



Neel Bhatt

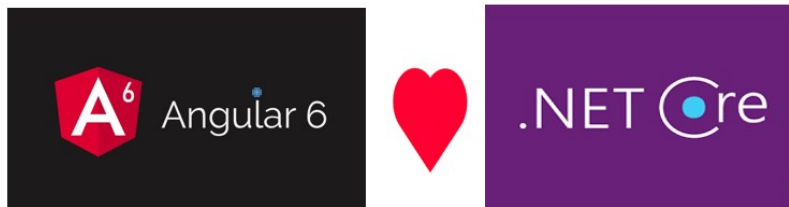
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Create an application with Angular 6 and .Net Core: Step by step guide

Neel

.Net Core, .Net Core 2.1, Angular .Net, Angular .Net core, Angular .Net core 2.0, Angular 6 .Net Core, Angular Visual studio, ASP .Net Core, ASP .Net Core 2.0, Asp .Net Core 2.1, asp.netcore2.0, Core 2.0, Visual Studio 2017

June 2, 2018 2 Minutes



Angular 6 is announced recently which has introduced some pretty awesome features.

Let us see how to create **Angular 6** application **with and without using .Net Core SPA** templates using **Visual Studio 2017**.

There are more than one ways to create **Angular 6** application with **.Net Core**, Let us see some of them.

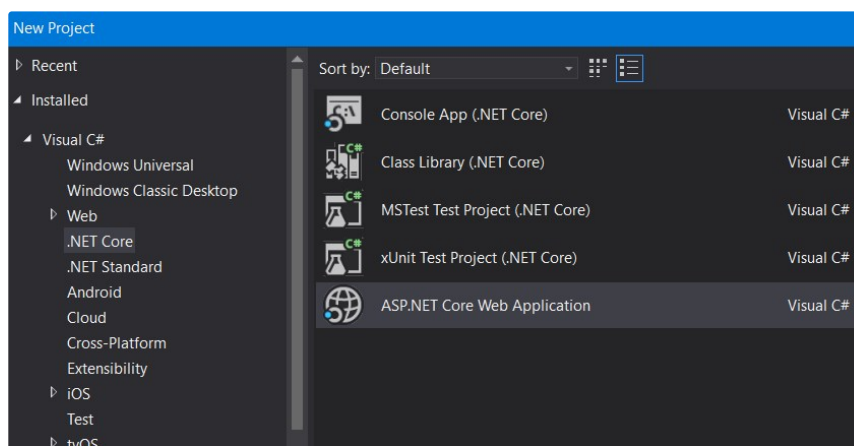
Make sure you have instilled **Visual Studio 2017** & **.Net Core latest SDK** and of course **Node** & **Angular CLI**.

Without using SPA Template

In this approach we **will not use any template** and will add Angular 6 within an API project.

Create the Angular application using .Net Core 2.0 template in VS 2017

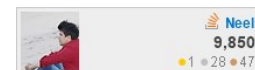
Once you have all these installed, open your Visual Studio 2017 -> Create New Project -> Select Core Web application:



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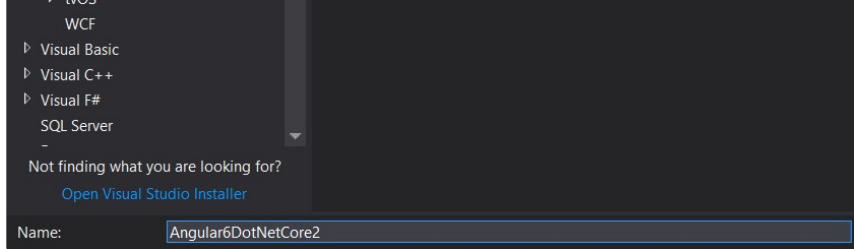
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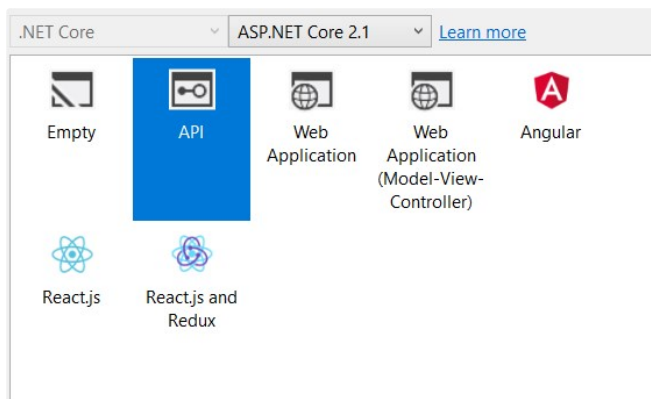


This is an awesome security product on which I am working currently. Check it out.





