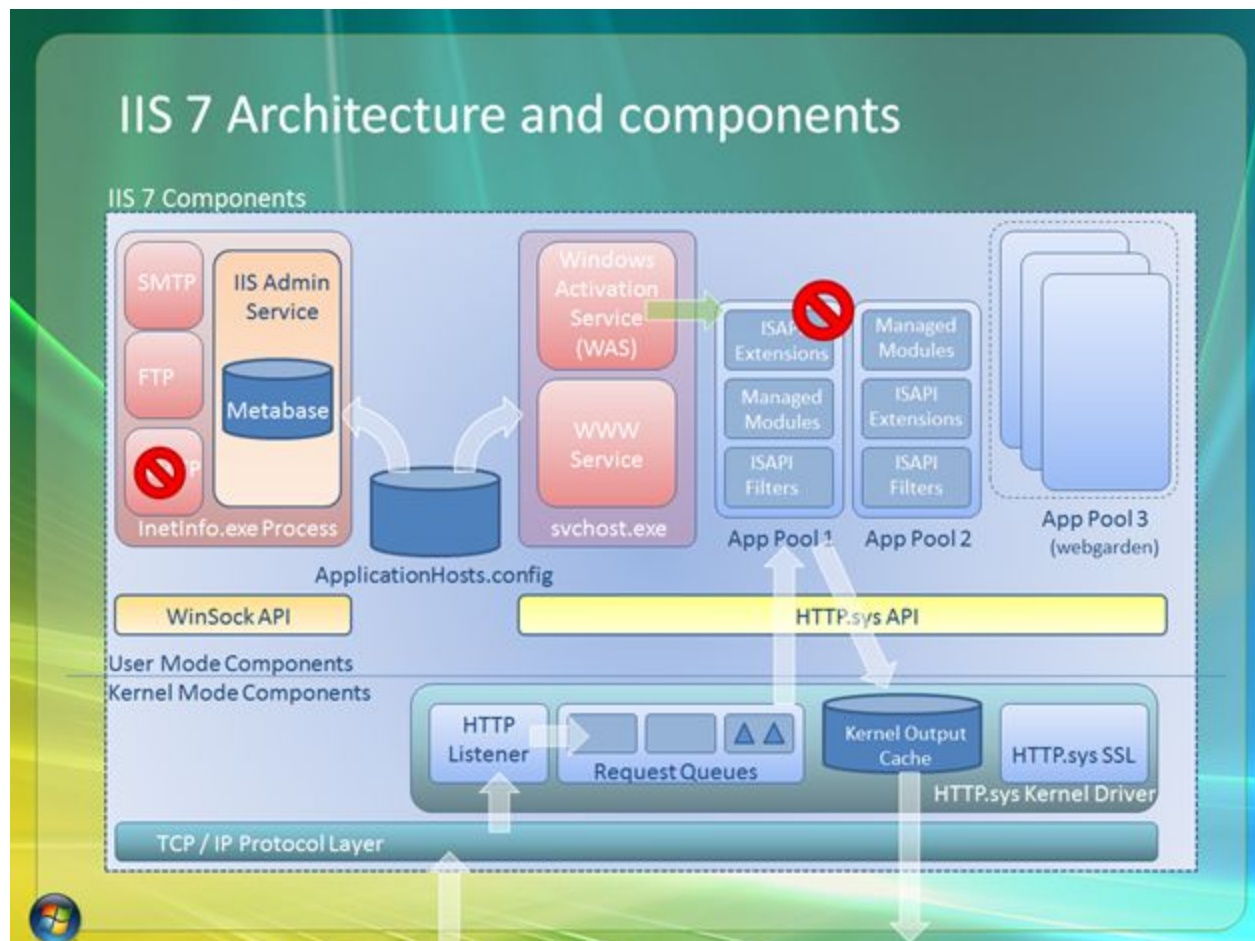


## Task 7. IIS(Internet Information Services)

### 1. IIS Basics

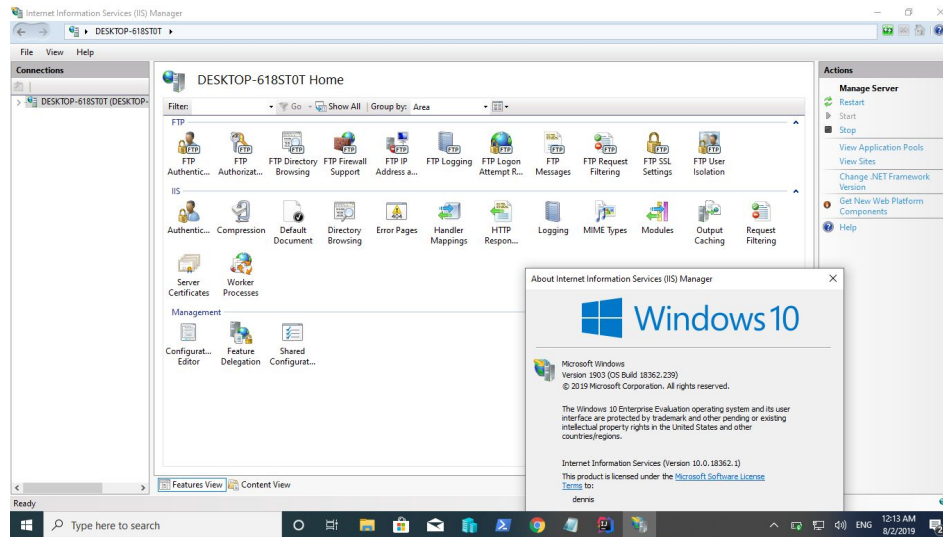
Docs

<https://docs.microsoft.com/en-us/iis/get-started/