



Release Notes for the Cisco 800 Series Routers and Cisco SOHO 70 Series Routers for Cisco IOS Release 12.2(11)YU

July 28, 2003

These release notes for the Cisco 800 series and Cisco SOHO 70 series routers describe the enhancements provided in Cisco IOS Release 12.2(11)YU1. These release notes are updated as needed. Use these release notes with *Cross-Platform Release Notes for Cisco IOS Release 12.2 T* located on Cisco.com and the Documentation CD.

For a list of the software caveats that apply to Cisco IOS Release 12.2(11)YU1, see the “[Caveats](#)” section on [page 12](#) and *Caveats for Cisco IOS Release 12.2 T*. The caveats document is updated for every maintenance release and is located on Cisco.com and the Documentation CD.

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System Requirements

This section describes the system requirements for Release 12.2(11)YU1 and includes the following sections:

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Memory Requirements

[Table 1](#) provides the memory requirements for the Cisco IOS feature sets supported by Cisco IOS Release 12.2(11)YU1 on the Cisco 800 and the Cisco SOHO 70 series routers. All images are run from RAM.

Table 1 Recommended Memory for the Cisco 800 Series Routers and Cisco SOHO 70 Series Routers

Platform	Image Name	Feature Set	Image	Flash Memory	DRAM Memory
Cisco 826, Cisco 827, and Cisco 827H routers	Cisco 820 Series IOS IP Plus FW IPSec 3DES	IP Plus FW IPSec 3DES	c820-k9osy6-mz	8 MB	24 MB
	Cisco 820 Series IOS IP/FW	IP/FW	c820-oy6-mz	8 MB	20 MB
	Cisco 820 Series IOS IP Plus	IP Plus	c820-sy6-mz	8 MB	24 MB
	Cisco 820 Series IOS IP	IP	c820-y6-mz	8 MB	20 MB
	Cisco 827-4V routers	Cisco 820 Series IOS IP Plus FW/Voice IPSec 3DES	IP Plus FW/Voice IPSec 3DES	c820-k9osv6y6-mz	8 MB
Cisco 827-4V routers	Cisco 820 Series IOS IP/FW/Voice	IP/FW/Voice	c820-ov6y6-mz	8 MB	32 MB
	Cisco 820 Series IOS IP Plus Voice	IP Plus Voice	c820-sv6y6-mz	8 MB	32 MB
	Cisco 820 Series IOS IP/Voice	IP/Voice	c820-v6y6-mz	8 MB	32 MB
	Cisco 828 router	Cisco 828 Series IOS IP Plus FW IPSec 3DES	IP Plus FW/ IPSec 3DES	c828-k9osy6-mz	8 MB
Cisco 828 router	Cisco 828 Series IOS IP/FW	IP/FW	c828-oy6-mz	8 MB	20 MB
	Cisco 828 Series IOS IP Plus	IP Plus	c828-sy6-mz	8 MB	20 MB
	Cisco 828 Series IOS IP	IP	c828-y6-mz	8 MB	20 MB
	Cisco SOHO 76, Cisco SOHO 77, and Cisco SOHO 77H routers	Cisco SOHO 70 Series IOS IP/FW	IP/FW	soho70-oy1-mz	8 MB
IP	soho70-y1-mz		8 MB	16 MB	
Cisco SOHO 78 router	Cisco SOHO 78 Series IOS IP	IP	soho78-y1-mz	8 MB	16 MB

Hardware Supported

Cisco IOS Release 12.2(11)YU1 supports the following Cisco routers:

- Cisco 820 series routers:
 - Cisco 826 routers
 - Cisco 827 routers
 - Cisco 827H routers
 - Cisco 827-4V routers
 - Cisco 828 routers
- Cisco SOHO 70 series routers
 - Cisco SOHO 76 routers
 - Cisco SOHO 77 routers
 - Cisco SOHO 77H routers
 - Cisco SOHO 78 router

For detailed descriptions of new hardware features and information about which features are supported on each router, see the “[New and Changed Information](#)” section on page 8. 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 800 and the Cisco SOHO 70 series routers, which are available on Cisco.com and the Documentation CD at the following location: http://www.cisco.com/univercd/cc/td/doc/product/access/acs_fix/index.htm

