



# Lesson 200.6 Creating Reports and Dashboards

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# Learning Objectives

At the end of this lesson, learners will be able to:

- Save a search as a report.
- Edit reports.
- Create reports that display statistics (tables).
- Create reports that display visualizations (charts).
- Create a dashboard.
- Add a report to a dashboard.
- Edit a dashboard.

# Introduction

Splunk reports are generated from search actions and can display statistics and visualizations of events.

Once created and saved, reports can run at any time, retrieving up-to-date results with each run.

Reports can be shared with other users and added to dashboards for easy access.

Advanced reports often include drill-down functionality, allowing users to explore the underlying events that contribute to the generated statistics.



image: Freepik.com

# Introduction (continued)

Splunk Dashboards are views that are made up of panels.

The panels can contain modules such as search boxes, fields, charts, tables, and lists.

Dashboard panels are usually connected to reports.

After creating a search visualization or saving a report, you can add it to a new or existing dashboard.

A Dashboard Editor allows you to create and edit dashboards. It is useful when you have a set of saved reports that you want to quickly add to a dashboard.

In this lesson, we will explore Splunk reports and dashboards.

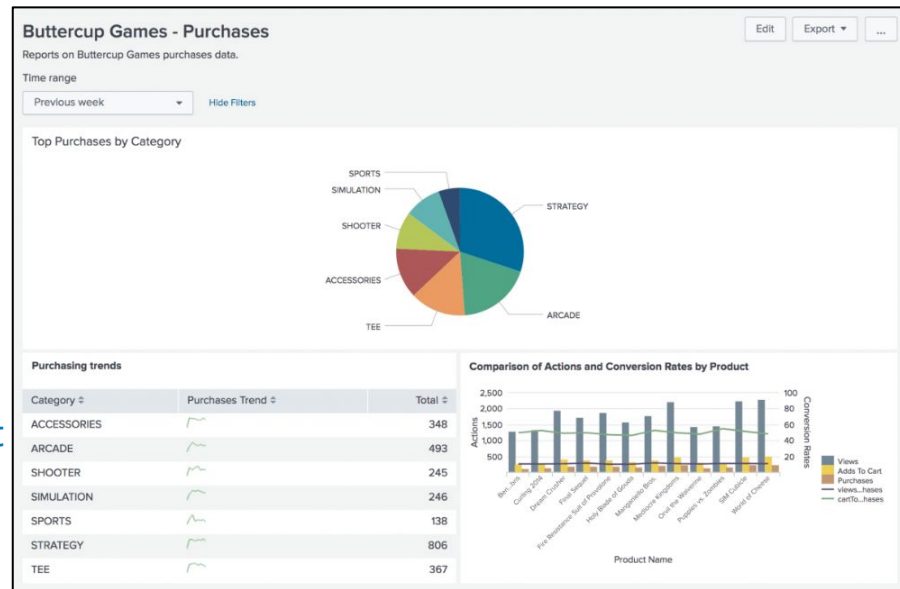


image: <https://docs.splunk.com/Documentation>

# Introduction (continued)

Splunk visualization capabilities -

Visualizations serve as a powerful storytelling tool.

Combined with reports and dashboards, visualizations convey information, insights, and findings to stakeholders or team members in a compelling and easy-to-understand manner, fostering better communication and collaboration.



image: Freepik.com

# 6.1 Save a Search as a Report

## Overview

When you create a **search** or a pivot that you would like to run again or share with others, you can **save it as a report**.

Once you create a report you can:

- View the **results** that the **report** returns on the **report viewing page** or Splunk Mobile.
- Open the report and **edit** it so that it returns **different data** or displays its data in a **different manner**.

### Note:

The Pivot tool lets you report on a specific data set without the Splunk Search Processing Language (SPL™). It provides a drag-and-drop interface to design and generate pivots that present different aspects of that data in the form of tables, charts, and other visualizations.

## 6.1 Save a Search as a Report (continued)

### Manually create a report in Splunk Web

There are **four ways** to create reports using Splunk web:

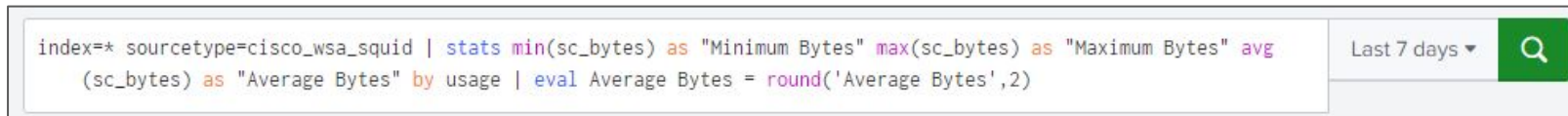
- **From Search**, by saving a **search** as a report.
- From Pivot, by saving a pivot as a report.
- By selecting **Settings > Searches, reports, and alerts** and clicking **New Report** to add a new report.
- From a **dashboard**, by **converting** an **inline-search-powered dashboard panel** to a report.

On the following slides, we will explore some of these options.

## 6.1 Save a Search as a Report

### Saving a search as a report

- Scenario: Display the **bandwidth** used by internet usage type **in the last 7 days**.

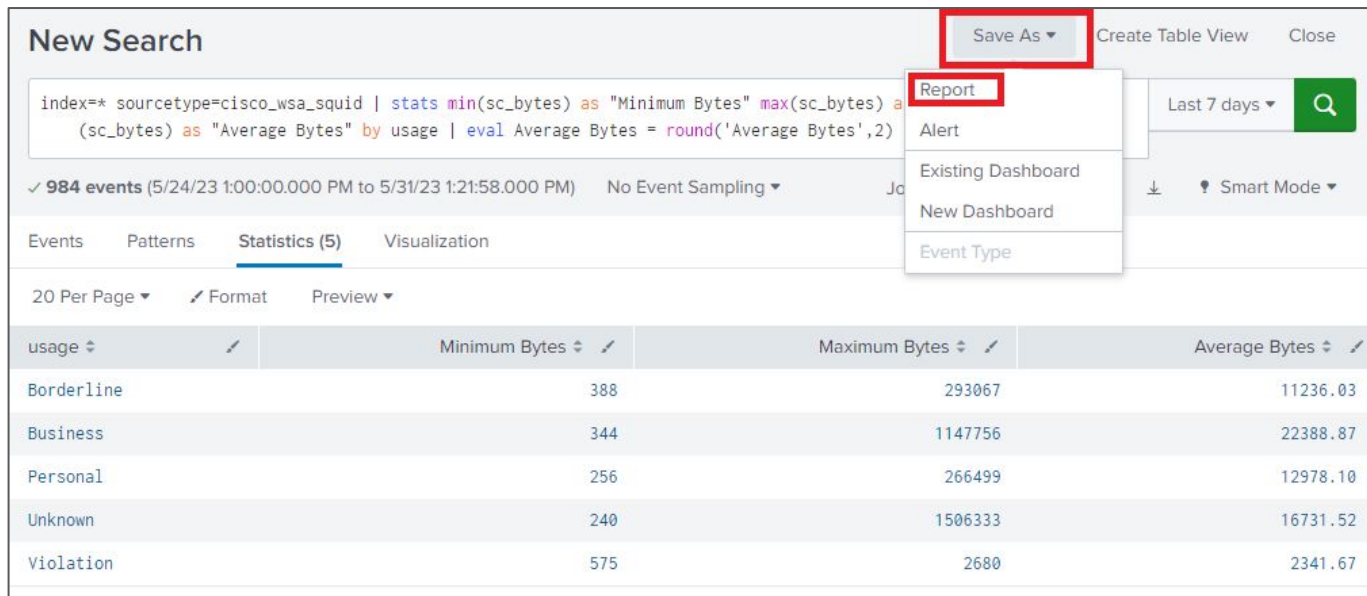




# 6.1 Save a Search as a Report (continued)

## Saving a search as a report

- From the **Save As** drop-down menu, select **Report**.



**New Search**

index=\* sourcetype=cisco\_wsa\_squid | stats min(sc\_bytes) as "Minimum Bytes" max(sc\_bytes) as "Maximum Bytes" avg(sc\_bytes) as "Average Bytes" by usage | eval Average Bytes = round('Average Bytes',2)

✓ 984 events (5/24/23 1:00:00.000 PM to 5/31/23 1:21:58.000 PM) No Event Sampling

Events Patterns **Statistics (5)** Visualization

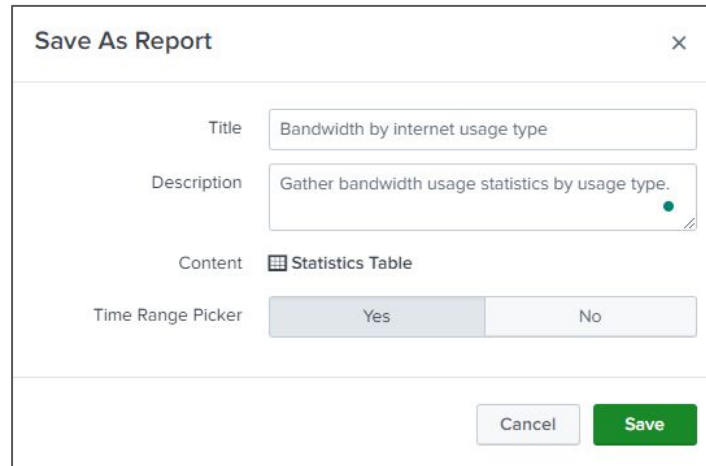
20 Per Page Format Preview

usage	Minimum Bytes	Maximum Bytes	Average Bytes
Borderline	388	293067	11236.03
Business	344	1147756	22388.87
Personal	256	266499	12978.10
Unknown	240	1506333	16731.52
Violation	575	2680	2341.67

## 6.1 Save a Search as a Report (continued)

### Saving a search as a report

- Provide a unique **Title** for the report.
  - Supported characters for titles are a-z, A-Z, 0-9, or \_.
- (Optional) Provide a **Description** of the report.
- (Optional) Add a **time range picker** to the report.
  - A time range picker allows users **without write permissions** to rerun the report over a different time range without actually editing it.
- If you **do not** provide a time range picker, the report **always** runs over the same time range as the **original** search.



Save As Report

Title: Bandwidth by internet usage type

Description: Gather bandwidth usage statistics by usage type.

Content: Statistics Table

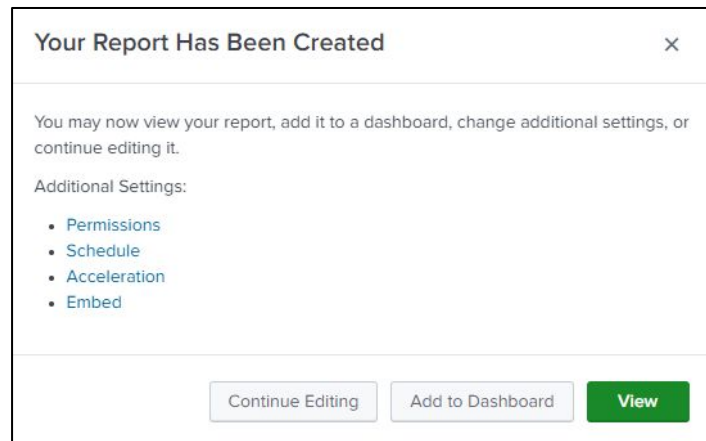
Time Range Picker: Yes No

Cancel Save

## 6.1 Save a Search as a Report (continued)

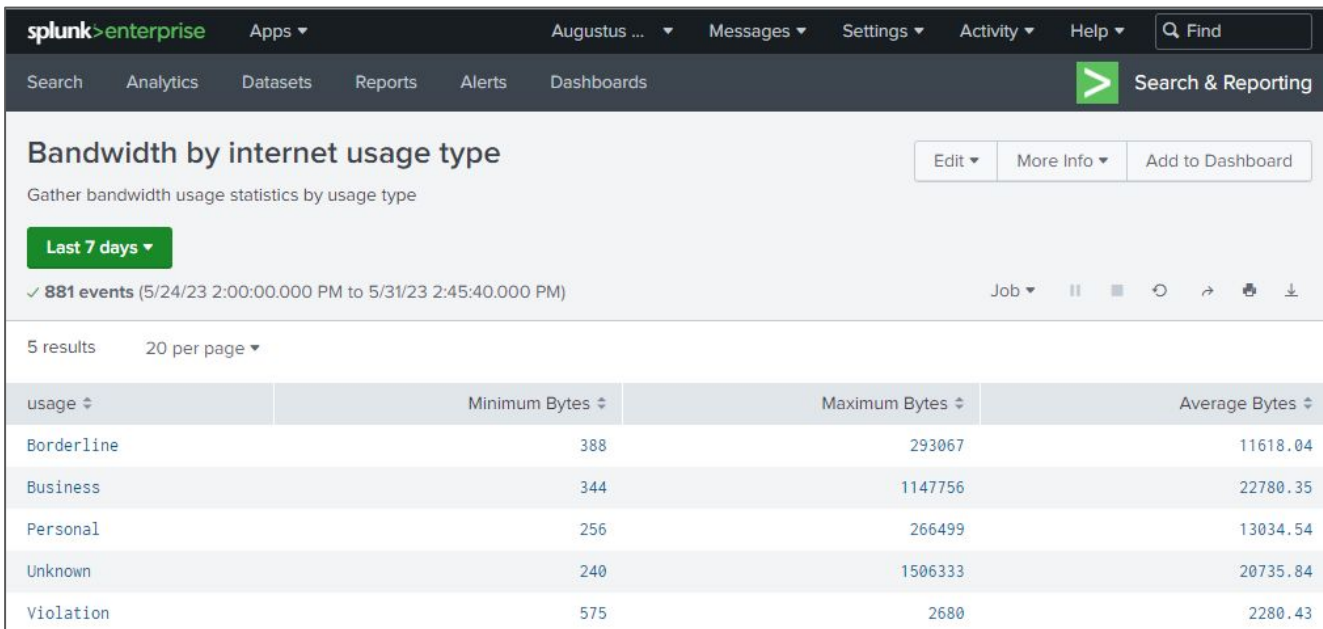
### Saving a search as a report

- At this point, your **report has been created**. You may **view** it, add it to a **dashboard**, change **additional settings**, or continue editing it.
- The additional settings are:
  - **Permissions**
  - **Schedule**
  - **Acceleration**
  - **Embed**
- Click on the **View** button to view the report.



