



# What's New in Cisco Product Documentation

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## March 2008

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Previous releases of the *What's New in Cisco Product Documentation* are available at the following URL:

<http://www.cisco.com/en/US/docs/general/whatsnew/archive/archive.html>

The Product Documentation Store ceased offering Cisco technical documentation in printed format in July 2007.

## Application Networking Services

### Revised Documents

- [Release Note for the Cisco Application Control Engine Module \(Software Version 3.0\(0\)A1\(x\)\)](#)  
Describes the ACE module open and resolved caveats in software version 3.0(0)A1(x).

## Cisco Interfaces and Modules

### New Documents

- [Cisco Service and Application Module for IP User Guide Overview](#)  
Describes a new-generation high-performance Cisco IOS software application module that occupies a single slot in Cisco 7600 series routers.



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**Americas Headquarters:**  
**Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA**

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# Cisco IOS Software

## New Documents

- [BGP Graceful Restart per Neighbor](#)

Enables or disables the Border Gateway Protocol (BGP) graceful restart capability for an individual BGP neighbor, including using peer session templates and BGP peer groups.

- [BFD Support for Nonstop Forwarding with Stateful Switchover](#)

Places Bidirectional Forwarding Detection (BFD) sessions in an “admin down” state during a planned stateful switchover (SSO).

- [BFD Support for Static Routing](#)

Introduces static routing support for Bidirectional Forwarding Detection (BFD).

- [Cisco IOS 12.2SR Configuration Guides](#)

Starting with Cisco IOS Release 12.2SRC, the Cisco IOS 12.2SR documentation set includes a suite of configuration guides as companions to the command references. The configuration guides document Cisco IOS software features supported in many software releases and on many platforms. Feature descriptions may contain configuration information that applies to other releases if that feature is supported in multiple releases or on many platforms.

- [Configuring a DHCP Lease Limit to Control the Number of Subscribers on an Interface](#)

Limits the number of Dynamic Host Configuration Protocol (DHCP) leases offered to DHCP clients on an interface.

- [Configuring IOS SLB with RADIUS Load Balancing Accelerated Data Plane Forwarding: Example](#)

Describes a high-performance solution that uses basic policy-based routing (PBR) route maps to handle subscriber data-plane traffic in a content services gateway (CSG) environment.

- [Configuring: KAL-AP Agent Support](#)

Provides load information along with its keepalive response message to the Keep-Alive Application Protocol (KAL-AP) manager or global server load balancing (GSLB) device, such as the Global Site Selector (GSS), and helps the GSLB device load-balance client requests to the least-loaded Cisco IOS SLB devices.

- [Configuring Per Subinterface MTU for Ethernet over MPLS](#)

Introduces the ability to specify maximum transmission unit (MTU) values in xconnect subinterface configuration mode.

- [Configuring PPPoEoE on a Cisco 7600 SIP-400](#)

Enables a Cisco 7600 series router with a shared port adapter (SPA) interface processor (SIP) 400 line card to terminate PPP over Ethernet PPP (PPPoE) sessions over Ethernet links.

- [Configuring Source IPv4 and Source MAC Address Binding on the SIP-400](#)

Provides a check of the source IPv4 and the source MAC address binding information before a packet can proceed to a higher level of processing.

- [Configuring TDM Local Switching](#)

Enables time division multiplexed (TDM) circuit emulation between two interfaces of the same or different types.

### *DHCPv6 Relay Options: Reload Persistent Interface-ID*

Introduces persistency for the interface-identifier option after a configuration change or a router reload.

### *DHCPv6 Relay Options: Remote-ID for Ethernet Interfaces*

Adds the remote identification (remote-ID) option to relayed (RELAY-FORWARD) Dynamic Host Configuration Protocol (DHCP)v6 packets.

### *DHCP Server MIB*

Provides Simple Network Management Protocol (SNMP) access to and control of Cisco IOS Dynamic Host Configuration Protocol (DHCP) server software on a Cisco router by an external network management device.

### *Fast Convergence—LSA and SPF Throttling*

Provides a dynamic mechanism to slow down link-state advertisement updates in Open Shortest Path First (OSPF) during times of network instability.

### *H-VPLS N-PE Redundancy for QinQ and MPLS Access*

Enables two network provider edge (N-PE) routers to provide failover services to a user provider edge (U-PE) router in a hierarchical virtual private LAN service (H-VPLS).

### *LACP Single Fault Direct Load Balance Swapping*

Reassigns the load balance bits so that the swapped-in hot standby port is assigned the load balance bits of the failed port, and the load balance bits of the remaining ports in the aggregation remain unchanged.

### *Load Distribution in an EtherChannel*

Uses a port reassignment scheme that enhances EtherChannel availability by limiting the load distribution reassignment to the port that is added or deleted.

### *MAC Address Withdrawal*

Expedites removal of MAC addresses as the result of a topology change (for example, the failure of the primary link for a dual-homed virtual private LAN service (VPLS)-capable switch), bringing convergence time down to seconds.

### *MPLS EM—MPLS VPN MIB RFC4382 Upgrade*

Describes the MPLS-L3VPN-STD-MIB that supports Multiprotocol Label Switching (MPLS) Layer 3 Virtual Private Networks (VPNs) based on RFC 4382, MPLS/BGP Layer 3 Virtual Private Network (VPN) Management Information Base, and describes the major differences between RFC 4382 and MPLS-VPN-MIB, which is based on the Internet Engineering Task Force (IETF) draft Version 3 (draft-ietf-ppvpn-mpls-vpn-mib-03.txt).

### *MPLS LDP—Local Label Allocation Filtering*

Introduces command-line interface (CLI) commands to modify the way in which Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP) handles local label allocation.

### *MPLS Pseudowire Status Signaling*

Enables you to configure the router so that it can send pseudowire status to a peer router, even when the attachment circuit is down.

### *MPLS TE—Bundled Interface Support*

Enables Multiprotocol Label Switching (MPLS) traffic engineering (TE) tunnels over the bundled EtherChannel interfaces and Multilink PPP (MLP).

### *MPLS TE—Tunnel-Based Admission Control (TBAC)*

Enables classic Resource Reservation Protocol (RSVP) unicast reservations that are traveling across a Multiprotocol Label Switching traffic engineering (MPLS TE) core to be aggregated over an MPLS TE tunnel.

### *MPLS Traffic Engineering: BFD-Triggered Fast Reroute (FRR)*

Allows you to obtain link and node protection by using the Bidirectional Forwarding Detection (BFD) protocol to provide fast forwarding path failure detection times for all media types, encapsulations, topologies, and routing protocols.

### *MPLS VPN PE-CE Link Protection*

Reduces the downtime of a provider edge (PE)-customer edge (CE) link failure by rerouting PE-egress traffic onto a backup path to the CE before Border Gateway Protocol (BGP) has reconverged.

