Splunk for Defence: Advanced Splunk Dashboarding Showcase

Dan Gray, Splunk Technical Consultant at Somerford
Penny Harrison, Marketing Director at Somerford

Note: This session will be recorded

Introduction

Penny Harrison,
Marketing Director at Somerford

Dan Gray,
Splunk Technical Consultant at Somerford

Data Fabric for Defence by 2025

Data fabric is a federated approach for securely managing, accessing and analysing data from any system or application from source

Delivering on Defence Digital Strategy:

- Data is being exploited by skilled Defence resource, using a common set of tooling
- Extensive adoption of Digital capabilities is resulting in tangible returns on its digital investment
- Successful and timely delivery of digital and data capability into programmes has realised strategic outcomes

www.somerfordassociates.com/somerford-defence-service/

Somerford and Defence

- Defence holds lots of unstructured data
- Huge value in this data
- Splunk can aggregate human readable data
- We can help

https://www.somerfordassociates.com/somerford-defence-service/

ARMED FORCES COVENANT

EMPLOYER RECOGNITION SCHEME

SILVER AWARD

SOMERFORD Delivering Innovation

The MOD Splunk Enterprise Agreement (MSEA) offers a range of new services for end-users including, on-demand and advisory services, professional services, user training, as well as discovery and technical workshops to enhance user's skills and future use-case adoption.

Splunk Licensing

Professional Services

Workshops & Webinars

Solution Guides

Splunk Education

Health Check

Support Form

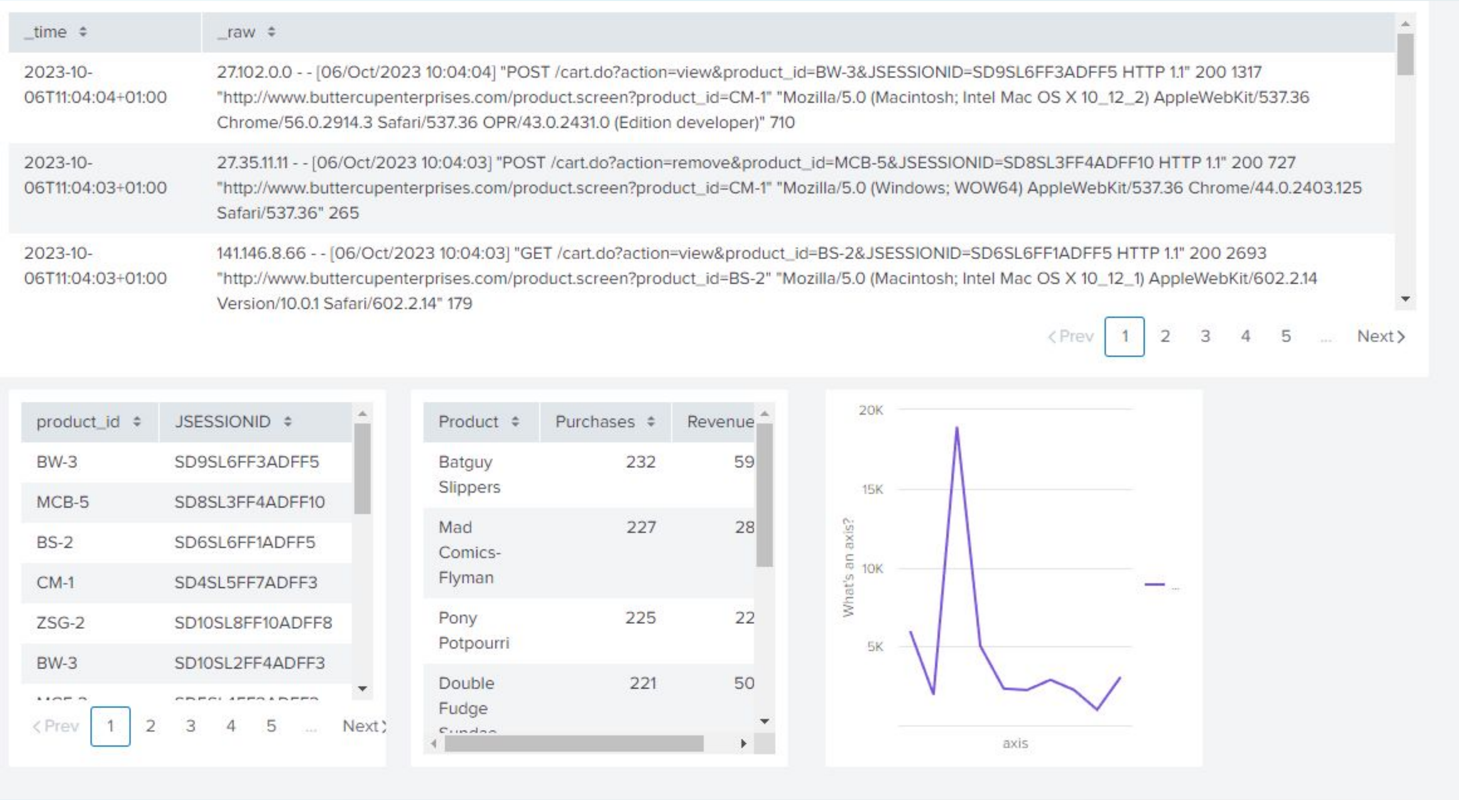
Splunk Trial

splunk>

Agenda

- Learn to make smart and interactive dashboards with real data
- Create appealing dashboards for management/business
- Learn to graphically illustrate your IT Operations data
- Visualise data using complex graphs and charts

Take dashboards from this:

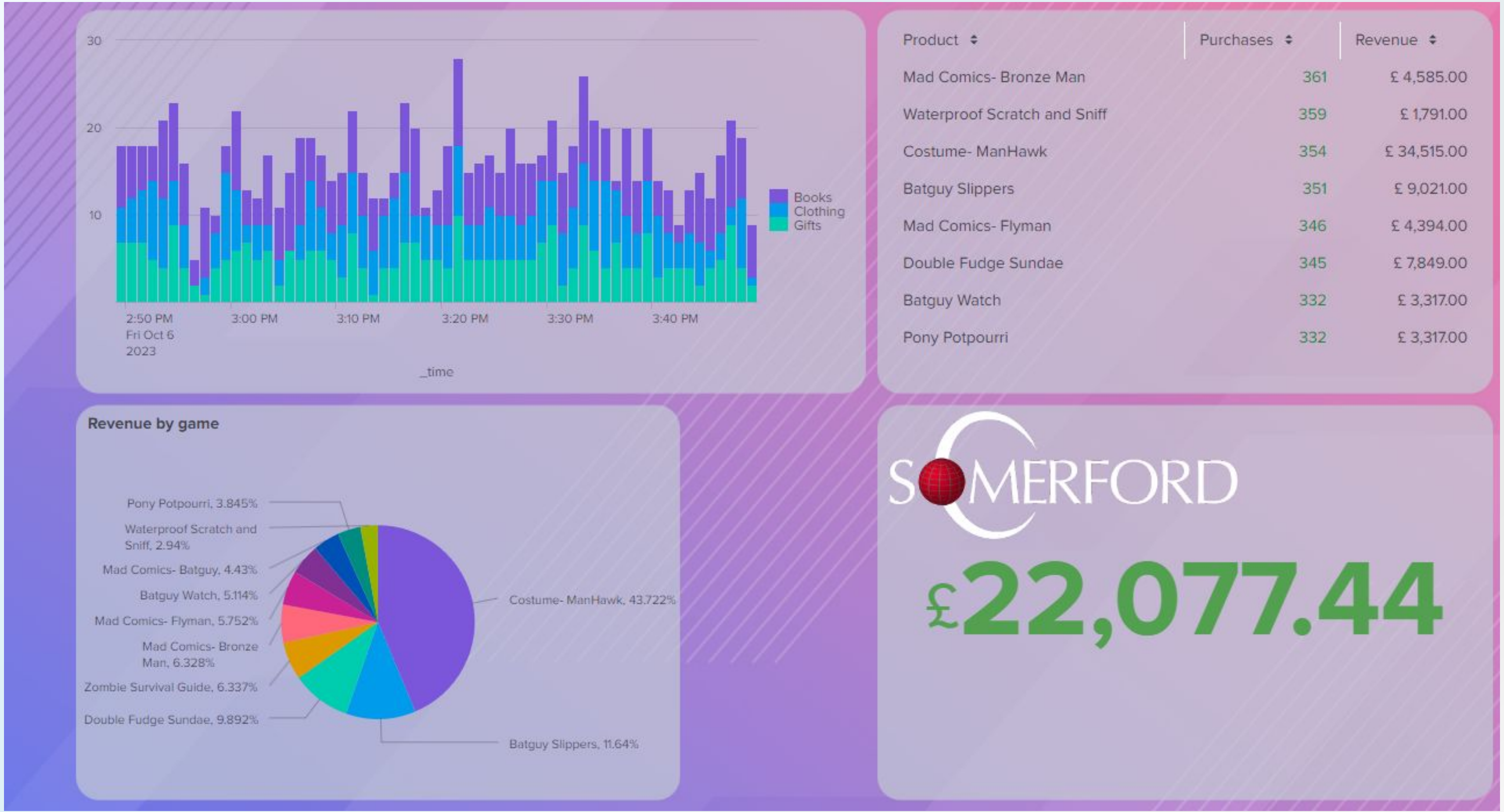


_time	_raw
2023-10-06T11:04:04+01:00	27.102.0.0 - - [06/Oct/2023 10:04:04] "POST /cart.do?action=view&product_id=BW-3&JSESSIONID=SD9SL6FF3ADFF5 HTTP 1.1" 200 1317 "http://www.buttercupenterprises.com/product.screen?product_id=CM-1" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_2) AppleWebKit/537.36 Chrome/56.0.2914.3 Safari/537.36 OPR/43.0.2431.0 (Edition developer)" 710
2023-10-06T11:04:03+01:00	27.35.11.11 - - [06/Oct/2023 10:04:03] "POST /cart.do?action=remove&product_id=MCB-5&JSESSIONID=SD8SL3FF4ADFF10 HTTP 1.1" 200 727 "http://www.buttercupenterprises.com/product.screen?product_id=CM-1" "Mozilla/5.0 (Windows; WOW64) AppleWebKit/537.36 Chrome/44.0.2403.125 Safari/537.36" 265
2023-10-06T11:04:03+01:00	141.146.8.66 - - [06/Oct/2023 10:04:03] "GET /cart.do?action=view&product_id=BS-2&JSESSIONID=SD6SL6FF1ADFF5 HTTP 1.1" 200 2693 "http://www.buttercupenterprises.com/product.screen?product_id=BS-2" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_1) AppleWebKit/602.2.14 Version/10.0.1 Safari/602.2.14" 179

product_id	JSESSIONID
BW-3	SD9SL6FF3ADFF5
MCB-5	SD8SL3FF4ADFF10
BS-2	SD6SL6FF1ADFF5
CM-1	SD4SL5FF7ADFF3
ZSG-2	SD10SL8FF10ADFF8
BW-3	SD10SL2FF4ADFF3

Product	Purchases	Revenue
Batguy Slippers	232	59
Mad Comics-Flyman	227	28
Pony Potpourri	225	22
Double Fudge	221	50

To this



30
20
10
2:50 PM
Fri Oct 6
2023
3:00 PM
3:10 PM
3:20 PM
3:30 PM
3:40 PM
_time
Books
Clothing
Gifts

Product	Purchases	Revenue
Mad Comics- Bronze Man	361	£ 4,585.00
Waterproof Scratch and Sniff	359	£ 1,791.00
Costume- ManHawk	354	£ 34,515.00
Batguy Slippers	351	£ 9,021.00
Mad Comics- Flyman	346	£ 4,394.00
Double Fudge Sundae	345	£ 7,849.00
Batguy Watch	332	£ 3,317.00
Pony Potpourri	332	£ 3,317.00

