



Working with Content in Cisco Vision Director

User Role: Administrator / Content Manager

This module provides information about how to use the Content screen to manage your content and an overview of the different content ingestion methods available in Cisco Vision Director.

This section includes the following topics:

- [Configuring the Default Content Channel, page 125](#)
- [Tuning Selected Media Players to a Multicast URL, page 126](#)
- [Defining Channels and Channel Guides, page 126](#)

Configuring the Default Content Channel

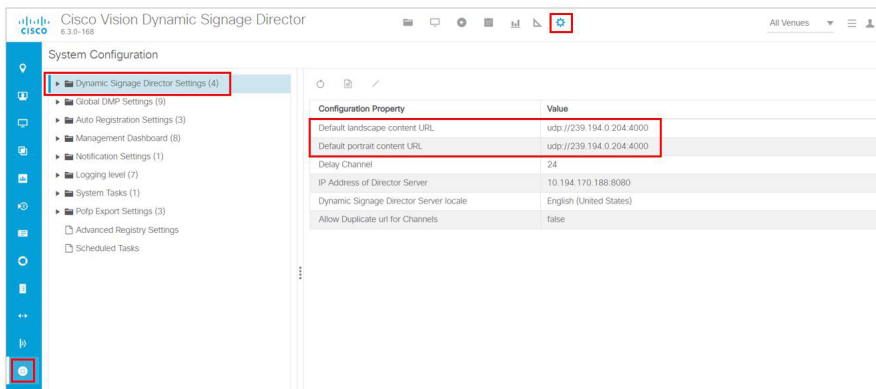
Specifying a default content channel allows you to quickly verify that video transmission is working after provisioning a media player without running an event script.

If the default content channel is video or a URL and is not configured properly, or if a video channel is not available, then media players not running an event script will display a black screen.

To configure the default video channel:

1. Log in to Cisco Vision Director as an administrator.
2. Click **Configuration > System Configuration > Dynamic Signage Director Settings** (Figure 1 on page 125).

Figure 1 Configuring the Default Video Channel



3. In the **Configuration Property**, find the **Default landscape content url** and the **Default portrait content url**.

Tuning Selected Media Players to a Multicast URL

4. Click **Edit** (pencil icon). The Edit – Configuration Setting dialog box appears.
5. Type the URL of the content. The URL can be a video stream or an HTML page.
6. Click **Save**.
7. Reboot the media players.

Note: We do not recommend using portrait mode for the CV-HD and CV-HD2 media players.

Tuning Selected Media Players to a Multicast URL

User Role: Administrator

You can tune one or more media players to a specific multicast URL. This configuration will not remain after reboot of the devices but can be used as temporary workaround to a content issue at the venue. An easier way to tune the DMPS is to use **Device Management**. See [Monitoring Media Player Operation During an Event Using Device Management, page 237](#).

To tune selected media players to a multicast URL:

1. Click **Device Management**. The **Devices** panel displays. Click the folders you want. The item appears in the center panel. Select it.
2. Use the drop down menu to select **Set Video Channel**.
3. Click the **Play** icon (**Send Command**). The Send Command box appears.
4. In the **Send Command** box, specify the URL for the multicast group (address and port) of the video channel that you want to display on the selected media players.
5. Click **OK**.

Defining Channels and Channel Guides

User Role: Administrator / Content Manager

Cisco Vision Director allows you to tune in-house and external video channels, including over the air (OTA) local channels, satellite, and cable TV, when distributed by the appropriate headend system. Video can be in either high definition (HD) or standard definition (SD). The number of video channels you can offer depends on the available bandwidth in your network. The channels you select will be available for viewing anywhere you have TVs connected to DMPs: in bars and restaurants, the back office, and in luxury suites. Users can change channels from the IP Phone or using the IR remote ([Figure 2 on page 127](#)).

Figure 2 Channel Guide Lineup on TV

Channel Lineup Designation at the Headend

A combination of external and internal channels make up the “channel lineup” that is available throughout the venue.

Although the concept of a channel number doesn’t really exist in the IP world, channel numbers are typically assigned to each channel at the head end. These numbers are arbitrary, but can be numbered to correspond to the channels that will show up on the IP phone control in the Luxury Suites.

To enable channel selection at the endpoints:

- When the On the Cisco DCM is deployed, each (in-house or external) channel received is mapped to its unique multicast group address and UDP port number.
- In Cisco Vision Director, each unique multicast group/UDP port number pair is assigned a Cisco Vision channel number and a channel name.
- Cisco Vision Director uses this mapping to direct DMPs to specific channels and populate a channel guide which lists the available channels.

Note: For information about how to configure the channel lineup at the headend, see the [Cisco Vision Network, Server, and Video Headend Requirements Guide](#) available to qualified Cisco Vision partners.

Defining the Universal Channel List

Once channels have been defined at the headend, define a universal channel list. Click **Configuration > Channel Definitions**.

Consider the following before you configure the universal channel list:

- Channels to be offered: Decide how many in-house live video feeds you will have and which external channels you will offer.
- Channel Numbering Scheme: You may want in-house channels at the top of your numbering scheme. You may want your numbering scheme to match the area satellite or cable numbering scheme. You may choose to hide some of the channels you have in house.
- Channel Guide Appearance: Decide the channel guide descriptions that appear on the TVs in your luxury suites, bars, and restaurants and whether you want a channel logo to appear on the screen.
- For each channel that should appear in the channel lineup accessed by a Cisco IP Phone or IR remote, set the “Visible in IP Phone Guide” field on the Channels panel to **Yes**.
- For each channel that is to appear in the channel lineup accessed by a third-party touch panel, set the “Visible in 3rd Party Guide” field on the Channels panel to **Yes**.

Adding Channels to the Universal Channel List

User Role: Administrator / Content Manager

Note: Now you can upload a customizable background image for the Channel Guide. See [Customizable Background Images for Login, DMP, or Channel Guide, page 172](#).

To add channels to the universal channel list:

1. Click **Configuration > Channel Definitions**. The Universal Channel List displays in the **Universal Channel List** tab.
2. Click “+” to add a channel.
3. On the **Basic Info** tab, define the information listed in [Table 1 on page 129](#). The items with an asterisk * are required.

Note: The Channel name configured in Cisco Vision Director should be limited to 12 characters or less. Due to the space allotted for channel names on the IP Phone interface, more than 12 characters may have undesirable results.

Table 1 Adding a Channel to the Universal Channel List

Field	Description
Source Type	Video Stream, External URL or HDMI-In
Channel Name	The name of the channel as you would like it to appear on the channel guide that appears on your video displays. Use a maximum of 12 characters.
Description	Description of what is playing on the channel (optional). This shows up on the TV only.
DMP Decode Latency	Default Settings Alternate Settings 1 Alternate Settings 2 Alternate Settings 3 Align these with the type of content you will display.
Protocol	Choose UDP or RTP (only applies to a video stream)
DMP-Encoded	Only applies to a video stream. Choose Custom bitrate High bitrate (Low Latency / High motion) Medium bitrate (Low Latency / Low Motion) Low bitrate (High Latency / Low Motion)
Multicast Address	Only applies to a video stream. The multicast IP address of this channel designated at the Cisco Vision headend.
Port	Only applies to a video stream. The multicast port used to communicate with this channel as designated at the Cisco Vision headend.
Channel Number	The number you want to assign to this channel. This channel number will appear in the channel guides on the TVs and IP Phones.
Long Name	Use the entire URL channel name.
Short Name	Use a shortened version of the name.
Source ID	Placeholder for future program guide integration. Not required.
Favorite	Select "Yes" if you want the channel to be listed as a favorite in the channel guide controlled by a 3 rd party touch panel.
Visible in Channel Guide	Select "Yes" if you want the channel to be visible in the channel guide controlled by a 3 rd party touch panel.

- When you have filled in all the required fields, click **Save**. As soon as you save this channel, it will appear in the Universal Channel List.

Note: You must **Save** before you add or modify another channel. As soon as you move from one channel to another without doing a save, all of your input is lost.

- Repeat steps 3 - 4 to add all the channels you want to display in Cisco Vision Director.

Using “Favorites” (Third-Party Touch Panels Only)

All installations should move to access channels directly via the local control API versus indirectly through the legacy favorites mechanism. In addition to the channel lineup, a maximum of 10 channels can be identified as favorites, which appear on the initial video control page of the third-party touch panels.

For each channel that should be listed as a favorite:

- In the **Favorite field**, select **Yes**.
- In the **Favorite Order field**, enter a number (between 1 and 10) indicating the ordinal placement of this channel in the listing.

Work with the third-party device integrator to determine how the favorites list should be displayed on the third-party touch panels.

Sorting the Universal Channel List

Click the Universal Channel List column headings (Name or #) to sort the channel names alphabetically in ascending or descending order or by channel number. You can also use the filter box to see only the subset of channels that have the characters you specify in the filter. The filter is not case sensitive.

Creating and Assigning Channel Guides

Once you have added channels to the Universal Channel List, you can create “per-area channel guides” to display a custom channel guide in different areas of the venue. For example, you can have a different set of channels available in each of the suites, concourses, clubs, the owners suite, back offices, locker rooms, concessions and ticket windows.

The per-area channel guides are a subset of the universal channel list, meaning the channel numbers and descriptions are preserved. For example, a venue may have raw in-house channels that they want to make available only to the coaching staff and not to the general public. To do this, create two channel guides: one private and one public. The private channel guide is assigned to groups/zones of DMPs that control the TVs in the coaches office and locker rooms. The public channel guide is flagged as the default channel guide and is automatically assigned to all other DMPs.

Designate one channel guide as the default channel guide. Only DMPs that are in a luxury suite are assigned a channel guide.

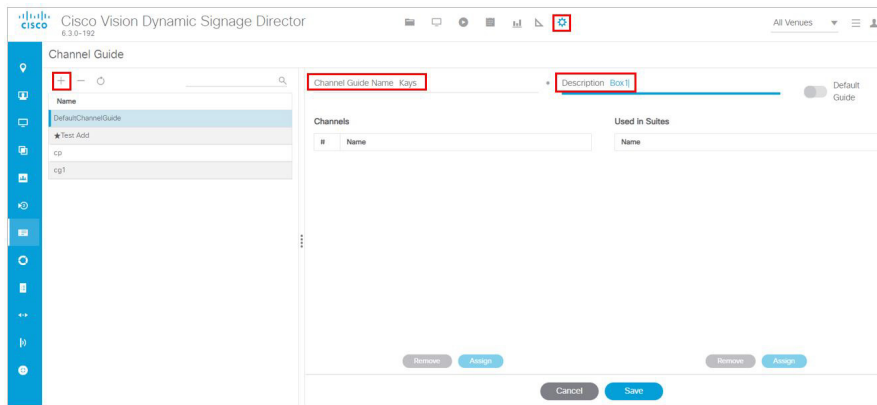
Note: If you make changes to a channel guide that is associated with an area serviced by a third-party touch panel, the third-party device must reload the latest channel guide information. Consult the third-party device integrator for reload options.

Creating a Channel Guide

User Role: Administrator / Content Manager

To create a channel guide:

1. Click **Configuration > Channel Guide** (Figure 3 on page 131). For more information, see Table 1 on page 129.

Figure 3 Creating a Channel Guide

2. Click the **plus (+)** and type a name and description for the new channel guide.
3. (Optional) Enable “Default Channel Guide for All Suites” to make this the default channel guide.
4. Click **Save**.

Assigning Channels to a Channel Guide

User Role: Administrator / Content Manager

To assign channels to a channel guide:

1. Click **Configuration > Channel Guide** and select the per area channel guide to which you want to assign channels.
2. Click **Assign**. The Universal Channel list displays.
3. Select the channels you want to add to the channel guide and click **Add**. The channels you add display in the Channel Guide window.

TIP: To select multiple channels, use the keyboard Shift-click and Ctrl-click.

4. Click **Save**.

Assigning a Channel Guide to a Luxury Suite/Local Control Area

User Role: Administrator / Content Manager

IMPORTANT: A DMP should only be assigned to one luxury suite, especially if using the local control API.

Do this task after the Universal Channel List and per area channel guide is created.

To assign a channel guide to a luxury suite:

1. Click **Configuration > Channel Guide**.
2. Select the per-area channel guide.
3. Click **Assign** (under the “Used in Suites” list). The list of undefined luxury suites/local control areas displays.

Note: The term “Luxury Suite” is used to define not only Luxury Suites but also any local control area.

4. Select the luxury suites/local control area to which you want to assign the custom channel guide.

TIP: To select more than one suite/local control area, use the keyboard Shift-click and Ctrl-click.

5. Click **Assign**.

By default, when the channel guide is brought up on the IP Phone, it is also displayed on the selected TV(s). You can change this behavior by setting the “`tvguide.autolaunch`” parameter to 0 in the Cisco Vision Director Registry. See [Controlling the Behavior of the Channel Guide](#), page 134.

Adding Icons to the IP Phone Channel Guide

You can associate channel icons that display in the IP Phone channel guide. Channel icons must be obtained locally (the venue must obtain permission from the network) and must be a 24 x 24 PNG file. The most common is a third-party channel icon file that is a 100 X 100 PNG.

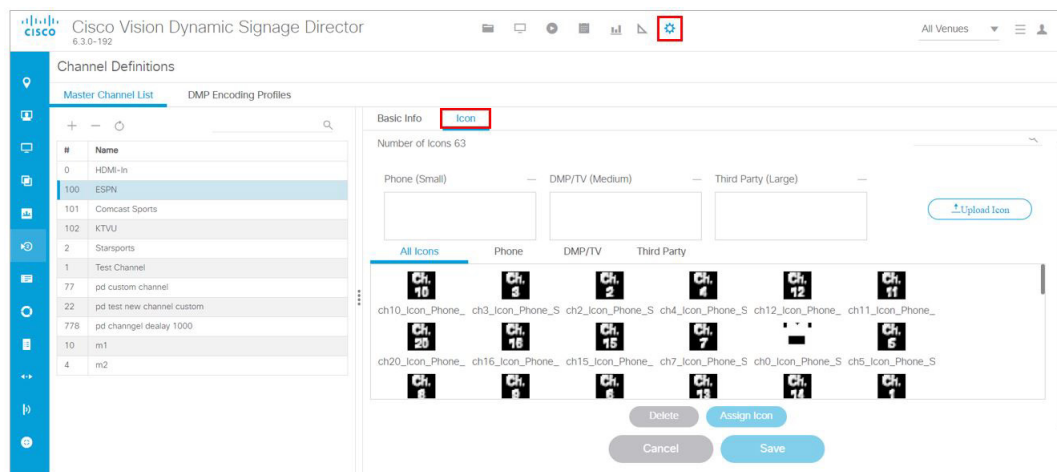
Uploading a Channel Icon

Click the **Icons** tab to control uploading the channel icons to the IP Phones, the DMP/TV or Third-Party devices ([Figure 4 on page 132](#)). Customize which icon is shown in certain contexts (like on-screen next to the name when it's chosen, in the channel banner, etc.). You can upload and tag multiple icons for the same usage type at the same time.

