



## **Installation and Troubleshooting Guide for Cisco Unified Video Advantage**

Release 2.1

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# CONTENTS

## **Preface** v

- Purpose v
- Audience v
- Organization vi
- Conventions vi
- Obtaining Documentation and Submitting a Service Request vii

---

## **CHAPTER 1**

### **Preparing the Network for Cisco Unified Video Advantage** 1-1

- About Cisco Unified Video Advantage 1-1
- Supported Protocols 1-1
- Network, Server and Client PC Requirements 1-3
- Servers and Application Interactions 1-3
- Configuring Cisco Unified Communications Manager 1-4
- Configuring Cisco Unified IP Phones 1-5

---

## **CHAPTER 2**

### **Deploying and Updating Cisco Unified Video Advantage** 2-1

- How to Deploy the Application 2-1
  - Installer Package Names 2-1
  - Software Components 2-2
  - Software Download Site 2-3
  - Deploying the Application and the Camera Drivers 2-4
  - Customizing the Deployment with Command-Line Options 2-5
  - Log File Locations 2-6
- Installing the Application 2-7
- Updating the Application 2-7

---

## **CHAPTER 3**

### **Providing Information to Users About Cisco Unified Video Advantage** 3-1

---

## **CHAPTER 4**

### **Troubleshooting Cisco Unified Video Advantage** 4-1

- How to Resolve Problems With Video 4-1
  - No Video on Multi-Party Conferences 4-1
  - Poor Audio and Video Lip Synchronization 4-2
  - No Video in the Video Windows; No-Video Icon Appears 4-2

Video Bandwidth Unavailable Message Appears on Cisco Unified IP Phone LCD Screen 4-3

Video Problem Icon Appears in the System Tray 4-3

Video Icon Does Not Appear on the Phone Screen and Cisco Unified Video Advantage Is Not Associating With the Cisco Unified IP Phone 4-3

Bandwidth Issues for Mobile Workers or Telecommuters 4-4

Disconnected Calls on H.323 Endpoints 4-4

PC CPU Utilization at 100 Percent 4-5

How to Use Cisco Unified Communications Manager Diagnostic Tools 4-5

    Using Serviceability Troubleshooting Traces 4-6

    Using the Real-Time Monitoring Tool (RTMT) 4-6

    Using CDR Analysis and Reporting (CAR) 4-7

How to Collect Diagnostic and Log Information for Cisco Unified Video Advantage 4-8

    Collecting Diagnostics Information 4-8

    Capturing Detailed Logs for Other Application Problems 4-9

    Capturing Logs Automatically When the Applications Crashes 4-10

---

**APPENDIX A**

**Technical Specifications for the Cisco VT Camera A-1**

    Physical and Operating Environment Specifications A-1

---

**INDEX**



## Preface

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### Purpose

This guide describes how to install and configure Cisco Unified Video Advantage on your network with Cisco Unified Communications Manager (formerly known as Cisco Unified CallManager) and with Cisco Unified IP Phones.

This guide does not describe how to use the application or how to assemble and connect the Cisco VT Camera or other third-party cameras. For this information, see the user guide, the Cisco VT Camera camera quick start guide, or the documentation that ships with the third-party camera:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products\\_user\\_guide\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products_user_guide_list.html)

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html)

For changes that occurred to this product after the publication date of this guide, see the release notes:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html)

The release notes include important information about system requirements, product limitations, restrictions, caveats, and documentation updates.

### Audience

This installation and troubleshooting guide is written for network and telephony administrators who will be administering Cisco Unified Video Advantage for end users.

# Organization

Table 1 describes the organization of this guide.

**Table 1** Document Organization

Chapter and Title	Description
Chapter 1, “Preparing the Network for Cisco Unified Video Advantage”	Describes how to prepare your network for Cisco Unified Video Advantage. Describes how to configure Cisco Unified Communications Manager and Cisco Unified IP Phones to support Cisco Unified Video Advantage.
Chapter 2, “Deploying and Updating Cisco Unified Video Advantage”	Describes how to deploy, install, and update Cisco Unified Video Advantage.
Chapter 3, “Providing Information to Users About Cisco Unified Video Advantage”	Describes the information about Cisco Unified Video Advantage that you need to provide to end users.
Chapter 4, “Troubleshooting Cisco Unified Video Advantage”	Describes how to troubleshoot Cisco Unified Video Advantage and use troubleshooting and diagnostic tools.
Appendix A, “Technical Specifications for the Cisco VT Camera”	Provides the Cisco VT Camera technical specifications.

## Conventions

Notes, cautions, and time savers use these conventions and symbols:



### Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the guide.



### Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.



### Timesaver

Means *the described action saves time*. You can save time by performing the action described in the paragraph.



### Tip

Means *the information contains useful tips*.

# Obtaining Documentation and Submitting a Service Request

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

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

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.





# CHAPTER 1

## Preparing the Network for Cisco Unified Video Advantage

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- [About Cisco Unified Video Advantage, page 1-1](#)
- [Supported Protocols, page 1-1](#)
- [Network, Server and Client PC Requirements, page 1-3](#)
- [Servers and Application Interactions, page 1-3](#)
- [Configuring Cisco Unified Communications Manager](#)
- [Configuring Cisco Unified IP Phones](#)

### About Cisco Unified Video Advantage

Cisco Unified Video Advantage brings video telephony functionality to all video-enabled Cisco Unified IP Phones including Cisco IP Communicator. The Cisco Unified Video Advantage software coupled with a supported USB camera allows a PC connected to a Cisco Unified IP Phone to add video to phone calls.

When registered to Cisco Unified Communications Manager (formerly known as Cisco Unified CallManager), the Cisco Unified Video Advantage-enabled Cisco Unified IP Phone has the features and functionality of a full-featured IP videophone. Call features such as call forward, transfer, conference, hold, and mute are available with video, and all are initiated through Cisco IP Communicator or the Cisco Unified IP Phone. Cisco Unified Video Advantage is intended for desktop-to-desktop IP video telephony environments, not as a general purpose video conferencing solution for use in conference rooms.



**Note**

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In this document, references to Cisco Unified IP Phones include all video-enabled Cisco Unified IP Phones and Cisco IP Communicator, Release 2.0 and later.

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### Supported Protocols

[Table 1-1](#) list the industry-standard and Cisco networking protocols required for video communication with Cisco Unified Video Advantage.