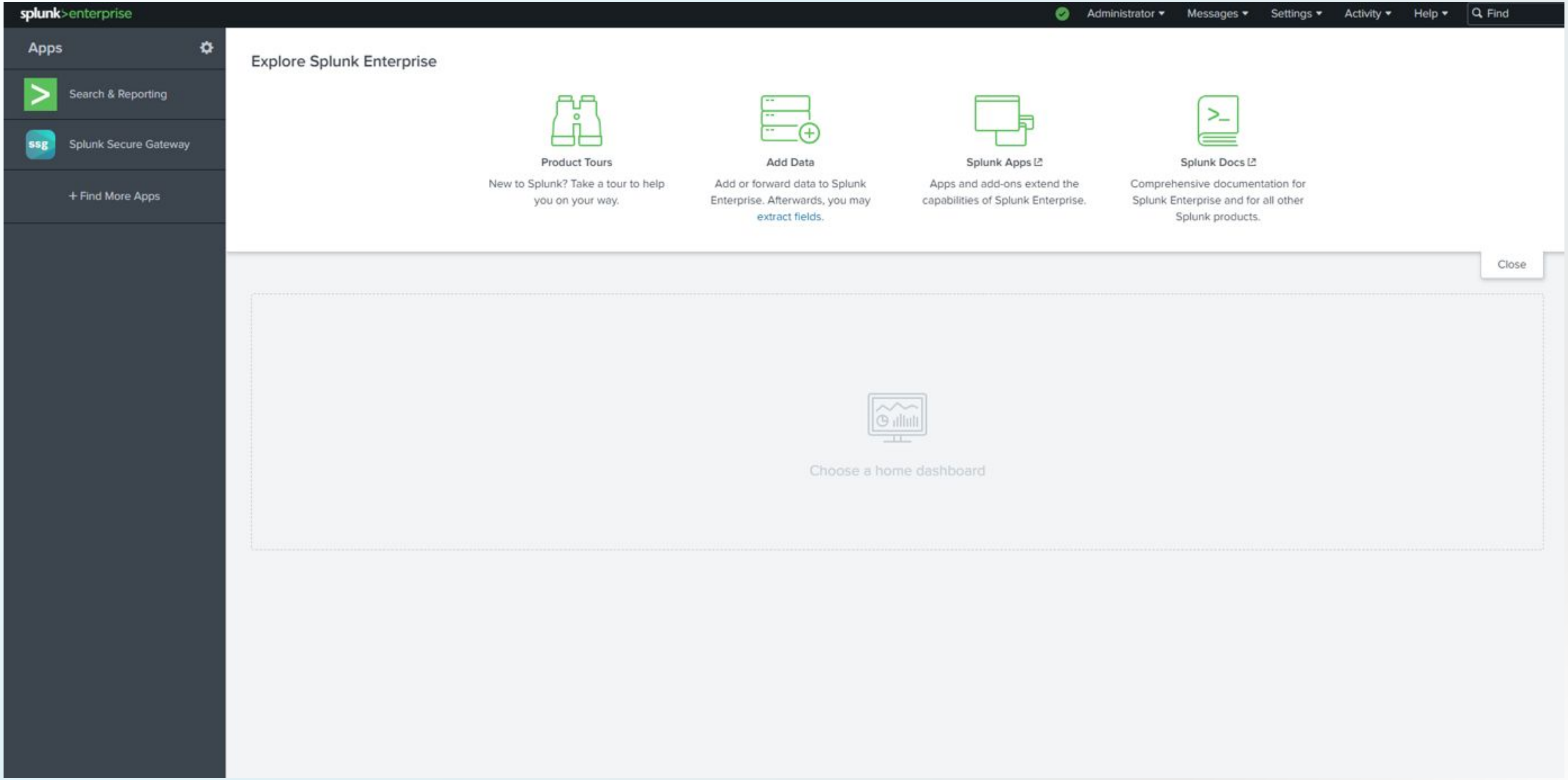
Revenue by game

Pony Potpourri, 3.845%
Waterproof Scratch and Sniff, 2.94%
Mad Comics- Batguy, 4.43%
Batguy Watch, 5.114%
Mad Comics- Flyman, 5.752%
Mad Comics- Bronze Man, 6.328%
Zombie Survival Guide, 6.337%
Double Fudge Sundae, 9.892%
Costume- ManHawk, 43.722%
Batguy Slippers, 11.64%
SOMERFORD

£22,077.44

Getting started with Splunk

1. Make a Splunk account
2. Download latest version of Splunk enterprise
3. Install
4. Add data



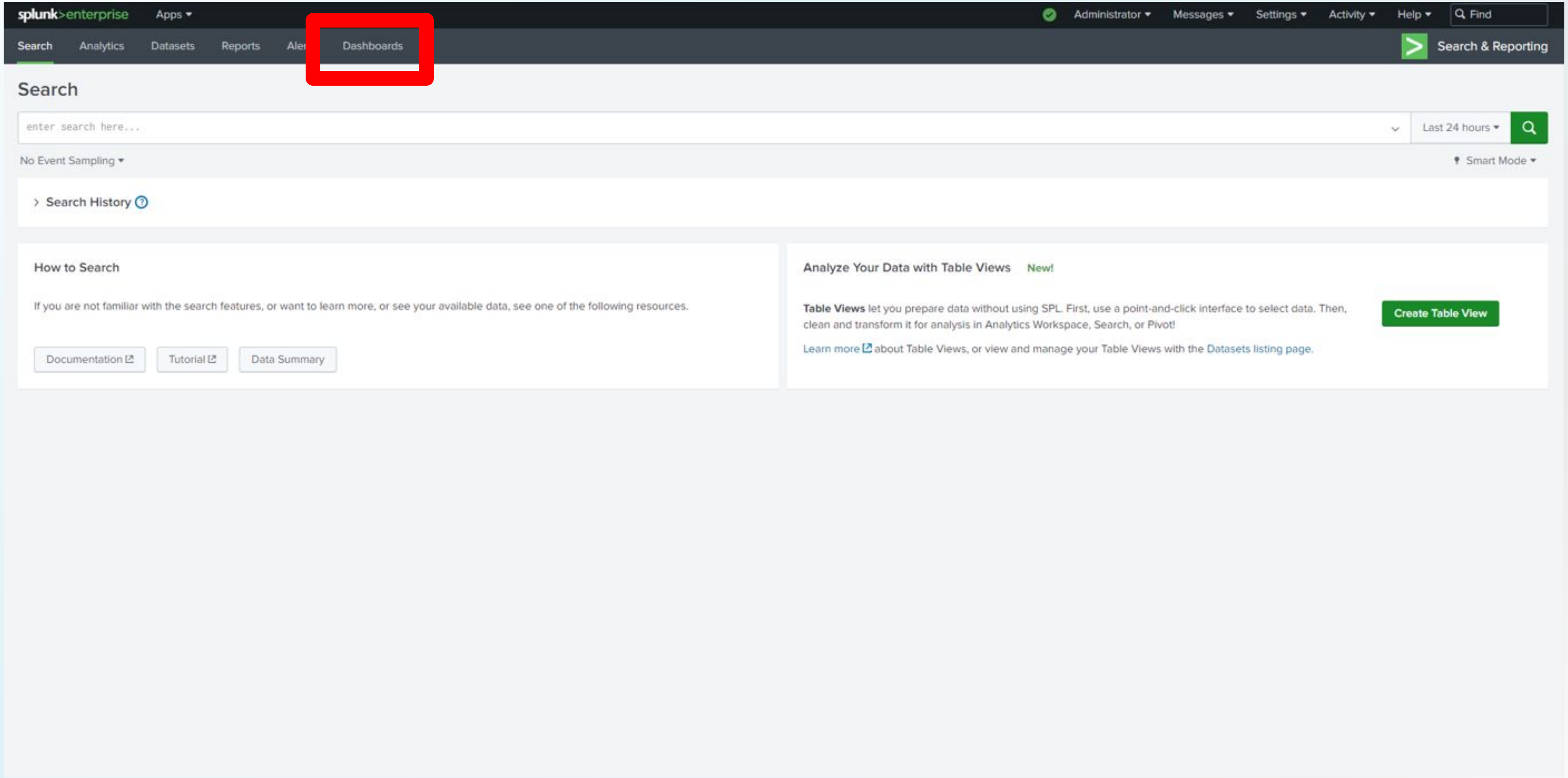
Explore Splunk Enterprise

Product Tours: New to Splunk? Take a tour to help you on your way.

Add Data: Add or forward data to Splunk Enterprise. Afterwards, you may extract fields.

Splunk Apps: Apps and add-ons extend the capabilities of Splunk Enterprise.

Splunk Docs: Comprehensive documentation for Splunk Enterprise and for all other Splunk products.



Search

enter search here...

Search History

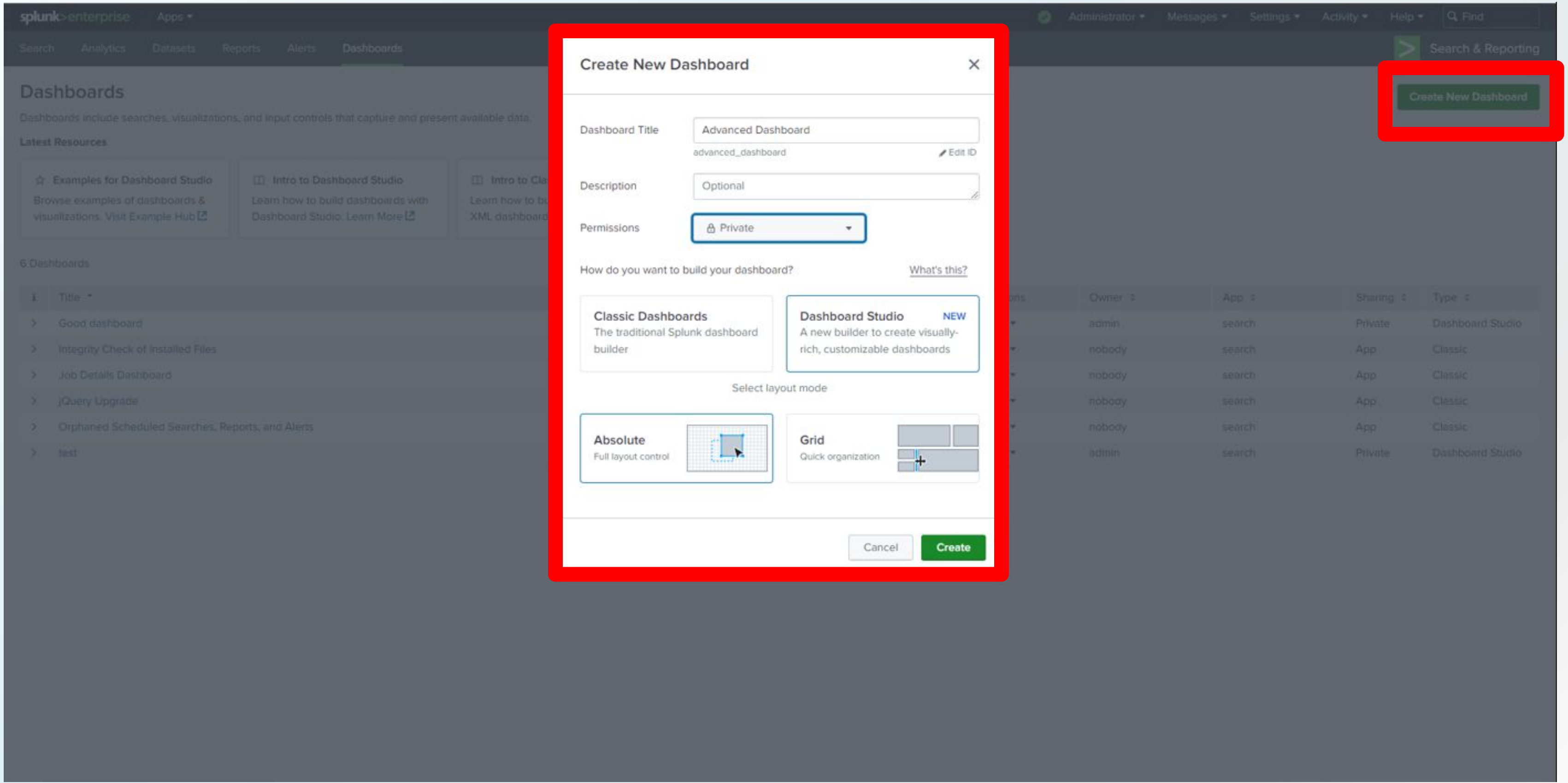
How to Search

If you are not familiar with the search features, or want to learn more, or see your available data, see one of the following resources.

Analyze Your Data with Table Views

Table Views let you prepare data without using SPL. First, use a point-and-click interface to select data. Then, clean and transform it for analysis in Analytics Workspace, Search, or Pivot!

Learn more about Table Views, or view and manage your Table Views with the Datasets listing page.



splunk>enterprise Apps ▾ Administrator ▾ Messages ▾ Settings ▾ Activity ▾ Help ▾ Find

Search Analytics Datasets Reports Alerts Dashboards Search & Reporting

Dashboards

Dashboards include searches, visualizations, and input controls that capture and present available data.

Latest Resources

Examples for Dashboard Studio
Browse examples of dashboards & visualizations. Visit Example Hub

Intro to Dashboard Studio
Learn how to build dashboards with Dashboard Studio. Learn More

Intro to Cla…
Learn how to bu… XML dashboard…

Create New Dashboard

6 Dashboards

i	Title	Owner	App	Sharing	Type
›	Good dashboard	admin	search	Private	Dashboard Studio
›	Integrity Check of Installed Files	nobody	search	App	Classic
›	Job Details Dashboard	nobody	search	App	Classic
›	jQuery Upgrade	nobody	search	App	Classic
›	Orphaned Scheduled Searches, Reports, and Alerts	nobody	search	App	Classic
›	test	admin	search	Private	Dashboard Studio

Create New Dashboard

Dashboard Title: Advanced Dashboard
advanced_dashboard ✎ 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

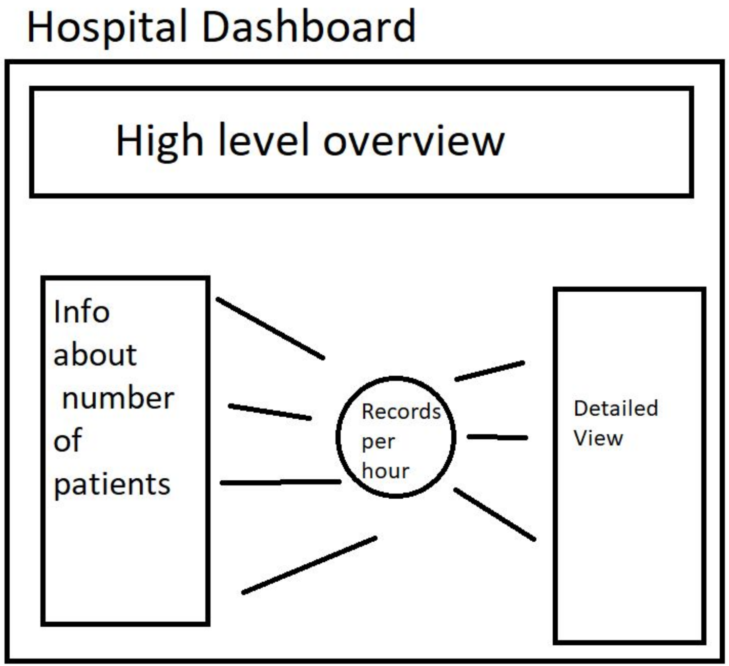
Select layout mode

Absolute
Full layout control

Grid
Quick organization

Cancel Create

Start with a Plan



Hospital Dashboard

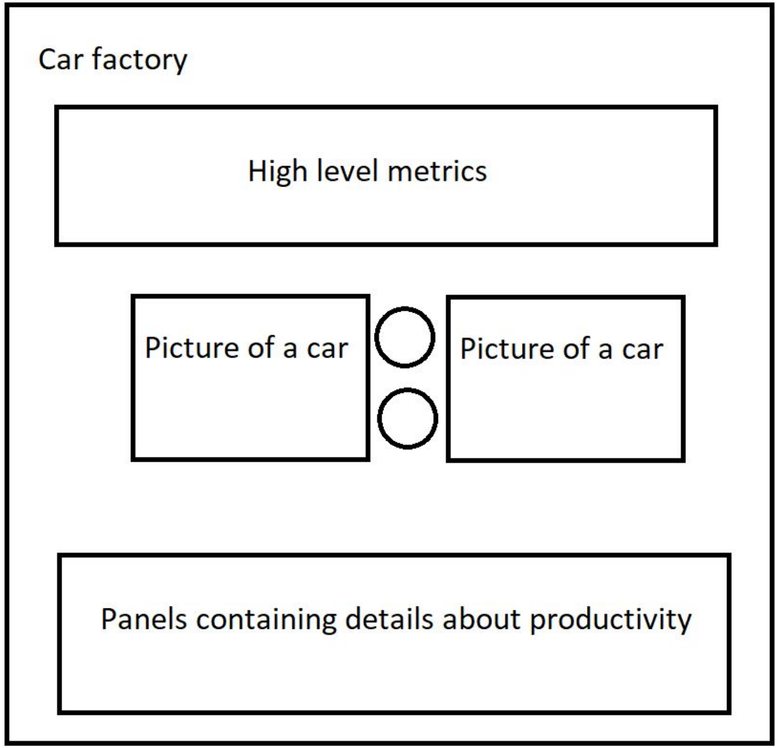
High level overview

Info about number of patients

Records per hour

Detailed View

Include colour coding. (Red = Bad)
Make it look sleek.



