



# Release Notes for Cisco 2800 Series Integrated Services Routers with Cisco IOS Release 12.4(20)YA

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**First Released: August 1, 2008**  
**Last Revised: April 7, 2009**  
**Cisco IOS Release 12.4(20)YA3**  
**OL-17463-04 Fourth Release**

These release notes describe new features and significant software components for the Cisco 2800 series routers that support the Cisco IOS Release 12.4(20)YA releases. These release notes are updated as needed. Use these release notes with the [Cross-Platform Release Notes for Cisco IOS Release 12.4T](#) and [About Cisco IOS Release Notes](#).

For a list of the software caveats that apply to the Release 12.4(20)YA releases, see the “[Caveats](#)” section on [page 10](#). See also [Caveats for Cisco IOS Release 12.4\(20\)T](#). The online caveats document is updated for every maintenance release.

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# System Requirements

This section describes the system requirements for Release 12.4(20)YA and includes the following sections:

- [Memory Requirements, page 2](#)
- [Hardware Supported, page 5](#)
- [Determining the Software Version, page 5](#)
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## Memory Requirements

[Table 1](#) describes the memory requirements for the Cisco IOS feature sets supported by Cisco IOS Release 12.4(20)YA on the Cisco 2800 series routers.

**Table 1** Required Memory for the Cisco 2800 Series Routers with Cisco IOS Release 12.4(20)YA

Platform	Image Name	Feature Set	Image	Flash Memory (MB)	DRAM (MB)
Cisco 2801	Cisco 2801 IOS Advanced Enterprise Services	Advanced Enterprise Services	adventerprisek9-mz	64	192
	Cisco 2801 IOS AISK9-AESK9 Feature Set Factory Upgrade For Bundles	AISK9-AESK9 Feature Set Factory Upgrade For Bundles		64	192
	Cisco 2801 IOS ASK9-AESK9 Feature Set Factory Upgrade For Bundles	ASK9-AESK9 Feature Set Factory Upgrade For Bundle		64	192
	Cisco 2801 IOS SPSK9-AESK9 Feat set factory upgrade for bundles	SPSK9-AESK9 Feat set factory upgrade for bundles		64	192
	Cisco 2801 IOS INT Voice/Video, IPIPGW, TDMIP GW AES	INT Voice/Video, IPIPGW, TDMIP GW AES	adventerprisek9_ivs-mz	64	256
	Cisco 2801 IOS Advanced Enterprise Services SNA Switching	Advanced Enterprise Services SNA Switching	adventerprisek9_sna-mz	64	192
	Cisco 2801 IOS Advanced IP Services	Advanced IP Services	advipservicesk9-mz	64	192
	Cisco 2801 IOS SPSK9-AISK9 Feature Set Factory Upgrade For Bundles	SPSK9-AISK9 Feature Set Factory Upgrade For Bundles		64	192
	Cisco 2801 IOS ASK9-AISK9 Feature Set Factory Upgrade For Bundles	ASK9-AISK9 Feature Set Factory Upgrade For Bundles		64	192

**Table 1** Required Memory for the Cisco 2800 Series Routers with Cisco IOS Release 12.4(20)YA (continued)

Platform	Image Name	Feature Set	Image	Flash Memory (MB)	DRAM (MB)
Cisco 2801	Cisco 2801 IOS AISK9-AISK9 Feature Set Factory Upgrade For Bundles	AISK9-AISK9 Feature Set Factory Upgrade For Bundles	advservicesk9-mz	64	192
	Cisco 2801 IOS Advanced Security	Advanced Security	advsecurityk9-mz	64	192
	Cisco 2801 IOS ASK9-ASK9 Feature Set Factory Upgrade For Bundles	ASK9-ASK9 Feature Set Factory Upgrade For Bundles		64	192
	Cisco 2801 IOS Enterprise Base w/o Crypto	Enterprise Base w/o Crypto	entbase-mz	64	128
	Cisco 2801 IOS Enterprise Base	Enterprise Base	entbasek9-mz	64	128
	Cisco 2801 IOS Enterprise services w/o crypto	Enterprise services w/o crypto	entservices-mz	64	192
	Cisco 2801 IOS Enterprise Services	Enterprise Services	entservicesk9-mz	64	192
	Cisco 2801 IOS SPSK9-ESK9 Feat Set Factory Upgrade For Bundles	SPSK9-ESK9 Feat Set Factory Upgrade For Bundles		64	192
	Cisco 2801 IOS IP Base w/o Crypto	IP Base w/o Crypto	ipbase-mz	64	128
	Cisco 2801 IOS IP Base	IP Base	ipbasek9-mz	64	128
	Cisco 2801 IOS IP Voice w/o Crypto	IP Voice w/o Crypto	ipvoice-mz	64	192
	Cisco 2801 IOS INT Voice/Video, IPIP GW, TDMIP GW	INT Voice/Video, IPIP GW, TDMIP GW	ipvoice_ivs-mz	64	256
	Cisco 2801 IOS IP Voice	IP Voice	ipvoicek9-mz	64	192
	Cisco 2801 IOS SP Services	SP Services	spservicesk9-mz	64	192
	Cisco 2801 IOS SPSK9-SPSK9 Feature Set Factory Upgrade For Bundles	SPSK9-SPSK9 Feature Set Factory Upgrade For Bundles		64	192

