



Designing the Layout of External Content Using the Widgets Tool

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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](#)

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**.

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 to 16 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.



Note 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.



Note 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](#)).



Note 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)

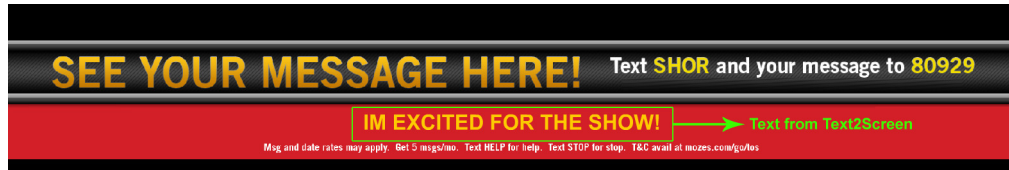
The TextToScreen component can support any number of messages from the data feed.

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.



Tip

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.



Tip

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.

Table 1 Text Area Component Properties

Property Name	Description	Values
x	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
y	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	Character string to display within the text area component. Note The Text property does not support line wrap, so the length of the string that can be supported is the canvas width.	Default is “TextAreaN,” where <i>N</i> 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.

Table 2 Graphic Component Properties

Property or Effect Name	Description	Values
x	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
y	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.

Table 2 *Graphic Component Properties (continued)*

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

PicToScreen Component Properties and Effects

[Table 3](#) describes the property options and [Table 4](#) describes the effects that can be applied to PicToScreen components.

Table 3 *PicToScreen Component Properties*

Property or Effect Name	Description	Values
x	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
y	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. Tip The 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.	Range is 2–5. Default is 5.
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 (continued)*

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 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.

Table 5 *TextToScreen Component Properties*

Property or Effect Name	Description	Values
x	Number of pixels that defines the starting position of the component horizontally.	Range is 0–1920.
y	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 6 *TextToScreen Component Effects*

Effect Name	Description	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.

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.



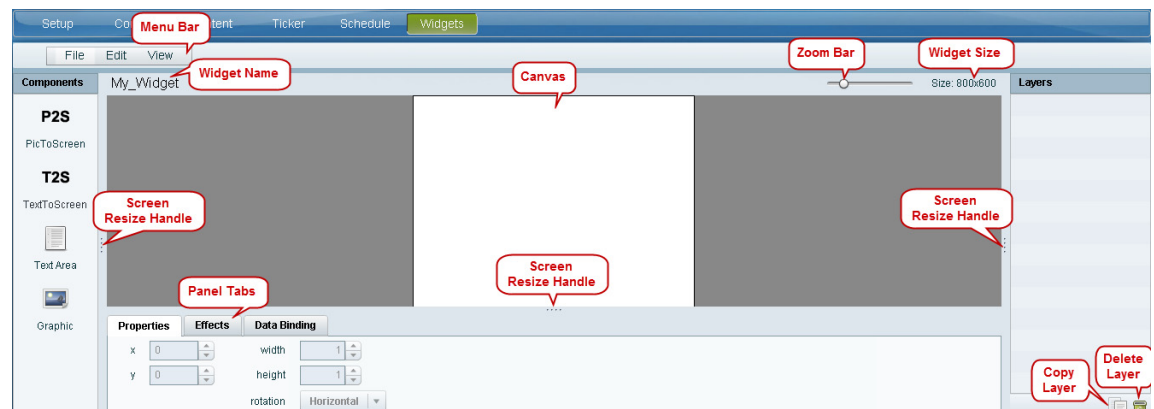
Note

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.

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](#)

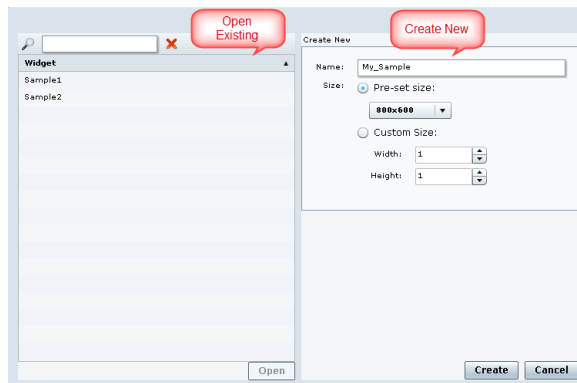
Accessing the Widgets Tool

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*



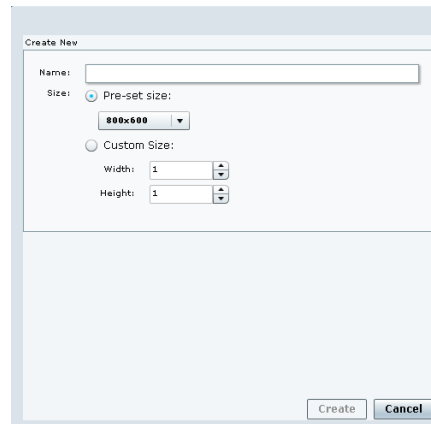
Creating New Widgets

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

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



- 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**.

