



Configuring Cisco Vision Dynamic Signage Director for External Triggers

Release 6.2

Revised: October 25, 2019
First Published: May 29, 2012

Note: All the screens and examples in this document show Administrator role-based access level.

This document is intended for Cisco Vision Director administrators who are responsible for working with third-party developers and system integrators to establish connectivity for external input triggers to initiate certain actions by the Cisco Vision Director software, such as to start an event script to control display of content for a desired “moment of exclusivity” or make an emergency notification at a venue.

Output triggers also can be configured by the administrator to send a Hypertext Transfer Protocol (HTTP) request to notify external systems of a script event and trigger an action externally.

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Prerequisites for Cisco Vision Director for External Triggers

Before you configure Cisco Vision Director for External Triggers, be sure that the following requirements are met:

- For input triggers, the Cisco Vision Director server is reachable by the GPIO device or external HTTP server on the Internet Protocol (IP) network.
- For output triggers, the GPIO device or external HTTP server should be reachable by Cisco Vision Director.
- When more than the default values of 16 inbound and 64 outbound triggers are required, use the **Registry** to set a maximum of 1024 inbound and 256 outbound triggers. See [Increased Inbound Trigger Functionality, page 8](#).

Restrictions of External Triggers on Cisco Vision Director

Before you configure Cisco Vision Director for External Triggers, consider the following restrictions:

- The Triggers interface is not venue aware, which means that you **cannot** apply venue-specific scope of control using the venue selector. See [Multiple Venues, page 2](#).
- The Event Trigger Application Programming Interface (API) calls are one-way. One-way means that while a response was successful received by Cisco Vision Director it may not mean it was executed successfully.
- The script duration, proof of play, and staging registry settings are global and cannot be configured on a per-action basis.
- Both HTTP and HTTPS protocols are automatically available and unable to be individually disabled.
- You can configure an output trigger to loop back to Cisco Vision Director using an input trigger, but no verification is made to prevent a loop.
- If you are saving a trigger in the enabled state, at least one HTTP action must be configured. Otherwise, you get an error while attempting to save the trigger.
- By default, Cisco Vision Director uses a self-signed certificate. There is an option to import a certificate.

Information About External Triggers in Cisco Vision Director

This section includes the following topics:

- [Overview of External Triggers, page 2](#)
- [HTTP Methods and URLs for External Triggers, page 4](#)
- [Authentication for External Triggers, page 5](#)
- [External Trigger Actions, page 5](#)
- [Use Cases for External Triggers, page 6](#)
- [Management Dashboard Registry Settings, page 7](#)

Overview of External Triggers

This section describes the input and output trigger support in Cisco Vision Director.

Multiple Venues

The **Triggers** interface in the **Configuration** area of the UI is not venue aware. All defined triggers in Cisco Vision Director are global in scope in a centralized Cisco Vision Director server configuration with multiple venues. However, *triggers can be applied to venue-associated scripts*.

Input Trigger Support

Note: In Release 6.1, the number of inbound triggers supported increased to 1024.

Cisco Vision Dynamic Signage Director supports an HTTP-based inbound API that can be used to trigger one or more actions by the Cisco Vision Director software.

Cisco Vision Director has 16 default (with a configurable maximum of 1024) input trigger IDs that serve as placeholders for a Cisco Vision Director administrator to define and enable for your system.

Information About External Triggers in Cisco Vision Director

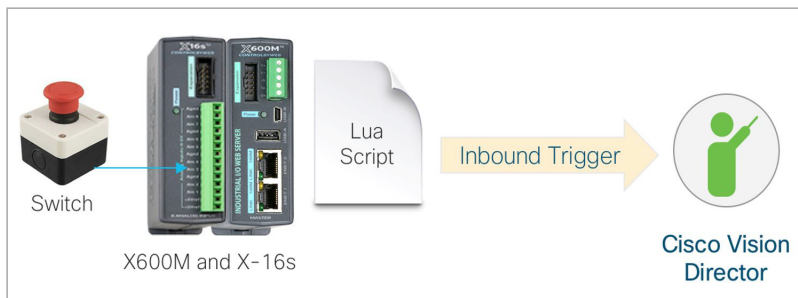
Note: To control external triggers from a software application, contact your Cisco Systems representative to obtain the Event Trigger API white paper by special agreement.

Building management and life safety systems as well as the broadcast control room in a stadium typically allow external integration by using dry contact closure and/or GPIO devices. It is expected that networked surveillance cameras, video routers, and other broadcast equipment already have these input/output (I/O) modules built into the hardware.

Figure 1 on page 3 shows the different sources of contact closure that can be used as external input triggers to an event script on the Cisco Vision Director server.

- The virtual contact closure option represents a software application that can initiate an HTTP request directly and also use the Event Trigger API for retrieval of input trigger configuration from Cisco Vision Director.
- The physical contact closure option represents a hardware device, such as those used for life safety or building management systems, which produce an electrical signal that requires another device to convert the signal to an IP-based HTTP request. Figure 1 on page 3 shows this conversion being done by a GPIO gateway to initiate the HTTP request after receiving the trigger from the physical contact closure device. The Control by Web x600M is an example of a third-party hardware device that accepts two-wire signals and sends commands to Cisco Vision Director. The X600M has the ability to run Lua scripts that can take physical input from a dry-contact physical switch, digital connection, thermocouple, or other source and then send Cisco Vision Director the HTTP **GET** that forms the input trigger API call.

