

boost(js)

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Working with AngularJs 1.x and React together

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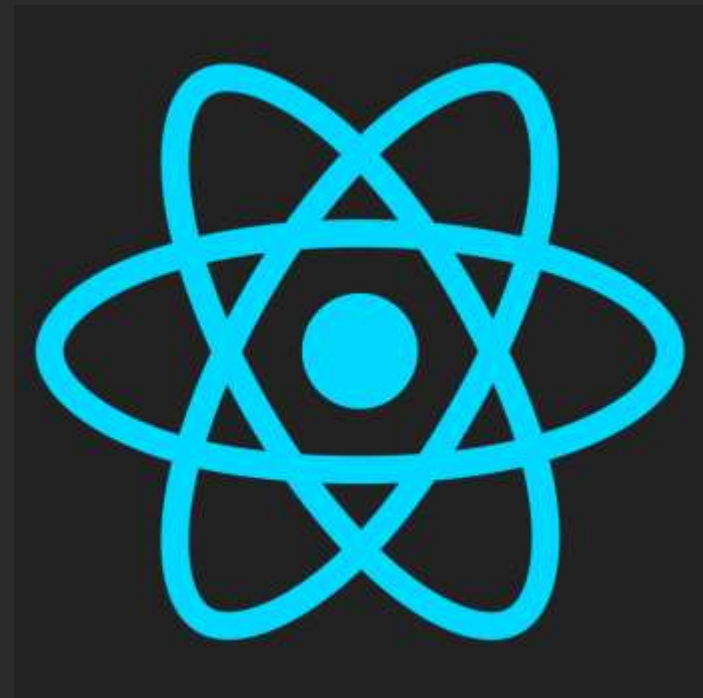
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Don't compare React to Angular



Don't compare React to Angular



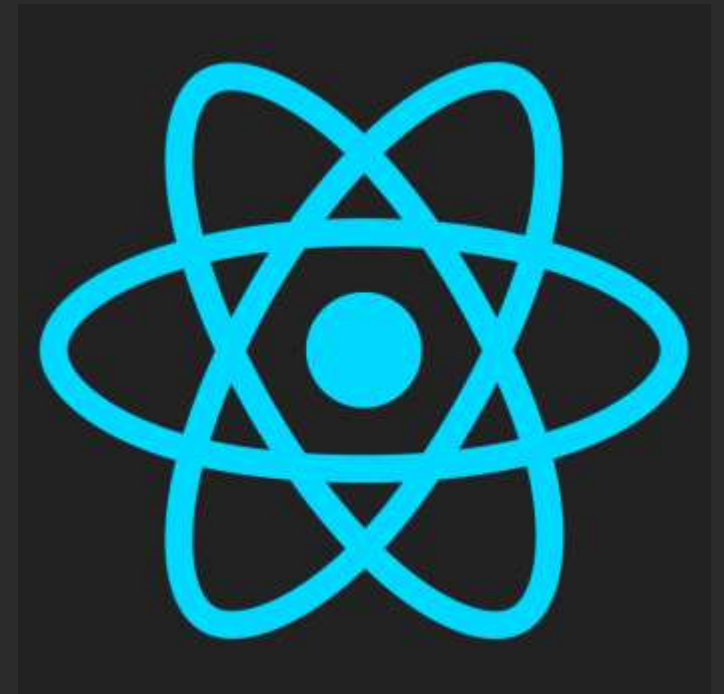
What is AngularJs?

- ✦ Framework for dynamic web apps
 - ✦ Controllers (scope)
 - ✦ Views/Templates
 - ✦ Services (service/factory/provider)
 - ✦ Filters
 - ✦ Binding
 - ✦ Watchers/\$Digest
 - ✦ Events
 - ✦ Directives
-