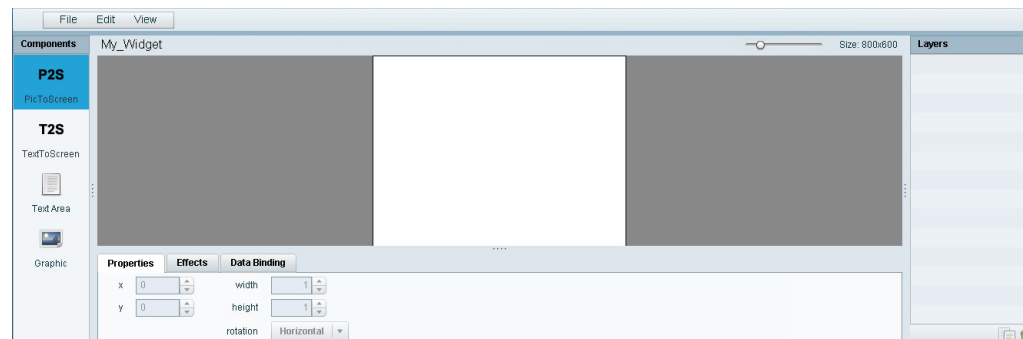
The tool displays a white box of the size that you created, with the dimensions that you specified displayed in the upper right corner (Figure 7).



Note

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.

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.

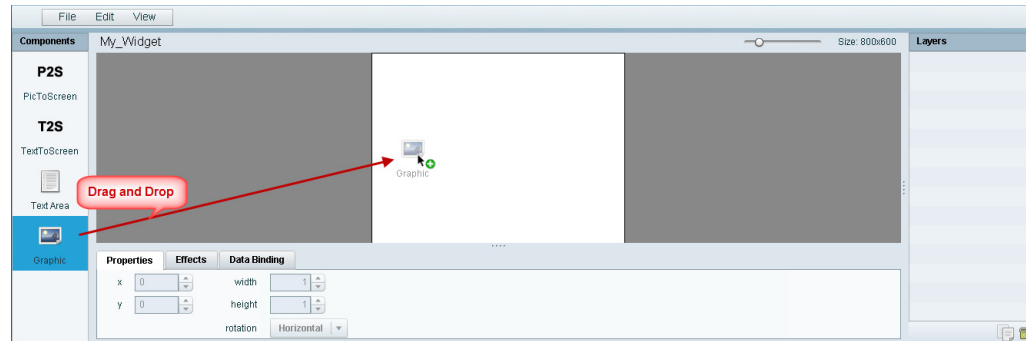
Prerequisite

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

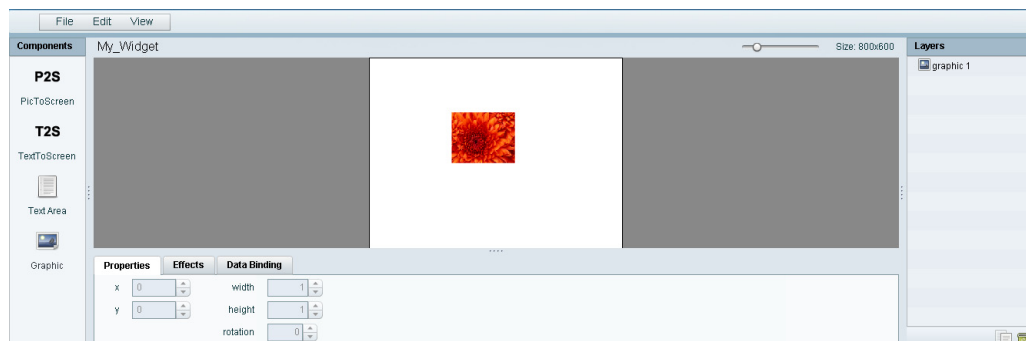
To add an image to a widget, complete the following steps:

- 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**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

- 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.

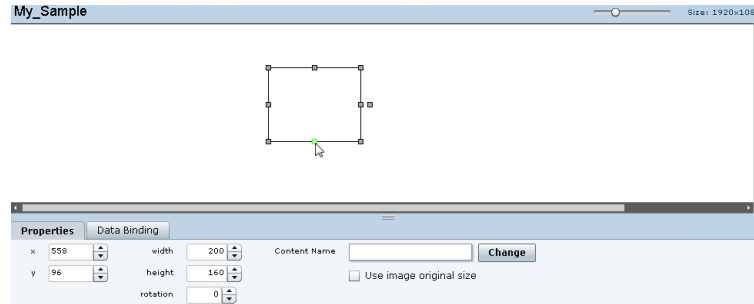
**Tip**

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.