Car factory

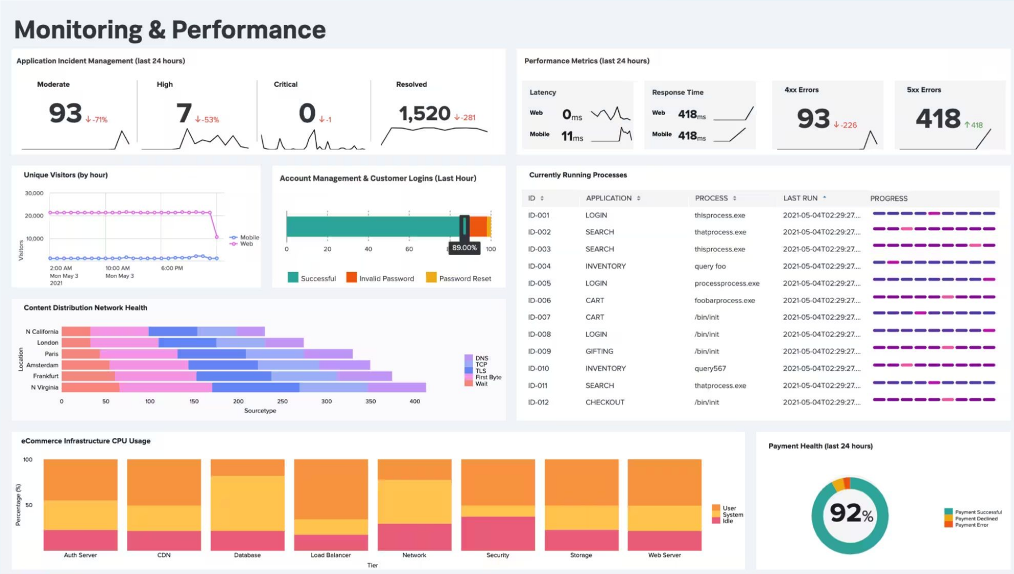
High level metrics

Picture of a car

Picture of a car

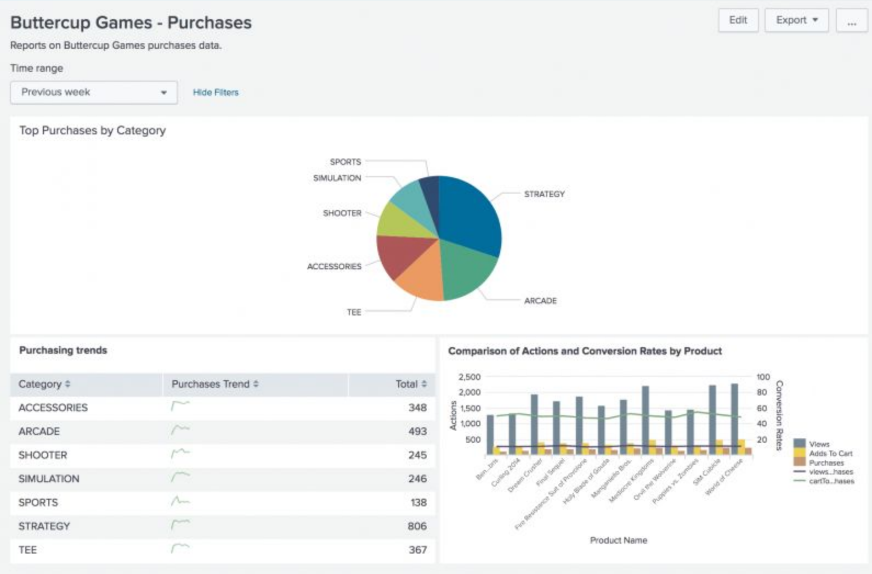
Panels containing details about productivity

Adding a Background



Currently Running Processes

ID	APPLICATION	PROCESS	LAST RUN	PROGRESS
ID-001	LOGIN	thisprocess.exe	2021-05-04T02:29:27....	
ID-002	SEARCH	thatprocess.exe	2021-05-04T02:29:27....	
ID-003	SEARCH	thisprocess.exe	2021-05-04T02:29:27....	
ID-004	INVENTORY	query foo	2021-05-04T02:29:27....	
ID-005	LOGIN	processprocess.exe	2021-05-04T02:29:27....	
ID-006	CART	foobarprocess.exe	2021-05-04T02:29:27....	
ID-007	CART	/bin/init	2021-05-04T02:29:27....	
ID-008	LOGIN	/bin/init	2021-05-04T02:29:27....	
ID-009	GIFTING	/bin/init	2021-05-04T02:29:27....	
ID-010	INVENTORY	query567	2021-05-04T02:29:27....	
ID-011	SEARCH	thatprocess.exe	2021-05-04T02:29:27....	
ID-012	CHECKOUT	/bin/init	2021-05-04T02:29:27....	



Buttercup Games - Purchases

Reports on Buttercup Games purchases data.

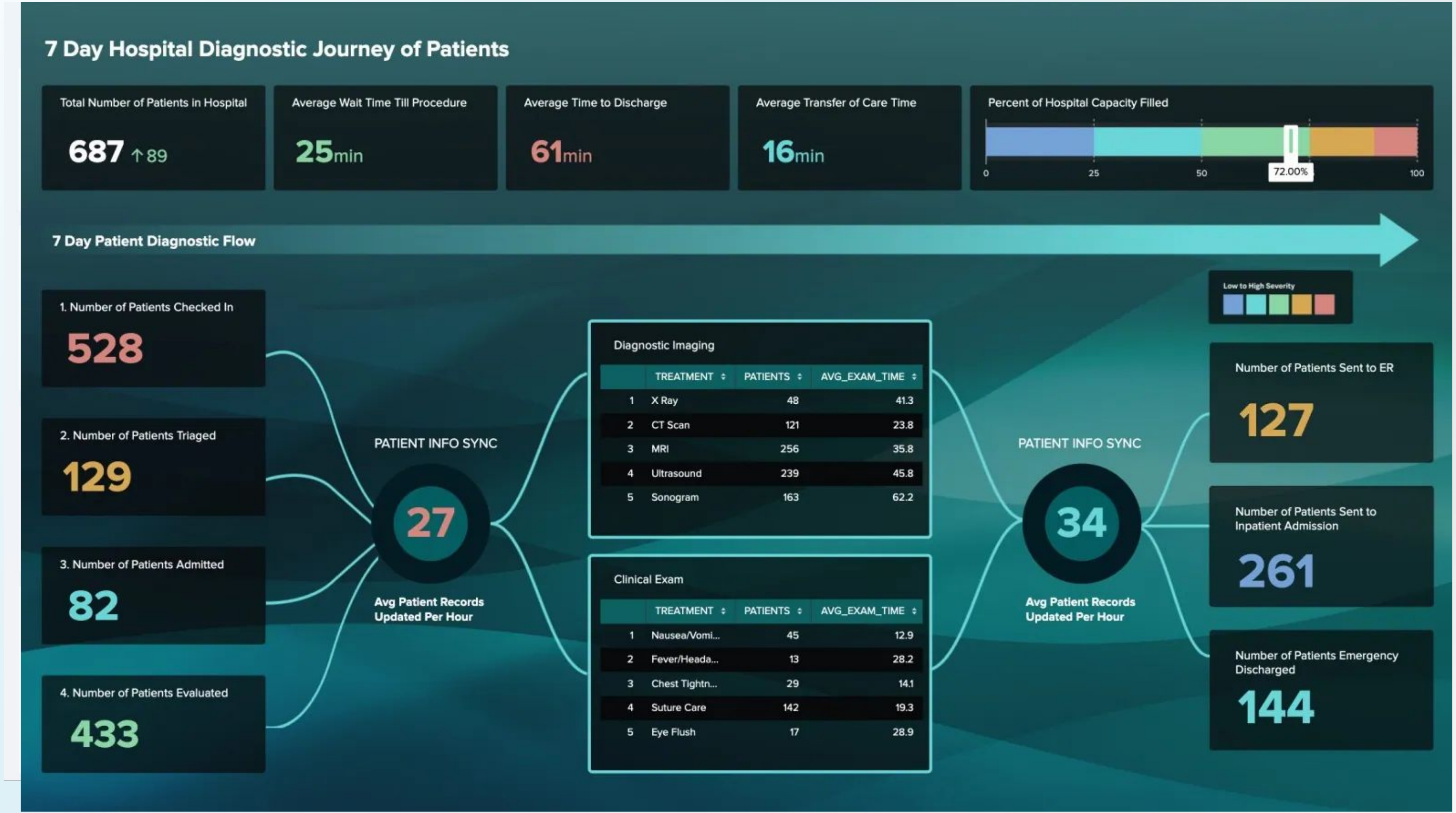
Time range

Previous week ▾

Hide Filters

Purchasing trends

Category	Purchases Trend	Total
ACCESSORIES		348
ARCADE		493
SHOOTER		245
SIMULATION		246
SPORTS		138
STRATEGY		806
TEE		367



7 Day Hospital Diagnostic Journey of Patients

Total Number of Patients in Hospital
687 ↑89

Average Wait Time Till Procedure
25min

Average Time to Discharge
61min

Average Transfer of Care Time
16min

Percent of Hospital Capacity Filled
72.00%

7 Day Patient Diagnostic Flow

Low to High Severity
🟦 🟦 🟩 🟨 🟥

1. Number of Patients Checked In
528

2. Number of Patients Triaged
129

3. Number of Patients Admitted
82

4. Number of Patients Evaluated
433

PATIENT INFO SYNC
27
Avg Patient Records Updated Per Hour

Diagnostic Imaging

	TREATMENT	PATIENTS	AVG_EXAM_TIME
1	X Ray	48	41.3
2	CT Scan	121	23.8
3	MRI	256	35.8
4	Ultrasound	239	45.8
5	Sonogram	163	62.2

Clinical Exam

	TREATMENT	PATIENTS	AVG_EXAM_TIME
1	Nausea/Vomi...	45	12.9
2	Fever/Heada...	13	28.2
3	Chest Tightn...	29	14.1
4	Suture Care	142	19.3
5	Eye Flush	17	28.9

PATIENT INFO SYNC
34
Avg Patient Records Updated Per Hour

Number of Patients Sent to ER
127

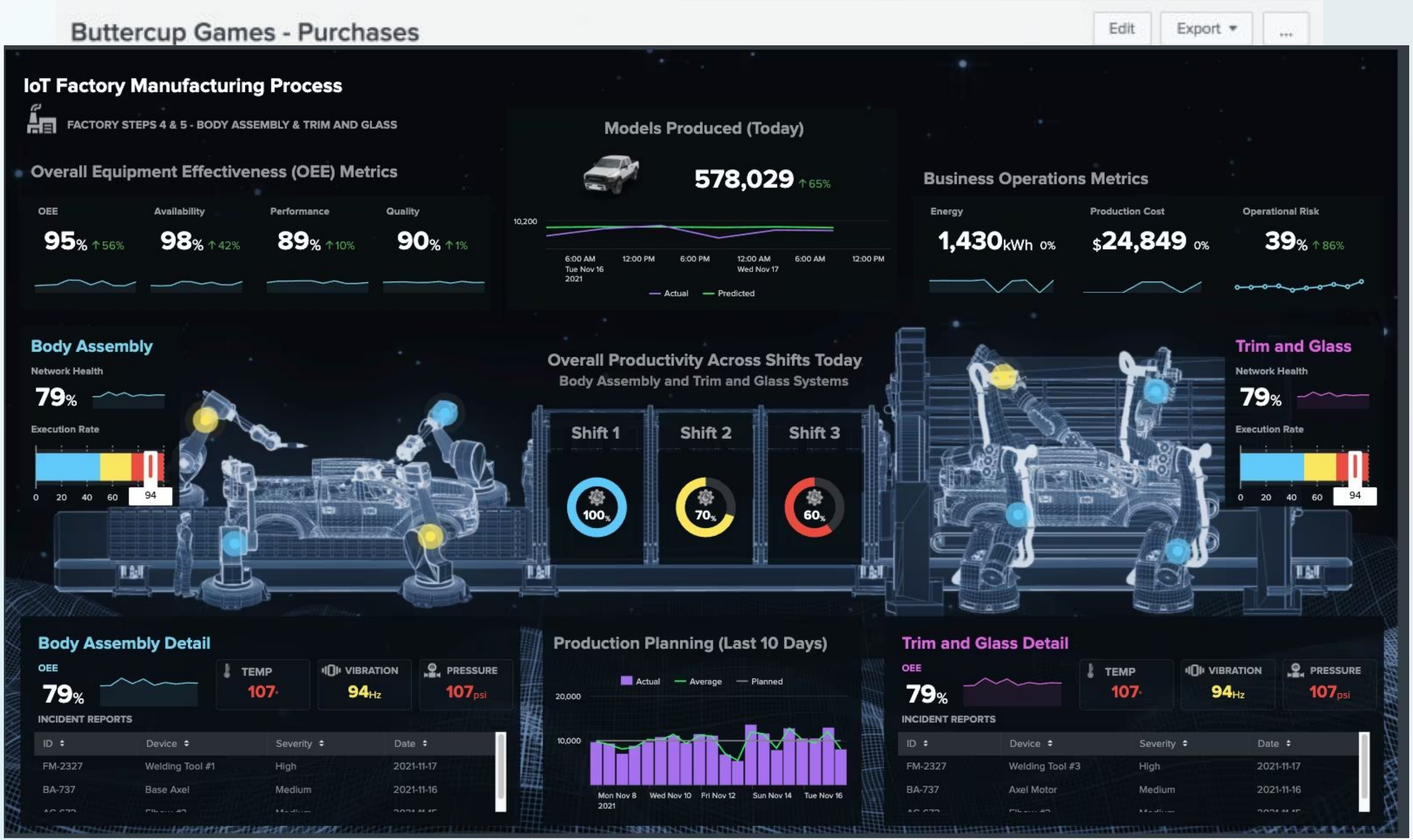
Number of Patients Sent to Inpatient Admission
261

