



Release Notes for Cisco 1750 Series Routers for Cisco IOS Release 12.1(5)XM

February 13, 2002

These release notes for Cisco 1750 routers describe the enhancements provided in Cisco IOS Release 12.1(5)XM7. These release notes are updated as needed. Use these release notes with *Cross-Platform Release Notes for Cisco IOS Release 12.1* on Cisco.com and the Documentation CD-ROM.

All caveats in Release 12.1(5)T are also in Release 12.1(5)XM7. For a list of the software caveats that apply to Cisco IOS Release 12.1 T, see *Caveats for Cisco IOS Release 12.1 T* that accompanies these release notes. The caveats document is updated for every maintenance release and is located on Cisco.com and the Documentation CD-ROM.



You can find the most current Cisco IOS documentation on Cisco.com. These electronic documents might contain updates and modifications made after the hardcopy documents were printed.

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Early Deployment Releases

These release notes describe Cisco 1750 routers for Cisco IOS Release 12.1(5)XM7, which is an early deployment (ED) release based on Cisco IOS Release 12.1. Early deployment releases contain fixes for software caveats and support for new Cisco hardware and software features.

The following list shows the sequence of recent early deployment releases for Cisco 1750 routers:

- Release 12.0(5)XQ
- Release 12.0(7)T
- Release 12.1 T, up to 12.1(5)T
- Release 12.1(5)XM, up to 12.1(5)XM7

For more information, see the “Platform-Specific Documents” section on page 16 about accessing related release note documents.

System Requirements

This section describes the system requirements for Cisco IOS Release 12.1(5)XM7:

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Memory Requirements

Table 1 Memory Requirements for the Cisco 1700 Series

Platforms	Feature Sets	Image Name	Software Image	Recommended Flash Memory	Recommended DRAM Memory	Runs from
Cisco 1750	IP Feature Sets	IP/IPX/AT/IBM/Voice/FW/IDS Plus IPSec 3DES	c1700-bk2no3r2sv3y-mz	16MB	48MB	RAM
		IP/IPX/AT/IBM/Voice/FW/IDS Plus IPSec 56	c1700-bno3r2sv3y56i-mz	16MB	48MB	RAM
		IP/Voice/FW/IDS Plus IPSec 3DES	c1700-k2o3sv3y-mz	8MB	48MB	RAM
		IP/Voice Plus IPSec 3DES	c1700-k2sv3y-mz	8MB	32MB	RAM
		IP/IPX/Voice/FW/IDS Plus	c1700-no3sv3y-mz	8MB	32MB	RAM

Table 1 Memory Requirements for the Cisco 1700 Series (continued)

Platforms	Feature Sets	Image Name	Software Image	Recommended Flash Memory	Recommended DRAM Memory	Runs from
Cisco 1750 (continued)	IP Feature Sets (continued)	IP/Voice/FW/IDS Plus	c1700-o3sv3y-mz	8MB	32MB	RAM
		IP/Voice/FW/IDS Plus IPSec 56	c1700-o3sv3y56i-mz	8MB	48MB	RAM
		IP/FW/IDS	c1700-o3y-mz	4MB	20MB	RAM
		IP/Voice Plus IPSec 56	c1700-sv3y56i-mz	8MB	32MB	RAM

Hardware Supported

Cisco IOS Release 12.1(5)XM7 supports the Cisco 1750, which runs data and data-plus-voice images. For detailed descriptions of the new hardware features, see “New and Changed Information” section on page 11.

The voice-and-data capable Cisco 1750 router provides global Internet and company intranet access and includes the following:

- Voice-over-IP (VoIP) voice-and-data functionality; the router can carry voice traffic (for example, telephone calls and faxes) over an IP network
- Support for virtual private networking
- Modular architecture
- Network device integration

The Cisco 1750 router has the following hardware components:

- One autosensing 10/100 Fast Ethernet port, which operates in full- or half-duplex mode (with manual override available)
- One Voice interface card slot—Supports a single voice interface card (Table 4) with two ports per card
- Two WAN interface card slots for either WAN interface cards (WICs) or voice interface cards (VICs)
- Synchronous serial interfaces on serial WAN interface cards
- Asynchronous serial interfaces on serial WAN interface cards
- ISDN WAN interface cards—ISDN dialup and ISDN leased line (IDSL) at 144 kbps; encapsulation over ISDN leased line: Frame Relay and PPP
- One auxiliary (AUX) port (up to 115.2 kbps asynchronous serial)
- One console port
- One internal expansion slot—Supports hardware-assisted services such as encryption (up to T1/E1) and compression processor
- RISC Processor—Motorola MPC860T PowerQUICC at 48 MHz
- One security slot that supports Kensington or similar lockdown equipment
- DRAM memory: 16 MB default, expandable to 48 MB
- Flash memory: 4 MB default, expandable to 16 MB

- Desktop form factor
- Australian FXO-M3

The Cisco 1750 router supports any combination of one or two of the following voice interface cards, which are shared with the Cisco 2600 and 3600 routers:

