Dashboard Wizardry

Advanced Dashboard Interactivity

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Brought To You By...

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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)
Agenda

- Background
- Live Example
  - Tokens & Form Inputs
  - Event Handlers
  - Show/Hide Content
  - Search Events
- Wrap-up
What Is A Dashboard?
Anatomy Of A Dashboard

<form>
  <label>My Dashboard</label>
  <fieldset>
    <input/>
    <!-- form inputs -->
  </fieldset>
  <row>
    <panel>
      <chart>
        <!-- ... -->
      </chart>
      <table>
        <!-- ... -->
      </table>
    </panel>
  </row>
</form>
Dashboard Technology Stack

- Drag-and-Drop UI Editor
- Simple XML
- CSS/JS Extensions
- HTML
- SplunkJS
- CoreJS
- UI Framework / SplunkD

Capability / Complexity

Public API

Private API
### Reference To Dashboard Fundamentals

<table>
<thead>
<tr>
<th>Layout</th>
<th>Search Managers</th>
<th>Event Managers</th>
<th>Form Inputs</th>
<th>Display Controls</th>
<th>Visualizations</th>
<th>Extensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Row</td>
<td>• Search</td>
<td>• Input</td>
<td>• Text</td>
<td>• Depends</td>
<td>• Events</td>
<td>• JavaScript</td>
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<tr>
<td>• Panel</td>
<td>• Post-process</td>
<td>• Change</td>
<td>• Radio</td>
<td>• Rejects</td>
<td>• Table</td>
<td>• CSS</td>
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<tr>
<td>• Element</td>
<td>• Report</td>
<td>• Search</td>
<td>• Dropdown</td>
<td>• Trellis</td>
<td>• Line</td>
<td>• Dashboard.js</td>
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<td></td>
<td>• Cache</td>
<td>• Drilldown</td>
<td>• Checkbox</td>
<td></td>
<td>• Area</td>
<td>• Dashboard.css</td>
</tr>
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<td></td>
<td>• Refresh</td>
<td>• Selection</td>
<td>• Multiselect</td>
<td></td>
<td>• Column</td>
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<td>• Refresh type</td>
<td>• Init</td>
<td>• Link</td>
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<td>• Radial gauge</td>
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<td>• Filler gauge</td>
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<td>• Marker gauge</td>
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<td>• Map</td>
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<td></td>
<td>• Choropleth map</td>
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</tr>
</tbody>
</table>

**New in Splunk Enterprise 7.0**

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Token Management
Let’s Build Some Dashboards!
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)
The Data: Buttercup Go
Building Dashboards
Part I
Tokens

- Automatic data binding
- Variables – connecting components and interactions
- Use in UI or XML
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)
  - $token|myfilter$
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
Building Dashboards

Part II
Event Handlers

- Introduce behaviors based on event hooks
  - User initiated events, or search job events
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
Event Handlers
Configure Behaviors

- Set tokens
- Unset tokens
- Link to another page or search
- Evaluate new tokens
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>`
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
Building Dashboards

Part III
Wrap-up
More Information

- Splunk Dashboard Examples
  - https://splunkbase.splunk.com/app/1603/

- Documentation
  - http://docs.splunk.com/Documentation/Splunk/7.0.0/Viz/PanelreferenceforSimplifiedXML
Splunk Dashboard Examples App

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

New in 7.0
THANK YOU

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