



Working with Screen Templates in Cisco Vision Director

User Role: Administrator / Content Manager

This module provides information about how to set up the layout of content on a TV display by defining regions for the screen using predefined or custom templates.

Information About Screen Templates

Screen templates define the video and non-video regions and layout of a display. Screen templates are used to create various layouts for the presentation of different types of content. Screen templates are assigned to zones or groups and apply to all locations within them.

[Figure 22 on page 87](#) shows three basic templates. The “L-wrap” template divides the screen into three sections where you have video in the top left of the screen, advertising along the side, and a ticker across the bottom that might be showing scores and a news feed.

Figure 22 Three Basic Templates



Cisco Vision Director allows you to create the following types of screen templates:

- Custom template—Specifies the size and arrangement of regions on the screen.
- Overlay template—Specifies a video region that overlaps a secondary video region (SV-4K only), or non-video region that overlaps a video region in the template.




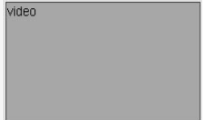
Default Screen Template Dimensions

The dimensions for the default screen templates are fixed and cannot be changed.

Alternatively, you can create custom screen templates (where you specify different sizes for the screen template regions) and overlay screen templates (where you have a non-video or video region overlapping a video or mixed media region).

[Table 4 on page 88](#) defines the default screen templates that are included with Cisco Vision Director **4.0 and later**. **Installing a full ISO image would remove previously available templates.**

Table 4 Default Screen Templates

Template Name	Content Type	Dimensions	Region Layout
Full Screen Video	Displays full-screen video.	Video: 1920x1080	
Full Screen Graphic	Displays full-screen graphic.	Graphic: 1920x1080	
3-Region L-wrapper	Displays live video footage or video replay in Region 1, a playlist of advertisements in Region 2, and a ticker with scores or news in Region 3. Also referred to as an “L-wrapper.”	Video: 1624x914 Ads: 296x914 Ticker: 1920x166	
Full Screen Dual Video	Displays a full screen video in each video region (video 1 and video 2). Using luma keying on video region 2, you can enable select areas of video region 1 content to be visible through video region 2. For video content with 4K resolution on the SV-4K media player, luma key cannot be applied. Luma keying is only supported for dual video when an HD video in the secondary region uses a luma key over a 4K video in the primary region. The Full Screen Dual Video template is only available to use on the DMPs media players.	Video 1: 1920x1080 Video 2: 1920x1080	

Note: Obsolete templates (such as 3-Region, Welcome, Exit, Emergency, Outside Emergency, 3-Region, 3-Region double) might still appear in your system if you have upgraded from earlier releases.

Full Screen Default Templates

The full screen templates that come with the Cisco Vision Director software are used to display full-screen video (or mixed media) or full-screen graphics. [Figure 23 on page 89](#) shows an example of a video (or mixed media) in the full screen template. [Figure 24 on page 89](#) shows an example of a graphic in the full screen template. Both are fixed screen templates and cannot be customized. [Table 5 on page 89](#) and [Table 6 on page 90](#) show the template dimensions.

Figure 23 Full Screen Video (or Mixed Media) Template Example



Table 5 Full Screen Video or Mixed Media Template Dimensions

Content Type	Dimensions
Region 1: Video or Mixed Media	Region 1: 1920x1080
Full Screen Video	1920x1080

Figure 24 Full Screen Graphic Template Example

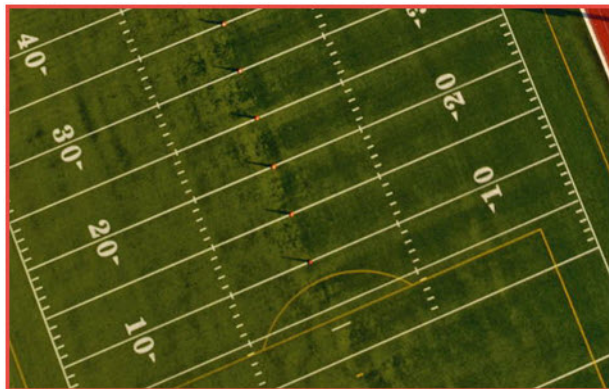


Table 6 Full Screen Graphic Template Dimensions

Content Type	Dimensions
Region 1: Graphic	Region 1: 1920x1080
Full Screen Graphic	1920x1080

3-Region LWrap with Bug Template

Figure 25 on page 90 shows an example of the content for the 3-Region Lwrap with Bug template that comes standard with Cisco Vision Director. This is a fixed screen template and cannot be customized. Table 7 on page 91 shows the template dimensions.

