



Release Notes for the Cisco 1700 Series Routers for Cisco IOS Release 12.2(11)YT2

March 3, 2003

These release notes describe new features and significant software components for the Cisco 1700 series routers that support Cisco IOS Release 12.2 T, up to and including Cisco IOS Release 12.2(11)YT2. These release notes are updated as needed to describe new memory requirements, new features, new hardware support, software platform deferrals, microcode or modem code changes, related document changes, open and resolved caveats, and any other important changes. Use these release notes with the [Cross-Platform Release Notes for Cisco IOS Release 12.2 T](#) located on Cisco.com.

For a list of the software caveats that apply to Cisco IOS Release 12.2(11)YT2, refer to the “[Caveats](#)” section of this document and to the online [Caveats for Cisco IOS Release 12.2 T](#) document. The caveats document is updated for every 12.2 T maintenance release and is located on Cisco.com and the Documentation CD.



Note

Cisco IOS Release 12.2(11)YT2 is an early deployment release and does not fully support all the features of the Cisco 1700 series routers. For more information, see the “[Features Not Supported in Cisco IOS Release 12.2\(11\)YT2](#)” section.

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System Requirements

This section describes the system requirements for Release 12.2(11)YT2 and includes the following sections:

- [Memory Requirements](#)
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Memory Requirements

This section describes the memory requirements for the Cisco IOS feature set supported by Cisco IOS Release 12.2(11)YT2 on the Cisco 1700 series routers.

Table 1 Recommended Memory for the Cisco 1700 Series Routers

Platform	Image Name	Feature Set	Image	Flash Memory	DRAM Memory
Cisco 1751 and Cisco 1760	Cisco 1700 IOS IP ADSL/VOX Plus	IP Plus ADSL/VOX	c1700-sv8y7-mz	16 MB	64 MB

Hardware Supported

Cisco IOS Release 12.2(11)YT2 supports the following Cisco 1700 series routers:

- Cisco 1751 and 1751-V Routers
- Cisco 1760 and 1760-V Routers

The Cisco 1751, 1751-V, 1760, and 1760-V routers run data or data-and-voice images, providing digital and analog voice support.

For detailed descriptions of new hardware features and which features are supported on each router, see the [“New and Changed Information” section on page 4](#). For descriptions of existing hardware features and supported modules, see the hardware installation guides, configuration and command reference guides, and additional documents specific to Cisco 1700 series routers, which are available on Cisco.com at the following location:

http://www.cisco.com/en/US/products/hw/routers/ps221/prod_instructions_guides.html

Determining the Software Version

To determine the version of Cisco IOS software currently running on your Cisco 1700 series router, log in to the router and enter the **show version** EXEC command. The following sample output from the **show version** command indicates the version number on the second output line:

```
router> show version
Cisco Internetwork Operating System Software
IOS (tm) C1700 Software (C1700-Y-MZ), Version 12.2(11)YT2, EARLY DEPLOYMENT RELEASE SOFTWARE
(fc1)
Synched to technology version 12.2(5.4)T
```

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/cgi-bin/Support/browse/index.pl?i=Hardware%20Products&f=505>

Feature Set Tables

The Cisco IOS software is packaged in feature sets consisting of software images—depending on the platform. Each feature set contains a specific set of Cisco IOS features. Release 12.2(11)YT2 supports the same feature sets as Cisco IOS Releases 12.2 and Cisco IOS Release 12.2(11)T, but Cisco IOS Release 12.2(11)YT2 includes new fixes or features supported by the Cisco 1700 series routers.

Table 2 lists the features and feature sets supported in Cisco IOS Release 12.2(11)YT2.

The table uses the following conventions:

- Yes—The feature is supported in the software image.
- No—The feature is not supported in the software image.
- Introduced—The number in the “Introduced” column indicates the Cisco IOS release in which the feature was introduced. For example, “12.2(11)YT2” means the feature was introduced in Cisco IOS 12.2(11)YT2. If a cell in this column is empty, the feature was included in a previous release or the initial base release.