Figure 1 Input Sources like Control by Web X600M to Cisco Vision Director



Output Trigger Support

The External Triggers feature supports output triggers which allow a script event to trigger notification to external systems. Cisco Vision Director has 64 default output trigger IDs, with a configurable maximum of 256. These are initially disabled and serve as placeholders for a Cisco Vision Director administrator to define and enable for your system.

Each output trigger is identified or addressed by its trigger ID, numbered sequentially. An output trigger defines a script event that will be used to trigger one or more outbound actions using an HTTP **GET** or **POST** request.

Cisco Vision Director maintains a history of what actions were taken and the responses. An HTTP output request is considered successful when HTTP code 200 (success status) is received.

Figure 2 on page 4 shows the different methods that can be used as external output triggers from an event script on the Cisco Vision Director server. Just as with input triggers, the supported methods include an HTTP call (like a software-based, virtual contact closure) with a third-party application, or a standard contact closure.

Figure 2 Output Trigger Methods From Cisco Vision Director**Method A: HTTP Call****Method B: Contact Closure**

HTTP Methods and URLs for External Triggers

This section describes the HTTP methods and URLs used to support input and output triggers in Cisco Vision Director. When using HTTPS protocol for either input or output triggers, TLS 1.2 is the default transport security protocol that is used in Release 6.2. Prior releases use TLS 1.0.

Input Trigger HTTP Methods and URLs

The HTTP method used by the trigger device can be a **GET**, **POST**, **PUT** or **DELETE** depending on the device requirements. You can configure the inbound HTTP method per input trigger in Cisco Vision Director. The default is **GET**.

Each time an external system sends an HTTP request to Cisco Vision Director as an input trigger, the set of actions associated with that input trigger are taken. There is a registry key (`ExternalTrigger.input.minInterval`) that specifies how much time to elapse before Cisco Vision Director processes any succeeding HTTP request to the same input trigger. For more information, see the [“Management Dashboard Registry Settings for Input Triggers”](#) section on page 8 and the [“How to Configure Advanced External Trigger Settings in the Registry”](#) section on page 19.

Cisco Vision supports both HTTP and HTTPS API calls using the following sample URLs, where `svd-server-ip` is the IP address of your Cisco Vision Director server, and `id` is the number of the input trigger:

- `http://svd-server-ip:8080/CiscoVision/ws/rest/trigger/input/id`
- `https://svd-server-ip/CiscoVision/ws/rest/trigger/input/id`

Note: To further protect access using these URLs, you can configure authentication by both password and IP address. For more information, see [Authentication for External Triggers](#), page 5.

Note: You can continue to use **StadiumVision** in the above addresses. We recommend switching to **CiscoVision**.

Consider the following when using HTTPS:

- Cisco Vision Director uses self-signed certificates. Depending on how the API consumer application is designed, it might require automatic acceptance of the certificate. In Release 6.2, you can import certificates. See [Release Notes for 6.2 Dynamic Signage Director](#) or the [Release 6.2: Cisco Vision Dynamic Signage Director Administration Guide](#).
- The standard HTTPS port 443 is used.

Output Trigger HTTP Methods and URLs

Just as with input triggers, the HTTP method used by output triggers in Cisco Vision Director can be a **GET**, **POST**, **PUT** or **DELETE** depending on the external device or application requirements. You can configure the outbound HTTP method per output trigger in Cisco Vision Director.

Note: Cisco Vision Director can accept a payload in a **POST** or **PUT** request.

Information About External Triggers in Cisco Vision Director

The URL that Cisco Vision Director specifies in its output HTTP request is determined by the target application or hardware device consuming the trigger event. However, the URL to the target external system must be configured in the output trigger when you define the HTTP action.

Sample Output Trigger URL to GPIO Device

The following is a sample URL when sending an output trigger to a hardware GPIO device:

- **`http://gpio-server-ip/state.xml?relayXState=n`**

where:

- *gpio-server-ip*—Specifies the IP address of the GPIO device.
- *X*—Specifies the relay number that you want to trigger (1 or 2).
- *n*—Specifies the numeric value that corresponds to the state that you want to assign to the relay (for example, 0 is off, 1 is on, and 2 pulses the relay on for a default of 1 second, then off).

Authentication for External Triggers

Cisco Vision Director supports Basic Authorization for both input and output triggers. This section describes the methods supported to secure the use of input and output triggers in Cisco Vision Director.

Input Trigger Authentication

Cisco Vision Director supports two forms of authentication that you can configure per input trigger:

- Username and password
- IP address list

For added security, both forms of authentication can be enabled.

Output Trigger Authentication

Cisco Vision Director supports a username and password authentication that you can configure per output trigger as part of the HTTP action definition.

