



Cisco IP Phone 7970G and 7971G-GE Release Notes for Firmware Release 7.0(3) for Cisco CallManager 3.3, 4.0, 4.1

February 9, 2006

Use these release notes with the Cisco IP Phone 7970G and 7971G-GE for firmware release 7.0(3) running on Cisco CallManager Versions 3.3(5) SR1, 4.0(2) SR2b, and 4.1(3) SR1.

Contents

These release notes provide the following information. You might need to notify your users about some of the information provided in this document.

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Related Documentation

Cisco IP Phone Documentation

Refer to publications that are specific to your language, phone model and Cisco CallManager version. Navigate from the following documentation URL:

http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/index.htm

Cisco CallManager Documentation

Refer to the Cisco CallManager Documentation Guide and other publications specific to your Cisco CallManager version. Navigate from the following URL:

http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm

Installation Notes

This section contains these topics:

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Firmware Information

The Cisco IP Phone 7970G and 7971G-GE firmware installation program is named **cmterm-7970_7971-sccp.7-0-3.exe**.

The readme file that contains installation instructions is named **cmterm-7970_7971-sccp.7-0-3-readme.htm**.

Both files can be downloaded from this location on Cisco.com:

<http://www.cisco.com/cgi-bin/tablebuild.pl/ip-7900ser>

Supported CallManager Versions

The Cisco IP Phone 7970G and 7971G-GE firmware release 7.0(3) is supported on these Cisco CallManager versions:

- Cisco CallManager version 3.3(5) SR1 or later
- Cisco CallManager version 4.0(2) SR2b or later
- Cisco CallManager version 4.1(3) SR1 or later

Cisco CallManager Device Packs

You should install the following device packs for these Cisco CallManager versions. You can download the device packs from this location on Cisco.com:

<http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>

The device pack readme files provide installation information.

Cisco CallManager Version	Device Pack
3.3(5) SR1	ciscocm.3-3-DevPack-64.exe, or later
4.0(2) SR2b	ciscocm.4-0-DevPack-43.exe, or later
4.1(3) SR1	ciscocm.4-1-DevPack-23.exe, or later

Cisco IP Phone Expansion Module 7914

The Cisco IP Phone Expansion Module 7914 is supported on the Cisco IP Phone 7970G and 7971G-GE.

If you are using the Cisco IP Phone Expansion Module 7914, you must upgrade the Expansion Module to firmware release S00104000100. You can download the installation program, which is named **cmterm-7914-sccp.4-0-1.exe**, and the readme file from Cisco.com at this location:

<http://www.cisco.com/cgi-bin/tablebuild.pl/ip-7900ser>

Important Notes

This section contains these topics:

- [Cisco CallManager Load Server Setting for Firmware Upgrades](#), page 4
- [Securing the Phone with a Cable Lock](#), page 5
- [Secure PC Log Off in an 802.1X Network](#), page 5

Cisco CallManager Load Server Setting for Firmware Upgrades

A setting that optimizes installation time for phone firmware upgrades is available in Cisco CallManager Administration.



Note

The setting is intended for future use, and is not yet a supported feature.

To view the load server setting, you must install the latest Cisco CallManager Device Pack (see the [“Cisco CallManager Device Packs”](#) section on page 3).

The Load Server setting is visible on the Phone Configuration page (Product Specific Configuration section) in the Cisco CallManager Administration application. This setting lets you specify another TFTP server IP address or name (other than the TFTP Server 1 or TFTP Server 2) from which the phone firmware can be retrieved for upgrades on the phones. When the Load Server is set, the phone contacts the designated server for the firmware upgrade.



Note

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- If the firmware load is not found on the Load Server, the phone does not upgrade and is not redirected to the TFTP Server 1 or TFTP Server 2.
 - On a factory reset or during a software recovery operation, the phone may fall back to using TFTP Server 1 or TFTP Server 2 to recover the phone load. In these scenarios, the phone will recover the phone load either via the term70.default.loads or term71.default.loads file, or it will attempt to recover the phone load based on its load.hist file.
 - If the phone is auto-registering with Cisco CallManager for the first time, the phone will request the phone load via TFTP Server 1 or TFTP Server 2. This will only occur once when the phone is first installed into the system. This can be mitigated by preloading the phones with the correct firmware so that

no firmware upgrade is required in combination with the auto-registration, or by auto-registering the phones at the main site prior to deployment at a remote site.

You can view the Load Server setting on the phone from **Settings > Device Configuration > Network Configuration > Load Server**. If the value in the Load Server setting is invalid, a “Load Server is invalid” message is displayed on the phone in **Settings > Status > Status Messages**.

Securing the Phone with a Cable Lock

You can secure the Cisco IP Phone 7970G and 7971G-GE to a desktop using a laptop cable lock. The lock connects to the security slot on the back of the phone and the cable can be secured to a desktop.