Table 1-1 Supported Protocols

Networking Protocol	Purpose	Usage Notes
CAST <sup>1</sup>	Enables Cisco Unified IP Phones and associated applications behind the phone to associate and communicate with the remote endpoints without requiring changes to the traditional signaling components like Cisco Unified Communications Manager and gateways.	<p>CAST works:</p> <ul style="list-style-type: none"> <li>Between Cisco Unified Video Advantage and the Cisco Unified IP Phone to exchange capabilities</li> <li>Between Cisco Unified Video Advantage and Cisco Unified Communications Manager, with the Cisco Unified IP Phone acting as an SCCP proxy.</li> </ul> <p>CAST triggers Cisco Unified Video Advantage call events such as: call video stream start and stop; speaker on and speaker off; audio mute on and audio mute off; call hold and call resume.</p>
CDP	<p>A device-discovery protocol that runs on all Cisco-manufactured equipment.</p> <p>By using CDP, a device can advertise its existence to other devices and receive information about other devices in the network.</p>	Cisco Unified Video Advantage uses CDP to communicate configuration information to the Cisco Unified IP Phone, and the Cisco Unified IP Phone uses CDP to communicate to Cisco Unified Video Advantage. With CDP, each device sends periodic messages to a multicast address and in turn listens to the periodic messages sent by other devices. This allows devices on the network to discover one another and learn information such as protocols used, protocol addresses, and so on.
IP	A networking protocol that addresses and sends packets across the network.	To communicate by using IP, network devices must have an assigned IP address, subnet, and gateway.
RTP <sup>2</sup>	A standard for using UDP to transport real-time data, such as interactive voice and video, over data networks.	The RTP protocol is used to encapsulate and stream the audio and video between endpoints and Cisco Unified Video Advantage.
SCCP <sup>3</sup>	A Cisco protocol using low-bandwidth messages to enable communication between IP devices and Cisco Unified Communications Manager	<p>If an SCCP Cisco Unified IP Phone reports video capabilities, Cisco Unified Communications Manager automatically opens a video channel if the other end supports video.</p> <p>For SCCP video calls, the system determines video call bandwidth by using regions.</p>
TCP	A connection-oriented transport protocol in the IP family.	Cisco Unified Video Advantage uses TCP to connect to Cisco Unified Communications Manager and to communicate to a Cisco Unified IP Phone.

1. CAST = Cisco Audio Session Tunnel

2. RTP = Real-Time Transport Protocol

3. SCCP = Skinny Client Control Protocol

# Network, Server and Client PC Requirements

Before deploying the Cisco Unified Video Advantage application to users, make sure you comply with the network, server, and client PC requirements that are described in the release notes:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html)

## Servers and Application Interactions

Cisco Unified Video Advantage interacts with these servers and applications:

- Cisco Unified Communications Manager

Cisco Unified Communications Manager handles the video call processing for Cisco Unified Video Advantage and controls the phone load that enables video on the Cisco Unified IP Phones.

For details about Cisco Unified Communications Manager, see the product documentation:

[http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd\\_products\\_support\\_general\\_information.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_general_information.html)

For details about configuring Cisco Unified Communications Manager for Cisco Unified Video Advantage, see the “[Configuring Cisco Unified Communications Manager](#)” section on page 1-4.

- Cisco Unified IP Phones or Cisco IP Communicator

Cisco Unified Video Advantage is supported on the Cisco IP Communicator and all video-enabled Cisco Unified IP Phones.

For details about which phones support video, see the Cisco Unified IP Phone documentation and the Cisco Unified Video Advantage release notes:

[http://www.cisco.com/en/US/products/hw/phones/ps379/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/phones/ps379/tsd_products_support_series_home.html)

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html)

For details about configuring the phones for Cisco Unified Video Advantage, see the “[Configuring Cisco Unified IP Phones](#)” section on page 1-5.

For information about the supported releases of the servers and applications that interact with Cisco Unified Video Advantage, see the release notes:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html)

# Configuring Cisco Unified Communications Manager

Table 1-2 describes the settings that you must configure on Cisco Unified Communications Manager to support Cisco Unified Video Advantage.

**Table 1-2** Cisco Unified Communications Manager Configuration Settings

Setting	Description	Reference
Alternate routing	You can use route lists, hunt lists, or AAR <sup>1</sup> groups to try different paths for video calls if you do not want the default behavior specified by the Retry Video Call as Audio setting (see below in this table).	<i>Cisco Unified Communications Manager Administration Guide</i> , Route List Configuration, Hunt List Configuration, and Automated Alternate Routing Group Configuration sections
DSCP <sup>2</sup>	DSCP packet marking can be changed using these QoS service parameters: <ul style="list-style-type: none"> <li>DSCPForAudioCalls</li> <li>DSCPForVideoCalls</li> </ul>	<i>Cisco Unified Communications Manager System Guide</i> , Bandwidth Management section
Locations	Locations in Cisco Unified Communications Manager Administration specify how much audio and video bandwidth is allowed for all calls in a specific location.  Parameters include: <ul style="list-style-type: none"> <li>Location audio bandwidth</li> <li>Location video bandwidth</li> </ul>	<i>Cisco Unified Communications Manager Administration Guide</i> , Location Configuration section
MRGL <sup>3</sup>	An MRGL in Cisco Unified Communications Manager specifies a prioritized list of MRGs <sup>4</sup> .  For video conference calls, make sure that a video conference bridge is configured in an MRG as the first conference bridge resource, and that this MRG is the first entry in the MRGL assigned to a video endpoint.	<i>Cisco Unified Communications Manager Administration Guide</i> , Media Resource Group List Configuration section  <i>Cisco Unified Communications Manager System Guide</i> , Media Resource Management section
Regions	Regions in Cisco Unified Communications Manager Administration specify the maximum audio codec and video call bandwidth that are used within and between regions for each video call.  Parameters include: <ul style="list-style-type: none"> <li>Region audio codec</li> <li>Region video call bandwidth</li> </ul>	<i>Cisco Unified Communications Manager Administration Guide</i> , Region Configuration section
Retry Video Call as Audio	When an endpoint (phone, gateway, trunk) cannot obtain the bandwidth that it needs for a video call, call control retries the call as an audio call.	<i>Cisco Unified Communications Manager Administration Guide</i> , Phone Configuration Settings section

1. AAR = Automated Alternate Routing

2. DSCP = Differentiated Services Code Point

3. MRGL = Media Resource Group List

4. MRG = Media Resource Group

# Configuring Cisco Unified IP Phones

The PC on which Cisco Unified Video Advantage is installed must be directly connected to a Cisco Unified IP Phone, either to Cisco IP Communicator or directly connected to the PC port on the Cisco Unified IP Phone.

