

## Related Documentation

The following sections describe the documentation available for Cisco IOS Release 12.1. These documents consist of software installation guides, Cisco IOS configuration guides and command references, system error messages, and other documents.

Documentation is available as printed manuals or electronic documents.

Use these release notes with the documents and tools described in the following sections:

- [Release-Specific Documents, page 209](#)
- [Cisco Feature Navigator, page 209](#)
- [Cisco IOS Software Documentation Set, page 210](#)

## Release-Specific Documents

The *Caveats for Cisco IOS Release 12.1* document is specific to Release 12.1 and is located on Cisco.com. Refer to this document for caveats applicable to all platforms for all maintenance releases of Release 12.1.

On Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.1: Caveats: Caveats for Cisco IOS Release 12.1**



### Note

If you have an account with Cisco.com, you can use the Bug Toolkit to find caveats of any severity for any release. To reach the Bug Toolkit, log in to Cisco.com and click **Service & Support: Software Center: Cisco IOS Software: 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).

## Cisco Feature Navigator

Cisco Feature Navigator is a web-based tool that enables you to determine which Cisco IOS software images support a specific set of features and which features are supported in a specific Cisco IOS image. You can search by feature or release. Under the release section, you can compare releases side by side to display both the features unique to each software release and the features in common.

To access Cisco Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to [cco-locksmith@cisco.com](mailto:cco-locksmith@cisco.com). An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions found at this URL:

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

Cisco Feature Navigator is updated regularly when major Cisco IOS software releases and technology releases occur. For the most current information, go to the Cisco Feature Navigator home page at the following URL:

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

## 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.

### 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 at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.1: Configuration Guides and Command References**

### Cisco IOS Release 12.1 Documentation Set Contents

[Table 29](#) lists the contents of the Cisco IOS Release 12.1 software documentation set, which is available in electronic form and in printed form if ordered.



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**Note**

You can find the most current Cisco IOS documentation on Cisco.com.

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On Cisco.com at:

**Technical Documents: Cisco IOS Software: Cisco IOS Release 12.1**

**Table 29 Cisco IOS Software Release 12.1 Documentation Set**

Books	Chapter Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Configuration Fundamentals Configuration Guide</i></li> <li>• <i>Cisco IOS Configuration Fundamentals Command Reference</i></li> </ul>	<ul style="list-style-type: none"> <li>Configuration Fundamentals Overview</li> <li>Using the Command-Line Interface</li> <li>Using Configuration Tools</li> <li>Configuring Operating Characteristics</li> <li>Managing Connections, Menus, and System Banners</li> <li>Using the Cisco Web Browser</li> <li>Using the Cisco IOS File System</li> <li>Modifying, Downloading, and Maintaining Configuration Files</li> <li>Loading and Maintaining System Images</li> <li>Maintaining Router Memory</li> <li>Rebooting a Router</li> <li>Configuring Additional File Transfer Functions</li> <li>Monitoring the Router and Network</li> <li>Troubleshooting a Router</li> <li>Performing Basic System Management</li> <li>System Management Using System Controllers</li> <li>Web Scaling Using WCCP</li> <li>Managing Dial Shelves</li> </ul>
<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>	<ul style="list-style-type: none"> <li>Overview of Apollo Domain, Banyan VINES, DECnet, ISO CLNS, and XNS</li> <li>Configuring Apollo Domain</li> <li>Configuring Banyan VINES</li> <li>Configuring DECnet</li> <li>Configuring ISO CLNS</li> <li>Configuring XNS</li> </ul>
<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>	<ul style="list-style-type: none"> <li>AppleTalk and Novel IPX Overview</li> <li>Configuring AppleTalk</li> <li>Configuring Novell IPX</li> </ul>

