

The New Toolchain



Object
Partners
Inc.

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What is OPI?

- Flat consulting firm with 100(ish) consultants in 6 states
- Historically on the JVM (Spring/Hibernate, Groovy, GR8, Open Source)
- Changing with the world (JS, Mobile, Big Data, Microservices, DevOps)
- Engage in the local communities

<https://github.com/jondejong/AGGUDemoApps>

All the code for the demo.

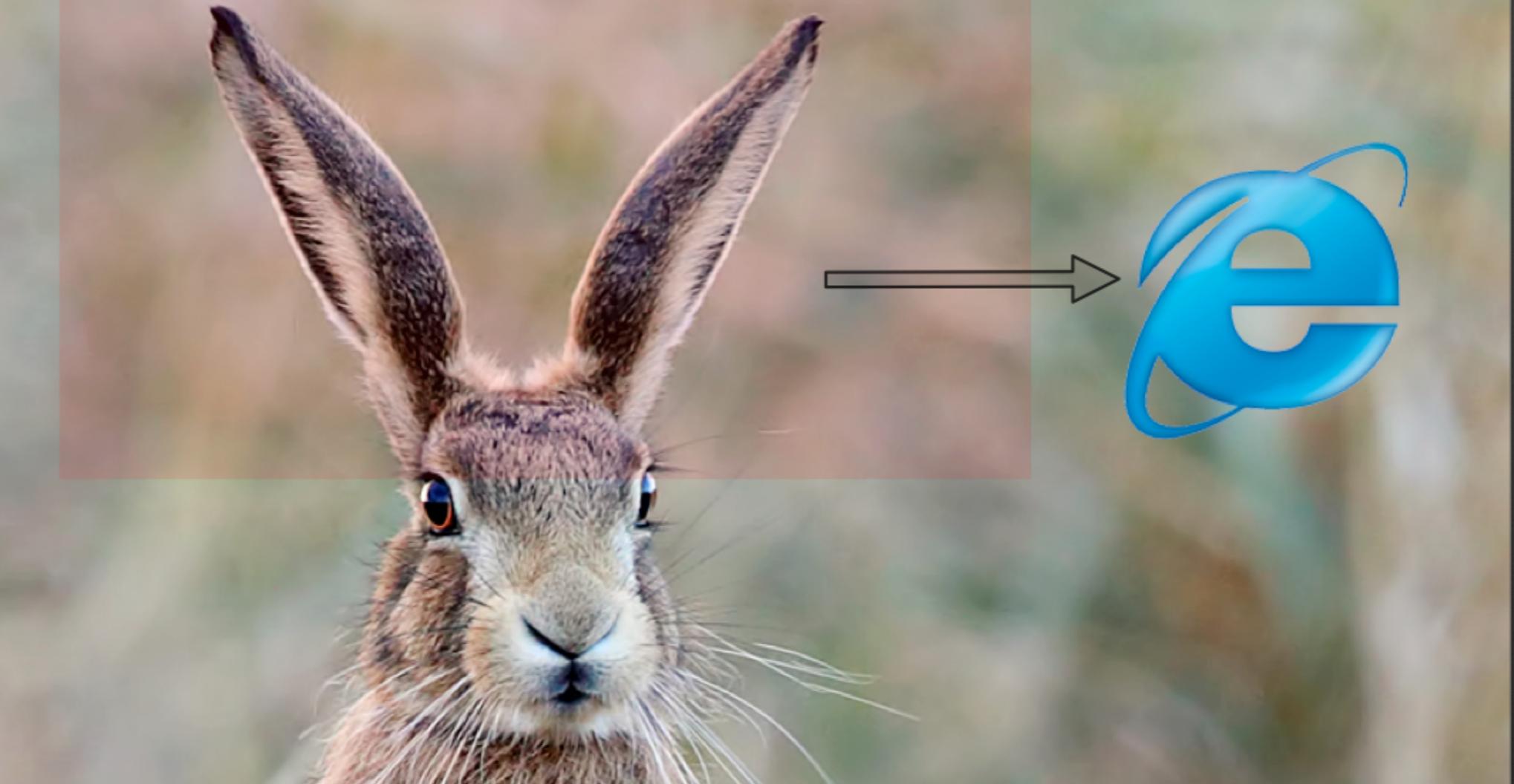
How did we get here?



