SPUINK> 4 rookies

Dashboard Studio





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Please introduce yourself!

- Name
- Company/organisation
- Role
- Are you currently using Splunk?
- What are you interested in using Splunk for?



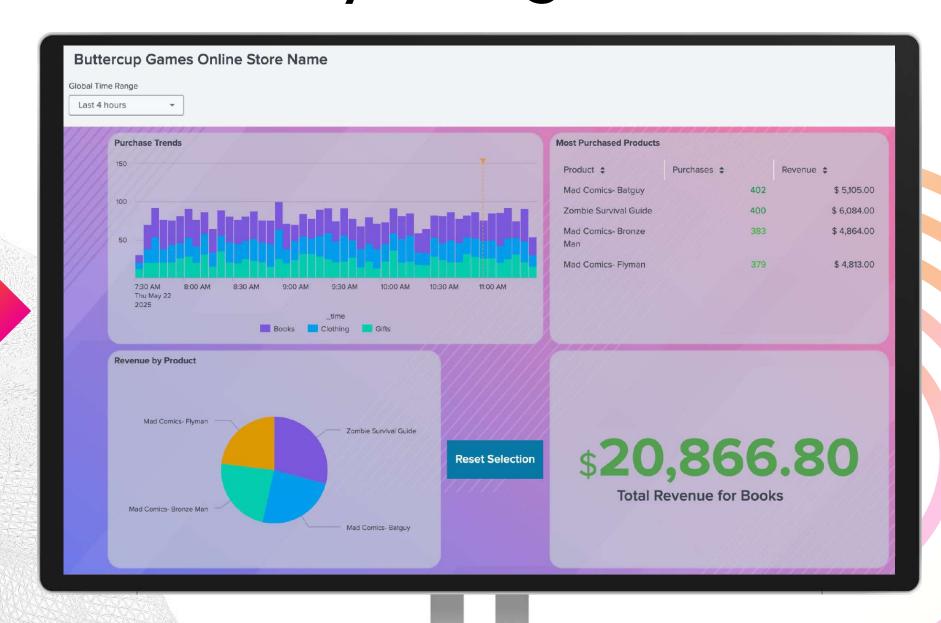
Workshop Agenda

- What is Dashboard Studio?
- Creating a dashboard
- Add a table
- Add visualizations
- Create a chain search
- Add an input
- Add a reset button

Objective

Transform data to Storytelling!

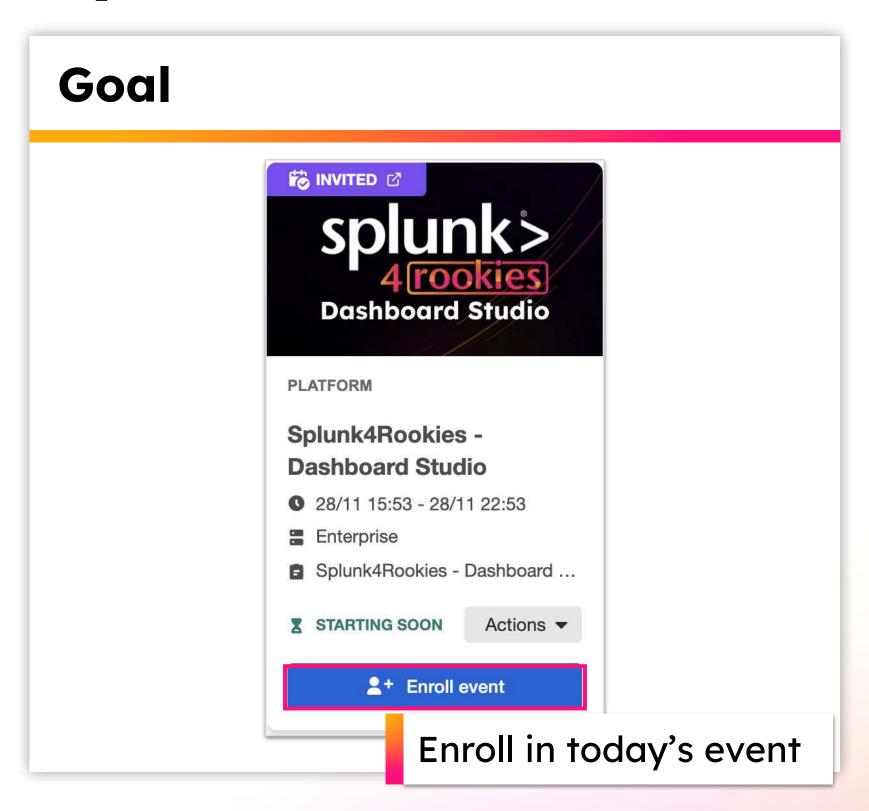




Enroll in Today's Workshop

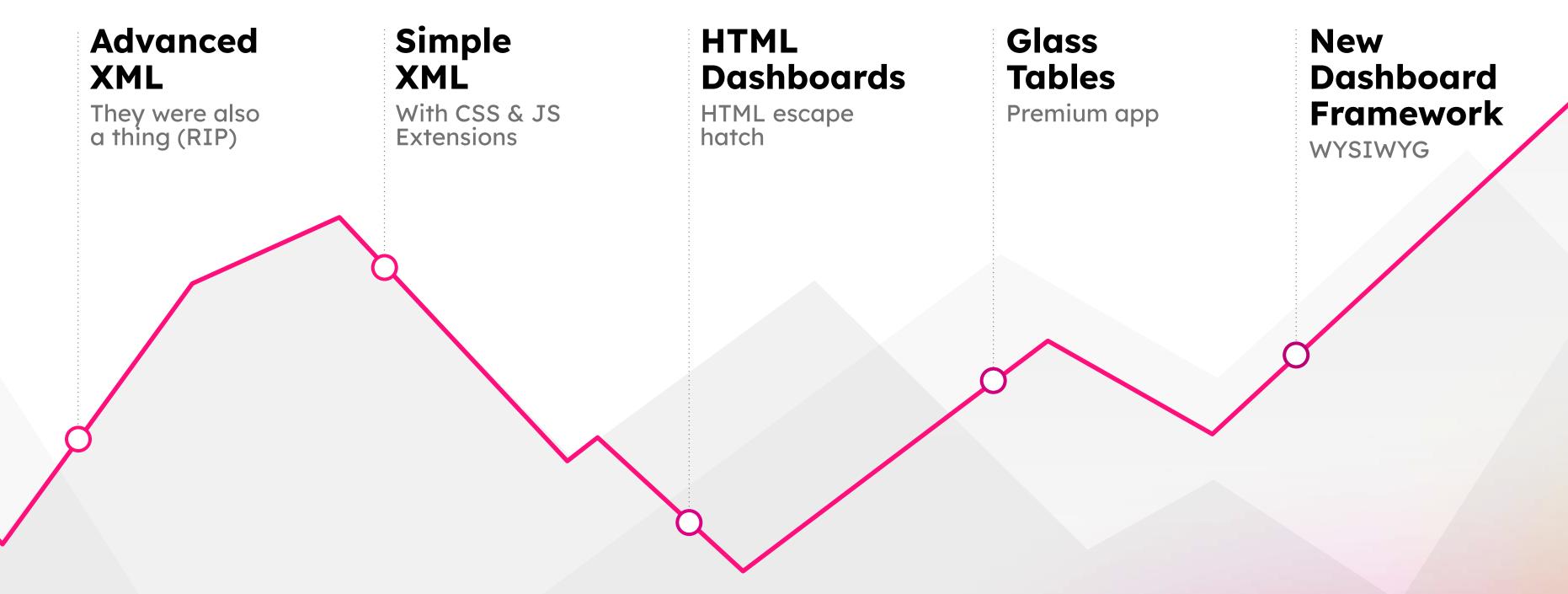
Tasks

- Get a splunk.com account if you don't have one yet: https://splk.it/SignUp
- 2. Enroll in the Splunk Show workshop event: https://show.splunk.com/event/ttps://show.splunk.com/event/eventID>
- 3. Download the hands-on lab guide: https://splk.it/DS4R-Lab-Guide
 - Contains step-by-step instructions for all of today's exercises!
- 4. Download a copy of today's slide deck: https://splk.it/DS4R-Attendee





