

# Features and Important Notes for Cisco IOS Release 15.2(1)S

These release notes describe the following topics:

- [New and Changed Information, page 45](#)
- [MIBs, page 50](#)
- [Important Notes, page 50](#)

## New and Changed Information

This section lists the new hardware and software features supported by Cisco IOS Release 15.2S and contains the following subsections:

- [New Hardware Features in Cisco IOS Release 15.2\(1\)S2, page 45](#)
- [New Software Features in Cisco IOS Release 15.2\(1\)S2, page 45](#)
- [New Hardware Features in Cisco IOS Release 15.2\(1\)S1, page 45](#)
- [New Software Features in Cisco IOS Release 15.2\(1\)S1, page 45](#)
- [New Hardware Features in Cisco IOS Release 15.2\(1\)S, page 45](#)
- [New Software Features in Cisco IOS Release 15.2\(1\)S, page 46](#)

### New Hardware Features in Cisco IOS Release 15.2(1)S2

There are no new hardware features in Cisco IOS Release 15.2(1)S2.

### New Software Features in Cisco IOS Release 15.2(1)S2

There are no new software features in Cisco IOS Release 15.2(1)S2.

### New Hardware Features in Cisco IOS Release 15.2(1)S1

There are no new hardware features in Cisco IOS Release 15.2(1)S1.

### New Software Features in Cisco IOS Release 15.2(1)S1

There are no new software features in Cisco IOS Release 15.2(1)S1.

### New Hardware Features in Cisco IOS Release 15.2(1)S

This section describes new and changed features in Cisco IOS Release 15.2(1)S. Some features may be new to Cisco IOS Release 15.2(1)S but were released in earlier Cisco IOS software releases. Some features may have been released in earlier Cisco IOS software releases and have been changed in Cisco IOS Release 15.2(1)S. To determine if a feature is new or changed, see the feature information table at the end of the feature module for that feature. Links to feature modules are included. If a feature does not have a link to a feature module, that feature is documented only in the release notes, and information about whether the feature is new or changed will be available in the feature description provided.

### 32k PVC Scale with Multipoint Bridging on SIP-400

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/76cfgatm.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76cfgatm.html)

### SPA-1xCHOC48-DS3 Support on Cisco 7600-SIP-400

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/sipspasw.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/sipspasw.html)

## New Software Features in Cisco IOS Release 15.2(1)S

This section describes new and changed features in Cisco IOS Release 15.2(1)S. Some features may be new to Cisco IOS Release 15.1S but were released in earlier Cisco IOS software releases. Some features may have been released in earlier Cisco IOS software releases and have been changed in Cisco IOS Release 15.2(1)S. Links to feature modules are included. If a feature listed does not have a link to a feature module, that feature is documented only in the release notes, and information about whether the feature is new or changed will be available in the feature description provided.

### 32k PVC Scale with Multipoint Bridging on SIP-400

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/76cfgatm.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76cfgatm.html)

### Any Transport over MPLS: ATM Cell Relay over MPLS: Packed Cell Relay

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios-xml/ios/mp\\_l2\\_vpns/configuration/15-2s/mp-any-transport.html](http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l2_vpns/configuration/15-2s/mp-any-transport.html)

### ATM Port Mode Packed Cell Relay over MPLS

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios-xml/ios/mp\\_l2\\_vpns/configuration/15-2s/mp-any-transport.html](http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l2_vpns/configuration/15-2s/mp-any-transport.html)

### BGP—Origin AS Validation

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios-xml/ios/iproute\\_bgp/configuration/15-2s/irg-origin-as.html](http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-origin-as.html)

### CISCO-ENTITY-DISPLAY-MIB

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/technical\\_references/7600\\_mib\\_guides/MIB\\_Guide\\_ver\\_6/mibgde6.html](http://www.cisco.com/en/US/docs/routers/7600/technical_references/7600_mib_guides/MIB_Guide_ver_6/mibgde6.html)

