



First Published: August 2, 2012 Revised: March 8, 2013

This module describes how to design the layout for display of the data that you have integrated and mapped for output in Cisco StadiumVision Director using the External Content Integration feature. This layout is required to create a content object referred to as a *widget*, that you can then publish with the standard features of Cisco StadiumVision Director using playlists and scripts for eventual display on TVs.

This module includes the following topics:

- Prerequisites for Using the Widgets Tool, page 49
- Restrictions for Using the Widgets Tool, page 50
- Information About Using the Widgets Tool, page 50
- How to Design the Layout of External Content for Display, page 58
- Configuration Examples, page 67
- What to Do Next, page 79

I

# Prerequisites for Using the Widgets Tool

Before you design the layout of external content, be sure that the following requirements are met:

- You have configured the external data sources and mapped the statistics to output fields in the External Content Integration feature.
- The data from the external source is being properly ingested by Cisco StadiumVision Director.
- You have added any standalone graphics that you want to add to the layout by importing them into Cisco StadiumVision Director from **Control Panel** > **Content** > **Import**.

......

StadiumVision

# **Restrictions for Using the Widgets Tool**

Before you design the layout of external content using the Widgets tool, consider the following restrictions:

- The Widgets layout tool can only be used for data sources that have been integrated into Cisco StadiumVision Director using the External Content Integration feature.
- Cisco StadiumVision Director only supports widgets that are created internally using the Widgets tool.
- Up to16 different sessions can be supported in the Widgets tool on a single computer.
- The maximum graphic size supported is 1920x1080, which is also the maximum size of the area supported in the Widgets layout tool.



If you attempt to use a larger graphic in the Widgets tool, it might not be displayed.

- The PicToScreen component has the following restrictions:
  - A maximum of 5 images can be rotated using the PicToScreen component. Therefore, up to the first 5 images received from the data feed can be displayed. A new set of images can be retrieved at the next polling interval.
  - Supports binding of image data fields only from a source feed. Therefore, the data source must be defined with an image field for output display. For more information on field mapping in the data source, see the "Selecting Input Statistics and Mapping to Output Fields for Display" section on page 30.
- The TextToScreen component supports binding of text data fields from a source feed. Therefore, the data source must be defined with a title, description, or other text data field for output display.
- The Widgets tool has the following font restrictions:
  - Only the Arial font type with the ASCII character set is supported.



While you might be able to see a supported localized language and create text components with non-ASCII characters in the Widgets tool, these text components might not be rendered as expected on the DMP.

- The maximum font size is limited to 128 due to a restriction by the DMP.
- Importing of fonts is not supported.
- The following functions are not supported in the Widgets tool:
  - Undo
  - Deleting a group of multi-selected components

# **Information About Using the Widgets Tool**

This section includes the following topics:

- Components, page 51
- Layers, page 53

- Properties and Effects, page 53
- Data Binding and Preview, page 57
- User Interface Characteristics, page 57

# **Components**

Overall, the Widgets tool includes four component types, which are either image-based or text-based. New components are added to the widget area simply by dragging the object type and dropping it onto the canvas or by double-clicking the component.

### **Standalone Text and Graphic Components**

Two component types are intended for data with standalone text or graphics:

- Text Area
- Graphic

The Widgets tool uses the Graphic component to support the addition of standalone images. Each time a graphic component is added to a widget, it is added in numerical order as a Layer on the canvas.

### **Data Feed Components**

Cisco StadiumVision Director Release 3.1 introduces two new component types to support generic data sources and feeds, whose content is either image-based or text-based.

#### P2S (PicToScreen)

The PicToScreen component supports only image data fields from the data source, and can display up to 5 images from a data feed. The images appear in a fixed overlapping cascade that rotates through the available images from the feed (Figure 1).



The cascading layout of the images cannot be changed. However, you can alter the position and orientation of the top graphic within the Widgets tool.

#### Figure 1 Example of PicToScreen Widget Display of 5 Maximum Images



#### **Default Images and Display Behavior**

Cisco StadiumVision Director has default images that are used as placeholders for any images that cannot be found or when the number of images received does not equal the number defined in the "Images to Display" property of the PicToScreen component (up to 5).

If Cisco StadiumVision Director must insert default images when enough images are not received from the data feed, then only the good images from the data feed are rotated through the cascading presentation. The default images will remain at the back of the stack in the presentation.

The default image is called DefaultImg.jpg and is found in the content library. You can change the default image by uploading your own image into the content library and change the "ContentName" property in the P2S component.

#### **Image Orientation**

You can change the position and rotation of the top graphic in the PicToScreen component. However, you cannot control the position or rotation of individual images within the stack.

#### T2S (TextToScreen)

The TextToScreen component can support any number of messages from the data feed.

Figure 3 shows an example of a fixed background graphic component, with a TextToScreen component overlay in Figure 3.

#### Figure 2 Example of TextToScreen Widget Background Graphic



#### Figure 3 Example of TextToScreen Widget Display



### Layers

Similar to standard graphics editing applications, each time a Text Area or Graphic component is added to a widget, it is labeled in numerical order (by type) as a *Layer* on the canvas. Unless reordered, the first component added is at the bottom of the components added to the canvas, and the last component added is the topmost layer. In the user interface, the Layers box also lists the layers in stacking order with the topmost layer at the top of the list. In general, a background image should be at the bottom of the list.

You can reorder the layers by dragging and dropping them into a different order in the Layers box of the Widget tool.

The first graphic component added to the widget is identified as "graphic 1," and the first text area is labeled "text area 1." Components are numbered sequentially as they are added. Therefore, if you delete a component, that component number is not replaced.

Tin

You can rename a component by double-clicking it.

# **Properties and Effects**

The Properties panel allows you to set the characteristics of a component including explicitly setting its size, location, and rotation on the canvas.

Depending on the component type, some additional Properties and Effects are available:

- Standalone Text Area Component Properties and Effects, page 53
- Standalone Graphic Component Properties, page 54
- PicToScreen Component Properties and Effects, page 55
- TextToScreen Component Properties and Effects, page 56

### **Standalone Text Area Component Properties and Effects**

In addition to setting the size, location, and rotation on the canvas for Text Area components, you also can specify the character string for the component, and select a font size and color.

