



About This Guide

This section describes the *Cisco IOS Dial Services Quick Configuration Guide* and includes the following topics:

- Document Objectives
- Audience
- Scope
- New and Changed Information
- Conventions Used in This Guide
- Additional Information Sources
- Providing Documentation Feedback

Document Objectives

This guide:

- Describes the tasks needed to solve common business problems with dial networking technologies.
- Presents the most common dial access tasks in a format that enables you to configure your access server quickly for the most common tasks.
- Does not describe every feature, but describes those tasks that you most likely need to do to configure your access server.
- Begins with a case study followed by configuration scenarios.
- References detailed configuration options described in the Cisco IOS configuration guides and command references, so that you can refer to these other documents for more information.

Audience

This guide is intended for the following audiences:

- System administrators who are familiar with the fundamentals of router-based internetworking and who are responsible for installing and configuring internetworking equipment, but who are not familiar with the specifics of Cisco products or the routing protocols supported by Cisco products.
- Customers who know one networking protocol (such as Novell IPX) and one LAN protocol (such as Ethernet), but have no additional networking background or experience.

Scope

This guide provides a case study as an example for you to use when setting up your network for dial services. You would most likely set up this initial network in your laboratory to get an understanding of how it works, before you scaled it up to meet your needs. The options indicated in this guide are the recommended methods for completing the specified configuration tasks. Although they are typically the easiest or the most straightforward, they are not the only methods of doing these tasks. If you know of another configuration method not presented in this guide, you can use it.

**Note**

Although this document has been revised for inclusion in the Cisco IOS Release 12.1 documentation set, the routers used in this case study were running earlier releases for the sake of example.

New and Changed Information

The following is new or changed information since the last release of the *Cisco IOS Dial Services Quick Configuration Guide* (formerly known as the *Dial Solutions Quick Configuration Guide*):

- The chapters of the former *Dial Solutions Quick Configuration Guide* Part 2, “Additional Dial-Up Configurations” have been removed because the information is available elsewhere in appropriate manuals of the Cisco IOS documentation set.

These chapters included:

- IP, IPX, and AppleTalk Dial-Up Environments

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios120/12supdoc/dsqcg3/qcpppara.htm>

- Routing Across Modem Lines

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios120/12supdoc/dsqcg3/qcddr.htm>

- Security Configuration

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios120/12supdoc/dsqcg3/qcsecur.htm>

- The figures have been revised in all chapters to reflect more current and correct information.

Conventions Used in This Guide

- Document Text Conventions
- Document Screen Example Conventions
- Document Command Description Conventions

Document Text Conventions

This document uses the following conventions:

Convention	Description
^ or Ctrl	Represents the Control key. For example, when you read <i>^D</i> or <i>Ctrl-D</i> , hold down the Control key and press the D key. Keys are indicated in capital letters but are not case sensitive.
<i>string</i>	A string is defined as a nonquoted set of characters. For example, when setting an SNMP community string to “public”, do not use quotation marks around the string; otherwise, the string will include the quotation marks.



Note

Contains important information.



Caution

Means *reader be careful*. The described action might result in equipment damage or loss of data.



Timesaver

You can *save time* by performing the action described.



Tips

Means *the following information might help you solve a problem*.

Document Screen Example Conventions

Examples use the following conventions:

Convention	Description
screen	Information that appears on the screen.
bold screen	Information you must enter.
< >	Nonprinting characters, such as passwords, display in angle brackets.
!	Exclamation points at the beginning of a line indicate a comment line or certain Cisco IOS processes.
[]	Default responses to system prompts.

Document Command Description Conventions

Command descriptions use the following conventions:

Convention	Description
bold	Indicates commands and keywords that you enter exactly as shown.

<i>italics</i>	Indicates arguments for which you supply values; in contexts that do not allow italics, arguments are enclosed in angle brackets (< >).
[x]	Keywords or arguments shown within square brackets are optional.
{x y z}	A choice of required keywords (represented by x , y , and z) appears in braces separated by vertical bars. Select one keyword.
[x {y z}]	Braces and vertical bars within square brackets indicate a required choice within an optional element. You may choose not to select the option presented within the square brackets; but if you do want to select anything within the square brackets, the required choice within the braces must be made.

