

Preparing for Migration from AngularJS (1.x) to Angular (2+)

INTRODUCTION



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Vocab

Angular 1/AngularJS

Angular 2/Angular

Migrate/Convert/Rewrite

Upgrade & Downgrade



Agenda

Course Structure

Course Agenda

Goals & Rationale

Angular 2 Primer

Migration Overview

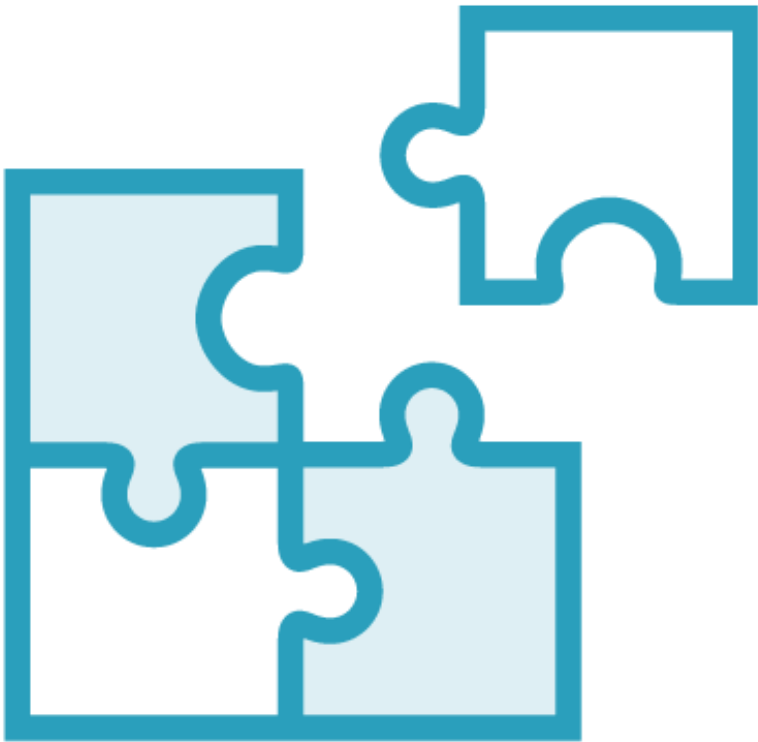
Angular 2 Migration Plan

Prerequisites

Course Repo

Demo App





2 Phases

Phase 1: Preparation

Phase 2: Migration

- Migrating Applications from AngularJS to Angular



Skipping This
Course

Well Factored
Follow the Style Guide
Manual Bootstrapping



Course Agenda

Introduction

Preparing Your Code

Adding 1.5 Components

Preparing Directives & Bootstrapping

Adding TypeScript & ES6

Using ES6

Switching to Classes



Course Goal & Rationale



Course Goal

Educate

Provide a Comprehensive Plan

- Controllers
- Directives
- Filters
- Tests
- 3rd Party Code

Provide Versatility

Minimize Risk



Why Should You Prepare for Angular 2?

Better, More Maintainable Code

- More Expressive
- More Productive

Keep Up To Date

Closer to Full Migration



Why Should You Migrate to Angular 2?

Faster

Simpler

Forward Looking

Supports Additional Features

- Lazy Loading
- Server-Side Rendering
- Multiple Rendering Targets



Types of Directives

Component

Decorator

Structural



```
{  
  restrict: 'E',  
  templateUrl: '/someTemplate.html',  
  scope: {}  
  controller: ...  
}
```

Component Directives

Represented by an Element

Has a Template

Should Use Isolate Scope

Most Common Custom Directive



```
<div>
```

```
  <user-panel user="currentUser"></user-panel>
```

```
</div>
```

Component Directives Usage

Represented by an Element

Has a Template

Should Use Isolate Scope

Most Common Custom Directive



```
{  
  restrict: 'A',  
  link: ...  
  controller: ...  
}
```

Decorator Directives

Represented by an Attribute

Has no Template

Should Use Shared Scope

Uncommon Custom Directive



```
<div blink>
```

```
  This is some content that I want to blink
```

```
</div>
```