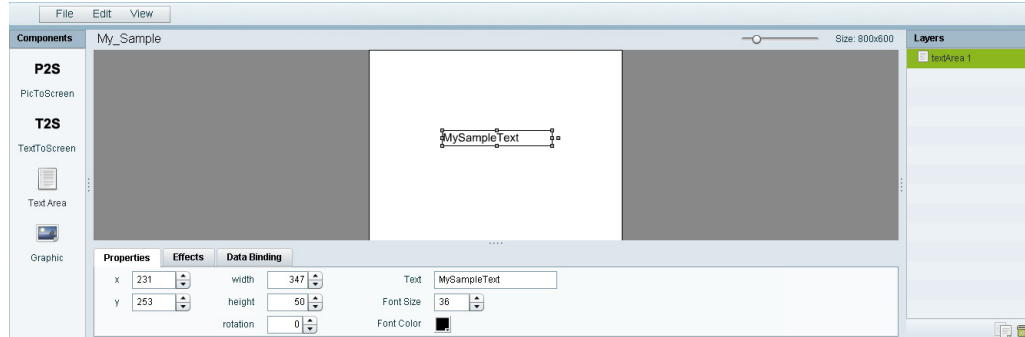
Currently the only available font is Arial.

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.

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

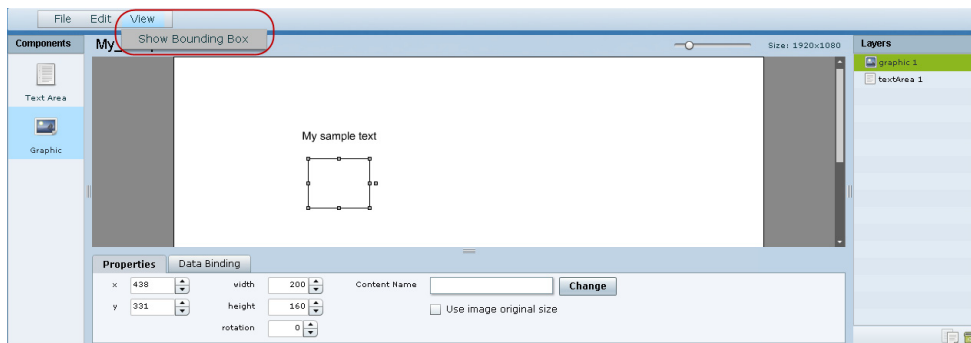
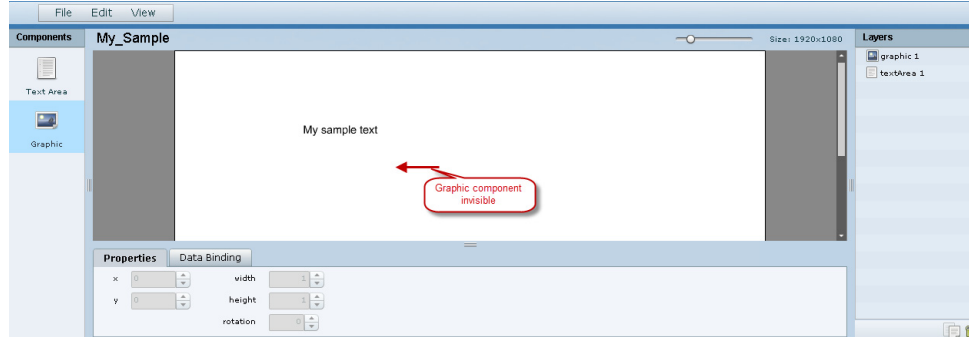


Figure 13 Default Setting Without Bounding Box or Selected Components

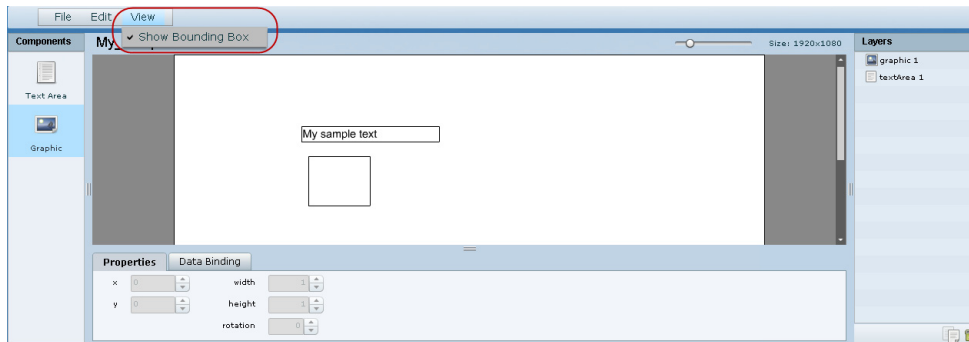
To display a boundary around all components in the widget, complete the following steps:

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

Step 3 Click **File > Save**.

