



# Release Notes for the Cisco 1812 Routers for Cisco IOS Release 12.3(8)YH

---

January 12, 2005

## Contents

- [System Requirements, page 1](#)
- [New and Changed Information, page 3](#)
- [Limitations and Restrictions, page 3](#)
- [Caveats, page 4](#)
- [Related Documentation, page 5](#)
- [Obtaining Documentation, page 10](#)
- [Documentation Feedback, page 11](#)
- [Cisco Product Security Overview, page 11](#)
- [Obtaining Technical Assistance, page 12](#)
- [Obtaining Additional Publications and Information, page 14](#)

## System Requirements

This section describes the system requirements for Cisco IOS Release 12.3(8)YH.

## Memory Requirements

[Table 1](#) lists the memory requirements for Cisco IOS Release 12.3(8)YH.



**Note**

---

Recommended memory is the memory required for potential future expansions.

---



---

**Corporate Headquarters:**  
**Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA**

Copyright © 2004 Cisco Systems, Inc. All rights reserved.

**Table 1** *Memory Requirements for the Cisco 1812 Routers*

Platform	Software Product Description	Feature Set	Image	Flash	DRAM
Cisco 1812	Cisco 181X Advanced IP Services	Cisco 181X Advanced IP Services	c181x-advipservicesk9-mz	32MB	128MB
Cisco 1812	Cisco 181X Advanced Enterprise Services	Cisco 181X Advanced Enterprise Services	c181x-adventerprisek9-mz	32MB	128MB

## Hardware Supported

Cisco IOS Release 12.3(8)YH introduces a new security router to the Cisco 1800 series. The following model is supported by this release:

- Cisco 1812 - Two Fast Ethernet ports, one ISDN-BRI S/T port, eight Fast Ethernet switch ports, and two USB connectors

## Determining the Software Version

To determine the version of Cisco IOS software running on your Cisco router, log in to the router and enter the **show version** EXEC command. The following sample displays command output from a Cisco 827 router running Cisco IOS Release 12.3(8)YH:

```
Router>show version
```

```
Cisco IOS Software, C181X Software (C181X-ADVENTERPRISEK9-M), Version 12.3(8)YH, RELEASE SOFTWARE (fc1)
Synchronized to technology version 12.3(10.3)T
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2004 by Cisco Systems, Inc.
Compiled Thu 02-Dec-04 02:22 by ealyon
```

```
ROM: System Bootstrap, Version 12.3(8r)YH, RELEASE SOFTWARE (fc1)
```

## 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](http://www.cisco.com/warp/public/130/upgrade_index.shtml).

## Feature Set Tables

[Table 2](#) shows the feature set table for Cisco IOS Release 12.3(8)YH.

**Table 2**      **Feature Set Table**

Product	IP Base	IP Voice	Enterprise Base	Advanced Security	Service Provider Services	Advanced IP Services	Enterprise Services	Advanced Enterprise Services
Cisco 1812	Not supported	Not supported	Not supported	Not supported	Not supported	Supported	Not supported	Supported

## New and Changed Information

Cisco IOS Release 12.3(8)YH supports the features listed in this section.

### New Hardware Features in Cisco IOS Release 12.3(8)YH

The following features are supported by this release.

#### Cisco 1812 Routers

- Two Fast Ethernet ports,
- One ISDN-BRI S/T port
- Eight Fast Ethernet Switch ports
- Two USB connectors

### New Software Features in Cisco IOS Release 12.3(8)YH

The following features are supported by this release.

#### Inline Power Auto Negotiation

Inline power auto negotiation is supported.

#### Easy VPN Remote Web Based Activation

This feature provides user-friendly Web based entry of username/password via client web browser (IE or Netscape). A bypass mode is provided for Internet access without requiring VPN tunnel activation. One-time passwords are supported using RADIUS.

## Limitations and Restrictions

#### Inline Power

The Cisco 1812 routers are able to deliver up to 80 W of power through Fast Ethernet switch ports if the routers are equipped with field-upgradable inline power daughter card and an external power supply. Up to eight IP phones may be powered by inline power.

**USB**

USB ports should not be connected to laptops or other hosts using Type A to Type A cables or connectors.