The Dashboard Journey



Current Dashboarding Options

Simple XML (CSS & JS Extension)

Cascaded rows and panels layout

Styling and control through CSS & JS

Custom visualizations

HTML

One-way trip - lose out on UI editing

Some Simple XML features will not work

HTML, JS/CSS and SplunkJS-based code

Glass Tables

Drag/drop, resize, copy/paste

UI-based editing, no source code

No chaining or custom visualization

New Dashboard Framework

What You See Is
What You Get

JSON-based code

Used in Dashboard Studio, ITSI and ES

Dashboards Before

Simple XML (now Classic dashboards)

- Easy to deploy a wide variety of data viz, but hard to craft a story
- Flexible and extensible, but time consuming to build something truly beautiful (custom JS, CSS)
- PDF export loses look/feel of dashboard

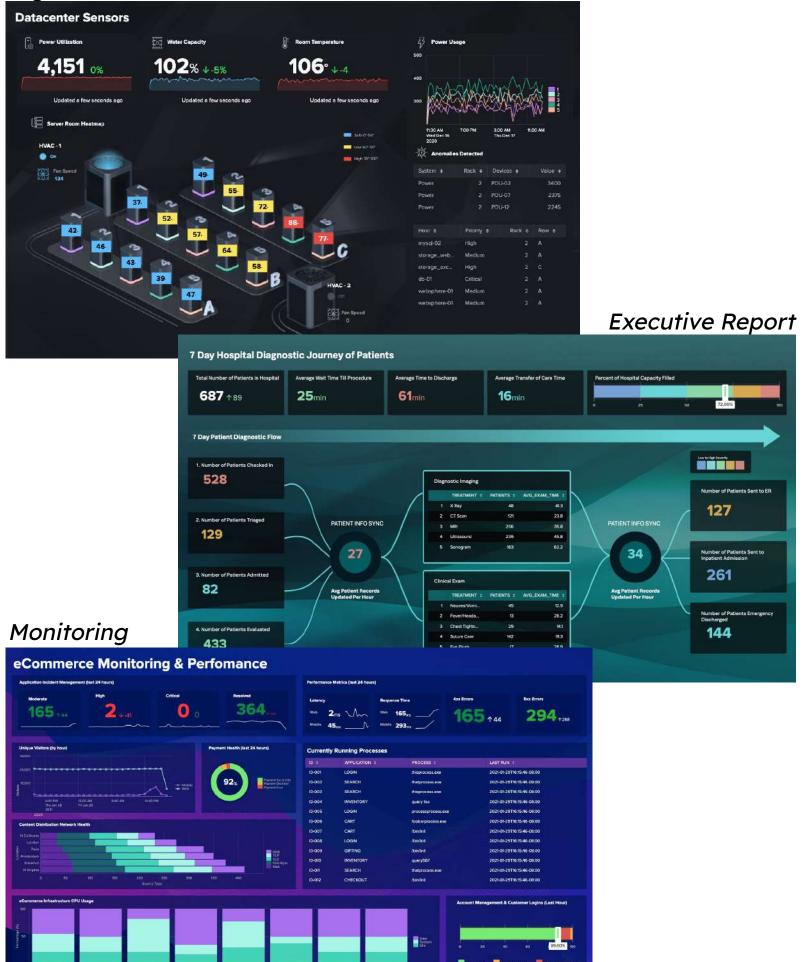
Glass Tables

- Easy to craft a story with absolute layout and text
- Easy for non-technical users to start, but limited viz and interactivity
- No export





Digital Twin



Dashboards Now

- Create powerful, story-telling dashboards with advanced visualization tools
- Efficiently build dashboards with a streamlined editing experience and fully customizable formats
- With no custom code required, empower more dashboard creators and users

Today's Scenario

Your Company

- Buttercup Enterprises is a large national online retailer operating in the US, which sells a variety of books, clothing and other gifts through its online webstore
- Buttercup Enterprises invested in Splunk for security and now want to start making use of it for Sales Analytics

Your Role

- Your responsibility is to provide dashboards to users throughout the company around Sales Analytics
- You gather data and statistics, and report on:
 - Most Purchased Products
 - Revenue by Product
 - Purchase Trends
 - Total Revenue





Workshop Time!

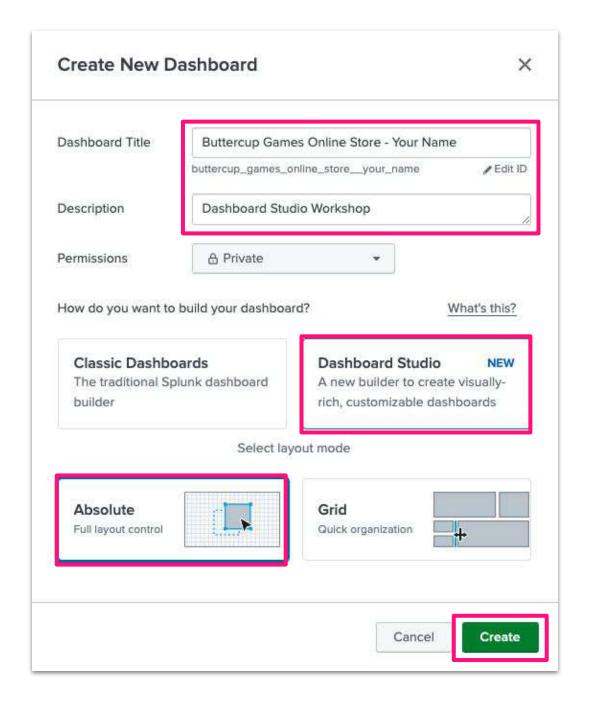




Lab 1 - Create a Dashboard

Tell a story about the revenue and purchasing trends of Buttercup Games

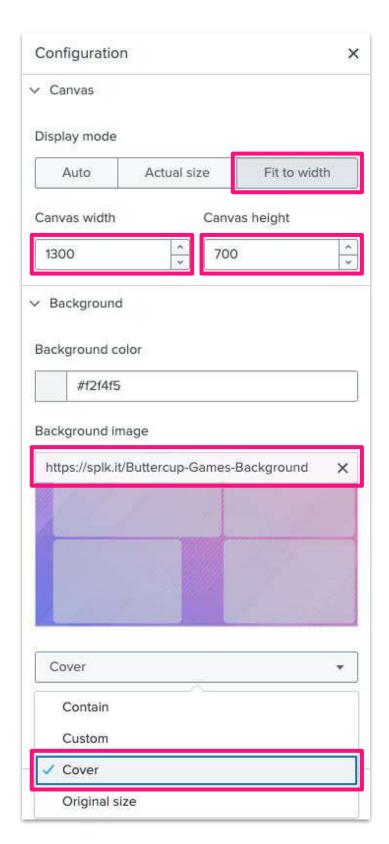
- From the **Dashboards** tab select **Create New Dashboard**.
- Title your dashboard Buttercup Games Online Store
 <your name> and add a description (optional).
- Select the **Dashboard Studio** option to build your dashboard.
- 4. Select the **Absolute** layout.
- 5. Select **Create.**



Set Up the Dashboard Canvas

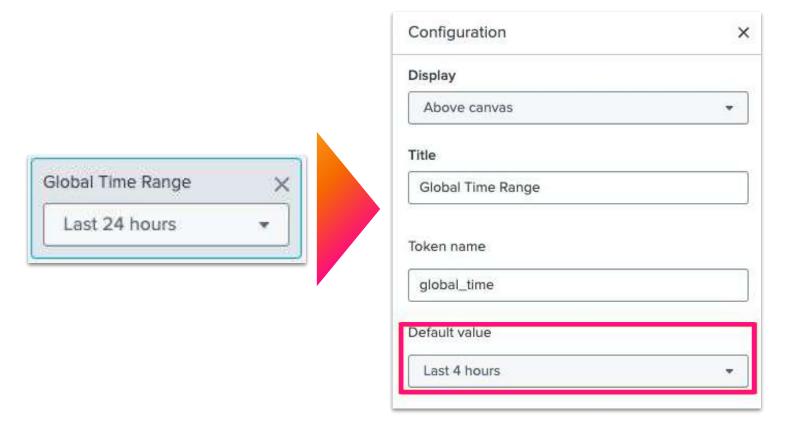
Adding a background image

- Using the Configuration panel, make sure the Display Mode is set to Fit to Width.
- 7. Change **Canvas Width** to 1300 and **Canvas Height** to 700.
- 8. In the **Background image** section, paste the following image URL into the **Enter URL** box: https://splk.it/Buttercup-Games-Background
- 9. Change the background image size setting from Contain to Cover.