# 6.1 Save a Search as a Report (continued)

View of the Bandwidth by internet usage type report-



The screenshot shows the Splunk Search & Reporting interface. At the top, there's a navigation bar with 'splunk>enterprise' and various menu items like 'Apps', 'Augustus ...', 'Messages', 'Settings', 'Activity', and 'Help'. Below this is a search bar with 'Find' and a 'Search & Reporting' button. The main content area is titled 'Bandwidth by internet usage type' and includes a subtitle 'Gather bandwidth usage statistics by usage type'. There are buttons for 'Edit', 'More Info', and 'Add to Dashboard'. A green button indicates 'Last 7 days'. Below this, it shows '✓ 881 events (5/24/23 2:00:00.000 PM to 5/31/23 2:45:40.000 PM)'. A table displays 5 results with columns for 'usage', 'Minimum Bytes', 'Maximum Bytes', and 'Average Bytes'. The table lists five usage types: Borderline, Business, Personal, Unknown, and Violation, each with corresponding byte counts.

usage	Minimum Bytes	Maximum Bytes	Average Bytes
Borderline	388	293067	11618.04
Business	344	1147756	22780.35
Personal	256	266499	13034.54
Unknown	240	1506333	20735.84
Violation	575	2680	2280.43

## 6.2 Edit Reports

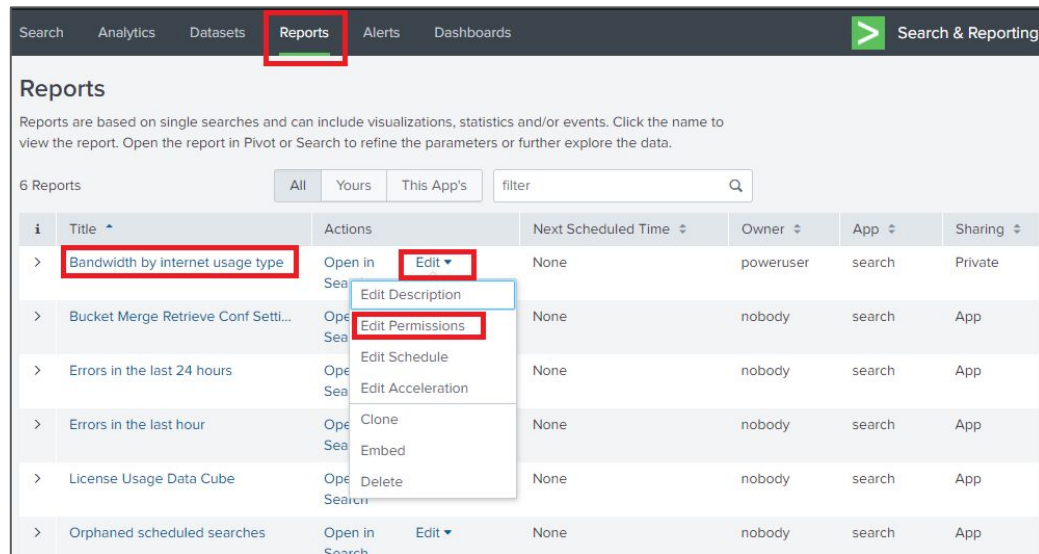
### Set report permissions

- Any report you create is **initially private** and **only** available to **you**.
- If the capabilities granted to you by your role allow it, you can **change the report permissions to share it with others**.
- There are a **number** of ways that you can access the **Edit Permissions** dialog:
  - When you **first create** the report.
  - From the **reports listing** page.
  - From the **report display** view.
  - From **settings**.

## 6.2 Edit Reports (continued)

Set report permissions from the Reports listing page.

- Navigate to the **Reports listing** page.
- **Locate** the report that you want to edit permissions for, click **Edit**, and select **Edit Permissions**.



Search Analytics Datasets **Reports** Alerts Dashboards Search & Reporting

### Reports

Reports are based on single searches and can include visualizations, statistics and/or events. Click the name to view the report. Open the report in Pivot or Search to refine the parameters or further explore the data.

6 Reports All Yours This App's

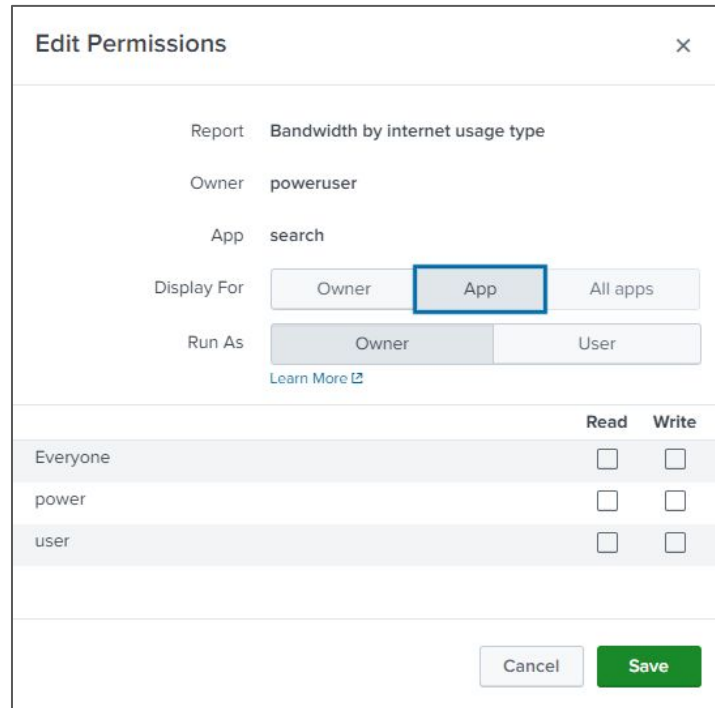
i	Title ^	Actions	Next Scheduled Time	Owner	App	Sharing
>	<b>Bandwidth by internet usage type</b>	Open in Search <b>Edit</b> Edit Description Edit Permissions Edit Schedule Edit Acceleration	None	poweruser	search	Private
>	Bucket Merge Retrieve Conf Sett...	Open in Search Edit Description Edit Permissions Edit Schedule Edit Acceleration	None	nobody	search	App
>	Errors in the last 24 hours	Open in Search Edit Description Edit Permissions Edit Schedule Edit Acceleration	None	nobody	search	App
>	Errors in the last hour	Open in Search Clone Embed	None	nobody	search	App
>	License Usage Data Cube	Open in Search Delete	None	nobody	search	App
>	Orphaned scheduled searches	Open in Search Edit	None	nobody	search	App

## 6.2 Edit Reports (continued)

Set report permissions - Edit permissions dialog box.

- Select either **App** or All **apps**.
  - Note: All reports are created in the **context** of a **specific app**.
- Select **App** to **share** the report with **other users** of the **app** that the **report belongs** to.
- Select **All apps** to share the report **with all users of your Splunk platform** implementation.

Selecting App or All apps exposes the **Run as field** and **role permissions** settings.



**Edit Permissions** [X]

Report: Bandwidth by internet usage type

Owner: poweruser

App: search

Display For: Owner **App** All apps

Run As: Owner User

[Learn More](#)

	Read	Write
Everyone	<input type="checkbox"/>	<input type="checkbox"/>
power	<input type="checkbox"/>	<input type="checkbox"/>
user	<input type="checkbox"/>	<input type="checkbox"/>

Cancel Save

## 6.2 Edit Reports (continued)

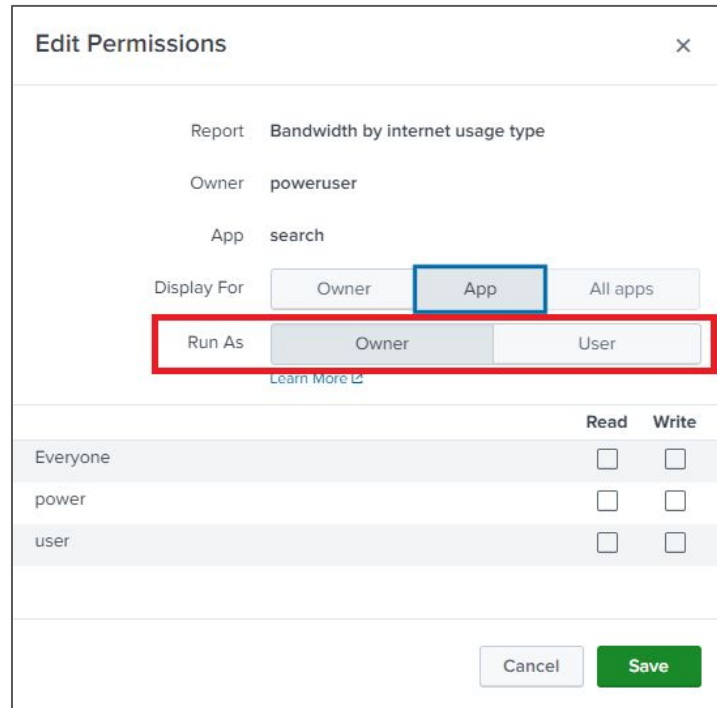
### Set report permissions - Edit permissions dialog box - Owner vs. User.

When you **share** a report with other users, you have the option of having it run with the **permissions** of the report "**owner**" (the person who created the report) or the report "**user**" (the person who is running the report).

This setting is used for two reasons:

- It can **allow access** to search data that might otherwise be unavailable to the person running the report.
- It helps **prevent situations** where your concurrent search limit is reached when too many people run reports that you own.

All reports run as **Owner** by default.



**Edit Permissions** [X]

Report: Bandwidth by internet usage type

Owner: poweruser

App: search

Display For: [Owner] [App] [All apps]

Run As: [Owner] [User]

[Learn More](#)

	Read	Write
Everyone	<input type="checkbox"/>	<input type="checkbox"/>
power	<input type="checkbox"/>	<input type="checkbox"/>
user	<input type="checkbox"/>	<input type="checkbox"/>

[Cancel] [Save]



## 6.2 Edit Reports (continued)

### Set report permissions - Edit permissions dialog box - Read/Write.

Set the Read and Write permissions by role.

- **Read** gives a user with the **selected role** the ability to **see** and **run** the report, but they **cannot edit** it.
- **Write** gives the user the ability to **run** and **edit** the report if they wish.
- If you leave these settings **unmarked** for a **particular role**, that role **cannot see** the report.
- Click **Save** to save your permissions changes.

Report

Bandwidth by internet usage type

Owner

poweruser

App

search

Display For

Owner

App

All apps

Run As

Owner

User

[Learn More](#)

	Read	Write
Everyone	<input checked="" type="checkbox"/>	<input type="checkbox"/>
power	<input type="checkbox"/>	<input type="checkbox"/>
user	<input type="checkbox"/>	<input type="checkbox"/>

Cancel

Save

## 6.2 Edit Reports (continued)

### Objective 8.1 - Describe scheduled reports

A **scheduled report** is a report that **runs** on **scheduled intervals** and which can **trigger** an **action** each time it runs.

You can define **up to four actions** for a scheduled report:

- **Send** a report summary by email.
- **Write** the report results to a CSV lookup file.
- **Set up a webhook** that sends a message to an external web resource such as a chatroom.
- **Log and index** searchable events.

## 6.2 Edit Reports (continued)

### Objective 8.2 - Configure scheduled reports

Open the **Edit Schedule dialog** to define a **schedule** for an **existing report**, and optionally set up **actions** that are **triggered** each time the report **runs** on its schedule.

