

ASP.NET

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What is ASP.NET?

- ▶ Web development platform
- ▶ Uses HTTP commands/policies
- ▶ Microsoft .NET Platform
 - ▶ Compiled using components in .NET Framework
- ▶ .NET Framework (runs in Windows)
 - ▶ Handles memory management, exception handling
 - ▶ Library of classes interfaces etc

Flavours

Active
Server
Pages
(Classic
ASP)

ASP.NET
(Web
Forms)

ASP.NET
MVC
1/2/3/4/5

ASP.NET
~~MVC 6~~
Core
MVC

ASP.NET
Web
Pages

ASP.NET
Web API

Unified
MVC,
Web API
and Web
Pages

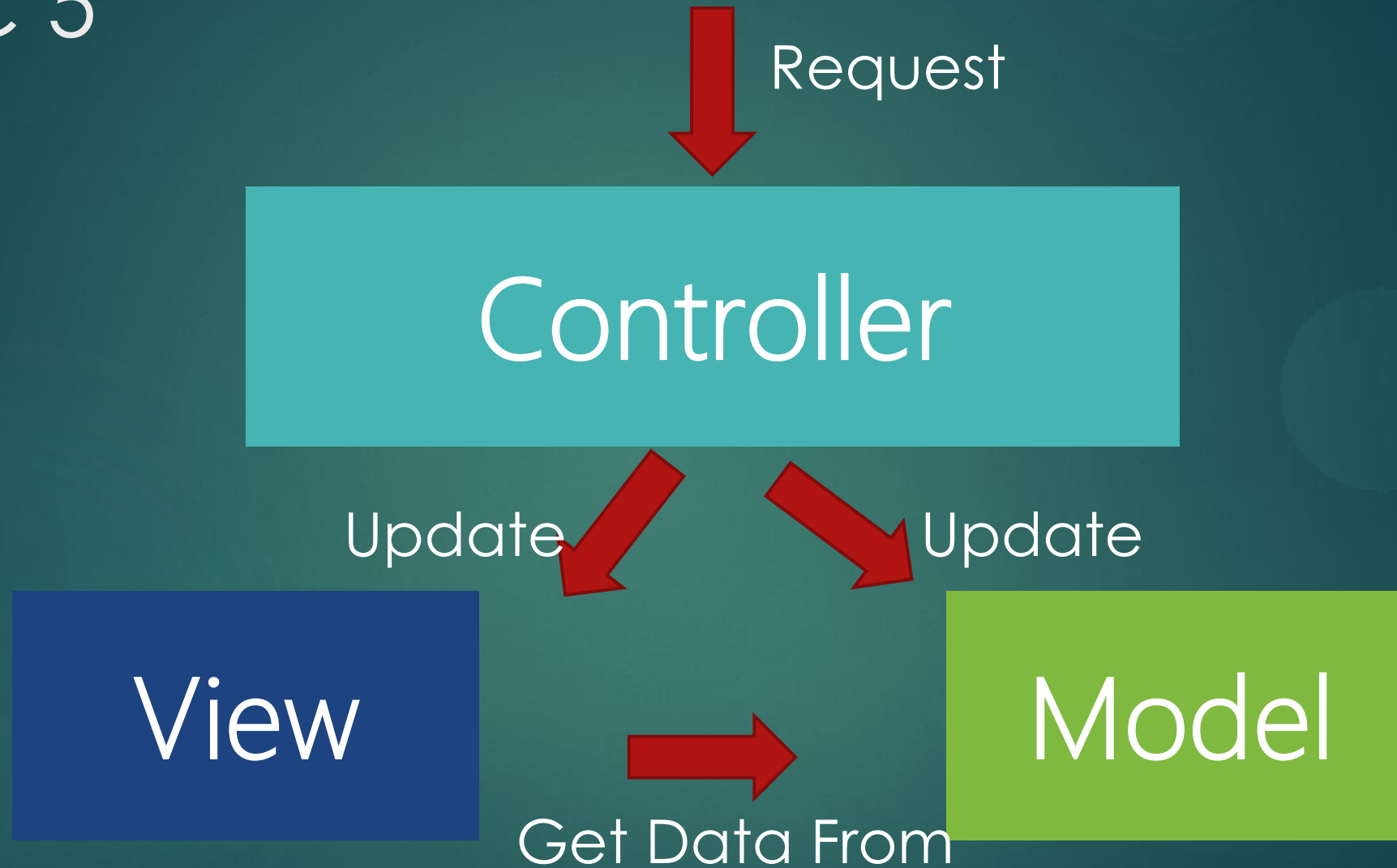
Server side

- ▶ The ASP.NET application compiles on the server.
- ▶ Runs locally on IIS (Internet Information Services) on Windows – see links for Mac solution (Kestrel)
- ▶ Deploy to Azure (free tier)

.NET 4.6 or Core?