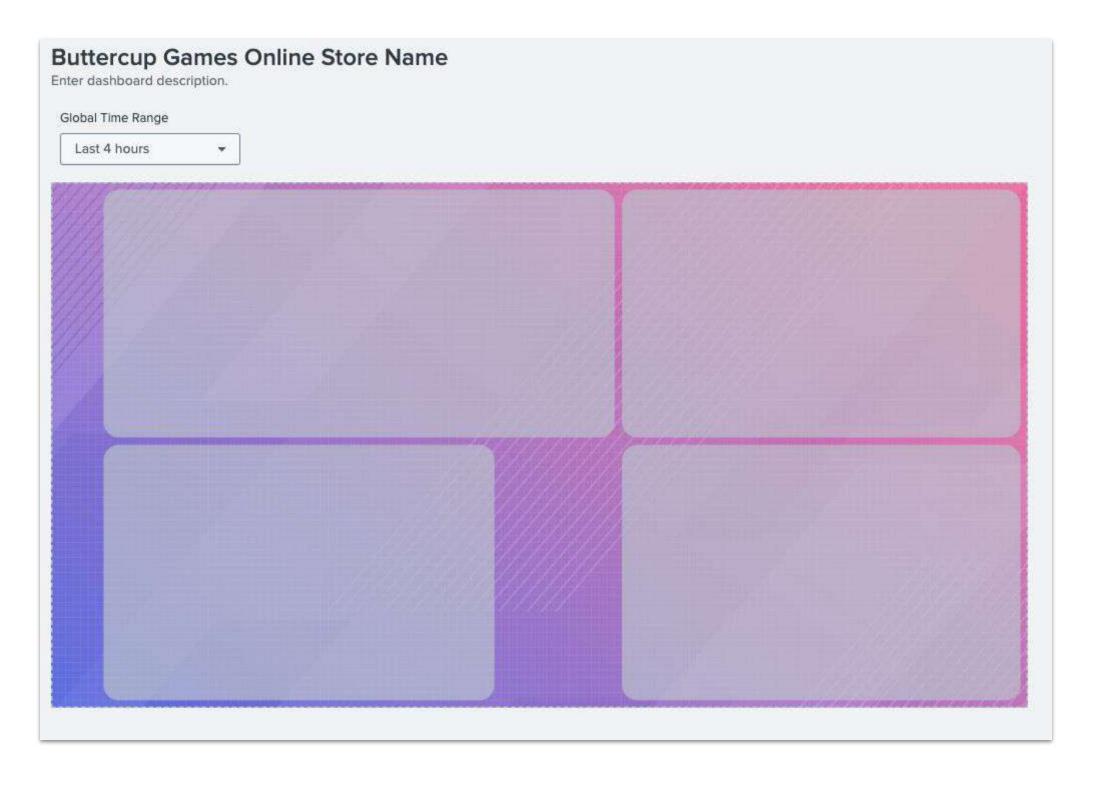
Change the Time Range

- 10. Change the <u>default</u> time range by selecting the Global Time Range input and change the default time from Last 24 hours to **Last 4 Hours**
 - This will be the time range used when you first load or refresh your dashboard
- 11. Save your dashboard



Set Up the Dashboard Canvas

At this point in the workshop, the Buttercup Games dashboard looks like this:



Try it Yourself



Lab 2 - Add a Table

Add the visualization and connect to data

- 1. Navigate to the Search tab
- 2. Add the following search into the Search bar:

```
index=main sourcetype=access_combined action=purchase status=200
lookup product_codes.csv product_id
stats count as Purchases by product_name product_price
table product_name Purchases product_price
eval Revenue=Purchases*product_price
table product_name Purchases Revenue
sort -Purchases
rename product_name as "Product"
head 8
```

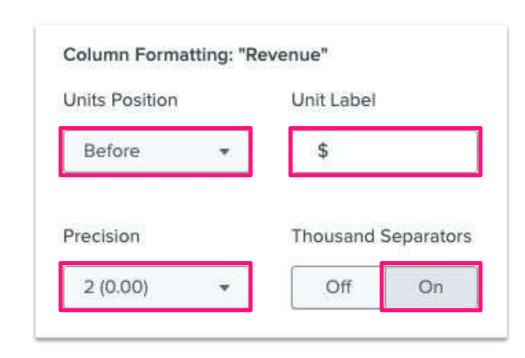
This search looks for all successful purchase events and outputs a table of the number of purchased and the associated revenue, broken down by product

- 3. Click on **Save As > Existing Dashboard**
- 4. Select the dashboard you just created and title the panel **Most Purchased Products**
- 5. Click on Save to Dashboard and then on View Dashboard

Configure the Table

Position the table and format the Revenue column

- 6. In the **Configuration** panel, edit the **Most Purchased Products search** data source and set the **Time range** to **Input**. Click on **Apply and Close** to save it.
- 7. In the Color and style section, change the Background to transparent.
- 8. In the **Column-specific formatting** section, follow these steps:
 - a. Select + Add column to format and select the Revenue number
 column.
 - b. Select the edit icon ().
 - c. Change the **Units Position** option to Before and for the **Unit Label** enter a dollar symbol (\$).
 - d. Increase the **Precision** value to "**2 (0.00)**" and set **Thousand Separators** to **On**.



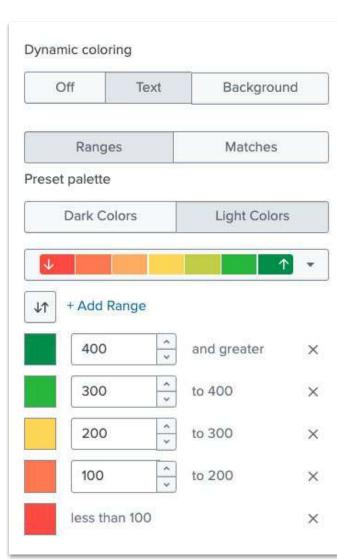
Configure the Table

Format the **Purchases** column

- 8. (Continued) In the Column-specific formatting section, follow these steps:
 - e. Select + Add column to format again, but this time choose the **Purchases** *number* column.
 - f. Click on the edit icon ().
 - g. Change the **Dynamic Coloring** option to **Text**.
 - h. Select a color palette. **Note:** For the best contrast, choose 'Dark Colors' if you're using the Light theme and choose 'Light Colors' if you're using the Dark theme.
 - Edit the color range values as follows:

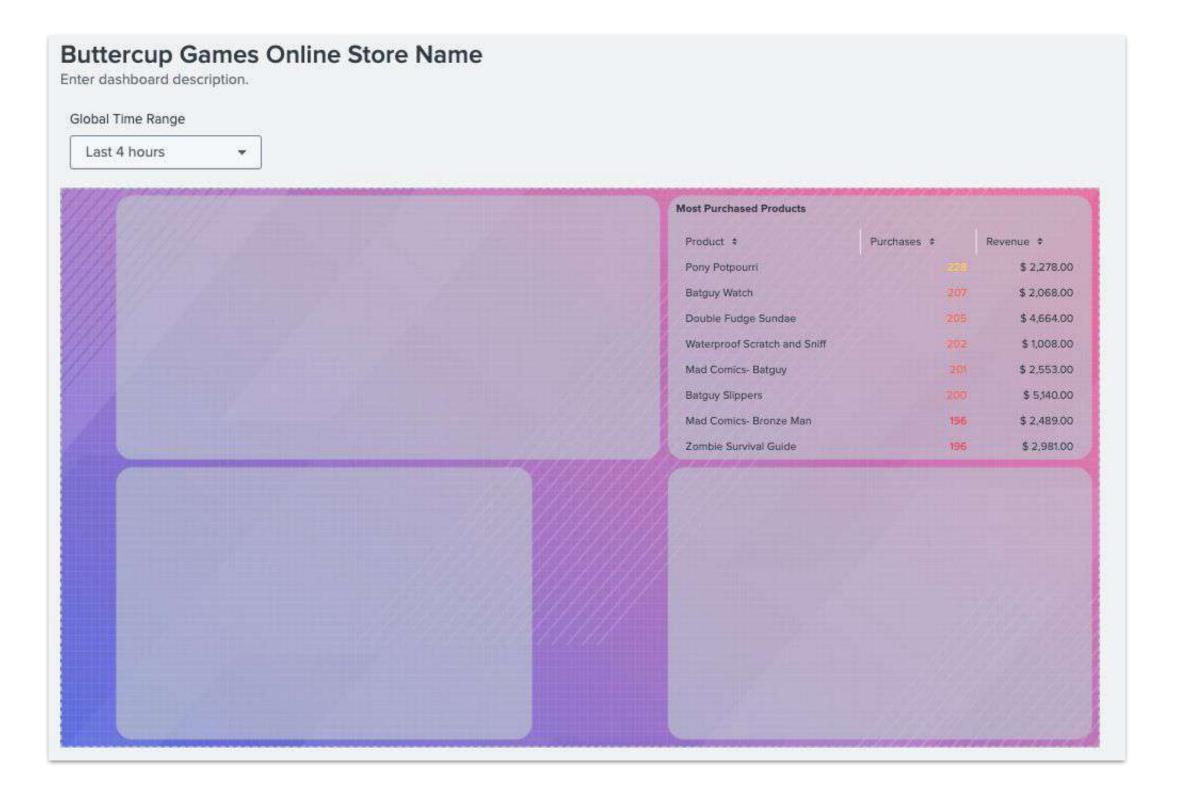
400 and greater 300 to 400 200 to 300 100 to 220 Less than 100

9. Move and resize your table to center it in the top right panel



Configure the Table

At this point in the workshop, the Buttercup Games dashboard looks like this:



Try it Yourself



Lab 3 - Add a Pie Chart Visualization

Add the visualization and connect to data

- 1. Select the add chart icon (11-) in the editing toolbar, and then select **Pie**.
- 2. In the **Select data source** panel, click on **+ Create Search** and add your following search into the **SPL query** box:

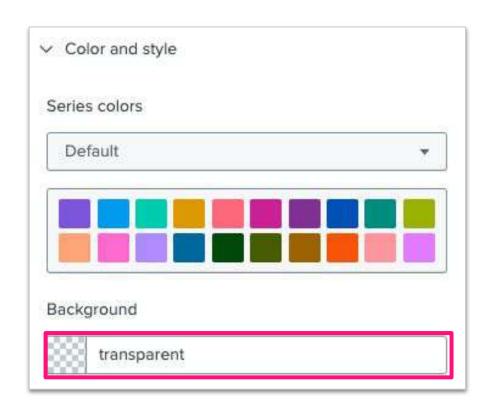
```
index=main sourcetype=access_combined action=purchase status=200
| lookup product_codes.csv product_id
| stats count values(product_price) as Price by product_name product_id
| table product_name product_id count Price
| eval revenue=count*Price
| fields product_name revenue
| rename product_name as "Product" revenue as "Revenue"
| sort -Revenue
```

- 3. For the Data source name put 'Revenue by Product search'
- 4. Set the **Time range** to **Input**
- 5. Select **Apply and Close**.
- 6. Title your pie chart **Revenue by Product** and leave the description box empty.

Configure the Pie Chart Visualization

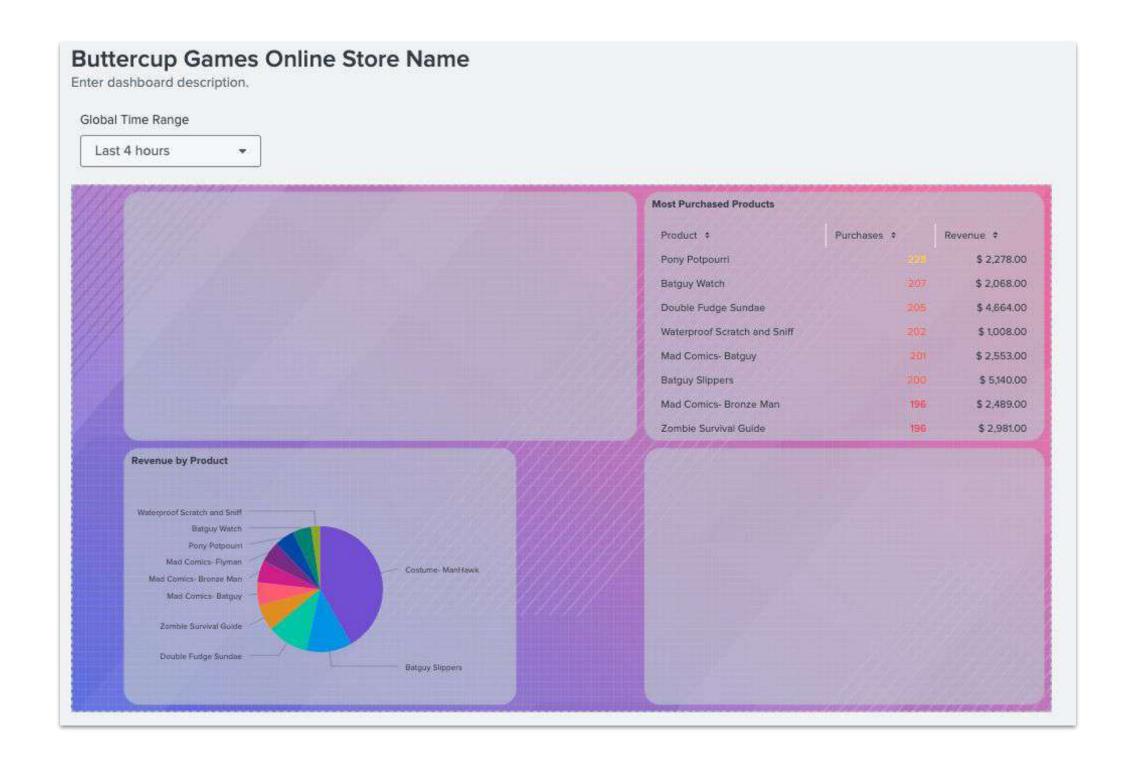
Styling and labeling

- 7. In the **Color and style** section of the **Configuration** panel, change the Background to be **transparent**
- 8. Move and resize your pie chart to center it on the bottom left gray rectangle.