Click on Ok and in next window, select API as shown below:



Once the **API** project is created, open **Command prompt** and navigate to the project folder -> run command:

```
ng new ClientApp
```

This will create **Angular 6** application within API project.

Next task is **to run our Angular application with .Net Core**. For this we need to add some code within **Startup.cs** class.

Add below lines in **ConfigureService** method:

```
services.AddSpaStaticFiles(configuration =>
{
configuration.RootPath = "ClientApp/dist";
});
```

Add below lines in **Configure** method:

```
app.UseHttpsRedirection();
app.UseStaticFiles();
app.UseSpaStaticFiles();

app.UseHttpsRedirection();
app.UseMvc();

app.UseSpa(spa =>
{
spa.Options.SourcePath = "ClientApp";

if (env.IsDevelopment())
{
spa.UseAngularCliServer(npmScript: "start");
}
});
```

Above code adds **required configuration for running Angular code with .Net**

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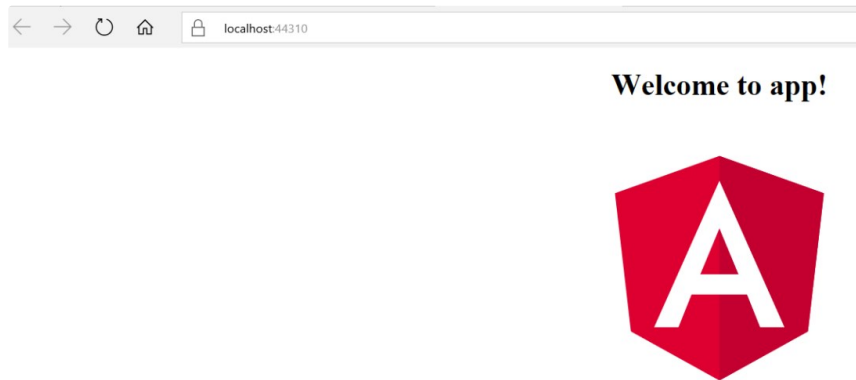
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Core.

Note: Make sure the property **“launchUrl”**: **“api/values”** is not present in the **Properties/launchSettings.json**, if it is available then delete it.

Just run the application in the browser:



Here are some links to help you start:

• [Tour of Heroes](#)

• [Getting Started](#)

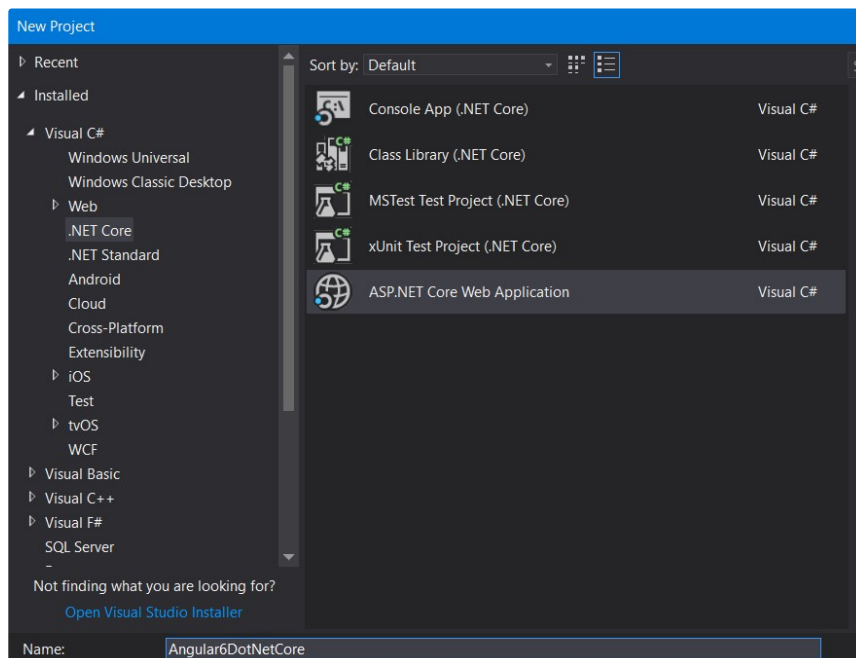
Your Angular 6 application is now running with .Net Core.

