



Release Notes for Cisco MC3810 for Cisco IOS Release 12.0

January 2, 2001

These release notes for the Cisco MC3810 support Cisco IOS Release 12.0, up to and including Release 12.0(15). These release notes are updated as needed to describe new features, memory recommendations, hardware support, software platform deferrals, and changes to the microcode or modem code and related documents.

For a list of the software caveats that apply to Release 12.0(15), see *Caveats for Cisco IOS Release 12.0* that accompanies these release notes. The caveats document is updated for every maintenance release and is located on Cisco Connection Online (CCO) and the Documentation CD-ROM.

Use these release notes with *Cross-Platform Release Notes for Cisco IOS Release 12.0* on CCO and the Documentation CD-ROM.

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System Requirements

This section describes the system requirements for Cisco IOS Release 12.0 and includes the following sections:

- Memory Recommendations, page 2
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Memory Recommendations

Table 1 lists the image numbers and minimum memory recommendations for the Cisco MC3810 multiservice concentrator using Cisco IOS Release 12.0(15).

Table 1 Memory Recommendations for Cisco MC3810 Series

Feature Set	Images	Recommended Flash Memory	Recommended DRAM Memory	Runs From
IP/IPX/IBM/ATM	mc3810-a2inr3-mz	8 MB	32 MB	RAM
IP/IPX/AT/IBM/Voice	mc3810-binr3v2-mz	8 MB	32 MB	RAM
IP/IPX/AT/IBM/ATM/Voice	mc3810-a2binr3v2-mz	8 MB	32 MB	RAM

Hardware Supported

Cisco IOS Release 12.0(15) supports the Cisco MC3810 multiservice access concentrator.

Determining the Software Version

To determine the version of Cisco IOS software running on your Cisco MC3810, log in to the Cisco MC3810 and enter the **show version EXEC** command:

```
router>show version
Cisco Internetwork Operating System Software
IOS (tm) MC3810 Software (mc3810-a2inr3-mz), Version 12.0(15), RELEASE SOFTWARE
```

Upgrading to a New Software Release

For general information about upgrading to a new software release, see *Cisco IOS Upgrade Ordering Instructions* located at:

http://www.cisco.com/warp/public/cc/cisco/mkt/ios/prodlit/957_pp.htm

Feature Set Tables

To determine what features are available with each feature set, see Table 2. The table summarizes what features you can use when running a specific feature set on the Cisco MC3810 for Cisco IOS Release 12.0(15). The feature set table uses the following terms to identify features:

- Yes—The feature is offered in the feature set
- No—The feature is not offered in the feature set

Table 2 Feature List by Feature Set for the Cisco MC3810 Series

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
ATM Access			
UNI 3.1 ¹	Yes	No	Yes
Traffic Shaping	Yes	No	Yes
rtVBR, nrtVBR, CBR, UBR	Yes	No	Yes
Structured CES ²	Yes	No	Yes
RFC 1483	Yes	No	Yes
IBM Support			
APPN	No	No	No
APPN High-Performance Routing	No	No	No
APPN MIB Enhancements	No	No	No
APPN over Ethernet LAN Emulation	No	No	No
APPN Scalability Enhancements	No	No	No
BAN for SNA Frame Relay Support	Yes	Yes	Yes
Bisync ³	No	No	No
Bridging Code Rework	Yes	Yes	Yes
Caching and Filtering	Yes	Yes	Yes
DLSw+	Yes	Yes	Yes
DLSw (RFC 1795)	Yes	Yes	Yes
DLSw Version 2 (RFC 1266)	Yes	Yes	Yes
Downstream PU Concentration (DSPU)	Yes	Yes	Yes
Frame Relay SNA Support (RFC 1490)	Yes	Yes	Yes
NCIA	No	No	No
NetView Native Service Point	Yes	Yes	Yes
QLLC	No	No	No
Polled Async (ADT) ⁴	No	No	No
Response Time Reporter	No	No	No
RIF Passthru in DLSw+	Yes	Yes	Yes
SDLC Integration	Yes	Yes	Yes

