

# Preparing for ASP.NET 5

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# Robert Hurlbut

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- Microsoft MVP – Security Developer 2005-2009, (ISC)2 CSSLP 2014-2017
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<https://github.com/rhurlbut/PrepareForAspNet5Demos>

The ASP.NET you know ...

... is going through ...

... ***some changes*** ...

A black and white photograph of a two-lane road stretching into the distance, completely obscured by a thick layer of fog. The road has white dashed lines in the center and solid lines on the sides. Bare trees are visible on both sides of the road, their forms softened by the mist. The overall atmosphere is mysterious and uncertain.

**What?!! Another ASP.NET??**

**Let's lift the fog and see what it means ...**

# Disclaimer

This is all new and it **may** **will** change ...

Driving on the edge is like that ...

Enjoy the ride!



# ASP.NET 5 is now ...

- open source
- cross-platform
- lean
- re-designed

# New Features in ASP.NET 5

- New project templates in VS 2015
- New file-based project system in VS 2015
- New configuration layout

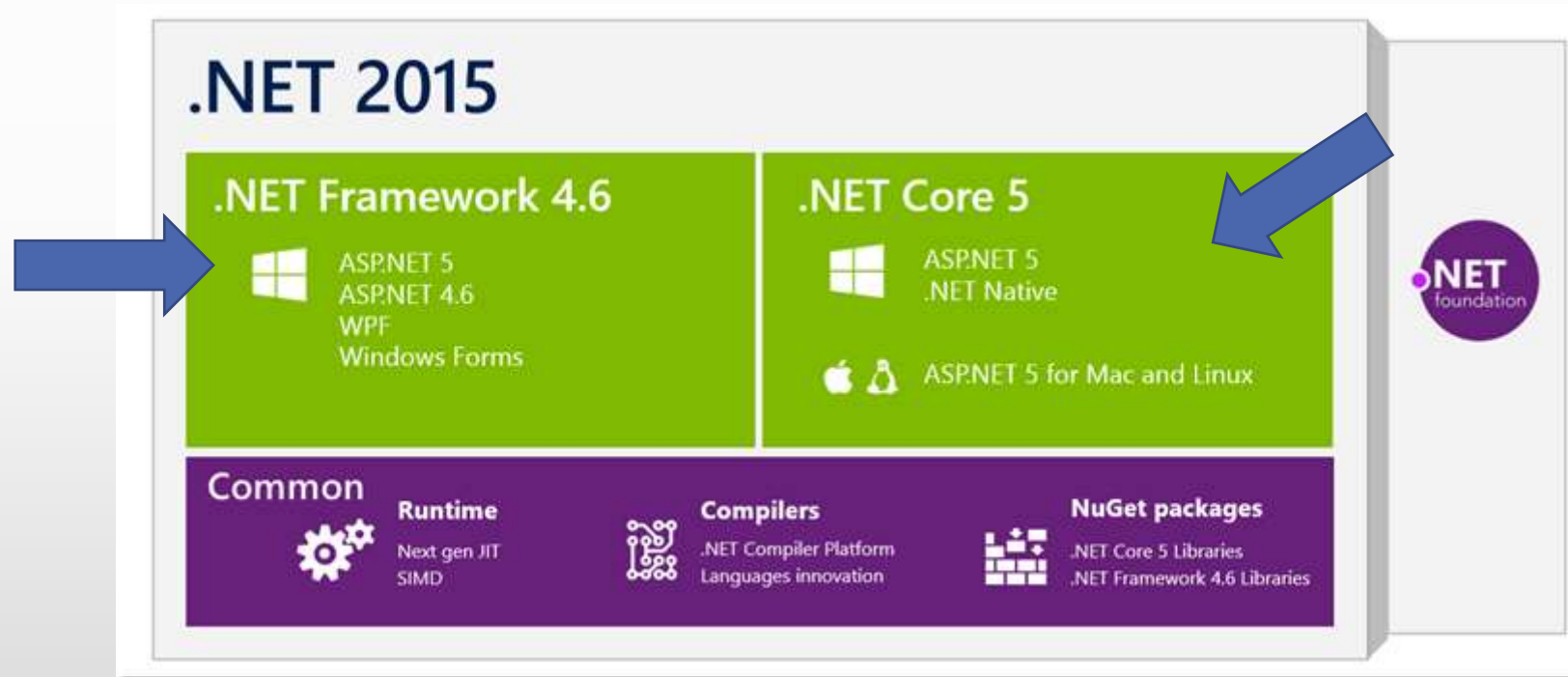
# New Features in ASP.NET 5

- Dynamic compilation
- Thank you “Roslyn” (.NET Compiler Platform)!



# New Features in ASP.NET 5

- Full .NET Framework and “Cloud-Ready” Core



# ASP.NET 5 hosting

- Internet Information Services (IIS)
- Open Web Interface for .NET (OWIN) based server
- Kestrel server
- Self-hosted in a custom process

# MVC 6

- Unified with MVC + Web API (and Web Pages)
- Leaner – No System.Web! (2kb vs 30kb per request)
- Single controller, routing framework, model binding framework, filter pipeline
- Dependency Injection, View Components, TagHelpers, ...

# Lots of Javascript goodness

- Node.js installed by default with VS 2015 (includes npm)
- Works well with AngularJS and other Javascript MVC Frameworks
- Able to use bower and grunt for JS management – easy to plug in gulp, too.

A photograph of a two-lane asphalt road with a double yellow center line, stretching into the distance through a dense forest of tall, thin pine trees. The sky is bright and slightly hazy, creating a soft, atmospheric light. The trees are dark green and fill both sides of the road, framing the path.

Demo Time:  
Test Driving

VS 2015 CTP 6  
ASP.NET 5  
beta3