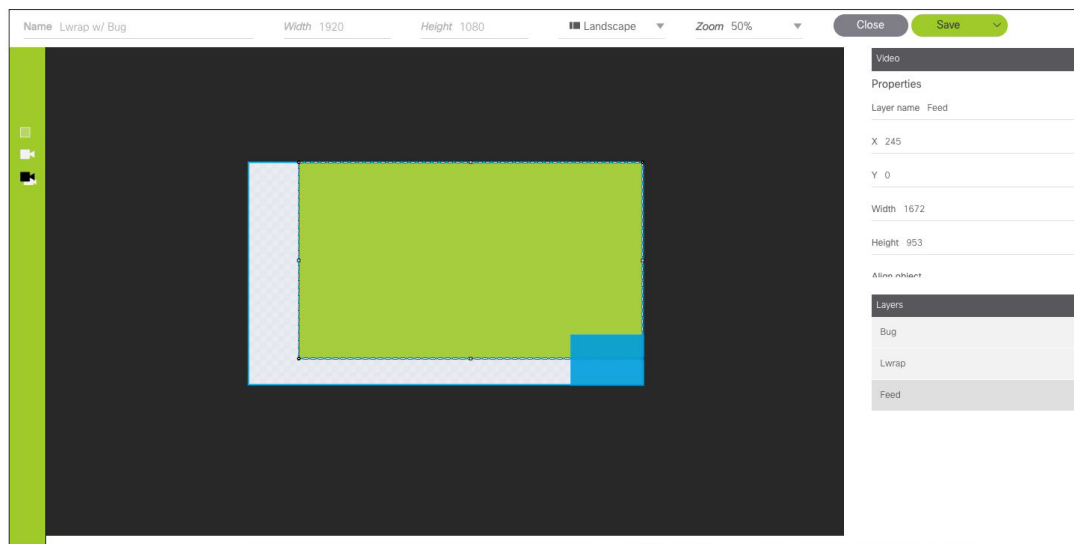
Figure 25 3-Region Lwrap with Bug Template, Feed Layer

