Release Notes for Cisco Unified Communications for RTX Release 8.6

March 25, 2013

These release notes describe features and caveats for all versions of Cisco Unified Communications for RTX (Cisco UC for RTX) Release 8.6.

To access the latest software upgrades for all versions of Cisco UC for RTX, go to:

http://tools.cisco.com/support/downloads/go/Model.x?mdfid=283454590

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Introduction

These release notes describe requirements, restrictions, and caveats for Cisco UC for RTX Release 8.6. These release notes are updated for every maintenance release but not for patches or hot fixes.

Before you install Cisco UC for RTX, review this document for information about issues that might affect your system. For a list of the open caveats, see Open caveats, page 25.

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System Requirements

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Network Requirements

Table 1 Ports Used for Inbound Traffic by Cisco Unified Client Services Framework

Port	Protocol	Description
16384-32766	UDP	Receives Real-Time Transport Protocol (RTP) media streams for audio and video. These ports are configured in Cisco Unified Communications Manager. For more information about device configuration files, see the *Cisco Unified Communications Manager System Guide*: http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

Table 2 Ports Used for Outbound Traffic by Cisco Unified Client Services Framework

Port	Protocol	Description
69	UDP	Connects to the Trivial File Transfer Protocol (TFTP) server to download the TFTP file.
80	TCP HTTP	Connects to services such as Cisco WebEx for meetings or Cisco Unity Connection for voicemail features.
143	TCP IMAP	Connects to Cisco Unity Connection to retrieve and manage the list of voice messages for the user and the voice messages themselves.
443	TCP HTTPS	Connects to services such as Cisco WebEx for meetings and Cisco Unity Connection for voicemail features.
993	IMAP (SSL)	Connects to Cisco Unity Connection to retrieve and manage the list of voice messages for the user and the voice messages themselves.
2748	TCP	Connects to the Computer Telephony Integration (CTI) gateway, which is the CTIManager component of Cisco Unified Communications Manager.
4224	TCP (CAST)	Connects to the IP Phone via CAST for enabling video while in desktop phone mode.
5060	UDP/TCP	Provides Session Initiation Protocol (SIP) call signalling.
5061	TCP	Provides secure SIP call signalling.
7993	IMAP (TLS)	Connects to Cisco Unity Connection to retrieve and manage the list of secure voice messages for the user and the secure voice messages themselves.

Table 2 Ports Used for Outbound Traffic by Cisco Unified Client Services Framework

Port	Protocol	Description
8443	TCP	Connects to the Cisco Unified Communications Manager IP Phone (CCMCIP) server to get a list of currently-assigned devices.
16384-32766	UDP	Sends RTP media streams for audio and video.

Server Requirements

Table 3 Cisco UC for RTX Server Requirements

Item	Release
Cisco Unified Communications Manager	9.0 or later releases 8.6(1) or later 8.6(*x*) releases 8.5(1) or later 8.5(*x*) releases 8.0(1) or later 8.0(*x*) releases 7.1(3) or later 7.1(*x*) releases **Note** Cisco UC for RTX does not support multiple Cisco Unified Client Services Framework devices.
Cisco Unified Communications Manager Business Edition 3000	8.6(1) or later 8.6(*x*) releases
RTX Server	Tencent RTXS 2012 Cisco Server (8.1.867.202) Tencent RTXS 2011 Cisco Server (8.1.224.202)
Cisco Unity Connection	8.6(1) or later 8.6(*x*) releases 8.5(1) or later 8.5(*x*) releases 8.0(1) or later 8.0(*x*) releases 7.1(4) or later 7.1(*x*) releases Cisco UC for RTX supports all of these releases in systems where: • Failover is configured, or not configured. • Publisher and subscriber Cisco Unity Connection servers are integrated in an active-active configuration.
Cisco WebEx Meetings Server	• Cisco WebEx Meetings Server 1.0 or later
Cisco WebEx Meetings	• Cisco WebEx Software as a Service (Cisco WebEx SaaS)
Cisco Unified MeetingPlace	• Cisco WebEx integrated with Cisco Unified MeetingPlace 8.5 using Cisco WebEx scheduling (formerly known as Type 2 integration)

Table 3 Cisco UC for RTX Server Requirements (continued)

Item	Release
Cisco TelePresence MCU	4501 series 4500 series 4200 series
Cisco IOS Video Conference Bridge	Cisco IOS Homogeneous Video Conference Bridge (using Cisco Integrated Services Routers Generation 2 (ISR G2) with the packet voice and video digital signal processor 3 (PVDM3)
Cisco Unified Videoconferencing Multiple Control Unit (MCU)	7.0 5.6
Cisco Unified Survivable Remote Site Telephony	8.6 with IOS 15.1(4)M with Cisco Unified Communications Manager Release 8.6 8.5 with IOS 15.1(3)T with Cisco Unified Communications Manager Release 8.5 8.0 with IOS 15.1(1)T with Cisco Unified Communications Manager Release 8.0 7.1 with IOS 12.4(22)YB with Cisco Unified Communications Manager Release 7.1

Client Computer Requirements

Hardware Requirements

Table 4 Hardware Requirements for Desktop and Laptop Computers for Audio and Video in Various Modes

Item	Audio Only	QCIF	CIF	VGA	720HD
Memory	512 MB	512 MB	512 MB	1 GB	2 GB
Minimum Windows Experience Index (WEI) processor score[1]	2.2	2.2	3.0	4.8	5.9 and a system with at least a quad-core processor.
Graphic card	Not applicable	64 MB	64 MB	64 MB	128 MB
I/O interface	When you use USB audio and video, USB 2.0 is required.				HD-capable USB 2.0 web camera, HDMI capture card, and HD camera.