Table 1 describes the property options and Table 2 describes the effects that can be applied to standalone Text Area components.



Remember that the Widgets tool displays a white background for ease of use, but if you are not using any background images, a black font will *not* be visible on the TV screen because the TV background is actually black.

Property Name	Description	Values
X	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
у	Number of pixels that defines the starting position of the component vertically.	Range is 0–1080.
width	Number of pixels that defines the horizontal width of the component.	Range is 0–1920.
height	Number of pixels that defines the vertical height of the component.	Range is 0–1080.
rotation	Number of degrees to rotate the component box.	Range is 0–360. Default is 0.
Text	<ul> <li>Character string to display within the text area component.</li> <li>Note The Text property does not support line wrap, so the length of the string that can be supported is the canvas width.</li> </ul>	Default is "TextAreaN," where N is a number in sequential order of the number of Text area components added to the canvas.
Font Size	Size of the Arial font for the Text property.	Default is 36. Maximum is 128.
Color	Color for the Text property.	Default is black.

## **Standalone Graphic Component Properties**

In addition to setting the size, location, and rotation on the canvas for Graphic components, you can import an image and also specify that it retain the dimensions of the original image.

Table 1 describes the property options that can be applied to standalone Graphic components. No effects are supported for Graphic components.

Property or Effect Name	Description	Values
X	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
У	Number of pixels that defines the starting position of the component vertically.	Range is 0–1080.
width	Number of pixels that defines the horizontal width of the component.	Range is 0–1920.
height	Number of pixels that defines the vertical height of the component.	Range is 0–1080.
rotation	Number of degrees to rotate the component box.	Range is 0–360. Default is 0.

1

Table 2 Graphic Component Properties

Property or Effect Name	Descr	iption	Values
Content Name	ameFilename of the image to be displayed in the component.NoteThe image must be uploaded to the Content Management System (CMS) from the Control		Unspecified. Default images from the system are used.
		<b>Panel &gt; Content &gt; Import</b> area of Cisco StadiumVision Director to be made available to the widget.	
Use image original size	When compo	selected, changes the image size in the onent to the size stored in the CMS.	Default is disabled.
	Note	If you select this option and then unselect it, the image does not revert to the settings in the widget.	

### Table 2 Graphic Component Properties (continued)

### **PicToScreen Component Properties and Effects**

ſ

Table 3 describes the property options and Table 4 describes the effects that can be applied to PicToScreen components.

Property or Effect Name	Description	Values
X	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
У	Number of pixels that defines the starting position of the component vertically.	Range is 0–1080.
width	Number of pixels that defines the horizontal width of the component.	Range is 0–1920.
height	Number of pixels that defines the vertical height of the component.	Range is 0–1080.
rotation	Number of degrees to rotate the component box.	Range is 0–360. Default is 0.
Images to Display	Maximum number of images to display from the data feed.	Range is 2–5. Default is 5.
TipThe value of the Images to Display property should match the value of the "Number of messages keep" data option for an Atom or RSS feed data source.		
Use default image if no image present.	When enabled, replaces any missing images that might occur from the data feed (up to the maximum number for display) with a default image.	Default is enabled.

Table 3 PicToScreen Component Properties

Property or Effect Name	Description	Values
Content Name	Filename of an image to be used as the default when default images are enabled for the component.	Unspecified. Default images from the system are used.
Image Duration	Length of time (in seconds) to display the current set of images.	Range is 5 to 25. Default is 5.

Table 3	PicToScreen	Component	Properties	(continued)
	1 10 10 001 0011	component	rioperties	(continueu)

#### Table 4 PicToScreen Component Effects

Property or Effect Name	Description	Values
Image Duration	Length of time (in seconds) to display the current set of images.	Range is 5 to 25. Default is 5.

### **TextToScreen Component Properties and Effects**

Table 5 describes the property options and Table 7 describes the effects that can be applied to TextToScreen components.

Property or Effect Name	Description	Values
X	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
у	Number of pixels that defines the starting position of the component vertically.	Range is 0–1080.
width	Number of pixels that defines the horizontal width of the component.	Range is 0–1920.
height	Number of pixels that defines the vertical height of the component.	Range is 0–1080.
rotation	Specifies the orientation of the component.	Horizontal or vertical. Default is horizontal.
Font Size	Size of the Arial font for the text that appears in the component.	Default is 36. Maximum is 128.
Font Color 1	Sets a font color for the first text data field in a feed, and alternates with Font Color 2. If there is only one message, then only Font Color 1 is used.	Default is black.
Font Color 2	Sets a font color for the second text data field in a feed and alternates with Font Color 1.	Default is black.

Table 5 TextToScreen Component Properties

L

Effect Name	Values	
Fade	Gradually shows the text data field in the component.	—
Message display duration (Seconds)	Length of time (in seconds) that the text from the data feed is displayed.	Range is 5–25. Default is 5.

Table 6 TextToScreen Component Effects

# **Data Binding and Preview**

After you have mapped the output fields for an external data source, you can bind that data to a component in a widget and see a preview of that live content feed.

Note

Live data is polled for preview every 15 seconds in the Widgets tool. There can be a slight delay before you see an update of the content within a component. This polling interval is for preview only and is not the same polling interval used in the data source configuration.

Only certain data fields are supported for the PicToScreen and TextToScreen components. For more information, see the "Restrictions for Using the Widgets Tool" section on page 50.

# **User Interface Characteristics**

Figure 4 shows the areas of the user interface for a new widget.