Additional Information Sources

For more information about the Cisco IOS and Cisco equipment, refer to the following resources:

- Documentation CD-ROM
- Cisco Connection Online
- Technical Assistance Center
- European Technical Assistance Center
- Related Documents
- Cisco IOS Documentation Set

Documentation CD-ROM

Cisco documentation and additional literature are available on the Documentation CD-ROM. The CD is updated and shipped monthly, so it may be more current than printed documentation. To order the Documentation CD (available both as a single CD and as an annual subscription), contact your local sales representative or call Cisco Customer Service.

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco's customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

Technical Assistance Center

If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800-553-2447 or 408-526-7209, or tac@cisco.com. Emergency technical assistance (for network-down or severe network problems) is available 24 hours a day, 7 days a week. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800-553-6387, 408-526-7208, or cs-rep@cisco.com.

For popular configuration tips and hints gathered from Cisco's Technical Assistance Center (TAC), go to the Hot Tips home page at the following URL. This URL is subject to change without notice.

<http://www.cisco.com/warp/public/701/>

If you choose to telephone the TAC for help, have the following information ready:

- Chassis serial number
- Maintenance contract number
- Software version level and hardware configuration (enter the **show version** command to display this information)
- Running software configuration. To display this information for Release 11.0 or later, enter the **show running config** command. For earlier releases, enter the **write terminal** command.

European Technical Assistance Center

Cisco and its European Service Partners coordinate all customer service in Europe, including hardware and software telephone technical support, onsite service, and module exchange and repair. For more information, contact the European TAC.

European TAC numbers and e-mail address are as follows:

- Phone: 32 2 778 42 42
- Fax: 32 2 778 43 00
- E-mail: euro-tac@cisco.com

Related Documents

Refer to the following online resources for more information:

- *Internetworking Case Studies*—Provides practical examples of how to implement Cisco IOS software features. Case studies address implementation concerns and show how to apply features to their best advantage. Detailed configuration file examples and network diagrams are included.
<http://www.cisco.com/univercd/cc/td/doc/cisintwk/ics/index.htm>
- *Cisco Access Dial Configuration Cookbook*—Contains common configurations or recipes to configure various access routers and dial technologies. It covers common configurations for async, dial-on-demand routing (DDR), integrated services digital network (ISDN), and other access dial concepts including basic security. It also provides configurations for the Cisco 700, AS5200, and AS5300. You must be a registered Cisco Connection Online (CCO) user to gain access to this publication.
http://www.cisco.com/warp/customer/793/access_dial/
- *Cisco IOS Dial Services Configuration Guides* and *Cisco IOS Dial Services Command Reference*—Provide a comprehensive library of Cisco's dial software features, which are configured by using the command line interface (CLI).
http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121cgcr/dialns_c/index.htm
http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121cgcr/dialts_c/index.htm
http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121cgcr/dial_r/index.htm
- *Internetworking Technology Overview, Point-to-Point Protocol*—Describes the background and general operation of PPP.
http://www.cisco.com/univercd/cc/td/doc/cisintwk/ito_doc/ppp.htm
- *Troubleshooting Engine*—Helps you solve common problems involving hardware, configuration, and performance.
<http://te.cisco.com/cgi-bin/webcgi.exe?New,KB=TE>
- *Cisco AS5x00 Access Server Documentation*—Includes software and hardware configuration guides for Cisco's access server product line.
http://www.cisco.com/univercd/cc/td/doc/product/access/acs_serv/index.htm



Note

These URLs can change without notice.

