



New Features in Cisco IOS XE Release 2.3

The following features were introduced in Cisco IOS XE Release 2.3. Links to feature documentation are also included.

Feature guides may contain information about more than one feature. To find information about a specific feature within a feature guide, see the Feature Information table at the end of the guide.

Feature guides document features that are supported on many different software releases and platforms. Your Cisco IOS XE software release or platform may not support all the features documented in a feature guide. See the Feature Information table at the end of the feature guide for information about which features in that guide are supported in your software release. Use Cisco Feature Navigator to find information about platform support and Cisco IOS, Cisco IOS XE, and Catalyst OS software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

For the latest feature information and caveats, see the release notes for your platform and software release at the following URL:

http://www.cisco.com/en/US/docs/ios/ios_xe/2/release/notes/rnasr21.html

See the following sections for a list of features:

- [New Hardware Features in Cisco IOS XE Release 2.3, page 1](#)
- [New Software Features in Cisco IOS XE Release 2.3, page 2](#)

New Hardware Features in Cisco IOS XE Release 2.3

Cisco ASR 1000 Series Route Processor 2

<http://www.cisco.com/en/US/docs/routers/asr1000/install/guide/chassis/asr1000hig.html>

Shared Port Adaptors

ATM SPAs

- 1-Port OC-3 ATM SPA (SPA-1XOC3-ATM-V2)
- 3-Port OC-3 ATM SPA (SPA-3XOC3-ATM-V2)



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http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/install_upgrade/ASR1000/asr_sip_spa_hw.html
http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/ASR1000/ASRspasw.html

New Software Features in Cisco IOS XE Release 2.3

Any Transport Over MPLS (AToM): ATM Cell Relay Over MPLS: VP Mode

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_any_transport.html

Any Transport over MPLS (AToM): Graceful Restart

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_atom_grace_rstrt.html

Any Transport Over MPLS (AToM): Layer 2 QoS (Quality of Service)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_any_transport.html

Any Transport Over MPLS (AToM): Single Cell Relay - VC Mode (CRoMPLS)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_any_transport.html

ATM Conditional debug/show Commands

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_con_deb_supp.html

ATM MIB Enhancements

http://www.cisco.com/en/US/docs/ios/ios_xe/2/release/notes/rnasr21.html

ATM OAM Ping

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_oam_ping.html

ATM OAM Traffic Reduction

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_oam.html

ATM PVC F5 OAM Recovery Traps

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_cfg_atm.html

ATM PVC Trap Enhancements for Segment and AIS/RDI Failures

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_oam_f5_cnck.html

ATM PVC Trap Support

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_snmp_oam_enh.html

ATM SNMP Trap and OAM Enhancements

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_snmp_oam_enh.html

ATM VC Class Support

http://www.cisco.com/en/US/docs/ios/ios_xe/2/release/notes/rnasr21.html

ATM VP Average Traffic Rate

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_vp_avg_tfc_rate.html

AToM Tunnel Selection

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_any_transport.html

Auto Secure Manageability

http://www.cisco.com/en/US/docs/ios/security/configuration/guide/sec_autosecure.html

Basic ATM Support of RFC1483

http://www.cisco.com/en/US/docs/ios/ios_xe/2/release/notes/rnasr21.html

BGP Support for 4-Byte ASN

http://www.cisco.com/en/US/docs/ios/iproute/configuration/guide/irp_bgp_overview.html

Cell-Based ATM Shaping per PVP

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/qos_atm_vp_support.html

Consistent and User-Selectable Fail/Open and Fail/Close Operation

http://www.cisco.com/en/US/docs/ios/security/configuration/guide/sec_encrypt_trns_vpn.html

Control Plane Policing—Time Based

http://www.cisco.com/en/US/docs/ios/qos/configuration/guide/ctrl_plane_policng.html

DHCP Client

http://www.cisco.com/en/US/docs/ios/ipaddr/configuration/guide/iad_dhcp_client.html

DHCP Relay—MPLS VPN Support

http://www.cisco.com/en/US/docs/ios/ipaddr/configuration/guide/iad_dhcp_rly_agt.html

Enhanced ATM VC Configuration and Management

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_cfg_atm.html

Explicit Passive Mode CLI Support

http://www.cisco.com/en/US/docs/ios/security/configuration/guide/sec_encrypt_trns_vpn.html

GETVPN Phase 1.2

http://www.cisco.com/en/US/docs/ios/security/configuration/guide/sec_encrypt_trns_vpn.html

Group Encrypted Transport VPN (GET VPN)

http://www.cisco.com/en/US/docs/ios/security/configuration/guide/sec_encrypt_trns_vpn.html

Integrated Session Border Controller

http://www.cisco.com/en/US/docs/routers/asr1000/configuration/guide/sbc/2_xe/sbc_2_xe_book.html

IPv6 Bidirectional PIM

<http://www.cisco.com/en/US/docs/ios/ipv6/configuration/guide/ip6-multicast.html>

IPv6 Multicast: Address Family Support for Multiprotocol BGP

<http://www.cisco.com/en/US/docs/ios/ipv6/configuration/guide/ip6-multicast.html>

IPv6 Source Specific Multicast (SSM) Mapping

<http://www.cisco.com/en/US/docs/ios/ipv6/configuration/guide/ip6-multicast.html>

ISSU—ATM

http://www.cisco.com/en/US/docs/ios/ios_xe/ha/configuration/guide/ha-in serv_upd g_xe.html

ISSU—AToM ATM Attachment Circuit

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_trnsprt_mpls_atom.html

ISSU—MPLS Traffic Engineering (TE)—Path Protection

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_path_prot.html

L2VPN PW Preferential Forwarding (Active/Standby Status)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/l2vpn_pw_preferential_forwarding.html