Setup	Co Menu Bar tent	Ticker S	Schedule Widgets				
File	Edit View			$\frown$	Zoom Bar	Widget Size	
Components	My_Widget Widge	t Name		Canvas			Layers
P2S				V			
PicToScreen							
T2S							
TextToScreen	Screen Regize Handle					Screen Resize Handle	
	Resize Handle						
Text Area				Screen			
	Panel Ta	abs		Resize Handle			
				. <u>.</u> .			
Graphic	Properties Effects	Data Binding	1				
	X 0	width 1	× v				Delete
	у 0 <del>*</del>	height 1	A V				Copy Layer
		rotation Horizon	ntal 🛛 🔻				

Figure 4 New Widget Interface

The Widgets tool interface supports some of the following functions and characteristics:

- Multi-selection of components using standard Control key sequences to move components as a group.
- Showing or hiding the bounding box of a component.
- "Zoom-to-fit" function by double-clicking the zoom knob.
- Change the widget dimensions by double-clicking the widget size in the upper right of the screen.

# How to Design the Layout of External Content for Display

This section includes the following tasks:

- Accessing the Widgets Tool, page 58
- Creating New Widgets, page 58
- Working with Images, page 60
- Adding Text Areas, page 62
- Showing the Component Bounding Box, page 63
- Resizing and Rotating Components, page 64
- Binding External Data to a Widget, page 65
- Modifying Existing Widgets, page 66

## Accessing the Widgets Tool

#### To access the Widgets tool, complete the following steps:

- **Step 1** Log into Cisco StadiumVision Director as an administrator.
- Step 2 From the main menu, click Control Panel > Widgets.

A dialog box opens for you to select an existing widget or create a new one (Figure 5).

#### Figure 5 Dialog Box to Open Existing or Create New Widgets

Vidget . Sample1 Sample2	Create New Name: My_Sample Site:    Pre-Set Size: BORGOD
Open	Create Cancel

# **Creating New Widgets**

You can create a new widget when you first access the Widgets tool, or you can create a new widget from within the tool.

1

#### To create a new widget from within the tool, complete the following steps:

Step 1 From the menu bar in the Widgets tool, click File > New. The Create New dialog box is displayed (Figure 6).

#### Figure 6 Create New Dialog Box

Size:	<ul> <li>Pre-set siz</li> </ul>	e:	
	800×600	<b>.</b>	
	O Custom Siz	28:	
	Width: 1	<b></b>	
	Height: 1	<b>•</b>	

- **Step 2** In the **Name** box, type a name for your new widget.
- **Step 3** Do one of the following to specify the size of the widget:
  - Click **Pre-Set** size and click the drop-down list to select a predefined dimension (WxH) for the canvas in pixels.
  - Click **Custom Size** and specify a number (in pixels) for the width and height dimensions of the canvas.

#### Step 4 Click Create.

The tool displays a white box of the size that you created, with the dimensions that you specified displayed in the upper right corner (Figure 7).

Note

I

The background canvas of the widget is actually transparent, but it is not shown with the graphics-standard checkerboard pattern to ease visibility of the components.

File	Edit View								
Components	My_Widget						-0	- Size: 800x600	Layers
P2S									
PicToScreen									
T2S									
Terran									
Text to oct to bit									
Text Area									
<u></u>									
Graphic	Properties	Effects	Data Bin	ding					
	<b>x</b> 0	A V	width	1					
	<b>y</b> 0	A V	height	1 *					
			rotation	Horizontal 💌					F: 6

#### Figure 7 New Widget Screen

Step 5 Click File > Save.

Changes to the widget are saved.

# Working with Images

This section includes the following topics:

- Adding Standalone Images, page 60
- Resizing and Rotating Images, page 61

### **Adding Standalone Images**

Images can be added as a background to your layout in the Widgets tool, and they also can be bound to a data field using the External Content configuration, such as to add a team logo to a score field that will appear in the widget.

To support the addition of a graphic bound to a particular external source data field, see the "Modifying the Output Format of a Statistic" section on page 43.

The Widgets tool uses the Graphic component to support the addition of images as a background or in other places on your canvas.

#### Prerequisite

Before you can add an image to a widget, you must import the image file into Cisco StadiumVision Director by going to **Control Panel > Content > Import** to select and open a file. In the Import Content dialog box, specify any options and click **Upload**.

#### Procedure

#### To add an image to a widget, complete the following steps:

**Step 1** Open or create the widget where you want to add an image.

Step 2 In the Components box, select the Graphic component and drag and drop it onto your widget canvas (Figure 8).



Figure 8 Drag and Drop Graphic Component on Widget Canvas

```
<u>P</u>
Tip
```

Double-click a component to automatically add it to the canvas.

- **Step 3** To add an image, be sure that the graphic component where you want to add the image is selected, and click **Change**.
- Step 4 In the Select Image dialog box, highlight the image that you want to add and click Select.

The image is added and scaled to the size of your graphic component box (Figure 9).

Figure 9 Image Added to Graphic Component

File	Edit View																
Components	My_Widget									-	0		Size	: 800x600	Lay	ers	
P2S																graphic 1	
DUTOUTO																	
Pictuscreen						0.0	ALC DODE										
T2S							100										
TextToScreen																	
_																	
Text Area																	
					_				_	_	_	_	_	_			
Graphic	Properties	Effects	Data Bin	ding													
	X 0	*	width	1	-												
	<b>y</b> 0	A •	height	1	*												
			rotation	0													ī

Step 5 Click File > Save.

Changes to the widget are saved.

### **Resizing and Rotating Images**

Images will automatically scale to the size of the graphic component box in the widget.

 $\rho$ Tip

I

To find the size of your image file, use the List view for your images in **Control Panel > Content**. Select your image and look at the size in the Dimension field in the "Other content metadata" box.

You can scale the graphic to its original size after you add it, or if you modify the image size in the widget, you can revert back to its original size using the "Use original image size" option, which is recommended.

Figure 10 shows the options available on the Properties panel for a graphic component and displays the different bounding box handles that can be used to modify the size of a component box.

Figure 10 Graphic Component Properties Panel and Bounding Box Handles



You can modify the size and position of an image in the following ways:

- Explicitly setting values on the Properties panel.
- Selecting the bounding box and using the handles to modify it.
- With the graphic component selected, select the "Use original image size" checkbox to revert the image to its original size when imported.

For more information, see the "Resizing and Rotating Components" section on page 64.