Figure 26 3-Region Lwrap with Bug Template, Lwrap Layer

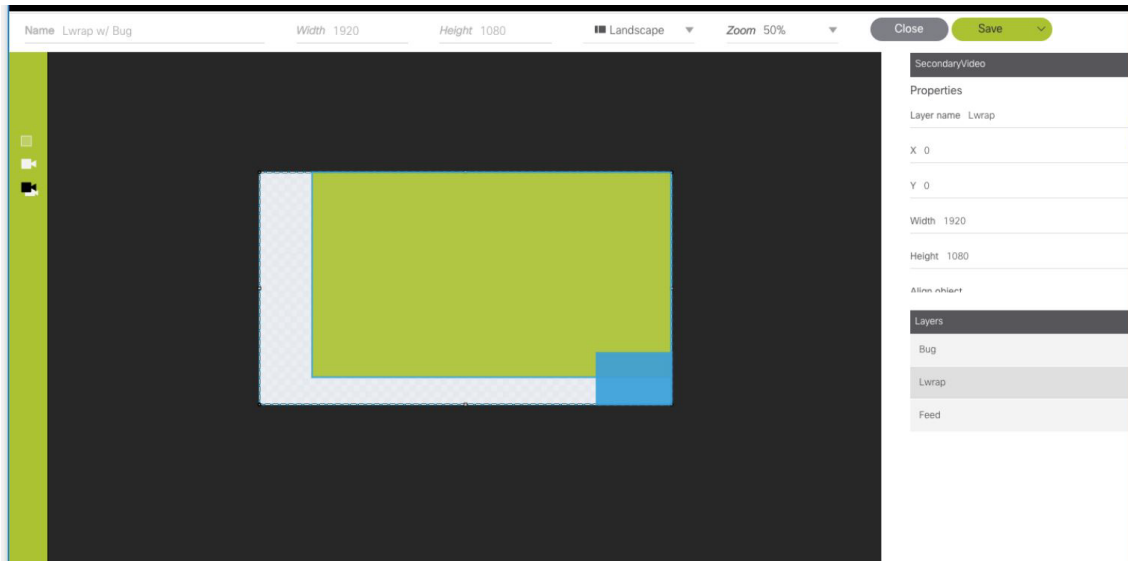


Figure 27 3-Region Lwrap with Bug Template, Bug Layer

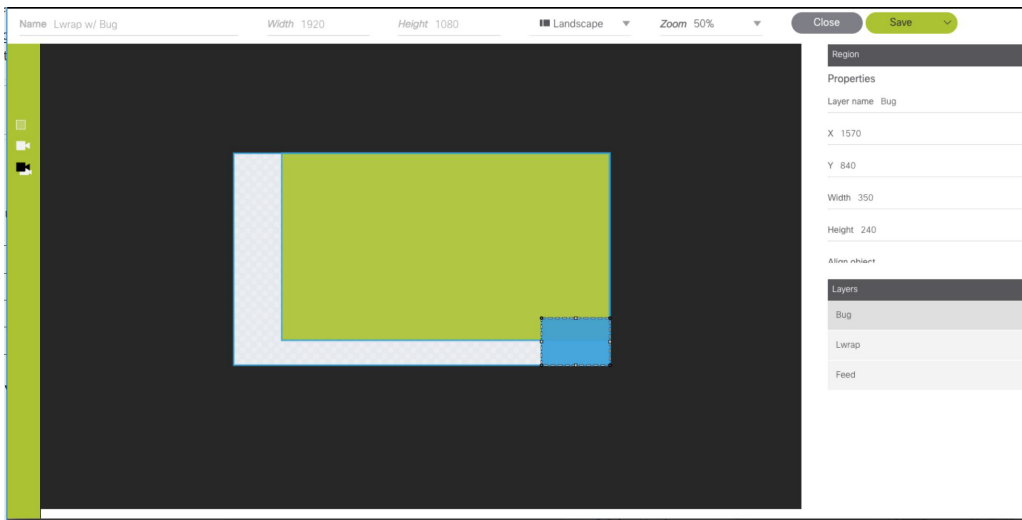


Table 7 Standard Lwrap with Bug Template Dimensions

Lwrap w/Bug	x	y	width	height
Bug	1570	840	350	240
Lwrap (video)	0	0	1920	1080
Feed (video)	245	0	1672	953

3-Region L-Wrapper Default Template

Figure 28 on page 92 shows an example of the content for the 3-Region L-wrapper template that comes standard with Cisco Vision Director. This is a fixed screen template and cannot be customized. Table 8 on page 92 shows the template dimensions.

Figure 28 3-Region L-Wrapper Template



Table 8 3-Region L-wrapper Region Template Dimensions

Content Type	Dimensions
Region 1: video or mixed media	Region 1: 1624x914
Region 2: non-video	Region 2: 296x914
Region 3: non-video	Region 3: 1920x166

Table 9 on page 93 lists the characteristics of the 3-Region L-wrapper screen template.

Table 9 3-Region L-wrapper screen template characteristics

Region	Description
Region 1	<ul style="list-style-type: none"> ■ 16:9 aspect ratio. ■ Supports live video broadcasts or video replay. For more details on video formats, refer to the Cisco StadiumVision Director Video Headend Design and Implementation Guide for your release (available to qualified Cisco Vision partners).
Region 2	<ul style="list-style-type: none"> ■ Supports playlists of advertisements. ■ Due to the small dimensions of region 2, use graphic-intensive ads rather than ads that have a lot of small text in this region.
Region 3	<ul style="list-style-type: none"> ■ Designed for displaying a graphic and/or information in the form of a ticker. ■ The ticker content can be from a compatible RSS feed approved by the venue. ■ The ticker region can be customized with the venue logo (with the ticker content playing in the remaining space).

Full Screen Dual Video Default Template for All DMPs

A full screen dual video default template is available for the DMPs media player. Dual video regions allow you to overlay two video regions; a secondary local or multicast video region and a primary video region.

The dual video template provides the following capabilities:

- Show two video feeds at the same time.
- Place video-based advertisements.
- Promote a moment of exclusivity during an event.
- Apply luminance (luma) keying to the secondary video region.

Note: The dual video template is only supported on the DMPs media players.