**Table 1** Required Memory for the Cisco 2800 Series Routers with Cisco IOS Release 12.4(20)YA (continued)

Platform	Image Name	Feature Set	Image	Flash Memory (MB)	DRAM (MB)
Cisco 2811	Cisco 2800 Advanced Enterprise Services	Enterprise Services	adventerprisek9-mz	64	256
Cisco 2821					
Cisco 2851	Cisco 2800 AISK9-AESK9 Feature Set Factory Upgrade For Bundles	AISK9-AESK9 Feature Set Factory Upgrade For Bundles		64	256
	Cisco 2800 ASK9-AESK9 Feature Set Factory Upgrade For Bundles	ASK9-AESK9 Feature Set Factory Upgrade For Bundles		64	256
	Cisco 2800 INT Voice/Video, IPIPGW, TDMIP GW AES	INT Voice/Video, IPIPGW, TDMIP GW AES	adventerprisek9_ivs-mz	64	256
	Cisco 2800 INT Voice/Video GK, IPIPGW, TDMIP GW AES, LI	INT Voice/Video GK, IPIPGW, TDMIP GW AES, LI	adventerprisek9_ivs_li-mz	64	256
	Cisco 2800 Advanced Enterprise Services With SNA Switching	Advanced Enterprise Services With SNA Switching	adventerprisek9_sna-mz	64	256
	Cisco 2800 Advanced IP Services	Advanced IP Services	advipservicesk9-mz	64	256
Cisco 2811	Cisco 2800 SPSK9-AISK9 Feat Set Factory Upgrade For Bundles	SPSK9-AISK9 Feat Set Factory Upgrade For Bundles		64	256
Cisco 2821					
Cisco 2851	Cisco 2800 ASK9-AISK9 Feature Set Factory Upgrade For Bundles	ASK9-AISK9 Feature Set Factory Upgrade For Bundles		64	256
	Cisco 2800 AISK9-AISK9 Feature Set Factory Upgrade For Bundles	AISK9-AISK9 Feature Set Factory Upgrade For Bundles		64	256
	Cisco 2800 Advanced Security	Advanced Security	advsecurityk9-mz	64	256
	Cisco 2800 ASK9-ASK9 Feature Set Factory Upgrade For Bundles	ASK9-ASK9 Feature Set Factory Upgrade For Bundles		64	256
	Cisco 2800 Enterprise Base w/o Crypto	Enterprise Base without Crypto	entbase-mz	64	256
	Cisco 2800 Enterprise Base	Enterprise Base	entbasek9-mz	64	256
	Cisco 2800 Enterprise Services w/o Crypto	Enterprise Services without Crypto	entservices-mz	64	256

**Table 1** Required Memory for the Cisco 2800 Series Routers with Cisco IOS Release 12.4(20)YA (continued)

Platform	Image Name	Feature Set	Image	Flash Memory (MB)	DRAM (MB)
Cisco 2811 Cisco 2821	Cisco 2800 Enterprise Services	Enterprise Services	entservicesk9-mz	64	256
Cisco 2851	Cisco 2800 SPSK9-ESK9 Feature Set Factory Upgrade For Bundles	SPSK9-ESK9 Feature Set Factory Upgrade For Bundles		64	256
Cisco 2811 Cisco 2821	Cisco 2800 IP Base without crypto	IP Base without Crypto	ipbase-mz	64	256
Cisco 2851	Cisco 2800 IP Base	IP Base	ipbasek9-mz	64	256
	Cisco 2800 IP Voice without crypto	IP Voice without Crypto	ipvoice-mz	64	256
	Cisco 2800 INT Voice/Video, IPIP GW, TDMIP GW	INT Voice/Video, IPIP GW, TDMIP GW	ipvoice_ivs-mz	64	256
	Cisco 2800 IP Voice	IP Voice	ipvoicek9-mz	64	256
	Cisco 2800 SP Services	SP Services	spservicesk9-mz	64	256
	Cisco 2800 SPSK9-SPSK9 Feature Set Factory Upgrade For Bundles	SPSK9-SPSK9 Feature Set Factory Upgrade For Bundles		64	256

## Hardware Supported

Cisco IOS Release 12.4(20)YA supports the following Cisco 2800 series routers:

- Cisco 2801
- Cisco 2811
- Cisco 2821
- Cisco 2851

For descriptions of existing hardware features and supported modules, see the hardware installation guides, configuration and command reference guides, and additional documents specific to the Cisco 2800 series routers, which are available at:

[http://www.cisco.com/en/US/products/ps5854/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps5854/tsd_products_support_series_home.html)

## Determining the Software Version

To determine the version of Cisco IOS software currently running on your Cisco 2800 series router, see *About Cisco IOS Release Notes* located at:

[http://www.cisco.com/en/US/docs/ios/12\\_4/12\\_4x/12\\_4xy15/ReleaseNote.html](http://www.cisco.com/en/US/docs/ios/12_4/12_4x/12_4xy15/ReleaseNote.html).

## Upgrading to a New Software Release

For general information about upgrading to a new software release, see *About Cisco IOS Release Notes* located at:

[http://www.cisco.com/en/US/docs/ios/12\\_4/12\\_4x/12\\_4xy15/ReleaseNote.html](http://www.cisco.com/en/US/docs/ios/12_4/12_4x/12_4xy15/ReleaseNote.html).

## Feature Set Tables

For information about feature set tables, see *About Cisco IOS Release Notes* located at:

[http://www.cisco.com/en/US/docs/ios/12\\_4/12\\_4x/12\\_4xy15/ReleaseNote.html](http://www.cisco.com/en/US/docs/ios/12_4/12_4x/12_4xy15/ReleaseNote.html).

## New and Changed Information

This section contains the following information:

- [New Hardware Features in Cisco IOS Release 12.4\(20\)YA3, page 6](#)
- [New Software Features in Cisco IOS Release 12.4\(20\)YA3, page 6](#)
- [New Hardware Features in Cisco IOS Release 12.4\(20\)YA2, page 6](#)
- [New Software Features in Cisco IOS Release 12.4\(20\)YA2, page 6](#)
- [New Hardware Features in Cisco IOS Release 12.4\(20\)YA1, page 7](#)
- [New Software Features in Cisco IOS Release 12.4\(20\)YA1, page 7](#)
- [New Hardware Features in Cisco IOS Release 12.4\(20\)YA, page 7](#)
- [New Software Features in Cisco IOS Release 12.4\(20\)YA, page 7](#)

### New Hardware Features in Cisco IOS Release 12.4(20)YA3

There are no new hardware features in this release.