1. Windows XP does not provide a WEI processor score.

Tested Video Devices

The video cameras tested with Cisco UC for RTX are as follows:

- Cisco VT Camera III
- Lenovo C3010
- Logitech Portable Webcam C500
- Logitech Quickcam C200
- Logitech Quickcam C500
- Logitech Qucikcam C905 for Notebooks
- Logitech QuickCam Pro 9000
- Microsoft LifeCam Cinema HD
- Microsoft LifeCam VX-6000
- Tandberg PrecisionHD
- Unisplendour V18

The following computers with built-in video cameras were tested with Cisco UC for RTX are:

- Acer Aspire 4540
- Acer Aspire 4732Z
- Acer TravelMate 8371
- Dell Latitude E6500
- Dell Inspiron 1464
- Dell Precision P03t
- Dell Vostro 320
- Dell Vostro 1014
- Dell XPS M1330
- HP Compaq 2710p Notebook PC
- HP Compaq Presario CQ41
- HP EliteBook 2530p
- Lenovo IdeaPad Y550
- Lenovo ThinkPad X200
- Lenovo ThinkPad T400
- Lenovo ThinkPad T500
- Lenovo ThinkPad W500
- Lenovo ThinkPad SL410
- Sony Vaio VGN-CS290
- Sony Vaio VPCS1100C
- Toshiba Portege T131

Tested Audio Devices

The audio devices tested with Cisco UC for RTX are as follows:

- ClearOne CHAT 50 USB
- Jabra GN8110 USB
- Jabra GN8120 USB
- Jabra GN2100
- Jabra GN2000
- Jabra GN9350
- Jabra GN5390
- MAQ PM650
- Nokia BH-104
- Nokia BH-105
- Ovann OA-G10
- Plantronics CS60
- Plantronics DA60 USB
- Plantronics DSP-400
- Plantronics DA55 USB
- Plantronics Voyager 510SL Bluetooth USB
- Polycom CX100 Speakerphone USB
- Samsung WEP200
- Steel Series SteelSound 4H

Note If you are using your computer for phone calls, and are using the Jabra GN9350 headset, when you receive a call, the headset alerts you. If you press the answer button on the headset, the phone call is ended.

Software Requirements

Table 5 Software Requirements for Cisco UC for RTX

Item	Description
Operating system	• Windows 7 Professional, Enterprise, or Ultimate, 32-bit or 64-bit[1] • Windows Vista SP2, with DirectX 10, 32-bit • Windows XP SP2, SP3 with DirectX 9.0c, 32-bit **Note** Ensure that the latest graphic card drivers are installed on your computer so that your display functions correctly with DirectX.
RTX	Tencent RTXC 2011 Cisco Client (8.1.224.210) **Note** On 64-bit editions of Windows 7, you cannot install RTX in the C:\Program Files folder because RTX is a 32-bit application. The C:\Program Files folder is for 64-bit applications. You can install RTX in the C:\Program Files (x86) folder.

1. On 64-bit editions of Windows 7, you cannot use video when you have Cisco UC for RTX set to use your desk phone for phone calls.

Software Interoperability

Before you deploy Cisco UC for RTX to the computers of your users, ensure that there are no other applications installed and running on the computers of your users that use Cisco Unified Client Services Framework. The following applications use Cisco Unified Client Services Framework:

- Cisco UC Integration for Microsoft Office Communicator
- Cisco UC Integration for Microsoft Lync
- Cisco UC Integration for Cisco WebEx Connect
- Cisco Unified Personal Communicator
- Cisco Unified Video Advantage
- Cisco Jabber for Windows
- Web applications that integrate Cisco UC capabilities offered by Cisco Jabber Web Tool Kit

Codecs for Use with Cisco UC for RTX

A codec is an implementation of an algorithm capable of performing encoding and decoding on a digital data stream. Codecs are used to encode and decode data, such as sound and video streams, that would otherwise use large amounts of network bandwidth when transmitted or disk space when stored.

Video Codecs

You can use the following video codecs with Cisco UC for RTX:

- H.264/AVC

Audio Codecs

You can use the following audio codecs with Cisco UC for RTX:

- G.711a, G.711µ
- G.722 (wide band)
- G.729a, G.729b
- Internet Low Bit Rate Codec (iLBC)
- Internet Speech Audio Codec (iSAC). iSAC is only available on Cisco Unified Communications systems that include Cisco Unified Communications Manager Release 8.0 or later.

Tested VPN Clients

The VPN clients tested with Cisco UC for RTX are as follows:

- Cisco VPN Client
- Cisco AnyConnect

Cisco Unified IP Phone Requirements

Table 6 lists the Cisco Unified IP Phone models that Cisco UC for RTX can control, and whether Skinny Call Control Protocol (SCCP) and Session Initiation Protocol (SIP) are supported:

Table 6 Phones That Cisco UC for RTX Can Control

Phone	SCCP	SIP	Supports Video with CAST
Cisco IP Communicator	Yes	Yes	Not applicable
9971	Not applicable	Yes	No
9951	Not applicable	Yes	No
8961	Not applicable	Yes	No
8945	Yes	Yes	Yes[1]
8941	Yes	Yes	Yes[1]
7985G	Yes	Not applicable	No
7975G	Yes	Yes	Yes[1]
7971G[2]	Yes	Yes	Yes[1]
7970G[2]	Yes	Yes	Yes[1]
7965G	Yes	Yes	Yes[1]
7962G	Yes	Yes	Yes[1]
7961G-GE[2]	Yes	Yes	Yes[1]
7961G[2]	Yes	Yes	Yes[1]
7960G	Yes	Not applicable	Yes
7945G	Yes	Yes	Yes[1]
7942G	Yes	Yes	Yes[1]
7941G-GE[2]	Yes	Yes	Yes[1]
7941G[2]	Yes	Yes	Yes[1]
7940G	Yes	Not applicable	Yes

Table 6 Phones That Cisco UC for RTX Can Control (continued)

Phone	SCCP	SIP	Supports Video with CAST
7931G	Yes	Not applicable	Yes
7925G	Yes	Not applicable	No
7921G	Yes	Not applicable	No
7920G[2]	Yes	Not applicable	No
7912G[2]	Yes	Not applicable	No
7911G	Yes	Yes	Yes[1]
7910G[2]	Yes	Not applicable	No
7906G	Yes	Yes	No
7905G[2]	Yes	Not applicable	No
7902G[2]	Yes	Not applicable	No
6961	Yes	Not applicable	Yes
6941	Yes	Not applicable	Yes
6921	Yes	Not applicable	Yes
6911	Yes	Not applicable	Yes

1. An SCCP firmware load is required to support video. Note: SCCP 9.2(1) or 9.2(1)ES1 doesn't support video (CSCtq48538 Phone does not send CallStateMessage through CAST connection to PC).
2. This phone is at the end of software maintenance.