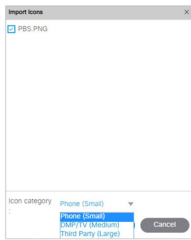
To upload a channel icon:

1. Copy the icon graphic(s) to your local drive.
2. Click **Configuration > Channel Definitions**.
3. Click the **Universal Channel List** tab and the **Icon** tab. The icon list displays ([Figure 4 on page 132](#)).

Figure 4 Channel Icons



4. Click **Upload Icon** and browse to the .png file you want to assign as a channel icon.
5. In the Import Icons dialog box, select where the channel icon will be used (icon category) from the drop-down menu ([Figure 5 on page 133](#)).
 - DMP (for TV banner)
 - Phone
 - 3rd Party Remote

Figure 5 Channel Icon Upload

6. Select an expiration setting.
7. Click **Upload**. The icon you uploaded will now appear in the icon list.

Assigning a Channel Icon

User Role: Administrator / Content Manager

Once you have created a universal channel list and uploaded phone channel icons, assign icons to the channels.

To assign a channel icon:

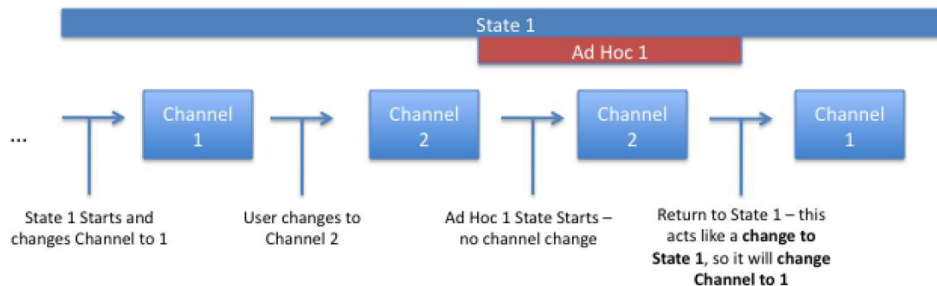
1. Select **Configuration > Channel Definitions**.
2. Click the **Universal Channel List** tab and the **Icon** tab. The icon list displays.
3. In the icon list, select the channel for which you want to assign an icon. The channel number displays in the Assigned Icons box.
4. Select the icon you want to assign to the channel.
5. Click **Assign Icon**.
6. Click **Save**. A message displays confirming the icon assignment was successful.

Channel Guide Behavior

IMPORTANT: When using the Local Control API, unpredictable results may occur if you assign a DMP to more than one luxury suite.

- If a DMP is assigned to more than one Luxury Suite, it will use the Per-Area Channel Guide associated with the last Luxury Suite to which it was assigned. For example if a DMP is added to Suite 1 and then added to Suite 2, it will use the Channel Guide defined for Suite 2. For this reason, do not assign a DMP to more than one Luxury Suite.
- If the user changes the channel via an IP phone, IR remote, or 3rd-Party remote, the channel chosen by the user will override the currently playing video playlist with the selected video.
- If the template has a primary video region assigned to a video channel, the template will not change, but the video will change to the selected channel.
- If the template has no primary video region, the display will be replaced with full screen video showing the selected channel.
- If the DMP is showing a playlist of video, the entire playlist will be replaced by the single video channel. For example, if the playlist contains three videos, all three videos will stop and be replaced by the selected channel. Only one video in a playlist will play.
- When the state changes on a DMP that is associated with a local control area (luxury suite, bar, restaurant, etc.), the script contents will override the user's local control.

Therefore, if you expect a DMP to be locally controlled, any states in use during that period should not change the template or channel. This is particularly important when using ad hoc states with locally controlled DMPs. Cisco Vision Director will treat the return from an ad hoc as a state change, so if the base state has a channel setting, the channel on all locally controlled DMPs will return to the base channel when the ad hoc state ends.



For the new quad template feature, note the following:

- You can play UDP channels in all the four regions or video playlists in all the four regions. Widgets, External URL channels, image playlists are not supported.
- You can change the channels in each of the regions through a new local control API. Work with the third-party device integrator to determine how the channel changing and volume controls operate.
- When changing a channel through the new API, the default template does not change. Only the channel in a particular region changes.
- There is no support for an IP Phone, IR remote or third-party remote. Check if the local control API could be integrated with the existing mobile applications you are using.

Controlling the Behavior of the Channel Guide

The appearance and behavior of the channel guide are controlled by parameters in the Cisco Vision Director registry. These settings control whether:

- A preview window is displayed when a channel is selected.
- The channel guide is automatically displayed on the TV when it is selected on the phone.
- The phone UI continues to display the channel guide after a channel has been selected.

Note: For individual luxury suites, you can override the setting that controls the automatic display of the channel guide on the TV through **Script Management**.

Note: For URL channels, the preview window will show the HTML content. The DMP will not scale this HTML content. We highly recommend that the URL channels be responsive to the region size.

Configuring Channel Guide Settings in the Registry

User Role: Administrator

To configure channel guide settings in the registry:

1. Click **Configuration > System Configuration > Advanced Registry Settings**. To be sure that you are displaying the current settings, click **Refresh**.

2. Scroll through the **Registry Data** list to the desired parameters.

Note: To change the phoneControl.stayOnChannelSelect parameter from its default (1), you must add the parameter using **Add**. The **Create - Configuration Settings** dialog box appears.

3. Type the **Name** and the **Value** field beside each parameter and enter the appropriate values.
4. Click **Save**.

Defining a Delay Channel

User Role: Administrator / Content Manager

If you have assigned DMPs to a delay zone, then you can configure the channel you want to display on the TVs controlled by the DMPs in the delay zone during the delay event state.

If no channel is configured, the DMPs will display the default channel during the delay event state.

To define a delay channel:

1. Click **Script Management** and select the event script.
2. Click the **Edit** icon.
3. Click the plus sign (+) below the Ad Hoc States tab. The Add State box appears.
4. Enable the **Manual** transition button (the default setting).
5. In the Ad Hoc State box, click **Edit**.
6. Select the delay group from the tree list.
7. Select the Set FULLSCREEN action source and drag it to the Assigned Actions list.
8. Click Region 1.
9. Select the channel you want to play during a delay from the Playlist Sources channels list.
10. Drag the channel to the Assigned Playlists.
11. Click **Apply**.
12. Click **Save**.

Defining a Non-Event Channel

User Role: Administrator / Content Manager

If you have assigned DMPs to a non-event zone, you can configure the channel you want the TVs to play when no event script is running in that non-event zone.

If no channel is configured, the DMPs will display the default channel during the non-event state.

To define a non-event channel:

1. Open the event script.
2. Click the plus sign (+) above the Ad Hoc states panel. The Add State box appears.
3. Enable the **Manual** transition button (the default setting).

4. In the Ad Hoc State box, click **Edit**.
5. Select your non-event group from the tree list.
6. Select the Set FULLSCREEN action source and drag it to the Assigned Actions list.
7. Click Region 1.
8. Select the channel you want to play when no event script is running from the Playlist Sources channels list.
9. Drag the channel to the Assigned Playlists.
10. Click **Apply**.
11. Click **Save**.

Setup Channel Source Types

There is a channel source type called **External URL** that allows you to specify an HTTP, HTTPS, or HTTP Live Streaming (HLS) source as a channel, including HTML page sources.

HLS sources are hardware-accelerated on the DMP. The content is specified as an External URL source type in the Channels setup. The system recognizes the content as an HLS source based on the Allowed HLS file formats designated in the system. The default extensions allowed are **m3u** and **m3u8**. See the [Cisco Vision Dynamic Signage Director Release Notes for Release 6.3](#).

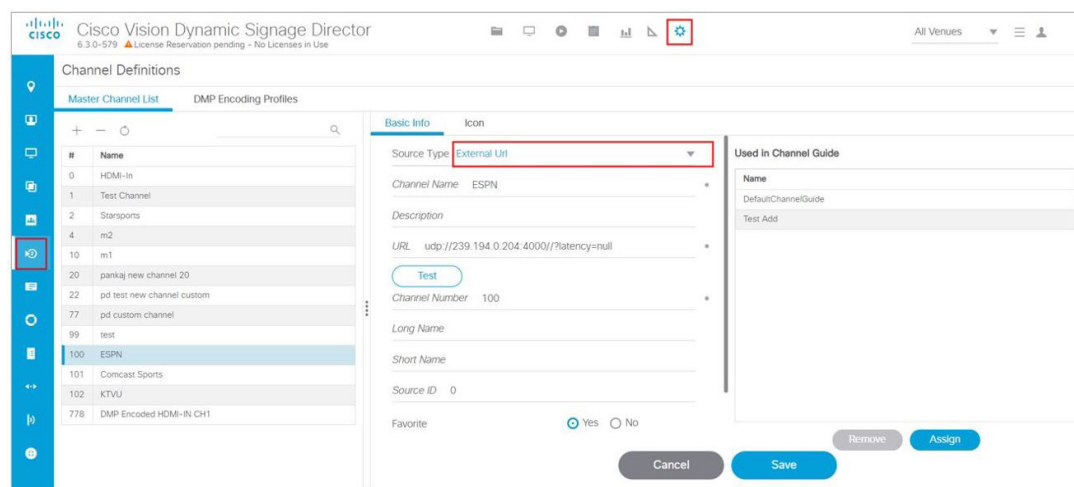
Note: This feature does not replace the existing HTML pass-through feature (**External Content**) from the **Library** screen.

The Source Type field is available with Video Stream, External URL, and HDMI-In options ([Figure 6 on page 136](#)).

To choose a source type:

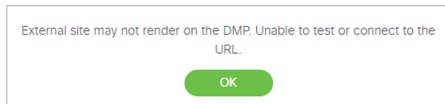
1. Click **Configuration > Channel Definitions**.
2. Click the **Basic Info** tab.
3. At the **Source Type** pull-down, select **External URL** to choose an external url for your channel ([Figure 6 on page 136](#)).

Figure 6 Channel Source Types



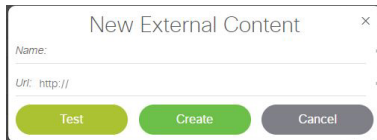
To test the external URL to see if it has X-Frame option, add the URL into the field and click **Test**.

If the URL will not render on the DMP, you may get an error message ([Figure 7 on page 137](#)). If it passes, click **Save**.

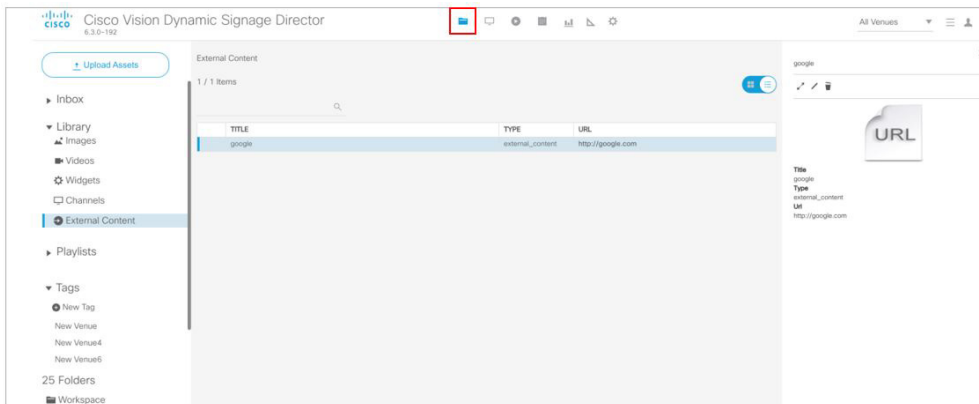
Figure 7 Testing the External URL, Error

To test a new External URL from the Library:

1. Right click **External Content > Create**. The New External Content dialog box appears (Figure 8 on page 137).

Figure 8 New External Content Dialog Box

2. Type in the Name and the URL.
3. Click **Test**. You may see an error message here if this external URL cannot render on the DMP.
4. If it passes, click **Create**. The URL will be stored and will push to the DMP (Figure 9 on page 137).

Figure 9 Test New External URL from Library

Use an external URL as a channel when you do not need synchronization of content, but you would like to be able to tune to that content from a script, User Control API, IP phone, or IR remote (Figure 10 on page 138). The figure just shows the Basic Info tab blow-up portion. External URL channels also can be streamed to a DMP-encoded multicast channel but do not support audio when streamed in that form.

Figure 10 External URL Dialog Box

The screenshot shows a dialog box for configuring an external URL channel. The title is 'ESPN'. The 'Basic Info' tab is active. The 'Source Type 1' is set to 'External URL'. The 'Channel Name' is 'ESPN', and the 'Channel Number' is '100'. The 'URL' is 'http://239.194.0.204:8000'. There are 'Cancel' and 'Save' buttons at the bottom.

The items with an asterisk (*) are required.

Maintaining Iframe for External URL Channel

This behavior for an external URL channel will perform the same way as the existing video channel. The Channel No Change option for multicast video allows a second layer of content to be overlaid and yet continue to play the multicast video in the background, so when the overlying content is dismissed, the video reappears without interruption.

For example, an external HTML-based menu board is overlaid with a Moment of Exclusivity (MoE) ad hoc state. The menu board external HTML may have video content embedded with it; there may be video playing behind the menu board external HTML that could have the channel no change option. When this HTML menu board composition gets overlaid with an MoE, then the MoE dismisses, the background video and HTML should simply reappear and have no reload or restart of the content. So: a video region is in the background, a web application is in the middle, and a top layer that is MoE content.

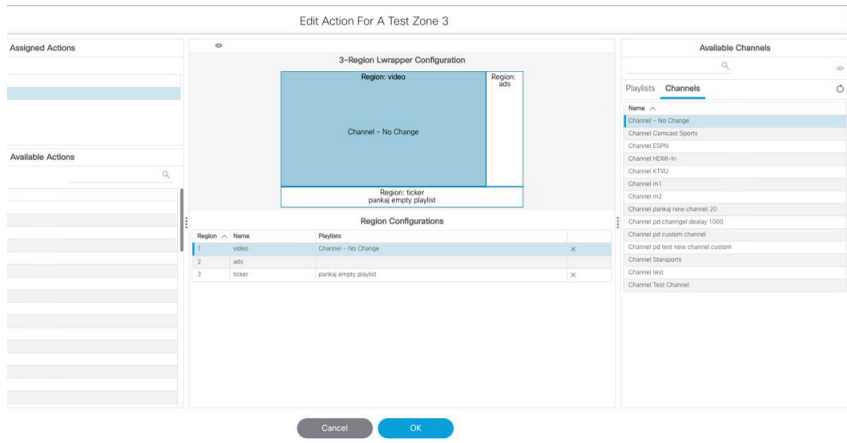
This URL channel can be unloaded if either (or both) the primary and secondary video players are set.

Note: Secondary video is not available on CV-HD and CV-HD2 DMPs.

If the next state puts the URL channel in a different size region, the URL channel will be scaled (or not scaled) based on a global registry setting.