For video content with 4K resolution on the SV-4K and CV-UHD media players, a luma key cannot be applied. Luma keying is only supported for dual video when an HD video in the secondary region uses a luma key over a 4K video in the primary region.

[Table 10 on page 94](#) lists the specifications of the dual video regions.

Table 10 Full Screen Dual Video Template Specifications

Region	Specification
Video 1	<ul style="list-style-type: none"> ■ Can be controlled using an infrared remote (IR) remote or local control. ■ In the template, video region 1 appears as the bottom or primary layer. ■ Supports audio. ■ Source: Local or multicast video.
Video 2	<ul style="list-style-type: none"> ■ Cannot be controlled through an IR remote or local control. ■ In the template, video region 2 fully overlaps video region 1. ■ Luminance (luma) keying is applied to second video region (it cannot be disabled or changed in the template). ■ Does not play audio. ■ Source: Local or multicast video.

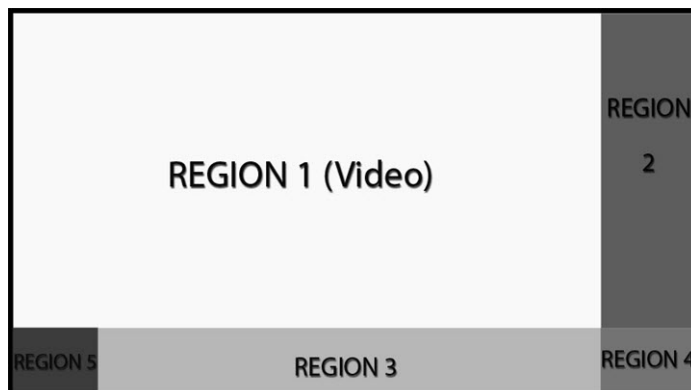
Note: The luma key default is set to #ff2000. To enable luma keying, click the checkbox.

To change the global luma key value:

1. Go to **Tools > Management Dashboard > Dynamic Signage Director Configuration > System Configuration > Global DMP Settings > Audio/Video/Closed Caption.**

Custom Screen Templates

Custom screen templates allow you to change the size and arrangement of content regions on the screen to fit your sponsor and venue needs. [Figure 29 on page 94](#) shows an example of some custom screen templates.

Figure 29 Custom Screen Template Example

Custom Overlay Screen Templates

Overlay screen templates are custom templates that allow a non-video region (graphics) to overlap a video (or mixed media) region on the media players.

TIP: On the DMPs media player, you can also create a custom template that allows for dual video regions or you can use default full screen dual video template. See [Full Screen Dual Video Default Template for All DMPs, page 93](#).

This overlay feature can be assigned to any region. Using the overlay feature you can display:

- A full-screen video (or mixed media) region with a full-screen non-video (graphics) content region overlaid on top.
- A brand/graphic overlaid in a small region of the screen.
- A ghosted brand/graphic such as a transparent logo where some of the colors in the logo are transparent and others are not.

Note: When creating an overlay screen template on the DMPs media player that has a primary video and a non-video region on top, be sure the image is designed to fit on the canvas. If the image is placed off the canvas, only part of the image will appear

The recommended file format for graphics when using an overlay template is 8-bit or 24-bit PNG (transparent pixels supported). When you create the PNG file, you must make the pixels transparent for the full-size video region. JPG files are not recommended because they do not preserve transparency.

How to Configure Screen Templates

This section includes the following topics:

- [General Guidelines for All Screen Templates, page 95](#)
- [Guidelines for Custom Screen Templates, page 96](#)
- [Understanding the Templates Screen, page 97](#)
- [The left panel has Non-Video Region, Primary Video Region, and Secondary Video Region., page 97](#)
- [Naming Screen Templates, page 98](#)
- [Setting the Size and Position of a Region on the Template Canvas, page 98](#)

General Guidelines for All Screen Templates

When creating screen templates and populating content, consider the following:

- Templates are ordered by name.
- For Proof of Play, you can have more than one region with an ad playlist.
- Regions are listed from top-to-bottom layer order, where the top layer appears at the top of the list.
- Layers are numbered, if a screen template contains a non video region and a video or mixed media region, the video or mixed media region always appears at the bottom of the list.