Number of Patients Emergency Discharged
144

—

splunk>

SOMERFORD Delivering Innovation

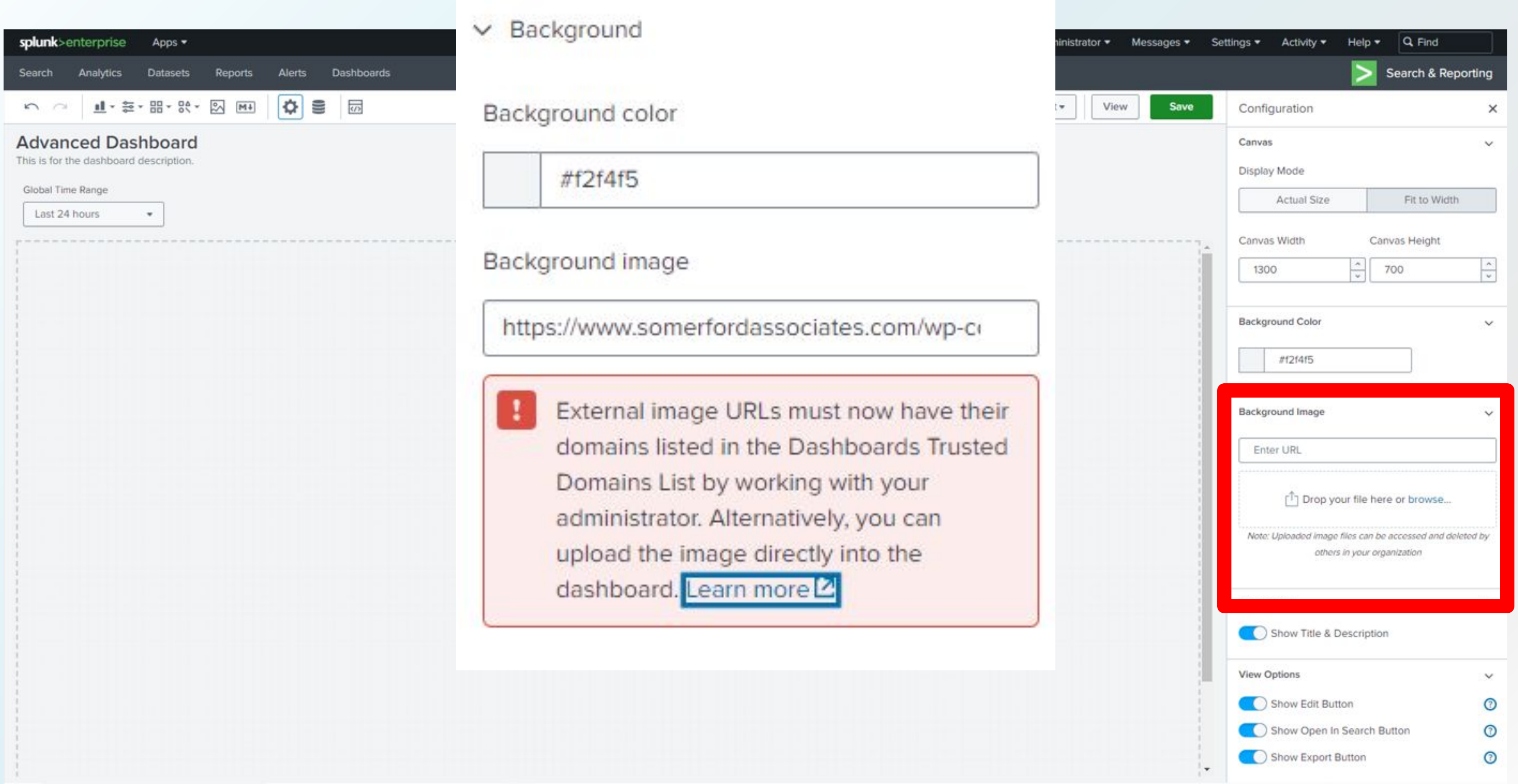


INCIDENT REPORTS

ID	Device	Severity	Date
FM-2327	Welding Tool #1	High	2021-11-17
BA-737	Base Axel	Medium	2021-11-16
AC-673	Elbow #2	Medium	2021-11-15

INCIDENT REPORTS

ID	Device	Severity	Date
FM-2327	Welding Tool #3	High	2021-11-17
BA-737	Axel Motor	Medium	2021-11-16
AC-673	Elbow #2	Medium	2021-11-15



Advanced Dashboard

This is for the dashboard description.

Global Time Range: Last 24 hours

Background

Background color: #f2f4f5

Background image: https://www.somerfordassociates.com/wp-c

External image URLs must now have their domains listed in the Dashboards Trusted Domains List by working with your administrator. Alternatively, you can upload the image directly into the dashboard. Learn more

Canvas

Display Mode: Actual Size | Fit to Width

Canvas Width: 1300

Canvas Height: 700

Background Color: #f2f4f5

Background Image: Enter URL

Note: Uploaded image files can be accessed and deleted by others in your organization

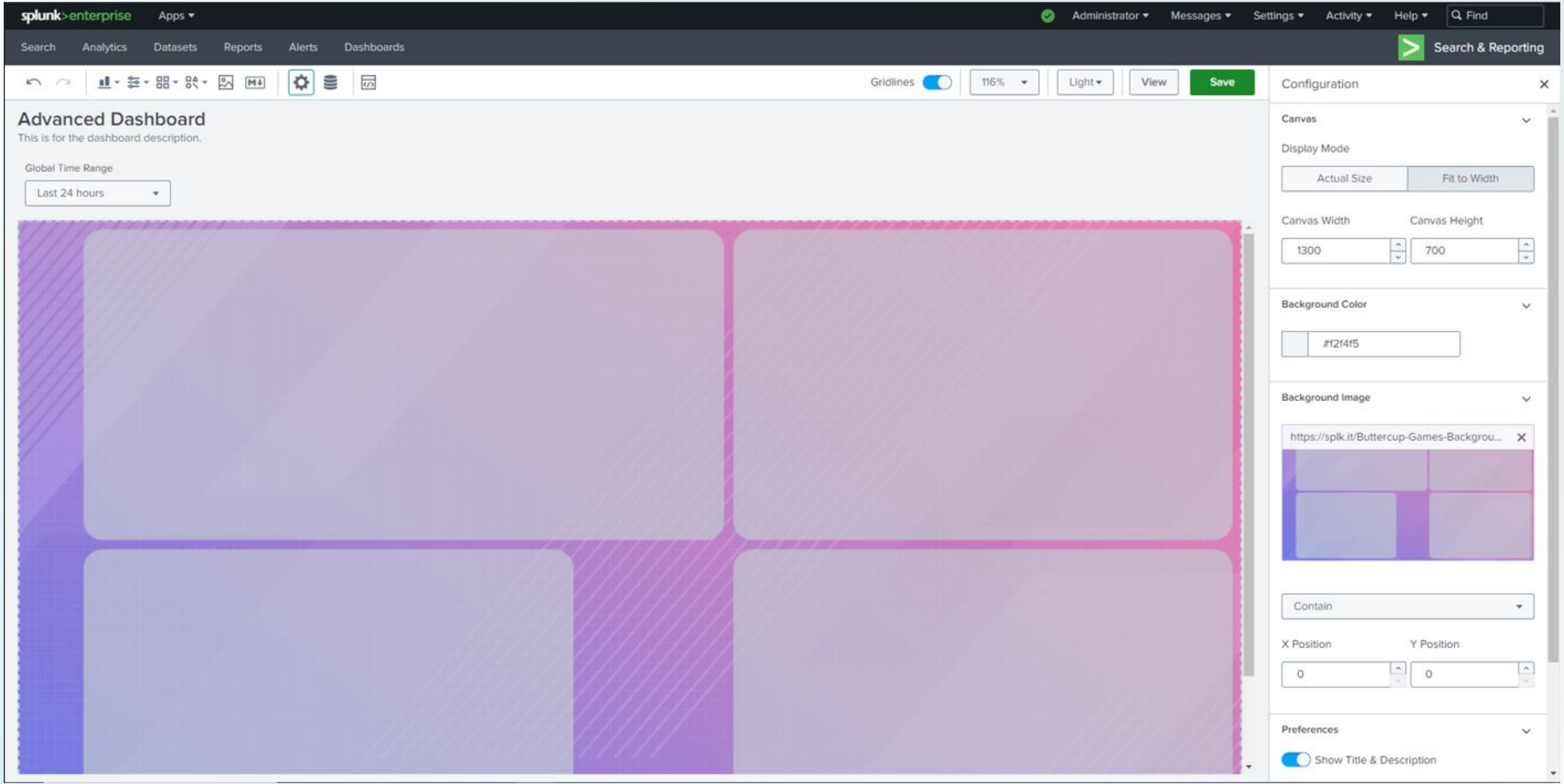
Show Title & Description

View Options

Show Edit Button

Show Open In Search Button

Show Export Button



Advanced Dashboard

This is for the dashboard description.

Global Time Range

Last 24 hours

Configuration

Canvas

Display Mode

Actual Size | Fit to Width

Canvas Width: 1300

Canvas Height: 700

Background Color

#f2f4f5

Background Image

https://splk.it/Buttercup-Games-Backgrou...

Contain

X Position: 0

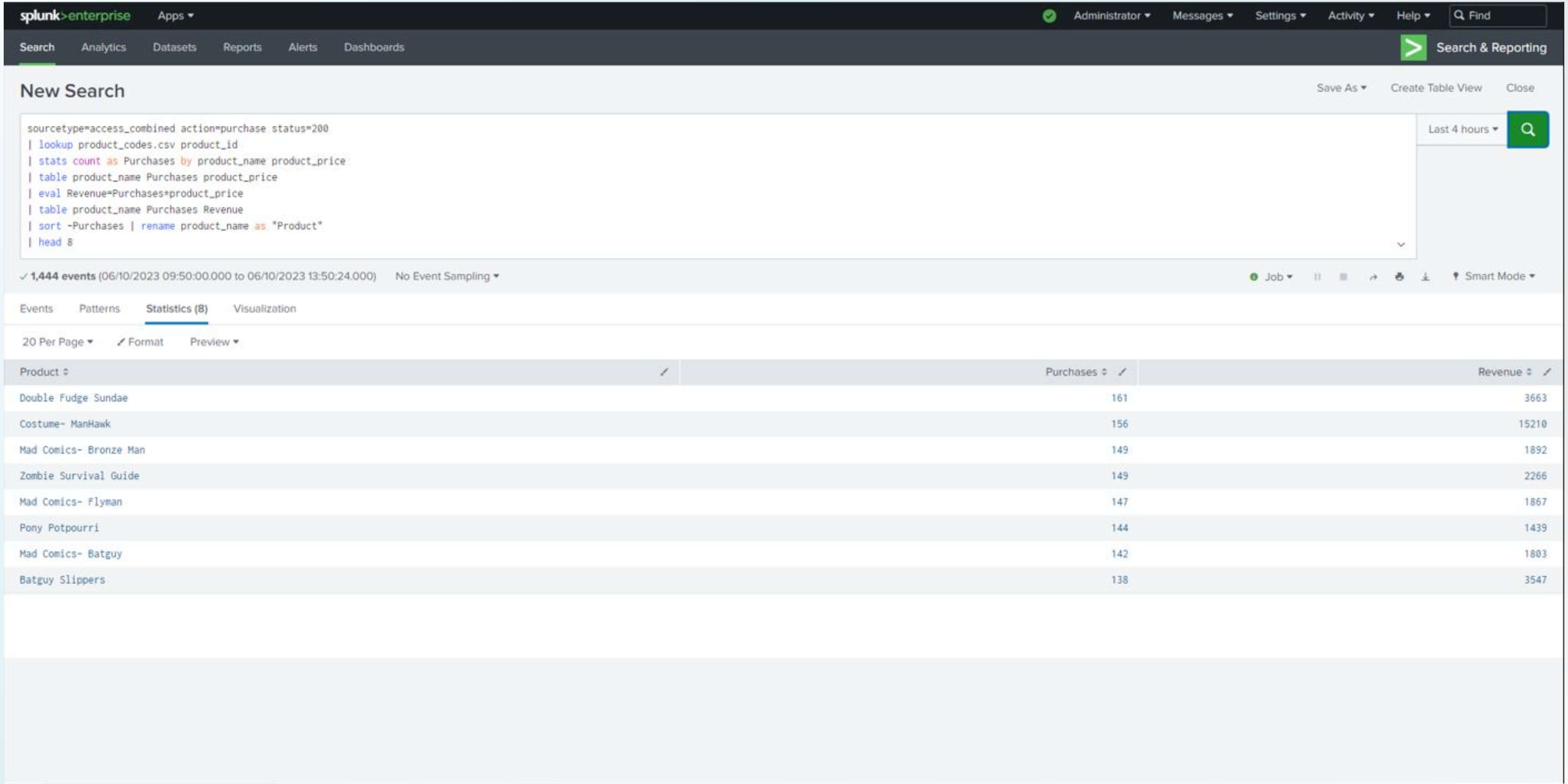
Y Position: 0

Preferences

Show Title & Description

Adding our panels

- Best way to visualise the data you want to present
- Location of panels
- Panel orientation
- Don’t overload with information