To set Channel No Change:

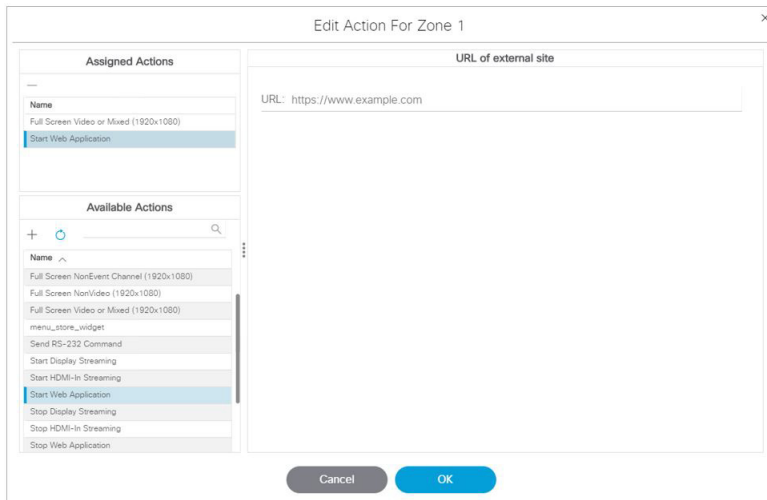
1. In the Edit Actions box, click on the region of the template you want to assign.
2. Click the **Channels** tab.
3. Select **Channel No Change** to that region.
4. Click **OK**.

Figure 11 Assign Channel No Change to a Region of your Template

Note: Channel No Change is not supported for the new quad-region default template.

Frameless External HTML Browser

You can render a full-screen external HTML page without the constraints of being in an I-frame. Supply a valid URL to a new script action command, **StartWebApp**, in the Edit Action dialog box (Figure 12 on page 139). The URLs are not managed as External URL content or External URL channels which are both rendered inside an I-frame.

Figure 12 StartWebApp for Frameless External HTML Browsers

Using the **StartWebApp** action, a new browser will be launched and is rendered on top of the template-based content. Use the corresponding **StopWebApp** to close a web page rendered via **StartWebApp**. If two or more successive **StartWebApp** commands are received by the DMP, the Cisco Vision Director runtime will invoke the **StopWebApp** implicitly to guarantee that only one browser is overlaid on top of the runtime.

Web pages launched via **StartWebApp** can outlive the script that spawned them. Use the same **StartWebApp/StopWebApp** commands in **Device Management** to separately manage the overlay browser.

Notes:

Configuring HDMI-In Video Sources on the SV-4K, CV-UHD, and CV-UHD2 Media Players

- Certificates are shared between the Cisco Vision Director runtime and the browser overlay.
- Custom fonts are not shared. Custom fonts are not accessible by the browser overlay. We suggest using webfonts so that pages are rendered the way the content creators meant these to be rendered.
- The webdb and indexdb storage settings will also apply to the browser overlay. Adjust the available memory you want to use in the asset pool accordingly if you decide to use browser overlay.

Configuring HDMI-In Video Sources on the SV-4K, CV-UHD, and CV-UHD2 Media Players

This section includes the following topics:

- [Guidelines for Using HDMI-In on the SV-4K, CV-UHD, and CV-UHD2 DMPs, page 140](#)
- [Prerequisites for Using HDMI-In on the SV-4K, CV-UHD, and CV-UHD2, page 140](#)
- [Restrictions for Using HDMI-In on the SV-4K, CV-UHD, and CV-UHD2, page 141](#)
- [Configuring HDMI-In as a Video Source in a Region on the SV-4K, CV-UHD, and CV-UHD2 Media Players, page 141](#)
- [Configuring a DMP-Encoded Multicast Channel on the SV-4K, CV-UHD, or CV-UHD2 DMPs, page 147](#)
- [Starting and Stopping HDMI-In Streaming on the SV-4K, CV-UHD, and CV-UHD2 Media Players, page 152](#)
- [HDMI-In Streaming Versus Display Streaming, page 153](#)
- [HDMI-In Streaming, page 154](#)
- [Display Streaming, page 157](#)

Guidelines for Using HDMI-In on the SV-4K, CV-UHD, and CV-UHD2 DMPs

When using HDMI-In on the DMPs, consider the following guidelines:

- If using video with UHD resolution, be sure to observe the guidelines for UHD content in the [Cisco Vision Content Planning and Specification Guide](#) and use cables that are HDMI version 1.4 compliant.
- You can use different forms of local control only when using HDMI-In encoding to stream video as a multicast channel. Otherwise, use scripts to start/stop streaming.
- If you want to maintain privacy of channels, create a DMP-encoded channel per suite with a unique multicast address (from 239.193.20.0/24 range) and create a separate channel guide per suite.

For example, if you have 10 suites:

1. Create 10 separate DMP-encoded channels with unique multicast addresses.
2. Create 10 different channel guides for each DMP-encoded channel.
3. Assign each suite to a different channel guide.

Prerequisites for Using HDMI-In on the SV-4K, CV-UHD, and CV-UHD2

Before you use HDMI-In on the DMPs, be sure that the following conditions are met:

- You have purchased a separate encoder software license. For more information, see the [Cisco Vision Dynamic Signage Director Release Notes for 6.4](#).

- Test the devices that you plan to connect to the DMP HDMI-In port to stream content for HDCP support.
- Most Mac OS and Windows laptops should work for HDMI-In video encoding for non-copy-protected content. It is up to the device manufacturer and OS whether or not this is supported.
- When using HDMI-In encoded video channels, be sure that you have configured the allowable multicast range 239.193.20.0/24 for this feature in the network requirements. See [Cisco Vision Network, Server, and Video Headend Requirements Guide](#).

Restrictions for Using HDMI-In on the SV-4K, CV-UHD, and CV-UHD2

Before you use HDMI-In on the DMPs, consider the following restrictions:

IMPORTANT: The HDMI-In port on the SV-4K, CV-UHD, and CV-UHD2 digital media players can only be supported either as a source to video region or source to encoder as a channel, but not both. Therefore, you cannot have a script in a state which tunes to the HDMI-In as video source in a region, and then transition to the next state where you are streaming video from HDMI-In.

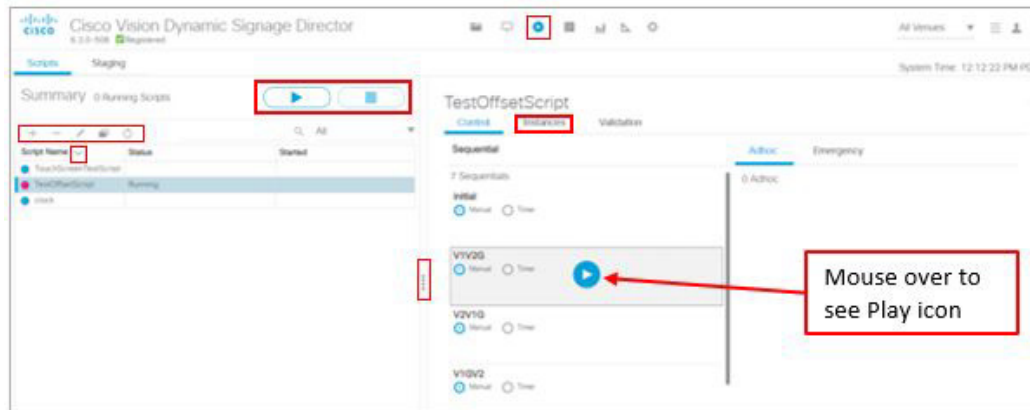
- Videos with UHD resolution are not supported for HDMI-In streaming.
- When using HDMI-In encoding to stream video content as a multicast channel:
 - The streaming state is synchronized only when streaming is started by script, IP phone, IR remote, or User Control API—not when started from **Device Management**.
 - This means that if you start streaming from **Device Management**, then the IR remote menu might not properly show which channel is streaming or not streaming.
 - The DMPs playing HDMI-In encoded video stops streaming if the DMP is rebooted, even though the script is running. Start Streaming is a direct command, which is sent when the svd server changes state (like RS232 commands or tv on /off type commands). It is only executed when the state is changed, so it is not re-executed on reboot.

Configuring HDMI-In as a Video Source in a Region on the SV-4K, CV-UHD, and CV-UHD2 Media Players

User Role: Administrator / Content Manager

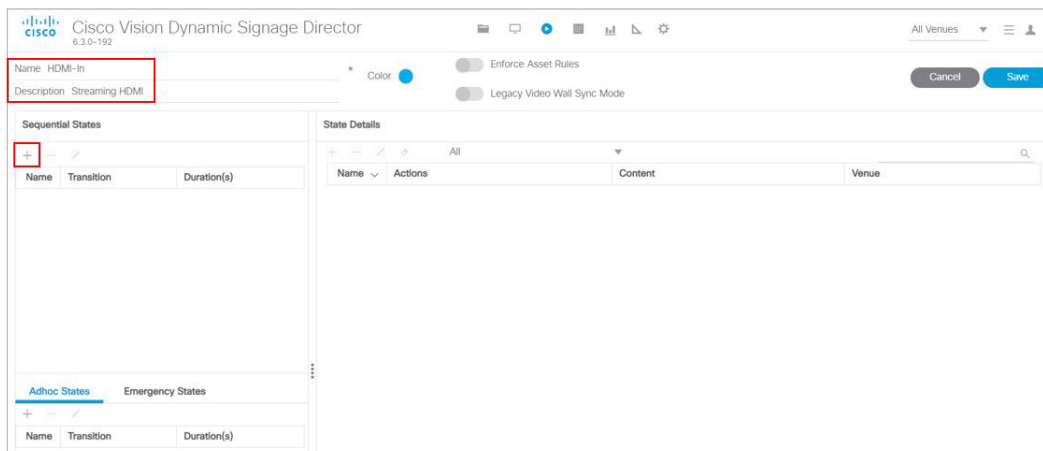
To configure HDMI-In as a video source in a region:

1. Click **Script Management**.
2. Click the + sign to **add** (create) a new script ([Figure 13 on page 142](#)). The States screen appears.

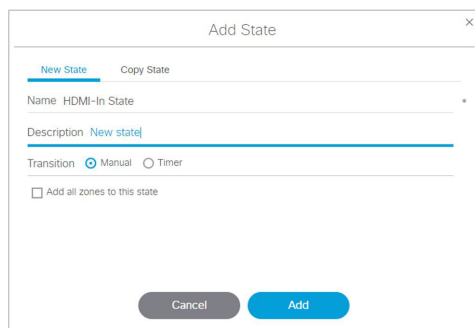
Figure 13 Script Management

3. Type **HDMI-In** for **Name** (as an example, only).

4. Type **Streaming-HDMI** in the **Description** (Figure 14 on page 142).

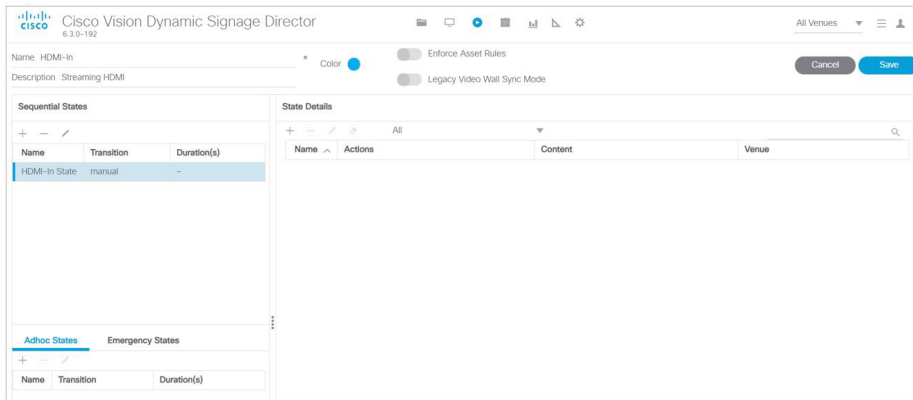
Figure 14 Creating a New Script

5. Click the **+** in the **Sequential States** panel. The **Add State** box appears (Figure 15 on page 142).

Figure 15 Add State

6. Add the state named **HDMI-In State**. Click **Add**. The screen changes back to show the new script.

Configuring HDMI-In Video Sources on the SV-4K, CV-UHD, and CV-UHD2 Media Players



7. Click the + in the **State Details** panel to select the group/zone where the event script should run to assign actions and content to the HDMI-In State. The Add Zone dialog appears (Figure 16 on page 143).
8. Once you select a zone, click the **Add** button, select the zone from the State Details pane, select **Edit** (pencil icon) in the State screen. The Edit Actions box appears (Figure 17 on page 143).

Figure 16 Add Zone

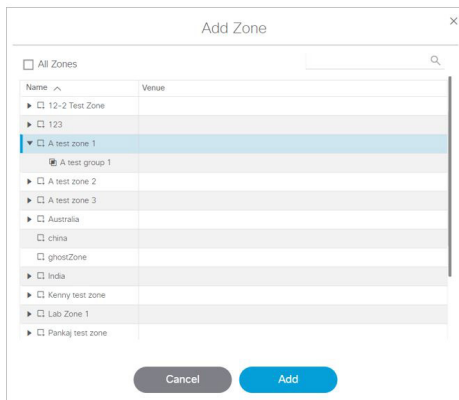
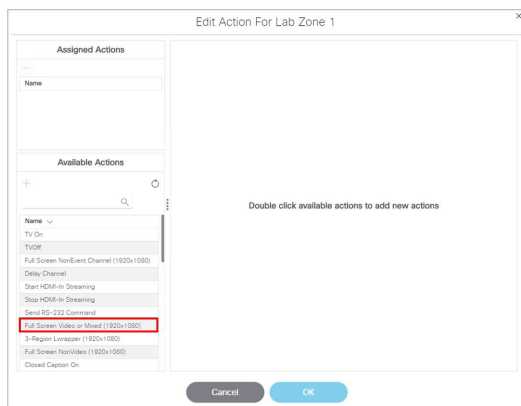
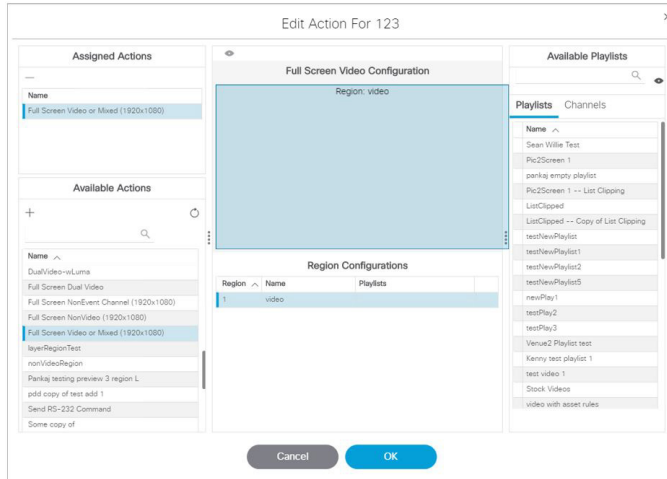


Figure 17 Edit Action Box



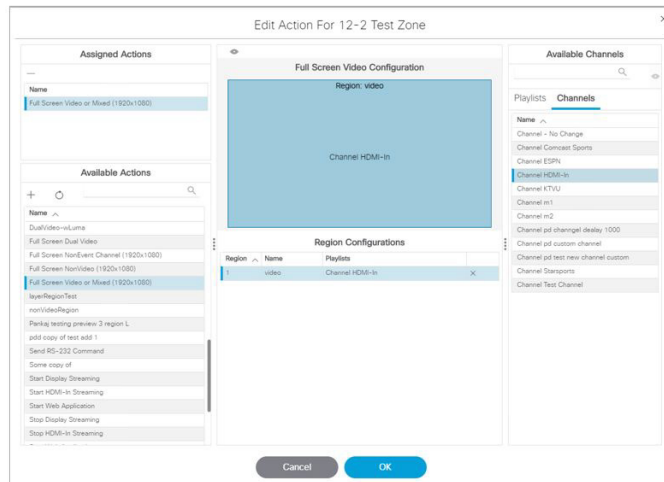
9. Double click an **Available Action** from the list. In this example, the Full Screen Video or Mixed. The Edit Action box updates.

