Release Notes for Cisco UC Integration for Microsoft Lync Release 8.6

December 15, 2014

These release notes describe features and caveats for all versions of Cisco UC Integration for Microsoft Lync Release 8.6. The Cisco UC Integration for Microsoft Lync works with the following applications:

- Microsoft Lync
- Microsoft Office Communicator

Cisco UC Integration for Microsoft Lync uses Cisco Unified Client Services Framework. Cisco Unified Client Services Framework provides Cisco telephony services and next-generation media services for Cisco UC Integration for Microsoft Lync.

To access the latest software upgrades for all versions of Cisco UC Integration for Microsoft Lync, navigate to the Download Software page from the following URL:


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Introduction

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

Before you install Cisco UC Integration for Microsoft Lync, review this document for information about issues that might affect your system. For a list of the open caveats, see Open Caveats, page 40.

System Requirements

- Network Requirements, page 2
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- Client Computer Requirements, page 7
- Cisco Unified IP Phone Requirements, page 11

Network Requirements

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

<table>
<thead>
<tr>
<th>Port</th>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Port</th>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>69</td>
<td>UDP</td>
<td>Connects to the Trivial File Transfer Protocol (TFTP) server to download the TFTP file.</td>
</tr>
<tr>
<td>80</td>
<td>TCP/HTTP</td>
<td>Connects to services such as Cisco Unified MeetingPlace for meetings, Cisco Unity or Cisco Unity Connection for voicemail features.</td>
</tr>
<tr>
<td>143</td>
<td>IMAP (TCP/TLS)</td>
<td>Connects to Cisco Unity or Cisco Unity Connection to retrieve and manage the list of voice messages for the user, and the voice messages themselves.</td>
</tr>
<tr>
<td>389</td>
<td>TCP</td>
<td>Connects to the LDAP server for contact searches.</td>
</tr>
<tr>
<td>443</td>
<td>TCP/HTTPS</td>
<td>Connects to services such as Cisco Unified MeetingPlace for meetings, Cisco Unity or Cisco Unity Connection for voicemail features.</td>
</tr>
</tbody>
</table>
### System Requirements

#### Table 2  Ports Used By Cisco UC Integration for Microsoft Lync

<table>
<thead>
<tr>
<th>Port</th>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>636</td>
<td>LDAPS</td>
<td>Connects to the secure LDAP server for contact searches.</td>
</tr>
<tr>
<td>993</td>
<td>IMAP (SSL)</td>
<td>Connects to Cisco Unity or Cisco Unity Connection to retrieve and manage the list of voice messages for the user, and the voice messages themselves.</td>
</tr>
<tr>
<td>2748</td>
<td>TCP</td>
<td>Connects to the CTI gateway, which is the CTIManager component of Cisco Unified Communications Manager.</td>
</tr>
<tr>
<td>4224</td>
<td>TCP (CAST)</td>
<td>Connects to the IP Phone through CAST for enabling video while in desktop phone mode.</td>
</tr>
<tr>
<td>5060</td>
<td>UDP/TCP</td>
<td>Provides Session Initiation Protocol (SIP) call signaling.</td>
</tr>
<tr>
<td>5061</td>
<td>TCP</td>
<td>Provides secure SIP call signaling.</td>
</tr>
<tr>
<td>5445-5446</td>
<td>UDP</td>
<td>Provides desktop phone video regardless of the Cisco Unified Communications Manager SIP profile used. Port 5446 is used for RTP Control Protocol (RTCP) and provides out-of-band statistics and control information for an RTP flow.</td>
</tr>
<tr>
<td>7993</td>
<td>IMAP (TLS)</td>
<td>Connects to Cisco Unity Connection to retrieve and manage the list of secure voice messages for the user, and the secure voice messages themselves.</td>
</tr>
<tr>
<td>8191</td>
<td>TCP</td>
<td>Connects to the local port to provide Simple Object Access Protocol (SOAP) web services.</td>
</tr>
<tr>
<td>8443</td>
<td>TCP, HTTPS</td>
<td>Connects to the Cisco Unified Communications Manager IP Phone (CCMCIP) server to get a list of currently assigned devices. In a single sign on (SSO) deployment, this connects to the Cisco Unified Communications Manager User Data Service (UDS) instead of CCMCIP. In an SSO deployment, an outbound HTTPS connection is made to the OpenAM server. Typically, port 8443 is configured on the OpenAM server for this connection. However, the administrator of the OpenAM server might configure the server to use a different port for HTTPS traffic, for example, 443.</td>
</tr>
<tr>
<td>16384-32766</td>
<td>UDP</td>
<td>Sends RTP media streams for audio and video.</td>
</tr>
</tbody>
</table>

#### Table 3  Ports Used By Cisco UC Integration for Microsoft Lync

<table>
<thead>
<tr>
<th>Port</th>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>44442</td>
<td>HTTP</td>
<td>The Cisco UC Integration for Microsoft Lync process, cucimoc.exe, listens for events from Cisco Unified Client Services Framework on this port.</td>
</tr>
</tbody>
</table>

| Key Value Name | CUCIMOCCSFPort |
## Server Requirements

### Table 4  
**Cisco UC Integration for Microsoft Lync Server Requirements**

<table>
<thead>
<tr>
<th>Item</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Unified Communications Manager</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>8.6(x) releases</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Please see Open Caveats, page 40 for information on caveats that affect support for this release.</td>
</tr>
<tr>
<td></td>
<td>8.5(1) or later for the 8.5 release¹</td>
</tr>
<tr>
<td></td>
<td>8.0(1) or later for the 8.0 release</td>
</tr>
<tr>
<td></td>
<td>7.1(5) or later for the 7.1 release</td>
</tr>
<tr>
<td></td>
<td>6.1(4) or later for the 6.1 release</td>
</tr>
<tr>
<td></td>
<td>6.1(3) with Cisco Options Package (COP) file to create the Cisco Unified Client Services Framework device type</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Cisco UC Integration for Microsoft Lync does not support multiple Cisco Unified Client Services Framework devices.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Computer Telephony Integration (CTI) servitude is supported. This enables another application to control Cisco UC Integration for Microsoft Lync.</td>
</tr>
<tr>
<td>Communications server</td>
<td>Microsoft Lync Server 2010</td>
</tr>
<tr>
<td></td>
<td>Microsoft Office Communications Server 2007 R2</td>
</tr>
<tr>
<td>Cisco Unity</td>
<td>8.0 with Microsoft Exchange 2007 on another server, or in a failover configuration</td>
</tr>
<tr>
<td></td>
<td>8.0 with Microsoft Exchange 2003 on the same server, on another server, or in a failover configuration</td>
</tr>
<tr>
<td></td>
<td>7.0(2) with Engineering Special (ES) 19 or later, with Microsoft Exchange 2007 on another server, or in a failover configuration</td>
</tr>
<tr>
<td></td>
<td>7.0(2) with Engineering Special (ES) 19 or later, with Microsoft Exchange 2003 on the same server, on another server, or in a failover configuration</td>
</tr>
<tr>
<td>Cisco Unity Connection</td>
<td>8.6(x)</td>
</tr>
<tr>
<td></td>
<td>8.5(1) or later</td>
</tr>
<tr>
<td></td>
<td>8.0(1) or later</td>
</tr>
<tr>
<td></td>
<td>7.1(4) or later</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Cisco UC Integration for Microsoft Lync supports all of these releases in systems where publisher and subscriber Cisco Unity Connection servers are integrated in an active-active configuration, regardless of whether or not failover is configured.</td>
</tr>
</tbody>
</table>
### System Requirements

#### For conference calls with video:
- 8.0 or later
- 7.0 or later
- Cisco Unified MeetingPlace Express VT 2.0

#### For meetings:
- 8.0 or later
- 7.0 or later

*Note* Cisco WebEx Meeting Center is only supported when integrated with Cisco Unified MeetingPlace using MeetingPlace scheduling. This is formerly known as type 1 integration. WebEx scheduling, that is, type 2 integration, is not supported.