Big EARs

our apps used to look like this

Big Huge Container



Big EARs

Actually, they looked like this



Big, giant WARs

...and then they looked like this

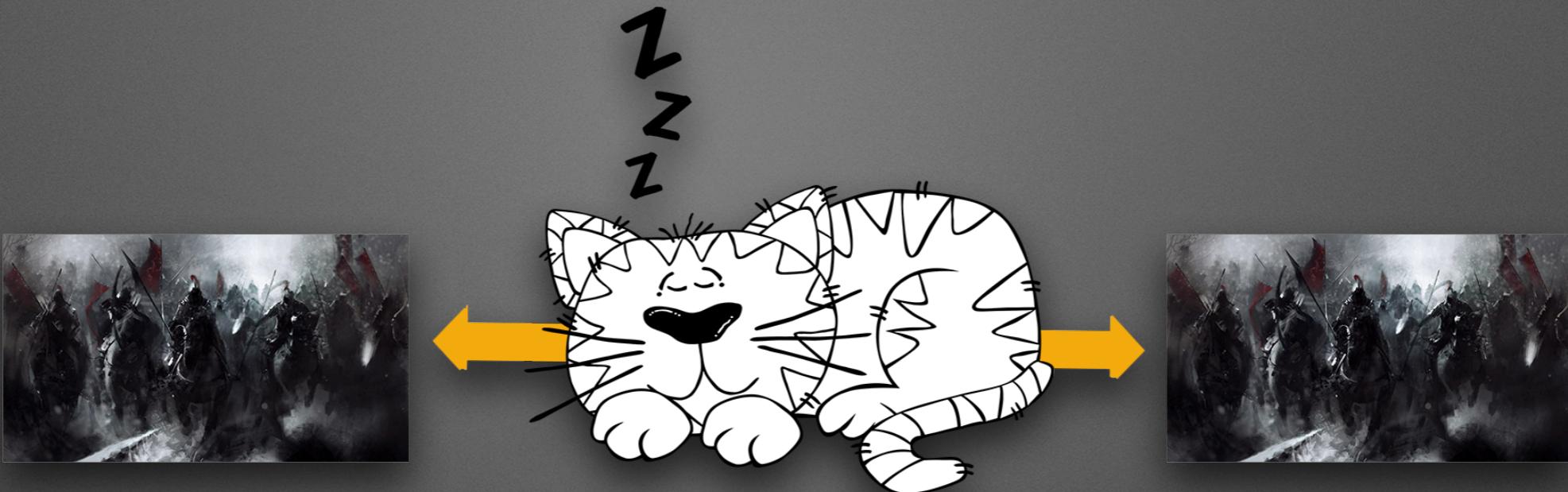


No EJBs, But SOAP