- VIC-2FXS: Two port Foreign Exchange Station (FXS) voice/fax interface card for voice/fax network module
- VIC-2FXO: Two port Foreign Exchange Office (FXO) voice/fax interface card for voice/fax network module
- VIC-2FXO-EU: Two port FXO voice/fax interface card for Europe
- VIC-2E/M: Two port Ear & Mouth (E&M) voice/fax interface card for voice/fax network module

Determining the Software Release

To determine the version of Cisco IOS software running on your Cisco 1750 router, log in to the router and enter the **show version EXEC** command:

```
router> show version  
Cisco Internetwork Operating System Software  
IOS (tm) Software (c1700-sv3y56i-mz), Version 12.1(5)XM7, RELEASE SOFTWARE
```

Upgrading to a New Software Release

For general information about upgrading to a new software release, see *Software Installation and Upgrade Procedures* located at: http://www.cisco.com/warp/public/130/upgrade_index.shtml.

Feature Set Tables

The Cisco IOS software is packaged in feature sets consisting of software images—depending on the platform. Each feature set contains a specific set of Cisco IOS features. Cisco IOS Release 12.1(5)XM7 supports the same feature sets as Cisco IOS Release 12.1 T, but Release 12.1(5)XM7 can include new features supported by Cisco 1750 routers.



Caution

Cisco IOS images with strong encryption (including, but not limited to 168-bit (3DES) data encryption feature sets) are subject to United States government export controls and have limited distribution. Strong encryption images to be installed outside the United States are likely to require an export license. Customer orders may be denied or subject to delay due to United States government regulations. When applicable, the purchaser/user must obtain local import and use authorizations for all encryption strengths. Please contact your sales representative or distributor for more information, or send an e-mail to export@cisco.com.

Table 2, Table 3, and Table 4 list the features and feature sets supported by the Cisco 1750 routers in Cisco IOS Release 12.1(5)XM7. All three tables use the following conventions:

- Yes—The feature is supported in the software image.
- No—The feature is not supported in the software image.
- In—The number in the “In” column indicates the Cisco IOS release in which the feature was introduced. For example, (2) means a feature was introduced in 12.1(2)T. If a cell in this column is empty, the feature was included in the initial base release.



Note

These feature set tables contain only the features specific to the T-train. For a more complete list of features, see the feature set tables in the mainline release notes on Cisco.com:
<http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121relnt/xprn121/121feats.htm>.

Table 2 Feature List by Feature Set for the Cisco 1700 Series, Part 1

Features	In	Feature Sets					
		IP	IP Plus	IP Plus IPSec 56	IP/FW/IDS	IP/FW/ IDS Plus IPSec 56	IP/IPX
IP Multicast							
Bidirectional PIM	(2)	No	Yes	Yes	No	Yes	No
IP Routing Protocols							
OSPF Flooding Reduction	(2)	Yes	Yes	Yes	Yes	Yes	Yes

Table 2 Feature List by Feature Set for the Cisco 1700 Series, Part 1 (continued)

Features	In	Feature Sets					
		IP	IP Plus	IP Plus IPSec 56	IP/FW/IDS	IP/FW/ IDS Plus IPSec 56	IP/IPX
Miscellaneous							
AutoInstall Using DHCP for LAN Interfaces	(5)	Yes	Yes	Yes	Yes	Yes	Yes
Closed User Group Selection Facility Suppress Option	(5)	Yes	Yes	Yes	Yes	Yes	Yes
DiffServ Compliant Weighted Random Early Detection	(5)	Yes	Yes	Yes	Yes	Yes	Yes
Fax Relay Packet Loss Concealment	(5)	Yes	Yes	Yes	Yes	Yes	Yes
Implementing DiffServ for End-to-End Quality of Service	(5)	Yes	Yes	Yes	Yes	Yes	Yes
L2TP Tunnel Management Enhancements	(5)	No	Yes	Yes	No	Yes	No
L2TP Tunnel Switching	(5)	No	Yes	Yes	No	Yes	No
NAT - Support for NetMeeting Directory (Internet Locator Service - ILS)	(5)	Yes	Yes	Yes	Yes	Yes	Yes
NTP MIB	(5)	No	Yes	Yes	No	Yes	No
Parser Cache	(5)	No	Yes	Yes	No	Yes	No
RSVP Support for Frame Relay	(5)	No	Yes	Yes	No	Yes	No
SDLC SNRM Timer and Window Size Enhancements	(5)	No	No	No	No	No	No
UDLR Tunnel ARP and IGMP Proxy	(5)	No	Yes	Yes	No	Yes	No
VoIP Call Admission Control using RSVP	(5)	No	No	No	No	No	No
Multimedia and Quality of Service							
H.323 V2 Enhancements	(3)	No	No	No	No	No	No
Quality of Service Voice Enhancements	(3)	No	No	No	No	No	No
Multiservice Applications							
Voice over Frame Relay (Cisco 1750 only)	(2)	No	No	No	No	No	No
Security							
Secure Shell Version 1 Integrated Client	(3)	No	No	Yes	No	Yes	No

Table 2 Feature List by Feature Set for the Cisco 1700 Series, Part 1 (continued)