# Changes on the horizon ... beta4\*

## Command line tools

Current name	New name	Comments
k.cmd / klr.exe	dnx	<p>The main runner entry point to boot an app / site. This was previously split into two files, but will be unified into one.</p> <p>Running "dnx.exe --help" (or the equivalent *nix/MacOS command) would show a help screen such as: C:\&gt; dnx.exe --help Microsoft .NET Execution environment vX.Y.Z</p> <p>Usage: dnx [options] [command] [arguments] Options: --help -h Show help</p> <p>Commands: run Run the main entry point of the application cmd1 Do cmd1</p>
KRE / XRE	DNX	The .NET Execution environment – these are NuGet packages that are per arch/OS/CLR that contain the CLR (for Core CLR), CLR bootstrappers, and required app execution components.
kvm.ps1/.sh	dnvm.ps1/.sh	.NET (DNX) Version Manager. Manages which DNXs are installed, which DNX is currently in use, etc.
kpm	nuget	The package manager for NuGet packages in the app. Being merged with NuGet.

\*Taken from "ASP.NET 5 Community Standup - Mar 10th, 2015 - The Big Rename" on YouTube

# Changes on the horizon ... beta4\*

## Folders and package names

Current name	New name	Comments
%userprofile%\k	%userprofile%\dnx	The folder where DNXs and global NuGet packages will be installed. Has at least these subfolders: <ul style="list-style-type: none"><li>• /packages – Contains NuGet package dependencies (stuff that apps use, like loggers, EF, MVC, etc.)</li><li>• /runtimes – Contains the expanded DNXs (each version/os/arch is in its own folder)</li><li>• /tools – Contains globally installed tools (e.g. nuget, packaging commands, runners, etc.)</li></ul>
aspnet50 / aspnetcore50	dnx452 / dnx46 / dnxcore50	The target framework monikers (TFM) that are specific to the DNX-based apps. Inside NuGet packages these show up in the form of /lib/dnxcore50/Foo.Bar.dll.
<none>	core50	The new “base” TFM to represent a DLL that is compatible with Core CLR and any CLR that support the contracts.
kre-<clr>-<os>-<arch>.<version>	dnx-<clr>-<os>-<arch>.<version>	The NuGet packages in which the DNXs ship. These are per-CLR (i.e. desktop/CoreCLR/Mono), per-OS, and per-architecture (i.e. bitness).
\$env:KRE_*	\$env:DNX_*	Env vars that point to various DNX features such as: location of DNX (DNX_HOME), enabling low-level trace (DNX_TRACE), servicing (DNX_SERVICING), design time host config (DNX_COMPILATION_SERVER_PORT), etc.
kproj	xproj	The file extension for VS projects based on a DNX.