## DHCP Snooping over Pseudo-MLACP

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/install\\_config/ES40\\_config\\_guide/es40\\_chap4.html](http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap4.html)

## DHCPv6—Relay Chaining (for Prefix Delegation) and Route Insertion in FIB

For detailed information about this feature, see the document at the following URL:

<http://www.cisco.com/en/US/docs/ios-xml/ios/ipv6/configuration/15-2s/ip6-dhcp.html>

## EIGRP Dual DMVPN Domain Enhancement

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios-xml/ios/iproute\\_eigrp/configuration/15-2s/config-eigrp.html](http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_eigrp/configuration/15-2s/config-eigrp.html)

## Extensible Messaging Client Protocol 2.0

For detailed information about this feature, see the document at the following URL:

<http://www.cisco.com/en/US/docs/ios-xml/ios/saf/configuration/15-2s/saf-saf.html>

## Frame Relay Fragmentation

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/76cfsip.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76cfsip.html)

## GLC-EX-SMD, GLC-ZX-SMD

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/Hardware/15\\_0s/7600\\_hwd.html](http://www.cisco.com/en/US/docs/routers/7600/Hardware/15_0s/7600_hwd.html)

## IPoDWDM Proactive Protection Support for Cisco 7600

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/install\\_config/ES40\\_config\\_guide/es40\\_chap10.html](http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap10.html)

## IPv6 Policy-Based Routing

For detailed information about this feature, see the documents at the following URLs:

<http://www.cisco.com/en/US/docs/ios-xml/ios/ipv6/configuration/15-2s/ip6-pol-bsd-rtng.html>

[http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/IPv6\\_PBR.html](http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/IPv6_PBR.html)

## L2VPN Resilient Pseudowire

For detailed information about this feature, see the documents at the following URLs:

[http://www.cisco.com/en/US/docs/ios-xml/ios/mp\\_l2\\_vpns/configuration/15-2s/wan-l2vpn-pw-red.html](http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l2_vpns/configuration/15-2s/wan-l2vpn-pw-red.html)

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/76cfgatm.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76cfgatm.html)

**MPLS TE—Enhanced Path Protection**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp\\_te\\_path\\_prot.html](http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_path_prot.html)

**MPLS TE—Interarea Tunnels**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp\\_te\\_interarea\\_tun.html](http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_interarea_tun.html)

**MPLS TE—Inter-AS TE**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp\\_te\\_inter\\_as\\_te.html](http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_inter_as_te.html)

**MPLS TE—Shared Risk Link Groups**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp\\_te\\_shared\\_risk.html](http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_te_shared_risk.html)

**MPLS VPN—L3VPN over GRE**

For detailed information about this feature, see the documents at the following URLs:

[http://www.cisco.com/en/US/docs/ios-xml/ios/mp\\_l3\\_vpns/configuration/15-2s/mp-vpn-gre.html](http://www.cisco.com/en/US/docs/ios-xml/ios/mp_l3_vpns/configuration/15-2s/mp-vpn-gre.html)

[http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp\\_vpn\\_gre.html](http://www.cisco.com/en/US/docs/ios/mpls/configuration/guide/mp_vpn_gre.html)

[http://www.cisco.com/en/US/docs/routers/7600/install\\_config/ES40\\_config\\_guide/es40\\_chap6.html](http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap6.html)

**Multichassis LACP IGMP Snooping State Sync**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/install\\_config/ES40\\_config\\_guide/es40\\_chap4.html](http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap4.html)

**N:1 PVC Mapping to PWE with Nonunique VPI (ATMCOMMON)**

For detailed information about this feature, see the documents at the following URLs:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/76cfgatm.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76cfgatm.html)

[http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm\\_nto1\\_PVC\\_map\\_to\\_PWE.html](http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_nto1_PVC_map_to_PWE.html)

