



Working with Screen Templates in Cisco Vision Director

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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 20 on page 65](#) 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 20 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.




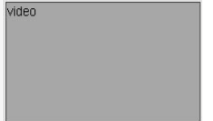
Default Screen Template Dimensions

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 66](#) 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 SV-4K and DMP-2K 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 21 on page 67](#) shows an example of a video (or mixed media) in the full screen template. [Figure 22 on page 67](#) shows an example of a graphic in the full screen template. Both are fixed screen templates and cannot be customized. [Table 5 on page 67](#) and [Table 6 on page 68](#) show the template dimensions.

Figure 21 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 22 Full Screen Graphic Template Example

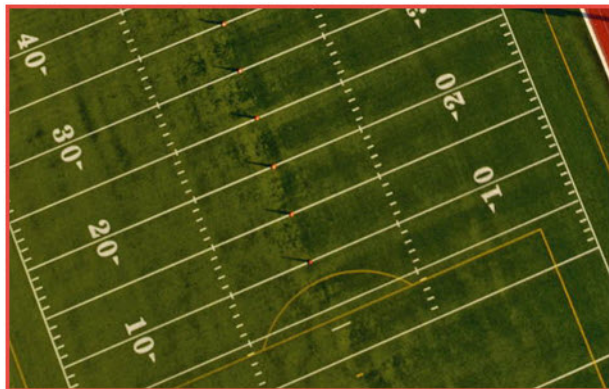


Table 6 Full Screen Graphic Template Dimensions

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

3-Region LWrap with Bug Template

[Figure 23 on page 68](#) 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 69](#) shows the template dimensions.

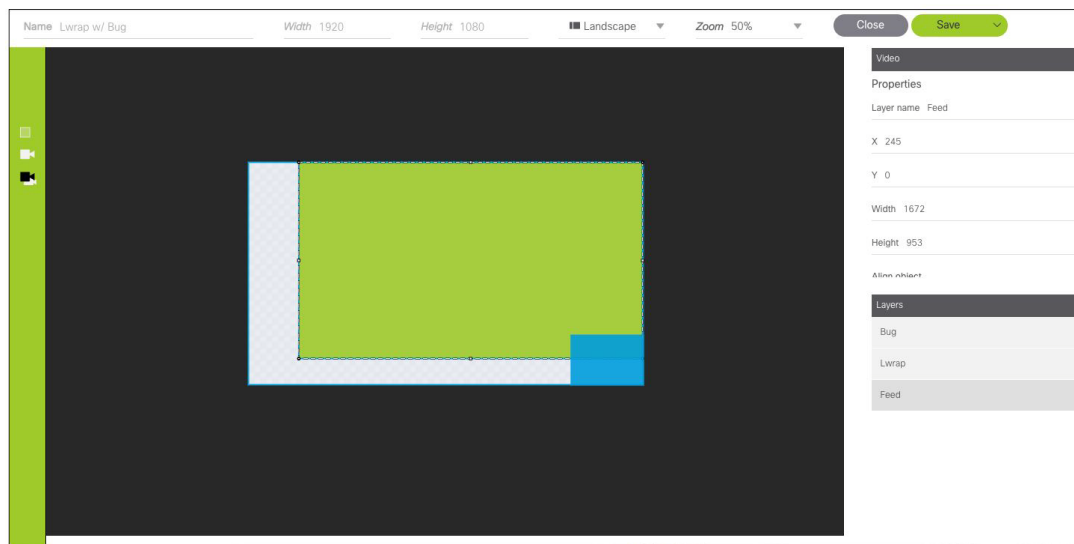
Figure 23 3-Region Lwrap with Bug Template, Feed Layer