**IPSec Tunnels**

50 simultaneous IPSec tunnels are supported. A tunnel is defined as five SAs: one IKE, two AH and two ESPs. A data plane consists of ESP encapsulated in AH, encapsulated in IP.

**Firewall**

At least 4000 concurrent sessions are supported through the Cisco IOS firewall.

**VLANs**

A total of 8 VLANs can be configured on the 10/100BaseT ports.

## Caveats

Caveats describe unexpected behavior or defects in the 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.

### Open Caveats - Cisco IOS Release 12.3(8)YH

- CSCsa47584  
Traceback warning appears during callback on the auxiliary modem.
- CSCef43906  
Sweeping ping packet drop for back-to-back Fast Ethernet
- CSCee34595  
IPSec may cause performance degradation when unconfigured. IP CEF performance could be reduced only if IPSec is configured (and used) and then all the IPSec configuration is subsequently removed.
- CSCeg21014  
Router hangs after removing dialer pool-member from interface bri0.
- CSCeg17441  
Need to support SNMP traps for fan fault and overheating conditions.
- CSCef95303  
ipv6ftp: Session counts are wrong after generating FTP alert.
- CSCeg34833  
Three tunnels are displayed when the show ipv6 pim tunnel command is issued.
- CSCef60471  
pppox address negotiation using IPCP failed in an ipv6 RADIUS access test.
- CSCef83035  
Occasional ALIGN-3-SPURIOUS, ALIGN-3-TRACE messages are displayed with pings.

- CSCef58201  
The CEF Dialer failed to add adjacency for the CEF interface Virtual-Access1.
- CSCed88091  
Packets enter in clear state.
- CSCsa45794  
Service exec-callback on the auxiliary port does not work.
- CSCef10863  
The router crashed at stile\_ad\_show\_all.
- CSCeg48830  
Show policy-map errors for match parameters occur.
- CSCsa46380  
CLI “clear line 5” does not clear active connection on the auxiliary line.

## Resolved Caveats - Cisco IOS Release 12.3(8)YH

- CSCin82407  
Cisco Internetwork Operating System (IOS) Software release trains 12.2T, 12.3 and 12.3T may contain vulnerabilities in processing certain Internet Key Exchange (IKE) Xauth messages when configured to be an Easy VPN Server.  
  
Successful exploitation of these vulnerabilities may permit an unauthorized user to complete authentication and potentially access network resources.  
  
This advisory will be posted to  
<http://www.cisco.com/warp/public/707/cisco-sa-20050406-xauth.shtml>

## Related Documentation

The following sections describe the documentation available for the Cisco 1800 series routers. These documents consist of hardware and software installation guides, Cisco IOS configuration guides 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 at [Cisco.com](http://www.cisco.com) at <http://www.cisco.com/univercd/home/index.htm>.

Use these release notes with these documents:

- [Release-Specific Documents](#)
- [Platform-Specific Documents](#)
- [Cisco IOS Software Documentation Set](#)

## Release-Specific Documents

The following documents are specific to Cisco IOS Release 12.3 and are located on [Cisco.com](http://www.cisco.com) at <http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/>:

- [Cross-Platform Release Notes for Cisco IOS Release 12.3\(8\)T](#)

On [Cisco.com](#) at:

**Products and Solutions: Cisco IOS Software: Cisco IOS Software Releases 12.3: Instructions and Guides: Release Notes**

On <http://www.cisco.com/univercd/home/index.htm> at:

**Cisco IOS Software: Cisco IOS Release 12.3: Release Notes: Cross-Platform Release Notes**




---

**Note** Cross-Platform Release Notes for Cisco IOS Release 12.3 T are located on [Cisco.com](#) or on <http://www.cisco.com/univercd/home/index.htm> at **Cisco IOS Software: Cisco IOS Release 12.3: Release Notes: Cisco IOS Release 12.3 T.**

---

- Product bulletins, field notices, and other release-specific documents at this URL:

<http://www.cisco.com/univercd/home/index.htm>

- [Caveats for Cisco IOS Release 12.3](#)

As a supplement to the caveats listed in these release notes, see [Caveats for Cisco IOS Release 12.3](#) and [Caveats for Cisco IOS Release 12.3T](#), which contain caveats applicable to all platforms for all maintenance releases of Cisco IOS Release 12.3 and Cisco IOS Release 12.3T.