This URL is subject to change without notice. If it changes, point your web browser to CCO, and click the following path:

[Cisco Product Documentation: Access Servers and Access Routers: Fixed Configuration Access Routers: <platform_name>](#)

Determining the Software Version

To determine what version of Cisco IOS software is running on your Cisco router, log in to the router and enter the **show version** EXEC command. The following example shows command output from a Cisco 827 router running Cisco IOS Release 12.2(11)YU1:

```
Router> show version
Cisco Internetwork Operating System Software
IOS (tm) C827 Software (C827-SY6-MZ), Version 12.2(11)YU1, EARLY DEPLOYMENT RELEASE
SOFTWARE (fc1)
Synched to technology version 12.2(13.1u)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/warp/public/130/upgrade_index.shtml.

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)YU1 supports the same feature sets as Releases 12.2(8)T, but Release 12.2(11)YU1 can include new features supported by the Cisco 800 and the Cisco SOHO 70 series routers.

Table 2 through Table 6 list the features and feature sets supported in Cisco IOS Release 12.2(11)YU1:

- Table 2—Cisco 826, Cisco 827, and Cisco 827-4H routers
- Table 3—Cisco 827-4V router
- Table 4—Cisco 828 router
- Table 5—Cisco SOHO 76, SOHO 77 and SOHO 77H routers
- Table 6—Cisco SOHO 78 router

The tables use the following conventions:

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



Note

These feature set tables contain only a selected list of features. These tables are not cumulative—nor do they list all the features in each image.

Table 2 Feature List by Feature Set for the Cisco 826, Cisco 827 and Cisco 827H Routers

Features	In	Feature Sets			
		IP FW/Plus 3DES	IP/FW	IP Plus	IP
WAN					
ADSL LED Blinking When DSL Line Trains	12.2(11)YU	Yes	Yes	Yes	Yes
Voice Features					
T.38 Fax Relay	12.2(11)YU	No	No	No	No
Modem Passthrough	12.2(11)YU	No	No	No	No
Caller ID for Spain and Austria	12.2(11)YU	No	No	No	No
SIP Support for VoIP	12.2(11)YU	No	No	No	No
Quality of Service					
CBQoS MIB and DSCP	12.2(11)YU	Yes	No	Yes	No

Table 3 Feature List by Feature Set for the Cisco 827-4V Router

Features	In	Feature Sets			
		IP FW/Voice Plus 3DES	IP/FW/Voice	IP Plus Voice	IP Voice
WAN					
ADSL LED Blinking When DSL Line Trains	12.2(11)YU	Yes	Yes	Yes	Yes
Voice Features					
T.38 Fax Relay	12.2(11)YU	Yes	Yes	Yes	Yes
Modem Passthrough	12.2(11)YU	Yes	Yes	Yes	Yes
Caller ID for Spain and Austria	12.2(11)YU	Yes	Yes	Yes	Yes
SIP Support for VoIP	12.2(11)YU	Yes	Yes	Yes	Yes
Quality of Service					
CBQoS MIB and DSCP	12.2(11)YU	Yes	No	Yes	No

Table 4 Feature List by Feature Set for the Cisco 828 Router

Features	In	Feature Sets			
		IP Plus FW/IPSec 3DES	IP/FW	IP Plus	IP
WAN					
ADSL LED Blinking When DSL Line Trains	12.2(11)YU	No	No	No	No
Voice Features					
T.38 Fax Relay	12.2(11)YU	No	No	No	No
Modem Passthrough	12.2(11)YU	No	No	No	No
Caller ID for Spain and Austria	12.2(11)YU	No	No	No	No
SIP Support for VoIP	12.2(11)YU	No	No	No	No
Quality of Service					
CBQoS MIB and DSCP	12.2(11)YU	Yes	No	Yes	No

Table 5 Feature List by Feature Set for the Cisco SOHO 76, SOHO 77 and SOHO 77H Routers

Features	In	Feature Set	
		IP FW	IP
WAN			
ADSL LED Blinking When DSL Line Trains	12.2(11)YU	Yes	Yes
Voice Features			
T.38 Fax Relay	12.2(11)YU	No	No
Modem Passthrough	12.2(11)YU	No	No
Caller ID for Spain and Austria	12.2(11)YU	No	No
SIP Support for VoIP	12.2(11)YU	No	No
Quality of Service			
CBQoS MIB and DSCP	12.2(11)YU	No	No

Table 6 Feature List by Feature Set for the Cisco SOHO 78 Router

Features	In	Feature Set
		IP
WAN		
ADSL LED Blinking When DSL Line Trains	12.2(11)YU	No
Voice Features		
T.38 Fax Relay	12.2(11)YU	No
Modem Passthrough	12.2(11)YU	No
Caller ID for Spain and Austria	12.2(11)YU	No
SIP Support for VoIP	12.2(11)YU	No
Quality of Service		
CBQoS MIB and DSCP	12.2(11)YU	No

Cisco Feature Navigator

Cisco Feature Navigator is a web-based tool that enables you to quickly 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. 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>

New and Changed Information

The following sections list the new software features supported by Cisco IOS Release 12.2(11)YU1 for the Cisco 800 series and the Cisco SOHO 70 series routers.

New Software Features in Release 12.2(11)YU

The following sections list the new software features supported by Cisco IOS Release 12.2(11)YU on the and the Cisco 800 Series Routers.