Changes to the widget are saved.

Resizing and Rotating Components

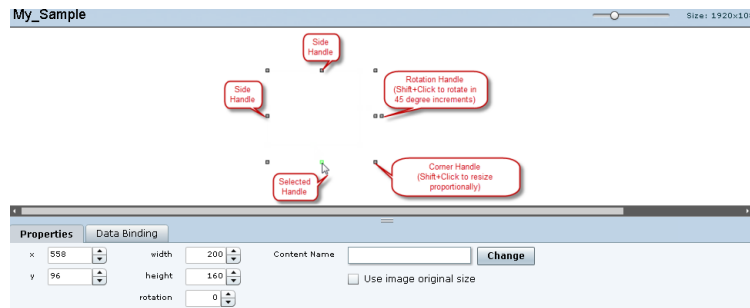
You can resize and rotate both Text Area and Graphic components in the following ways:

- 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

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

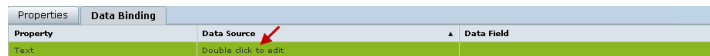
To bind external data to a widget, complete the following steps:

-
- 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.

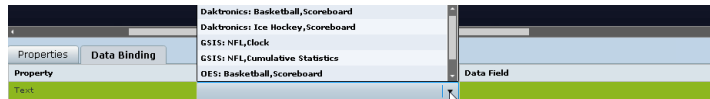
- Step 4** In the Data Binding panel, double-click in the first cell under the Data Source heading and open the drop-down list ([Figure 16](#)).

Figure 16 Accessing the Data Source List



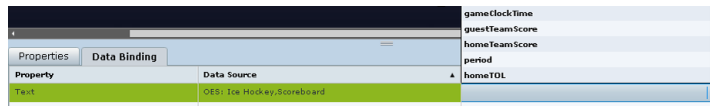
- Step 5** Click the drop-down list and select the data source from which you want to bind data. Use the scroll bar to reveal all data sources as necessary ([Figure 17](#)).

Figure 17 Selecting the Data Source



- 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**.



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 **Delete**.

Renaming Widgets

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 **Rename**.

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



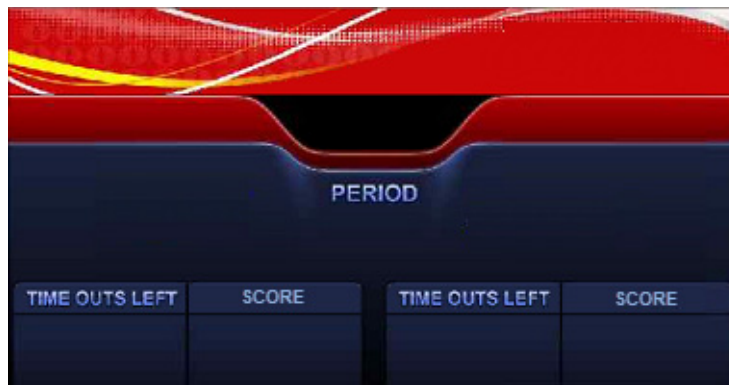
Note

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.

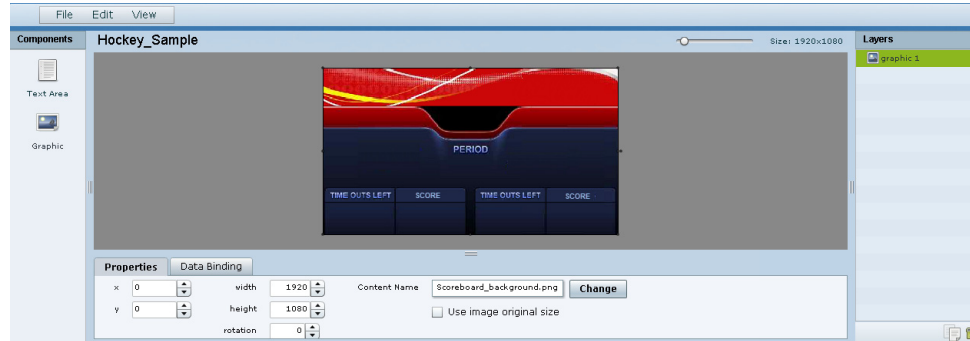
These text areas will be positioned beneath the background image headings and will have real-time data bound to them to appear in the widget.