### **Adding Text Areas**

A text area component is added to a widget in the same way as a graphic component, but with some different properties. A text area supports a character string, and font size and color selection. Currently the only available font is Arial.

To add a text area to a widget, complete the following steps:

- **Step 1** Open or create the widget where you want to add the text area.
- **Step 2** In the Components box, select the Text Area component and drag and drop it onto your widget canvas.
- Step 3 In the Properties panel, type the character string for the box, and select the font size and color.Figure 11 shows the options available on the Properties panel for a sample text area component.

I

File	Edit View					
Components	My_Sample				-O Size: 800x600	Layers
P2S						📃 textArea 1
PicToScreen						
T2S						
TextToScreen				aMySample Text		
Text Area						
<b></b>						
Graphic	Properties Effects	s Data Binding				
	x 231 🗘	width 347 🖨	Text	MySampleText		
	y 253 🗘	height 50 🜲	Font Size	36		
		rotation 0	Font Color			

Figure 11 Text Area Component Properties

- Step 4 Resize or position the text area as needed. For more details, see the "Resizing and Rotating Components" section on page 64.
- Step 5 Click File > Save.

Changes to the widget are saved.

# Showing the Component Bounding Box

When you add a component onto the canvas, a temporary bounding box appears while the component is selected. If you move away from that component into another area of the canvas, you will not be able to see the boundaries of the component box.

Figure 12 shows an example of a text area and graphic component displaying the default setting without a visible boundary when the component is unselected. Notice that while the graphic component is selected the temporary bounding box is displayed in Figure 12, but when unselected it appears to disappear from the canvas (Figure 13).



Figure 12 Default Setting Without Bounding Box and Selected Component



File	Edit View						
Components	My_Sample				-0	Size: 1920×1080	Layers
Text Area						·	textArea 1
Graphic	1		My sample text	Graphic component invisible			
	Properties	Data Binding					
	× 0	vidth	1				
	у 0	+eight	1				
		rotation					i a

To display a boundary around all components in the widget, complete the following steps:

**Step 1** From the menu bar, go to **View**.

#### Step 2 Click Show bounding box.

A checkmark appears beside the option when the bounding box is enabled for display, and all components will display a boundary around them.

Figure 14 shows an example of a text area and graphic component after the Show bounding box option is enabled.

Figure 14	Show Bounding Box Option Enabled
-----------	----------------------------------

File	Edit View						
Components	My Show	Bounding Box			-0	Size: 1920×1080	Layers
Text Area						-	graphic 1 textArea 1
Graphic			My sample text				
	11						1
	Properties	Data Binding		=			
	× 0	width					
		rotation					

Step 3 Click File > Save.

Changes to the widget are saved.

# **Resizing and Rotating Components**

You can resize and rotate both Text Area and Graphic components in the following ways:

- Change the component location:
  - Select the component and manually drag it to the location that you want on the canvas.

- Specify the x/y horizontal and vertical values directly in the Properties panel.

- Change the component size:
  - Select and drag a handle on the component's bounding box to enlarge or reduce the component size. If using a handle on a side of the box, only that dimension is changed. If using a corner handle, both dimensions of the box are changed.
  - Shift+Click on a corner handle to resize the box proportionally.
  - Specify the width and height values directly in the Properties panel.
- Change the component angle:
  - Select the rotation handle and drag the box up or down to rotate it.
  - Shift+Click on the rotation handle and drag the box up or down to change the angle in 45 degree increments.
  - Specify the rotation value in degrees directly in the Properties panel.

Figure 15 identifies the bounding box handles that you can use to resize and rotate components.

Figure 15 Bounding Box Handles



# **Binding External Data to a Widget**

The widget supports the binding of external data to a text area component so that you can display dynamic output fields, such as game periods, scores, and so on from an external source.

Note

If you add a text string to the component, it will be replaced by the real-time data from the output field that you specified in the Data Binding panel.

### Prerequisite

I

Before you can bind external data to a widget, you must have configured your external data source and mapped the output fields by going to **Control Panel** > **Setup** > **External Content**. For more information, see the "Configuring External Content Integration in Cisco StadiumVision Director".

### **Procedure**

#### To bind external data to a widget, complete the following steps:

- **Step 1** Open or create the widget where you want to add the text area.
- **Step 2** In the Components box, select the Text Area component and drag and drop it onto your widget canvas.
- **Step 3** In the Properties panel, select the font size and color. Optionally, specify a character string if you want to temporarily see some content in the component while the widget is open.

The font size and color will be applied to the bound data.

**Step 4** In the Data Binding panel, double-click in the first cell under the Data Source heading and open the drop-down list (Figure 16).





Step 5 Click the drop-down list and select the data source from which you want to bind data. Use the scroll bar to reveal all data sources as necessary (Figure 17).

#### Figure 17 Selecting the Data Source

Text	T. I.	
Property	OES: Basketball,Scoreboard -	Data Field
Properties Data Binding	GSIS: NFL,Cumulative Statistics	
	GSIS: NFL,Clock	
	Daktronics: Ice Hockey,Scoreboard	
	Daktronics: Basketball,Scoreboard	

**Step 6** Double-click inside the cell for the data field and select the drop-down list to select the data output field that you want to display in the text area component (Figure 18).

Figure 18 Selecting the Data Field



Step 7 Click File > Save.

Changes to the widget are saved.

# **Modifying Existing Widgets**

This section includes the following tasks:

- Changing the Size of a Widget, page 67
- Deleting Widgets, page 67
- Renaming Widgets, page 67

### **Changing the Size of a Widget**

#### To change the size of a widget, complete the following steps:

Step 1	Open the widget whose size you want to change.
Step 2	From the Edit menu, select Widget Dimension.
Ō	
Timesaver	You can also double-click the widget size in the upper right corner of the screen to open the Change Widget Dimension dialog box. See the "User Interface Characteristics" section on page 57.
Step 3	In the Change Widget Dimension dialog box, specify the new width and height values.
Step 4	Click Change.

