



What's New in Cisco Product Documentation

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New Edition of the Cisco Product Quick Reference Guide Available for Preorder on June 2, 2008 Stay Current on Cisco Products with This Valuable Tool

Announcing the new Summer/Fall 2008 edition of the Cisco Product Quick Reference Guide—a complete portfolio of Cisco products and solutions for every part of your business. It provides information to readers from enterprise, service provider, and small and medium-sized businesses. This is your tool for matching today's business challenges with industry-leading products and solutions from Cisco. Compact, portable, and an easy-to-use reference, the guide summarizes information about many of Cisco's products sold through our channel partners. Inside the guide you will find a wealth of information, including brief product overviews, important features, technical specifications, part numbers, and ordering information.

For more information and to place your order on June 2, 2008, visit the Cisco Product Quick Reference Guide website at

<http://www.cisco.com/go/guide>.

Application Networking Services

None at this time.



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Cisco Interfaces and Modules

New Documents

- [Cisco Application eXtension Platform 1.0 Command Reference](#)
Provides an alphabetical list of all CLI commands supported in Cisco Unified Application eXtension platform version 1.0.
- [Cisco Application eXtension Platform Developer Guide](#)
Provides information on how to create, package, and install applications on the Cisco Application eXtension Platform (Cisco AXP).
- [Cisco Application eXtension Platform Quick Start Guide](#)
Describes the tasks and commands necessary to quickly configure the hardware and software for the Cisco Application eXtension Platform (Cisco AXP).
- [Cisco Application eXtension Platform User Guide](#)
Describes the commands and tasks for installing and configuring the Cisco Application eXtension Platform (AXP) on Cisco's Integrated Service Routers.
- [Cisco ASR 1000 Series Aggregation Services Routers SIP and SPA Hardware Installation Guide](#)
Describes how to install the supported SPA interface processors (SIPs) and shared port adapters (SPAs) on the Cisco ASR 1000 series routers and how to troubleshoot the installation.
- [Cisco ASR 1000 Series Aggregation Services Routers SIP and SPA Software Configuration Guide](#)
Describes the configuration and troubleshooting of SIPs and SPAs that are supported on the Cisco ASR 1000 series aggregation services routers.
- [Release Notes for Cisco Application eXtension Platform \(AXP\)](#)
Describes new features and significant software components for the Cisco Application eXtension 1.0.4 release.

Cisco IOS Software

Cisco IOS Documentation, Master Command Lists, and Command Lookup Tool Updates

All Cisco IOS documentation is now available from the new Product Selector Application on Cisco.com at the following URL:

<http://www.cisco.com/web/psa/products/index.html>

If you have not done so already, you should update your documentation bookmarks to the documentation pages listed under this URL.

To find a specific Cisco IOS release, choose "Cisco IOS Software" from the category list, and then choose the release you want to see. A Master Command List is available for each Cisco IOS release train. Click the "Master Index" link on the release landing page. The command lists are presented in a series of smaller files so that they open faster than did the larger, single file.

For information about all Cisco IOS commands, use the new Cisco IOS Master Command List, All Releases, at

http://www.cisco.com/en/US/docs/ios/mcl/allreleasemcl/all_book.html.

You can also use the Command Lookup Tool to search for all Cisco IOS commands at

<http://tools.cisco.com/Support/CLILookup>

End-of-Life or End-of-Sale Products

You have access to information about Cisco end-of-life or end-of-sale products from the Product Selector Application at

<http://www.cisco.com/web/psa/products/index.html>

or at the End-of-Life URL:

http://www.cisco.com/en/US/products/hw/tsd_products_support_end-of-sale_and_end-of-life_products_list.html