<table>
<thead>
<tr>
<th>Item</th>
<th>Release</th>
</tr>
</thead>
</table>
| Cisco Unified MeetingPlace | For conference calls with video:  
- 8.0 or later  
- 7.0 or later  
- Cisco Unified MeetingPlace Express VT 2.0  
For meetings:  
- 8.0 or later  
- 7.0 or later |
| Cisco Unified Videoconferencing Multipoint Control Unit (MCU) | 7.1  
7.0  
5.7  
5.6 |
| Cisco Unified Survivable Remote Site Telephony | 8.5 with Cisco IOS 15.1(1)T with Cisco Unified Communications Manager Release 8.5  
8.0 with Cisco IOS 15.1(1)T with Cisco Unified Communications Manager Release 8.0  
7.1 with Cisco IOS 12.4(24)T with Cisco Unified Communications Manager Release 7.1(2)  
7.0 with Cisco IOS 12.4(20)T with Cisco Unified Communications Manager Release 7.0(1)  
4.2 with Cisco IOS 12.4(11)XW5 with Cisco Unified Communications Manager 6.1(3) |
| LDAP with Single Sign On (SSO) | Microsoft Active Directory 2008  
Microsoft Active Directory 2003 |
| LDAP without SSO | Microsoft Active Directory 2008  
Microsoft Active Directory 2003  
OpenLDAP 2.4 |
| Access management software | OpenAM server Release 9 |
| Cisco Unified Communications Manager, Business Edition 3000 | 8.6.3 or later 8.6(x) releases  
*Note* The Business Edition 3000 server is not as feature rich as the full Cisco Unified Communications Manager. Several features are not implemented. This reduces the functionality available to Cisco UC Integration for Microsoft Lync.  
See *Cisco Unified Communications Manager, Business Edition 3000, page 19* for additional information. |
Note: You can configure Cisco UC Integration for Microsoft Lync in a large number of contexts, and you can include or exclude particular features. The application is tested in the most common configuration contexts, but due to production constraints, not all configurations are tested.

User-Based Licensing Requirements for Cisco Unified Communications Manager Release 8.0 and Later

DLUs do not apply to Cisco Unified Communications Manager Release 8.0 or later. Instead the following license requirements apply:

<table>
<thead>
<tr>
<th>Description</th>
<th>License Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>User has a Cisco Unified IP Phone</td>
<td>Adjunct user license</td>
</tr>
<tr>
<td>User has no other phone connected to Cisco Unified</td>
<td>Enhanced license</td>
</tr>
<tr>
<td>Communications Manager</td>
<td></td>
</tr>
</tbody>
</table>

DLUs Required for Cisco Unified Communications Manager 6.1(4) and 6.1(3)

<table>
<thead>
<tr>
<th>Release</th>
<th>Device License Units (DLUs) Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1(x), 6.1(4)</td>
<td>Three DLUs are required if you use Cisco UC Integration for Microsoft Lync as a primary phone. If you use Cisco UC Integration for Microsoft Lync in <em>adjunct mode</em>, only one license is required. When you use a phone in adjunct mode, you associate a secondary device with the primary device and consume only one device license for each device.</td>
</tr>
<tr>
<td>6.1(3)</td>
<td>Three DLUs are always required, whether you use Cisco UC Integration for Microsoft Lync as a primary phone, or in adjunct mode.</td>
</tr>
</tbody>
</table>

Note: If you use Cisco Unified Workspace Licensing (CUWL), typically lots of DLUs are available. If you start to use Cisco UC Integration for Microsoft Lync with Cisco Unified Communications Manager 6.1(3), then move to 6.1(4) the extra DLUs become available again after you upgrade.
Client Computer Requirements

Hardware Requirements

Table 5 Hardware Requirements for Desktop and Laptop Computers for Audio and Video in Various Modes

<table>
<thead>
<tr>
<th>Item</th>
<th>Audio Only</th>
<th>QCIF</th>
<th>CIF</th>
<th>VGA</th>
<th>720HD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1 GB</td>
<td>1 GB</td>
<td>1 GB</td>
<td>1 GB</td>
<td>2 GB</td>
</tr>
<tr>
<td>Available disk space before the application is started</td>
<td>350 MB</td>
<td>350 MB</td>
<td>350 MB</td>
<td>350 MB</td>
<td>500 MB</td>
</tr>
<tr>
<td>Available disk space</td>
<td>1 GB</td>
<td>1 GB</td>
<td>1 GB</td>
<td>1 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Minimum Windows Experience Index (WEI) processor score</td>
<td>2.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.8</td>
<td>5.9 and a system with at least four CPU cores.</td>
</tr>
<tr>
<td>Video card</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A DirectX 9-compatible graphics card with this video RAM:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsoft Windows XP</td>
<td>Not applicable</td>
<td>128 MB</td>
<td>128 MB</td>
<td>128 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>Microsoft Windows Vista</td>
<td>Not applicable</td>
<td>256 MB</td>
<td>256 MB</td>
<td>256 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>Microsoft Windows 7</td>
<td>Not applicable</td>
<td>256 MB</td>
<td>256 MB</td>
<td>256 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>I/O ports</td>
<td>When you use USB audio and video, USB 2.0 is required.</td>
<td></td>
<td></td>
<td></td>
<td>HD-capable USB 2.0 web camera, HDMI capture card, and HD camera.</td>
</tr>
</tbody>
</table>

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

Tested Video Devices

The video cameras tested with Cisco UC Integration for Microsoft Lync are as follows:

- Cisco VT Camera II
- Cisco VT Camera III
- Tandberg PrecisionHD

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

- Acer TravelMate 5730
Tested Audio Devices

The audio devices tested with Cisco UC Integration for Microsoft Lync are as follows:

- Jabra BIZ 620 USB
- Jabra BIZ 2400 USB
- Jabra GO6470
- Jabra GN9350e
- Jabra GN5390
- Jabra GN9350
- Jabra Pro9470
- Polycom CX100 Speakerphone USB

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.

The following Plantronics audio devices have also been tested and work with Cisco UC Integration for Microsoft Lync:

- Blackwire USB wired headset family.
- Calisto USB handset/speakerphone family.
- CS50 and CS60 USB wireless headset system family.
- DA45 USB adapter family for use with Plantronics H-series headsets, also known as H-top headsets.
- Savi Office wireless headset system family, DECT.
- Voyager PRO UC Bluetooth headset system family.

Note

The -M models of the Blackwire and Voyager headset families have not been tested with Cisco UC Integration for Microsoft Lync.
## Software Requirements

### Table 6  
**Software Requirements for Cisco UC Integration for Microsoft Lync**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Microsoft Windows 7 SP1 Professional, Enterprise, or Ultimate, 32-bit or 64-bit</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows Vista SP2 Business, Enterprise, or Ultimate, with DirectX 10, 32-bit or 64-bit</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows XP SP3 with DirectX 9.0c, 32-bit only</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> Ensure that the latest display drivers are installed on your computer so that your display functions correctly with DirectX.</td>
</tr>
<tr>
<td>Microsoft Visual C++ 2005 Redistributable Package</td>
<td>Version 8.0.59193</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> The redistributable package must be installed before you install Cisco UC Integration for Microsoft Lync, if you are using MSI to install.</td>
</tr>
<tr>
<td>Microsoft Lync or Microsoft Office Communicator</td>
<td>Microsoft Lync 2010</td>
</tr>
<tr>
<td></td>
<td>Microsoft Office Communicator 2007 R2</td>
</tr>
<tr>
<td>Applications that can use click-to-call features</td>
<td>Microsoft Outlook 2010[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Outlook 2007 SP1[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Outlook 2003[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Word 2010[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Word 2007[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Word 2003[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Excel 2010[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Excel 2007[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft Excel 2003[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft PowerPoint 2010[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft PowerPoint 2007[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft PowerPoint 2003[^1]</td>
</tr>
<tr>
<td></td>
<td>Microsoft SharePoint 2010[^1] 2</td>
</tr>
<tr>
<td></td>
<td>Microsoft SharePoint 2007[^1] 2</td>
</tr>
<tr>
<td></td>
<td>Microsoft SharePoint 2003[^1] 2</td>
</tr>
<tr>
<td></td>
<td>Microsoft Internet Explorer 7.0 or later[^1]</td>
</tr>
<tr>
<td></td>
<td>Mozilla Firefox 3.6 - 9.0 (32 bit)</td>
</tr>
<tr>
<td>Software framework</td>
<td>Microsoft .NET 3.5 SP1</td>
</tr>
</tbody>
</table>

[^1]: 32-bit edition only.

[^2]: You cannot use click to call with Microsoft SharePoint if you are using Microsoft Office 2010.
**System Requirements**

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**Note**

If you are using McAfee anti-virus software, due to a memory issue with Presentationhost.exe, you must use McAfee 8.0 Patch 16 or later, or McAfee 8.5 Patch 5 or later.

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**Software Interoperability with Cisco Unified Client Services Framework**

Before you deploy Cisco UC Integration for Microsoft Lync 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

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**Software Interoperability with Click to Call**

If you plan to install click-to-call features with Cisco UC Integration for Microsoft Lync, ensure that your client computers do not have the standalone version of Cisco Click to Call installed. These two products are not interoperable.

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**Software Interoperability with Cisco Jabber**

Cisco Jabber and Cisco UC Integration for Microsoft Lync cannot be installed and run on the same client computer. Installation of Cisco Jabber may prevent Cisco UC Integration for Microsoft Lync from being able to successfully sign in. See caveat **CSCty89028** in Open Caveats, page 40 for additional information.