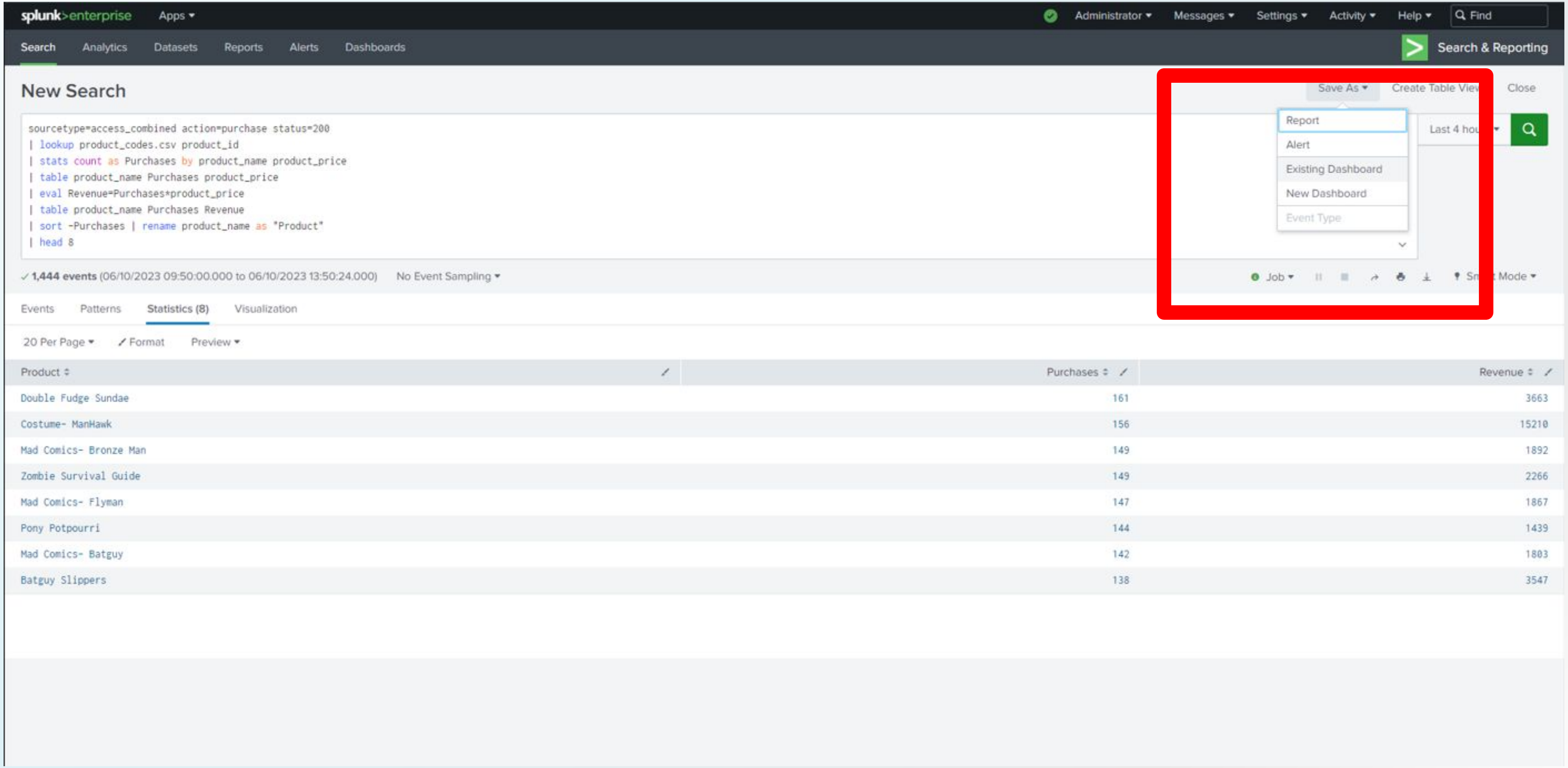


New Search

```
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
```

✓ 1,444 events (06/10/2023 09:50:00.000 to 06/10/2023 13:50:24.000) No Event Sampling

Product	Purchases	Revenue
Double Fudge Sundae	161	3663
Costume- ManHawk	156	15210
Mad Comics- Bronze Man	149	1892
Zombie Survival Guide	149	2266
Mad Comics- Flyman	147	1867
Pony Potpourri	144	1439
Mad Comics- Batguy	142	1803
Batguy Slippers	138	3547



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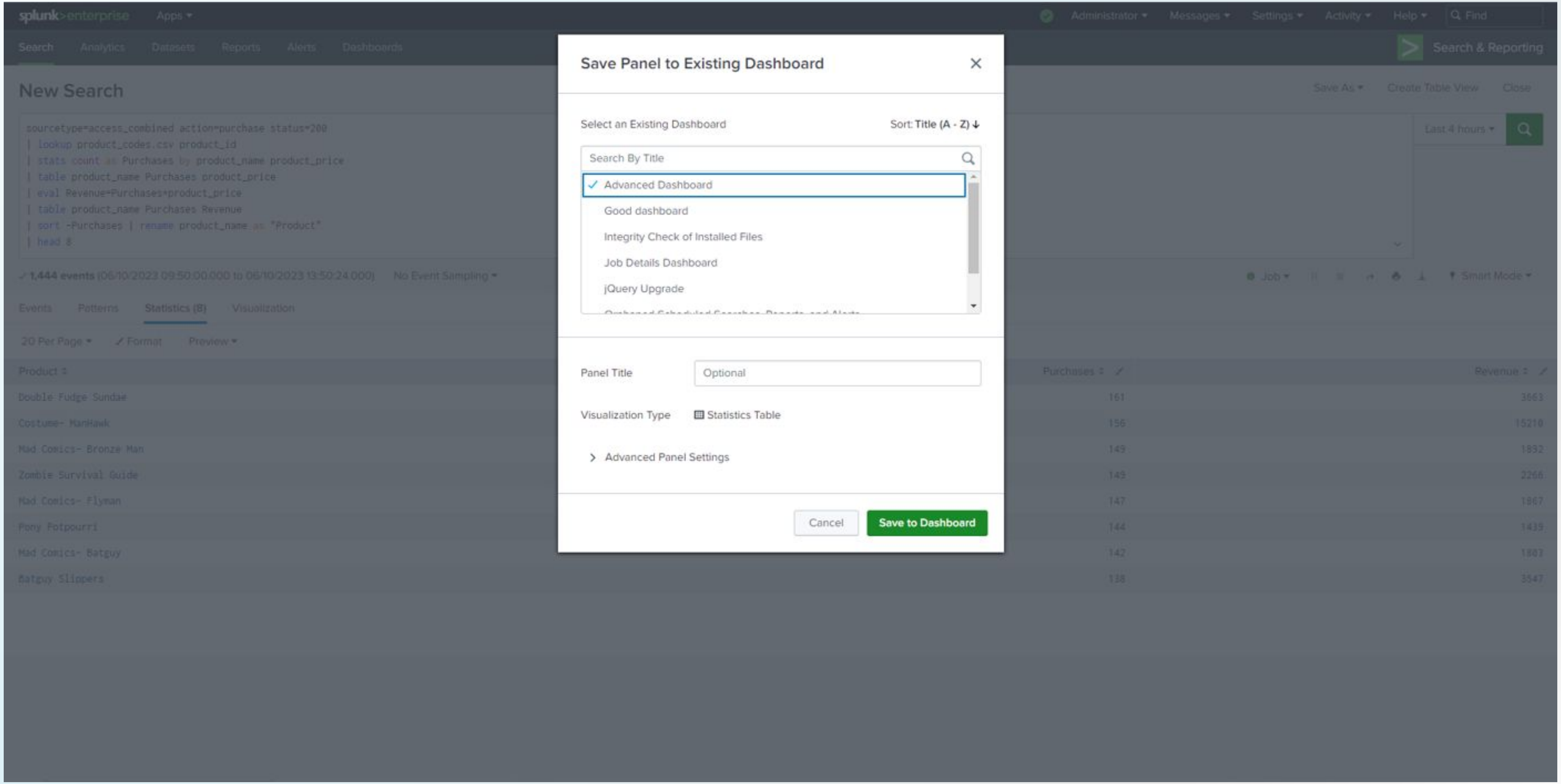

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Save Panel to Existing Dashboard

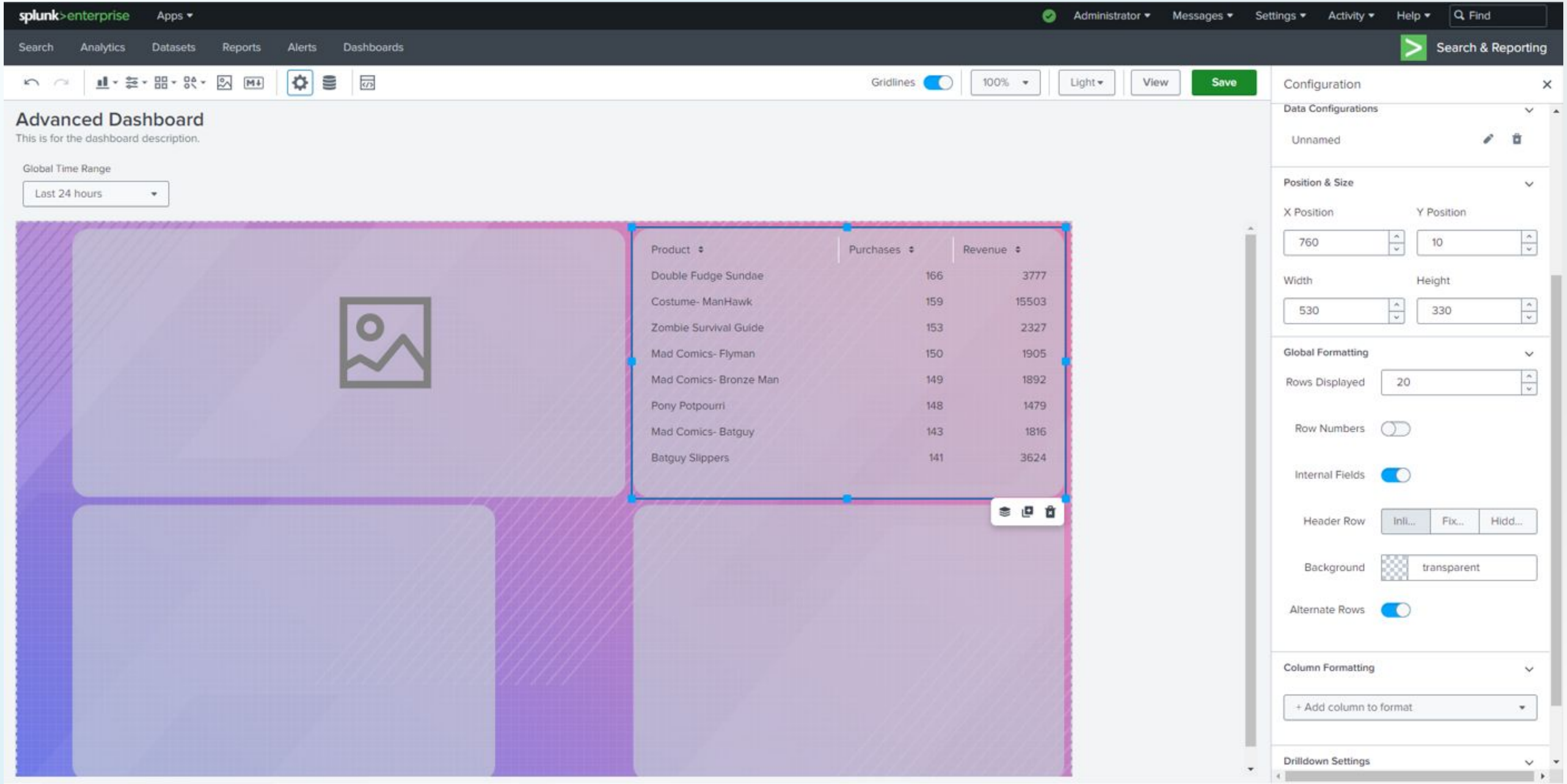
Select an Existing Dashboard   Sort: Title (A - Z)

Search By Title

- ✓ Advanced Dashboard
- Good dashboard
- Integrity Check of Installed Files
- Job Details Dashboard
- jQuery Upgrade
- Orphaned Scheduled Searches, Reports, and Alerts

Panel Title: Optional

Visualization Type: Statistics Table



Advanced Dashboard

This is for the dashboard description.