### *NSF/SSO/ISSU Support for VPLS*

Improves the availability of service provider networks that use Virtual Private LAN Services (VPLS) for multipoint Layer 2 virtual private network (VPN) services.

### *OSPF Graceful Shutdown*

Provides the ability to shut down temporarily a protocol in the least disruptive manner and notify its neighbors that it is going away.

### *Phase 2 Access Circuit Redundancy with Local Switching*

Provides a backup attachment circuit (AC) when the primary attachment circuit fails.

### *RSVP Aggregation*

Allows the Resource Reservation Protocol (RSVP) state to be reduced within an RSVP/DiffServ network by aggregating many smaller reservations into a single, larger reservation at the edge.

### *TTL Security Check for OSPF*

Increases protection against Open Shortest Path First (OSPF) denial of service attacks, enables checking of time to live (TTL) values on OSPF packets from neighbors, and allows you to set TTL values sent to neighbors.

### *Virtual Template Manager for ISSU*

Provides In-Service Software Upgrade (ISSU) support to virtual access interfaces for sessions that are not high availability (HA)-capable and are not synchronized to the standby router.

### *Virtual Template Manager for SSO*

Provides stateful switchover (SSO) support to virtual access interfaces for sessions that are not high availability (HA)-capable and are not synchronized to the standby router.

### *802.1P CoS Bit Set for PPP and PPPoE Control Frames*

Provides the ability to set user priority bits in the IEEE 802.1Q tagged frame to allow traffic prioritization.

### *AAA High Availability Support for Local PPPoX Sessions*

Enhances the authentication, authorization, and accounting (AAA) capability to meet high availability (HA) criteria for locally terminated PPP over X (PPPoX) sessions, where X represents a transport technology, such as Ethernet or ATM.

### *Cisco Express Forwarding—SNMP CEF-MIB Support*

Introduces the CISCO-CEF-MIB, which allows management applications through the use of the Simple Network Management Protocol (SNMP) to configure and monitor Cisco Express Forwarding operational data and to provide notification when Cisco Express Forwarding encounters specific configured events.

### *Cisco IOS 12.2SR Command References*

Provide detailed information on platform-independent Cisco IOS commands; specifically, on command syntax, defaults, command modes, command history, usage guidelines, and examples. Starting with Cisco IOS Release 12.2SRC, the command references are no longer release specific and include commands supported in all major releases, such as Cisco IOS Release 12.2SX, Cisco IOS Release 12.2SB, and Cisco IOS Release 12.4. As a result, some commands found in these books may not be supported in Cisco IOS Release 12.2SR.

### *Cisco IOS 12.2SR Documentation Set*

Starting with Cisco IOS Release 12.2SRC, the Cisco IOS 12.2SR documentation set includes a suite of configuration guides as companions to the command references. The configuration guides document Cisco IOS software features supported in many software releases and on many platforms. Feature descriptions may contain configuration information that applies to other releases if that feature is supported in multiple releases or on many platforms. The command references continue to include documentation of commands supported in Cisco IOS Release 12.2SR, but in addition they include commands supported in other major releases, such as Cisco IOS Release 12.2SX. As a result, some commands found in these books may not be supported in the 12.2SR release.

### *Cisco IOS Server Load Balancing*

Provides load balancing for a variety of networked devices and services.

### *CISCO-IP-URPF-MIB Support*

Provides Simple Network Management Protocol (SNMP) notification when a specified Unicast Reverse Path Forwarding (URPF) drop-rate threshold on a managed device is exceeded.

### *Configuring Call Home*

Provides e-mail-based and web-based notification of critical system events.

### *Configuring Cisco Subscriber Service Switch Policies*

Provides the framework for the management and scalability of PPP sessions that are switched from one virtual PPP link to another.

### *Configuring DHCP Enhancements for Edge Session Management*

Provides the capability of simultaneous service by multiple Internet service providers (ISPs) to customers using one network infrastructure.

### *Configuring DHCP Relay Agent Support for MPLS VPNs*

Enables a network administrator to conserve address space by allowing overlapping addresses.

### *Configuring DHCP Static Mapping*

Enables assignment of static IP addresses without creating numerous host pools with manual bindings by using a customer-created text file that the Dynamic Host Configuration Protocol (DHCP) server reads.

### *Configuration Enhancements for Broadband Scalability*

Reduces the amount of memory that is used per terminated PPP session by creating virtual-access subinterfaces.

### *Configuration Generation Performance Enhancement*

Assists configuration management by enabling faster collection of running configuration file information.

### *Configuring Multicast VPN Extranet Support*

Enables service providers to distribute IP multicast content originated from one enterprise site to other enterprise sites.

### *Configuring Tunnel Selection*

Allows you to specify the path that traffic uses; that is, either an Multiprotocol Label Switching traffic engineering (MPLS TE) tunnel or a destination IP address or domain name server (DNS) name.

### *Configuring VTP*

Describes how to configure the Virtual Trunking Protocol (VTP) version 3 on Cisco 7600 series routers.

### *DHCP Authorized ARP*

Enhances the Dynamic Host Configuration Protocol (DHCP) and Address Resolution Protocol (ARP) components of the Cisco IOS software to limit the leasing of IP addresses to authorized users.

### *DHCP--DHCPv6 Relay Agent Notification for Prefix Delegation*

Manages link, subnet, and site addressing changes.

### *DHCP Secured IP Address Assignment*

Provides the capability to secure Address Resolution Protocol (ARP) table entries to Dynamic Host Configuration Protocol (DHCP) leases in the DHCP database.

### *DHCP Server Multiple Subnet*

Enables multiple subnets to be configured under the same Dynamic Host Configuration Protocol (DHCP) address pool.

### *DHCP Server On-Demand Address Pool Manager*

Centralizes the management of large pools of addresses and simplifies the configuration of large networks by providing a central management point for the allocation and assignment of IP addresses.

### *DHCP Statically Configured Routes Using a DHCP Gateway*

Enables the configuration of static routes that point to an assigned Dynamic Host Configuration Protocol (DHCP) next hop router.

### *Feature Information for Establishing PPPoE Session Limits per NAS Port*

Enables you to limit the number of PPP over Ethernet (PPPoE) sessions on a specific permanent virtual circuit (PVC) or VLAN configured on a Layer 2 Tunnel Protocol (L2TP) access concentrator (LAC).

### *Feature Information for Identifying the Physical Subscriber Line for RADIUS Access and Accounting: RADIUS Port Identification*

Enables a Layer 2 Tunnel Protocol (L2TP) access concentrator (LAC) and an L2TP network server (LNS) to identify and forward RADIUS network access server (NAS)-port and NAS-port-type attribute values for Point-to-Point Protocol over ATM, PPP over Ethernet (PPPoE) over ATM, and PPPoE over IEEE 802.1Q VLANs.