**NTPv4 Orphan Mode Support, Range for Trusted Key Configuration**

For detailed information about this feature, see the document at the following URL:

<http://www.cisco.com/en/US/docs/ios-xml/ios/bsm/configuration/15-2s/bsm-time-calendar-set.html>

[http://www.cisco.com/en/US/docs/routers/7600/install\\_config/ES40\\_config\\_guide/es40\\_chap6.html](http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap6.html)

### **Multichassis LACP IGMP Snooping State Sync**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/install\\_config/ES40\\_config\\_guide/es40\\_chap4.html](http://www.cisco.com/en/US/docs/routers/7600/install_config/ES40_config_guide/es40_chap4.html)

### **N:1 PVC Mapping to PWE with Nonunique VPI (ATMCOMMON)**

For detailed information about this feature, see the documents at the following URLs:

[http://www.cisco.com/en/US/docs/interfaces\\_modules/shared\\_port\\_adapters/configuration/7600series/76cfgatm.html](http://www.cisco.com/en/US/docs/interfaces_modules/shared_port_adapters/configuration/7600series/76cfgatm.html)

[http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm\\_nto1\\_PVC\\_map\\_to\\_PWE.html](http://www.cisco.com/en/US/docs/ios/atm/configuration/guide/atm_nto1_PVC_map_to_PWE.html)

### **NTPv4 Orphan Mode Support, Range for Trusted Key Configuration**

For detailed information about this feature, see the document at the following URL:

<http://www.cisco.com/en/US/docs/ios-xml/ios/bsm/configuration/15-2s/bsm-time-calendar-set.html>

### **Point to Multipoint MPLS-TE MIB**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios-xml/ios/mp\\_em\\_and\\_mibs/configuration/15-2s/mp-p2mp-mpls-te-mib.html](http://www.cisco.com/en/US/docs/ios-xml/ios/mp_em_and_mibs/configuration/15-2s/mp-p2mp-mpls-te-mib.html)

### **Synchronous Ethernet: ESMC and SSM**

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios/interface/configuration/guide/ir\\_synce.html](http://www.cisco.com/en/US/docs/ios/interface/configuration/guide/ir_synce.html)

### **Video Monitoring MIB Support for Medianet Video Monitoring**

This feature provides support for the use of the industry-standard Simple Network Management Protocol (SNMP) to monitor media streams. This support is implemented with the addition of the following Cisco proprietary SNMP Management Information Base (MIB) modules:

- **CISCO-FLOW-MONITOR-TC-MIB**—Defines the textual conventions common to the following MIB modules.
- **CISCO-FLOW-MONITOR-MIB**—Defines the framework that describes the flow monitors supported by a system, the flows that it has learned, and the flow metrics collected for those flows.
- **CISCO-MDI-METRICS-MIB**—Defines objects that describe the quality metrics collected for media streams that comply to the Media Delivery Index (MDI) [RFC 4445].
- **CISCO-RTP-METRICS-MIB**—Defines objects that describe the quality metrics collected for RTP streams, similar to those described by an RTCP Receiver Report packet [RFC 3550].
- **CISCO-IP-CBR-METRICS-MIB**—Defines objects that describe the quality metrics collected for IP streams that have a constant bit rate (CBR).

For detailed information about these MIBs, and to locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at <http://www.cisco.com/go/mibs>.

This feature also includes two new CLI commands and one modified CLI command. The commands are as follows:

**snmp-server host**—Enables the delivery of flow monitoring SNMP notifications to a recipient.

**snmp-server enable traps flowmon**—Enables flow monitoring SNMP notifications. By default, flow monitoring SNMP notifications are disabled.