T.38 Fax Relay

The T.38 Fax Relay for Voice over IP (VoIP) feature provides standards-based fax relay protocol support on the Cisco 827-4V router. The T.38 standard defines the IP network protocol used by Internet-aware T.38 fax devices and T.38 IP fax gateways.

The only method that has been available on the 827-4v for relaying facsimile transmission over IP network is Cisco Fax Relay. Existing Cisco proprietary protocol uses Telogy DSPware and it is handled at the DSP level without any signaling taking place at the H.323 level. This is the default fax protocol if none is configured.

The Cisco proprietary Fax Relay solution is sometimes not ideal for enterprise and service provider customers who have mixed-vendor networks. Because the T.38 Fax Relay protocol is standards based, Cisco gateways and gatekeepers will now be able to interoperate with third-party T.38-enabled gateways and gatekeepers in a mixed-vendor networks that require real time Fax Relay capabilities are required.

The Cisco 827-4V router supports the H.323 Annex D standard for T.38 Fax relay in H.323 networks. A voice call is established first. When a fax tone is detected, fax switch-over takes place.

In addition to H.323 support, the T.38 fax relay feature also supports the Session Initiation Protocol (SIP).

The T.38 fax relay feature supports modem speeds of 2400 bps, 4800 bps, 7200 bps, 9600 bps, 12000 bps, and 14000 bps.

The T.38 fax gateways provide the following functions:

- Demodulates incoming T.30 fax signals at the transmitting gateway



Note T.30 is the standard procedure for fax transmission in the public switched telephone network (PSTN).

- Translates T.30 fax signals into T.38 Internet Fax Protocol (IFP) packets
- Exchanges IFP packets between the transmitting and receiving T.38 gateways
- Translates T.38 IFP packets back into T.30 signals at the receiving gateway

Modem Passthrough

The modem passthrough over VoIP feature provides the transport of modem signals through a packet network by using pulse code modulation (PCM)-encoded packets. This feature is supported up to a maximum speed of 28800 bps (28.8 kbps).

The modem passthrough over VoIP feature performs the following functions:

- Represses processing functions such as compression, echo cancellation, high-pass filter, and voice activity detection (VAD)
- Issues redundant packets to protect against random packet drops
- Provides static jitter buffers of 200 ms to protect against clock skew
- Discriminates modem signals from voice and fax signals, indicating the detection of the modem signal across the connection, and placing the connection in a state that transports the signal across the network with minimal distortion
- Reliably maintains a modem connection across the packet network for a long duration under normal network conditions

Caller ID for Spain and Austria

Caller ID (sometimes called *CLID* or *ICLID* for incoming call line identification) is an analog service offered by a central office (CO), which supplies calling party information to subscribers. Typically, the calling party number, and sometimes the name, appears on a station (also called *extension*) device such as a PC telephony software application screen or the display on a telephone. Type 1 Caller ID show the calling party information while the call is ringing, and Type 2 Caller ID shows calling number display while the recipient is on another call. Type 1 Caller ID is supported in this release.

The Caller ID feature supports the sending of calling party information from Foreign Exchange Station (FXS) loop-start and ground-start ports into a Caller-ID-equipped telephone device. The FXS port emulates the extension interface of a private-branch exchange (PBX) or the subscriber interface for a CO switch.

Spain and Austria both use the ETSI-FSK method for sending the caller number to the analog phone.

SIP Support for VoIP

Session Initiation Protocol (SIP) is the Internet Engineering Task Force's (IETF's) standard for multimedia conferencing over IP. SIP is an ASCII-based, application-layer control protocol (defined in RFC 2543) that can be used to establish, maintain, and terminate calls between two or more endpoints.

Like other VoIP protocols, SIP is designed to address the functions of signaling and session management within a packet telephony network. Signaling allows call information to be carried across network boundaries. Session management provides the ability to control the attributes of an end-to-end call.

