

edureka!



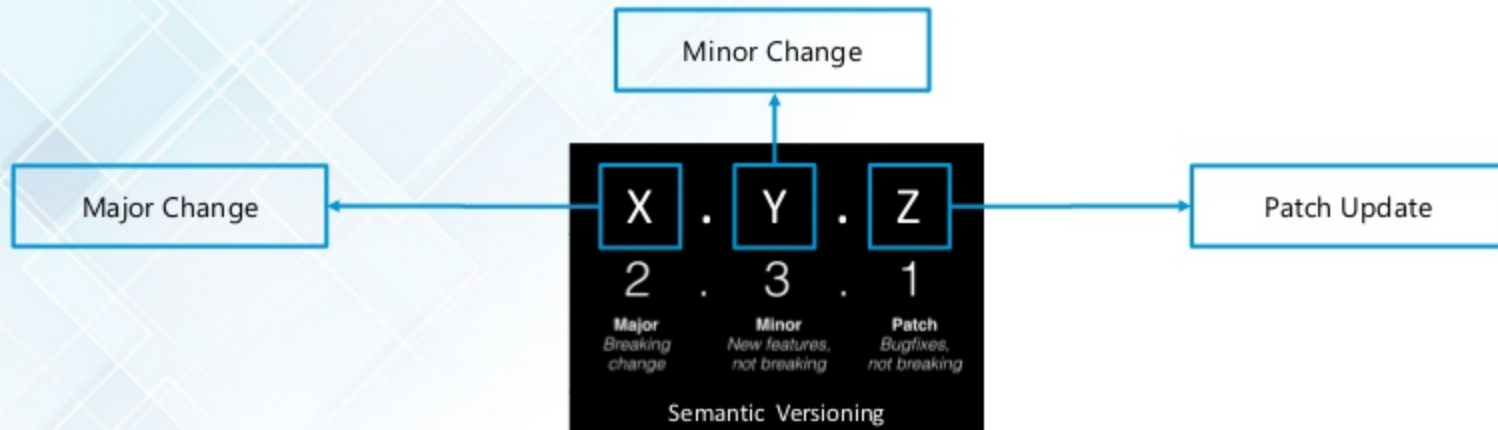
What is New in Angular 4?



Angular 4

Angular 4 Coming into Picture ...

- Changing from version 2 to version 4 ... won't be like changing from Angular 1
- It will simply be a *change in some core libraries* that demand a major SEMVER version change
- There will be proper *deprecation phases* to allow developers to adjust their code



Back in September, the Angular team also announced they will switch to *Semantic Versioning (SEMVER)*

The Angular team committed to time based releases that occur in three cycles:

- patch releases every week
- 3 monthly minor release after each major release
- a major release with easy-to-migrate-over breaking changes every 6 months

Predictable, Transparent & Incremental Evolution

Version 4	March 2017
Version 5	September/October 2017
Version 6	March 2018
Version 7	September/October 2018

(tentative schedule)

Why not Angular 3?

- Due to this *misalignment of the router package's version*, the team decided to go straight for Angular v4
- In this way again, all the core packages are aligned which (easier to maintain and avoid confusion in future)
- The core Angular libraries are all versioned the same way except *routes*

Modules Version 2	@angular/core	v2.3.0
	@angular/compiler	v2.3.0
	@angular/compiler-cli	v2.3.0
	@angular/http	v2.3.0
Router Version 3	@angular/router	v3.3.0