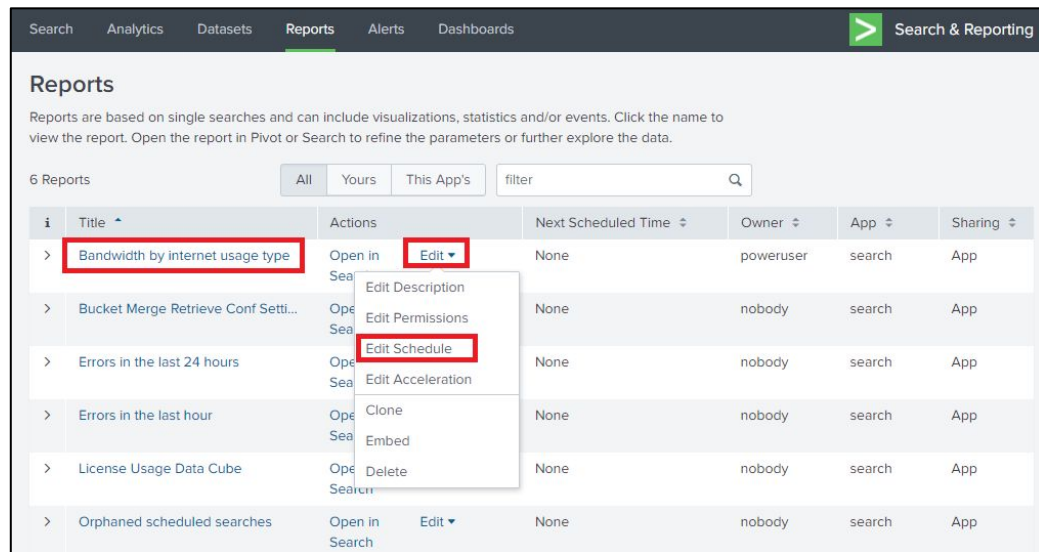
There are **several** ways to open the **Edit Schedule dialog**:

- After **saving** a search as a report.
- When you extend a dataset as a scheduled report.
- From the **Reports listing** page.
- From the **report display view**.
- From **Settings**.

## 6.2 Edit Reports (continued)

### (8.2) Schedule reports - From the Reports listing page

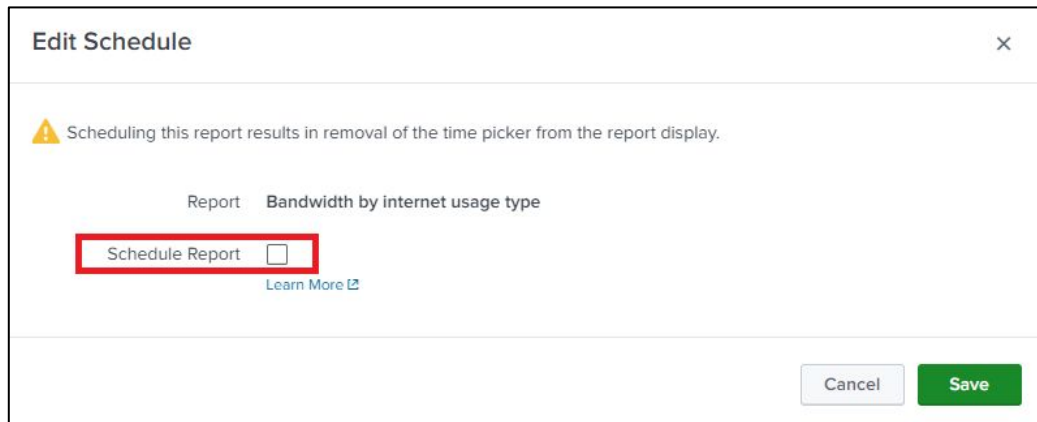
- Navigate to the **Reports listing** page.
- **Locate** the report that you want to schedule.
- Click **Edit**, and select **Edit Schedule**.



## 6.2 Edit Reports (continued)

### (8.2) Schedule reports - Edit schedule dialog box.

- On the **Edit Schedule** dialog box, **check the Schedule Report checkbox** to display the schedule options.
- Note that scheduling a report results in **removal of the time picker** from the report display.




## 6.2 Edit Reports (continued)

### (8.2) Schedule reports - Set a schedule to run the report.

- Select the **Schedule** for the report.
- You can select a **predefined schedule** such as **Run every hour**, or you can select **Run on Cron Schedule**, and then define a custom schedule with a Cron Expression.

Edit Schedule

 Scheduling this report results in removal of the time picker from the report display.

Report

Bandwidth by internet usage type

Schedule Report

☒
[Learn More](#)

Schedule

Run every week ▼

Run every hour

Run every day

✓ Run every week

Run every month

Run on Cron Schedule

Time Range

Schedule Window ?

Trigger Actions

+ Add Actions ▼

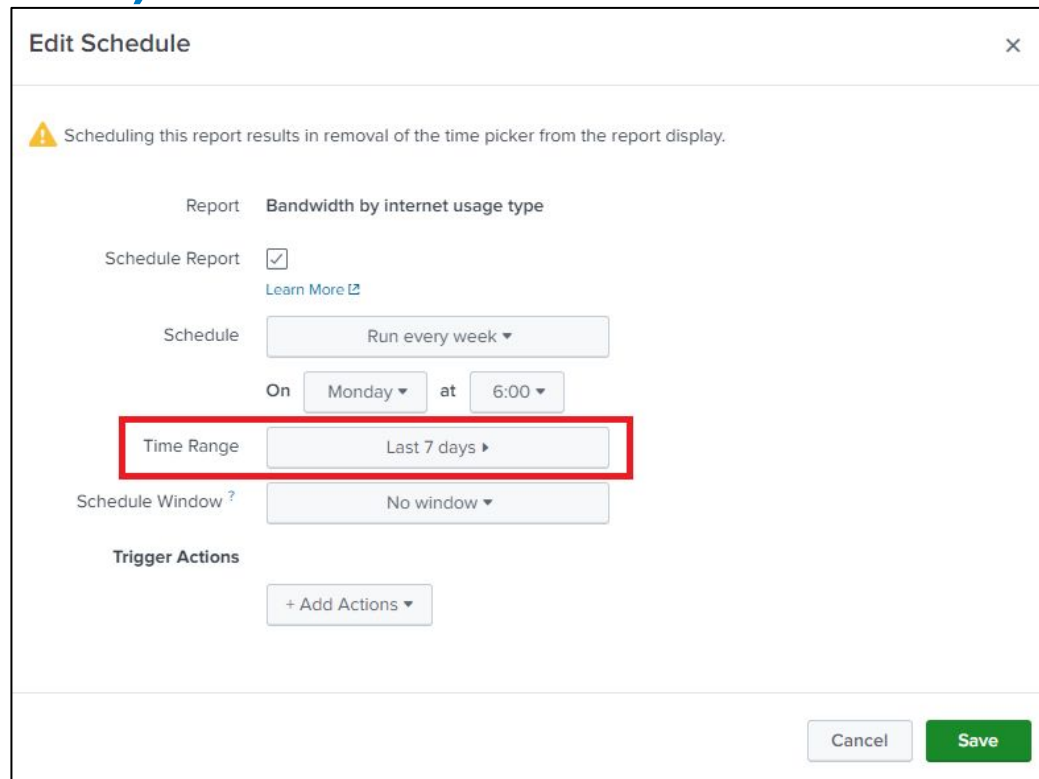
Cancel

Save


## 6.2 Edit Reports (continued)

### (8.2) Schedule reports - Set the report's time range.

- Select the **Time range** for the report.
- Time range is the **time range** for which the report **collects data**.
- It **defaults** to the time range that you have set for the **report**.
- Specify a **new time range** to **override** the default.



**Edit Schedule** [X]

 Scheduling this report results in removal of the time picker from the report display.

Report **Bandwidth by internet usage type**

Schedule Report ☒ [Learn More](#)

Schedule **Run every week** ▼

On **Monday** ▼ at **6:00** ▼

**Time Range** **Last 7 days** ▶

Schedule Window ? **No window** ▼

Trigger Actions

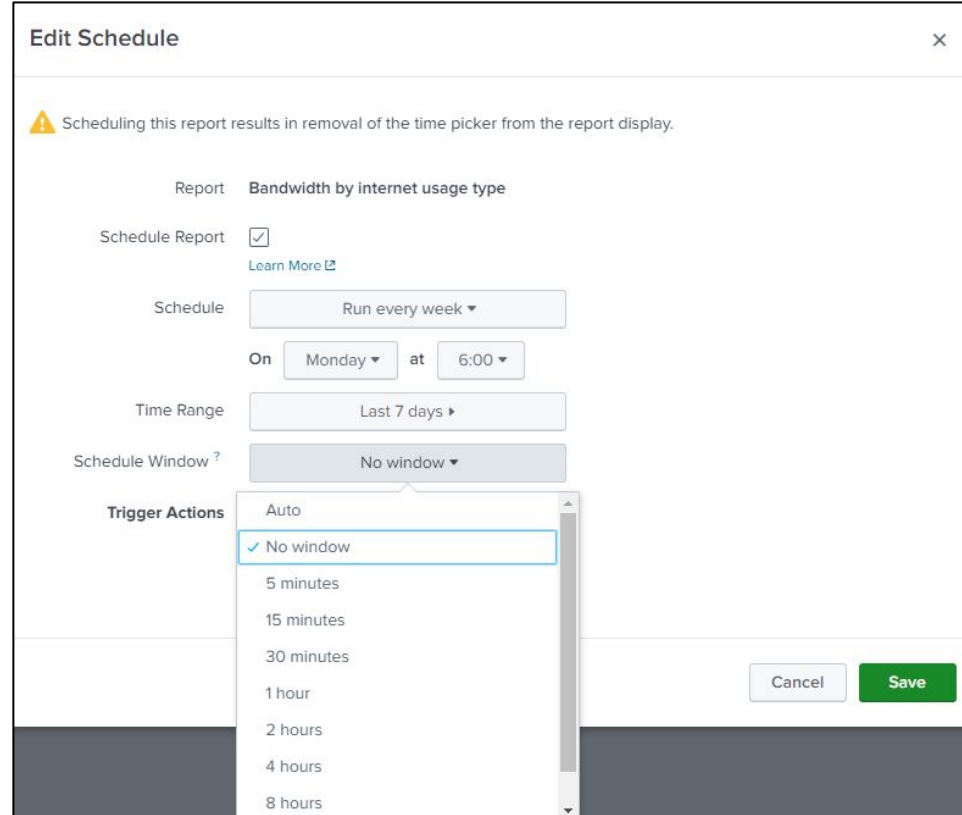
**+ Add Actions** ▼

**Cancel** **Save**


## 6.2 Edit Reports (continued)

### (8.2) Schedule reports - Select a schedule window.

- (Optional) Select a **Schedule Window** for the report to run within.
- When there are many scheduled reports set to run concurrently, you can set **Schedule Window** to specify **how long the report scheduler can defer this report** and cause it to **yield** to **higher-importance** reports.



**Edit Schedule**

 Scheduling this report results in removal of the time picker from the report display.

Report: **Bandwidth by internet usage type**

Schedule Report: ☒ [Learn More](#)

Schedule: Run every week ▼

On: Monday ▼ at 6:00 ▼

Time Range: Last 7 days ▶

Schedule Window ? No window ▼

Trigger Actions

- Auto
- ☒ No window
- 5 minutes
- 15 minutes
- 30 minutes
- 1 hour
- 2 hours
- 4 hours
- 8 hours

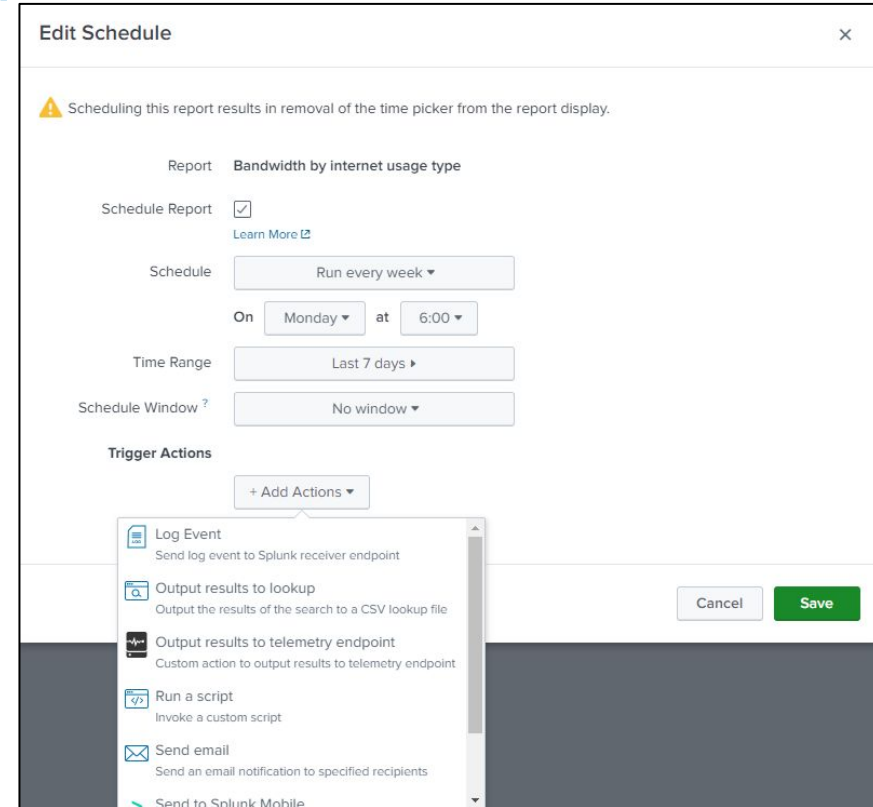
Cancel Save



## 6.2 Edit Reports (continued)

### (8.2) Schedule reports - Define actions for a scheduled report.

- When you schedule a report, you can optionally **define actions** that are **triggered** each time it **runs** on its schedule.
- If you add an **email notification** action to a scheduled report, each time that report runs, the Splunk software will send an **email** with the **results** of the report to a set of stakeholders.
- To add actions to a scheduled report, select one or more options from the **Add Actions** menu.



