



Tridion Developer Summit

DD4T & ASP.NET vNext

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TRIVIDEN



Agenda

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1. Introductions
2. Why Linux?
3. What is ASP.NET vNext?
4. DD4T and ASP.NET vNext
5. Development vs. Runtime
6. Demo



Why Linux?

- Cost
 - Windows is almost twice as expensive (Azure)
- Customization
 - With Linux you can build the OS you want. With only the things you need. Lower memoryprint. Smaller machines = cheaper in the cloud
- Ecosystem
 - New Tch runs on Linux first (Node.js, Docker, etc.)
- Choice
 - Windows: Current or previous version
 - Linux: Redhat, CentOS, Oracle, Solaris, Ubuntu, etc.





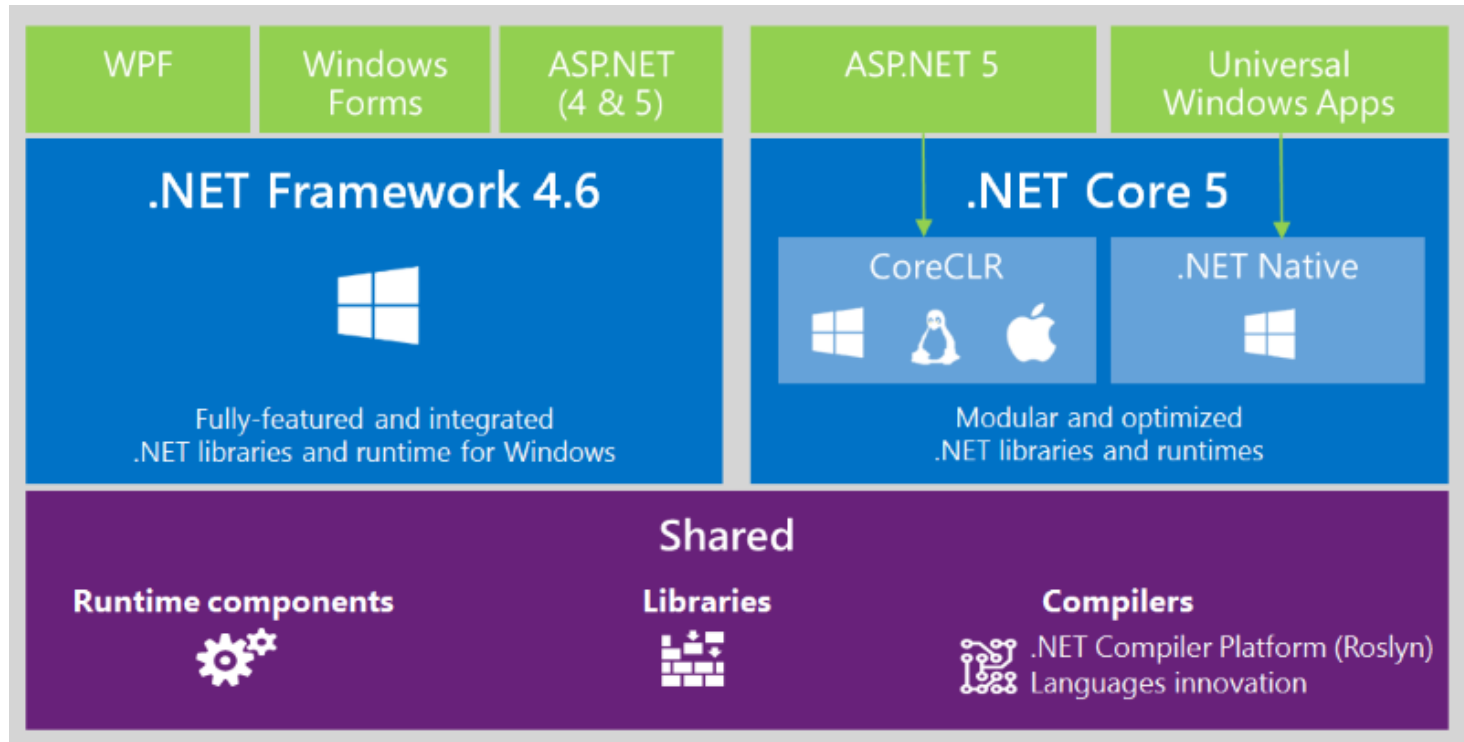
What is *ASP.NET vNext*?