The Cisco Unified IP Phone requires Cisco Unified Communications Manager to handle call processing and the appropriate phone load that enables video on the phone. (A phone enabled for video will display a video icon in the lower right corner of the LCD screen.)

To ensure that the Cisco Unified IP Phones are properly set up and configured, see the appropriate Cisco Unified IP Phone administration guides:

[http://www.cisco.com/en/US/products/hw/phones/ps379/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/phones/ps379/tsd_products_support_series_home.html)

Table 1-3 describes the settings that you must configure on Cisco Unified Communications Manager to support Cisco Unified Video Advantage on Cisco Unified IP Phones.

**Table 1-3 Cisco Unified IP Phones Configuration Settings on Cisco Unified Communications Manager**

Cisco Unified Communications Manager Feature	Description	Configuration Reference
PC Port	Indicates whether the PC port on the Cisco Unified IP Phone is enabled or disabled. The PC port on the back of the phone connects a PC or workstation to the phone so they can share a single network connection.	Make sure this feature is enabled on Cisco Unified IP Phones that operate with Cisco Unified Video Advantage.  Cisco Unified Communications Manager Administration: <b>Device &gt; Phone &gt; Phone Configuration</b>
Phone load	Indicates the phone load that supports video.  For details about supported phone loads, see the Cisco Unified Video Advantage release notes: <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html</a>  If the phone you are using does not appear in the supported list, see the release notes for the phone: <a href="http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_notes_list.html">http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_notes_list.html</a>  Support for a phone might be added after this release of Cisco Unified Video Advantage.	Make sure that the phone load that supports video is loaded on each Cisco Unified IP Phone.  Cisco Unified Communications Manager Administration (Releases 5.x and 6.x): <b>Device &gt; Device Settings &gt; Device Defaults</b>  Cisco Unified Communications Manager Administration (Release 4.x): <b>System &gt; Device Defaults</b>
Video Capabilities	Indicates that the phone will participate in video calls when connected to an appropriately equipped PC.	Make sure this feature is enabled on Cisco Unified IP Phones that operate with Cisco Unified Video Advantage.  Cisco Unified Communications Manager Administration: <b>Device &gt; Phone &gt; Phone Configuration</b>

**Note**

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You can use the Cisco Unified Communications Manager Bulk Administration Tool (BAT) to update a large number of phones on your network for video support. You can use BAT to set the PC port and video capabilities settings described in [Table 1-3](#). For details, see the BAT user guide:  
[http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html)

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## CHAPTER 2

# Deploying and Updating Cisco Unified Video Advantage

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- [How to Deploy the Application, page 2-1](#)
- [Installing the Application, page 2-7](#)
- [Updating the Application, page 2-7](#)

**Note**

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Before deploying the application, make sure that you have completed the configurations in the “[Configuring Cisco Unified Communications Manager](#)” section on page 1-4 and “[Configuring Cisco Unified IP Phones](#)” section on page 1-5.

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## How to Deploy the Application

- [Installer Package Names, page 2-1](#)
- [Software Components, page 2-2](#)
- [Software Download Site, page 2-3](#)
- [Deploying the Application and the Camera Drivers](#)
- [Customizing the Deployment with Command-Line Options](#)
- [Log File Locations, page 2-6](#)

## Installer Package Names

You can deploy Cisco Unified Video Advantage and the Cisco VT Camera by using the installer packages listed in [Table 2-1](#). The installers are bundled into one Zip file that contains a separate installer for the Cisco VT Camera drivers and another installer for the Cisco Unified Video Advantage application.

**Note**

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Cisco Unified Video Advantage no longer installs the Cisco VT Camera drivers during its installation. You install the camera drivers and the application as separate tasks.

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**Table 2-1** *Installer Packages for Cisco Unified Video Advantage*

Filename	Description
CiscoUnifiedVideoAdvantageSetup.exe	This executable contains the required Windows Installer engines and default verbose logging for typical deployments. The executable is recommended when end users are installing the application on their own PCs.
CiscoVTCameraDriverSetup.exe	This executable contains the installer for the Cisco VT Camera and Cisco VT Camera II device drivers. The installation prompts the user to choose the language (if a language other than English is available).
CiscoUnifiedVideoAdvantageSetup.msi	This MSI <sup>1</sup> package allows you to provide deployment customization using command-line options. Logging is not automatically set when you use the MSI package. The MSI package is recommended for use by systems administrators with their deployment tools.
CiscoVTCameraDriverSetup.msi	This MSI package contains the installer for the Cisco VT Camera and Cisco VT Camera II device drivers. This package is offered in English only.

1. MSI = Microsoft Windows Installer

#### Related Topics

- [Software Components, page 2-2](#)
- [Software Download Site, page 2-3](#)

## Software Components

[Table 2-2](#) lists the Cisco Unified Video Advantage software components.

**Table 2-2** *Cisco Unified Video Advantage Software Components*

Component	Description
CDP driver	Transmits and receives device information so that Cisco Unified Video Advantage software can determine the IP address of the Cisco Unified IP Phone to which it is connected and can associate to that phone.
Cisco Unified IP Phone firmware	Firmware release that supports video on the Cisco Unified IP Phone. For details about specific phone models and firmware releases, see the release notes for the phone model you are using: <a href="http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_notes_list">http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_notes_list</a>

**Table 2-2** Cisco Unified Video Advantage Software Components (continued)

Component	Description
Cisco Unified Video Advantage Win32 application	<p>Performs these functions:</p> <ul style="list-style-type: none"> <li>• Enables and manages the video window display</li> <li>• Communicates with the CDP driver</li> <li>• Communicates with the Cisco Unified Communications Manager by using a Cisco Unified IP Phone as an SCCP<sup>1</sup> proxy</li> <li>• Discovers the associated Cisco Unified IP Phone using CDP</li> <li>• Connects to the Cisco Unified IP Phone by using CAST<sup>2</sup></li> <li>• Indirectly communicates with Cisco Unified Communications Manager and remote endpoints via CAST messages sent to the Cisco Unified IP Phone</li> <li>• Responds to events from a Cisco Unified IP Phone</li> <li>• Creates and manages system tray icons</li> <li>• Creates and displays the system tray popup messages for status feedback to the user</li> </ul>
Software video decoders and encoders	Includes H.263 and H.264

1. SCCP = Skinny Client Control Protocol

2. CAST = Cisco Audio Session Protocol

#### Related Topics

- [Software Download Site, page 2-3](#)

## Software Download Site

You must register for an account on Cisco.com to access the software download site:

<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240>

On the download site, the installer packages listed in [Table 2-1 on page 2-2](#) are offered as a single Zip file, which contain all the files required to deploy the application and the Cisco VT Camera drivers.