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
SDLC Transport (STUN)	Yes	Yes	Yes
SDLC-to-LAN Conversion (SDLLC)	Yes	Yes	Yes
SNA and NetBIOS WAN Optimization	Yes	Yes	Yes
SRB/RSRB	Yes	Yes	Yes
SRT	No	Yes	Yes
SRTL B	Yes	Yes	Yes
TG/COS	No	No	No
TN3270	No	No	No
TN3270 LU Nailing	No	No	No
TN3270 Server Enhancements	No	No	No
IP Routing			
BGP	Yes	Yes	Yes
BGP4	Yes	Yes	Yes
EGP	Yes	Yes	Yes
Enhanced IGRP	Yes	Yes	Yes
Enhanced IGRP Optimizations	Yes	Yes	Yes
ES-IS	No	No	No
GRE VPN	Yes	Yes	Yes
IGRP	Yes	Yes	Yes
IS-IS	No	No	No
Named IP Access Control List	Yes	Yes	Yes
Network Address Translation (NAT)	Yes	Yes	Yes
NHRP	Yes	Yes	Yes
OSPF	Yes	Yes	Yes
OSPF Not-So-Stubby-Areas (NSSA)	Yes	Yes	Yes
OSPF On Demand Circuit (RFC 1793)	Yes	Yes	Yes
Protocol-Independent Multicast (PIM)	Yes	Yes	Yes
PIM Version 2	Yes	Yes	Yes
Policy-Based Routing	Yes	Yes	Yes
RIP	Yes	Yes	Yes
RIP Version 2	Yes	Yes	Yes

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
LAN Support			
Apollo Domain	No	No	No
AppleTalk Phase 2	No	Yes	Yes
Banyan VINES	No	No	No
Concurrent Routing and Bridging	Yes	Yes	Yes
DECnet IV	No	No	No
DECnet V	No	No	No
GRE	Yes	Yes	Yes
Integrated Routing and Bridging (IRB)	Yes	Yes	Yes
IP	Yes	Yes	Yes
LAN Extension Host	No	No	No
Multiring	No	No	No
Novell IPX	Yes	Yes	Yes
OSI	No	No	No
Source-Route Bridging	No	No	No
Transparent and Translational Bridging	Yes	Yes	Yes
VLANs (ISL and IEEE 802.10)	No	No	No
XNS	No	No	No
Management			
AutoInstall	Yes	Yes	Yes
Automatic Modem Configuration	Yes	Yes	Yes
HTTP Server	Yes	Yes	Yes
Cisco IOS File System	Yes	Yes	Yes
RMON Events and Alarms	Yes	Yes	Yes
RMON Full	No	No	No
SNMP	Yes	Yes	Yes
SNMP Inform Request	Yes	Yes	Yes
Telnet	Yes	Yes	Yes
VPDN MIB Feature	Yes	Yes	Yes
Multimedia and Quality of Service			
Generic Traffic Shaping	Yes	Yes	Yes
Random Early Detection (RED)	Yes	Yes	Yes
RSVP	Yes	Yes	Yes

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
Other Routing			
AURP	No	Yes	Yes
IPX RIP	Yes	Yes	Yes
NLSP	Yes	Yes	Yes
RTMP	No	Yes	Yes
SMRP	No	Yes	Yes
S RTP	No	No	No
Protocol Translation			
LAT	No	No	No
PPP	No	No	No
Rlogin	No	No	No
Telnet	No	No	No
TN3270	No	No	No
X.25	No	No	No
Remote Node			
ARAP 1.0/2.0	No	Yes	Yes
Asynchronous Master Interfaces	No	No	No
ATCP	No	No	No
CPPP	No	No	No
CSLIP	No	No	No
DHCP	No	No	No
IP Pooling	No	No	No
IPX and ARAP on Virtual Async Interfaces	No	No	No
IPXCP	No	No	No
MacIP	No	No	No
NASI	No	No	No
NetBEUI over PPP	No	No	No
PPP	Yes	Yes	Yes
SLIP	Yes	Yes	Yes
Scalability			
Airline Product Set (ALPS)	No	No	No
Cisco IOS File System	Yes	Yes	Yes
Entity MIB	Yes	Yes	Yes
Expression MIB	Yes	Yes	Yes
OSPF Point to Multipoint	Yes	Yes	Yes