With SPA Template

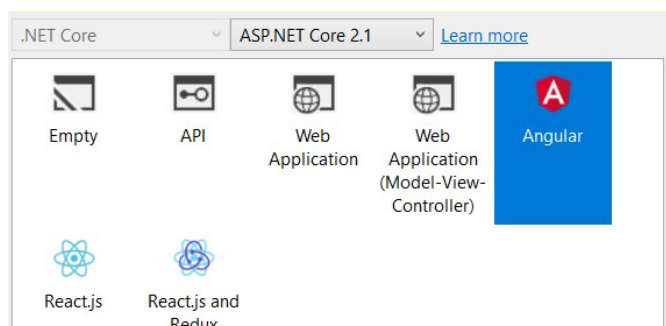
In first approach, we have not used SPA template to create Angular app, in this approach we will use the Angular template.

Create the Angular application using .Net Core 2.1 template in VS 2017

Once you have all these installed, open your Visual Studio 2017 -> Create New Project -> Select Core Web application:



Click on Ok and in next window, select Angular as shown below:



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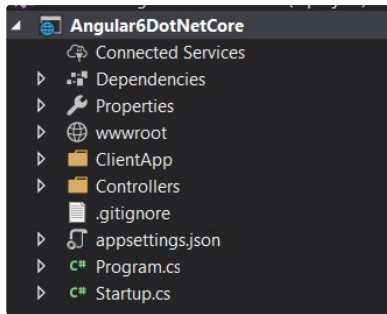
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Visual Studio will create a well-structured application for you.

If you compare latest project structure with the previous versions then you would notice that the **Views folder is no more there:**

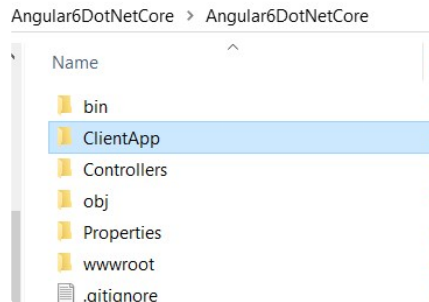


We do not need that Views folder now.

Delete ClientApp and install Angular 6

If you open **package.json** file under **ClientApp** folder, you would notice the **Angular version is 5.0** but we want to create **Angular 6** application.

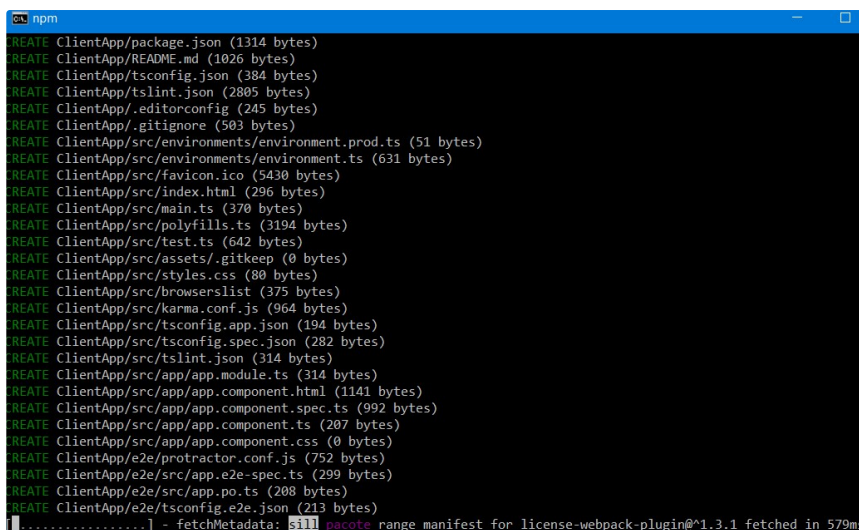
So go to File explorer and delete **ClientApp** folder:



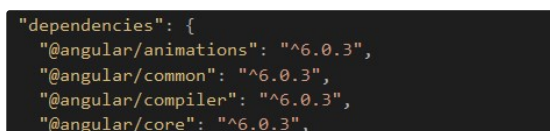
Once the folder is deleted, open **Command prompt** and navigate to the project and run command:

```
ng new ClientApp
```