So much **O**verhead **A**ll over the place **P**rotocol

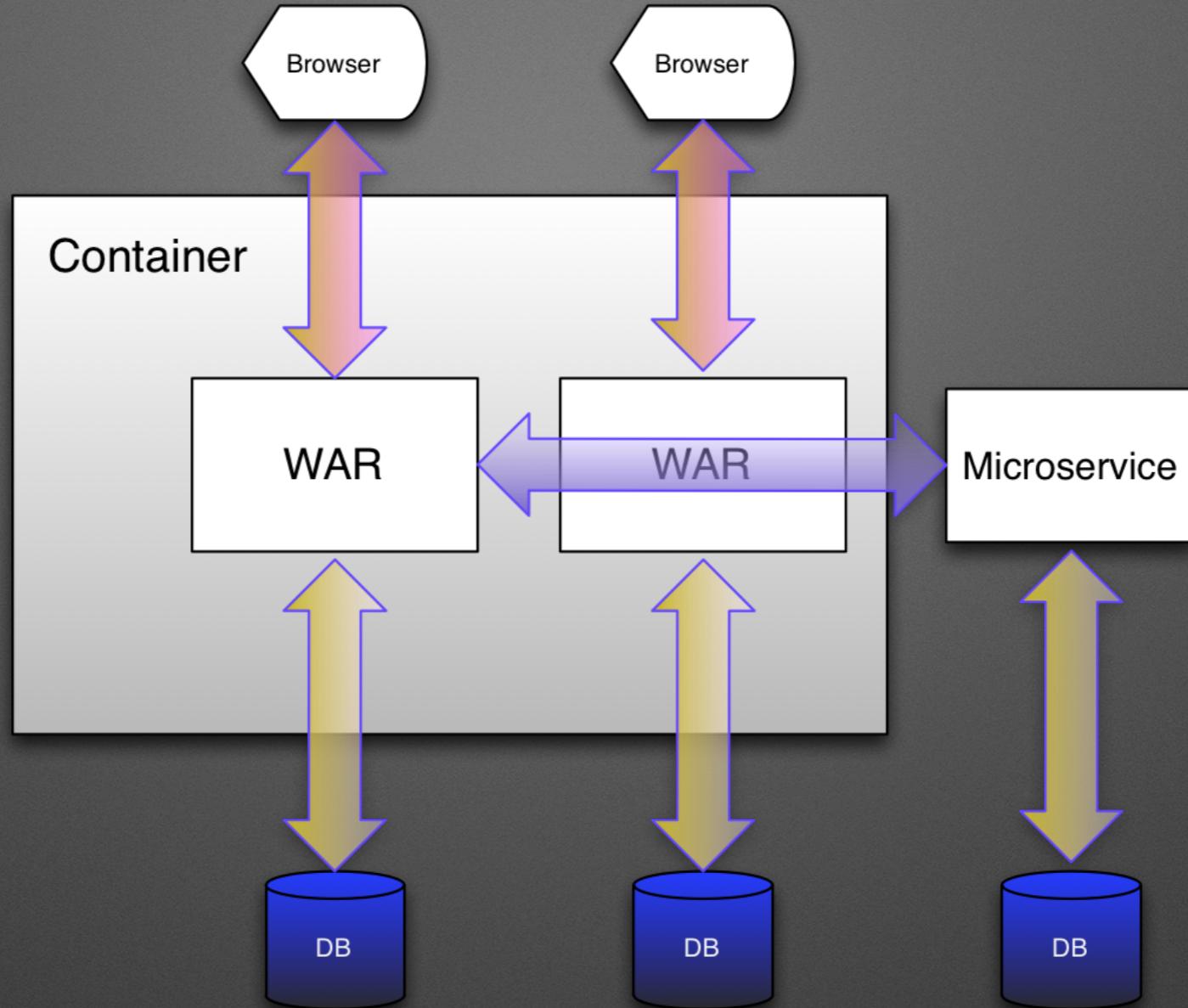


...but most of what we do is just
CRUD
So why all the overhead?



REST

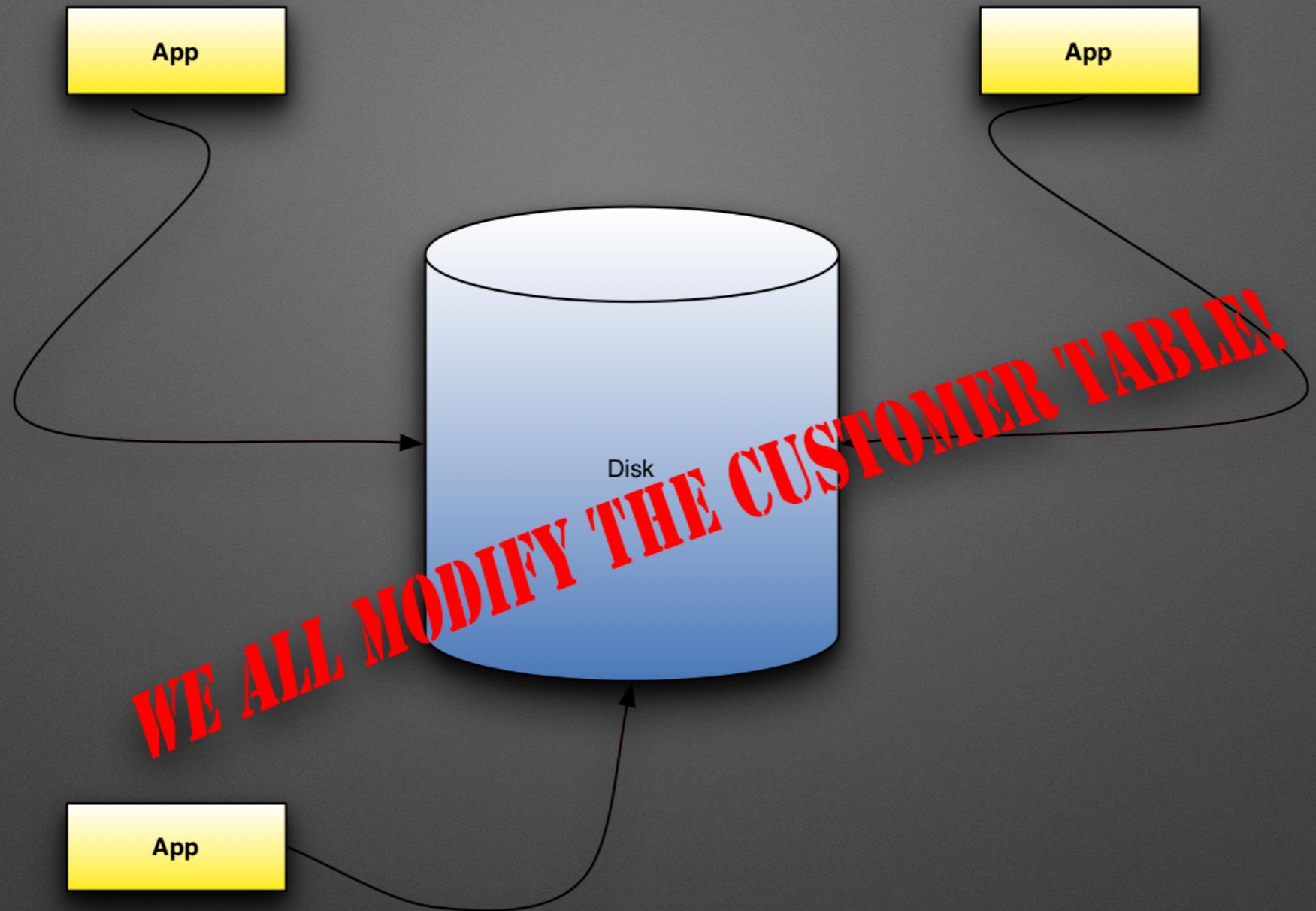
So now we REST between WARs.