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
Per Port Debugging (Conditionally Triggered Debugging)	Yes	Yes	Yes
SNMP Manager	Yes	Yes	Yes
Security			
Access Lists	Yes	Yes	Yes
Access Security	Yes	Yes	Yes
Additional Vendor-Proprietary RADIUS Attributes	Yes	Yes	Yes
Authenticating ACLs	No	No	No
Automated Double Authentication	No	No	No
Certificate Authority Interoperability	No	No	No
Context-Based Access Control (CBAC)	No	No	No
Extended Access Lists	Yes	Yes	Yes
Internet Key Exchange Security Protocol	No	No	No
IPSec Network Security	No	No	No
Kerberized Login	No	No	No
Kerberos V Client Support	No	No	No
Lock And Key	No	No	No
Mac Security For Hubs	Yes	Yes	Yes
Md5 Routing Authentication	No	No	No
MS-CHAP Support	No	Yes	Yes
Named Method Lists for AAA Authentication and Accounting	Yes	Yes	Yes
Network Layer Encryption (40-bit Or Export Controlled 56-bit DES)	No	No	No
RADIUS	No	No	No
Router Authentication	No	No	No
Subblock Phase 1	Yes	Yes	Yes
TACACS+	Yes	Yes	Yes
Switching			
Enhanced ATM VC Configuration and Management	Yes	No	Yes
Multiple ISDN Switch Types	No	No	No
Terminal Services			
LAT	No	No	No
Rlogin	No	No	No

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
Telnet	No	No	No
TN3270	No	No	No
X.25 Pad	No	No	No
Xremote	No	No	No
Voice/Multimedia			
Analog Signaling	No	Yes	Yes
E1 CAS Signaling ⁵	No	Yes	Yes
Gain Control	No	Yes	Yes
Local Dialing	No	Yes	Yes
Multiflex Trunk	No	Yes	Yes
Multiple Ring Tones	No	Yes	Yes
Off-net Dialing	No	Yes	Yes
On-net/Off-net Call Rerouting	No	Yes	Yes
Pass-Through Voice	No	Yes	Yes
Private Line Auto-Ringdown (PLAR)	No	Yes	Yes
Remote Dialing	No	Yes	Yes
T1 CAS Signaling	No	Yes	Yes
Voice Activity Detection	No	Yes	Yes
Voice over ATM	No	Yes	Yes
Voice over Frame Relay	No	Yes	Yes
Voice over HDLC	No	Yes	Yes
Voice over IP	No	No	No
WAN Optimization			
Bandwidth-on-demand	No	No	No
Custom and Priority Queuing ⁶	Yes	Yes	Yes
Dial Backup	No	No	No
Dial-on-demand	No	No	No
DRP Server Agent	Yes	Yes	Yes
Header, Link and Payload Compression	Yes	Yes	Yes
Snapshot Routing	Yes	Yes	Yes
Weighted Fair Queuing ⁷	Yes	Yes	Yes
WAN Services			
Always On/Direct ISDN	No	No	No
ATM LAN Emulation: Decnet Routing And Banyan Vines Support	No	No	No

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
ATM LAN Emulation: (HSRP And SSRP)	No	No	No
ATM: Rate Queues for SVC Per Subinterface	No	No	No
ATM: Uni 3.1 Signaling for ATM	No	No	No
Combinet Packet Protocol (CPP)	No	No	No
Dialer Profiles	No	No	No
Dialer Watch	Yes	Yes	Yes
8/16 Port Analog/Digital Network Module	Yes	Yes	Yes
Frame Relay Compression (FRF.9)	Yes	Yes	Yes
Frame Relay SVCs Support (DTE)	No	No	No
Frame Relay Traffic Shaping	Yes	Yes	Yes
Frame Relay Switching	Yes	Yes	Yes
Frame Relay–ATM Interworking	Yes	No	Yes
Half Bridge/Half Router for CPP and PPP	No	No	No
HDLC	Yes	Yes	Yes
IPXwan 2.0	Yes	Yes	Yes
ISDN	No	No	No
ISDN Advice of Charge	No	No	No
ISDN Caller ID Callback	No	No	No
ISDN NFAS	No	No	No
Leased Line ISDN at 128 kbps	No	No	No
MPPC-MS PPP Compression	Yes	Yes	Yes
MS Callback	Yes	Yes	Yes
Multichassis Multilink PPP (MMP)	No	No	No
National ISDN Switch Type	No	No	No
PPP	Yes	Yes	Yes
SMDS	No	No	No
Stackable Home Gateway	Yes	Yes	Yes
Switched 56	No	No	No
Virtual Private Dialup Network (VPDN)	No	No	No
X.25	No	No	No
X.25 Enhancements	No	No	No
X.25 on ISDN	No	No	No
X.25 Switching between PVCs and SVCs	No	No	No

