



# System Release Notes for Contact Center: Cisco Unified Communications System, Release 5.0

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# Overview

It is standard methodology for Cisco Systems to perform system-wide testing of Cisco Unified Communications components, supplementing the product-level testing performed on each Cisco Unified Communications product.

A major deliverable of the System Release and Cisco Unified Communications System testing is a recommendation of compatible software releases that have been verified by the test for customers. The recommendations are not exclusive and are in addition to interoperability recommendations for each of the individual voice application or voice infrastructure products. See [System Requirements](#) for more information.

The focus of this document is the contact center family of products of Cisco Unified Communications System testing.

**Note**

Many Cisco components have been renamed as part of the introduction of Cisco Unified Communications System (for example, Cisco CallManager is now Cisco Unified CallManager or simply Unified CallManager). The new names are used throughout this document when describing the versions of the product tested as part of Cisco Unified Communications System Release 5.0. The old names may appear in sections that describe upgrading from previous versions.

IP telephony (IPT) components have also been tested. Additional information is available in the *System Architecture Reference Manual for IP Telephony* at:

<http://www.cisco.com/univercd/cc/td/doc/systems/unified/unified1/starmipt/index.htm>

This document is the Cisco Unified Communications System release notes on the testing conducted on voice systems composed of Cisco voice gateways, routers, Catalyst switches and the following components:

- Cisco Unified CallManager (Unified CallManager)
- Cisco Unified Contact Center Enterprise (Unified CCE) / Cisco Unified Intelligent Contact Management (Unified ICM) software
- Cisco Customer Response Solutions (CRS / Cisco Unified IP IVR)
- Cisco Unified Customer Voice Portal (Unified CVP) (formerly ISN)
- Computer Telephony Integration Object Server (CTI OS)
- Cisco Agent Desktop (CAD)

## Tested Functionality

The system-wide testing of contact center functionality for Cisco Unified Communications System Release 5.0 includes the following:

- Upgrade of the following main components from IP Communications Systems Test Release 4.1 versions:
  - Cisco CallManager to Release 5.0(2)
  - Cisco IPCC Enterprise / Cisco ICM to Release 7.0(0)SR3
  - CRS (IP IVR) to Release 4.5(2)
  - CVP to Release 3.1(0)ES2
  - CAD to Release 7.0.1.17

- CTI OS to Release 7.1(0)SR1
- Deployment models such as:
  - Single-site, Multisite Centralized, and Multisite Distributed deployment models
  - Unified CCE deployment with CRS for testing Unified CallManager Post-Routed and Cisco Unified Outbound Dialer (Unified OUTD) call flows and Cisco Unified Mobile Agent (Unified MA)
  - Unified CCE deployment with Unified CVP comprehensive mode for testing Unified CVP Post-Routed and Unified OUTD call flows in a branch office model
  - Outsourcing model with Unified CVP and CRS for testing Parent/Child call flow, where a single parent Cisco Unified Intelligent Contact Management Enterprise (Unified ICME) system post-routes calls to multiple (two) child Unified CCE systems
  - Cisco Unified System Contact Center (Unified SCC) deployment (with streamlined installation and web-based administration) at the Single-site
- Clustering-over-WAN (CoW) deployment models for Unified CallManager
- Unified CCE/Unified ICM duplexed for redundancy and fault tolerance
- Unified CallManager Appliance model
- Hybrid SCCP (Skinny Call Control Protocol) and SIP (Session Initiation Protocol) agents/phones deployment
- Unified CallManager Releases 5.0(2) (SIP/SCCP) and Cisco CallManager 4.1(x) (SCCP) interoperability
- SIP and H.323 Intercluster Trunks (ICT)
- Cisco Unified Customer Voice Portal Studio (Unified CVPS) with Self-Service Application
- Unified ICM Dialed Number plans for agent-initiated Blind and Consultative transfers and Ad hoc conferencing
- Unified OUTD features including:
  - Transfers to Unified CVP and Unified IP IVR
  - Progressive/Predictive/Preview/Direct Preview Dialing Modes
  - Personal/System Callback
  - Call Progress Analysis
- CTI OS and CAD desktop features including:
  - BargeIn/Intercept
  - Silent desktop monitoring by supervisors
  - Silent monitoring by supervisors using VoIP monitors (CAD only)
- Network management using Cisco Unified Operations Manager (Unified Operations Manager)
- IOS software release 12.4(6)T interoperability

## New and Changed Features

Cisco Unified Communications System Release 5.0 integrates telephony, conferencing (voice and web), messaging, and contact center products for enterprise IP customers in a variety of deployment models using SIP and SCCP endpoints over IP networks. The contact center system is a portion of the end-to-end system release for enterprise Cisco Unified Communications, which is centered on the latest Unified CallManager release.