Features	In	Feature Sets					
		IP	IP Plus	IP Plus IPSec 56	IP/FW/IDS	IP/FW/ IDS Plus IPSec 56	IP/IPX
SSH Version 1 Server Support		Yes	Yes	Yes	Yes	Yes	Yes
Virtual Private Network (VPN) Module for the Cisco 1700 Series	(2)	No	No	Yes	No	Yes	No
Voice and Multimedia							
MGCP CAS PBX and AAL2 PVC	(5)XM	Yes	Yes	Yes	Yes	Yes	Yes
WAN							
Frame Relay Switching Enhancements: Shaping and Policing	(2)	No	Yes	Yes	No	Yes	No

Table 3 Feature List by Feature Set for the Cisco 1700 Series, Part 2

Features	In	Feature Sets					
		IP/IPX/FW/IDS Plus	IP/IPX/AT/IBM	IP/IPX/AT/IBM Plus	IP/Voice Plus IPSec 56	IP/Voice/FW/IDS Plus	IP/Voice/FW/IDS Plus IPSec 56
IP Multicast							
Bidirectional PIM	(2)	Yes	No	Yes	Yes	Yes	Yes
IP Routing Protocols							
OSPF Flooding Reduction	(2)	Yes	Yes	Yes	Yes	Yes	Yes
Miscellaneous							
AutoInstall Using DHCP for LAN Interfaces	(5)	Yes	Yes	Yes	Yes	Yes	Yes
Closed User Group Selection Facility Suppress Option	(5)	Yes	Yes	Yes	Yes	Yes	Yes
DiffServ Compliant Weighted Random Early Detection	(5)	Yes	Yes	Yes	Yes	Yes	Yes
Fax Relay Packet Loss Concealment	(5)	Yes	Yes	Yes	Yes	Yes	Yes
Implementing DiffServ for End-to-End Quality of Service	(5)	Yes	Yes	Yes	Yes	Yes	Yes
L2TP Tunnel Management Enhancements	(5)	Yes	No	Yes	Yes	Yes	Yes
L2TP Tunnel Switching	(5)	Yes	No	Yes	Yes	Yes	Yes
NAT - Support for NetMeeting Directory (Internet Locator Service - ILS)	(5)	Yes	Yes	Yes	Yes	Yes	Yes
NTP MIB	(5)	Yes	No	Yes	Yes	Yes	Yes
Parser Cache	(5)	Yes	Yes	Yes	Yes	Yes	Yes
RSVP Support for Frame Relay	(5)	Yes	No	Yes	Yes	Yes	Yes
SDLC SNRM Timer and Window Size Enhancements	(5)	No	Yes	Yes	No	No	No
UDLR Tunnel ARP and IGMP Proxy	(5)	Yes	No	Yes	Yes	Yes	Yes
VoIP Call Admission Control using RSVP	(5)	No	No	No	Yes	Yes	Yes
Multimedia and Quality of Service							
H.323 V2 Enhancements	(3)	No	No	No	Yes	Yes	Yes
Quality of Service Voice Enhancements	(3)	No	No	No	Yes	Yes	Yes

Table 3 Feature List by Feature Set for the Cisco 1700 Series, Part 2 (continued)

Features	In	Feature Sets					
		IP/IPX/FW/IDS Plus	IP/IPX/AT/IBM	IP/IPX/AT/IBM Plus	IP/Voice Plus IPSec 56	IP/Voice/FW/IDS Plus	IP/Voice/FW/IDS Plus IPSec 56
Multiservice Applications							
Voice over Frame Relay (Cisco 1750 only)	(2)	No	No	No	Yes	Yes	Yes
Security							
Secure Shell Version 1 Integrated Client	(3)	No	No	No	Yes	No	Yes
SSH Version 1 Server Support		Yes	Yes	Yes	Yes	Yes	Yes
Virtual Private Network (VPN) Module for the Cisco 1700 Series	(2)	No	No	No	Yes	No	Yes
Voice and Multimedia							
MGCP CAS PBX and AAL2 PVC	(5)XM	Yes	Yes	Yes	Yes	Yes	Yes
WAN							
Frame Relay Switching Enhancements: Shaping and Policing	(2)	Yes	No	Yes	Yes	Yes	Yes

Table 4 Feature List by Feature Set for the Cisco 1700 Series, Part 3

Features	In	Feature Sets				
		IP/IPX/Voice/FW/IDS Plus	IP Plus IPSec 3DES	IP/FW/IDS Plus IPSec 3DES	IP/Voice Plus IPSec 3DES	IP/Voice/FW/IDS Plus IPSec 3DES
IP Multicast						
Bidirectional PIM	(2)	Yes	Yes	Yes	Yes	Yes
IP Routing Protocols						
OSPF Flooding Reduction	(2)	Yes	Yes	Yes	Yes	Yes
Miscellaneous						
AutoInstall Using DHCP for LAN Interfaces	(5)	Yes	Yes	Yes	Yes	Yes
Closed User Group Selection Facility Suppress Option	(5)	Yes	Yes	Yes	Yes	Yes
DiffServ Compliant Weighted Random Early Detection	(5)	Yes	Yes	Yes	Yes	Yes

