Applications with Splunk UI and React Visualizations

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Overview

- What we're going to build / The End Result: 1min
- How this would have been done in the old world: 1min
- Quick reminder about React & styled-components: 1min
- The three primary building blocks that we use for our app: 5-10min
- Splunk UI intro
- Dashboard Framework
- React Visualizations
- UI Deconstruction: 1min
- Roughly associate the responsibilities of packages to deconstructed UI: 1min
- Setup: 1min
- classic folder structure
- The Main View: 5-10min

Action Plan

1. Demo
2. The 3 building blocks we will use
   - Splunk UI
   - Dashboard Framework
   - React Visualizations
3. How we built the demo
4. Bonus

Demo

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Overview

Enterprise

- SimpleXML Dashboard
- Custom Javascript Extension
- Hide the Chrome
- SplunkJS
- Packaged as Splunk App

The New Way

- React Single Page App
- Packaged as web app
- Component libraries that make it easy to use Splunk services

The 3 building blocks

Splunk UI	@splunk/react-ui …
Dashboard Framework	@splunk/dashboard-core …
React Visualizations	@splunk/react-visualizations …

Splunk UI

What's Splunk UI

- A front-end toolkit

Why Splunk UI

- Documented
- Isolated
- Accessible
- Tested
- Versioned

Where to use

Dashboard Framework

- A set of React components that make it easy to show dashboards
- Dashboards are powered by dashboard definition

```
{
  dataSources: {...},
  visualizations:{...},
  layout: {...}
}
```

DDISDO

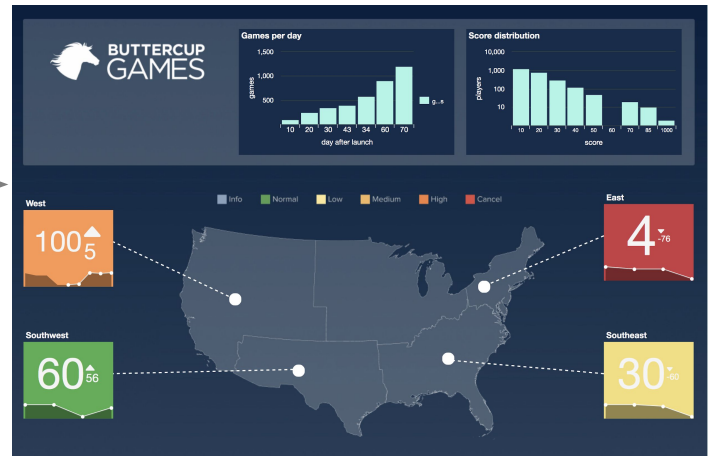
Dashboard Definition In Shiny Dashboard Out

Dashboard Definition

```
{
  dataSources: {...},
  visualizations:{...},
  layout: {...}
}
```

dashboard framework

Shiny Dashboard

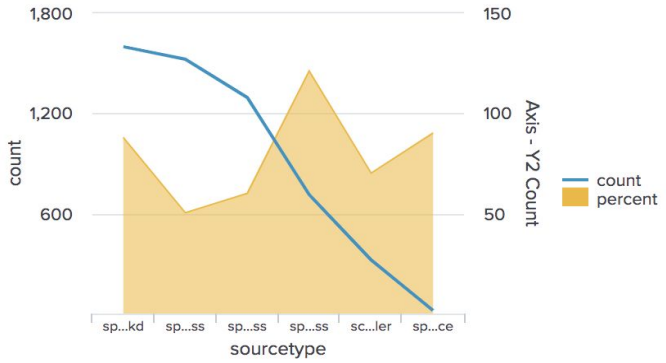


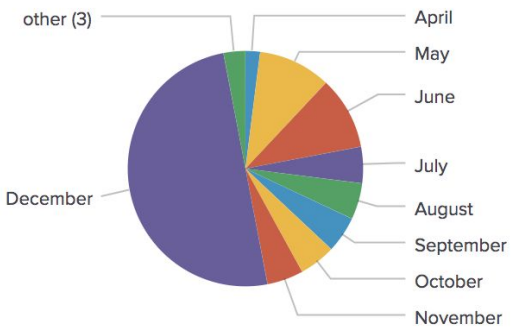
<DashboardCore>

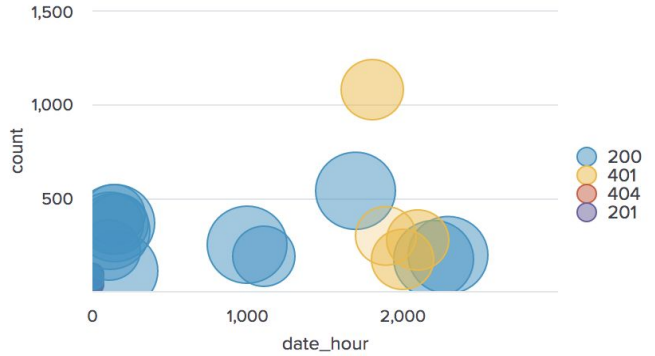
- A React component to render dashboards
- Takes a dashboard definition as prop
- Exposes Dashboard Lifecycle Events via dashboardCorePlugin

