

The easy way to make your CF App Pretty and Cool with VueJS and CF APIs

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Vue.js

Who am I?

- Software Consultant for Ortus Solutions
- Work with ColdBox, CommandBox, ContentBox every day
- Working with Coldfusion for 20 years
- Working with Javascript just as long
- Love learning and sharing the lessons learned
- From New Zealand, live in Bakersfield, Ca
- Loving wife, lots of kids, and countless critters

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What are we talking about today?

- Fact: Most of us work on existing apps or legacy apps
- Fact: We can't jump on the bandwagon of the latest and greatest javascript framework as they get released weekly
- Q: What are some of the new javascript frameworks?
- Q: How does VueJS fit into the javascript landscape?
- Q: Why do we want to add VueJS into our existing apps?
- Q: How can we use some of the new technology in our existing apps?
- Show: Getting started with VueJS - Directives
- Demo: Let's look at some code
- Q: How can we learn more about VueJS?

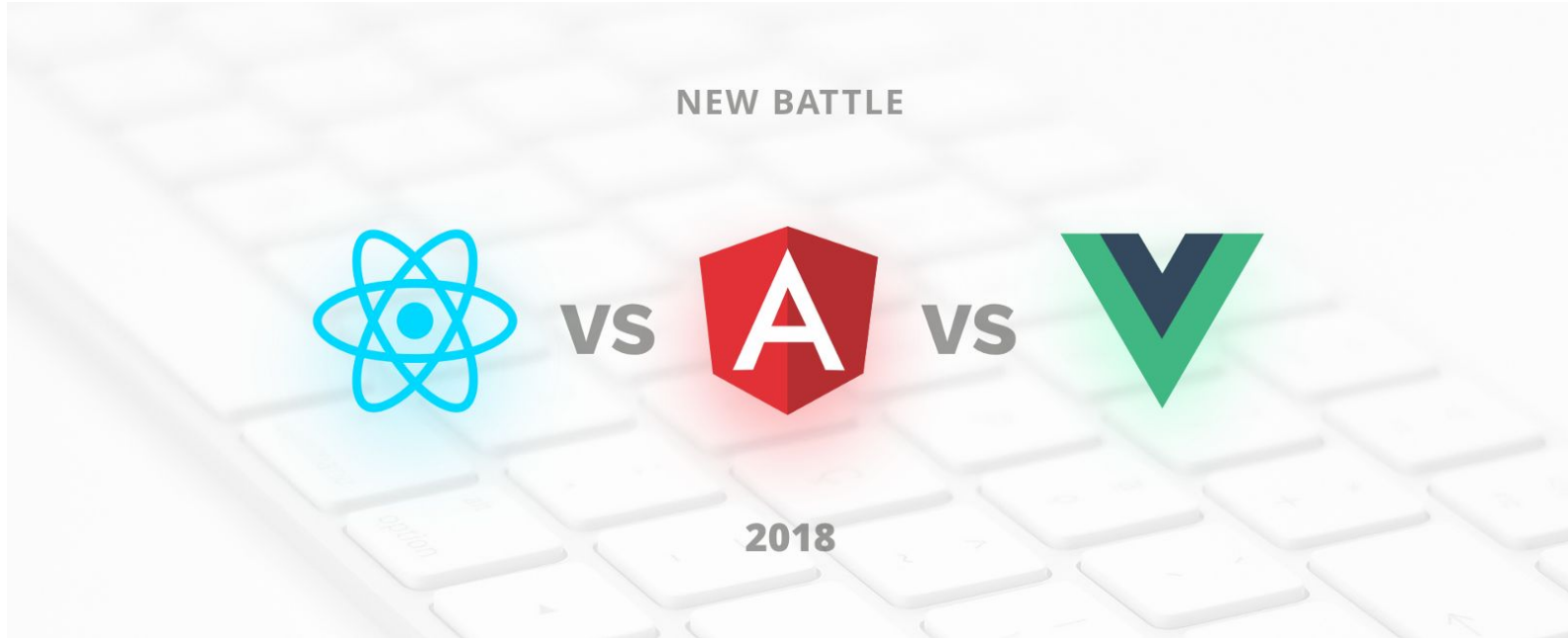
Fact: Most of us work on existing apps or legacy apps

