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Dashboard Wizardry

Advanced Dashboard Interactivity

Siegfried Puchbauer | Principal Software Engineer

Yuxiang Kou | Software Engineer

September 25, 2017 | Washington, DC

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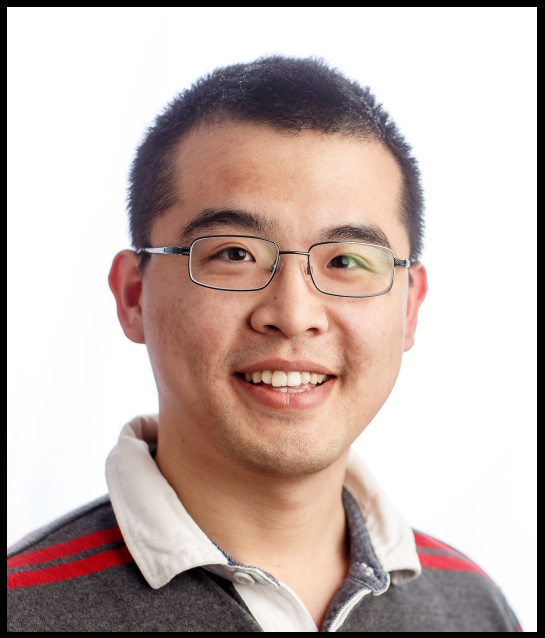
Brought To You By…

Siegfried Puchbauer

- Lead Engineer, Dashboard Team
- Expert in Dashboards, Alerting, JavaScript, and Bowler Hats



Yuxiang Kou

- Software Engineer, Dashboard Team
- Enjoying front-end development in Splunk

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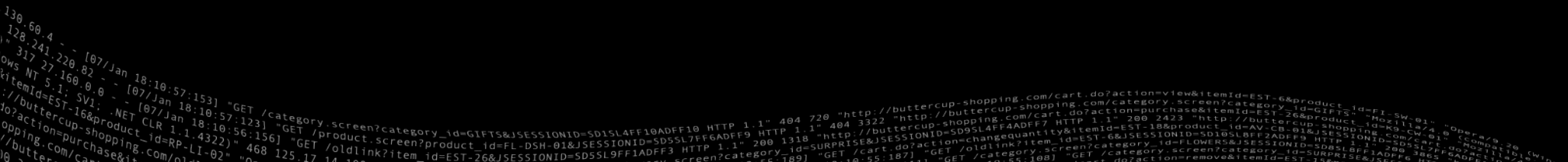
Prerequisites

- You have created dashboards before
- Knowing SimpleXML is a plus but not required

What you'll learn

- Building Interactive Dashboards
  - (without using JavaScript or CSS)



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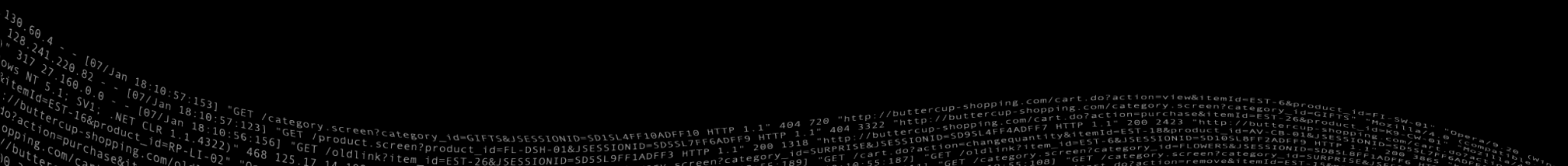
Agenda

- Background
- Live Example
  - Tokens & Form Inputs
  - Event Handlers
  - Show/Hide Content
  - Search Events
- Wrap-up



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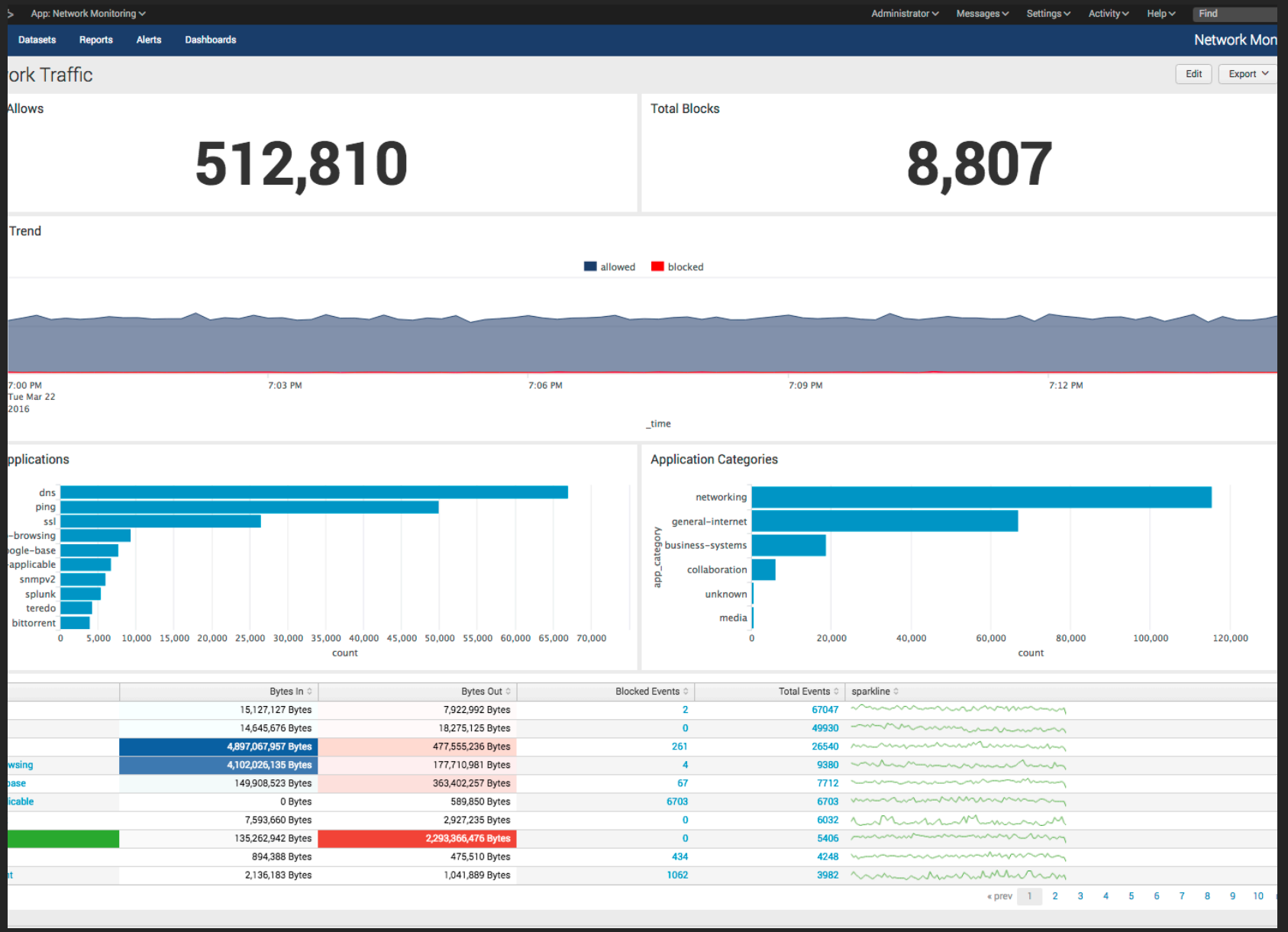
What Is A Dashboard?