Figure 24 3-Region Lwrap with Bug Template, Lwrap Layer

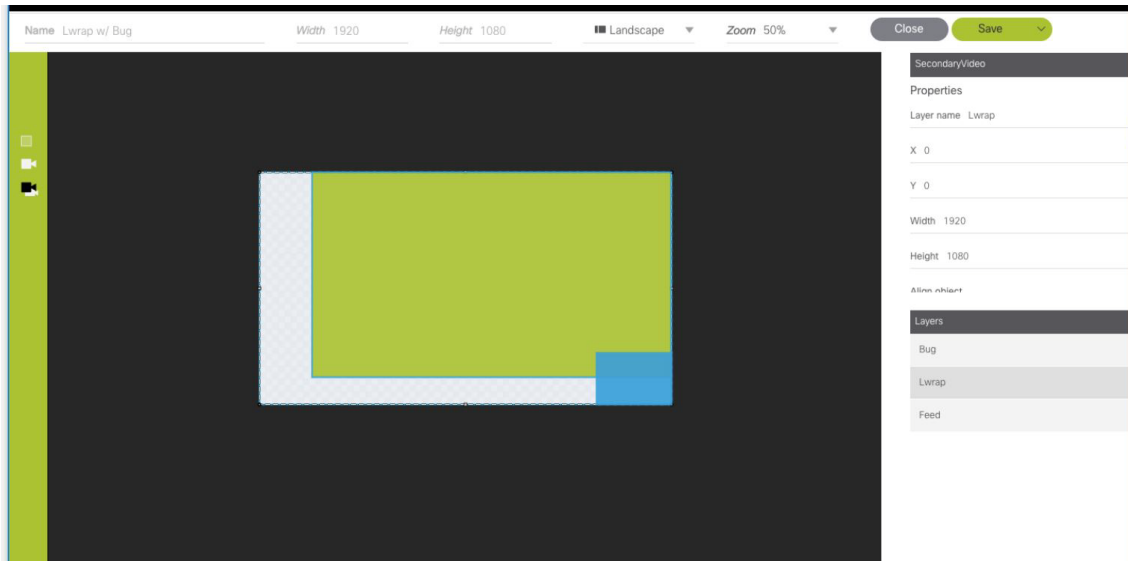


Figure 25 3-Region Lwrap with Bug Template, Bug Layer

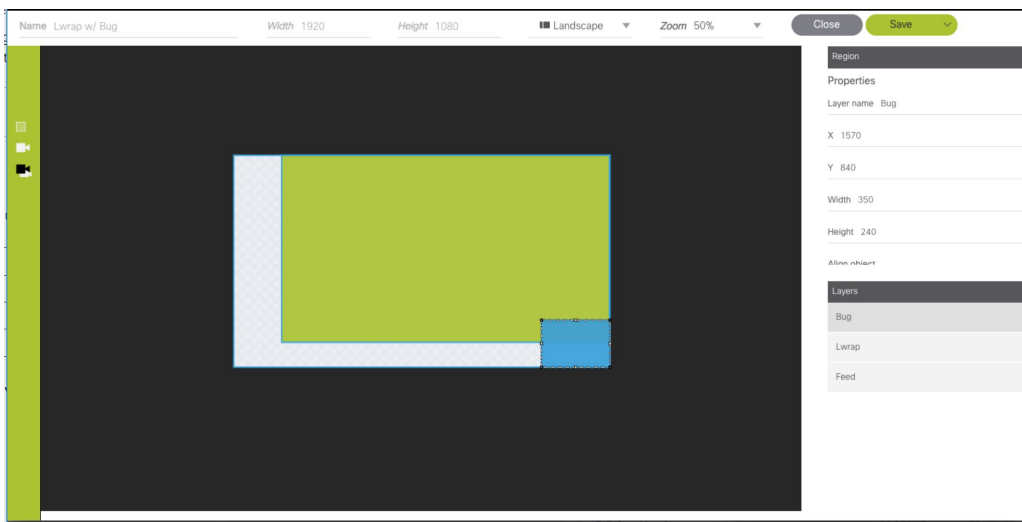


Table 7 Standard Lwrap with Bug Template Dimensions

| 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 26 on page 70 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 70 shows the template dimensions.