Note: You can manually drag a video region to be on top of other regions; however, the rendering of the regions below the video region will not be predictable, and can be completely invisible.

- A plus sign icon adds a non-video region.
- A film icon adds a video or mixed media region.
- Switching a non-video region to a video region might produce a warning if there is already an existing video region.

- Saving an existing template with regions removed will produce a force dialog for confirmation. In addition, when a template that is used in an event script is edited (including when one is adding a region) a force dialog appears for confirmation. You should also edit the scripts that use the changed template to verify that the added or removed regions contain the appropriate content and changes occur as expected.

Note: Cisco StadiumVision Director Release 4.1 supports HD/SD and video content with 4K resolution (local and streaming video) on the SV-4K media player. Graphics with 4K resolution are not supported. The DMP-2K media players only support HD/SD content.

Guidelines for Custom Screen Templates

Consider the following guidelines when creating custom screen templates:

- Regions can contain non-video content (static graphics), video, or a combination of both (in a mixed media region).
- The number of allowable regions will vary based on the media player.
- Up to 5 regions are supported for each screen template, more than 5 may cause degradation. Results may vary depending on what type of non-video content is used. For example, a very simple widget may not cause degradation but a very complex widget could.

Table 11 on page 96 provides the number of content regions that you can have when creating custom templates.

Table 11 Number of Allowed Content Regions When Creating Custom Templates

Region Type	DMPs
Non-Video (Graphics)	Zero or more
Video Region 1 or Mixed Media	Up to one
Video Region 2 or Mixed Media	Up to one

- A custom template designed for DMPs media players can contain up to two video regions.

Note: The SV-4K media player does not support dual 4K video regions.

- Using luma keying on video region 2, you can enable select areas of video region 1 content to be visible through video region 2.
- You can change the order of the video regions by changing their relative layer order in the template.

- When layering regions, the non-video content (graphics, widgets, etc.) will always appear above the video content.

IMPORTANT: When layering two video/mixed media regions on the DMPs, if the playlist for the first video/mixed media region includes both video and non-video content, then the non-video content in the first region will always appear on top of the video in the second video region. Name the layers with “top” or “bottom” so that “Layer1Bottom” will be covered by “Layer2Top.”

If you must include non-video content in region 1, then a workaround is to create a local video of the static content and use that in the playlist so that it remains in the primary region.

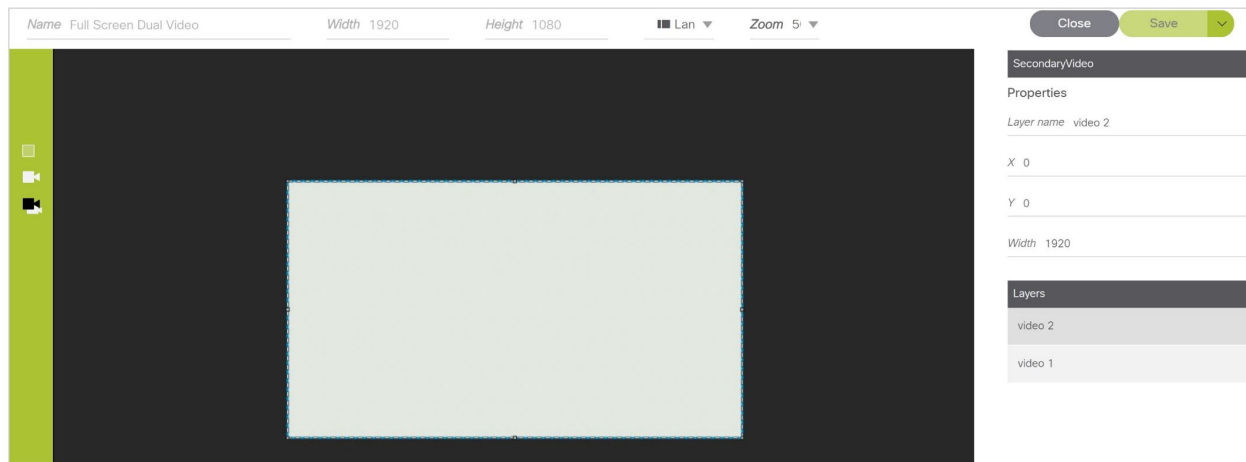
- To optimize performance, the video and graphic aspect ratio sizes should match the aspect ratio of the region. Multi-screen template stretching is not currently supported on DMPs media players.
- All regions must fit within the 1920x1080 dimensions. If you are using an overlay, then you can have two regions that are both 1920x1080.

