About This Publication

This section discusses the objectives, audience, organization, and conventions of the *Internetworking Case Studies* publication.

Cisco documentation and additional literature are available on a CD called Cisco Connection Documentation, Enterprise Series. The CD is updated and shipped monthly so it might be more current than printed documentation. To order the Cisco Connection Documentation, Enterprise Series CD, contact your local sales representative or call Customer Service. The CD is available both as a single CD and as an annual subscription. You can also access Cisco technical documentation on the World Wide Web URL `http://www.cisco.com`.

Note   The Cisco Connection Documentation, Enterprise Series CD was previously called UniverCD.

Document Objectives

This publication documents case studies, providing practical examples of how to implement Cisco Systems 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.

Although this publication is *not* software release specific, the majority of this publication is based on Software Release 9.21 features. Exceptions for Cisco Internetwork Operating System (Cisco IOS) Software Release 10 and Cisco IOS Software Release 11 are noted in the text. This document is published approximately twice a year. New topics are added according to current interests.

Note   This is *not* a step-by-step configuration guide; it does not address all of the configuration options available per feature. For a complete description of router configuration options, see the Cisco IOS software configuration guides and command references. For detailed information on all router configuration commands and syntax, see the Cisco IOS software configuration guides and command references. Case studies often provide companion information for design considerations discussed in the *Internetwork Design Guide*.

Audience

This publication is designed for users interested in referencing practical examples of how to apply Cisco features to meet their internetworking needs. Readers should know how to configure a Cisco router and should be familiar with the protocols and media that their routers have been configured to support.

Document Organization

This document consists of the following chapters:

- Chapter 1, "RIP and OSPF Redistribution," addresses the issue of integrating Routing Information Protocol (RIP) networks with Open Shortest Path First (OSPF) networks.

- Chapter 2, "Dial-on-Demand Routing," describes Cisco's dial-on-demand (DDR) routing features, which allow you to form wide-area networks (WANs) over existing telephone lines.

- Chapter 3, "Increasing Security on IP Networks," describes Cisco's approach to network security and tells you how to use features of the Cisco IOS software to increase security in Internet Protocol (IP) networks.

- Chapter 4, "Integrating Enhanced IGRP into Existing Networks," describes the use of Enhanced IGRP with three network level protocols: IP, AppleTalk, and Internetwork Packet Exchange (IPX).

- Chapter 5, "Reducing SAP Traffic in Novell IPX Networks," tells you how to use access lists and incremental SAP updates to reduce congestion caused by Service Advertisement Protocol (SAP) updates.

- Chapter 6, "UDP Broadcast Flooding," describes techniques for using directed and flooded UDP broadcasts to deliver incoming data from a few sources to a large number of users in a network that is designed for redundancy.

- Chapter 7, "STUN for Front-End Processors," provides information about configuring serial tunneling (STUN) in traditional Systems Network Architecture (SNA) networks.

- Chapter 8, "Using ISDN Effectively in Multiprotocol Networks," describes the relationship between DDR and ISDN and presents a variety of techniques that can be used to control unnecessary connections in ISDN environments.

- Chapter 9, "Using HSRP for Fault-Tolerant IP Routing," tells you how to use the Hot Standby Routing Protocol (HSRP) to configure a router to assume the IP routing tasks of another router in the event that the other router becomes unavailable.

- Chapter 10, "LAN Switching," describes switching and describes how virtual LANs can be used to control congestion in switched LAN networks.

- Chapter 11, "Multicasting in IP and AppleTalk Networks," provides information about how to configure routers to support multicasting multimedia applications in IP and AppleTalk networks.

- Chapter 12, "Using the Border Gateway Protocol for Interdomain Routing," tells you how to use the Border Gateway Protocol (BGP) to route packets among autonomous systems (ASs).

- Chapter 13, "Scaling Dial-on-Demand Routing," describes a large asynchronous dial-up network and tells you how to configure it for IP routing.

Document Conventions

This publication uses the following conventions:

Command descriptions 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.

- Commands and keywords are in **boldface** font.

- Arguments for which you supply values are in *italic* font.

- Elements in square brackets ([ ]) are optional.

- Alternative but required keywords are grouped in braces ({ }) and separated by vertical bars (|).

Examples use these conventions:

- Terminal sessions and information the system displays are in `screen` font.

- Modified configurations show new commands 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.

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 publication.