whats-new-in-iis-10-version-1709/new-features-introduced-in-iis-10-1709>



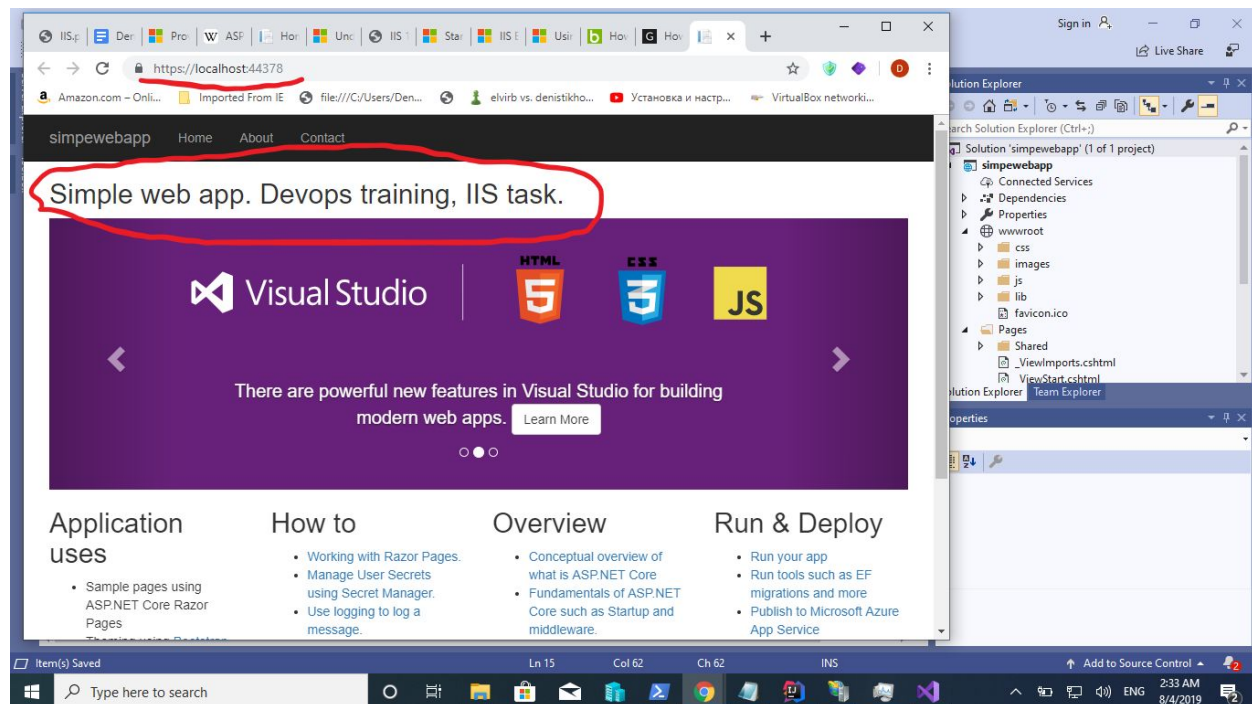
## 1.1. Install IIS

Installed version 10.0.18362.1, Windows 10 Enterprise Evaluation.