New Documents

- [8K Policy Maps Policy Map: Scaling Phase 2](#)
Enables a router to support a maximum of 8192 unique policy maps for the performance routing engine 3 (PRE3) and PRE4, doubling the number supported in previous releases.
- [ATM VP Average Traffic Rate](#)
Enables you to display 5-minute traffic rates on virtual path (VP) counters.
- [AToM Set ATM CLP Bit Using a Policer](#)
Enables you to set the ATM cell loss priority (CLP) bit using the set-clp-transmit policing action.
- [AToM Set FR DE as Police Action](#)
Enables you to police and mark inbound Frame Relay traffic before forwarding it onto Any Transport over Multiprotocol Label Switching (AToM) Layer 2 Virtual Private Network (VPN) pseudowire.
- [Cisco 10000 Series Router CLI Command Changes in Cisco IOS Release 12.2\(33\)SB](#)
Describes changes in command-line interface (CLI) command behavior in Cisco IOS Release 12.2(33)SB.
- [Cisco IOS Integrated Session Border Controller Command Reference](#)
Describes the commands used by the Cisco IOS Integrated Session Border Controller to configure, debug, and show statistics.
- [Configuring High Availability Support on GEC Bundle: NSF](#)
Allows nonstop forwarding (NSF) relationships among routers connected by Gigabit EtherChannel (GEC) bundles.
- [Configuring High Availability Support on GEC Bundle: NSR](#)
Allows nonstop routing (NSR) relationships among routers connected by Gigabit EtherChannel (GEC) bundles.
- [Configuring High Availability Support on GEC Bundle: SSO](#)
Maintains Gigabit EtherChannel (GEC) configuration when a stateful switchover (SSO) occurs.
- [Configuring MVP Support on GEC Bundle](#)
Allows a service provider to configure and support multicast traffic within a Virtual Private Network (VPN) environment that includes Gigabit EtherChannel (GEC) bundles.
- [Configuring Policy-Based Routing Support on a GEC Bundle](#)
Introduces support for policy-based routing (PBR) over Gigabit EtherChannel (GEC) bundles.

- *Configuring PPPoX Support on a GEC Bundle: PPPoEoE*
Introduces support for PPP over Ethernet (PPPoE) traffic on Gigabit EtherChannel (GEC) bundles.
- *Configuring PPPoX Support on a GEC Bundle: PPPoEoQinQ*
Introduces support for PPP over Ethernet (PPPoE) QinQ traffic on Gigabit EtherChannel (GEC) bundles.
- *Configuring PPPoX Support on a GEC Bundle: PPPoVLAN*
Introduces support for PPP over VLAN (PPPoVLAN) traffic on Gigabit EtherChannel (GEC) bundles.
- *Configuring QoS Service Policies on GEC Interfaces*
Introduces support for several types of quality of service (QoS) policies on Gigabit EtherChannel (GEC) bundles.
- *Controlling Congestion Using Weighted Random Early Detection: QoS ATM CLP-Based WRED*
Configures a drop policy for weighted random early detection (WRED) based on a cell loss priority (CLP) value.
- *IEEE 802.1Q Tunneling for AToM—QinQ*
Allows you to choose a unique pseudowire endpoint to switch traffic based on the combination of inner and outer VLAN IDs.
- *IEEE 802.3ad—Faster Link Switchover Time*
Provides a link failover time of 250 milliseconds or less and a maximum link failover time of 2 seconds.
- *IEEE 802.3ad—Maximum Number of Links Increased*
Supports eight member links per Link Aggregation Control Protocol (LACP) bundle, an increase from four in previous software releases.
- *ISG: Flow Control: Flow Redirect (PXF Scaling)—Layer 4 Redirect Scaling*
Allows redirection of your TCP or UDP traffic to a server to control and provide better user experience.
- *ISG: Flow Control: QoS Control—MQC Support for IP Sessions*
Extends the router's quality of service (QoS) functionality to support per-user QoS on IP sessions.
- *MLP on LNS*
Bundles together a virtual private dialup network (VPDN) session on a single logical connection to form a Multilink PPP (MLP) bundle on an L2TP Network Server (LNS).
- *Overhead Accounting*
Enables the router to account for downstream Ethernet frame headers when applying shaping to packets.
- *Per-Session Shaping for ATM Interfaces*
Enables the router to shape session traffic on L2TP network server (LNS) outbound ATM interfaces.
- *PPPoE Smart Server Selection*
Allows service providers to determine on which broadband remote access server (BRAS) a PPP call terminates.
- *PPPoX Hitless Failover*
Allows a port channel to remain in the LINK_UP state during a link switchover.