Table 4 Feature List by Feature Set for the Cisco 1700 Series, Part 3 (continued)

Features	In	Feature Sets				
		IP/IPX/Voice/ FW/IDS Plus	IP Plus IPSec 3DES	IP/FW/IDS Plus IPSec 3DES	IP/Voice Plus IPSec 3DES	IP/Voice/FW/ IDS Plus IPSec 3DES
Fax Relay Packet Loss Concealment	(5)	Yes	Yes	Yes	Yes	Yes
Implementing DiffServ for End-to-End Quality of Service	(5)	Yes	Yes	Yes	Yes	Yes
L2TP Tunnel Management Enhancements	(5)	Yes	Yes	Yes	Yes	Yes
L2TP Tunnel Switching	(5)	Yes	Yes	Yes	Yes	Yes
NAT - Support for NetMeeting Directory (Internet Locator Service - ILS)	(5)	Yes	Yes	Yes	Yes	Yes
NTP MIB	(5)	Yes	Yes	Yes	Yes	Yes
Parser Cache	(5)	Yes	Yes	Yes	Yes	Yes
RSVP Support for Frame Relay	(5)	Yes	Yes	Yes	Yes	Yes
SDLC SNRM Timer and Window Size Enhancements	(5)	No	No	No	No	No
UDLR Tunnel ARP and IGMP Proxy	(5)	Yes	Yes	Yes	Yes	Yes
VoIP Call Admission Control using RSVP	(5)	Yes	No	No	Yes	Yes
Multimedia and Quality of Service						
H.323 V2 Enhancements	(3)	Yes	No	No	Yes	Yes
Quality of Service Voice Enhancements	(3)	Yes	No	No	Yes	Yes
Multiservice Applications						
Voice over Frame Relay (Cisco 1750 only)	(2)	Yes	No	No	Yes	Yes
Security						
Secure Shell Version 1 Integrated Client	(3)	No	Yes	Yes	Yes	Yes
SSH Version 1 Server Support		Yes	Yes	Yes	Yes	Yes
Virtual Private Network (VPN) Module for the Cisco 1700 Series	(2)	No	Yes	Yes	Yes	Yes
Voice and Multimedia						
MGCP CAS PBX and AAL2 PVC	(5)XM	Yes	Yes	Yes	Yes	Yes

Table 4 Feature List by Feature Set for the Cisco 1700 Series, Part 3 (continued)

Features	In	Feature Sets				
		IP/IPX/Voice/ FW/IDS Plus	IP Plus IPSec 3DES	IP/FW/IDS Plus IPSec 3DES	IP/Voice Plus IPSec 3DES	IP/Voice/FW/ IDS Plus IPSec 3DES
WAN						
Frame Relay Switching Enhancements: Shaping and Policing	(2)	Yes	Yes	Yes	Yes	Yes

New and Changed Information

New Software Features in Cisco IOS Releases 12.1(5)XM and 12.1(5)XM1

The following new software features are supported by Cisco 1750 routers for Release 12.1(5)XM. No new software features are supported by Cisco 1750 routers for Release 12.1(5)XM7.

MGCP CAS PBX and AAL2 PVC

The Media Gateway Control Protocol Channel Associated Signaling (MGCP CAS) PBX and ATM Adaptation Layer 2 Permanent Virtual Circuit (AAL2 PVC) feature set extends the Simple Gateway Control Protocol (SGCP) Channel Associated Signaling (CAS) and AAL2 support onto the merged SGCP/MGCP software base to enable various service provider solutions. Following is a list of the features in the feature set:

- CAS termination and translation to MGCP on Business Gateways (BGWs) and Trunking Gateways (TGWs)
Digital CAS (E&M) interfaces are supported in addition to the analog (FXO, FXS, and E&M) interfaces.
- Support for CAS PBX and Feature Group D CAS Functions
MGCP 0.1 is now expanded to support CAS packages that handle CAS PBX and Feature Group D CAS functions, including Barge-In, Busy Line Verify, and 911 capabilities on the Trunking Gateway (TGW).
- Expanded MGCP 0.1 to control AAL2 voice transport
The earlier version of the merged SGCP/MGCP stack supported only Voice over IP. The standalone SGCP software supported both VoIP and Voice over AAL2. The merged stack supports both VoIP and VoAAL2.
- Addition of SGCP CAS PBX support to the existing merged SGCP/MGCP software stack
The CAS PBX gateway features include CAS PBX trunks, digit maps, CAS events, and quarantine buffer software. These features were available in the existing standalone SGCP software; now they are supported in the merged stack.
- Consolidation of various SGCP and MGCP feature sets onto one software image for Residential Gateways (RGWs), BGWs, and TGWs.

The essential difference for current SGCP users is that support for the SGCP application has been replaced with the MGCP application. The MGCP application supports both SGCP commands and MGCP commands, permitting access to a larger feature set than with the SGCP application alone. The MGCP CAS PBX and AAL2 PVC software assumes the MGCP mode as the default environment. This allows the gateway to recognize both MGCP and SGCP messages sent by the Call Agent. However, you can specify SGCP mode for certain messages to be sent by the gateway.