- ▶ ASP.NET Core is the next-generation release after ASP.NET 4.5.
- ▶ .NET Core - released early 2016.
- ▶ .NET 4.5 has been around for over 5 years, with lots of packages and documentation.

MVC 5



Select a template:

ASP.NET 4.5 Templates

Empty Web Forms MVC Web API Single Page Application

Azure API App Azure Mobile App Azure Mobile Service

ASP.NET 5 Templates

Empty Web API **Web Application**

Add folders and core references for:

- Web Forms MVC Web API

Add unit tests

Test project name:

A project template for creating an ASP.NET 5 application. The template uses ASP.NET MVC and can be used to build Web Applications and RESTful HTTP Services.

[Learn more](#)

Change Authentication

Authentication: **Individual User Accounts**

Microsoft Azure

Host in the cloud

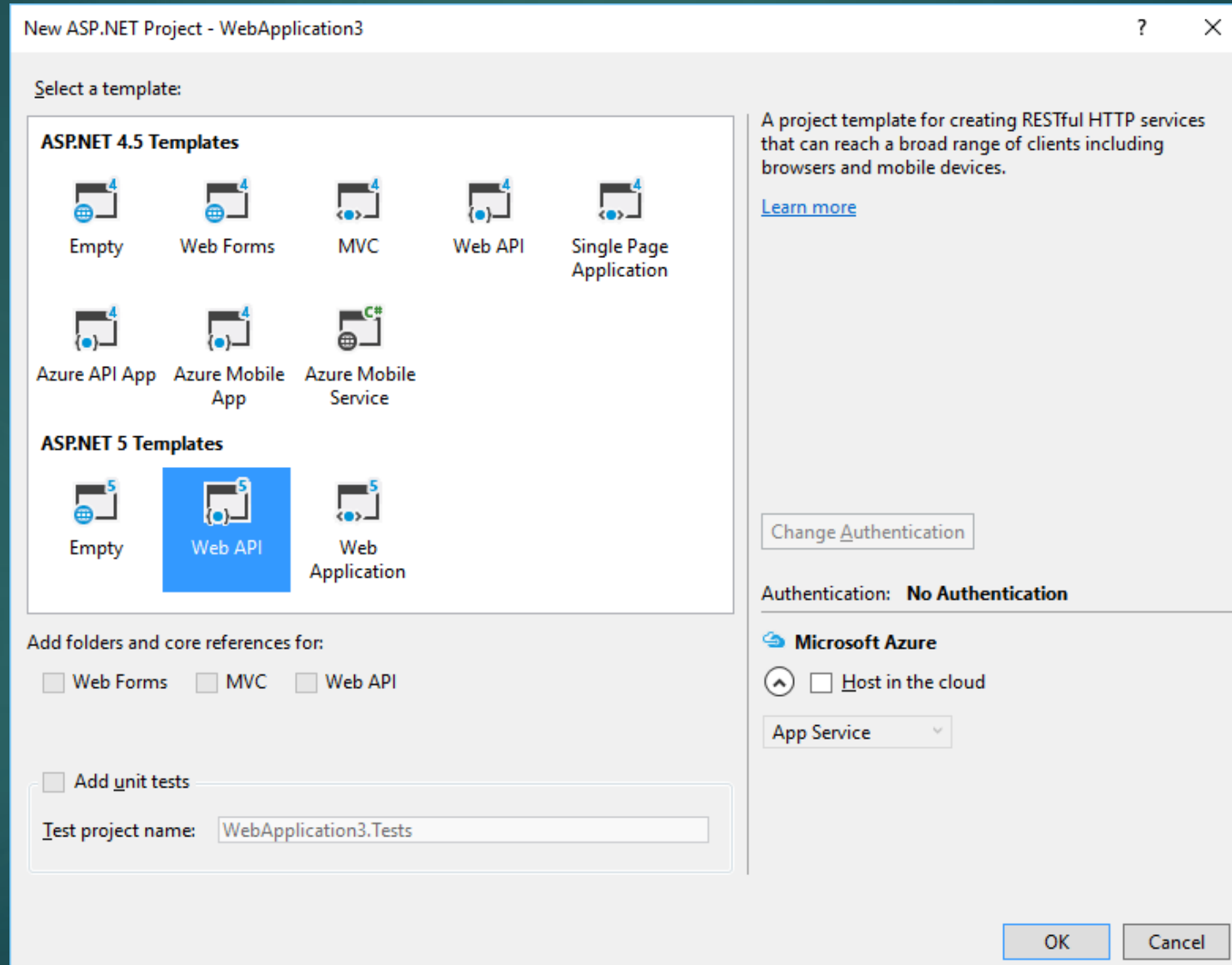
App Service

OK

Cancel

```
10
11 <h2>@ViewData["Title"].</h2>
12 <div class="row">
13   <div class="col-md-8">
14     <section>
15       <form asp-controller="Account" asp-action="Login" asp-route-
        returnUrl="@ViewData["ReturnUrl"]" method="post" class="form-horizontal"
        role="form">
16         <h4>Use a local account to log in.</h4>
17         <hr />
18         <div asp-validation-summary="ValidationSummary.All" class="text-
          danger"></div>
19         <div class="form-group">
20           <label asp-for="Email" class="col-md-2 control-label"></label>
21           <div class="col-md-10">
22             <input asp-for="Email" class="form-control" />
23             <span asp-validation-for="Email" class="text-danger"></span>
24           </div>
25         </div>
26         <div class="form-group">
27           <label asp-for="Password" class="col-md-2 control-label"></label>
28           <div class="col-md-10">
29             <input asp-for="Password" class="form-control" />
