



TRAINING MODULE

5.0

Advanced Data Source Integration

## Module 5.0 | Advanced Data Source Integration

### Google Sheets

Publish the data in your Google Sheets to StratosMedia with just a few clicks.

This add-on for Google Sheets allows you to publish data to your StratosMedia scenes and players with just a few clicks. Just change any of the data in your Google Sheet, click the 'Publish' button and watch it update instantly in real-time across the entire StratosMedia ecosystem.

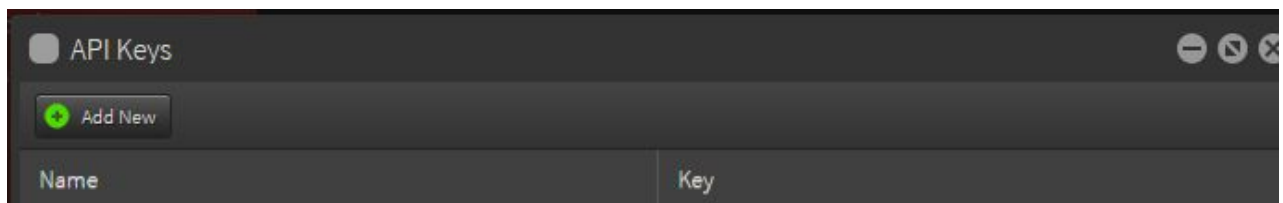
This data link can then be found in your Data Sources folder and linked within a scene using the Table component or Text Box to a cell.

#### Generate an API Key in StratosMedia GUI

Select the API Keys tab from the dropdown green HOME MENU

Click on Add New and name your API Key.

This will be used in the StratosMedia Export Tool in Google Sheets to define your Data link.



#### StratosMedia Export Tool

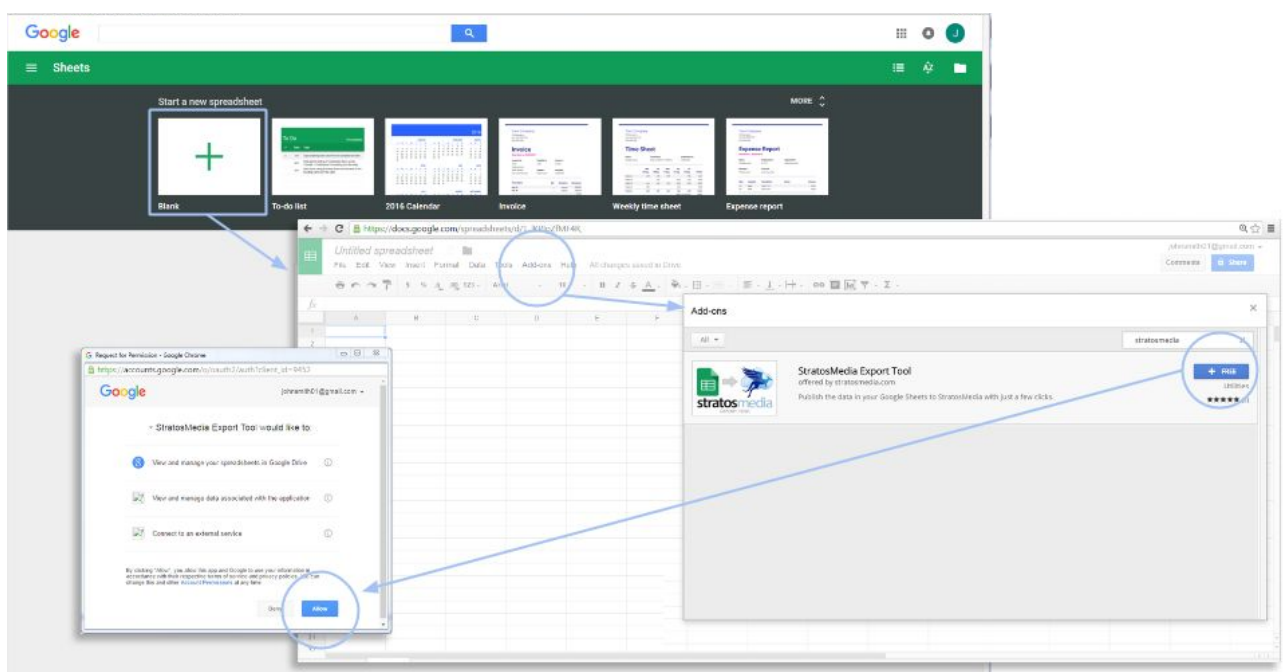
Login to your Google Account and open Google Sheets

NOTE: When adding the Export Tool for the FIRST time in your Google Account you MUST use a NEW BLANK spreadsheet. Adding the Tool for the first time into your Google account to an existing SHARED live sheet containing datasource links will remove these existing selections. If this occurs all selections will need to be recreated and any scenes with links to these sources relinked to the new selections.

Open a new spreadsheet and click on the Add-ons Tab and then Get Add-ons

Search for 'StratosMedia' and this will direct you to the StratosMedia Export Tool

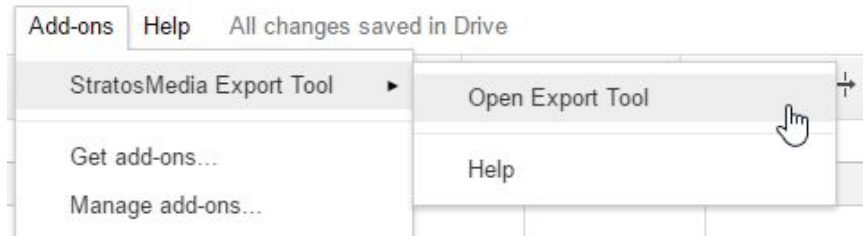
Select +FREE Allow permissions to run when requested to install the application



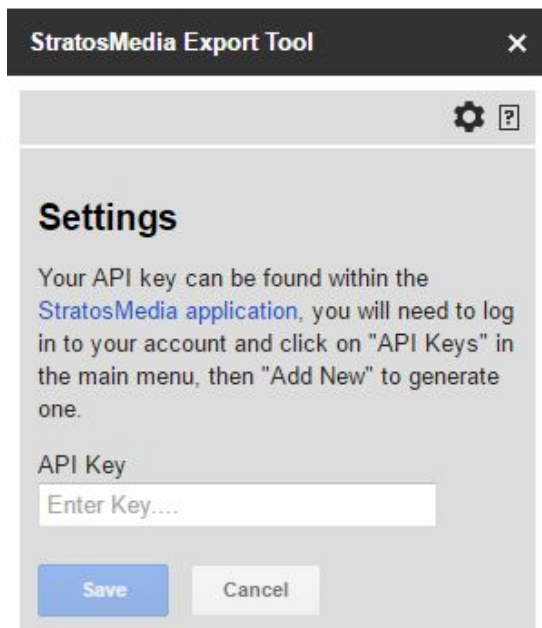
## Loading a Google Sheet into the StratosMedia Export Tool

Open the Google Sheet you wish to integrate with StratosMedia.

If the add-on is not visible on the right side of the screen open it up from the 'add-ons' menu.



Open the add-on Settings by clicking on the cog, enter the API key you created and save.

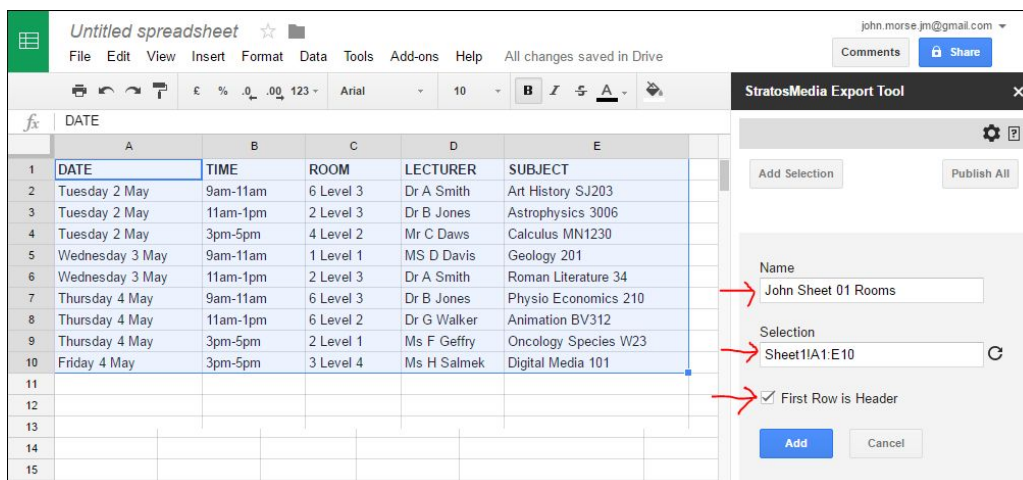


Select the range of data fields you wish to publish to Stratos.

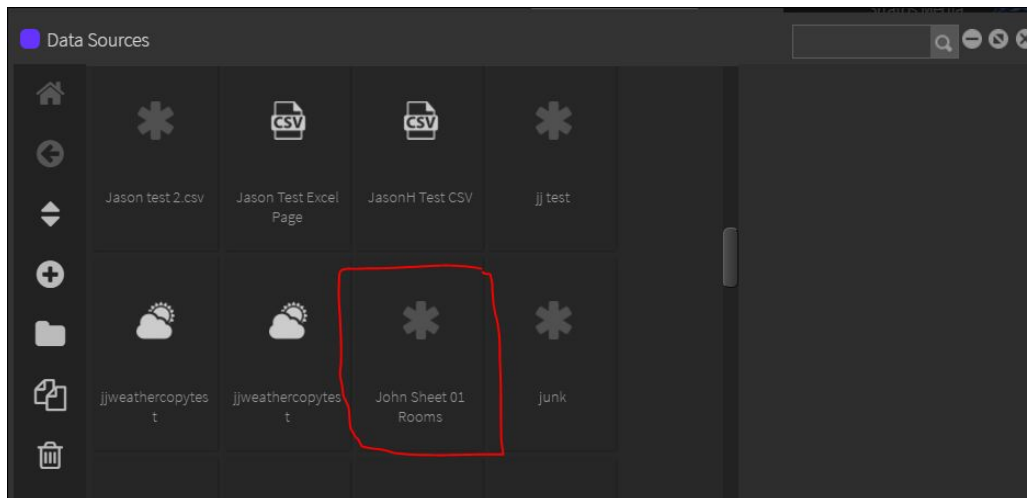
Click 'add selection'

Enter a name for this data source

If the first row of your data is a header tick the check box. Click 'Add'



Click on 'publish' to publish this selection to Stratos, it will automatically appear in your data sources with the name you entered – in this case John Sheet 01 Rooms.