**Edit Schedule**

⚠ Scheduling this report results in removal of the time picker from the report display.

Report: **Bandwidth by internet usage type**

Schedule Report: ☒ [Learn More](#)

Schedule: Run every week ▼







On: Monday ▼ at 6:00 ▼

Time Range: Last 7 days ▶

Schedule Window: No window ▼

**Trigger Actions**

+ Add Actions ▼

-  **Log Event**  
Send log event to Splunk receiver endpoint
-  **Output results to lookup**  
Output the results of the search to a CSV lookup file
-  **Output results to telemetry endpoint**  
Custom action to output results to telemetry endpoint
-  **Run a script**  
Invoke a custom script
-  **Send email**  
Send an email notification to specified recipients
-  **Send to Splunk Mobile**

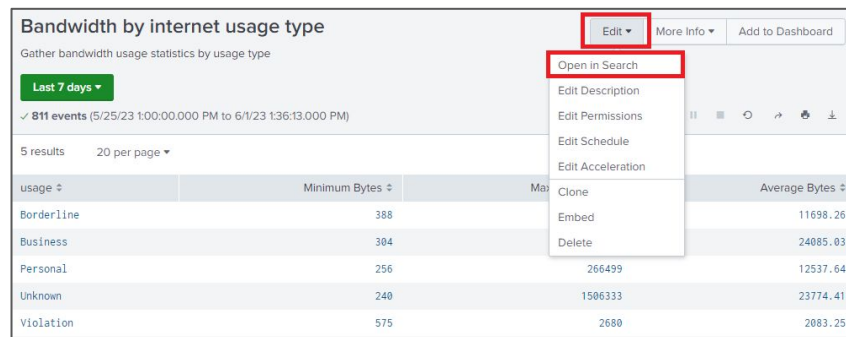
Cancel Save

## 6.2 Edit Reports (continued)

### Edit a report's definition.

There are two ways to edit a **report's definition**, depending on whether you are on the **Reports listing page** or looking at the **report itself**.

- On the **Reports listing page**, locate the report you want to edit, go to the **Actions** column, and click **Open in Search** or **Open in Pivot** (you will see one or the other, depending on which tool you used to create the report).
- Looking at the **report itself**, click **Edit** and select **Open in Search** or Open in Pivot (you will see one or the other, depending on which tool you used to create the report).



**Bandwidth by internet usage type**  
Gather bandwidth usage statistics by usage type

Last 7 days ▼

✓ 811 events (5/25/23 1:00:00.000 PM to 6/1/23 136:13.000 PM)

5 results 20 per page ▼

usage ↕	Minimum Bytes ↕	Maximum Bytes ↕	Average Bytes ↕
Borderline	388		11698.26
Business	304		24085.03
Personal	256	266499	12537.64
Unknown	240	1506333	23774.41
Violation	575	2680	2083.25

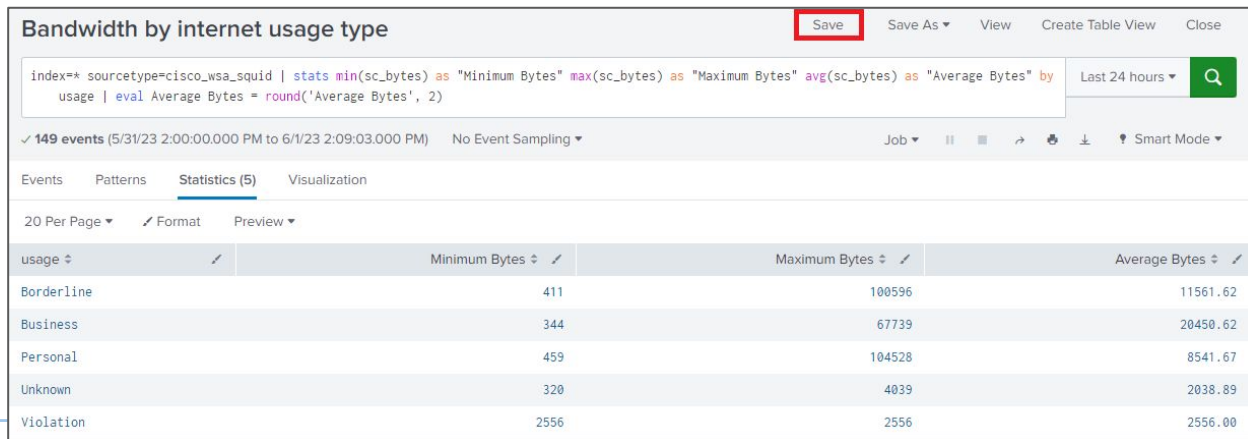
Looking at the report itself - second bullet

image: screenshot, Splunk Search & Reporting app

## 6.2 Edit Reports (continued)

Edit the definition of a report opened in Search.

- After you **open** a **report** in **search**, you can **change** the **search string**, **time range**, or report **formatting**.
- After you **rerun the report**, a **Save button** will be enabled, located in the upper-right section of the report. **Click this to save the report.**
- You also have the option of **saving** your **edited search** as a **new report**.



**Bandwidth by internet usage type** Save Save As ▾ View Create Table View Close

index=\* sourcetype=cisco\_wsa\_squid | stats min(sc\_bytes) as "Minimum Bytes" max(sc\_bytes) as "Maximum Bytes" avg(sc\_bytes) as "Average Bytes" by usage | eval Average Bytes = round('Average Bytes', 2) Last 24 hours ▾ Q

✓ 149 events (5/31/23 2:00:00.000 PM to 6/1/23 2:09:03.000 PM) No Event Sampling ▾ Job ▾ || ■ → ⬇ Smart Mode ▾

Events Patterns Statistics (5) Visualization

20 Per Page ▾ Format Preview ▾

usage ▾	Minimum Bytes ▾	Maximum Bytes ▾	Average Bytes ▾
Borderline	411	100596	11561.62
Business	344	67739	20450.62
Personal	459	104528	8541.67
Unknown	320	4039	2038.89
Violation	2556	2556	2556.00

image: screenshot,  
Splunk Search &  
Reporting app

## 6.3 Reports That Display Statistics (continued)

- Any search that contains **transforming commands**, a command that "transforms" the specified cell values for each event into **numerical** values for **statistical** purposes, produces statistics that can be represented in a **table** or **visualized**.
- A **report** that is based on a **search string** containing a **transforming command** will display a statistics table.
- This is similar to the examples displayed on this presentation so far.

Command
addtotals
anomalydetection
append
associate
chart
cofilter
contingency
history
makecontinuous
mvcombine
rare
stats
table
timechart
top
xyseries

image:  
<https://docs.splunk.com/Documentation/Splunk/9.0.4/SearchReference/Commandsbytype>

## 6.3 Reports That Display Statistics (continued)

- The following search aims to **display** the **difference** between the **Listed Price** and the **Sales Price** of **products** sold by the manufacturer over a **24-hour** period.

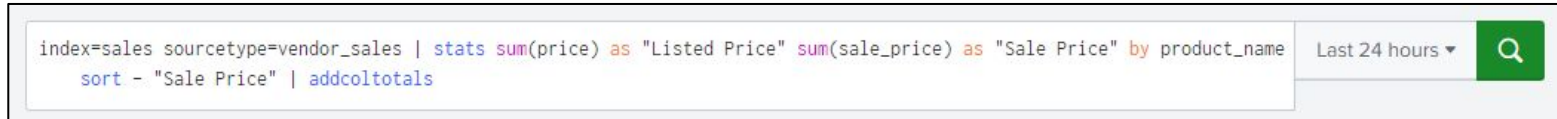


image: screenshot, Splunk Search & Reporting app

Note: The `| addcoltotals` command at the end of the search string will sum the Listed Price and the Sales Price columns.

## 6.3 Reports That Display Statistics (continued)

- Savings this search as a **report**, will create a **report that displays statistics in tabular format**.
- Tables can help you **compare** and **aggregate** field **values**.
- Use a table to **visualize patterns** for one or more **metrics** across a **data set**.
- There are plenty of options to **format table visualizations**, helping create better visual representation of the data.

Sales price vs Listed price by product

[Edit](#)
[More Info](#)
[Add to Dashboard](#)

Last 24 hours

✓ 157 events (5/31/23 4:00:00.000 PM to 6/1/23 4:30:25.000 PM)

Job [▶](#) [||](#) [■](#) [↺](#) [↻](#) [⌵](#)

15 results 20 per page

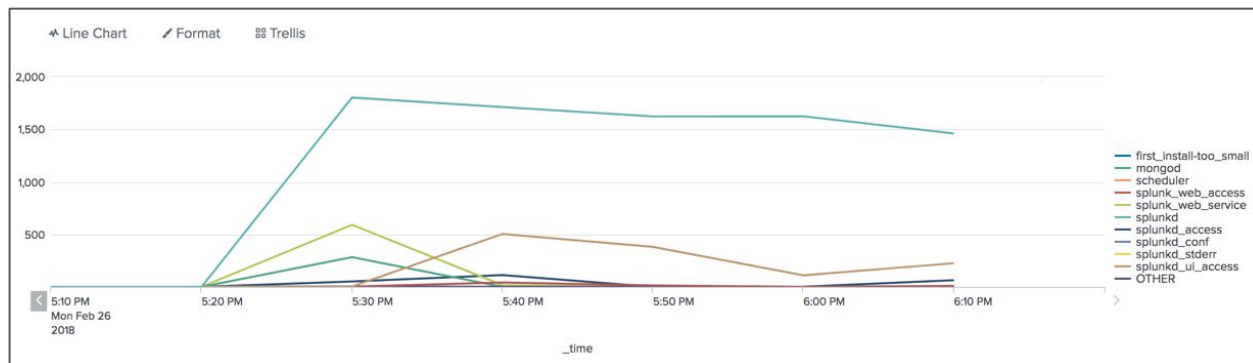
product_name	Listed Price	Sale Price
Dream Crusher	599.85	374.85
Orvil the Wolverine	479.88	299.88
World of Cheese	349.86	279.86
Manganiello Bros.	439.89	274.89
Mediocre Kingdoms	324.87	259.87
SIM Cubicle	299.85	254.85
Final Sequel	324.87	220.87
Curling 2014	159.92	135.92
Manganiello Bros. Tee	129.87	90.87
World of Cheese Tee	89.91	62.91
Benign Space Debris	74.97	59.97
Puppies vs. Zombies	79.84	31.84
Holy Blade of Gouda	41.93	20.93
Fire Resistance Suit of Provolone	31.92	15.92
	3427.43	2383.43

image: screenshot, splunk Search & Reporting app

## 6.4 Reports That Display Visualizations

### Data for charts

- As mentioned before, Splunk supports a **wide range of charts**.
- To **build** any **chart**, start with a **transforming search** that **generates** one or more **data series**.
- A series is a **sequence of related data points**. These points can be plotted on a chart. For example, each line in a line chart shows one series



## 6.4 Reports That Display Visualizations (continued)

### Types of charts.

- By default, Splunk supports the following chart types: **Pie, Bar, Column, Line, Area, Scatter, and Bubble.**
- Note that **different** charts work better for different **types** of data.
- In addition, Splunk supports visualizations such as **Single Value, Radial Gauge, and Cluster Maps.**

Chart name	Optimized for single series?	Optimized for multiple series?	Notes
Pie	Yes	No	Pie charts can only render a single series.
Bar	Yes	Yes	
Column	Yes	Yes	
Line	Yes	Yes	Typically, line charts are used for multiple series.
Area	No	Yes	Use an area chart to render multiple series.
Scatter	No	Yes	Scatter charts work best with two data series.
Bubble	No	Yes	Bubble charts work best with three data series.

image: image: [https://docs.splunk.com/images/b/b3/7.1\\_line\\_chart.png](https://docs.splunk.com/images/b/b3/7.1_line_chart.png)



## 6.4 Reports That Display Visualizations (continued)

- Here, the previous search example is used to **display** the **difference** between the **Listed Price** and the **Sales Price** of **products** sold by the manufacturer over a **24-hour** period, using a chart:

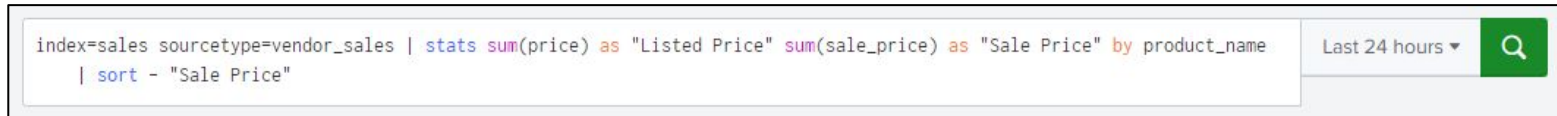
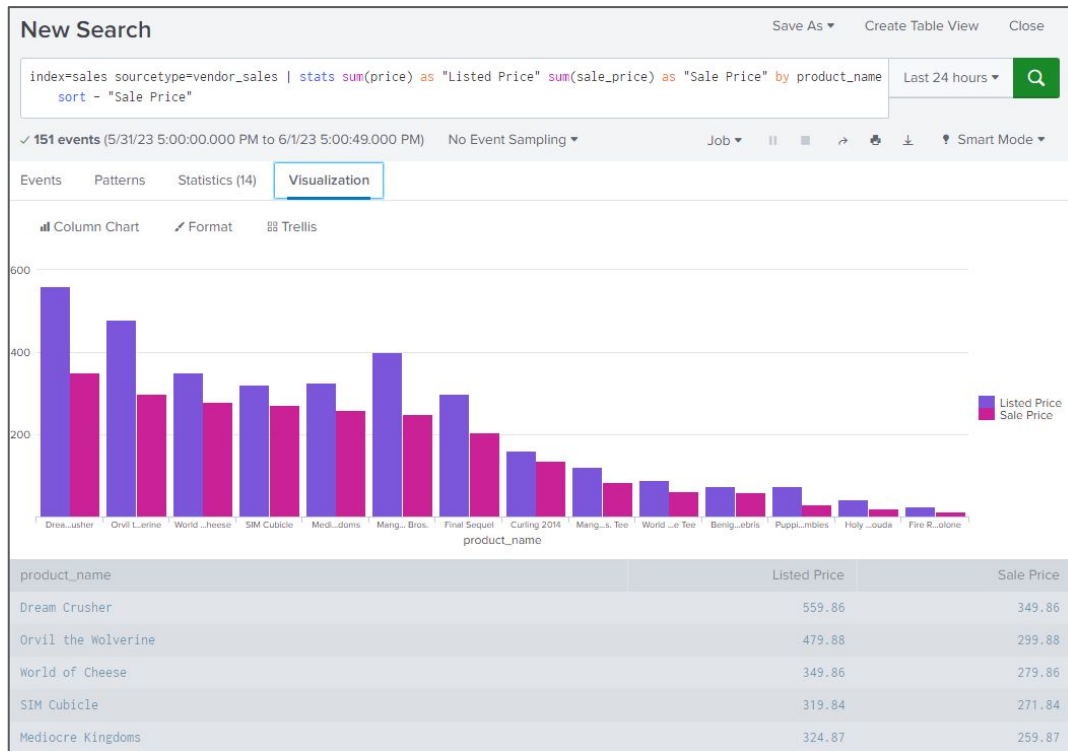


image: screenshot, splunk Search & Reporting app

Note: The `| addcoltotals` command was omitted from this example.

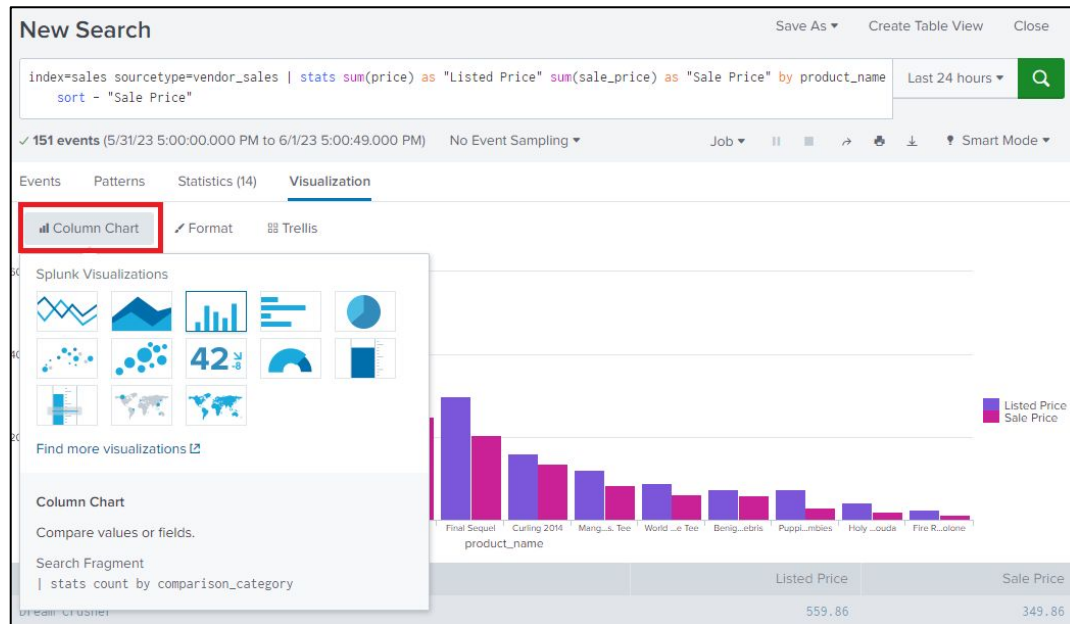
## 6.4 Reports That Display Visualizations (continued)

- Once the search completes, select the **Visualization** tab.
- Note that the result (in this case) displays a **column chart** followed by a **statistics table**.



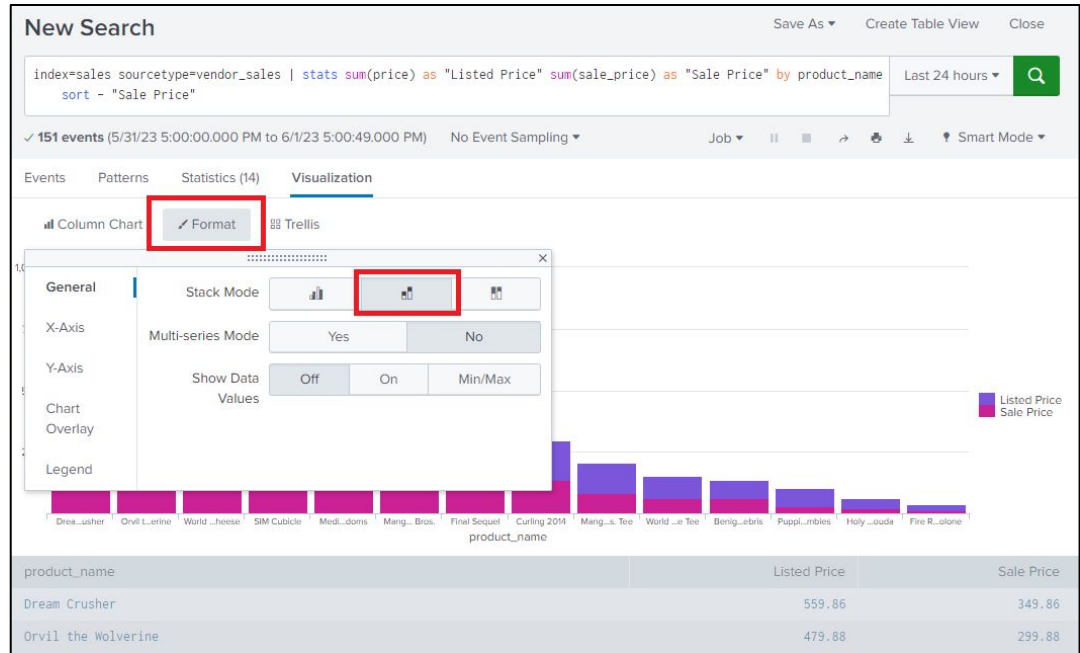
## 6.4 Reports That Display Visualizations (continued)

- To select a **different chart type**, click on the **Column Chart** button.
- The popup menu provides a **short description** of the **chart** or visualization, accompanied by a **Search Fragment**.



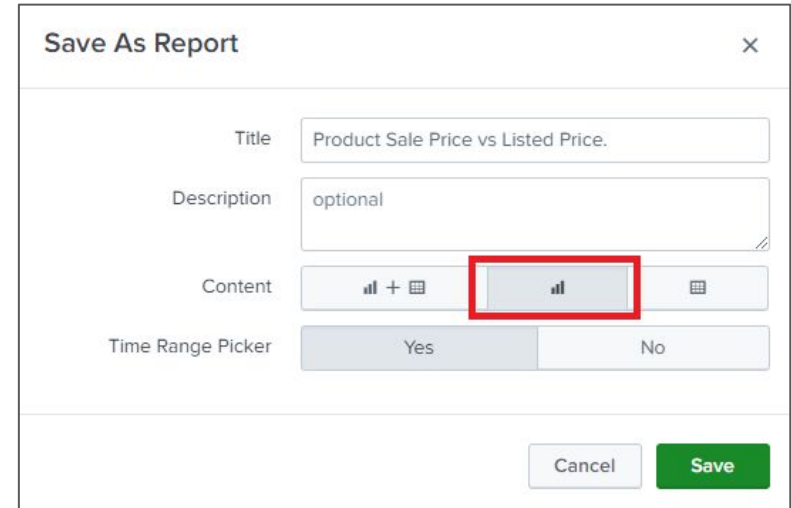
## 6.4 Reports That Display Visualizations (continued)

- To adjust the **chart format**, click on the **Format** button
- Many options are available, but for this example, only select **Stack Mode**.



## 6.4 Reports That Display Visualizations (continued)

- When **saving** this search as a **report**, there are **three content type** options:
  - **Column Chart and Statistic Table**
  - **Column Chart**
  - **Statistic Table**
- This example, demonstrates the **Column Chart** option.



The screenshot shows the 'Save As Report' dialog box. It contains the following fields and options:

- Title:** Product Sale Price vs Listed Price.
- Description:** optional
- Content:** Three options are shown: a combined chart and table icon, a column chart icon (highlighted with a red box), and a table icon.
- Time Range Picker:** Two options are shown: 'Yes' and 'No'.
- Buttons:** 'Cancel' and 'Save' buttons are located at the bottom right.

image: screenshot, splunk Search & Reporting app

## 6.4 Reports That Display Visualizations (continued)

- A **report** that **displays** a **visualization** has been created.
- All **sharing**, **scheduling**, and **editing** options that are available for **reports** that **display tables** are also available for **reports** that **display visualizations**.



# 6.5 Create a Dashboard

## About dashboards

- Dashboards are **views** that are made up of **panels**. The panels can contain modules such as **search boxes, fields, charts, tables, and lists**.
- Dashboard panels are **usually connected to reports**.
- After you **create a search visualization** or **save a report**, you can add it to a **new** or **existing** dashboard.
- There is also a **Dashboard Editor** that you can use to **create** and **edit** dashboards.

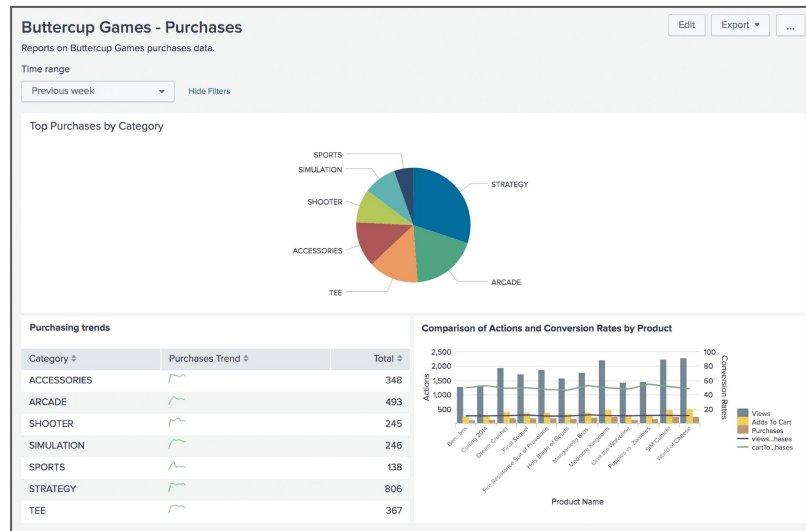


image:  
[https://docs.splunk.com/images/8/87/7.1.0\\_morepanels\\_rearrang\\_e2-compressor.png](https://docs.splunk.com/images/8/87/7.1.0_morepanels_rearrang_e2-compressor.png)

## 6.5 Create a Dashboard (continued)

### Getting started

- There are now **two** different **frameworks** you can use for **creating** visualizations and **dashboards**.
- The **Classic Splunk dashboards** and visualizations framework uses **Simple XML** as the source code and has a limited user interface.
- The **Splunk Dashboard Studio** framework uses **JSON-formatted** stanzas as the source code for the objects in a dashboard and for the entire dashboard.
- This section will focus only on the **Classic** Splunk dashboards.



## 6.5 Create a Dashboard (continued)

### Getting started.

- There are two main ways to create a dashboard:
  - **Directly** from the **Search & Reporting App**. Any Search can be **directly** saved as a **new dashboard** or **added** to an existing **dashboard**.
  - Using the **Dashboard Editor** to add **new** visualizations or reuse **prebuilt** content.