ASP.NET vNext

- .NET Core vs. .NET Framework vs. ASP.NET 5
- Open source
- Platform independent
- Tight cloud integration
- Release date: Q1 2016
 - .NET Core
 - .NET Framework (4.6)
 - MVC 6



.NET Stack (High Level)



.NET, .NET Core and ASP.NET 5... What?!

- .NET CORE
 - New (open source)
 - Modular
 - Cross-platform runtime
 - Small footprint
 - CoreCLR runtime
- .NET Framework
 - The 'old', full .NET framework
- ASP.NET 5
 - Webframework for modern web apps
 - Cross-platform
 - MVC 6, WEB API unified
 - SignalR 3
 - Build on top of .NET Core
 - Can also run on full .NET framework



.NET Framework features

- Version 4.6 and up
- ASP.NET 5 is build on top of .NET Core and .NET Framework
- Ability to host on IIS or self hosting (Kestrel)
- Single aligned web stack for Web UI and Web APIs
- Cross-platform



ASP.NET vNext tools

- DNVM:
 - .NET Version Manager
- DNX:
 - Runtime environment (platform independent)
- DNU:
 - DNU Restore packages





DD4T and ASP.NET vNext

DD4T Transformation

- Running DD4T Core on .NET Core
 - A specific version of .NET Core
- DD4T is only depended on features it really needs.
- DD4T can now run cross-platform
- Cloud ready!



ASP.NET vNext Features

- OWIN
- Environment Variables support
- Default dependency injection and more ..
- Support for async calls



OWIN Middleware

- DD4T
- BinaryModule

```
0 references | Albert Romkes, 50 days ago | 1 author, 2 changes
public class Startup
{
    // For more information on how to configure your application, visit
    // https://go.microsoft.com/fwlink/?LinkID=398940
    // 0 references | Albert Romkes, 50 days ago | 1 author, 2 changes
    public void ConfigureServices(IServiceCollection services)
    {
        services.AddMvc();
        services.AddDD4T();
    }

    // 0 references | Albert Romkes, 50 days ago | 1 author, 1 change
    public void Configure(IApplicationBuilder app)
    {
        app.UseMyCustomAuthentication();
        app.UseMvc();
        app.UseDD4T();
        app.UseDD4TBinary();
        app.UseErrorPage();
    }
}
```



What does this mean for DD4T?

- DD4T being ready for the next generation of web development!
 - Platform independent
 - Cloud Ready





Development vs. Runtime

Development

- Environment agnostic
 - Visual studio Code (*nix, Windows)
 - Visual studio (Windows)
- Developers are faster up to speed
 - Own development tooling (OS, IDE, Tools)
 - Pre-defined environments
 - vm box (DD4T Content Delivery stack) (Vagrant, Hyper-V, Virtual Box)



Development – DD4T.Mvc

- NuGet Package supporting MVC 6
 - Dynamic tags (XPM tags)
 - View Components
 - Dependency Injection in Views
 - No dependency on System.Web

```
<div class="col-md-4">  
    @await Component.InvokeAsync("ArticleList", 2, true)  
</div>
```



Runtime

- Lightweight application
- Cloud aware (Microsoft Azure, AWS, Adobe Cloud)
- Docker (Chef, Puppet, etc.)