- Very few people get to work on Greenfield Apps
- We have to maintain the apps we have given to us
- We might have yui, moo tools prototype jquery & a few more in real legacy app

Fact: We can't jump on the bandwagon of the latest and greatest javascript framework as they get released weekly

- There are lots of Javascript plugins, libraries and frameworks out there
- It felt like there was one released a week for a while
- It has calmed down, but still lots of options, can feel overwhelming
- There are libraries, Frameworks and ways of life, not all will work with your app

Q: What are some of the new javascript frameworks?



Q: How does VueJS fit into the javascript landscape?

THERE CAN BE ONLY ONE



Q: How does VueJS fit into the javascript landscape?

Just kidding



Q: How does VueJS fit into the javascript landscape?

Comparison (Vue biased possibly)

<https://vuejs.org/v2/guide/comparison.html>

- VueJS - 115k stars on github - <https://github.com/vuejs/vue>
- React - 112k stars on github - <https://github.com/facebook/react>
- AngularJS (1) - 59k stars on github - <https://github.com/angular/angular.js>
- Angular (2,3,4,5,6) - 39k stars on github - <https://github.com/angular/angular>
- Ember - 20k stars on github - <https://github.com/emberjs/ember.js/>
- Knockout, Polymer, Riot

Q: How does VueJS fit into the javascript landscape?

Big Players share the same big wins

- Virtual Dom for better UI performance
 - Only update changes not everything
- Reactive and composable components
 - You change the data, the Framework changes the UI



Q: How does VueJS fit into the javascript landscape?

Why VueJS?

- Stable Progressive framework, with sponsors and solid community backing.
- Easy to learn and understand (CFML Dev friendly concepts)
- Simple and Flexible - Does not require a build system
- Awesome Documentation!!!
- Lightweight (20-30kb)
- Great for simple components or full complex applications
- Official support for State Management (Vuex) and Routing (Vue Router)
- Great Dev Tools and CLI tools and IDE Tools / Plugins

Q: Why do we want to add VueJS into our existing apps?

- Easy to get started
- Easy to learn
- Easy to get value
- Easy to integrate
- Easy to have fun
- Easy to find documentation



Q: Why do we want to add VueJS into our existing apps?

Extremely Flexible

Most frameworks make you use their build system, their templates, and jump through so many hoops.

- You can just include the library/core and use it where you need it
`<script src="https://cdn.jsdelivr.net/npm/vue@2.5.17/dist/vue.js"></script>`
- Angular 1 was like that
- Angular 2,3,4,5 etc and React is not really like that
 - All or nothing approach essentially

Q: Why do we want to add VueJS into our existing apps?

Component Based (if you want to)

- **Abstract away the logic and display code**
- **Compose your Applications with smaller pieces**
- **Easier reuse and code sharing**
- **Lots of great components available**

<https://github.com/vuejs/awesome-vue>

Q: Why do we want to add VueJS into our existing apps?

If you want to, you can:

- Build a full Single Page App (SPA) App
 - Including Server Side Rendering for additional speed and SEO benefits
- Build and Release Desktop apps
 - Windows and Mac with Electron
- Build and Release Mobile Apps
 - IOS and Android with Cordova
 - Vue Native (similar to React Native)

Q: How can we use some of the new technology in our existing apps?

- Better form elements
- Better UI/UX in general
- Form Validation - more flexible than CFInput
- Data tables - Search, Pagination Sorting, Computing powered by ColdFusion APIs
- SPA, Desktop and Mobile apps powered by ColdFusion APIs

Show: Getting started with VueJS - Outputting Text

Binding template output to data - {{ interpolation }}

```
<h2>{{ searchText }}</h2>
<script>
  new Vue({
    el: '#app1',
    data: {
      searchText: 'VueJS'
    }
  })
</script>
```