So... they decided to go with Angular 4

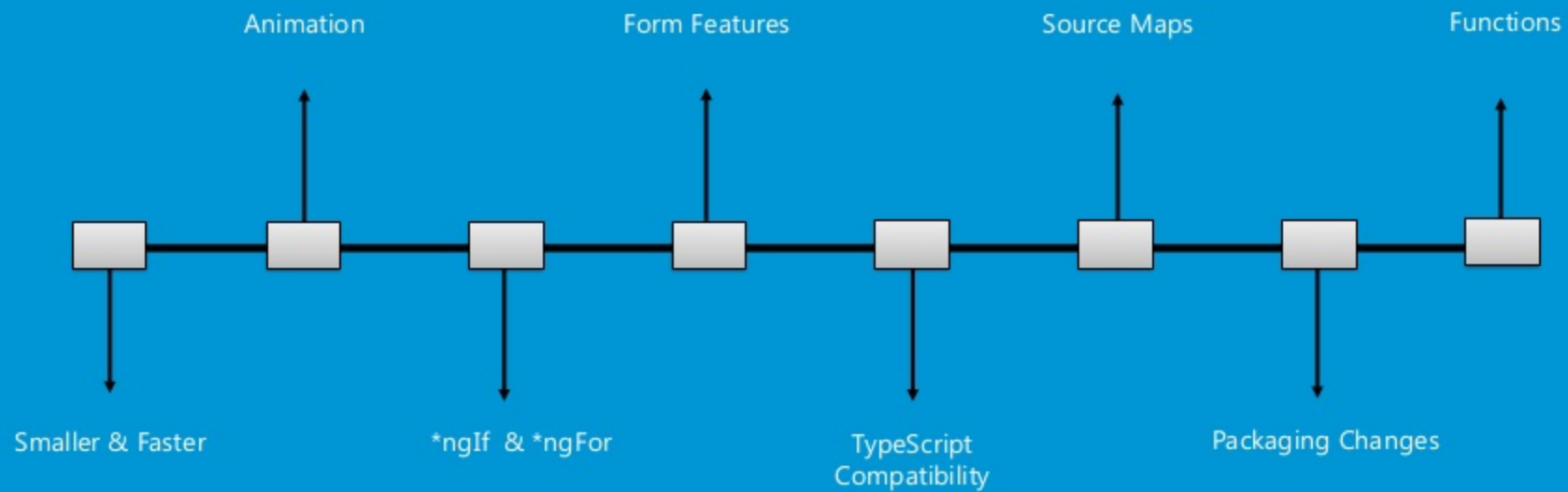
Team announced that from now on, you should address Angular versions 2.0.0 or later as simply "Angular"... [#ItIsJustAngular](#)

Angular adopted Semantic Versioning and is backwards compatible with 2.x.x



Even upgrading TypeScript dependency from v1.8 to v2.1/v2.2 and compile Angular with it, would cause a breaking change

Angular 4: What's New ? ? ?



Smaller & Faster

Animation

*ngIf & *ngFor

Form Features

[View Engine](#)

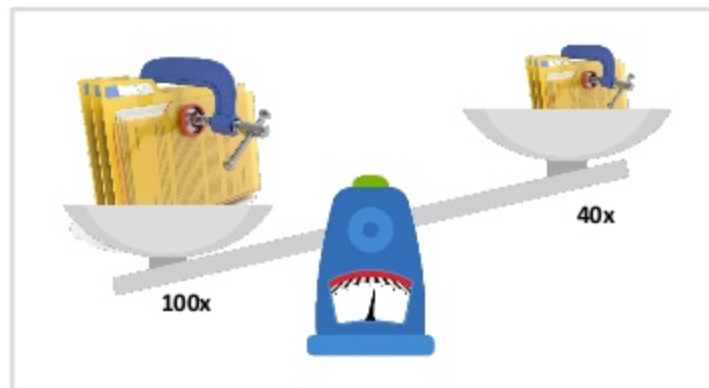
- Changes were done under the hood to what AOT generated code looks like
- Purpose is to reduce the size of the generated code for app components by averagely 60 percent
- During the candidate period release, many developers that migrated to 4, reduced their production bundles by hundreds of kilobytes



Angular 2
Bundle



Angular 4
Bundle



Smaller & Faster

Animation

*ngIf & *ngFor

Form Features

Animation Package

- Angular team has pulled animations out of @angular/core and into their own package
- Add animations to main NgModule by importing *BrowserAnimationsModule* from *@angular/platform-browser/animations*

```
1  import {Component, OnInit} from '@angular/core';  
2  
3  import {  
4    animate,  
5    state,  
6    style,  
7    transition,  
8    trigger } from '@angular/animations';
```

Importing Properties

Animation Module

Smaller & Faster

Animation

*ngIf & *ngFor

Form Features

Enhanced *ngIf and *ngFor

The template binding syntax now supports a couple helpful changes:

- You can now use an if/else style syntax
- Assign local variables such as when unrolling an observable

```
<div *ngIf="userList | async as users; "else loading"  
  <user-profile *ngFor="let user of users; count as count" [user]="user">  
    </user-profile>  
</div>  
<ng-template #loading>Loading...</ng-template> |
```

Else Statement

Loading block

Smaller & Faster

Animation

*ngIf & *ngFor

Form Features

New features in Forms

Now you have email validator in forms to validate email instead of using pattern.

```
1 <form #emailForm="ngForm">
2   <input type="email"
3     ngModel
4     required
5     email
6     name="email"
7   />
8   <button type="submit">Validate</button>
9 </form>
```

Email type input

TypeScript
Compatibility

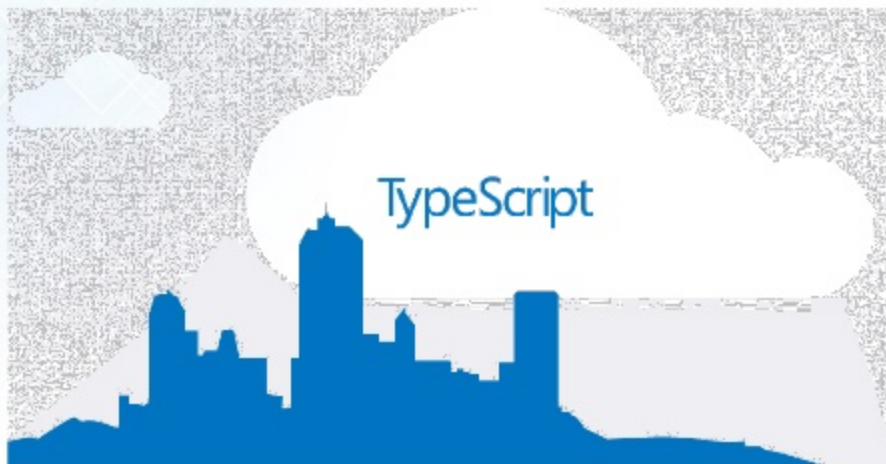
Source Maps

Packaging
Changes

Upgrade to
Angular 4

TypeScript 2.1 and 2.2 compatibility:

- Angular has also been updated to a more recent version of TypeScript
- This improves the speed of ngc and users will get better type checking throughout your application



TypeScript
Compatibility

Source Maps

Packaging
Changes

Upgrade to
Angular 4

Whenever an error occurs in one of templates, source maps are generated with meaningful context in terms of the original template

Template

< >

Changes

Errors

Updated Template

< >

source maps are
generated with a
meaningful context
in terms of the
original template





Packaging Changes

Flat ES Modules (Flat ESM / FESM)

- Angular now ship flattened versions of modules
- It helps in tree-shaking, reducing the size of your generated bundles, and speed up build, transpilation and loading

Experimental ES2015 Builds

- Angular now also ship packages in the ES2015 Flat ESM format
- This option is experimental and opt-in.
- Developers have reported up to 7% bundle size savings when combining these packages with Rollup

TypeScript
Compatibility

Source Maps

Packaging Changes

Upgrade to
Angular 4

Ready to upgrade 4.0.0

- Updating to 4 is easy
- This will work for most use cases

```
1  npm install @angular/common@latest @angular/compiler@latest
2
3  @angular/compiler-cli@latest @angular/core@latest @angular/forms@latest
4
5  @angular/http@latest @angular/platform-browser@latest
6
7  @angular/platform-browser-dynamic@latest @angular/platform-server@latest
8
9  @angular/router@latest @angular/animations@latest typescript@latest --save |
```



Create an app in v4!

Use `ng new` command along with `--ng4` option to create a new app

```
ng new angular-4-demo --ng4
```

Upgrading Angular Application

The background of the entire image is a blurred photograph of a person's head and shoulders in profile, looking at a laptop screen. A semi-transparent blue rectangle is overlaid on the center of the image, containing the text. The text 'edureka!' is in a white sans-serif font, with the 'e' in lowercase and the rest in uppercase. The background image also shows a wooden table and a white cup of coffee in the bottom right corner.

edureka!

Thank You

For more information please visit our website
www.edureka.co