In the following sections, there are brief overviews of new and enhanced features for Cisco Unified Communications System and links to the detailed documentation:

- [Cisco Unified Contact Center Enterprise and Cisco Unified Intelligent Contact Management Software](#)
- [Cisco Unified CallManager](#)
- [Cisco Customer Response Solutions](#)
- [Cisco Unified Customer Voice Portal](#)
- [Cisco Unified Outbound Dialer](#)
- [Cisco Computer Telephony Integration Object Server](#)
- [Cisco Agent Desktop](#)
- [Cisco Unity Connection](#)
- [Cisco Unified IP Phones](#)
- [Cisco Unified Operations Manager](#)
- [CiscoWorks Management Center for Cisco Security Agents](#)
- [Windows Operating System Support](#)

## Cisco Unified Contact Center Enterprise and Cisco Unified Intelligent Contact Management Software

Unified CCE and Unified ICM software includes the following new features:

- Parent/Child deployment:
  - Cisco Unified Contact Center Gateway Enterprise Feature deployment based on the new Unified ICM Enterprise component, Cisco Unified Contact Center Gateway Enterprise (Unified CCGE), and the new Unified CCE component, Cisco Unified System Contact Center Gateway (Unified SCCG)
  - Unified SCC deployment with streamlined installation and web-based administration
  - There is no upgrade path for Unified CCGE and Unified SCCG; you can only *fresh* install these components.
- Windows Server 2003 including Active Directory (AD) and Domain Security Support
- Security enhancements such as automated Windows hardening, more secure SQL server, Windows firewall support, and deployment of IPSec (IP Security)
- Dynamic routing client
- CTI OS support of 1000 agents per PG pair
- Dynamic re-skilling of agents
- Increased agent extensions to 15 digits allowing international dialing

- Cisco Unified IP Phone Agent to enable agents to log on and work from a Cisco Unified IP Phone
- Webview reporting with default templates
- Unified OUTD dialing enhancements
- Cisco Unified Mobile Agent (Unified MA) support for remote, telecommuter agents, either via broadband or POTS (Plain Old Telephone System) phones
- SNMP-based application health monitoring and extended functionality for Unified CCE/Unified ICM Support Tool

### Cisco Unified Contact Center Gateway Enterprise

The Cisco Unified Contact Center Gateway Enterprise feature extends Unified ICM capabilities to “child” Unified CCE installations via the Unified CCGE. This new feature allows Unified ICM to connect to multiple Unified CCE systems in a child mode, enabling the “parent” Unified ICM to provide enterprise-wide routing and reporting—while still controlling its other Unified ICM Peripherals, such as TDM ACDs. The child Unified CCE system automatically configures its agents, skills groups, and services on to the parent Unified ICM.

### Cisco Unified System Contact Center

In the test environment, Unified SCC is implemented as a two-server configuration. The Central Controller and Agent/IVR Controller server combines the Unified SCCG with the CallRouter, Logger, and CRS, CTI, CTI OS and CAD servers. The Administration and Reporting server combines the AW/HDS/Web Administration functionality. This deployment has a streamlined installation and a browser-based interface associated with it.

### Domain Security/Active Directory Support

Unified CCE/Unified ICM Release 7.0(0)SR3 can now operate in a shared corporate domain. Prior to this release, Unified ICM and Unified CCE were required to be in their own Active Directory domain or forest.

There is no support for Windows NT Domain Controllers. Unified CCE/Unified ICM Release 7.0(0)SR3 requires the domain to be (at least) at Windows 2000 native mode—mixed mode is **not** supported.

### Dynamic Routing Client

When Unified ICM uses the *Translation Route To VRU* method to route a call to a Type2 VRU, the VRU becomes the new routing client for the call. For Unified CCE/Unified ICM Release 7.0(0)SR3, a new mechanism has been added in Unified ICM to support a subsequent network transfer using this new VRU routing client.

In an environment in which the original routing client is not capable of network transfer, all the pre-routed calls can be transferred to Unified CVP via “Translation Route To VRU” to take advantage of the network transfer feature.

### Other Enhancements

In the Unified CCE/Unified ICM Release 7.0(0)SR3 environment, there are new web-based administration tools that provide streamlined installations with improvements to the Customer Interaction Network reporting.

The productivity of agents, supervisors, and contact center managers has been improved by dynamic agent re-skilling, new reporting templates that include graphic displays for trend analysis, increased number of agent extensions, and graphical real-time views of agent activity for supervisors.

For a detailed description of new and enhanced features and functionality, see the *Release Notes for Cisco IPCC/ICM Enterprise & Hosted Editions Release 7.0(0)* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps1001/c1178/ccmigration\\_09186a00805670e0.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps1001/c1178/ccmigration_09186a00805670e0.pdf)

## Cisco Unified CallManager

Unified CallManager 5.0(2) (comprised of Cisco Unified CallManager Release 4.0 and 4.1(3) features) includes the following changes and updates to functionality:

- Appliance model implementation
- New security, administration platform, RSVP, and user license functionality and requirements
- Line-side (endpoint) SIP support for SIP devices and applications
- SIP trunk-side enhancements
- Unified CallManager SIP integration to Cisco Unity where a SIP trunk is required for the SIP voice mail Message Waiting Indicator (MWI) to operate
- Support of next generation SIP phones as agent phones
- Different installation framework including Basic Install, Upgrade during Install, and Operating System Upgrade
- Different storage architecture and access for Call Detail Records (CDR)
- Networking enhancements including Cisco RSVP Agent support
- The names of the publisher and subscribers have been changed:
  - Publisher is called first node
  - Subscriber is called subsequent node
- Cisco Unified CallManager Bulk Administration Tool is a new Unified CallManager Administration menu item (only on the publisher or first node). Previously, Bulk Administration Tool (BAT) was installed as a plugin and then run as a separate application within Unified CallManager.
- The new name for the backup and recovery mechanism is the Cisco Disaster Recovery System (DRS), which performs a cluster-level backup, and restore. If the system crashes for any reason it can be restored back using DRS using backed up files.
- The following enhancements or changes have been made to server configurations:
  - TFTP server—Support the ability to define a single TFTP server for all phones in multiple Unified CallManager clusters to retrieve their configuration files.
  - DHCP server—The DHCP server provides addresses only for phones, not for all devices in the network.
  - DNS server—Unified CallManager must be configured at the initial install for either DNS services or static IP Addressing only.
  - Unified CallManager, Music on Hold (MOH), and Annunciator servers—Because of security requirements, you cannot add, copy, or delete these server configurations, which get automatically created at Unified CallManager installation.