Show: Getting started with VueJS - Outputting Attributes

Binding template output to data

```
<h2 class="{{ searchClass }}">{{ searchText }}</h2> WON'T WORK  
<h2 v-bind:class="searchClass">{{ searchText }}</h2> WILL WORK  
<h2 :class="searchClass">{{ searchText }}</h2> WILL WORK - Shorthand  
<script>  
  new Vue({  
    el: '#app1',  
    data: {  
      searchText: 'VueJS',  
      searchClass: 'small'  
    }  
  })
```

Show: Getting started with VueJS - Directives

V-model

```
<input v-model="searchText" class="form-control">
<script>
  new Vue({
    el: '#app1',
    data: {
      searchText: 'VueJS'
    }
  })
</script>
```

Show: Getting started with VueJS - Directives

V-show - show or hide html elements (CSS)

```
<button v-show="isFormValid">Submit</button>
```

```
<script>
```

```
  new Vue({  
    el: '#app1',  
    data: {  
      isFormValid: false  
    }  
  })
```

```
</script>
```

Show: Getting started with VueJS - Directives

V-if- insert or remove html elements (v-else-if is available too)

```
<button v-if="isFormValid">Submit</button> Function Call  
<button v-if="name === ''">Cancel</button> Inline evaluation  
<script>  
  new Vue({  
    el: '#app1',  
    data: {  
      isFormValid: false,  
      Name: ''  
    }  
  })  
</script>
```

Show: Getting started with VueJS - Directives

V-else Negates a prior v-if directive

```
<button v-if="isFormValid">Submit</button>
```

```
<button v-else>Cancel</button>
```

```
<script>
```

```
  new Vue({  
    el: '#app1',  
    data: {  
      isFormValid: false  
    }  
  })
```

```
</script>
```

Show: Getting started with VueJS - Directives

V-for Loop through an array, struct, etc

```
<li v-for="color in colors">
  {{ color }}
</li>
<script type="text/javascript">
  new Vue({
    el: '#app1',
    data: {
      Colors: [
        "Blue",
        "Red"
      ]
    }
  })
</script>
```

Show: Getting started with VueJS - Directives

V-for Loop through an array, struct, etc

```
<li v-for="(value,key) in person">  
  {{ key }}: {{ value }}<br>  
</li>
```

```
<script type="text/javascript">  
  new Vue({  
    el: '#app1',  
    data: {  
      person: {  
        FirstName: "Gavin",  
        LastName: "Pickin"  
      }  
    }  
  })  
</script>
```


Show: Getting started with VueJS - Directives

V-on:click

```
<button v-on:click="submitForm">Submit</button>
```

```
<button @click="cancelForm">Cancel</button> Shorthand
```

Event Modifiers: <https://vuejs.org/v2/guide/events.html>

Show: Getting started with VueJS - Directives

V-on:keyup.enter

```
<button v-on:keyup.enter="submitForm">Submit</button>
```

```
<button @keyup.esc="cancelForm">Cancel</button> Shorthand
```

```
<button @keyup.esc="alert('hi');">Say Hi</button> Shorthand & Inline
```

Show: Getting started with VueJS - Directives

More information on directives

<https://vuejs.org/v2/api/#Directives>

Show: Getting started with VueJS - Vue App Structure

Options / Data - <https://vuejs.org/v2/api/#Options-Data>

```
<script type="text/javascript">
```

```
new Vue({
  el: '#app1',
  data: {
    num1: 10
  },
  methods: {
    square: function () { return this.num1 * this.num1 }
  },
  computed: {
    aDouble: function () {
      return this.num1 * 2
    }
  }
})
```

Show: Getting started with VueJS - Vue App Structure

Life Cycle Hooks - <https://vuejs.org/v2/api/#Options-Lifecycle-Hooks>

```
<script type="text/javascript">
new Vue({
  el: '#app1',
  mounted: function() {
    setValues();
    resetFields();
  },
  created: function() {
    doSomething();
  }
})
</script>
```

Demo: Vegas Baby - Roulette mini game

Thanks to Scott Steinbeck who whipped up some of the code for this game.

Simple roulette wheel.

Start with 100 chips.

Pick 5 numbers

Spin the wheel.

Each bet is 1 chip.

Each win is 36 chips.

Play until you run out of chips.