These are credentials required by the external system. For example, consider an external web server's REST API that can only be called by clients that provide credentials. Then, configure an input trigger (10) in Cisco Vision Director to require authentication. If you wanted to loop an output trigger to that input trigger 10, the username/password for this output trigger must match what is set in input trigger 10.

External Trigger Actions

This section describes the trigger actions that are supported for input and output triggers. For input triggers, you define what script actions should happen when an inbound trigger is received. For output triggers, you define a URL to be sent from Cisco Vision Director when a particular script action occurs.

Input Trigger Actions

Cisco Vision Director can perform certain script actions or TV controls upon receipt of an input trigger. Each input trigger can be configured to have multiple actions.

You can configure the following script actions to occur upon receipt of an input trigger:

Information About External Triggers in Cisco Vision Director

- Start a script.
- Stop a script.
- Change to an ad-hoc state.
- Leave the current ad-hoc state.
- Go to the next sequential state.
- Go to the previous sequential state.

You can configure the following TV control actions to occur upon receipt of an input trigger:

- Turn TVs off by group, zone, or device.
- Turn TVs on by group, zone or device.

Output Trigger Actions

Cisco Vision Director supports configuration of a URL to be sent outbound when a designated script starts, stops, or changes to a specified state.

If a script is configured in an outbound trigger, and then you remove the script (or you remove a state, and the trigger refers to a state in the script), Cisco Vision Director will auto-disable the trigger.

Use Cases for External Triggers

This section provides a high-level description of some specific use cases for input and output triggers in Cisco Vision Director.

Moment of Exclusivity Use Case for Input Triggers

[Figure 3 on page 7](#) shows the use case of a single button that can be used when a goal occurs during the match that can trigger multiple display changes at once, including a Cisco Vision Director event script change to an ad-hoc state that displays new content on multiple TVs in the venue.

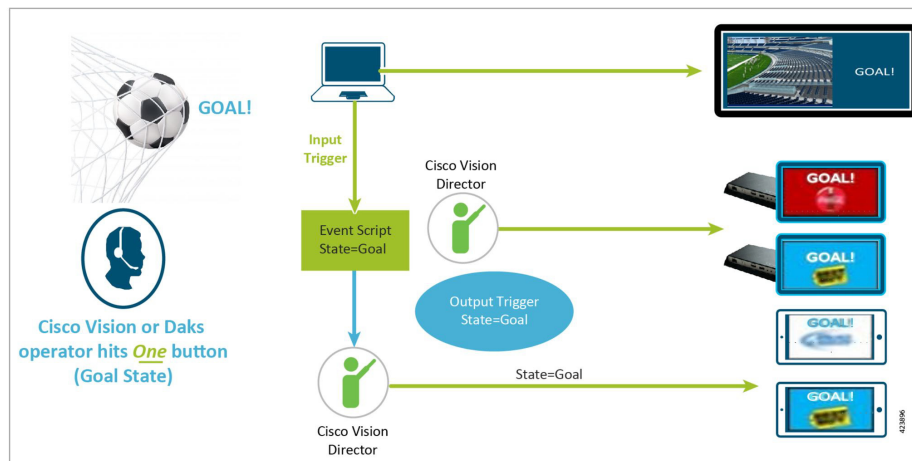
Figure 3 Moment of Exclusivity for a Goal During Match with Input Trigger



Moment of Exclusivity Use Case for Input and Output Triggers

Figure 4 on page 7 also shows the use case of a moment of exclusivity for a goal during a match. In this example, an input trigger occurs when a single button is used to identify a goal. Cisco Vision Director responds to the input trigger action with an event script change to an ad-hoc state that displays new content on multiple TVs in the venue. In addition, an output trigger is defined that sends an output URL to the Cisco Vision Connected Stadium that displays a message on mobile devices.

Figure 4 Moment of Exclusivity for a Goal During Match with Input and Output Triggers



Management Dashboard Registry Settings

This section describes the registry keys in the Cisco Vision Management Dashboard for input and output triggers. The registry values are global and apply to all input or output triggers.

Management Dashboard Registry Settings for Input Triggers

Table 1 on page 8 describes the registry keys in the Management Dashboard that support input trigger configuration and operation.

Table 1 Default Registry Settings for Input Triggers

Registry Key	Default	Description
ExternalTrigger.input.count	16	Number of allowable input triggers. The range is 1-1024.
ExternalTrigger.input.history.days	7	Maximum number of days that the input trigger history is kept before it is purged.
ExternalTrigger.input.minInterval	5	Minimum length of time (in seconds) that must transpire between receipt of two input triggers of the same ID to avoid processing as a duplicate.
ExternalTrigger.input.script.duration	0	Script duration in seconds. The default is zero, which specifies that the script plays forever.
ExternalTrigger.input.script.pofp	true	Proof-of-play setting when a script starts due to an input trigger. The values are true or false. The default is true, which enables proof of play.
ExternalTrigger.input.script.staging	true	Content staging setting when a script starts due to an input trigger. The values are true or false. The default is true, which enable content staging.