When you have Cisco UC for RTX set to use your desk phone for phone calls, video is only supported on SCCP phones. The PC Port and Video Capabilities fields must be enabled for the phone in Cisco Unified Communications Manager. The phone must be connected to the controlling computer by Ethernet cable. For more information, see Users Might See Lower Video Quality When Computer Is Connected to Some Models of Cisco Unified IP Phone, page 23.

Note For 7931G phones to function correctly with Cisco UC for RTX, you must set the value of the Outbound Call Rollover to field to **No Rollover** in Cisco Unified Communications Manager.

About Audio and Video Quality

This application is designed to provide premium voice quality under a variety of conditions; however, in some instances users may notice interruptions of audio transmission or temporary audio distortions ("Artifacts") which are considered a normal part of the operation of the application.

These artifacts should be infrequent and temporary when using the application:

- On a workstation meeting the recommended configuration requirements.
- On a network that meets the recommended quality criteria in the Cisco Unified Communications System Solution Reference Network Design Document. Navigate to the following URL: http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/srnd/8x/uc8x.html

We take reasonable measures to interface with the operating system in ways that decrease the likelihood that other applications running on the system will interfere with softphone audio and video quality. However, the shared nature of system environments in which these products run is very different than a closed environment like Cisco Unified IP Phones and we cannot guarantee equivalent performance.

The following are some conditions that may cause artifacts:

- Spike in usage of the CPU of the personal computer - where CPU utilization is between 75 to 100% - due to launching applications, system processes or processing happening within other applications running.
- The system is running low on available physical memory.
- Other applications using large amounts of bandwidth to or from the workstation to the network.
- Other network bandwidth impairments.
- Dynamic reduction in CPU clock speed due to power management policy (for example, laptops running on battery power) or thermal protection causing the CPU to run in a more highly-loaded condition.
- Any other condition that causes the application to lose timely access to the network or audio system, for example, interference from third-party software.

Avoiding or recovering from the conditions previously listed will help minimize audio distortion artifacts.

For example, in a low-bandwidth or bad network environment, starting a video call at a high resolution may bring unacceptable video quality. In such network environments, use the recommended settings in the "Limiting of Usage of Bandwidth by Users" section on page 21 to limit the bandwidth use before you start a video call.

Finding Documentation

Provide the following URL to your users:

http://www.cisco.com/en/US/products/ps11241/tsd_products_support_series_home.html

Cisco Unified Communications Manager Documentation

See the *Cisco Unified Communications Manager Documentation Guide* and other publications specific to your Cisco Unified Communications Manager release. Navigate to the following URL:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_series_home.html

Cisco Unified Communications Manager Express Documentation

See the C*isco Unified Communications Manager Express System Administrator Guide* (for configuring Cisco IOS Heterogeneous Video Conference Bridge and Cisco IOS Homogeneous Video Conference Bridge). Navigate to the following URL:

http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/admin/configuration/guide/cmevconf.html

Cisco Unity Connection Documentation

See the Cisco Unity Connection Documentation Guide and other publications specific to your Cisco Unity Connection release. Navigate to the following URL:

http://www.cisco.com/en/US/products/ps6509/tsd_products_support_series_home.html

Cisco Unified IP Phone Documentation

See publications that are specific to your language, phone model, and Cisco Unified Communications Manager release. Navigate to the following URL:

http://www.cisco.com/cisco/web/psa/maintain.html?mode=prod&level0=278875240

Cisco Unified MeetingPlace Documentation

See the Cisco Unified MeetingPlace Documentation Guide and other publications specific to your Cisco Unified MeetingPlace release. Navigate to the following URL:

http://www.cisco.com/en/US/products/sw/ps5664/ps5669/tsd_products_support_series_home.html

Cisco TelePresence MCU Documentation

See Cisco TelePresence MCU publications specific to your Cisco TelePresence MCU release. Navigate to the following URL:

http://www.tandberg.com/video-conferencing-multipoint-control.jsp

Tips for Searching Cisco Documentation

Use the following formula in the search field:

<*product name*> <*release number*> <*topic keywords*> **site:cisco.com**

Examples of search entries:

- meetingplace 8.0 recording disk space site:cisco.com
- mobility advantage 7.0 compatibility matrix site:cisco.com
- presence 7.0 disaster recovery site:cisco.com

New and Changed Information

- Release 8.6(4), page 11
- Release 8.6(3), page 12
- Release 8.6(2), page 12
- Release 8.6, page 12

Release 8.6(4)

The release provides the following new functionality:

New Functionality

- Cisco WebEx Meetings Server support

  With Cisco WebEx Meetings Server deployment, end users can initiate and join instant meetings from Cisco UC for RTX client or via the applications and web pages that integrate Cisco UC capabilities via Cisco UC Desktop SDK.

- Latest RTX server support

Release 8.6(3)

The release provides the following new functionality:

New Functionality

- Cisco Unified Communications (UC) Desktop Software Development Kit (SDK) can run with Cisco UC for RTX at the same time.