Global Time Range: Last 24 hours

Product	Purchases	Revenue
Double Fudge Sundae	166	3777
Costume- ManHawk	159	15503
Zombie Survival Guide	153	2327
Mad Comics- Flyman	150	1905
Mad Comics- Bronze Man	149	1892
Pony Potpourri	148	1479
Mad Comics- Batguy	143	1816
Batguy Slippers	141	3624

Configuration

Data Configurations

Unnamed

Position & Size

X Position: 760
Y Position: 10
Width: 530
Height: 330

Global Formatting

Rows Displayed: 20
Row Numbers: off
Internal Fields: on
Header Row: Inli... | Fix... | Hidd...
Background: transparent
Alternate Rows: on

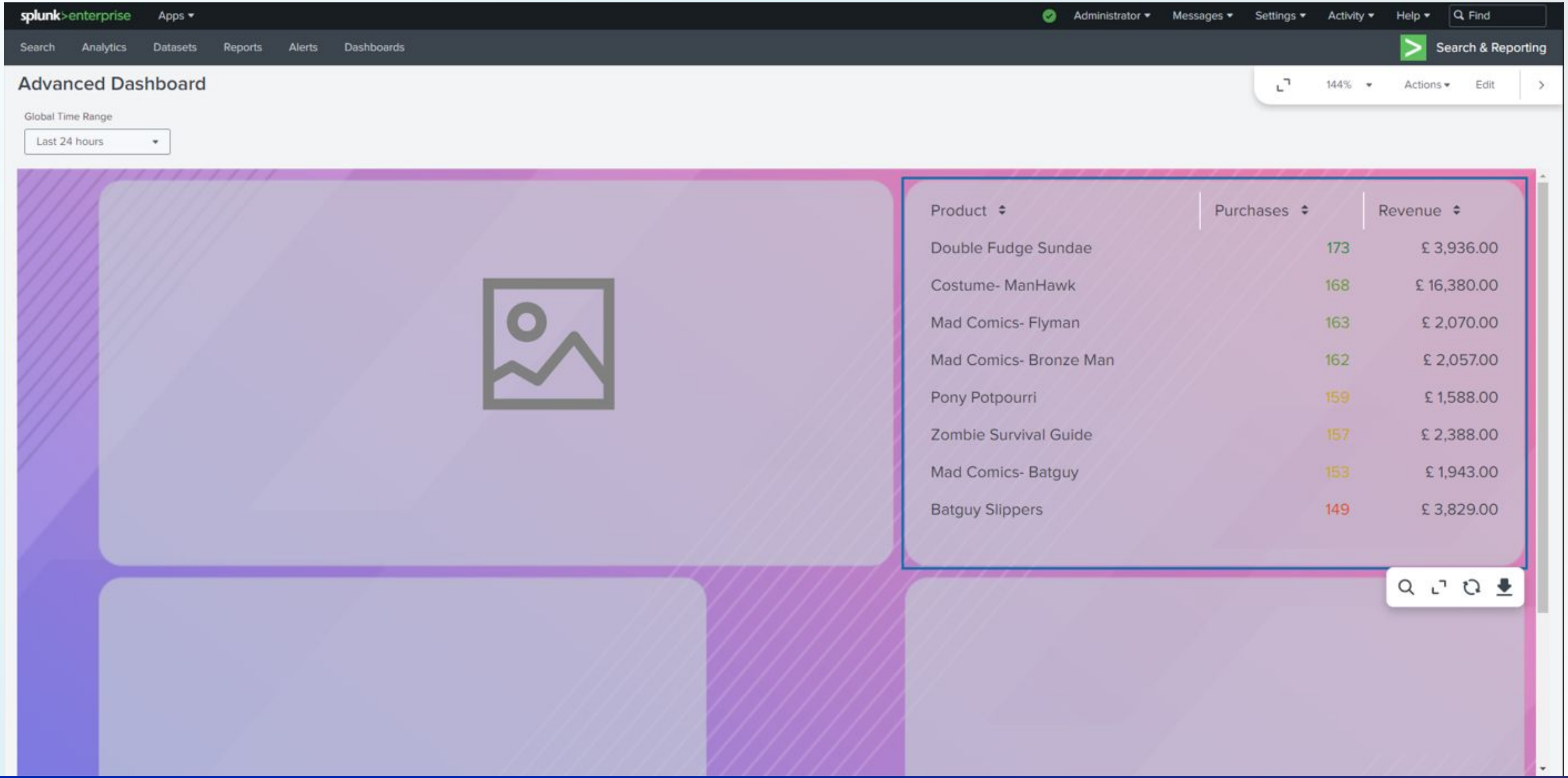
Column Formatting

+ Add column to format

Drilldown Settings

Formatting options

- Data Bars
- Icon Links
- Sparklines
- Progress Bars
- Color Coding
- Icon and Image Display
- Text Styling
- Thresholds

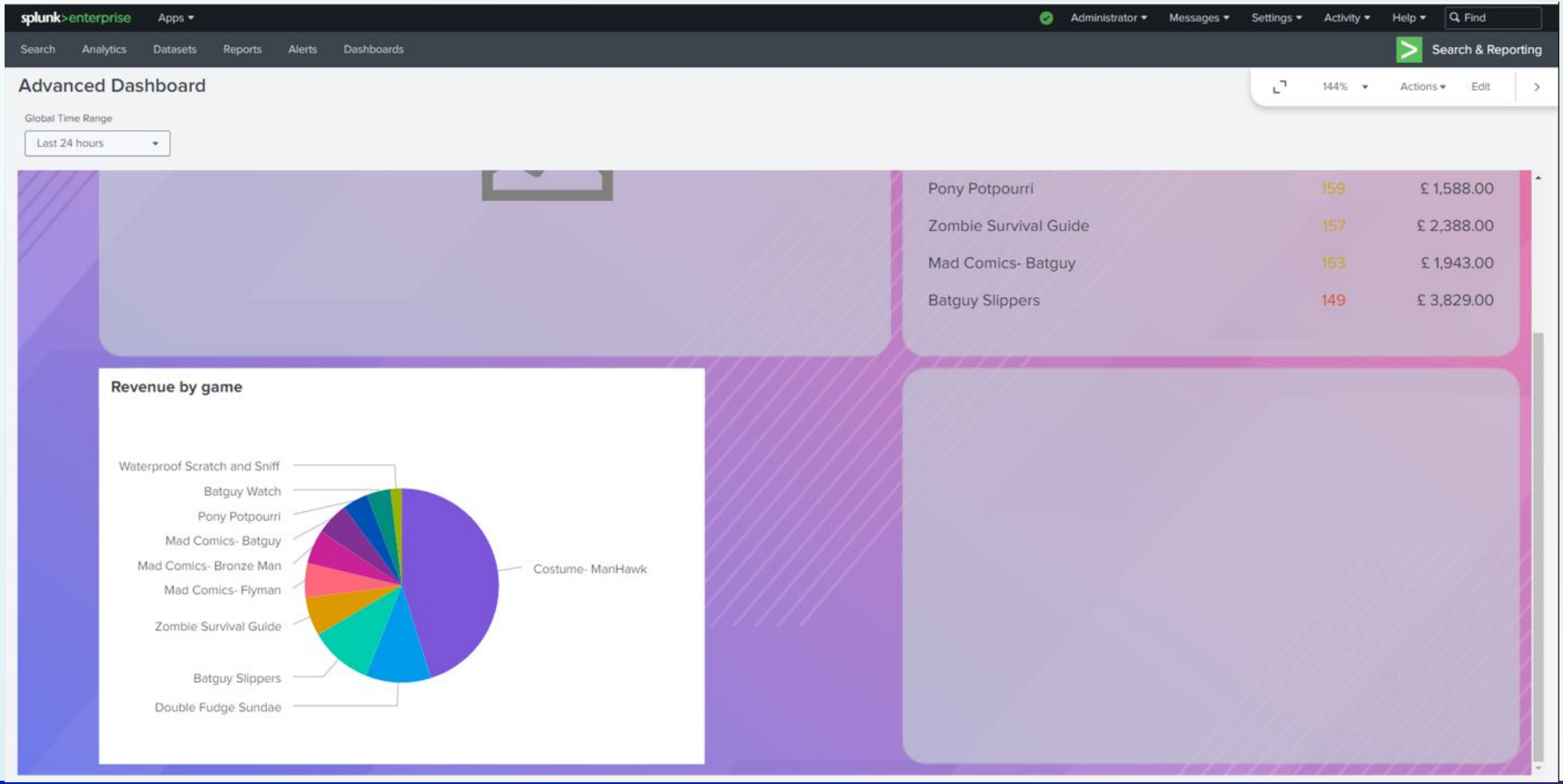


Advanced Dashboard

Product	Purchases	Revenue
Double Fudge Sundae	173	£ 3,936.00
Costume- ManHawk	168	£ 16,380.00
Mad Comics- Flyman	163	£ 2,070.00
Mad Comics- Bronze Man	162	£ 2,057.00
Pony Potpourri	159	£ 1,588.00
Zombie Survival Guide	157	£ 2,388.00
Mad Comics- Batguy	153	£ 1,943.00
Batguy Slippers	149	£ 3,829.00

Adding more panels

- Visualisations
- Panel titles
- Chart type
- Time range picker
- Drilldowns



Advanced Dashboard

Global Time Range: Last 24 hours

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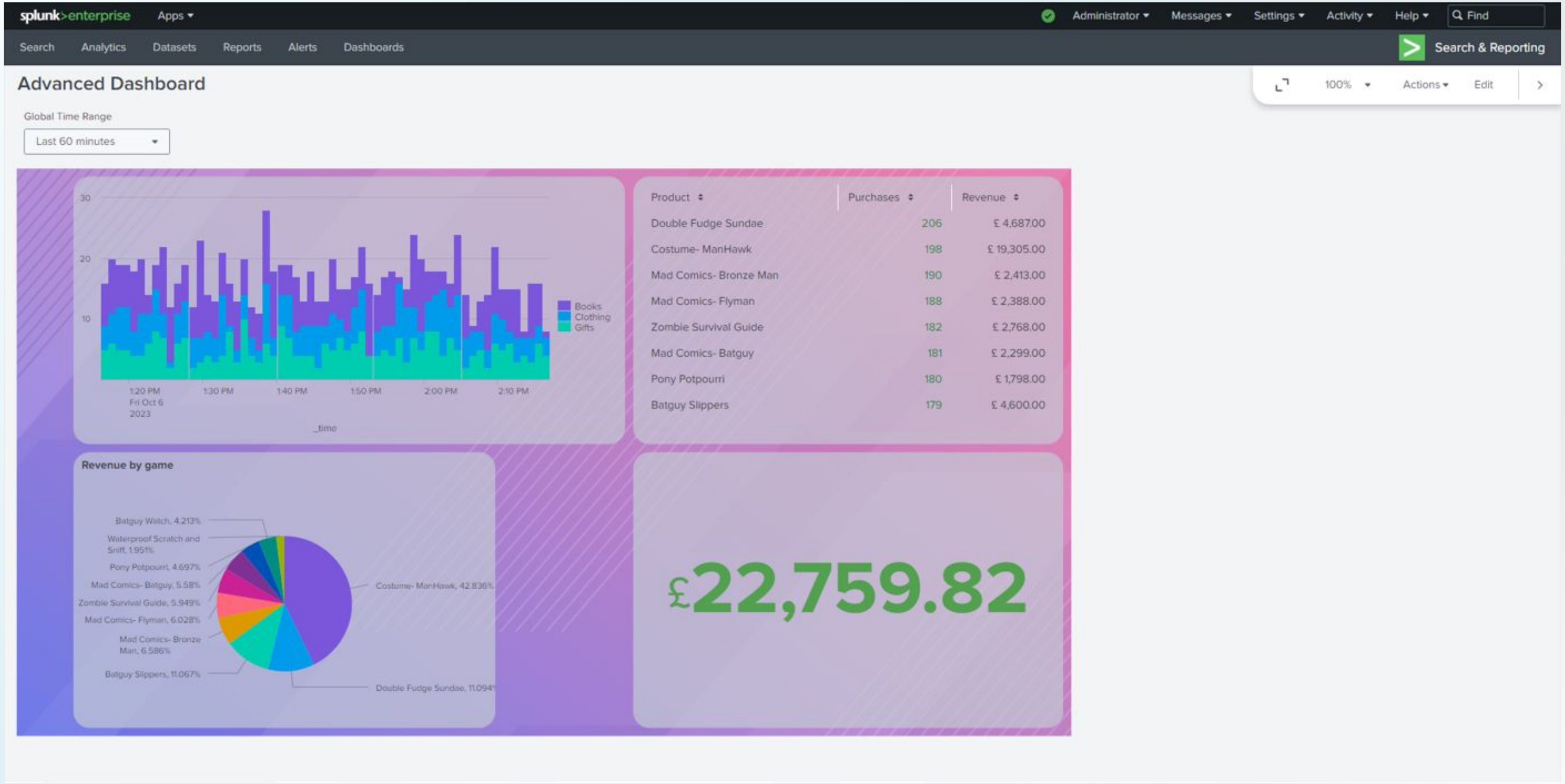
Revenue by game