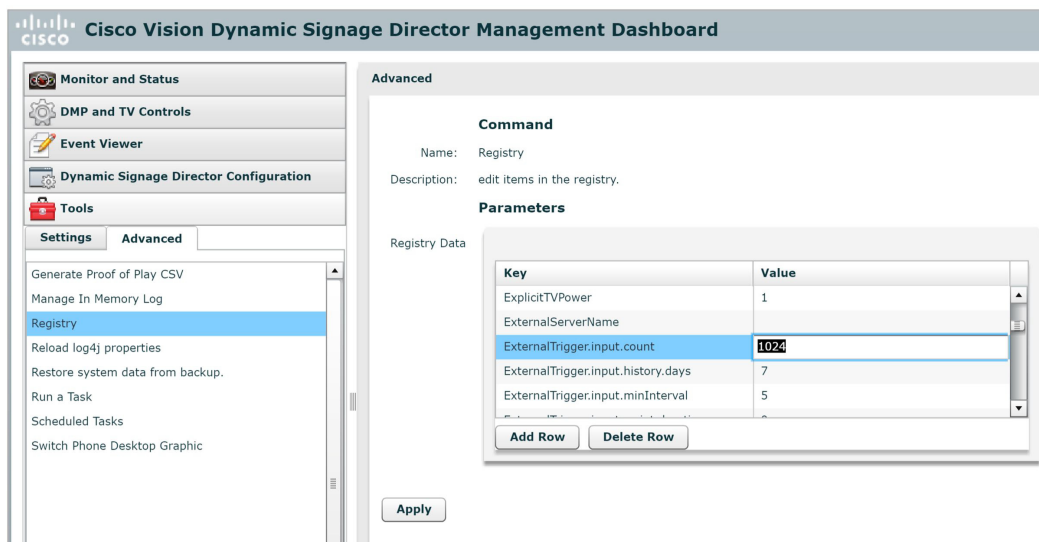
Increased Inbound Trigger Functionality

New in Release 6.1, the number of inbound triggers in the registry greatly increased to 1024. Be advised, the more triggers you add, the more difficult it may be to find them. They are collated by incrementing number only and not searchable.

To change the number of inbound triggers:

1. Go to **More > Management Dashboard > Tools** drawer > **Advanced** tab > **Registry**.
2. Scroll down to **ExternalTrigger.input.count** (Figure 5 on page 9).
3. Change the **Value** field to no greater than 1024.
4. Click **Apply**.

Figure 5 External Trigger Input Registry



Management Dashboard Registry Settings for Output Triggers

Table 2 on page 9 describes the registry keys in the **Management Dashboard** that support output trigger configuration and operation.

Table 2 Default Registry Settings for Output Triggers

Registry Key	Default	Description
ExternalTrigger.output.count	64	Number of allowable output triggers. The range is 1-256.
ExternalTrigger.output.history.days	7	Maximum number of days that the output trigger history is kept before it is purged. ¹
ExternalTrigger.output.initialDelay	0	Length of time (in seconds) to wait before processing the first configured trigger action. This registry is ignored if an output trigger is disabled.
ExternalTrigger.output.interActionDelay	0	Length of time (in seconds) to wait before processing the next configured action in the output trigger. This delay does not account for the time required to send an HTTP request to the external system. This registry is ignored if an output trigger is disabled.

1. The scheduled task named "ExternalTriggerHistoryCleanupTask" purges expired entries in the trigger history.

How to Configure Cisco Vision Director for External Triggers

This section includes the following topics:

- [How to Configure Input Triggers, page 10](#)
- [How to Configure Output Triggers, page 16](#)

How to Configure Input Triggers

This section includes the following tasks:

- [Defining an Input Trigger, page 10](#) (required)
- [Configuring the HTTP Method for Input Triggers, page 11](#) (optional)
- [Configuring Authentication for Input Triggers, page 11](#) (optional)
- [Configuring Actions for a Received Trigger, page 12](#) (required)

Defining an Input Trigger

By default, Cisco Vision Director supports 16 placeholder triggers that are undefined (unmapped) in the user interface. To support an external trigger, define one of the unmapped triggers and enable it.

You can change this number of supported triggers in the **Management Dashboard** registry. For more information [How to Configure Advanced External Trigger Settings in the Registry, page 19](#).

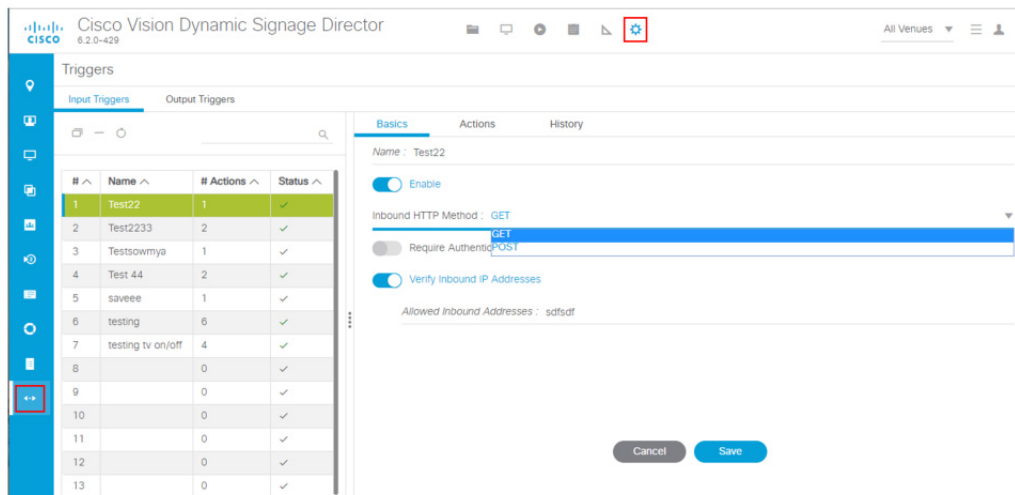
Note: All the screens and examples in this document show Administrator role-based access level.