### Dashboard Editor.

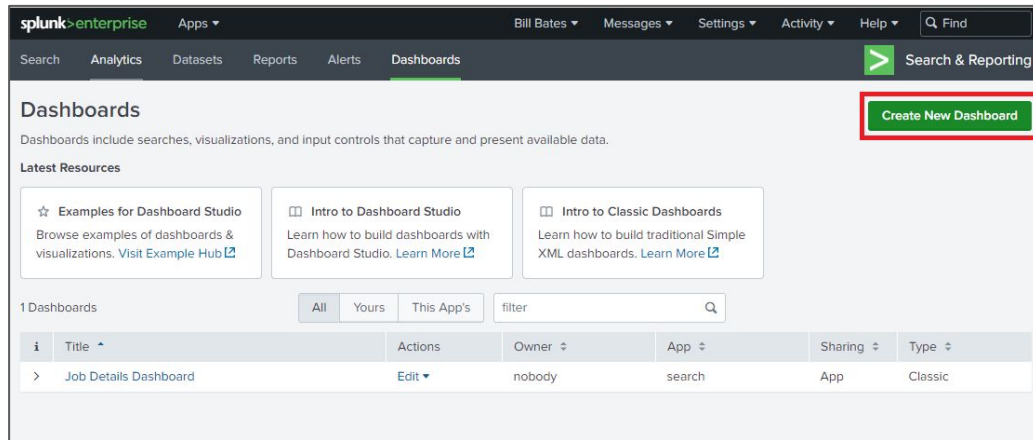
- On the **Splunk Enterprise** interface navigate to the **Dashboards** tab.



## 6.5 Create a Dashboard (continued)

### Getting started - Dashboard Editor

- The **Dashboard section** displays the **existing** dashboards and provides **filtering** and **search** options to help locate a **specific** dashboard.
- Note the **resources available** in the **Latest Resources** section.
- To create a **new** dashboard from scratch, click on the **Create New Dashboard** button.

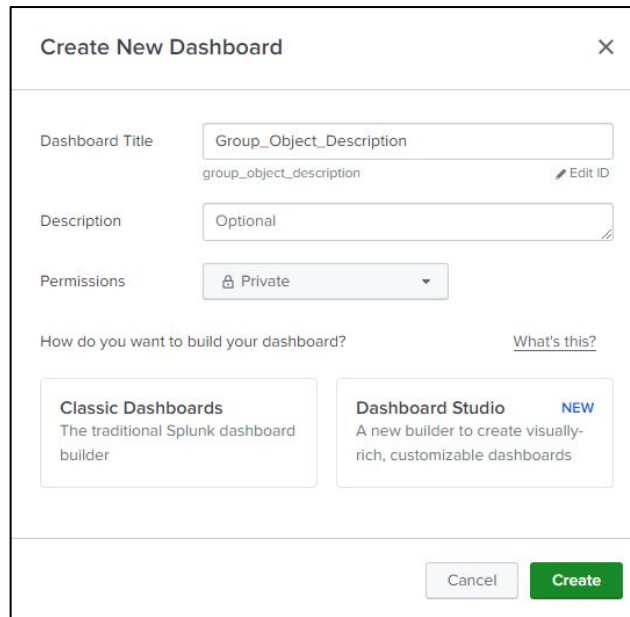


## 6.5 Create a Dashboard (continued)

### Getting started - Dashboard Editor

On the **Create New Dashboard** dialog box, the following options are available:

- Dashboard Title (required).
- Description (optional).
- Permissions.
- Classic Dashboards or Dashboard Studio (required).



The screenshot shows the 'Create New Dashboard' dialog box with the following fields and options:

- Dashboard Title:** A text input field containing 'Group\_Object\_Description'. Below the field, the text 'group\_object\_description' is visible, and there is an 'Edit ID' link.
- Description:** A text input field containing 'Optional'.
- Permissions:** A dropdown menu showing 'Private' with a lock icon.
- How do you want to build your dashboard?:** Two options are presented:
  - Classic Dashboards:** The traditional Splunk dashboard builder.
  - Dashboard Studio:** A new builder to create visually-rich, customizable dashboards. This option is marked as 'NEW'.
- What's this?:** A link to help documentation.
- Buttons:** 'Cancel' and 'Create' buttons at the bottom right.

## 6.5 Create a Dashboard (continued)

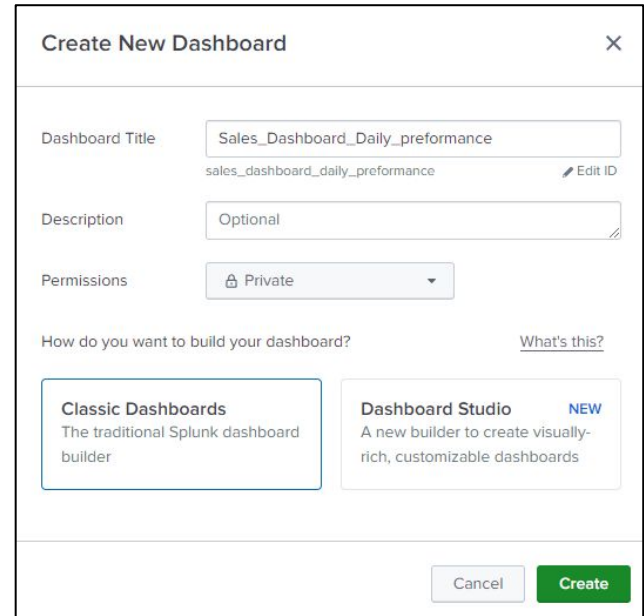
### Getting started - Dashboard editor

Note: Splunk Dashboard naming convention recommendation is using the **Group\_Object\_Description** format.

- Group represents a **business unit** such as sales or operations.
- Object represents the **object type** such as report or alert.
- Description **describes** the dashboard.

For example: Sales\_Dashboard\_Daily\_preformance

- Click the **Create** button to create the dashboard.



Create New Dashboard

Dashboard Title

Sales\_Dashboard\_Daily\_preformance

sales\_dashboard\_daily\_preformance

Edit ID

Description

Optional

Permissions

Private

How do you want to build your dashboard?

What's this?

Classic Dashboards

The traditional Splunk dashboard builder

Dashboard Studio

NEW

A new builder to create visually-rich, customizable dashboards

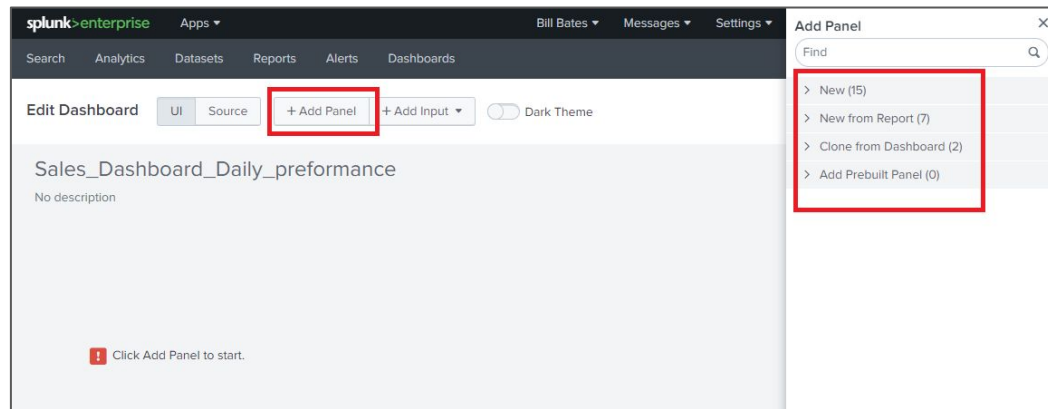
Cancel

Create

## 6.5 Create a Dashboard (continued)

### Getting started - Dashboard editor

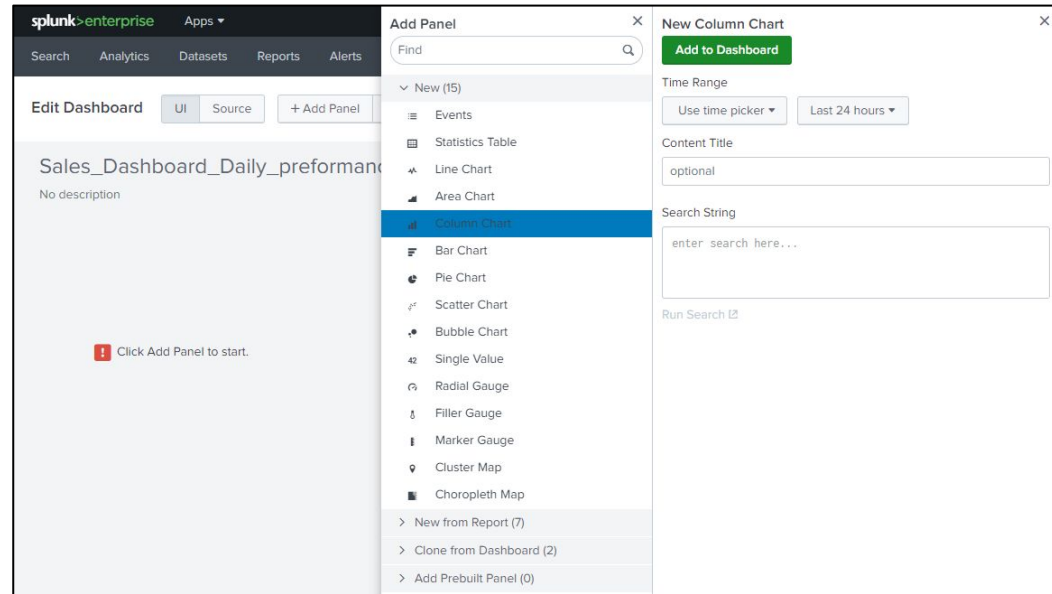
- On the **Edit Dashboard** interface, click the **+ Add Panel** button.
- The Add Panel section allows for **adding panels** to the **dashboard** from the following sources:
  - **New**
  - **New from Report**
  - **Clone from Dashboard**
  - **Add Prebuilt Panel**



## 6.5 Create a Dashboard (continued)

### Getting started - Add a New panel

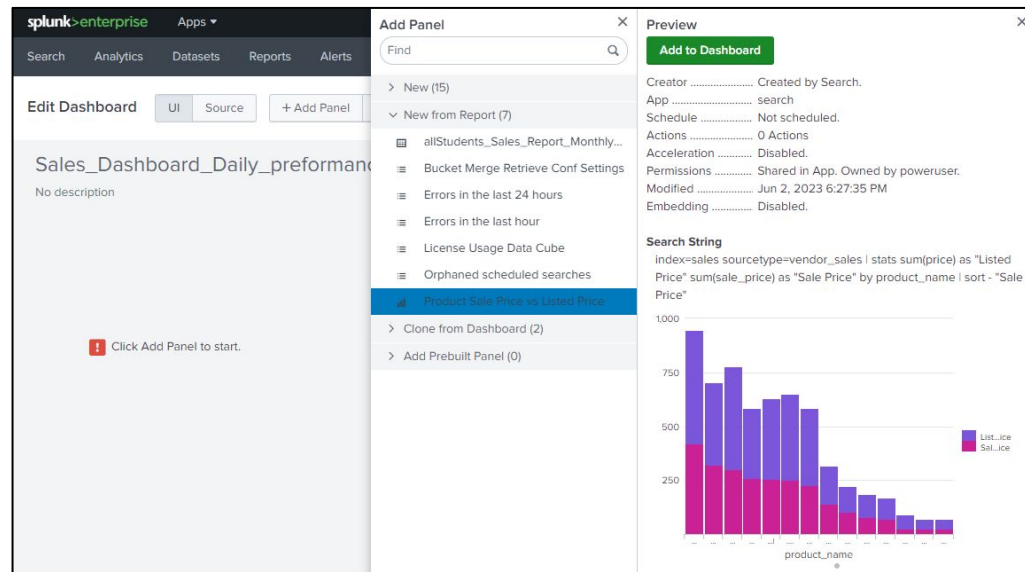
- The **New** option under the **Add Panel** section allows for **selecting a chart or visualization**.
- For example: Expanding the **New** section and selecting the **Column Chart** item opens a **New Column Chart** dialog into which a **Search String** can be entered, a **Time Range** selected, and a **Content Title** set.
- Clicking the **Add to Dashboard** button will **add the panel to the dashboard**.



## 6.5 Create a Dashboard (continued)

### Objective 6.6 Add a report to a dashboard.

- The **New from report** option under the **Add Panel** section allows **selecting** a **report** and using it as a panel.
- Expand the **New from report** section and select the **Product Sale Price vs Listed Price** report opens a **Preview** dialog displaying the report's details.
- Click the **Add to Dashboard** button to **add** the **panel** to the **dashboard**.