Configure the Pie Chart Visualization

At this point in the workshop, the Buttercup Games dashboard looks like this:



Add a Column Chart

Add the visualization and connect to data

- 9. Select the add chart icon ($\mathbf{1}$) in the editing toolbar, and then select **Column**.
- 10. Create a search as you did previously and paste the following into the **SPL** box:

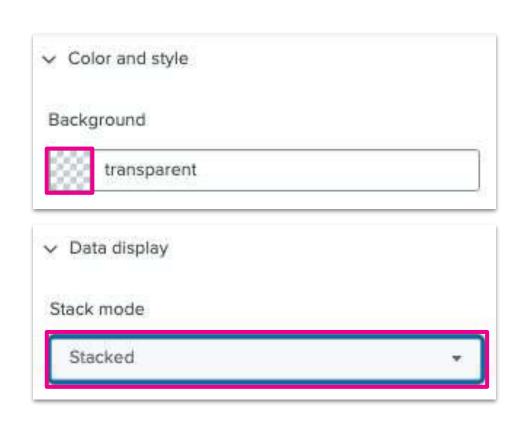
```
index=main sourcetype=access_combined action=purchase status=200
| lookup product_codes.csv product_id
| fields _time category clientip
| timechart count by category
This search outputs a chart showing the count of successful purchases over time by product category
```

- 11. Name the data source Purchase Trends search
- 12. Set the **Time range** to **Input**
- 13. Check the Access search results or metadata box
- 14. Select Apply and Close

Configure the Column Chart

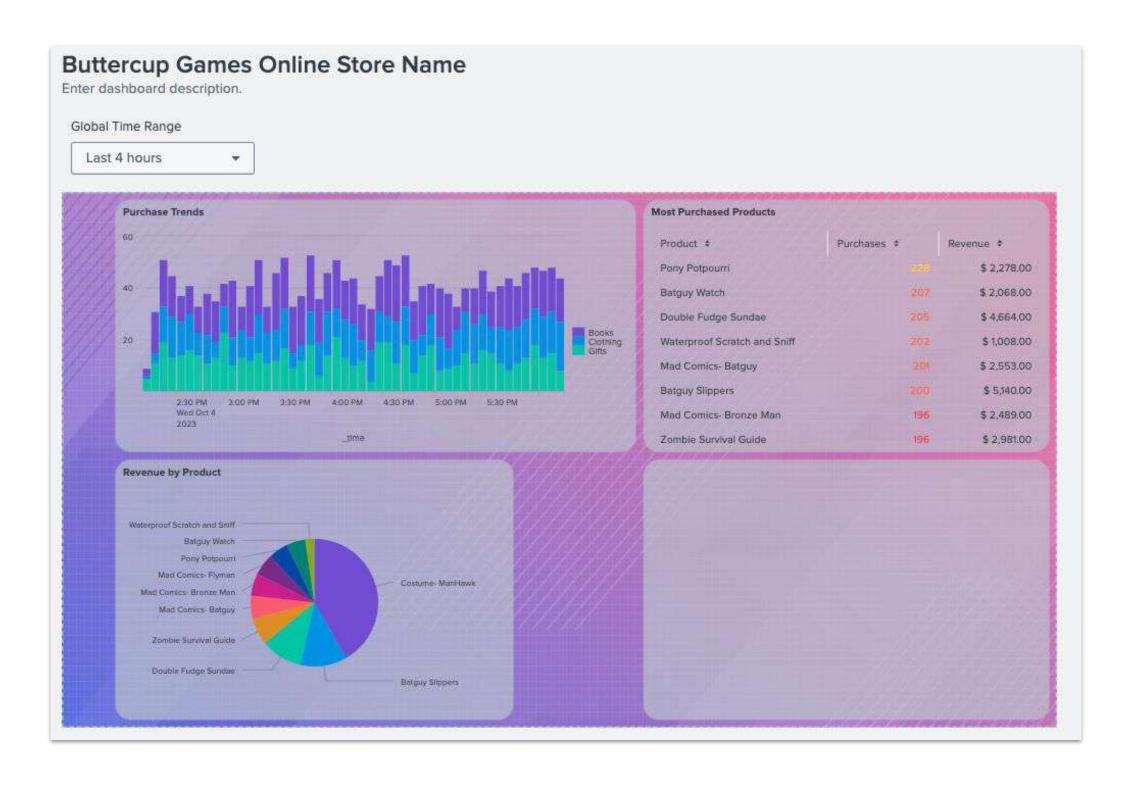
Styling

- 15. Title your chart **Purchase Trends** and leave the description box empty.
- 16. In the **Configuration** panel, follow these steps:
 - In the Color and style section, change the Background to transparent.
 - b. In the **Data display** section change the **Stack Mode** to **Stacked**.
 - The stacked option builds the area for each value vertically on top of one another instead of creating layers beginning at the x-axis.
 - c. In the **Legend** section change the **Legend display** to the **Right**.
- 17. Move and resize your area chart to the center of the top left gray rectangle.



Configure the Column Chart

At this point in the workshop, the Buttercup Games dashboard looks like this:



Try it Yourself



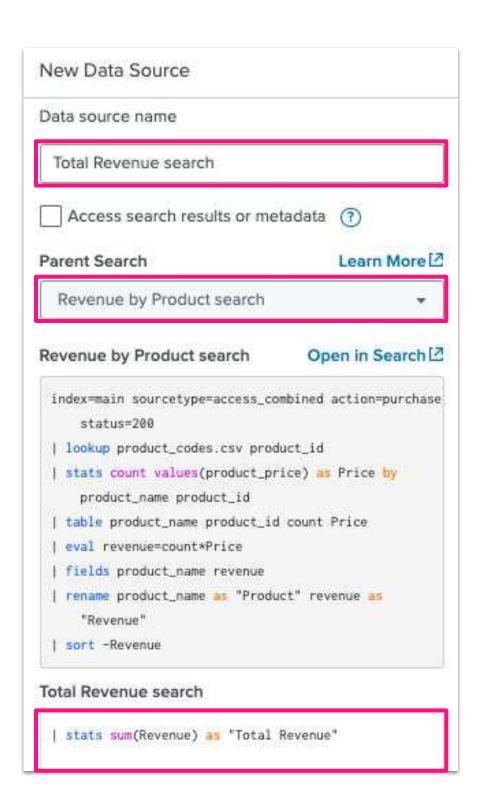
Lab 4 - Create a Chain Search

Using base and chain searches

- In the Data source overview () panel, select
 + Create Chain Search.
- 2. Name the source **Total Revenue search** and for the **Parent Search** select **Revenue by Product search**.
- 3. Add your extended search. For this workshop, copy and paste the following search into the **Total Revenue search** box:

```
| stats sum(Revenue) as "Total Revenue"
```

4. Select **Apply and Close**.



Add a Single Value Visualization

Add the visualization and connect to data

- 5. Click on the add chart icon (11-) in the editing toolbar, and then select **Single Value**.
- 6. In the **Select Data** panel, under the **Chain Search** section, click on **Total Revenue search (Unused)**
- 7. Under the **Data configurations** section, for the **Value** select '**Total Revenue (number)**'

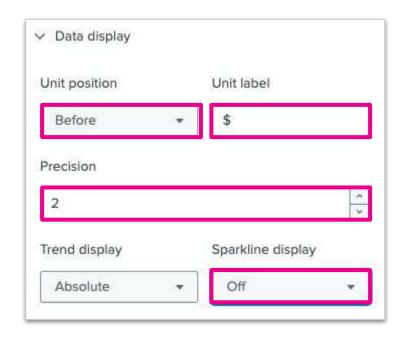


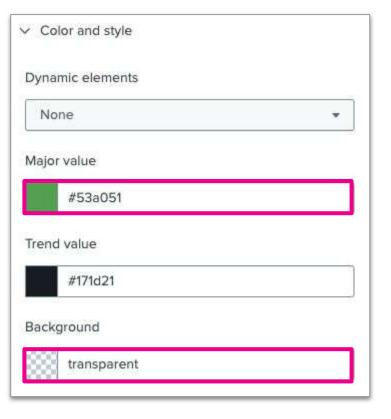


Configure the Single Value Visualization

Formatting and styling

- 8. Under the **Data display** section, set the following:
 - a. Change the **Unit Position** to **Before**
 - b. Set the **Unit Label** to **\$**
 - c. Increase the **Precision** value to 2
 - d. Set Sparkline display to Off
- 9. Under the **Color and style** section, set the following:
 - a. Change the **Major value** to **#53a051**
 - b. Change the **Background** to **transparent**.
- 10. Move and resize the single value so that it fits inside the bottom right corner box of your dashboard