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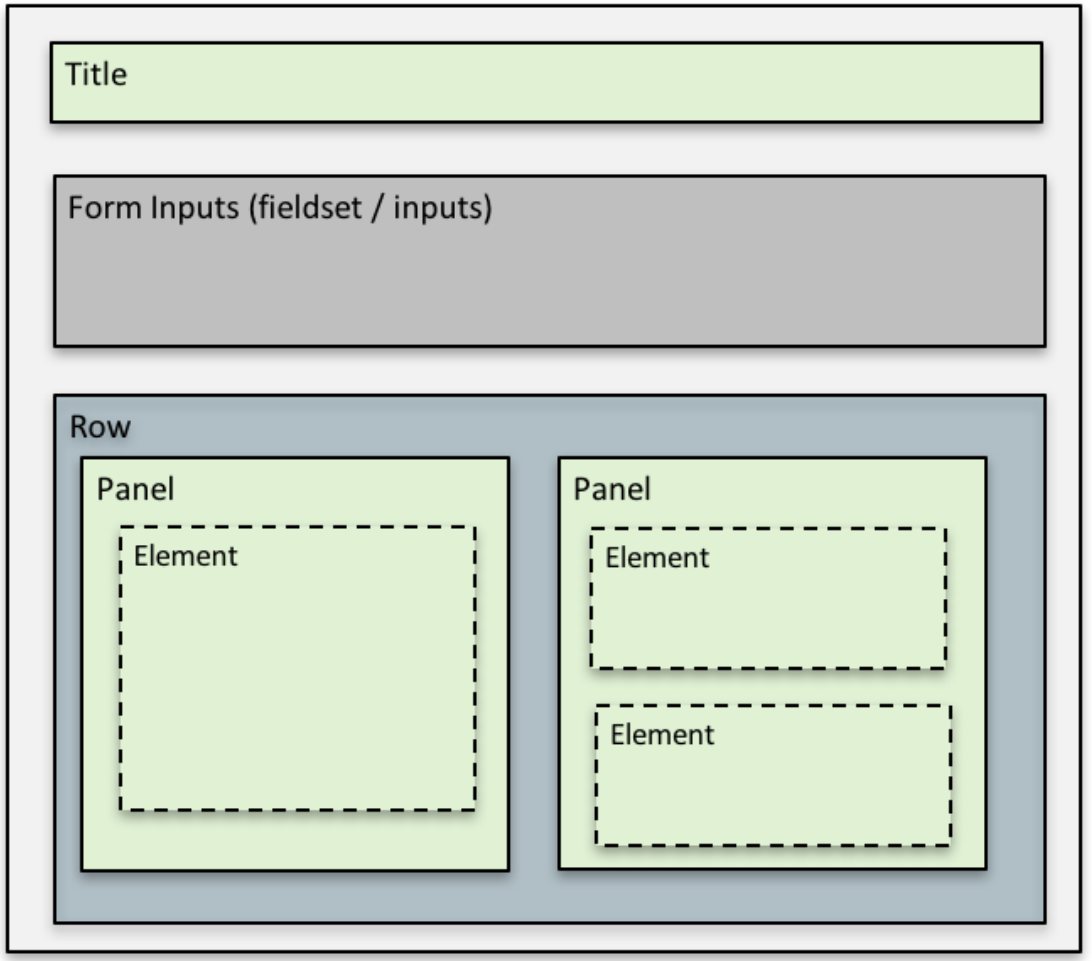
Anatomy Of A Dashboard

```
<form>
   <label>My Dashboard</label>

   <fieldset>
      <input>
         <!- form inputs -->
      </input>
   </fieldset>

   <row>
      <panel>
         <chart>
            <!- ... -->
         </chart>
         <table>
            <!- ... -->
         </table>
      </panel>
   </row>
</form>
```



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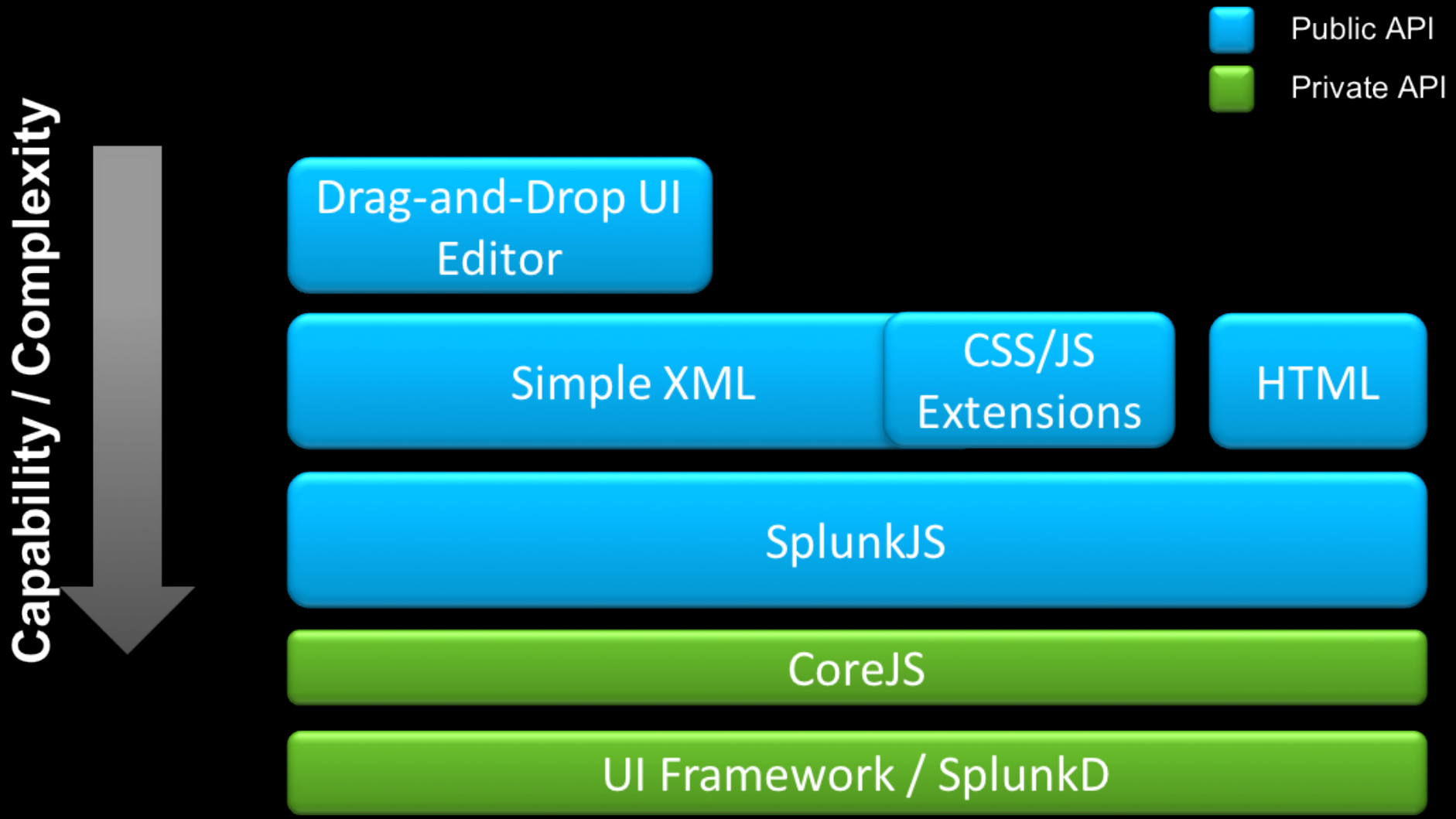
Dashboard Technology Stack