- *Set L2 CoS as Policer Action*
Enables you to police and mark inbound VLAN and QinQ traffic before forwarding the traffic onto the outbound link.
- *Simultaneous Policy Maps*
Allows the broadband aggregation system (BRAS) to provide multiple levels of quality of service (QoS) hierarchy that shape traffic at different points of congestion in a Layer 2 network.
- *SSO—LACP Enhancements*
Supports stateful switchover (SSO), In Service Software Upgrade (ISSU), Cisco nonstop forwarding (NSF), and nonstop routing (NSR) on Gigabit EtherChannel (GEC) bundles.

Revised Documents

- *Any Transport over MPLS—Tunnel Selection*
Allows you to specify the path that Any Transport over MPLS (AToM) traffic uses.
- *BFD Echo Mode*
Describes how echo packets are sent by the forwarding engine and forwarded back along the same path in order to perform detection.
- *BFD for BFG*
Describes Border Gateway Protocol (BGP) support for Bidirectional Forwarding Detection (BFD), which is a detection protocol that is designed to provide fast forwarding path failure detection times for all media types, encapsulations, topologies, and routing protocols.
- *BFD Support for Non-Broadcast Media Interfaces*
Adds Bidirectional Forwarding Detection (BFD) support for ATM, Frame Relay (FR), Packet over SONET (POS), and subserial interfaces.
- *BFD Support for Nonstop Forwarding with Stateful Switchover: Admin Down*
Describes Bidirectional Forwarding Detection (BFD) sessions that are placed in an “Admin Down” state during a planned switchover.
- *BFD Support for Static Routing*
Introduces static routing support for Bidirectional Forwarding Detection (BFD).
- *BFD Support for VPN Routing and Forwarding Interfaces*
Adds Bidirectional Forwarding Detection (BFD) support to be VPN routing and forwarding (VRF) aware to provide fast detection of routing protocol failures between provider edge (PE) and customer edge (CE) routers.
- *BFD Version Interoperability*
Describes the interoperability between Bidirectional Forwarding Detection (BFD) versions 0 and 1.
- *BGP Neighbor Policy*
Introduces new keywords to two existing commands to display information about local and inherited policies.
- *BGP per Neighbor SoO Configuration*
Simplifies the configuration of the site-of-origin (SoO) value.
- *BGP Route-Map Continue Support for Outbound Policy*
Introduces support for continue clauses to be applied to outbound route maps.