Figure 26 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 71 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 (SV-4K and DMP-2K Media Players Only)

A full screen dual video default template is available for the SV-4K and DMP-2K 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 SV-4K and DMP-2K media players.

For video content with 4K resolution on the SV-4K media player, 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 72](#) 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 from the **Management Dashboard**, go to **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 27 on page 72](#) shows an example of some custom screen templates.

Figure 27 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 SV-4K and DMP-2K 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 \(SV-4K and DMP-2K Media Players Only\)](#), page 71.

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 SV-4K and DMP-2K 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 73
- [Guidelines for Custom Screen Templates](#), page 74
- [Understanding the Templates Screen](#), page 75
- [Creating Custom Screen Templates](#), page 75
- [Naming Screen Templates](#), page 76
- [Setting the Size and Position of a Region on the Template Canvas](#), page 76

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.

How to Configure Screen Templates

- 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 74 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 | SV-4K and DMP-2K |
|-------------------------------|------------------|
| 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 SV-4K and DMP-2K 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 SV-4K and DMP-2K, 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.

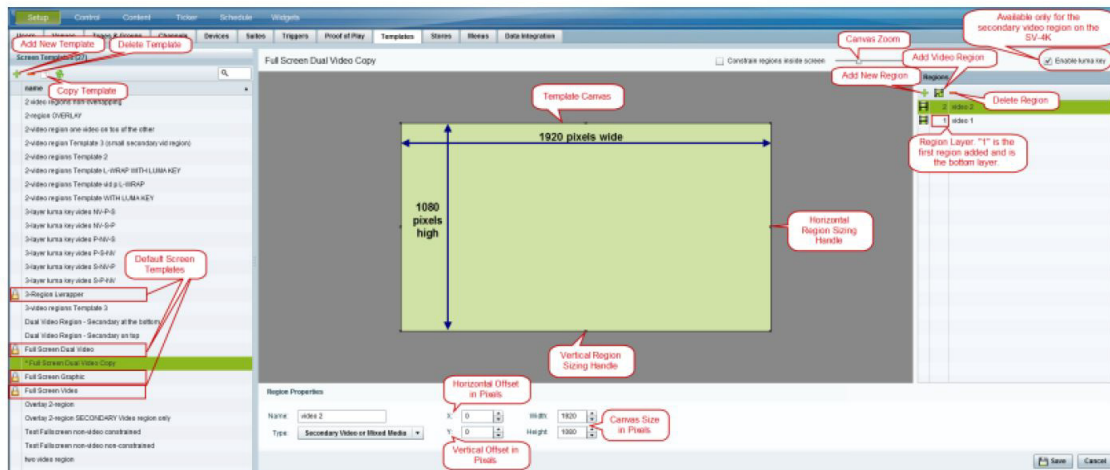
- To optimize performance, the video and graphic aspect ratio sizes should match the aspect ratio of the region. Multi-screen template stretching is not currently supported on SV-4K and DMP-2K media players.
- All regions must fit within the 1920x1080 dimensions. If you are using an overlay, then you can have two regions that are both 1920x1080.

Note: SV-4K and DMP-2K 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 28 on page 75 identifies several key areas of the Templates screen that you should be familiar with when creating and modifying templates.

Figure 28 Templates Screen Navigation



Creating Custom Screen Templates

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 gold lock icon to the left of the template name) can be copied but not modified.

Adding a New Template

To add a new template:

1. From the Control Panel, go to Setup > Templates.
2. At the top of the Screen Templates list, click the “+” icon. A new template is opened in the screen with the name “* new template.”
3. Double-click the template name and type a new name. For suggestions on naming conventions, see the [Naming Screen Templates, page 76](#).
4. Add one or more regions (up to 5).
5. Specify the region properties.
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. From the Control Panel, go to Setup > Templates.
2. At the top of the Screen Templates list, click the copy icon. A new template is opened in the screen with the name " * copied-template-name Copy."
3. Double-click the template name and type a new name. For suggestions on naming conventions, see the [Naming Screen Templates, page 76](#).
4. (As required) Modify the region properties and layers.
5. Save the template.