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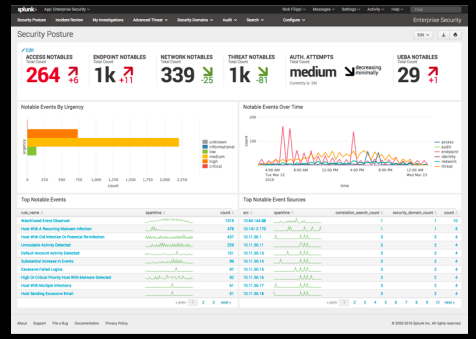
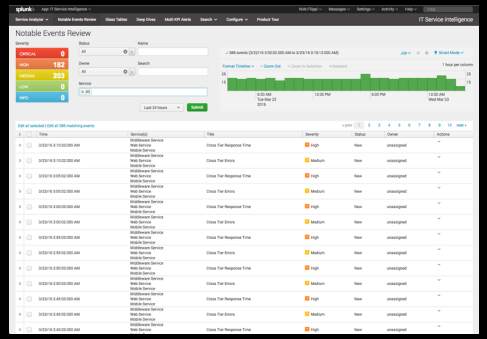
Advanced Dashboards

Premium Solutions

Enterprise Security



IT Service Intelligence



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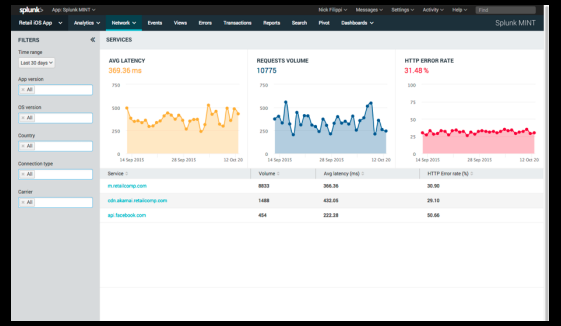
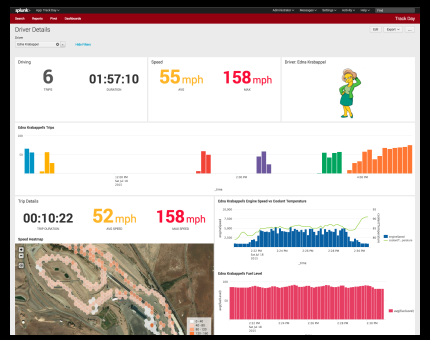
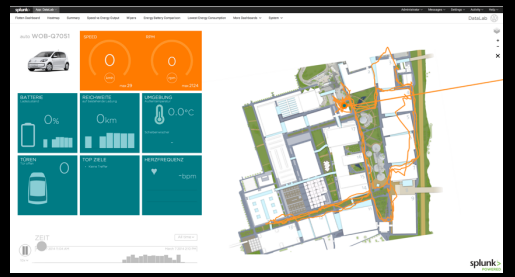


Internal Examples

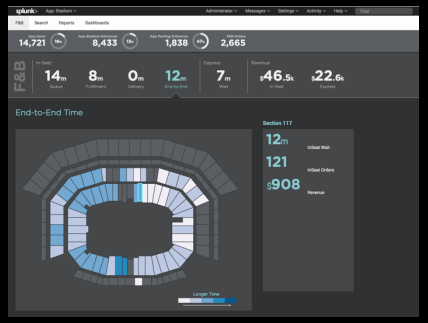
Sample App



eCars Project



Stadium Project



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Reference To Dashboard Fundamentals

Layout	Search Managers	Event Managers	Form Inputs	Display Controls	Visualizations	Extensions
• Row • Panel • Element	• Search • Post-process • Report • Cache • Refresh • Refresh type • Chart annotation**	• Input • Change • Search • Drilldown • Selection • Init	• Text • Radio • Dropdown • Checkbox • Multiselect • Link • Time	• Depends • Rejects • Trellis	• Events • Table • Line • Area • Column • Bar • Pie • Scatter • Bubble • Single value • Radial gauge • Filler gauge • Marker gauge • Map • Choropleth map	• JavaScript • CSS • Dashboard.js • Dashboard.css