- [*Bidirectional Forwarding Detection*](#)
Describes how to enable the Bidirectional Forwarding Detection (BFD) protocol.
- [*Cisco IOS Release 12.2SB Command References*](#)
Provides detailed information on platform-independent Cisco IOS commands; specifically, on command syntax, defaults, command modes, command history, usage guidelines, and examples.
- [*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).
- [*Configuration Change Notification and Logging*](#)
Allows the tracking of configuration changes entered on a per-session and per-user basis by implementing a configuration log.
- [*Configuration Generation Performance Enhancement*](#)
Assists configuration management by enabling faster collection of running configuration file information.
- [*Configuration Logger Persistency*](#)
Increases the operational robustness of Cisco IOS configuration and provisioning actions by implementing a “quick-save” functionality that saves just the commands entered since the last startup-config file was generated.
- [*Configuration Partitioning*](#)
Provides modularization (“partitioning”) of the running configuration state for granular access to the running configuration in Cisco IOS software.
- [*Configuration Replace and Configuration Rollback*](#)
Provides the capability to replace the current running configuration with any saved Cisco IOS configuration file to revert to a previous configuration state, effectively rolling back any configuration changes that were made since that configuration file was saved.
- [*Configuration Rollback Confirmed Change*](#)
Allows configuration changes to be performed with an optional requirement that they be confirmed.
- [*Configuring BFD Support for IS-IS*](#)
Describes how to enable Bidirectional Forwarding Detection (BFD) and register it with Intermediate System-to-Intermediate System (IS-IS) to receive forwarding path detection failure messages from BFD.
- [*Configuring BFD Support for OSPF*](#)
Describes how to configure the Bidirectional Forwarding Detection (BFD) protocol and register it with Open Shortest Path First (OSPF) to receive forwarding path detection failure messages from BFD.
- [*Configuring NetFlow Multicast Accounting*](#)
Lets you capture multicast-specific data (both packets and bytes) for multicast flows.
- [*Configuring the L2TP Forwarding of PPPoE Tag Information Feature*](#)
Allows you to transfer digital subscriber line (DSL) information from the L2TP access concentrator (LAC) to the L2TP network server (LNS).

- *Contextual Configuration Diff Utility*
Provides the ability to perform a line-by-line comparison of any two configuration files (accessible through the Cisco IOS File System [IFS]) and generates a list of the differences between them.
- *EtherChannel Min-Links*
Allows a port channel to be shut down when the number of active links falls below the minimum threshold.
- *Ethernet/VLAN to ATM AAL5 Interworking*
Allows interworking at Layer 2 between Ethernet VLANs and ATM virtual circuits (VCs).
- *Ethernet/VLAN to Frame Relay Interworking*
Allows interworking at Layer 2 between Ethernet VLANs and Frame Relay.
- *Exclusive Configuration Change Access (Configuration Lock) and Access Session Locking*
Allows you to have exclusive change access to the Cisco IOS running configuration, preventing multiple users from making concurrent configuration changes.
- *Implementing IPv6 VPN over MPLS (6VPE)*
Allows Internet service providers (ISPs) to offer IPv6 Virtual Private Network (VPN) services to their customers.
- *IP SLAs—LSP Health Monitor*
Provides the capability to monitor Layer 3 Multiprotocol Label Switching (MPLS) Virtual Private Networks (VPNs) proactively.
- *IP SLAs—LSP Health Monitor with LSP Discovery*
Provides the capability to discover the equal-cost multipaths for carrying Multiprotocol Label Switching (MPLS) traffic between the source and destination provider edge (PE) routers.
- *IP SLAs for Metro-Ethernet*
Provides the capability to gather Ethernet-layer network performance metrics.
- *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.
- *IP SLAs Random Scheduler*
Provides the capability to schedule multiple IP Service Level Agreement (SLA) operations to begin at random intervals uniformly distributed over a specified duration of time and to restart at uniformly distributed random frequencies within a specified frequency range.
- *ISG: Policy Control: ISG-SCE Control Bus*
Describes how to configure Intelligent Service Gateway (ISG) and Cisco Service Control Engine (SCE) to function as a single policy enforcement point for subscriber sessions.
- *ISG: Session Protection & Resiliency: Keepalive—ARP, ICMP*
Introduces IP subscriber session keepalive support for monitoring session data traffic in the upstream direction for idleness using Address Resolution Protocol (ARP) for Layer 2 connected subscribers and Internet Control Message Protocol (ICMP) for Layer 3 connected subscribers.
- *Layer 2 Local Switching*
Allows you to switch Layer 2 data between two interfaces on the same router, and in some cases to switch Layer 2 data between two circuits on the same interface port.