To define an input trigger:

5. From the **Main Menu** click **Configuration > Triggers**.
6. In the Input Triggers list, select a trigger number that is not configured.

The trigger is highlighted and the trigger configuration is shown in the **Basics** panel on the right ([Figure 6 on page 10](#)).

Figure 6 New Input Trigger Basics Panel



7. In the **Name** box, type a name for the external trigger.

8. (Optional) Configure the HTTP method.

For more information, see [Configuring the HTTP Method for Input Triggers, page 11](#).

9. (Optional) Configure authentication of the trigger source.

For more information, see [Configuring Authentication for Input Triggers, page 11](#).

10. Configure the actions for the trigger.

How to Configure Cisco Vision Director for External Triggers

For more information, see [Configuring Actions for a Received Trigger, page 12](#).

11. To activate the trigger, click the Enable checkbox.

TIP: You can only enable a trigger if actions are defined for it.

For more information, see [Enabling and Disabling an External Trigger, page 19](#).

12. Click **Save**.

Configuring the HTTP Method for Input Triggers

The default HTTP method is a GET operation in Cisco Vision Director. A GET operation is also required for external devices that use the Event Trigger API to get the list of defined triggers.

Cisco Vision Director ignores any payload updates that might be included in a POST operation. Therefore, you only need to configure the HTTP method if your device only supports the POST HTTP method, or if you prefer to support a POST.

To configure the HTTP method for input triggers:

1. From **Main Menu > Configuration > Triggers**, select a trigger number in the Input Triggers list.

The configuration for the trigger that you selected appears in the **Basics** panel.

2. In the Inbound HTTP Method drop-down box, click the arrow to display options and select GET or POST ([Figure 7 on page 11](#)).

Figure 7 Inbound HTTP Method

3. Click **Save**.

Configuring Authentication for Input Triggers

You can authenticate an external input trigger by user name and password, and/or IP address.

Note: The trigger user name and password has no relationship to any Cisco Vision Director user accounts. You can define any ASCII set of characters for an external trigger user name and password.

You can configure multiple IP addresses to be accepted using a semi-colon separator between addresses, and also using an asterisk (*) as a wild card symbol to match any number that appears in the position where the asterisk is specified.

For example, 10.10.10.* accepts an external input trigger from any IP address in the range 10.10.10.0 through 10.10.10.255.

How to Configure Cisco Vision Director for External Triggers

To configure authentication for input triggers:

1. From **Main Menu**, click **Configuration > Triggers**.

2. Select a trigger number in the trigger list.

The configuration for the trigger that you selected appears in the **Basics** panel.

3. To authenticate the external trigger by username and password:

- a. Select the **Require Authentication** checkbox (Figure 8 on page 12).
- b. In the User Name box, type the user name that you want to allow.
- c. In the Password box, type the password for the specified user name.

Figure 8 Basics Panel for Input Triggers

The screenshot shows the 'Basics' panel of the configuration interface. It has three tabs: 'Basics', 'Actions', and 'History'. The 'Basics' tab is active. The panel contains the following fields and controls:

- Name:** A text input field.
- Enable:** A toggle switch that is currently turned on.
- Inbound HTTP Method:** A dropdown menu showing 'GET'.
- Require Authentication:** A toggle switch that is currently turned on.
- User Name:** A text input field containing 'TriggerTest1'.
- Password:** A text input field.
- Verify Inbound IP Addresses:** A toggle switch that is currently turned on.
- Allowed Inbound Addresses:** A text input field containing '10.10.10.*'.

At the bottom right of the panel, there are two buttons: 'Cancel' and 'Save'.

4. To authenticate the external trigger by IP address:

- a. Select the **Verify Inbound IP Addresses** checkbox (Figure 8 on page 12).
- b. In the Address List box, type one or more IP addresses separated by a semi-colon (;).

5. Click **Save**.

Configuring Actions for a Received Trigger

Cisco Vision Director can perform certain script actions or TV controls upon receipt of an input trigger. Each input trigger can be configured to have multiple actions.