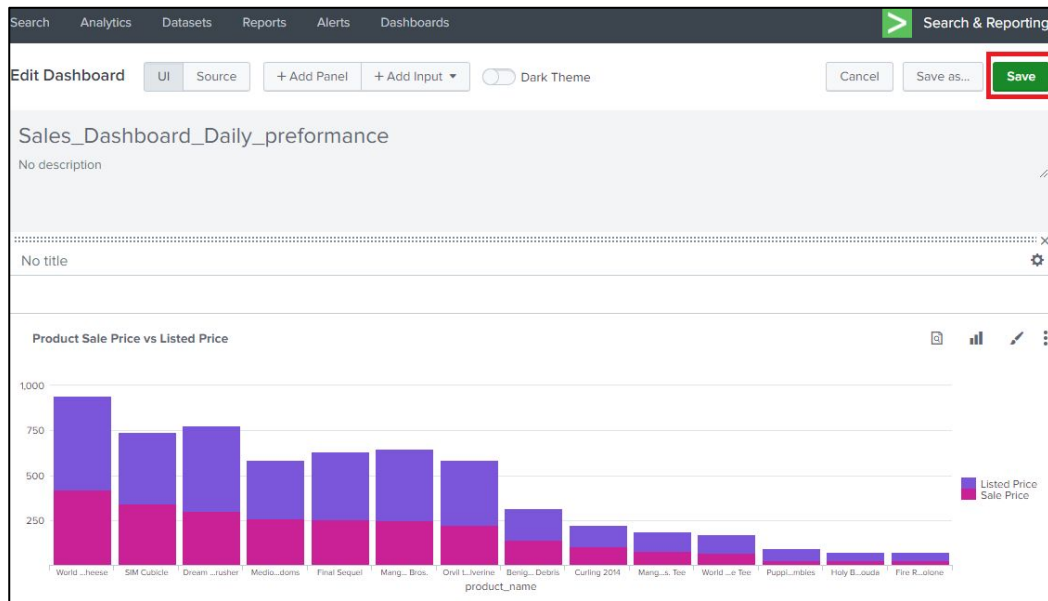


Note: The remaining options - Clone from Dashboard and Add Prebuilt Panel will not be discussed on this presentation.

## 6.5 Create a Dashboard (continued)

### Getting started - Save the Dashboard

- Once the **New from Report** panel was added to the **Dashboard**, you can continue to **edit** the Dashboard.
- Changes you make to the chart visuals at this point **will not** affect the original report.
- Save the Dashboard by clicking on the **Save** button.

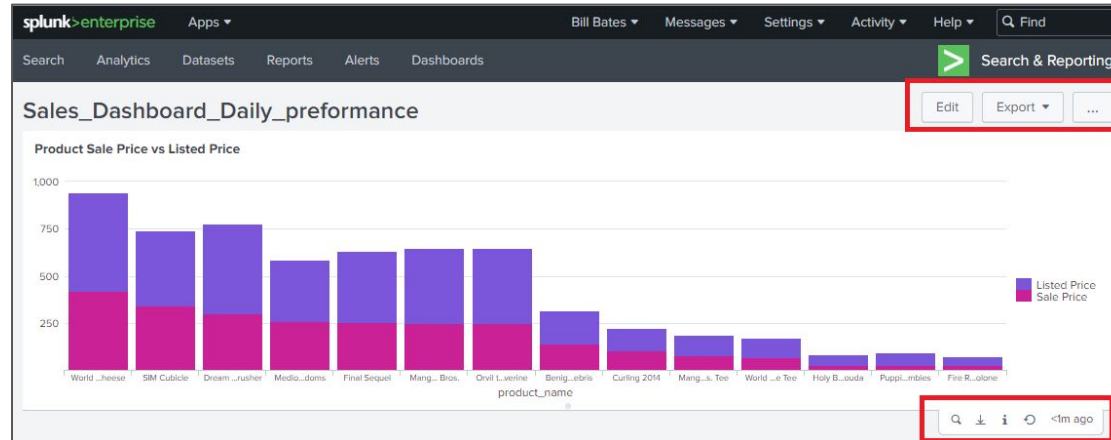




## 6.5 Create a Dashboard (continued)

### View the Dashboard

- Splunk Enterprise displays the new **Sales\_Dashboard\_Daily\_preformance** Dashboard. Note that this is a live display that will react to the mouse moving over it.
- At this point, you can **Edit**, **Export**, **Clone**, **Set as Home Dashboard**, **Delete**, **Refresh**, **Inspect**, and **Open in Search**.

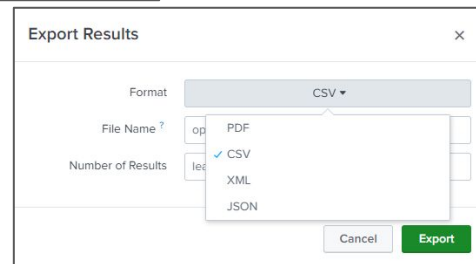
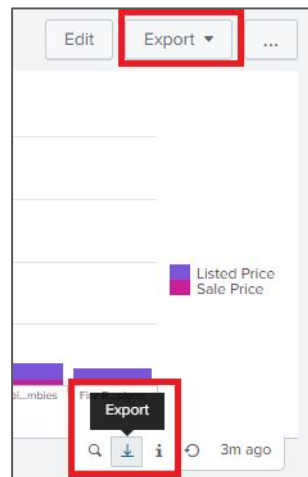


## 6.5 Create a Dashboard (continued)

### Exporting the Dashboard

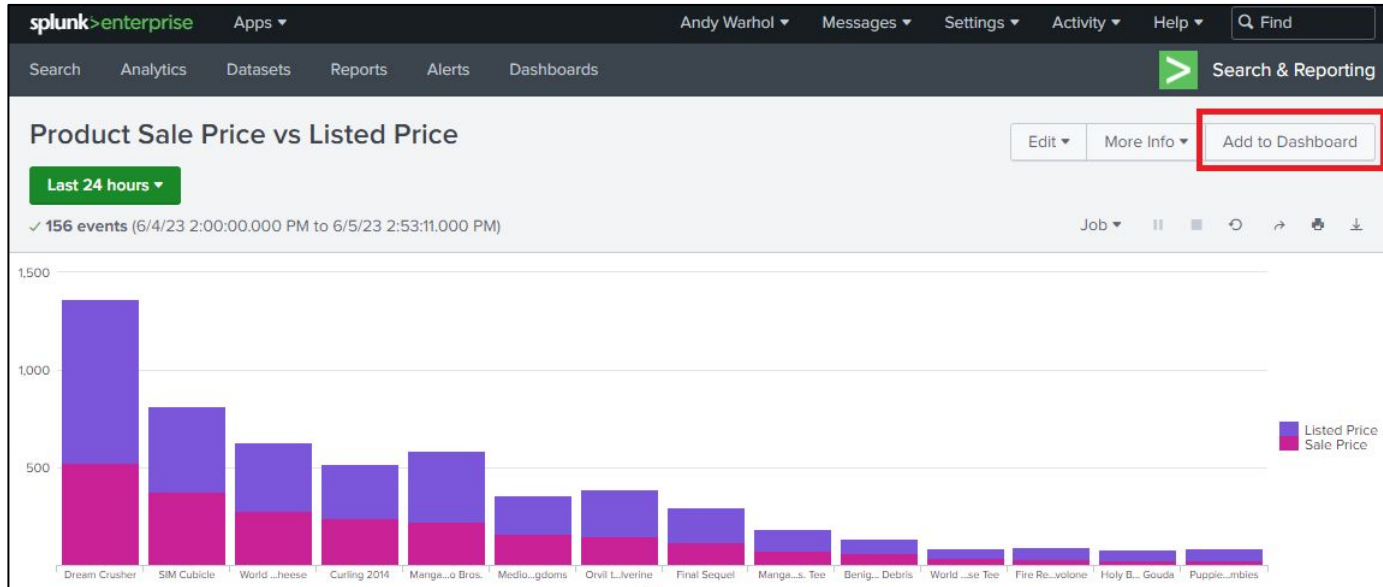
Note: The Dashboard interface provides two exporting options.

- Using the Export button on the upper-right corner of the dashboard view - This exports the entire Dashboard and supports only PDF.
- Hovering with the mouse over the chart and selecting the Export option - This will export the underlying reports data and supports PDF, CSV, XML, and JSON.



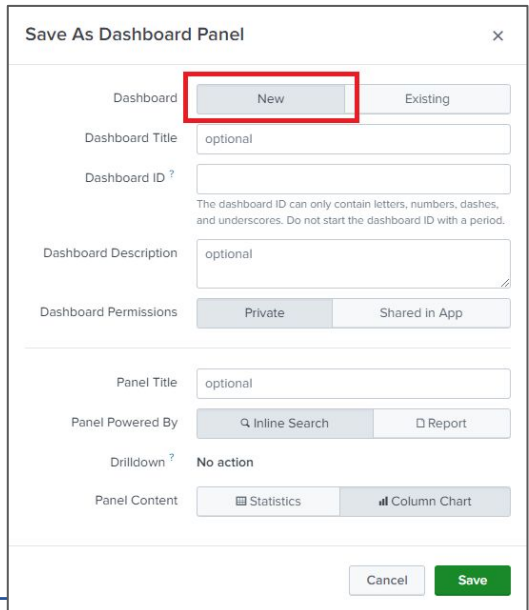
## 6.6 Add a Report to a Dashboard

- Another way to **add** a **report** to a **dashboard** or to **create** a **new Dashboard** is by **navigating** to the report and clicking the **Add to Dashboard** button.

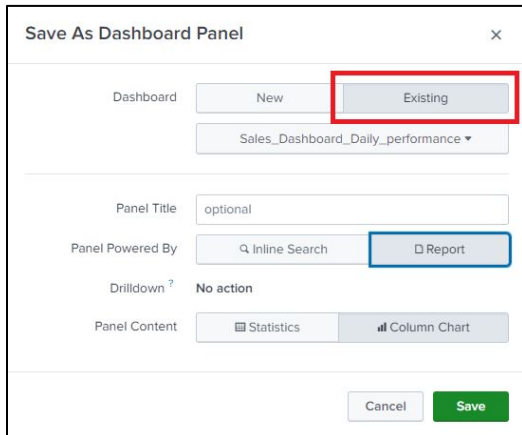


## 6.6 Add a Report to a Dashboard (continued)

- The **Save As Dashboard Panel** dialog box allows for **adding** the report to a **New** or **Existing** Dashboard



The screenshot shows the 'Save As Dashboard Panel' dialog box. The 'Dashboard' dropdown menu is set to 'New' and is highlighted with a red rectangle. Other fields include 'Dashboard Title' (optional), 'Dashboard ID' (with a note: 'The dashboard ID can only contain letters, numbers, dashes, and underscores. Do not start the dashboard ID with a period.'), 'Dashboard Description' (optional), 'Dashboard Permissions' (Private/Shared in App), 'Panel Title' (optional), 'Panel Powered By' (Q Inline Search/Report), 'Drilldown?' (No action), and 'Panel Content' (Statistics/Column Chart). 'Cancel' and 'Save' buttons are at the bottom.



The screenshot shows the 'Save As Dashboard Panel' dialog box. The 'Dashboard' dropdown menu is set to 'Existing' and is highlighted with a red rectangle. The dropdown menu is open, showing 'Sales\_Dashboard\_Daily\_performance' as the selected option. Other fields are the same as in the first screenshot. The 'Report' button under 'Panel Powered By' is highlighted with a blue rectangle. 'Cancel' and 'Save' buttons are at the bottom.

When adding a report as a Panel to an existing Dashboard, select the Dashboard from the dropdown menu.

Selecting the Panel Powered By Report option creates a link between the report and the dashboard. Any change to the report will reflect on the dashboard, where as the Inline Search option will clone the report's search string and time picker and save them internally on the dashboard.

## 6.7 Edit a Dashboard (continued)

When editing a Splunk dashboard, you have **various options** to **customize** and **enhance** its appearance and functionality.

Here are some elements you can **edit** on a **Splunk dashboard**:

- **Layout and Panels:**
  - **Add panels:** Insert new panels to display search results, visualizations, or other components.
  - **Remove panels:** Delete existing panels from the dashboard.
  - **Rearrange panels:** Drag and drop panels to change their order and placement within the dashboard.
  - **Resize panels:** Adjust the size of panels to accommodate different content or optimize the layout.

## 6.7 Edit a Dashboard (continued)

- **Panel Settings:**

- **Search query:** Modify the search query associated with a panel to retrieve specific data.
- **Time range:** Adjust the time range for the panel's search results.
- **Visualization type:** Select different visualization types (charts, tables, maps, etc.) to present the data.
- **Display options:** Customize the appearance of the panel, including colors, fonts, labels, and legends.
- **Refresh settings:** Specify the refresh interval for real-time updates on the panel.

## 6.7 Edit a Dashboard (continued)

- **Drilldown and Interactivity:**
  - **Create drilldowns:** Configure clickable elements or actions within panels to navigate to detailed views or related dashboards.
  - **Set up interactivity:** Establish interactions between panels, enabling users to select data points or perform cross-panel analysis.
- **Dashboard Titles and Descriptions:**
  - **Modify the dashboard title and subtitle:** Update the title and subtitle to provide a clear description or context for the dashboard's purpose.
  - **Add descriptions:** Include descriptive text to provide additional information or instructions to users.

## 6.7 Edit a Dashboard (continued)

- **Permissions and Sharing:**

- **Set permissions:** Define who can access and edit the dashboard based on user roles and access controls.
- **Share the dashboard:** Share the dashboard with specific users or groups within your Splunk environment.