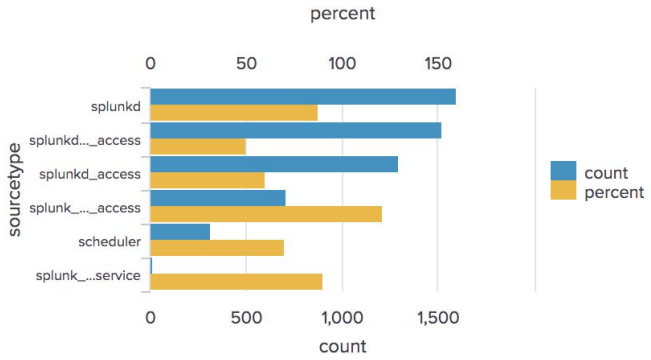
```
<DashboardCore
    width="100%"
    height="100%"
    preset={DefaultPreset}
    definition={dashboardDefinition}
    dashboardCorePlugin={{
        onInitialized: console.log('I am ready!'),
    }}
/>
```

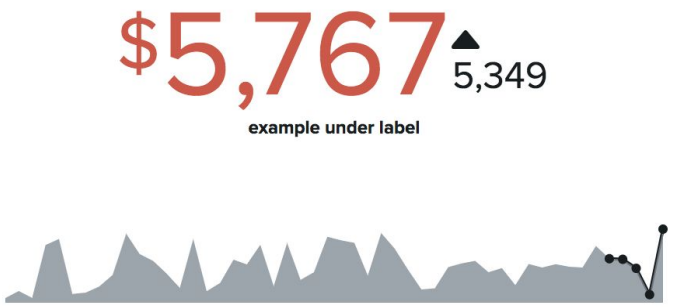
React Visualizations

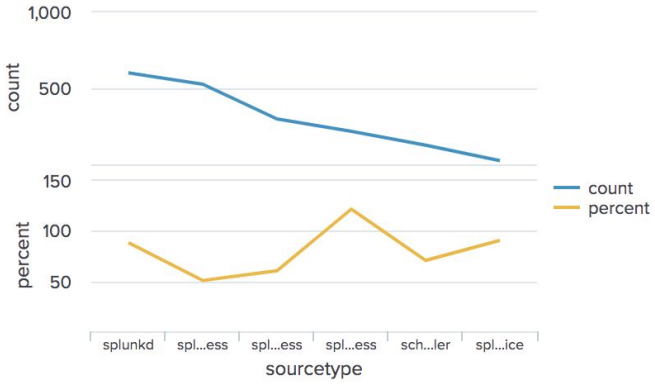












and many more!