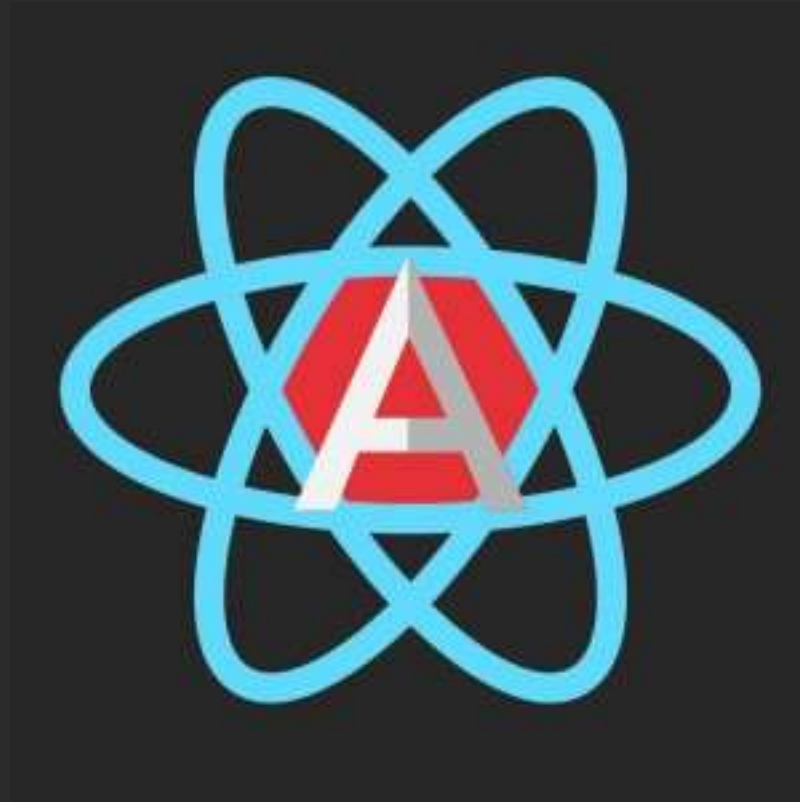


What is React?

- ⚡ A **library** for creating user interfaces
- ⚡ React does one thing and does it well
- ⚡ Renders your UI and responds to events
- ⚡ Virtual DOM
- ⚡ Develop real components



Can Work Together



Intro to React

- ✦ Build components
- ✦ Encapsulated and interoperable custom elements that extend HTML itself
- ✦ A component should ideally only do one thing
- ✦ Use components to separate your concerns

```
class PageTitle extends React.Component {  
  render() {  
    return (<h1>Hello World!</h1>);  
  }  
}
```


JSX

- ✦ JSX lets you create JavaScript objects using HTML syntax
- ✦ Optional
- ✦ Combines ease-of-use of templates with power of JavaScript
- ✦ <http://facebook.github.io/jsx>
- ✦ Need to be "transpiled"
 - ✦ <https://facebook.github.io/react/docs/getting-started.html>
- ✦ Improve performance with Babel
 - ✦ <https://goo.gl/Tu9eTx>

BABEL

Props

- ✦ Props are select pieces of data that are passed to child components from a parent and are immutable by the child

```
var HelloWorld = React.createClass({
  function render() {
    return (<div>Hello {this.props.name}!!</div>);
  }
});

ReactDOM.render(
  <HelloWorld name="Sebastian" />,
  document.getElementById("example")
);
```

State

- ★ States are component data that the component sets itself via:
 - ★ `getInitialState`
 - ★ `setState`
- ★ State and UI always must be synced

```
var HelloWorld = React.createClass({
  getInitialState(){
    return{
      name: ""
    },
  },
  handleOnChange(e){
    this.setState({
      name: e.target.value
    });
  },
  render() {
    return (<input value={this.state.name} onChange={this.handleOnChange} />);
  }
});
```

Life Cycle

Mounting/Unmounting

getInitialState()
getDefaultProps()
componentWillMount()
render()

componentDidMount()
componentWillUnmount()

Update

componentWillReceiveProps()
shouldComponentUpdate()
componentWillUpdate()
render()

componentDidUpdate()

* State before and after DOM manipulations

Virtual DOM

- ✦ Abstract JavaScript version of the DOM
 - ✦ Optimized for performance and memory footprint
 - ✦ Re-Render All The Things
 - ✦ Batch execute all updates
-

TODO

Demo



Why Angular+React?

- ⚡ We ❤️ AngularJs ❤️
 - ⚡ Want to use "Components"
 - ⚡ Don't want to think about \$digest
 - ⚡ React is very cool!
 - ⚡ Directives are powerful but not easy to write
-