**snmp mib flowmon alarm history**—Sets the maximum number of entries maintained by the flow monitor alarm history log.

For more information about these commands, see the *Cisco IOS Master Command List* at the following URL:

[http://www.cisco.com/en/US/docs/ios/mcl/allreleasemcl/all\\_book.html](http://www.cisco.com/en/US/docs/ios/mcl/allreleasemcl/all_book.html)

## Voltage Table Support for CISCO-ENVMON-MIB

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/routers/7600/technical\\_references/7600\\_mib\\_guides/MIB\\_Guide\\_ver\\_6/mibgde6.html](http://www.cisco.com/en/US/docs/routers/7600/technical_references/7600_mib_guides/MIB_Guide_ver_6/mibgde6.html)

## VPLS MAC Address Withdrawal

For detailed information about this feature, see the document at the following URL:

[http://www.cisco.com/en/US/docs/ios/mps/configuration/guide/mp\\_hvpls\\_npe\\_red.html](http://www.cisco.com/en/US/docs/ios/mps/configuration/guide/mp_hvpls_npe_red.html)

# MIBs

To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use the Cisco MIB Locator found at the following URL:

<http://tools.cisco.com/ITDIT/MIBS/servlet/index>

If the Cisco MIB Locator does not support the MIB information that you need, you can obtain a list of supported MIBs and download MIBs from the Cisco MIBs page at the following URL:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

To access the Cisco MIB Locator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to [cco-locksmith@cisco.com](mailto:cco-locksmith@cisco.com). An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

<http://tools.cisco.com/RPF/register/register.do>

## Important Notes

The following sections contain important notes about Cisco IOS Release 15.2S:

- [Cisco IOS Behavior Changes, page 51](#)
- [Deferrals, page 54](#)
- [Field Notices and Bulletins, page 54](#)

## Cisco IOS Behavior Changes

Behavior changes describe the minor modifications to the way a device works that are sometimes introduced in a new software release. These changes typically occur during the course of resolving a software defect and are therefore not significant enough to warrant the creation of a standalone document. When behavior changes are introduced, existing documentation is updated with the changes described in these sections.

Behavior changes are provided for the following releases:

- [Cisco IOS Release 15.2\(1\)S2, page 51](#)
- [Cisco IOS Release 15.2\(1\)S1, page 52](#)

### Cisco IOS Release 15.2(1)S2

The following behavior changes were introduced in Cisco IOS Release 15.2(1)S2:

- Configure “radius-server attribute 44 include-in-access-req all” instead of “radius-server attribute 44 include-in-access-req” if per vrf level attribute inclusion is not required.

Old behavior: **radius-server attribute 44 include-in-access-req** command applies attribute 44 for all the sessions.

New behavior: The command is modified to include the configuration of non-vrf sessions.

Additional information:

<http://www.cisco.com/en/US/docs/ios-xml/ios/security/m1/sec-cr-r1.html#GUID-0C067786-2A4D-4D26-A429-0E7AA331E4CD>

- Change in the **cns config retrieve** command.

Old Behavior: The **cns config retrieve** command accepts an IPv4 or IPv6 address as a source for CNS communications.

New Behavior: The **cns config retrieve** command does not accept an IPv4 or IPv6 address as a source for CNS communications. Instead, the **source interface name** keyword/argument pair is available.

Additional Information:

<http://www.cisco.com/en/US/docs/ios-xml/ios/cns/command/cns-cr-book.html>

- The **sub-application-table** keyword can be enabled in the option command in Flexible NetFlow flow exporter configuration mode.

Old Behavior: The periodic sending of an options table, which allows the collector to map NBAR subapplication table information, is not enabled.

New Behavior: The periodic sending of an options table, which allows the collector to map the NBAR subapplication tags, subapplication names, and subapplication descriptions provided in the flow records to application IDs, can be enabled by using the sub-application-table keyword in the option command in Flexible NetFlow flow exporter configuration mode.

Additional Information:

<http://www.cisco.com/en/US/docs/ios-xml/ios/fnetflow/command/fnf-m1.html>

- PfR syslog levels are added to minimize number of messages.

Old Behavior: There are too many PfR syslog messages.