- DD4T Core
 - Will package the needed dependencies from the .NET Core framework
 - Will be small and efficient
 - Smaller memory footprint

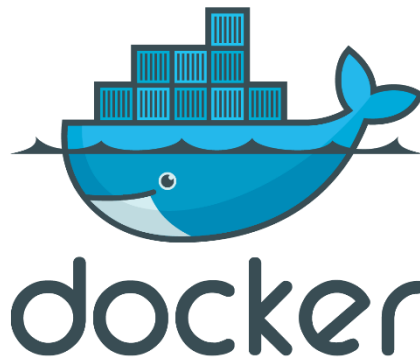
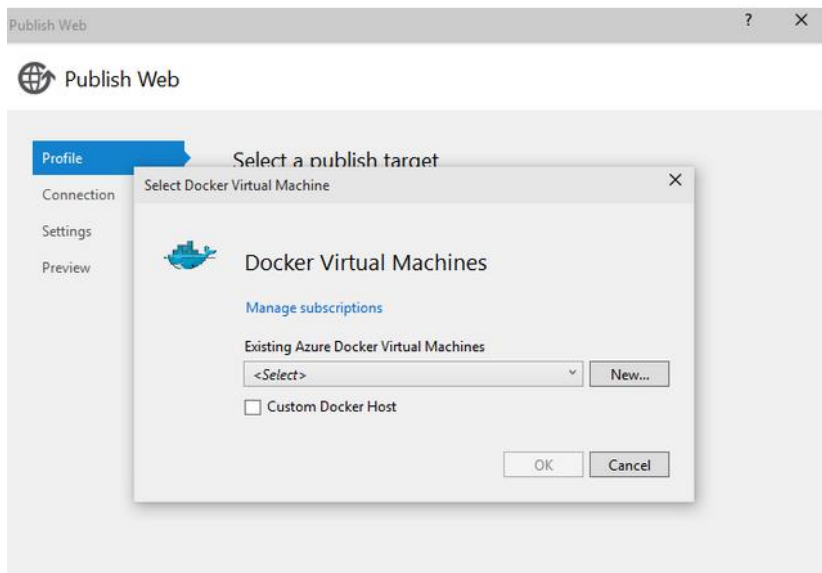


Advantages

- Rapid development cycles
- Platform independent
- Self contained
- Cloud ready
- Docker enabled



Docker



```
FROM microsoft/aspnet
```

```
COPY . /app
```

```
WORKDIR /app
```

```
RUN ["dnu", "restore"]
```

```
EXPOSE 5004
```

```
ENTRYPOINT ["dnx", "-p", "project.json", "kestrel"]
```



Dockerfile

<https://raw.githubusercontent.com/sshibani/dd4t-vnext/master/Dockerfile>

```
1 FROM jtbennett/aspnet
2
3 RUN sudo apt-get update && apt-get install -y git
4
5 RUN mkdir dd4tweb
6
7 RUN git clone https://github.com/sshibani/dd4t-vnext.git /dd4tweb
8
9 WORKDIR dd4tweb/src/DD4T.WebApplication
10
11 RUN ["dnu", "restore"]
12
13 ENTRYPOINT ["dnx", "kestrel"]
```



Running DD4T in Docker (development)



Ubuntu 14.04 (Virtualbox)
(Vagrant)



Docker Container → DD4T Web App



Docker Container → ASPNET 5



Docker Container → .NET Core



Docker Container → OS



Docker Daemon



Windows Host machine



Roadmap

- DD4T.NET running on .NET Core version
- MVC6 support
- Docker repo???
- ...



Get engaged!



GitHub, Inc. [US]

<https://github.com/dd4t>



Resources

- <http://blogs.msdn.com/b/dotnet/archive/2014/12/04/introducing-net-core.aspx>
- <https://hub.docker.com>
- <https://channel9.msdn.com/Events/Build/2015/2-726>
- <https://github.com/aspnet/home>
- <http://dotnet.github.io/core/about/overview.html>
- <http://dotnet.readthedocs.org/en/latest/>





Questions?