  End users can integrate the Cisco UC features into any systems or clients with Cisco UC Desktop SDK. All clients including Cisco UC for RTX can run with the same Cisco UC account at the same time.
- End users can start audio calls using an analog phone via Cisco UC Desktop SDK.
- End users can initiate an instant WebEx meeting via the applications and web pages that integrate Cisco UC capabilities via Cisco UC Desktop SDK.
- Compatibility with Cisco Unified Communications Manager 9.0

Release 8.6(2)

The release provides the following new functionality and enhancements:

New Functionality

- Cisco Jabber Desktop Integration Software Development Kit
  Cisco Jabber Desktop Integration Software Development Kit (SDK) provides a unified interface that you can easily add Cisco Unified Communication (UC) capabilities to your applications and web pages, for example, the internal instant messaging tool, and the office automation (OA) platform.

  With the applications or web pages, end users can make audio and video calls, start video conferences, view conversation history, access voicemail, and so on.

Release 8.6

The release provides the following new functionality and enhancements:

New Functionality

- Support for mixed deployment with Cisco UC for RTX, and RTX of Tencent generic version
- Cisco UC configuration push to client computers through Manager for Cisco UC for RTX
- LDAP synchronization and authentication for the RTX server through Manager for Cisco UC for RTX
- Video interoperability with Tandberg video endpoints with or without Cisco TelePresence Video Communication Server (Cisco VCS)
- Integration with Microsoft Office applications on calls, instant messaging, and availability status
- Visual voicemail

Enhancements

- Improved application performance
- Reduced memory footprint

- Reduced installation time
- Enhanced user interface with a new application skin
- Easier deployment and configuration to client computers compared to the previous release
- Lower software or hardware requirements of client computers compared to the previous release, for example, the release is tested and works on Windows XP SP2

Installation Notes

- Installing Cisco Systems Network Protocol, page 13
- Restarting Upgrade Service When Deploying New Release, page 13
- Installing Cisco UC Desktop SDK, page 13

For step-by-step installation and upgrade instructions, see the *Installation and Configuration Guide for Cisco Unified Communications for RTX Release 8.6:*

http://www.cisco.com/en/US/products/ps11241/prod_installation_guides_list.html

Installing Cisco Systems Network Protocol

When you install Cisco UC for RTX on Windows Vista or Windows 7, you might be prompted to install Cisco Systems Network Protocol device software. Install this software.

If you do not install this software, you cannot place video calls if you set your Cisco UC for RTX to use your desk phone for phone calls.

Restarting Upgrade Service When Deploying New Release

If you deploy a new release of Cisco UC for RTX using the RTX Server Manager, restart the Upgradesvr service in **RTX Server Manager > Configuration Wizard > Server Status.**

Installing Cisco UC Desktop SDK

See the Cisco UC Desktop SDK document at Cisco Developer Network.

http://developer.cisco.com/

Limitations and Restrictions

Review Table 7 before you work with Cisco UC for RTX. Table 7 lists known limitations that will not be fixed, and there is not always a workaround. The table is sorted by severity, then by identifier in alphanumeric order.

Some features might not work as documented, and some features could be affected by recent changes to the product. Make sure to read the Important Notes, page 15.

For information about open and resolved caveats, see Open caveats, page 25, and Resolved Caveats, page 26.

Table 7 Closed for Cisco UC for RTX

Identifier	Severity	Component	Headline
CSCts07628	3	install-standalone	user can't install CUCRTX, when user change the rpi file names
CSCts07791	3	session-windows	Unhandle exception when user end a conference conversation
CSCts07801	3	atw	os and RTX will hang when user pull out usb or bluetooth audio device
CSCts07808	3	session-windows	Remote side answer, audio call displays "calling" status, can't end call
CSCts07813	3	video-windows	Unhandle Exception When Adjust Screen Resolution During Video Call
CSCts10194	3	win-api	crash happened in microsoft audioSes.dll (ASIO driver)
CSCts07576	4	dtmf-dialpad	User cannot adjust DTMF volume on conversation window in SP mode
CSCts07579	4	options	Phone list is not updated realtime when devices associated/disassociated
CSCts07594	4	atw	Unplugin line-in headset, and can't switch to usb headset automatically
CSCts07600	4	accounts-login	Wrong prompt when CUCRTX user is locked
CSCts07601	4	accounts-login	CUCRTX sign in delay 15 seconds when user set a wrong TFTP address
CSCts07607	4	accounts-login	Cucrtx can't sign out automatically when Admin config to issue certifica
CSCts07609	4	install-standalone	If RTX and CUCRTX8.5 are installed to same folder, can't upgrade to 8.6
CSCts07632	4	install-standalone	Sometimes RTX.exe still exists when after unhandled exception
CSCts07643	4	accounts-login	CUCM admin reset csf device, cucrtx can't restart automatically
CSCts07659	4	atw	Plug in/out audio device, conversation window stucks for several seconds
CSCts07784	4	video-windows	Can't cancel when adjusting brightness contrast on a video call(xp&vista)
CSCts07794	4	install-standalone	cucrtx plugin info still exist if uninstall RTX then uninstall CUCRTX
CSCts07804	4	atw	DP-user can't see correct conversation title when joining cross-cluster
CSCts07610	5	session-windows	can't see shield icon on call conversation window for authenticated call
CSCts07621	5	session-windows	Make a secure conference, user can't see lock icon on conversation window

Important Notes

Warning **IMPORTANT NOTICE - PLEASE READ: During an emergency, softphone technology may not provide the most timely or accurate location data if used for a 911 emergency call. Calls may be misdirected to the wrong emergency response center or the emergency response center may make errors when determining your location. USE A SOFTPHONE ONLY AT YOUR OWN RISK DURING AN EMERGENCY. Cisco will not be liable for resulting errors or delays.**

- Other Party Hears Cuts or Clips in Audio on a Call, page 16
- Users Hear Echo on Calls, page 16
- Adding an Audio Call to a Video Call Results in an Audio Conference, page 16
- Users of Cisco Unified IP Phone 9900 Series Models Cannot Control Desk Phone, page 17
- Limitation with Shared Lines When Deploying with Cisco Unified SRST, page 17
- How Cisco UC for RTX Determines the Audio Codec to Use on a Call, page 17
- Allocation of Video and Audio Ports for Devices, page 18
- Notes on Video, page 18
- Video Troubleshooting Tips, page 22
- Camera Troubleshooting Tips, page 24

Other Party Hears Cuts or Clips in Audio on a Call

When you are on a call with audio, or with audio and video, the other party might hear cuts or clips in your audio. The following table shows a possible solution to this problem. This solution relates only to particular audio devices, so you might not see the microphone boost setting referred to in the solution.