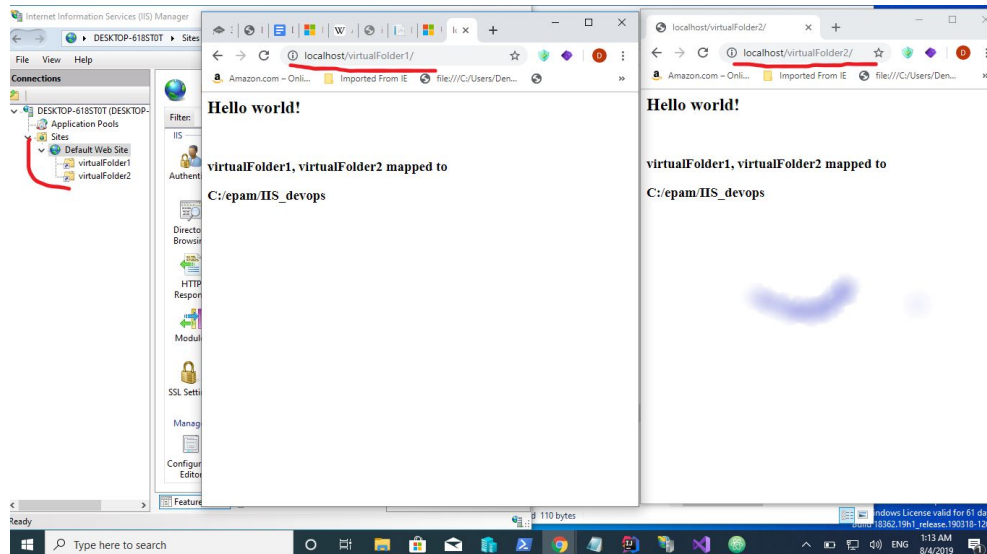


IIS related files placed in C:\interbub\

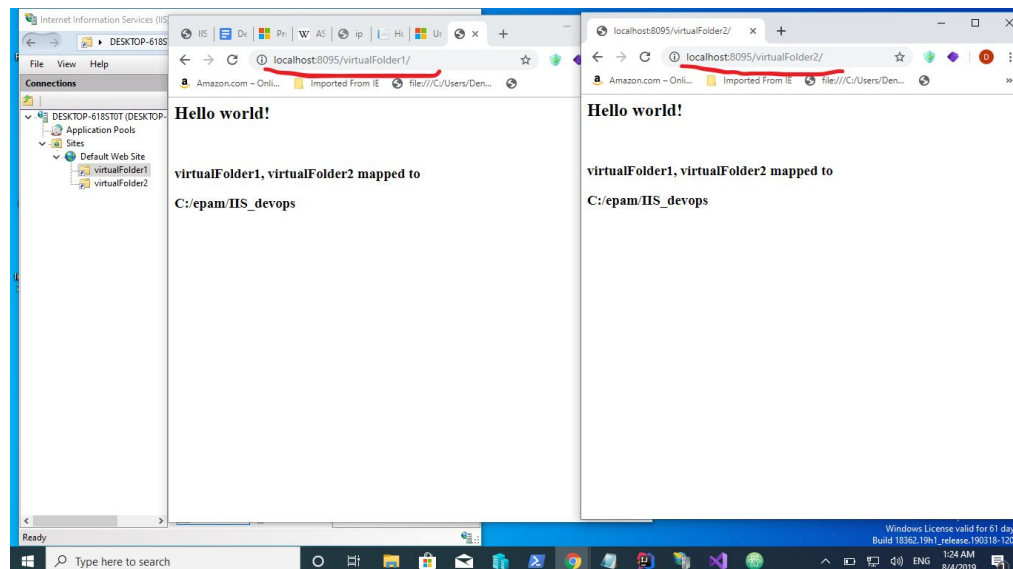
## 1.2. Using VS create a simple WEB-site using ASP.NET Core