Advanced Dashboard

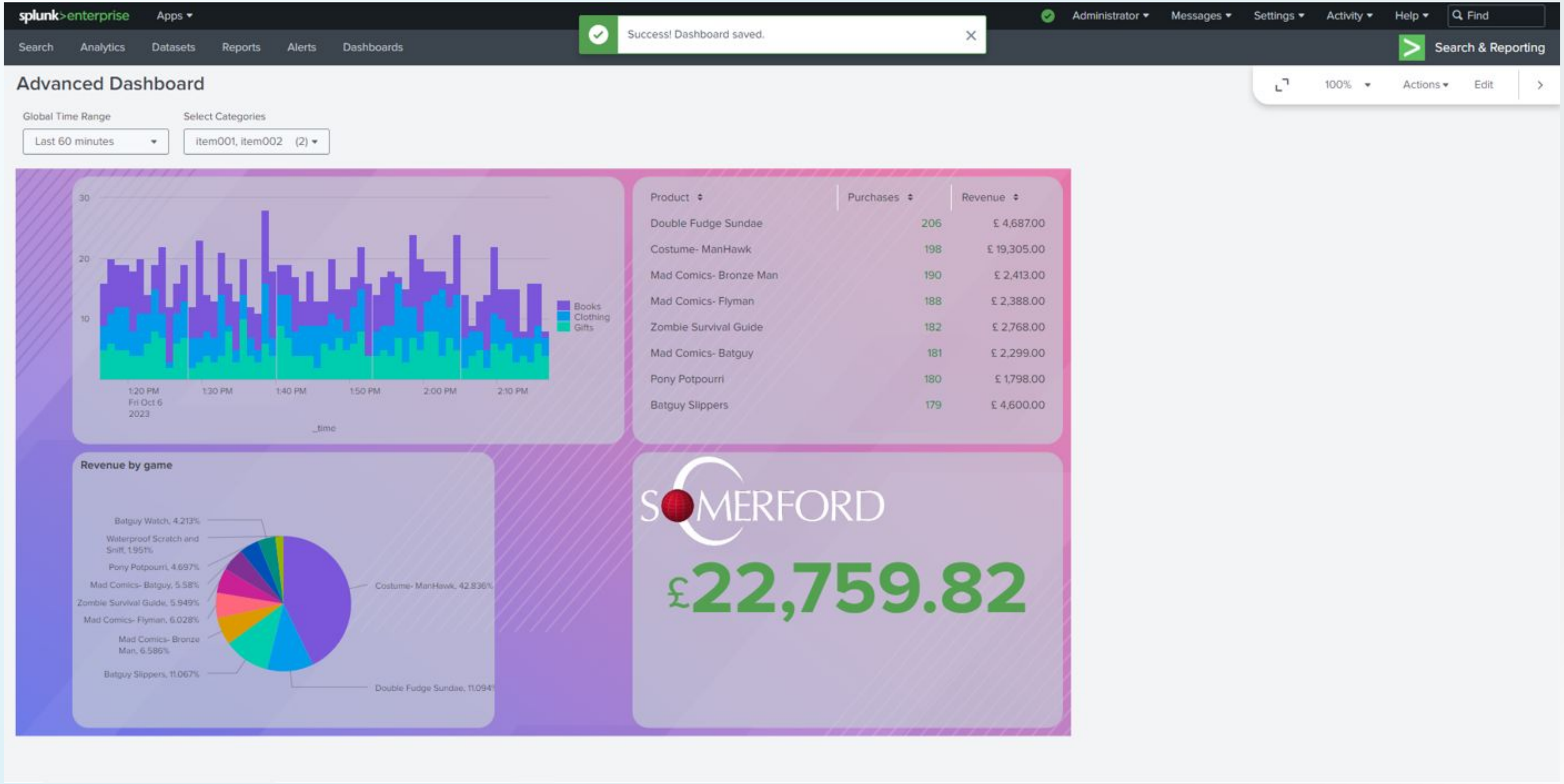
Global Time Range: Last 60 minutes ▾

Product	Purchases	Revenue
Double Fudge Sundae	206	£ 4,687.00
Costume- ManHawk	198	£ 19,305.00
Mad Comics- Bronze Man	190	£ 2,413.00
Mad Comics- Flyman	188	£ 2,388.00
Zombie Survival Guide	182	£ 2,768.00
Mad Comics- Batguy	181	£ 2,299.00
Pony Potpourri	180	£ 1,798.00
Batguy Slippers	179	£ 4,600.00

Revenue by game

Batguy Watch, 4.213%
Waterproof Scratch and Sniff, 1.951%
Pony Potpourri, 4.697%
Mad Comics- Batguy, 5.58%
Zombie Survival Guide, 5.949%
Mad Comics- Flyman, 6.028%
Mad Comics- Bronze Man, 6.586%
Batguy Slippers, 11.067%
Costume- ManHawk, 42.836%
Double Fudge Sundae, 11.094%

£22,759.82



Success! Dashboard saved.

Advanced Dashboard

Global Time Range: Last 60 minutes

Select Categories: item001, item002 (2)

Product	Purchases	Revenue
Double Fudge Sundae	206	£ 4,687.00
Costume- ManHawk	198	£ 19,305.00
Mad Comics- Bronze Man	190	£ 2,413.00
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Revenue by game

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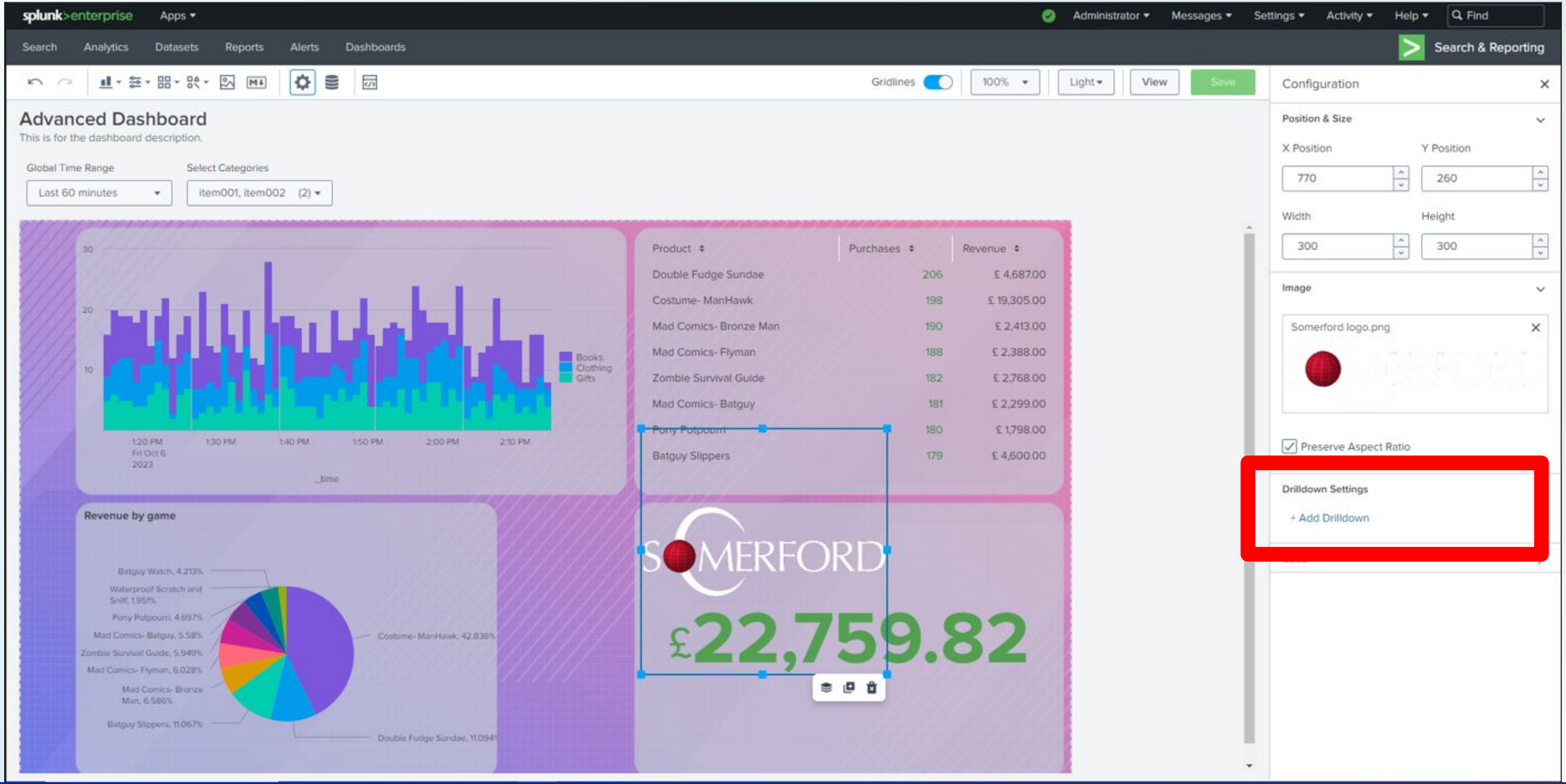

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Batguy Slippers, 11.067%
Costume- ManHawk, 42.836%
Double Fudge Sundae, 11.094
SOMERFORD

£22,759.82

Configuration

Position & Size

X Position: 770

Y Position: 260

Width: 300

Height: 300

Image

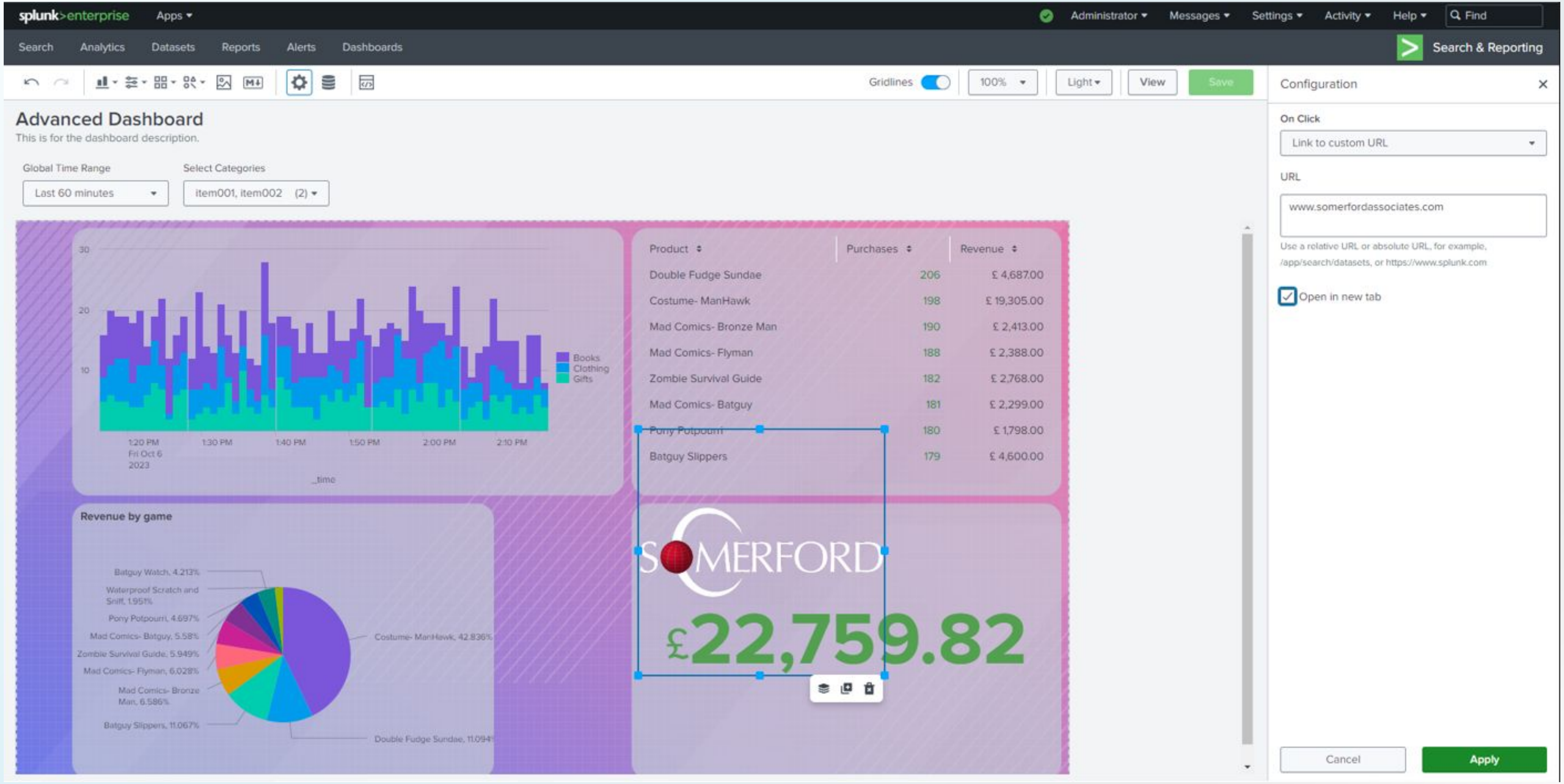
Somerford logo.png

☑ Preserve Aspect Ratio

Drilldown Settings

+ Add Drilldown

splunk> SOMERFORD Delivering Innovation



Advanced Dashboard

This is for the dashboard description.