\* Taken from “ASP.NET 5 Community Standup - Mar 10th, 2015 - The Big Rename” on YouTube

# Changes on the horizon ... beta4\*

## Project names

Updated project names	Comments
ASP.NET 5 Application (and its sub-project types)	All the ASP.NET 5-specific projects for building web apps and web services (i.e. MVC)
“Command Line (Package)”	<p>A DNX-based project for building command line (i.e. console) apps that produces a NuGet package</p> <p>These projects are run from the command with “dnx &lt;command&gt;” or from VS with the usual F5 gesture (with options to pick alternate command names).</p>
“Class Library (Package)”	<p>A project for building a NuGet package that can target any framework/platform/system (all existing and all new).</p> <p>The default TFM of these projects is core50.</p>

\* Taken from “ASP.NET 5 Community Standup - Mar 10th, 2015 - The Big Rename” on YouTube



# Changes on the horizon ... beta4\*

- Newest addition: DNU (DotNet Utility)
  - Package Restore
  - Bundling a Project
  - Building a Project
- Uses same core libraries as next version of Nuget 3
- Ex: `dnu publish --no-source` (publish with no Roslyn)

\*Taken from “ASP.NET 5 Community Standup - Mar 31th, 2015 - DNU” on YouTube

# What should I learn now?

- Startup
  - Be familiar with OWIN / Katana “style” of Startup – currently available in MVC 5 and WebAPI 2.x
- Configuration changes
  - Become familiar with JSON format and Javascript tools (bower, grunt, gulp, etc.)
  - Get more comfortable / familiar with NuGet
- Deployment changes

# How easy to upgrade existing projects?

- Standard MVC Controllers / Views / Models should move over
- Some changes needed for WebAPI 2.x using a “shim” (Microsoft.AspNet.Mvc.WebApiCompatShim)
- Need some updating to Startup.cs (minor)
- Few updates on controls / helpers needed

# What if I don't (can't) want to upgrade?

- Only C# supported on ASP.NET 5 v1
  - May want to wait if developing in VB.NET, F#, etc.
- ASP.NET Web Forms will not be supported on ASP.NET 5 (but will be on .NET 4.6)
- Everything that works for you in Visual Studio today (should) work for you Visual Studio 2015

# Resources (1 of 3)

- ASP.NET vNext / 5

<http://www.asp.net/vnext>

<http://weblogs.asp.net/scottgu/introducing-asp-net-5>

- ASP.NET 5 Community Standup (YouTube videos by Scott Hanselman)

<http://roberthurlbut.com/r/aspnet5communitystandup>

- ASP.NET 5: First Look (Pluralsight Course by Scott Allen)

<http://www.pluralsight.com/courses/asp-dotnet-5-first-look>

# Resources (2 of 3)

- GitHub – ASP.NET 5

<https://github.com/aspnet>

<https://github.com/aspnet/Home>

- .NET Foundation

<http://www.dotnetfoundation.org>

<https://github.com/dotnet>

- ASP.NET 5 Nightly Builds

<https://www.myget.org/gallery/aspnetvnext>

<https://www.myget.org/gallery/aspnetmaster>

# Resources - Tools

- Visual Studio 2015 (used CTP 6 for this presentation)

<https://www.visualstudio.com/en-us/news/vs2015-vs.aspx>

Fixed issues: <https://support.microsoft.com/en-us/kb/2967191>

- OmniSharp – Cross Platform .NET Development in the editor of your choice

<http://www.omnisharp.net>

<https://github.com/OmniSharp>

- Sublime Text

<http://www.sublimetext.com>

# Questions?

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