### **Deleting Widgets**

#### To delete a widget, complete the following steps:

Step 1	From the File menu, select Manage Widgets.
Step 2	In the Manage Widget dialog box, select the widget that you want to remove.
Step 3	Click <b>Delete</b> .

### **Renaming Widgets**

ſ

#### To rename a widget, complete the following steps:

Step 1	From the File menu, select Manage Widgets.
Step 2	In the Manage Widget dialog box, select the widget that you want to rename.
Step 3	Click <b>Rename</b> .
	The widget name is changed to an editable box.
Step 4	Type a new name for the widget.
Step 5	Click Close.

# **Configuration Examples**

This section includes the following topics:

- Basic Widget Configuration Example, page 68
- TextToScreen Widget with Merged Generic Data Sources, page 70

# **Basic Widget Configuration Example**

Note

This example demonstrates use of the Text Area and Graphic components with data binding. The figures are based on the original interface for the External Content Integration feature; Therefore, some of the figures do not reflect all of the latest available components in the interface.

This section shows a basic widget configuration example to bind external data for an OES Ice Hockey Scoreboard data source. The example uses an image background (Figure 19) that creates static headings for Period, Time Outs, and Score, with companion text area components that will be created as layers on top of the background.

These text areas will be positioned beneath the background image headings and will have real-time data bound to them to appear in the widget.



Figure 19 Image Background for Scoreboard Widget

#### To create a widget and bind data to it, complete the following steps:

- **Step 1** Create a new widget with size 1920x1080.
- **Step 2** In the Components box, select the Graphic component and drag and drop it onto your widget canvas.
- **Step 3** With the graphic component selected, go to the Properties panel and click **Change**.
- Step 4 In the Select Image dialog box, click on the background image that you want to add and click Select.The image is added and scaled to the size of your graphic component box.
- **Step 5** In the Properties tab, specify the following values (Figure 20):
  - **a.** x and y—0
  - **b.** width —1920
  - **c.** height—1080
  - **d**. rotation—0

File	Edit View	
Components	Hockey_Sample Size: 1920x1080 L	ayers
Text Area	PERIOD THE OUTS LEFT SCORE THE OUTS LEFT SCORE .	graphic 1
	-	
	x U v Vidt 122 v Content Name scoreboard_background.png Change	
	y 0 🚖 height 1080 😴 🗌 Use image original size	
	rotation 0 🖕	(i) 🕞 🗃

Figure 20 Background Image Added to Graphic Component

**Step 6** Create two new text area components to add "HOME" and "GUEST" as the specified text string positioned as layers on top of the background graphic component (Figure 21).



Figure 21 Addition of Home and Guest Text Areas

- **a.** Drag and drop the Text Area component onto the background graphic.
- **b.** In the Properties panel, specify the following values:
  - Text box—Type "HOME"
  - Font size—128

ſ

- Font color—Choose yellow
- c. Select the handles on the text area box and expand its boundaries enough to reveal the text.
- **d.** Select the text area component and drag it to the left side of the background graphic over the Time Outs Left and Score fields.
- e. Repeat steps a-d using "GUEST" text and drag the component to the right side of the background graphic.
- **Step 7** Add Text Area components to bind data for Period, Time Outs, and Score areas for both teams:
  - **a.** Drag and drop the Text Area component onto the background graphic.
  - **b.** (Optional) Zoom in as needed to see the component better.

- **c.** Position and resize the component beneath the heading for which you are going to bind corresponding data (Figure 22).
- d. (Optional) Add text to temporarily identify what data will be in the box, such as "period\_data."

Figure 22 Text Area Component to Bind Period Data



e. In the Data Binding panel, select the OES: Ice Hockey, Scoreboard data source and the period data field (Figure 23).

Figure 23 Period Data Field Binding for OES Ice Hockey Scoreboard Source

File	Edit View			
Components	Hockey_Sample			D Layers
Text Area	HOM	E PĘ	G	<ul> <li>textArea 2</li> <li>textArea 2</li> <li>textArea 1</li> <li>graphic 1</li> </ul>
		•	questTeam Score	
			homeTeamScore	•
	Properties Data Binding	=	period	
	Property A	Data Source	guestTOL	
	Text	OES: Ice Hockey,Scoreboard	period 🔻	

f. Repeat steps a-e for all other data fields that you need to bind.

#### Step 8 Click File > Save.

Changes to the widget are saved.

## TextToScreen Widget with Merged Generic Data Sources

This advanced example shows how to create generic data sources from RSS feeds, filter the data, and combine the feeds into a new data source for layout in the Widgets tool. The example highlights the following functionality in the External Content Integration feature:

- Generic data source configuration of an RSS data feed.
- Provision of XML sample data.
- Selection of specific item ranges in a data feed using the XPath expression editor.

- Merging of data sources into a data view.
- Data view configuration as a data source.
- Preview of received data in the data source.
- Use of a background graphic in the layout.
- Overlay of a TextToScreen component with data bound from merged data sources (a data view).
- Use of color properties in the TextToScreen component.

#### To create a TextToScreen widget with merged data sources, complete the following steps:

**Step 1** From the Control Panel, click **Data Integration**.

For more information, see the "Accessing the External Content Integration Interface" section on page 17.

**Step 2** Add a new Generic Data Source with the HTTP message type.

For more information, see the "Adding a New Data Source" section on page 17.

**Step 3** In the Configuration panel for the new Generic Data Source, type the URL to your RSS feed.

Figure 24 creates a new Generic Data Source named "Twins\_businessnews" with the following HTTP URL "http://feeds.reuters.com/reuters/businessNews". The rest of the configuration uses the default values.

