



# Release Notes for Cisco Unified Communications for RTX Release 8.5

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**October 25, 2010**

These release notes describe features and caveats for all versions of Cisco Unified Communications for RTX (Cisco UC for RTX) Release 8.5. Cisco UC for RTX uses Cisco Unified Client Services Framework. Cisco Unified Client Services Framework provides Cisco telephony services and next-generation media services for Cisco UC for RTX.

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 8.5. These release notes are updated for every maintenance release but not for patches or hot fixes.



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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 24](#).

## System Requirements

- [Network Requirements, page 2](#)
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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 <i>Cisco Unified Communications Manager System Guide</i> : <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html</a>

**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 Unified MeetingPlace for meetings or Cisco Unity Connection for voicemail features.
443	TCP HTTPS	Connects to services such as Cisco Unified MeetingPlace for meetings, and Cisco Unity Connection for voicemail features.
2748	TCP	Connects to the CTI gateway, which is the CTIManager component of Cisco Unified Communications Manager.
5060	UDP/TCP	Provides Session Initiation Protocol (SIP) call signalling.
5061	TCP	Provides secure SIP call signalling.
8191	TCP	Connects to the local port to provide Simple Object Access Protocol (SOAP) web services.
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	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 <b>Note</b> Cisco UC for RTX does not support multiple Cisco Unified Client Services Framework devices.
RTX Server	Tencent RTX 2010 Cisco
Cisco Unity Connection	8.0(1) or later 8.x releases Cisco UC for RTX supports all of these releases in systems where: <ul style="list-style-type: none"> <li>Failover is configured, or not configured.</li> <li>Publisher and subscriber Cisco Unity Connection servers are integrated in an active-active configuration.</li> </ul>
Cisco Unified MeetingPlace	For conference calls with video: <ul style="list-style-type: none"> <li>8.x</li> <li>7.x</li> <li>Cisco Unified MeetingPlace Express VT 2.0<sup>1</sup></li> </ul> For meetings: <ul style="list-style-type: none"> <li>8.x</li> <li>7.x</li> </ul>
Cisco WebEx	Cisco WebEx is supported when integrated with Cisco Unified MeetingPlace.
Cisco Unified Videoconferencing Multiple Control Unit (MCU)	7.0 5.6
Cisco Unified Survivable Remote Site Telephony	8.0 with IOS 15.1(1)T with Cisco Unified Communications Manager Release 8.0 7.1 with IOS 12.4(24)T with Cisco Unified Communications Manager Release 7.1(2) 7.0 with IOS 12.4(20)T with Cisco Unified Communications Manager Release 7.0(1)

1. Cisco Unified MeetingPlace Express VT 2.0 does not support web conference calls.

# 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	1 GB	1 GB	1 GB	1 GB	2 GB
Available disk space before the application is started	350 MB	350 MB	350 MB	350 MB	500 MB
Available disk space <sup>1</sup>	1.5 GB	1.5 GB	1.5 GB	1.5 GB	1.5 GB
Minimum Windows Experience Index (WEI) processor score <sup>2</sup>	2.2	4.0	4.0	4.6	5.9 and a system with at least four CPU cores.
Video card					
A DirectX 9-compatible graphics card with this video RAM:					
Windows XP	Not applicable	128 MB	128 MB	128 MB	256 MB
Windows Vista	Not applicable	256 MB	256 MB	256 MB	256 MB
Windows 7	Not applicable	256 MB	256 MB	256 MB	256 MB
I/O ports	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. Available disk space for Windows 7, 64-bit is 2.5 GB for audio only, QCIF, CIF, VGA, and 720HD video modes. A large amount of disk space is reserved for the installation of Microsoft .NET Framework 4. For details on system requirements of Microsoft .NET Framework system, go to this URL: <http://msdn.microsoft.com/en-us/library/8z6watww.aspx>.
2. 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 Quiccam 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
- HP ProBook 4416s
- 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
- Somic E95
- 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 <sup>1</sup> Windows Vista SP2 Business or Ultimate, with DirectX 10, 32-bit Windows XP SP3 with DirectX 9.0c, 32-bit only <b>Note</b> Ensure that the latest display drivers are installed on your computer so that your display functions correctly with DirectX.
Microsoft Visual C++ 2005 Service Pack 1 Redistributable Package ATL Security Update	Version 8.0.59193 or later <b>Note</b> The redistributable package must be installed before you install Cisco UC for RTX, if you are using MSI to install.
Microsoft Visual C++ 2008 Redistributable Package (x86)	Version 9.0.21022 or later <b>Note</b> The redistributable package must be installed before you install Cisco UC for RTX, if you are using MSI to install.