Table 2 Feature List by Feature Set for the Cisco MC3810 Series (continued)

Features	Feature Set		
	IP/IPX/IBM/ ATM	IP/IPX/AT/ IBM/Voice	IP/IPX/AT/ IBM/ATM/Voice
Misc.			
Interface Name Modularity	Yes	Yes	Yes
Setup Enhancement	Yes	Yes	Yes

1. ATM PVCs only. SVCs are not supported.
2. Voice signaling on CES is not available.
3. Not supported until testing is completed.
4. Not supported until testing is completed.
5. Includes T1 CAS protocols, plus UK Standard CAS (Mercury protocol) and CEPT standard E&M.
6. Applicable to data-only interfaces.
7. Applicable to data-only interfaces.

New and Changed Information

The following sections list the new hardware and software features supported by the Cisco MC3810 for Release 12.0.

New Hardware Features in Release 12.0(15)

There are no new hardware features supported by the Cisco MC3810 in Cisco IOS Release 12.0(15).

New Software Features in Release 12.0(15)

There are no new software features supported by the Cisco MC3810 in Cisco IOS Release 12.0(15).

Important Notes

Caveat CSCdr91706 and IOS HTTP Vulnerability

A defect in multiple releases of Cisco IOS software will cause a Cisco router or switch to halt and reload if the IOS HTTP service is enabled, browsing to `http://router-ip/anytext?/` is attempted, and the enable password is supplied when requested. This defect can be exploited to produce a denial of service (DoS) attack.

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. Customers are urged to upgrade to releases that are not vulnerable to this defect as shown in detail below.

This vulnerability can only be exploited if the enable password is known or not set. You are strongly encouraged to read the complete advisory, which is available at <http://www.cisco.com/warp/public/707/ioshttpserverquery-pub.shtml>.

Ordering Cisco IOS Software

Beginning with Cisco IOS Release 12.0(7)XK, Cisco is changing the product numbers you use to order a specific Cisco IOS software image. In short, Cisco will remove the periods separating the release train, maintenance release, and build number. The following table provides some examples.

Old Product Number	New Product Number	Release	Image Description
S364AR1K2-12.0.7XK	S364AR1K2-12007XK	12.0(7)XK	Cisco 3640 Series IOS Enterprise/ SNA SW PLUS IP Sec 3DES
S26CP-12.0.7XK	S26CP-12007XK	12.0(7)XK	Cisco 2600 Series IOS IP Plus

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 3.

Table 3 *Deprecated and Replacement MIBs*

Deprecated MIB	Replacement
OLD-CISCO-APPLETALK-MIB	RFC1243-MIB
OLD-CISCO-CHASSIS-MIB	ENTITY-MIB
OLD-CISCO-CPUK-MIB	In development
OLD-CISCO-DECNET-MIB	In development
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	In development
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	In development
OLD-CISCO-VINES-MIB	CISCO-VINES-MIB
OLD-CISCO-XNS-MIB	In development

Using the Cisco MC3810 with the PSTN

This section describes important notes regarding use of the Cisco MC3810 with the Public Switched Telephone Network (PSTN).

Connections to a PSTN

Care should be exercised when connecting switched voice ports on the Cisco MC3810 directly to the PSTN because improper configurations can expose the corporate network to telephone fraud.

Switched Access from the PSTN

The Cisco MC3810 has the capability to connect a user from the PSTN directly to the corporate wide-area telephone network. As a phone switch, the Cisco MC3810 can be configured to switch the user to any location in that network, even remote locations that are connected again to another PSTN. However, the Cisco MC3810 does not provide any mechanism to restrict where users can call after they are connected. Without proper network design, this condition could result in the unauthorized use of the corporate network for making calls at the corporation's expense. To prevent this from occurring, Cisco does not recommend connecting a switched voice interface on the Cisco MC3810 directly to the PSTN. Instead, it should be connected to a PBX that implements a security scheme that prevents unauthorized use.