SIP can:

- Determine the location of the target endpoint—SIP supports address resolution, name mapping, and call redirection.
- Determine the media capabilities of the target endpoint—Using Session Description Protocol (SDP), SIP determines the “lowest level” of common services between the endpoints. Conferences are established using only the media capabilities that can be supported by all endpoints.
- Determine the availability of the target endpoint—If a call cannot be completed because the target endpoint is unavailable, SIP determines whether the called party is already on the phone or did not answer in the allotted number of rings. SIP then returns a message indicating why the target endpoint was unavailable.
- Establish a session between the originating and target endpoint—If the call can be completed, SIP establishes a session between the endpoints. SIP also supports mid-call changes, such as the addition of another endpoint to the conference or the changing of a media characteristic or codec.
- Handle the transfer and termination of calls—SIP supports the transfer of calls from one endpoint to another. During a call transfer, SIP simply establishes a session between the transferee and a new endpoint (specified by the transferring party) and terminates the session between the transferee and the transferring party. At the end of a call, SIP terminates all the sessions.

Conferences can consist of two or more users. Call can be established using multicast or multiple unicast sessions.

CBQoS MIB and DSCP

The Class-Based Quality of Service Management Information Base (CBQoS MIB) provides access to quality of service (QoS) configuration information and statistics. The CBQoS MIB allows service providers to monitor their QoS offerings. This MIB gives QoS configuration done in the router such as ClassMap, PolicyMap, Match Statements and Feature Actions configuration parameters. The MIB also contains counter objects which gives statistics information such as the number of packets traversed conforming to a policing feature. The MIB uses several indexes to identify QoS features and to distinguish among instances of those features. The MIB provides information about marking and policing done using IP precedence and Differentiated Services Code Point (DSCP).

ADSL LED Blinking When DSL Line Trains

ADSL LED Blinking provides information on the status of DSL line. ADSL Tx/Rx is used for this purpose. There are three distinct blinking patterns that indicate the various states of a DSL line when it is training.

1. When the firmware is being downloaded within the router, the LED remains ON for 700 ms and goes OFF for 300 ms.
2. When Modem state is MODEM_ACT_ACK (0x8), it means that the router is waiting to hear from the central office (CO) and is not yet seeing an incoming signal. During this, the LED will be ON and OFF for 50 ms each.
3. When modem state is MODEM_TRAINING (0x10), the LED will always be ON. This means that the DSL line is training.

Shortly after the DSL line has started training, if the modem state changes to SHOWTIME, then the router is successfully trained with the DSLAM.

**Note**

The CD LED on the front panel will be OFF during the DSL line training process. This distinguishes from the normal operation when packets are being transmitted or received.

New Software Features in Release 12.2 T

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 and the Documentation CD-ROM:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/index.htm>

This URL is subject to change without notice. If it changes, point your web browser to Cisco.com, and click on the following path:

Service & Support: Technical Documents: Release 12.2 (from the Cisco IOS Software drop-down list)

Important Notes

The following sections contain important notes about Cisco IOS Release 12.2(11)YU1 that can apply to Cisco 800 series routers. (Also, see the “Caveats” section on page 12.)

Caveats

Caveats describe unexpected behavior 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 the three severity levels.

Caveats in Cisco IOS Releases 12.2 and 12.2 T are also in Cisco IOS Release 12.2(11)YU1. For information on caveats in Cisco IOS Release 12.2, see *Caveats for Cisco IOS Release 12.2*. For information on caveats in Cisco IOS Release 12.2 T, see *Caveats for Cisco IOS Release 12.2 T*. These two documents list severity 1 and 2 caveats and are located on CCO and the Documentation CD-ROM.