SOA

You probably now live in a world that looks something like this.

If you're really **unlucky**...

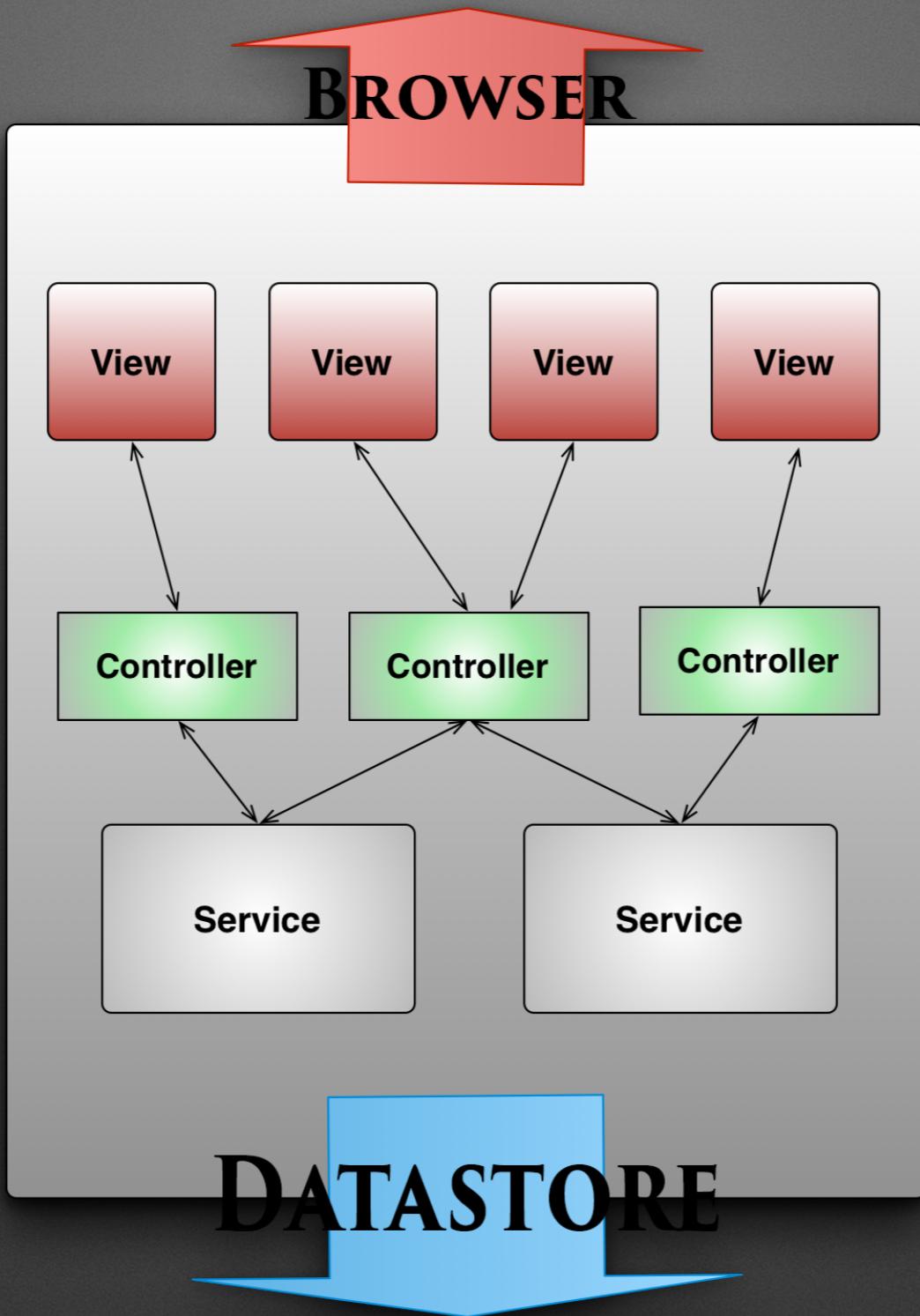


Mess