The security slot can accommodate a lock up to 20 mm. Compatible laptop cable locks include the Kensington® laptop cable lock and laptop cable locks from other manufacturers that can fit into the security slot on the back of the phone.

Secure PC Log Off in an 802.1X Network

Firmware release 7.0(3) provides support for a Cisco IP Phone 7970G or 7971G-GE to monitor IEEE 802.1X messages between an authenticating switch and a connected PC (supplicant).

When a PC is disconnected from the Cisco IP Phone, the phone issues an EAPOL-Logoff message on behalf of the PC to the authenticating switch. The proxy EAPOL-Logoff message causes the authenticating switch to set the port to an unauthenticated state.

If you have an 802.1X network and upgrade to Cisco IP Phone firmware release 7.0(2) or greater, be aware that you must re-authenticate a PC that is connected to a Cisco IP Phone 7970G and 7971G-GE.

For more information about 802.1X re-authentication, refer to the Cisco Catalyst switch configuration guides at:

http://www.cisco.com/en/US/products/hw/switches/tsd_products_support_category_home.html

Caveats

This section contains these topics:

- [Using Bug Toolkit, page 6](#)
- [Resolved Caveats, page 7](#)
- [Open Caveats, page 12](#)

Using Bug Toolkit

These release notes contain descriptions of resolved and open caveats of severity level 1 or 2, and significant severity level 3 caveats.

You can get more information about the caveats in these release notes or search for caveats of any severity level by using the Cisco software called Bug Toolkit.

To access Bug Toolkit, you need a Cisco.com user ID and password.

To use Bug Toolkit, follow these steps:

Procedure

- Step 1** Go to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.
 - Step 2** Log on with your Cisco.com user ID and password.
 - Step 3** Click the **Launch Bug Toolkit** hyperlink.
 - Step 4** To look for information about a specific problem, enter the bug ID number in the “Enter known bug ID” field and click **Search**.
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Resolved Caveats

Table 1 lists severity 1, 2, and 3 defects that are resolved in firmware release 7.0(3) for the Cisco IP Phone 7970G and 7971G-GE.

Table 1 **Resolved Caveats**

Identifier	Summary and Bug Toolkit Link
CSCsb13507	Domain Name field under Network Configuration menu can not be removed. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb13507
CSCsb13552	The phone does not remove the default router configuration. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb13552
CSCsb30771	Phone crashes when sending a fragmented ICMP packet. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb30771
CSCsb32965	Phone UI locks after pressing Directory button. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb32965
CSCsb40300	Phone doesn't register when unable to resolve the Cisco CallManager name. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb40300
CSCsb42411	After a power outage, the phone is stuck at "Configuring IP". http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb42411
CSCsb44304	There is a race condition in CNU sockets when the same socket is accessed by multiple threads in the same process. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb44304
CSCsb47829	Phone still downloads files after a DHCP release. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb47829
CSCsb50077	After erase or reset, the phone sticks at "Configuring IP" and shows Cisco logo. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb50077
CSCsb54419	LED does not blink red while the DCP is busy. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb54419
CSCsb60547	Assigning same IP port to RX and TX socket causes one-way audio. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb60547

Table 1 **Resolved Caveats (continued)**

Identifier	Summary and Bug Toolkit Link
CSCsb60762	Phone doesn't play Zip/ZipZip Tones toward network. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb60762
CSCsb61918	When the spanPCPort is enabled and the pcPort is disabled, the pcPort still displays messages. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb61918
CSCsb62087	Phone is stuck in a reboot loop. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb62087
CSCsb66459	SIP TNP: DSP debug seen when pressing Settings, Directories, or Services. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb66459
CSCsb66487	The phone is requesting a CTL file from a TFTP server that does not exist in the current CTL file on the phone. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb66487
CSCsb67660	File system formats on reset from Cisco CallManager. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb67660
CSCsb68597	Phone receives mcast pkts when port open for Mcast transmit. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb68597
CSCsb68914	Error Verifying Config Info after LSC install on secure phone. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb68914
CSCsb70143	If a DNS lookup fails because an FQDN was mis-configured, the code will still send out a message to IP address 0.0.0.0. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb70143
CSCsb75176	Phone displays wrong message when registration is rejected for security reason. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb75176
CSCsb77225	Phone is stuck at "Configuring IP" on the screen. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb77225
CSCsb85540	Ethernet Disconnected message does not appear when Ethernet unplugged. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb85540