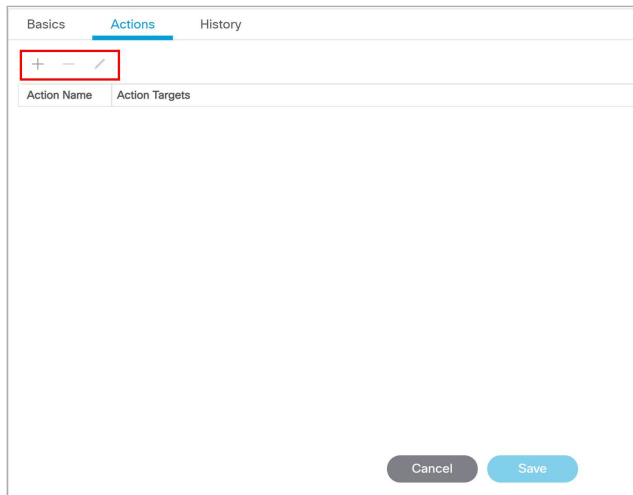
The script and device controls available for selection are based on what is already configured in the Cisco Vision Director Control Panel.

To configure the actions for a received trigger:

1. From **Main Menu > Event Management > Control Panel > Setup > Triggers**, select a trigger number in the trigger list.

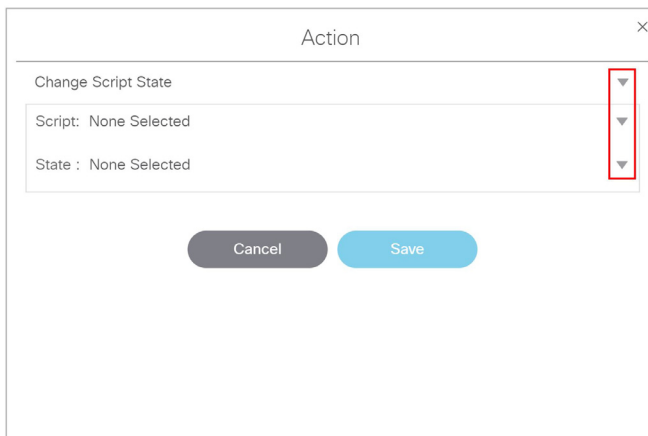
The configuration for the trigger that you selected appears in the Basics panel.

2. Click the **Actions** tab. The Actions panel displays (Figure 9 on page 13).

Figure 9 Input Trigger Actions Panel

3. Click the plus (+) icon to add an action for the selected input trigger.

The Action dialog box opens ([Figure 10 on page 13](#)).

Figure 10 Trigger Action Dialog Box

4. At the top right of the dialog box, select the drop-down list and choose one of the following actions and associated sub-options shown in the figure and described in [Table 3 on page 14](#).

Table 3 External Trigger Script Actions and Sub-Options

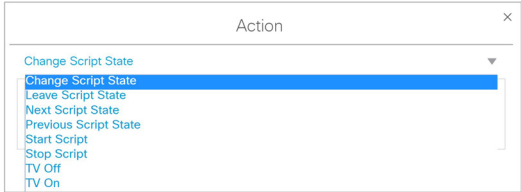
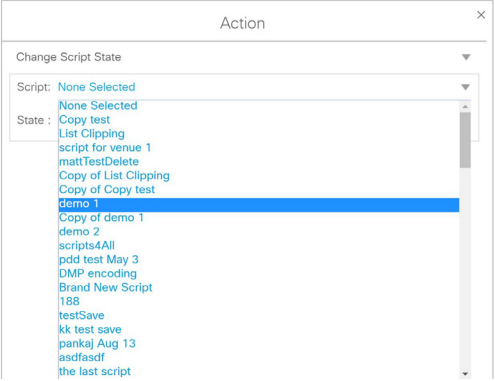


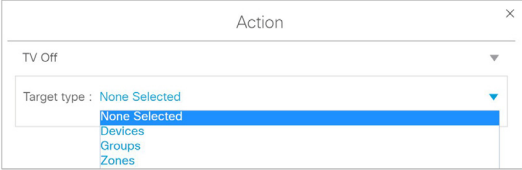
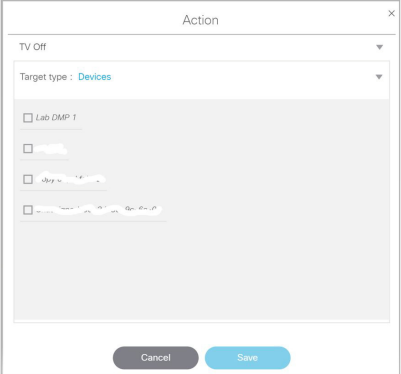
Action Name	Sub-Options	Description
Change Script State	<ul style="list-style-type: none"> ■ Script—Select the script name for the action. ■ State—Select the state to which to change. <p>Change Script State Example:</p>  <p>Select Script Example:</p>  <p>Select State Example:</p> 	Change to an ad-hoc or sequential state of a specified script.
Leave Script State	<p>Script—Select the script name for the action.</p> <p>Example:</p> 	Leave the current ad-hoc state of a specified script.
Next Script State	<p>Script—Select the script name for the action. (See Leave Script State example).</p>	Go to the next sequential state of a specified script.