...you live in a word that looks like this.

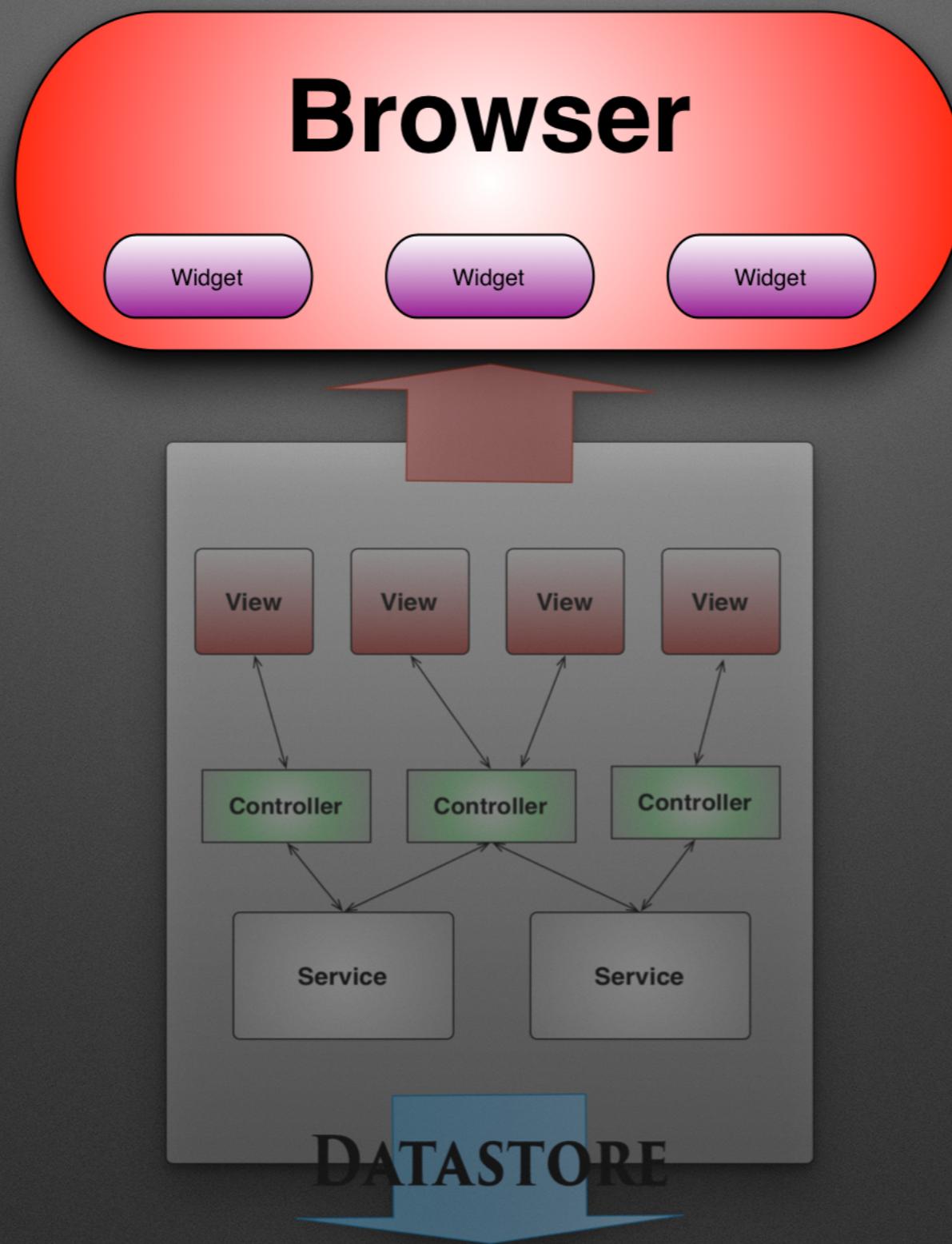
But we'll ignore that for now

(this is not an architecture talk)