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Bridging and IBM Networking Configuration Guide</i></li> </ul>	<ul style="list-style-type: none"> <li>Overview of SNA Internetworking</li> <li>Overview of Bridging</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Bridging and IBM Networking Command Reference, Volume I</i></li> </ul>	<ul style="list-style-type: none"> <li>Configuring Transparent Bridging</li> <li>Configuring Source-Route Bridging</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Bridging and IBM Networking Command Reference, Volume II</i></li> </ul>	<ul style="list-style-type: none"> <li>Configuring Token Ring Inter-Switch Link</li> <li>Configuring Token Ring Route Switch Module</li> <li>Overview of IBM Networking</li> <li>Configuring Remote Source-Route Bridging</li> <li>Configuring Data-Link Switching Plus+</li> <li>Configuring Serial Tunnel and Block Serial Tunnel</li> <li>Configuring LLC2 and SDLC Parameters</li> <li>Configuring IBM Network Media Translation</li> <li>Configuring Frame Relay Access Support</li> <li>Configuring NCIA Server</li> <li>Configuring the Airline Product Set</li> <li>Configuring DSPU and SNA Service Point Support</li> <li>Configuring SNA Switching Services</li> <li>Configuring Cisco Transaction Connection</li> <li>Configuring Cisco Mainframe Channel Connection Adapters</li> <li>Configuring CLAW and TCP/IP Offload Support</li> <li>Configuring CMPC and CSNA</li> <li>Configuring CMPC+</li> <li>Configuring the TN3270 Server</li> </ul>

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Dial Services Configuration Guide: Terminal Services</i></li> <li>• <i>Cisco IOS Dial Services Configuration Guide: Network Services</i></li> <li>• <i>Cisco IOS Dial Services Command Reference</i></li> </ul>	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 Preparing for Dial Access Modem Configuration and Management ISDN and Signalling Configuration PPP Configuration Dial-on-Demand Routing Configuration Dial-Backup Configuration Terminal Service Configuration
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Interface Configuration Guide</i></li> <li>• <i>Cisco IOS Interface Command Guide</i></li> </ul>	Interface Configuration Overview Configuring LAN Interfaces Configuring Serial Interfaces Configuring Logical Interfaces

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS IP and IP Routing Configuration Guide</i></li> <li>• <i>Cisco IOS IP and IP Routing Command Reference</i></li> </ul>	<ul style="list-style-type: none"> <li>IP Overview</li> <li>Configuring IP Addressing</li> <li>Configuring DHCP</li> <li>Configuring IP Services</li> <li>Configuring Mobile IP</li> <li>Configuring On-Demand Routing</li> <li>Configuring RIP</li> <li>Configuring IGRP</li> <li>Configuring OSPF</li> <li>Configuring IP Enhanced IGRP</li> <li>Configuring Integrated IS-IS</li> <li>Configuring BGP</li> <li>Configuring Multicast BGP</li> <li>Configuring IP Routing Protocol-Independent Features</li> <li>Configuring IP Multicast Routing</li> <li>Configuring Multicast Source Discovery Protocol</li> <li>Configuring PGM Router Assist</li> <li>Configuring Unidirectional Link Routing</li> <li>Using IP Multicast Tools</li> </ul>
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Multiservice Applications Configuration Guide</i></li> <li>• <i>Cisco IOS Multiservice Applications Command Reference</i></li> </ul>	<ul style="list-style-type: none"> <li>Multiservice Applications Overview</li> <li>Configuring Voice over IP</li> <li>Configuring Gatekeepers (Multimedia Conference Manager)</li> <li>Configuring Voice over Frame Relay</li> <li>Configuring Voice over ATM</li> <li>Configuring Voice over HDLC</li> <li>Configuring Voice-Related Support Features</li> <li>Configuring PBX Signalling</li> <li>Configuring Store and Forward Fax</li> <li>Configuring Video Support</li> <li>Configuring Head-End Broadband Access Router Features</li> <li>Configuring Subscriber-End Broadband Access Router Features</li> <li>Configuring Synchronized Clocking</li> </ul>