*Feature Information for ISG Accounting—ISG: Accounting: Per Session, Service and Flow*

Uses the RADIUS protocol to facilitate interaction between Intelligent Service Gateway (ISG) and an external RADIUS-based authentication, authorization, and accounting (AAA) or mediation server.

*Feature Information for ISG Accounting—ISG: Accounting: Postpaid*

Sends accounting start and stop records for sessions and services to an accounting server for postpaid billing.

*Feature Information for ISG Automatic Subscriber Logon—ISG: Authentication: DHCP Option 82 Line ID--AAA Authorization Support*

Enhances Intelligent Service Gateway (ISG) automatic subscriber logon by providing support for authorization on the basis of the circuit-ID and remote-ID.

*Feature Information for ISG Automatic Subscriber Logon—ISG: Session: Authentication (MAC, IP)*

Enables an IP address or MAC address to be used in place of the username in authorization requests.

*Feature Information for ISG Control Policies—ISG: Policy Control: Policy: Domain Based (Auto-Domain, Proxy)*

Describes control policies that you can configure to interpret a domain as a request to activate the service associated with that domain name, allowing users to receive services automatically in accordance with the domain to which they are attempting to connect.

*Feature Information for ISG Control Policies—ISG: Policy Control: Multidimensional Identity per Session*

Describes how to use control policies as a flexible way to collect pieces of subscriber identity information during session establishment.

*Feature Information for ISG Control Policies—ISG: Policy Control: Policy: Triggers*

Explains how to configure control policies with time-based, volume-based, and duration-based policy triggers.

*Feature Information for ISG Interaction with External Policy Servers—ISG: Policy Control: Policy Server: CoA*

Provides Intelligent Service Gateway (ISG) support for the RADIUS change of authorization (CoA) extension, which facilitates dynamic authorization.

*Feature Information for ISG Layer 2 Access—ISG: Session: Creation: P2P Session (PPPoE, PPPoXoX)*

Describes point-to-point (P2P) sessions, which are established through a signaling protocol handled by Intelligent Service Gateway (ISG).

*Feature Information for ISG Layer 3 Access—ISG: Session: Creation: Interface IP Session: L2*

Adds the ability to create Layer 2 IP sessions for Intelligent Service Gateway (ISG) for an entire interface or subinterface.

*Feature Information for ISG Layer 3 Access—ISG: Session: Creation: Interface IP Session: L3*

Adds the ability to create Layer 3 IP sessions for Intelligent Service Gateway (ISG) for an entire interface or subinterface.

*Feature Information for ISG Layer 3 Access—ISG: Session: Creation: IP Session: Protocol Event (DHCP)*

Configures Intelligent Service Gateway (ISG) to create an IP session upon receipt of the first Dynamic Host Configuration Protocol (DHCP) DISCOVER packet received from a subscriber.

*Feature Information for ISG Layer 3 Access—ISG: Session: Creation: IP Session: Subnet and Source IP: L2*

Describes IP subnet and source-IP-based sessions for Layer 2.

*Feature Information for ISG Layer 3 Access—ISG: Session: Creation: IP Session: Subnet and Source IP: L3*

Describes IP subnet and source-IP-based sessions for Layer 3.

*Feature Information for ISG Layer 3 Access—ISG: Session: VRF Transfer*

Provides a means to switch an active session between virtual routing domains dynamically.

*Feature Information for the Overview of ISG—ISG: Session: Auth: Single Sign-on*

Eliminates the need to authenticate a session more than once when a subscriber has access to services provided by other devices in the administrative domain of the access or service provider.

*Feature Information for ISG Port-Bundle Host Key—ISG: Session: Auth: PBHK*

Serves as an in-band signaling mechanism for session identification at external portals.

*Feature Information for ISG Session Maintenance—ISG: Session: Lifecycle: Idle Timeout*

Controls how long a connection can be idle before it is terminated.

*Feature Information for ISG Session Monitoring and Distributed Conditional Debugging—ISG: Instrumentation: Advanced Conditional Debugging*

Generates specific and relevant information that can be used for session, flow, subscriber, and service diagnostics.

*Feature Information for ISG Subscriber IP Address Management—ISG: Policy Control: DHCP Proxy*

Enables Intelligent Service Gateway (ISG) to interact dynamically with Dynamic Host Configuration Protocol (DHCP) and apply policies that influence the IP addresses that DHCP assigns subscribers.

*Feature Information for Providing Protocol Support for Broadband Access Aggregation of PPPoE Sessions—PPPoE Session Recovery After Reload*

Enables the aggregation device to attempt to recover PPP over Ethernet (PPPoE) sessions that failed because of reload by notifying customer premises equipment (CPE) devices about the PPPoE session failures.

*Feature Information for Redirecting ISG Subscriber Traffic—ISG: Flow Control: Flow Redirect*

Redirects specified packets to servers that handle the packets in a specified manner.

*How to Configure DHCP ODAP Subnet Allocation Server Support*

Introduces the capability to configure a Dynamic Host Configuration Protocol (DHCP) server (or router) as a subnet allocation server.

*How to Configure the DHCP Server On-Demand Address Pool Manager*

Provides on-demand address pool (ODAP) support for non-Multiprotocol Label Switching (MPLS) virtual private networks (VPNs).

*HSRP Group Shutdown*

Enables you to configure a Hot Standby Router Protocol (HSRP) group to become disabled by changing its state to init instead of having its priority decremented when a tracked object goes down.

### *IP SLAs for MPLS Pseudo Wire (PWE3) via VCCV*

Adds virtual circuit connectivity verification (VCCV) support for pseudowire emulation edge-to-edge (PWE3) services across Multiprotocol Label Switching (MPLS) networks.

### *ISG Principles*

Specifies services and functionality that should be applied to Intelligent Service Gateway (ISG) sessions for the specified subscriber.

### *ISG Session and Flow Monitoring*

Provides a mechanism for continuously monitoring interface and CPU statistics.

### *ISSU and SSO—DHCP ODAP Client and Server*

Adds In-Service Software Upgrade (ISSU) support to the Dynamic Host Configuration Protocol (DHCP) on-demand address pool (ODAP) client and server.

### *ISSU and SSO—DHCP Proxy Client*

Describes stateful switchover (SSO) capability for the Dynamic Host Configuration Protocol (DHCP) proxy client.

### *ISSU and SSO—DHCP Proxy Client*

Adds In-Service Software Upgrade (ISSU) support to the Dynamic Host Configuration Protocol (DHCP) proxy client.