**Data - John Sheet 01 Rooms**

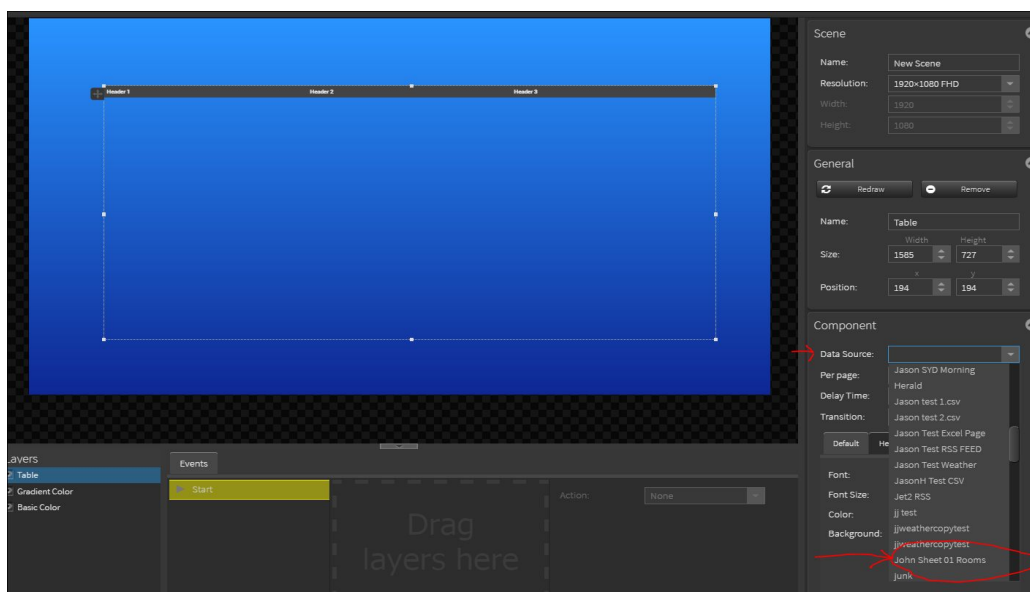
Details Preview

Save Add Row Add Column Remove Column Edit Headers

DATE	TIME	ROOM	LECTURER	SUBJECT
Tuesday 2 May	9am-11am	6 Level 3	Dr A Smith	Art History SJ203
Tuesday 2 May	11am-1pm	2 Level 3	Dr B Jones	Astrophysics 3006
Tuesday 2 May	3pm-5pm	4 Level 2	Mr C Daws	Calculus MN1230
Wednesday 3 May	9am-11am	1 Level 1	MS D Davis	Geology 201
Wednesday 3 May	11am-1pm	2 Level 3	Dr A Smith	Roman Literature 34
Thursday 4 May	9am-11am	6 Level 3	Dr B Jones	Physio Economics 210
Thursday 4 May	11am-1pm	6 Level 2	Dr G Walker	Animation BV312
Thursday 4 May	3pm-5pm	2 Level 1	Ms F Geffry	Oncology Species W23
Friday 4 May	3pm-5pm	3 Level 4	Ms H Salmek	Digital Media 101

## Data Source and Google Sheets

Open a New Scene and add the Table Object onto the edit area.



Select your Data Source (John Sheet 01 Rooms) and then format your table as needed.



The screenshot shows the StratosMedia interface. On the left, a table displays lecture data. On the right, a settings panel is visible with various configuration options.

DATE	TIME	ROOM	LECTURER	SUBJECT
Tuesday 2 May	9am-11am	6 Level 3	Dr A Smith	Art History SJ203
Tuesday 2 May	11am-1pm	2 Level 3	Dr B Jones	Astrophysics 3006
Tuesday 2 May	3pm-5pm	4 Level 2	Mr C Daws	Calculus MN1230
Wednesday 3 May	9am-11am	1 Level 1	MS D Davis	Geology 201
Wednesday 3 May	11am-1pm	2 Level 3	Dr A Smith	Roman Literature 34
Thursday 4 May	9am-11am	6 Level 3	Dr B Jones	Physio Economics 210
Thursday 4 May	11am-1pm	6 Level 2	Dr G Walker	Animation BV312
Thursday 4 May	3pm-5pm	2 Level 1	Ms F Geffry	Oncology Species W23
Friday 4 May	3pm-5pm	3 Level 4	Ms H Salmek	Digital Media 101

Settings Panel (Right):

- Resolution: 1920x1080 FHD
- Width: 1920
- Height: 1080
- General: Redraw, Remove
- Name: Table
- Size: Width 1533, Height 579
- Position: X 206, Y 271
- Component: Data Source: John Sheet 01 Rooms
- Per page: 0
- Delay Time: 5000
- Transition: None
- Font: Roboto
- Font Size: 30
- Color: 000000
- Background: fbfad

The data source in the StratosMedia head end will now be automatically updated when values in the Google sheet are changed.

The screenshot shows a Google Sheet titled 'Untitled spreadsheet'. The data is organized in a table with columns A through E. The 'StratosMedia Export Tool' sidebar is open on the right, showing options to 'Add Selection' and 'Publish All'. The 'Published to the StratosMedia App' status is visible.

	A	B	C	D	E
1	DATE	TIME	ROOM	LECTURER	SUBJECT
2	Tuesday 2 May	9am-11am	6 Level 3	Dr A Smith	Art History SJ203
3	Tuesday 2 May	11am-1pm	2 Level 3	Dr B Jones	Astrophysics 3006
4	CANCELLED	3pm-5pm	4 Level 2	Mr C Daws	Calculus MN1230
5	Wednesday 3 May	9am-11am	1 Level 1	MS D Davis	Geology 201
6	Wednesday 3 May	11am-1pm	2 Level 3	Dr A Smith	Roman Literature 34
7	Thursday 4 May	9am-11am	6 Level 3	Dr B Jones	Physio Economics 210
8	Thursday 4 May	11am-1pm	6 Level 2	Dr G Walker	Animation BV312
9	CANCELLED	3pm-5pm	2 Level 1	Ms F Geffry	Oncology Species W23
10	Friday 4 May	3pm-5pm	3 Level 4	Ms H Salmek	Digital Media 101
11					
12					

After updating values in the Google Sheet you will need to publish from the sheet again, this will update the values in the data source. You can use the 'Publish All' button to update all data sources on this Google sheet.

The screenshot shows the StratosMedia interface with the updated table data. The 'CANCELLED' entries are highlighted with red circles.

DATE	TIME	ROOM	LECTURER	SUBJECT
Tuesday 2 May	9am-11am	6 Level 3	Dr A Smith	Art History SJ203
Tuesday 2 May	11am-1pm	2 Level 3	Dr B Jones	Astrophysics 3006
CANCELLED	3pm-5pm	4 Level 2	Mr C Daws	Calculus MN1230
Wednesday 3 May	9am-11am	1 Level 1	MS D Davis	Geology 201
Wednesday 3 May	11am-1pm	2 Level 3	Dr A Smith	Roman Literature 34
Thursday 4 May	9am-11am	6 Level 3	Dr B Jones	Physio Economics 210
Thursday 4 May	11am-1pm	6 Level 2	Dr G Walker	Animation BV312
CANCELLED	3pm-5pm	2 Level 1	Ms F Geffry	Oncology Species W23
Friday 4 May	3pm-5pm	3 Level 4	Ms H Salmek	Digital Media 101

## Google Slides

We have recognized that some users are more familiar with Microsoft Powerpoint and Google Slides when creating and presenting their communication needs and may be hesitant to review workflow practices if it requires added burden on already time poor resources and results in a drop in productivity.

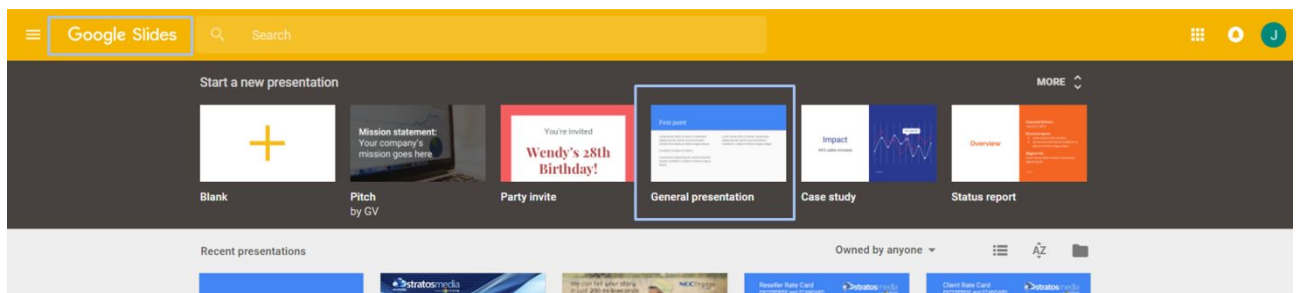
These simple steps show how your current Google Slides can be linked directly to a scene in StratosMedia using the 'Web View' component to display and update your content automatically and seamlessly.

The only caveat on this method is that the media device must always have an active internet connection to display this linked content as the URL link is live and not a cached feed or this message will be displayed.

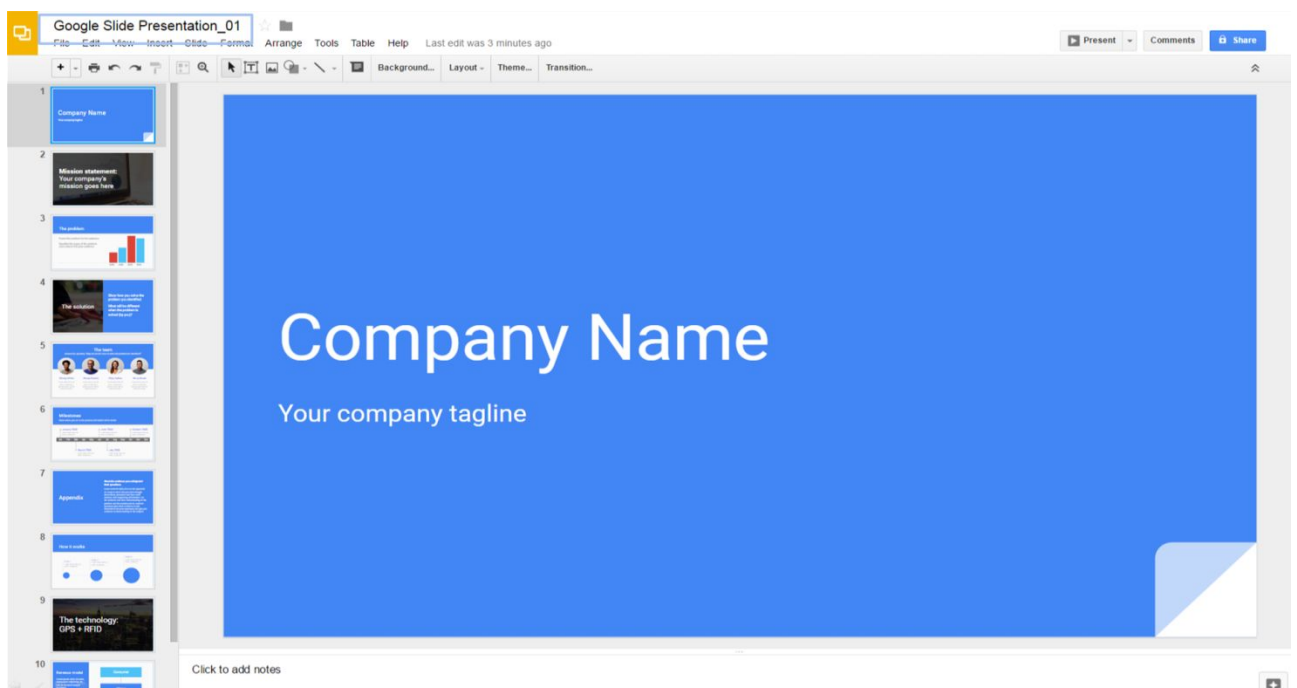


### Publish to the web

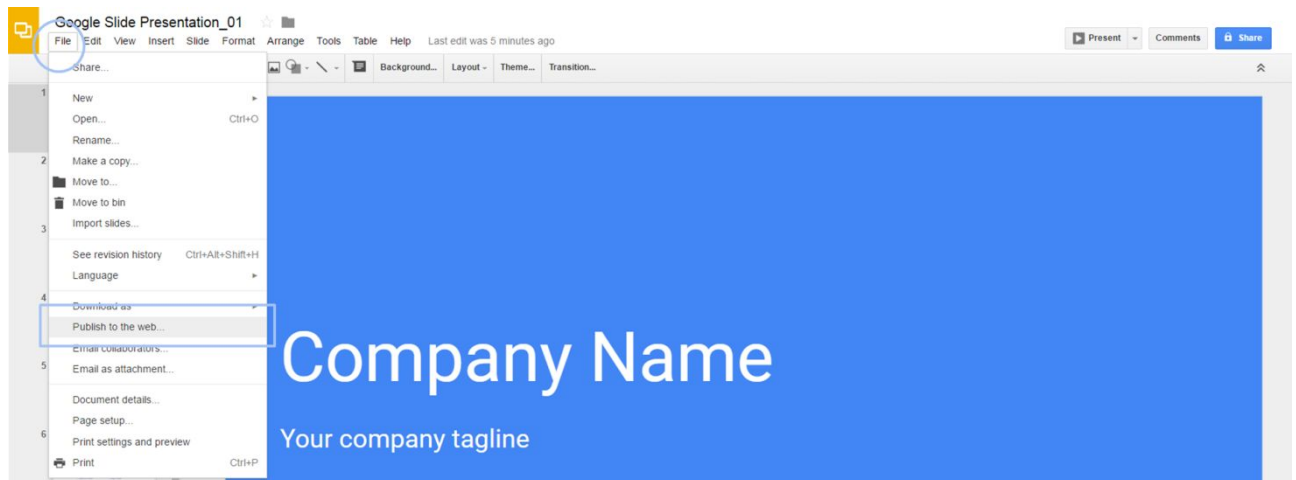
Open Google Chrome and Google Slides to start a presentation.



