Video Tag App

This chapter provides information about the Video Tag app for Cisco IP cameras. This app applies a tag to a live video image based on an external trigger. The tag appears as text on the video image from the IP camera. The app also can cause the IP camera to take a designated action.

This chapter includes these topics:

• About the Video Tag App, page 12-1
• Configuring the Video Tag App on an IP Camera, page 12-2
• Configuring the IP Camera for a GPIO Tag Trigger, page 12-3
• Sending an HTTP POST Request Tag Trigger, page 12-4
• Configuring the IP Camera to Take an Action, page 12-5
• Running the Video Tag App, page 12-6
• Stopping the Video Tag App, page 12-6

About the Video Tag App

The Video Tag app causes a tag to appear on the live video image from the IP camera when the app detects a designated external trigger. The app also can cause the IP camera to take a designated action, which can include sending information in an email message or HTTP stream, sending information to a Syslog server, uploading a snapshot or video clip, and changing the state of the output 1 port on the IP camera.

A tag is preconfigured text, for example “Door open” or “Entry alarm activated.” You can configure the Video Tag app to respond to either or both of the following external trigger types:

• State change of an input port on the IP camera—The app displays a tag and optionally causes the camera to take an action when the state of an input port on the IP camera changes.
• An HTTP POST request in the appropriate format—The app listens for a request on a designated port. The app displays a tag and optionally causes the camera to take an action when it receives an appropriate request.

If you used the Video Overlay window in the IP Camera web-based user interface to configure overlay text, statistics, or an image, the tag from the Video Tag app replaces the configured overlay item or items. The configured overlay item or items redisplay when the tag is cleared.
Configuring the Video Tag App on an IP Camera

Before you can use the Video Tag 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 Video Tag app on the IP camera on which it will run. See the “Related Documentation” section on page 1-1 for more information.
- If you want the app to display a tag when it detects a state change of an input port on the IP camera, configure the IP camera as described in the “Configuring the IP Camera for a GPIO Tag Trigger” section on page 12-3.
- If you want the app to display a tag when it detects and HTTP POST request, review the information in the “Sending an HTTP POST Request Tag Trigger” section on page 12-4.
- If you want the app to cause the IP camera to take an action when it detects a state change of an input port or an appropriate HTTP POST request, configure the IP camera as described in the “Configuring the IP Camera to Take an Action” section on page 12-5.

**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 **VideoTag** radio button, then click **Configure**.

The Cisco Video Tag Application page appears.

**Step 3**
Enter appropriate values in the Cisco Video Tag Application page fields as described in the following table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GPIO Trigger Area</strong></td>
<td></td>
</tr>
<tr>
<td>Enable GPIO</td>
<td>Check this check box to cause the app to listen for a state change of an input port on the IP camera, and to display the configured tag when it detects a state change.</td>
</tr>
<tr>
<td>Trigger Description</td>
<td>Enter the text of the tag to be displayed when the app detects a state change of an input port on the IP camera. The text can contain up to 26 characters and can include letters, numbers, spaces, and these characters: ! $ % ( ) + , . / : = @ ^ _ ` { } ~.</td>
</tr>
<tr>
<td>Enable Auto Clear</td>
<td>Check this check box cause the app to clear the text of the tag from the video display after the tag appears for a specified amount of time. If you do not enable auto clear, the text of the tag remains on the video display indefinitely.</td>
</tr>
</tbody>
</table>
Chapter 12  Video Tag App

Configuring the IP Camera for a GPIO Tag Trigger

If you want the Video Tag app to display a tag when it detects a state change of an input port on the IP camera, you must enable the Input 1 setting on the IP camera in addition to configuring the GPIO trigger options as described in the “Configuring the Video Tag App on an IP Camera” section on page 12-2.

To enable the Input 1 setting, follow these steps:

**Procedure**

**Step 1**  From the IP camera web-based user interface, click the **Setup** link, click **Events** to expand the menu, then click **Notification Settings**.
**Step 2**  In the Event Triggering area on the Notification Settings page, check the Input 1 check box.