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Quality of Service Solutions Configuration Guide</i></li> </ul>	Quality of Service Overview Classification Overview
<ul style="list-style-type: none"> <li>• <i>Cisco IOS Quality of Service Solutions Command Reference</i></li> </ul>	Configuring Policy-Based Routing Configuring QoS Policy Propagation via Border Gateway Protocol Configuring Committed Access Rate Congestion Management Overview Configured Weighted Fair Queueing Configuring Custom Queueing Configuring Priority Queueing Congestion Avoidance Overview Configuring Weighted Random Early Detection Policing and Shaping Overview Configuring Generic Traffic Shaping Configuring Frame Relay and Frame Relay Traffic Shaping Signalling Overview Configuring RSVP Configuring Subnetwork Bandwidth Manager Configuring RSVP-ATM Quality of Service Interworking Link Efficiency Mechanisms Overview Configuring Link Fragmentation and Interleaving for Multilink PPP Configuring Compressed Real-Time Protocol IP to ATM CoS Overview Configuring IP to ATM CoS QoS Features for Voice Introduction

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
<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>	<p>Security Overview</p> <p>AAA Overview</p> <p>Configuring Authentication</p> <p>Configuring Authorization</p> <p>Configuring Accounting</p> <p>Configuring RADIUS</p> <p>Configuring TACACS+</p> <p>Configuring Kerberos</p> <p>RADIUS Commands</p> <p>TACACS+ Commands</p> <p>Access Control Lists: Overview and Guidelines</p> <p>Cisco Secure Integrated Software Firewall Overview</p> <p>Configuring Lock-and-Key Security (Dynamic Access Lists)</p> <p>Configuring IP Session Filtering (Reflexive Access Lists)</p> <p>Configuring TCP Intercept (Prevent Denial-of-Service Attacks)</p> <p>Configuring Context-Based Access Control</p> <p>Configuring Cisco Secure Integrated Software Intrusion Detection System</p> <p>Configuring Authentication Proxy</p> <p>Configuring Port to Application Mapping</p> <p>IP Security and Encryption Overview</p> <p>Configuring IPSec Network Security</p> <p>Configuring Certification Authority Inoperability</p> <p>Configuring Internet Key Exchange Security Protocol</p> <p>Configuring Passwords and Privileges</p> <p>Neighbor Router Authentication: Overview and Guidelines</p> <p>Configuring IP Security Options</p>

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
• <i>Cisco IOS Switching Services Configuration Guide</i>	Cisco IOS Switching Services Overview
• <i>Cisco IOS Switching Services Command Reference</i>	Switching Paths Overview Configuring Switching Paths Cisco Express Forwarding Overview Configuring Cisco Express Forwarding NetFlow Switching Overview Configuring NetFlow Switching MPLS Overview Configuring MPLS Configuring IP Multilayer Switching Configuring IP Multicast Multilayer Switching Configuring IPX Multilayer Switching Configuring Multicast Distributed Switching Routing Between VLANs Overview Configuring Routing Between VLANs with ISL Encapsulation Configuring Routing Between VLANs with IEEE 802.10 Encapsulation Configuring Routing Between VLANs with IEEE 802.1Q Encapsulation LAN Emulation Overview Configuring LAN Emulation Configuring Token Ring LANE MPOA Overview Configuring the MPOA Client Configuring the MPOA Server Configuring Token Ring LANE for MPOA

**Table 29 Cisco IOS Software Release 12.1 Documentation Set (continued)**

Books	Chapter Topics
<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>	Wide-Area Networking Overview Configuring ATM Frame Relay Frame Relay-ATM Interworking Configuring SMDS Configuring X.25 and LAPB
<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 Command Summary</i></li> <li>• <i>Cisco IOS Debug Command Reference</i></li> <li>• <i>Cisco IOS Dial Services Quick Configuration Guide</i></li> <li>• <i>Cisco IOS New Features Index</i> (Cisco.com only)</li> <li>• <i>Cisco IOS System Error Messages</i></li> </ul>	



**Note**

*The Cisco Management Information Base (MIB) User Quick Reference* is no longer published. If you have an account with Cisco.com, you can find the latest list of MIBs supported by Cisco. To reach the *Cisco Network Management Toolkit*, click **login** at Cisco.com and go to **Software Center: Network Mgmt Software: Cisco Network Management Toolkit: Cisco MIBs**.