Build your presentation in Google Slides.

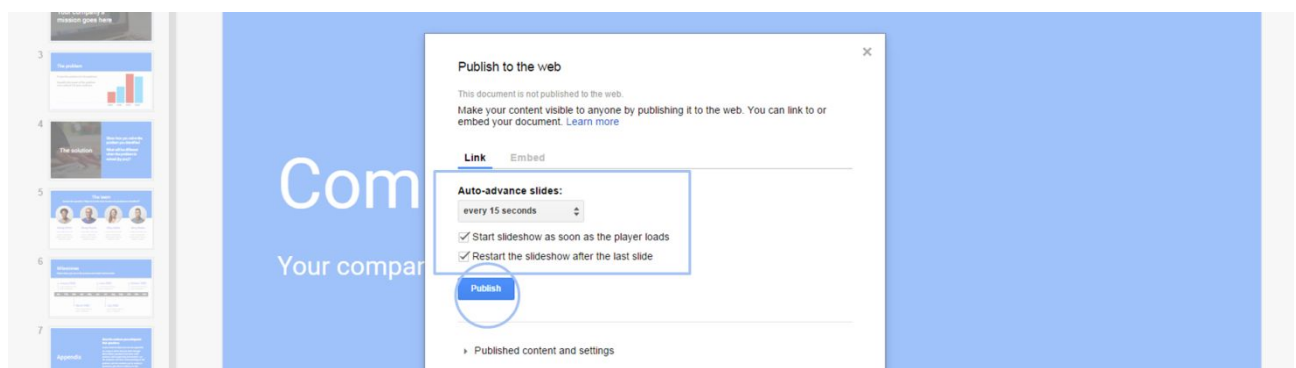


Go to File Tab and select Publish to the web...



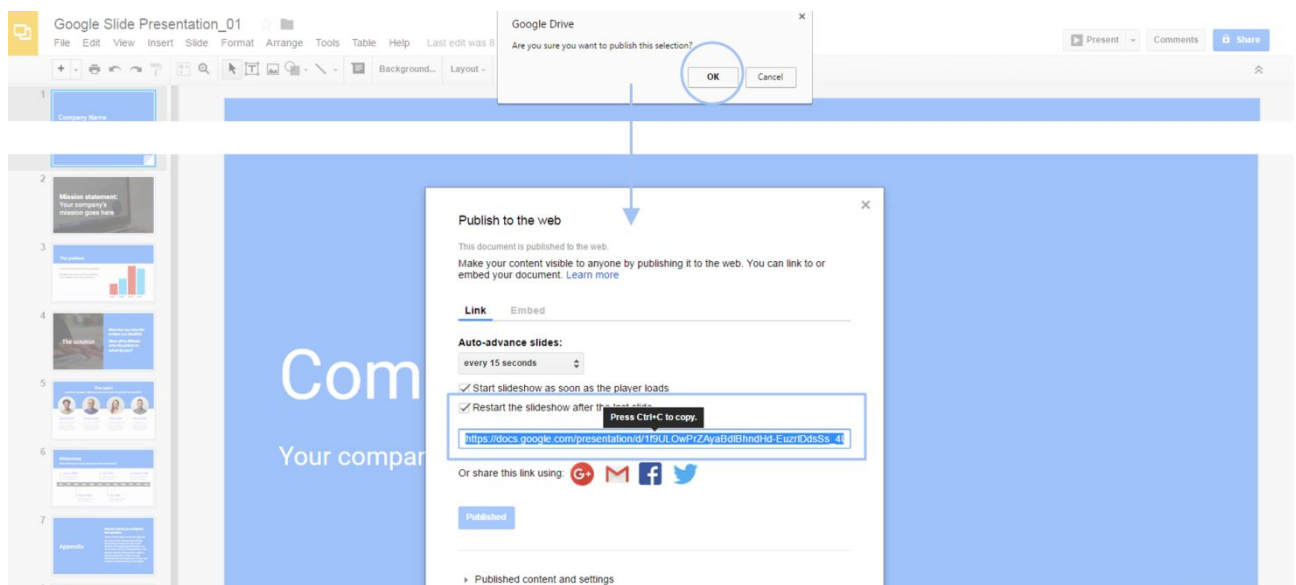
Now determine the playback options for the Slideshow.

Click Publish Tab.



Follow the prompt and select OK to publish your presentation.

Copy the URL link to use later in the StratosMedia scene.



Google Slides is an interactive Presentation format and will display a slideshow presentation control panel onscreen on Slide 1 for a few seconds. Since the Web View component is an interactive element the Google Slide scene will also be interactive if the media player screen is a touch enabled device. You will be able to use these controls to navigate through the slides for the duration of the scene.

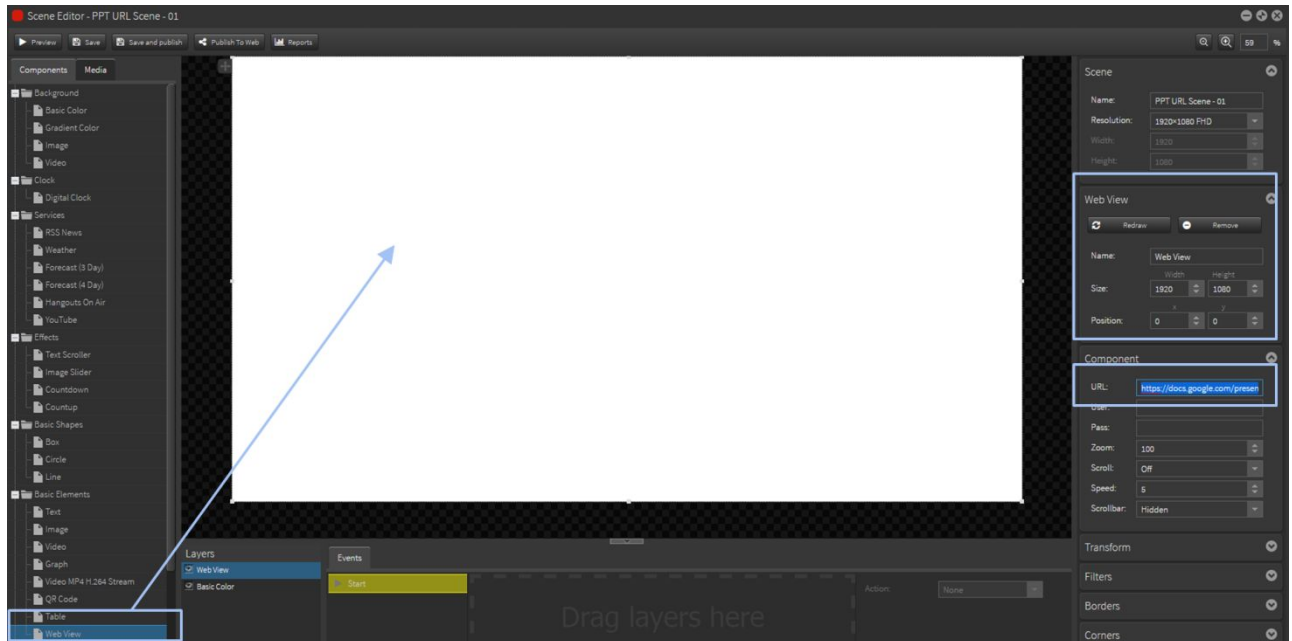
If you wish to 'hide' the control panel add this code to the end of the url string: `&rm=minimal`

## Create a Scene with Google Slide link and distribute to StratosMedia Player

Open StratosMedia Scene Editor and create a new scene.

Drag the Web View Component at left onto the edit area and resize to full screen to fill the entire area.

Paste the URL from Google Slides into the Component URL field at right.



NOTE: No preview will display at this point in Scene editor or Preview pane.

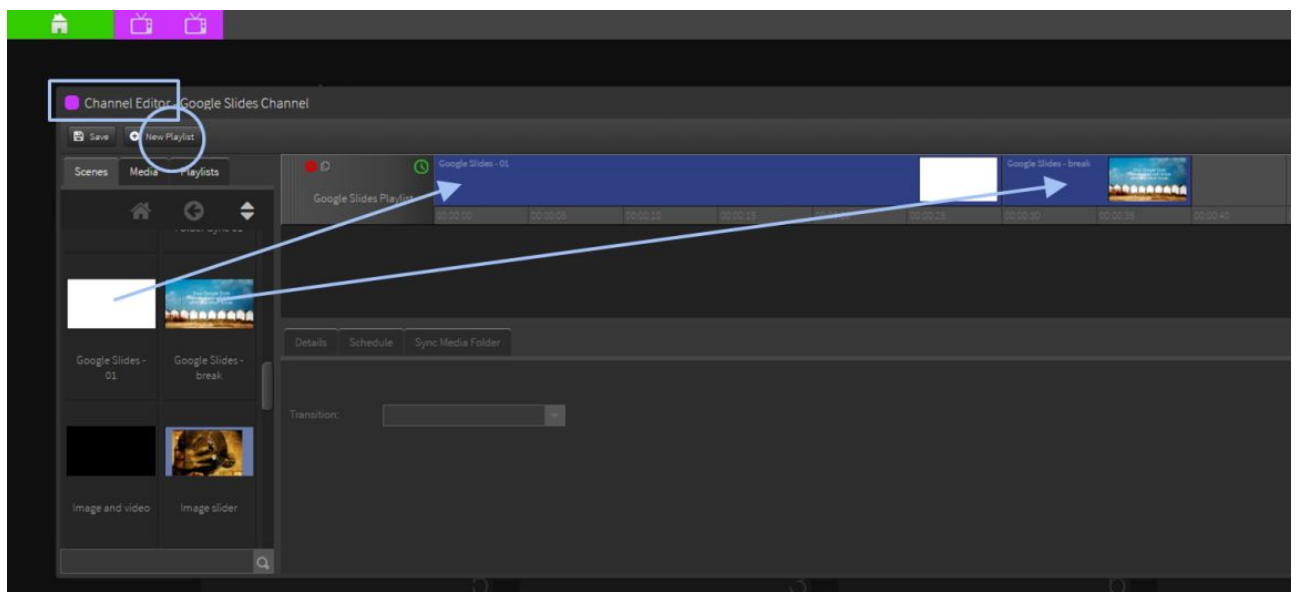
## Add to a Playlist/Channel and send to Player

Create a new playlist or add the Google Slides scene to an existing playlist of content.

