Building a Web App with ASP.NET Core, MVC, Entity Framework Core, Bootstrap, and Angular

WHAT IS ASP.NET CORE?

Shawn Wildermuth
MICROSOFT MVP, AUTHOR AND SPEAKER

@shawnwildermuth wildermuth.com

Overview

Build a web app using ASP.NET Core

Learn by doing

Feel free to follow along

You'll see it all

What You'll Learn

ASP.NET Core and MVC 6

HTML5, JavaScript, CSS

Using Bootstrap

Data with Entity Framework Core

Client-side with Angular

What You'll Use

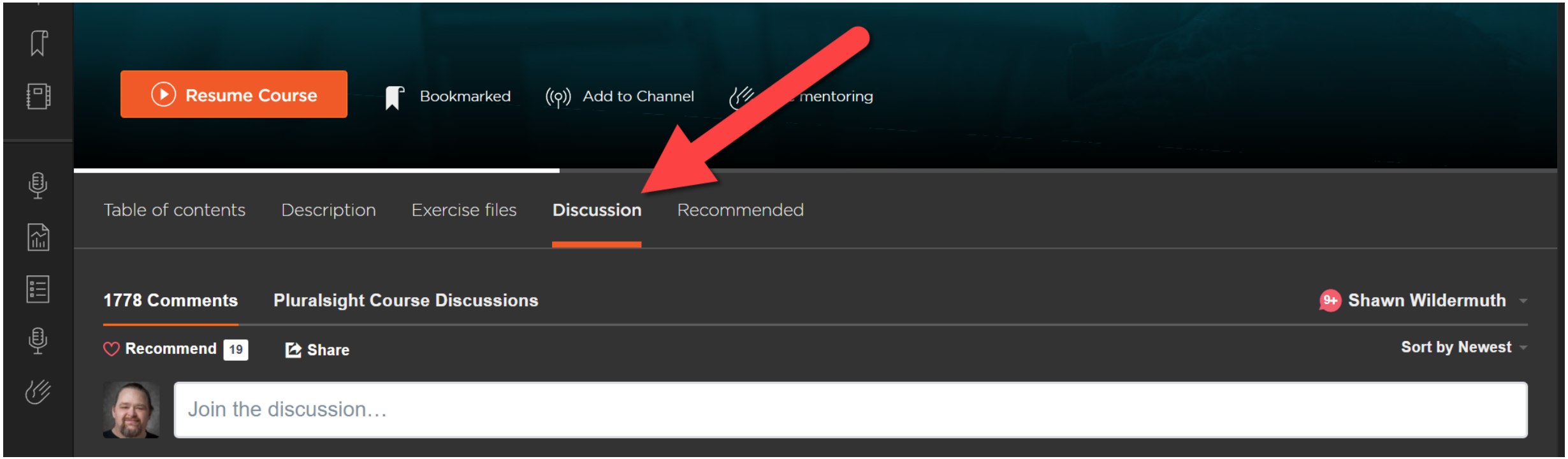
- Visual Studio 2019
- ASP.NET Core 3
- Entity Framework Core 3
- Bootstrap 4.1
- Angular v8

Notes About Course

Course has been updated in place

- Some shots of Visual Studio are old
  - Ignore any wwwroot/lib folders
  - Ignore shots of VS2017

Questions During the Course?



Why Reinvent ASP.NET?

The Web Stack is *old*!

Weighed down by old, unused code

Machine level upgrades is problematic

Had Reached a Ceiling of Performance

ASP.NET Core is a complete rethinking of the platform.

What Is ASP.NET Core?