### New Software Features in Cisco IOS Release 12.4(20)YA3

There are no new software features in this release.

### New Hardware Features in Cisco IOS Release 12.4(20)YA2

There are no new hardware features in this release.

### New Software Features in Cisco IOS Release 12.4(20)YA2

There are no new software features in this release.

## New Hardware Features in Cisco IOS Release 12.4(20)YA1

There are no new hardware features in this release.

## New Software Features in Cisco IOS Release 12.4(20)YA1

There are no new software features in this release.

## New Hardware Features in Cisco IOS Release 12.4(20)YA

The new hardware features are:

- [NME-IPS-K9, page 7](#)

### NME-IPS-K9

NME-IPS is a Cisco Intrusion Prevention System (Cisco IPS) that you can install in any network module slot in the Cisco 2800 and Cisco 3800 series integrated services routers (Cisco ISRs). NME-IPS modules run Cisco IPS Sensor software (6.0 or a later version) and provide full support for current versions of Cisco IPS products.

## New Software Features in Cisco IOS Release 12.4(20)YA

The new software features are:

- [CVP IOS Debug CLI, page 7](#)
- [SIT Detection and Reporting, page 8](#)
- [CallBack on Busy for Analog Phones on Cisco Voice Gateways, page 8](#)
- [Call Hold/Resume for Shared Lines for SCCP Analog Ports, page 8](#)
- [Flexible Feature Access Codes, page 8](#)
- [SIP Supplementary Features for Analog Ports on Cisco VG224/Cisco ISRs with Cisco Unified Communications Manager, page 8](#)
- [Application Performance Assurance Network Module, page 9](#)

### CVP IOS Debug CLI

When a voice gateway is used as a contact center, it is often necessary to turn on the error debugging for AFW/IVR, HTTP, MRCP, RTSP, and VoiceXML. Enabling the **ivr contact-center** command automatically turns on all of these error debugs, and also prevents these error debugs from being turned off when the **no debug all** command is entered. For more information, see the **ivr contact-center** command in the *Cisco IOS Voice Command Reference*:

[http://www.cisco.com/en/US/docs/ios/voice/command/reference/vr\\_i2.html#wp1112650](http://www.cisco.com/en/US/docs/ios/voice/command/reference/vr_i2.html#wp1112650)

## SIT Detection and Reporting

This feature provides detection of the eight U.S. special information tones (SITs) and reporting of the detected SIT with a preassigned disconnect cause code for disconnect supervision. This capability is supported for analog FXO trunk and T1/E1 channel-associated signaling (CAS) FXO loop-start. The SIT reporting complies with standard Q.850 messages in order for fax servers to uniquely identify each condition. For more information, see the **supervisory sit us** command in the *Cisco IOS Voice Command Reference*:

[http://www.cisco.com/en/US/docs/ios/voice/command/reference/vr\\_s12.html#wp1198948](http://www.cisco.com/en/US/docs/ios/voice/command/reference/vr_s12.html#wp1198948)

Cisco IOS Release 12.4(20)YA provides SCCP features requested by customers planning to deploy Cisco Unified Communications including the following features for FXS ports on Cisco VG224 Analog Phone Gateways and Cisco 2800 series integrated services routers:

- [CallBack on Busy for Analog Phones on Cisco Voice Gateways, page 8](#)
- [Call Hold/Resume for Shared Lines for SCCP Analog Ports, page 8](#)
- [Flexible Feature Access Codes, page 8](#)
- [SIP Supplementary Features for Analog Ports on Cisco VG224/Cisco ISRs with Cisco Unified Communications Manager, page 8](#)

## CallBack on Busy for Analog Phones on Cisco Voice Gateways

CallBack on Busy is on analog phones that are connected to FXS ports on Cisco IOS voice gateways and controlled by Cisco Unified Communications Manager 6.1.2 or a later version. With CallBack on Busy, users on analog phones can place a callback notification if the destination user is busy on another call.

## Call Hold/Resume for Shared Lines for SCCP Analog Ports

Hold/Resume is on analog SCCP phones that share a line and directory number with one or more other phones in Cisco Unified Communications Manager 6.0 or a later version. Hold/Resume is supported only on analog SCCP phones connected to FXS ports on which hold-resume is configured.

## Flexible Feature Access Codes

This feature enables users on SCCP-controlled Cisco VG224s or Cisco ISRs analog port to customize the Feature Access Codes for invoking supplementary services.

## SIP Supplementary Features for Analog Ports on Cisco VG224/Cisco ISRs with Cisco Unified Communications Manager

Analog phones connected on Cisco ISRs and Cisco VG224s now support SIP Supplementary Services with a SIP trunk configured towards the Cisco Unified Communications Manager. Features supported are:

- Call Hold/Resume
- 3 Way Calling
- Call Transfer
- Call Waiting.



## Application Performance Assurance Network Module

The applications manage traffic on NME-APA service modules installed in Cisco 2811, 2821, 2851, and Cisco 3800 Series Integrated Services Routers by enabling or disabling the flow of packets through the router and the service module. Configure the router interface with the **service-module apa traffic-management [monitor | inline]** command. The **monitor** command enables the interface to copy the packet and designate the copy as the one forwarded to the NME-APA. The **inline** command (promiscuous mode) sends the packet to the router, instead of a copy of the packet to the router. For more information see the *Cisco Application Performance Assurance User Guide*:

[http://www.cisco.com/en/US/docs/ca-ble/serv\\_exch/serv\\_control/broadband\\_app/apa/NME-APA\\_User\\_Guide/NME-APA-User-Guide.html](http://www.cisco.com/en/US/docs/ca-ble/serv_exch/serv_control/broadband_app/apa/NME-APA_User_Guide/NME-APA-User-Guide.html)