The length of the scene in the timeline must be calculated based on the number of slides in your presentation and the auto-advance time selected when published to web.

For example: 8 slides x 15 seconds auto-advance = 120 secs

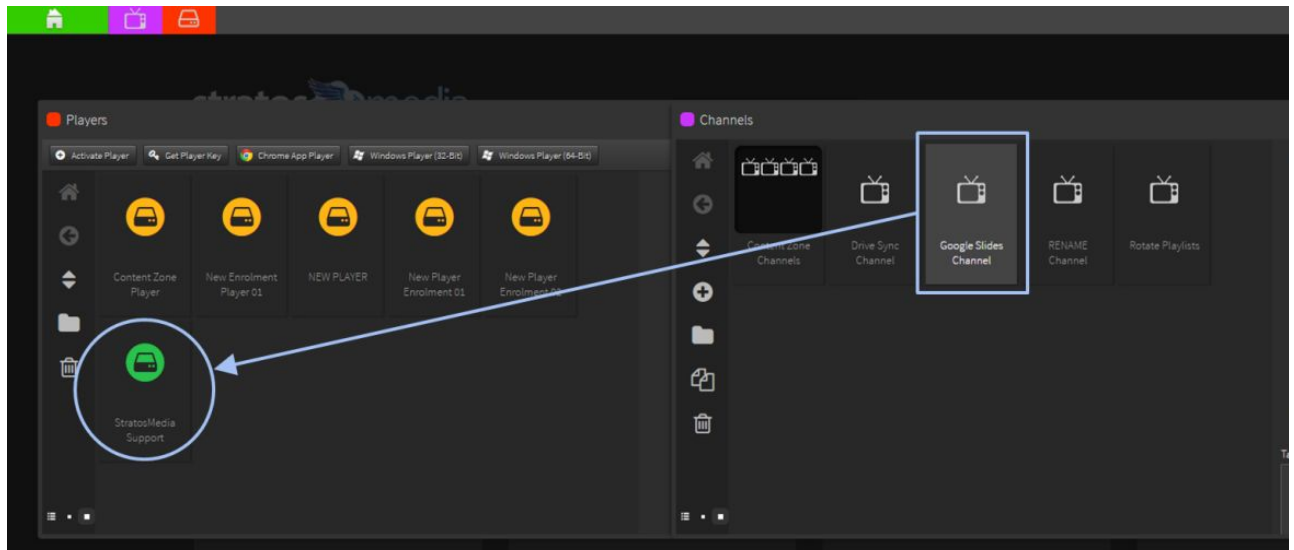
NOTE: This time length is very important to determine so all slides have time to display in the scene.



NOTE: At least two scenes must populate the playlist which includes the Google Slide scene. When the Google Slide scene restarts the URL will refresh and pick up any changes made to the Google Slide presentation automatically.

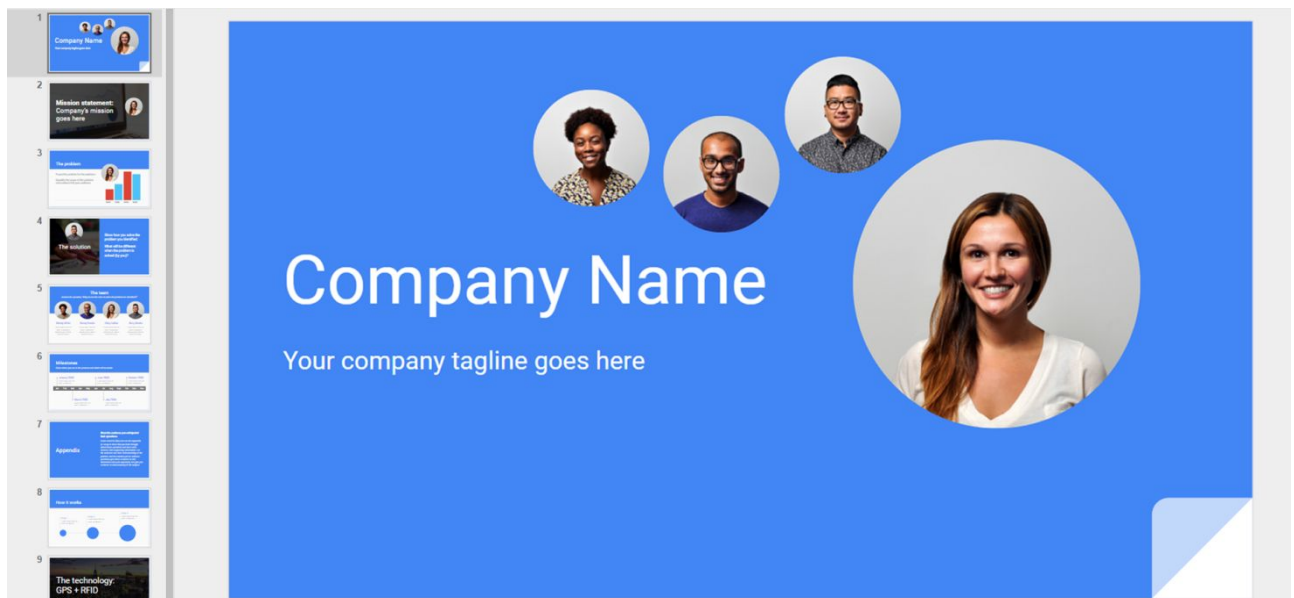


Now drop the Channel containing the Playlist onto the StratosMedia Player.



### Updating the Google Slides Presentation

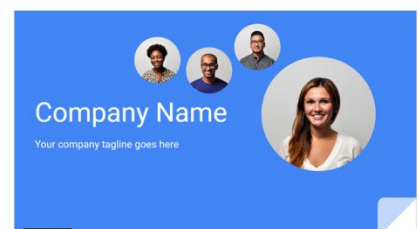
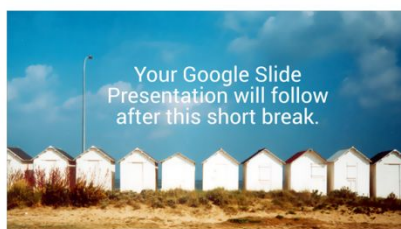
Open Google Slides presentation in Chrome browser and make changes to the presentation.



The next time the scene plays in the playlist on the media device the changes will appear.



Before changes.



After changes.

## Graphs

You can link data to a dynamic visual display using the Graphs element.

There are multiple style options such as Bar and Line Graphs or a combination of both of these, Vertically or Horizontally aligned options, Stacked Bar Graphs, Pie Charts with labels and 3D style, and a dynamic Dashboard Dial 180° or 360° view.

### Data source

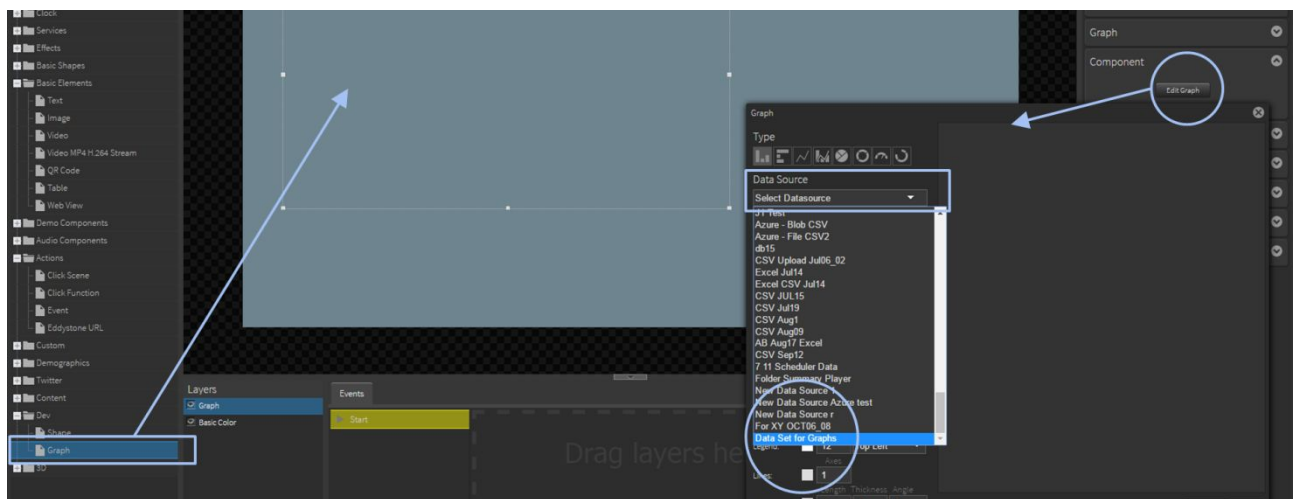
Firstly create a data source from an Excel csv file or a Google Sheet.

### Bar Graph - Vertical

This style is useful for displaying data sets with a large number of data points, or when you want multiple data sets on the same graph.

Select and drag the Graph Element onto the edit area then click the Edit Graph tab.

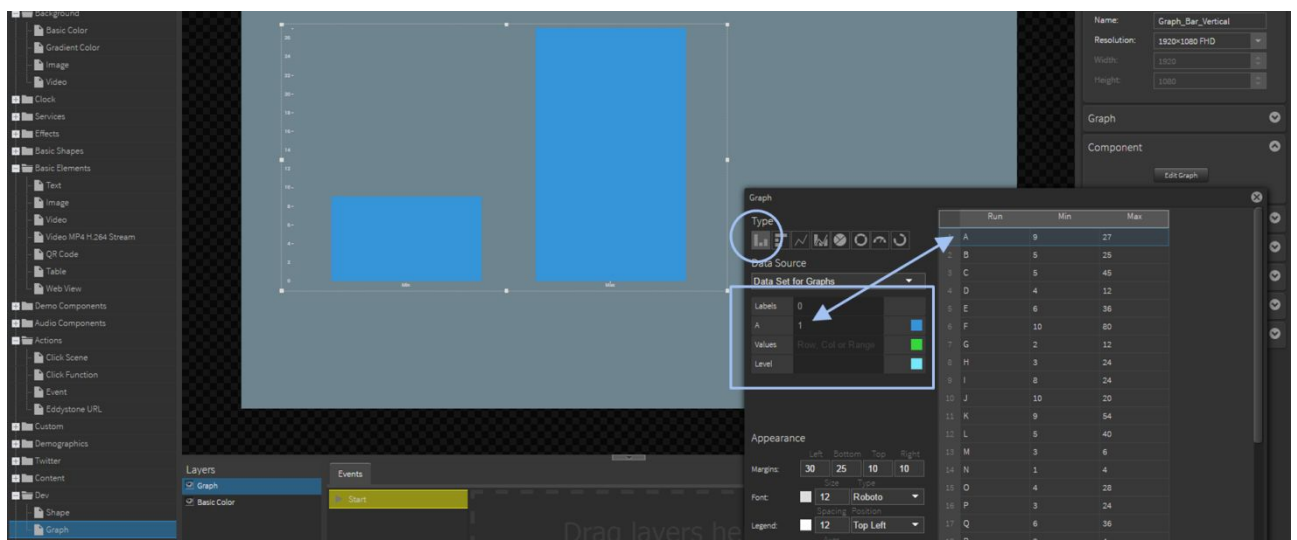
The Graph dialogue box now lets you select your Data Sources from the dropdown menu.