**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 the following URL: http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Resolved Caveats - Release 12.2(11)YU1

Cisco IOS Release 12.2(11)YU1 is a rebuild release for Cisco IOS Release 12.2(11)YU. This section describes unexpected behavior that is fixed in Release 12.2(11)YU1.

CSCdz71127

Cisco routers and switches running Cisco IOS software and configured to process Internet Protocol version 4 (IPv4) packets are vulnerable to a Denial of Service (DoS) attack. A rare sequence of crafted IPv4 packets sent directly to the device may cause the input interface to stop processing traffic once the input queue is full. No authentication is required to process the inbound packet. Processing of IPv4 packets is enabled by default. Devices running only IP version 6 (IPv6) are not affected. A workaround is available.

Cisco has made software available, free of charge, to correct the problem.

This advisory is available at

<http://www.cisco.com/warp/public/707/cisco-sa-20030717-blocked.shtml>

CSCea02355

Cisco routers and switches running Cisco IOS software and configured to process Internet Protocol version 4 (IPv4) packets are vulnerable to a Denial of Service (DoS) attack. A rare sequence of crafted IPv4 packets sent directly to the device may cause the input interface to stop processing traffic once the input queue is full. No authentication is required to process the inbound packet. Processing of IPv4 packets is enabled by default. Devices running only IP version 6 (IPv6) are not affected. A workaround is available.

Cisco has made software available, free of charge, to correct the problem.

This advisory is available at

<http://www.cisco.com/warp/public/707/cisco-sa-20030717-blocked.shtml>

Open Caveats - Release 12.2(11)YU

This section describes unexpected behavior in Release 12.2(11)YU.

CSCdy28747

Microsoft MSN Messenger clients using the SIP protocol will not be able to communicate correctly with each other when NAT is enabled on the router. There is no workaround at present.

CSCin11192

Dial-on-demand routing (DDR) is normally triggered by traffic going in the direction opposite the direction for which it is enabled. When DDR is enabled on the Cisco 806 router for inbound traffic, one does not expect DDR to activate upon detecting incoming traffic. However, dial-on-demand router does activate, and the router is assigned an IP address.

CSCin08502

tftp fails with NAT overload when the router listens for **tftp** traffic on a non-standard port.

CSCdz01412

A Cisco 827-4V router configured for traffic shaping with constant bit rate (CBR) and variable bit rate–non real-time (VBR-nrt) permanent virtual circuits (PVCs) will have the traffic over the CBR PVC affecting throughput on the VBR-nrt PVC. The CBR PVC will also not be shaped and will be send at line rate.

Workaround

Increase the peak cell rate (PCR) and sustained cell rate (SCR) parameters of the VBR-nrt virtual circuit.

CSCin25256

EzVPN Tunnel fails to come up after configuring XAUTH. This requires Cisco IOS running on the remote EzVPN server to be upgraded to Cisco IOS release 12.2-13.T or later.

CSCdz59316

In the Cisco 82x router, PPP over ATM using **aal5mux** encapsulation on the dialer interface will not fast switch packets, instead packets will get process switched.

Workaround

Enable **ip cef** in the router.

CSCdz61900

Cisco 827-4V router reloads when **debug vtsp all** is enabled for T.38 fax relay with Cisco Fallback option and when a Cisco fax-relay call is recieved.

Workaround

Disable **debug vtsp all**.

Resolved Caveats - Release 12.2(11)YU

This section describes problems that were fixed in Release 12.2(11)YU.

CSCin14702

The HSRP **interface track** command sets the decrement value for an interface. It can also be used to modify the decrement value associated with an interface. At any given time, it is possible to have only one such command active for an interface.

However, the router seems to allow multiple track commands to be applied to an interface. Thus, more than one command can be active at any time. The commands are accumulated instead of being overwritten. When the interface goes down, the decrement values specified in all these commands are added up, and the resulting value is used as the decrement value.

Workaround