Figure 19 Image Background for Scoreboard Widget

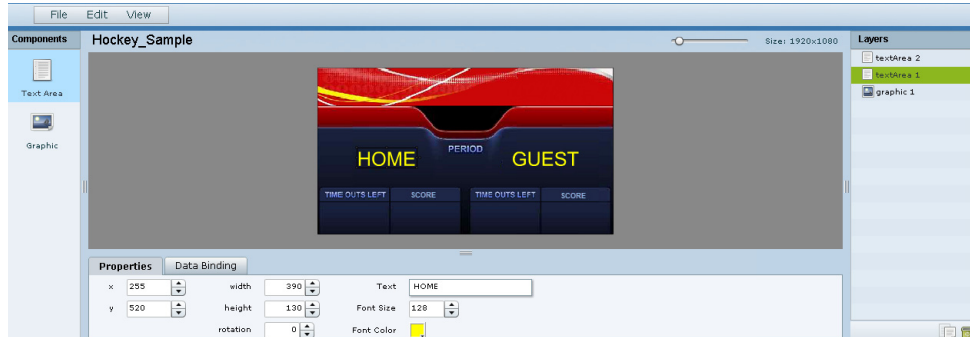


To create a widget and bind data to it, complete the following steps:

- 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

Figure 20 Background Image Added to Graphic Component

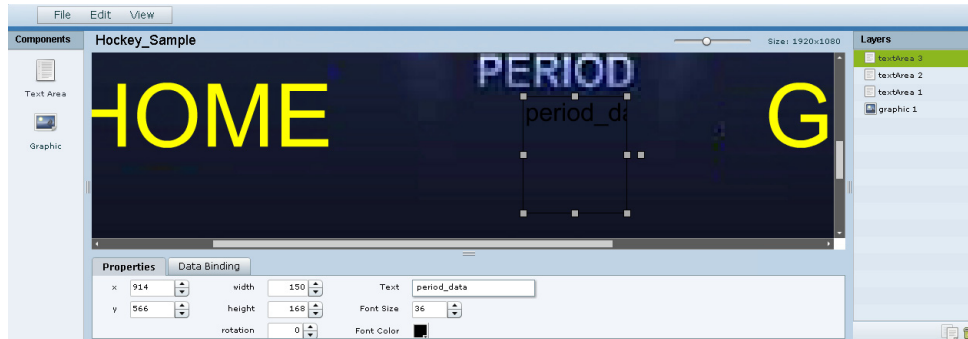
- Step 6** Create two new text area components to add “HOME” and “GUEST” as the specified text string positioned as layers on top of the background graphic component (Figure 21).

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
 - 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.

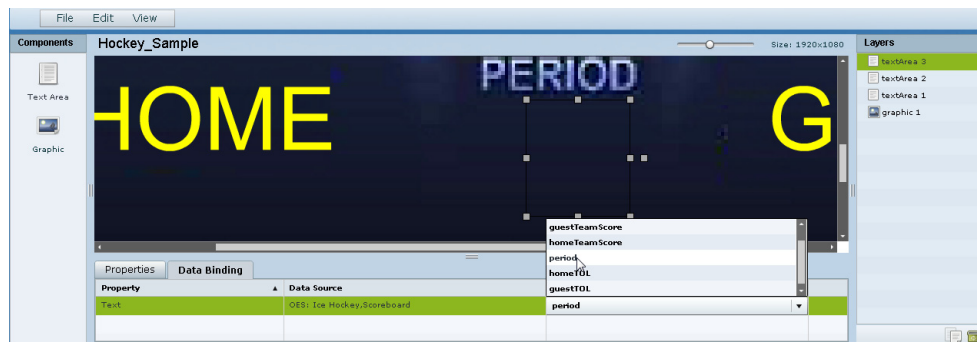
- c. Position and resize the component beneath the heading for which you are going to bind corresponding data (Figure 22).
- d. (Optional) Add text to temporarily identify what data will be in the box, such as “period_data.”

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



- 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.