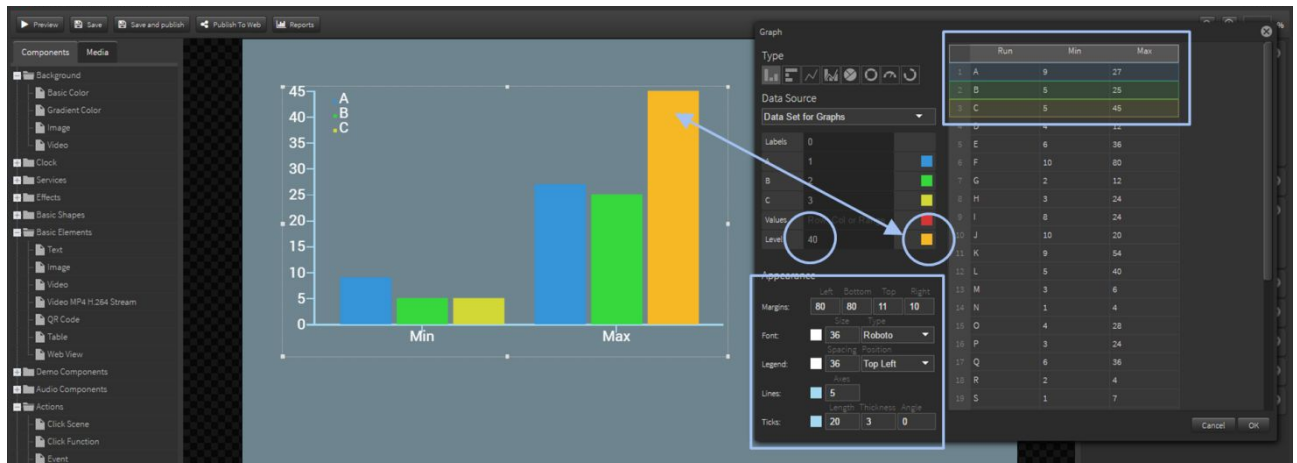
In this example the data source is a table with 3 columns and 30 rows.

Once the data table is selected you can then begin to populate the graph with some or all of the data. The initial default settings simply highlight the first row with the default colors, sizes and fonts. Data columns or rows can be selected as values, resulting in different graphs.

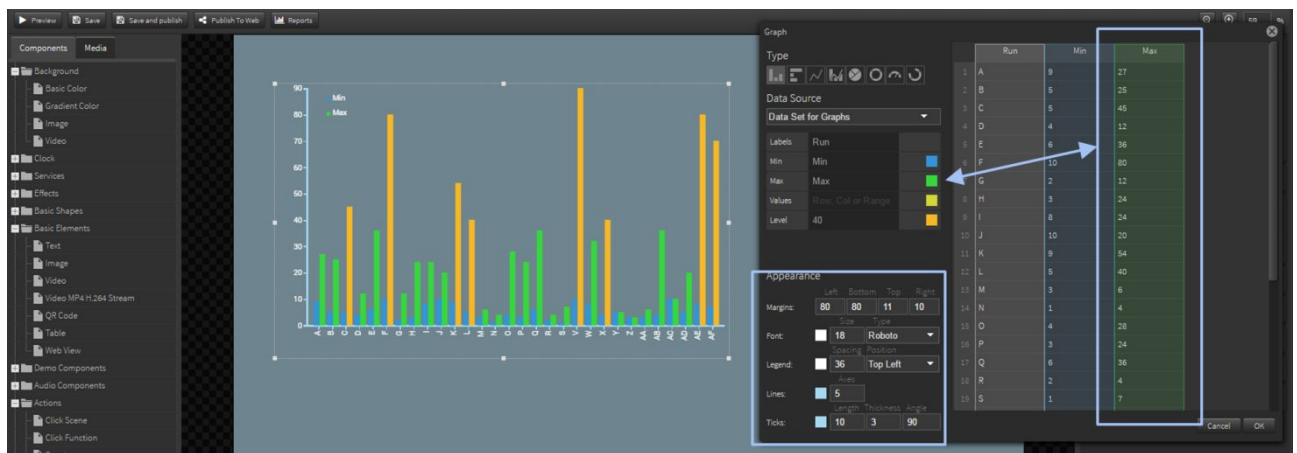
To select your rows or columns click in the "Values" box and then on the right select the row or column to be used and displayed. Each time you click in the Value area a new data set will be added. Colors will be automatically generated but you can select your own palette colors.



The first graph below shows a Value selection of Rows.



This second graph shows a Value selection of the columns.



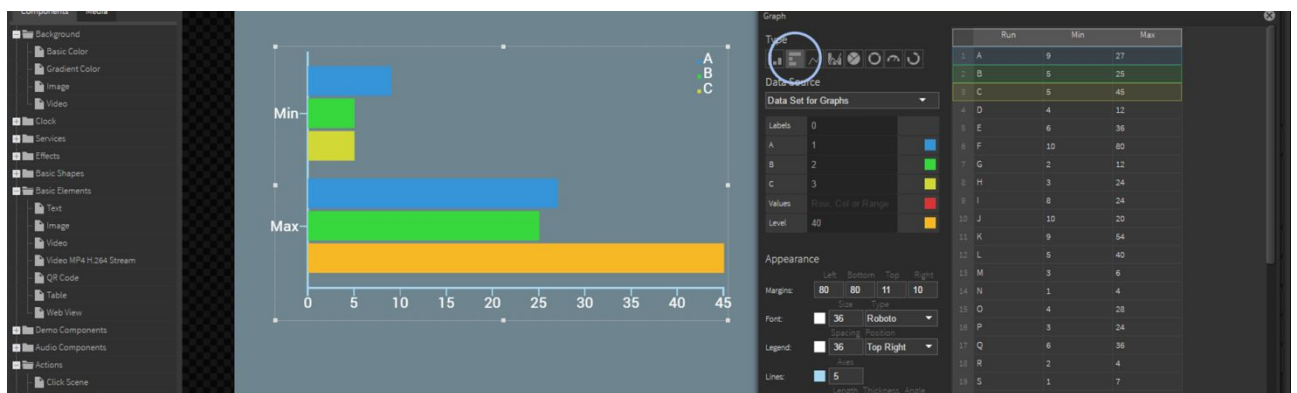
You can set a control Level value. Manually type in the set 'Level' value. This will color all of the data bars with values equal to or greater than the set level the same color and override individual colors.

The Appearance settings allow you to format the look of the graph:

- Margins are the 'padding' space around the graph. Increasing these values give extra space.
- Font color/size affects the X and Y labels.
- Legend color/size affects the key or legend tag names.
- Lines color/size affects the X and Y axis.
- Ticks color, length, width, thickness affects the label marks on each axis.

### Bar Graph - Horizontal

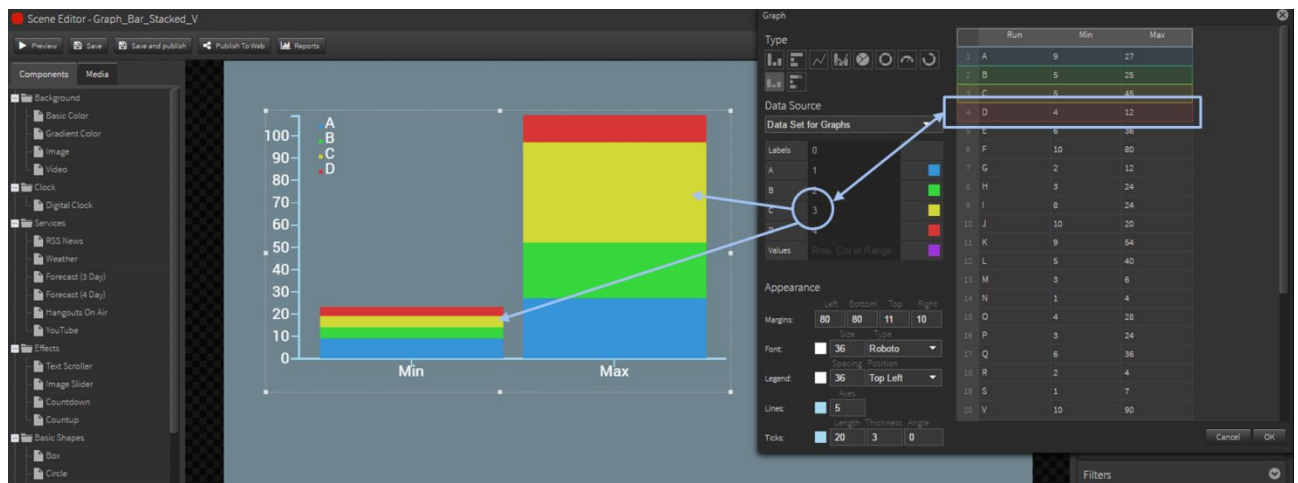
This style will change the orientation of the graph and swap the X and Y axis.



You can change the position of the Legend in your layout – TL, TR, BL and BR.

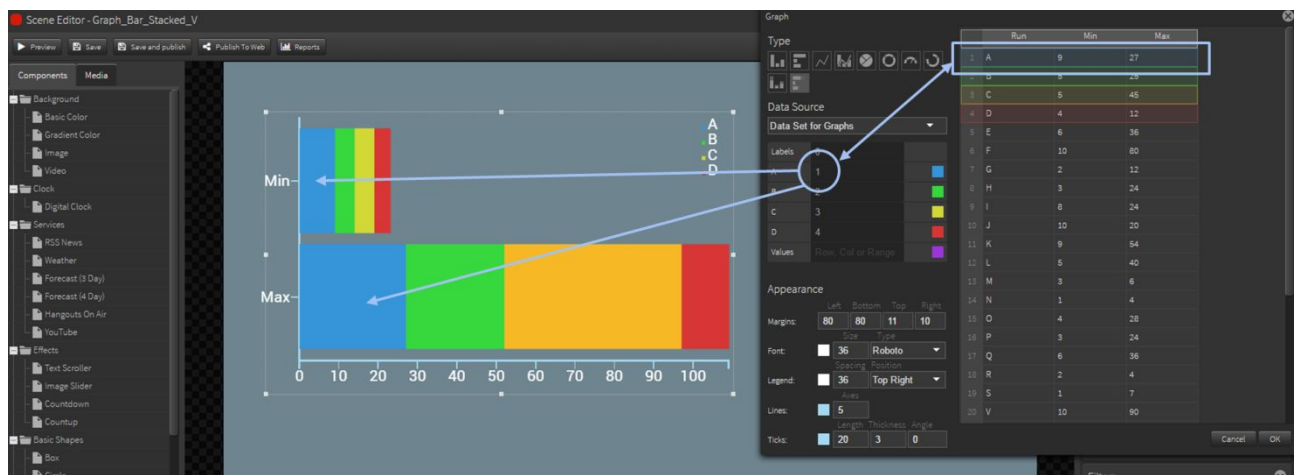
## Stacked Bar Graph - Vertical

This style will stack each value on top of each other in different colors. Use the Legend to name the bands.



## Stacked Bar Graph - Horizontal

This style will change the orientation of the graph and swap the X and Y axis.