## New Features in Release 12.4T

For information regarding the features supported in Cisco IOS Release 12.4T, see the *Cross-Platform Release Notes* links at:

[http://www.cisco.com/en/US/products/ps6441/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps6441/prod_release_notes_list.html)

# Limitations and Restrictions

## Limitations and Restriction - Release 12.4(20)YA

- Interoperability between Cisco Unified CME and Cisco Unified CCX is restricted to one Cisco Unified CCX per Cisco Unified CME.
- Support for Multi-Party Ad Hoc and Meet-Me Conferencing features is not provided.
- Only incoming calls from a PSTN trunk are supported for deployment of the Interoperability feature. Other trunks, such as SIP and H.323, are supported as usual in Cisco Unified CME, however, not for customer calls to Cisco Unified CCX.
- Only SCCP phones can be configured as agent phones in Cisco Unified CME. The Cisco VG224 Analog Phone Gateway and analog and SIP phones are supported as typical in Cisco Unified CME, however, not as Cisco Unified CCX agent phones.
- Cisco Unified IP Phone 7931 cannot be configured as an agent phone in Cisco Unified CME. Cisco Unified IP Phone 7931s are supported as typical in Cisco Unified CME, however, not as Cisco Unified CCX agent phones.
- Shared-line appearance is not supported on Cisco Unified CCX agent phones in Cisco Unified CME. A directory number cannot be associated with more than one physical agent phone at one time.
- Overlaid lines are not supported on Cisco Unified CCX agent phones in Cisco Unified CME. More than one directory number cannot be associated with a single line button on an agent phone.
- Monitored mode for a line button is not supported on Cisco Unified CCX agent phones in Cisco Unified CME. An agent phone cannot be monitored by another phone.
- For call forward and call pickup, the directory number of a Cisco Unified CCX agent cannot forward to a Cisco CRS route point.

## Caveats

For general information on caveats and the bug toolkit, see *About Cisco IOS Release Notes* located at: [http://www.cisco.com/en/US/docs/ios/12\\_4/12\\_4x/12\\_4xy15/ReleaseNote.html](http://www.cisco.com/en/US/docs/ios/12_4/12_4x/12_4xy15/ReleaseNote.html).

This section contains the following caveat information:

- [Open Caveats - Release 12.4\(20\)YA3, page 11](#)
- [Resolved Caveats - Release 12.4\(20\)YA3, page 11](#)
- [Open Caveats - Release 12.4\(20\)YA2, page 11](#)
- [Resolved Caveats - Release 12.4\(20\)YA2, page 11](#)
- [Open Caveats - Release 12.4\(20\)YA1, page 19](#)
- [Resolved Caveats - Release 12.4\(20\)YA1, page 19](#)
- [Open Caveats - Release 12.4\(20\)YA, page 24](#)
- [Resolved Caveats - Release 12.4\(20\)YA, page 24](#)

## Open Caveats - Release 12.4(20)YA3

There are no open caveats in this release.

## Resolved Caveats - Release 12.4(20)YA3

CSCsu84868 c3845: Error mesg %SYS-2-BADSHARE: Bad refcount in datagram\_done.

**Symptom** Cisco 3845 experiences traceback error:

```
Aug 14 12:34:55.960: %SYS-2-BADSHARE: Bad refcount in datagram_done, ptr=7006C010,
count=0, -Traceback= 0x61816650 0x60641BD0 0x60C27A80 Aug 17 16:51:45.739:
%SYS-2-BADSHARE: Bad refcount in datagram_done, ptr=705985A4, count=0, -Traceback=
0x61816650 0x60641BD0 0x60C27A80
```

**Conditions** The error message occurs on a router running the c3845-adventerprisek9\_ivs\_li-mz.124-15.T5 image.

**Workaround** None.

CSCsy22826 VG224 sending incorrect ssType in 1+ node CUCM cluster.

**Symptom** VG224 endpoint does not connect to callback destination, once the callback destination is idle.

**Conditions** Multi node cluster and VG224 endpoint is registered with node other than the first node in the cluster.

**Workaround** Have VG224 endpoints registered with first node.

**Further Problem Description:** The activation of the callback is successful. What fails is when the callback destination becomes idle again and the VG224 endpoint gets notified (ring). After the VG224 endpoint goes offhook, the system should automatically connect to the Callback destination. This does not happen and VG224 endpoint gets silence.

## Open Caveats - Release 12.4(20)YA2

There are no open caveats in this release.

## Resolved Caveats - Release 12.4(20)YA2

- CSCsv04836

Multiple Cisco products are affected by denial of service (DoS) vulnerabilities that manipulate the state of Transmission Control Protocol (TCP) connections. By manipulating the state of a TCP connection, an attacker could force the TCP connection to remain in a long-lived state, possibly indefinitely. If enough TCP connections are forced into a long-lived or indefinite state, resources on

a system under attack may be consumed, preventing new TCP connections from being accepted. In some cases, a system reboot may be necessary to recover normal system operation. To exploit these vulnerabilities, an attacker must be able to complete a TCP three-way handshake with a vulnerable system.

In addition to these vulnerabilities, Cisco Nexus 5000 devices contain a TCP DoS vulnerability that may result in a system crash. This additional vulnerability was found as a result of testing the TCP state manipulation vulnerabilities.

Cisco has released free software updates for download from the Cisco website that address these vulnerabilities. Workarounds that mitigate these vulnerabilities are available.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090908-tcp24.shtml>.

#### CSCsr16693

A series of TCP packets may cause a denial of service (DoS) condition on Cisco IOS devices that are configured as Easy VPN servers with the Cisco Tunneling Control Protocol (cTCP) encapsulation feature. Cisco has released free software updates that address this vulnerability. No workarounds are available; however, the IPsec NAT traversal (NAT-T) feature can be used as an alternative.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090325-ctcp.shtml>.