Note that the available editing options may **vary** depending on your **Splunk version**, the installed **apps** or **add-ons**, and your **user permissions**.

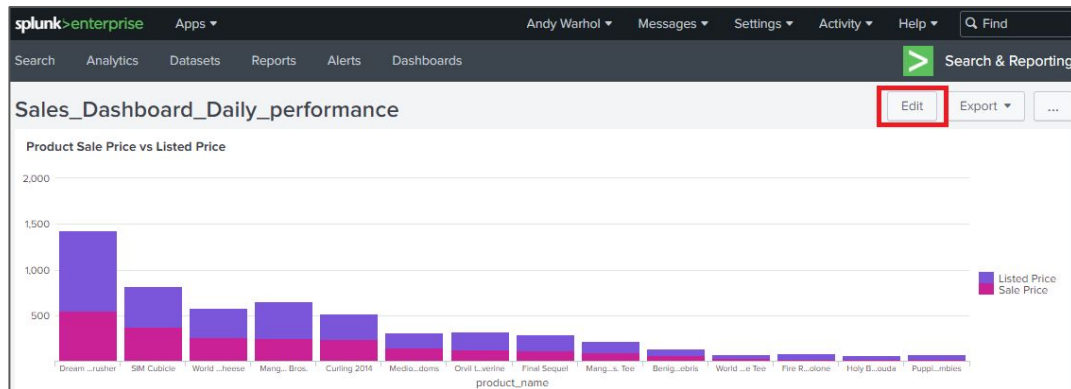
The Splunk dashboard editor provides a user-friendly interface to make these edits, allowing you to customize the dashboard to meet your specific requirements.



## 6.7 Edit a Dashboard (continued)

### Simple dashboard editing example:

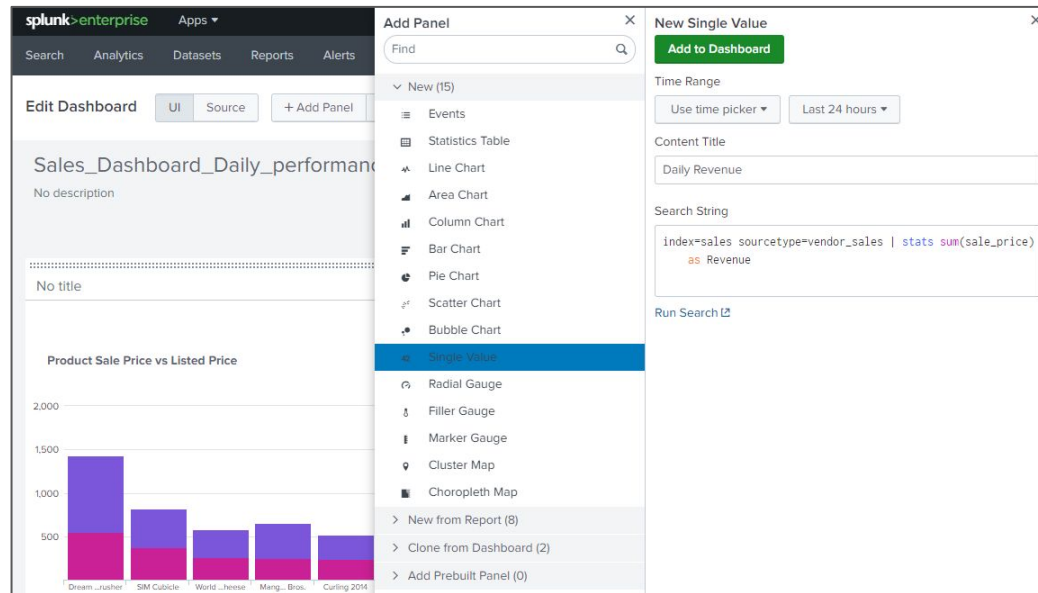
- The **Sales\_Dashboard\_Daily\_performance** dashboard used previously on this presentation is a very simple dashboard containing just **one** panel. It will be used for this example.
- Navigate to the **Sales\_Dashboard\_Daily\_performance** dashboard and click on the **Edit** button.



## 6.7 Edit a Dashboard (continued)

### Simple dashboard editing example:

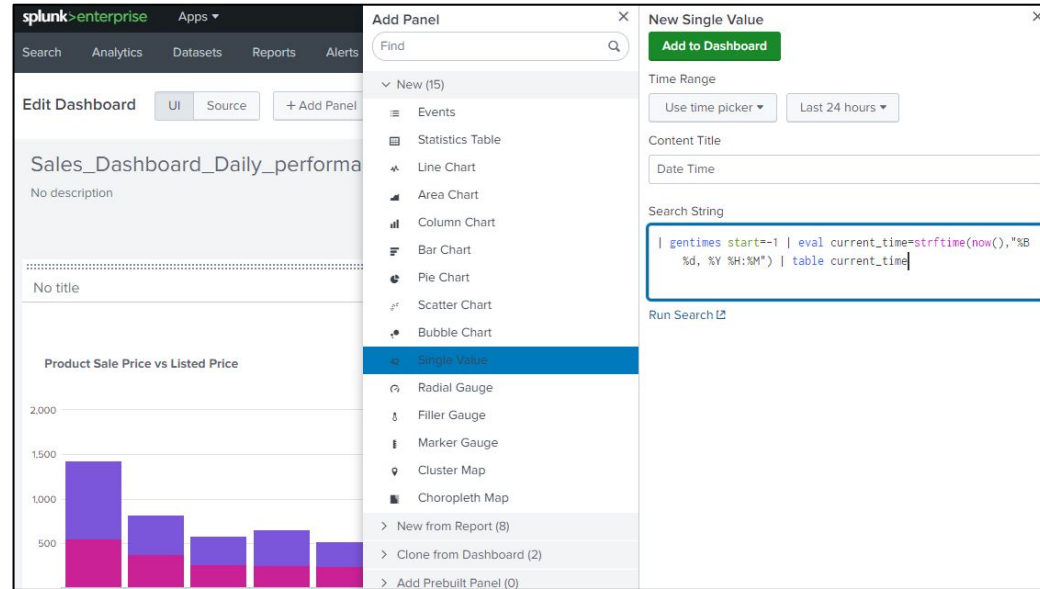
- Click on the **Add Panel** button, expand the **New** section, and select **Single Value**.
- On the **New Single Value** section, Type **Daily Revenue** into the **Content Title** text box and type: `index=sales`  
`sourcetype=vendor_sales | stats`  
`sum(sale_price) as Revenue` into the **Search String** text box.
- Next, click the **Add to Dashboard** button



## 6.7 Edit a Dashboard (continued)

### Simple dashboard editing example:

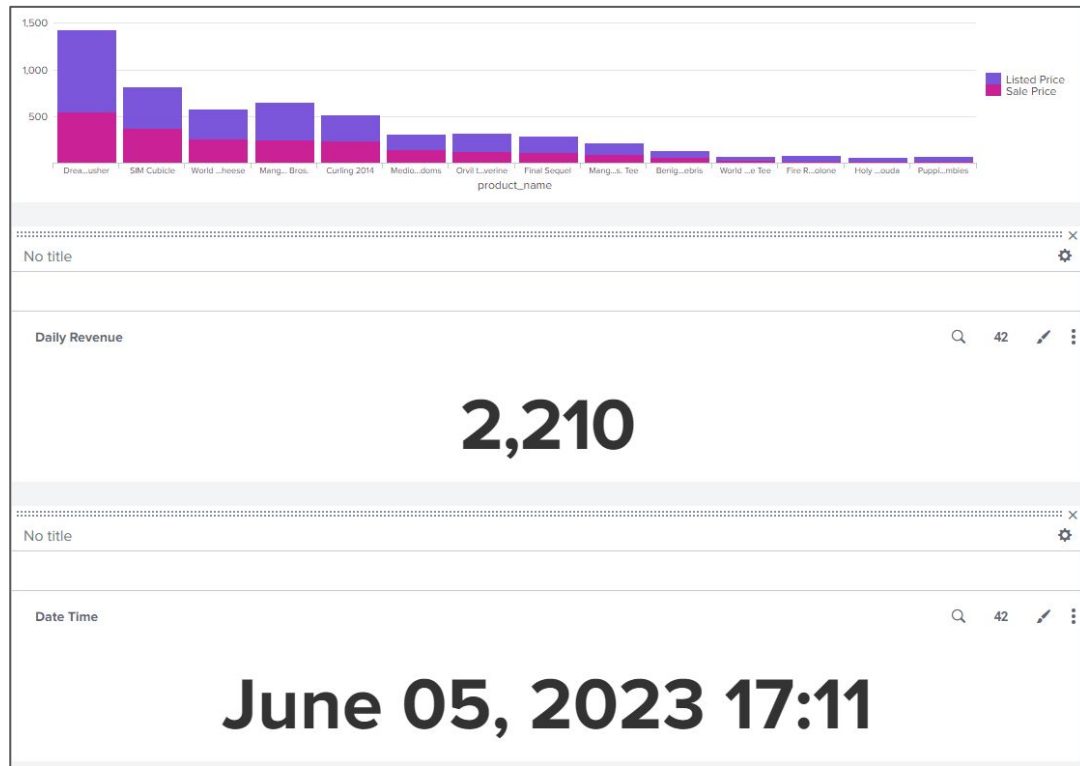
- Click on the **Add Panel** button, expand the **New** section, and select **Single Value**.
- On the **New Single Value** section, Type **Date Time** into the **Content Title** text box and type:  
`| gentimes start=-1 | eval current_time=strftime(now(),"%B %d, %Y %H:%M") | table current_time`  
into the **Search String** text box.
- Next, click the **Add to Dashboard** button



## 6.7 Edit a Dashboard (continued)

### Simple dashboard editing example:

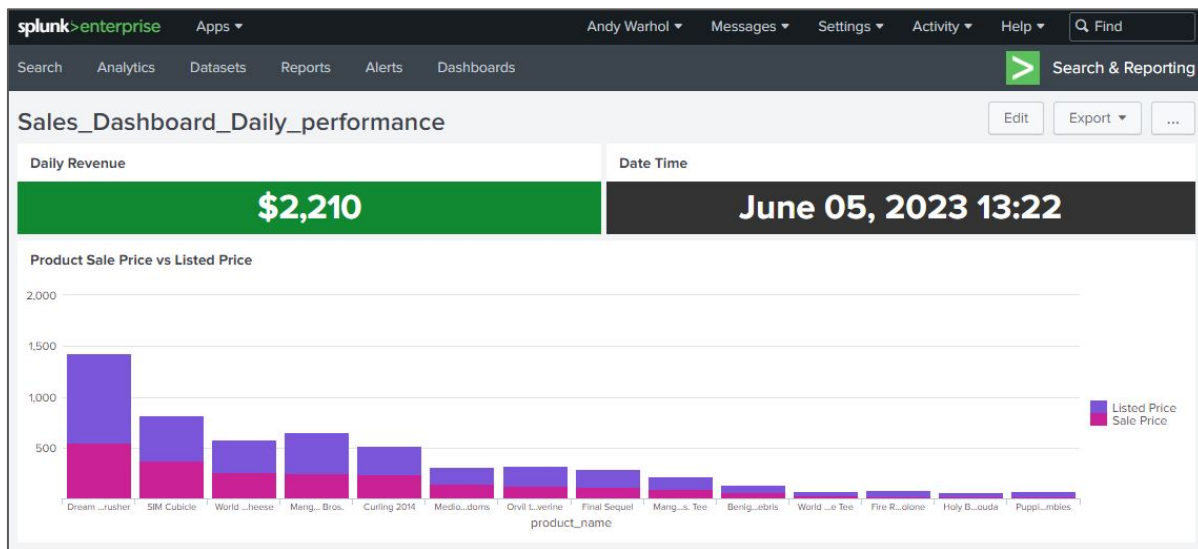
- The dashboard will now look something like **this**:
- At this point, you can **drag and drop** panels to **rearrange** the dashboard layout, you can **resize** panels, and **edit** any panel property.
- Once you are done editing the dashboard, click on the **Save** button.



## 6.7 Edit a Dashboard (continued)

### Simple dashboard editing example:

- **Experiment** with the **available options**. Try to achieve a dashboard that looks like the one in the image below.



## 6.1 - 7 Creating Reports and Dashboards - Summary

Splunk reports are generated from search actions and can display statistics and visualizations of events.

Splunk Dashboards are views that are made up of panels. The panels can contain modules such as search boxes, fields, charts, tables, and lists.

Visualizations serve as a powerful storytelling tool.

Reports and dashboards convey information, insights, and findings to stakeholders or team members in a compelling and easy-to-understand manner. It is relatively simple to create reports, add them to dashboards, and customize dashboards with a wide selection of formatting options.

# Knowledge check.

- What type of search can be saved as a report?
- What has to be added to a report's search string to display statistical data?
- What options are available for editing immediately after saving a report?
- What are some options to edit the permissions for a report?
- What actions can a user define for a scheduled report to trigger?
- What is an advantage of scheduling a report?
- What are some of the visualization options available for statistical data in a Splunk dashboard?
- What are two ways to create a dashboard in Splunk?
- What is the Splunk recommended Dashboard naming convention?
- Name some of the options available to edit panels in a dashboard.