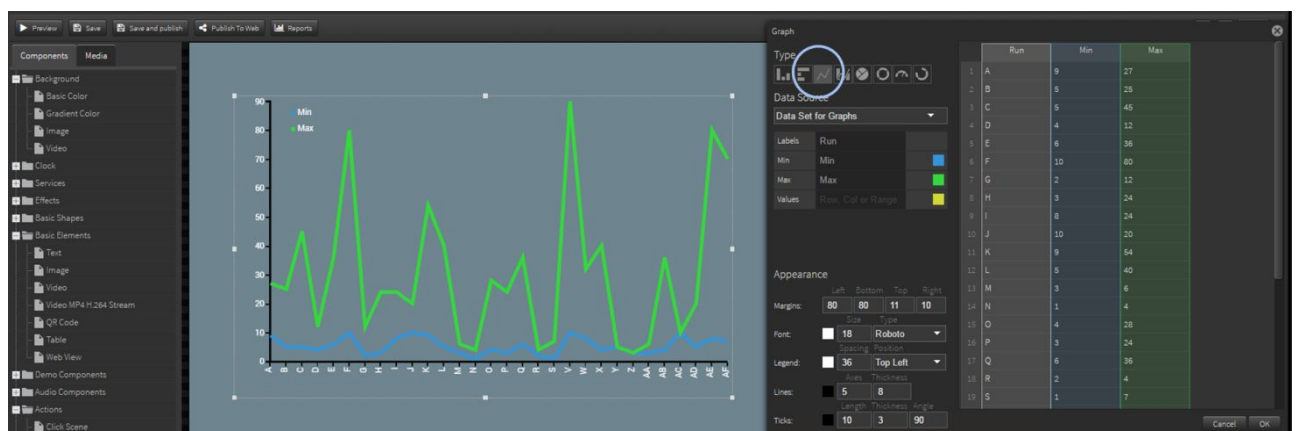


## Line Graph

Line graphs are very similar to bar graphs.

There is a second line size option which affects thickness of the lines in the graph.

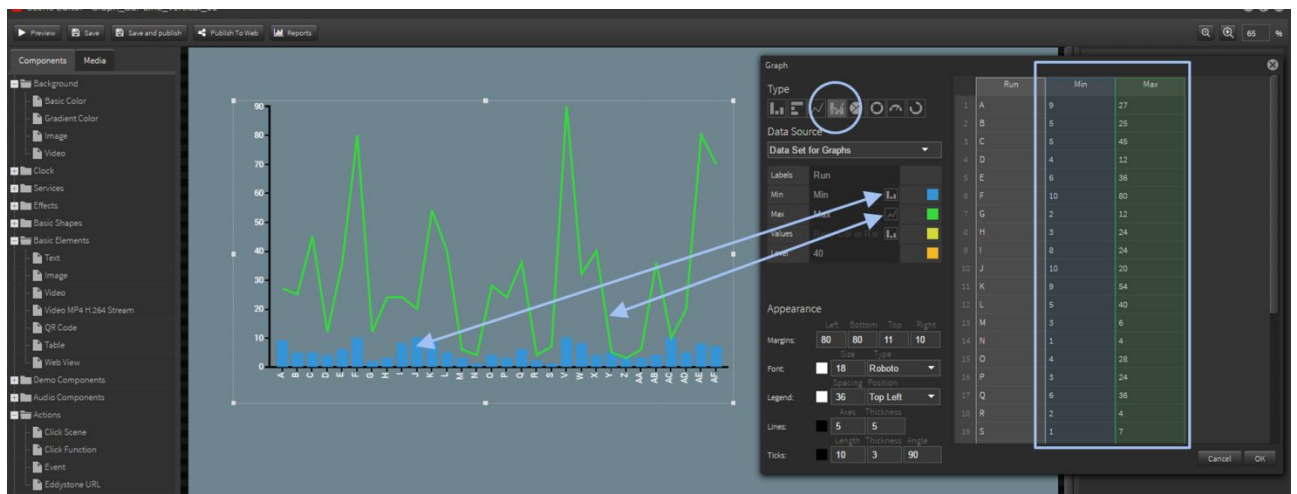
There is no 'Level' option for line graph.





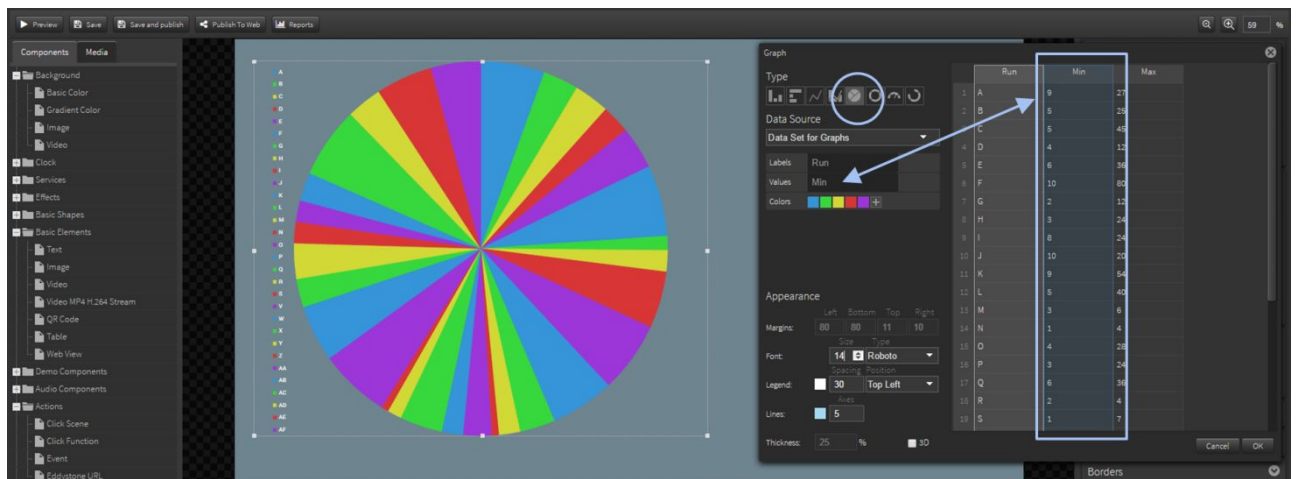
## Combination Bar and Line Graph

This option allows you to select the type of display, either Bar or Line, for each set of values.



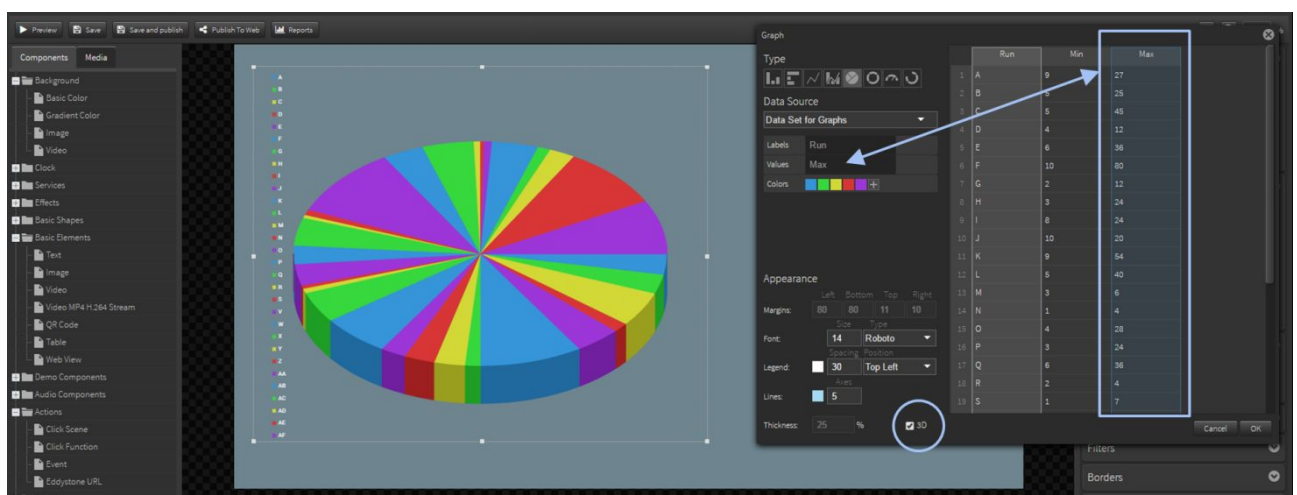
## Pie Chart

This option is a typical pie chart or pinwheel graph.



You can only display one set of data at a time in this format ie. One column or one row.

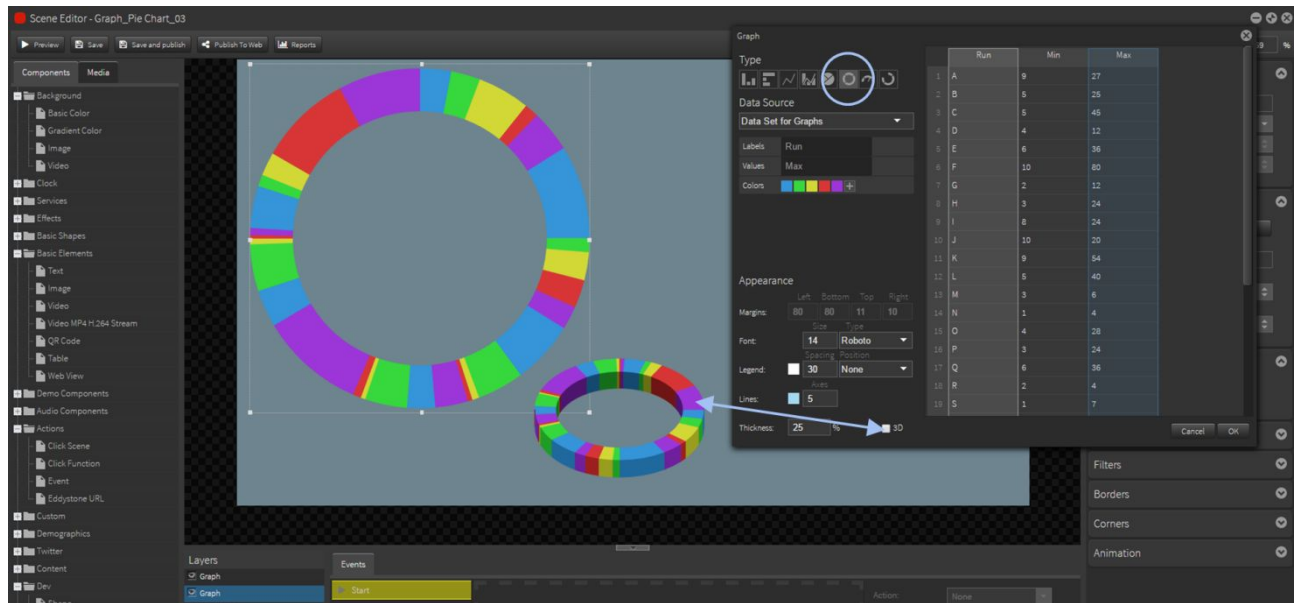
There is a 3D checkbox option for a different rendering of the chart.



## Hollow Pie Chart

This option is a pie chart with a hole in the middle or a doughnut style graph.

The size of the hole can be changed by altering the thickness. 3D option is also available.



## Arc Graph

Set the Levels manually using one or multi color sections.

For example here the levels could be indicative of a Fire Danger level: None, Low, Moderate, Dangerous, and Critical where the colors change from blue to crimson.

The Dial is then linked to a temperature value which moves as a % of the total level up and down the Arc.