Directives – Need to be an expert

No real 'one way' binding

Controller/
Link

Compile
Pre-Link
Post-Link

attribute.
\$observe

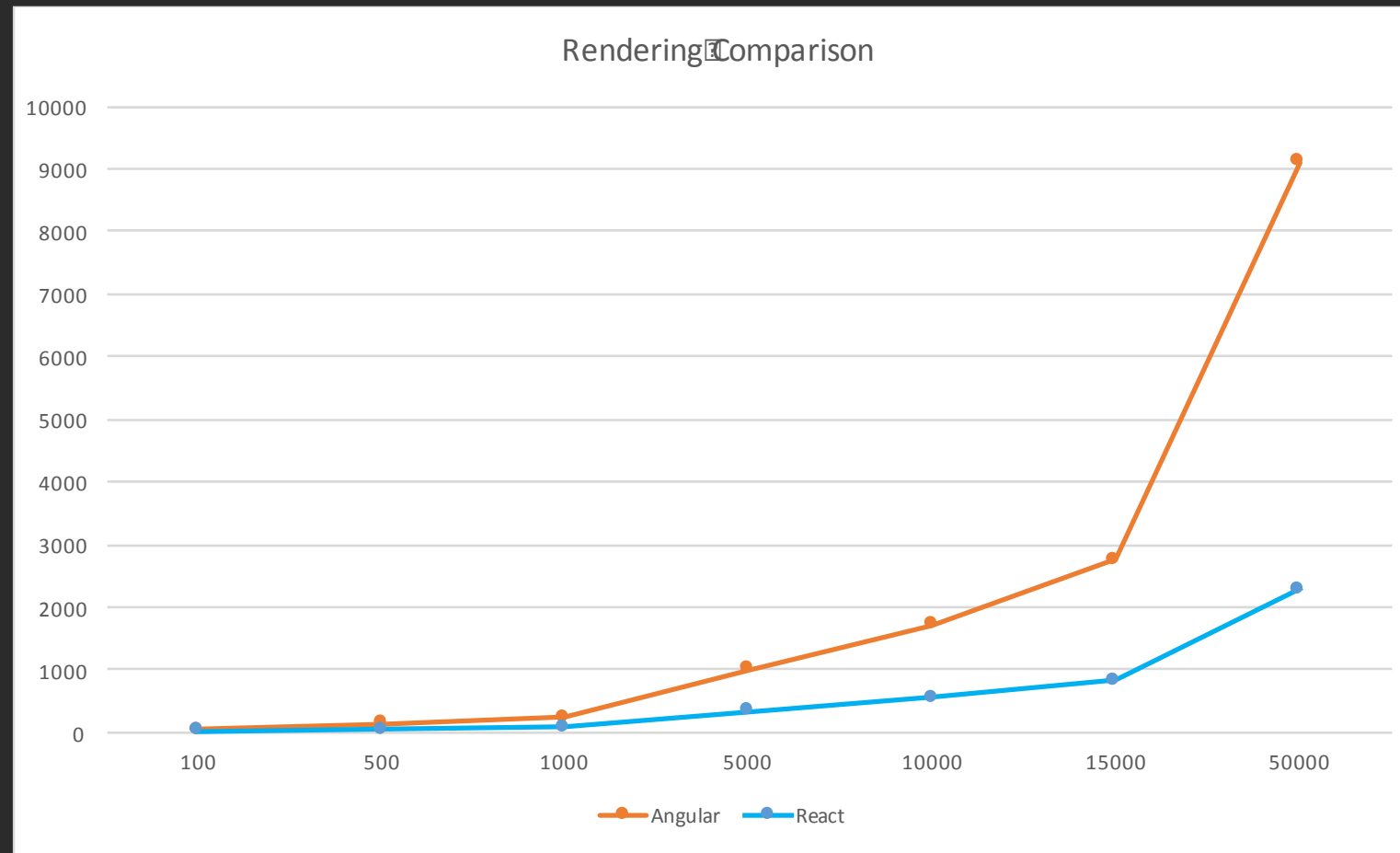
Compile/Link
functions

'ng-repeat'
'track by'

Why Angular+React?

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 - ✦ React is very cool!
 - ✦ Directives are powerful but not easy to write
 - ✦ Performance
-

Performance – AngularJs vs. React



Angular/React/Angular + React

Demo



Ng-React

Watch ▾

86

★ Star

1,846

🔗 Fork

146

- ⚡ ngReact is an AngularJs module that allows React Components to be used in AngularJs applications
- ⚡ Very easy to use
- ⚡ Most of the cases is enough

```
<script>  
  angular.module('app', ['react']);  
</script>
```

```
<body ng-app="app">  
  <div ng-controller="helloController">  
  
    <react-component name="HelloComponent" props="person"/>  
  
  </div>  
</body>
```