This command will create brand new **Angular application with latest version.**



Once the process is completed, go back to **solution explorer** -> **ClientApp** -> **package.json** file, it should show **Angular 6.0** references:



Core 2.1 feature

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```
"@angular/forms": "^6.0.3",
"@angular/http": "^6.0.3",
"@angular/platform-browser": "^6.0.3",
"@angular/platform-browser-dynamic": "^6.0.3",
"@angular/router": "^6.0.3",
"core-js": "^2.5.4",
"rxjs": "^6.0.0",
"zone.js": "^0.8.26"
```

That is it. We have just created **Angular 6 application with .Net Core**.

Let us try to use any random **Angular 6 feature** just to make sure we have latest Angular 6 code.

Test Library feature

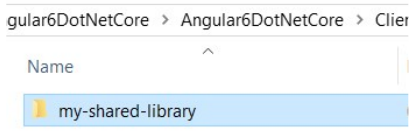
We will test the **library feature** which has been shipped with Angular 6.

Open the command prompt again and navigate to ClientApp folder -> run command:

```
ng generate library my-shared-library
```

```
C:\Users\E074368\source\repos\Angular6DotNetCore\Angular6DotNetCore\ClientApp>ng generate library my-shared-library
CREATE projects/my-shared-library/karma.conf.js (968 bytes)
CREATE projects/my-shared-library/ng-package.json (193 bytes)
CREATE projects/my-shared-library/ng-package.prod.json (166 bytes)
CREATE projects/my-shared-library/package.json (177 bytes)
CREATE projects/my-shared-library/src/test.ts (700 bytes)
CREATE projects/my-shared-library/src/public_api.ts (199 bytes)
CREATE projects/my-shared-library/tsconfig.lib.json (769 bytes)
CREATE projects/my-shared-library/tsconfig.spec.json (246 bytes)
CREATE projects/my-shared-library/tslint.json (317 bytes)
CREATE projects/my-shared-library/src/lib/my-shared-library.module.ts (271 bytes)
CREATE projects/my-shared-library/src/lib/my-shared-library.component.spec.ts (693 bytes)
CREATE projects/my-shared-library/src/lib/my-shared-library.component.ts (287 bytes)
CREATE projects/my-shared-library/src/lib/my-shared-library.service.spec.ts (430 bytes)
CREATE projects/my-shared-library/src/lib/my-shared-library.service.ts (144 bytes)
UPDATE angular.json (4764 bytes)
UPDATE package.json (1447 bytes)
UPDATE tsconfig.json (550 bytes)
..... | fetchMetadata: sill install loadAllDepsIntoIdealTree
```

Logs in the window confirms that **we have Angular 6 now**. Library would be created under the **ClientApp -> Projects** folder:



Hope it helps.

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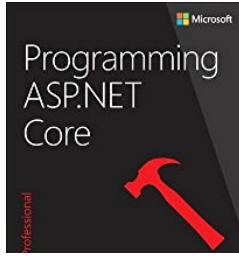


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36 thoughts on "Create an application with Angular 6 and .Net Core: Step by step guide"

Pingback: [Create an application with Angular 6 and .Net Core: Step by step guide - How to Code .NET](#)



Moksha

June 7, 2018 at 11:55 am

Hi,

Can you please explain the deployment of Angular 6 with .NET Core in IIS Server

★ Like

↩ Reply



Neel

June 7, 2018 at 12:10 pm

Hello, you can check this: <https://neelbhatt.com/2017/12/19/build-angular-app-with-net-core-2-0-templatevs-2017-deploy-on-azure-step-by-step-guide/>

★ Like

↩ Reply



kerray

June 21, 2018 at 1:18 pm

This was very helpful. Thanks a lot Neel

★ Liked by [1 person](#)

↩ Reply



Neel

June 24, 2018 at 5:16 pm

Glad to know that it is helpful 😊

★ Like

[↩ Reply](#)



Mark Cole

July 2, 2018 at 4:45 pm

Neel:

Considering 2.1's integration with Angular 6, would you say the best practice for UI in .Net Core is to use Angular as your front end rather than Razor files?

Thanks,

mark

★ Like

[↩ Reply](#)



Neel

July 3, 2018 at 9:03 am

Hi Mark, from .Net Core 2.1 onwards, default template does not include the views which means it would be good to use Angular as front end but we can use Razor as well. It makes more sense to use Angular though.

★ Like

[↩ Reply](#)



Mark Cole

July 9, 2018 at 1:28 am

Neel:

I hate to ask a dumb question, but could you please specify how to "run the app". I open a command prompt in the project folder, and run ng serve. I receive the error "Local workspace file ('angular.json') could not be found" What am I doing wrong?

