CHAPTER **4**

SIP Video App

This chapter provides information about the SIP Video app for Cisco IP cameras. This app lets an IP camera send audio to and receive audio from, and send video to an external SIP client device or Cisco Unified Communications Manager (CUCM).

This chapter includes these topics:

About the SIP Video App

The SIP Video app enables an IP camera to transmit and receive audio to and from an external SIP client device or Cisco Unified Communications Manage. It also lets you send video to a device. The IP camera plays audio that it receives on external speakers that are connected to it. The IP camera transmits audio through its internal or external microphone.

The SIP Video app provides these operating modes:

- Standalone mode—In this mode, the IP camera waits for contact from a device on which a SIP client is operating and establishes a connection with that device when it receives contact. After the connection is established, the IP camera and this SIP client device can engage in full-duplex audio communication, and half-duplex video communication.

  This mode supports one connection from a SIP device to the IP camera at a time. When a SIP client device disconnects from the IP camera, the camera is ready to establish another connection.

- CUCM mode—In this mode, the IP camera connects to an active Cisco Unified Communications Manager and can engage in full-duplex audio communication, and half-duplex video communication.

Configuring the SIP Video App on an IP Camera

Before you can use the SIP Video app, you must configure it on each IP camera on which it will run. To configure this app, perform the following steps.

Before You Begin

Install the SIP Video app on the IP camera on which it will run. For information about installing apps, see your Cisco VSM documentation.

Procedure

Step 1 From the IP camera web-based user interface, click the **Setup** link, click **Application Manager** to expand the menu, then click **App Setup**.

Step 2 Click the **SIPVideo** radio button, then click **Configure**.

The Cisco SIP Video App configuration page appears.

Step 3 Enter appropriate values in the Cisco SIP Video App configuration page fields as described in the following table:

Field	Settings for Standalone Mode	Settings for CUCM Mode (Cisco Unified Communications Manager)	Default Setting
App Mode	Standalone	CUCM	—
Connection Check Time	Enter a time interval in seconds at which the IP camera periodically contacts the SIP client to ensure that a live connection is in place. If the IP camera detects that the connection to the SIP client is lost, the camera tries three times to reestablish a connection. If the connection cannot be reestablished, the SIP Video app stops automatically. Valid values are **10** through **600** (10 seconds through 10 minutes).	Enter a time interval in seconds at which the IP camera periodically contacts Cisco Unified Communications Manager to ensure that a live connection is in place. If the IP camera detects that the connection to Cisco Unified Communications Manager is lost, the camera tries three times to reestablish a connection. If the connection cannot be reestablished, the SIP Video app stops automatically. Valid values are **10** through **600** (10 seconds through 10 minutes).	10
SIP Server	—	Enter the IP address of the Cisco Unified Communications Manager server.	0
Video Calling	Choose **Enabled** enable the app to send video in addition to sending and receiving audio. If you choose Disabled, the app sends and receives audio only.		Enabled
Video Resolution	Available only if the Video Calling field is set to **Enabled**. Choose the resolution at which the video is sent to a device. The options that appear depend on the model of IP camera that you are using.		Depends on the IP camera model
Audio Gain	Enter the volume in decibels (dB) at which the IP camera plays on its external speakers audio that it receives from a remote SIP device or Cisco Unified Communications Manager. Valid values are **0** through **20**.		15

Field	Settings for Standalone Mode	Settings for CUCM Mode (Cisco Unified Communications Manager)	Default Setting
Username	—	Enter the camera username that the camera uses to register with Cisco Unified Communications Manager. This value is the User ID that you configure in Cisco Unified Communications Manager as described in the "Adding and Associating an End User" section on page 4-5.	—
Password	—	Enter the camera password that the camera uses to register with Cisco Unified Communications Manager. This value is the password that you configure in Cisco Unified Communications Manager as described in the "Adding and Associating an End User" section on page 4-5.	—

Step 4   Click the **Save** button in the Cisco SIP Video App configuration page, and then click **OK** in the confirmation dialog box.

If you want to reset the options in the Cisco SIP Video App configuration page to their default values, click the **Reset** button, click **OK** in the two dialog boxes that appear, click the **Save** button, and then click **OK** in the confirmation dialog box.