New Behavior: PfR syslog levels are added to minimize the number of messages displayed, and a syslog notice is added to display when 30 percent of the traffic classes are out-of-policy.

Additional Information:

<http://www.cisco.com/en/US/docs/ios-xml/ios/pfr/configuration/15-1mt/pfr-15-1mt-book.html>

- New CLI command added to enable/disable BFDv6 and BFDv4 session offloading.

Old behavior: No CLI command.

New behavior: **platform bfd disable-offload** added.

Additional Information:

[http://www.cisco.com/en/US/docs/ios/iproute\\_pi/command/reference/iri\\_pi1.html](http://www.cisco.com/en/US/docs/ios/iproute_pi/command/reference/iri_pi1.html)

## Cisco IOS Release 15.2(1)S1

The following behavior changes were introduced in Cisco IOS Release 15.2(1)S1:

- BGP-Origin AS Validation feature is changed in two ways.

Old Behavior 1: The router may send serial query or reset query messages to an RPKI server at any time.

New Behavior 1: The router will not send a serial query message or reset query message during the interval between when it sends a serial query or reset query message and when it receives an End of Data (EOD) message. Serial queries in this interval are stripped, and reset queries in this interval are sent upon receipt of the EOD message.

Old Behavior 2: The Invalid state indicates the prefix is found, but either the corresponding autonomous system received from the eBGP peer is not the autonomous system that appears in the SOVC table or the prefix length in the BGP Update message is longer than the maximum length permitted in the SOVC table. The Not Found state indicates that the prefix is not among the prefixes or prefix ranges in the SOVC table.

New Behavior 2: The Invalid state indicates that the prefix meets either of the following two conditions:

1. It matches one or more Route Origin Authorizations (ROAs), but there is no matching ROA where the origin autonomous system matches the origin autonomous system on the AS-PATH.
2. It matches one or more ROAs at the minimum length specified in the ROA, but for all ROAs where it matches the minimum length, it is longer than the specified maximum length. The origin autonomous system does not matter for condition #2.

The Not Found state indicates that the prefix is not among the Valid or Invalid prefixes.

Additional Information:

[http://www.cisco.com/en/US/docs/ios-xml/ios/iproute\\_bgp/configuration/15-2s/irg-origin-as.html](http://www.cisco.com/en/US/docs/ios-xml/ios/iproute_bgp/configuration/15-2s/irg-origin-as.html)

- Change in BGP next-hop for redistributed recursive static routes.

Old Behavior: A router advertising a locally originated route (from a static route with a recursive next hop) advertises the next hop to be itself. The local next hop (equal to next-hop-self) is kept.

New Behavior: A router advertising a locally originated route (from a static route with a recursive next hop) advertises the next hop to be the recursive next hop of the static route.

- Switched Virtual Interface (SVI)-based Ethernet over MPLS (EoMPLS) now works with Transport Profiles (TPs).

Old Behavior: SVI-based EoMPLS did not work for packets over TPs.

New Behavior: SVI-based EoMPLS now works for packets over TPs.

Additional Information:

[http://www.cisco.com/en/US/docs/ios-xml/ios/mp\\_12\\_vpns/configuration/15-1s/mp-any-transport.html](http://www.cisco.com/en/US/docs/ios-xml/ios/mp_12_vpns/configuration/15-1s/mp-any-transport.html)