<https://github.com/ngReact/ngReact>

Ng-React

Demo



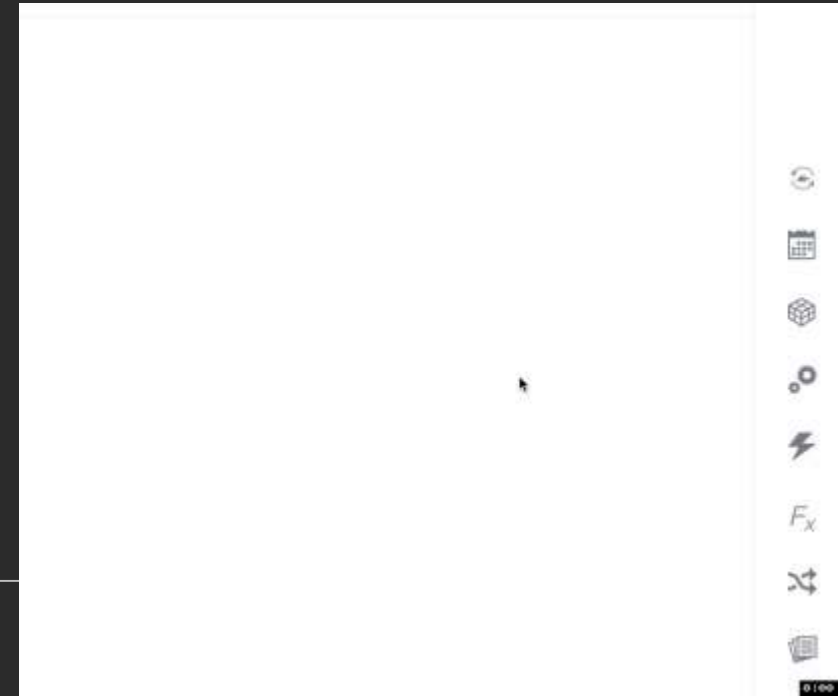
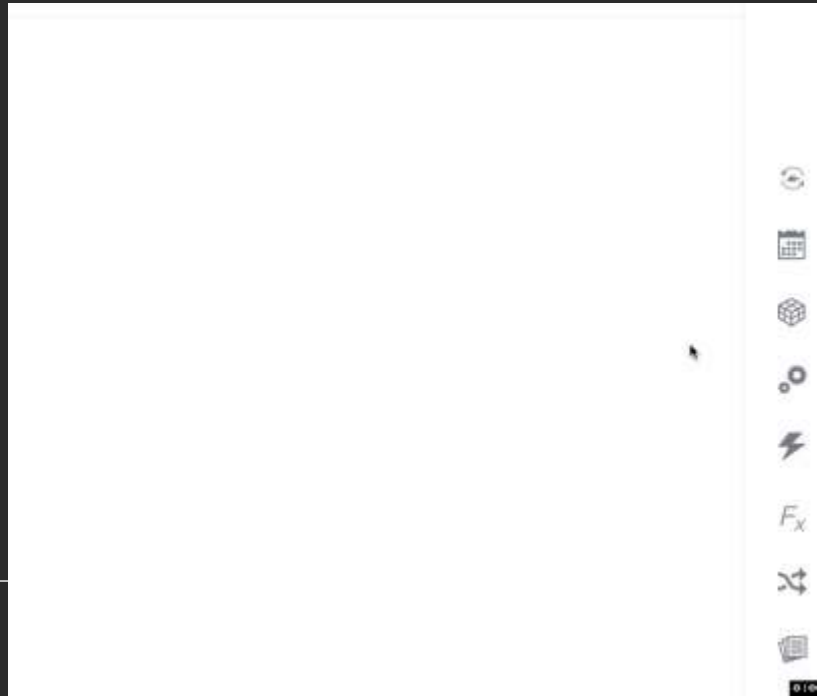
Ng-React - Bindings

Demo



Use case

- ⚡ Rendering a really long list (ng-repeat)
- ⚡ Very dynamic layout
- ⚡ Performance problems
- ⚡ Really separation of concerns



Links

- ✦ <http://blog.500tech.com/using-reactjs-with-angularjs>
 - ✦ <https://www.bimeanalytics.com/engineering-blog/you-put-your-react-into-my-angular>
 - ✦ <http://www.bennadel.com/blog/2902-rendering-reactjs-components-in-angularjs-using-angularjs-directives.htm>
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Summary

- ✦ Overview React
- ✦ Why AngularJs + React
- ✦ The “glue” directive between AngularJs and React
- ✦ Ng-React

Questions?