- Lightweight Directory Access Protocol (LDAP) directory server—The optional embedded LDAP server with DC Directory is no longer supported.

For a detailed description of these features and functionality, see the *Release Notes for Cisco Unified CallManager Release 5.0(2)* at:

[http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_release\\_note09186a008062bd3b.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_release_note09186a008062bd3b.html)

## Cisco Customer Response Solutions

CRS 4.5(2) includes the following changes and updates to functionality:

- Standalone server configuration with no support for high availability
- Cannot be co-resident with Unified CallManager on the same server, since CRS runs only on the Windows platform, whereas Unified CallManager runs as an Appliance model
- CRS 4.5(2) in the Cisco Unified Communications System contact center environment can only be handled as a *fresh* installation; upgrading from the previous CRS system is not supported



**Note**

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However, you can upgrade from CRS 4.5(1)SR1 to CRS4.5(2).

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- Support for a maximum of 300 agents, 300 Unified IP IVR (Interactive Voice Response) ports, and 32 supervisors
- CRS only supports Unified CallManager Release 5.0(2) or later
- CRS requires a special version of the Cisco Unified Backup and Restore System (BAR 4.0.900) utility called *BARS for CRS 4.5(2)*. BARS for CRS 4.5(2) is bundled as part of the CRS 4.5(2) DVD.
- Enhancements to agent and supervisor GUIs, recording and monitoring capabilities, CRS Script Editor, and Cisco Unified IP Phone Agent

For a detailed description of Cisco CRS 4.5(2), see the *Release Notes for Customer Response Solutions 4.5(2)* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps6879/c1178/ccmigration\\_09186a008063b195.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps6879/c1178/ccmigration_09186a008063b195.pdf)

## Cisco Unified Customer Voice Portal

The following enhancements have been made to Unified CVP Release 3.1(0)ES2:

- Unified CVP Self-Service Application using Unified CVPS (an offline tool that is part of the Unified CVP product line)
- Support for SIP agents/phones, additional gateways, and standalone configuration

For a detailed description of new and enhanced features and functionality, see *Release Notes for Cisco Customer Voice Portal (CVP) Release 3.1(0)* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps1006/c1178/ccmigration\\_09186a0080551e4c.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps1006/c1178/ccmigration_09186a0080551e4c.pdf)

## Cisco Unified Outbound Dialer

Cisco Unified Outbound Dialer (OUTD) has been enhanced to support the following:

- Dynamic re-skilling of agents is supported in outbound mode. Blended contact centers can use this to move agents between campaigns.
- The *Find Me* feature for Unified OUTD allows the Predictive Dialer to find a customer by sequentially dialing up to 10 numbers for a single customer.
- Cisco Agent Desktop provides Outbound Specific buttons: Accept, Skip, Reject, Skip-Close, Reject-Close, and Callback.
- Direct Preview Dialing mode allows agents to initiate customer calls from their phones directly instead of having the Unified OUTD place the call.

For a detailed description of new and enhanced features and functionality, see the *Release Notes for Cisco IPCC/ICM Enterprise & Hosted Editions Release 7.0(0)* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps1001/c1178/ccmigration\\_09186a00805670e0.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps1001/c1178/ccmigration_09186a00805670e0.pdf)

## Cisco Computer Telephony Integration Object Server

Cisco CTI OS has been enhanced to support the following:

- Transport Layer Security (TLS) for traffic between the CTI OS server and CTI OS clients (COM/C++ CILs only) and between peer CTI OS servers
- QoS support applicable to COM/C++ CILs only.
- Support for application development targeting Microsoft .NET framework
- Login by login name, skill group name, or agent name
- Dynamic re-skilling of agents
- Supervisors can silently monitor agents using the CTI OS Desktop

Performance improvements have also been made; for example, the maximum number of agent connections is increased to 1000 per PG pair and statistics distribution is smoother to accommodate network traffic bursts due to the collection of statistics.

For a detailed description of these and other new and enhanced features, see the *Release Notes for Cisco CTI OS Release 7.1(0)* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps14/c1178/ccmigration\\_09186a00804d6e5f.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps14/c1178/ccmigration_09186a00804d6e5f.pdf)

## Cisco Agent Desktop

CAD 7.0(1) includes the following new features and functionality:

- Localization—CAD has been localized in several languages and the localized applications and online help are available for Cisco Agent Desktop, Cisco Supervisor Desktop, and the Cisco IP Phone Agent service.
- Citrix/Terminal Services—CAD is now supported in a Citrix/Microsoft Terminal Services environment.
- Accessibility—The CAD application GUIs have been improved to increase accessibility.