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**Codecs for Use with Cisco UC Integration for Microsoft Lync**

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 Integration for Microsoft Lync:

- H.264/AVC

**Audio Codecs**

You can use the following audio codecs with Cisco UC Integration for Microsoft Lync:

- G.711a, µ-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.
Correct Hardware Specification Not Detected on Microsoft Windows XP SP2

Table 6 states that the minimum service pack requirement for Cisco UC Integration for Microsoft Lync on Microsoft Windows XP is SP3. We recommend that you do not install Cisco UC Integration for Microsoft Lync on Microsoft Windows XP with SP2. If you do install Cisco UC Integration for Microsoft Lync on Microsoft Windows XP with SP2, you must install the latest patches for the operating system.

Cisco UC Integration for Microsoft Lync on Microsoft Windows XP with SP2 cannot detect the correct hardware specification of the computer. This causes the application to attempt to render video at a resolution that the computer is not capable of. This in turn causes high CPU usage which significantly impairs the responsiveness of the computer.

Tested VPN Clients

The virtual private network (VPN) clients tested with Cisco UC Integration for Microsoft Lync are as follows:

- Cisco VPN Client 5.0
- Cisco Anyconnect VPN Client 2.2, 2.3, and 2.4

Cisco Unified IP Phone Requirements

Table 7 lists the Cisco Unified IP Phone models that are supported for Cisco UC Integration for Microsoft Lync, and whether Skinny Call Control Protocol (SCCP) and Session Initiation Protocol (SIP) are supported:

<table>
<thead>
<tr>
<th>Phone</th>
<th>SCCP</th>
<th>SIP</th>
<th>Supports Video with CAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco IP Communicator</td>
<td>Yes</td>
<td>Yes</td>
<td>Not applicable</td>
</tr>
<tr>
<td>9971</td>
<td>Not applicable</td>
<td>Yes</td>
<td>Yes(^1)</td>
</tr>
<tr>
<td>9951</td>
<td>Not applicable</td>
<td>Yes</td>
<td>Yes(^1)</td>
</tr>
<tr>
<td>8961</td>
<td>Not applicable</td>
<td>Yes</td>
<td>Yes(^1)</td>
</tr>
<tr>
<td>8945</td>
<td>Yes</td>
<td>Yes</td>
<td>No(^2)</td>
</tr>
<tr>
<td>8941</td>
<td>Yes</td>
<td>Yes</td>
<td>No(^2)</td>
</tr>
<tr>
<td>7985G</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7975G</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7971(^G)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7970(^G)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7965G</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7962G</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7961(^G)-GE(^4)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7961(^G)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
<tr>
<td>7960(^G)</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>7945(^G)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^3)</td>
</tr>
</tbody>
</table>
Table 7 Phones Supported by Cisco UC Integration for Microsoft Lync (continued)

<table>
<thead>
<tr>
<th>Phone</th>
<th>SCCP</th>
<th>SIP</th>
<th>Supports Video with CAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>7942G</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes³</td>
</tr>
<tr>
<td>7941G-GE⁴</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes³</td>
</tr>
<tr>
<td>7941G⁴</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes³</td>
</tr>
<tr>
<td>7940G⁴</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>7931G</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>7925G</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7921G</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7920G⁴</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7912G⁴</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7911G</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes³</td>
</tr>
<tr>
<td>7910G⁴</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7906G</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>7905G⁴</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>7902G⁴</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>6961</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>6945</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6941</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>6921</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>6911</td>
<td>Yes</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>69015</td>
<td>Yes</td>
<td>Not applicable</td>
<td>No</td>
</tr>
</tbody>
</table>

1. CAST operation is not enabled if a Cisco Unified Video Camera is attached to the phone. The video is displayed on the phone.
2. This phone does not have a detachable camera. CAST cannot be enabled. Video can only be displayed on the phone, not the desktop.
3. An SCCP firmware load is required to support video.
4. This phone is at the end of software maintenance.
5. This phone does not support speakerphones or headsets.

When you have Cisco UC Integration for Microsoft Lync 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 35.

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

See Open Caveats, page 40 for information on a caveat pertaining to the 9971 model phone.
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.

Cisco takes reasonable measures to interface with the operating system in ways that decrease the likelihood that other applications running on the system will interfere with the software phone 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 Cisco cannot guarantee equivalent performance.

The following are some conditions that may cause artifacts:

- The computer increases usage of the CPU to 75% to 100% because multiple application or system processes run at the same time.
- 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 for additional information and product guides:


For a complete list of documents, see the Documentation Guide for Cisco UC Integration for Microsoft Lync at


Cisco Unified Communications Manager Documentation

See the Cisco Unified Communications Manager Documentation Guide and other publications specific to your Cisco Unified Communications Manager release:


Cisco Unity Documentation

See the Cisco Unity Documentation Guide and other publications specific to your Cisco Unity release:

Cisco Unity Connection Documentation
See the Cisco Unity Connection Documentation Guide and other publications specific to your Cisco Unity Connection release:

Cisco Unified IP Phone Documentation
See publications that are specific to your language, phone model, and Cisco Unified Communications Manager release:
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:

Tips for Searching Cisco Documentation
You can use an external search engine such as Google to search Cisco documentation. The following search query returns keywords from specific product releases on cisco.com:
<product name> <release number> <topic keywords> site:cisco.com
The following are example search queries:
• meetingplace 7.0 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(2)
This release provides the following new functionality and enhancements:
• Microsoft Office 365 support
• Registry key added to make the location of help files configurable.
• Fixes to functionality. Refer to Resolved Caveats, page 41 for information on these fixes.

Release 8.6(1)
This release provides the following new functionality and enhancements:
• Cisco Unified Communications Manager 9.0 support.
• Registry key added to disable the CDP driver in desktop phone mode.
Installation Notes

For step-by-step installation and upgrade instructions, see the Installation Guide for Cisco UC Integration for Microsoft Lync:


Limitations and Restrictions

Review Table 8 before you work with Cisco UC Integration for Microsoft Lync. Table 8 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 40, and Resolved Caveats, page 41.

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Severity</th>
<th>Component</th>
<th>Headline</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCtf64972</td>
<td>3</td>
<td>video-windows</td>
<td>Video separates from conv. window when dragging window, worse on low-end</td>
</tr>
<tr>
<td>CSCth90767</td>
<td>3</td>
<td>accessibility</td>
<td>CUCIMOC Login fail when WindowsUpdate KB979909 &amp; KB976769v2 installed</td>
</tr>
<tr>
<td>CSCtq39848</td>
<td>3</td>
<td>signin</td>
<td>CuciLync MR: Potential password exposure</td>
</tr>
</tbody>
</table>

Important Notes

IMPORTANT NOTICE - PLEASE READ: During an emergency, software phone 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 SOFTWARE PHONE ONLY AT YOUR OWN RISK DURING AN EMERGENCY. Cisco will not be liable for resulting errors or delays.

- Microsoft Office 365 Support, page 17
- Help File Location Configuration, page 17
- Cisco Virtualization Experience Client Documentation, page 17
- Disable Video in Desktop Phone Mode, page 18
- Change Location of Local Data Files, page 18
- Meeting Escalation with Cisco Unified MeetingPlace 8.5(x), page 18
- Installer Fix, page 19
- Cisco Unified Communications Manager, Business Edition 3000, page 19
- DSCP Packet Marking, page 19
- Preferred Audio and Video Device Selection, page 21
- Forced Authorization Codes, page 21
- Client Matter Codes, page 21
- Suppressing Error Codes, page 21
- Account Lockout Prevention, page 22
- Cisco Unified Communications Manager 6.1(3) and Conference Participant Lists, page 22
- Upgrading from Microsoft Windows XP SP2 to SP3, page 22
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- Limitation with Shared Lines When Deploying with Cisco Unified SRST, page 24
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- Specifying Audio Value Names, page 25
- How Cisco UC Integration for Microsoft Lync Determines the Audio Codec to Use on a Call, page 25
- Updating the Voicemail Server Value Name, page 26
- Changing the Version of JRE That Cisco UC Integration for Microsoft Lync Uses, page 26
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- Buttons on Cisco UC Pane Rendered Incorrectly, page 28
- Incoming Call Sounds Not Muted, page 29
- Click to Call Menu Items Might Appear Twice in Microsoft Internet Explorer, page 29
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- Shortcut for Click to Call Not Added to Taskbar, page 30
- User Is Asked to Allow Cisco UC Integration for Microsoft Lync to Open Web Content, page 30
- Notes on Video, page 30
- Video Troubleshooting Tips, page 34
- Notes on Cameras, page 36
- Camera Troubleshooting Tips, page 37
- Usage of English-Language and Translated User Documentation, page 38
Microsoft Office 365 Support

Cisco UC Integration for Microsoft Lync supports Microsoft Office 365 with the following software:

- Microsoft Office 2007 Service Pack 2 32 bit
- Microsoft Office 2010 32 bit

Microsoft Office 365 support was tested with the following operating systems:

- Microsoft Windows XP Service Pack 3
- Microsoft Windows 7 Professional 32 bit
- Microsoft Windows 7 Ultimate 32 bit

Microsoft Office 365 support was tested with the Midsize Business and Enterprise (Plan E3) trial version.