On [Cisco.com](#) at:

**Products & Services: IOS Software: Cisco IOS Software Releases 12.3: Instructions and Guides: Release Notes: Release Notes for Cisco IOS Release 12.3, Part 5: Caveats**

On <http://www.cisco.com/univercd/home/index.htm> at:

**Cisco IOS Software: Cisco IOS Release 12.3: Release Notes: Caveats**

- If you have an account on [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 **Products and Solutions: Cisco IOS Software: Cisco IOS Software Releases 12.3: Troubleshooting: Bug Toolkit**. Another option is to go to [http://www.cisco.com/cgi-bin/Support/Bugtool/launch\\_bugtool.pl](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl).

## Platform-Specific Documents

These documents are available for the Cisco 1800 series routers:

On [Cisco.com](#) at:

**Products and Solutions: Routers: Cisco 1800 Series Modular Access Routers**

At <http://www.cisco.com/univercd/home/index.htm>

**Product Documentation: Routers: Modular Access Routers: Cisco 1800 Series Routers**

## 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. The Cisco IOS software documentation set is available online.

## Documentation Modules

Each module in the Cisco IOS documentation set consists of one or more configuration guides and one or more corresponding command references. Chapters in a configuration guide describe protocols, configuration tasks, and 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](http://www.cisco.com) at:

**Products and Solutions: Cisco IOS Software: Cisco IOS Releases 12.3: Instructions and Guides**

On <http://www.cisco.com/univercd/home/index.htm> at:

**Cisco IOS Software: Cisco IOS Release 12.3: Configuration Guides and Command References**

## Cisco IOS Release 12.3 Documentation Set Contents

[Table 3](#) lists the contents of the Cisco IOS Release 12.3 software documentation set, which is available in electronic form and in printed form if ordered.

On [Cisco.com](http://www.cisco.com) at:

**Products and Solutions: Cisco IOS Software: Cisco IOS Releases 12.3: Instructions and Guides**

At <http://www.cisco.com/univercd/home/index.htm>

**Cisco IOS Software: Cisco IOS Release 12.3**

**Table 3 Cisco IOS Release 12.3 Documentation Set**

Books	Major Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Configuration Fundamentals and Network Management Configuration Guide</i></li> <li>• <i>Cisco IOS Configuration Fundamentals and Network Management Command Reference</i></li> </ul>	Configuration Fundamentals Overview Cisco IOS User Interfaces File Management System Management
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Bridging and IBM Networking Configuration Guide</i></li> <li>• <i>Cisco IOS Bridging and IBM Networking Command Reference, Volume 1 of 2: Bridging</i></li> <li>• <i>Cisco IOS Bridging and IBM Networking Command Reference, Volume 2 of 2: IBM Networking</i></li> </ul>	Transparent Bridging SRB Token Ring Inter-Switch Link Token Ring Route Switch Module RSRB DLSw+ Serial Tunnel and Block Serial Tunnel LLC2 and SDLC IBM Network Media Translation SNA Frame Relay Access NCI Client/Server Airline Product Set 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
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Dial Technologies Configuration Guide</i></li> <li>• <i>Cisco IOS Dial Technologies Command Reference</i></li> </ul>	Preparing for Dial Access Modem and Dial Shelf Configuration and Management ISDN Configuration Signaling Configuration Dial-on-Demand Routing Configuration Dial Backup Configuration Dial Related Addressing Service Virtual Templates, Profiles, and Networks PPP Configuration Callback and Bandwidth Allocation Configuration Dial Access Specialized Features Dial Access Scenarios
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Interface and Hardware Component Configuration Guide</i></li> <li>• <i>Cisco IOS Interface and Hardware Component Command Reference</i></li> </ul>	LAN Interfaces Serial Interfaces Logical Interfaces