### *ISSU and SSO—DHCP Relay on Unnumbered Interface*

Adds In-Service Software Upgrade (ISSU) support to the Dynamic Host Configuration Protocol (DHCP) relay agent on unnumbered interfaces.

### *ISSU and SSO—DHCP Server*

Adds In-Service Software Upgrade (ISSU) support to the Dynamic Host Configuration Protocol (DHCP) server.

### *ISSU—PPPoE*

Adds In-Service Software Upgrade (ISSU) support to PPP over Ethernet (PPPoE).

### *Layer 2 Tunnel Protocol Version 3*

Expands on Cisco support of the Layer 2 Tunnel Protocol Version 3 (L2TPv3) to ensure interoperability among vendors, increasing customer flexibility and service availability.

### *MPLS LDP—Lossless MD5 Session Authentication*

Enables a Label Distribution Protocol (LDP) session to be password-protected without tearing down and reestablishing the LDP session.

### *MPLS Traffic Engineering (TE): Path Protection*

Provides an end-to-end failure recovery mechanism (that is, full path protection) for Multiprotocol Label Switching (MPLS) traffic engineering (TE) tunnels.

### *MPLS VPN Half-Duplex VRF*

Provides scalable hub-and-spoke connectivity for subscribers of a Multiprotocol Label Switching (MPLS) Virtual Private Network (VPN) service by removing the requirement of one virtual routing and forwarding (VRF) instance per spoke.

### *MQC—Traffic Shaping Overhead Accounting for ATM*

Enables a broadband aggregation system (BRAS) to account for various encapsulation types when applying quality of service (QoS) functionality to packets.

### *OSPFv2 Local RIB*

Reduces update activity in the global Routing Information Base (RIB) so that fewer packets are dropped.

### *Per-Session QoS*

Provides the ability to apply quality of service (QoS) features (such as traffic classification, shaping, queueing, and policing) on a per-session basis.

### *Per Session Queueing and Shaping for PPPoEoVLAN Using RADIUS*

Enables you to shape PPP over Ethernet (PPPoE) over VLAN sessions to a user-specified rate.

### *PPP-Max-Payload and IWF PPPoE Tag Support*

Enables the Point-to-Point (PPP) over Ethernet (PPPoE) component to process the PPP-max-payload and Interworking Functionality (IWF) PPPoE tags in the PPPoE discovery frame.

### *PPP/MLP MRRU Negotiation Configuration*

Allows a router to send and receive frames over Multilink PPP [(MLP)] bundles that are larger than the default Maximum Receive Reconstructed Unit (MRRU) limit of 1524 bytes.

### *PPPoE Agent Remote-ID and DSL Line Characteristics Enhancement*

Provides a method by which the digital subscriber line access multiplexer (DSLAM) sends the DSL Remote-ID tag in the discovery phase as an identifier for the authentication, authorization, and accounting (AAA) access request on an Ethernet interface, thereby simulating ATM-based broadband access, but using cost-effective Ethernet instead.

### *PPPoE Circuit-ID Tag Processing*

Provides a way to extract a circuit-ID tag from the digital subscriber line (DSL) as an identifier for the authentication, authorization, and accounting (AAA) access request on an Ethernet interface, thereby simulating ATM-based broadband access, but using cost-effective Ethernet instead.

### *PPPoE Connection Throttling*

Limits PPP over Ethernet (PPPoE) connection requests to help prevent intentional denial-of-service attacks and unintentional PPP authentication loops.

### *PPPoE on Ethernet*

Adds support to PPP over Ethernet (PPPoE) by adding direct connections to actual Ethernet interfaces.

### *PPPoE over VLAN Enhancements: Configuration Limit Removal and ATM Support*

Removes the requirement for each PPP over Ethernet (PPPoE) VLAN to be created on a subinterface to increase the number of VLANs that can be configured on a router to 4000 VLANs per interface and adds ATM permanent virtual circuit (PVC) support for PPPoE over VLAN traffic that uses bridged RFC 1483 encapsulation.

### *PPPoE—QinQ Support*

Preserves VLAN IDs and keeps traffic in different customer VLANs segregated when used on the subinterface level.

### *PPPoE Service Selection Through Service Tags*

Uses service tags to enable a PPP over Ethernet (PPPoE) server to offer PPPoE clients a selection of services during call setup.

### *PPPoE Session Count MIB*

Provides the ability to use Simple Network Management Protocol (SNMP) to monitor in real time the number of PPP over Ethernet sessions configured on permanent virtual circuits (PVCs) and on a router.

### *PPPoE—Session Limiting on Inner QinQ VLAN*

Allows a service provider to limit each customer to one PPP over Ethernet (PPPoE) client in use by providing the ability to limit the number of PPPoE over QinQ (IEEE 802.1Q VLAN tunnel) sessions based on the inner VLAN ID configured under a subinterface.

### *QoS: Tunnel Marking for GRE Tunnels*

Introduces the capability to define and control quality of service (QoS) for incoming customer traffic on the provider edge (PE) router in a service provider network.

### *Release Notes for Cisco 1800 Series Routers with Cisco IOS Release 12.4(11)XW*

Describes new features and significant software components for the Cisco 1800 series routers that support Cisco IOS Release 12.4(11)XW.

### *Release Notes for Cisco 1800 Series Routers with Cisco IOS Release 12.4(15)XY*

Describes new features and significant components for the Cisco 1800 series routers that support Cisco IOS Release 12.4(15)XY.

### *Release Notes for Cisco IAD2430 Series Integrated Access Devices with Cisco IOS Release 12.4(11)XW*

Describes new features and significant software components for the Cisco IAD2430 series Integrated Access Devices that support Cisco IOS Release 12.4(11)XW.

### *Release Notes for Cisco IAD2430 Series Integrated Access Devices with Cisco IOS Release 12.4(15)XY*

Describes new features and significant components for the Cisco IAD2430 series Integrated Access Devices that support Cisco IOS Release 12.4(15)XY.

### *Release Notes for Cisco IAD2801 Series Integrated Access Devices with Cisco IOS Release 12.4(15)XY*

Describes new features and significant software components for the Cisco IAD2801 series Integrated Access Devices that support Cisco IOS Release 12.4(15)XY.

### *Release Notes for Cisco 2800 Series Integrated Services Routers with Cisco IOS Release 12.4(11)XW*

Describes new features and significant software components for the Cisco 2800 series Integrated Services Routers that support Cisco IOS Release 12.4(11)XW.

### *Release Notes for Cisco 2800 Series Integrated Services Routers with Cisco IOS Release 12.4(15)XY*

Describes new features and significant components for the Cisco 2800 series Integrated Services Routers that support Cisco IOS Release 12.4(15)XY.

### *Release Notes for Cisco 3700 Series Integrated Services Routers with Cisco IOS Release 12.4(11)XW*

Describes new features and significant software components for the Cisco 3700 series Integrated Services Routers that support Cisco IOS Release 12.4(11)XW.