Thanks in advance.

★ Like

[↩ Reply](#)



Neel

July 9, 2018 at 6:56 am

Hey Mark, questions are never dumb, it is good when someone asks questions. ng serve works for me. Reason of the error can be anything from this answers:<https://stackoverflow.com/questions/49810580/error-local-workspace-file-angular-json-could-not-be-found>

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J.R

July 30, 2018 at 2:02 am

Is "ng serve" the accepted way to run/debug the application when using visual studio? If I try to run the app in IIS I get errors about paths to NPM not found, but using "ng serve" from command prompt works.

★ Like



Neel

August 3, 2018 at 7:13 am

Hi, ng serve is basically used to test your app locally while developing. While developing, you can use ng serve which will build the application and start a web server where you can test. Deploying to IIS is a different thing because you are using IIS server for that. Have a look here for hosting Angular apps on IIS:

https://www.google.co.in/search?safe=strict&ei=ngBkW9DaJYn28gWgo5_YAw&q=host+angular+app+in+iis&oq=host+angular+app&gs_l=psy-ab.1.0.0i20i263k1j0l9.2144.5919.0.7918.18.14.1.3.3.0.289.1936.0j4j5.9.0....0...1c.1.64.psy-ab..6.12.1665...35i39k1joi67k1joi10k1joi131k1joi22i3ok1.0.7avk2QHyTw8

★ Like



Mark Cole

July 10, 2018 at 12:38 am

Neel:

I didn't upgrade node.js – once I had the latest version the project ran correctly.

Thanks.

★ Like

↩ Reply



Neel

July 11, 2018 at 7:11 am

Good to know that Mark.

★ Like

↩ Reply



rhermans

July 13, 2018 at 7:11 am

Thanks for this, this makes is really easy to start with.

★ Like

↩ Reply



Neel

July 16, 2018 at 11:42 am

Thanks for your kind words.

★ Like

↩ Reply



Angel Martínez

July 18, 2018 at 3:34 pm

Neel, first of all, great post!!

But trying to expand Mark's question... What would you consider to be the pros/cons of choosing Angular over Razor UI? What would be de main differences? Thank you!!

★ Like

↩ Reply



Neel

July 28, 2018 at 9:36 am

Hello Angel, Thanks a lot. Well your question is broad so I would suggest you to look at these threads where similar discussion is going on:
<https://www.google.co.in/search?q=angular+vs+razor+UI+site:stackoverflow.com&safe=strict&sa=X&ved=2ahUKEwiplMX-vsHcAhXrqlQKHUoaAvAQrQIoBDAAegQIABAM&biw=1366&bih=662>

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Luis Angel

July 26, 2018 at 3:48 am

Hi Neel,

I have a doubt, in your experience. Which is better using with or without SPA Template?

Thanks.

★ Like

↪ Reply



Neel

July 28, 2018 at 9:30 am

Hi Luis. Using SPA template is bit easier to use as we do not require to configure anything manually. VS does it for us.

★ Like

↪ Reply



John

July 30, 2018 at 11:59 pm

One thing to mention is that you need to change parameter in angular.json to make it work in Production (in Azure):

“outputPath”: “dist”

instead of

“outputPath”: “dist/ClientApp”

to match original .angular-cli.json setting

★ Like

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Neel

July 31, 2018 at 10:51 am

Thanks John. This is really helpful.

★ Like

↪ Reply



Samuel Song

July 31, 2018 at 6:00 pm

It would be nice how to connect to oracle with this project

★ Like

↪ Reply



Neel

August 3, 2018 at 7:17 am

Hi Samuel, .Net applications mostly use SQL, there are very few .Net apps which

uses Oracle. You can check this for using .Net Core API with Oracle :
<https://www.c-sharpcorner.com/article/asp-net-core-web-api-with-oracle-database-and-dapper/>

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Pradip Jalu

August 7, 2018 at 2:56 pm

Thank you Neel, This is really good post to start on AngularJS with .Net Core.
While running the application, I was facing weird issue. Initially was getting HTTP ERROR 500.

This page isn't working
localhost is currently unable to handle this request.
HTTP ERROR 500

But, after waiting for some time when I reload the browser, it's working fine.

Any guess ?

★ Like

↪ Reply



Pradip Jalu

August 7, 2018 at 3:33 pm

An unhandled exception occurred while processing the request.