Non-Switched Calls

The same opportunity for illicit use does not exist for non-switched call types such as pass-through connections. Pass-through calls create a path to only a single location specified by the network administrator. For example, a pass-through connection might be used to pass a trunk from a PBX to the PSTN. In this case, the trunk on the PBX will always pass straight through the Cisco MC3810 to the PSTN. As a result, the necessary security is provided by the PBX.

Caveats

Caveats describe unexpected behavior in Cisco IOS software releases. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious. Severity 3 caveats are moderate caveats, and only select severity 3 caveats are included in the caveats document.

For information on caveats in Cisco IOS Release 12.0, see *Caveats for Cisco IOS Release 12.0*, which lists severity 1 and 2 caveats and select severity 3 caveats for Release 12.0 and is located on CCO and the Documentation CD-ROM.

Related Documentation

The following sections describe the documentation available for the Cisco MC3810. These documents consist of hardware and software installation guides, Cisco IOS configuration and command references, system error messages, and other documents.

Documentation is available as printed manuals or electronic documents.

Use these release notes with these documents:

- Release-Specific Documents, page 13
- Platform-Specific Documents, page 13
- Cisco IOS Software Documentation Set, page 14

Release-Specific Documents

The following documents are specific to Release 12.0 and are located on CCO and the Documentation CD-ROM:

- Cross-Platform Release Notes for Cisco IOS Release 12.0

On CCO at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0:

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Release Notes: Cross-Platform Release Notes

- Product bulletins, field notices, and other release-specific documents on CCO at:

Technical Documents

- Caveats for Cisco IOS Release 12.0

As a supplement to the caveats listed in “Caveats” in these release notes, see *Caveats for Cisco IOS Release 12.0* and *Caveats for Cisco IOS Release 12.0 T*, which contains caveats applicable to all platforms for all maintenance releases of Release 12.0.

On CCO at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Caveats

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Caveats



Note

If you have an account with CCO, you can use Bug Navigator II to find caveats of any severity for any release. You can reach Bug Navigator II on CCO at **Software Center: Cisco IOS Software: Cisco Bug Toolkit: Cisco Bugtool Navigator II**, or at <http://www.cisco.com/support/bugtools>.

Platform-Specific Documents

These documents are available for the Cisco MC3810 on CCO and the Documentation CD-ROM:

- *Cisco MC3810 Multiservice Concentrator Hardware Installation Guide*

- *Cisco Redundant Power System Hardware Installation Guide*

On CCO at:

Technical Documents: Documentation Home Page: Cisco Product Documentation: Access Servers and Access Routers: Multiservice Access Concentrators: Cisco MC3810

On the Documentation CD-ROM at:

Cisco Product Documentation: Access Servers and Access Routers: Multiservice Access Concentrators: Cisco MC3810

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

On CCO at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Configuration Guides and Command References

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0: Configuration Guides and Command References

Release 12.0 Documentation Set

Table 4 describes the contents of the Cisco IOS Release 12.0 software documentation set, which is available in electronic form and in printed form upon request.



Note

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

On CCO at:

Technical Documents: Documentation Home Page: Cisco IOS Software Configuration: Cisco IOS Release 12.0

On the Documentation CD-ROM at:

Cisco Product Documentation: Cisco IOS Software Configuration: Cisco IOS Release 12.0