- Automated Distribution—Cisco Agent Desktop and Cisco Supervisor Desktop can now be installed or upgraded on multiple desktops through the use of an automated package distribution tool.

For a detailed description of new and enhanced features and functionality, see the *Release Notes for Cisco Agent Desktop Release 7.0(1)* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps427/c1178/ccmigration\\_09186a00805e2462.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps427/c1178/ccmigration_09186a00805e2462.pdf)

## Cisco Unity Connection

Cisco Unity Connection is a new component of the Cisco Unified Communications messaging portfolio along with Cisco Unity and Cisco Unity Express. Cisco Unity Connection combines integrated messaging, voice recognition, and call transfer rules into an easy-to-manage system for mid-market customers with up to 1500 users. Cisco Unity Connection transparently integrates messaging and voice recognition components with your data network to provide continuous global access to calls and messages.

The following is a list of features and functionality:

- Simplified installation (less than 2 hours) compared to Cisco Unity
- Supports Unified CallManager SIP integration to Cisco Unity
- Provides subscriber-to-subscriber name dialing by simply speaking the destination name
- Ability to create individual Cisco Unity user mailboxes from the Unified CallManager Administration End User and Directory Number configuration pages
- Voice recognition allows the use of voice commands such as play messages, send message, reply, forward, and others, for managing voice mail
- Provides advanced personalized productivity via call transfer rules such as transfer calls based on time of day, transfer calls based on calendar information, transfer calls based on who the caller is, and so on.
- Supports IMAP client access with Cisco Unity Connection IMAP client access options, allowing users to retrieve voice mail messages through email clients

For more information, see the *Release Notes for Cisco Unity Connection Release 1.1(1)* at:

[http://www.cisco.com/en/US/products/ps6509/prod\\_release\\_note09186a008058bbd1.html](http://www.cisco.com/en/US/products/ps6509/prod_release_note09186a008058bbd1.html)

## Cisco Unified IP Phones

Both SCCP and SIP agents/phones have been deployed in the Cisco Unified Communications System contact center test environment and are listed in [Table 2](#).

In addition to SCCP phones, only enhanced SIP phones can be used as agent phones. For more information, see the following Release Notes for SCCP and SIP Phones for Unified CallManager 5.0(2):

- *Cisco IP Phone 7970G/7971G-GE Release Notes for Firmware Release 8.0(1) for Cisco CallManager 5.0, 4.2, 4.1, 4.0, 3.3 (SIP)* at:

[http://www.cisco.com/en/US/products/hw/phones/ps379/prod\\_release\\_note09186a00805fe55e.html](http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_note09186a00805fe55e.html)

- *Cisco Unified IP Phone 7961G/7961G-GE and 7941G/7941G-GE Release Notes for Firmware Release 8.0(1) for Cisco CallManager 5.0 (SIP)* at:

[http://www.cisco.com/en/US/products/hw/phones/ps379/prod\\_release\\_note09186a00805fe57f.html](http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_note09186a00805fe57f.html)

- *Cisco IP Phone 7970G and 7971G-GE Release Notes for Firmware Release 8.0(1) for Cisco CallManager 5.0, 4.2, 4.1, 4.0, 3.3 (SCCP)* at:  
[http://www.cisco.com/application/pdf/en/us/guest/products/ps5440/c1178/ccmigration\\_09186a00805f28fe.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps5440/c1178/ccmigration_09186a00805f28fe.pdf)
- *Cisco Unified IP Phone 7960G and 7940G Release Notes for Firmware Release 8.0(1) for Cisco Unified CallManager (SCCP)* at:  
[http://www.cisco.com/en/US/products/hw/phones/ps379/prod\\_release\\_note09186a00805ed09c.html](http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_note09186a00805ed09c.html)
- *Cisco IP Phone 7961G, 7961G-GE, 7941G, and 7941G-GE Release Notes for Firmware Release 8.0(1) for Cisco CallManager 5.0, 4.2, 4.1, 4.0, and 3.3 (SCCP)* at:  
[http://www.cisco.com/en/US/products/hw/phones/ps379/prod\\_release\\_note09186a00805f2972.html](http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_note09186a00805f2972.html)

## Cisco Unified Operations Manager

CiscoWorks IP Telephony Environment Monitor (ITEM) is replaced by Cisco Unified Operations Manager. For a detailed description of new and enhanced features and functionality, see the *Release Notes for Cisco Unified Operations Manager 1.1* at:

[http://www.cisco.com/en/US/products/ps6535/prod\\_release\\_note09186a0080627fa0.html](http://www.cisco.com/en/US/products/ps6535/prod_release_note09186a0080627fa0.html)

## CiscoWorks Management Center for Cisco Security Agents

For a detailed description of new and enhanced features and functionality, see the *Release Notes for CiscoWorks Management Center for Cisco Security Agents 4.0* at:

[http://www.cisco.com/en/US/products/sw/cscowork/ps5212/prod\\_release\\_note09186a00801e54be.html](http://www.cisco.com/en/US/products/sw/cscowork/ps5212/prod_release_note09186a00801e54be.html)

## Windows Operating System Support

For new installations, Unified CCE/Unified ICM Release 7.0(0)SR3 Setup requires the installation of Windows Server 2003 SP1 (or later).



### Note

Windows 2000 Server is subject to end-of-life/end-of-support considerations as enforced by Microsoft.