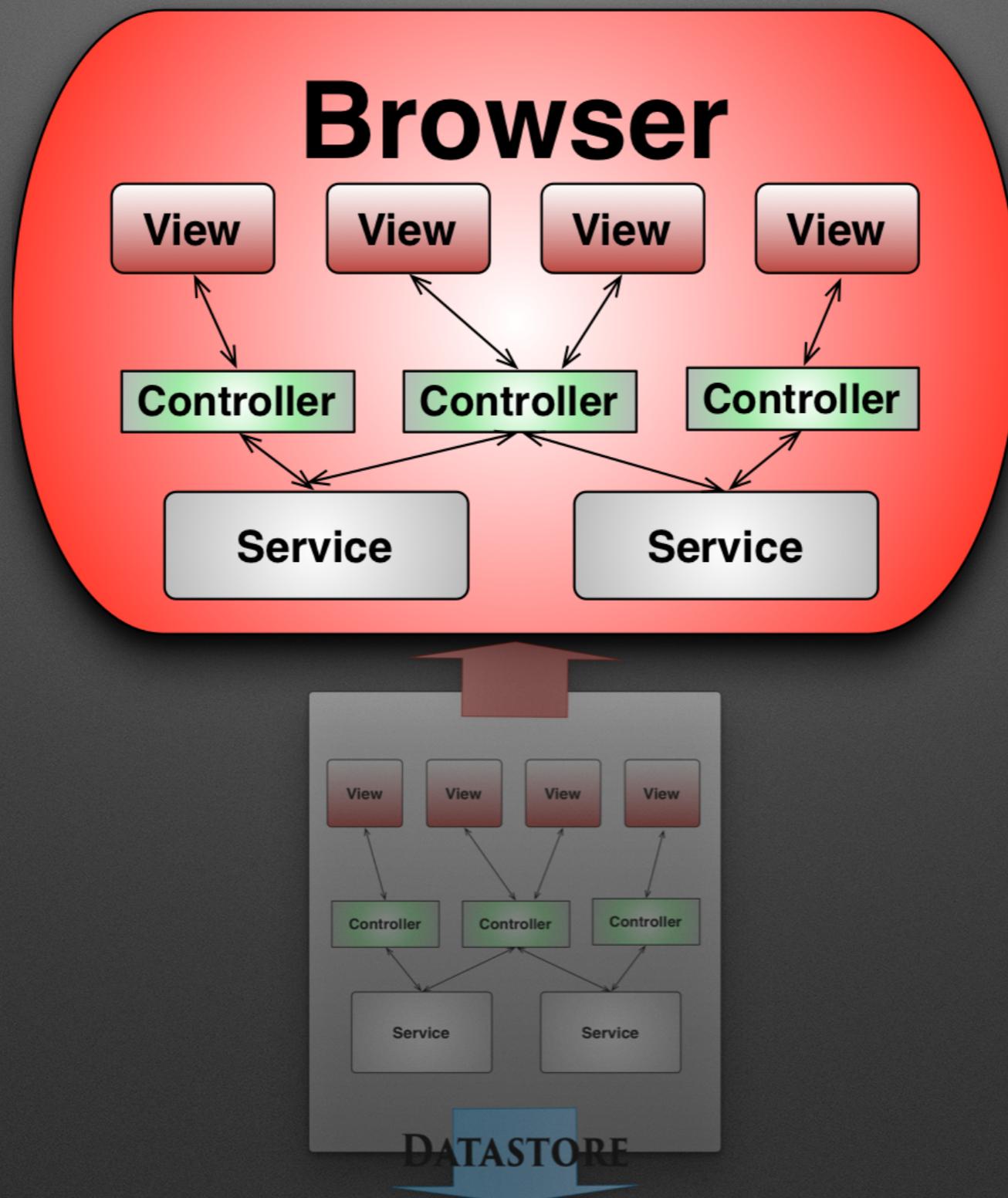


What is a WAR?