L2VPN PW Redundancy—ATM Attachment Circuits

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_link_node_prot.html

LSP Ping for FEC129 (via VCCV)—RFC4379

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_ldp_te_lsp_vccv.html

MPLS EM—LSP Ping/Trace for LDP & RSVP IPv4 FECs

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_ldp_te_lsp_vccv.html

MPLS EM—MPLS FRR MIB (IETF draft v01)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_fast_rr_mib.html

MPLS EM—MPLS Multipath (ECMP) LSP Tree Trace

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_em_multipath_tree.html

MPLS EM—MPLS TE MIB (IETF draft v05)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_mib.html

MPLS LSP Ping/Traceroute and AToM VCCV

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_ldp_te_lsp_vccv.html

MPLS Pseudowire Status Signaling

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_pw_status.html

MPLS Support for Multi-Segment PWs—MPLS OAM/VCCV

<http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/multisegmentpseudowires.html>

MPLS TE—BFD-Triggered Fast Reroute (FRR)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_bfd_frr.html

MPLS TE—Fast Tunnel Interface Down Detection

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_link_node_prot.html

MPLS TE—Node Protection Desired Bit

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_link_node_prot.html

MPLS Traffic Engineering Forwarding Adjacency

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_fwd_adjacency.html

MPLS Traffic Engineering—Policy Routing onto MPLS TE Tunnels

http://www.cisco.com/en/US/docs/ios/iproute/command/reference/irp_pi2.html

MPLS Traffic Engineering (TE)

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_enhance.html

MPLS Traffic Engineering (TE)—Configurable Path Calculation Metric for Tunnels

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_cfg_path_calc.html

MPLS Traffic Engineering (TE)—Fast Reroute (FRR) Link and Node Protection

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_frr_node_prot.html

MPLS Traffic Engineering (TE)—IP Explicit Address Exclusion

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_expl_address.html

MPLS Traffic Engineering (TE)—LSP Attributes

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_lsp_attr.html

MPLS Traffic Engineering (TE)—Path Protection

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_path_prot.html

MPLS Traffic Engineering (TE)—RSVP Graceful Restart

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_rsvp_graceful.html

MPLS Traffic Engineering (TE)—RSVP Hello State Timer

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_rsvp_hello.html

MPLS Traffic Engineering (TE): Verbatim Path Support

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_verbatim_path.html

MPLS VPN—Explicit Null Label Support with BGP IPv4 Label Session

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_ce_vpn_explicit.html

NBAR Protocols

http://www.cisco.com/en/US/docs/ios/ios_xe/qos/configuration/guide/clsfy_traffic_nbar_xe.html

NSF/SSO—AToM ATM Attachment Circuit

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_rsvp_graceful.html

NSF/SSO—MPLS TE and RSVP Graceful Restart

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_rsvp_graceful.html

NSF/SSO—MPLS Traffic Engineering (TE)—Path Protection

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_path_prot.html

Operation, Administration, and Maintenance (OAM) F4 and F5

http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_oam_f5_cnck.html

Per-VC Queueing for ATM

http://www.cisco.com/en/US/docs/ios/ios_xe/2/release/notes/rnasr21.html

PPP—Max-Payload and IWF PPPoE Tag Support

http://www.cisco.com/en/US/docs/ios/ios_xe/bbds1/configuration/guide/bba_ppp_mx_payld_xe.html

PPPoE Agent Remote ID and DSL Line Characteristics Enhancement

http://www.cisco.com/en/US/docs/ios/ios_xe/bbds1/configuration/guide/bba_rmtid_dsl_xe.html

PPPoE Circuit-ID Tag Processing

http://www.cisco.com/en/US/docs/ios/ios_xe/bbds1/configuration/guide/bba_cir_id_tag_pr_xe.html

PPPoE Relay

http://www.cisco.com/en/US/docs/ios/ios_xe/bbds1/configuration/guide/bba_relaydis_ssf_xe.html

PPPoE—Session Limiting on Inner QinQ VLAN

http://www.cisco.com/en/US/docs/ios/ios_xe/bbds1/configuration/guide/bba_qinq_vlan_limt_xe.html

Pseudowire Emulation Edge-to-Edge MIBs for Ethernet, FR, and ATM Services

http://www.cisco.com/en/US/docs/ios/mps/configuration/guide/mp_edge2edge_mibs.html

QoS: Match ATM CLP

http://cisco.com/en/US/docs/ios/ios_xe/qos/configuration/guide/clsfy_netwk_traffic_xe_ps9587_TSD_Products_Configuration_Guide_Chapter.html

QoS-per-VC QoS Classification for ATM VP Pseudowires

http://www.cisco.com/en/US/docs/ios/mps/configuration/guide/qos_atm_vp_support.html

QoS Priority Percentage CLI Support

http://www.cisco.com/en/US/docs/ios/ios_xe/qos/configuration/guide/llq_with_pps_xe.html

Quality of Service: Policies Aggregation

http://www.cisco.com/en/US/docs/ios/ios_xe/qos/configuration/guide/qos_policies_agg_xe.html

RADIUS Attribute 66 (Tunnel-Client-Endpoint) Enhancements

http://www.cisco.com/en/US/docs/ios/security/configuration/guide/sec_rad_a66_enhcmts.html

RSVP Refresh Reduction and Reliable Messaging

http://www.cisco.com/en/US/docs/ios/qos/configuration/guide/rsvp_messaging.html

RSVP—Resource Reservation Protocol

http://www.cisco.com/en/US/docs/ios/ios_xe/2/release/notes/rnasr21.html

SSO—ATM

http://www.cisco.com/en/US/docs/ios/ios_xe/ha/configuration/guide/ha-stfl_swovr_xe.html

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