Let's have a look:

<http://127.0.0.1:52080/roulette/index.html>



Demo: jQuery vs VueJS DOM Manipulation

Pesticide Labels selection list for CSTC Safety

This company is a safety training company. When they do Pesticide trainings, they need to select the pesticides the company works with. This little tool helps them select which pesticides they need in their documentation. As this list has grown, the responsiveness has dropped, dramatically.

We're going to test hiding 3500 table rows and then showing them again in jQuery vs VueJS.

[jQuery Version](#)

Demo: jQuery vs VueJS DOM Manipulation

Pesticide Labels selection list for CSTC Safety

jQuery Version

1782ms hide

1859ms show

Vue

Items - V-SHOW

Demo: jQuery vs VueJS DOM Manipulation

Pesticide Labels selection list for CSTC Safety

jQuery Version

1782ms hide

1859ms show

Vue

Items - V-SHOW

415ms hide

777ms show

Vue

Items - V-IF

Demo: jQuery vs VueJS DOM Manipulation

Pesticide Labels selection list for CSTC Safety

<u>jQuery Version</u>		1782ms hide	1859ms show
<u>Vue</u>	Items - V-SHOW	415ms hide	777ms show
<u>Vue</u>	Items - V-IF	409ms hide	574ms show
<u>Vue</u>	Filtered Items Methods		

Demo: jQuery vs VueJS DOM Manipulation

Pesticide Labels selection list for CSTC Safety

<u>jQuery Version</u>		1782ms hide	1859ms show
<u>Vue</u>	Items - V-SHOW	415ms hide	777ms show
<u>Vue</u>	Items - V-IF	409ms hide	574ms show
<u>Vue</u>	Filtered Items Methods	188ms hide	476ms show
<u>Vue</u>	Filtered Items Computed		

Demo: jQuery vs VueJS DOM Manipulation

Pesticide Labels selection list for CSTC Safety

<u>jQuery Version</u>		1782ms hide	1859ms show
<u>Vue</u>	Items - V-SHOW	415ms hide	777ms show
<u>Vue</u>	Items - V-IF	409ms hide	574ms show
<u>Vue</u>	Filtered Items Methods	188ms hide	476ms show
<u>Vue</u>	Filtered Items Computed	145ms hide	455ms show

Demo: Form Validation

Vuelidate is a great validation library.

Lots of options out there

<https://monterail.github.io/vuelidate/#sub-basic-form>

Note: I use this in Quasar Framework

Demo: Datatable

Pros:

Lots of options out there

Cons:

Most of them require CSS to make them look good, so you might have to get a CSS compatible with your existing styles.

<https://vuejsfeed.com/blog/comparison-of-datable-solutions-for-vue-js>

Q: How can we learn more about VueJS?

VueJS Website

<https://vuejs.org/>

Informative and up to date

- Guide
- API
- Style Guide
- Examples
- Cookbook

Q: How can we get the demos for this presentation?

My Github account

<https://github.com/gpickin/vuejs-cfsummit2018>

Q: How can we learn more about VueJS?

- **Awesome VueJS Framework - Quasar Framework**
<https://quasar-framework.org/>
- **Vuex - State Management Pattern and Library**
<https://vuex.vuejs.org/>
- **Vue Router - Official Vue Router**
<https://router.vuejs.org/>

Q: How can we learn more about VueJS?

VueJS Courses

- [Vue JS 2 - The Complete Guide on Udemy - Approx \\$10](#)
- [Learn Vue 2 - Step by Step - By Laracasts - Free](#)
- [VueSchool.io - Several Courses - Some Free changing to Subscription](#)
 - [VueJS Fundamentals](#)
 - [Dynamic Forms with VueJS](#)
 - [VueJS Form Validation](#)
 - [VueJS + Firebase Authentication](#)
 - [Vuex for Everyone](#)

Greenfield Projects



Quasar

Thanks

I hope you enjoyed the session.

Visit www.gpickin.com to see my follow up blog post with links to code and slides.

Code: <https://github.com/gpickin/vuejs-cfsummit2018>

Got questions?

Hit me up on twitter at @gpickin or in slack @gpickin (cfml and boxteam slack)