Table 3 External Trigger Script Actions and Sub-Options (continued)

Action Name	Sub-Options	Description
Previous Script State	Script—Select the script name for the action. (See Leave Script State example).	Go to the previous sequential state of a specified script.
Start Script or Stop Script	Script—Select the script name for the action. (See Leave Script State example).	Start or stop a specified script.
TV Off or TV On	<ul style="list-style-type: none"> Target type—Select Devices, Groups, or Zones.  <ul style="list-style-type: none"> Select—Choose one or more checkboxes beside devices, groups, or zones to which the action applies. <p>Example: Devices</p> 	Turn TVs off or on by device name, group, or zone.

5. Click **Save**.

The action that you added is shown under the **Actions** panel of the Input Triggers screen.

Basics		Actions	History
+ - /			
Action Name	Action Targets		
TVOff	Device : pd fake		

6. Repeat from Step 2. to add multiple actions for the trigger.

7. When you have finished adding actions, click **Save**.

How to Configure Output Triggers

This section includes the following tasks:

- [Defining an Output Trigger, page 16](#) (required)
- [Configuring Actions for an Output Trigger, page 17](#) (required)
- [Enabling and Disabling an External Trigger, page 19](#) (required)

Defining an Output Trigger

By default, Cisco Vision Director supports 64 placeholder triggers that are undefined (unmapped) in the user interface for output triggers. To support an external trigger, define one of the unmapped triggers and enable it.

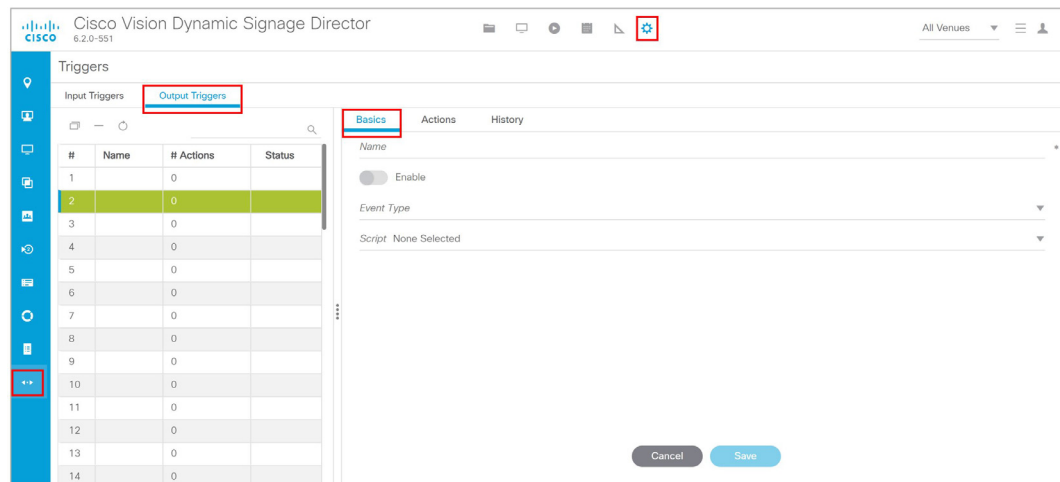
You can change this number of supported triggers in the **Management Dashboard** registry. For more information see [How to Configure Advanced External Trigger Settings in the Registry, page 19](#).

To define an output trigger:

1. Click **Configuration > Triggers**.
2. Click **Output Triggers**.
3. In the Output Triggers list, select a trigger number that is not configured.

The trigger that you selected is highlighted and the trigger configuration is shown in the **Basics** panel on the right ([Figure 11 on page 16](#)).

Figure 11 New Output Trigger Basics Panel



4. In the **Name** box, type a name for the external trigger.
5. Configure the **Event Type**, by completing the following steps:
 - a. In the Event Type drop-down box, choose the type of script event that will be used to initiate the output trigger actions.
 - **Script State Changed**—Specifies that output trigger actions begin when a change to the specified state for the selected script occurs.
 - **Script Started**—Specifies that output trigger actions begin when the specified script starts.
 - **Script Stopped**—Specifies that output trigger actions begin when the specified script stops.

How to Configure Cisco Vision Director for External Triggers

- b. In the Script drop-down box, select the script name for the specified event type.
 - c. (ChangeScriptState only) In the State drop-down box, select the state of the specified script that will be used to initiate the output trigger actions.
6. Configure the **Actions** for the trigger.
- For more information, see the “[Configuring Actions for an Output Trigger](#)” section on page 17.
7. To activate the trigger, click the **Enable** checkbox.
- TIP:** You can only enable a trigger if actions are defined for it.
- For more information, see the “[Enabling and Disabling an External Trigger](#)” section on page 19.
8. Click **Save**.

Configuring Actions for an Output Trigger

Cisco Vision Director can send an output URL based on a specified script event. Each output trigger can be configured to have multiple actions.

The scripts available for selection are based on what is already configured in the **Trigger** interface.

To configure the actions for an output trigger:

1. Click **Configuration > Triggers**, select a trigger number in the trigger list.

The configuration for the trigger that you selected appears in the **Basics** panel.

2. Click **Actions** ([Figure 12 on page 17](#)).

Figure 12 Output Trigger Actions Panel

URL	HTTP Method	Verify Credentials	User Name	Password

3. Click the plus (+) icon to add an action for the selected output trigger.

The HTTP Action dialog box opens ([Figure 13 on page 18](#)).