Cisco IOS Documentation Set

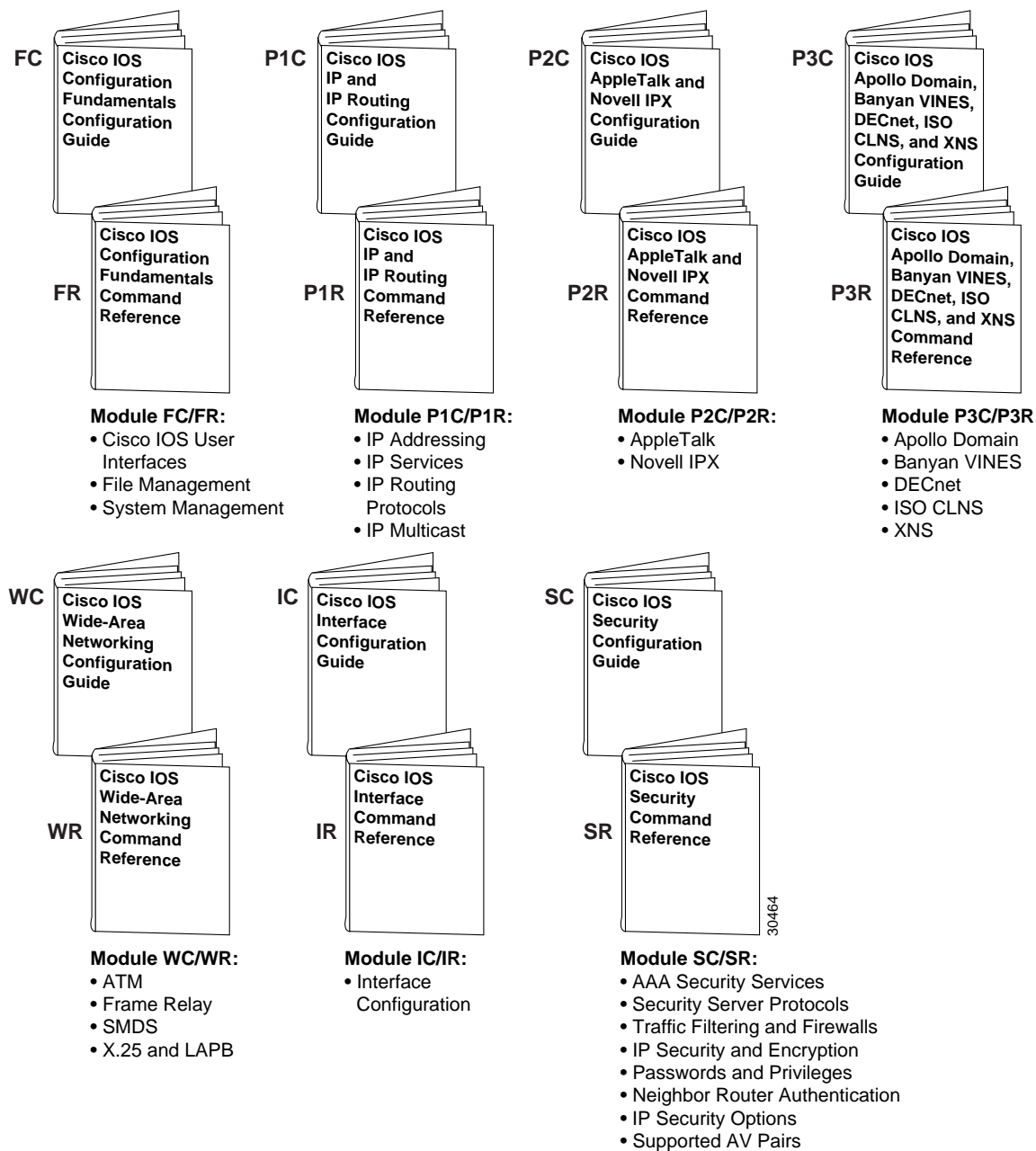
The Cisco IOS software documentation set is illustrated in the following figure:

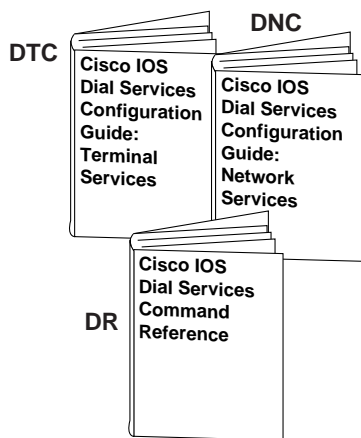


Note

The abbreviations next to the book icons in the following figure are page designators (for example, FC, FR, and so on), which are defined in a key in the index of each document to help with navigation. The bulleted lists under each module describe the major technology areas discussed in their corresponding books.