The software download site does not contain device drivers for third-party video cameras. These drivers should be provided by the manufacturer.

#### Related Topics

- [Deploying the Application and the Camera Drivers, page 2-4](#)

## Deploying the Application and the Camera Drivers

### Restriction

Cisco Unified Video Advantage and Cisco VT Camera do not support the *advertising* or *publishing* deployment in which a user installs the application by opening an icon that the administrator has placed on the desktop.

### Before You Begin

- If users in your company do *not* have administrator rights on their computers, we recommend that you use a software deployment tool for initial deployment. Alternately, you can manually install Cisco Unified Video Advantage and camera drivers on each PC.
- If your users are using third-party video cameras, make sure you provide them with the camera drivers and the instructions for installing them.
- Use the EXE package for end users and the MSI package for advanced users or administrators.
- On Windows Vista, even administrators have restricted permissions by default. Ensure that users have elevated privileges throughout the installation process.

### Procedure

Table 2-3 describes how to deploy the application and Cisco VT Camera drivers.

**Table 2-3** Deploying the Application and Cisco VT Camera Drivers

If you want to...	Then...
Deploy the executable or MSI package to a shared location (such as a web server) where users can access it.	Push the installer at an elevated privilege so that users can complete the installation (run the installer and follow the installation wizard)
Deploy either the executable or the MSI package directly to the client computer. Use an administrator account if necessary.	Push the installer at an elevated privilege so that users can complete the installation (run the installer and follow the installation wizard). or Perform the installation operation directly on a client computer while logged in as the administrator.
Use a software deployment tool to distribute Cisco Unified Video Advantage and camera drivers to client computers. Use this method if users do not have administrative privileges on their computers and if you want to avoid manually installing the application on each client PC.  Software deployment tools include group policy-based tools, such as Active Directory, or more advanced tools, such as the SMS <sup>1</sup> software from Microsoft.	Push the installer at an elevated privilege so that users can complete the installation (run the installer and follow the installation wizard).

1. SMS = System Management Server

**Related Topics**

- [Customizing the Deployment with Command-Line Options, page 2-5](#)
- [Log File Locations, page 2-6](#)
- [Installing the Application, page 2-7](#)
- [Updating the Application, page 2-7](#)

## Customizing the Deployment with Command-Line Options

Table 2-4 provides examples of command-line options that are specific to the deployment of Cisco Unified Video Advantage with the MSI package and the Cisco VT Camera with the MSI package. (Values given for variables are examples only.) You can use command-line options to reduce the number of configuration tasks that users might need to perform during and after installation.

**Note**

These configuration options are for new installations only and not for upgrades.

For a complete list of command-line options that can be used and examples of their usage, see this URL: <http://msdn2.microsoft.com/en-us/library/aa367988.aspx>

**Table 2-4** Using Command-Line Options with the MSI Package

If you want to....	Use this command line
Prevent users from interacting with the installation process, but allow them to view its progress	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi /qb</code>
Specify an installation directory location	<code>msiexec /i \\server\share\CiscoUnifiedVideoAdvantageSetup.msi /qb INSTALLDIR="D:\Newlocation"</code>
Create a server image of Cisco Unified Video Advantage at a specified network location	<code>msiexec /a CiscoUnifiedVideoAdvantageSetup.msi</code>
Disable the Launch Cisco IP Communicator button	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi /qb LaunchIpCommunicatorButton=0 (to deactivate), 1 (to activate)</code>
Limit the deployment to use only the H.264 codec	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi /qb CODEC="H.264"</code>
Limit the deployment to use only the H.263 codec	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi /qb CODEC="H.263"</code>
Allow the deployment to use either the H.263 or H.264 codecs (enabled by default; there is no need to pass the CODEC="ALL" option)	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi /qb CODEC="ALL"</code>
Enable the video confirmation preference in the deployment	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi VIDEOCONFIRMATION=1</code>
Disable the video quality settings	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi NOVIDEOQUALITYSETTINGSDIALOG=1</code>
Enable flow control	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi FLOWCONTROLOPTION=1</code>
Specify an alternate port	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi /qb UDPPORT="5555"</code>
Configure the Cisco Unified Problem Reporting Tool to send e-mail to a different address	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi PROBLEMREPORTMAILER=[e-mail address]</code>

**Table 2-4** Using Command-Line Options with the MSI Package (continued)

If you want to....	Use this command line
Change the default location of the Cisco Unified Video Advantage application logs	<code>msiexec /i CiscoUnifiedVideoAdvantageSetup.msi TRACEPATH="C:\logfilelocation"</code>
Change the default location of the Cisco VT Camera installation logs	<code>msiexec /i CiscoVTCameraDriverSetup.msi /L &lt;Logfile&gt;</code>

**Note**

If you want Cisco Unified Video Advantage to display a window that users must manually dismiss before the installer reboots the computer, add a “+” character after “qb” in the command-line options in [Table 2-4](#).

**Related Topics**

- [Log File Locations, page 2-6](#)
- [Installing the Application, page 2-7](#)
- [Updating the Application, page 2-7](#)

## Log File Locations

[Table 2-5](#) lists the log file types and their locations.

**Table 2-5** Log File Locations

Log Type	Location
Cisco Unified Video Advantage installation	[CommonFilesFolder]CiscoUnifiedVideoAdvantageInstall.log Example: C:\Program Files\Common Files\CiscoUnifiedVideoAdvantageInstall.log
Cisco Unified Video Advantage application	[LocalAppData]Cisco\Cisco Unified Video Advantage Example: C:\Documents and Settings\ <userid>\Local Settings\Application Data\Cisco\Cisco Unified Video Advantage (Windows XP and 2000) Example: C:\Users\<username>\Appdata\Local\Cisco\Cisco Unified Video Advantage (Windows Vista)</username></userid>
Cisco VT Camera installation	[CommonFilesFolder]VTCameraInstall.log Examples: C:\Documents and Settings\ <userid>\Local Settings\Temp (Windows XP and 2000) C:\Users\<username>\AppData\Local\Temp (Windows Vista)</username></userid>
Cisco Unified Problem Reporting Tool log	Desktop Example: C:\Documents and Settings\ <userid>\Desktop (Windows XP and 2000) Example: C:\Users\<username>\Desktop (Windows Vista)</username></userid>

**Related Topics**

- [Installing the Application, page 2-7](#)

# Installing the Application

For detailed steps about installing the camera drivers and Cisco Unified Video Advantage, see the user guide at this URL:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products\\_user\\_guide\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products_user_guide_list.html)

**Note**

Cisco Unified Video Advantage no longer installs the Cisco VT Camera drivers. You install the camera drivers first and then install the Cisco Unified Video Advantage application. You perform these operations as separate tasks.