Synchronization of user data from Microsoft Active Directory to Microsoft Lync Online server may take more than the expected amount of time to complete. Please allow up to one day for this process to complete.

Phone numbers must be in E164 format to allow synchronization between Microsoft Active Directory and Microsoft Lync Online server.

Help File Location Configuration

The location of application help files is now configurable. There are two ways to configure a custom location for help files:

- Add the key `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc\Unified Communications\CUCIMOC` to the registry. Add a String subkey called `HelpUrl`. Enter the location of the help file as the `HelpUrl` value.
- Add the key `HKEY_CURRENT_USER\SOFTWARE\Cisco Systems, Inc\Unified Communications\CUCIMOC` to the registry. Add a String subkey called `HelpUrl`. Enter the location of the help file as the `HelpUrl` value.

If the help file location is set using the `HKEY_CURRENT_USER\SOFTWARE\Cisco Systems, Inc\Unified Communications\CUCIMOC` key, there should not be another key located at `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc\Unified Communications\CUCIMOC`. Use one method or the other but do not use both.

Cisco Virtualization Experience Client Documentation

The client experience of the standalone Cisco UC Integration for Microsoft Lync application and the version running on virtualized clients is identical. See the following documentation locations for information on the virtualized clients:

Disable Video in Desktop Phone Mode

The desktop phone mode video capabilities of Cisco UC Integration for Microsoft Lync can be disabled using the `DeskphoneVideoDisabled` registry key. This registry key also disables the CDP driver. Both actions are enabled by setting this registry key to `true`. This registry key is set to `false` by default.

This key is located in `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc\Client Services Framework\AdminData` or `HKEY_CURRENT_USER\Software\Cisco Systems, Inc\Client Services Framework\AdminData`.

Change Location of Local Data Files

The location of local data files is now configurable. This includes information such as the user profile, device configuration, and log files. Perform the following procedure to configure a custom location for this information:

**Step 1** Create a new environment variable with a regular folder path as a value.
For example: `MyLocalData = C:\My Local Data`

**Step 2** Create a new registry key in `HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Cisco Systems, Inc.` or `HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.` called `LocalAppDataEnvVariable` that points to the environment variable created in previous step.

*Note* This key should be located in the `Wow6432Node` subkey in 64 bit systems. The key would be located in `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Policies\Cisco Systems, Inc.` or `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Cisco Systems, Inc.` in 64 bit systems.

Meeting Escalation with Cisco Unified MeetingPlace 8.5(x)

Meeting integration between Cisco Webex and Cisco Unified MeetingPlace 8.5(x) has a new set of requirements to follow. These new requirements allow you to create a meeting with the desired audio provider with Cisco Unified MeetingPlace 8.5(x) while preserving backward compatibility:

- Cisco Unified MeetingPlace Audio Conferencing must be configured in the Audio Conference section of the Cisco Webex One-Click Setup to be able to escalate a meeting with Cisco Unified MeetingPlace 8.5(x) audio support.
- Ensure the key `WebConfSSOIdentityProvider` is no longer present in the following registry locations:
  - `HKEY_CURRENT_USER\Software\Cisco Systems, Inc\Client Services Framework\AdminData`
  - `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc\Client Services Framework\AdminData`

This value should not be present in these locations if Cisco Unified MeetingPlace 8.5(x) is used.
This configuration ensures Cisco Unified MeetingPlace is used as the audio provider.

**Installer Fix**

An installer condition associated with the Microsoft Visual C++ 2005 Redistributable in previous versions of Cisco UC Integration for Microsoft Lync prevented the user from installing the client in certain situations. This condition would fail incorrectly when a user had a new version of the package installed. This condition is now fixed to ensure that if either the 8.0.59193 or 8.0.61001 versions of the package are installed, the condition will pass. The condition will fail once again however if any versions newer than this are subsequently installed.

A public installer property can be used to override this condition if necessary. Name the installer property to VCREDISTOVERRIDE and set its value to TRUE. The following is an example of how to override this condition when installing from the command line:

```
msiexec /i [Product].msi VCREDISTOVERRIDE=TRUE
```

**Cisco Unified Communications Manager, Business Edition 3000**

Cisco UC Integration for Microsoft Lync supports Cisco Unified Communications Manager, Business Edition 3000 Release 8.6(3) and later. Versions prior to this are not supported.

Business Edition 3000 is not as feature rich as the full version of Cisco Unified Communications Manager. The following features are not supported:

- Visual voicemail
- Desktop phone video
- Conference bridge integration
- Call Park

The following link provides additional information about Business Edition 3000:


**DSCP Packet Marking**

Differentiated Services Code Point (DSCP) is an IP field responsible for classification of IP packets. It allows for Quality of Service on IP networks where packet priority is dependent on the DSCP value. Packets with higher DSCP values are given a higher priority as they traverse the network.

Applications running on Microsoft Windows XP have the ability to set DSCP values without interference from the operating system. Microsoft Windows Vista and 7 remove this ability. These operating systems reset all DSCP values to zero that have been set by the application if the user is not an administrator and the UAC user account control setting is turned on. This was the behavior on Cisco UC Integration for Microsoft Lync releases prior to 8.5(5). In summary, whereas the DSCP packet markings are application driven on Microsoft Windows XP, they are operating system driven for Microsoft Windows Vista and 7 in the non-Administrative user / UAC case.

Cisco UC Integration for Microsoft Lync 8.5(5) includes changes to ensure that audio and video streams are always set up within separate, specific port ranges. This is necessary because the Microsoft Windows Vista and 7 operating systems need to mark DSCP values for audio and video packets differently and thus need a way to discover how to separately identify audio and video streams. Since the Cisco UC
Integration for Microsoft Lync 8.5(5) changes guarantee that audio will always be set up within one port range and video in another, an OS Group Policy can be configured to distinguish one from the other and mark the media packets appropriately.

Perform the following procedure to create audio and video group policies:

Procedure

**Step 1** Go to the Cisco Unified Communications Manager administration page.

**Step 2** Select Device > Device Settings > SIP Profile from the menu and select the applicable SIP profile.

**Step 3** Note the values in the Start Media Port and Stop Media Port fields.

The port range between these two numbers is the port range all media streams use. From that port range you need two port ranges; an audio port range and a video port range. Calculate these ranges by allocating the bottom half of the range to audio and the top half to video.

**Step 4** Follow the instructions found at the following URL to create the new DSCP group policies: http://technet.microsoft.com/en-us/library/cc771283.aspx.

**Step 5** Using the instructions from Step 4, create a new audio policy with the following attributes:

- **Policy name:** CUPC_Audio (Wizard Page 1)
- **Specify DSCP value:** 46 (Wizard Page 1)
- **Only applications with this executable name:** cucsf.exe (Wizard Page 2)
- **Select the protocol this QoS policy applies to:** UDP (Wizard Page 4)
- **From this source port number or range as:** The audio port range calculated in Step 3 (Wizard Page 4)

**Step 6** Using the instructions from Step 4, create a new video policy with the following attributes:

- **Policy name:** CUPC_Video (Wizard Page 1)
- **Specify DSCP value:** 34 (Wizard Page 1)
- **Only applications with this executable name:** cucsf.exe (Wizard Page 2)
- **Select the protocol this QoS policy applies to:** UDP (Wizard Page 4)
- **From this source port number or range as:** The video port range calculated in Step 3 (Wizard Page 4)

**Step 7** Using the instructions from Step 4, create a new video policy with the following attributes:

- **Policy name:** CUPC_Deskphone_Video (Wizard Page 1)
- **Specify DSCP value:** 34 (Wizard Page 1)
- **Only applications with this executable name:** cucsf.exe (Wizard Page 2)
- **Select the protocol this QoS policy applies to:** UDP (Wizard Page 4)
- **From this source port number or range as:** 5445:5446
Preferred Audio and Video Device Selection

Note
This feature only applies to Microsoft Lync. Audio and video device selection for the Microsoft Office Communicator Release 2 integration, while still supported, is wholly controlled by the Microsoft Office Communicator client and is unaffected by these changes.

Cisco UC Integration for Microsoft Lync supports the selection of preferred audio and video devices. When Cisco UC Integration for Microsoft Lync is first installed, the devices selected as defaults by the operating system become the currently selected devices. If the user has a preferred audio or video device they wish to use when it is available, they will select it on the Audio or Video tab of the Options window and click Apply after selection is complete. Once applied, the chosen devices will override any other plugged in devices.