Token Management

**New in Splunk Enterprise 7.0

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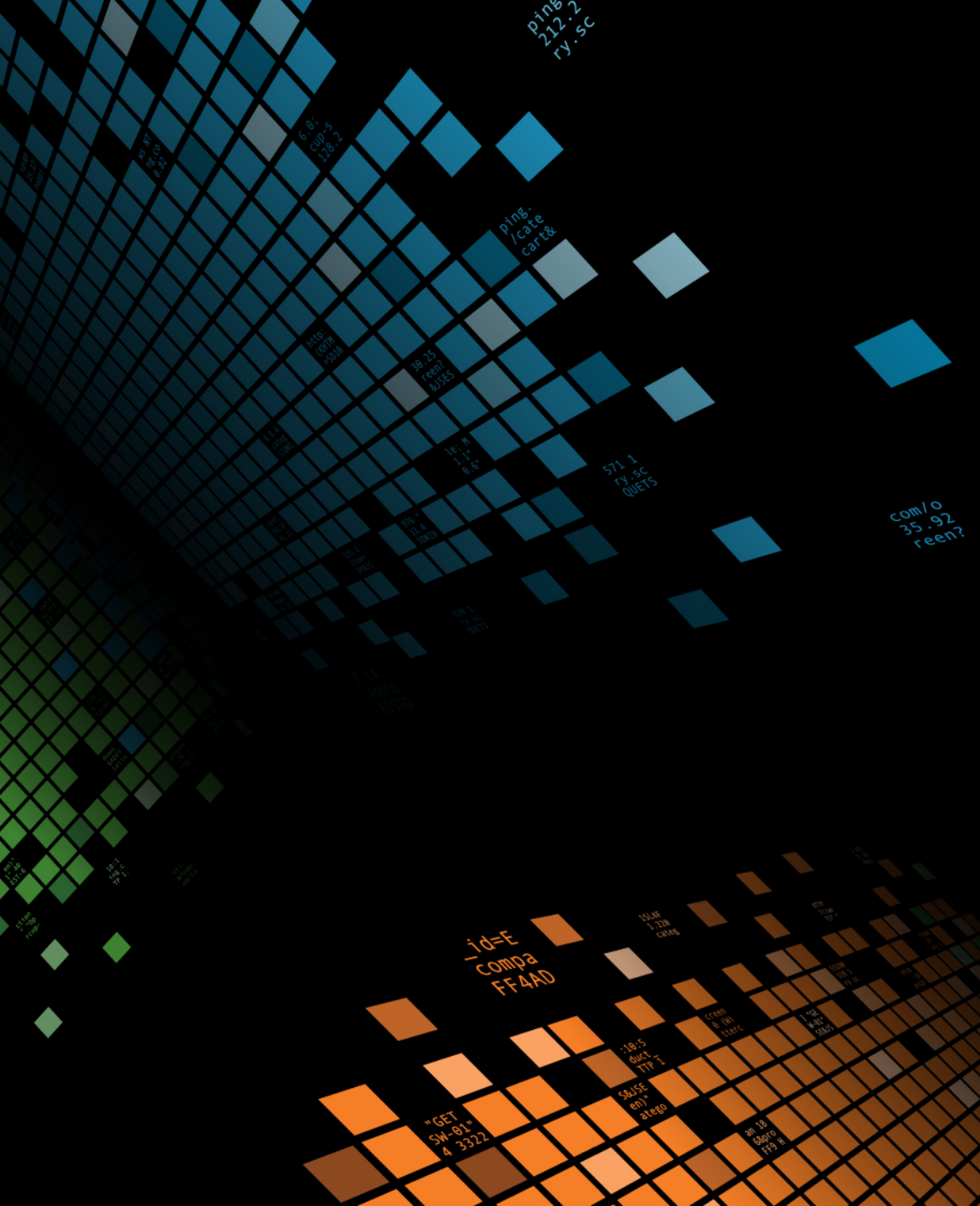

Let’s Build Some Dashboards!

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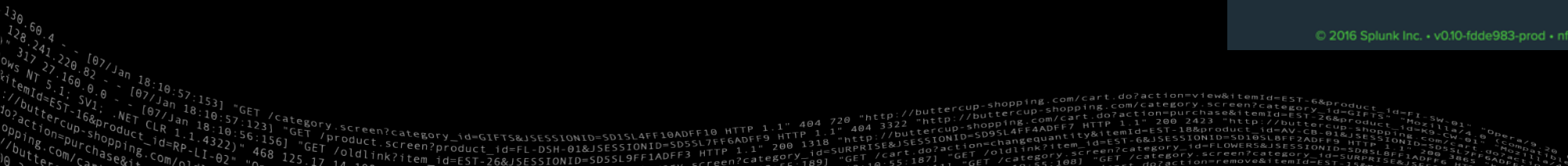
The Data: Buttercup Go

- Launched at Splunk .conf2016
  - 1000s of users
  - Overnight sensation!
- Source Data
  - Authentication data
  - Device data
  - In-game event data (click, game start, game over)



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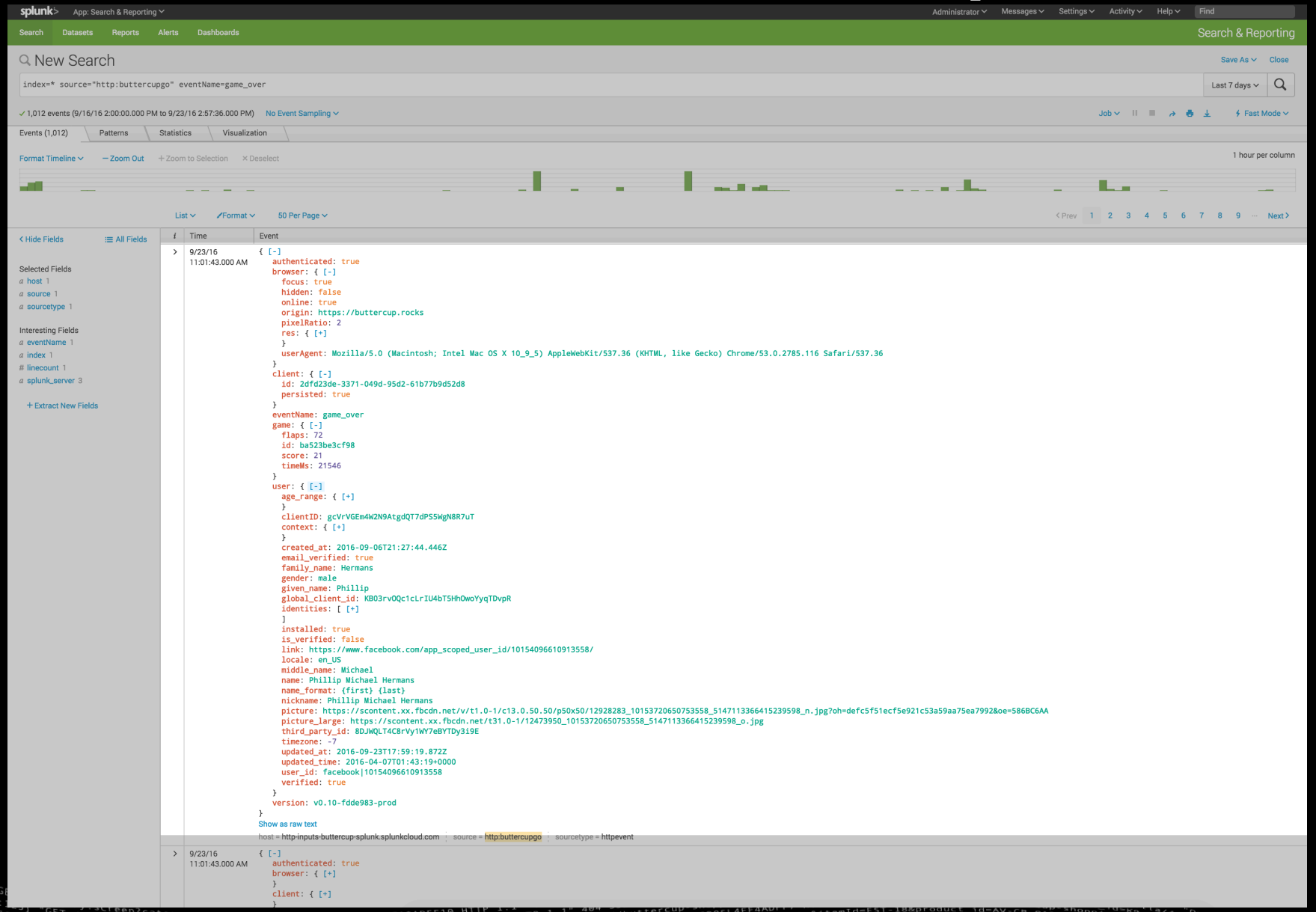
The Data: Buttercup Go