**Related Topics**

- [Log File Locations, page 2-6](#)
- [Updating the Application, page 2-7](#)

# Updating the Application

**Before You Begin**

- Register for an account on Cisco.com so that you can access the software download site.
- During the upgrade of Cisco Unified Video Advantage, the Cisco VT Camera camera drivers are removed and must be re-installed.
- Download the latest available software (camera drivers and Cisco Unified Video Advantage):  
<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240>
- Users can uninstall the previous version of Cisco Unified Video Advantage or of the Cisco VT Camera camera drivers through the **Control Panel**, but it is not required.

**Restrictions**

In a Windows OS environment, command-line options are not supported on upgrades. They are supported only on new installations.

**Procedure**

---

**Step 1** Download the latest available Cisco Unified Video Advantage software and Cisco VT Camera drivers from the Software Center:

<http://tools.cisco.com/support/downloads/go/Redirect.x?mdfid=278875240>

The installers are bundled into one Zip file that contains a separate installer for the Cisco VT Camera drivers and another installer for the Cisco Unified Video Advantage application.

**Step 2** Make the updated software available for deployment. For details, see the “Related Topics.”

- (If users have administrative privileges on their computers) Ask users to manually launch the application and/or camera driver executable to upgrade.
- (If users do not have administrative privileges on their computers) Use a software deployment tool to push software updates. A software deployment tool can temporarily elevate privileges for installation purposes. You probably used a software deployment tool to initially deploy the application.

**Step 3** Tell users to follow the steps in the user guide for upgrading the application and Cisco VT Camera drivers.

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products\\_user\\_guide\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products_user_guide_list.html)

---

**Related Topics**

- [Deploying the Application and the Camera Drivers, page 2-4](#)



# CHAPTER 3

## Providing Information to Users About Cisco Unified Video Advantage

As the system administrator, you are likely the primary source of information for Cisco Unified Video Advantage users in your network or company. It is important to provide current and thorough information to end users.

We recommend that you create a web page on your internal support site that provides end users with important information about Cisco Unified Video Advantage.

Table 3-1 lists the information that you need to provide.

**Table 3-1** Information Needed By Users

Provide This Information	Explanation
<ul style="list-style-type: none"><li>Information about client hardware and software requirements.</li><li>Location of the Microsoft hotfix for USB audio devices.</li><li>List of supported USB cameras and how to get them.</li></ul>	<ul style="list-style-type: none"><li>Leverage information from the release notes: <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html</a></li><li>Be sure to provide users with the <i>Cisco VT Camera Quick Start Guide</i> (if they are using Cisco VT Camera): <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html</a></li></ul>
Installation link (or executable file) for Cisco Unified Video Advantage and the Cisco VT Camera drivers.	Depends on the deployment method. For details, see the “ <a href="#">Deploying the Application and the Camera Drivers</a> ” section on page 2-4.
Third-party cameras drivers and installation information.	Provide the documentation and the driver to the user. Assist with the installation, as necessary.

**Table 3-1** Information Needed By Users (continued)

Provide This Information	Explanation
Instructions for installing, setting up, and using the application.	Provide the user with these guides <ul style="list-style-type: none"> <li data-bbox="669 361 1485 472">• User guide for Cisco Unified Video Advantage <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products_user_guide_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products_user_guide_list.html</a></li> <li data-bbox="669 483 1485 594">• User guide for Cisco IP Communicator <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps5475/products_user_guide_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps5475/products_user_guide_list.html</a></li> <li data-bbox="669 604 1485 716">• User Guide for Cisco Unified IP Phones <a href="http://www.cisco.com/en/US/products/hw/phones/ps379/products_user_guide_list.html">http://www.cisco.com/en/US/products/hw/phones/ps379/products_user_guide_list.html</a></li> <li data-bbox="669 726 1485 835">• Cisco VT Camera documentation <a href="http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html">http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html</a></li> </ul>
Internal company support for the application.	Provide users with the names of people to contact for assistance and the instructions for contacting those people.
Information about how to report problems with Cisco Unified Video Advantage.	Tell users about the Problem Reporting Tool and how to enable logging and when to use them. For details, see the <a href="#">Chapter 4, “Troubleshooting Cisco Unified Video Advantage.”</a>  Tell users where log files are located. For details, see <a href="#">“Log File Locations” section on page 2-6.</a>



## CHAPTER 4

# Troubleshooting Cisco Unified Video Advantage

---

- [How to Resolve Problems With Video](#), page 4-1
- [How to Use Cisco Unified Communications Manager Diagnostic Tools](#), page 4-5
- [How to Collect Diagnostic and Log Information for Cisco Unified Video Advantage](#), page 4-8

## How to Resolve Problems With Video

- [No Video on Multi-Party Conferences](#), page 4-1
- [Poor Audio and Video Lip Synchronization](#), page 4-2
- [No Video in the Video Windows; No-Video Icon Appears](#), page 4-2
- [Video Bandwidth Unavailable Message Appears on Cisco Unified IP Phone LCD Screen](#), page 4-3
- [Video Problem Icon Appears in the System Tray](#), page 4-3
- [Video Icon Does Not Appear on the Phone Screen and Cisco Unified Video Advantage Is Not Associating With the Cisco Unified IP Phone](#), page 4-3
- [Bandwidth Issues for Mobile Workers or Telecommuters](#), page 4-4
- [Disconnected Calls on H.323 Endpoints](#), page 4-4
- [PC CPU Utilization at 100 Percent](#), page 4-5

## No Video on Multi-Party Conferences

**Problem** No video on multi-party conferences.

**Solution** In Cisco Unified Communications Manager ((formerly known as Cisco Unified CallManager) check that the Media Resource Groups and Media Resource Group Lists include an MCU.

Make sure that a video conference bridge has been allocated and not an audio conference bridge.

### Related Topics

- *Cisco Unified Communications Manager Administration Guide*, Media Resource Group List, Configuration Settings section
- *Cisco Unified Communications Manager System Guide*, Media Resources section

## Poor Audio and Video Lip Synchronization

**Problem** Poor audio and video lip synchronization.

**Solution** This problem can be caused by, but not limited to, these conditions:

- Quality of service issues. Verify that quality of service is properly configured throughout the network.
- High CPU utilization on the PC. Tell the user to close some applications during a video call.
- Network congestion.