If the preferred device is removed from the workstation, Cisco UC Integration for Microsoft Lync will revert to using the operating system default devices. If the preferred device is removed from the workstation and a new device of the same type (audio or video) is introduced, this new device will become the currently selected device. If an additional device is introduced to the workstation while the preferred device is still present, it must be explicitly selected to become the new preferred device.

Forced Authorization Codes

Forced Authorization Codes (FAC) allow for the limiting of phone usage to certain numbers by requiring users to enter authorization codes. When the user calls a number associated with an FAC route pattern, they will be prompted to enter the associated code. If the code is correct the call is allowed to proceed.

Client Matter Codes

Client matter codes (CMC) allow you to manage call access and accounting. CMC assists with call accounting and billing for billable clients by forcing the user to enter a code to specify that the call relates to a specific client matter. You can assign client matter codes to customers, students, or other populations for call accounting and billing purposes.

Suppressing Error Codes

Cisco UC Integration for Microsoft Lync has the ability to suppress error codes. These error codes may be displayed erroneously due to installation or configuration particulars that do not represent actual error conditions.

This suppression is accomplished by creating the following registry keys in 
\HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc.\Unified Communications\CUCIMOC:

- **SuppressedErrorCodes** - The error codes to be suppressed. Error codes are acquired by inspecting server logs.
- **SuppressedServerTypes** - The server producing the error code to be suppressed. Server codes are as follows:
  - CtiManager - 1
  - CUCM - 2
Account Lockout Prevention

Cisco UCIntegration for Microsoft Lync has measures to prevent user account lockup when passwords have been changed during a user session. These measures are triggered when the registry setting `EnableActiveDirectoryLockoutPolicy` contains the value 1. This value is located in the registry at `HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc.\Unified Communications\CUCIMOC`. It is a String value.

When this registry value is set and a password change occurs during a user session, a popup window is displayed to the user the next time credentials are required. The popup informs the user their current credentials are invalid and prompts them for a valid user name and password. Invalid credentials are deleted from the application and cannot be retrieved.

Cisco Unified Communications Manager 6.1(3) and Conference Participant Lists

If you use Cisco Unified Communications Manager 6.1(3), in conference calls the names of the participants are incorrect in the participant list.

Upgrading from Microsoft Windows XP SP2 to SP3

If you have Cisco UC Integration for Microsoft Lync installed on Microsoft Windows XP with SP2, and you plan to upgrade to SP3, you must first uninstall the following applications from the system:

- Cisco UC Integration for Microsoft Lync
- Microsoft Lync or Microsoft Office Communicator

After you upgrade the computer to Microsoft Windows XP with SP3, reinstall both applications.

Searching for Contacts That Do Not Have Unique Information

If you have Microsoft Outlook installed and you use the Microsoft Lync or Microsoft Office Communicator window to search for contacts, Microsoft Lync or Microsoft Office Communicator searches your Microsoft Outlook contacts.
If you try to place a call to a matched contact, and the contact does not have a unique email address, SIP address, or name, a dialog box displays all of the contacts in your corporate directory that match the criteria you searched for. Select the contact you require, then select Call.

### 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.

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Suggested Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows Vista,</td>
<td>1. Open the microphone properties in your Control Panel.</td>
</tr>
<tr>
<td>Microsoft Windows 7</td>
<td>2. Adjust the volume and the microphone boost levels to suit your requirements.</td>
</tr>
<tr>
<td>Microsoft Windows XP</td>
<td>1. Open the advanced properties for recording audio in your Control Panel.</td>
</tr>
<tr>
<td></td>
<td>2. Modify the volume settings so that the microphone boost setting is not enabled.</td>
</tr>
</tbody>
</table>

### 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.

For information about how to select another microphone device, see the online help, or the Frequently Asked Questions: Cisco UC Integration for Microsoft Lync:


### Voice Messages Show a Duration of Zero

When you view your voice messages, the duration of some messages might appear as zero. This problem occurs in releases of Cisco Unity and Cisco Unity Connection that are not supported by Cisco UC Integration for Microsoft Lync. To resolve this issue, upgrade your release of Cisco Unity or Cisco Unity Connection to a release that is supported by Cisco UC Integration for Microsoft Lync. For information on supported releases of Cisco Unity and Cisco Unity Connection, see Server Requirements, page 4.

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

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 call.
Important Notes

Users of Cisco Unified IP Phone 8900 and 9900 Series Models Cannot Control Desk Phone

If users who have a Cisco Unified IP Phone 8900 or 9900 series model cannot use their desk phone from Cisco UC Integration for Microsoft Lync, 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 UC Integration for Microsoft Lync:


JTAPI Error When a Call Is Placed

Users might see a JTAPI error about 15 seconds after they place a call, when Cisco UC Integration for Microsoft Lync 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:


Opening and Closing Conversation History Window Repeatedly Causes Large Memory Usage

On some computers, if you open and close the conversation history window repeatedly, the cucimoc.exe process might use a large amount of memory. To resolve this issue, you must install the following hotfix:

http://code.msdn.microsoft.com/KB981107/

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 Integration for Microsoft Lync 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 Integration for Microsoft Lync receives only alternate calls if both of the following conditions occur:

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

However, the desk phone receives all calls.
Important Notes

Application Might Not Start in Some Circumstances Due to Office Communicator Automation API Error

After you install Cisco UC Integration for Microsoft Lync, then start Microsoft Lync or Microsoft Office Communicator, your Microsoft Windows operating system might display a message that says "Cisco.Uc.Clients.Moc.UCClient has stopped working." Cisco UC Integration for Microsoft Lync does not start.

This issue can occur when Cisco UC Integration for Microsoft Lync cannot connect to the Office Communicator Automation API. For example, this issue can occur in the following circumstances:

- On Microsoft Windows XP, if you have Microsoft Lync, Microsoft Office Communicator, or Microsoft Windows Live Messenger installed, and you upgrade from SP2 to SP3.
- If you have Microsoft Lync, Microsoft Office Communicator, or Microsoft Windows Live Messenger installed, and you uninstall Microsoft Windows Live Messenger.

To fix this issue, perform a repair of Microsoft Lync or Microsoft Office Communicator, as shown in the following steps. Alternatively, reinstall Microsoft Lync or Microsoft Office Communicator.

Procedure

Step 1 Open the add or remove programs tool in the Control Panel.
Step 2 Select Microsoft Lync or Microsoft Office Communicator in the tool.
Step 3 Select Click here for support information.
Step 4 Select Repair.

Specifying Audio Value Names

Before you install Cisco UC Integration for Microsoft Lync, 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 UC Integration for Microsoft Lync:


How Cisco UC Integration for Microsoft Lync Determines the Audio Codec to Use on a Call

Cisco UC Integration for Microsoft Lync uses Cisco Unified Communications Manager devices for your Cisco UC Integration for Microsoft Lync 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 Integration for Microsoft Lync 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:

<table>
<thead>
<tr>
<th>Release of Cisco Unified Communications Manager</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0 or later</td>
<td>Max Audio Bit Rate</td>
</tr>
<tr>
<td>Earlier than 8.0</td>
<td>Audio Codec</td>
</tr>
</tbody>
</table>

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:


When you place a call in Cisco UC Integration for Microsoft Lync, 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.

### Updating the Voicemail Server Value Name

If you migrate from one voicemail system to another, or if the IP address or hostname of your voicemail server changes, you must also update the value of the voicemail server registry key value names.

If you do not update the value of the voicemail server registry key value names, users might still be able to access voice messages from the old voicemail system from the visual voicemail interface in Cisco UC Integration for Microsoft Lync.

For more information about voicemail server registry key value names, see the Installation Guide for Cisco UC Integration for Microsoft Lync:


### Changing the Version of JRE That Cisco UC Integration for Microsoft Lync Uses

Cisco UC Integration for Microsoft Lync 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 Integration for Microsoft Lync uses. However, the Cisco UC Integration for Microsoft Lync might not work correctly with a different version of JRE than the one that is installed with the Cisco UC Integration for Microsoft Lync.

To change the version of JRE that the Cisco UC Integration for Microsoft Lync uses, you change the values of the subkey names listed in Table 9.
Conversation History Cleared When You Upgrade

Your conversation history is cleared if you upgrade Cisco UC Integration for Microsoft Lync in any of the following ways:

- Upgrade from Release 7.1 to Release 8.0(1)
- Upgrade from Release 8.0(1) to Release 8.0(2) or later

Configuring Users to Sign In Automatically in a Non-SSO Deployment

If you want to deploy Cisco UC Integration for Microsoft Lync in a non-SSO environment, you can use registry subkeys to configure your users so that they can be signed in automatically to Cisco UC Integration for Microsoft Lync. Group Policy administrative templates are provided with Cisco UC Integration for Microsoft Lync. You can use these templates to deploy these subkeys to your users.

You can get the administrative templates from the Administration Toolkit for Cisco UC Integration for Microsoft Lync. To access the Administration Toolkit, navigate to the Download Software page for Cisco UC Integration for Microsoft Lync from the following URL:


Table 10 lists the subkeys that you can use to configure automatic sign in.