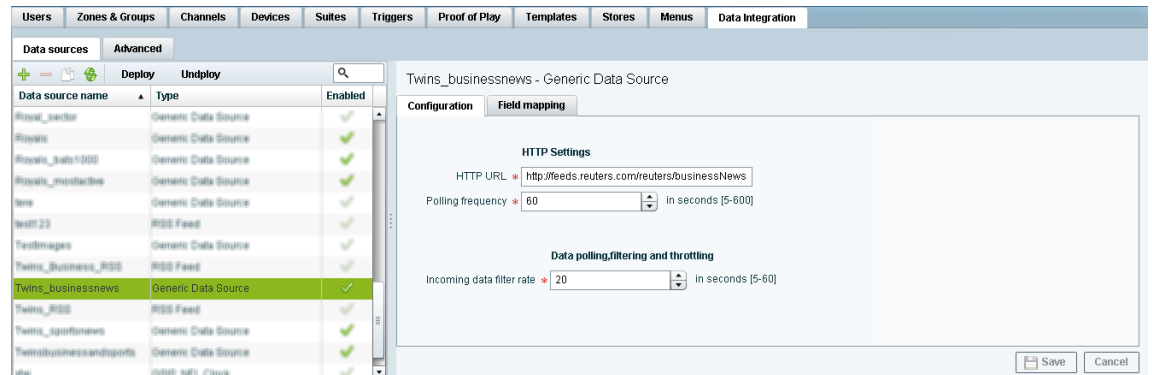
Step 2 Add a new Generic Data Source with the HTTP message type.

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



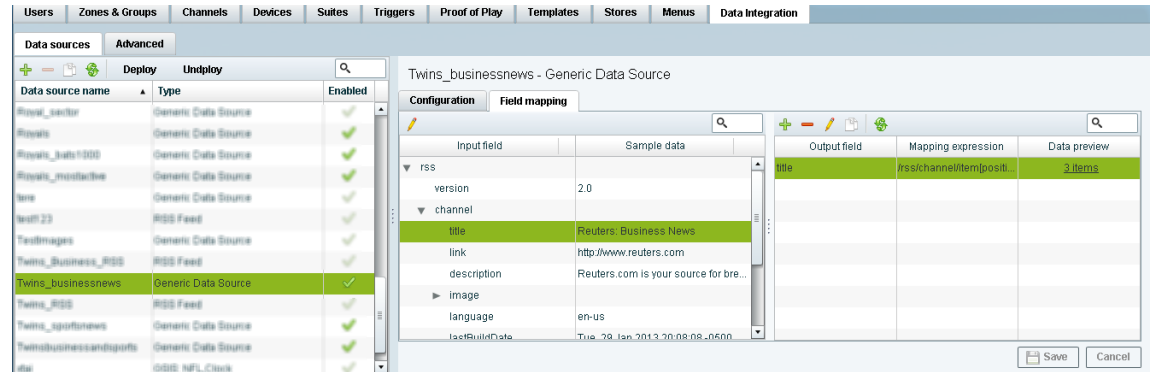
Step 4 Click **Field Mapping**.

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 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



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



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.

Figure 29 HTTP Configuration for Second Generic Data Source

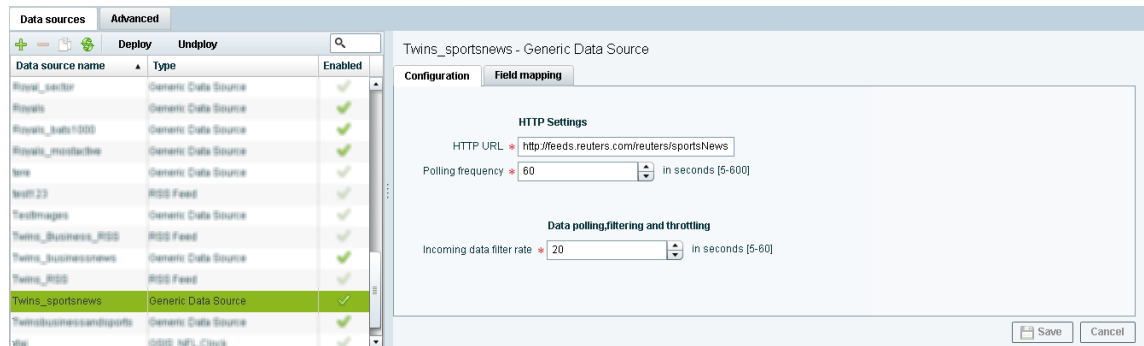


Figure 30 shows the corresponding XPath expression to filter the data to pull the 4th, 5th, and 6th items from the title element for the second generic data source.