Figure 1 Cisco IOS Software Documentation Modules



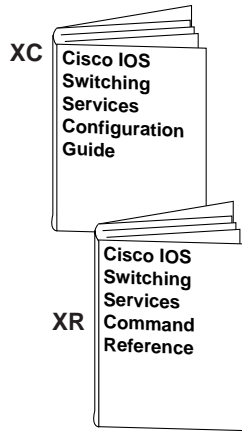


Module DTC/DR:

- Dial Access
- Modem Management
- ISDN BRI Services
- Point-to-Point Protocols
- Dial-on-Demand Routing
- Dial Backup
- Terminal Services

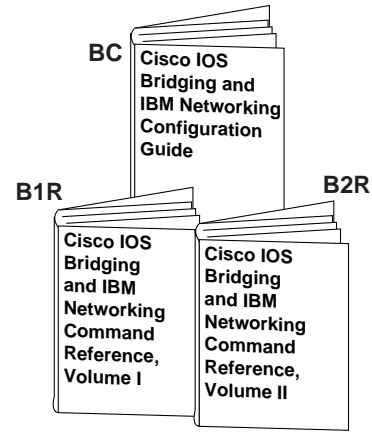
Module DNC/DR:

- Large-Scale Dial Solutions
- Cost-Control Solutions
- Virtual Private Networks
- X.25 on ISDN Solutions
- Telco Solutions
- Dial-Related Addressing Services
- Internetworking Dial Access Scenarios



Module XC/XR:

- Cisco IOS Switching Paths
- Cisco Express Forwarding
- NetFlow Switching
- Multiprotocol Label Switching
- Multilayer Switching
- Multicast Distributed Switching
- Virtual LANs
- LAN Emulation

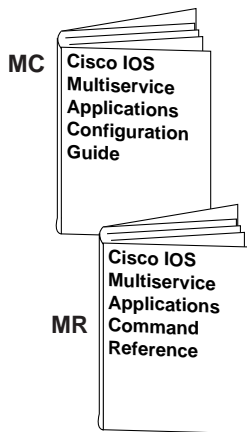


Module BC/B1R:

- Transparent Bridging
- Source-Route Bridging
- Token Ring Inter-Switch Link
- Token Ring Route Switch Module
- Remote Source-Route Bridging
- Data-Link Switching Plus
- Serial Tunnel and Block Serial Tunnel
- LLC2 and SDLC
- IBM Network Media Translation
- SNA Frame Relay Access
- NCI Client/Server
- Airline Product Set

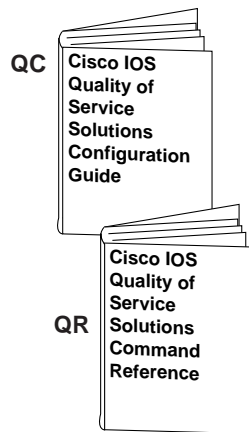
Module BC/B2R:

- DSPU and SNA Service Point
- SNA Switching Services
- Cisco Transaction Connection
- Cisco Mainframe Channel Connection
- CLAW and TCP/IP Offload
- CSNA, CMPC, and CMPC+
- TN3270 Server



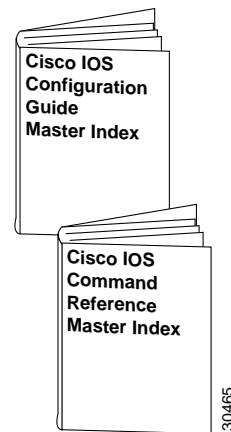
Module MC/MR:

- Voice over IP
- Voice over Frame Relay
- Voice over ATM
- Voice over HDLC
- Video Support
- Universal Broadband Features



Module QC/QR:

- Packet Classification
- Congestion Management
- Congestion Avoidance
- Policing and Shaping
- Signalling
- Link Efficiency Mechanisms



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Providing Documentation Feedback

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

You can also submit feedback on Cisco documentation as follows:

- Mail in the Cisco Reader Comment Card located at the front of this book
- Send an e-mail to bug-doc@cisco.com
- Send a fax to 408 527-8089

We appreciate your comments.