<table>
<thead>
<tr>
<th>Subkey Names</th>
<th>Description</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>DisablePrivateJRE</td>
<td>If you do not want to install JRE with the Cisco UC Integration for Microsoft Lync, you must set the value of DisablePrivateJRE to 1. If you set this value to 1, the Cisco UC Integration for Microsoft Lync installation application does not install JRE. The Cisco UC Integration for Microsoft Lync uses the version of JRE that is on the client computer. DisablePrivateJRE is in the following registry key: HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Cisco Systems, Inc.\Unified Communications\CUCSF</td>
<td>REG_SZ</td>
</tr>
<tr>
<td>PrivateJREInstalled</td>
<td>If you already have the Cisco UC Integration for Microsoft Lync installed on your client computers, and you want the Cisco UC Integration for Microsoft Lync to not use the version of JRE that was installed with the Cisco UC Integration for Microsoft Lync, set the value of PrivateJREInstalled to 0. The Cisco UC Integration for Microsoft Lync stops using the version of JRE that is installed with the Cisco UC Integration for Microsoft Lync, and starts to use the version of JRE that is on the client computer. PrivateJREInstalled is in the following registry key: HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Systems, Inc.\Unified Communications\CUCSF</td>
<td>REG_SZ</td>
</tr>
</tbody>
</table>
Table 10  Registry Subkeys for Automatic Sign In

<table>
<thead>
<tr>
<th>Subkey Names</th>
<th>Description</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>RememberMe</td>
<td>Set this value to 1 to enable Cisco UC Integration for Microsoft Lync to remember the details of the user when the user signs in.</td>
<td>DWORD</td>
</tr>
<tr>
<td>AutoLogin</td>
<td>Set this value to 1 to enable Cisco UC Integration for Microsoft Lync to automatically sign the user in when the user signs in to Microsoft Lync or Microsoft Office Communicator.</td>
<td>DWORD</td>
</tr>
</tbody>
</table>

The subkey entries in Table 10 are in the following registry key:

HKEY_CURRENT_USER\Software\Policies\Cisco Systems, Inc.\Unified Communications\CUCIMOC\n
If Cisco UC Integration for Microsoft Lync does not find a policy setting for these entries, the same registry subkeys are created in the following location:

HKEY_CURRENT_USER\Software\Cisco Systems, Inc.\Unified Communications\CUCIMOC\n
If you set the values of both of these subkey entries to 1, the following happens:

- When Cisco UC Integration for Microsoft Lync starts for the first time, the user can enter their user ID and password, then select **Sign In** to sign in.
- After the first time that the user signs in, Cisco UC Integration for Microsoft Lync signs the user in automatically every time the user starts Microsoft Lync or Microsoft Office Communicator.
- The **Automatically sign me in when I sign in to Microsoft Lync or Microsoft Office Communicator** option is not available in the Cisco UC Options dialog box.

If you do not set values for these subkey entries, the following happens:

- When Cisco UC Integration for Microsoft Lync starts for the first time, the user can enter their user ID and password, then select **Sign In** to sign in. The user can also select a **Remember Me** check box.
- The **Automatically sign me in when I sign in to Microsoft Lync or Microsoft Office Communicator** option is available in the Cisco UC Options dialog box.

**Note**

If you upgrade your users from any previous release of Cisco UC Integration for Microsoft Lync to Release 8.6(1), users who previously selected the **Automatically sign me in when I sign in to Microsoft Lync or Microsoft Office Communicator** option, must sign in to Cisco UC Integration for Microsoft Lync again, then select the option again. The users do not need to sign in again after that.

**Buttons on Cisco UC Pane Rendered Incorrectly**

**Problem**  The buttons on the Cisco UC pane might be rendered incorrectly in the following circumstances:

- You are running Cisco UC Integration for Microsoft Lync on Microsoft Windows XP.
- Cisco UC Integration for Microsoft Lync is displayed on an external display.
Important Notes

- The external display is disconnected, and Cisco UC Integration for Microsoft Lync is displayed on the primary monitor.

**Solution** Perform the following steps:

1. Execute this command: `dxdiag`
   - The DirectX Diagnostic Tool starts.
2. Select the **Display** tab.
3. Select **Disable** beside Direct3D Acceleration.

### Incoming Call Sounds Not Muted

You can select the speakers that Microsoft Office Communicator uses. To do this, select ⌘ in the Microsoft Office Communicator title bar, then select **Tools > Setup Audio and Video**. If you select the speaker on your computer as the device to play program sounds, and your system sound is muted, your incoming call alerts are not muted.

This is a known issue with Microsoft Office Communicator and Microsoft Windows.

### Click to Call Menu Items Might Appear Twice in Microsoft Internet Explorer

**Problem** When you open the menu that contains the click to call menu items, the Call and Call with Edit menu items might appear twice.

**Solution** Perform the following steps:

1. Access the following registry subkey:
   - `HKEY_CURRENT_USER\Software\Microsoft\Internet Explorer\MenuExt`
2. Delete the Call and Call with Edit entries that are not related to your current Cisco UC Integration for Microsoft Lync installation.

### “On the Phone” Availability Status Not Available

**Problem** Cisco UC Integration for Microsoft Lync includes custom availability statuses such as “On the Phone.” These statuses are stored in the custom availability status file `cisco-presence-states-config.xml`. Microsoft Lync and Microsoft Office Communicator allow only 16 entries in the custom availability statuses file. Cisco UC Integration for Microsoft Lync supports more than 16 languages.

If a user is using a language that is not in `cisco-presence-states-config.xml`, they cannot see the custom availability status "On the Phone" when they select the presence button in Microsoft Lync or Microsoft Office Communicator. Other users see the availability status of this user as “Busy.”

**Solution** Perform the following steps:

**Step 1**
Locate the `cisco-presence-states-config-all-languages.xml` file in the Administration Toolkit.

The `cisco-presence-states-config-all-languages.xml` file contains the custom availability status entries for all supported languages.

To access the Administration Toolkit, navigate to the Download Software page for Cisco UC Integration for Microsoft Lync from the following URL:
Step 2  Save a copy of the cisco-presence-states-config-all-languages.xml file to your computer.

Step 3  Edit the cisco-presence-states-config-all-languages.xml file to suit your language requirements. Ensure that you have no more than 16 entries in the file.

Step 4  Save the cisco-presence-states-config-all-languages.xml file with the filename cisco-presence-states-config.xml.

Step 5  Deploy cisco-presence-states-config.xml as normal.

For more information about custom availability statuses, see the Installation Guide for Cisco UC Integration for Microsoft Lync:


Shortcut for Click to Call Not Added to Taskbar

Problem  Cisco UC Integration for Microsoft Lync does not add a shortcut to the quick launch area of your taskbar.

Solution  This is expected behavior. Earlier releases of this product added a shortcut to the taskbar, but this does not occur in the current release. You can use the workarounds described in the following table:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Workaround</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows 7</td>
<td>Pin the Click to Call menu item from the Start menu to your taskbar.</td>
</tr>
<tr>
<td>Microsoft Windows Vista</td>
<td>Add the Click to Call menu item from the Start menu to the quick launch area of your taskbar.</td>
</tr>
<tr>
<td>Microsoft Windows XP</td>
<td>Create a shortcut from the Click to Call menu item in the Start menu, then drag the shortcut to the quick launch area of your taskbar.</td>
</tr>
</tbody>
</table>

User Is Asked to Allow Cisco UC Integration for Microsoft Lync to Open Web Content

Problem  In some circumstances, when you use the click to call feature in Microsoft Internet Explorer to place a call, a message is displayed that asks you to allow Cisco UC Integration for Microsoft Lync to open web content. This occurs if all of the following are true:

- Your operating system is Microsoft Windows Vista or Microsoft Windows 7.
- Your browser is Microsoft Internet Explorer 8 or later.
- Protected mode is enabled on your browser.

Solution  Select Allow on the message. If you do not want to see this message again, check Do not show me the warning for this program again.

Notes on Video

- Factors That Affect the Video Capability of Users, page 31
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 Integration for Microsoft Lync.
- Selected camera.
- CPU speed and usage.
- Cisco Unified MeetingPlace configuration of videoconferencing 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 11 to determine the minimum bit rate that your Cisco UC Integration for Microsoft Lync requires to attain a particular frame format and frame rate.