Naming Screen Templates

When naming screen templates, use meaningful abbreviations or 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

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 SV-4K, the Width and Height of the template canvas must match the signal resolution. For more information, see [Canvas and Template Resolution, page 57](#).

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 will display 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 only supported by the SV-4K media player.

This section includes the following topics:

- [Understanding How the Luma Key Works, page 77](#)
- [Modifying the Default Luma Key Value, page 78](#)

Understanding How the Luma Key Works

Note: The Luma key property is available only for the SV-4K and DMP-2K media player.

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 29 on page 77](#) shows an example of overlaying "GOAL" to highlight a moment of exclusivity during a game.

Figure 29 Goal Overlaying Game Stream



[Figure 30 on page 78](#) shows an example of a hockey puck moving over the game stream to highlight a goal during the game.

Figure 30 Flying Hockey Puck Overlaying Game Stream After Goal

Modifying the Default Luma Key Value

Administrator

The Luma key property is set globally for all SV-4K and DMP-2K 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 #fff2000 by default. [Table 12 on page 78](#) 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 |

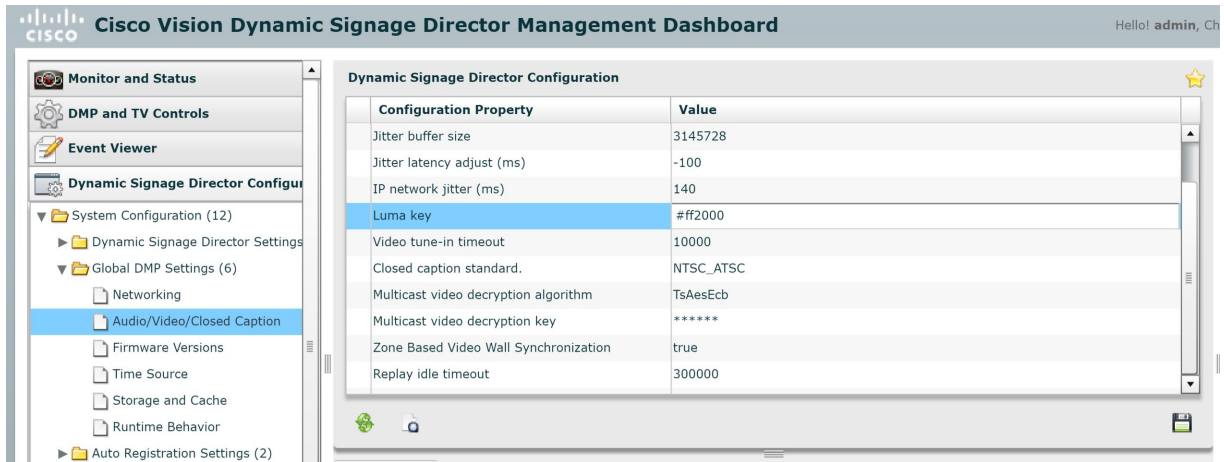
With the default value, content with the luma of 0xff is masked (left unchanged), and content with luma values in the range of 0x00 to 0x20 (the darker pixels) are filtered from the content and made transparent.

To disable the luma key property globally for all SV-4K and DMP-2Ks, 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. From the **Management Dashboard**, go to **Dynamic Signage Director Configuration > System Configuration > Global DMP Settings > Audio/Video/Closed Caption**.
2. In the Configuration Property box, find the **Luma key** property.

How to Use Luma Keying for Dual Video Templates



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 SV-4K and DMP-2K media player retrieves the global settings.