Figure 13 HTTP Action Dialog Box for Output Triggers

4. In the **HTTP Method** drop-down box, click the arrow to display options and select **GET**, **POST**, **PUT** or **DELETE**.
5. To specify authentication for the outbound URL, click the **Verify Credentials** checkbox (Figure 14 on page 18).

Figure 14 Verify Credentials for Output Triggers

- a. In the **User Name** box, type the user name that you want to allow.
 - b. In the **Password** box, type the password for the specified user name.
6. In the **URL** box, type the URL to be sent by the output trigger when the specified event type occurs.
Enter only a single URL in this box. Be sure that the entire URL appears correctly and as a single string.
 7. Click **Save**.
The action displays in the **Actions** panel of the Output Triggers screen.
 8. Repeat from 3. to add multiple actions for the trigger.
 9. When you finish adding actions, click **Save**.

Enabling and Disabling an External Trigger

You can define external triggers in Cisco Vision Director, but independently enable or disable them from operation. By default, external triggers are disabled.

Disabled triggers are indicated by a gray checkmark in the Status column of the corresponding trigger. When a trigger is enabled, the checkmark turns green in the Status column for the trigger name.

Note: You can only enable a trigger if actions are defined for it.

To enable and disable an external trigger:

1. Click **Configuration > Triggers**, click the **Input Triggers** or **Output Triggers** tab.
2. Select a trigger number in the trigger list.

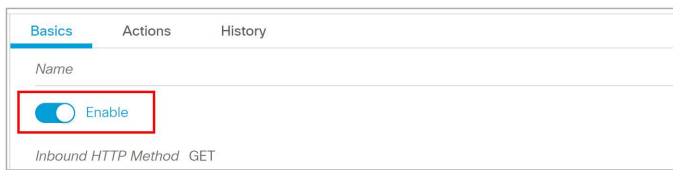
The configuration for the trigger that you selected appears in the **Basics** panel.

3. In the **Basics** panel, do one of the following:

- To enable the external trigger configuration, select the **Enable** checkbox.

A checkmark appears in the box when the option has been enabled.

- To disable the external trigger configuration, select the **Enable** checkbox to clear the checkmark.



4. Click **Save**.

How to Monitor External Trigger History

You can view a log of activity for a particular external trigger using the **History** feature. There is currently no way to see a global set of events that occurred.

To monitor external trigger history:

1. Click **Configuration > Triggers**, click the **Input Triggers** or **Output Triggers** tab.
2. Select a trigger number in the trigger list.

The configuration for the trigger that you selected appears in the **Basics** panel.

3. Click the **History** tab.

The logged messages and times for the selected trigger display.

How to Configure Advanced External Trigger Settings in the Registry

You can change some of the default settings for external triggers in the Cisco Vision Director registry. Be certain that you understand the purpose and impact of the registry values before changing anything.

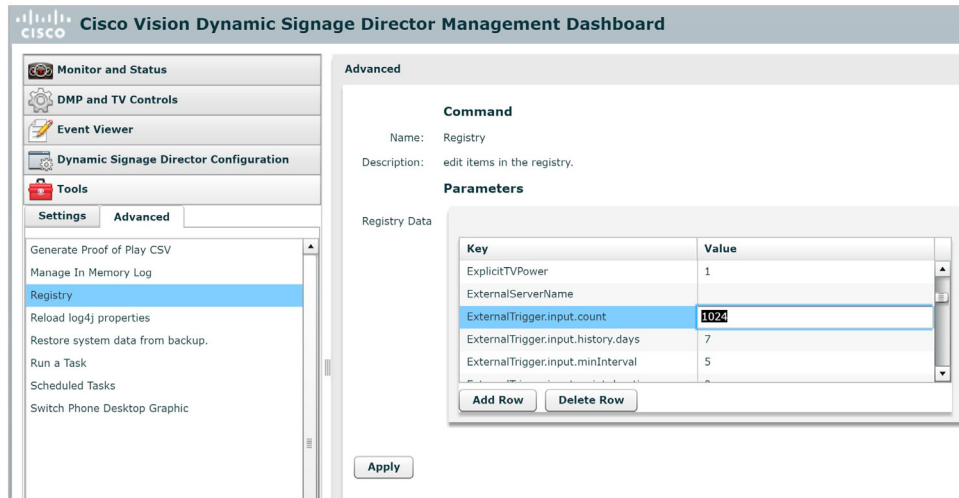
How to Configure Advanced External Trigger Settings in the Registry

Refer to [Table 1 on page 8](#) and [Table 2 on page 9](#) for a description of the registry keys and their default values.

To configure advanced external trigger options in the registry:

1. Log into Cisco Vision Director server as an administrator.
2. Click **More > Management Dashboard > Tools** drawer > **Advanced** tab > **Registry**.
3. In the **Registry Data** box, find the key to change from the tables ([Figure 15 on page 20](#)).

Figure 15 Changing an ExternalTrigger Registry Setting



4. In the **Value** box for the Key that you want to change, type the new value that you want to apply.
5. Click **Apply**.
6. Click **OK** when the “Registry values saved (success)” message appears.

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