<table>
<thead>
<tr>
<th>Combined Bit Rate for Audio and Video (kb/s)</th>
<th>Audio Codec Allowance (kb/s)</th>
<th>Minimum Video Call Bit Rate (kb/s)</th>
<th>Frame Format</th>
<th>Frames per Second</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>14</td>
<td>64</td>
<td>QCIF</td>
<td>15</td>
</tr>
<tr>
<td>142</td>
<td>14</td>
<td>128</td>
<td>QCIF</td>
<td>30</td>
</tr>
<tr>
<td>206</td>
<td>14</td>
<td>192</td>
<td>CIF</td>
<td>15</td>
</tr>
<tr>
<td>320</td>
<td>64</td>
<td>256</td>
<td>CIF</td>
<td>30</td>
</tr>
<tr>
<td>448</td>
<td>64</td>
<td>384</td>
<td>VGA</td>
<td>15</td>
</tr>
<tr>
<td>576</td>
<td>64</td>
<td>512</td>
<td>VGA</td>
<td>30</td>
</tr>
<tr>
<td>832</td>
<td>64</td>
<td>768</td>
<td>VGA</td>
<td>30</td>
</tr>
<tr>
<td>1064</td>
<td>64</td>
<td>1000</td>
<td>720p</td>
<td>15</td>
</tr>
<tr>
<td>2064</td>
<td>64</td>
<td>2000</td>
<td>720p</td>
<td>30</td>
</tr>
</tbody>
</table>
Example
To configure Cisco UC Integration for Microsoft Lync for a user to be capable of video with VGA frame size, at 30 frames per second, Cisco UC Integration for Microsoft Lync 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 Integration for Microsoft Lync

Cisco UC Integration for Microsoft Lync uses Cisco Unified Communications Manager devices for your Cisco UC Integration for Microsoft Lync software.

The bit rate, or bandwidth, capability of these devices is one of several factors that determine the video capability of Cisco UC Integration for Microsoft Lync 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:

<table>
<thead>
<tr>
<th>Release of Cisco Unified Communications Manager</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0 or later</td>
<td>• Max Audio Bit Rate</td>
</tr>
<tr>
<td></td>
<td>• Max Video Call Bit Rate</td>
</tr>
<tr>
<td>Earlier than 8.0</td>
<td>• Audio Codec</td>
</tr>
<tr>
<td></td>
<td>• Video Call Bandwidth</td>
</tr>
</tbody>
</table>

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:


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 Integration for Microsoft Lync 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:

<table>
<thead>
<tr>
<th>Release of Cisco Unified Communications Manager</th>
<th>Video Call Bit Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0 or later</td>
<td>Greater than or equal to 2064 kb/s.</td>
</tr>
<tr>
<td>Earlier than 8.0</td>
<td>Greater than or equal to 2000 kb/s.</td>
</tr>
</tbody>
</table>

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 12 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>
<thead>
<tr>
<th>H.264/AVC Level</th>
<th>Maximum Bit Rate (kb/s)</th>
<th>Maximum Frame Format</th>
<th>Minimum WEI Processor Subscore Required to Send and Receive Video at This Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>64</td>
<td>QCIF</td>
<td>4.0</td>
</tr>
<tr>
<td>1b</td>
<td>128</td>
<td>QCIF</td>
<td>4.0</td>
</tr>
<tr>
<td>1.1</td>
<td>192</td>
<td>CIF</td>
<td>4.0</td>
</tr>
<tr>
<td>1.2</td>
<td>384</td>
<td>CIF</td>
<td>4.0</td>
</tr>
<tr>
<td>1.3</td>
<td>768</td>
<td>CIF</td>
<td>4.0</td>
</tr>
<tr>
<td>2</td>
<td>768</td>
<td>CIF</td>
<td>4.0</td>
</tr>
<tr>
<td>2.1</td>
<td>768</td>
<td>CIF</td>
<td>4.0</td>
</tr>
<tr>
<td>2.2</td>
<td>1350</td>
<td>VGA</td>
<td>4.8</td>
</tr>
<tr>
<td>3</td>
<td>1350</td>
<td>VGA</td>
<td>4.8</td>
</tr>
<tr>
<td>3.1</td>
<td>4000</td>
<td>HD</td>
<td>5.9 and a system with at least four CPU cores.</td>
</tr>
</tbody>
</table>

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 Integration for Microsoft Lync uses for video calls. Table 13 lists the bandwidth settings that are available on the slider, from highest to lowest, and the video implications for each level.

<table>
<thead>
<tr>
<th>Bandwidth Settings Available</th>
<th>H.264/AVC Level</th>
<th>Maximum Decoder Bit Rate</th>
<th>Maximum Encoder Bit Rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest video quality (Level 6)</td>
<td>3.1</td>
<td>4 Mb/s</td>
<td>4 Mb/s</td>
<td>Allows the maximum video capabilities supported by Cisco Unified Client Services Framework, currently 720p HD.</td>
</tr>
<tr>
<td>Level 5</td>
<td>2.2</td>
<td>4 Mb/s</td>
<td>768 kb/s</td>
<td>Supports VGA in both directions.</td>
</tr>
<tr>
<td>Level 4</td>
<td>2.2</td>
<td>4 Mb/s</td>
<td>384 kb/s</td>
<td>Supports scenarios where downstream bandwidth is less than upstream. Supports incoming VGA.</td>
</tr>
</tbody>
</table>
**Important Notes**

**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 UC Integration for Microsoft Lync*:


**Video Troubleshooting Tips**

- Users See Video Impairments, page 34
- Video Conversations with Multiple Displays, page 35
- Users Might See Lower Video Quality When Computer Is Connected to Some Models of Cisco Unified IP Phone, page 35
- No Video When Using the Desk Phone and a Wireless Network Interface Card Is Enabled, page 36

**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 Integration for Microsoft Lync MTU of 1270.

---

**Table 13 Bandwidth Settings Available to Users**

<table>
<thead>
<tr>
<th>Bandwidth Settings Available</th>
<th>H.264/AVC Level</th>
<th>Maximum Decoder Bit Rate</th>
<th>Maximum Encoder Bit Rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td>1.3</td>
<td>768 kb/s</td>
<td>384 kb/s</td>
<td>Limits incoming video to CIF at 30 frames per second (fps).</td>
</tr>
<tr>
<td>Level 2</td>
<td>1.2</td>
<td>384 kb/s</td>
<td>128 kb/s</td>
<td>Limits incoming video to CIF at 15 fps.</td>
</tr>
<tr>
<td>Lowest bandwidth usage (Level 1)</td>
<td>1.1</td>
<td>192 kb/s</td>
<td>64 kb/s</td>
<td>Limits incoming video to QCIF at 30 fps, or potentially CIF at 7.5 fps. <strong>Note</strong> This setting can render QCIF video at 6 fps, which may result in poor image rendering with some cameras.</td>
</tr>
</tbody>
</table>

---

**Table 13 Bandwidth Settings Available to Users**

<table>
<thead>
<tr>
<th>Bandwidth Settings Available</th>
<th>H.264/AVC Level</th>
<th>Maximum Decoder Bit Rate</th>
<th>Maximum Encoder Bit Rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td>1.3</td>
<td>768 kb/s</td>
<td>384 kb/s</td>
<td>Limits incoming video to CIF at 30 frames per second (fps).</td>
</tr>
<tr>
<td>Level 2</td>
<td>1.2</td>
<td>384 kb/s</td>
<td>128 kb/s</td>
<td>Limits incoming video to CIF at 15 fps.</td>
</tr>
<tr>
<td>Lowest bandwidth usage (Level 1)</td>
<td>1.1</td>
<td>192 kb/s</td>
<td>64 kb/s</td>
<td>Limits incoming video to QCIF at 30 fps, or potentially CIF at 7.5 fps. <strong>Note</strong> This setting can render QCIF video at 6 fps, which may result in poor image rendering with some cameras.</td>
</tr>
</tbody>
</table>
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 Integration for Microsoft Lync 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 31](#).

**Solution** Perform the following steps:

1. Select in the Cisco UC Integration for Microsoft Lync pane.
2. Select 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 Integration for Microsoft Lync 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. See 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
Important Notes

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 Microsoft 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 Notifications window.
5. Ensure that the desk phone is an SCCP-based endpoint.

Related Topics
Users of Cisco Unified IP Phone 8900 and 9900 Series Models Cannot Control Desk Phone, page 24

Notes on Cameras

- Installing a New Camera, page 36

Installing a New Camera

Procedure

Step 1 If Cisco UC Integration for Microsoft Lync is running, do one of the following:
Microsoft Lync: Select the menu arrow in in the Microsoft Lync window.
Microsoft Office Communicator: Select in the title bar.

Step 2 Select Tools > Stop Cisco UC.

Note It can take approximately 2 minutes for the cucsf.exe process to stop. Use the Task Manager to check if the process has stopped before proceeding to Step 3.

Step 3 Install the new camera.

Step 4 Do one of the following:
Microsoft Lync: Select the menu arrow in in the Microsoft Lync window.
Microsoft Office Communicator: Select in the title bar.