### Related Topics

- Quality of Service design guide: <http://www.cisco.com/warp/public/779/largeent/it/ese/srnd.html>
- [PC CPU Utilization at 100 Percent, page 4-5](#)

## No Video in the Video Windows; No-Video Icon Appears

**Problem** No video in the video windows, no-video icon appears.

**Solution** Try these solutions:

- See the *User Guide for Cisco Unified Video Advantage* to troubleshoot no-video issues for users: [http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products\\_user\\_guide\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/products_user_guide_list.html)
- Make sure that Regions have been configured correctly for video. See “Related Topics.”
- Make sure that Locations have sufficient video bandwidth. See “Related Topics.”
- Make sure that a Media Termination Point (MTP) or Transcoder has not been allocated for video calls because they do not support video capabilities.
- If you are using Cisco Unified Communications Manager Release 5.0, adjusting the video quality settings below a certain value will cause Cisco Unified Video Advantage to display no video. Upgrade to Cisco Unified Communications Manager Release 5.0(4) or higher to resolve this problem.
- Cisco Unified Video Advantage uses port 5445. If your firewall blocks this port, users will receive no video. You will need to configure your firewall to allow access to Port 5445 and enable video.
- Upgrade to Cisco VPN Client 4.0. Earlier versions of Cisco VPN Client do not support video.
- Make sure that Cisco Unified IP Phone is running on the SCCP protocol. Cisco Unified Video Advantage is not supported in a SIP environment.

### Related Topics

- [Configuring Cisco Unified Communications Manager, page 1-4](#)
- [No Video on Multi-Party Conferences, page 4-1](#)
- [Video Problem Icon Appears in the System Tray, page 4-3](#)

## Video Bandwidth Unavailable Message Appears on Cisco Unified IP Phone LCD Screen

**Problem** The message “Video bandwidth unavailable” displays on the Cisco Unified IP Phone LCD screen.

**Solution** There is not enough bandwidth available to make a video call. In this situation, the Cisco Unified IP Phone falls back to an audio-only call.

### Related Topics

- [Configuring Cisco Unified Communications Manager, page 1-4](#)
- *Cisco Unified Communications Manager Administration Guide*, Location Configuration section

## Video Problem Icon Appears in the System Tray

**Problem** The video problem icon appears in the system tray on the PC.

**Solution** Cisco Unified Video Advantage cannot associate with the Cisco Unified IP Phone or Cisco IP Communicator. Cisco Unified Video Advantage might not be sending CDP properly. Try these solutions:

- For the Cisco Unified IP Phone, make sure the client computer is plugged into the PC port on the phone.
- The Ethernet cable might be faulty. Try a known good replacement cable.
- For Cisco IP Communicator, make sure Cisco IP Communicator Release 2.0 or later is running.

### Related Topics

- [Video Bandwidth Unavailable Message Appears on Cisco Unified IP Phone LCD Screen, page 4-3](#)

## Video Icon Does Not Appear on the Phone Screen and Cisco Unified Video Advantage Is Not Associating With the Cisco Unified IP Phone

**Problem** Video icon does not display on the Cisco Unified IP Phone LCD screen. Cisco Unified Video Advantage is not associating with the Cisco Unified IP Phone.

**Solution** Try these solutions:

- Verify the version of Cisco Unified IP Phone firmware; the firmware version must support video.
- Verify that the Cisco Unified IP Phone model is supported.
- Verify that these parameters are properly set in Cisco Unified Communications Manager for the Cisco Unified IP Phones:
  - Video Capabilities is enabled
  - PC Port is enabled
- Verify that you can ping between the PC and the Cisco Unified IP Phone.
- Verify that you are not using a phone configured for SIP. Cisco Unified Video Advantage is currently supported only on SCCP.

**Related Topics**

- [Configuring Cisco Unified IP Phones, page 1-5](#)

## Bandwidth Issues for Mobile Workers or Telecommuters

**Problem** In most cases when working over a LAN, users will not need to adjust the bandwidth setting. If you have mobile workers or telecommuters, they may need to cap their bandwidth settings at a maximum rate.

**Solution** Try these solutions:

- Tell the user to adjust video quality settings from the Cisco Unified Video Advantage console (**Settings > Video Quality**). Deselect **Automatic**, and ask the user to move the slider to adjust the bandwidth setting. A popup tooltip displays the bandwidth rate.
- Users can contact their respective Internet service providers, or if they are advanced users, they can use the DSL Reports internet site (<http://www.dslreports.com/stest>), and follow the instructions for obtaining the upload and the download speeds. Selecting a bandwidth is usually a factor of the uplink speed, which can range from a low of 50 kbps up to perhaps 500 kbps.

After the uplink speed is determined, leave some headroom between the selected bandwidth setting and the capacity of the channel (Location and Region settings in Cisco Unified Communications Manager).

**Note**


---

If users are limited to a low rate, for example 50 kbps, they might not be able to participate in video conferences.

---

**Related Topics**

- [Configuring Cisco Unified Communications Manager, page 1-4](#)

## Disconnected Calls on H.323 Endpoints

**Problem** Calls are disconnecting on H.323 endpoints.

**Solution** When an H.323 endpoint is placed on hold by Cisco IP Communicator, Cisco Unified Communications Manager utilizes a procedure referred to as the Empty Capabilities Set (ECS), sometimes also referred to as the Null Capabilities Set or TCS=0. The H.323 endpoints must support ECS to respond properly when placed on hold. If they do not, the call is disconnected when it is placed on hold because the H.323 endpoint does not understand the ECS message from Cisco Unified Communications Manager and disconnects the call.

Transfer, conference, and park operations also exhibit this behavior because there is an implicit hold operation that takes place in these scenarios as well (for example, when a call is transferred, the call is first placed on hold by Cisco Unified Communications Manager before completing the transfer).

Try these solutions:

- Verify that the H.323 endpoint you are using supports ECS.

**Note**


---

Some ECS implementations do not allow audio calls to become video calls after a transfer, conference, or park operation.

---

- If an endpoint does not support ECS:
  - A Media Termination Point (MTP) can be added to provide supplementary support so that hold, transfer, conference, and park are available, ensuring that calls are not dropped. In this case, video is not supported for these calls.
  - To preserve video over the features (hold, transfer, conference, and park), configure the H.323 endpoint to require an MTP. But, make sure that the Media Resource Group List (MRGL) and the default MRGL do not include MTPs or Transcoders. Then hold, transfer, conference, and park will be disabled when calling this device, and Cisco Unified Communications Manager knows that the H.323 endpoint does not support these features.