The following changes are implemented for Unified ICM and the Windows 2003 operating system:

- Separation of domain controllers from Unified ICM components
- Transition and migration to Windows 2003 Active Directory (AD)

For more information, see the *Staging Guide for Cisco Unified ICM/Unified CCE & Hosted Editions* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps1001/c1097/ccmigration\\_09186a00804d72f9.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps1001/c1097/ccmigration_09186a00804d72f9.pdf)

# System Requirements

This section provides the following information about the software versions of Cisco components and firmware versions of Cisco Unified IP phones used in system-wide testing of Cisco Unified Communications System Release 5.0 for Contact Center.

- [Deployment Considerations](#)
- [Software Version Matrix](#)
- [Firmware Version Matrix](#)

## Deployment Considerations

Tables in this section list the recommended software and firmware releases based on Cisco Unified Communications System Release 5.0 for Contact Center. Note that not every rebuild is tested as part of the Cisco Unified Communications System testing. Therefore, additional regression testing in a customer or Cisco-specific certification lab is recommended before deployment.

When deploying the Cisco Unified Communications System in a customer environment, remember the following:

- At the minimum, customers should deploy the software release recommended in these tables.
- For CSA, customers should use the latest engine and policy release. CSA software is available at: <http://www.cisco.com/cgi-bin/tablebuild.pl/csa>
- For other software components, customers should use the most current rebuild of a maintenance release. For IOS, information about the latest releases, including deferral advisories, is available at: <http://www.cisco.com/kobayashi/sw-center/sw-ios.shtml>

At this URL, you can also access Feature Navigator and read about the Cisco IOS Roadmap.

- If the recommended release has been deferred to a subsequent release, customers should use the subsequent release.
- Before deploying a release, examine the open caveats in the chosen release to determine if any will impact your implementation. Open caveats can be viewed through the Bug Toolkit, located at: [http://www.cisco.com/cgi-bin/Support/Bugtool/launch\\_bugtool.pl](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl)
- Deploy the chosen release in a lab environment that uses the same product components as the customer's product components before moving it to a production environment.

## Software Version Matrix

[Table 1](#) lists the software release versions of the system components in the contact center test environment.

**Table 1** *Software Versions for Contact Center Components in Cisco Unified Communications Release 5.0*

Component	Release Version
Cisco Unified CallManager	5.0(2)
Cisco Unified CallManager Operating System	Included with Unified CallManager

**Table 1**      **Software Versions for Contact Center Components in Cisco Unified Communications Release 5.0**

<b>Component</b>	<b>Release Version</b>
Cisco Customer Response Solutions (Unified IP IVR)	4.5(2)
Cisco Customer Response Solutions (Unified IP IVR) Operating System	2000.4.2SR3
Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise	7.0(0)SR3 ES1
Cisco Unified Intelligent Contact Management and Cisco Unified Contact Center Enterprise Operating System	Win2003 SP1
Cisco Unified Customer Voice Portal (formerly ISN)	3.1(0)ES2
Cisco Unified Customer Voice Portal Operating System	Win2000 SP4
Computer Telephony Integration Object Server (CTI OS)	7.0SR1
Cisco Agent Desktop (CAD)	7.0.1.17
Cisco Agent Desktop (CAD) Operating System	WinXP SP2
Cisco Unified IP Phone Agent	7.0.1.17
ScanSoft Open Speech Recognizer (OSR)	2.0.9
ScanSoft Open Speech Media Server (OSMS)	2.0.4
ScanSoft Speechify	3.0.1
Cisco CSS 11501 Content Services Switch	WebNs 7.40.2.02
Cisco Unity Connection	1.1(1)SR1 ES12
Cisco IP Communicator	2.0(1a)
Cisco 3725, 3745 (Unified CVP VXML voice gateway)	12.4(6)T
Cisco 3825, 3845 (Unified CVP VXML voice gateway)	12.4(6)T
Cisco AS5400HPX (Unified CVP VXML voice and PSTN gateways)	12.4(6)T
Cisco AS5850 (PSTN gateway)	12.4(6)T
Cisco 3660 (gatekeeper cluster)	12.4(6)T
Cisco 3745 (HSRP gatekeeper)	12.4(6)T
Cisco 3725, 3745 (voice/data gateway)	12.4(6)T
Cisco 3825, 3845 (voice/data gateway)	12.4(6)T
RSVP Agent (on 37xx and 38xx platforms)	12.4(6)T
Cisco 7206 (core/WAN router)	12.4(6)T
Cisco 831 router	12.4(5a)
Cisco Catalyst 3550 (access switch)	12.2(25)SEC
Cisco Catalyst 6506, 6509 (core switch, Supervisor 2)	CatOS 8.4(4)
Cisco Catalyst 6506, 6509 (MSFC, Supervisor 2)	12.1(26)E3
Cisco Communication Media Module (CMM)	12.4-4.T1
CiscoWorks Management Center for Cisco Security Agents	4.5.1.639
Cisco Security Agent for Unified CallManager	Bundled with Unified CallManager
Cisco Security Agent for Customer Response Solutions	4.5.1.639 / 2.0.3
Cisco Security Agent for Unified Intelligent Contact Management	4.5.1.639 / 2.0.1

**Table 1** *Software Versions for Contact Center Components in Cisco Unified Communications Release 5.0*

Component	Release Version
Cisco Security Agent for Unified Customer Voice Portal	4.5.1.639 / 2.0.0
Cisco Unified Operations Manager (formerly CiscoWorks ITEM)	1.1
LAN Management Solution (LMS)	2.5
Resource Management Essentials (RME)	4.0
Cisco Remote Monitoring Suite (RMS)	2.0
Cisco Unified ICM Support Tools (Server and Agent)	2.0
McAfee Antivirus	Enterprise 8.0.0
Cisco Unified IP Phones—See “ <a href="#">Firmware Version Matrix</a> ” for models	Bundled with Unified CallManager

## Firmware Version Matrix

[Table 2](#) lists the recommended firmware versions of the Cisco Unified IP Phones (SCCP and SIP) used in the contact center test environment.