If you change configuration values while the SIP Video app is running, you must stop and then restart the app before the changes take effect.

Configuring Cisco Unified Communications Manager for use with the SIP Video App

You configure Cisco Unified Communications Manager for use with the SIP Video app by using the Cisco Unified Communications Manager Administration Console. For more detailed configuration information, see your Cisco Unified Communications Manager documentation.

This configuration involves the procedures that the following sections describe:

- Adding a Camera to Cisco Unified Communications Manager, page 4-4
- Adding and Associating an End User, page 4-5

Adding a Camera to Cisco Unified Communications Manager

Adding a camera to Cisco Unified Communications Manager enables that application to support the camera. When you add a camera, you add the device as a phone. You must add each camera that will run the SIP Video app.

To add a camera to Cisco Unified Communications Manager, follow these steps from the Cisco Unified Communications Manager Administration Console:

Procedure

Step 1 Log in to the Cisco Unified Communications Manager Administration Console.

Step 2 Choose **Device > Phone**.

The Add a New Phone page appears

Step 3 Click **Add New** near the top left side of the page.

The Add a New Phone page appears.

Step 4 From the Phone Type drop-down list, choose **Third-party SIP device (Advanced).**

Step 5 Click **Next**.

The Phone Configuration page appears.

Step 6 In the Device Information area, take these actions:

   a. In the MAC Address field, enter the MAC address of the IP camera.

   b. From the Device Pool drop-down list, choose **Default**.

   c. From the **Phone Button Template** drop-down list, choose **Third-party SIP Device (Advanced)**.

Step 7 In the Protocol Specific Information area, take these actions:

   a. From the Device Security Profile drop-down list, choose **Third-party SIP Device Advanced**.

   b. From the **SIP Profile** drop-down list, choose **Standard SIP Profile**.

   c. Check the **Media Transmission Point Required** check box.

Step 8 Click **Save** near the bottom of the Phone Configuration page to save and load the new phone configuration, and then click **OK** in the dialog box that appears.

Step 9 Click **Line[1]-Add a new DN i**n the Association Information area on left side of the window.

The Directory Number Configuration page appears.

Step 10 In the Directory Number field near the top of the page, enter a valid four-digit directory number that is within your dial plan.

Step 11 (Optional) In the Description field, enter a description of the camera.

For example, Hallway Camera.

Step 12 (Optional) In the Alerting Name field, enter the name of the camera that appears on telephones when the camera is called.

Step 13 Click **Save** near the bottom of the Directory Number Configuration page to associate the directory number with the device that you added.

Step 14 Click **Apply Config** near the top of the screen.

Adding and Associating an End User

Adding end user to Cisco Unified Communications Manager and associating and end user with a camera allows cameras that run the SIP Video app to register with Cisco Unified Communications Manager. Cisco recommends that you create one end user and associate that end user with each camera.

To add an end user in Cisco Unified Communications Manager, follow these steps from the Cisco Unified Communications Manager Administration Console:

Procedure

Step 1   Choose **User Management > End User**.

The Find and List Users page appears

Step 2   Click **Add New** near the top left side of the page.

The End User Configuration page appears.

Step 3   In the User ID field, enter an identifier for the user.

For example, enter **camera**.

Step 4   In the Password field, enter a password that the IP camera uses to register with Cisco Unified Communications Manager.

Step 5   In the Confirm Password field, reenter the password that you entered in the Password field.

Step 6   In the Last name field, enter a name to identify the user.

For example, enter **IP camera**.

Step 7   Click **Save** near the bottom of the End User Configuration page.

Step 8   Associate the device added with the end user by selecting a device from the Device association tab in the Device Information block.

Step 9   In the Device Information area in the End User Configuration page, click **Device Association**.

Step 10   Take these actions:

   a.   Locate one or more devices that you added as described in the "Adding a Camera to Cisco Unified Communications Manager" section on page 4-4, click the check box that corresponds to that device.

   b.   In the Protocol Specific Information area, uncheck the **Media Termination Point Required** check box.

   c.   Click **Save Selected Changes** at the bottom of the page.

You can repeat this step as needed.

Running the SIP Video App

To run the Video Tag app on an IP camera, use the start and stop functions for apps in Cisco VSM. Do not use the Run and Stop buttons that appear in the IP Camera web-based user interface.