- [Release Notes for Cisco 3800 Series Integrated Services Routers with Cisco IOS Release 12.4\(11\)XW](#)  
Describes new features and significant software components for the Cisco 3800 series Integrated Services Routers that support Cisco IOS Release 12.4(11)XW.
- [Release Notes for Cisco 3800 Series Integrated Services Routers with Cisco IOS Release 12.4\(15\)XY](#)  
Describes new features and significant components for the Cisco 3800 series Integrated Services Routers that support Cisco IOS Release 12.4(15)XY.
- [Release Notes for Cisco AS5x00 Universal Gateways with Cisco IOS Release 12.4\(11\)XW](#)  
Describes new features and significant software components for the Cisco AS5x00 Universal Gateways that support Cisco IOS Release 12.4(11)XW.
- [Release Notes for Cisco AS5x00 Universal Gateways with Cisco IOS Release 12.4\(15\)XY](#)  
Describes new features and significant components for the Cisco AS5x00 Universal Gateways that support Cisco IOS Release 12.4(15)XY.
- [SSO—DHCP ODAP Client and Server](#)  
Describes stateful switchover (SSO) capability for the Dynamic Host Configuration Protocol (DHCP) on-demand address pool (OADP) client and server.
- [SSO PPPoE](#)  
Describes stateful switchover (SSO) capability for PPP over Ethernet (PPPoE) subscriber access sessions.
- [Supporting Session Limits on Legacy Configurations—PPPoE Session Limit](#)  
Enables you to limit the number of PPP over Ethernet (PPPoE) sessions that can be created on a router or on an ATM permanent virtual circuit (PVC), PVC range, virtual circuit (VC) class, or Ethernet subinterface for configuration created using Cisco IOS Release 12.2 and earlier releases.
- [Understanding LACP 1:1 Redundancy](#)  
Provides an EtherChannel configuration with one active link and fast switchover to a hot standby link.

## Cisco IOS XR Software

### Revised Documents

- [Cisco IOS XR Command Modes Reference, Release 3.6](#)  
Contains descriptions of the modes that are available in the user command-line interface (CLI) that is used in Cisco IOS XR software.
- [Cisco IOS XR Interface and Hardware Component Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug interface and hardware components.
- [Cisco IOS XR IP Addresses and Services Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug the IP addresses and services features.
- [Cisco IOS XR Modular Quality of Service Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug the QoS software components.

- [Cisco IOS XR MPLS Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug MPLS features and facilities.
- [Cisco IOS XR Multicast Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug multicast facilities.
- [Cisco IOS XR Routing Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug the various routing protocols.
- [Cisco IOS XR System Management Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug the System Manager.
- [Cisco IOS XR System Monitoring Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug the system monitoring facilities.
- [Cisco IOS XR System Security Debug Command Reference, Release 3.6](#)  
Describes the commands you can use to debug the System Security software components.
- [Release Notes for Cisco IOS XR Software Release 3.5.3](#)  
Describes new, changed, and unique characteristics of this release.
- [Using Debug Commands on Cisco IOS XR Software, Release 3.6](#)  
Describes how to use the Cisco IOS XR software debug commands to monitor system operations and troubleshoot errors.

## Interoperability Systems

None at this time.

## Network Management

### New Documents

- [Cisco Active Network Abstraction Administrator Guide 3.6 Service Pack 2](#)  
Describes the structure and features of the Cisco ANA system. Cisco ANA Manage is the GUI client application designed to simplify and facilitate Cisco ANA administration.
- [Cisco Active Network Abstraction BQL User Guide 3.6 Service Pack 2](#)  
Describes the basic functions and concepts of the Broadband Query Language and Information Model Objects, and provides basic BQL code examples.
- [Cisco Active Network Abstraction Command Builder User Guide 3.6 Service Pack 2](#)  
Describes managing command scripts. Command scripts enable the user to execute a programmable sequence of SNMP or Telnet command lines.
- [Cisco Active Network Abstraction Customization User Guide 3.6 Service Pack 2](#)  
Describes managing soft properties and Threshold Crossing Alarms (TCA).

- [Cisco Active Network Abstraction Documentation Guide 3.6 Service Pack 2](#)  
Describes the documentation set for this release and explains how to get started using Cisco Active Network Abstraction 3.6 Service Pack 2.
- [Cisco Active Network Abstraction Error Messages 3.6 Service Pack 2](#)  
Provides a list of system-detected errors supported by Cisco ANA and viewable in Cisco ANA EventVision.
- [Cisco Active Network Abstraction EventVision User Guide 3.6 Service Pack 2](#)  
Describes the events that are logged in the Cisco ANA Gateway, and how they can be viewed.
- [Cisco Active Network Abstraction Fault Management User Guide 3.6 Service Pack 2](#)  
Describes the Cisco ANA event processing and parsing mechanisms. It also details the various advanced correlation scenarios, impact analysis, and supported service alarms.
- [Cisco Active Network Abstraction High Availability User Guide 3.6 Service Pack 2](#)  
Describes the high availability (redundancy) and protection options available for Cisco ANA Units and Cisco ANA Gateways.
- [Cisco Active Network Abstraction Installation Guide 3.6 Service Pack 2](#)  
Describes the typical installation of Cisco ANA and the Cisco ANA Client installation.
- [Cisco Active Network Abstraction Managing MPLS User Guide 3.6 Service Pack 2](#)  
Describes the tools included in NetworkVision used to monitor network-based environments, specifically MPLS networks. It describes logical inventory information specific to MPLS, fault management, service impact analysis, MPLS-TE, and multipath tracing.
- [Cisco Active Network Abstraction NetworkVision User Guide 3.6 Service Pack 2](#)  
Describes Cisco NetworkVision and its use in network-based environments.
- [Cisco Active Network Abstraction Release Notes 3.6 Service Pack 2](#)  
Describes the features and caveats for Cisco ANA 3.6 Service Pack 2.
- [Cisco Active Network Abstraction Shell User Guide 3.6 Service Pack 2](#)  
Describes implementation guidelines of the Cisco ANA interface, basic command behavior, and the various commands supported by the Cisco ANA.
- [Cisco Active Network Abstraction Technology Support and Information Model Reference Manual 3.6 Service Pack 2](#)  
Outlines the level of functionality that Cisco ANA provides for each supported technology.
- [Cisco Active Network Abstraction Workflow User Guide 3.6 Service Pack 2](#)  
Describes how to create, run, manage, and view workflows using the Cisco ANA Workflow Editor, Cisco ANA Manage, and Cisco ANA EventVision.
- [CISCO-DATA-COLLECTION-MIB](#)  
Enables Simple Network Management Protocol (SNMP) configuration of periodic MIB data collection and transfer mechanisms.
- [Cisco IOS IPv6 MIBs—RFC 4293 IP-MIB \(IPv6 only\) and RFC 4292 IP-FORWARD-MIB \(IPv6 only\)](#)  
Describes the CISCO-IP-FORWARD-MIB and the CISCO-IP-MIB, which were updated to RFC 4292 and RFC 4293 standards, respectively.