Decorator Directives Usage

Represented by an Attribute

Has no Template

Should use Shared Scope

Uncommon Custom Directive



```
<div ng-repeat="user in users">
  {{user.name}}
</div>
```

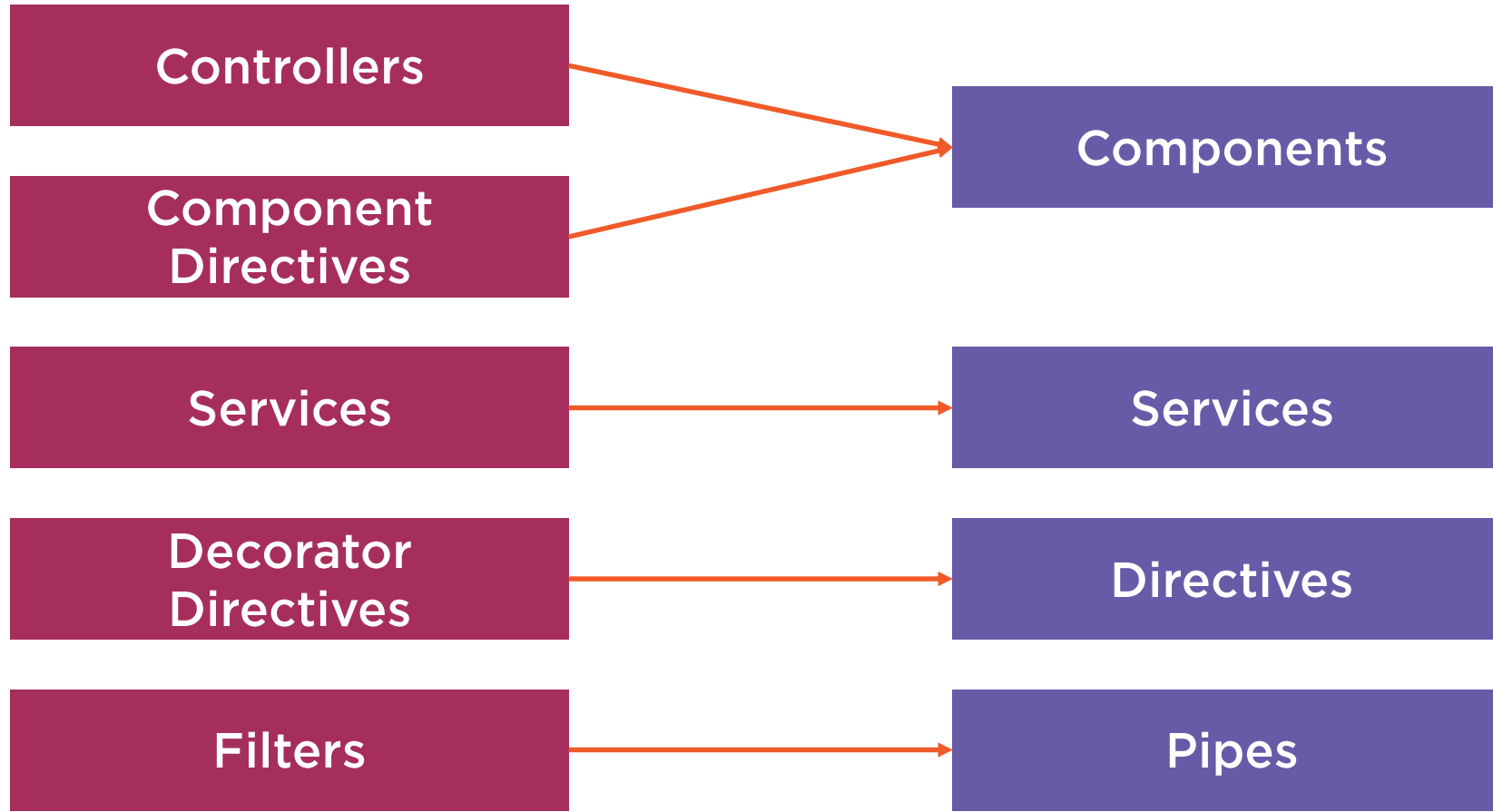
Structural Directives Usage

Adds or Removes Nodes

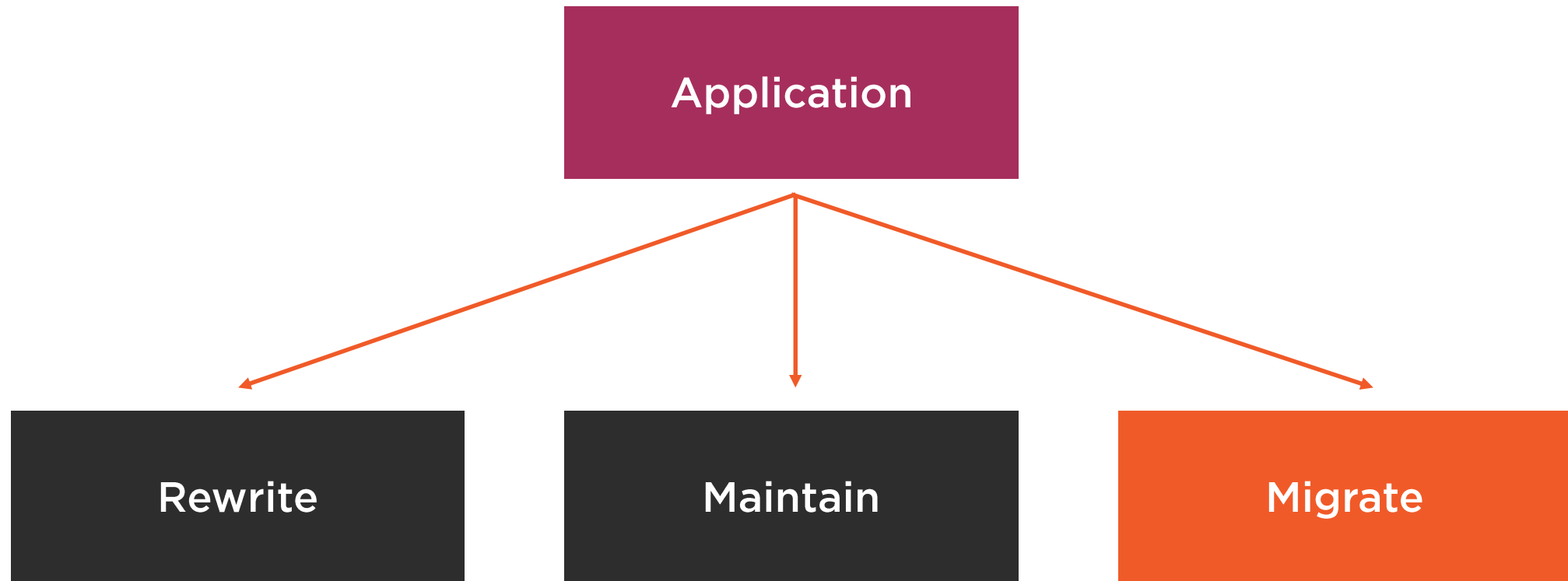
Almost Never Created



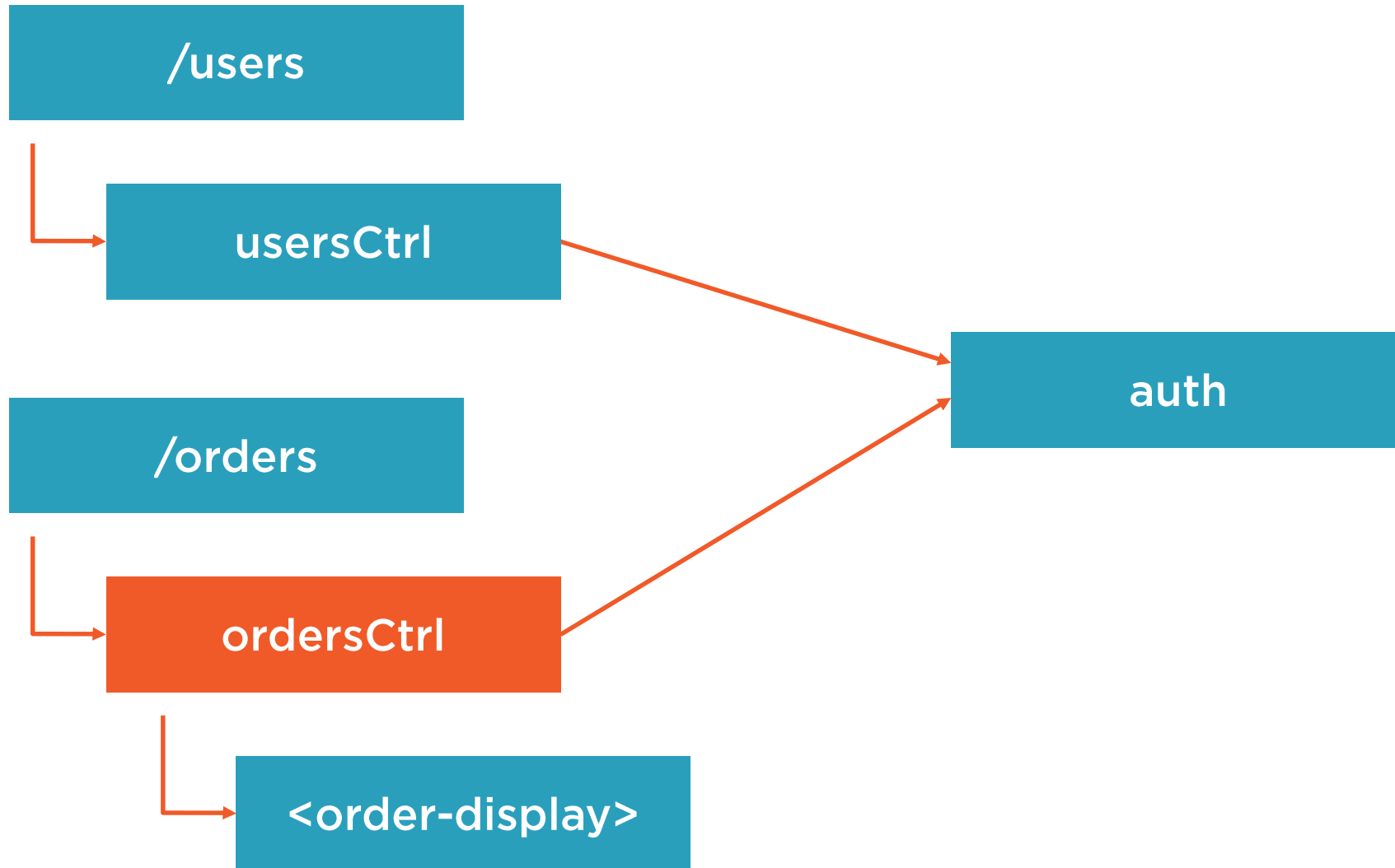