Operating System	Suggested Solution
Windows Vista, Windows 7	1. Open the Control Panel. 2. Select **Hardware and Sound**. 3. Select **Manage audio devices**. 4. Select the **Recording** tab. 5. Select the microphone that is currently in use. 6. Select **Properties**. 7. Select the **Levels** tab on the Microphone Properties dialog box. 8. Adjust the volume and the microphone boost settings to suit your requirements.
Windows XP	1. Open the Control Panel. 2. Select **Sounds and Audio Devices**. 3. Select the **Audio** tab. 4. Select **Volume** in the Sound recording section. 5. Select the **Advanced** button under the Microphone section in the Capture dialog box. 6. Ensure that **Microphone Boost** check box is not checked.

Users Hear Echo on Calls

When you are on a call with audio, or with audio and video, you might hear an echo. Camera microphones often have issues with echo. If you have selected your camera microphone as your microphone device, consider using a non-camera microphone as your microphone device.

To select another microphone device, follow these steps:

Procedure

Step 1 Select the Menu button from the title bar.

Step 2 Select **Actions > Audio/Video > Audio/Video setting**.

Step 3 Follow the instructions in the wizard to configure your device.

Adding an Audio Call to a Video Call Results in an Audio Conference

When you add an audio call to a video call, the party on the audio call does not receive a request to add video to their call. When the calls are merged, the call becomes an audio conference.

Users of Cisco Unified IP Phone 9900 Series Models Cannot Control Desk Phone

If users who have a Cisco Unified IP Phone 9900 series model cannot use their desk phone from Cisco UC for RTX, you must add the users to the Standard CTI Allow Control of Phones supporting Connected Xfer and conf user group. For more information about how to do this, see the *Installation and Configuration Guide for Cisco Unified Communications for RTX Release 8.6:*

http://www.cisco.com/en/US/products/ps11241/prod_installation_guides_list.html

Limitation with Shared Lines When Deploying with Cisco Unified SRST

If you have Cisco Unified Survivable Remote Site Telephony (SRST) set up in your Cisco Unified Communication system, you can continue to place and receive calls during a system failure. In these circumstances, the Cisco UC for RTX uses shared lines to enable you to continue to place and receive calls.

Cisco Unified SRST does not support shared lines with SIP phones. Cisco UC for RTX receives only alternate calls if both of the following conditions occur:

- Cisco UC for RTX is set to use your computer for phone calls.
- Cisco UC for RTX has the same directory number as a SIP desk phone.

However, the desk phone receives all calls.

How Cisco UC for RTX Determines the Audio Codec to Use on a Call

Cisco UC for RTX uses Cisco Unified Communications Manager devices for your Cisco UC for RTX software, and for your desk phone.

The audio bit rate capability of these devices is one of several factors that determine the audio capability of Cisco UC for RTX for the user. You specify this bit rate capability in Cisco Unified Communications Manager.

To configure the bit rate capability of these devices, use the region settings of the device pool that the devices are in. The following settings affect the audio bit rate capability of the devices:

Release of Cisco Unified Communications Manager	Settings
8.0 or later	Max Audio Bit Rate
Earlier than 8.0	Audio Codec

For more information about region and device pool configuration in Cisco Unified Communications Manager, see the Cisco Unified Communications Manager Administration online help, or the *Cisco Unified Communications Manager Administration Guide*:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

When you place a call in Cisco UC for RTX, both endpoints advertise their audio codec capability to the Cisco Unified Communications Manager. The Cisco Unified Communications Manager selects the highest possible common codec between them. The default audio codec is G.711.

Allocation of Video and Audio Ports for Devices

Cisco UC for RTX Release 8.6 changes how video and audio ports are allocated for the devices used when you are using your computer for phone calls.

For these devices, you can specify a range of numbers available to be used for media ports in the SIP profile of the device in Cisco Unified Communications Manager. Use the Start Media Port and Stop Media Port fields to specify this range.

The audio port for SIP devices is allocated randomly in the first half of this range, and the video port for SIP devices is allocated randomly in the second half of this range. Earlier releases of Cisco UC for RTX allowed the allocation of the audio port from any number in the range between Start Media Port and Stop Media Port.

There is no change in how video and audio ports are allocated for the devices used when you are using your desk phone. Audio is terminated on the desk phone itself, and video always uses the following ports:

Port	Protocol
5445	RTP
5446	RTCP

Notes on Video

- Factors That Affect the Video Capability of Users, page 18
- Determining the Bit Rate Required for a Particular Video Capability, page 19
- Configuring the Bit Rate Capability for Cisco UC for RTX, page 19
- How Cisco Unified Client Services Framework Determines the Video Capability of Your Computer, page 20
- Limiting of Usage of Bandwidth by Users, page 21
- About Tuning Computers for Maximum Video Performance, page 22

Factors That Affect the Video Capability of Users

Factors that affect the frame format and frame rate that can be achieved on a video call are:

- Cisco Unified Communications Manager configuration of device bit rate limits.
- User settings, such as the options that are available to the user through the Cisco UC Options dialog box in Cisco UC for RTX.
- Selected camera.
- CPU speed and usage.
- Cisco Unified MeetingPlace configuration of video conferencing parameters.
- Video capability of the other endpoints on a call.
- The parameters of the network between the two endpoints, such as, the physical network bandwidth and the router configuration in the network path of the call.