**Table 2** *Firmware Versions of Cisco SCCP and SIP Phones in Cisco Unified Communications Release 5.0*

Component	SCCP Firmware Version	SIP Firmware Version
Cisco Unified IP Phone 7940	P00308000100	not applicable
Cisco Unified IP Phone 7941G	SCCP41.8-0-2SR1S	SIP41.8-0-2SR1S
Cisco Unified IP Phone 7960	P00308000100	not applicable
Cisco Unified IP Phone 7961G	SCCP41.8-0-2SR1S	SIP41.8-0-2SR1S
Cisco Unified IP Phone 7970	SCCP70.8-0-2SR1S	SIP70.8-0-2SR1S
Cisco Unified IP Phone 7971G	SCCP70.8-0-2SR1S	SIP70.8-0-2SR1S

## Related Documentation

The following URLs are links to documentation for related products:

- Cisco Unified Communications System:  
<http://www.cisco.com/go/unified-techinfo>
- Voice documentation:  
[http://www.cisco.com/en/US/products/sw/voicesw/tsd\\_products\\_support\\_category\\_home.html](http://www.cisco.com/en/US/products/sw/voicesw/tsd_products_support_category_home.html)
- Cisco Unified CallManager:  
[http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_series_home.html)
- Cisco Unified IP Phones:  
[http://www.cisco.com/en/US/products/hw/phones/ps379/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/phones/ps379/tsd_products_support_series_home.html)
- Cisco Unified Intelligent Contact Management/Unified Contact Center Enterprise Edition:  
[http://www.cisco.com/en/US/products/sw/custcosw/ps1001/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1001/tsd_products_support_series_home.html)

- Cisco Unified Contact Center Enterprise:  
[http://www.cisco.com/en/US/products/sw/custcosw/ps1844/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1844/tsd_products_support_series_home.html)
- Customer Response Solutions (Cisco Unified IP IVR):  
[http://www.cisco.com/en/US/products/sw/custcosw/ps1846/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1846/tsd_products_support_series_home.html)
- Cisco Unified Customer Voice Portal:  
[http://www.cisco.com/en/US/products/sw/custcosw/ps1006/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1006/tsd_products_support_series_home.html)
- Cisco Telephony Integration Object Server:  
[http://www.cisco.com/en/US/products/sw/custcosw/ps14/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/custcosw/ps14/tsd_products_support_series_home.html)
- Cisco Agent Desktop:  
[http://www.cisco.com/en/US/products/sw/custcosw/ps427/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/custcosw/ps427/tsd_products_support_series_home.html)
- CiscoWorks Management Center for Cisco Security Agents:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps5212/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/cscowork/ps5212/tsd_products_support_series_home.html)
- Cisco Security Agents:  
[http://www.cisco.com/en/US/products/sw/secursw/ps5057/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/secursw/ps5057/tsd_products_support_series_home.html)
- Cisco Unified Operations Manager:  
[http://www.cisco.com/en/US/products/ps6535/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps6535/tsd_products_support_series_home.html)
- Cisco Unity Connection:  
[http://www.cisco.com/en/US/products/ps6509/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps6509/tsd_products_support_series_home.html)
- CiscoWorks Remote Management Essentials:  
[http://www.cisco.com/en/US/products/sw/cscowork/ps2073/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/cscowork/ps2073/tsd_products_support_series_home.html)
- Cisco 800 Series Routers:  
[http://www.cisco.com/en/US/products/hw/routers/ps380/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/routers/ps380/tsd_products_support_series_home.html)
- Cisco 7200 Series Routers:  
[http://www.cisco.com/en/US/products/hw/routers/ps341/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/routers/ps341/tsd_products_support_series_home.html)
- Cisco Catalyst 3600 Series MultiService Platforms:  
[http://www.cisco.com/en/US/products/hw/routers/ps274/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/routers/ps274/tsd_products_support_series_home.html)
- Cisco AS5400 Series Universal Gateways:  
[http://www.cisco.com/en/US/products/hw/univgate/ps505/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/univgate/ps505/tsd_products_support_series_home.html)
- Cisco AS5850 Series Universal Gateways:  
[http://www.cisco.com/en/US/products/hw/univgate/ps509/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/univgate/ps509/tsd_products_support_series_home.html)
- Cisco 3700 Series Voice Gateways/Gatekeepers:  
[http://www.cisco.com/en/US/products/hw/routers/ps282/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/routers/ps282/tsd_products_support_series_home.html)
- Cisco 3800 Series Voice Gateways:  
[http://www.cisco.com/en/US/products/ps5855/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps5855/tsd_products_support_series_home.html)
- Cisco Catalyst 3550 Series Access Switches:  
[http://www.cisco.com/en/US/products/hw/switches/ps646/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/switches/ps646/tsd_products_support_series_home.html)