**Table 5**      **Software Requirements for Cisco UC for RTX**

Item	Description
RTX	Tencent RTX 2010 Cisco  <b>Note</b> 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.
Software framework	Microsoft .NET Framework 4

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 on the computers of your users that use Cisco Unified Client Services Framework. The following applications use Cisco Unified Client Services Framework:

- Cisco Unified Personal Communicator Release 8.0 or later
- Cisco Unified Communications Integration for Cisco WebEx Connect
- Cisco Unified Communications Integration for Microsoft Office Communicator

## 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,  $\mu$ -law
- G.722 (wide band)
- G.729a, G.729ab
- 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 Secure Mobility Client

## Cisco Unified IP Phone Requirements

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

**Table 6** Phones Supported by Cisco UC for RTX

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
7985G	Yes	Not applicable	No
7975G	Yes	Yes	Yes <sup>1</sup>
7971G <sup>2</sup>	Yes	Yes	Yes <sup>1</sup>
7970G <sup>2</sup>	Yes	Yes	Yes <sup>1</sup>
7965G	Yes	Yes	Yes <sup>1</sup>
7962G	Yes	Yes	Yes <sup>1</sup>
7961G-GE <sup>2</sup>	Yes	Yes	Yes <sup>1</sup>
7961G <sup>2</sup>	Yes	Yes	Yes <sup>1</sup>
7960G	Yes	Not applicable	Yes
7945G	Yes	Yes	Yes <sup>1</sup>
7942G	Yes	Yes	Yes <sup>1</sup>
7941G-GE <sup>2</sup>	Yes	Yes	Yes <sup>1</sup>
7941G <sup>2</sup>	Yes	Yes	Yes <sup>1</sup>
7940G	Yes	Not applicable	Yes
7931G	Yes	Not applicable	Yes
7925G	Yes	Not applicable	No
7921G	Yes	Not applicable	No
7920G <sup>2</sup>	Yes	Not applicable	No
7912G <sup>2</sup>	Yes	Not applicable	No
7911G	Yes	Yes	Yes <sup>1</sup>
7910G <sup>2</sup>	Yes	Not applicable	No
7906G	Yes	Yes	No
7905G <sup>2</sup>	Yes	Not applicable	No
7902G <sup>2</sup>	Yes	Not applicable	No
6961	Yes	Not applicable	Yes
6941	Yes	Not applicable	Yes



**Table 6**      **Phones Supported by Cisco UC for RTX (continued)**

Phone	SCCP	SIP	Supports Video with CAST
6921	Yes	Not applicable	Yes
6911	Yes	Not applicable	Yes

1. An SCCP firmware load is required to support video.
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 21](#).

**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 Communication Solution Reference Design Document.

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.

# Finding Documentation

Provide the following URL to your users:

[http://www.cisco.com/en/US/products/ps11241/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps11241/tsd_products_support_series_home.html)

## Cisco Unified Communications Manager Documentation

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

[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 Unity Connection Documentation

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

[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)

## Cisco Unified IP Phone Documentation

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

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

## Cisco Unified MeetingPlace Documentation

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

[http://www.cisco.com/en/US/products/sw/ps5664/ps5669/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/sw/ps5664/ps5669/tsd_products_support_series_home.html)

## Tips for Searching Cisco Documentation

We recommend using the external Google Search (<http://www.google.com>) to find information.

Use the following formula in the search field:

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

Examples of Google 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

## Installation Notes

- [Time Required to Install, page 11](#)
- [Installing Cisco Systems Network Protocol, page 11](#)

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

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucrtx/8\\_5/english/installguide/cucrtx\\_install.html](http://www.cisco.com/en/US/docs/voice_ip_comm/cucrtx/8_5/english/installguide/cucrtx_install.html)

## Time Required to Install

If the computer on which you are installing Cisco UC for RTX does not already have Microsoft .NET Framework 4 installed, the Cisco UC for RTX installer installs Microsoft .NET Framework 4. This will result in a longer installation time.

## 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.

## 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 12.

For information about open and resolved caveats, see [Open Caveats](#), page 24, and [Troubleshooting](#), page 24.

**Table 7** *Closed Caveats for Cisco UC for RTX*

Identifier	Severity	Component	Headline
<a href="#">CSCti36672</a>	3	video-windows	video window no control panel and title bar with T410.
<a href="#">CSCth66728</a>	4	call-stats	Connection Statistics window cannot show ip address properly in Windows.
<a href="#">CSCth66745</a>	4	csf-api	No indicator message showed to end user when reach maximum users.
<a href="#">CSCth66829</a>	4	csf-api	csf does not refresh user info w/o restart when Cisco UC for RTX user is changed.
<a href="#">CSCth89720</a>	4	comm-history	Sort by Calls 'Type' in call history, after reopen, the order changed.
<a href="#">CSCti36725</a>	4	performance	change forward number, it takes about 5 seconds to refresh tooltips.
<a href="#">CSCtj15091</a>	4	install-admin	Win7 64bits, install RTX in C:\Program Files, Cisco UC for RTX cannot be loaded