- *Logging to Local Nonvolatile Storage (ATA Disk)*
Enables system logging messages to be saved on an advanced technology attachment (ATA) flash disk.
- *MPLS EM—MPLS LDP MIB - RFC 3815*
Describes the MIBs that support the Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP) based on RFC 3815.
- *MPLS EM—MPLS LSR MIB - RFC 3813*
Allows you to use the Simple Network Management Protocol (SNMP) to monitor a label switch router (LSR) that is using the Multiprotocol Label Switching (MPLS) technology remotely.
- *MPLS EM—MPLS VPN MIB RFC 4382 Upgrade*
Describes the MPLS-L3VPN-STD-MIB that supports Multiprotocol Label Switching (MPLS) Virtual Private Networks (VPNs) based on RFC 4382.
- *MPLS Enhancements to Interfaces MIB*
Describes the Multiprotocol Label Switching (MPLS) enhancements to the existing Interfaces MIB (RFC 2233) to support an MPLS layer.
- *MPLS LDP—IGP Synchronization*
Ensures that the Label Distribution Protocol (LDP) is fully established before the Interior Gateway Protocol (IGP) path is used for switching.
- *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 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 LDP—VRF-Aware Static Labels*
Allows Multiprotocol Label Switching (MPLS) static labels to be used for Virtual Private Network (VPN) routing and forwarding (VRF) traffic.
- *MPLS Static Labels*
Provides the means to configure statically the binding between a label and an IPv4 prefix and the contents of a Label Forwarding Information base (LFIB) crossconnect entry.
- *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.
- *MPLS VPN—VRF CLI for IPv4 and IPv6 VPNs*
Introduces Cisco IOS command-line interface (CLI) commands that allow you to enable an IPv4 and IPv6 Virtual Private Network (VPN) in the same VPN routing and forwarding (VRF) instance and to simplify the migration from a single-protocol VRF configuration to a multiprotocol VRF configuration.
- *MQC—Traffic Shaping Overhead Accounting for ATM*
Enables a broadband aggregation system (BRAS) to account for various encapsulation types when quality of service (QoS) functionality is applied to packets.

- [*NSF and SSO—L2VPN*](#)
Adds Cisco nonstop forwarding (NSF) and stateful switchover (SSO) to Any Transport over Multiprotocol Label Switching (AToM).
- [*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.
- [*OSPFv2 Local RIB*](#)
Reduces update activity in the global Routing Information Base (RIB) so that fewer packets are dropped.
- [*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 Session Limit Local Override*](#)
Enables the session limit configured locally on the broadband remote access server (BRAS) or L2TP access concentrator (LAC) to override the per-network access server (NAS)-port session limit downloaded from the RADIUS server when Subscriber Service Switch (SSS) preauthorization is enabled.
- [*QoS: Tunnel Marking for GRE Tunnels*](#)
Introduces the capability to define and control quality of service (QoS) for incoming customer traffic on a provider edge (PE) router in a service provider network.
- [*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)XY3.
- [*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)XY3.
- [*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)XY3.
- [*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)XY3.
- [*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)XY3.

- [Release Notes for the Cisco 800 Series Routers with Cisco IOS Release 12.4\(15\)XY](#)
Describes new features and significant components for the Cisco 800 series routers that support Cisco IOS Release 12.4(15)XY3.
- [Release Notes for the 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)XY3.
- [Remote Ethernet Port Shutdown](#)
Allows a service provider edge (PE) router on the local end of an Ethernet over Multiprotocol Label Switching (EoMPLS) pseudowire to detect a remote link failure and shutdown of the Ethernet port on the local customer edge (CE) router.
- [RFC 3020 Multilink Frame Relay MIB Support](#)
Introduces MIB functionality to manage and monitor multilink Frame Relay interfaces via the use of MIB tables.
- [SNMP Support for ISSU](#)
Adds In-Service Software Upgrade (ISSU) support to the Simple Network Management Protocol (SNMP).
- [Unicast Reverse Path Forwarding](#)
Verifies that the path of an incoming packet is consistent with the local packet forwarding information.
- [Using the IEEE 802.3ad Link Aggregation MIB](#)
Introduces IEEE 802.3ad link aggregation (LAG) MIB support in Cisco IOS software.
- [VRF-Aware VPDN Tunnels](#)
Allows you to create virtual private dialup network (VPDN) tunnels that use a customer VPN routing and forwarding (VRF) address from a VRF routing table as the tunnel endpoint.