Complete re-write of the platform

Cross-platform and open source

Single platform for MVC and WebAPI

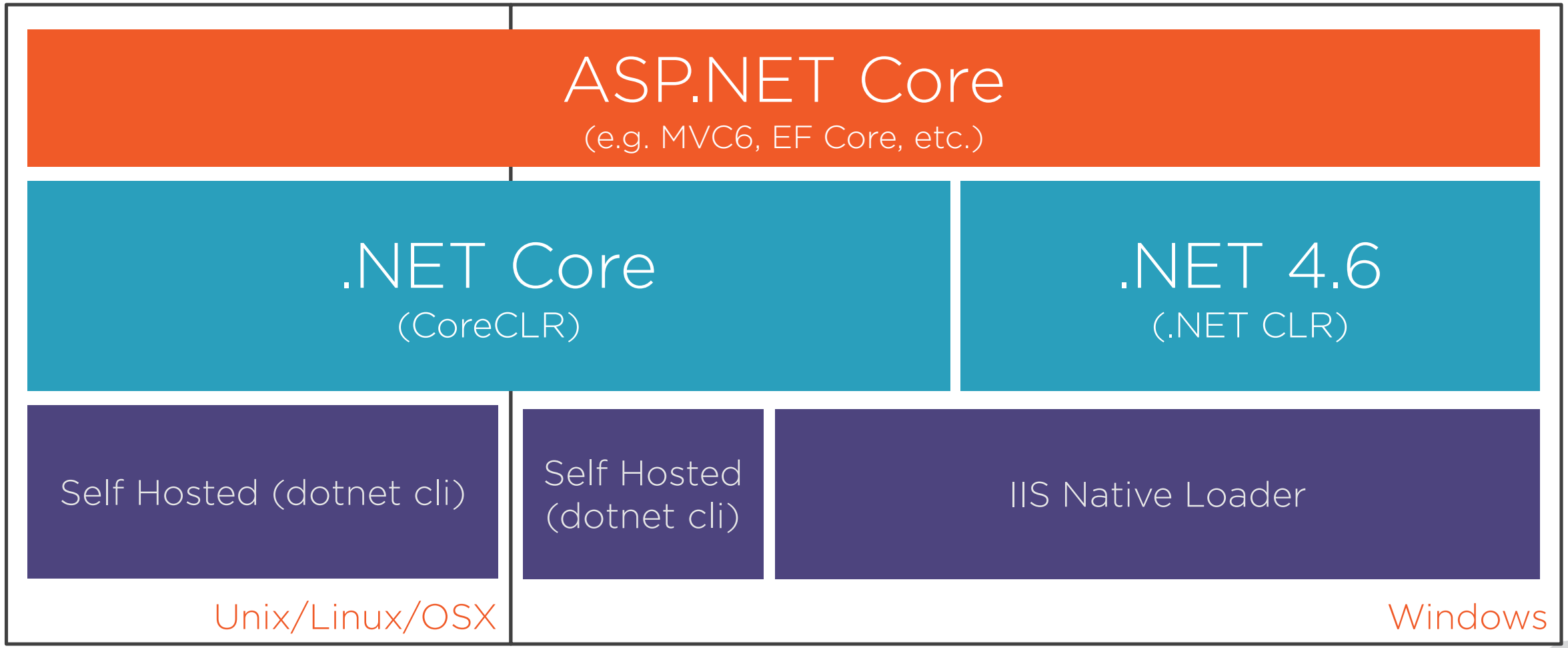
Everything is a dependency

Low memory footprint

Multiple deployment support

Cloud, IIS, Self-Hosting, etc.

Overview


ASP.NET Core
(e.g. MVC6, EF Core, etc.)
.NET Core
(CoreCLR)
.NET 4.6
(.NET CLR)
Self Hosted (dotnet cli)
Self Hosted
(dotnet cli)
IIS Native Loader
Unix/Linux/OSX
Windows

Frameworks?

.NET 4.x

- The .NET you've always known
- Limited to Windows Only

.NET Core

- The cross-platform .NET Framework
- Linux, Mac and Windows support

Completely Composed

Above the .NET Core layer is a Package

- Frameworks are the bootstrap and CLR
- MVC, Logging, Identity are just packages
- Everything is optional

Embraces Open Web Development

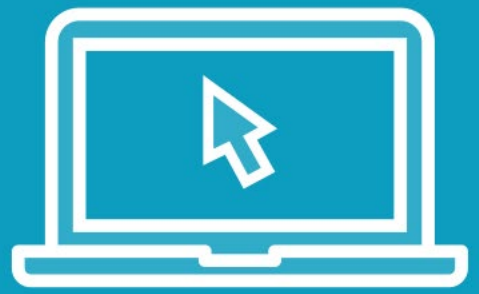
Uses existing web development tooling

- NPM for tooling support
- Bower/NPM for client-side libraries
- Grunt and Gulp for build automation
- NuGet for .NET Packages
- None of it is required

Deployment Options for ASP.NET Core

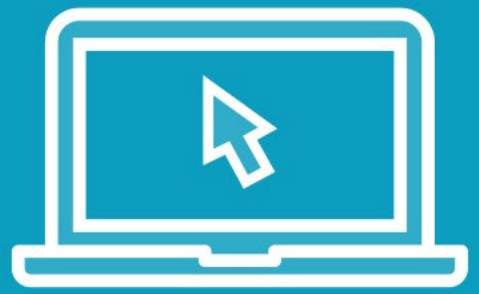
	Windows	Mac	Linux*
Directly on Hardware	✓	✓	✓
In a VM	✓		✓
In a Container	✓		✓
Cloud Hosting	✓		✓

Demo



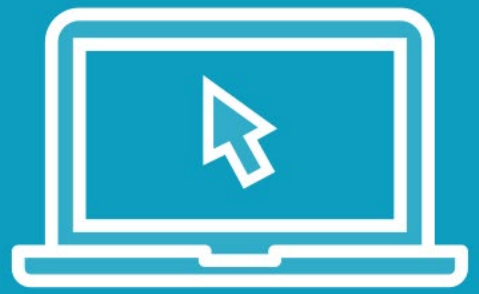
Installing ASP.NET Core

Demo



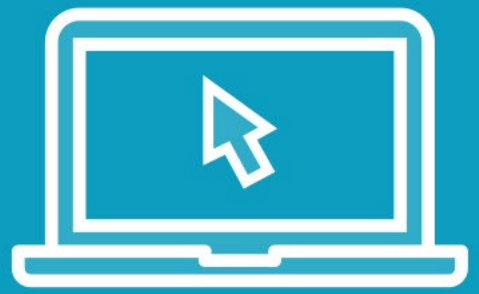
Hello World

Demo



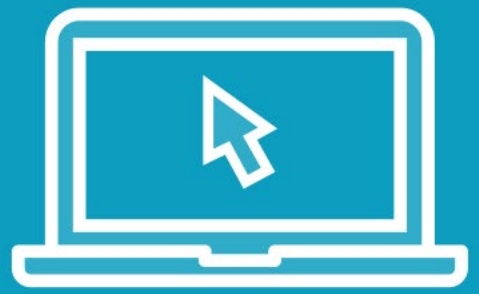
Installing Visual Studio 2019

Demo



Creating the Project with Visual Studio

Demo



Serving Your First File

What We've Learned

It's a whole new .NET world out there!

You can use the power of the full IDE

Or use command-line if you prefer

Open Source top-to-bottom