## PC CPU Utilization at 100 Percent

**Problem** The PC CPU utilization is at 100 percent.

**Solution** Try these solutions:

- Make sure you are using a supported release:

Cisco Unified Communications Manager Release 4.1(3), Service Release 2 is the minimum release required for Cisco Unified Video Advantage to operate with Cisco IP Communicator or with a Cisco Unified IP Phone. For a list of the supported releases, see the Cisco Unified Video Advantage release notes:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html)
- To free up some PC CPU resources, close any applications that are not being used while on a video call.
- Make sure the client computer meets the hardware requirement for Cisco Unified Video Advantage. For details, see the release notes:

[http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html)

## How to Use Cisco Unified Communications Manager Diagnostic Tools

- [Using Serviceability Troubleshooting Traces](#), page 4-6
- [Using the Real-Time Monitoring Tool \(RTMT\)](#), page 4-6
- [Using CDR Analysis and Reporting \(CAR\)](#), page 4-7

## Using Serviceability Troubleshooting Traces

### Before You Begin

Depending on your release of Cisco Unified Communications Manager, the navigation to the serviceability pages might vary.

### Procedure

- 
- Step 1** Log in to Cisco Unified Communications Manager Administration.
- Step 2** From the Navigation drop-down list in the upper right corner, choose the “Serviceability” option, and click **Go**.
- Step 3** Choose **Trace > TroubleShooting Trace Setting**.
- 

For details about setting up and using Cisco Unified Communications Manager Serviceability Traces, see the serviceability system guide (Trace section) or the serviceability administration guide (Troubleshooting Trace Setting Configuration section) at this URL:

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

### Related Topics

- [Using the Real-Time Monitoring Tool \(RTMT\), page 4-6](#)
- [Using CDR Analysis and Reporting \(CAR\), page 4-7](#)

## Using the Real-Time Monitoring Tool (RTMT)

You can use the Cisco Unified Communications Manager Real-Time Monitoring Tool to monitor real-time information (video active calls, video completed calls, and so on).

### Before You Begin

Depending on your release of Cisco Unified Communications Manager, the navigation to the serviceability pages might vary.

### Procedure

- 
- Step 1** Log in to Cisco Unified Communications Manager Administration.
- Step 2** From the Navigation drop-down list in the upper right corner, choose the “Serviceability” option, and click **Go**.
-

For more information about setting up and using this tool, see these guides:

- For Cisco Unified Communications Manager Release 6.0 — *Cisco Unified Communications Manager Real-Time Monitoring Tool Administration Guide*
- For Cisco Unified Communications Manager Release 5.x:
  - *Cisco Unified Communications Manager Serviceability System Guide*, “Real-Time Monitoring Tool” section
  - *Cisco Unified Communications Manager Serviceability Administration Guide*, “Real-Time Monitoring Configuration” section

These guides are available at this URL:

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

#### Related Topics

- [Using Serviceability Troubleshooting Traces](#), page 4-6
- [Using CDR Analysis and Reporting \(CAR\)](#), page 4-7

## Using CDR Analysis and Reporting (CAR)

You can use CAR to view Call Details Records and generate reports on video conference bridge information.

#### Before You Begin

Depending on your release of Cisco Unified Communications Manager, the navigation to the serviceability pages might vary.

#### Procedure

- 
- Step 1** Log in to Cisco Unified Communications Manager Administration.
- Step 2** From the Navigation drop-down list in the upper right corner, choose the “Serviceability” option, and click **Go**.
- 

For more information about setting up and using this tool, see these guides:

- For Cisco Unified Communications Manager Release 6.0 — *Cisco Unified Communications Manager CDR Analysis and Reporting Administration Guide*
- For Cisco Unified Communications Manager Release 5.x:
  - *Cisco Unified Communications Manager Serviceability System Guide*, “CDR Analysis and Reporting” section
  - *Cisco Unified Communications Manager Serviceability Administration Guide*

These guides are available at this URL:

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

#### Related Topics

- [Using Serviceability Troubleshooting Traces](#), page 4-6
- [Using the Real-Time Monitoring Tool \(RTMT\)](#), page 4-6

# How to Collect Diagnostic and Log Information for Cisco Unified Video Advantage

- [Collecting Diagnostics Information, page 4-8](#)
- [Capturing Detailed Logs for Other Application Problems, page 4-9](#)
- [Capturing Logs Automatically When the Applications Crashes, page 4-10](#)

## Collecting Diagnostics Information

The Diagnostics Tool provides some technical details about the current state of the Cisco Unified Video Advantage software that is running on the PC:

- Connectivity information about Cisco IP Communicator or the Cisco Unified IP Phone
- Information about the performance of the Cisco VT Camera, including video delay issues due to low-memory conditions
- Packet statistics at the end of each call, including the total number of packets (sent or received), packets lost or discarded, average and maximum jitter, and average and maximum delay

All information in the diagnostics window is logged in the application log.

When troubleshooting some Cisco Unified Video Advantage problems with the assistance of the Cisco Technical Assistance Center (TAC), TAC representatives might ask you to provide them with the information displayed in the diagnostics window.

### Procedure

---

- Step 1** Launch Cisco Unified Video Advantage.
- Step 2** Double right-click any where on the console to display the diagnostics window.
- Step 3** Click the options in the navigation pane on the left to see specific diagnostics information.
- 

### Related Topics

- [Log File Locations, page 2-6](#)
- [Capturing Detailed Logs for Other Application Problems, page 4-9](#)
- [Capturing Logs Automatically When the Applications Crashes, page 4-10](#)

## Capturing Detailed Logs for Other Application Problems

Sometimes, you need detailed log files to help troubleshoot problems with Cisco Unified Video Advantage. Detailed logs have these characteristics:

- By default, detailed logging is disabled, and logs are collected at the information level (3).
- Detailed logs are collected at the verbose level (5).
- Detailed logs remains enabled until the user changes the setting.

The log files are stored in the Application Data folder.

### Restrictions



#### Caution

You should ask users to enable detailed logging only when you are trying to resolve a specific issue. Detailed logging will cause degraded performance especially in lower-end computers. Make sure to instruct users to disable detailed logging when your troubleshooting activities are completed.