Note: The March 25, 2009, Cisco IOS Security Advisory bundled publication includes eight Security Advisories. All of the advisories address vulnerabilities in Cisco IOS Software. Each advisory lists the releases that correct the vulnerability or vulnerabilities in the advisory. The following table lists releases that correct all Cisco IOS Software vulnerabilities that have been published in Cisco Security Advisories on March 25, 2009, or earlier.

[http://www.cisco.com/en/US/products/products\\_security\\_advisories\\_listing.html](http://www.cisco.com/en/US/products/products_security_advisories_listing.html)

#### CSCsu21828

A series of TCP packets may cause a denial of service (DoS) condition on Cisco IOS devices that are configured as Easy VPN servers with the Cisco Tunneling Control Protocol (cTCP) encapsulation feature. Cisco has released free software updates that address this vulnerability. No workarounds are available; however, the IPsec NAT traversal (NAT-T) feature can be used as an alternative.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090325-ctcp.shtml>.

Note: The March 25, 2009, Cisco IOS Security Advisory bundled publication includes eight Security Advisories. All of the advisories address vulnerabilities in Cisco IOS Software. Each advisory lists the releases that correct the vulnerability or vulnerabilities in the advisory. The following table lists releases that correct all Cisco IOS Software vulnerabilities that have been published in Cisco Security Advisories on March 25, 2009, or earlier.

[http://www.cisco.com/en/US/products/products\\_security\\_advisories\\_listing.html](http://www.cisco.com/en/US/products/products_security_advisories_listing.html)

#### CSCsv38166

The server side of the Secure Copy (SCP) implementation in Cisco IOS software contains a vulnerability that could allow authenticated users with an attached command-line interface (CLI) view to transfer files to and from a Cisco IOS device that is configured to be an SCP server, regardless of what users are authorized to do, per the CLI view configuration. This vulnerability

could allow valid users to retrieve or write to any file on the device's file system, including the device's saved configuration and Cisco IOS image files, even if the CLI view attached to the user does not allow it. This configuration file may include passwords or other sensitive information.

The Cisco IOS SCP server is an optional service that is disabled by default. CLI views are a fundamental component of the Cisco IOS Role-Based CLI Access feature, which is also disabled by default. Devices that are not specifically configured to enable the Cisco IOS SCP server, or that are configured to use it but do not use role-based CLI access, are not affected by this vulnerability.

This vulnerability does not apply to the Cisco IOS SCP client feature.

Cisco has released free software updates that address this vulnerability.

There are no workarounds available for this vulnerability apart from disabling either the SCP server or the CLI view feature if these services are not required by administrators.

This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090325-scp.shtml>.

#### CSCsu11522

A vulnerability exists in the Session Initiation Protocol (SIP) implementation in Cisco IOS software that can be exploited remotely to cause a reload of the Cisco IOS device.

Cisco has released free software updates that address this vulnerability. There are no workarounds available to mitigate the vulnerability apart from disabling SIP, if the Cisco IOS device does not need to run SIP for VoIP services. However, mitigation techniques are available to help limit exposure to the vulnerability.

This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090325-sip.shtml>.

#### CSCsk64158

**Symptom** Several features within Cisco IOS software are affected by a crafted UDP packet vulnerability. If any of the affected features are enabled, a successful attack will result in a blocked input queue on the inbound interface. Only crafted UDP packets destined for the device could result in the interface being blocked, transit traffic will not block the interface.

**Conditions** Cisco has released free software updates that address this vulnerability.

**Workaround** Workarounds that mitigate this vulnerability are available in the workarounds section of the advisory. This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090325-udp.shtml>.

CSCsj27458 IOS display "Using -1 out of xx bytes" after "erase nvram"/"show start"

**Symptom** The following message is seen when giving the command **<CmdBold> show startup-config <noCmdBold>**

"Using -1 out of xxxxx bytes"

This error message is misleading. This caveat does not affect the functionality.

**Conditions** startup-config was not present in NVRAM. That is, nvram configs were previously erased by **<CmdBold> write erase <noCmdBold>** command. This behavior is seen only in the c2400, c2691, c2800, c3631, c3725, c3745, c3825, c3845, and as5400 platforms.

**Workaround** Issuing **<CmdBold> write memory <noCmdBold>** command restores the config.

CSCsj31168 Loopback remote payload failed in 2800.

**Symptom** Loopback remote payload failed for 2800 routers.

**Conditions** This symptom has been seen on Cisco 2800 routers with Cisco IOS 12.4(13). Loopback works perfectly with 2801 & 1841 routers.

**Workaround** There is no workaround.

CSCsk41593 PAK\_SUBBLOCK error found when ping with >1500-byte over cellular inter.

**Symptom** The following error occurs when a ping packet is sent or received:

PAK\_SUBBLOCK\_ALREADY: 2 -Process= "IP Input"

**Conditions** Occurs when large ping packets (greater than 1500 bytes) are sent to back-to-back cellular interfaces with GRE tunneling enabled.

**Workaround** Disable the **<CmdBold>ip virtual-reassembly<noCmdBold>** command on the cellular interface.

CSCso30142 Traceback due to channel-group configuration.

**Symptom** Traceback is generated during boot up.

**Conditions** This is caused when the channel-group serial interface is configured with ip-address or np-ip-address. This is specific to T1/E1 HWIC.

**Workaround** None.

CSCso39750 router crashes at socket\_inherit\_fd after no ccm sccp.

CSCso39964 QoS:router hangs while removing class-map.

**Symptom** The router hangs when attempts are made to modify pure ACL configuration while traffic is still flowing.

**Conditions** Occurs on routers running Cisco IOS Release 12.4(15)T4. The router returns back to normal if the traffic is stopped.

**Workaround** There is no workaround.

CSCso41513 helper-address triggers ARP for non directly connected server.