**Table 3 Cisco IOS Release 12.3 Documentation Set (continued)**

Books	Major Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS IP Configuration Guide</i></li> <li>• <i>Cisco IOS IP Command Reference, Volume 1 of 4: Addressing and Services</i></li> <li>• <i>Cisco IOS IP Command Reference, Volume 2 of 4: Routing Protocols</i></li> <li>• <i>Cisco IOS IP Command Reference, Volume 3 of 4: Multicast</i></li> <li>• <i>Cisco IOS IP Command Reference, Volume 4 of 4: IP Mobility</i></li> </ul>	IP Addressing and Services IP Routing Protocols IP Multicast
<ul style="list-style-type: none"> <li>• <i>Cisco IOS AppleTalk and Novell IPX Configuration Guide</i></li> <li>• <i>Cisco IOS AppleTalk and Novell IPX Command Reference</i></li> </ul>	AppleTalk Novell IPX
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Configuration Guide</i></li> <li>• <i>Cisco IOS Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS Command Reference</i></li> </ul>	Apollo Domain Banyan VINES DECnet ISO CLNS XNS
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Voice Configuration Library</i></li> <li>• <i>Cisco IOS Voice Command Reference</i></li> </ul>	Voice over IP Call Control Signaling Voice over Frame Relay Voice over ATM Telephony Applications Trunk Management Fax, Video, and Modem Support
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Quality of Service Solutions Configuration Guide</i></li> <li>• <i>Cisco IOS Quality of Service Solutions Command Reference</i></li> </ul>	Packet Classification Congestion Management Congestion Avoidance Policing and Shaping Signaling Link Efficiency Mechanisms
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Security Configuration Guide</i></li> <li>• <i>Cisco IOS Security Command Reference</i></li> </ul>	AAA Security Services Security Server Protocols Traffic Filtering and Firewalls IP Security and Encryption Passwords and Privileges Neighbor Router Authentication IP Security Options Supported AV Pairs
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Switching Services Configuration Guide</i></li> <li>• <i>Cisco IOS Switching Services Command Reference</i></li> </ul>	Cisco IOS Switching Paths NetFlow Switching Multiprotocol Label Switching Multilayer Switching Multicast Distributed Switching Virtual LANs LAN Emulation
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Wide-Area Networking Configuration Guide</i></li> <li>• <i>Cisco IOS Wide-Area Networking Command Reference</i></li> </ul>	ATM Broadband Access Frame Relay SMDS X.25 and LAPB

**Table 3 Cisco IOS Release 12.3 Documentation Set (continued)**

Books	Major Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Mobile Wireless Configuration Guide</i></li> <li>• <i>Cisco IOS Mobile Wireless Command Reference</i></li> </ul>	General Packet Radio Service
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Terminal Services Configuration Guide</i></li> <li>• <i>Cisco IOS Terminal Services Command Reference</i></li> </ul>	ARA LAT NASI Telnet TN3270 XRemote X.28 PAD Protocol Translation
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Configuration Guide Master Index</i></li> <li>• <i>Cisco IOS Command Reference Master Index</i></li> <li>• <i>Cisco IOS Debug Command Reference</i></li> <li>• <i>Cisco IOS Software System Messages</i></li> </ul>	

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/cisco/web/support/index.html>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

Cisco Marketplace:

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

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

## Documentation Feedback

You can send comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

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

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—[security-alert@cisco.com](mailto:security-alert@cisco.com)
- Nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)



### Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

### Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>



### Note

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID

or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

**Severity 1 (S1)**—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Severity 2 (S2)**—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

**Severity 3 (S3)**—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

**Severity 4 (S4)**—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

# Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

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

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions.

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

---

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

CCSP, the Cisco Square Bridge logo, Follow Me Browsing, and StackWise are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, and iQuick Study are service marks of Cisco Systems, Inc.; and Access Registrar, Aironet, ASIST, BPX, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Empowering the Internet Generation, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, FormShare, GigaDrive, GigaStack, HomeLink, Internet Quotient, IOS, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, LightStream, Linksys, MeetingPlace, MGX, the Networkers logo, Networking Academy, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, ProConnect, RateMUX, ScriptShare, SlideCast, SMARTnet, StrataView Plus, SwitchProbe, TeleRouter, The Fastest Way to Increase Your Internet Quotient, TransPath, and VCO are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0411R)

Copyright © 2004 Cisco Systems, Inc. All rights reserved.