Cisco NX-OS Software

New Documents

- [Cisco NX-OS Software Upgrade and Downgrade Guide, Release 4.0](#)
Describes how to upgrade and downgrade Cisco NX-OS software images.

Revised Documents

- [Cisco NX-OS Release Notes, Release 4.0](#)
Describes the features, caveats, and limitations for Cisco NX-OS software. Updated for Release 4.0(1a).

Interoperability Systems

None at this time.

Network Management

New Documents

- [Cisco Application eXtension Platform Developer Guide](#)
Provides information on how to create, package, and install applications on the Cisco Application eXtension Platform (Cisco AXP).
- [Cisco Application eXtension Platform Quick Start Guide](#)
Describes the tasks and commands necessary to quickly configure the hardware and software for the Cisco Application eXtension Platform (Cisco AXP).
- [Cisco Application eXtension Platform User Guide](#)
Describes the commands and tasks for installing and configuring the Cisco Application eXtension Platform (AXP) on Cisco's Integrated Service Routers.
- [Cisco Application eXtension Platform 1.0 Command Reference](#)
Provides an alphabetical list of all CLI commands supported in Cisco Unified Application eXtension platform version 1.0.
- [Release Notes for Cisco Application eXtension Platform \(AXP\)](#)
Describes new features and significant software components for the Cisco Application eXtension 1.0.4 release.

Revised Documents

- [AES and 3-DES Encryption Support for SNMP Version 3](#)
Enhances the encryption capabilities of Simple Network Management Protocol (SNMP) version 3.
- [Alarm Filtering—Cisco Entity Alarm MIB](#)
Implements the alarm filter profile capability defined in the CISCO-ENTITY-ALARM-MIB.
- [Cisco DCNM Release Notes, Release 4.0](#)
Describes the features, system requirements, and caveats for Cisco DCNM. Updated for Release 4.0(1a).
- [Cisco Express Forwarding—SNMP CEF-MIB Support](#)
Introduces the CISCO-CEF-MIB that 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.
- [CNS](#)
Describes a collection of services that provide remote event-driven configuring of Cisco IOS networking devices and remote execution of some command-line interface (CLI) commands.
- [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—Configuration Agent](#)
Assists in the initial configuration and subsequent partial configurations on a Cisco IOS device.

- *CNS—Event Agent*

Describes the Cisco IOS infrastructure that allows Cisco IOS applications to publish and subscribe to events on a Cisco Network Services (CNS) Event Bus.
- *CNS—Image Agent*

Describes the Cisco IOS infrastructure that enables automated installation and activation of Cisco IOS images on Cisco IOS networking devices.
- *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.
- *Configuring Embedded Resource Manager (ERM)-MIB*

Allows you to monitor the usage of resources by gathering resource usage information using MIB objects.
- *Configuring SNMP Support for VPNs*

Allows Simple Network Management Protocol (SNMP) traps and informs to be sent and received using Virtual Private Network (VPN) routing and forwarding (VRF) tables.
- *Embedded Event Manager 2.3*

Introduces enhancements to the Generic Online Diagnostics (GOLD) Event Detector for Cisco Catalyst 6500 Series switches.
- *Embedded Resource Manager (ERM)*

Allows you to monitor internal system resource usage for specific resources such as the buffer, memory, and CPU.
- *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 TACACS+ Accounting Support*

Introduces the **ip http accounting** commands used to specify a particular accounting method for Hypertext Transfer Protocol (HTTP) server users.
- *MIBs: CISCO-DATA-COLLECTION-MIB*

Enables Simple Network Management Protocol (SNMP) configuration of periodic MIB data collection and transfer mechanisms.
- *Network Management Support for MTR*

Leverages context-based Simple Network Management Protocol (SNMP) to extend support for existing MIBs from representing the management information for just the base topology to representing the same information for multiple topologies.
- *Periodic MIB Data Collection and Transfer Mechanism*

Provides the ability to transfer selected MIB data periodically from Cisco IOS-based devices to specified Network Management Stations (NMS).
- *Reliable Delivery and Filtering for Syslog*

Allows a device to be customized for receipt of syslog messages using Blocks Extensible Exchange Protocol (BEEP).

