



New Features in Cisco IOS XE Release 2.1

The following features were introduced in Cisco IOS XE Release 2.1. 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 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 2.1, page 1](#)
- [New Software Features in Cisco IOS XE Release 2.1, page 3](#)

New Hardware Features in Cisco IOS XE Release 2.1

Cisco ASR 1002 Router

<http://www.cisco.com/en/US/docs/routers/asr1000/install/guide/routers/ASR1hwig.html>

Cisco ASR 1004 Router

<http://www.cisco.com/en/US/docs/routers/asr1000/install/guide/routers/ASR1hwig.html>

Cisco ASR 1006 Router

<http://www.cisco.com/en/US/docs/routers/asr1000/install/guide/routers/ASR1hwig.html>



Cisco ASR 1000 Embedded Services Processors

- 5-Gbps Cisco ASR 1000 Series ESP
- 10-Gbps Cisco ASR 1000 Series ESP

<http://www.cisco.com/en/US/docs/routers/asr1000/install/guide/routers/ASR1hwig.html>

Cisco ASR 1000 Route Processor 1

<http://www.cisco.com/en/US/docs/routers/asr1000/install/guide/routers/ASR1hwig.html>

Cisco ASR 1000 SPA Interface Processor

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

Shared Port Adapters

Serial SPAs

- 2-Port and 4-Port T3/E3 Serial SPA (SPA-2XT3/E3, SPA-4XT3/E3)
- 2-Port and 4-Port Channelized T3 SPA (SPA-2XCT3/DS0, SPA-4XCT3/DS0)
- 8-Port Channelized T1/E1 Serial SPA (SPA-8XCHT1/E1)
- 4-Port Serial Interface SPA (SPA-4XT-Serial)

Ethernet SPAs

- 4-Port and 8-Port Fast Ethernet SPA (SPA-4X1FE-TX-V2, SPA-8X1FE-TX-V2)
- 1-Port 10-Gigabit Ethernet SPA (SPA-1X10GE-L-V2)
- 2-Port Gigabit Ethernet SPA (SPA-2X1GE-V2)
- 5-Port Gigabit Ethernet SPA (SPA-5X1GE-V2)
- 8-Port Gigabit Ethernet SPA (SPA-8X1GE-V2)
- 10-Port Gigabit Ethernet SPA (SPA-10X1GE-V2)
- 1-Port OC-12c/STM-4 POS SPA (SPA-1XOC12-POS)
- 2-Port and 4-Port OC-3 POS SPA (SPA-2XOC3-POS, SPA-4XOC3-POS)

POS SPAs

- 1-Port OC-12c/STM-4 POS SPA (SPA-1XOC12-POS)
- 2-Port and 4-Port OC-3 POS SPA (SPA-2XOC3-POS, SPA-4XOC3-POS)

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

1GB USB Flash Token for Cisco ASR 1000 Series

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

New Software Features in Cisco IOS XE Release 2.1

BFD IPv6 Enacaps Support

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-bfd_xe.html

DHCP—DHCPv6 Relay Agent Notification for Prefix Delegation

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-dhcp_xe.html

DHCP Relay Server ID Override and Link Selection Option 82 Suboptions

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

DHCPv6 Ethernet Remote ID Option

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-dhcp_xe.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: Base Protocols High Availability

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-mptcl_bgp_xe.html

IPv6: NSF and Graceful Restart for MP-BGP IPv6 Address Family

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-mptcl_bgp_xe.html

IPv6: RIPng Non-Stop Forwarding

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-rip_xe.html

IPv6: Static Route Non-Stop Forwarding

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-stat_routes_xe.html

MQC—Distribution of Remaining Bandwidth Using Ratio

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

PPPoE Session Limit Local Override

http://www.cisco.com/en/US/docs/ios/ios_xe/bbdsf/configuration/guide/bba_ppoe_sllov_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

Quality of Service for Gigabit EtherChannels

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

Static Route Support for BFD over IPv6

http://www.cisco.com/en/US/docs/ios/ios_xe/ipv6/configuration/guide/ip6-bfd_xe.html

TCP MIB for RFC4022 Support

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

VLAN Mapping to Gigabit EtherChannel (GEC) Member Links

http://www.cisco.com/en/US/docs/ios/ios_xe/lanswitch/configuration/guide/lsw_cfg_gecvlan_xe.html

CCDE, CCENT, CCSI, Cisco Eos, Cisco HealthPresence, Cisco IronPort, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco Nurse Connect, Cisco Pulse, Cisco StackPower, Cisco StadiumVision, Cisco TelePresence, Cisco Unified Computing System, Cisco WebEx, DCE, Flip Channels, Flip for Good, Flip Mino, Flipshare (Design), Flip Ultra, Flip Video, Flip Video (Design), Instant Broadband, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn, Cisco Capital, Cisco Capital (Design), Cisco:Financed (Stylized), Cisco Store, and Flip Gift Card are service marks; and Access Registrar, Aironet, AllTouch, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, Continuum, EtherFast, EtherSwitch, Event Center, Explorer, Fast Step, Follow Me Browsing, FormShare, GainMaker, GigaDrive, HomeLink, iLYNX, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, Laser Link, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerKEY, PowerPanels, PowerTV, PowerTV (Design), PowerVu, Prisma, ProConnect, ROSA, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0908R)

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

© 2009 Cisco Systems, Inc. All rights reserved.