



SIP Client App

This chapter provides information about the SIP Client app for Cisco Video Surveillance 8000 Series IP cameras. This app lets an IP camera send audio to and receive audio from an external SIP client device or Cisco Unified Communications Manager (CUCM).

This chapter includes these topics:

- [About the SIP Client App, page 3-1](#)
- [Configuring the SIP Client App on an IP Camera, page 3-1](#)
- [Configuring Cisco Unified Communications Manager for use with the SIP Client App, page 3-3](#)
- [Running and Stopping the SIP Client App, page 3-5](#)

About the SIP Client App

The SIP Client app enables an IP camera to transmit and receive audio to and from an external SIP client device or Cisco Unified Communications Manager. 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 Client 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.

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.

Configuring the SIP Client App on an IP Camera

Before you can use the SIP Client 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 Client 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 **Configuration** in the menu bar, and then choose **Applications > Package Management** from the left panel.
- Step 2** Click the **SIPClient** radio button, then click **SIPClient** in the Module Name column in the Package list table.

The Cisco SIP Client App configuration page appears.

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

Field	Description
App Mode	For Standalone mode, enter Standalone . For CUCM mode, enter CUCM .
Connection Check Time	Enter a time interval in seconds at which the IP camera periodically contacts the SIP client (in Standalone mode) or Cisco Unified Communications Manager (in CUCM mode) to ensure that a live connection is in place. If the IP camera detects that the connection to the SIP client or Cisco Unified Communications Manager is lost, the camera tries three times to reestablish a connection. If the connection cannot be reestablished, the SIP Client app stops automatically. Valid values are 1 through 60 (1 seconds through 1 minute). The default value is 2.
SIP Server	Used only for CUCM mode. Enter the IP address of the Cisco Unified Communications Manager server.
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 . The default value is 15.
Username	Used only for CUCM mode. 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 3-4.

Field	Description
Password	Used only for CUCM mode. 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 3-4.
SIP Port	Camera port used for the SIP Client app. Make sure that the port that you configure is not used by any other application on the IP camera. Valid values are 1 through 65535.

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

If you want to reset the options in the Cisco SIP Client 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 Client 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 Client App

You configure Cisco Unified Communications Manager for use with the SIP Client 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 3-3](#)
- [Adding and Associating an End User, page 3-4](#)

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 Client app.

To add a camera to Cisco Unified Communications Manager, perform the following steps from the Cisco Unified Communications Manager Administration Console.

For more detailed information, see your Cisco Unified Communications Manager documentation.

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:
- In the MAC Address field, enter the MAC address of the IP camera.
 - From the Device Pool drop-down list, choose **Default**.
 - From the **Phone Button Template** drop-down list, choose **Third-party SIP Device (Advanced)**.
 - From the **Owner User ID** drop-down list, choose your Cisco Unified Communications Manager user ID.
- Step 7** In the Protocol Specific Information area, take these actions:
- From the Device Security Profile drop-down list, choose **Third-party SIP Device Advanced - Standard non secure profile**.
 - From the **SIP Profile** drop-down list, choose **Standard SIP Profile**.
 - Check the **Media Termination Point Required** check box.
 - From the **Digest User** drop-down list, choose the ID of the digest user.
- 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** in 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 an end user with a camera allows cameras that run the SIP Client app to register with Cisco Unified Communications Manager. Cisco recommends that you create one end user and associate that end user with the camera.

To add an end user in Cisco Unified Communications Manager, perform the following steps from the Cisco Unified Communications Manager Administration Console.

For more detailed information, see your Cisco Unified Communications Manager documentation.

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 same the four-digit directory number that you entered in [Step 10](#) in the [“Adding a Camera to Cisco Unified Communications Manager”](#) section on page 3-3.
- 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 Digest Credentials field, enter same password that you entered in the Password field.
- Step 7** In the Confirm Digest Credentials field, reenter the password that you entered in the Digest Credentials field.
- Step 8** In the Last name field, enter a name to identify the user.
For example, enter **IP camera**.
- Step 9** Click **Save** near the bottom of the End User Configuration page.
- Step 10** Associate the device added with the end user by selecting a device from the Device association tab in the Device Information block.
- Step 11** In the Device Information area in the End User Configuration page, click **Device Association**.
- Step 12** Locate one or more devices that you added as described in the [“Adding a Camera to Cisco Unified Communications Manager”](#) section on page 3-3, click the check box that corresponds to that device, and then click **Save Selected Changes** at the bottom of the page.
You can repeat this step as needed.
-

Running and Stopping the SIP Client App

When you run the SIP Client app, the IP camera does the following:

- If the SIP Client app is configured for Standalone mode, begins to wait for contact from a SIP client device
- If the SIP Client app is configured for CUCM mode, an incoming call to the camera is established through Cisco Unified Communications Manager

To run the SIP Client 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.