Global Time Range: Last 60 minutes

Select Categories: item001, item002 (2)

Product	Purchases	Revenue
Double Fudge Sundae	206	£ 4,687.00
Costume- ManHawk	198	£ 19,305.00
Mad Comics- Bronze Man	190	£ 2,413.00
Mad Comics- Flyman	188	£ 2,388.00
Zombie Survival Guide	182	£ 2,768.00
Mad Comics- Batguy	181	£ 2,299.00
Pony Potpourri	180	£ 1,798.00
Batguy Slippers	179	£ 4,600.00

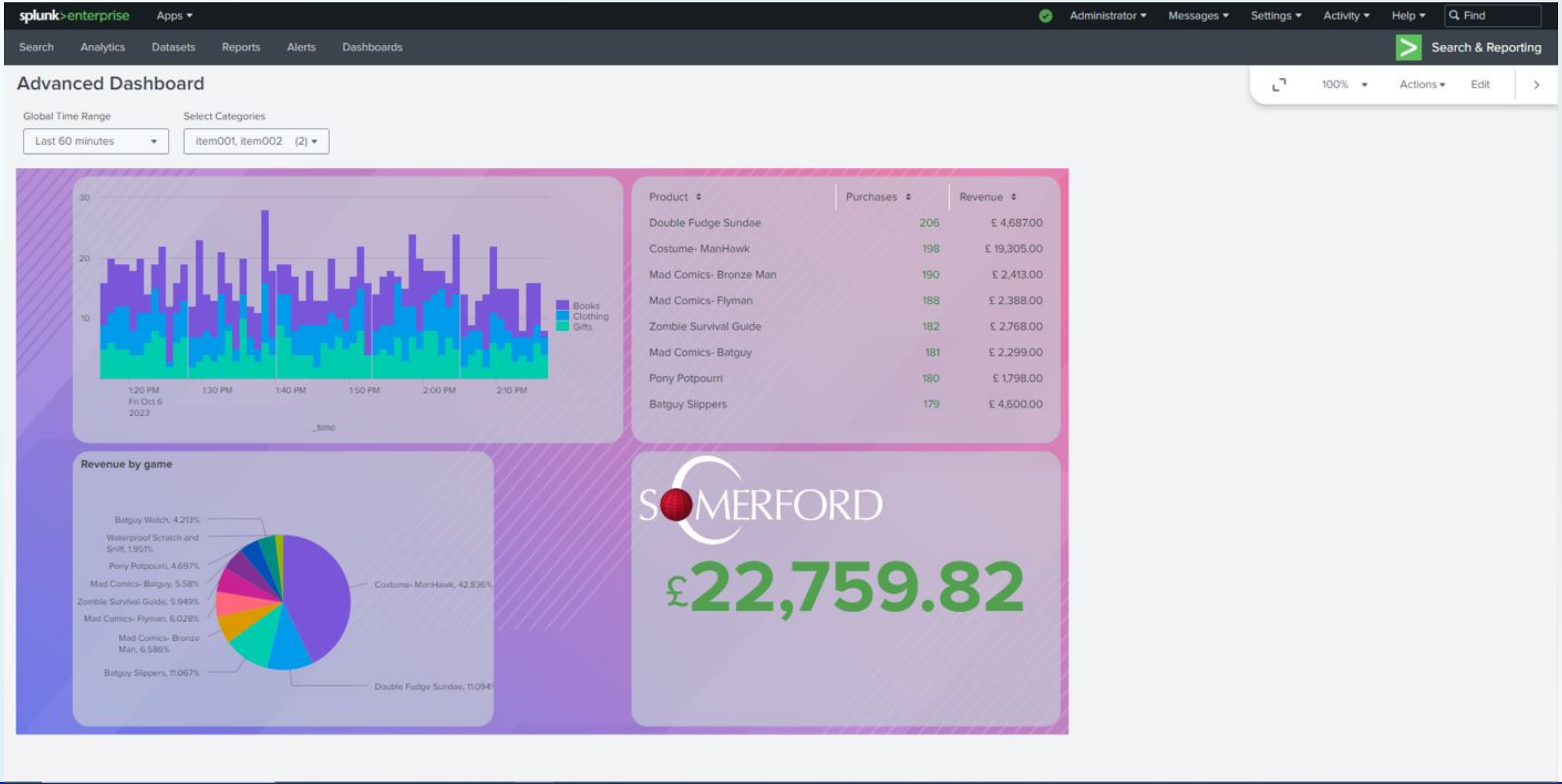
Configuration

On Click: Link to custom URL

URL: www.somerfordassociates.com

Use a relative URL or absolute URL, for example, /app/search/datasets, or https://www.splunk.com

☑ Open in new tab



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Revenue by game

£22,759.82

Live Demo

www.somerfordassociates.com/somerford-defence-service/

Defence Roadshows

- Somerford and Splunk roadshows will be held across main sites in the 2024 (dates TBC)
- Demonstrating the range of Licence offered under EA (Enterprise Agreement)
- Exploring Data Fabric platform use cases

Upcoming Knowledge Workshops For Defence

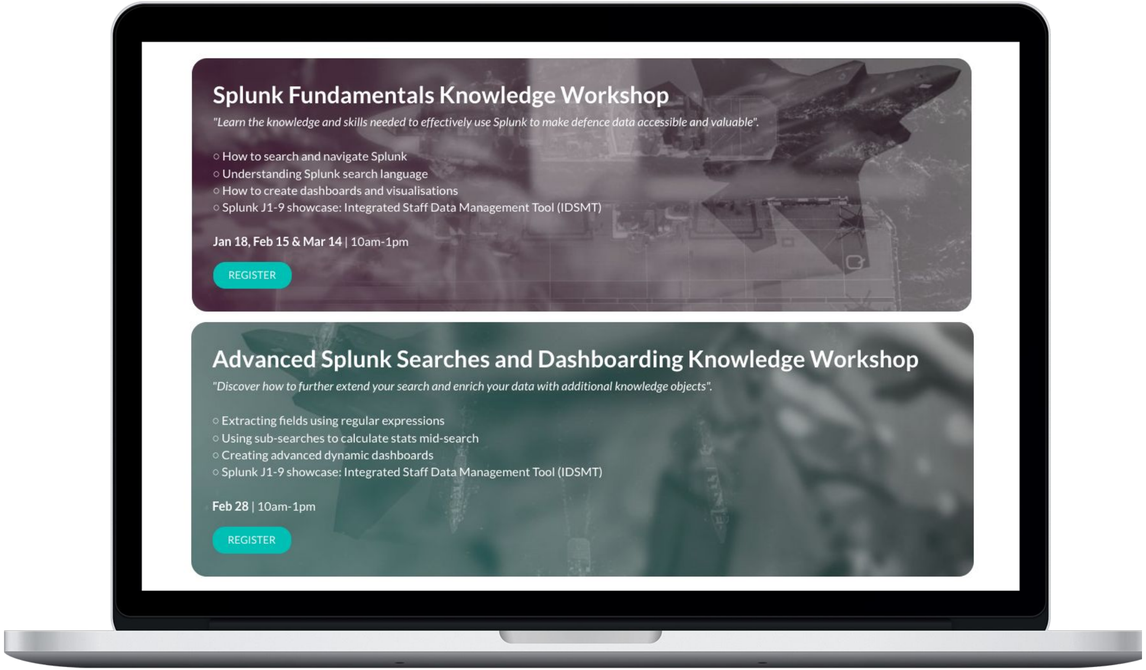
Upcoming Knowledge Workshops in Q1

Splunk Fundamentals

- Jan 18, Feb 15 & Mar 14 | 10am-1pm
- somerfordassociates.com/somerford-defence-service-splunk-fundamentals-workshop/

Advanced Splunk Searches and Dashboarding

- Feb 28 | 10am-1pm
- somerfordassociates.com/somerford-defence-service-splunk-search-and-reporting-workshop/



Splunk Fundamentals Knowledge Workshop

"Learn the knowledge and skills needed to effectively use Splunk to make defence data accessible and valuable".

- ○ How to search and navigate Splunk
- ○ Understanding Splunk search language
- ○ How to create dashboards and visualisations
- ○ Splunk J1-9 showcase: Integrated Staff Data Management Tool (IDSMT)

Jan 18, Feb 15 & Mar 14 | 10am-1pm

Advanced Splunk Searches and Dashboarding Knowledge Workshop

"Discover how to further extend your search and enrich your data with additional knowledge objects".

- ○ Extracting fields using regular expressions
- ○ Using sub-searches to calculate stats mid-search
- ○ Creating advanced dynamic dashboards
- ○ Splunk J1-9 showcase: Integrated Staff Data Management Tool (IDSMT)

Feb 28 | 10am-1pm

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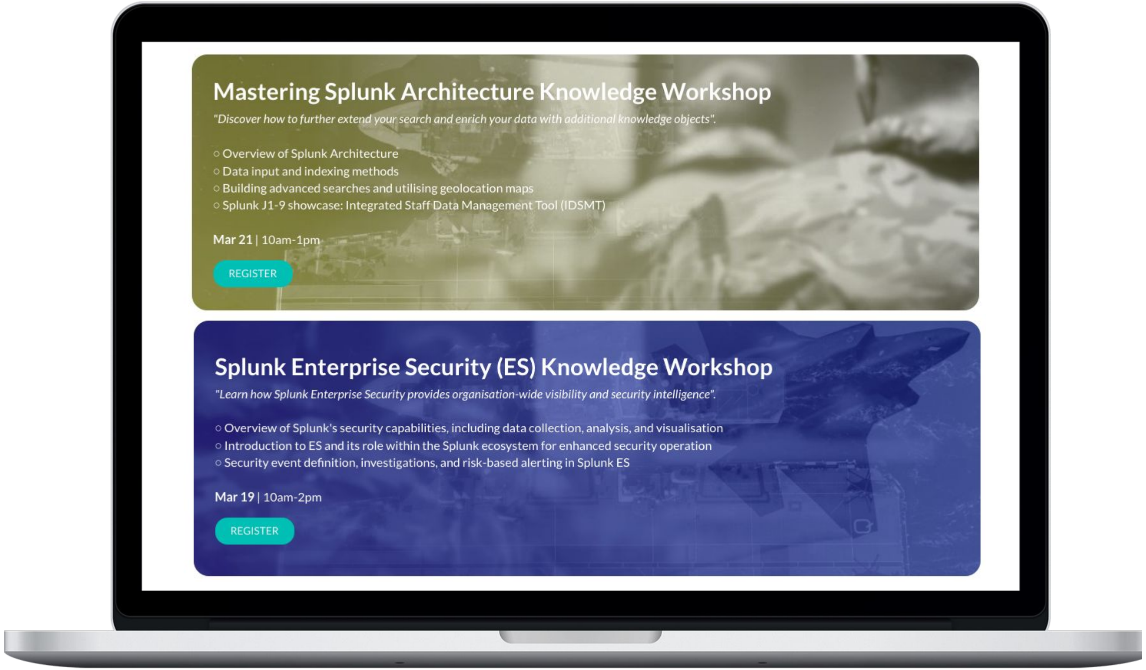
Upcoming Knowledge Workshops in Q1

Mastering Splunk Architecture

- Mar 21 | 10am-1pm
- somerfordassociates.com/events/somerford-defence-service-mastering-splunk-architecture-knowledge-workshop/

Splunk for Security: Enterprise Security (ES)

- Mar 19 | 10am-1pm
- somerfordassociates.com/events/somerford-defence-service-splunk-enterprise-security-es-workshop/



Mastering Splunk Architecture Knowledge Workshop

"Discover how to further extend your search and enrich your data with additional knowledge objects".

○ Overview of Splunk Architecture
○ Data input and indexing methods
○ Building advanced searches and utilising geolocation maps
○ Splunk J1-9 showcase: Integrated Staff Data Management Tool (IDSMT)

Mar 21 | 10am-1pm

Splunk Enterprise Security (ES) Knowledge Workshop

"Learn how Splunk Enterprise Security provides organisation-wide visibility and security intelligence".

○ Overview of Splunk's security capabilities, including data collection, analysis, and visualisation
○ Introduction to ES and its role within the Splunk ecosystem for enhanced security operation
○ Security event definition, investigations, and risk-based alerting in Splunk ES

Mar 19 | 10am-2pm

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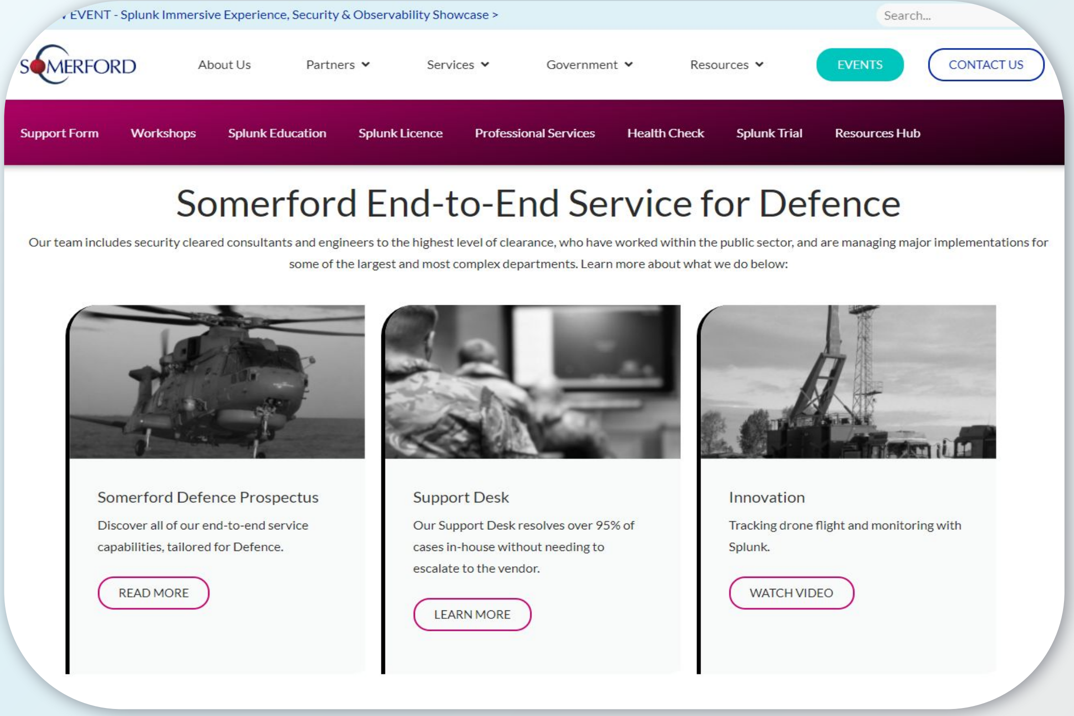

Somerford End-to-End Service for Defence

Our team includes security cleared consultants and engineers to the highest level of clearance, who have worked within the public sector, and are managing major implementations for some of the largest and most complex departments. Learn more about what we do below:

Somerford Defence Prospectus

Discover all of our end-to-end service capabilities, tailored for Defence.

Support Desk

Our Support Desk resolves over 95% of cases in-house without needing to escalate to the vendor.

Innovation

Tracking drone flight and monitoring with Splunk.

https://www.somerfordassociates.com/somerford-defence-service/

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Q&A

info@somerfordassociates.com
www.somerfordassociates.com/

ARMED FORCES COVENANT

EMPLOYER RECOGNITION SCHEME

SILVER AWARD

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#ERS2023

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