Determining the Bit Rate Required for a Particular Video Capability

Use Table 8 to determine the minimum bit rate that your Cisco UC for RTX requires to attain a particular frame format and frame rate.

Table 8 Minimum Bit Rates to Use for Particular Frame Formats and Frame Rates

Combined Bit Rate for Audio and Video (kb/s)	Audio Codec Allowance (kb/s)	Minimum Video Call Bit Rate (kb/s)	Frame Format	Frames per Second
78	14	64	QCIF	15
142	14	128	QCIF	30
206	14	192	CIF	15
320	64	256	CIF	30
448	64	384	VGA	15
576	64	512	VGA	30
832	64	768	VGA	30
1064	64	1000	720p	15
2064	64	2000	720p	30

Example

To configure Cisco UC for RTX for a user to be capable of video with VGA frame size, at 30 frames per second, Cisco UC for RTX requires a combined audio and video bit rate of at least 768 kb/s. Allow 64 kb/s for the audio codec to use with VGA frame format.

Configuring the Bit Rate Capability for Cisco UC for RTX

Cisco UC for RTX uses Cisco Unified Communications Manager devices for your Cisco UC for RTX software.

The bit rate, or bandwidth, capability of these devices is one of several factors that determine the video capability of Cisco UC for RTX for the user. You specify this bit rate capability in Cisco Unified Communications Manager.

To configure the bit rate capability of the devices, use the region settings of the device pool that the devices are in. The following settings affect the bit rate capability of the devices:

Release of Cisco Unified Communications Manager	Settings
8.0 or later	• Max Audio Bit Rate • Max Video Call Bit Rate
Earlier than 8.0	• Audio Codec • Video Call Bandwidth

For more information about region and device pool configuration in Cisco Unified Communications Manager, see the Cisco Unified Communications Manager Administration online help, or the *Cisco Unified Communications Manager Administration Guide*:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

Example

If you want your devices to be capable of 720p HD video calls at 30 frames per second (fps), configure the Region Settings to allocate a bit rate that can handle the 720p HD video at 30 fps, as well as the audio for the call.

If Cisco UC for RTX requires a minimum bit rate of 2000 kb/s to make a HD video call, and the audio bit rate for the region is set to 64 kb/s (G.722, G.711), then you must put the devices in a device pool that is in a region that is configured to have a video call bit rate as shown in the following table:

Release of Cisco Unified Communications Manager	Video Call Bit Rate
8.0 or later	Greater than or equal to 2064 kb/s.
Earlier than 8.0	Greater than or equal to 2000 kb/s. Releases of Cisco Unified Communications Manager earlier than 8.0 automatically add the audio bandwidth to the configured video bandwidth to allocate bandwidth for the call.

How Cisco Unified Client Services Framework Determines the Video Capability of Your Computer

Cisco Unified Client Services Framework derives the hardware profile of the machine as a WEI score. Cisco Unified Client Services Framework uses the WEI processor subscore to determine the send and receive video profile that is appropriate for your computer.

Table 9 lists the H.264/AVC levels that are supported, the bit rate and frame format for each level, and the minimum WEI processor subscore that is required to support each level

Table 9 Video Capabilities Supported for WEI Processor Subscores

H.264/AVC Level	Maximum Bit Rate (kb/s)	Maximum Frame Format	Minimum WEI Processor Subscore Required to Send and Receive Video at This Level
1.0	64	QCIF	2.0
1b	128	QCIF	2.0
1.1	192	QCIF	2.0
1.2	384	CIF	2.0
1.3	768	CIF	3.0
2	768	CIF	3.0
2.1	768	CIF	3.0
2.2	1350	VGA	4.8
3	1350	VGA	4.8
3.1	4000	HD	5.9 and a system with at least four CPU cores.

Limiting of Usage of Bandwidth by Users

The Video category in the **Cisco UC Settings** dialog box contains a slider that enables users to limit the bandwidth that Cisco UC for RTX uses for video calls. Table 10 lists the bandwidth settings that are available on the slider, from highest to lowest, and the video implications for each level.

Table 10 Bandwidth Settings Available to Users

Bandwidth Settings Available	H.264/ AVC Level	Maximum Decoder Bit Rate	Maximum Encoder Bit Rate	Description
Highest video quality (Level 6)	3.1	4 Mb/s	4 Mb/s	Allows the maximum video capabilities supported by Cisco Unified Client Services Framework, currently 720p HD.
Level 5	2.2	4 Mb/s	768 kb/s	Supports VGA in both directions.
Level 4	2.2	4 Mb/s	384 kb/s	Supports scenarios where downstream bandwidth is less than upstream. Supports incoming VGA.
Level 3	1.3	768 kb/s	384 kb/s	Limits incoming video to CIF at 30 frames per second (fps).
Level 2	1.2	384 kb/s	128 kb/s	Limits incoming video to CIF at 15 fps.
Lowest bandwidth usage (Level 1)	1.1	192 kb/s	64 kb/s	Limits incoming video to QCIF at 30 fps, or potentially CIF at 7.5 fps. **Note** This setting can render QCIF video at 6 fps, which may result in poor image rendering with some cameras.

Table 11 lists recommended bandwidth settings, and the resulted video quality for different company network bandwidths.

Table 11 Recommended Bandwidth Settings

Network Bandwidth	Recommended Bandwidth Setting	Video Quality
1.5 Mbps	Level 5 (768 kb/s up, 4 Mb/s down)	Limits video to VGA in both directions.
	Level 4 (384 kb/s up, 4 Mb/s down)	Limits incoming video to VGA
384 kbps	Level 2 (128 kb/s up, 384 kb/s down)	Limits incoming video to CIF at 15fps.
	Level 1 (64 kb/s up, 192 kb/s down)	Limits incoming video to QCIF at 30 fps, or potentially CIF at 7.5 fps.