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

- [Cisco 10008 Router PRE4 Installation and Configuration Guide](#)
Contains instructions for installing and upgrading the performance routing engine 4 (PRE4) in a Cisco 10008 router.
- [Cisco ASR 1000 Series Aggregation Services Routers Documentation Roadmap](#)
Provides an online directory to quickly access publications for the Cisco ASR 1000 series routers.
- [Cisco ASR 1000 Series Aggregation Services Routers Hardware Installation and Initial Configuration Guide](#)
Provides instructions for installing the Cisco ASR 1000 series routers and replacing or upgrading field-replaceable units (FRUs).
- [Cisco ASR 1000 Series Aggregation Services Routers MIB Specifications Guide](#)
Describes Cisco ASR 1000 series routers product implementation of the MIB protocol.
- [Cisco ASR 1000 Series Aggregation Services Routers Software Configuration Guide](#)
Contains platform-specific information that does not fit logically into the train-based Cisco IOS configuration guides.
- [Cisco ASR 1004 Router Quick Start Guide](#)
Provides a summary of the hardware installation guide for the Cisco ASR 1004 router.
- [Cisco ASR 1006 Router Quick Start Guide](#)
Provides a summary of the hardware installation guide for the Cisco ASR 1006 router.
- [Cisco IOS XE Integrated Session Border Controller Configuration Guide for the Cisco ASR 1000 Series Aggregation Services Routers](#)
Describes the Cisco IOS XE Integrated Session Border Controller (SBC) functions, features, and configuration tasks.
- [Configuring IEEE 802.1Q and QinQ Support on GEC Bundle](#)
Introduces support for 802.1Q and QinQ subinterfaces on Gigabit EtherChannel (GEC) bundles.
- [Regulatory Compliance and Safety Information for the Cisco ASR 1000 Series Aggregation Services Routers](#)
Provides international agency compliance, safety, and statutory information and translations for the safety warnings for the Cisco ASR 1000 series routers.

Security

New Documents

- [Control Plane Policing—Platform Enhancement](#)
Provides user-level punt monitoring, configurable rate and burst size for the divert cause policer, and drop alarms for packet drops by the Route Processor (RP) queues and the divert cause policer.

Revised Documents

- [Cisco NAC Appliance - Clean Access Manager Installation and Configuration Guide, Release 4.1\(3\)](#)
Describes installation and configuration of the Clean Access Manager via the CAM web console for Cisco NAC Appliance, Release 4.1(3).
- [Cisco NAC Appliance - Clean Access Server Installation and Configuration Guide, Release 4.1\(3\)](#)
Describes installation and configuration of the Clean Access Server (including failover, DHCP, AD SSO, and VPN concentrator integration) for Cisco NAC Appliance, Release 4.1(3).
- [HTTPS - HTTP Server and Client with SSL 3.0](#)
Provides Secure Socket Layer (SSL) version 3.3 support for the HTTP 1.1 server and HTTP 1.1 client within Cisco IOS software to include server authentication, encryption, and message integrity to allow secure HTTP communications.
- [NETCONF over BEEP](#)
Allows you to enable either the Network Configuration (NETCONF) protocol server or the NETCONF client to initiate a connection, thus supporting large networks of intermittently connected devices and those devices that must reverse the management connection where there are firewalls and Network Address Translators (NATs).
- [NETCONF over SSHv2](#)
Enables you to perform network configurations via Cisco command-line interface (CLI) over an encrypted transport.
- [Role-Based CLI Access](#)
Allows a network administrator to define “views,” which are a set of operational commands and configuration capabilities that provide selective or partial access to Cisco IOS EXEC and configuration (config) mode commands.
- [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.