Angular 1 to 2 Mapping



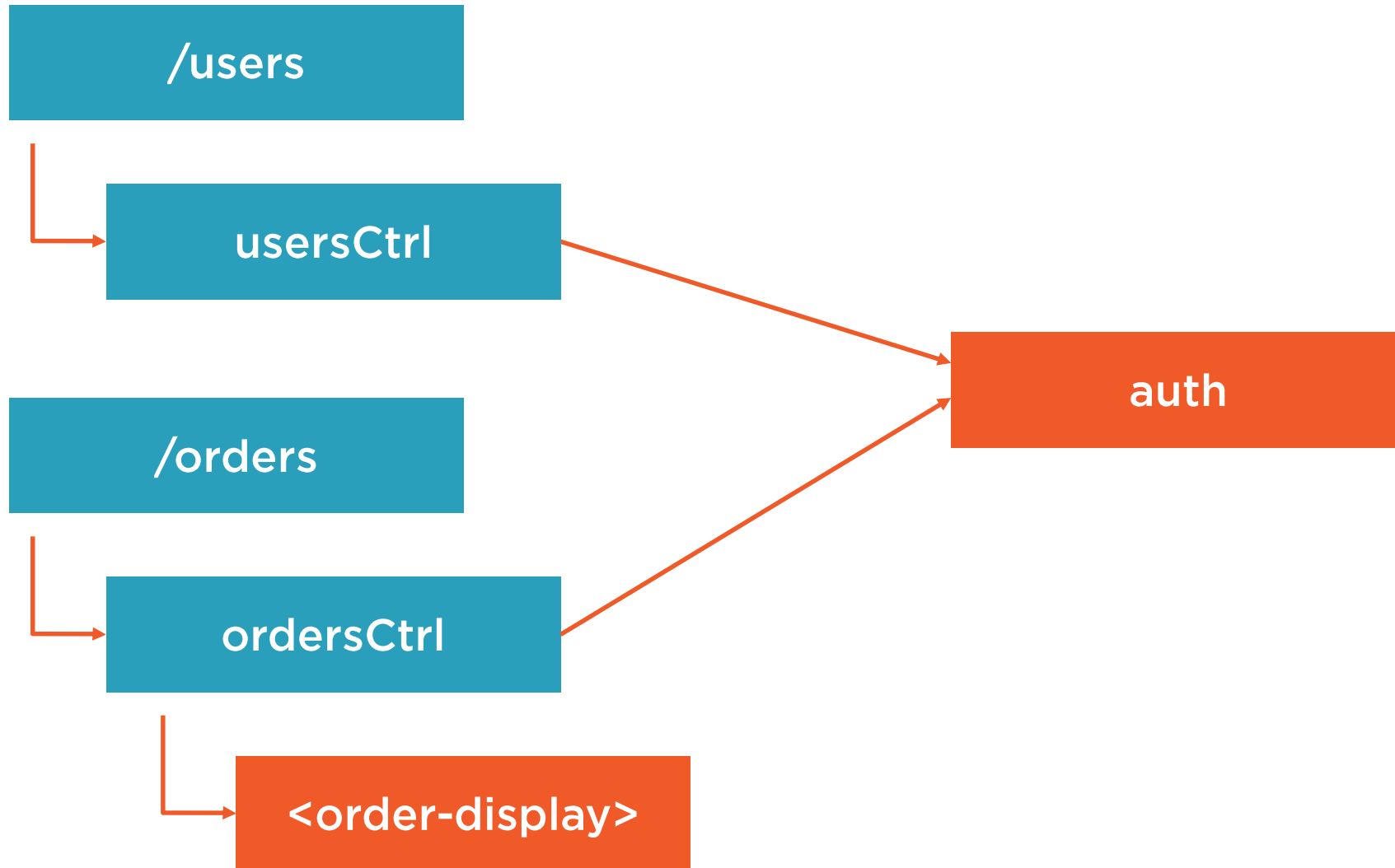
Choices, Choices



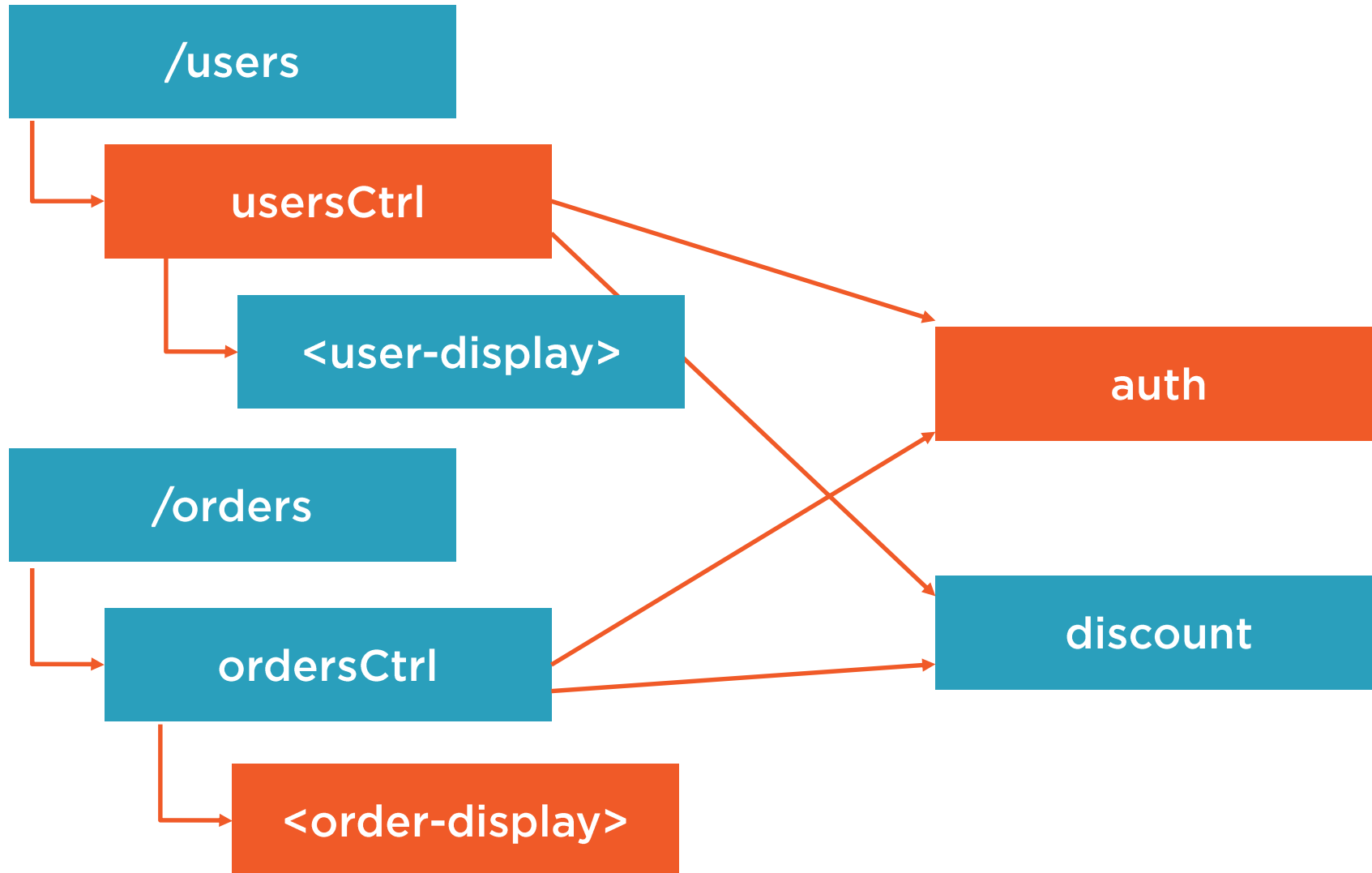
Official Migration Plan



Upgrade & Downgrade



Simple Migration Path



```
<body>
  <div>
    <order-summary>
      <div>
        <order-detail>
          <h1>Order 1</h1>
          <table>
            ...
```

◀ Container. Always Angular 1

◀ Angular 2 Component

◀ Angular 1 Directive



```
<body>
  <div>
    <order-summary ng-show="">
      <div>
        <order-detail>
          <h1>Order 1</h1>
          <table>
            ...
```