**Step 3**  Click Save at the bottom of the Notification Settings page.

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**Sending an HTTP POST Request Tag Trigger**

If you want the Video Tag app to display a tag when it detects an HTTP POST request, you must configure the HTTP trigger options as described in the “Configuring the Video Tag App on an IP Camera” section on page 12-2. In addition, you must ensure that the request is sent in the format that this section describes.

An HTTP POST request can be generated from a third-party application or add-on, such as the Advanced REST Client Application for Google Chrome, the RESTClient add-on for Mozilla Firefox, or the Linux wget command. The app can receive the request from any external source that can send HTTP requests and that is on the same network as the IP camera on which the app is running.

The HTTP POST request should include the elements that Table 12-1 describes.

**Table 12-1  Elements of HTTP POST Request for Video Tag App**

<table>
<thead>
<tr>
<th>Request Element</th>
<th>Format</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>URL</td>
<td>http://ip_address:port</td>
<td>ip_address is the IP address of the IP camera to which to send the request. port is the port on which the IP camera listens for an HTTP POST request.</td>
</tr>
<tr>
<td>Header</td>
<td>Content-Type: text/xml</td>
<td>—</td>
</tr>
<tr>
<td>Request payload</td>
<td>&lt;HttpTrigger&gt;</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>&lt;EnableTrigger&gt;1</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>&lt;TriggerDescription&gt;tag_text</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>&lt;/TriggerDescription&gt;</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>&lt;/HttpTrigger&gt;</td>
<td>—</td>
</tr>
</tbody>
</table>

The following examples show two ways in which you can generate an HTTP POST trigger for the video tag app. In each example:

- The IP address of the IP camera is 10.110.0.00
- The View Video app is configured to listen for an appropriate HTTP request on port 48999
- The tag that this request generates appears as “Door Open” on the video image from the IP camera

**Example 12-1  Sending an HTTP POST Request by Using the REST Client Application for Google Chrome**

Figure 12-1 shows an example of using the REST Client Application for Google Chrome to generate an HTTP POST trigger for the Video Tag app. The REST Client Application application receives the status message “200:OK” when the request is successfully sent.
Configuring the IP Camera to Take an Action

You can configure the IP camera to take any or all of the following actions when it detects a state change or an HTTP trigger:

- Send information in an email message to the designated recipient.
- Change the state of the output 1 port on the IP camera as defined in the IO Ports page in the IP Camera web-based user interface.
- Send information to a designated Syslog server.
- Send information as an HTTP stream to a remote system.
- Upload a snapshot or video clip of the event to an FTP server.

To configure actions, follow these steps:

**Procedure**

**Step 1** From the IP camera web-based user interface, click the **Setup** link, click **Events** to expand the menu, then click **Notification Settings**.

**Step 2** In the Event Triggering area on the Notification Settings page, check the **App** check box.

**Step 3** Check the desired check boxes to designate that actions that the Video Tag app causes the IP camera to take when a trigger occurs:

- **Email**—Sends information about the event that caused the trigger in an email message to the designated recipient. You designate the recipient and configure other email options in other fields on the Notification Settings page.
- **Output 1**—Changes the state of the output 1 port on the IP camera as defined in the IO Ports page in the IP Camera web-based user interface.
Running the Video Tag App

To run the Video Tag app on an IP camera, perform the following steps:

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 VideoTag radio button.

Step 3 (Optional) If you want the Video Tag app to run automatically each time the IP camera reboots, in the Installed Application List area, check the Start on Boot check box that corresponds to this app.

If you do not check this check box, you must run the app manually each time the IP camera reboots.

Step 4 Click the Run button.

Stopping the Video Tag App

To stop the Video Tag app on an IP camera, follow these steps:

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 VideoTag radio button.

Step 3 Click the Stop button.