Server Networking and Virtualization

None at this time.

Service Exchange

None at this time.

Storage Networking

None at this time.

Switches

New Documents

- [Cisco Catalyst Switch Module 3110 and 3012 for IBM BladeCenter Command Reference, Release 12.2\(40\)EX2](#)
Describes the Layer 2+ and Layer 3 CLI commands supported by the switch.
- [Cisco Catalyst Switch Module 3110 and 3012 for IBM BladeCenter Software Configuration Guide, Release 12.2\(40\)EX2](#)
Describes how to configure the Layer 2+ and Layer 3 software features.

Revised Documents

- [Catalyst 6500 Series Ethernet Module Installation Guide](#)
Provides information on installing the Catalyst 6500 series switch chassis with new information about the WS-X6716-10G-3C and WS-X6716-10G-3CXL modules, and X2 transceivers.
- [Catalyst 6500 Series Switch Installation Guide](#)
Provides information on installing the Catalyst 6500 series switches with new switch information, new module power and heat measurements, and Catalyst 6509-V-E information, including cable management information.
- [Catalyst 6500 Series Switch Supervisor Engine Guide](#)
Provides information on installing the Catalyst 6500 supervisor engines with new information about the Catalyst 6509-V-E switch chassis and the Supervisor Engine 720-10GE.
- [Cisco Gigabit Ethernet Switch Module for HP BladeSystem p-Class Release Notes, Cisco IOS Release 12.2\(44\)SE and Later](#)
Describes the system requirements, limitations, and caveats for the Cisco Catalyst Blade Switch 3020 for HP. Revised for Cisco IOS Release 12.2(44)SE2.
- [Release Notes for Catalyst 3550 Multilayer Switch, Cisco IOS Release 12.2\(44\)SE and Later](#)
Describes the system requirements, limitations, caveats, and updated system messages for the Catalyst 3550 switches. Revised for Cisco IOS Release 12.2(44)SE2.
- [Release Notes for Catalyst 3750, 3560, 2970, and 2960 Switches, Cisco IOS Release 12.2\(44\)SE and Later](#)
Describes the system requirements, limitations, and caveats for the Catalyst 3750, 3560, 2970 and 2960 switches. Revised for Cisco IOS Release 12.2(44)SE2.

- [*Release Notes for the Catalyst 2918 Switch, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, caveats, and updated system messages for the Catalyst 2918 switches. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Catalyst 3750-E and Catalyst 3560-E Switches, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Catalyst 3750-E and 3560-E switches. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Catalyst 3750 Metro Switch, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Catalyst 3750 Metro switches. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Cisco Catalyst Blade Switch 3020 for HP, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Cisco Catalyst Blade Switch 3020 for HP. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Cisco Catalyst Blade Switch 3030, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Cisco Catalyst Blade Switch 3030. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Cisco Catalyst Blade Switch 3040 for FSC, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Cisco Catalyst Blade Switch 3040 for FSC switches. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Cisco ME 2400 Ethernet Access Switches, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Cisco ME 2400 series Ethernet switches. Revised for Cisco IOS Release 12.2(44)SE2.
- [*Release Notes for the Cisco ME 3400 Series Ethernet Access Switches, Cisco IOS Release 12.2\(44\)SE and Later*](#)
Describes the system requirements, limitations, and caveats for the Cisco ME 3400 series Ethernet switches. Revised for Cisco IOS Release 12.2(44)SE2.

TelePresence

None at this time.

Universal Gateways and Access Servers

None at this time.

Video, Cable, and Content Delivery

None at this time.

Voice and Unified Communications

None at this time.

Wireless

None at this time.

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