### Procedure

- 
- Step 1** Tell users to follow the user guide instructions for capturing log files:
- Enable detailed logging (Cisco Unified Video Advantage console window **Settings > Enable Detailed Logs**).
  - If possible, restart Cisco Unified Video Advantage to clear the logs and to put the application in a known state. If the problem is intermittent or unexpected, capture the logs without restarting the application.
  - Recreate the problem, if possible.
  - Manually launch the Problem Reporting Tool and send the report to you.
- Step 2** Provide the Zip file to the Cisco Technical Assistance Center (TAC) representative, if requested.
- 

### Related Topics

- [Log File Locations, page 2-6](#)
- [Collecting Diagnostics Information, page 4-8](#)
- [Capturing Logs Automatically When the Applications Crashes, page 4-10](#)

## Capturing Logs Automatically When the Applications Crashes

If Cisco Unified Video Advantage unexpectedly crashes, the Problem Reporting Tool automatically collects installation, application, and client computer system information to automate the trace and crash-dump collection process on the client computer.

### Procedure

---

**Step 1** Tell users to follow the user guide instructions for capturing log files:

- Locate the automatically generated Zip file on their desktop.
- Send the Zip file from their desktop to you through e-mail.

If you set up an e-mail support alias at the time the application was deployed or installed, the file is automatically sent there. For details, see the “Related Topics.”

**Step 2** Provide the Zip file to the TAC representative, if requested.

---

### Related Topics

- [Customizing the Deployment with Command-Line Options, page 2-5](#)
- [Collecting Diagnostics Information, page 4-8](#)
- [Capturing Detailed Logs for Other Application Problems, page 4-9](#)



# APPENDIX **A**

## Technical Specifications for the Cisco VT Camera

### Physical and Operating Environment Specifications

Table A-1 shows the physical and operating environment specifications for the Cisco VT Camera. The Cisco VT Camera II meets all European Union RoHS compliance requirements.



**Note**

For details about Cisco VT Camera driver downloads, see the [“Software Download Site”](#) section on page 2-3.

**Table A-1** Cisco VT Camera Physical and Operating Environment Specifications

Specification	Value or Range
Operating temperature and relative humidity	0 to 40°C (32° to 104°F) 10% to 90% RH (non-condensing)
Storage temperature and relative humidity	-10 to 60°C (14° to 140°F) 10% to 90% RH (noncondensing)
Weight	< 200g, including the camera’s flexible base
USB Cable and connector	<ul style="list-style-type: none"><li>• Shielded</li><li>• UL recognized</li><li>• 3.9mm diameter</li><li>• 9 ft. long</li></ul>





## INDEX

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### A

#### application deployment

deploying to a shared location [2-4](#)

described [2-4](#)

using a software deployment tool [2-4](#)

using the client computer installer [2-4](#)

application log file location [2-6](#)

---

### B

BAT, for updating phones to support video [1-6](#)

---

### C

#### camera drivers

deploying [2-4](#)

deploying with command-line options [2-5](#)

installer package names [2-1](#)

CDR analysis and reporting, using [4-7](#)

#### Cisco Unified Communications Manager

configuring for Cisco Unified Video Advantage [1-4](#)

configuring the phone for Cisco Unified Video Advantage [1-5](#)

Cisco Unified IP Phones, setting up on Cisco Unified Communications Manager [1-5](#)

#### Cisco Unified Video Advantage

application log file location [2-6](#)

collecting diagnostic and log information [4-8](#)

described [1-1](#)

installation log file location [2-6](#)

network, server, PC requirements [1-3](#)

server and application interactions [1-3](#)

software components [2-2](#)

supported protocols [1-1](#)

#### Cisco VT Camera

installation log file location [2-6](#)

technical specifications [A-1](#)

command-line options, deploying with [2-5](#)

#### configuration settings

for Cisco Unified Communications Manager [1-4](#)

for Cisco Unified IP Phones [1-5](#)

CPU utilization, resolving high usage [4-5](#)

---

### D

#### deploying the application

described [2-4](#)

installer package names [2-1](#)

software components [2-2](#)

software download site [2-3](#)

with command-line options [2-5](#)

detailed logs, described [4-9](#)

Diagnostics Tool, described [4-8](#)

#### diagnostic tools

using CDR analysis and reporting [4-7](#)

using Real-Time Monitoring Tool [4-6](#)

using serviceability troubleshooting traces [4-6](#)

disconnected calls on H.323 endpoints, resolving [4-4](#)

---

### E

elevated privileges [2-4](#)

---

### I

information needed by users [3-1](#)

installation log location  
 for Cisco VT Camera [2-6](#)  
 for CUVA [2-6](#)

installer packages [2-1](#)

installing the application. See user guide

---

## L

logs

capturing detailed [4-9](#)  
 collecting when the application crashes [4-10](#)  
 location of [2-6](#)

---

## M

mobile workers, resolving bandwidth issues [4-4](#)

---

## N

network protocols

CAST [1-2](#)  
 CDP [1-2](#)  
 IP [1-2](#)  
 RTP [1-2](#)  
 SCCP [1-2](#)  
 TCP [1-2](#)

---

## P

performance degraded from detailed logs [4-9](#)

privileges, required for updating [2-7](#)

Problem Reporting Tool

capturing logs automatically [4-10](#)  
 described [4-10](#)  
 enabling detailed logs [4-9](#)  
 log file location [2-6](#)

protocols, supported [1-1](#)

---

## R

Real-Time Monitoring Tool, using [4-6](#)

restricted permissions, Vista [2-4](#)

---

## S

server and application interactions [1-3](#)

serviceability troubleshooting traces, using [4-6](#)

shared location deployment [2-4](#)

Software Center, URL for [2-8](#)

software deployment tools [2-4](#)

---

## T

telecommuters, resolving bandwidth issues [4-4](#)

troubleshooting, resolving

bandwidth issues for mobile workers or telecommuters [4-4](#)

CUVA not associating with IP phone [4-3](#)

disconnected calls on H.323 endpoints [4-4](#)

no-video icon appears [4-2](#)

no video icon appears on phone screen [4-3](#)

no video in video windows [4-2](#)

no video on multi-party conferences [4-1](#)

PC CPU utilization at 100 percent [4-5](#)

poor audio and video lip synchronization [4-2](#)

video bandwidth unavailable message appears on IP phone [4-3](#)

video problem icon appears in system tray [4-3](#)

video problems [4-1](#)

---

## U

updating

manually [2-7](#)

obtaining software for [2-7](#)

privileges for [2-7](#)

software deployment tool [2-7](#)

- uninstalling previous version [2-7](#)
- URL for downloading latest software [2-8](#)
- user information, providing [3-1](#)
- users
  - access to documentation and online help [3-2](#)
  - contact names to provide assistance [3-2](#)
  - how to report problems [3-2](#)
  - required information for [3-1](#)

---

## V

- Vista, restricted permissions [2-4](#)

