



About This Manual

This section discusses the objectives, audience, organization, and conventions of the *Router Products Command Reference* publication.

Document Objectives

This publication provides an in-depth description of the commands necessary for configuring and maintaining your router. It describes tasks only in the context of using a particular command; it does not describe how the tasks interrelate or provide comprehensive configuration examples. You can use this publication as a standalone reference manual or in conjunction with the *Router Products Configuration Guide*. Not all of the **debug** commands are included in this publication, but you can find all of them in the *Debug Command Reference* publication.

How To Use This Manual

Use the *Router Products Command Reference* to do the following:

- Look up detailed information on command usage
- See what commands can be used in conjunction with a particular command

Audience

This publication is intended as a standalone document for experienced network administrators who will be configuring and maintaining routers and would like to reference commands. For less-experienced users who need to understand the tasks as well as the commands, it is intended as a companion guide to the *Router Products Configuration Guide*.

Document Organization

This publication is divided into six main parts. Each part comprises chapters describing related tasks or functions. The organization of parts and chapters in this publication matches the organization of parts and chapters in the *Router Products Configuration Guide*, except that this document contains appendixes. The parts in this publication are as follows:

- Part 1, “Product Introduction,” contains an overview of the router and command descriptions for the system user interface and command parser.

- Part 2, “System and Interface Configuration and Management,” describes the commands pertaining to booting, terminal sessions and modem lines, system management, and system interfaces.
- Part 3, “Wide-Area Networking,” describes the tasks pertaining to ATM, DDR, Frame Relay, HDLC, ISDN, LAN emulation (LANE), PPP, SLIP, SMDS, and X.25. The chapters are arranged in alphabetical order for ease of use.
- Part 4, “Routing Protocols,” contains chapters that describe the commands used to configure each supported network protocol. These protocols include Apollo Domain, AppleTalk, Banyan VINES, DECnet, IP, ISO CLNS, Novell IPX, and XNS (including Ungermann-Bass and 3Com variations). This part also contains a chapter that discusses commands for IP routing protocols, which include IGRP, Enhanced IGRP, BGP, RIP, OSPF, IS-IS, and ISO-IGRP. The chapters are arranged in alphabetical order for ease of use.
- Part 5, “Bridging,” contains chapters that describe the commands used to configure transparent bridging, source-route bridging, source-route transparent (SRT) bridging, and source-route translational bridging (SR/TLB) on our routers/bridges.
- Part 6, “IBM Networking,” contains chapters that describe how to configure the SDLC transport and serial tunneling mechanisms in an IBM local-area network (LAN). Also included are the tasks for configuring the local acknowledgment feature, managing your source-route bridges with LAN Network Manager, and configuring SDLLC and QLLC conversion, our IBM network protocol translation features. Part 6 also contains chapters that describe how to configure SNA downstream physical unit (DSPU) support and SNA Frame Relay access support, and Advanced Peer-to-Peer Networking (APPN), which provides support for client/server applications and offers more dynamics than traditional hierarchical SNA. Also covered in this part is data link switching plus (DLSw+), an SNA-over-IP routing standard that integrates SNA and LAN internetworks. The IBM Channel Attach chapter describes how to configure a Channel Interface Processor (CIP).

The appendixes contain a list of references and recommended reading, Ethernet type codes, regular expressions, a table of the ASCII character set, switching information, and a description of IOS 11.0 features supported by specific router platforms.

Document Conventions

Software and hardware documentation uses the following conventions:

- The caret character (^) represents the Control key.
For example, the key combinations ^D and Ctrl-D are equivalent: Both mean hold down the Control key while you press the D key. Keys are indicated in capitals, but are not case sensitive.
- 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.

Command descriptions use these conventions:

- Vertical bars (|) separate alternative, mutually exclusive, elements.
- Square brackets ([]) indicate optional elements.
- Braces ({ }) indicate a required choice.
- Braces within square brackets ([{ }]) indicate a required choice within an optional element.
- **Boldface** indicates commands and keywords that are entered literally as shown.

- *Italics* indicate arguments for which you supply values; in contexts that do not allow italics, arguments are enclosed in angle brackets (< >).

Examples use these conventions:

- Examples that contain system prompts denote interactive sessions, indicating that the user enters commands at the prompt. The system prompt indicates the current command mode. For example, the prompt `router(config)#` indicates global configuration mode.
- Terminal sessions and information the system displays are in `screen` font.
- Information you enter is in **boldface** `screen` font.
- Nonprinting characters, such as passwords, are in angle brackets (< >).
- Default responses to system prompts are in square brackets ([]).
- Exclamation points (!) at the beginning of a line indicate a comment line. They are also displayed by the router for certain processes.



Caution Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Note Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

The following illustration explains the fields of a typical command reference page.

	<div><div>router bgp</div></div>
Command name	router bgp
Brief description of command usage	Use the router bgp global configuration command to configure the Border Gateway Protocol (BGP) routing process. Use the no router bgp command to remove the routing process.
Command syntax	router bgp <i>autonomous-system</i> no router bgp <i>autonomous-system</i>
List of command arguments and keywords	Syntax Description <i>autonomous-system</i>
Descriptions of arguments and keywords	Identifies the router to other BGP routers and tags the routing information passed along.
Default configuration or value	Default No BGP autonomous systems are specified.
Mode in which command is entered	Command Mode Global configuration
Guidelines about use and operation of the command or related commands	Usage Guidelines This command allows you to set up a distributed routing core that automatically guarantees the loop-free exchange of routing information between autonomous systems (AS).
Example of using the command	Example The following example configures a BGP process for AS 120. router bgp 120
Other commands to reference for related information; all commands are in the same chapter except those followed by a †; see the index to locate these commands	Related Commands neighbor network timers bgp