**Symptom** When using the **<CmdBold>ip helper-address</noCmdBold>** command to forward directed broadcast, an incomplete ARP entry will be created for the helper-address configured even if it is not a directly connected subnet. This may break BOOTP forwarding to the DHCP server.

**Conditions** The symptoms are observed in Cisco IOS Release 12.4(19) only. Cisco IOS Release 12.4(18) does not have this issue.

**Workaround** Configure proxy-arp on the next hop device on the path to the DHCP server.

**Alternate Workaround:** Configure static ARP on the router for the helper-address pointing towards the next hop.

CSCso52548 parser breakage in crypto isakmp key <> CLI.

**Symptom** crypto isakmp key cli parser mode breakage.

**Conditions** crypto isakmp key <> cli.

**Workaround** None.

**Further information:** Not service impacting. Only that, crypto isakmp key <0/6> ? option gives "% Ambiguous command" instead of WORD for (UNENCRYPTED/ENCRYPTED) password.

CSCso61743 Router crashes@stcapp\_free\_supported\_codec\_list when stop/start stcapp.

**Symptom** Router crashes when stcapp is disabled, stcapp ccm-group is removed from configuration, and then stcapp is re-enabled.

**Conditions** Occurs on Cisco 2691 and Cisco 3745 routers running Cisco IOS Release 12.4(15)T05. Can also occur on other platforms running this Cisco IOS release. Can also occur if stcapp is disabled and the user attempts to enable stcapp but stcapp fails to start for any reason.

**Workaround** None.

CSCsq20970 ATM option missing, while configuring T1 controller for mode atm.

**Symptom** On the 2432 platform UUT, the 'atm' option is missing in the 'mode' CLI when the T1 controller is being configured for ATM.

**Conditions** The symptom is observed on the 2432 platform with a T1 controller.

**Workaround** There is no workaround.

CSCsq91960 failed to delete vrf when it is 32 characters long.

**Symptom** VRF may not get deleted if the VRF NAME size is 32 characters on a dual RP HA/SSO router.

**Conditions** This symptom occurs when adding a VRF with 32 characters on a DUAL RP HA router. (In some releases a VRF name with more than 32 characters will get truncated to 32.) The following may occur:

- There may be a DATA CORRUPTION ERRMSG.
- While deleting this 32 character length VRF, VRF will fail to get deleted completely with an ERRMSG on active.

**Workaround** There is no workaround.

CSCsq97697 No dialtone is heard when an outgoing call is made right after call disc.

**Symptom** Sometimes dialtone is not heard when user disconnects the existing call and immediately makes another outgoing call via hookflash.

**Conditions** Is seen when hookflash is used to disconnect the existing call and make an outgoing call.

**Workaround** Do not use the hookflash button. Go onhook to disconnect the call, wait for a few seconds then go offhook to make a new outgoing call.



CSCsr06625 telephony-service command throws % Invalid input detected.

CSCsr27960 Traceback observed after configuring credential under sip-ua.

**Symptom** Traceback observed when configuring credentials CLI under sip-ua.

**Conditions** This happens when user configures credentials CLI with username length more than 32 characters.

**Workaround** There is no workaround.

CSCsr68545 Error %DATACORRUPTION-1-DATAINCONSISTENCY when running ipsla with rtt.

**Symptom** Error message occurs:

```
000302: Jul 24 13:00:13.575 CDT: %DATACORRUPTION-1-DATAINCONSISTENCY: copyerror
-Traceback= 0x410FD1A4 0x41119DB0 0x41138324 0x41DE5714
```

**Conditions** IP SLA configured with RTT.

**Workaround** There is no workaround.

CSCsr74835 incorrect uses of sprintf() in tcp/telnet.c.

**Symptom** Certain sprintf() calls in tcp/telnet.c are incorrect.

**Conditions** They have the potential to overflow the destination buffers.

**Workaround** snprintf() should be used with a bounding length of the size of the destination buffer.

CSCsr78883 Router console displays messages "Data corruption Data Inconsistency.

**Symptom** There will be traceback on configuring **mls qos cos pass-through dscp** in supporting interface mode.

**Conditions** Configuring **mls qos cos pass-through dscp** in the interface that supports the functionality.

**Workaround** Currently the CLI is not supported in most network modules, and thus, is invisible to the users. If the CLI is supported, configure it as **mls qos cos override | cos-value**.

**Further Problem Description:** Due to the buffer overflow, there will be traceback when configuring the QoS in the supporting interface. Currently the CLI is not supported in most network modules, and is thus, invisible to the users.

CSCsr92741 TCP packets with zero fields misbehavior.

**Symptom** When a TCP packet with all fields set to "zero" (at a tcp level) is sent to a remote router (whether using ipv4 and IPv6). The destination router (to which the destination IP belongs), will send a ACK/RST flag set TCP packet back to the source.

**Workaround** CoPP, FPM and other mechanisms can be used to mitigate and protect against these packets.

CSCsu24050 Multiple PRC\_NON\_COMPLIANCE tracebacks found on configuring stcapp FAC.

CSCsu58305 c880 build breaks due to stricter compiler flags in the throttle branch.

CSCsu64215 ip tcp adjust-mss command results in packet loss for non-TCP traffic.

**Symptom** Router may incorrectly drop non TCP traffic. TFTP and EIGRP traffic can be impacted as seen in CSCsv89579.

**Conditions** Occurs when the `<CmdBold>ip tcp adjust-mss<NoCmdBold>` command is configured on the device.

**Workaround** Disable `<CmdBold>ip tcp adjust-mss<NoCmdBold>` on all interfaces. Note that this may cause higher CPU due to fragmentation and reassembly in certain tunnel environments where the command is intended to be used.

CSCsv13562 Router crashes due to double free of `ccb->call_info.origRedirectNumber`.

**Symptom** The router crashes due to double free scenarios. While handling 302 response, "`ccb->call_info.origRedirectNumber`" attempts a double free due to signaling forking.