About Tuning Computers for Maximum Video Performance

For more information about how to tune computers for maximum video performance, see the *Installation and Configuration Guide for Cisco Unified Communications for RTX Release 8.6:*

http://www.cisco.com/en/US/products/ps11241/prod_installation_guides_list.html

Video Troubleshooting Tips

- Users See Video Impairments, page 22
- Video Conversations with Multiple Displays, page 23
- Users Might See Lower Video Quality When Computer Is Connected to Some Models of Cisco Unified IP Phone, page 23
- No Video When Connecting to the Desk Phone and a Wireless Network Interface Card Is Enabled, page 23

Users See Video Impairments

Problem Under certain rare conditions, users may see some video impairment in the following situations:

- At the start of a video call or during a video call when the Hold or Resume functions are used.
- During a call when the user adjusts the video quality using the slider in the Video section of the Cisco UC Options dialog box.

This problem occurs when:

- The client computer is capable of handling high-resolution video but the network or switch has insufficient bandwidth to support the video resolution.
- There is packet loss on the network.
- There is packet loss along the network due to video packet fragmentation, if the Maximum Transmission Unit (MTU) of the network interface card at either endpoint is set lower than the Cisco UC for RTX MTU of 1270.
- There are packets dropped at routers along the call path.
- The Cisco Unified Client Services Framework device that is associated with the installation of Cisco UC for RTX is set up in Cisco Unified Communications Manager for a bandwidth that the physical network that the device is located on does not support. For example, if you are on a physical network that has a 128 kb/s bandwidth and you configure the Cisco Unified Client Services Framework device for a bandwidth setting of 4 Mb/s, then the call starts at a higher video codec level than the underlying physical network actually supports.

Try one or more of the following suggested solutions.

Solution Put the Cisco Unified Client Services Framework device in a device pool that is in a region that is configured to have a maximum video bit rate that is less than the bandwidth of your physical network. For more information, see Determining the Bit Rate Required for a Particular Video Capability, page 19.

Solution Perform the following steps:

1. Select the Menu button from the title bar.
2. Select **Cisco UC Settings > Video**.
3. Use the slider to set the balance between bandwidth usage and video quality.

4. Ensure that the **Optimize video quality for your computer** option is selected.

Video Conversations with Multiple Displays

If your computer displays on more than one device, use the primary display for video conversations. Video hardware acceleration is generally not supported on non-primary displays, so CPU usage on non-primary displays becomes very high.

Users Might See Lower Video Quality When Computer Is Connected to Some Models of Cisco Unified IP Phone

Problem Users might see lower video quality in Cisco UC for RTX when their computer is connected to some Cisco Unified IP Phone models, such as 7945G, 7965G, and 7975G.

This problem occurs if the link speeds and duplex configuration on either end of the connection are not the same. For example, if the link speed of the port at the PC port is 1000 Mb/s and the switch port is connected at 100 Mb/s. Alternatively, if the link on one end of the connection is half duplex, and the link on the end is full duplex.

Contact your Cisco Support representative to get the latest update on this issue.

Solution To address this issue, perform the following steps:

1. Go to the Network Configuration settings for your phone.
2. Set the **SW Port Configuration** setting to **100 Full**.
3. Set the **PC Port Configuration** setting to **100 Full**.

For information about how to set network configuration settings on your Cisco Unified IP Phone, see the documentation for your phone. Refer to publications that are specific to your language, phone model, and Cisco Unified Communications Manager release. You can navigate to the documentation for your phone from the following URL:

http://www.cisco.com/cisco/web/psa/maintain.html?mode=prod&level0=278875240

No Video When Connecting to the Desk Phone and a Wireless Network Interface Card Is Enabled

Problem When using the desk phone to receive an incoming call, the "Answer with audio and video" button is sometimes disabled.

Solution Desk phone video is only supported when the PC is directly connected to the desk phone with an ethernet cable. Desk phone video is not supported in 64-bit versions of Windows. To resolve this issue, check the following:

1. Ensure that the PC is directly connected to the desk phone that is being controlled.
2. Disable any wireless network interface cards on the PC.
3. Ensure that the desk phone is enabled for video in Cisco Unified Communications Manager.
4. Check the Desk Phone (CAST) connection status in the Server Status and Error Notifications window.
5. Ensure that the desk phone is an SCCP-based endpoint.

Related Topics

Users of Cisco Unified IP Phone 9900 Series Models Cannot Control Desk Phone, page 17

Camera Troubleshooting Tips

- Some Web Cameras Start When Users Sign In, page 24
- Poor Sound Quality on the Tandberg PrecisionHD USB Camera on Windows 7, page 24
- Built-In Camera on Lenovo ThinkPad W500 Crops Image, page 24

Some Web Cameras Start When Users Sign In

The correct behavior of web cameras is that web cameras start when users start a video call, or a video conference call. In particular circumstances, some web cameras start when users sign in to Cisco UC for RTX. This occurs on particular hardware configurations, with particular web camera driver software.

In these circumstances, Cisco UC for RTX controls the web camera. This means that you cannot see a preview of your video in the RTX audio and video tuning wizard. However, you can still use the web camera for video calls, video conference calls, and so on.

To resolve this problem, install the latest drivers from the manufacturer of your web camera. If your computer is a Lenovo ThinkPad W500, install the drivers at the following URL:

http://www-307.ibm.com/pc/support/site.wss/MIGR-70600.html

Poor Sound Quality on the Tandberg PrecisionHD USB Camera on Windows 7

Problem When using the Tandberg PrecisionHD USB Camera Version 1.0 or 1.1 with Windows 7, a very high input gain is set for your microphone, which can cause the sound to be distorted or extremely high.