Note

These feature set tables only contain a selected list of features, which are cumulative for Release 12.2(11)*nn* early deployment releases only (*nn* identifies each early deployment release). The tables do not list all features in each image—additional features are listed in the *Cross-Platform Release Notes for Cisco IOS Release 12.2 T* and Release 12.2 T Cisco IOS documentation.

Table 2 Feature List by Feature Set for Cisco 1751 and 1760 Routers

Feature	Introduced	Feature Set
		IP Plus ADSL/VOX
Cisco IOS Telephony Service (ITS) Version 2.1	12.2(11)YT	Yes
Cisco Survivable Remote Site Telephony (SRST) Version 2.1	12.2(11)YT	Yes

New and Changed Information

The following sections list the new hardware and software features supported by the Cisco 1700 series routers for Cisco IOS Release 12.2(11)YT2.

**Note**

Because it is a maintenance release, there are no new software features for Cisco IOS Release 12.2(11)YT2.

New Software Features in Release 12.2(11)YT2

The following sections describe the new software features supported by the Cisco 1700 series routers for Cisco IOS Release 12.2(11)YT2.

For additional information on these features and their configurations, refer to *Cisco IOS Telephony Feature Enhancements for Cisco IOS Release 12.2(11)YT* at:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122newft/122limit/122y/122yt/1228yt/its122yt.fm>.

Cisco IOS Telephony Service Version 2.1

Cisco IOS Telephony Service (ITS) offers an entry-level IP telephony solution integrated directly into Cisco IOS. Customers can now deploy voice, data and IP telephony on a single platform for their small offices. ITS offers a core set of phone features that customers commonly require for their everyday business needs, and leverages the wide array of voice capabilities that are available in Cisco IOS to provide a very robust IP telephony offering for the small office environment.

Cisco ITS version 2.1 provides support for the following new features: additional languages, phone loads for Cisco CallManager 3.1 and above, GUI customization capability, Live Feed Music on Hold (MoH), H450.2 and H450.3 support in Cisco IOS, Consultative Transfer, and Hookflash Transfer.

Cisco Survivable Remote Site Telephony Version 2.1

The Cisco Survivable Remote Site Telephony (SRST) feature offers enterprises a reliable mechanism for providing continuous IP telephony services to small branch offices in the event of an outage. SRST enables enterprises to build large IP telephony networks using centralized call processing resources.

SRST Version 2.1 provides support for additional languages and for the Cisco IP Phone Extension Module 7914.

New Software Features in Cisco IOS Release 12.2T

For information regarding the features supported in Cisco IOS Release 12.2 T, refer to the Cross-Platform Release Notes and New Feature Documentation links at the following location on Cisco.com:

http://www.cisco.com/en/US/products/sw/iosswrel/ps1839/prod_release_notes_list.html

Limitations

This section describes the limitations and features that are not supported on the the Cisco 1700 series routers in Cisco IOS Release 12.2(11)YT2.

Features Not Supported in Cisco IOS Release 12.2(11)YT2

Cisco IOS Release 12.2(11)YT2 is a maintenance release based on Cisco IOS Release 12.2(11)YT . Cisco IOS Release 12.2(11)TY was an early deployment release that provided support for the Cisco ITS Version 2.1 and Cisco SRST Version 2.1. Release 12.2(11)YT2 does not include support for features that are supported on the Cisco 1700 series routers in the following Cisco IOS releases:

- Cisco IOS Release 12.2(4)XL
- Cisco IOS Release 12.2(4)XM
- Cisco IOS Release 12.2(4)YA
- Cisco IOS Release 12.2(2)YB
- Cisco IOS Release 12.2(4)YH
- Cisco IOS Release 12.2(8)YJ
- Cisco IOS Release 12.2(8)YL
- Cisco IOS Release 12.2(8)YM
- Cisco IOS Release 12.2(8)YN

Features that are not supported in Cisco IOS Release 12.2(11)YT2 include the following:

- T1/E1 multiflex voice and WAN interface cards (VWICs)
- 4-port FXS/DID voice interface card (VIC)
- Easy Virtual Private Network (VPN) server and some Quality of Service (QoS) features on xDSL interfaces

Live Feed MoH

Only one Live Feed MoH is supported per system.