- [CNS Agents](#)  
Describes the Cisco Networking Services (CNS) subsystem agents that link users to networking services and provide the infrastructure for the automated configuration of large numbers of network devices in IPv6.
- [Configuration Guide for Cisco Secure ACS 4.2](#)  
Provides step-by-step tasks to configure new features for the ACS 4.2 release.
- [Config Logger](#)  
Tracks and reports configuration changes in IPv6.
- [Documentation Guide for Cisco Secure ACS 4.2](#)  
Lists information about user documentation for Cisco Secure Access Control Server (ACS).
- [HTTP\(S\) IPv6 Support](#)  
Enhances the Hypertext Transfer Protocol server [HTTP(S)] client and server to support IPv6 addresses.
- [Installation Guide for Cisco Secure ACS Solution Engine 4.2](#)  
Provides installation and local configuration information for the Cisco Secure Access Control Server (ACS) Solution Engine.
- [Installation Guide for Cisco Secure ACS for Windows 4.2](#)  
Provides installation and local configuration information for the Cisco Secure Access Control Server (ACS) for Windows.
- [Installation and User Guide for Cisco Secure ACS User-Changeable Passwords 4.2](#)  
Describes the installation, configuration, and use of User-Changeable Passwords for Cisco Secure Access Control Server (ACS) Solution Engine.
- [IP SLAs for IPv6](#)  
Describes the Cisco IOS IP service level agreements (SLAs) that are supported in IPv6.
- [NETCONF](#)  
Describes the Network Configuration Protocol (NETCONF), which is a mechanism through which a network device can be managed, configuration data information can be retrieved, and new configuration data can be uploaded and manipulated in IPv6 and IPv4.
- [Regulatory Compliance and Safety Information for Cisco Secure ACS Solution Engine 4.2](#)  
Provides regulatory compliance and safety information for the Cisco Secure ACS Solution Engine.
- [Release Notes for Cisco Secure ACS 4.2](#)  
Contains the requirements, limitations, restrictions, and caveats for the Cisco Secure Access Control Server (ACS) release 4.2.
- [SOAP Message Format](#)  
Describes the Service-Oriented Access Protocol (SOAP), which is used for exchanging structured information in a decentralized, distributed environment in IPv6 and IPv4.
- [Supported and Interoperable Devices and Software Tables for Cisco Secure ACS 4.2](#)  
Provides information about the tested and interoperable devices and software that Cisco Secure Access Control Server (ACS) Solution Engine supports.
- [Supported Devices Table for the Cisco Application Networking Manager 1.2](#)  
Lists the latest Cisco devices supported for the Cisco Application Networking Manager (ANM) 1.2.

- [TCL](#)  
Describes the Tool Command Language (TCL), which is used in IPv6 to support features such as embedded syslog manager (ESM), embedded event manager (EEM), interactive voice response (IVR), and telsh parser mode.
- [User Guide for Cisco Secure Access Control Server 4.2](#)  
Provides information about how to configure and use the Cisco Secure Access Control Server (ACS). ACS is the policy control and integration point for access to or through Cisco devices or solutions.

## Revised Documents

- [Cisco IOS Scripting with Tcl](#)  
Provides the ability to run Tool Command Language (Tcl) version 8.3.4 commands from the Cisco IOS command-line interface (CLI).
- [CNS Config Retrieve Enhancement with Retry and Interval](#)  
Adds two options to the **cns config retrieve** command enabling you to specify an amount of time in seconds to wait before attempting to retrieve a configuration from a trusted server.
- [CNS Interactive CLI](#)  
Introduces an XML interface that allows you to send interactive commands, such as those that generate prompts for user input, to a router.
- [Command Scheduler](#)  
Allows you to schedule fully qualified EXEC mode CLI commands to run once, at specified intervals, at specified calendar dates and times, or upon system startup.
- [Embedded Syslog Manager \(ESM\)](#)  
Provides a programmable framework that allows you to filter, escalate, correlate, route, and customize system logging messages prior to delivery by the Cisco IOS system message logger.
- [HTTP 1.1 Web Server and Client—TACAC+ Accounting Support](#)  
Adds the ability to log accounting records for the Hypertext Transfer Protocol (HTTP) to the Cisco IOS HTTP(S) 1.1 server.
- [NAS-Port-ID Format C Enhancement](#)  
Introduces the **nas-port-id format c** command for Broadband Access (BBA) Group configuration.

# Optical Networking

The terms “Unidirectional Path Switched Ring” and “UPSR” may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, and “Path Protected Mesh Network” and “PPMN,” refer generally to Cisco’s path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

# Routers

## New Documents

- [8-Port Gigabit Ethernet Switching Modules—WS-X6708-10G-3C and WS-X6708-10G-3CXL](#)  
Describes two eight-port Gigabit Ethernet switching modules for the Cisco 7600 series routers.
- [Configuring a Route Switch Processor 720](#)  
Describes a route switch processor (RSP) 720, also called a supervisor engine, with two 10 Gigabit Ethernet (GE) and three 1 GE uplink ports for high-end platforms.
- [SIP and SPA Compatibility Table for Ethernet SPAs—SPA-1X10GE-L-V2](#)  
Describes the Cisco 1-Port 10-Gigabit Ethernet (GE) shared port adapter (SPA) available for shared interface processor (SIP) 400 line cards on Cisco 7600 series routers.

## Revised Documents

- [Port Adapter Overview—PA-MC-T3/EC and the PA-MC-2T3/EC](#)  
Describes channelized port adapters that provide T3 interface connections using BNC connectors.
- [SIP and SPA Compatibility Table for Serial SPAs—Cisco 8-Port Channelized T1/E1 Shared Port Adapter \(SPA-8XCHT1/E1\)](#)  
Provides eight ports per shared port adapter (SPA) and up to 32 ports per SPA interface processor (SIP) for high-end platforms.
- [SIP and SPA Compatibility Table for Serial SPAs—Cisco Channelized T3 to DS0 Shared Port Adapters \(SPA-2XCT3/DS0, SPA-4XCT3/DS0\)](#)  
Describes two shared port adapters (SPAs) that provide channelized WAN capability and support up to 1023 configurable data channels at rates from NxDS0 up to DS3.
- [SIP and SPA Compatibility Table for Serial SPAs—Cisco Clear Channel T3/E3 Shared Port Adapters \(SPA-2XT3/E3, SPA-4XT3/E3\)](#)  
Describes two shared port adapters (SPAs) that provide direct connectivity to T3/E3 lines for full-duplex communications at the T3 rate of 44.736 MHz or the E3 rate of 34.368 MHz.
- [SIP and SPA Compatibility Table for Serial SPAs—SPA-1XCHSTM1/OC3](#)  
Describes the Cisco 1-Port Channelized OC-3/STM-1 shared port adapter (SPA) available for high-end platforms.