- Cisco Catalyst 6500 Series Switches:  
[http://www.cisco.com/en/US/products/hw/switches/ps708/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/switches/ps708/tsd_products_support_series_home.html)
- Cisco Unified 7900 Series IP Phones:  
[http://www.cisco.com/en/US/products/hw/phones/ps379/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/phones/ps379/tsd_products_support_series_home.html)
- Cisco IP Communicator:  
[http://www.cisco.com/en/US/products/sw/voicesw/ps5475/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5475/tsd_products_support_series_home.html)
- Cisco IOS Software Release 12.4 T:  
[http://www.cisco.com/en/US/products/ps6441/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps6441/tsd_products_support_series_home.html)

## Install and Upgrade Notes

The components in these release notes, including the platforms tested, are discussed in the *System Test Architecture Reference Manual for Contact Center* at:

<http://www.cisco.com/univercd/cc/td/doc/systems/unified/unified1/starmipc/index.htm>

See this content for the specific versions of the components tested and links to relevant documentation for installation and configuration procedures.

Upgrade information for components that have been tested and verified during system testing is discussed in the *System Upgrade Manual* at:

<http://www.cisco.com/univercd/cc/td/doc/systems/unified/unified1/sum/index.htm>

For additional information on specific hardware recommendations or bills of material for each product, see the [System Requirements](#) section.

## Latest Software Upgrades and Licenses

The following are links to the latest software upgrades and licenses for Cisco Unified Communications System Release 5.0 components:

- Unified CallManager, Unified IP Phones, Customer Response Solutions, Unified Contact Center Enterprise, and Cisco Unity Connection:  
<http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml>
- Unified Intelligent Contact Management, Unified Outbound Dialer, Unified Customer Voice Portal, Cisco Agent Desktop, and Computer Telephony Integration Object Server:  
<http://www.cisco.com/kobayashi/sw-center/sw-custcontact.shtml>
- Cisco IOS routers and gateways: <http://www.cisco.com/kobayashi/sw-center/sw-ios.shtml>
- Catalyst switches:  
<http://tools.cisco.com/support/downloads/go/MDFTree.x?butype=switches>
- Cisco Agent Desktop Web Licensing Site:  
<http://209.46.83.138/sws/WebLicensingInitial/InitialLicensePage.html>
- Cisco Unity Connection License Files:  
[http://www.cisco.com/en/US/products/ps6509/products\\_installation\\_guide\\_chapter09186a008055e1f6.html#wp1041859](http://www.cisco.com/en/US/products/ps6509/products_installation_guide_chapter09186a008055e1f6.html#wp1041859)
- Product Upgrade Tool (for ordering CD's of new major/minor releases):  
<http://tools.cisco.com/gct/Upgrade/jsp/index.jsp>

# Limitations and Restrictions

This section includes the following:

- [Important Notes, page 16](#)
- [Resolved Caveats](#)
- [Open Caveats, page 17](#)

If you have an account with Cisco.com, you can use the Bug Toolkit to find caveats of any severity for any release. To access the Bug Toolkit, perform either of these actions:

- Go to this URL: [http://www.cisco.com/cgi-bin/Support/Bugtool/launch\\_bugtool.pl](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl)
- Log in to Cisco.com, click Technical Support, click Tools & Utilities, and then click Software Bug Toolkit under Troubleshooting Tools.

## Important Notes

This section includes important notes related to the testing of Cisco Unified Communications System Release 5.0 for Contact Center.

### Internal IPTA Only flag for Cisco Unified System Contact Center Gateway (CSCsc68889)

**Symptom:**

The documentation regarding the Internal IPTA Only flag for the System PG (Unified SCCG) does not clarify whether the route request is local or remote. It currently states:

Internal IPTA Only. If checked, the Router can only target agents on this PG in response to a route request. For IPCC, uncheck this box.

**Conditions:**

This information is in the “How to Configure the System PG PIM” section of Chapter 6 of the *IPCC Installation and Configuration Guide for Cisco IPCC Enterprise Edition* at:

[http://www.cisco.com/application/pdf/en/us/guest/products/ps1844/c1097/ccmigration\\_09186a00804d73b7.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps1844/c1097/ccmigration_09186a00804d73b7.pdf)

**Workaround:**

The documentation should be updated as follows: When the call is routed between different System PGs, the Internal IPTA Only flag is used to decide whether the router or the ACD should pick the agent. If the System PG is an ACD, the router should **not** pick the agent. If the call is routed on the same System PG, the router uses the skill group IPTA configuration.

### Agents in talking state are set to NOT READY after Unified System Contact Center Gateway Failover (CSCsd29061)

**Symptom:**

Agents that are in a “talking” state are set to a “Not Ready” state once the call ends.

**Condition:**

This happens when the Unified SCCG has a failover.

**Workaround:**

Manually put the agent back into a “Ready” State.

## Resolved Caveats

This section lists severity 1, 2, and selected 3 caveats that are resolved now but the fix *may* not be included in the recommended component versions of Cisco Unified Communications System Release 5.0 for Contact Center.

In the Identifier column, click on the linked caveat number to go to the Bug Toolkit and determine the software version in which the fix is included (in the First Fixed-In Version field).