30             <span asp-validation-for="Password" class="text-danger"></span>
```


Web API



Web API

- ▶ Create RESTful APIs that return JSON/XML/etc
- ▶ Can tie in with front-end component e.g. Angular

Core

- ▶ Integrate MVC and Web API in one solution
- ▶ More modular/learner framework - faster

Languages

- ▶ C#
- ▶ HTML/CSS
- ▶ Javascript (for any frontend components using Web API)
- ▶ Razor syntax (embedding C# in HTML)

Get started – 4.6

- ▶ ASP.NET 4.6 (MVC 5, Web API):

- ▶ Install guide: <https://www.asp.net/aspnet/overview/making-websites-with-aspnet/installing-aspnet-and-web-tools>
- ▶ MVC – Tutorial (MS): <https://www.asp.net/mvc/overview/getting-started/introduction/getting-started>
- ▶ MVC – Tutorial (TutorialsPoint): http://www.tutorialspoint.com/asp.net_mvc/
- ▶ Working with SQL Server (<https://www.asp.net/mvc/overview/getting-started/introduction/creating-a-connection-string>)
- ▶ Deploy to Azure App Service (<https://docs.microsoft.com/en-us/azure/app-service-web/web-sites-dotnet-get-started>)
- ▶ Build Web API tutorial (<https://www.asp.net/web-api/overview/getting-started-with-aspnet-web-api/tutorial-your-first-web-api>)
- ▶ Razor Markup (http://www.w3schools.com/asp/razor_intro.asp)
- ▶ Mac development – you should download Xamarin, or try the open source Mono project (<https://joelennon.com/asp-net-mvc-on-mac-os-x/>). I hear .NET Core's cross-platform development is more friendly for Mac development but MVC 5 solutions can work on Mac.

Get started - Core

- ▶ ASP.NET Core:

- ▶ <https://www.asp.net/get-started>

- ▶ Install .NET Core Guide

- (<https://www.microsoft.com/net/core#windowsvs2015>) – you will need Visual Studio (recommended 2015)

- ▶ Tutorial (https://www.tutorialspoint.com/asp.net_core/index.htm)

- ▶ Running .NET Core on Mac (<https://docs.microsoft.com/en-us/aspnet/core/tutorials/your-first-mac-aspnet#running-locally-using-kestrel>)