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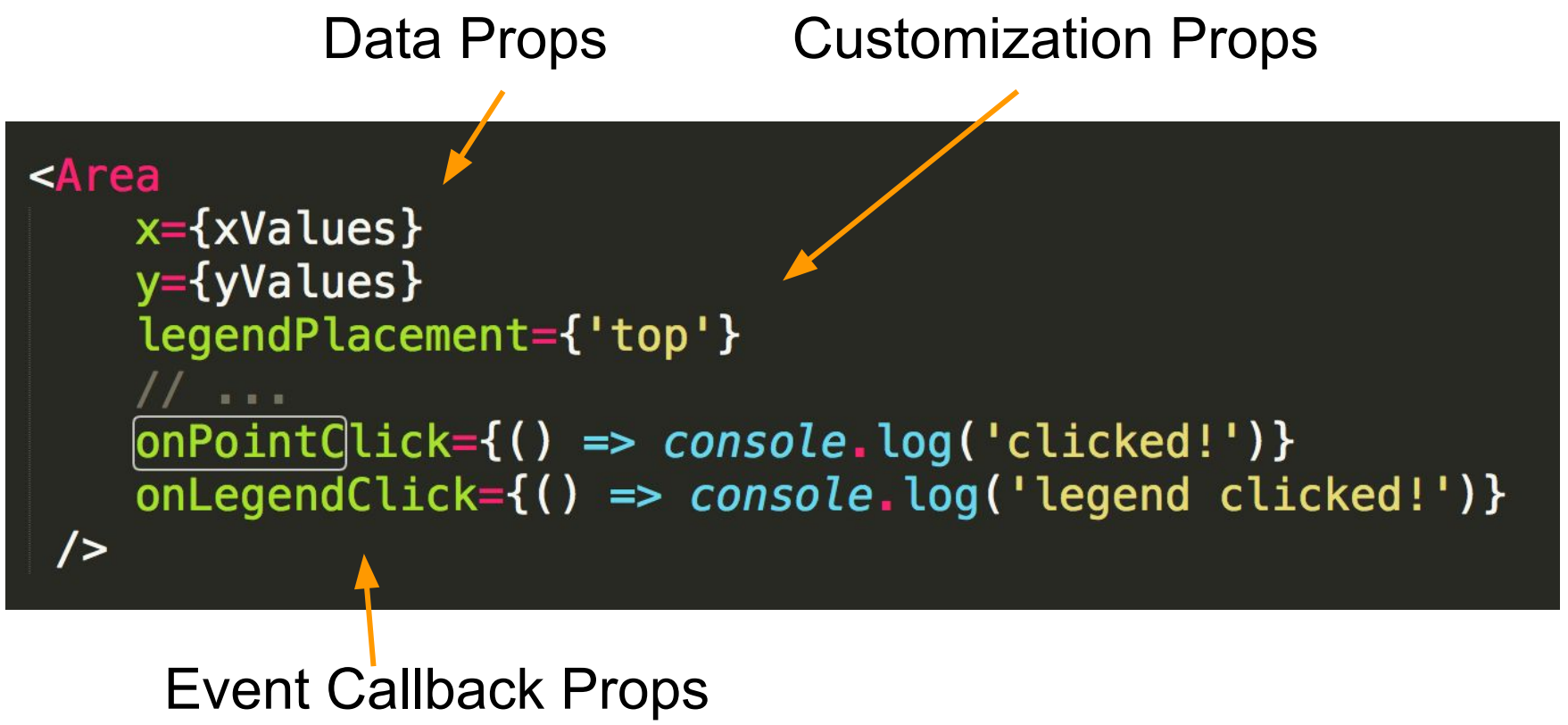
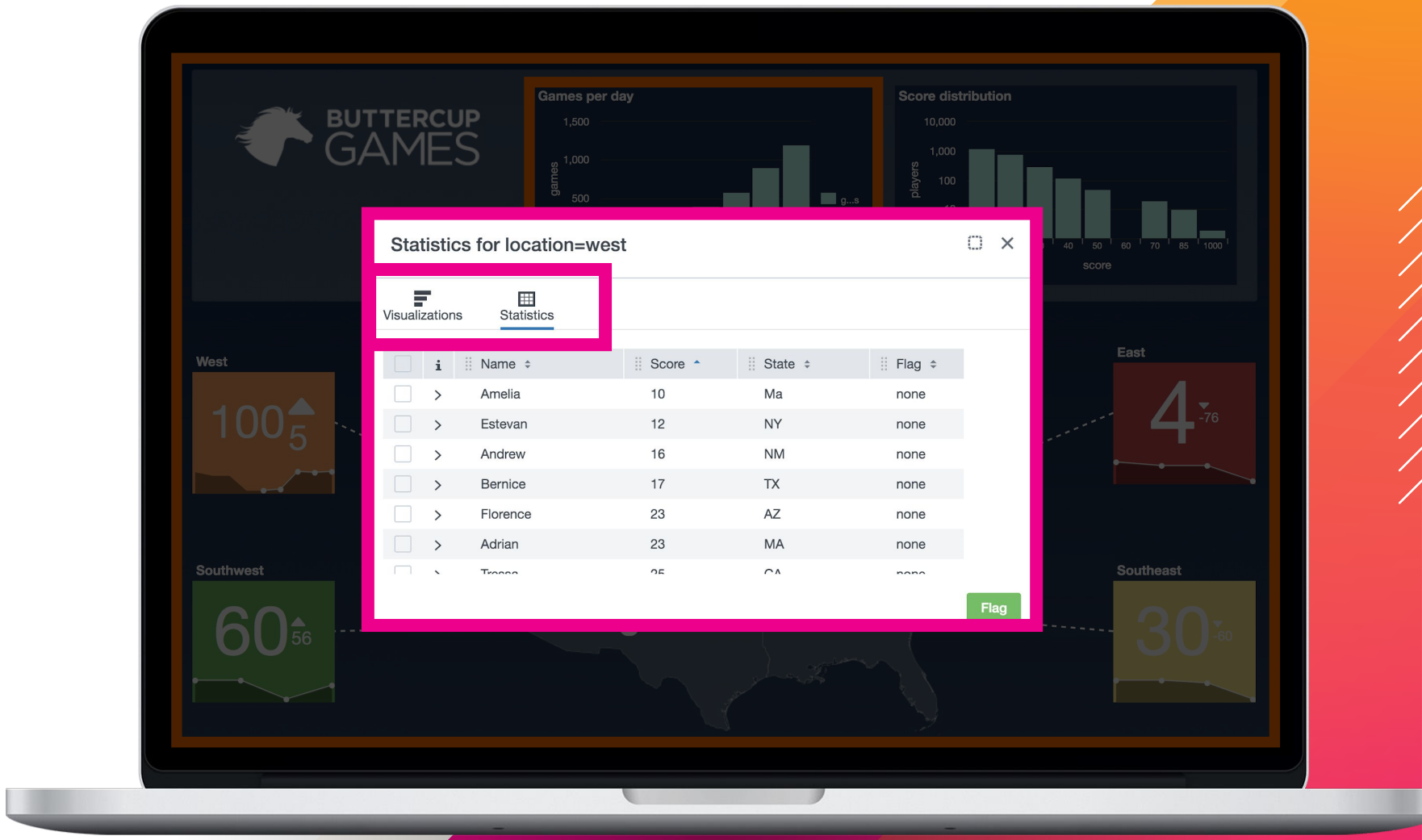
React Visualizations