# Important Notes



## Warning

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**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.**

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- [Other Party Hears Cuts or Clips in Audio on a Call, page 13](#)
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- [Video Troubleshooting Tips, page 20](#)
- [Camera Troubleshooting Tips, page 22](#)

## 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	<ol style="list-style-type: none"> <li>1. Open the Control Panel.</li> <li>2. Select <b>Hardware and Sound</b>.</li> <li>3. Select <b>Manage audio devices</b>.</li> <li>4. Select the <b>Recording</b> tab.</li> <li>5. Select the microphone that is currently in use.</li> <li>6. Select <b>Properties</b>.</li> <li>7. Select the <b>Levels</b> tab on the Microphone Properties dialog box.</li> <li>8. Adjust the volume and the microphone boost settings to suit your requirements.</li> </ol>
Windows XP	<ol style="list-style-type: none"> <li>1. Open the Control Panel.</li> <li>2. Select <b>Sounds and Audio Devices</b>.</li> <li>3. Select the <b>Audio</b> tab.</li> <li>4. Select <b>Volume</b> in the Sound recording section.</li> <li>5. Select the <b>Advanced</b> button under the Microphone section in the Capture dialog box.</li> <li>6. Ensure that <b>Microphone Boost</b> check box is not checked.</li> </ol>

## 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 **Actions > Audio/Video > Audio/Video setting**.
- Step 2** Follow the instructions in the wizard to configure your device.
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## 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 Guide for Cisco Unified Communications for RTX*:

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucrtx/8\\_5/english/installguide/cucrtx\\_install.html](http://www.cisco.com/en/US/docs/voice_ip_comm/cucrtx/8_5/english/installguide/cucrtx_install.html)

## JTAPI Error When a Call Is Placed

Users might see a JTAPI error about 15 seconds after they place a call, when Cisco UC for RTX is set to use the desk phone for phone calls.

To resolve this issue, ensure that your dial plan is set up correctly on Cisco Unified Communications Manager. In particular, ensure that Cisco Unified Communications Manager does not need to wait for more digits to be dialed.

For detailed information on setting up your dial plan, see the Cisco Unified Communications Manager Administration online help, or the *Cisco Unified Communications Manager Administration Guide* and the *Cisco Unified Communications Manager System Guide*:

[http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_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.

## Specifying Audio Value Names

Before you install Cisco UC for RTX, you must perform some configuration on the computers of your users. You can specify the Cisco Unified Client Services Framework client settings, including an `Audio_ISAC_Advertised` setting. This specifies whether to enable the advertising of the availability of the iSAC audio codec. Enter one of the following values for this setting:

- 0: Disables advertising.
- 1: Enables advertising.

The iSAC audio codec is only supported in Cisco Unified Communications Manager Release 8.0 and later.

For more information about how to configure this setting, see the *Installation Guide for Cisco Unified Communications for RTX*:

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucrtx/8\\_5/english/installguide/cucrtx\\_install.html](http://www.cisco.com/en/US/docs/voice_ip_comm/cucrtx/8_5/english/installguide/cucrtx_install.html)

## 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](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.

## Changing the Version of JRE That Cisco UC for RTX Uses

Cisco UC for RTX is installed with a particular version of Java Runtime Environment (JRE), with which the application has been tested and certified. You can change the version of JRE that the Cisco UC for RTX uses. However, the Cisco UC for RTX might not work correctly with a different version of JRE than the one that is installed with the Cisco UC for RTX.

To change the version of JRE that the Cisco UC for RTX uses, you change the values of the subkey names listed in [Table 8](#).

**Table 8 Registry Subkeys for JRE Version**

Subkey Names	Description	Data Type
DisablePrivateJRE	<p>If you do not want to install JRE with the Cisco UC for RTX, you must set the value of DisablePrivateJRE to 1.</p> <p>If you set this value to 1, the Cisco UC for RTX installation application does not install JRE. The Cisco UC for RTX uses the version of JRE that is on the client computer.</p> <p>DisablePrivateJRE is in the following registry key: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Cisco Systems, Inc.\Unified Communications\CUCSF</p>	REG_SZ
PrivateJREInstalled	<p>If you already have the Cisco UC for RTX installed on your client computers, and you want the Cisco UC for RTX to <i>not</i> use the version of JRE that was installed with the Cisco UC for RTX, set the value of PrivateJREInstalled to 0.</p> <p>The Cisco UC for RTX stops using the version of JRE that is installed with the Cisco UC for RTX, and starts to use the version of JRE that is on the client computer.</p> <p>PrivateJREInstalled is in the following registry key: HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\Unified Communications\CUCSF</p>	REG_SZ