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Building Dashboards

Part I

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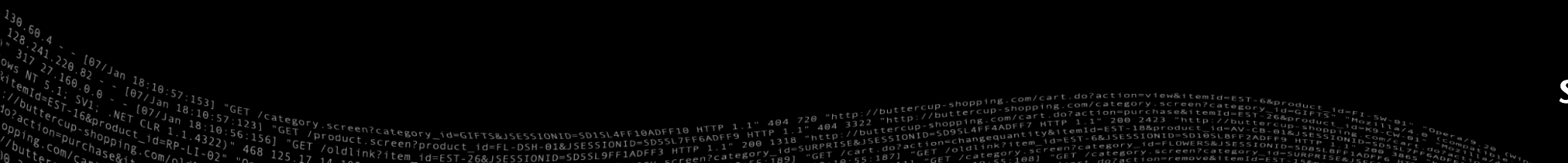
Tokens

- Automatic data binding
- Variables – connecting components and interactions
- Use in UI or XML

$buttercup$



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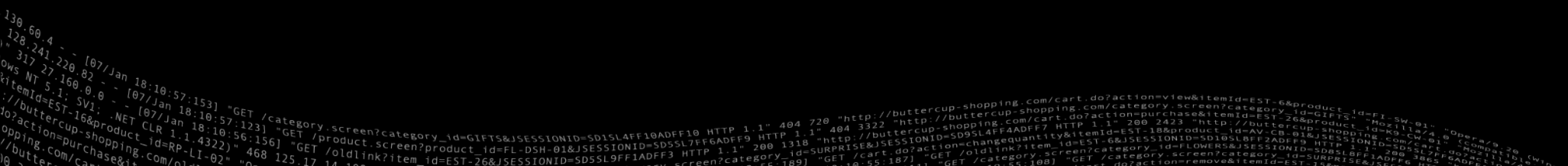
Token Filters

- Insert altered/processed value
- Built-in
  - `$token|s$` - search escape
  - `$token|u$` - URL encode
  - `$token|h$` - HTML escape
  - `$token|n$` - No encoding
- Build your own (in JavaScript)
  - `$token|myfilter$`



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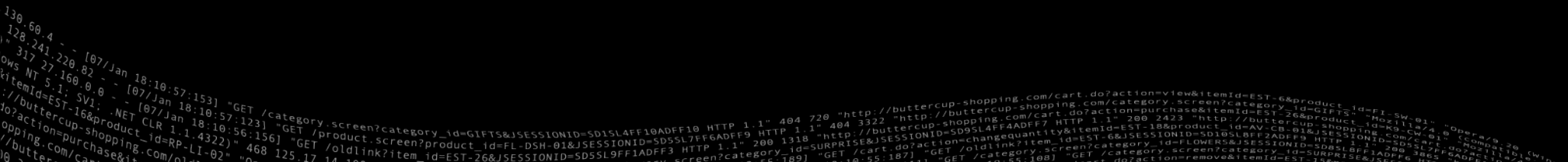
Form Input Values And Token Namespaces

- Token Namespaces
  - **Default** – current values of form input fields
  - **Submitted** – submitted values of fields
  - **URL** – submitted form.* tokens persisted
- Refer to namespaces:

  $**submitted:**driver$

- $form.mytoken$
  - Tokens contain raw form input
- $mytoken$
  - After applying prefix, suffix, default value



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Building Dashboards

Part II

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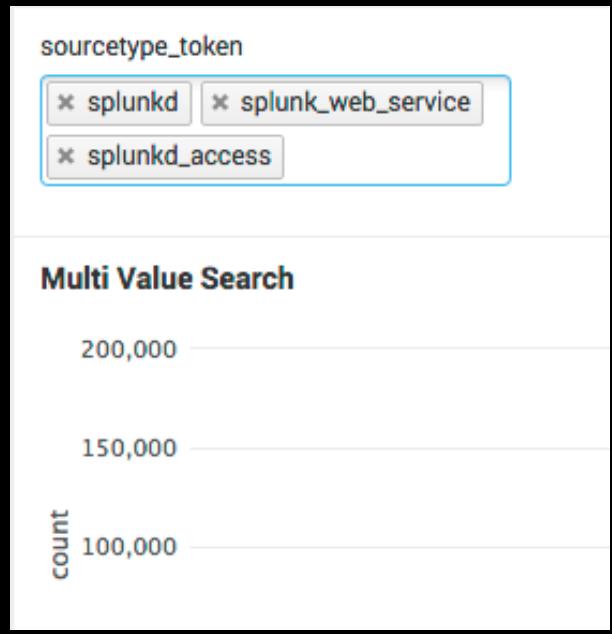
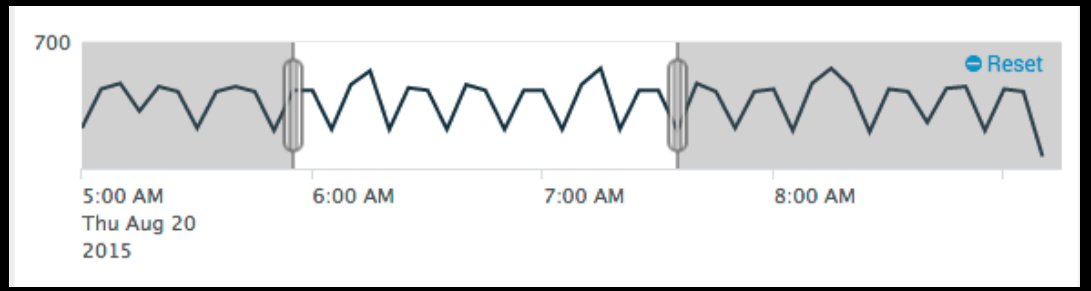
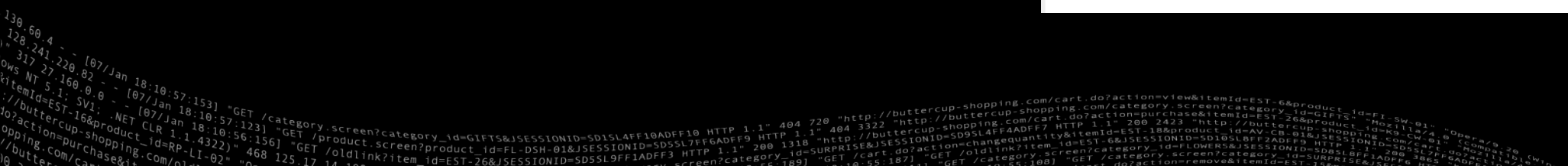
Event Handlers