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

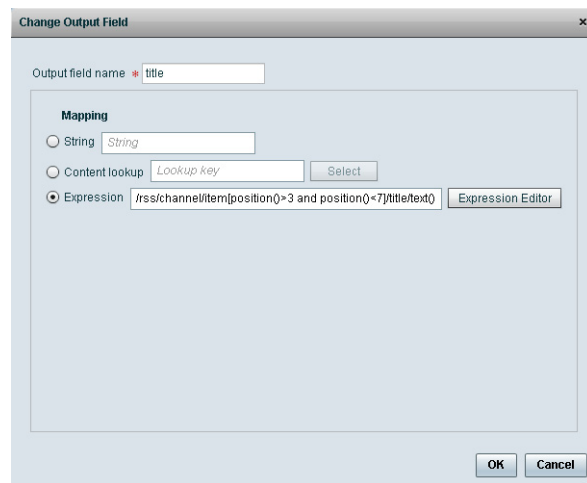
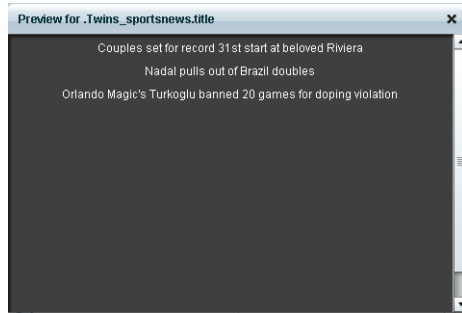


Figure 31 shows the preview of the 3 sports titles filtered from the second generic data source.

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

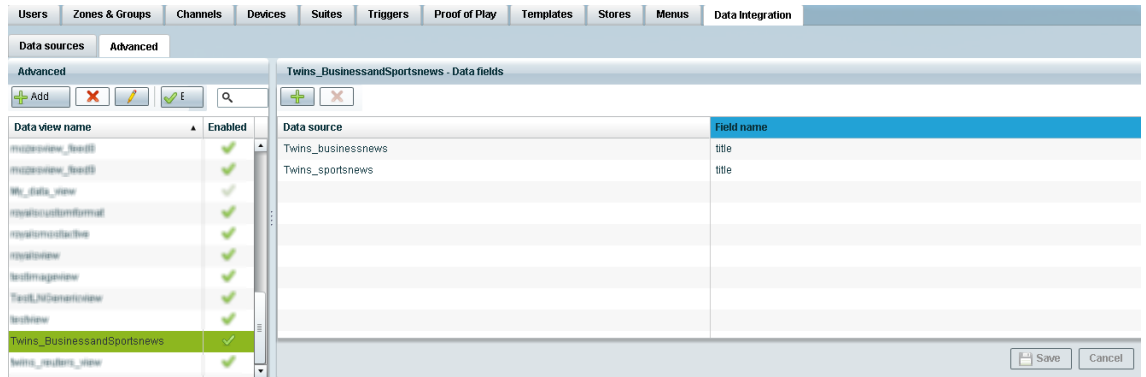


Step 11 To combine content from multiple data sources, click **Advanced** to create a data view and add the data sources that you created.

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



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

The screenshot shows the 'Data sources' configuration page in Cisco StadiumVision Director. The 'Advanced' tab is selected. On the left, a table lists various data sources, with 'Twinsbusinessandsports' highlighted in green. The right pane shows the configuration for this source, including 'HTTP Settings' with the URL 'http://10.194.172.32:8888/StadiumVision/flows/dataview/dataTwins_BusinessandSportsnews', a polling frequency of 60 seconds, and 'Data polling, filtering and throttling' with an incoming data filter rate of 20 seconds.

Data source name	Type	Enabled
Royal_sector	Generic Data Source	✓
Royals	Generic Data Source	✓
Royals_inns100	Generic Data Source	✓
Royals_mustache	Generic Data Source	✓
tere	Generic Data Source	✓
test23	RSS Feed	✓
TestImages	Generic Data Source	✓
Twins_business_RSS	RSS Feed	✓
Twins_businessnews	Generic Data Source	✓
Twins_RSS	RSS Feed	✓
Twins_sportsnews	Generic Data Source	✓
Twinsbusinessandsports	Generic Data Source	✓
test	GDSP NFL_Clock	✓

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:



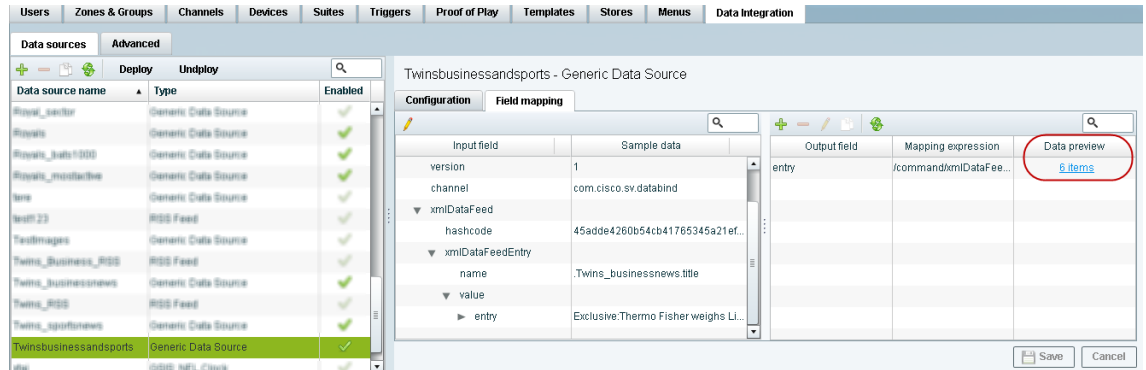
Note The “entry” node is required in the sample data.

```
<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>
    </xmlDataFeedEntry>
    <xmlDataFeedEntry>
      <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.

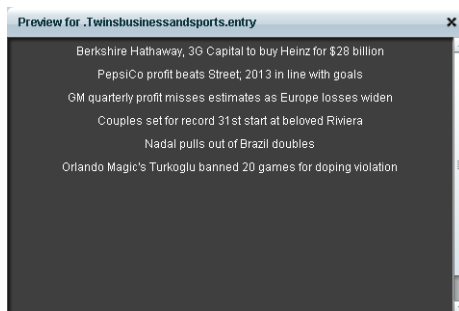
Figure 34 Data View Field Mapping



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.

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

Step 16 Create 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

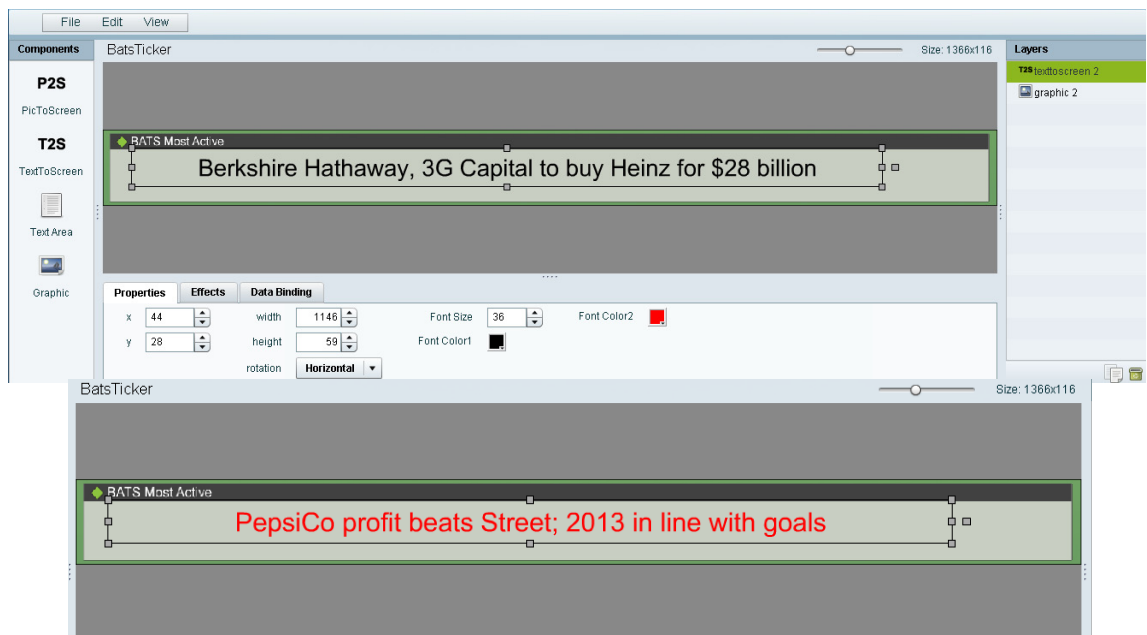
Property	Data Source	Data Field
Bind Messages	Twinsbusinessandsports	entry

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.

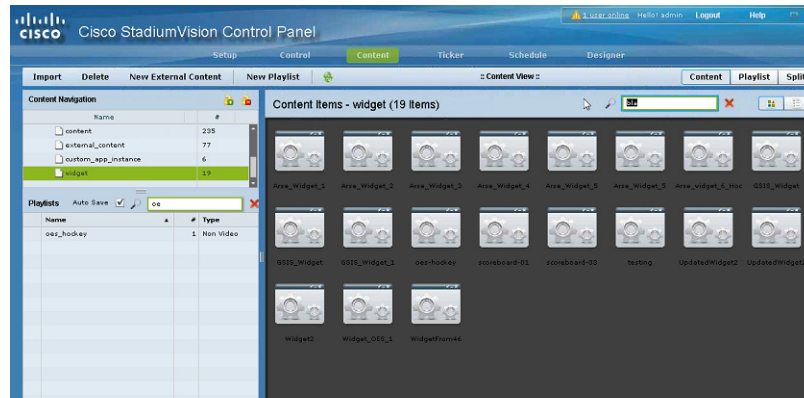
Figure 37 TextToScreen Data Preview of First Message Color



What to Do Next

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.



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