Note Invoking the SGCP mode initiates the older set of SGCP commands. Support for this set will eventually be discontinued. Unless you have a very specific reason for using the older command set, Cisco recommends using the MGCP application going forward.

Limitations and Restrictions

MIBs

Old Cisco Management Information Bases (MIBs) will be replaced in a future release. Currently, OLD-CISCO-* MIBs are being converted into more scalable MIBs—without affecting existing Cisco IOS products or NMS applications. You can update from deprecated MIBs to the replacement MIBs as shown in Table 5.

Table 5 *Deprecated and Replacement MIBs*

Deprecated MIB	Replacement
OLD-CISCO-APPLETALK-MIB	RFC1243-MIB
OLD-CISCO-CHASSIS-MIB	ENTITY-MIB
OLD-CISCO-CPUK-MIB	To be decided
OLD-CISCO-DECNET-MIB	To be decided
OLD-CISCO-ENV-MIB	CISCO-ENVMON-MIB
OLD-CISCO-FLASH-MIB	CISCO-FLASH-MIB
OLD-CISCO-INTERFACES-MIB	IF-MIB CISCO-QUEUE-MIB
OLD-CISCO-IP-MIB	To be decided
OLD-CISCO-MEMORY-MIB	CISCO-MEMORY-POOL-MIB
OLD-CISCO-NOVELL-MIB	NOVELL-IPX-MIB
OLD-CISCO-SYS-MIB	(Compilation of other OLD* MIBs)
OLD-CISCO-SYSTEM-MIB	CISCO-CONFIG-COPY-MIB
OLD-CISCO-TCP-MIB	CISCO-TCP-MIB
OLD-CISCO-TS-MIB	To be decided
OLD-CISCO-VINES-MIB	CISCO-VINES-MIB
OLD-CISCO-XNS-MIB	To be decided

**Note**

Cisco Management Information Base (MIB) User Quick Reference is no longer published. If you have an account with Cisco.com, you can find the current list of MIBs supported by Cisco. To reach the *Cisco Network Management Toolkit*, go to Cisco.com, press **Login**, and click to **Software Center: Network Mgmt Products: Cisco Network Management Toolkit: Cisco MIB**.

Important Notes

The following sections contain important notes about Cisco IOS Release 12.1(5)XM7 that can apply to Cisco 1750 routers.

Caveat CSCdr91706 and IOS HTTP Vulnerability

A defect in multiple releases of Cisco IOS software causes a Cisco router or switch to halt and reload if the IOS HTTP service is enabled and you browse to `http://router-ip/anytext?/` and enter the enable password when it is requested. This defect can be exploited to produce a denial of service (DoS) attack. This vulnerability can only be exploited if the enable password is known or not set.

The vulnerability, identified as Cisco bug ID CSCdr91706, affects virtually all mainstream Cisco routers and switches running Cisco IOS software releases 12.0 through 12.1, inclusive. This is not the same defect as CSCdr36952.

The vulnerability has been corrected and Cisco is making fixed releases available for free to replace all affected IOS releases. Cisco urges all customers to upgrade to releases that are not vulnerable to this defect as listed in the complete advisory, which is available at: <http://www.cisco.com/warp/public/707/ioshttpserverquery-pub.shtml>. You are strongly encouraged to read the complete advisory.

Using the boot flash Command

Booting a Cisco 1700 series router with the commands **boot flash** or **boot system flash** results in unpredictable behavior. To work around this problem, be sure to enter a colon (:) following both commands (for example, **boot flash:** or **boot system flash:**).

Fan Operation in Cisco 1700 Series Routers

The fans in the Cisco 1700 series routers stay off until thermally activated (45°C/115°F).

Flash Defaults to Flash:1 on Multipartition Flash

When using a multipartition flash card, the various flash partitions are referred to as “flash:1:”, “flash:2:”, etc. If you specify only “flash” in a multipartition flash, the parser assumes “flash:1:.” For example, if you enter **show flash all** the parser defaults to “show flash:1: all” and only the flash information for the first partition displays. To see information for all flash partitions, enter **show flash ?**. This will list all of the valid partitions. Then enter **show flash:xx: all** on each valid partition.

Caveats

Caveats describe unexpected behavior or defects in Cisco IOS software releases. Severity 1 caveats are the most serious caveats, severity 2 caveats are less serious, and severity 3 caveats are the least serious of these three severity levels.

All caveats in Release 12.1(5)T are also in Release 12.1(5)XM7. For information on caveats in Cisco IOS Release 12.1(5)T, refer to the *Caveats for Cisco IOS Release 12.1 T* document. For information on caveats in Cisco IOS Release 12.1, refer to the *Caveats for Cisco IOS Release 12.1* document. These publications, located on Cisco.com and the Documentation CD-ROM, list severity 1 and 2 caveats, and select severity 3 caveats.



Note

If you have an account with Cisco.com, you can also use the Bug Toolkit to find select caveats of any severity. To reach the Bug Toolkit, log in to Cisco.com and click **Service & Support: Technical Assistance Center: Tool Index: Bug Toolkit**. Another option is to go to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Resolved Caveats - Release 12.1(5)XM7

This section describes unexpected behavior that is fixed in Release 12.1(5)XM7.