Configuring HDMI-In Video Sources on the SV-4K, CV-UHD, and CV-UHD2 Media Players



10. Click the **Channel** tab.

11. Drag **HDMI-In** to a template region.



12. Click **OK** to save the script.

Note: Return to the Script Details screen by clicking the **Script Management** icon.

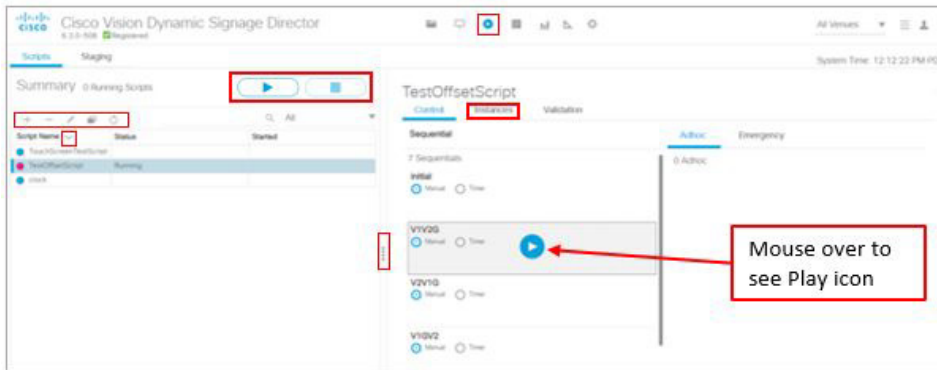
Configuring Video Stream Channel using Quad Template in a Region on the CV-UHD and CV-UHD2 Media Players

User Role: Administrator / Content Manager

To configure quad template as a video source in a region:

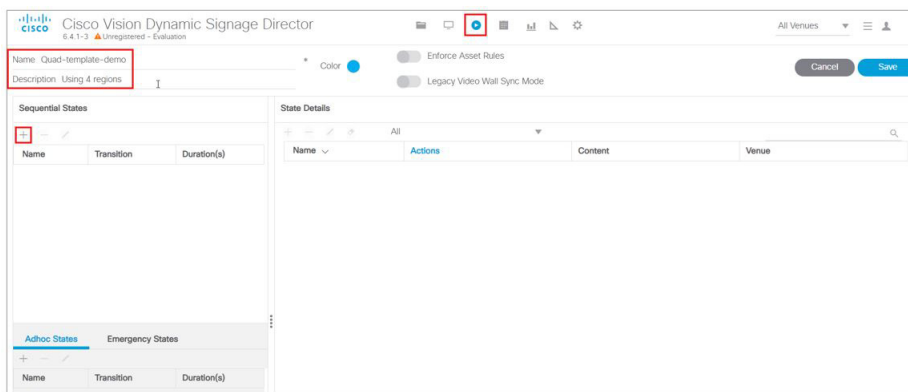
1. Click **Script Management**.
2. Click the **+** sign to **add** (create) a new script (Figure 18 on page 145). The States screen appears.

Figure 18 Script Management

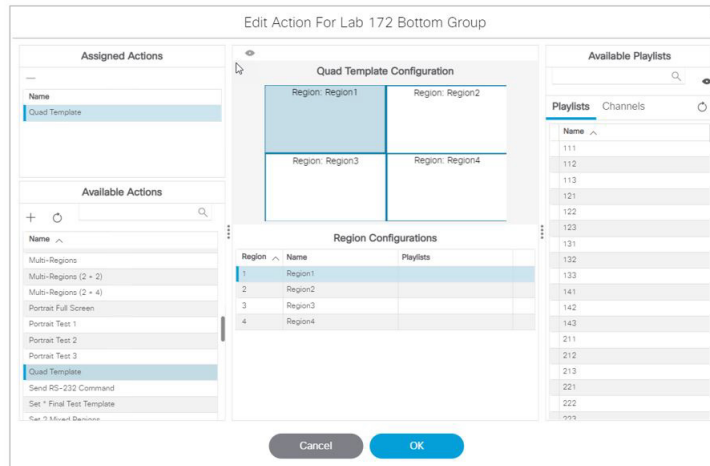


3. Type **Quad Template** for **Name** (as an example, only).

Figure 19 Creating a New Script for Quad Template



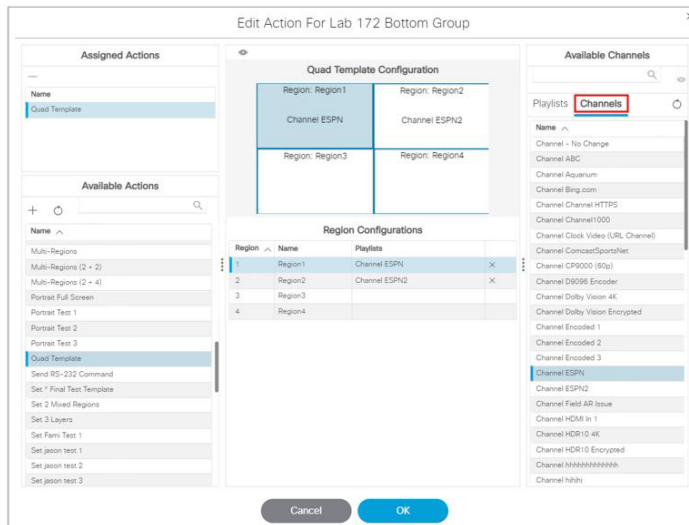
4. Click the **+** in the **Sequential States** panel. The **Add State** box appears.
5. Add the state named **Quad-template**. Click **Add**. The screen changes back to show the new script.
6. Click the **+** in the **State Details** panel to select the group/zone where the event script should run to assign actions and content to the Quad-template State. The Add Zone dialog appears.
7. Once you select a zone, click the **Add** button, select the zone from the State Details pane, select **Edit** (pencil icon) in the State screen. The Edit Actions box appears (Figure 20 on page 146).
8. Double click an **Available Action** from the list. In this example, the **Quad Template**. The Edit Action box updates.

Figure 20 Edit Action Interface

Note: When using quad template, up to four HD videos are supported (1920 x 1080 in each, equal region).

9. Click the **Channel** tab (Figure 21 on page 146).

10. Drag **channel content** to a template region.

Figure 21 Edit Actions > Channel Tab

11. Click **OK** to save the script.

12. Click **Save**.

Note: Return to the Script Details screen by clicking the **Script Management** icon. Continue with the following sections, just as you would any script.

Verifying the Script Plays Local HDMI-In Content

To verify that the script plays the local HDMI-In content:

1. Click **Script Management**.

2. Select the script and click **Start** (Figure 22 on page 147). The Start Script dialog box appears (Figure 23 on page 147).

Figure 22 Starting a Script

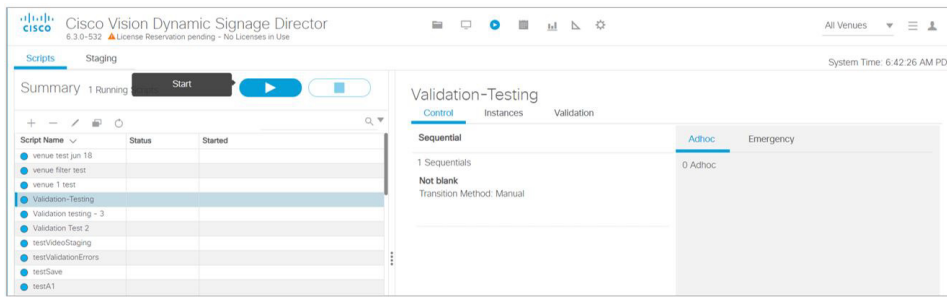
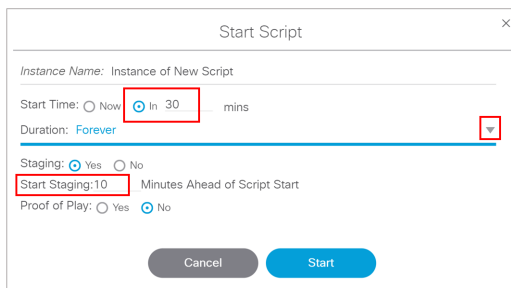


Figure 23 Start Script Dialog Box



3. Add in all the parameters.
4. Click **Start**.
5. Start the HDMI-In_State. Verify that the TV display for the target DMP is playing the expected HDMI-In content.

Configuring a DMP-Encoded Multicast Channel on the SV-4K, CV-UHD, or CV-UHD2 DMPs

User Role: Administrator / Content Manager

To configure a DMP-encoded multicast channel on the DMPs:

1. Click **Configuration > Channel Definitions**.
2. Select or create a channel guide where you want to include the DMP-encoded channel.

TIP: If you want to maintain privacy of channels, create a DMP-encoded channel per suite with a unique multicast address (from 239.193.20.0/24 range) and create a separate channel guide per suite.

3. From the **Basic Info** tab, configure the options shown in [Figure 24 on page 148](#) and described in [Table 2 on page 149](#).

Figure 24 DMP-Encoded Multicast Channel Example

The screenshot displays the configuration page for a DMP-Encoded Multicast Channel. The page is titled "Basic Info" and includes an "Icon" tab. The configuration fields are as follows:

- Source Type: Video Stream (dropdown)
- Channel Name: Starsports (text field with asterisk)
- Description: (text field)
- DMP Decode Latency: Alternate Settings 1 (dropdown)
- DMP-Encoded: (checkbox)
- Profile: High Bitrate (Low Latency / High Motion) (dropdown)
- Protocol: udp (dropdown)
- Multicast Address: 239.194.0.206 (text field with asterisk)
- Port: 4000 (text field with asterisk)
- Channel Number: 2 (text field with asterisk)
- Long Name: (text field)
- Short Name: (text field)
- Source ID: 0 (text field)
- Favorite: Yes No (radio buttons)
- Visible In Channel Guide: Yes No (radio buttons)

A "Cancel" button is located at the bottom right of the configuration area.

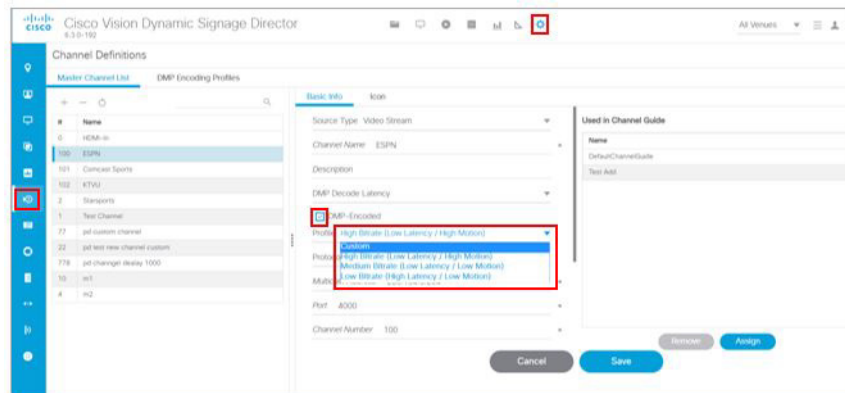
Table 2 DMP-Encoded Multicast Channel Options

Option	Description
Source Type	Must be set to Video Stream
Channel Name	Simple name for the channel that will appear in local control devices.
Description	Describe the Channel
DMP Decode Latency	Default Settings Alternate Settings 1 Alternate Settings 2 Alternate Settings 3
DMP-Encoded	(Required) Select this checkbox to configure an encoded multicast channel on the SV-4K, CV-UHD or CV-UHD2 DMPs.
(If DMP-Encoded is checked): Profile	Custom: you set the bitrate and latency High Bitrate (Low Latency / High Motion) Medium Bitrate (Low Latency / Low Motion) Low Bitrate (High Latency / Low Motion)
Protocol	UDP or RTP
Multicast Address	(Required) Multicast address from range 239.193.20.0/24 according to your Connected Stadium network configuration.
Port	(Required) Multicast port.
Channel Number	Number that appears in local control.
Video Mode	Resolution that matches the configuration of the content and TV display.
Long Name	The full name of your channel.
Short Name	A shortened name of your channel.
Source ID	Placeholder for future program guide integration. Not required.
Favorite	Yes or No
Visible in Channel Guide	Yes or No

4. Click **Save**.

DMP Encoding Profiles

New to Release 6.2 is a **DMP Encoding Profiles** tab. There are three new encoding profiles to choose from in the **Universal Channel List** tab ([Figure 25 on page 150](#)).

Figure 25 Setting a Custom Video Profile for DMP-Encoded Information

The available encoding profiles are:

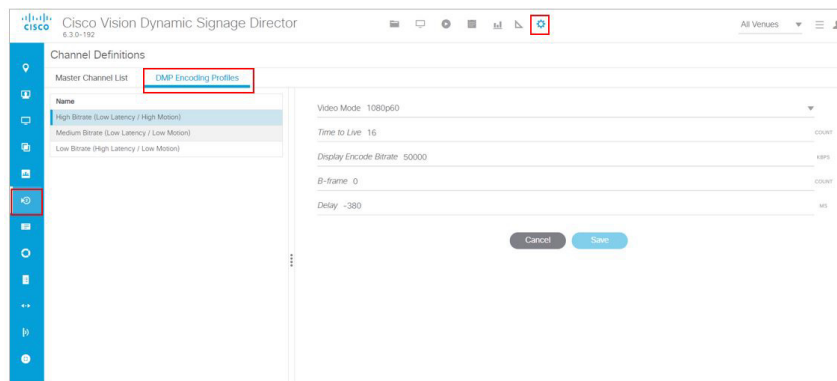
- Custom: you set the bitrate and latency
- High Bitrate (Low Latency / High Motion)
- Medium Bitrate (Low Latency / Low Motion)
- Low Bitrate (High Latency / Low Motion)

For every newly created DMP-encoded channel, select one of the encoding profiles. For pre-existing DMP-encoded channels like those in Release 6.1 and older, the earlier settings are preserved and the encoded profile becomes **Custom**. This provides backward compatibility and we recommended you select any one of the Encoding Profiles listed.