Figure 24 HTTP Configuration for First Generic Data Source

Users Zones & Group	is Channels Devices	Suites	Triggers	Proof of Play	Templates	Stores	Menus	Data Integration	
Data sources Advance	ed								
🕂 — 🖹 😵 🛛 Deple	ry Undpløy	Q	Tw	ins businessn	ews - Generic	: Data Sou	irce		
Data source name	Туре	Enabled	Co	- Figuration	ald manning				
#rayal_sector	Generic Data Source	~	C0	inguruduon rik	an mapping				
#royalis	Generic Data Source	×							
Revals_bats1000	Ceneric Data Source	× .			HTTP Settings	6			
#oyalis_mostactive	Generic Data Source	~		HTTP URL	http://feeds.re	uters.com/re	uters/busin	essNews	
Serre .	Ceneric Data Source	1		Polling frequency	* 60	÷	😜 in secor	nds (5-600)	
(wsth23	RISS Feed	~							
Testimages	Generic Data Source	~			Data na	lling filtoring	and throttli	B) 62	
Twins_Business_RSS	RISIS Feed	1			Data pu	ung,nitering		ng 	
Twins_businessnews	Generic Data Source			Incoming data filte	er rate \star 20		in 🔁	n seconds (5-60)	
Twins_RSS	RISIS Feed	~							
Twins_sportsnews	Ceneric Data Source	× .	=						
Twinsbusinessandsports	Generic Data Source	1							Sam Cancol
attai	OBIE: NFL,Clack	1	-						Save

#### Step 4 Click Field Mapping.

Step 5 Click the pencil icon to open the Sample data box, paste the sample XML data from the feed, and save it.For more information, see the "Providing Sample XML Data for Generic Data Sources" section on page 28.

Figure 25 shows a portion of the XML data pasted into the Sample data box.

Data sources Advan	ced		
🕂 — 🖺 🛞 🛛 Depl	oy Undploy	٩	Twins businessnews - Generic Data Source
Data source name	Туре	Enabled	- Configuration Field manning
Configuration     Configuration     Field mapping     Type     Configuration     Field mapping     Configuration     Field     Field			
Data Source Haine     Type     Lindicat       Ring Source Haine     Generic Cata Source     Image Source       Sample data     Image Source Haine     Image Source       Stationary Source Haine     Generic Cata Source     Image Source Haine       Sample data     Image Source Haine     Image Source Haine       Sample data     Image Source Haine     Image Source Haine       Image Source Haine     Generic Cata Source     Image Source Haine       Image Source Haine     Generic Cata Source     Image Source Haine       Image Source Haine     Generic Cata Source     Image Source Haine       Image Source Haine     Generic Cata Source     Image Haine       Image Source Haine     Generic Cata Source     Image Haine       Image Source Haine     Generic Cata Source     Image Haine       Image Haine     Gene			
Foyaits_balts1000	Ceneric Data Source	× 1	Sample data
Royalis_mostactive	Generic Data Source	× 1	<rss version="2.0" xmlns:feedburner="http://rssnamespace.org/</td>
Data source name     Type       Data source name     Type       Enabled     Configuration       Finance     Configuration       Finance     Connert: Calls Source       Sample data     Connert: Calls Source       Teaching Source     Connert: Calls Source       Teaching Source     Connert: Calls Source       Teaching Source     Connert: Calls Source	<channel></channel>		
Data sources       Advanced	<pre></pre>		
Testimages	Ceneric Data Source	~	<description>Reuters.com is your source for breaking news, business, financial and investing news, including personal finance and stocks.</description>
Twins_Business_RSIS	RSS Feed	~	Reuters is the leading global provider of news, financial information and technology solutions to the world's media, financial institutions
Twins_businessnews	Generic Data Source	✓	businesses and individuals.
Twitts_RSIS	RSIS Feed	~	<irrage> <title>Reuters News</title></irrage>
Twins_sportsnews	Generic Data Source	<b>v</b>	<pre><width>120</width> Schema</pre>
Twinsbusinessandsports	Generic Data Source		

Figure 25 Sample Data for First Generic Data Source

**Step 6** Expand the RSS input fields made available from the sample data and select a text-based input field to be used in the output display.

For more information, see the "Selecting Input Statistics and Mapping to Output Fields for Display" section on page 30.

**Step 7** Select the Expression mapping option and click **Ok**.

The default XPath expression for the data field is added to the Mapping expression field. For an RSS title element, the default expression is "/rss/channel/title/text()."

**Step 8** Click the pencil icon in the Output field icon bar to modify the XPath expression to filter the data provided by the feed.

Fore more information, see the "Modifying the Default XPath Expression" section on page 45.

Figure 26 shows a modification to the title data field to add the "item[position()>=2andposition()<5]" predicate to the default /rss/channel/title/text() expression:

/rss/channel/item[position()>=2andposition()<5]/title/text</pre>

In this example, the data will be filtered to pull the 2nd, 3rd, and 4th items in the title element of the feed.

#### Figure 26 Output Data Filter Using XPath Expression for First Generic Data Source

Change Output Field	Output Field     ×       tf field name * title     *       Mapping     *       String     String       Content lookup     Lookup key       Expression     Irss/channel/item[position0×=2 and position0<5]/ittle/texto)	
Output field name 🔺 t	tte	
Mapping		
O String String		
<ul> <li>Content lookup</li> </ul>	Lookup key Select	
Expression /rs	s/channel/item[position()>=2 and position()<5]/title/text() Expression Editor	
	OK Como	_
	UK Cance	

Figure 27 shows selection of the "title" field for output display with the modified mapping expression and the 3 items available for data preview from the RSS feed.