# Security

## New Documents

- [Connection Accounting](#)  
Provides information about all outbound connections made from the network access server, such as Telnet, local-area transport (LAT), TN3270, packet assembler/disassembler (PAD), and rlogin.

- *Exec Accounting*  
Transmits information about user EXEC terminal sessions (user shells) on the network access server, including username, date, start and stop times, the access server IP address, and (for dial-in users) the telephone number the call originated from using RADIUS or TACACS+.
- *Feature Information for Define Interface Policy-Map AV Pairs AAA—RADIUS Push for MOD CLI Policies*  
Introduces the push functionality that allows a new policy map to be applied or an existing policy map to be modified, without affecting its session, during a PPP over ATM (PPPoA) or PPP over Ethernet over ATM (PPPoEoA) session establishment.
- *Generating Interim Accounting Records*  
Enables a network access server (NAS) to send periodic accounting records about a subscriber's session at a predefined interval.
- *Throttling of AAA (RADIUS) Records*  
Supports throttling of access (authentication and authorization) and accounting records that are sent to the RADIUS server so that you can configure the appropriate throttling rate to avoid network congestion and instability; such as when there is insufficient bandwidth to accommodate a sudden burst of records generated from the Cisco IOS router to the RADIUS server.

## Revised Documents

- *AAA Accounting Stop Records: Examples*  
Enables sending an accounting stop record only when an access accept is received from the authentication, authorization, and accounting (AAA) server.
- *AAA Authorization and Authentication Cache*  
Allows you to cache authorization and authentication responses for a configured set of users or service profiles, providing performance improvements and an additional level of network reliability because user and service profiles that are returned from authorization and authentication responses can be queried from multiple sources and need not depend solely on an offload server.
- *AAA Double Authentication Secured by Absolute Timeout*  
Allows you to secure the double authentication mechanism by protecting it with a per-user session timeout.
- *AAA per-User Scalability*  
Creates subvirtual access interfaces, if specified, to achieve higher scalability.
- *AAA Session MIB*  
Allows you to monitor and terminate your authenticated client connections using Simple Network Management Protocol (SNMP).
- *Attribute Screening for Access Requests*  
Allows you to configure your network access server (NAS) to filter attributes in outbound access requests to the RADIUS server for purposes of authentication or authorization.
- *Configuring Message Banners for AAA Authentication*  
Allows you to change the default message for login and failed login.
- *Connect-Info RADIUS Attribute 77*  
Enables a network access server (NAS) to report connect-info (attribute 77) in RADIUS accounting “start” and “stop” records that are sent to the RADIUS client (dial-in modem).

- *Encrypted Vendor Specific Attributes*

Provides a way to manage filters at a RADIUS server centrally and supports the Tagged String, Encrypted String, and Tagged and Encrypted String vendor-specific attributes (VSAs).
- *Enhanced Test Command*

Allows a named user profile to be created with calling line ID (CLID) or dialed number identification service (DNIS) attribute values.
- *Extended NAS-Port-Type and NAS-Port Support*

Allows you to identify better what service type is taking place on specific ports with non-RADIUS RFC supported types.
- *Framed-Route in RADIUS Accounting*

Provides for the presence of framed-route (RADIUS attribute 22) information in RADIUS accounting-request accounting records.
- *Local AAA Server*

Allows you to configure your router so that user authentication and authorization attributes currently available on AAA servers are available locally on the router.
- *Offload Server Accounting Enhancement*

Allows you to maintain authentication and accounting information between your network access server (NAS) and the offload server.
- *Per-User QoS Via AAA Policy Name*

Provides the ability to download a policy name that describes quality of service (QoS) parameters for a user session from a RADIUS server and applies them for the particular session.
- *Per VRF AAA*

Allows authentication, authorization, and accounting (AAA) on the basis of Virtual Private Network (VPN) routing and forwarding (VRF) instances.
- *RADIUS Attribute 5 (NAS-Port) Format Specified on a Per-Server Group Level*

Allows you to customize configurations for different RADIUS server groups.
- *RADIUS Attribute 8 (Framed-IP-Address) in Access Requests*

Enables a network access server (NAS) to provide the RADIUS server with a hint of the user IP address in advance of user authentication.
- *RADIUS Attribute Screening*

Allows you to configure a list of “accept” or “reject” RADIUS attributes on the network access server (NAS) for purposes such as authorization or accounting.
- *RADIUS Centralized Filter Management*

Introduces a filter server to simplify access control list (ACL) configuration and management.
- *RADIUS Logical Line ID*

Enables administrators to track their customers on the basis of the physical lines on which customer calls originate.
- *RADIUS NAS-IP-Address Attribute Configurability*

Allows an arbitrary IP address to be configured and used as RADIUS attribute 4, NAS-IP-Address, without changing the source IP address in the IP header of the RADIUS packets.

- [\*RADIUS Progress Codes\*](#)  
Adds progress codes for attribute 196 (Ascend-Connect-Progress), which indicates a connection state before a call is disconnected through progress codes.
- [\*RADIUS Route Download\*](#)  
Allows you to configure your network access server (NAS) to direct RADIUS authorization.
- [\*RADIUS: Separate Retransmit Counter for Accounting\*](#)  
Allows you to configure an exponential backoff retransmit; that is, after the normally configured retransmission retries have been used, the router keeps on trying with an interval that doubles on each retransmission failure until a configured maximum interval is reached.
- [\*RADIUS Server Load Balancing\*](#)  
Distributes authentication, authorization, and accounting (AAA) transactions across servers in a server group.
- [\*RADIUS Server Reorder on Failure\*](#)  
Provides for failover to another server in the server group during periods of high load or when server failure occurs.
- [\*Vendor-Specific Attributes \(VSA\) and RADIUS Disconnect-Cause Attribute Values\*](#)  
Discusses the Internet Engineering Task Force (IETF) draft standard, which specifies a method for communicating vendor-specific information between the network access server and the RADIUS server by using the vendor-specific attribute (attribute 26).

## Server Networking and Virtualization

None at this time.

## Service Exchange

None at this time.

## Storage Networking

None at this time.