Best practice: Set the encoding profiles on any pre-existing channels from Release 6.1 or older. If you know your videos will contain low-motion, you can choose the low or medium bit rates for low-motion video. This helps the DMP adjust the jitter so your content displays best.

To choose an encoding profile:

1. Click **Configuration > Channel Definition**.
2. Select an encoding profile from the drop-down.
3. Click the **DMP Encoding Profiles** tab. The Detail screen appears ([Figure 26 on page 150](#)) showing the suggested **Video Mode**, **Display Encode Bitrate**, **Bframes** and **Delay**. Click **Save**.

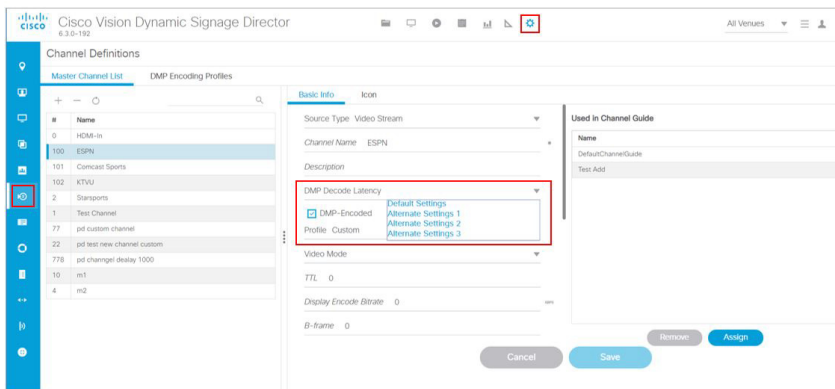
Figure 26 DMP Encoding Profile Details

DMP Decode Latency, Configured per Channel

This feature allows you to choose the latency setting you want on a per channel basis.

There are three **Decode Latency Settings** options available to **Channel Definitions** (Figure 27 on page 151). Pick the channel and use the **Default Setting** or the **Alternate Setting** from the drop-down.

Figure 27 Setting Decode Latency Per Channel

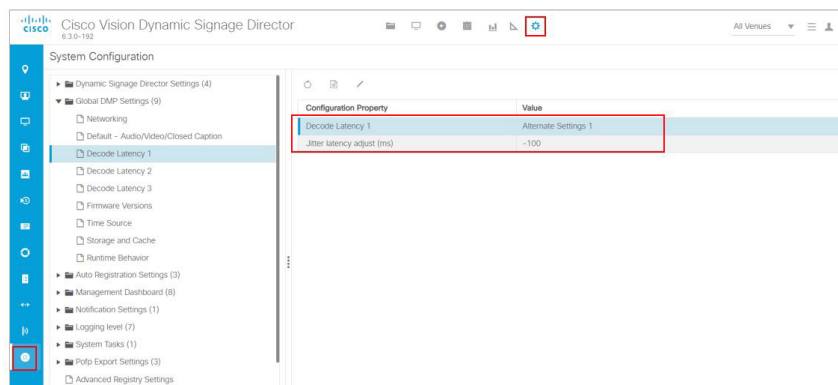


Set the Alternate Latency setting parameters in **System Configuration**.

To set the DMP decode latency:

1. Click **Configuration > System Configuration > Global DMP Settings > Decode Latency 1** (Figure 28 on page 151).
2. Click **Edit** (pencil icon). The Edit – Configuration Setting dialog box appears. Set all the values for the available configuration properties.
3. Click **Save**.
4. Click **Configuration > Channel Definitions** (Figure 27 on page 151).
5. Select the channel from the list on the left panel.
6. Choose **Alternate Settings 1, 2, or 3** from the **DMP Decode Latency** drop-down.
7. Click **Save**.

Figure 28 Alternate Latency Configuration Properties In System Configuration



Starting and Stopping HDMI-In Streaming on the SV-4K, CV-UHD, and CV-UHD2 Media Players

[Table 3 on page 152](#) summarizes the methods of starting and stopping streaming for HDMI-In video sources on the DMPs.

Table 3 Methods for Starting and Stopping HDMI-In Streaming by Type of HDMI-In Content Source

Method	HDMI-In as Video Source	DMP-Encoded Multicast Channel
IP Phone	No	Yes
IR Remote	No	Yes
Device Management	No	Yes
Script	Yes	Yes
User Control API	No	Yes

Note: When using the **Device Management** to start/stop streaming for a DMP-encoded multicast channel, the channel parameters are configured directly in **Configuration > Channel Definitions**.

Starting and Stopping Streaming by IP Phone

A luxury suite user can use a configured IP phone to select HDMI-In Broadcast on the selected DMP-encoded player. The user cwww.yahoo.com

can select the configured DMP encoded channels or Off to start streaming or stop streaming, respectively.

For more information, see the phone guide [Using a Cisco Unified IP Phone with Cisco Vision: HDMI-In Broadcast](#).

Starting and Stopping Streaming by IR Remote

A luxury suite user can use an IR Remote to broadcast HDMI-In contents. On selection of the HDMI-In Broadcast menu, the list of DMP-encoded channels for streaming are listed for selection and “Off” to stop streaming.

Starting and Stopping Streaming by Script Action

Two new actions of Start and Stop streaming can be defined as actions within a script. When the script starts running according to the defined state, either start streaming or stop streaming action will be executed.

Starting and Stopping Streaming by Device Management Command

User Role: Administrator

To start and stop streaming in Device Management:

1. Click **Device Management**. The **Devices** panel displays.
2. Click the folders you want. The item appears in the center panel. Select the device you want to start HDMI-In streaming.
3. Use the drop-down menu to select **Start Streaming**.
4. Click the **Play** icon (**Send Command**). The Send Command box appears.

5. In the **Send Command** box, specify the **Source** and the **Video Mode** (Figure 29 on page 153). Use the drop-down menus.
6. Fill in all the required fields.
7. Click **OK**.

Figure 29 Send Start Streaming Command in Device Management

8. A confirmation message flashes.

HDMI-In Streaming Versus Display Streaming

For HDMI-In streaming, what streams from the DMP is the audio/video from the HDMI-In port source ONLY (Figure 30 on page 154).

For Display Streaming, entire video composition (without audio) will be streamed from the DMP - i.e., an encoded rendition of what you see on the TV connected to the DMPs HDMI-out.

Display streaming can be used even when your video source is not HDMI-In, or in cases where you want to encode/stream not just HDMI-In but also other elements on the screen, or maybe an HTML5 page (you don't need a video source in display streaming). Display streaming parameters are set in channels where the DMP is the encoder (DMP encoded channels).

HDMI-In Streaming

Local HDMI-In (HDMI-In Pass-Through for SV-4K, CV-UHD, and CV-UHD2 Players)

Note: The following sections show an example of how to set HDMI-In streaming.

Script Configuration

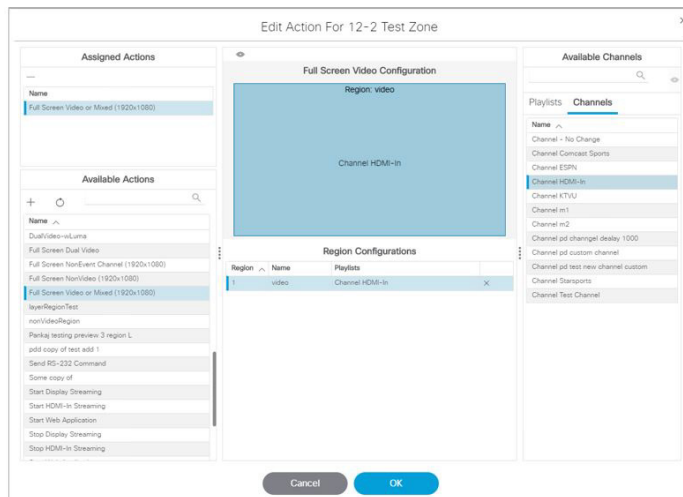
1. Assign for DMP .94 pre-defined Channel 0 “Channel HDMI-In” to action **Full Screen Video or Mixed (1920X1080)**.

When script runs, all input from HDMI-In will be streamed out to the Display via HDMI-OUT (Figure 31 on page 154).

Figure 30 HDMI Streaming



Figure 31 Full Screen Video Streaming



DMP HDMI-In Streaming

Script Configuration

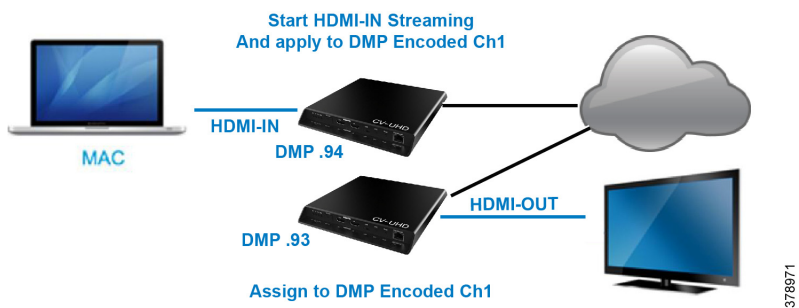
1. Create DMP-encoded CH1 configuration (Figure 32 on page 155). Click **Configuration > Channel Definitions > Universal Channel List tab > Basic Info tab**.

Figure 32 Create DMP-Encoded Channel 1

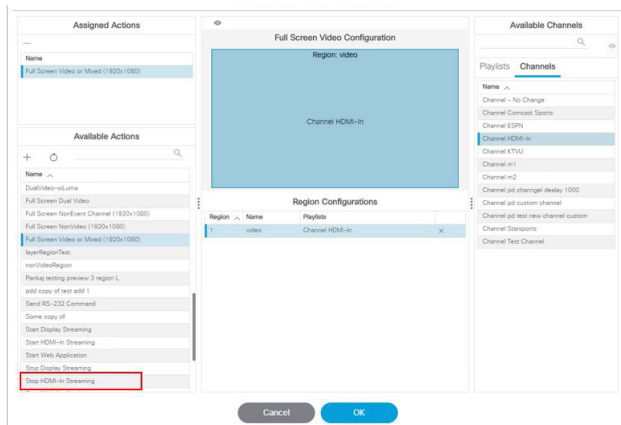
2. Attach video source to HDMI-IN.
3. For DMP .94 (Figure 33 on page 155): Script action Start HDMI-In Streaming and assign it to DMP encoded channel 1.
4. For DMP .93: Tune in on DMP Encoded channel 1 (Figure 34 on page 155).

Figure 33 Start HDMI-In Streaming to DMP-Encoded Channel 1

Figure 34 DMP-Encoded Channel 1



5. On DMP .94: stop display streaming (Figure 35 on page 156). See [Configuring HDMI-In as a Video Source in a Region on the SV-4K, CV-UHD, and CV-UHD2 Media Players](#), page 141.

Figure 35 Stop HDMI-In Streaming

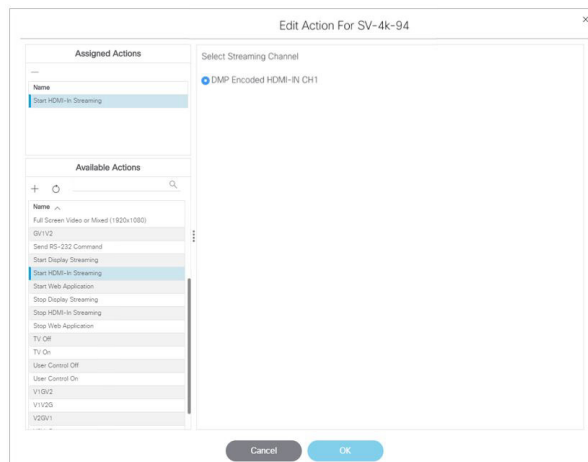
6. Click **OK**.

HDMI-In Streaming with External URL Source or Playlist

When you want to use the DMP HDMI-IN encoder to broadcast an External URL Script or a Playlist, there is an additional head-end DMP required (DMP .95).

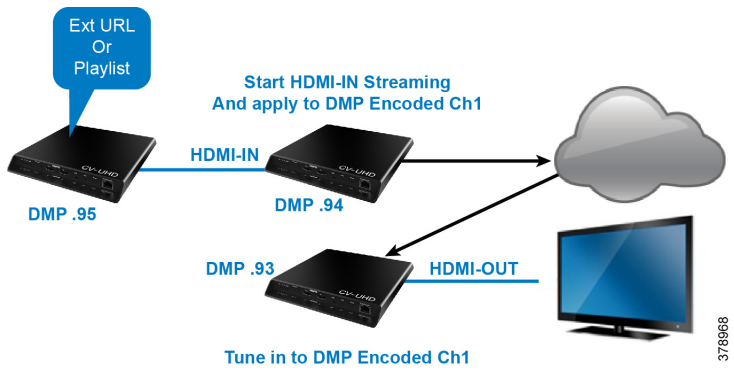
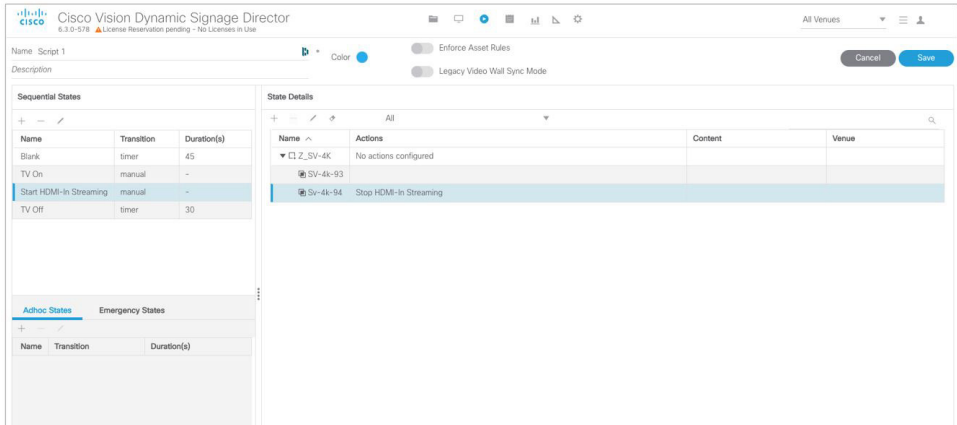
Script Configuration

1. Create separate script and run Ex. Mixed playlist on DMP .95.
2. Connect the HDMI-OUT to the HDMI-IN of DMP .94 (Figure 36 on page 156).

Figure 36 Start HDMI-In Streaming and Assign to DMP-Encoded Channel

3. In DMP .94 Start HDMI-Streaming and assign to DMP encoded Channel.
4. DMP .93: Select DMP Encoded channel 1.
5. On DMP .94, stop display streaming (Figure 37 on page 157).