**Table 3** *Resolved Caveats for Contact Center Components in Cisco Unified Communications System Release 5.0*

Identifier	Headline
<a href="#">CSCsd33134</a>	Router crashed at http code due to corrupted bad pointer
<a href="#">CSCsd47307</a>	After upgrade, Cisco Communications Media Module (CMM) T1 PRI could be down and goes into TEI_ASSIGNED state
<a href="#">CSCsd67486</a>	Unified CallManager SIP and H.225 trunks do not go into service after cluster restart
<a href="#">CSCsd70288</a>	SIP: Multiple via headers present in 180 ringing response messages sent by Cisco Unity Connection

## Open Caveats

This section lists known severity 1, 2, and selected 3 caveats related to the testing of contact center components in Cisco Unified Communications System Release 5.0 and previous releases, which were not resolved at the time this document was written.

In the Identifier column, click on the linked caveat number to go to the Bug Toolkit and determine the software version in which the fix is to be included (in the First Fixed-In Version field).

**Table 4** *Open Caveats for Contact Center Components in Cisco Unified Communications System Release 5.0*

Identifier	Headline
<a href="#">CSCeg20715</a>	WS-X6608-T1 or WS-X6624 gateways and/or media devices cannot register
<a href="#">CSCsb37689</a>	An MGCP gateway will intermittently not respond to three Create Connection (CRCX) requests
<a href="#">CSCsb64288</a>	Campaign stops unexpectedly after a phone number is removed from a zone
<a href="#">CSCsd22499</a> <sup>1</sup>	Memory leak for Malloc chunk alloc @cp_iphost_close_tcpport
<a href="#">CSCsd23641</a>	CTI failover takes more than five minutes
<a href="#">CSCsd44118</a> <sup>1</sup>	IOS 12.4(6)T leaks memory leading to a crash
<a href="#">CSCsd62689</a>	OPC process on Unified SCCG crashes
<a href="#">CSCsd78710</a>	DSMP Process consumes CPU cycles in Communications Media Module
<a href="#">CSCsd83507</a>	Unified CallManager Process crash during load run
<a href="#">CSCsd84481</a>	Unexpectedly high IOWait causes Unified CallManager Code Yellow and/or crash
<a href="#">CSCsd84488</a>	Unified CallManager crashed during load run after sending H.225 ReleaseComplete
<a href="#">CSCsd85002</a>	Customer Response Solution Engine restarts during load test

1. This defect will be resolved and fixed in a future IOS Release (12.4(6)T1) scheduled to be available in mid-May, 2006. Customers requiring an immediate fix and unable to wait for IOS Release 12.4(6)T1 should contact their TAC representative who can provide them access to an engineering special which addresses the problem.

## Troubleshooting

For important troubleshooting information, tips, and recommendations related to the testing of Cisco Unified Communications System Release 5.0 for Contact Center, see Troubleshooting information at: [http://www.cisco.com/iam/unified/ipcc1/Introduction\\_to\\_Troubleshooting.htm](http://www.cisco.com/iam/unified/ipcc1/Introduction_to_Troubleshooting.htm)

## Documentation Updates

- **Technical Information Sites**—The Cisco Unified Communications System Technical Information Site at <http://www.cisco.com/go/unified-techinfo> is your one-stop location for all system-level documentation, resources, and training. The following sites are specific to IP telephony or contact center system applications:
  - Cisco Unified Communications System for IP Telephony Release 5.0:  
<http://www.cisco.com/iam/unified/ipt1/index.htm>
  - Cisco Unified Communications System for Contact Center Release 5.0:  
<http://www.cisco.com/iam/unified/ipcc1/index.htm>
- *System Upgrade Manual*—The content has been updated to reflect the new upgrade path to Cisco Unified Communications System Release 5.0. The content also discusses new upgrade strategies and upgrade considerations to be aware of for various components as you perform the upgrade. Additional information about the upgrade of the contact center test beds has been added.
- *System Architecture Reference Manual for Contact Center*—The content has been updated to include Cisco Unified Communications System Release 5.0 features and functionality. Changes include updated business logic, deployment models and sites, topology diagrams, and links to related documentation. The new Parent/Child deployment and call flow have been described in detail and the new Unified CCGE feature and Unified SCC implementation have also been discussed.
- *Cisco Unified Communications System for Contact Center Release 5.0 System Test Results*—Test results of the contact center system testing are now available in an Excel spreadsheet at: [http://www.cisco.com/iam/unified/ipcc1/System\\_Test\\_Results.htm#wp1058916](http://www.cisco.com/iam/unified/ipcc1/System_Test_Results.htm#wp1058916)

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

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

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

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Product Documentation DVD

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

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

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

## Ordering Documentation

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

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

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

## Documentation Feedback

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

You can submit comments about Cisco documentation by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

# Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

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

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories, security notices, and security responses for Cisco products is available at this URL:

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

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

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you have identified a vulnerability in a Cisco product, contact PSIRT:

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

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

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

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

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

  
**Tip**

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

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

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

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

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

# Obtaining Technical Assistance

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

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

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

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

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

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

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

For S1 or S2 service requests, or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

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

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—An existing network is down, or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of the network is impaired, while most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

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

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

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

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

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

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

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

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

or view the digital edition at this URL:

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

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

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

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

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

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

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