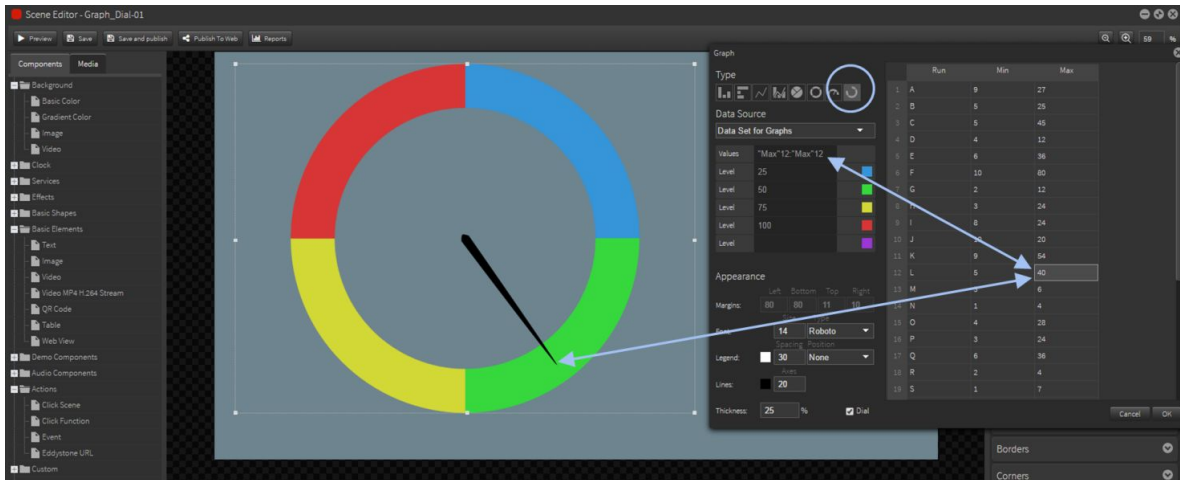
Deselecting the Dial option will grow or diminish the Arc depending on the value.



## 360° Dial Arc Graph

This is the same as the 180° arc graph except it is a full circle.

You can use a Dial arm or the bands of color.

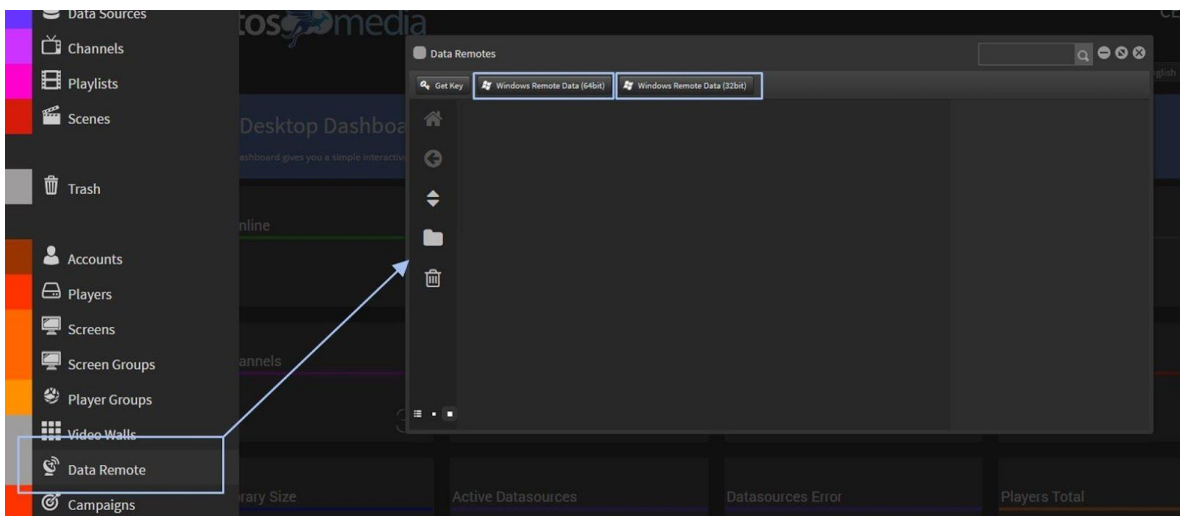


NOTE: Data can also be linked to a Google Sheets account.

## Data Remote Tool

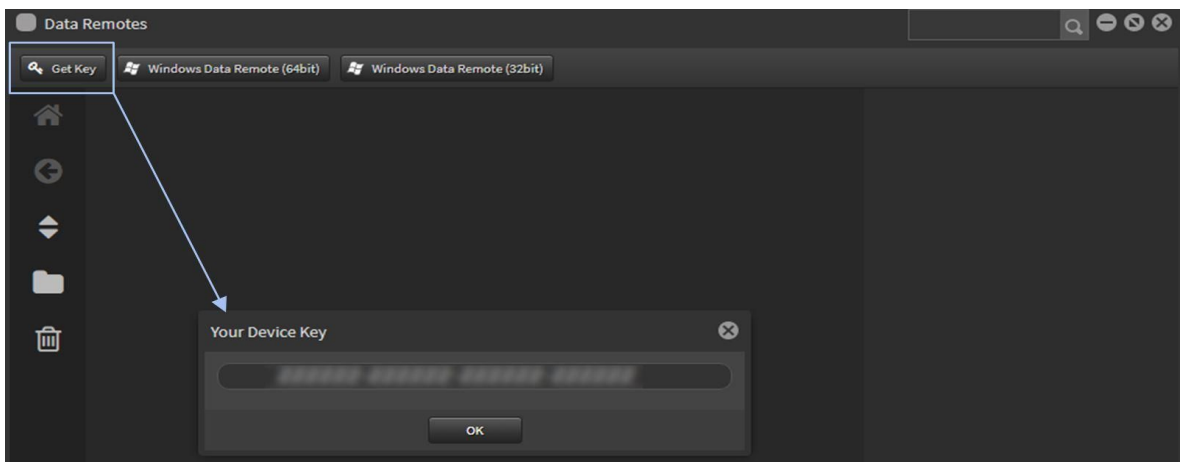
## Setting up the Data Remote Application

In the StratosMedia head end open the menu and select "Data Remote"



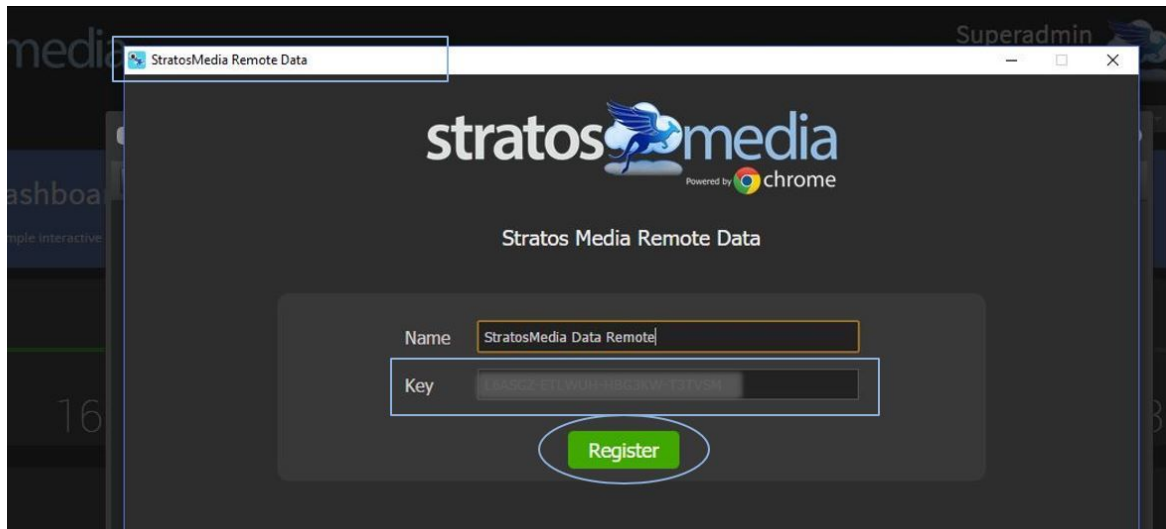
Select the correct version for your operating system. This will download the Data Remote Application.

In the StratosMedia head end select “Get Key” and copy the key.



Once the download is completed extract the archive to a folder on C Drive - eg. C:\StratosRemoteData.

Open the folder you extracted the archive to on C:\ right click "remotedata.exe" and "Send to" > "Desktop (Create Shortcut)". Double click on the shortcut to run the data remote.

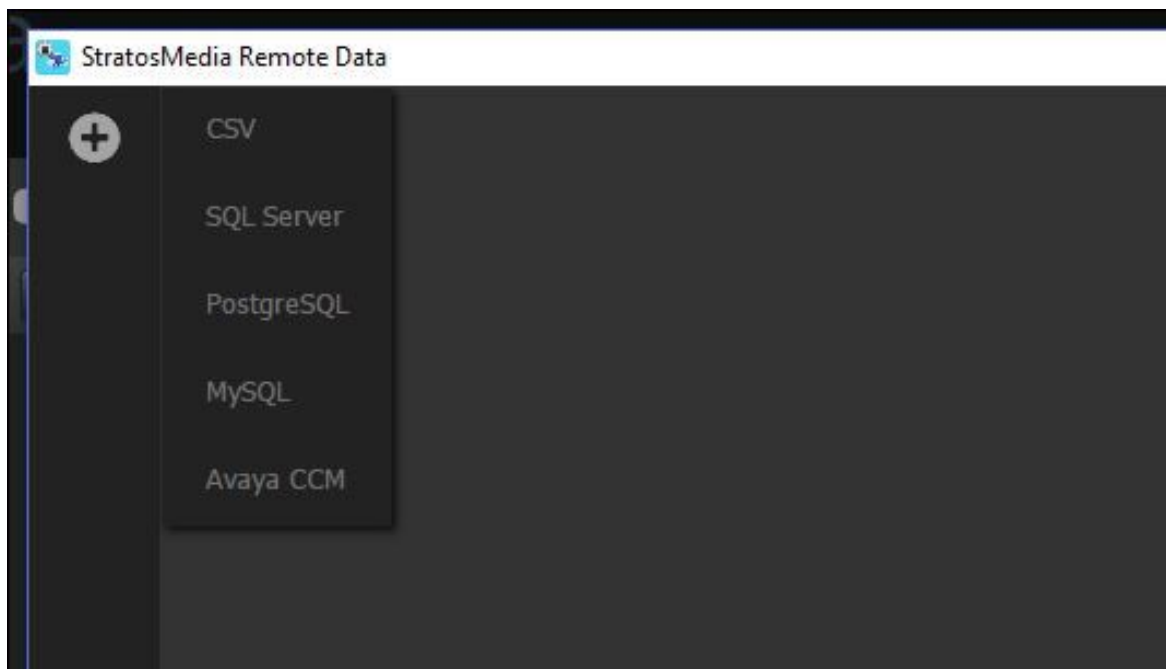


Enter the player key you copied and give the Data Remote source a name.

After the Data Remote application has been registered press the + button to add a data source.