Solution To fix this problem in the short-term, lower the recording volume for your microphone in the Windows settings.

To resolve this issue completely, install the software upgrade version 1.2 for the PrecisionHD USB Camera, as follows:

1. Download the upgrade from the following location:

   http://www.tandberg.com/support/video-conferencing-software-download.jsp?t=2&p=94
2. Connect your PrecisionHD USB camera to your computer.
3. Make sure the LED is green before you start the upgrade.
4. Install the software upgrade.

Built-In Camera on Lenovo ThinkPad W500 Crops Image

For video calls in CIF format, the video image from a built-in camera on a Lenovo ThinkPad W500 is cropped to a portion in the center of the image. This is expected behavior. The video image is cropped because the camera does not support CIF format directly.

Caveats

- Using Bug Toolkit, page 25
- Open caveats, page 25
- Resolved Caveats, page 26

Using Bug Toolkit

Known problems (bugs) are graded according to severity level. These release notes contain descriptions of the following:

- All severity level 1 or 2 bugs.
- Significant severity level 3, 4, or 5 bugs.
- All customer-found bugs except severity level 6 enhancement requests.

You can search for problems by using the Cisco Software Bug Toolkit.

Before You Begin

To access Bug Toolkit, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

Procedure

Step 1 To access the Bug Toolkit, go to http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs

Step 2 Log in with your Cisco.com user ID and password.

Step 3 To look for information about a specific problem, enter the bug ID number in the "Search for Bug ID" field, then click **Go**.

For information about how to search for bugs, create saved searches, and create bug groups, click **Help** in the Bug Toolkit page.

Open caveats

Table 12 describes possible unexpected behavior that might occur in Cisco UC for RTX. Only severity 1, severity 2, and select severity 3, 4, and 5 open, as well as all customer-found defects, are provided in this document. The table is sorted by severity, then by identifier in alphanumeric order.

Unless otherwise noted, these apply to all Cisco UC for RTX releases. For details about an individual defect, click the identifier to access the online record for that defect in the Bug Toolkit.

Because defect status continually changes, be aware that the table reflects a snapshot of the defects that were open at the time this report was compiled. For an updated view of open defects, access the Bug Toolkit. For details, see Using Bug Toolkit, page 25.

Table 12 Open for Cisco UC for RTX

Identifier	Severity	Component	Headline
CSCuc78070	4	call stats	Meeting List is wrong when the RTX user have both DN and Directory URIs
CSCts07454	4	csf-api	video screen will hide all the RTX window, when full screen icon display
CSCts07539	4	csf-api	Call preservation feature doesn't work when make call cross cluster

Table 12 Open for Cisco UC for RTX (continued)

Identifier	Severity	Component	Headline
CSCts07549	4	csf-api	"can not connect to CUCM" for VGA/HD video under VPN or low bandwidth
CSCts07554	4	csf-api	When opening sign-in window of cucrtx, RTX can't closed.
CSCts07542	5	csf-api	(DP)call park window won't update when the remote user pick up the call.
CSCts07562	5	rtx-api	Help menu display incompletely when standard user start RTX for 1st time
CSCts07572	5	dtmf-dialpad	intermittently Can't input DTMF through keyboard under chinese input mode.6

Resolved Caveats

This section lists that may have been open in previous releases and are now resolved. Only severity 1, severity 2, and select severity 3, 4, 5, and 6 resolved defects, as well as all customer-found defects, are listed in this section. The table is sorted by severity, then by identifier in alphanumeric order.

Because defect status continually changes, be aware that this document reflects a snapshot of the defects that were resolved at the time this report was compiled. For an updated view of resolved defects, access the Bug Toolkit (see the "Using Bug Toolkit" section on page 25).

The following section lists the caveat that is resolved in Cisco UC for RTX Release 8.6(2) but that may have been open in previous releases:

- Release 8.6(4)
- Release 8.6(3)
- Release 8.6(2)

Release 8.6(4)

Table 13 lists the caveat that is resolved in Release 8.6(3).

Table 13 Resolved in Cisco UC for RTX Release 8.6(3)

Identifier	Severity	Component	Headline
CSCuf34818	2	web-conferencing	Can't start meeting when meeting account is set correctly
CSCuf34820	3	web-conferencing	When meeting account is set incorrectly, no error message appeared.
CSCuf34837	3	web-conferencing	After deleting meeting account, "start meeting " button isn't disabled
CSCuf34938	3	web-conferencing	When in a meeting, can escalate another meeting from a call conversation
CSCtj37599	4	server-health	Triangle on RTX status bar disappear after sign out and sign in CUCRTX

Release 8.6(3)

Table 14 lists the caveat that is resolved in Release 8.6(3).

Table 14 Resolved in Cisco UC for RTX Release 8.6(3)

Identifier	Severity	Component	Headline
CSCtz16059	4	localization	CUCRTX displays wrong codec when call phone's directory number with Chinese characters.
CSCub79128	4	accessibility	CUCRTX application icon resolution too low in Win7 system task bar.

Release 8.6(2)

Table 15 lists the caveat that is resolved in Release 8.6(2).

Table 15 Resolved in Cisco UC for RTX Release 8.6(2)

Identifier	Severity	Component	Headline
CSCtu20096	3	lifecycle	Several DLL failed to be loaded with CUC-RTX on some ghost image.
CSCtx16961	3	comm-history	DP-Mode:Crash when start conference from call history when remote fwded.

Troubleshooting

The following Cisco UC for RTX documents provide troubleshooting information:

- *Installation Guide for Cisco Unified Communications for RTX Release 8.6*
- *Frequently Asked Questions: Cisco Unified Communications for RTX Release 8.6*

Use this link to access this documentation:

http://www.cisco.com/en/US/products/ps11241/tsd_products_support_series_home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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