Table 1 **Resolved Caveats (continued)**

Identifier	Summary and Bug Toolkit Link
CSCsb87704	The syslogd does not write the log files in proper order. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb87704
CSCsb88142	After setting DHCP = No and attempting to set the TFTP2 address to 0.0.0.0, the phone stops sending packets. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb88142
CSCsb88986	Phone crashes due to buffer handling in net_input(). http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb88986
CSCsb93321	Race condition in __shutdown() function causes BugTrap. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb93321
CSCsc03743	Presence BLF lamp is not being displayed correctly on the phone. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc03743
CSCsc08584	Calls drop during Cisco CallManager Express failback. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc08584
CSCsc24668	cBarge Target phone changes focus when other party cBarges. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc24668
CSCsc27685	If fragmented IP packets are received on the phone, they are not reassembled to provide a complete message to the User Datagram Protocol (UDP) layer. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc27685
CSCsc30810	Problems when filename length == NAME_MAX. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc30810
CSCsc31606	Pressing the “.” soft key in the edit menu doesn’t force Kate String T/O. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc31606
CSCsc36213	Clicking noise is heard in encrypted call when duplicating packets. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc36213
CSCsc36645	Phone does not boot up and the line buttons continuously flash red. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc36645

Table 1 **Resolved Caveats (continued)**

Identifier	Summary and Bug Toolkit Link
CSCsc39509	Call bubble does not disappear when there is no active call. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc39509
CSCsc40627	High End Phones connect to CCM sub that is not present in the CTL file. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc40627
CSCsc43827	InsideDialTone could not be stopped after removing CFwdAll. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc43827
CSCsc58105	Phone reboots when secondary Cisco CallManager Express is inaccessible and keepalive is 10. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc58105
CSCsc65503	SIP Phone does not do a TLS session reuse after network failure. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc65503
CSCsc70929	When phones are upgraded to use Cisco CallManager development version 50-205 they got stuck in a reboot loop. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc70929
CSCsc76402	RMS Store must be deleted in order for phone to boot correctly. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc76402
CSCsc91001	Answer softkey is not displayed for a new incoming call. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc91001
CSCsc72223	Phone stuck after erase under Settings menu. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc72223
CSCsd11037	Two (2) meg file limit cause double boot when upgrading to 8.0 load. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsd11037
CSCeb52862	No value for some items on Device Information page. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeb52862
CSCsa94528	Cancel softkey has delayed response when looking up a bogus DNS address. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsa94528

Table 1 **Resolved Caveats (continued)**

Identifier	Summary and Bug Toolkit Link
CSCsb54991	7970/7971 Touch Screen issue: Phone URL shows Delay. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb54991
CSCsb72254	Corporate directory search fails if username contains special characters. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb72254
CSCsb56740	Background Image thumbnails not displayed in correct order. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb56740
CSCsc28515	Services page text does not display properly. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc28515
CSCsd23065	Display distorts, when held calls goes from three to two. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsd23065
CSCsb40406	Phone resets randomly. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsb40406

Open Caveats

Table 2 lists severity 1, 2, and 3 caveats that are known to exist in firmware release 7.0(3) for the Cisco IP Phone 7970G and 7971G-GE.

Table 2 *Open Caveats*

Identifier	Summary and Bug Toolkit Link
CSCsd09502	Phone does not send DHCP traffic to PC port. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsd09502
CSCsd09043	Two concurrent XML posts result in Error 0 or Error 6. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsd09043
CSCsc23475	Delayed audio connection on phone with Cisco CallManager Express. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc23475
CSCsc85517	Phone does not use DNS cache properly on subnet without a domain. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc85517
CSCsc91398	Performs unneeded ARP when Garp enabled. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc91398
CSCsc67938	Phone sends bad HTTP request to Cisco CallManager. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc67938
CSCsc97119	Phone is not resetting after Extension Mobility logout. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc97119
CSCsd09298	Phone is unable to disable the PC Port permanently. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsd09298
CSCsc99161	Phone does not go offhook except via softkey. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsc99161
CSCsd09123	Phone displays time in GMT instead of GMT-4 when set to Caracas. http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCsd09123

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/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

Product Documentation DVD

The Product Documentation DVD is a comprehensive library of technical product documentation on a portable medium. The DVD enables you to access multiple versions of installation, configuration, and command guides for Cisco hardware and software products. With the DVD, you have access to the same HTML documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .PDF versions of the documentation available.

The Product Documentation DVD is available as a single unit or as a subscription. Registered Cisco.com users (Cisco direct customers) can order a Product Documentation DVD (product number DOC-DOCDVD= or DOC-DOCDVD=SUB) from Cisco Marketplace at this URL:

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

Ordering Documentation

Registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

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

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at tech-doc-store-mkpl@external.cisco.com or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

Documentation Feedback

You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

You can submit comments about Cisco documentation 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

From this site, you will find information about how to:

- 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

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

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

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 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

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

If you do not have or use PGP, contact PSIRT at the aforementioned e-mail addresses or phone numbers before sending any sensitive material to find other means of encrypting the data.

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 (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 & Documentation 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 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 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:

<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. You can access iQ Magazine at this URL:

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

or view the digital edition at this URL:

<http://ciscoiq.texterity.com/ciscoiq/sample/>

- *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>

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

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

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

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