Select the type of data source you wish to use

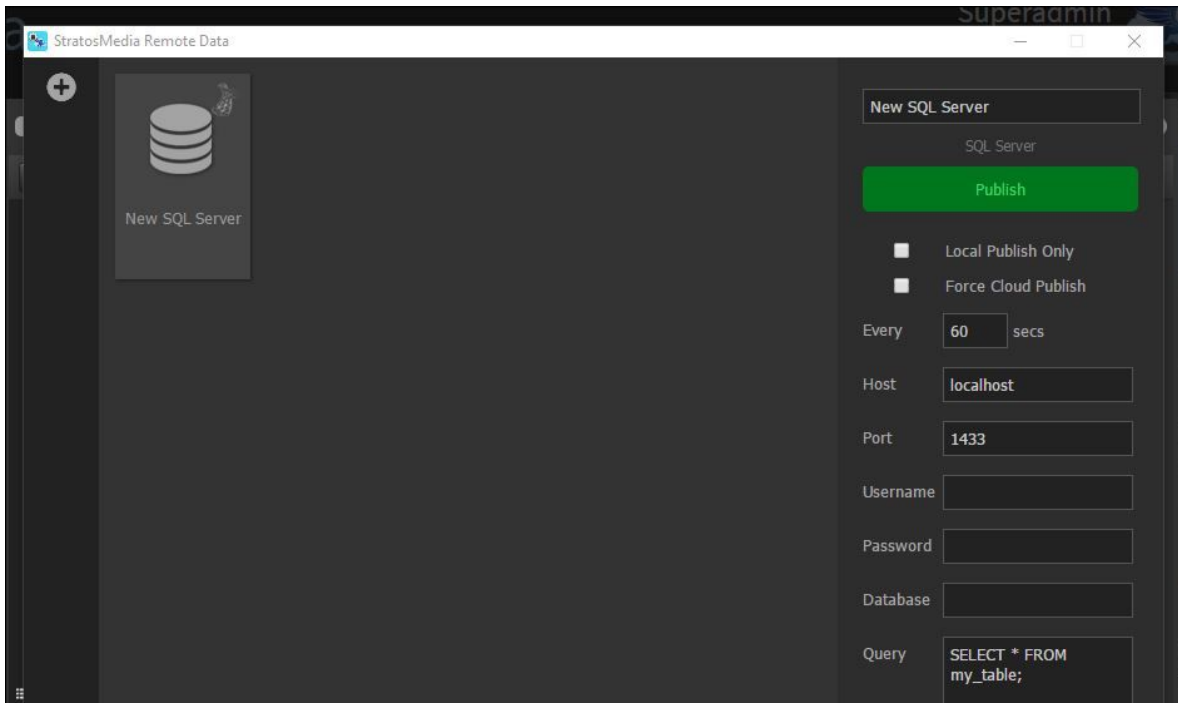


Options include CSV, SQL Server, PostgreSQL, MySQL and Avaya CCM.



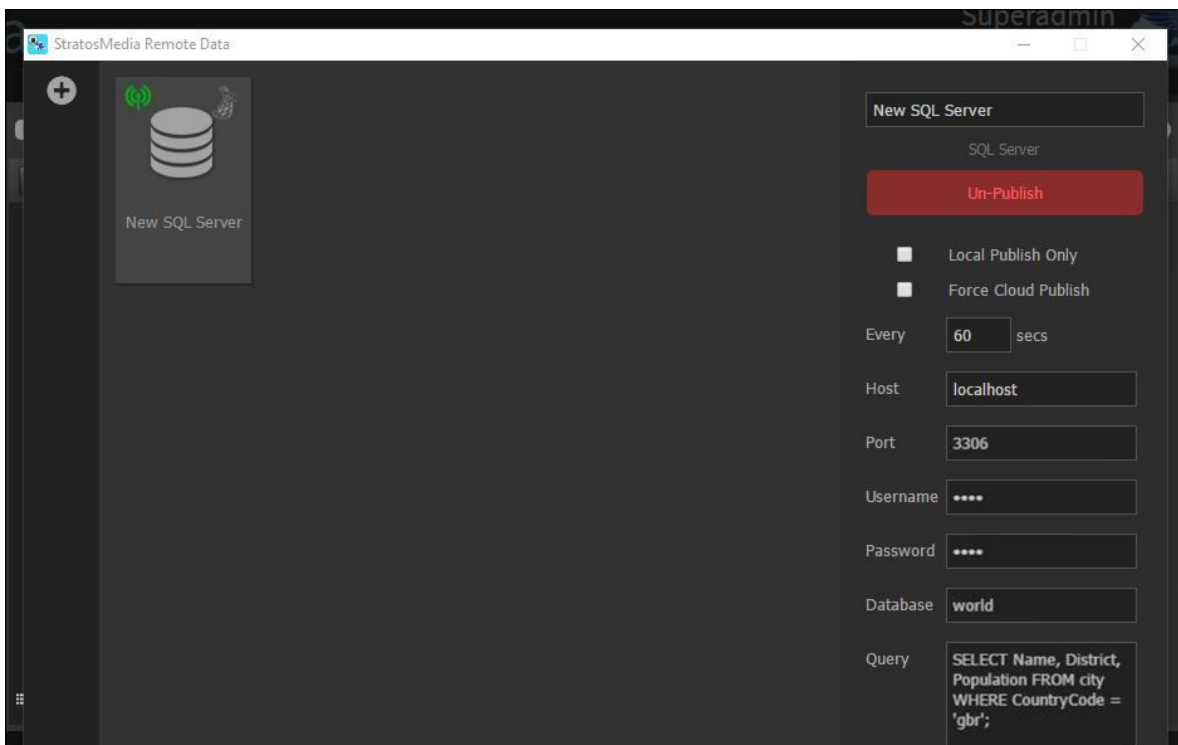
## SQL Data Source or other database

Select the SQL Server database option.



If using a Database, enter the IP address, login credentials, database name and the query you wish to run. Adjust the retrieval time based on your requirements.

The application will automatically fill the port number with the default port for your chosen type of database. Be sure to change this if your database is not using the default port. Enter your query field(s) and click 'Publish'



The application will automatically fill the port number with the default port for your chosen type of database. Be sure to change this if your database is not using the default port.

**"Local Publish Only"** will force the Data Remote application to only send the data within the local network. No data will be sent to the StratosMedia servers.

Do not enable **"Local Publish Only"** when first publishing the data source. When first publishing the data source it needs to be sent to the cloud. If the data source contains sensitive information you can replace it with placeholder data for this initial publish. After the data has been published to the cloud one time you can set it to **"Local Publish Only"** then change the placeholder data back to the real data. This will also give you placeholder data to use in the scene editor.

**"Force Cloud Publish"** will force the Data Remote application to send all data through the StratosMedia servers.

If neither of these are ticked the Data Remote application will attempt to use the local network, if it's not possible on the local network the data will be sent through the StratosMedia servers.

## CSV Data Source

Select the CSV data source option.



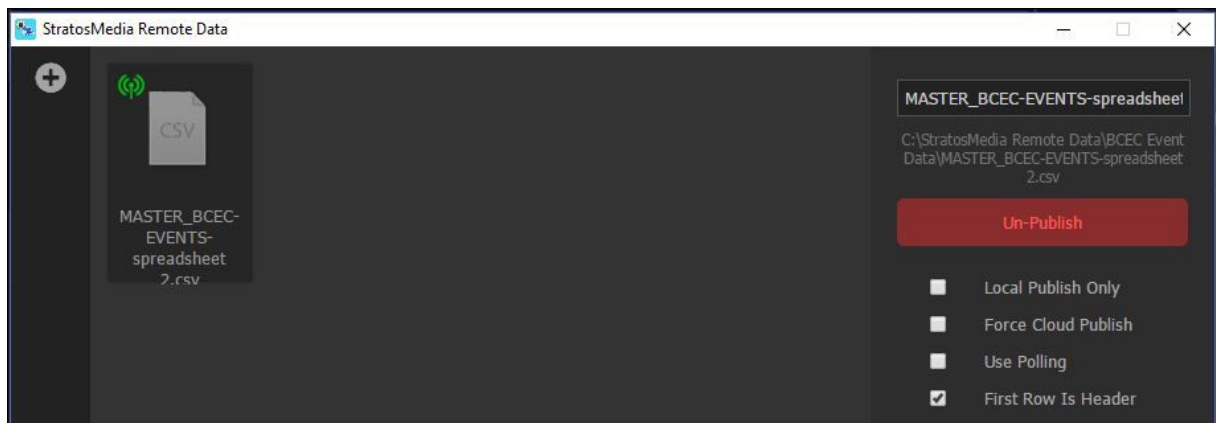
If using a CSV file, navigate to it and select it. The Data Remote application will monitor this file for changes.

**"Local Publish Only"** and **"Force Cloud Publish"** are available as well as two additional options for these file types:

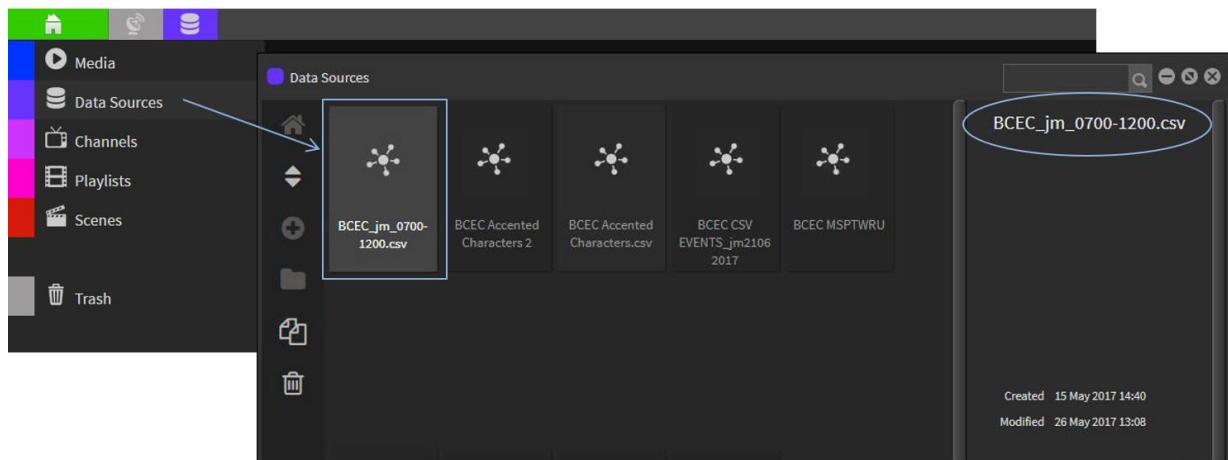
**"Use Polling"** – This can be used if you are having problems with data not updating. This will cause the Data Remote application to poll the CSV file for changes each second.

**"First row is header"** – Tick this if the first row of your CSV file contains headers.

Click 'Publish' to upload your data source.



All of the Data Sources will now automatically appear under data sources in the StratosMedia head end and are ready to be used in scenes via the Table Object, Text Box or in the Graph Tools. (See user guide for more information).



### Setting Windows to automatically launch Data Remote when starting up:

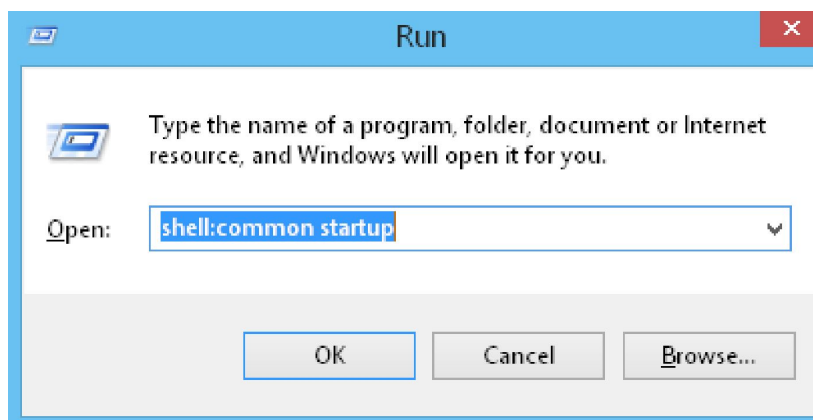
Note: The Data Remote Tool must be continuously running on the host computer for data to update. If the tool has stopped old data will still be displayed in the scene component.

#### Windows 7

1. Open the start menu, scroll down to a folder called startup, right click and select open.
2. Copy the desktop shortcut into this folder.
3. Reboot to confirm this is working.

#### Windows 8/8.1/10

1. Press Windows-r to open the run window, run shell:common startup, which will open the folder C:\ProgramData\Microsoft\Windows\Start Menu\Programs\StartUp.



2. Copy the shortcut from your desktop and paste it in this folder.
3. Reboot to confirm this is working.