Note: DMPs media players support negotiation to many resolutions, however when the negotiated resolution is less than 1920x1080, the template will be cropped to that lower resolution

Understanding the Templates Screen

Figure 30 on page 97 shows the Full Screen Dual Video Template, one of the four default templates.

Figure 30 Templates Screen Navigation



The left panel has Non-Video Region, Primary Video Region, and Secondary Video Region.

Choose Landscape or Portrait orientation for your content.

Choose a zoom percent from the drop down.

Click Layer name and set the X, Y, and Width metadata. Type in a layer name.

When finished, click Save As.

Creating Custom Screen Templates

User Role: Administrator / Content Manager

There are two ways that you can create new custom screen templates in Cisco Vision Director:

- Adding a brand new template for which you define all properties and regions.
- Copying from the default standard templates or another existing template to leverage the same properties and regions.

Default templates (indicated by a lock icon to the left of the template name) can be copied but not modified.

Adding a New Template

The default view is Listview for templates. Select a template and right-click for action boxes.

To add a new template:

1. Go to **Library > Designer > Templates**.
2. Click New Template “+” icon. A new template appears.

How to Configure Screen Templates

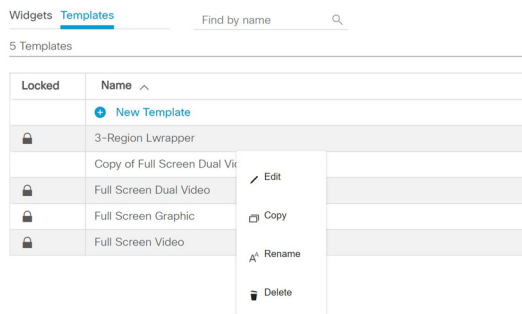
3. Type a new name. For suggestions on naming conventions, see the [Naming Screen Templates, page 98](#).
4. Add one or more regions (up to 5).
5. Specify the region properties, orientation, and zoom percent.
6. Save the template.

Copying From an Existing Template

An alternative way to create a new template is to copy an existing template that you have already customized, or copy from one of the default system templates. This method saves you time and includes all of the properties from the copied template.

To copy an existing template:

1. Go to **Library > Designer > Templates**.
2. Select the template and **right-click > Copy**. “Copy of...” the template you chose appears.
3. Right-click the template name and click Rename from the action box. The Rename dialog box appears.
4. Type a new name. Click **OK**. For suggestions on naming conventions, see the [Naming Screen Templates, page 98](#).
5. (As required) Modify the region properties and layers.
6. Save the template.



Naming Screen Templates

When naming screen templates, use meaningful abbreviations within the name to help you identify it. For example:

- Use “FV” in the name to indicate the screen template is for full-screen video
- Use “LW” to indicate the screen template is for an L-wrapper.

Additionally, you can include other pertinent information such as “beer” for a playlist that only has beer advertisements in it or “BrandY” for a playlist that only has BrandY products in it.

Setting the Size and Position of a Region on the Template Canvas

User Role: Administrator / Content Manager

There are several ways that you can modify the size and position of a region on the template canvas.

Resizing a Region

IMPORTANT: For the DMPs, the Width and Height of the template canvas must match the signal resolution. For more information, see [Canvas and Template Resolution, page 79](#).

To resize a region, you can:

- Select a handle of the region box and drag it to enlarge or shrink that dimension of the region.
- For a more precise result, type the actual pixel value in the Width and Height properties.
- If you specify a region size that overlaps with another region or is outside the allowable area, an error message displays to the right of the region screen.

Repositioning a Region

TIP: X and Y values should be 0, 0 when creating fullscreen template regions. The upper left corner (0,0) position is the starting point for all templates.

To reposition a region, you can:

- Select a region (layer) and drag it on the canvas to change its position (offset).
- For a specific position, type the actual pixel offset values:
 - X–(Horizontal offset) Number of pixels to indent the content from the left side of the canvas.
 - Y–(Vertical offset) Number of pixels to indent the content from the top of the canvas.
- To change the layer order of a region on the canvas, go to the Regions list box and drag and drop the region up or down to change its order.