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. This section explains the product documentation resources that Cisco offers.

### Cisco.com

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

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

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)

## Product Documentation DVD

The Product Documentation DVD is a library of technical product documentation on a portable medium. The DVD enables you to access installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the HTML documentation and some of the PDF files found on the Cisco website at this URL:

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

The Product Documentation DVD is created monthly and is released in the middle of the month. DVDs are available singly or by subscription. Registered Cisco.com users can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at the Product Documentation Store at this URL:

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

## Ordering Documentation

You must be a registered Cisco.com user to access Cisco Marketplace. Registered users may order Cisco documentation at the Product Documentation Store at this URL:

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

If you do not have a user ID or password, you can register at this URL:

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

## Documentation Feedback

You can provide feedback about Cisco technical documentation on the Cisco Technical Support & Documentation site area by entering your comments in the feedback form available in every online document.

## Notices

The following notices pertain to this software license.

### OpenSSL/Open SSL Project

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).

This product includes software written by Tim Hudson (tjh@cryptsoft.com).

## License Issues

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).

### OpenSSL License:

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3. All advertising materials mentioning features or use of this software must display the following acknowledgment: “This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)”.
4. The names “OpenSSL Toolkit” and “OpenSSL Project” must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).
5. Products derived from this software may not be called “OpenSSL” nor may “OpenSSL” appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment:  
“This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)”.

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This product includes cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)). This product includes software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

### Original SSLeay License:

Copyright © 1995-1998 Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)). All rights reserved.

This package is an SSL implementation written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

“This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)”.

The word ‘cryptographic’ can be left out if the routines from the library being used are not cryptography-related.

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: “This product includes software written by Tim Hudson (tjh@cryptsoft.com)”.

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The license and distribution terms for any publicly available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution license [including the GNU Public License].

## 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 will find information about how to do the following:

- 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, security notices, and security responses for Cisco products is available at this URL:

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

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at 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 have identified a vulnerability in a Cisco product, contact PSIRT:

- For emergencies only—[security-alert@cisco.com](mailto:security-alert@cisco.com)

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

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

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



**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked encryption key or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page 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)

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT to find other means of encrypting the data before sending any sensitive material.

## Product Alerts and Field Notices

Modifications to or updates about Cisco products are announced in Cisco Product Alerts and Cisco Field Notices. You can receive Cisco Product Alerts and Cisco Field Notices by using the Product Alert Tool on Cisco.com. This tool enables you to create a profile and choose those products for which you want to receive information.

To access the Product Alert Tool, you must be a registered Cisco.com user. (To register as a Cisco.com user, go to this URL: <http://tools.cisco.com/RPF/register/register.do>) Registered users can access the tool at this URL: <http://tools.cisco.com/Support/PAT/do/ViewMyProfiles.do?local=en>

## Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation 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 at this URL:

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

Access to all tools on the Cisco Technical Support & Documentation 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 Tool** to locate your product serial number before submitting a request for service online or by phone. You can access this tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link, clicking the **All Tools (A-Z)** tab, and then choosing **Cisco Product Identification Tool** from the alphabetical list. This 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.



### Tip

Displaying and Searching on Cisco.com

If you suspect that the browser is not refreshing a web page, force the browser to update the web page by holding down the Ctrl key while pressing F5.

To find technical information, narrow your search to look in technical documentation, not the entire Cisco.com website. On the Cisco.com home page, click the **Advanced Search** link under the Search box and then click the **Technical Support & Documentation** radio button.

To provide feedback about the Cisco.com website or a particular technical document, click **Contacts & Feedback** at the top of any Cisco.com web page.

## 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 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 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)**—An existing 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 operations 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 the network is impaired while 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.

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco channel product offerings. To order and find out more about the *Cisco Product Quick Reference Guide*, go to this URL:

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

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