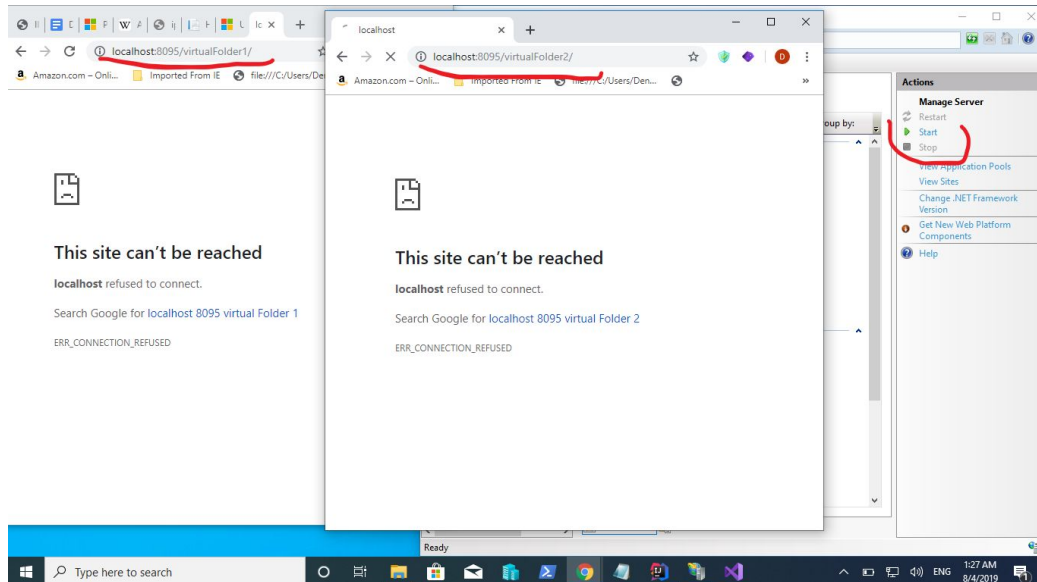
- 1.3. Create two virtual directories for the same folder on the disk. &
- 1.4. For each allow viewing content. &
- 1.5. The result should be available on the next links: <http://IP/virtualFolder1> and <http://IP/virtualFolder2> (make screenshots)



- 1.6. Change port to 8095
- 1.7. The created virtual directories must be accessible at the following addresses: <http://IP:8095/virtualFolder1> and <http://IP:8095/virtualFolder2> (make screenshots)