TimeoutException: The Angular CLI process did not start listening for requests within the timeout period of 50 seconds. Check the log output for error information.
Microsoft.AspNetCore.SpaServices.Extensions.Util.TaskTimeoutExtensions.WithTimeout(Task task, TimeSpan timeoutDelay, string message)

Stack Query Cookies Headers
TimeoutException: The Angular CLI process did not start listening for requests within the timeout period of 50 seconds. Check the log output for error information.
Microsoft.AspNetCore.SpaServices.Extensions.Util.TaskTimeoutExtensions.WithTimeout(Task task, TimeSpan timeoutDelay, string message)
Microsoft.AspNetCore.SpaServices.Extensions.Proxy.SpaProxy.PerformProxyRequest(HttpContext context, HttpClient httpClient, Task baseUriTask, CancellationToken applicationStoppingToken, bool proxy404s)
Microsoft.AspNetCore.Builder.SpaProxyingExtensions+c__DisplayClass2_o+<b__o>d.MoveNext()
Microsoft.AspNetCore.Builder.RouterMiddleware.Invoke(HttpContext httpContext)
Microsoft.AspNetCore.StaticFiles.StaticFileMiddleware.Invoke(HttpContext context)
Microsoft.AspNetCore.Diagnostics.DeveloperExceptionPageMiddleware.Invoke(HttpContext context)

★ Like

↪ Reply



Neel

August 10, 2018 at 6:26 am

Thanks Pradip. This post may help you:
<https://github.com/aspnet/JavaScriptServices/issues/1512>. This may occur due to the extra time taken by the compilation process. You can increase the startup time out value: `spa.Options.StartupTimeout = new TimeSpan(0, 0, 80);`

★ Like



Pradip Jalu

August 10, 2018 at 4:15 pm

Hi Neel,

Thank you for your response. Application is working fine now locally.

Publishing this app over Azure (app service) from Visual Studio 2017 getting below error.

InvalidOperationException: The SPA default page middleware could not return the default page '/index.html' because it was not found, and no other middleware handled the request. Your application is running in Production mode, so make sure it has been published, or that you have built your SPA manually. Alternatively you may wish to switch to the Development environment.

★ Like

↩ Reply



Neel

August 13, 2018 at 9:21 am

Looks like you are running the production mode, set it to the development:

ASPNETCORE_Environment=Development, this should help:

<https://github.com/aspnet/JavaScriptServices/issues/1514>

★ Like

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Manula Madushanka

September 18, 2018 at 5:52 am

Thanks for the post, I have just followed the steps,

what I still could not be able to do is, ajax calls to web api is not working.

★ Like

↩ Reply



Neel

September 19, 2018 at 5:18 pm

Hey, I would suggest you to use the httpmodule within the angular instead of using ajax calls. Have a look here:

<https://stackoverflow.com/questions/34802813/how-to-make-ajax-call-with-angular2ts>

★ Like

↩ Reply



Samuel

September 19, 2018 at 10:58 pm

It would be nice if you can post how it can be deployed in production using IIS

★ Like

↩ Reply



Neel

September 25, 2018 at 4:28 am

Hi Samuel, I will try to publish that soon. Thanks for the suggestion

★ Like

↩ Reply



Samuel Song

September 25, 2018 at 2:43 am

It would be really nice if you post to how to compile and to publish at once.

I meant debugging is easy, but to publish it I need to compile Angular 6 in prod and and publish core 2.1 seperately and move the files around

Thanks !! in advance

★ Like

↩ Reply



Neel

September 25, 2018 at 4:30 am

Hey, I have posts to publish angular app on Azure and Firebase. Have a look here:

<https://neelbhatt.com/2017/12/19/build-angular-app-with-net-core-2-0-templatevs-2017-deploy-on-azure-step-by-step-guide/> and here:

<https://neelbhatt.com/2018/09/12/publish-angular-6-app-to-firebase/>

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Marvin Cook

October 3, 2018 at 7:43 pm

The problem is I want to publish to WebHost a normal Windows10 server. Very disappointed.

★ Like



Neel

October 5, 2018 at 12:16 pm

What is the problem you are facing?

★ Like

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