Live feed MoH on an FXS voice port is not a realistic option.

Speed-Dial Directory Capacity

A maximum of 32 entries is allowed in the “speeddial.xml” file.

Important Notes

The following sections contain important notes about Cisco IOS Release 12.2(11)YT2 that can apply to the Cisco 1700 series routers. (Also, see the [“Caveats” section on page 6.](#))

Fan Operation in Cisco 1700 Series Routers

Cisco 1760 and 1760-V router fans are always on, and Cisco 1710 routers do not contain a fan. However, the fans in Cisco 1720, 1721, 1750, and 1751 routers stay off until thermally activated.

Flash defaults to Flash:1 on Multipartition Flash

When using a multipartition flash card, the various flash partitions are referred to as “flash:1:”, “flash:2:”, etc. If you specify only “flash” in a multipartition flash, the parser assumes “flash:1:.” For example, if you enter the **show flash all** command the parser defaults to “show flash:1: all” and only the flash information for the first partition displays. To see information for all flash partitions, enter the **show flash ?** command. This will list all of the valid partitions. Then enter the **show flash:xx: all** command on each valid partition.

Peak Cell Rate and Sustainable Cell Rate Values

On Cisco 1700 routers, specify the Peak Cell Rate (PCR) and Sustainable Cell Rate (SCR) as multiples of 32 Kbps. Other rates are treated as the next lower value of a multiple of 32. For example, an entered PCR value of 150 is considered 128.

Using the boot flash Command

Booting a Cisco 1700 series router with the **boot flash** command or the **boot system flash** command results in unpredictable behavior. To work around this problem, be sure to enter a colon (:) following both commands (for example, **boot flash:** or **boot system flash:**).

Using Dialer Interface with MLPPPoATM

This feature is not supported on the Cisco 1700 series platforms. Please use the Virtual Template interface instead.

Caveats

Caveats describe unexpected behavior or defects in 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.

Caveats in Cisco IOS Release 12.2 T are also in Cisco IOS Release 12.2(11)YT2. For information on caveats in Cisco IOS Release 12.2 T, refer to the [Caveats for Cisco IOS Release 12.2 T](#) document. For information on caveats in Cisco IOS Release 12.2, refer to the [Caveats for Cisco IOS Release 12.2](#) document. These documents list severity 1 and 2 caveats and are located on Cisco.com.

**Note**

If you have an account with 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 **Service & Support: Technical Assistance Center: Tool Index: Bug Toolkit**. Another option is to go to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Open Caveats—Cisco IOS Release 12.2(11)YT2

There are no open caveats specific to Cisco IOS Release 12.2(11)YT2 that require documentation in the release notes.

Resolved Caveats—Cisco IOS Release 12.2(11)YT2

All the caveats listed in this section are resolved in Cisco IOS Release 12.2(11)YT2. This section describes only severity 1 and 2 caveats and select severity 3 caveats.

Table 3 Resolved Caveats in Cisco IOS Release 12.2(11)YT2

Resolved in Cisco IOS Release	DDTS ID Number	Headline
12.2(11)YT1	CSCea23156	<p>DSPware must be upgraded.</p> <p>Symptom: When the Cisco 1700 series router goes into SRST mode, the second inbound call on the FXO-M1 card might cause dsp crash with following error message:</p> <pre>%IPM_C54X-1-TOOBIG</pre> <p>Workaround: Upgrade to Cisco IOS Release 12.2(11)YT, which has new DSPware.</p>
12.2(11)YT1	CSCea02389	<p>The user locations do not work when a phone from Version 3.3(2) of Call Connection Manager falls back to the router running Survivable Remote Site Telephony (SRST).</p> <p>Symptom: During SRST, the user locations on the IP Phone won't be available because of Skinny Client Control Protocol (SCCP) version conflict between Call Connection Manager 3.3(2) phone loads and SRST location dependencies on the SCCP version.</p> <p>Workaround: None.</p>
12.2(11)YT1	CSCdz03521	<p>If the terminating call legs get disconnect with pi8, the originator gets stuck</p> <p>Symptom: Disconnect with pi8 is used pretty often in Public Switched Telephone Networks (PSTN) to cut voice path before disconnect. The function is missing while the H.450 application is configured on dial-peers. If the terminating call legs get disconnect with pi8, the originator gets stuck.</p> <p>Workaround: None.</p>

Open Caveats—Cisco IOS Release 12.2(11)YT1

There are no open caveats specific to Cisco IOS Release 12.2(11)YT1 that require documentation in the release notes.