IMPORTANT: A multicast video layer should always be the bottom layer (Layer 1).

How to Use Luma Keying for Dual Video Templates

Note: Dual video luminance keying is not supported by the CV-HD media player.

This section includes the following topics:

- [Understanding How the Luma Key Works, page 99](#)
- [Modifying the Default Luma Key Value, page 100](#)

Understanding How the Luma Key Works

Luminance keying is used to filter the brightness level of content. Based on the key value, a range of brighter and darker pixels are filtered out and made transparent.

Luma Key Examples

Luma keys are useful when you want to overlay a moving graphic or other content over the multicast stream of a live event using dual video regions.

[Figure 31 on page 100](#) shows an example of overlaying “GOAL” to highlight a moment of exclusivity during a game.

Figure 31 Goal Overlaying Game Stream



Figure 32 on page 100 shows an example of a hockey puck moving over the game stream to highlight a goal during the game.

Figure 32 Flying Hockey Puck Overlaying Game Stream After Goal



Modifying the Default Luma Key Value

User Role: Administrator

The Luma key property is set globally for all DMPs media players in the system. It can be enabled or disabled per dual video template from the Control Panel Templates screen.

TIP: Contact the Cisco Creative Services team for guidance on how to effectively use and set the luma key value for your content needs.

The Luma key property is a 6-digit hexadecimal value that is set to #ff2000 by default. Table 12 on page 101 shows the format of the hexadecimal key and how the bits are interpreted.

Table 12 Luma Key Format

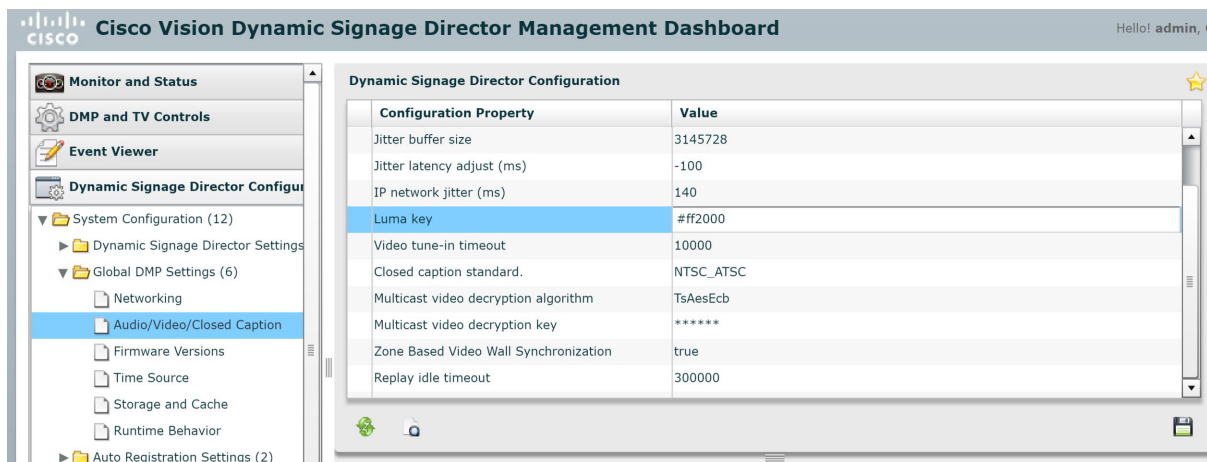
8-Bit Mask	8-Bit High Range	8-Bit Low Range
0xff	0x20	0x00

With the default value, content with the luma of 0xff is masked (left unchanged), and content with luma values in the range of 0x00 to 0x20 (the darker pixels) are filtered from the content and made transparent.

To disable the luma key property globally for all DMPs, leave the value blank (no spaces). If the Luma key property is blank, then no masking will be applied even if the option is set on the template.

To modify the default luma key value:

1. Go to **Tools > Management Dashboard > Dynamic Signage Director Configuration > System Configuration > Global DMP Settings > Audio/Video/Closed Caption**.
2. In the Configuration Property box, find the **Luma key** property.



3. In the value box, type the 6-digit hexadecimal value beginning with the # sign.
4. Click the disk icon to save your changes.

TIP: You do not need to reset the media player to apply the new value. Whenever a script starts, the digital media player retrieves the global settings.

