-path prepend or set as-path prepend last-as

However, if the route-map contains a continue clause, the processing order is reversed.

New Behavior: When the **neighbor remove-private-as** command is configured and a route-map is configured (whether it has a continue clause or not), the processing order is always:

1. neighbor remove-private-as processing
2. set as-path prepend or set as-path prepend last-as

- RTP signal processing is disabled by default.

  Old Behavior: RTP packets of payload type “123” can cause errors on Cisco AS5350 and AS5400 series platforms.

  New Behavior: RTP signal processing is disabled by default to prevent errors caused by RTP packets of payload type “123,” and can be enabled when necessary using the **voice-fastpath voice-rtp-signalling enable** command.

  Additional Information:
  http://www.cisco.com/en/US/tech/tk652/tk653/technologies_tech_note09186a00800a96c1.shtml

- Able to apply VRF transfer for default sessions.

  Old Behavior: Support was not available for applying VRF service on default sessions and for vrf mapping from vrf 1 to vrf 2 for an unclassified IP session. Also, the **show subscriber lite-session** command did not display the “service vrf” field.

  New Behavior: Support is available for applying VRF service on default sessions and for vrf mapping from vrf 1 to vrf 2 for an unclassified IP session. Also, the **show subscriber lite-session** command displays the “service vrf” field.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios-xml/ios/isg/configuration/xe-3s/isg-wlkby-supp.html

- Cable detection is extended to analog FXSLS, FXSGS, and FXOGS voice ports.

  Old Behavior: Cable detection existed on analog FXOLS voice port only.

  New Behavior: Cable detection is extended to analog FXSLS, FXSGS, and FXOGS voice ports, and a new CLI cable-detect-poll-timer is introduced to configure the cable polling timer value for background polling processes.

  Additional Information: http://www.cisco.com/en/US/docs/ios-xml/ios/voice/vcr1/vcr-c1.html

  http://www.cisco.com/en/US/docs/ios-xml/ios/voice/vcr4/vcr-s9.html
  #GUID-DDA37612-EDAE-42A4-B84E-1D1D345183B5

- IKEv2 default max in-negotiation CAC counter has been modified to 40.

  Old Behavior: IKEv2 default max in-neg CAC counter was 1000.

  New Behavior: IKEv2 default max in-neg CAC counter has been modified to 40 and is true for all platforms.

  Additional Information: http://www.cisco.com/en/US/docs/ios-xml/ios/security/s1/sec-cr-s3.html

- Old Behavior: ACL based IPv4 port feature can be applied on a trunk port in any mode.

  New Behavior: ACL based IPv4 port feature works only if the trunk port is configured in prefer port mode.

  Impact to customer: ACL based IPv4 port feature works only if the trunk port is configured in prefer port mode. Use the access-group mode prefer port command to configure the trunk port in prefer port mode.

Additional Information:
http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/pacl.html

- Missing threshold for logout calls in the queue display.

  Old Behavior: The threshold is missing for logout calls in the queue display. The CLI is **hunt-group logout** [**DND** | **HLog**].

  New Behavior: The **notify** keyword and **threshold** *number* argument are added in the **hunt-group logout** command to enable the indication of the calls in queue for logout agents using the Hlog Programmable Line Key.

  hunt-group logout [**DND** | **HLog** | **notify** | t**hreshold** *number*]

- Unable to lock out the background settings using the xml append file. Users cannot configure commonProfile xml content and comprise it with the callLogBlfEnabled enabled by “presence call-list”.

  Old Behavior: Users cannot configure the commonProfile xml content.

  New Behavior: Introduced the following new CLI to set parameters under commonProfile section in IP phone SEP*.cnf.xml configuration files.

  service profile [phonePassword password | callLogBlfEnabled | backgroundImageAccess false]

- ICMP unreachable configuration for null interfaces is added for Cisco ASR 1000 Routers.

  Old Behavior: If a packet is sent to a null interface, a Cisco ASR 1000 Router does not respond with an ICMP unreachable packet.

  New Behavior: If a packet is sent to a null interface, a Cisco ASR 1000 Router responds with an ICMP unreachable packet.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios-xml/ios/interface/configuration/xe-3s/ir-cfg-vir-if-xe.html#GUID-64A54530-30B1-43D7-A495-90065902E92D

- A new check compares the Virtual Access ID present in the binding before deleting the binding.

  Old behavior: When a request to free the binding is received the ODAP process searches for the IP and deletes it, due to which active bindings get deleted.

  New behavior: A new check now compares the Virtual Access ID present in the binding before deleting the binding in order to control the issue of duplicate IDs. The s**how ip dhcp server odap-statistics** and **clear ip dhcp server odap-statistics** commands have been introduced as part of this behavior change.

  Additional Information:
  http://www.cisco.com/en/US/docs/ios/ipaddr/command/reference/iad_book.html

Deferrals

Cisco IOS software images are subject to deferral. Cisco recommends that you view the deferral notices at the following location to determine if your software release is affected:

http://www.cisco.com/cisco/software/advisory.html

Field Notices and Bulletins

- Field Notices—Cisco recommends that you view the field notices for this release to see if your software or hardware platforms are affected. You can find field notices at http://www.cisco.com/en/US/support/tsd_products_field_notice_summary.html.

- Bulletins—You can find bulletins at http://www.cisco.com/en/US/products/sw/iosswrel/ps5012/prod_literature.html.