



New Features in Cisco IOS Release 12.2(33)XNE

The following hardware and software features were introduced in Cisco IOS Release 12.2(33)XNE. Links to feature documentation are 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 describe features that are supported on many different software releases and platforms. Your Cisco IOS 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: https://www.cisco.com/en/US/docs/ios/12_2sb/release/notes/122XN.html.

See the following sections for a list of features:

- [New Hardware Features in Cisco IOS Release 12.2\(33\)XNE](#)
- [New Software Features in Cisco IOS Release 12.2\(33\)XNE](#)

New Hardware Features in Cisco IOS Release 12.2(33)XNE

2-Port Channelized OC-12/DS0 SPA

https://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/10000series/10kspaswg.html

New Software Features in Cisco IOS Release 12.2(33)XNE

4 Level Scheduler

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/qos/10govrvu.html>

ANCP—Base Functionality

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/ancpcg10.html>



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ANCP Enhancement for Ethernet OAM

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/enhOAM.html>

ANCP Phase 2.5

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/ancpcg10.html>

ATM Support for Access Node Control Protocol (ANCP)

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/ancpcg10.html>

BGP IPv6 Graceful Restart

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

BGP Support for 4-byte ASN

http://www.cisco.com/en/US/docs/ios/iproute_bgp/configuration/guide/irg_basic_net.html

http://www.cisco.com/en/US/docs/ios/iproute_bgp/configuration/guide/irg_external_sp.html

http://www.cisco.com/en/US/docs/ios/iproute_bgp/configuration/guide/irg_overview.html

http://www.cisco.com/en/US/docs/ios/iproute_bgp/configuration/guide/irp_bgp_neighbor_soo.html

Configurable Connect-Info Attributes

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/adynam.html>

DHCP Server RADIUS Proxy

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

IEEE 802.1Q-in-Q VLAN Tag Termination

<http://www.cisco.com/en/US/docs/routers/10000/10008/feature/guides/qinq.html>

ISG:Accounting: Per Session, Service and Flow

http://www.cisco.com/en/US/docs/ios/isg/configuration/guide/cfg_isg_acctng.html

ISG:Accounting: Postpaid

http://www.cisco.com/en/US/docs/ios/isg/configuration/guide/cfg_isg_acctng.html

ISG:Accounting: Tariff Switching

http://www.cisco.com/en/US/docs/ios/isg/configuration/guide/cfg_isg_acctng.html

ISG:Flow Control: Flow Redirect (PXF Scaling)

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/scaling.html#wp1096692>

ISG Layer 4 Redirect

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/isbl4rdt.html>

ISG:Policy Control:Policy Server:Multiservice Activation in Access-accept Message

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/amulti.html>

ISG:Policy Control:Policy Server:Radius Based Policing

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/aradsp.html>

ISSU - MPLS VPN 6VPE and 6PE ISSU Support

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_6vpe_6pe_issu_sso.html

L2 Overhead Accounting

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/atacct.html>

L2VPN Interworking: Ethernet VLAN to ATM AAL5

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/l2vpn.html>

L2VPN Interworking: Ethernet VLAN to Frame Relay

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/l2vpn.html#wp1123470>

L2VPN Interworking: Frame Relay to ATM AAL5

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/l2vpn.html#wp1105618>

Link Noise Monitoring

http://www.cisco.com/en/US/docs/routers/10000/10008/feature/guides/10lnm_FG.html

MLPoE at PTA

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/mlp.html>

MPLS and LDP over Multilink Frame Relay

- Multilink Frame Relay (FRF.16.1)

http://www.cisco.com/en/US/docs/ios/wan/configuration/guide/wan_ml_fr_frf161.html

- Any Transport over MPLS

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

- Configuring Layer 3 VPNs

http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_cfg_layer3_vpn.html

Modified LNS Dead-Cache Handling

http://www.cisco.com/en/US/docs/ios/ios_xe/vpdn/configuration/guide/config_aaa_for_vpdn_xe.html

Multiservice Activation/Deactivation in a Single COA Message

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/amulti.html>

Multiclass MLP Support on Cisco 10000 PRE3 and PRE4

http://www.cisco.com/en/US/docs/routers/10000/10008/feature/guides/mcmlp_PRE.html

OSPFv3 Fast Convergence - LSA and SPF Throttling

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

OSPFv3 Graceful Restart

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

Parameterization for ACL and Layer 4 Redirect

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/adynam.html>

Parameterization of QoS ACL

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/ancp/adynam.html>

PPPoE Agent Remote-ID and DSL Line Characteristics Enhancement

http://www.cisco.com/en/US/docs/routers/10000/10008/feature/guides/rmt_dsl.html

PPPoE VLAN Session Throttling

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

PPP Session CAC Algorithm Improvements in RP

http://www.cisco.com/en/US/docs/routers/10000/10008/feature/guides/122_31sb13/cac-enha.html

PXF Stall Monitor

http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/pxf_stall.html

Radius Based Policing Attribute Modifications

http://www.cisco.com/en/US/docs/ios/isg/configuration/guide/isg_rabapol.html

Set Inner CoS Bits for QinQ

http://www.cisco.com/en/US/docs/routers/10000/10008/feature/guides/inn_cos.html

SSO - BFD

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/BFD.html>

VLAN-Based Load Balancing

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/broadband/gec.html>

VPDN Extended Failover

http://www.cisco.com/en/US/docs/ios/vpdn/configuration/guide/vpdn_tunnel_mgmt.html

VPDN LNS Address Checking

http://www.cisco.com/en/US/docs/ios/vpdn/configuration/guide/config_aaa_for_vpdn.html

WRED Based on CoS

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/qos/10queue.html>

WRED Based on FR DE Using Discard Class

<http://www.cisco.com/en/US/docs/routers/10000/10008/configuration/guides/qos/10queue.html>

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