Figure 27 Field Mapping for First Generic Data Source

Users Zones & Grou	ps Channels Devices	Suites T	riggers	Proof of Pl	ay Template	s Stores	Menus	Data Integ	ration		
Data sources Advan	ced										
🕂 — 🖺 🛞 🛛 Depl	oy Undploy	٩	Ти	ins busine:	ssnews - Gen	əric Data Sou	rce				
Data source name	Туре	Enabled	6	-	Field menning						
#ayai_sector	Generic Data Source	V .	• •	ningui auton	Field mapping			•			
Fitwaits	Generic Data Source	V						ų –	+ - / 🖻	\$	٩
Firewaits_batts 10000	Ceneric Data Source	V		Input fie	bld	Samp	ole data		Output field	Mapping expression	Data preview
Rovais_mostactive	Generic Data Source	~	V 1	SS				Ĥ	title	/rss/channel/item[positi	<u>3 items</u>
Terre	Ceneric Data Source	1		version		2.0					
Next1123	RSS Feed	1		r channel				=			
Testimages	Generic Data Source	1		title		Reuters: Busine	ess News				
Twins Business REE	RES Feed	1		link		http://www.reute	rs.com				
Twine hueingeenowe	Generic Data Source	1		descripti	on	Reuters.com is	your source fo	r bre			
Tuine_Been	Bible Faad			▶ image				- 11			
Twins_reas	General Pate Rours			language	)	en-us					
Twittis_agrantismewics	Contante Cratta Sciumo			laetRuild	Noto	Tuo 70 Ion 201	3.20.08.08.06	inn 💌			
TWITED LEATERS SHITES OF THE STREET	CANADIC CARE SOUND	× .									E Save Cancel
124	CODIE: NUTL CIERCE		•								

**Step 9** Click the link under Data preview to open the "Preview for" window, and verify the data from the RSS feed.

Based on the filter used in our example to pull 3 items from the title element, a link named "3 items" appears under Data preview. Figure 28 shows the preview of the three title items from the first generic data source RSS feed.

#### Figure 28 Data Preview for First Generic Data Source with Business Data



I

**Step 10** Repeat Step 2–9 for the second generic data source whose RSS feed content you want to combine with the first generic data source.

Figure 29 creates a second Generic Data Source named "Twins\_sportsnews" with the following HTTP URL "http://feeds.reuters.com/reuters/sportsNews". The rest of the configuration uses the default values.

Data sources Advanc	ed		
🕂 — 🕒 😵 🛛 Deplo	y Undploy	٩	Twins sportsnews - Generic Data Source
Data source name	Туре	Enabled	Configuration Field manning
#coval_conditor	Generic Data Source		
Royalis	Generic Data Source	I	
Revals_bats1000	Ceneric Data Source	Image: A state of the state	HTTP Settings
Royals_mostactive	Generic Data Source	Image: A state of the state	HTTP URL * http://feeds.reuters.com/reuters/sportsNews
Serve	Ceneric Data Source	~	Polling frequency * 60 in seconds (5-600)
healt123	RISIS Feed	V	
Testimages	Generic Data Source	~	Data walling filtering and throttling
Twins_Business_RISS	RISIS Feed	V	
Twins_businessnews	Generic Data Source	<ul> <li>Image: A second s</li></ul>	Incoming data filter rate 🔹 20
Twitts_RISIS	RISIS Feed	× .	
Twins_sportsnews	Generic Data Source	✓	
Twinsbusinessandsports	Generic Data Source	<ul> <li></li></ul>	E Save Cancel
aftan	OBIE: NFL, Clark	- ·	Jave Calice

Figure 29 HTTP Configuration for Second Generic Data Source

Figure 30 shows the corresponding XPath expression to filter the data to pull the 4th, 5th, and 6th items from the title element for the second generic data source.

#### Figure 30 Output Data Filter Using XPath Expression for Second Generic Data Source

Change Output Field	
Output field name * title	
Mapping	
String String	
O Content lookup Lookup key	Select
Expression /rss/channel/item[position()>	and position()<7]/title/text() Expression Editor
	OR Cance

Figure 31 shows the preview of the 3 sports titles filtered from the second generic data source.



Figure 31 Data Preview for Second Generic Data Source with Sports Data

**Step 11** To combine content from multiple data sources, click **Advanced** to create a data view and add the data sources that you created.

For more information, see the "Working with Data Views" section on page 37.

Figure 32 shows creation of a data view named "Twins\_BusinessandSportsnews" with the "Twins\_businessnews" and "Twins\_sportsnews" data sources included.

#### Figure 32 Data View Creation with Two Generic Data Sources Added

Users Zones & Groups Channels Device	s Suites Triggers Proof of Play Templates Stores Menus Data Integration
Data sources Advanced	
Advanced	Twins_BusinessandSportsnews - Data fields
- Add X / √ E Q	▲ X
Data view name 🔺 Enabled	Data source Field name
mazeoview_feedB 🖌 🖌	Twins_businessnews title
mazasview_feedD	Twins_sportsnews title
Wy_data_view	
myaisousiumformat	
rzyaitemostactive 🖌	
rayalashaw 🗸	
testimageniew 🗸	
TestLMSemarickiew	
testview 🧹 🛓	
Twins_BusinessandSportsnews 🗸	Save Cancel

**Step 12** Configure a third generic data source that connects internally to the created data view.

For more information, see the "Configuring the Data View as a New Data Source" section on page 42.

Figure 33 shows configuration of the internal HTTP URL using the Cisco StadiumVision Director server IP address and the name of the "Twins\_BusinessandSportsnews" data view.

Figure 33 Data View HTTP Configuration

Users Zones & Group	s Channels Devices	Suites Trig	igers Proof of Play	Templates	Stores Men	IS Data Integration		
Data sources Advanc	ed							
🕂 — 🕒 😚 🛛 Deplo	y Undploy	٩	Twinsbusinessan	dsports - Generi	ic Data Sourc	9		
Data source name	Туре	Enabled	Configuration Fit	d manning				
Proval_sector	Ceneric Cata Source	× -	comparation	a napping				
Royalis	Generic Data Source	<ul> <li>Image: A second s</li></ul>						
Proyaits_bats1000	Ceneric Data Source	~		HTTP Settings				
Royais_mostactive	Generic Data Source		HTTP URL	http://10.194.172	2.32:8888/Stadiun	Vision/flows/dataview/da	ta/Twins_BusinessandSportsnews	
tere	Ceneric Data Source	~	Polling frequency	* 60	📫 in s	econds (5-600)		
test123	RISIS Feed	~						
Testimages	Generic Data Source	~		Data nolling	a filtoring and the	ottling		
Twins_Business_RSS	RISS Feed	~		Data polini	gancering and di	la seconda (C. C.C.		
Twins_businessnews	Generic Data Source	<b>~</b>	Incoming data tilte	rrate * 20		in seconds (5-60)		
Twittis_RISIS	RISIS Feed	× .						
Twins_sportsnews	Ceneric Data Source	<b>~</b>						
Twinsbusinessandsports	Generic Data Source	✓						Sava Cancel
ettasi	OBIE NFL, Clock							Gancer