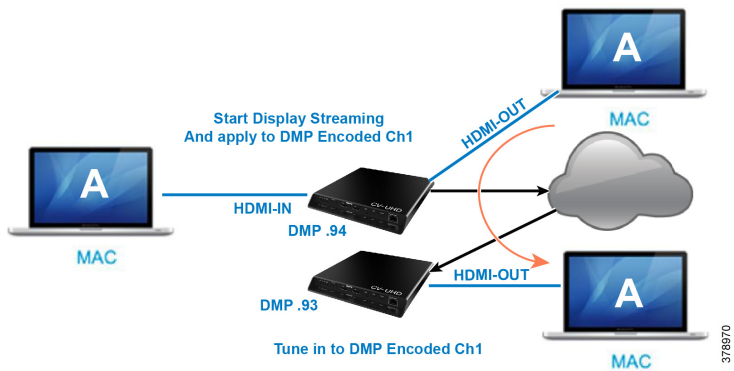
Figure 37 Stop HDMI-In Streaming on DMP 94



Display Streaming

Display Streaming with Video Source Input on DMP HDMI-In

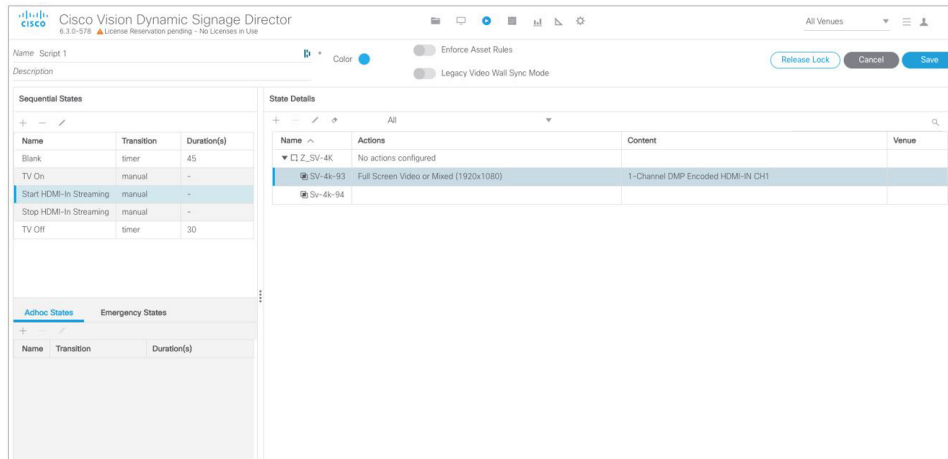
In this scenario, everything entering the HDMI-IN is displayed on the TV connected to the encoder DMP (DMP .94) and will be streamed out on DMP channel Encoded Ch1.



Script Configuration

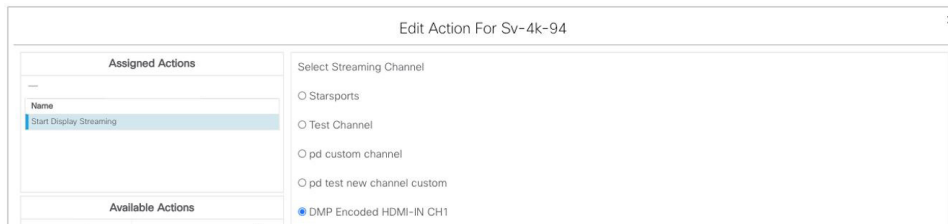
1. In DMP .94, start display streaming (Figure 38 on page 158) and assign to DMP encoded Channel 1 (Figure 39 on page 158).

Figure 38 Start Display Streaming on DMP .94



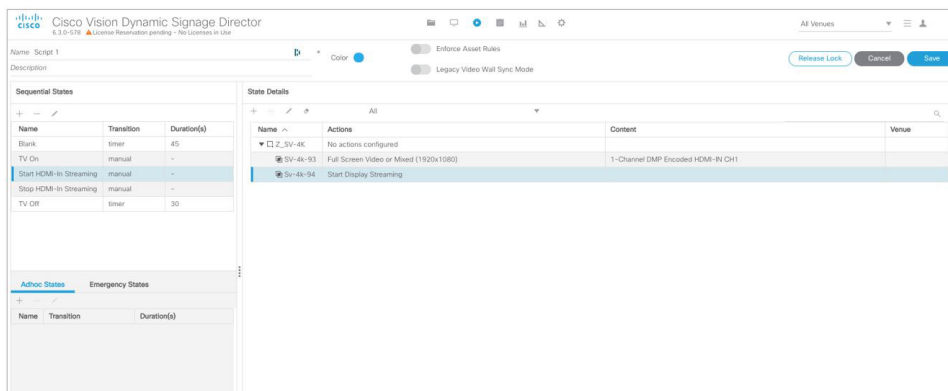
IMPORTANT: When content rules are in place, a DMP that reboots may not display the same content as other DMPs in the same group until the next state change.

Figure 39 Select Streaming Channel



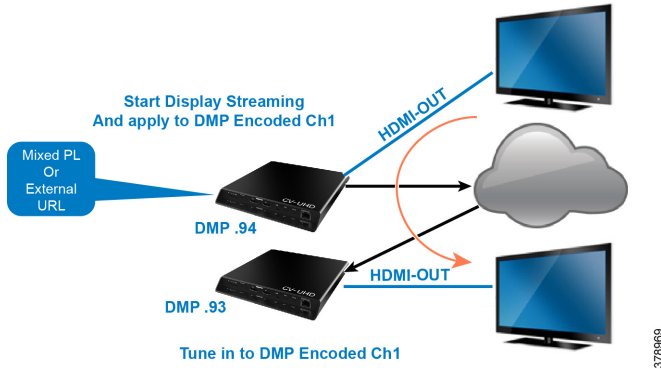
2. For DMP .93, tune to DMP-encoded Channel 1 (Figure 40 on page 158).

Figure 40 Start Display Streaming on DMP .93



Display Streaming with External URL or Mixed Media Playlist

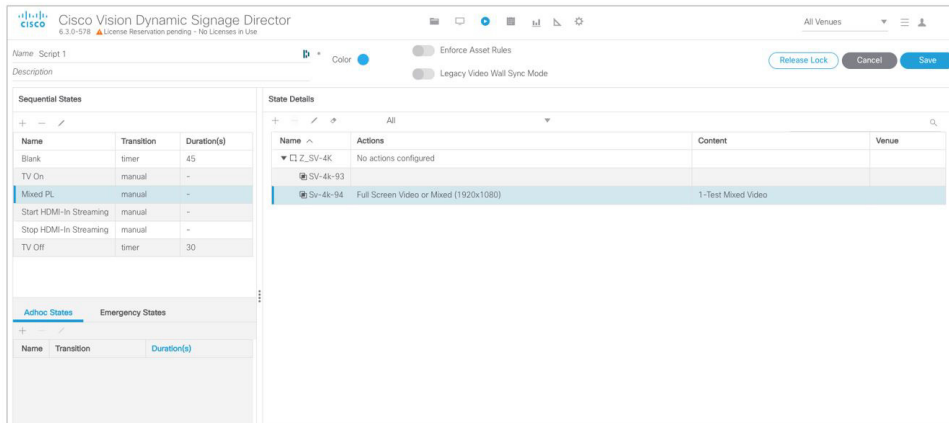
In this scenario, no HDMI-IN of the DMP is used. A script in DMP 94 is setup and started. Once the script runs, “Start Display Streaming” will attach it to the DMP–encoded channel, functioning as a multicast channel.



Script Configuration

1. Set up script.
2. Choose event state “Mixed PL.”
3. Assign “Full Screen Video or Mixed (1920x1080)” to DMP .94 (Figure 41 on page 159).

Figure 41 Assign DMP .94



4. For DMP .94, Start Display Streaming (Figure 42 on page 160) and assign it to DMP–encoded Channel 1 (Figure 43 on page 160).

Figure 42 Start Display Streaming on DMP .94

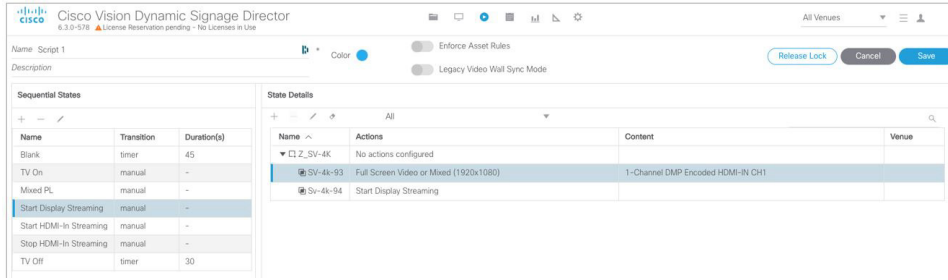
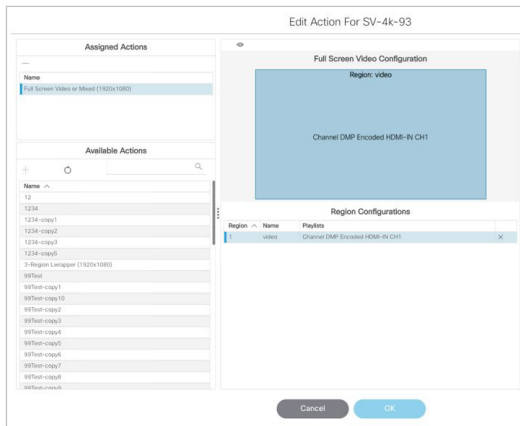


Figure 43 Select Streaming Channel



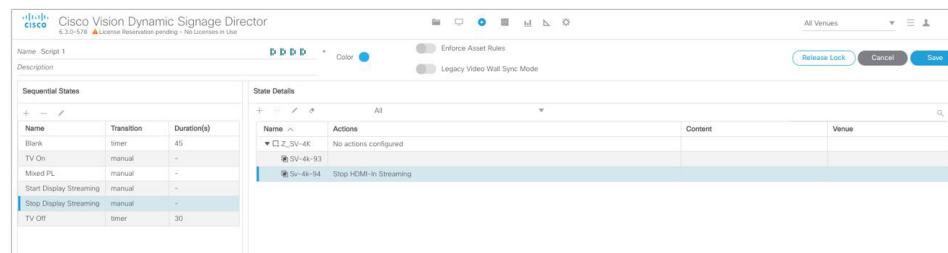
On DMP .93, choose the DMP-encoded channel 1 (Figure 44 on page 160).

Figure 44 Assign DMP .93 to Channel DMP Encoded HDMI-In Channel 1



On DMP .94, Stop HDMI-In Streaming (Figure 45 on page 160).

Figure 45 Stop HDMI-In Streaming on DMP .94



How to Manage Content (Assets)

This section includes the following topics:

- [Library \(Content\) Screen, page 161](#)
- [Library View, page 164](#)
- [Playlist View, page 165](#)
- [Asset Search Methods, page 167](#)
- [Guidelines for Asset Tags, page 168](#)
- [Getting Content Into Cisco Vision Director, page 170](#)
- [Staging Content to the Media Player, page 173](#)

Library (Content) Screen

The **Library** (content/assets) screen allows you to both manage content as well as create and modify playlists.

Library Inbox

Inbox allows you to schedule import of assets from external sources, accessible via secure file transfer protocols (SFTP). The assets available at the external sources are checked for valid extensions and file size as configured in Director. (Figure 46 on page 161). If you don't specify a destination folder in the Asset Library, the assets are downloaded to the Site list in **Inbox**, where they can be reviewed and moved to **Workspace** folders, appropriately.

Figure 46 Library, Inbox for Automated Importing of Assets

The screenshot shows the Cisco Vision Dynamic Signage Director interface. On the left sidebar, the 'Library' section is expanded, and 'New Site' is highlighted with a red box. The main content area shows a table of assets in the 'Workspace' folder, with 9 items listed. The table columns are TITLE, TYPE, SIZE, LAST MODIFIED, DURATION, and RESOLUTION.

TITLE	TYPE	SIZE	LAST MODIFIED	DURATION	RESOLUTION
2.png	image/png	119.73 KB	2020-07-18 20:42	0	1187x565
20200630_1c2959.mp4	video/mp4	43.4 MB	2020-07-13 04:29	21	1920x1080
72CuLRB4.jpg	image/jpeg	71.47 KB	2020-06-03 19:53	0	611x411
AU1.ts	video/ts	20.52 MB	2020-07-13 04:25	33	720x576
background.jpg	image/jpeg	117.82 KB	2020-05-16 07:20	0	1563x1059
blue.png	image/png	32.55 KB	2020-06-23 17:32	0	1900x1080
DS_FS_CorporateEvents_0323_	video/mp4	15.95 MB	2020-06-02 22:44	15	1920x1080
MB5618 Shark Reef Generic N_	video/mp4	19.02 MB	2020-06-16 22:29	15	1080x1920
Portrait.mp4	video/mp4	31.96 MB	2020-06-16 22:35	30	1080x1920

To create an automated content import event:

1. Click **New Site**. The Create Site window appears (Figure 47 on page 162).
2. Fill in the fields. The fields marked with * are required.
3. Schedule **Start Time** and **End Time**.

How to Manage Content (Assets)

Figure 47 Create New Content Source Site

The 'Create Site' dialog box includes the following fields and controls:

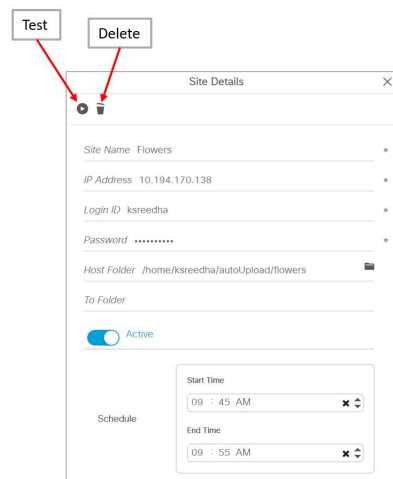
- Site Name * (text input: Enter site identifier)
- IP Address * (text input: Enter host site address)
- Login ID * (text input: Enter login ID)
- Password * (password input:
- Host Folder (text input: Enter FTP host folder path)
- To Folder (text input: Enter workspace folder path)
- Active (toggle switch, currently off)
- Schedule (dropdown menu):
 - Start Time (time picker: 02 : 30 AM)
 - End Time (time picker: 03 : 30 AM)
- Buttons: Cancel, Save

4. (Optional) Choose the **Host folder** and the **To Folder**.

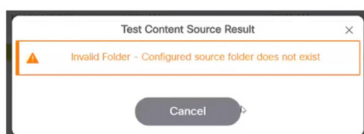
5. Click **Save**.

To test the content source for validity:

1. Click the **Test** icon (Figure 48 on page 162). **Test** checks the connectivity, validity of the credentials supplied, and also the existence of the configured source folder of the configured site.

Figure 48 Test and Delete a Content Source

If you entered any invalid information, you will see a failure notice. In the case below, it is an invalid destination folder.



