Robert Hurlbut

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    [http://roberthurlbut.com/training/presentations](http://roberthurlbut.com/training/presentations)
    [https://github.com/rhurlbut/PrepareForAspNet5Demos](https://github.com/rhurlbut/PrepareForAspNet5Demos)
The ASP.NET you know …

… is going through …

… some changes …
What?!! Another ASP.NET??

Let‘s lift the fog and see what it means …
Disclaimer

This is all new and it \textcolor{red}{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, ...

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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.
Demo Time: Test Driving

VS 2015 CTP 6
ASP.NET 5 beta3
Changes on the horizon … beta4*

Command line tools

<table>
<thead>
<tr>
<th>Current name</th>
<th>New name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>k.cmd / klr.exe</td>
<td>dnx</td>
<td>The main runner entry point to boot an app / site. This was previously split into two files, but will be unified into one. Running &quot;dnx.exe --help&quot; (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 Usage: dnx [options] [command] [arguments] Options: --help</td>
</tr>
<tr>
<td></td>
<td>DNX</td>
<td>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.</td>
</tr>
<tr>
<td>KRE / XRE</td>
<td>DNX</td>
<td>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.</td>
</tr>
<tr>
<td>kvm.ps1/.sh</td>
<td>dnvms1/.sh</td>
<td>.NET (DNX) Version Manager. Manages which DNXs are installed, which DNX is currently in use, etc.</td>
</tr>
<tr>
<td>kpm</td>
<td>nuget</td>
<td>The package manager for NuGet packages in the app. Being merged with NuGet.</td>
</tr>
</tbody>
</table>

*Taken from “ASP.NET 5 Community Standup - Mar 10th, 2015 - The Big Rename” on YouTube
## Changes on the horizon ... beta4*

Folders and package names

<table>
<thead>
<tr>
<th>Current name</th>
<th>New name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>%userprofile%.k</td>
<td>%userprofile%.dnx</td>
<td>The folder where DNXs and global NuGet packages will be installed. Has at least these subfolders:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- /packages – Contains NuGet package dependencies (stuff that apps use, like loggers, EF, MVC, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- /runtimes – Contains the expanded DNXs (each version/os/arch is in its own folder)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- /tools – Contains globally installed tools (e.g. nuget, packaging commands, runners, etc.)</td>
</tr>
<tr>
<td>aspnet50 /</td>
<td>dnx452 / dnx46 /</td>
<td>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.</td>
</tr>
<tr>
<td>aspnetcore50</td>
<td>dnxcore50</td>
<td></td>
</tr>
<tr>
<td>&lt;none&gt;</td>
<td>core50</td>
<td>The new “base” TFM to represent a DLL that is compatible with Core CLR and any CLR that support the contracts.</td>
</tr>
<tr>
<td>kre-&lt;clr&gt;-&lt;os&gt;-</td>
<td>dnx-&lt;clr&gt;-&lt;os&gt;-</td>
<td>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).</td>
</tr>
<tr>
<td>&lt;arch&gt;.&lt;version&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$env:KRE_*</td>
<td>$env:DNX_*</td>
<td>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.</td>
</tr>
<tr>
<td>kproj</td>
<td>xproj</td>
<td>The file extension for VS projects based on a DNX.</td>
</tr>
</tbody>
</table>

*Taken from “ASP.NET 5 Community Standup - Mar 10th, 2015 - The Big Rename” on YouTube
Changes on the horizon ... beta4*

Project names

<table>
<thead>
<tr>
<th>Updated project names</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASP.NET 5 Application (and its sub-project types)</td>
<td>All the ASP.NET 5-specific projects for building web apps and web services (i.e. MVC)</td>
</tr>
<tr>
<td>“Command Line (Package)”</td>
<td>A DNX-based project for building command line (i.e. console) apps that produces a NuGet package</td>
</tr>
<tr>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>“Class Library (Package)”</td>
<td>A project for building a NuGet package that can target any framework/platform/system (all existing and all new).</td>
</tr>
<tr>
<td></td>
<td>The default TFM of these projects is core50.</td>
</tr>
</tbody>
</table>
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)
  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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    - [https://github.com/rhurlbut/PrepareForAspNet5Demos](https://github.com/rhurlbut/PrepareForAspNet5Demos)