**Conditions** Running Call Manager Express.

**Workaround** There is no workaround.

CSCsv54651 Crafted VTP packet could cause a crash.

Cisco's VTP protocol implementation in some versions of Cisco IOS and CatOS may be vulnerable to a DoS attack via a specially crafted VTP packet sent from the local network segment when operating in either server or client VTP mode. When the device receives the specially crafted VTP packet, the switch may crash (and reload/hang). The crafted packet must be received on a switch interface configured to operate as a trunk port.

**Workaround** None.

This response is posted at <http://www.cisco.com/warp/public/707/cisco-sr-20081105-vtp.shtml>

CSCsv84605 When phone is onhook, media shouldn't be handled.

**Symptom** Reporting port hang. The symptom is that when the port is blocked, the underlying low layer (VPM, VTSP) is already in clean IDLE state, but STCAPP keeps itself in the REM\_ONHOOK\_PEND -> CONNECTING -> ACTIVE\_PENDING -> ONHOOK\_PEND -> REM\_ONHOOK\_PEND loop.

**Conditions** When STCAPP is used for analog phones through CCM control. CCM is 6.1.1. STCAPP version is 12.4(20)YA1. The fix will go into 12.4(22)T.

**Workaround** None.

## Open Caveats - Release 12.4(20)YA1

There are no open caveats in this release.

## Resolved Caveats - Release 12.4(20)YA1

CSCsu70214

A vulnerability exists in Cisco IOS software where an unauthenticated attacker could bypass access control policies when the Object Groups for Access Control Lists (ACLs) feature is used. Cisco has released free software updates that address this vulnerability. There are no workarounds for this vulnerability other than disabling the Object Groups for ACLs feature. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-acl.shtml>.

CSCsw47076

A vulnerability exists in Cisco IOS software where an unauthenticated attacker could bypass access control policies when the Object Groups for Access Control Lists (ACLs) feature is used. Cisco has released free software updates that address this vulnerability. There are no workarounds for this vulnerability other than disabling the Object Groups for ACLs feature. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-acl.shtml>.

CSCsv48603

A vulnerability exists in Cisco IOS software where an unauthenticated attacker could bypass access control policies when the Object Groups for Access Control Lists (ACLs) feature is used. Cisco has released free software updates that address this vulnerability. There are no workarounds for this vulnerability other than disabling the Object Groups for ACLs feature. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-acl.shtml>.

CSCsx07114

A vulnerability exists in Cisco IOS software where an unauthenticated attacker could bypass access control policies when the Object Groups for Access Control Lists (ACLs) feature is used. Cisco has released free software updates that address this vulnerability. There are no workarounds for this vulnerability other than disabling the Object Groups for ACLs feature. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-acl.shtml>.

CSCsu50252

A vulnerability exists in Cisco IOS software where an unauthenticated attacker could bypass access control policies when the Object Groups for Access Control Lists (ACLs) feature is used. Cisco has released free software updates that address this vulnerability. There are no workarounds for this vulnerability other than disabling the Object Groups for ACLs feature. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-acl.shtml>.

CSCsy54122

A vulnerability exists in Cisco IOS software where an unauthenticated attacker could bypass access control policies when the Object Groups for Access Control Lists (ACLs) feature is used. Cisco has released free software updates that address this vulnerability. There are no workarounds for this vulnerability other than disabling the Object Groups for ACLs feature. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-acl.shtml>.

CSCsy15227

Cisco IOS Software configured with Authentication Proxy for HTTP(S), Web Authentication or the consent feature, contains a vulnerability that may allow an unauthenticated session to bypass the authentication proxy server or bypass the consent webpage.

There are no workarounds that mitigate this vulnerability.

This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090923-auth-proxy.shtml>

CSCsz38104

The H.323 implementation in Cisco IOS Software contains a vulnerability that can be exploited remotely to cause a device that is running Cisco IOS Software to reload. Cisco has released free software updates that address this vulnerability. There are no workarounds to mitigate the vulnerability apart from disabling H.323 if the device that is running Cisco IOS Software does not need to run H.323 for VoIP services. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-h323.shtml>.

CSCsq58779

Cisco IOS devices that are configured for Cisco Unified Communications Manager Express (CME) and the Extension Mobility feature are vulnerable to a buffer overflow vulnerability. Successful exploitation of this vulnerability may result in the execution of arbitrary code or a Denial of Service (DoS) condition on an affected device.

Cisco has released free software updates that address this vulnerability.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-cme.shtml>.

CSCsr18691

Cisco IOS devices that are configured with Cisco IOS Zone-Based Policy Firewall Session Initiation Protocol (SIP) inspection are vulnerable to denial of service (DoS) attacks when processing a specific SIP transit packet. Exploitation of the vulnerability could result in a reload of the affected device.

Cisco has released free software updates that address this vulnerability.

Workarounds that mitigate this vulnerability are available within the workarounds section of the posted advisory.

This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090923-ios-fw.shtml>

CSCsy07555

Cisco IOS devices that are configured for Internet Key Exchange (IKE) protocol and certificate based authentication are vulnerable to a resource exhaustion attack. Successful exploitation of this vulnerability may result in the allocation of all available Phase 1 security associations (SA) and prevent the establishment of new IPsec sessions.

Cisco has released free software updates that address this vulnerability.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-ipsec.shtml>

CSCee72997

Cisco IOS devices that are configured for Internet Key Exchange (IKE) protocol and certificate based authentication are vulnerable to a resource exhaustion attack. Successful exploitation of this vulnerability may result in the allocation of all available Phase 1 security associations (SA) and prevent the establishment of new IPsec sessions. Cisco has released free software updates that address this vulnerability. This advisory is posted at

<http://www.cisco.com/warp/public/707/cisco-sa-20090923-ipsec.shtml>

CSCsu24505

Cisco IOS Software with support for Network Time Protocol (NTP) version (v4) contains a vulnerability processing specific NTP packets that will result in a reload of the device. This results in a remote denial of service (DoS) condition on the affected device.