- Introduce behaviors based on event hooks
  - User initiated events, or search job events







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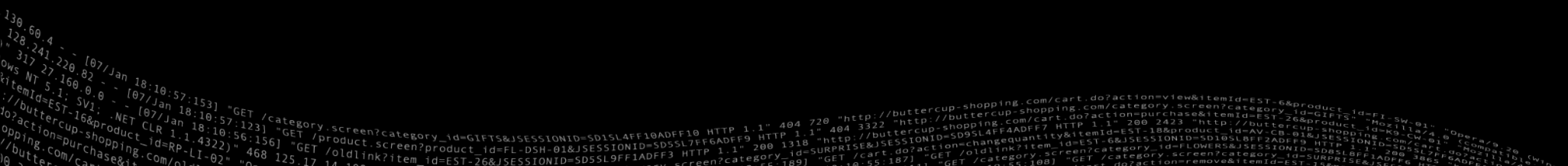
Event Handlers

Types

- Drilldown/condition
  - user clicks on a cell, or bar on a chart
- Input/change
  - user selects a value on a form input
- Selection
  - for line/column/area, user selects a window to zoom into
- Search
  - events come back from a search job (progress, done, error)
- Init
  - initial page loads; use this to set page tokens



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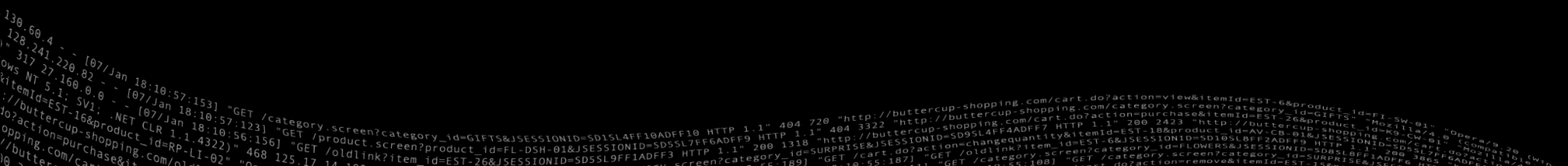
Event Handlers

Configure Behaviors

- Set tokens
- Unset tokens
- Link to another page or search
- Evaluate new tokens



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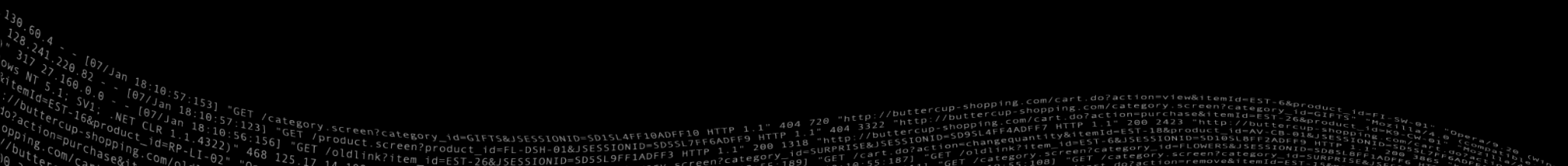
Show And Hide Content

- `<table depends="$show_table$">`
  - Hide table by default
  - Show table when `$show_table$` exists
- `<table rejects="$hide_table$">`
  - Show table by default
  - Hide table when `$hide_table$` exists

- Applies to `<chart>`, `<table>`, `<events>`, `<row>`, `<panel>`, `<input>`



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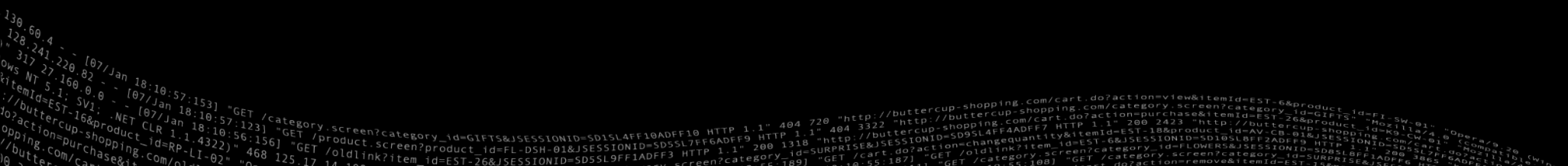
Show And Hide Content

Set/Unset Token

- In-page drilldown
  - Click on tables/visualizations to set/unset token
- Cascading Form Inputs
  - Change form input value to set/unset token