## Allocation of Video and Audio Ports for Devices

Cisco UC for RTX Release 8.5 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 17
- [Determining the Bit Rate Required for a Particular Video Capability](#), page 17
- [Configuring the Bit Rate Capability for Cisco UC for RTX](#), page 18
- [How Cisco Unified Client Services Framework Determines the Video Capability of Your Computer](#), page 19
- [Limiting of Usage of Bandwidth by Users](#), page 19
- [About Tuning Computers for Maximum Video Performance](#), page 20

## 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 9](#) to determine the minimum bit rate that your Cisco UC for RTX requires to attain a particular frame format and frame rate.

**Table 9** 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	<ul style="list-style-type: none"> <li>• Max Audio Bit Rate</li> <li>• Max Video Call Bit Rate</li> </ul>
Earlier than 8.0	<ul style="list-style-type: none"> <li>• Audio Codec</li> <li>• Video Call Bandwidth</li> </ul>

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](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 10](#) 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 10** 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	4.0
1b	128	QCIF	4.0
1.1	192	CIF	4.0
1.2	384	CIF	4.0
1.3	768	CIF	4.0
2	768	CIF	4.0
2.1	768	CIF	4.0
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 Options dialog box contains a slider that enables you to limit the bandwidth that Cisco UC for RTX uses for video calls. [Table 11](#) lists the bandwidth settings that are available on the slider, from highest to lowest, and the video implications for each level.

**Table 11** 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.

**Table 11 Bandwidth Settings Available to Users**

Bandwidth Settings Available	H.264/AVC Level	Maximum Decoder Bit Rate	Maximum Encoder Bit Rate	Description
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.  <b>Note</b> This setting can render QCIF video at 6 fps, which may result in poor image rendering with some cameras.

## About Tuning Computers for Maximum Video Performance

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

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucrtx/8\\_5/english/installguide/cucrtx\\_install.html](http://www.cisco.com/en/US/docs/voice_ip_comm/cucrtx/8_5/english/installguide/cucrtx_install.html)

## Video Troubleshooting Tips

- [Users See Video Impairments, page 20](#)
- [Video Conversations with Multiple Displays, page 21](#)
- [Users Might See Lower Video Quality When Computer Is Connected to Some Models of Cisco Unified IP Phone, page 21](#)
- [No Video When Using the Desk Phone and a Wireless Network Interface Card Is Enabled, page 22](#)

## 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 17](#).

**Solution** Perform the following steps:

1. Select **File > Cisco UC Settings > Video**.
2. Use the slider to set the balance between bandwidth usage and video quality.
3. 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 Using 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 14](#)

## Camera Troubleshooting Tips

- [Some Web Cameras Start When Users Sign In, page 22](#)
- [Poor Sound Quality on the Tandberg PrecisionHD USB Camera on Windows 7, page 22](#)
- [Built-In Camera on Lenovo ThinkPad W500 Crops Image, page 23](#)

## 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 23](#)
- [Open Caveats, page 24](#)
- [Troubleshooting, page 24](#)

## 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

- 
- |               |   |
|---------------|---|
| <b>Step 1</b> | To access the Bug Toolkit, go to<br><a href="http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs">http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs</a> |
| <b>Step 2</b> | Log in with your Cisco.com user ID and password.  |
| <b>Step 3</b> | To look for information about a specific problem, enter the bug ID number in the “Search for Bug ID” field, then click <b>Go</b> .  |
-

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 caveats, 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 caveats 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 23](#).

**Table 12** Open Caveats for Cisco UC for RTX

Identifier	Severity	Component	Headline
<a href="#">CSCtj39819</a>	3	rtx-api	Admin user install RTX and login, standard user cannot change RTX user
<a href="#">CSCth66625</a>	4	lifecycle	recover from hibernate, user auto login CUCRTX and no DN available
<a href="#">CSCti64591</a>	4	performance	Notification toast first time popup takes 3 secs after we restart machine
<a href="#">CSCtj14367</a>	4	csf-api	CSF hang after network connection lost and recover in short time.
<a href="#">CSCtj14872</a>	4	session-windows	During active call one party kill csf lead to other party can't makecall
<a href="#">CSCti61558</a>	5	ue	CUCRTX display error in low DPI system.

## Troubleshooting

The following Cisco UC for RTX documents provide troubleshooting information:

- *Installation Guide for Cisco Unified Communications for RTX Release 8.5*
- *Frequently Asked Questions: Cisco Unified Communications for RTX Release 8.5*

Use this link to access this documentation:

[http://www.cisco.com/en/US/products/ps11241/tsd\\_products\\_support\\_series\\_home.html](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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