## Switches

### Revised Documents

- [\*Catalyst 3560-E Switch Getting Started Guide\*](#)  
Describes the switch setup procedure and basic installation.
- [\*Catalyst 3750-E and 3560-E Switch Hardware Installation Guide\*](#)  
Describes the switch features, installation procedures, troubleshooting, cabling, and specifications.

- [Regulatory Compliance and Safety Information for the Catalyst 3750-E and 3560-E Switches](#)  
Describes the switch regulatory compliance and safety information and includes the translated warning statements.

## TelePresence

None at this time.

## Universal Gateways and Access Servers

None at this time.

## Video, Cable, and Content Delivery

### New Documents

- [Configuration Guide for Cisco Unified Videoconferencing 3522 BRI Gateway and 3527 PRI Gateway, Release 5.5](#)  
Describes how to perform basic and advanced configuration on the Cisco Unified Videoconferencing 3522 BRI Gateway and 3527 PRI Gateway.
- [Configuration Guide for Cisco Unified Videoconferencing 3545 PRI Gateway and 3545 Serial Gateway, Release 5.5](#)  
Describes how to perform basic and advanced configuration on the Cisco Unified Videoconferencing 3545 PRI and serial gateways.
- [Installation and Upgrade Guide for Cisco Unified Videoconferencing 3522 BRI Gateway and 3527 PRI Gateway, Release 5.5](#)  
Describes how to install and upgrade the Cisco Unified Videoconferencing 3522 BRI Gateway and 3527 PRI Gateway.
- [Installation and Upgrade Guide for Cisco Unified Videoconferencing 3545 PRI Gateway and 3545 Serial Gateway, Release 5.5](#)  
Describes how to install and upgrade the Cisco Unified Videoconferencing 3545 PRI and serial gateways.
- [Release Notes for Cisco Unified Videoconferencing Gateway 3500, Release 5.5](#)  
Describes the system requirements, supported upgrades, and caveats.
- [Troubleshooting Guide for Cisco Unified Videoconferencing 3500 Gateway, Release 5.5](#)  
Describes problems you might encounter when configuring, operating, and managing the Cisco Unified Videoconferencing 3500 Gateway and how to resolve them.
- [User Guide for Cisco Unified Videoconferencing 3500 Gateway, Release 5.5](#)  
Describes how to perform dialing operations.

# Voice and Unified Communications

## Revised Documents

- [Compatibility Matrix: Cisco Unified MeetingPlace Components](#)  
Lists the latest supported version combinations of Cisco Unified MeetingPlace Audio Server and the other Cisco Unified MeetingPlace components for Releases 5.3 through 6.0 maintenance release 2.
- [Quick Start Guide: Phone Features for Reservationless Meetings for Release 6.x](#)  
Contains phone features used when in a reservationless meeting with the Cisco Unified MeetingPlace system Release 6.x.
- [Quick Start Guide: Phone Features for Scheduled Meetings for Release 6.x](#)  
Contains phone features used when in a scheduled meeting with the Cisco Unified MeetingPlace system Release 6.x.
- [Release Notes for Cisco Unified MeetingPlace Audio Server Release 6.x](#)  
Contains information on new and changed support, new and changed functionality, limitations and restrictions, and open and resolved caveats for Cisco Unified MeetingPlace Audio Server Release 6.x, up to and including Release 6.0(2.13) and for Cisco Unified MeetingPlace MeetingTime Release 6.x, up to and including Release 6.0(2.4).
- [Release Notes for Cisco Unified MeetingPlace for Microsoft Outlook Release 6.x](#)  
Contains information on new and changed support, new and changed functionality, limitations and restrictions, and open and resolved caveats for Cisco Unified MeetingPlace for Microsoft Outlook Release 6.x up to and including Release 6.0(214.0).
- [Release Notes for Cisco Unified MeetingPlace Web Conferencing Release 6.x](#)  
Contains information on new and changed support, new and changed functionality, limitations and restrictions, and open and resolved caveats for Cisco Unified MeetingPlace Web Conferencing Release 6.x, up to and including Release 6.0(361.0).
- [Release Notes for Cisco Unity Express 3.0](#)  
Describes new features and significant components for Cisco Unity Express up to and including release 3.0.3.
- [System Requirements for Cisco Unified MeetingPlace Release 6.x](#)  
Lists requirements and other necessary information for installing Cisco Unified MeetingPlace Release 6.x components.

## Wireless

### New Documents

- [Cisco Services Modules—Catalyst 6500 Series Switch and Cisco 7600 Series Router Wireless Services Module Installation and Verification Note](#)  
Describes the Wireless Services Module (WiSM), which supports clustering capabilities of up to 3600 lightweight access points per roaming domain and scales to 300 lightweight access points per module with support for 10,000-plus wireless client devices.

# Obtaining Support from Cisco

Take (full) advantage of Cisco support opportunities at:

<http://www.cisco.com/en/US/support/index.html>

Use this website for the tasks listed below and more.

- Obtain technical assistance
- Download software
- Report security vulnerabilities or obtain assistance with security involving Cisco products
- Access tools and resources
  - Sign up for product alerts
  - Register for field notices
  - Search for known issues using the Bug Toolkit
- Participate in technology discussions with the Networking Professionals (NetPro) community
- Access training resources
- Interactively identify and troubleshoot common hardware, configuration, and performance issues using the TAC Case Collection tool

## Submitting a Service Request

Open a service request online at:

<http://www.cisco.com/techsupport/servicerequest>

View a list of Cisco worldwide contacts, at:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

## Obtaining Additional Information

Information about Cisco products, services, technologies, and networking solutions is available from various online sources.

- Sign up for Cisco e-mail newsletters and other communications at the Cisco Subscription Center at:  
<http://www.cisco.com/offer/subscribe>
- Learn about modifications to or updates about Cisco products. Go to the Product Alert Tool to create a profile, and then choose those products for which you want to receive information. Go to:  
<http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>
- Order the Cisco Product Quick Reference Guide, a reference tool that includes product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through partners. Go to:  
<http://www.cisco.com/go/guide>

- Visit the Cisco Services website to learn the latest technical, advanced, and remote services available to increase the operational reliability of your network. Go to:  
<http://www.cisco.com/go/services>
- Visit Cisco Marketplace, the company store, for Cisco collateral, logo merchandise, Cisco Press books, and software at:  
<http://www.cisco.com/go/marketplace/>
- Obtain general networking, training, and certification titles from Cisco Press publishers at:  
<http://www.ciscopress.com>
- Read the Internet Protocol Journal, a quarterly journal published by Cisco for engineering professionals who design, develop, and operate internets and intranets. Go to:  
<http://www.cisco.com/ipj>
- *What's New in Cisco Product Documentation* (this document) is an online publication that provides information about the latest documentation releases for Cisco products. Updated monthly, this online publication is organized by product category:  
<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>
- Access international Cisco websites at:  
[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

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