- The IKEv2 profile name must be specified to disassociate it from a crypto map or IPsec profile.  
Old Behavior: The IKEv2 profile name does not need to be specified to disassociate it from a crypto map or IPsec profile.  
New Behavior: The IKEv2 profile name must be specified to disassociate it from a crypto map or IPsec profile.  
Additional Information:  
[http://www.cisco.com/en/US/docs/ios-xml/ios/sec\\_conn\\_ike2vpn/configuration/15-2mt/sec-cfg-ikev2-flex.html#GUID-DC2773B6-7E71-43F4-B4E7-25063C7D4851](http://www.cisco.com/en/US/docs/ios-xml/ios/sec_conn_ike2vpn/configuration/15-2mt/sec-cfg-ikev2-flex.html#GUID-DC2773B6-7E71-43F4-B4E7-25063C7D4851)
- A command is added to truncate the downstream ANCP rate.  
Old Behavior: In situations where large number of unique Access Node Control Protocol (ANCP) rates generated result in a correspondingly high number of policy maps, the number of policy maps can exceed the maximum number of policy maps supported on a router.  
New Behavior: Use the **ancp truncate** command to reduce the ANCP rate.  
Caution: This command is to be used only in exceptional scenarios, such as when the number of unique rates generated result in exceeding the maximum number of policy maps supported on a router.  
Additional Information:  
<http://www.cisco.com/en/US/docs/ios-xml/ios/ancp/command/ancp-a1.html#GUID-4AB51EAF-C9B7-48EB-A3E4-E18D2A576816>
- CLI to tune ratelimit parameter for RP-based LI mode.  
Old Behavior: The command was not present in the command reference guide.  
New Behavior: Updated the command reference guide with the **li-slot rp rate** command.  
Additional Information:  
<http://www.cisco.com/en/US/docs/ios-xml/ios/interface/command/ir-l1.html>
- Optimization of ACL TCAM entry consumption on the Cisco 7600 platforms for Policy Based Routing under certain circumstances.  
Old Behavior: When configuring multiple PBR sequences (or a single PBR sequence with multiple ACLs) in which more than one PBR ACL contains DENY entries, the result of the merge is suboptimal in the terms of number of TCAM entries and masks used.  
New Behavior: Entering the new **platform ipv4 pbr optimize tcam** command allows for better optimization in the case described.  
Additional Information:  
<http://www.cisco.com/en/US/docs/routers/7600/ios/15S/configuration/guide/layer3.html#wp1027016>
- Cisco ASR 1000 BDI interface supports MTU size change.  
Old Behavior: The default maximum transmission unit (MTU) size is 1500 bytes and is not configurable.  
New Behavior: For a BDI, a MTU size from 1500 and 9216 bytes can be configured.  
Additional Information:  
<http://www.cisco.com/en/US/docs/routers/asr1000/configuration/guide/chassis/bdi.html>
- Fast Network Time Protocol (NTP) synchronization is achieved.  
Old Behavior: The burst and initial burst (iburst) modes are enabled manually.  
New Behavior: The burst and iburst modes are enabled by default.

Additional Information:

<http://www.cisco.com/en/US/docs/ios-xml/ios/bsm/command/bsm-cr-n1.html#GUID-CC69EFC5-68A3-4C5D-90CD-67DE45D4A370>

- The **telecom-solutions** keyword is not supported.

Old Behavior: The **telecom-solutions** keyword in the **ntp refclock** command allows users to configure the reference clock driver.

New Behavior: The **telecom-solutions** keyword, along with its options, is visible but cannot be configured.

Additional Information:

<http://www.cisco.com/en/US/docs/ios-xml/ios/bsm/command/bsm-cr-n1.html#GUID-875B8F64-2179-4F71-8BC0-6BF103EBB22F>

## Deferrals

Cisco IOS software images are subject to deferral. Cisco recommends that you view the deferral notices at the following location to determine if your software release is affected:

<http://www.cisco.com/cisco/software/advisory.html>

## Field Notices and Bulletins

- Field Notices—Cisco recommends that you view the field notices for this release to see if your software or hardware platforms are affected. You can find field notices at [http://www.cisco.com/en/US/support/tsd\\_products\\_field\\_notice\\_summary.html](http://www.cisco.com/en/US/support/tsd_products_field_notice_summary.html).
- Bulletins—You can find bulletins at [http://www.cisco.com/en/US/products/sw/iosswrel/ps5012/prod\\_literature.html](http://www.cisco.com/en/US/products/sw/iosswrel/ps5012/prod_literature.html).