**1.8. Stop IIS through UI. The created virtual directories must be inaccessible (make screenshots).**

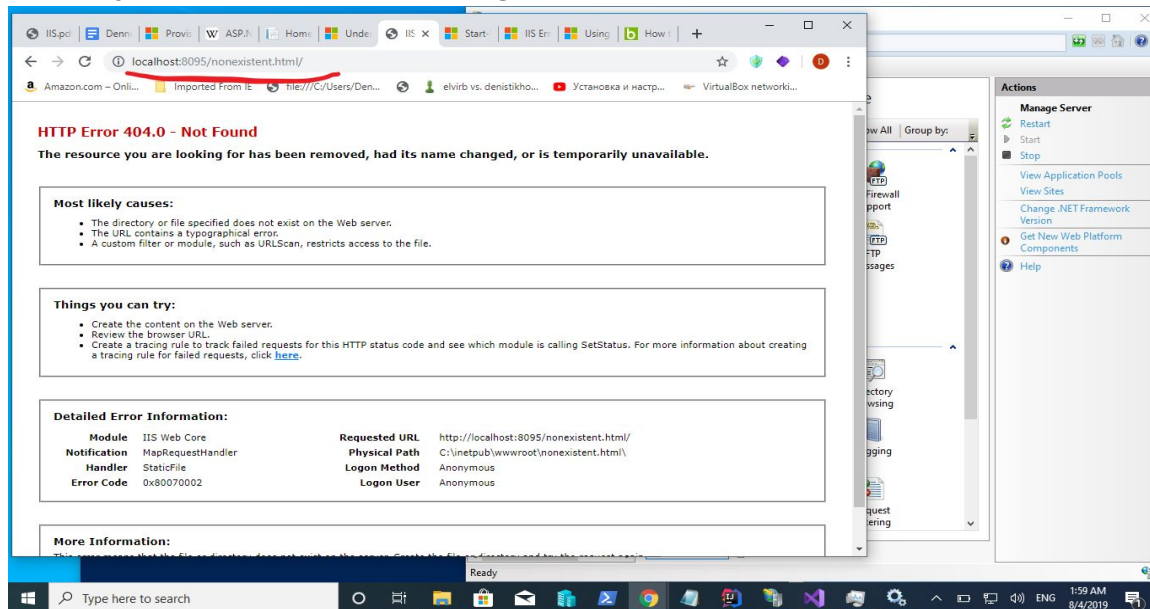


**1.9. Run IIS from the command line. Directories should be available again.**

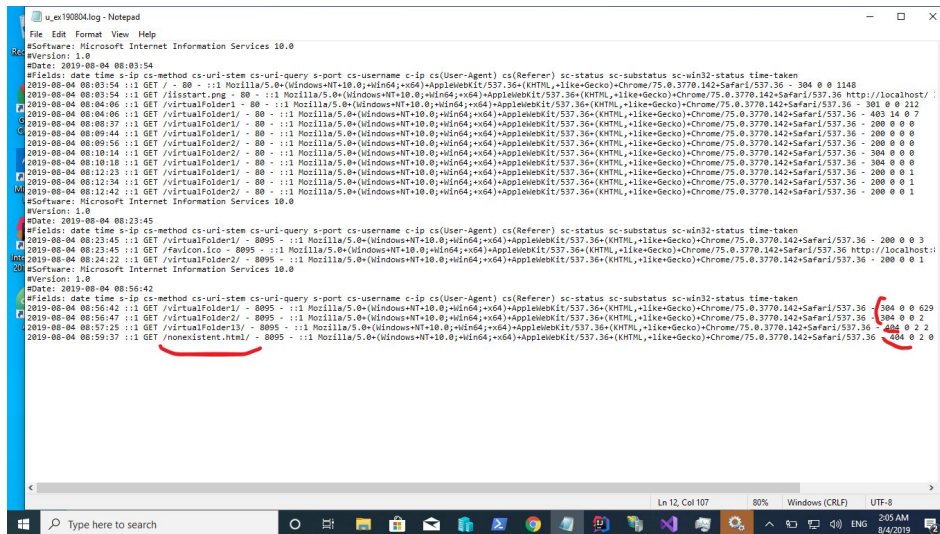
Run command from cmd:  
**NET START IISADMIN**

Yes, virtual folders are available again.