Resolved Caveats—Cisco IOS Release 12.2(11)YT1

All the caveats listed in this section are resolved in Cisco IOS Release 12.2(11)YT1. This section describes only severity 1 and 2 caveats and select severity 3 caveats.

Table 4 Resolved Caveats in Cisco IOS Release 12.2(11)YT2

Resolved in Cisco IOS Release	DDTS ID Number	Headline
12.2(11)YT	CSCdy48624	<p>Caller ID is not updated on XTO to XEEs ID once XOR commit transfer.</p> <p>Symptom: While transferring a call, the transferee phone is in conversation with transfer-to phone; however, the display on transferee phone shows it's talking to the transferor phone instead. Respectively, after consultation transfer, the transfer-to phone shows it's talking to transferor phone instead of transferee phone.</p> <p>Conditions:</p> <p>The wrong display on transferee phone happens on both blind transfer and consultation transfer. The wrong display on transfer-to phone happens on consultation transfer.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdy63251	<p>Interactive Voice Response (IVR) application fails to send Generic Transparency Descriptor (GTD).</p> <p>Symptom: A voice over IP (VOIP) gateway running with IVR application can't pass GTD information to the next gateway.</p> <p>Conditions: This happens on setup message only.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz03521	<p>Phones TFTP access contention causes local changes to remain in EN.</p> <p>Symptom: When more than one IP phone simultaneously attempts to access configuration files from ITS using the IOS TFTP server, the second phone will fail to gain access and might report an error on the phone display and in the status messages display.</p> <p>Usually, this error can be ignored because the phone continues operating by using configuration information obtained from a prior access.</p> <p>Only if the configuration information has changed, for example if the Services URL is modified, or the phone language or local changed will the TFTP access failure cause a problem. The phone might end up misconfigured if it is able to access some but not all of the modified configuration files.</p> <p>Workaround: Reset any phone that reports a TFTP error. When making global changes to a configuration that affect multiple phones, reset the phones one at a time and wait until the phone re-registration is complete before commencing the reset sequence for the next phone.</p>

Table 4 Resolved Caveats in Cisco IOS Release 12.2(11)YT2

Resolved in Cisco IOS Release	DDTS ID Number	Headline
12.2(11)YT	CSCdz05821	<p>Raw message might be lost when H.450 information exists in setup request.</p> <p>Symptom: Raw message might fail to be sent from a Voice Over IP (VoIP) gateway to another gateway across an IP link.</p> <p>Conditions: This happens only on setup messages, and when raw message coexist with H.450 message.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz15110	<p>Traceback might show when using H.450 call transfer and call forward TCL.</p> <p>Symptom: A Cisco IOS Voice gateway may show Traceback messages when using the H450 call transfer and call forward TCL application.</p> <p>Conditions: This might happen when the Cisco IOS gateway has the Transferor party committing the transfer while the Transfer-TO party is still alerting.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz20913	<p>Router might renumber a D channel in a running-configuration that has X.25 configured incorrectly.</p> <p>Symptom: After it reloads, the router might renumber a D channel in a running-configuration that has X.25 configured incorrectly. For example, "interface BRI1/0 interface BRI1/0:0" may become "interface BRI1/0 interface BRI0:0."</p> <p>Conditions: This symptom is observed on a Cisco 1700 series that has a 2- port ISDN BRI voice interface card (VIC-2BRI-NT/TE).</p> <p>Workaround: Reload the router and enter the correct configuration into the running-configuration by using the write erase privileged EXEC command.</p>
12.2(11)YT	CSCdz33080	<p>No dial tone after transfer during alerting to an FXS phone.</p> <p>Symptom: This problem occurs when performing transfer with consultation. The call transfer is made to an analog FXS phone (or any call transfer that provides in-band alerting) and the transfer is committed while the consulted phone is ringing. After the transfer is complete, if the phone attempts to make any outgoing calls it will not get dial-tone. The call might still be made, but the user does not hear dial tone.</p> <p>This situation persists until a call is actually connected or the phone is rebooted. When transfers to other local IP phones are attempted (which provide out-of-band alerting), this problem does not occur.</p> <p>Workaround: Do not use transfer with consultation. Configure the system so that all call transfers are committed as blind transfers. Alternatively do not attempt call transfer to destinations that provide in-band alerting.</p>