◀ Container. Always Angular 1

◀ Angular 2 Component

◀ Angular 1 Directive



Services
Components

Upgrade & Downgrade



Upgradeable Pieces

Upgradeable

Controllers

Component
Directives

Services

Components

Services

Non
Upgradeable

Decorator
Directives

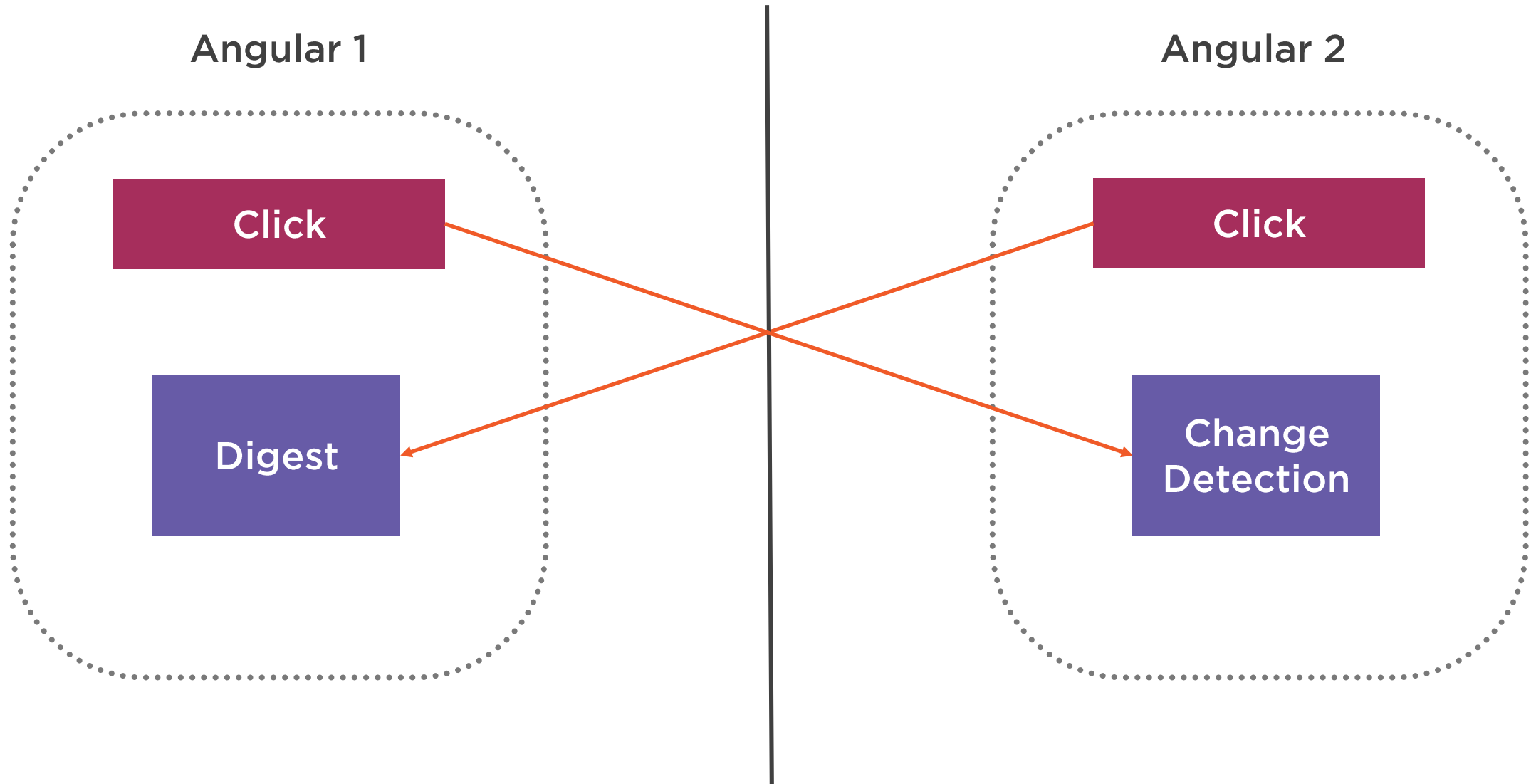
Filters

Directives

Pipes



Change Detection



Migration Preparation St



Code



Step 1: Follow the Style Guide

Step 2: Update to the Latest Version of Angular 1

Step 3: All New Development with Components

Step 4: Switch Controllers to Components

Step 5: Remove Incompatible Features from Directives

Step 6: Switch Component Directives to Components

Step 7: Implement Manual Bootstrapping



TypeScript & ES6



Step 8: Add TypeScript & a Build

Step 9: Start Using ES6

Step 10: Switch Controllers to ES6 Classes

Step 11: Switch Services to ES6 Classes



Options



Many Smaller Steps vs Few Big Steps

More Time

Small Steps



Your Plan



Immediately Run Angular 2

Prepare for Months

Only New Dev in Angular 2

Slow Ramp Up

Complete Migration

Leave Some Angular 1 Forever



JavaScript

HTML

Angular 1

Hard Prerequisites



TypeScript

ES6

Angular 2

Soft Prerequisites



Course Repository

<https://github.com/joeames/PSAngular2MigrationCourse>