Then we started moving stuff into the browser...



And then, wait, what? **Really?**



The browser is the world's most popular VM

We live in the **Javascript** world now

But I'm a **REAL** programmer

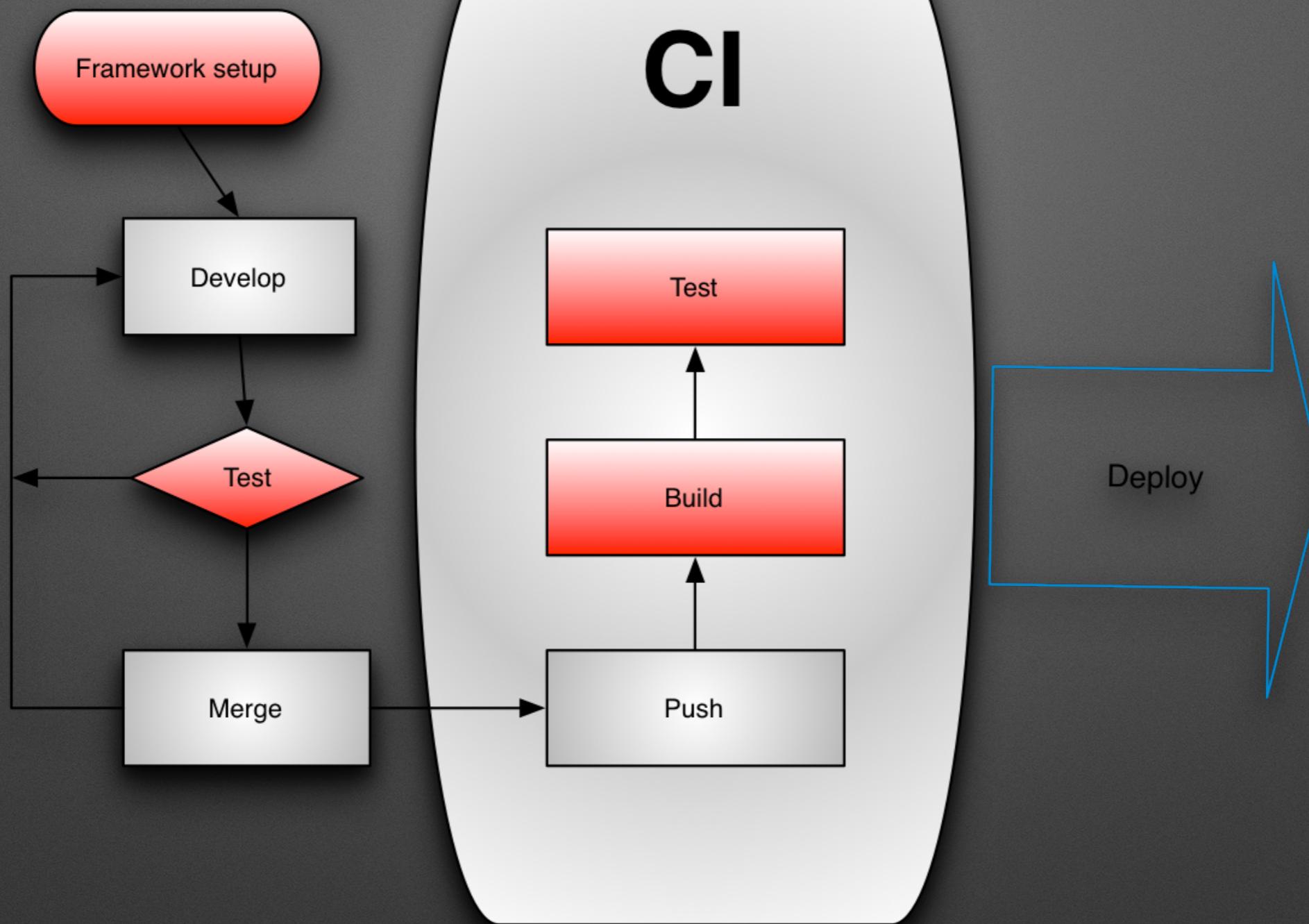
(by that I mean backend)

((I program in **REAL** languages, like Groovy/Java/C/Whatever))

How am I suppose to do **REAL**
programming in Javascript?

What is **REAL** programming?

Process



We want

(nay, **need**)

- Robust frameworks with clear separation of concerns
- Unit Tests
- Integration Tests
- Continuous Integration
- Dependency Management
- Did I mention tests?