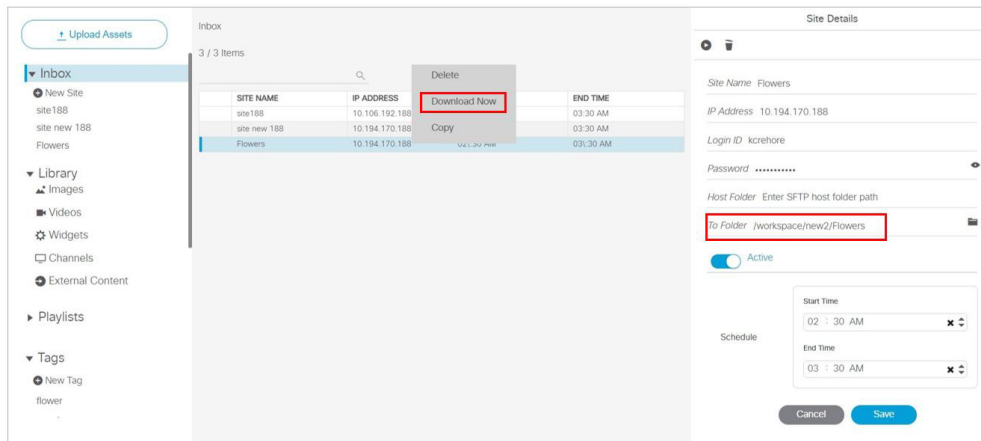
If you do not choose a destination folder in the **Create Site** dialog box, you can preview the content and decide if you want to download it. The unspecified content shows in the **Inbox** list.

To preview unspecified automated content from the Inbox list:

1. Select the content from the **Inbox** list in the center panel and double click it (Figure 49 on page 163).
2. Click the **Play** icon in the **Site Details** right panel to preview the content or change the center panel to thumbnail view.

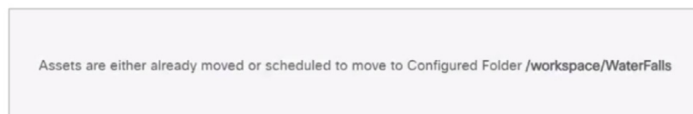
To download unspecified automated content from the Inbox list to Cisco Vision Director:

1. Select the content from the **Inbox** list in the center panel and right click it. An Action box appears (Figure 49 on page 163).
2. Select **Download Now**.

Figure 49 Action Box Operations for Auto-Content Import

If successful, you see “Content Import successfully triggered now.” This action triggers the content import On Demand. Since you didn’t choose a destination folder, the content goes to the Workspace Folder.

If you mapped the automated content to a designated folder in the **Site Details** panel, once the **Download Now** command is executed or the scheduled **Start Time** has passed, if you click on that content in **Inbox**, you see:

**IMPORTANT NOTES:**

- If you did not specify a Folder in the import action, you must move all the files to the correct Workspace folder or subfolders you’ve created. Otherwise the content is not available to use in a playlist.
- If you delete a site, the site is not visible in the list. However, the site details are not removed until the scheduled task runs. The default is 8:00 am.

To create a site with the same name before the scheduled task runs:

1. Click **Configuration > System Configuration > Scheduled Task**.
2. Scroll to **ContentImportDeleteTask**.
3. Click **Edit**.
4. Change the time to remove the Site details right away and click **Save**.

How to Manage Content (Assets)

Now you can reimport site details and assets without waiting for the task to run.

Use the **Library** menu to do the following tasks:

- Import static graphics or local video content.
- Manage external URL content.
- Add an HTML pass-through URL.
- Manage content:
 - Sort the content by name, type, URL, size, or expiration date.
 - Search for content.
 - Tag content.
 - Delete content.
 - Create folders for content.
- Create and manage playlists.

Library Screen Views

The Content screen has three views:

- [Library View, page 164](#) (default)
- [Playlist View, page 165](#)
- [Detail View](#) (content and playlist panels displayed)

The menu bar is organized based on the selected view.

Library View

Library View ([Figure 46 on page 161](#)) identifies the content-related layout and task options available from the **Library**.

Asset Items Panel

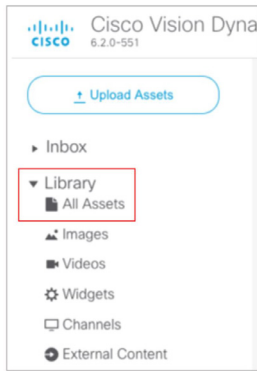
Asset items display as a list with details or as thumbnails. Use the slider in blue in the top right to change views.

By default, the Library Assets window shows List View of the following items stored in the Library:

- Inbox
- All Assets (when multi-venue is not enabled)
- Images (static graphics)
- Videos
- Widgets
- Channels
- External URLs

Note: In the left panel of the **Library** interface, the **Library** drop-down menu shows **All Assets** only when the registry setting for **multiVenueDeployment** is set to **false**. If **multiVenueDeployment** is set to **true**, **All Assets** is not visible.

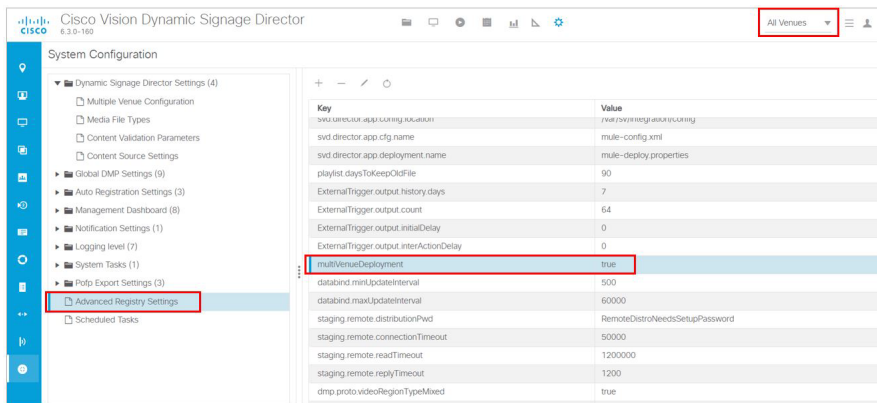
How to Manage Content (Assets)



To allow all assets across multi-venues:

1. Click **Configuration > System Configuration > Advanced Registry Settings**.
2. In Registry Data, scroll to **multiVenueDeployment**.
3. Click **Edit** (pencil icon). The Edit – Configuration Setting dialog box appears.
4. Set the **Value** to **true** (Figure 50 on page 165).
5. Click **Save**.

Figure 50 Registry for Multi-Venue Deployment

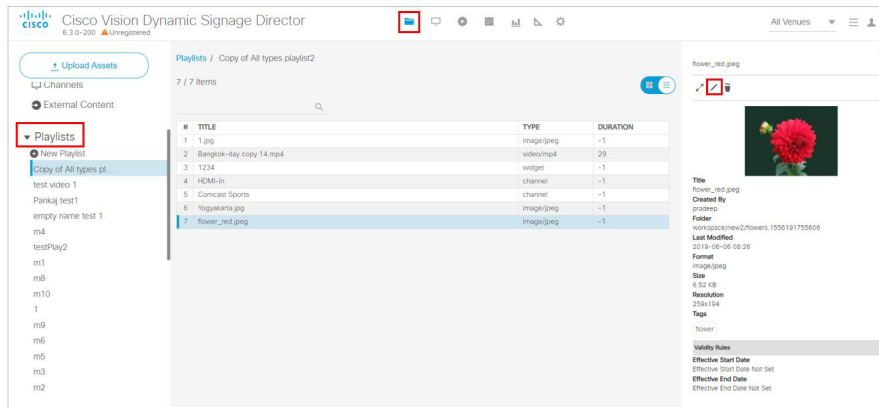


Playlist View

1. Click **Playlist** in the **Library** window to display your available playlists. The screen shows List View and gives the Title, Type, and Duration of your content.
2. Click any row to get the details of any content selected (Figure 51 on page 166).

How to Manage Content (Assets)

Figure 51 Playlist Detail



3. Use the pen icon to edit information for your content. The Validity Rules panel appears (Figure 52 on page 166).
4. Set the **Effective Start** and **End Dates** and **Times**. Click the calendar icon.
5. You can also choose **Restrict Playback** here. Set the days and times specifically as to when your content will not display.
6. Click the **Save** icon in the top of the panel.

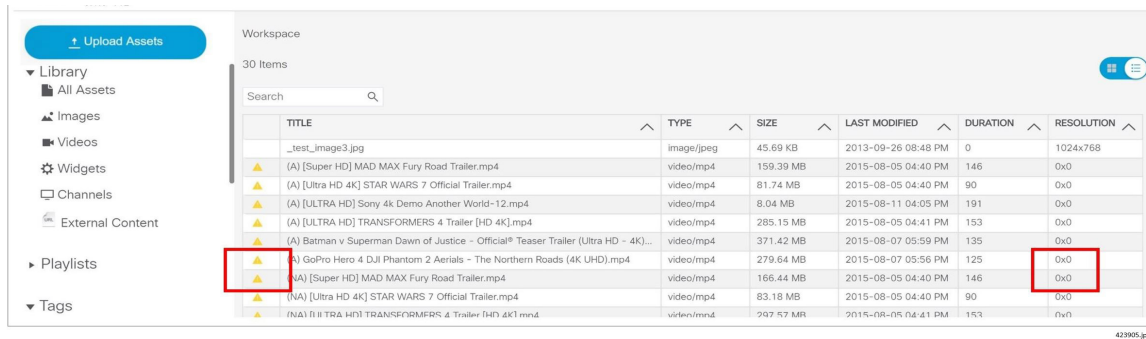
Figure 52 Validity Rules Panel

Asset (Content) Validation

If you upload a piece of content that is not supported by the DMP (Figure 53 on page 167), you get a warning message. The warning symbols means that the content may be distorted on the display. Best practice is to correct any warnings of your content so it will appear as planned. Hover over the icon for information.

The warning displays if the content metadata does not meet the restrictions defined in **System Configuration**. These settings do not necessarily mean that the DMP does not support the content, but it can be configured that way. As an example, if a site has content guidelines that all images must be no more than 1920x1080 only, and videos must be no more than full HD resolution only, that can be set in **System Configuration**. UHD video files can be played on the UHD DMPs, but a warning may still show in the UI.

Figure 53 Warning Symbol for Content Validity



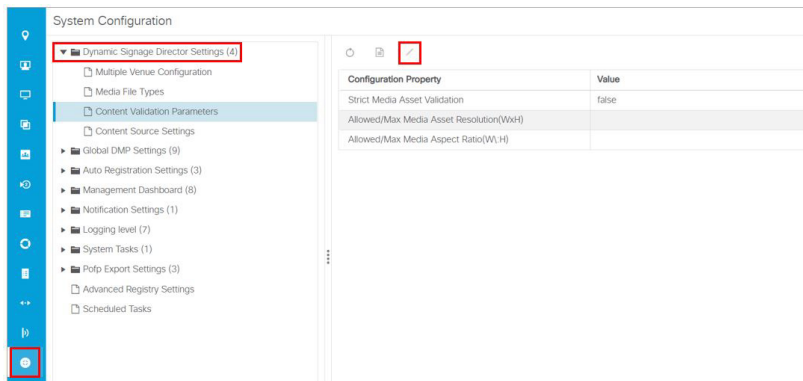
To check the validity of content:

1. Click **Configuration > System Configuration > Dynamic Signage Director Settings > Content Validation Parameters.**

Note: Since you can upload images and videos, each type has different issues involved in troubleshooting them. For images and videos, clear the warning here.

2. Check the resolution parameters of your assets to be certain they fall within the ranges allowed (Figure 54 on page 167). To change the value, select the property and click the **Edit** (pencil icon). The Edit – Configuration Setting dialog box appears.
3. Type a value and click **Save.**

Figure 54 System Configuration Content Validation Parameters



Asset Search Methods

Use the Playlist screen to find your asset items or playlists in multiple ways:

- Search for asset items assigned with a particular tag name by selecting the tag in the **Library** left pane.
- Search for asset items by name or file type using the Search box on the **Playlist** panel.

TIP: You can enter the first few letters of the content file name, or enter a file type such as ".jpg" in the search box.

- Search for playlists using the Search box on the Playlist panel, and by typing in the first few letters of the playlist name.

Guidelines for Asset Tags

Consider the following guidelines to create asset tags:

- Proof of Play processing requires the following naming convention:

- <tag name> **_PoP**

where <tag name> is the name for your proof of play label, and the “_PoP” suffix is required to designate the label for proof of play processing.

- The following characters are not supported in tag names: / ? < > \ : * | "
- Content in multiple playlists can use the same tag. The number of playlists that have content assigned to a tag displays under the # column in the Playlist Detail window next to the tag name.

Creating and Assigning Content Tags

User Role: Administrator / Content Manager

TIP: Consider assigning zone and group names as tags for the content files used in those areas. This allows you to type in a single search word or phrase and find all the content for a given zone or group, such as “Luxury Suite Delta” or “Concourse A.” You can also use tags that correspond to the type of content in the playlist, such as “menu.”

To create and assign content tags:

1. Click **Library > Tag** arrow. **New Tag** appears.
2. Click **New Tag**.
3. In the field, type a new name for the tag.
4. Hit **Return/Enter**. The tag name appears.

IMPORTANT: The following characters are not supported in tag names: / ? < > \ : * | " .

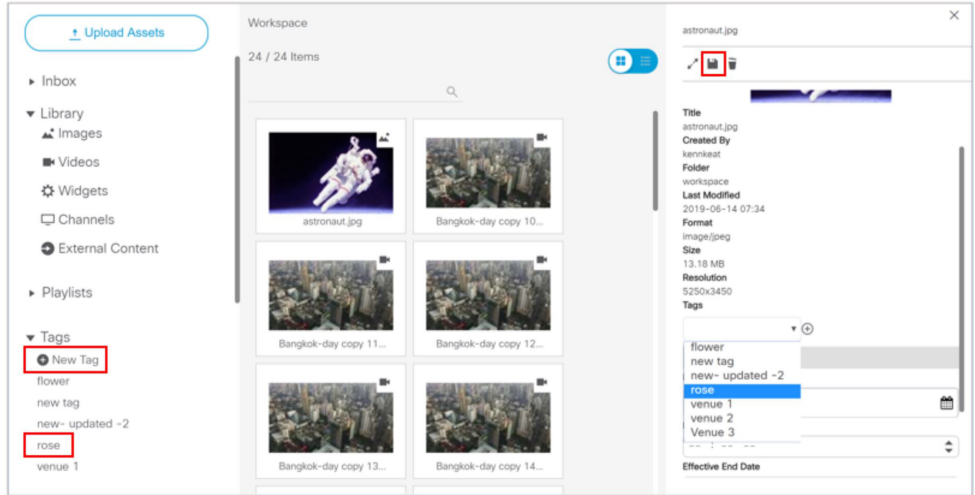
Note: If the tag name doesn't appear, click **Refresh**.

Be sure to include the required “_PoP” suffix in your tag name for proof of play records. For more information about Proof of Play, see the [Cisco Vision Director Proof of Play](#).

5. To assign a tag to content, select the content (asset) from the List view. The detail pane appears ([Figure 55 on page 169](#)).
6. Click the **Pen** icon to edit the metadata.
7. Select the tag name you want to attach to your content.
8. Click the **Save** icon.