Let's deconstruct the User Interface

- Dashboard
- Visualizations
- User Interactions
- Modal Window
- Tab Bar
- Table
- Visualization



The 3 building blocks

Splunk UI

- provides UI components (Table, Tab, Modal)
- animates our Modal

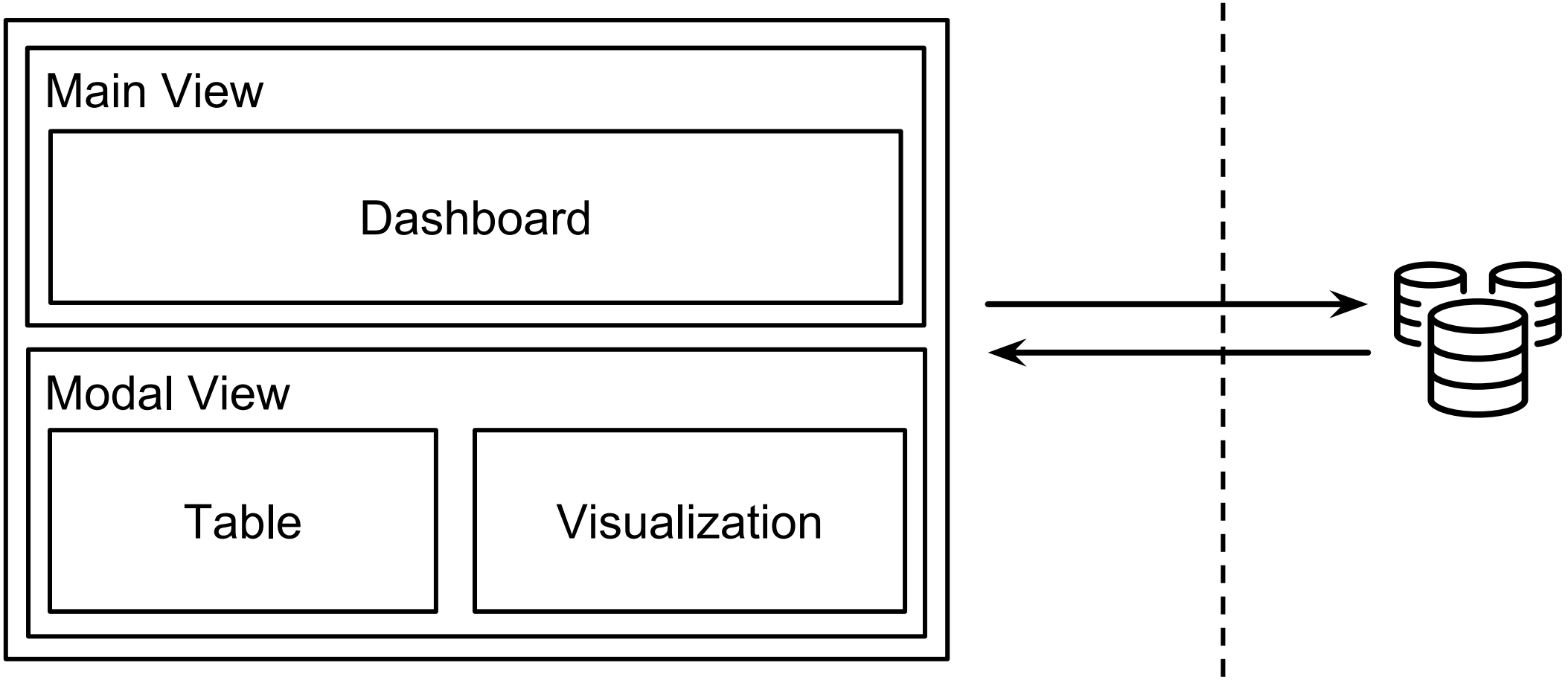
Dashboard Framework

- renders the dashboard
- reacts to click events

React Visualizations

- provides the Visualization component used in the Modal

App Architecture



Setup

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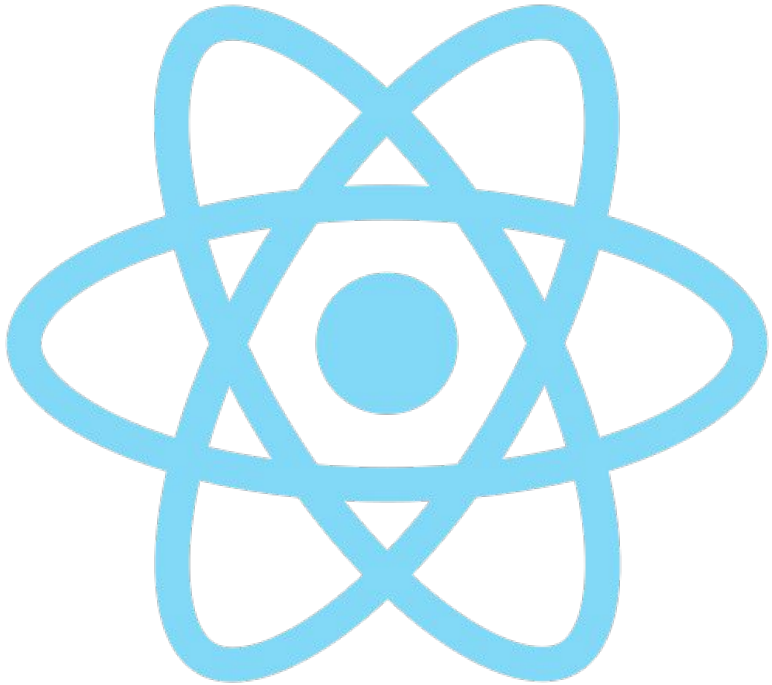
Set-up

- React Single Page Application
- npx create-react-app buttercup-games-app
- yarn add / npm install to add dependencies



Recap

What did we do?

1. Used create-react-app to create the app
2. Added library dependencies
   - @splunk/dashboard-core
   - @splunk/react-ui
   - @splunk/react-visualizations
3. Added peer dependencies
   - styled-components
   - babel-polyfill
   - @splunk/dashboard-presets

The Main View

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Create the Dashboard Definition

- Splunk Investigate has a drag and drop editor to build dashboards
- Use the source, Luke!

Recap

What did we do?

1. Imported the DashboardCore
2. Created a dashboard in Splunk Investigate
3. Copied the dashboard definition from source mode
4. Passed the dashboard definition to DashboardCore

The Modal View

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The Modal View

What Component we are using

- Modal
- TabLayout
- Table
- Area Visualization

```
<Modal>
    <TabLayout>
            <TabLayout.Panel>
             <Area Visualization>
        </TabLayout.Panel>
            <TabLayout.Panel>
                    <Table>
        </TabLayout.Panel>
    <TabLayout>
</Modal>
```

Recap

What did we do?

1. Imported the DashboardCore
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3. Copied the dashboard definition from source mode
4. Passed the dashboard definition to DashboardCore

Connect the Components

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Recap

What did we do?

1. Added event handlers to dashboard definition
2. Passed a dashboard core plugin with event callback functions
3. Set state when dashboard emits event

Bonus: Dark Mode

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Recap

What did we do?

1. Imported theme objects from our packages
2. Passed theme to ThemeProvider
3.

What did we learn?

- How to create a dashboard that can be embedded in a web app
- How to use UI components from Splunk UI
- How to react to dashboard events
- How to use themes

Source Code:

https://github.com/splunk/customized-app-conf19

Dashboard Examples:

https://github.com/splunk/dashboard-conf19-examples

Talk to us at the Visualizations Booth!

Patrick Wied | Senior Software Engineer
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Thank You !

Go to the .conf19 mobile app to

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