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Building Dashboards

Part III

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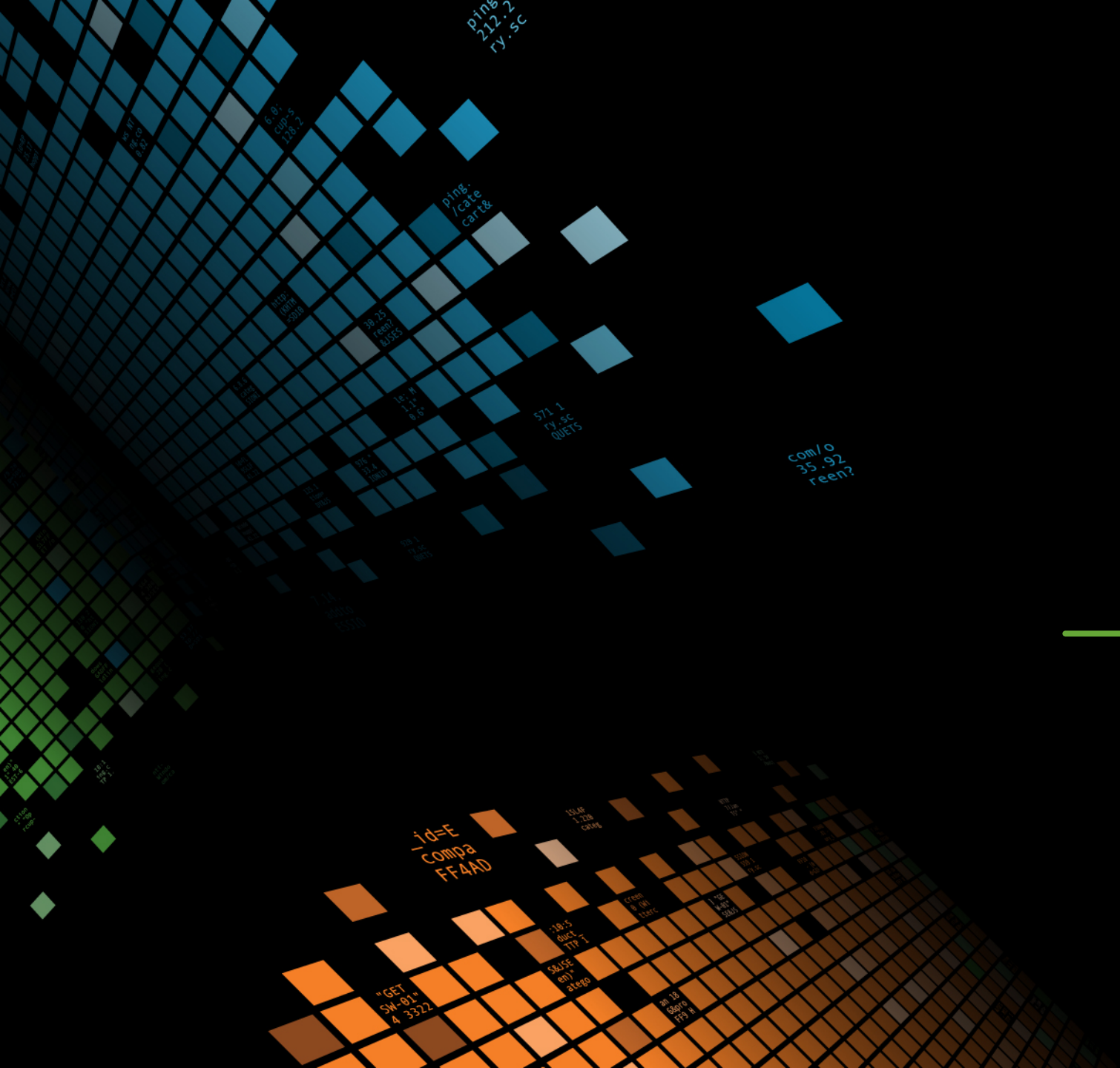

Wrap-up

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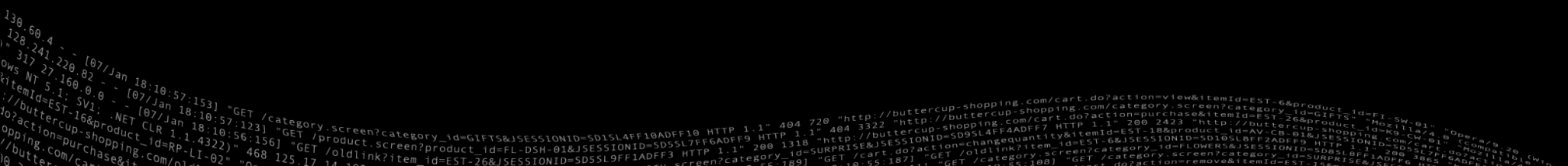
More Information

- Splunk Dashboard Examples
  - https://splunkbase.splunk.com/app/1603/
- Documentation
  - http://docs.splunk.com/Documentation/Splunk/7.0.0/Viz/PanelreferenceforSimplifiedXML



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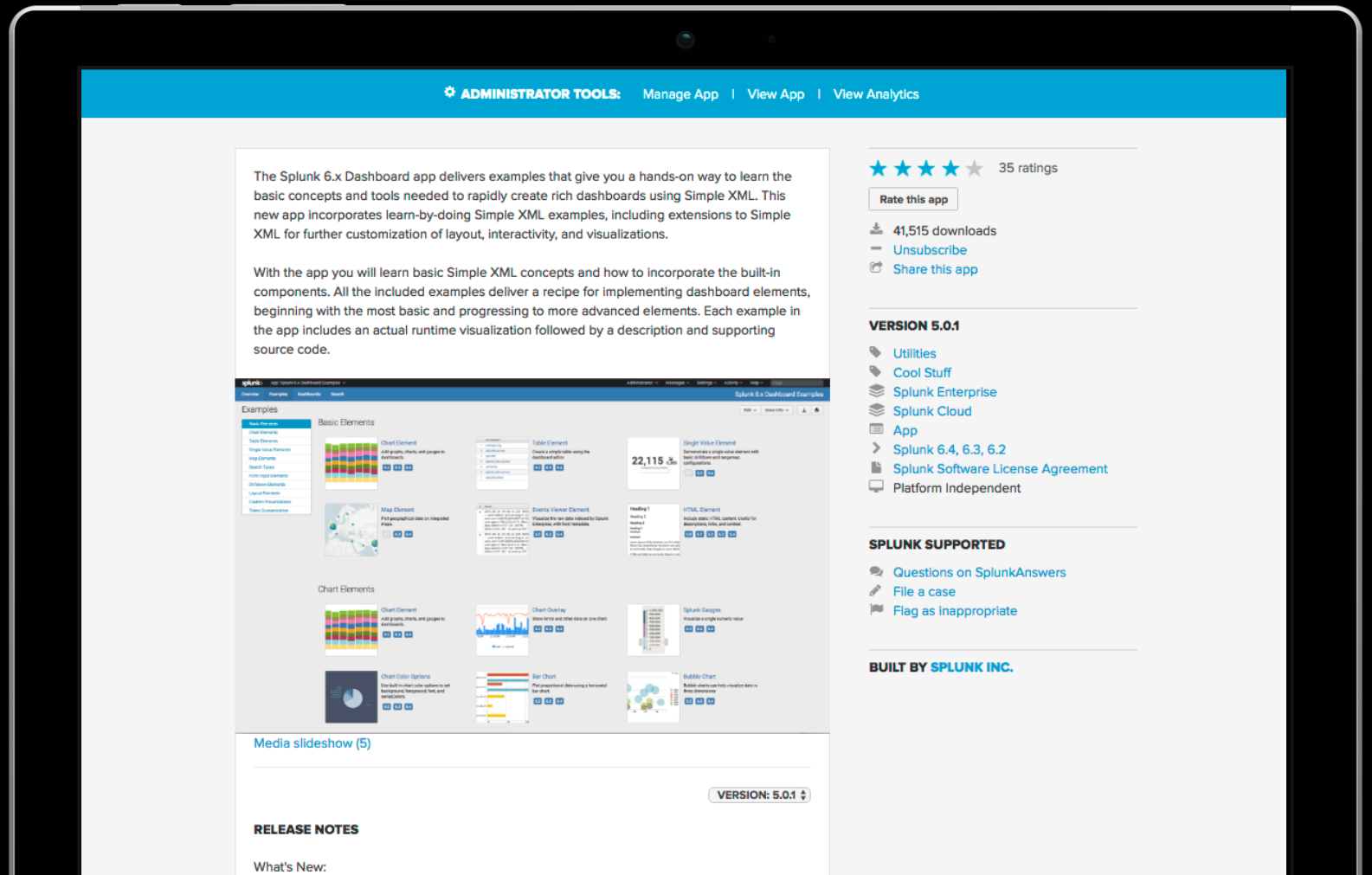
Splunk Dashboard Examples App