How to Manage Content (Assets)

Figure 55 Assigning a Tag to Content



TIP: Assign tags to content when you first upload content to the **Library**.

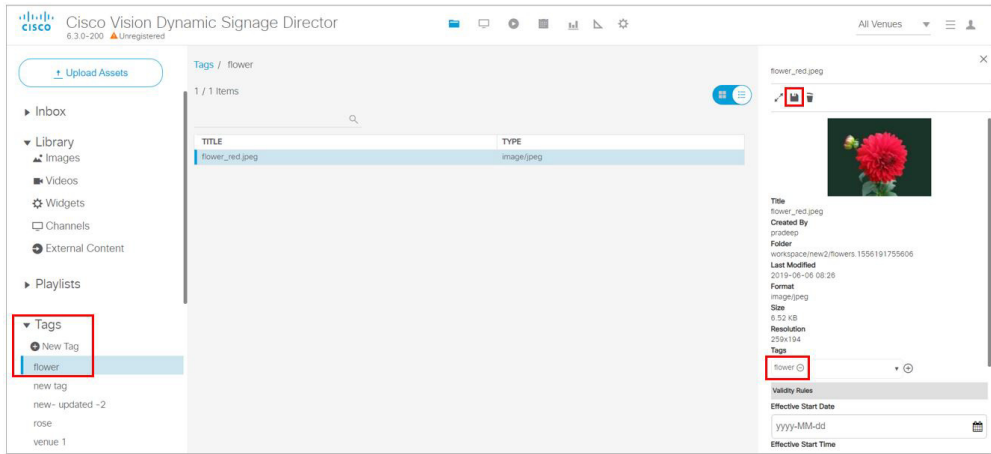
- 9. To verify that the content was assigned to the tag, click the tag name. The content assigned to the selected tag will display in the Content Items area.

Removing a Tag From Content

User Role: Administrator / Content Manager

When you remove a tag from content, the content will no longer be associated with that tag but the content itself remains in the **Asset Library**. [Figure 56 on page 169](#) summarizes the steps to remove a tag from selected content.

Figure 56 Workflow Summary to Remove a Tag From Content



To remove a tag from content:

1. In **Library**, select the tag name. The content items for that tag display in the Tags panel.
2. Click on the content item from which you want to remove the tag.

TIP: Use the keyboard Shift-Click function to select and untag multiple content items assigned to a tag.

3. Click the **Pen** icon in the Detail Panel to edit the tag metadata. The Tag information appears.
4. Click the tag name and the “-” symbol to remove the tag from the asset.
There is no confirmation prompt. The tag is immediately removed from the content.
5. Click **Save** at the top of the Detail Panel.

Getting Content Into Cisco Vision Director

Cisco Vision Director supports a wide variety of content types and methods for ingesting content.

There are limitations and specifications for the content size and formats supported by Cisco Vision Director. These vary depending upon a number of factors including the TV display resolution, the media player used in the venue, the screen template region layout, and the TV proximity to the fans.

Before you deploy content to Cisco Vision Director, be sure that you refer to the [Cisco Vision Content Planning and Specification Guide, Dynamic Signage Director](#) to be sure the content is in the correct format, is the appropriate size, and has the correct dimensions for where it will be displayed. If the content is not the correct size for the region into which it will be placed, the image will either be cropped or there will be blank space in the region.

[Table 4 on page 170](#) summarizes the different content types supported by Cisco Vision Director, the methods of how you ingest the content, and references to topics in this document and other external guides where you can find the details about how to work with that content type.

Table 4 Content Ingestion Methods by Type of Content

Type of Content	Method	For more information see:
Channel Guide	Configuration > Channel Guide	Configuring the Default Content Channel, page 125
Content Feeds (Atom, RSS)	Configuration > Data Integration	Release 6.4: Cisco Vision Director Data Integration Guide
Database (MySQL or SQLServer)	Configuration > Data Integration > Generic Data Source	Release 6.4: Cisco Vision Director Data Integration Guide
FTP Data	Configuration > Data Integration > Generic Data Source	Release 6.4: Cisco Vision Director Data Integration Guide
HTML Pass-Through	Library > New External Content	Adding a URL for HTML Pass-Through Content, page 172
HTTP/HTTPS Data	Configuration > Data Integration > Generic Data Source	Release 6.4: Cisco Vision Director Data Integration Guide
JSON Data	Configuration > Data Integration > Generic Data Source	Release 6.4: Cisco Vision Director Data Integration Guide
Menu Boards Using DMB	More > DMB Application	Cisco Vision Director Dynamic Menu Board and Store Configuration Guide
Menu Boards Using POS Data Sources	Configuration > Data Integration	Release 6.4: Cisco Vision Director Data Integration Guide

How to Manage Content (Assets)

Type of Content	Method	For more information see:
NFL Data	Configuration > Data Integration	Release 6.4: Cisco Vision Director Data Integration Guide
Scoreboard Controllers	Configuration > Data Integration	Release 6.4: Cisco Vision Director Data Integration Guide
Static Graphics (Content screen)	Library > Import	Importing Local Video and Images to the Library, page 171
Static Graphics (Direct upload to non-video playlist)	Library > Playlist View	Adding Static Graphics to a Non-Video Playlist by Direct Upload, page 184
TCP Data	Configuration > Data Integration > Generic Data Source	Release 6.4: Cisco Vision Director Data Integration Guide
UDP Data	Configuration > Data Integration > Generic Data Source	Release 6.4: Cisco Vision Director Data Integration Guide
Video (Headend)		Cisco Vision Network, Server, and Video Headend Requirements Guide (Available to qualified Cisco Vision partners.)
Video (Local)	Library > Upload Assets	Importing Local Video and Images to the Library, page 171
XML	Library > Import	Release 6.4: Cisco Vision Director Data Integration Guide

Importing Local Video and Images to the Library

User Role: Administrator / Content Manager

To import local video and images from the Main Menu:

1. Click **Library > Upload Assets**.

TIP: Use the keyboard Shift-Click function to select and untag multiple content items assigned to a tag.

2. Browse to the file that you want to upload.

TIP: Use the drop-down box by the File name to filter your selection by file type, including .zip files.

3. Click **Open**.

4. From the Upload Content dialog box, do the following ([Figure 57 on page 172](#)):

Figure 57 Upload Assets (Content)

- a. (Optional) Add or delete available tags.
 - b. (Optional) Select available tags to be assigned to the content that you are uploading.
5. Click **Continue**. The content uploads and appears in the Listview.

Adding a URL for HTML Pass-Through Content

User Role: Administrator / Content Manager

For HTML content guidelines, see the [Cisco Vision Content Planning and Specification Guide: Dynamic Signage Director](#).

To add a URL for HTML pass-through content:

1. Click **Configuration > Channel Definitions > Basic Info** tab.
2. Type the name and URL for your content.
3. Click **Save**.

Customizable Background Images for Login, DMP, or Channel Guide

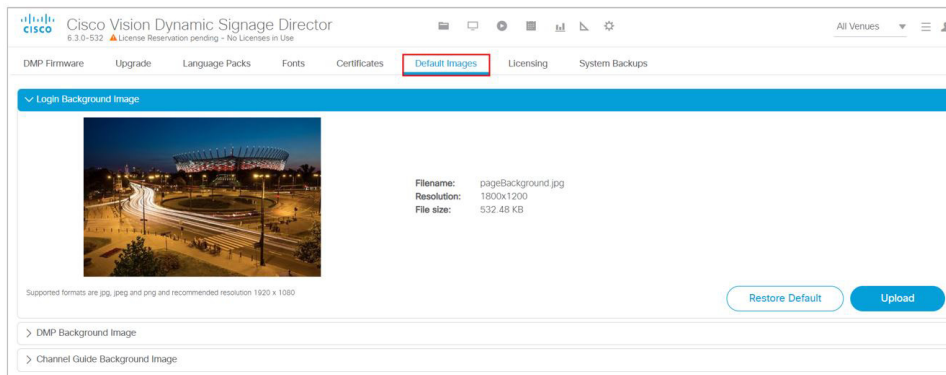
Now you can upload a different login image when you login to Cisco Vision Dynamic Signage Director, upload an image to show as the background of a DMP, and upload a channel guide image. The current file types allowed are stills, no video files: .jpg, .jpeg, .png, and .gif.

For the DMP image upload, the new image will show immediately after a DMP reboot. If the DMP should lose power or connectivity for any reason, the DMP will show a black screen. Then the screen will display the Cisco logo.

To upload a different image to the DSD Login page:

1. Click **More > Manage Software > Default Images**.
2. Click **Login Background Image** (Figure 58 on page 173).
3. Click **Upload**. Choose a new image. Click **OK**.

Note: When a DMP is configured for portrait mode, the DMP scales the image to fit (not to fill). The display may show black areas where the image does not fill.

Figure 58 Uploading a New DSD Login Image

This example shows only the login image upload. Open the **DMP Background Image** or **Channel Guide Background Image** drop-downs. The file size and type of file is limited. For instance, the limitation of file sizes apply to the new image you plan to display on the DMP, too. It displays with proper aspect ratio, depending on the screen size of the device you are changing.

We recommend an image that is 1920 X 1080 resolution. Use **Restore Default** if you need to return to the default images.

Staging Content to the Media Player

Once you have content uploaded to Cisco Vision Director, it must be pushed to the media player before it can be run by a script. This process of pushing content to the media player is called **content staging**.

Content staging needs to be done when:

- New custom fonts, language packs, or new login, DMP, or channel guide background default images have been installed or uploaded in the Software Manager.
- There have been changes to any content imported to the content Library (CMS). This includes local video and graphics files, and channels.

Note: Changes to widgets or data integration sources do not require content staging. But you must stage content to the DMP if you change content in a script or change content already assigned to a DMP within a particular script.

There are two ways that you can stage content from the Main Menu:

- Staging content manually

Manual content staging is performed outside the actual running of the script using the Staging button on the **Script Management > Staging** screen. With this method, you can stage content per script for all media players, or by selected media players.

Note: Only Administrator and Event Operator roles can stage content manually. Venue operator roles cannot stage content this way.

- Scheduling content staging

With this method, you can schedule content staging to occur at a specified number of minutes ahead of script start, or at a script start.

Staging Content Manually

User Role: Administrator / Event Operator

How to Manage Content (Assets)

To stage content manually:

1. Click **Script Management > Staging** tab (Figure 59 on page 174).
2. Select the script whose content you need to update on the media players.
3. Click the **Play** icon. The Start Manual Staging box appears (Figure 60 on page 174).

Figure 59 Staging Details

Name	Type	State	Start Time	End Time	Started by	Total De...	Complet...	Error
Staging requested on Thursday, March 5, 2020 3...	con...	STAGING_CO...	Thursday, March 5, 2020 3...	Thursday, March 5, 2020 3...	Manual Instance of Copy of demo 2	0	0	0

4. In the Staging screen, select the script you want to stage in the **For Script** field. Use the pull-down arrow.

Figure 60 Start Manual Staging Dialog Box

5. Select the target media players to receive the content updates. If you click “Selected DMPs configured in script,” a list of available media players appears (Figure 61 on page 174).

Figure 61 Selected DMPs Configured in Script

DMP Name	IP Address
1 pankaj test DMP	36.147.58.98
2 SJ Lab DMP 1	10.194.170.114
3 SJ Lab DMP 3	38.147.59.99
4 SJ Lab DMP 4	10.195.164.114
5 SJ Lab DMP 5	10.195.164.115
6 Copy of SJ Lab DMP 5	10.195.164.116

6. Select the available media players to receive the content updates. Use the scroll bar to find the DMP. Use the Shift and Control keys to select multiple DMPs.

7. Click **Start**.

Scheduling Content Staging with Script Start

User Role: Administrator / Event Operator / Venue Operator

How to Manage Content (Assets)

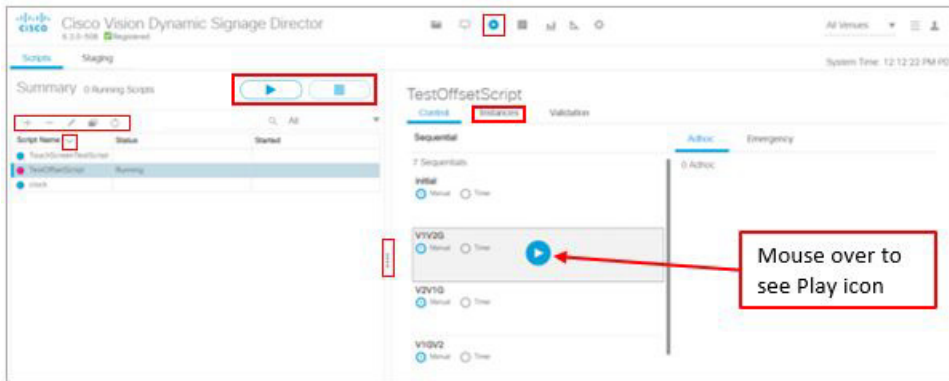
Be advised: a script will not start until staging is complete, even if 0 minutes ahead of script start is configured. Determine how long before the script start to schedule the staging.

For more information about starting event scripts, see also the [Starting an Event Script, page 226](#).

To schedule content staging with script start:

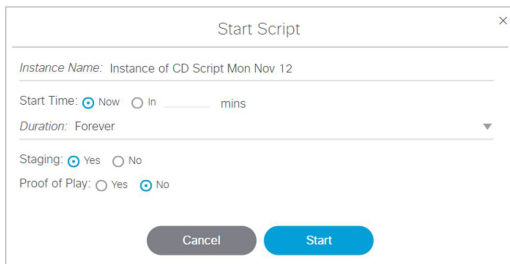
1. Click **Script Management > Script** tab. The Script Details screen appears ([Figure 62 on page 175](#)) with your scripts.

Figure 62 Script Details Screen



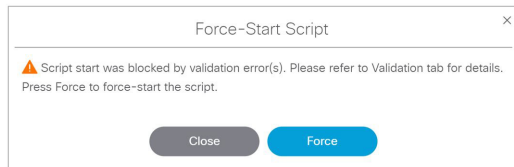
2. Select the script.
3. Click **Start**. The Start Script dialog box appears ([Figure 63 on page 175](#)).

Figure 63 Start Script Dialog Box



4. Set the start time as **Now** or type in the minutes.
5. Use the drop-down arrow to choose the **Duration**. The duration has values listed in seconds.
6. Click the Staging **Yes** or **No** button.
 - a. Type in the **Minutes Ahead of Script Start** to stage content to the media players (Script Start).
 - b. To run staging immediately before running the script, specify a value of 0. The script will not start until staging is complete.
7. Click **Start**.

If the script start is blocked by validation error(s), [Figure 64 on page 176](#) appears.

Figure 64 Confirm Force Script Start

Use the drop-down arrow to see more information on your script. The Status column shows **“Starting.”** When complete, see **“Past”** and icon, as well as the date and time in the Started column.

Click the **Staging** tab to see the details of your job. Double click the **Error** icon to see how to resolve the error.