Management

CSCdw65903

An error can occur with management protocol processing. Please use the following URL for further information:

<http://www.cisco.com/cgi-bin/bugtool/onebug.pl?bugid=CSCdw65903>

Caveats for Release 12.1(5)XM1

This section describes possibly unexpected behavior by Release 12.1(5)XM1, specific to the Cisco 1750 router only. The following caveats are severity 3.

CSCdr26084

From the perspective of the Cisco 1750 router command line interface (CLI), the format used to describe the slot and port is <slot>/<port>. However, after executing the command **show mgcp endpoint**, the Cisco 1750 router might display the output in the format <slot>/<subinterface>/<port>, such as 0/0/1 for port 0/1. The 0 digit for the <slot> does not represent hardware; it is a phantom number added by Cisco 1750 internal code because there is no concept of a subinterface for Cisco 1750 routers. This syntax structure matches that of some other networking equipment requiring unique specifications for all three hardware aspects: the slot number, the sub-unit number, and the port number. On the Cisco 1750 router, the <subinterface> is actually the slot number. The output format of the command **show mgcp endpoint** thus provides information about how to configure the command **call agent**.

CSCdr39864

The Cisco 1750 router is a Residential Gateway (RGW) and supports MGCP on FXS ports only, therefore, do not configure MGCP on FXO or E&M ports.

Related Documentation

The following sections describe the documentation available for Cisco 1750 routers. These documents consist of hardware and software installation guides, Cisco IOS configuration and command references, system error messages, feature modules, and other documents.

Documentation is available as printed manuals or electronic documents, except for feature modules, which are available online on Cisco.com and the Documentation CD-ROM.

Use these release notes with these documents:

- Release-Specific Documents, page 15
- Platform-Specific Documents, page 16
- Feature Modules, page 16
- Cisco IOS Software Documentation Set, page 17

Release-Specific Documents

The following documents are specific to Cisco IOS Release 12.1 and are located on Cisco.com and the Documentation CD-ROM:

- *Cross-Platform Release Notes for Cisco IOS Release 12.1*

On Cisco.com at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.1

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.1: Release Notes: Cross-Platform Release Notes

- Product bulletins, field notices, and other release-specific documents on Cisco.com at:

Technical Documents

- *Caveats for Cisco IOS Release 12.1*

See *Caveats for Cisco IOS Release 12.1* and *Caveats for Cisco IOS Release 12.1 T*, which contain caveats applicable to all platforms for all maintenance releases of Cisco IOS Release 12.1 and Release 12.1 T:

- On Cisco.com at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.1: Caveats

- On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.1: Caveats

**Note**

If you have an account with Cisco.com, you can also use the Bug Toolkit to find select caveats of any severity. To reach the Bug Toolkit, log in to Cisco.com and click **Service & Support: Technical Assistance Center: Tool Index: Bug Toolkit**. Another option is to go to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Platform-Specific Documents

These individual and groups of documents are available for the Cisco 1750 router on Cisco.com and the Documentation CD-ROM:

- *Cisco 1750 Router Hardware Installation Guide*
- *Voice-over-IP Quick Start Guide*
- Cisco 1750 software configuration guides
- *Cisco WAN Interface Cards Hardware Installation Guide*
- *Installing and Removing Packet Voice DSP Modules Configuration Note*
- Release notes for the Cisco 1750 router
- Safety information for Cisco 1600 and 1700 routers

On Cisco.com at:

Technical Documents: Documentation Home Page: Cisco Product Documentation: Access Servers and Access Routers: Modular Access Routers: Cisco 1750 Router

On the Documentation CD-ROM at:

Cisco Product Documentation: Access Servers and Access Routers: Modular Access Routers: Cisco 1750 Router

Feature Modules

Feature modules describe new features supported by Cisco IOS Release 12.1 T and above, and are updates to the Cisco IOS documentation set. A feature module consists of a brief overview of the feature, benefits, configuration tasks, and a command reference. As updates, the feature modules are available online only. Feature module information is incorporated in the next printing of the Cisco IOS documentation set.

The online-only feature module specific to Release 12.1(5)XM7 is located on Cisco.com at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.1: New Feature Documentation: New Features in 12.1-Based Limited Lifetime Releases: New Features in 12.1 X Releases: New Features in Release 12.1(5)XM: New Features in Release 12.1(5)XM: MGCP CAS PBX and AAL2 PVC

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.1: New Feature Documentation: New Features in 12.1-Based Limited Lifetime Releases: New Features in 12.1 X Releases: New Features in Release 12.1(5)XM: New Features in Release 12.1(5)XM: MGCP CAS PBX and AAL2 PVC

Feature Navigator

Feature Navigator is a web-based tool that enables you to quickly determine which Cisco IOS software images support a particular set of features and which features are supported in a particular Cisco IOS image. Feature Navigator is available 24 hours a day, 7 days a week.