We need tools for that



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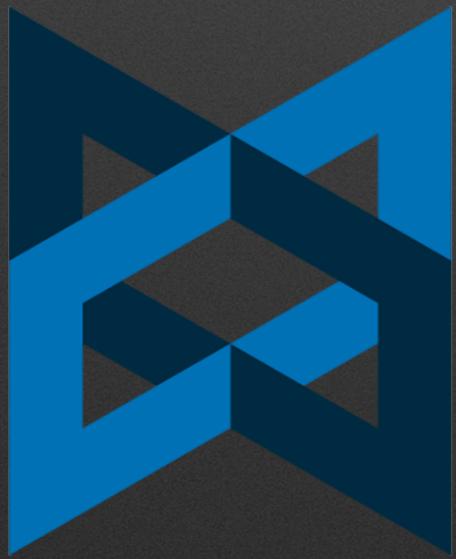
npm



wK ARMA



Jasmine





YEOMAN



Jasmine





YEOMAN

YEOMAN: Project Generator



Jasmine





YEOMAN



Bower: Dependency Manager



KARMA



Jasmine





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Node Package Manager: Tools Repository



Jasmine





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AngularJS: Application Framework



Jasmine

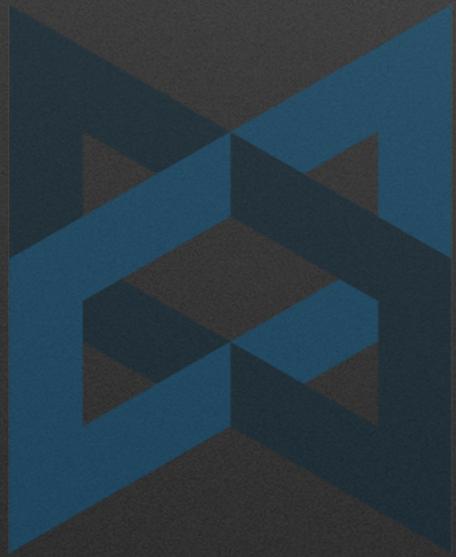




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Jasmine





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KARMA

Jasmine: Testing Framework



Jasmine





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Karma: Test Runner



Jasmine





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Jasmine





CoffeeScript

Sass

Oh and these too...



Oh and this...

What are we gonna do?

let's look at a sample project

Project Structure

- REST backend taking advantage of Grails 2.3
- AngularJS frontend (Coffeescript)
 - Generated by Yeoman
 - Tested with Karma/Jasmine
 - Built with Grunt
 - Styled with SASS/Bootstrap

Install Yeoman

- `npm install -g yo`
- `npm install -g generator-angular`

yo angular --coffee



Out of the box I include Bootstrap and some AngularJS recommended modules.

- [?] Would you like to use Sass (with Compass)? Yes
- [?] Would you like to include Bootstrap? Yes
- [?] Would you like to use the Sass version of Bootstrap? Yes
- [?] Which modules would you like to include? (Press <space> to select)
 - > angular-resource.js
 - angular-cookies.js
 - angular-sanitize.js
 - angular-route.js

Install Test Dependencies

- `npm install karma-jasmine --save-dev`
- `npm install karma-chrome-launcher --save-dev`

package.json

```
{  
  "name": "frontend",  
  "version": "0.0.0",  
  "dependencies": {},  
  "devDependencies": {  
    "grunt": "~0.4.1",  
    "karma-jasmine": "^0.1.5",  
    "karma-chrome-launcher": "^0.1.3"  
  }  
}
```

bower.json

```
{  
  "name": "frontend",  
  "version": "0.0.0",  
  "dependencies": {  
    "angular": "1.2.15",  
    ...  
  },  
  "devDependencies": {  
    "angular-mocks": "1.2.15",  
    "angular-scenario": "1.2.15"  
  }  
}
```

To run the demo

- npm install
- bower install

Hack karma.conf

(more on this later...)

Create AngularJS Components

- yo angular:route personList --uri=person –coffee
- yo angular:service personService --coffee

Let's look at the code...

Image Credits

- Rabbit: <https://www.flickr.com/photos/steventimothyphotography/9773261805>
- War Horses: <http://www.freehdwall.net/2013/01/battle-horses-soldiers-fantasy-artwork.html>
- Soap: http://webclipart.about.com/od/pho3/ss/Cosmetics-Clip-Art_12.htm
- Cat: <http://openclipart.org/detail/7736/-by--7736>