- Recipe book for dashboards
- Updated on every release
- All kinds of examples
- Tools

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Come Visit – “Ask the Dashboard Expert”

@Dashboard Clinic

- For assistance with troublesome dashboards
- For migration tips
- To brag about something cool you built
- To ask questions
- Or, just to say Hi!

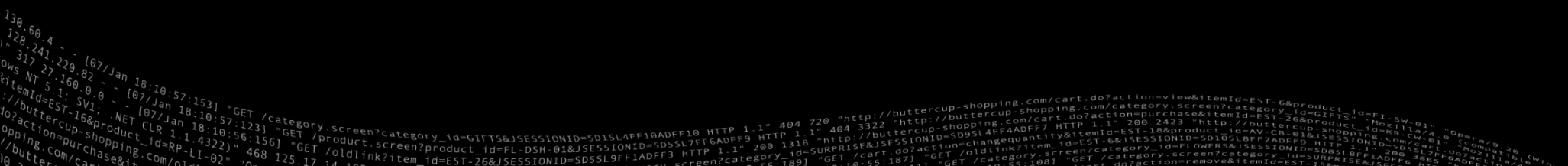

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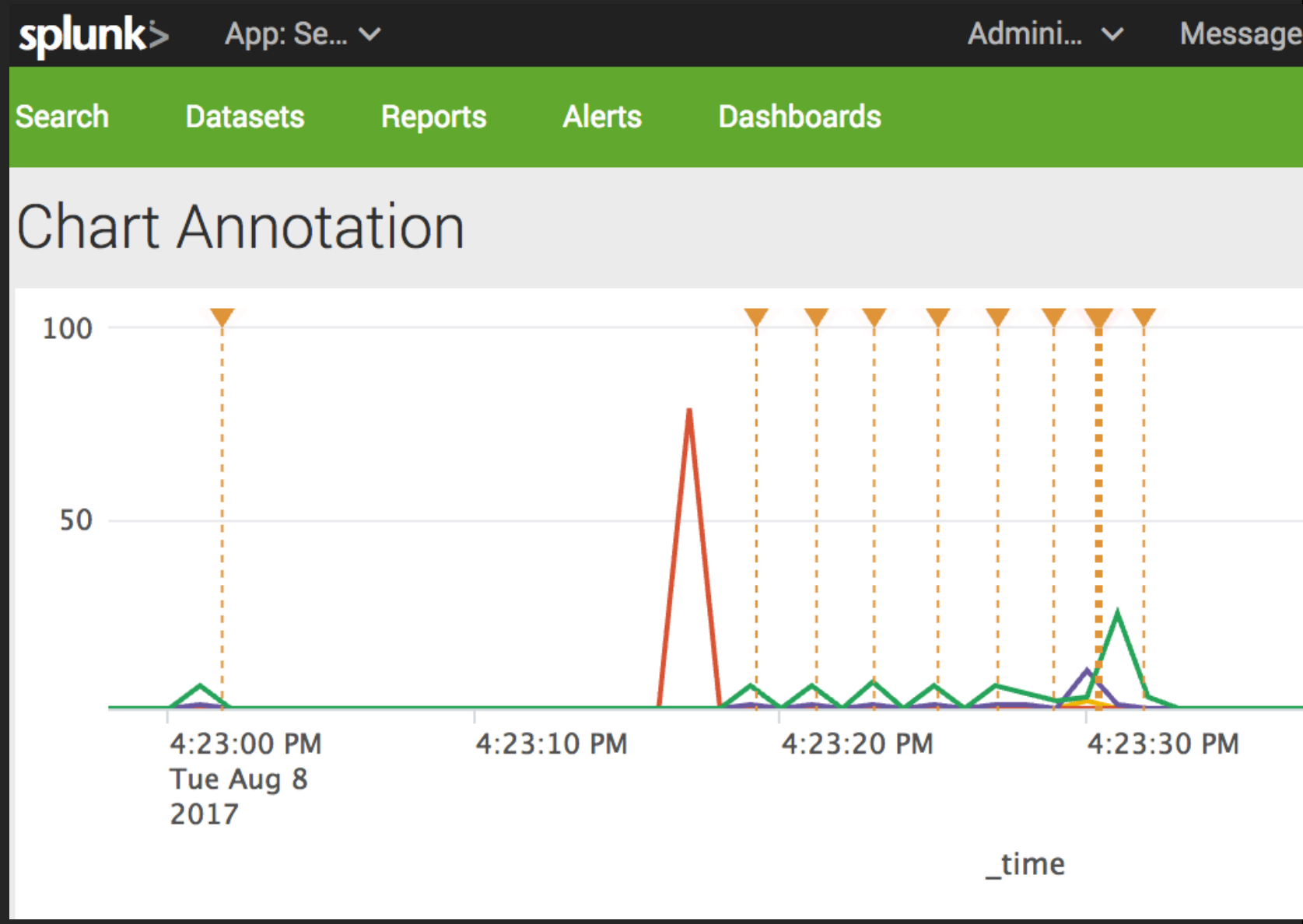
Chart Annotation

New in 7.0



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