Table 4 Resolved Caveats in Cisco IOS Release 12.2(11)YT2

Resolved in Cisco IOS Release	DDTS ID Number	Headline
12.2(11)YT	CSCdz35353	<p>LBDN converts in-band alerting state to out-of-band alerting</p> <p>Symptoms An originating Foreign Exchange Station (FXS) phone might hear a ringback tone instead of a busy tone.</p> <p>Conditions This symptom is observed when a call comes in from an FXS phone on gateway 1 or gateway 2. The call comes into gateway 2 through a pair of loopback-directory numbers (loopback-dns) and is forwarded on call forward no answer (CFNA)/call forward busy (CFB) to a public switched telephone network (PSTN)/PRI gateway. The PSTN gateway phone is busy; hence a disconnect tone is sent to the originating side. Gateway 2 receives in-band alerting. The loopback-directory number (loopback-dn) pair convert in-band alerting to out-of-band alerting.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz37079	<p>CFNA failure might be seen with ax XOR redirect.</p> <p>Symptom: A TCL Interactive Voice Response (IVR) script may not receive an ev_setup_done event after the call is forwarded.</p> <p>Conditions: This happens on the diverting gateway when call forwarding is finished prior to the outgoing leg being disconnected.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz40496	<p>Abnormal disconnect of XEE-XTO call in 2 gateway consult transfer</p> <p>Symptom: A consultation transfer might be prematurely disconnect shortly after it is committed.</p> <p>Conditions: Transferor and transfer-to parties are on different gateways. The transfer-to gateway the leg toward transferor is disconnected before the new conference between transferee and transferor-to is established.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz40744	<p>One way speech path after one gateway fullblind transfer</p> <p>Symptom: In a Voice Over IP (VoIP) gateway running Interactive Voice Response (IVR), an IP phone might hear one-way voice after a blind transfer.</p> <p>Conditions: Both transferee and transfer-to parties are IP phones connected to the same gateway. The calling party initiates blind transfer.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz56915	<p>Loopback-dn hangs when call gets disconnected</p> <p>Symptom: Calls is from PSTN to an IP phone through a pair of LBDN. A call transfer is to another IP Phone over PSTN. When the terminate side disconnects, by sending an inband disconnect tone to the remote end. The IP phones go off-hook, but the LBDN stays hung, making it unusable.</p> <p>Workaround: Reload the router.</p>