To access Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, e-mail the Contact Database Administration group at cdbadmin@cisco.com. If you do not have an account on Cisco.com, go to <http://www.cisco.com/register> and follow the directions to set up an account.

To use Feature Navigator, you must have a JavaScript-enabled web browser such as Netscape 3.0 or later, or Internet Explorer 4.0 or later. Internet Explorer 4.0 always has JavaScript enabled. To enable JavaScript for Netscape 3.x or Netscape 4.x, follow the instructions provided with the web browser. For JavaScript support and enabling instructions for other browsers, check with the browser vendor.

Feature Navigator is updated when major Cisco IOS software releases and technology releases occur. You can access Feature Navigator at the following URL:

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

Cisco IOS Software Documentation Set

The Cisco IOS software documentation set consists of the Cisco IOS configuration guides, Cisco IOS command references, and several other supporting documents that are shipped with your order in electronic form on the Documentation CD-ROM—unless you specifically ordered the printed versions.

Documentation Modules

Each module in the Cisco IOS documentation set consists of two books: a configuration guide and a corresponding command reference. Chapters in a configuration guide describe protocols, configuration tasks, Cisco IOS software functionality, and contain comprehensive configuration examples. Chapters in a command reference provide complete command syntax information. Use each configuration guide with its corresponding command reference.

On Cisco.com and the Documentation CD-ROM, two master hot-linked documents provide information for the Cisco IOS software documentation set:

- On Cisco.com at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.1: Configuration Guides and Command References

- On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.1: Configuration Guides and Command References

Cisco IOS Release 12.1 Documentation Set

Table 6 describes the contents of the Cisco IOS Release 12.1 software documentation set, which is available in electronic form and in printed form ordered.

**Note**

You can find the most current Cisco IOS documentation on Cisco.com and the Documentation CD-ROM. These electronic documents may contain updates and modifications made after the hard-copy documents were printed.

On Cisco.com at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.1

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.1

Table 6 Cisco IOS Software Release 12.1 Documentation Set

Books	Major Topics
<ul style="list-style-type: none"> <i>Cisco IOS Configuration Fundamentals Configuration Guide</i> <i>Cisco IOS Configuration Fundamentals Command Reference</i> 	Cisco IOS User Interfaces Cisco IOS File Management Cisco IOS System Management
<ul style="list-style-type: none"> <i>Cisco IOS Bridging and IBM Networking Configuration Guide</i> <i>Cisco IOS Bridging and IBM Networking Command Reference, Volume I</i> <i>Cisco IOS Bridging and IBM Networking Command Reference, Volume II</i> 	Using Cisco IOS Software Overview of SNA Internetworking Bridging IBM Networking
<ul style="list-style-type: none"> <i>Cisco IOS Dial Services Configuration Guide: Terminal Services</i> <i>Cisco IOS Dial Services Configuration Guide: Network Services</i> <i>Cisco IOS Dial Services Command Reference</i> 	Preparing for Dial Access Modem Configuration and Management ISDN and Signalling Configuration PPP Configuration Dial-on-Demand Routing Configuration Dial-Backup Configuration Terminal Service Configuration Large-Scale Dial Solutions Cost-Control Solutions Virtual Private Networks X.25 on ISDN Solutions Telco Solutions Dial-Related Addressing Services Interworking Dial Access Scenarios
<ul style="list-style-type: none"> <i>Cisco IOS Interface Configuration Guide</i> <i>Cisco IOS Interface Command Reference</i> 	Interface Configuration Overview Configuring LAN Interfaces Configuring Serial Interfaces Configuring Logical Interfaces
<ul style="list-style-type: none"> <i>Cisco IOS IP and IP Routing Configuration Guide</i> <i>Cisco IOS IP and IP Routing Command Reference</i> 	IP Addressing and Services IP Routing Protocols IP Multicast
<ul style="list-style-type: none"> <i>Cisco IOS AppleTalk and Novell IPX Configuration Guide</i> <i>Cisco IOS AppleTalk and Novell IPX Command Reference</i> 	AppleTalk and Novell IPX Overview Configuring AppleTalk Configuring Novell IPX

Table 6 Cisco IOS Software Release 12.1 Documentation Set (continued)