Cisco has released free software updates that address this vulnerability.

Workarounds that mitigate this vulnerability are available and are documented in the workarounds section of the posted advisory.

This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090923-ntp.shtml>

CSCsv75948

Cisco IOS Software with support for Network Time Protocol (NTP) version (v4) contains a vulnerability processing specific NTP packets that will result in a reload of the device. This results in a remote denial of service (DoS) condition on the affected device.

Cisco has released free software updates that address this vulnerability.

Workarounds that mitigate this vulnerability are available and are documented in the workarounds section of the posted advisory.

This advisory is posted at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20090923-ntp.shtml>

## CSCsx25880

A vulnerability exists in the Session Initiation Protocol (SIP) implementation in Cisco IOS Software that could allow an unauthenticated attacker to cause a denial of service (DoS) condition on an affected device when the Cisco Unified Border Element feature is enabled. Cisco has released free software updates that address this vulnerability. For devices that must run SIP there are no workarounds; however, mitigations are available to limit exposure of the vulnerability. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-sip.shtml>.

## CSCsq24002

Cisco IOS Software contains a vulnerability that could allow an attacker to cause a Cisco IOS device to reload by remotely sending a crafted encryption packet. Cisco has released free software updates that address this vulnerability. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-tls.shtml>.

## CSCsq31776

Cisco devices running affected versions of Cisco IOS Software are vulnerable to a denial of service (DoS) attack if configured for IP tunnels and Cisco Express Forwarding. Cisco has released free software updates that address this vulnerability. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-tunnels.shtml>.

## CSCsx70889

Cisco devices running affected versions of Cisco IOS Software are vulnerable to a denial of service (DoS) attack if configured for IP tunnels and Cisco Express Forwarding.

Cisco has released free software updates that address this vulnerability.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-tunnels.shtml>.

## CSCsh97579

Cisco devices running affected versions of Cisco IOS Software are vulnerable to a denial of service (DoS) attack if configured for IP tunnels and Cisco Express Forwarding.

Cisco has released free software updates that address this vulnerability.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-tunnels.shtml>.

## CSCsq13348

The Cisco IOS Intrusion Prevention System (IPS) feature contains a vulnerability in the processing of certain IPS signatures that use the SERVICE.DNS engine. This vulnerability may cause a router to crash or hang, resulting in a denial of service condition.

Cisco has released free software updates that address this vulnerability. There is a workaround for this vulnerability.

**Note**

This vulnerability is not related in any way to CVE-2008-1447 - Cache poisoning attacks. Cisco Systems has published a Cisco Security Advisory for that vulnerability, which can be found at [http://www.cisco.com/en/US/products/products\\_security\\_advisory09186a00809c2168.shtml](http://www.cisco.com/en/US/products/products_security_advisory09186a00809c2168.shtml).

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20080924-iosips.shtml>.

CSCsr56699 CME router crashes when invoking call features while AIM-IPS-K9 is enabled.

**Symptom** Router crashes.

**Conditions** Invoke call transfer on CME router where ids monitoring inline is configured to monitor voice traffic.

**Workaround** There is no workaround.

CSCej70453 Unable to control application: OER Route Map Failure.

**Symptom** OER Application Aware Routing will not work on 2600.

**Workaround** There is no workaround.

CSCso56129 %SYS-2-BADSHARE: Bad refcount in datagram\_done monitoring cme/cue calls.

**Symptom** Bad Refcount with tracebacks seen.

**Conditions** Use AIM-IPS-K9 to monitor interfaces with ephones registered to the CME on the same router and have ephone check voice mail. This is in a branch in a box setup. UUT serves as a CME and also has the voice mail AIM in the same router.

**Workaround** There is no workaround.

CSCsq19144 AAA downloaded PBR not getting installed.

**Symptom** User-specific policy-based routes that are downloaded from the AAA server using Attribute 104 may not be installed.

**Conditions** This symptom is seen if the policy-based routes are downloaded from the AAA server.

**Workaround** Configure the policy-based routes locally.

CSCsr16050 Ping fails from Service-Module-Engine to networks not directly connected.

## **Open Caveats - Release 12.4(20)YA**

There are no open caveats in this release.

## **Resolved Caveats - Release 12.4(20)YA**

There are no resolved caveats in this release.



# Additional References

Use this release note with the documents and websites in this release note and the documents listed in the following sections:

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

## Release-Specific Documents

The following documents are specific to Release 12.4 and apply to Release 12.4(20)YA:

- [Cross-Platform Release Notes for Cisco IOS Release 12.4T](#)
- [Cisco IOS Software Releases 12.4 Special and Early Deployments](#)
- [Caveats for Cisco IOS Release 12.4\(20\)T](#)

## Platform-Specific Documents

Hardware installation guides, configuration and command reference guides, and additional documents specific to the Cisco 2800 series routers are available at:

[http://www.cisco.com/en/US/products/ps5854/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps5854/tsd_products_support_series_home.html)

## Cisco IOS Software Documentation Set

The Cisco IOS software documentation set consists of the Cisco IOS configuration guides, Cisco IOS command references, and 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. [Cisco IOS Software Documentation](#) is available in html or pdf form.

Select your release and click the command references, configuration guides, or any other Cisco IOS documentation you need.

## Notices

See the “[Notices](#)” section in *About Cisco IOS Release Notes* located at:

[http://www.cisco.com/en/US/docs/ios/12\\_4/12\\_4x/12\\_4xy15/ReleaseNote.html](http://www.cisco.com/en/US/docs/ios/12_4/12_4x/12_4xy15/ReleaseNote.html)

Use this document in conjunction with the documents listed in the [“Additional References”](#) section.

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