Table 4 Resolved Caveats in Cisco IOS Release 12.2(11)YT2

Resolved in Cisco IOS Release	DDTS ID Number	Headline
12.2(11)YT	CSCdz58470	<p>Double-alert indication sent to LBDN instead of single-alert indication.</p> <p>Symptom: Call is made from PSTN to IP Phone of ITS through a pair of LBDN. A call transfer is done to another IP Phone over PSTN. The remote IP Phone is in a BUSY state. A double-alert indication is sent instead of a single alert indication.</p> <p>Workaround: There is no workaround.</p>
12.2(11)YT	CSCdz70454	<p>Local Consult is broken.</p> <p>Symptom: If a call transfer is committed while alerting the transfer-to IP phone and at the instant that the transfer is committed, then transfer-to IP phone attempts to answer the (consultation) call. This might cause the call to be dropped.</p> <p>Conditions: This occurs when ITS is configured to perform call transfer using the local-consult option.</p> <p>Workaround: Wait for the consultation call to be answered before committing the transfer, or use an alternate call transfer mode.</p>
12.2(11)YT	CSCdz72958	<p>Incoming digits might not be collected properly for incoming BRI calls</p> <p>Symptom: Not all digits from the called number are collected correctly. The system might not receive the last digit.</p> <p>Workaround: Do not use the bator script.</p>
12.2(11)YT	CSCdz75259	<p>one way voice path with loopback-dn if RTP header compression enable.</p> <p>Symptom: A one-way voice path is heard if the RTP header compression is enabled for the external VoIP call segment and the call is routed through a loopback-dn to a local ITS IP phone. To get the one-way voice path, the call must be transferred using the app-h450-transfer.tcl script to support transfer with consultation.</p> <p>Conditions: The transfer must be committed during alerting of the transfer-to local IP phone. If the transfer is committed after the local transfer-to IP phone has answered the consultation call, the problem is not seen.</p> <p>Workaround: Disable the RTP header compression.</p>
12.2(11)YT	CSCin17773	<p>IVR leg setup returns ls_009 instead of ls_004 for disc cause 0x1C.</p> <p>Symptom: When a call setup fails due to an invalid number format, a voice interactive response (IVR) application might show destination disconnect instead of invalid number.</p> <p>Workaround: There is no workaround.</p>

Open Caveats—Cisco IOS Release 12.2(11)YT

This section documents possible unexpected behavior by Cisco IOS Release 12.2(11)YT and describes only severity 1 and 2 caveats and select severity 3 caveats.

CSCdz05919—A transferred call may not be forwarded again.

Conditions: An IP phone on a voice over IP (VoIP) gateway has call forwarding configured, but the call-forward pattern is not set or it doesn't match the forwarding number. The incoming call to the local IP phone is a transferred call, the call forwarding initiated by the phone is failed.

Workaround: Correctly set the call-forward pattern under telephony-service on the local gateway so that the pattern matches the forwarding number.

Resolved Caveats—Cisco IOS Release 12.2(11) YT

Because Cisco IOS Release 12.2(11) YT is the initial base release, there are no resolved caveats.

Related Documentation

The following sections describe the documentation available for the Cisco 1700 series routers. Typically, these documents consist of hardware and software installation guides, Cisco IOS configuration 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 on Cisco.com and the Documentation CD.

Use these release notes with the documents listed in the following sections:

- [Release-Specific Documents](#)
- [Platform-Specific Documents](#)

Release-Specific Documents

The following documents are specific to Release 12.2 and apply to Release 12.2(11)YT2. They are located on Cisco.com:

- To reach the *Cross-Platform Release Notes for Cisco IOS Release 12.2 T*, click this path:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/prod_release_notes_list.html
- To reach product bulletins, field notices, and other release-specific documents, click this path:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/prod_alerts_news.html
- To reach the *Caveats for Cisco IOS Release 12.2* and *Caveats for Cisco IOS Release 12.2 T* documents, which contain caveats applicable to all platforms for all maintenance releases of Release 12.2, click the following paths:
http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/prod_release_notes_list.html
http://www.cisco.com/en/US/products/sw/iosswrel/ps1839/prod_release_notes_list.html



Note

If you have an account with 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 **Service & Support: Technical Assistance Center: Tool Index: Bug Toolkit**. Another option is to go to http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Platform-Specific Documents

Hardware installation guides, configuration and command reference guides, and additional documents specific to Cisco 1700 series routers are available on Cisco.com at the following location:

http://www.cisco.com/en/US/products/hw/routers/ps221/prod_instructions_guides.html

Obtaining Documentation

These sections explain how to obtain documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com>

Translated documentation is available at this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

Ordering Documentation

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:
http://www.cisco.com/cgi-bin/order/order_root.pl
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

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Cisco Systems
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170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

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- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

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<http://www.cisco.com>

Technical Assistance Center

The Cisco Technical Assistance Center (TAC) is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two levels of support are available: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Cisco TAC inquiries are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

The Cisco TAC resource that you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

Cisco TAC Web Site

You can use the Cisco TAC Web Site to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to this URL:

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

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

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

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC Web Site, you can open a case online by using the TAC Case Open tool at this URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC Web Site.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

This document is to be used in conjunction with the documents listed in the “Related Documentation” section.

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