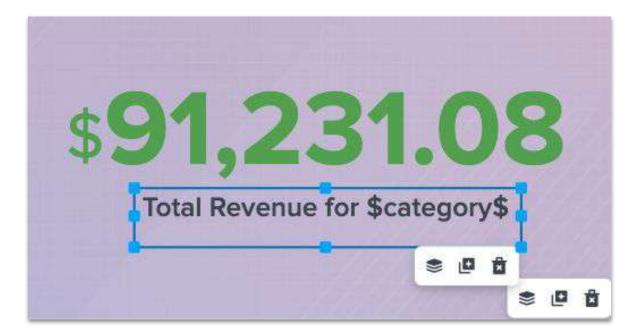


Configure the Single Value Title

Adding a title a different way

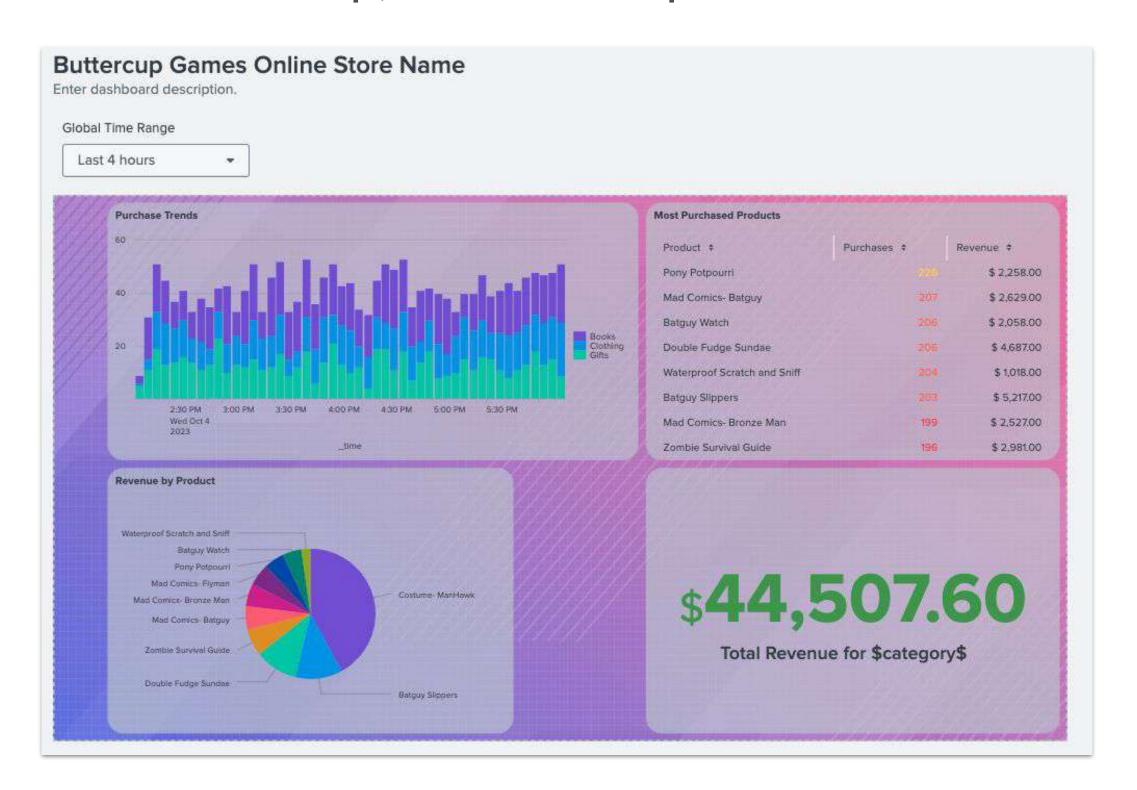
- 11. In the main toolbar click the markdown () button.
- 12. Type # Total Revenue for \$category\$ into the Markdown content text box.
 - The # makes the text extra large
- 13. Place the title beneath the total revenue visualization.
- 14. Click on the **Save** button in the top right corner.





Configure Chain Search

At this point in the workshop, the Buttercup Games dashboard looks like this:



Try it Yourself



Lab 5 - Setup Annotation and Token

Create Book Sale Annotation

- Click on your Purchase Trends chart. Under Data sources, click on + Set up annotation data source.
- 2. Click on + Create search and add the following into the SPL query box:

```
| makeresults count=1
| streamstats count
| eval annotation_label= case(count=1 , "Book Sale Starts")
| eval _time=now()-count*2000
```

This search adds a custom annotation_label field to our events

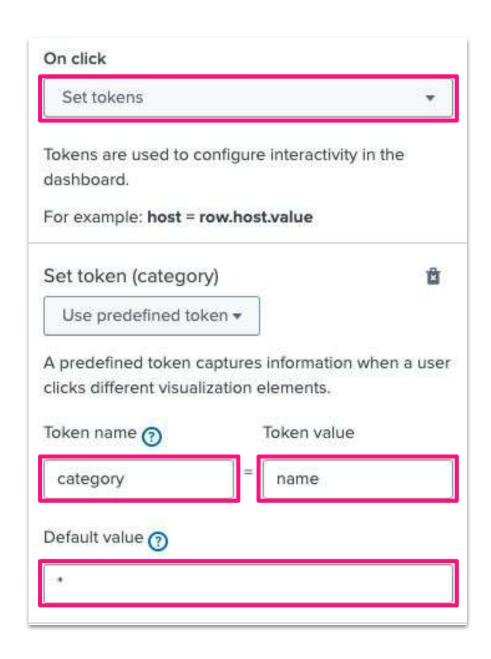
- 3. Set the **Time range** to **Input**
- 4. Name the data source Book Sale
- 5. Click on **Apply and Close**
- With your Purchase Trends chart still selected, under the Data configurations section for Annotation x, select _time (time).
- 7. For Annotation labels choose annotation_label (string)



Configure Searches

Using a token

- 8. In the Configuration panel, scroll down to Interactions.
- Click on + Add interaction and from the On click dropdown select Set tokens
- 10. Set the following:
 - a. Set the **Token name** to **category**
 - b. Set the **Token value** to **name**
 - c. Set the **Default value** to *
- 11. Click on Apply



Configure Searches

Using a token

- 12. Click on the **Data source overview** icon (**)** and open the **Most Purchased Products search** search with the edit icon.
- 13. Add your input token to the search by copying and pasting the following SPL after the | lookup... line:

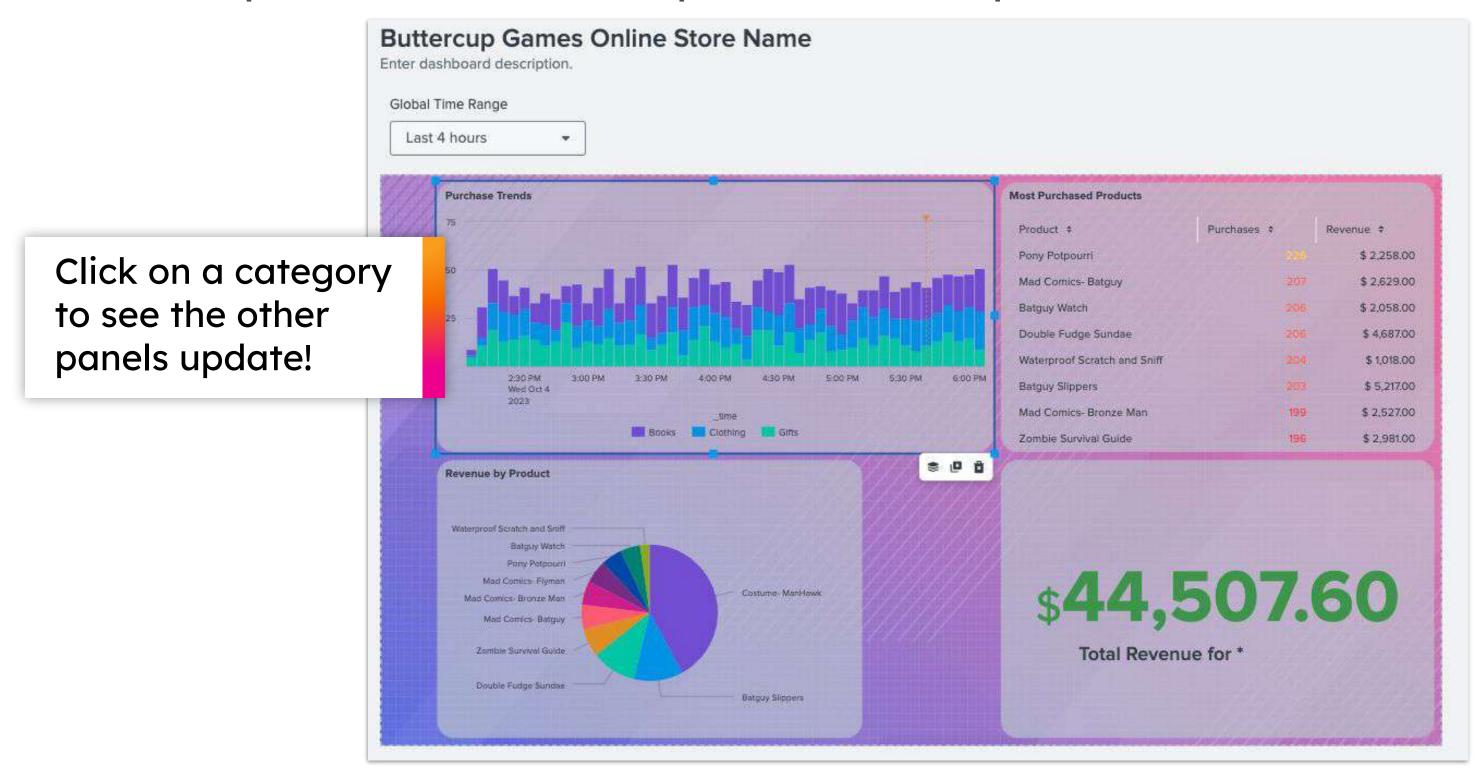
```
search category=$category$
```

- 14. Click on **Apply and Close**.
- 15. Repeat steps 12–14 for **Revenue by Product search**
- 16. Save your dashboard and click on View
- 17. Click on a category on the **Purchase Trends** chart to see your visualizations update!

```
index=main sourcetype=access_combined action=purchase status=200
| lookup product_codes.csv product_id
| search category=$category$
| stats count as Purchases by product_name product_price
| table product_name Purchases product_price
| eval Revenue=Purchases*product_price
| table product_name Purchases Revenue
| sort -Purchases
| rename product_name as "Product"
| head 8
```

Setup Annotation and Token

At this point in the workshop, the Buttercup Games dashboard looks like this:



Try it Yourself



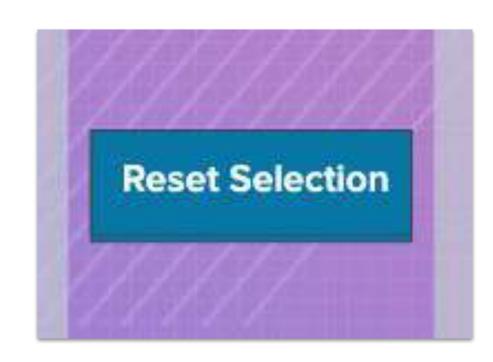
Lab 6 - Add a Reset Button

Create the "Reset Selection" button

- 1. Add a Rectangle
- 2. Move and resize the rectangle to fit in the space between the two bottom panels
- 3. Change the Fill and Stroke colors to blue (#0877a6)
- 4. Add the following markdown (MJ) text:

Reset Selection

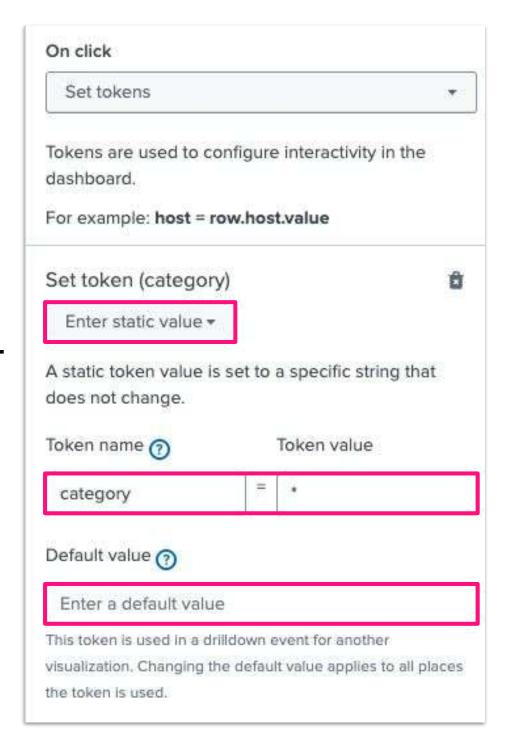
- 5. Move and resize the markdown text box to fit inside the rectangle
- 6. Change the font color of the markdown text to white



Add a Reset Button

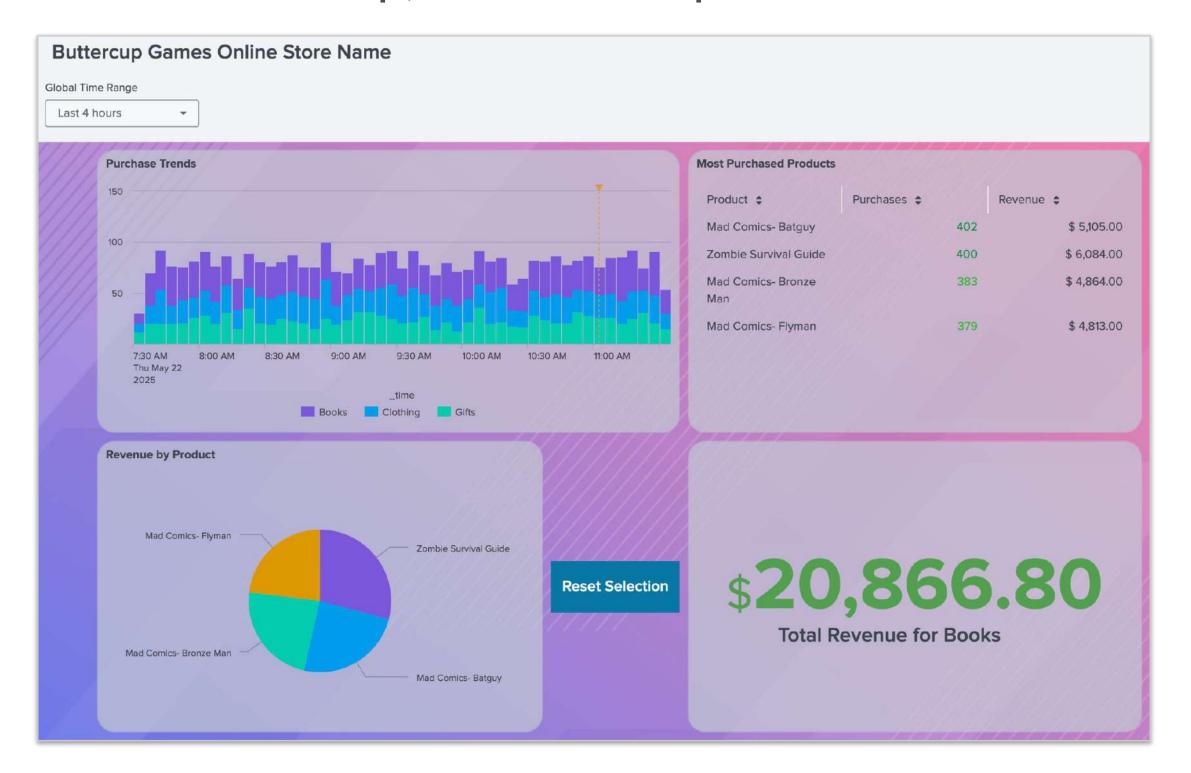
Configure the Set Token drilldown

- 7. Add another Rectangle
- 8. Move and resize the rectangle to cover the "Reset selection" text you previously added
- 9. Change the Fill and Stroke colors to transparent
- 10. In the Configuration panel, scroll down to Interactions.
- 11. Click on **+ Add interaction** and from the **On click** dropdown select **Set tokens**
- 12. Select 'Enter static value' and set the following:
 - a. Set the **Token name** to **category**
 - b. Set the **Token value** to *
 - c. Leave **Default value** empty