Use the **no** version of the **track** command to disable the previous setting for the interface, before issuing a new **track** command to change the decrement value. This will prevent accumulation of **track** commands.

CSCin11465

Easy VPN split tunneling extended access control list issue. This occurs when split tunneling is used in client mode. If the access list at the remote end is configured with two entries that have the same source IP address, the Cisco 806 client will try to install the same address twice and will clean up all the NAT configurations. In this case, one expects NAT to fail. However, on the Cisco 806 router, NAT continues to work correctly.

CSCin11017

In lab test scenarios, the Cisco 806 router client crashes after the idle timeout expires for DDR.

CSCdx72437

On a heavily loaded ATM VC, F5 OAM cells may be dropped by the Cisco 827 router causing the PVC to flap up and down. This flapping is not observed on the CPE but is visible on the aggregation device or on the remote end of the PVC.

CSCdz55586

In the Cisco 82x router, **max-reserved-bandwidth** command does not work, when configured on the ATM interface. This issue has been resolved in this release.

Related Documentation

The following sections describe the documentation available for the Cisco 800 series and SOHO 70 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 and the Cisco IOS release notes, which are available online on Cisco.com and the Documentation CD-ROM.

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)YU1. They are located on [Cisco.com](#) and the Documentation CD-ROM (under the heading **Service & Support**):

- To reach the *Release Notes for the Cisco 800 series and the Cisco SOHO 70 Series Routers for Cisco IOS Release 12.2(11)YU1*, click this path:
Technical Documents: Cisco IOS Software: Release 12.2: Release Notes: Cisco 800 Series Routers: Cisco 800 Series - Release Notes for Release 12.2(11)YU
- To reach the *Cross-Platform Release Notes for Cisco IOS Release 12.2 T*, click this path:
Technical Documents: Cisco IOS Software: Release 12.2: Release Notes: Cisco IOS Release 12.2 T
- To reach product bulletins, field notices, and other release-specific documents, click this path:
Technical Documents: Product Bulletins
- The *Caveats for Cisco IOS Release 12.2* and *Caveats for Cisco IOS Release 12.2 T* documents contain caveats applicable to all platforms for all maintenance releases of Release 12.2. To reach the caveats documents, click this path:
Technical Documents: Cisco IOS Software: Release 12.2: Caveats



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 the following URL:
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 are available for the Cisco 800 series and SOHO 70 series routers on Cisco.com and the Documentation CD-ROM.

Cisco 800 Series and SOHO 70 Series Routers

Documentation specific to the SOHO 70 Series Routers and Cisco 800 Series Routers is available on Cisco.com and the Documentation CD at the following location:

http://www.cisco.com/univercd/cc/td/doc/product/access/acs_fix/index.htm

This URL is subject to change without notice. If it changes, point your web browser to CCO, and click the following path:

Cisco Product Documentation: Access Servers and Access Routers: Fixed Configuration Access Routers:<platform_name>

Software Configuration

The document *Cisco Router Web Setup User Guide* is available for the Cisco 800 series routers at the following location:

<http://www.cisco.com/univercd/cc/td/doc/clckstr/crws/ugcrws30.htm>

This URL is subject to change without notice. If it changes, point your web browser to [Cisco.com](http://www.cisco.com) or the Documentation CD, and click the following path:

Technical Documents: Router Configuration Tools: Cisco Router Web Setup

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:
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- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
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- 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.

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Cisco TAC Web Site

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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:

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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:

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Cisco TAC Escalation Center

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