**Step 13** Go to Field Mapping and provide the sample XML data for the combined data sources.

The following is an example of the sample XML used:

```
Note The "entry" node is required in the sample data.
```

```
<command>
  <type>xmlDataFeed</type>
  <version>1</version>
  <channel>com.cisco.sv.databind</channel>
  <xmlDataFeed>
    <hashcode>45adde4260b54cb41765345a21efd3dc</hashcode>
    <xmlDataFeedEntry>
      <name>.Twins_businessnews.title</name>
      <value>
        <entry index="0">Exclusive:Thermo Fisher weighs Life Tech takeover -
sources</entry>
        <entry index="1">Chesapeake CEO McClendon steps down after year of tumult</entry>
      </value>
    </xmlDataFeedEntrv>
    <xmlDataFeedEntrv>
      <name>.Twins_sportsnews.title</name>
      <value>
        <entry index="0">Never-say-die Kings rally to haunt Canucks again</entry>
        <entry index="1">49ers' Moss: "I'm the greatest receiver ever"</entry>
        <entry index="2">MLB investigating doping report involving top players</entry>
      </value>
    </xmlDataFeedEntry>
  </xmlDataFeed>
</command>
```

After the XML sample data is saved, the data sources are combined.

Figure 34 highlights the new link to 6 items available for preview, which includes the 3 items from the business data source and 3 items from the sports data source.

Figure 34 Data View Field Mapping

Users Zones & Group	ps Channels Devices	Suites Tri	ggers Proof of F	Play Template	s Stores Menus	Data Integ	gration		
Data sources Advan	ced								
🕂 — 🕒 😵 🛛 Deple	oy Undploy	٩,	Twinsbusine	sandsports - G	eneric Data Source				
Data source name	Туре	Enabled	Configuration	Field menning					
#royal_sector	Ceneric Cala Source	× -	comgaradon	Freid mapping					0
Filmatis	Generic Data Source	V				~	* - / 0 1	•	~
Revails_bats1000	Ceneric Data Source		Input	leid	Sample data		Output field	Mapping expression	Data preview
#oyalis_mostactive	Generic Data Source	V	version		1	-	entry	/command/xmlDataFee	<u>6 items</u>
Terre	Generic Data Source	~	channel		com.cisco.sv.databind	_			
Nexett 2:3	RSS Feed	~	🔹 🔻 xmlDataFe	ed					
Testimates	Generic Data Source	1	hashco	de	45adde4260b54cb41765345a2	21 ef			
Tains Business BEE	BBB Fand		▼ xmiData	FeedEntry		_			
Tains husinessnews	Canadic Data Source		nam	e	.Twins_businessnews.title	=			
Tains Bill	Rifts Fand		🔻 valu	e					
Invitra_incere	Histo Petero		► e	ntry	Exclusive:Thermo Fisher weigh	ns Li			
Twitta_sgraftshaws	Cenenic Cate Ecunie	~				•			
Twinsbusinessandsports	Generic Data Source								E Save Cancel
10ai	GER NFL Clark	<b>v v</b>							

**Step 14** Click the link in the Data preview column to verify the content for display.

Figure 35 shows the combined title items from both the business and sports feeds.



#### Figure 35 Data View Field Mapping

**Step 15** Go to the Widgets tool.

I

For more information, see the "Accessing the Widgets Tool" section on page 58.

- Step 16Create a new widget.For more information, see the "Creating New Widgets" section on page 58.
- Step 17 Add a Graphic component to the canvas and adjust the size to accommodate the title fields from the RSS feeds.

For more information, see the "Working with Images" section on page 60.

Step 18 Add a TextToScreen component to the canvas to overlay the Graphic component.

**Step 19** Bind the data view data source to the TextToScreen component.

Figure 36 shows binding of the "Twinsbusinessandsports" data source.

Figure 36 Data Binding of the Data Source Created From the Data View

Properties	Effects	Data Binding			
Property			Data Source	Data Field	
Bind Message:	s		Twinsbusinessandsports	entry	

**Step 20** In the Properties panel, set the options and choose the font colors.

Figure 37 shows the properties used with black set for the first color, and red set for the second color. The bound data automatically appears in the widget. Since two different colors were set in the component properties, the colors will alternate for each message.

Notice that the first message of the combined data that was displayed in the Data Integration preview in Figure 35 appears in the Widget in black font, followed by the second message in red.



Figure 37 TextToScreen Data Preview of First Message Color

# What to Do Next

Γ

After you have completed creating a widget, complete the following steps to publish it for display:

1. Create a playlist from the Control Panel for the widget that you created. Widgets are categorized in the "By Type" folder under the "widget" type.

	secup	Control	Content	Ticker	Schedu	le Desi	gner		
mport Delete New Exter	mal Content Ne	w Playlist 🛛 🛞			: Content View :			Content F	Playlist S
ontent Navigation	à à	Content Iten	ns - widget (1	9 Items)			P 100	×	14
Name									
content	235			7.50					
external_content	77	A Dian	a Obier	Or al	-0	Ok an	a Chan	a Open	0.
i ustoni app_instance	10	101.00	22 Y	2.6. 17	22.74	22 22	1211 Y.Y.	3.97 . 25	22.7
=		Arxe_Widget_1	Arxe_Widget_2	Arxe_Widget_3	Arse_Widget_4	Arre_Widget_S	Arze_Widget_5	Arxe_vidget_6_Hoc	GS15_Widg
aylists Auto Save 🗹 🔎 🛛 oe	×								
Name 4	# Туре	0	0	0	0	0	0	0	0
oes_hodkey	1 Non Video	200	20			20	20		124
		GSIS Widget					testing		
				100					
		AOM AN		Con m					
		22.11	10. M	22 M					

- 2. Create an event script to run the playlist.
- 3. Schedule the script to display the content on a TV.

1