Add a Reset Button

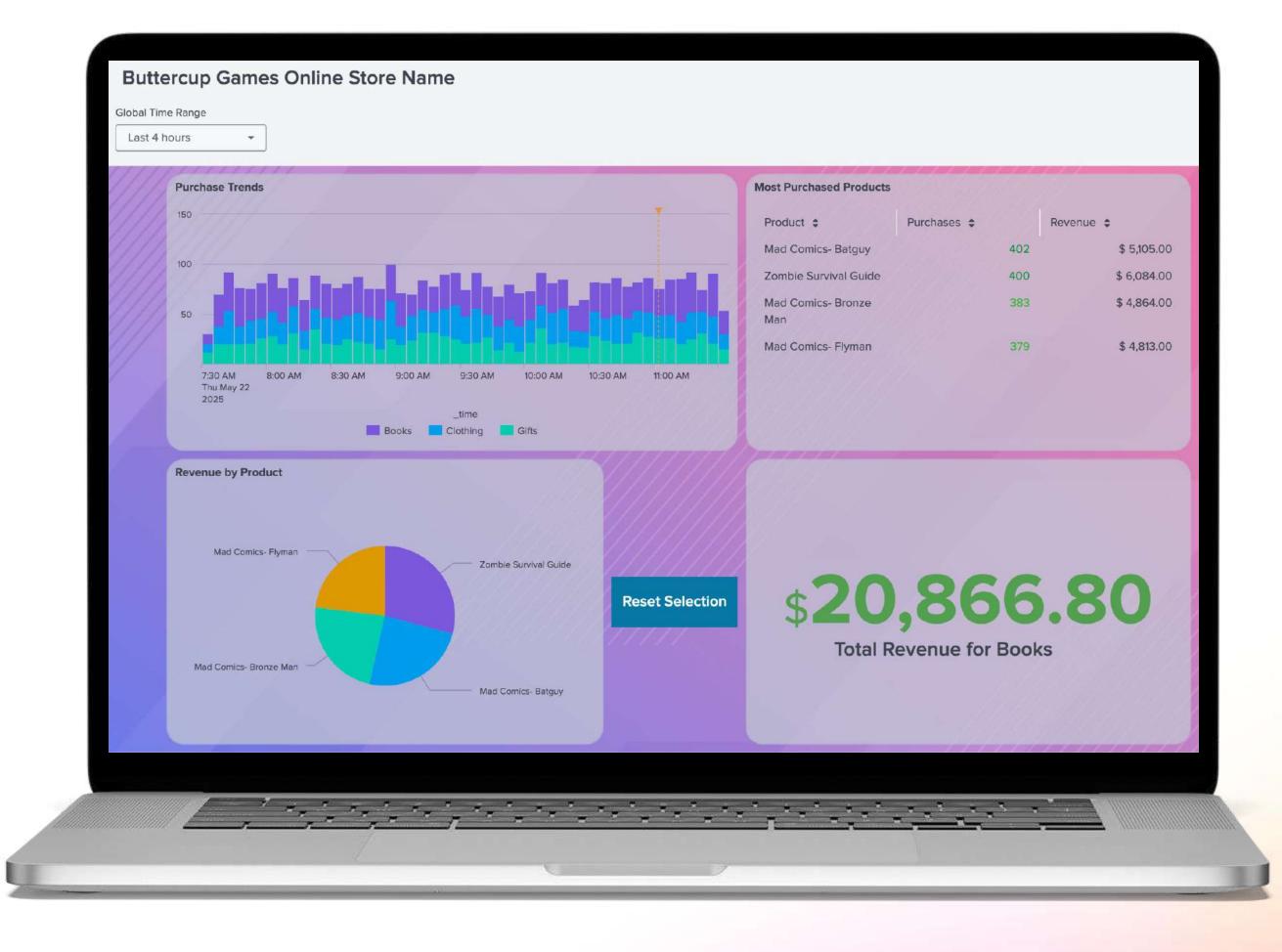
At this point in the workshop, the Buttercup Games dashboard looks like this:



Try it Yourself



You've finished!



Splunk Resources

Where to go after today's workshop



Additional Resources

- Check out the in-built **Examples Hub** for more dashboard inspiration.
- Take one of our <u>Dashboard Studio education courses</u>.
- Try converting your Classic dashboards today!
- Send Dashboard Studio product feedback to:
 - dashboard-studio@splunk.com
 - #dashboard_studio in Splunk User Groups Slack

Splunk4Ninjas - Dashboard Studio Hands-on Workshop

 Go from dashboard zero to hero in 2 hours!

In person and remote options available

- Advanced dashboard configuration
 Discover how to eval tokens in search and modify advanced visualizations options
- Learn and apply dashboard best practices

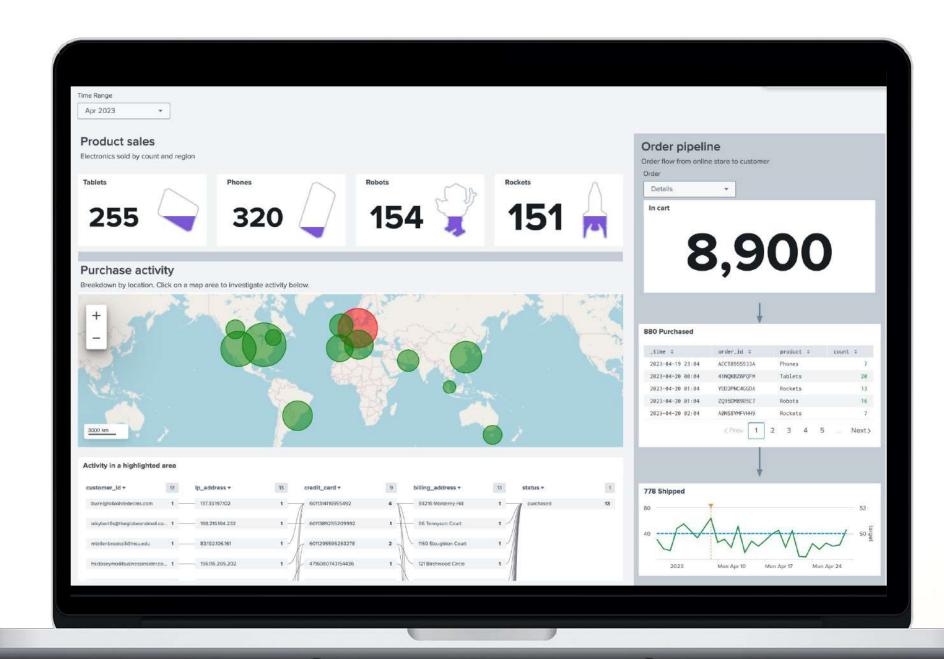
Improve performance and learn dashboard design best practices & tips!

 For people with basic Splunk Dashboard Studio experience

Take your Dashboard Studio skills to the next level!



Workshop Flyer



Create an advanced Splunk dashboard!

Thank you