Books	Major Topics
<ul style="list-style-type: none"> • <i>Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Configuration Guide</i> • <i>Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Command Reference</i> 	Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Overview Configuring Apollo Domain Configuring Banyan VINES Configuring DECnet Configuring ISO CLNS Configuring XNS
<ul style="list-style-type: none"> • <i>Cisco IOS Multiservice Applications Configuration Guide</i> • <i>Cisco IOS Multiservice Applications Command Reference</i> 	Multiservice Applications Overview Voice Video Broadband
<ul style="list-style-type: none"> • <i>Cisco IOS Quality of Service Solutions Configuration Guide</i> • <i>Cisco IOS Quality of Service Solutions Command Reference</i> 	Quality of Service Overview Classification Congestion Management Congestion Avoidance Policing and Shaping Signalling Link Efficiency Mechanisms Quality of Service Solutions
<ul style="list-style-type: none"> • <i>Cisco IOS Security Configuration Guide</i> • <i>Cisco IOS Security Command Reference</i> 	Security Overview Authentication, Authorization, and Accounting (AAA) Security Server Protocols Traffic Filtering and Firewalls IP Security and Encryption Other Security Features
<ul style="list-style-type: none"> • <i>Cisco IOS Switching Services Configuration Guide</i> • <i>Cisco IOS Switching Services Command Reference</i> 	Cisco IOS Switching Services Overview Cisco IOS Switching Paths Cisco Express Forwarding NetFlow Switching MPLS Switching Multilayer Switching Multicast Distributed Switching Virtual LANs LAN Emulation
<ul style="list-style-type: none"> • <i>Cisco IOS Wide-Area Networking Configuration Guide</i> • <i>Cisco IOS Wide-Area Networking Command Reference</i> 	Wide-Area Networking Overview Configuring ATM Configuring Frame Relay Configuring Frame Relay-ATM Interworking Configuring SMDS Configuring X.25 and LAPB
<ul style="list-style-type: none"> • <i>New Features in 12.1-Based Limited Lifetime Releases</i> • <i>New Features in Release 12.1 T</i> • Release Notes (Release note and caveat documentation for 12.1-based releases and various platforms) • <i>Cisco IOS Debug Command Reference</i> • <i>Cisco IOS Dial Services Quick Configuration Guide</i> 	

**Note**

Cisco Management Information Base (MIB) User Quick Reference is no longer published. If you have an account with Cisco.com, you can find the current list of MIBs supported by Cisco. To reach the *Cisco Network Management Toolkit*, go to CC, press **Login**, and click to **Software Center: Network Mgmt Products: Cisco Network Management Toolkit: Cisco MIB**.

Obtaining Documentation

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly. Therefore, it is probably more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

Ordering Documentation

Registered Cisco.com users can order the Documentation CD-ROM and other Cisco Product documentation through our online Subscription Services at <http://www.cisco.com/cgi-bin/subcat/kaojump.cgi>.

Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco's corporate headquarters (California, USA) at 408 526-4000 or, in North America, call 800 553-NETS (6387).

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Warranty or maintenance contract customers can use the Technical Assistance Center. All customers can submit technical feedback on Cisco documentation using the web, e-mail, a self-addressed stamped response card included in many printed documents, or by sending mail to Cisco.

Cisco.com

Cisco continues to revolutionize how business is done on the Internet. Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

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Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users may order products, check on the status of an order and view benefits specific to their relationships with Cisco.

You can access Cisco.com in the following ways:

- WWW: www.cisco.com
- Telnet: [cco.cisco.com](telnet://cco.cisco.com)
- Modem using standard connection rates and the following terminal settings: VT100 emulation; 8 data bits; no parity; and 1 stop bit.
 - From North America, call 408 526-8070
 - From Europe, call 33 1 64 46 40 82

You can e-mail questions about using Cisco.com to cco-team@cisco.com.

Technical Assistance Center

The Cisco Technical Assistance Center (TAC) is available to warranty or maintenance contract customers who need technical assistance with a Cisco product that is under warranty or covered by a maintenance contract.

To display the TAC web site that includes links to technical support information and software upgrades and for requesting TAC support, use www.cisco.com/techsupport.

To contact by e-mail, use one of the following:

Language	E-mail Address
English	tac@cisco.com
Hanzi (Chinese)	chinese-tac@cisco.com
Kanji (Japanese)	japan-tac@cisco.com
Hangul (Korean)	korea-tac@cisco.com
Spanish	tac@cisco.com
Thai	thai-tac@cisco.com

In North America, TAC can be reached at 800 553-2447 or 408 526-7209. For other telephone numbers and TAC e-mail addresses worldwide, consult the following web site:
<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>.

Software Configuration Tips on the Cisco Technical Assistance Center Home Page

If you have a Cisco.com log-in account, you can access the following URL, which contains links and tips on configuring your Cisco products:

http://www.cisco.com/public/technotes/tech_sw.html

This URL is subject to change without notice. If it changes, point your Web browser to Cisco.com, press **Login**, and click on this path: **Technical Assistance Center: Technical Tips**.

The following sections are provided from the Technical Tips page:

- Access Dial Cookbook—Contains common configurations or recipes for configuring various access routes and dial technologies.
- Field Notices—Notifies you of any critical issues regarding Cisco products and includes problem descriptions, safety or security issues, and hardware defects.
- Frequently Asked Questions—Describes the most frequently asked technical questions about Cisco hardware and software.
- Hardware—Provides technical tips related to specific hardware platforms.
- Hot Tips—Describes popular tips and hints gathered from the Cisco Technical Assistance Center (TAC). Most of these documents are available from the TAC Fax-on-demand service. To reach Fax-on-demand and receive documents at your fax machine from the United States, call 888-50-CISCO (888-502-4726). From other areas, call 650-596-4408.
- Internetworking Features—Lists tips on using Cisco IOS software features and services.
- Sample Configurations—Provides actual configuration examples that are complete with topology and annotations.

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, for your convenience many documents contain a response card behind the front cover. Otherwise, you can mail your comments to the following address:

Cisco Systems, Inc.
Document Resource Connection
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate and value your comments.

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