Table 4 Cisco IOS Software Release 12.0 Documentation Set

Books	Chapter Topics
<ul style="list-style-type: none"> • <i>Configuration Fundamentals Configuration Guide</i> • <i>Configuration Fundamentals Command Reference</i> 	Configuration Fundamentals Overview Cisco IOS User Interfaces File Management System Management
<ul style="list-style-type: none"> • <i>Bridging and IBM Networking Configuration Guide</i> • <i>Bridging and IBM Networking Command Reference</i> 	Transparent Bridging Source-Route Bridging Token Ring Inter-Switch Link Remote Source-Route Bridging DLSw+ STUN and BSTUN LLC2 and SDLC IBM Network Media Translation DSPU and SNA Service Point SNA Frame Relay Access Support APPN Cisco Database Connection NCIA Client/Server Topologies Cisco Mainframe Channel Connection Airline Product Set
<ul style="list-style-type: none"> • <i>Dial Solutions Configuration Guide</i> • <i>Dial Solutions Command Reference</i> 	X.25 over ISDN Appletalk Remote Access Asynchronous Callback, DDR, PPP, SLIP Bandwidth Allocation Control Protocol ISDN Basic Rate Service ISDN Caller ID Callback PPP Callback for DDR Channelized E1 and T1 Dial Backup for Dialer Profiles Dial Backup Using Dialer Watch Dial Backup for Serial Lines Peer-to-Peer DDR with Dialer Profiles DialOut Dial-In Terminal Services Dial-on-Demand Routing (DDR) Dial Backup Dial-Out Modem Pooling Large-Scale Dial Solutions Cost-Control Solutions Virtual Private Dialup Networks Dial Business Solutions and Examples
<ul style="list-style-type: none"> • <i>Cisco IOS Interface Configuration Guide</i> • <i>Cisco IOS Interface Command Reference</i> 	Interface Configuration Overview LAN Interfaces Logical Interfaces Serial Interfaces

Table 4 Cisco IOS Software Release 12.0 Documentation Set (continued)

Books	Chapter Topics
<ul style="list-style-type: none"> • <i>Network Protocols Configuration Guide, Part 1</i> • <i>Network Protocols Command Reference, Part 1</i> 	IP Overview IP Addressing and Services IP Routing Protocols
<ul style="list-style-type: none"> • <i>Network Protocols Configuration Guide, Part 2</i> • <i>Network Protocols Command Reference, Part 2</i> 	AppleTalk Novell IPX
<ul style="list-style-type: none"> • <i>Network Protocols Configuration Guide, Part 3</i> • <i>Network Protocols Command Reference, Part 3</i> 	Network Protocols Overview Apollo Domain Banyan VINES DECnet ISO CLNS XNS
<ul style="list-style-type: none"> • <i>Security Configuration Guide</i> • <i>Security Command Reference</i> 	AAA Security Services Security Server Protocols Traffic Filtering and Firewalls IP Security and Encryption Passwords and Privileges Neighbor Router Authentication IP Security Options
<ul style="list-style-type: none"> • <i>Cisco IOS Switching Services Configuration Guide</i> • <i>Cisco IOS Switching Services Command Reference</i> 	Switching Services Switching Paths for IP Networks Virtual LAN (VLAN) Switching and Routing
<ul style="list-style-type: none"> • <i>Wide-Area Networking Configuration Guide</i> • <i>Wide-Area Networking Command Reference</i> 	Wide-Area Network Overview ATM Frame Relay SMDS X.25 and LAPB
<ul style="list-style-type: none"> • <i>Voice, Video, and Home Applications Configuration Guide</i> • <i>Voice, Video, and Home Applications Command Reference</i> 	Voice over IP Voice over Frame Relay Voice over ATM Voice over HDLC Frame Relay-ATM Internetworking Synchronized Clocks Video Support Universal Broadband Features

Table 4 Cisco IOS Software Release 12.0 Documentation Set (continued)

Books	Chapter Topics
<ul style="list-style-type: none"> • <i>Quality of Service Solutions Configuration Guide</i> • <i>Quality of Service Solutions Command Reference</i> 	Policy-Based Routing QoS Policy Propagation via BGP Committed Access Rate Weighted Fair Queuing Custom Queuing Priority Queuing Weighted Random Early Detection Scheduling Signaling RSVP Packet Drop Frame Relay Traffic Shaping Link Fragmentation RTP Header Compression
<ul style="list-style-type: none"> • <i>Cisco IOS Software Command Summary</i> • <i>Dial Solutions Quick Configuration Guide</i> • <i>System Error Messages</i> • <i>Debug Command Reference</i> 	

**Note**

Cisco Management Information Base (MIB) User Quick Reference is no longer published. For the latest list of MIBs supported by Cisco, see *Cisco Network Management Toolkit* on Cisco Connection Online. From CCO, click on the following path: **Software Center: Network Mgmt Products: Cisco Network Management Toolkit: Cisco MIB.**

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <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 and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

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