Step 5 Select Tools > Start Cisco UC.
Cisco UC Integration for Microsoft Lync and the cucsf.exe process are automatically restarted.
Camera Troubleshooting Tips

- Some Web Cameras Start When Users Sign In, page 37
- Poor Sound Quality on the Tandberg PrecisionHD USB Camera on Microsoft Windows 7, page 37
- Built-In Camera on Lenovo ThinkPad W500 Crops Image, page 37

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 Integration for Microsoft Lync. This occurs on particular hardware configurations, with particular web camera driver software.

In these circumstances, Cisco UC Integration for Microsoft Lync controls the web camera. This means that you cannot see a preview of your video in the Set Up Audio and Video dialog box in Microsoft Office Communicator. 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:

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

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

Solution To fix this problem in the short-term, lower the recording volume for your microphone in the Microsoft 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:
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.
Usage of English-Language and Translated User Documentation

The English-language and Japanese-language versions of the online help and the Frequently Asked Questions: Cisco UC Integration for Microsoft Lync have been updated for Cisco UC Integration for Microsoft Lync. For most languages, the translated versions of the online help and FAQ document have not been updated for this release. The following languages use the online help from Release 8.0: Arabic, French, German, Spanish, Dutch, Danish, Korean, Chinese (China), Chinese (Taiwan), Russian, Swedish, Brazilian Portuguese, Italian, Polish, and Turkish.

The following languages use the English-language online help: Czech, European Portuguese, Hebrew, Greek, Norwegian, and Finnish.

Corrections to User Documentation

<table>
<thead>
<tr>
<th>Topic</th>
<th>Text</th>
<th>Correct Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basics</td>
<td>The When I select the voicemail button option is set to Call my voice message service.</td>
<td>The When I select the voicemail button option is set to Call my voicemail service.</td>
</tr>
<tr>
<td>Calls</td>
<td>Select General, then check Warn me before closing the active conversations window.</td>
<td>Select General, then uncheck Warn me before closing the conversations window.</td>
</tr>
</tbody>
</table>
### Caveats

<table>
<thead>
<tr>
<th>Topic</th>
<th>Text</th>
<th>Correct Text</th>
</tr>
</thead>
</table>
| Calls       | Not present.       | Q. How do I specify whether to call the default number for a contact, or to allow me to select the number to call?  
|             |                    | A.  
|             |                    | 1. Select in the Cisco UC pane.  
|             |                    | 2. Select Calls.  
|             |                    | 3. Select one of the following options:  
|             |                    | – Call the default number  
|             |                    | – Allow me to select the number to call  
| Troubleshooting | Omitted           | Q. What do "Desk Phone (CAST)" and "Desk Phone (CTI)" mean?  
|             |                    | A. Cisco Audio Session Tunnel (CAST) is the protocol that the Cisco UC Integration for Microsoft Lync uses to communicate with your desk phone to enable video if your computer is connected to the desk phone. The Server Status and Notifications dialog box shows whether your desk phone is directly connected to your computer and the desk phone is video enabled.  
|             |                    | Computer Telephony Integration (CTI) enables the Cisco UC Integration for Microsoft Lync to interact with your desk phone. The Server Status and Notifications dialog box shows whether the Cisco UC Integration for Microsoft Lync can interact with your desk phone. |

### Using Bug Toolkit

- Using Bug Toolkit, page 39
- Open Caveats, page 40
- Resolved Caveats, page 41

**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**

2. Log in with your Cisco.com user ID and password.
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 14 describes possible unexpected behavior that might occur in Cisco UC Integration for Microsoft Lync. Only severity 1, 2, 3, and select severity 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 Integration for Microsoft Lync 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 39.

**Table 14 Open Caveats for Cisco UC Integration for Microsoft Lync**

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Severity</th>
<th>Component</th>
<th>Headline</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCto99253</td>
<td>3</td>
<td>audio-svc</td>
<td>Threading issues caused crash in getAudioInputDevices()</td>
</tr>
<tr>
<td>CSCtr59834</td>
<td>3</td>
<td>comm-history</td>
<td>Conversation window sometime shows “Work” and sometimes number</td>
</tr>
<tr>
<td>CSCtr63664</td>
<td>3</td>
<td>video-svc</td>
<td>Phone can't display video when interact with CUPC</td>
</tr>
<tr>
<td>CSCtr78562</td>
<td>3</td>
<td>api-general</td>
<td>CUCIMOC 8.0(3) freezes the laptop when the user disconnects the call</td>
</tr>
<tr>
<td>CSCtu09917</td>
<td>4</td>
<td>audio-svc</td>
<td>Racing condition in port switching causes CSF to resend SIP INVITE</td>
</tr>
<tr>
<td>CSCty89028</td>
<td>3</td>
<td>signin</td>
<td>Jabber causes CUCILYNC to crash on sign-in, if installed on same machine</td>
</tr>
</tbody>
</table>
Resolved Caveats

This section lists caveats that are resolved but that may have been open in previous releases. Bugs are listed in order of severity and then in alphanumeric order by bug identifier. 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 39).

The following sections list caveats that are resolved in Cisco UC Integration for Microsoft Lync but that may have been open in previous releases:

- Release 8.6(2), page 41
- Release 8.6(1), page 42

Release 8.6(2)

Table 15 lists some of the caveats that were resolved in Release 8.6(2). Only severity 1, 2, 3, and select severity 4, 5, and 6 resolved defects, as well as all customer-found defects, are provided in this document.

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Severity</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCua31395</td>
<td>2</td>
<td>system-svc</td>
<td>CUPC 8.6 - Wrong time Zone when Webex meeting is started from CUPC</td>
</tr>
<tr>
<td>CSCty64291</td>
<td>3</td>
<td>cdp</td>
<td>CUPC client creates bogus MAC address for CDP</td>
</tr>
<tr>
<td>CSCub66388</td>
<td>3</td>
<td>cdp</td>
<td>CDP driver is not uninstalled properly</td>
</tr>
<tr>
<td>CSCtt96607</td>
<td>3</td>
<td>install-standalone</td>
<td>CUCILYNC Installer Does Not Update Firewall Restrictions</td>
</tr>
<tr>
<td>CSCty88864</td>
<td>3</td>
<td>video-svc</td>
<td>DP video does not work when controlling 9971 - latest firmware 9-2-3-27</td>
</tr>
<tr>
<td>CSCub38189</td>
<td>3</td>
<td>video-svc</td>
<td>CUCIlync intermittently shows error message &quot;Video subscription error..&quot;</td>
</tr>
<tr>
<td>CSCtx89144</td>
<td>4</td>
<td>error-notification</td>
<td>CUCILYNC pops-up multiple times when monitored phone goes out of service</td>
</tr>
<tr>
<td>CSCtz63692</td>
<td>4</td>
<td>accessibility</td>
<td>CUCILync - Disabled menu to remove people from Conf call showing</td>
</tr>
<tr>
<td>CSCua42455</td>
<td>4</td>
<td>device-selection</td>
<td>CUCILYNC Auto Selecting Non-CTI Line</td>
</tr>
<tr>
<td>CSCub31583</td>
<td>6</td>
<td>docs-online-help</td>
<td>CUCILync: Not able to point to own Help text from help menus</td>
</tr>
</tbody>
</table>
Release 8.6(1)

Table 16 lists some of the caveats that were resolved in Release 8.6(1). Only severity 1, 2, 3, and select severity 4, 5, and 6 resolved defects, as well as all customer-found defects, are provided in this document.

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Severity</th>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCty68194</td>
<td>2</td>
<td>webconf-svc</td>
<td>CUPC does not Support New Interface to MP 8.5</td>
</tr>
<tr>
<td>CSCty64291</td>
<td>3</td>
<td>cdp</td>
<td>CUPC client creates bogus MAC address for CDP</td>
</tr>
<tr>
<td>CSCtr62194</td>
<td>4</td>
<td>phone-deskphone</td>
<td>Jtapi error when ringing FAC/CMC number &amp; wrong code entered - dp mode</td>
</tr>
<tr>
<td>CSCtx89372</td>
<td>4</td>
<td>phone-deskphone</td>
<td>CSF should handle JTAPI error condition of busy.</td>
</tr>
<tr>
<td>CSCua11797</td>
<td>6</td>
<td>performance</td>
<td>Make location that CUCILync use %localappdata% to be configurable</td>
</tr>
<tr>
<td>CSCua33796</td>
<td>6</td>
<td>video-svc</td>
<td>Disable CDP through registry key</td>
</tr>
<tr>
<td>CSCua65094</td>
<td>6</td>
<td>install-standalone</td>
<td>CUCILync doesn’t work with VC++ 2005 ( 8.0.61001) redist</td>
</tr>
</tbody>
</table>

Troubleshooting

The following Cisco UC Integration for Microsoft Lync documents provide troubleshooting information:

- Installation Guide for Cisco UC Integration for Microsoft Lync
- Frequently Asked Questions: Cisco UC Integration for Microsoft Lync

Use this link to access this documentation:

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:

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