**1.10. Try to open a non-existent page (http://IP/nonexistent.html) (make a screenshot).**



**1.11. In the logs to find the lines where the page was displayed well and where was the attempt to open a non-existent page (make screenshots).**



```
File Edit Format View Help
#Software: Microsoft Internet Information Services 10.0
#Version: 1.0
#date: 2019-08-04 08:03:54
#fields: date time s-ip cs-method cs-uri-stem cs-uri-query s-port cs-username c-ip cs(User-Agent) cs(Referer) sc-status sc-substatus sc-win32-status time-taken
2019-08-04 08:03:54 : ::1 GET / - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 304 0 0 1148
2019-08-04 08:03:54 : ::1 GET /iisstart.png - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 http://localhost/
2019-08-04 08:04:06 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 212
2019-08-04 08:04:06 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 403 14 0 7
2019-08-04 08:08:37 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 0
2019-08-04 08:08:44 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 0
2019-08-04 08:09:56 : ::1 GET /virtualFolder2 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 0
2019-08-04 08:10:14 : ::1 GET /virtualFolder2 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 304 0 0 0
2019-08-04 08:10:18 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 304 0 0 0
2019-08-04 08:12:23 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 1
2019-08-04 08:12:34 : ::1 GET /virtualFolder1 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 1
2019-08-04 08:12:42 : ::1 GET /virtualFolder2 - 80 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 1
#Software: Microsoft Internet Information Services 10.0
#Version: 1.0
#date: 2019-08-04 08:23:45
#fields: date time s-ip cs-method cs-uri-stem cs-uri-query s-port cs-username c-ip cs(User-Agent) cs(Referer) sc-status sc-substatus sc-win32-status time-taken
2019-08-04 08:23:45 : ::1 GET /virtualFolder1 - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 3
2019-08-04 08:23:45 : ::1 GET /favicon.ico - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 http://localhost/
2019-08-04 08:24:22 : ::1 GET /virtualFolder2 - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 200 0 0 1
#Software: Microsoft Internet Information Services 10.0
#Version: 1.0
#date: 2019-08-04 08:56:42
#fields: date time s-ip cs-method cs-uri-stem cs-uri-query s-port cs-username c-ip cs(User-Agent) cs(Referer) sc-status sc-substatus sc-win32-status time-taken
2019-08-04 08:56:42 : ::1 GET /virtualFolder1 - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 304 0 0 629
2019-08-04 08:56:47 : ::1 GET /virtualFolder2 - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 304 0 0 2
2019-08-04 08:57:28 : ::1 GET /virtualFolder13 - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 404 0 2 2
2019-08-04 08:59:37 : ::1 GET /nonexistent.html - 8095 - ::1 Mozilla/5.0 (Windows+NT+10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36 - 404 0 2 0
```

**1.12. Create a web site with the name simplewebsite**

See below

**1.13. Publish web-project created in p 1.2 to this WEB-site**

Process described here

<https://docs.microsoft.com/en-us/visualstudio/deployment/tutorial-import-publish-settings-iis?view=vs-2019>

It helped me . <https://github.com/aspnet/IISIntegration/issues/945>

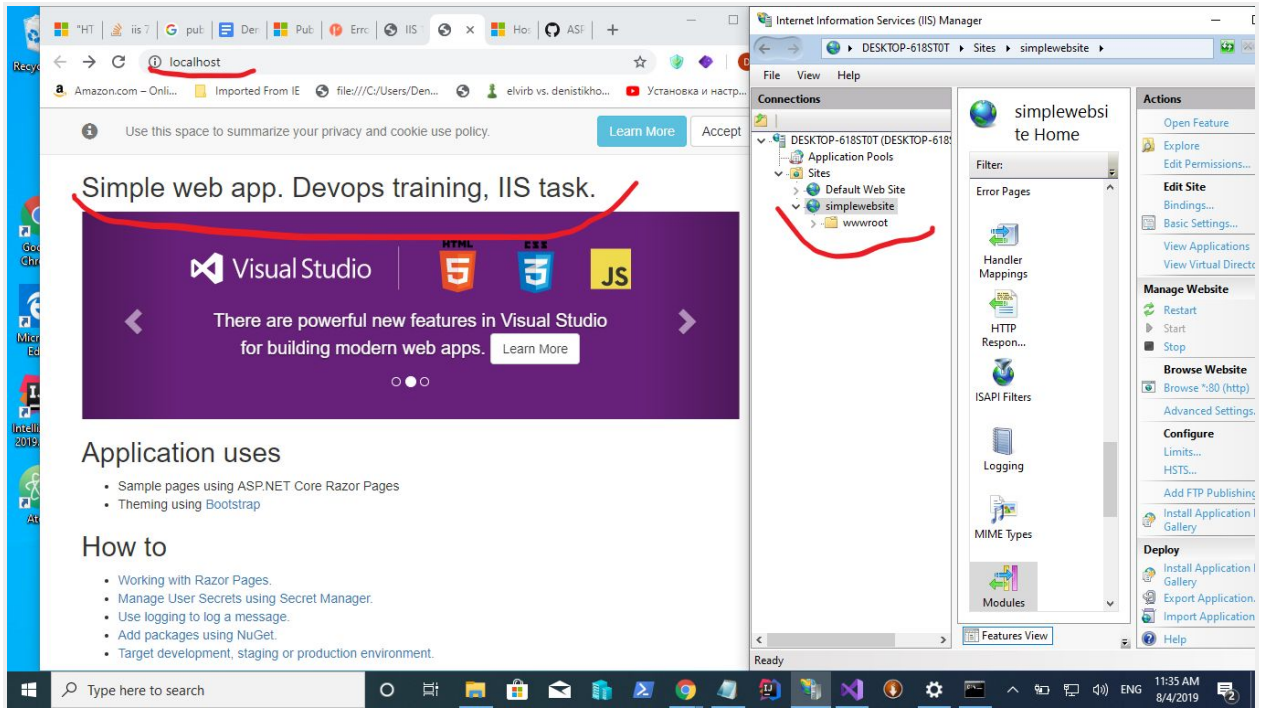
Should be installed:

Microsoft .NET Core 2.2.6 Windows Server Hosting

Microsoft .NET Core Runtime - 2.2.6

Also it needs to change permission for file web.config: add Authenticated Users group





## web.config

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <location path="." inheritInChildApplications="false">
    <system.webServer>
      <handlers>
        <add name="aspNetCore" path="*" verb="*" modules="AspNetCoreModule"
resourceType="Unspecified" />
      </handlers>
      <aspNetCore processPath="dotnet" arguments=".\\simpewebapp.dll"
stdoutLogEnabled="false" stdoutLogFile=".\logs\stdout" />
    </system.webServer>
  </location>
  <system.webServer>
    <directoryBrowse enabled="true" />
  </system.webServer>
  <system.web>
    <identity impersonate="false" />
  </system.web>
</configuration>
<!--ProjectGuid: a590c8c6-3911-4982-bef4-ffde30c39c3b-->
```

## 1.14. Check its performance and take screenshots

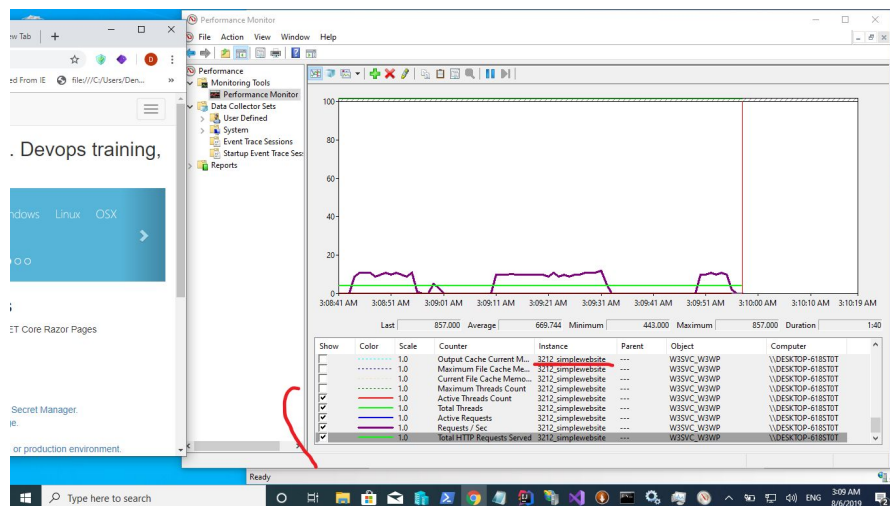
Performance counters in the .NET framework:

<https://docs.microsoft.com/en-us/dotnet/framework/debug-trace-profile/performance-counters>

There are several main metrics for server's performance:

- Requests per second (RPS)
- Data in/out
- Average response time
- Peak response time (PRT)
- Thread count
- Total HTTP requests served

This screenshot shows RPS = 12 (that is max I could imitate), Total HTTP requests served = 887



### 1.15. Check if the Kestrel webserver is running

About Kestrel

<https://docs.microsoft.com/en-us/aspnet/core/fundamentals/servers/kestrel?view=aspnetcore-2.2>

Kestrel is a cross-platform [web server for ASP.NET Core](#). Kestrel is the web server that's included by default in ASP.NET Core project templates.

### 1.16. Delete website

Did it.

### 1.17. Write a script that allows you to publish and delete this project, taking the parameters from the command line (bring the script and take screenshots)

I used Microsoft provided PowerShell scripts for automating Web Deploy setup

<https://docs.microsoft.com/en-us/iis/publish/using-web-deploy/powershell-scripts-for-automating-web-deploy-setup>

publish.ps1:

```
param(
    [parameter(Mandatory = $true)]
    $siteName,
    [parameter(Mandatory = $true)]
    [int]$sitePort,
    [parameter(Mandatory = $true)]
    $sitePhysicalPath
)
```

```
set-executionpolicy allsigned
```

```
cd "c:\Program Files\IIS\Microsoft Web Deploy v3\Scripts"
```

```
./SetupSiteForPublish.ps1 -siteName $siteName -sitePhysicalPath $sitePhysicalPath -sitePort $sitePort
```

```
cd $sitePhysicalPath
```

```
git clone http://dennis00010011b/simpleweb2
```

```
Start-IISSite $siteName
```



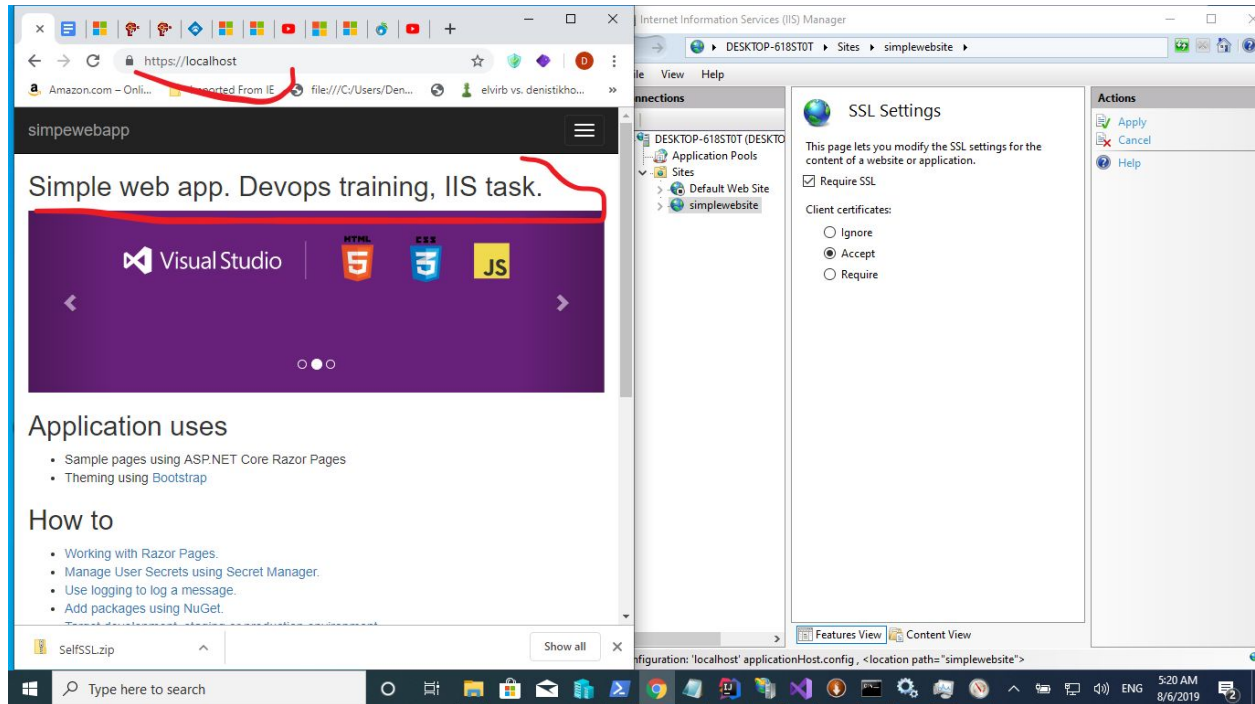
### 1.18. Using selfssl.exe, configure https.

For some reason Microsoft hasn't been provide selfssl.exe with IIS since version IIS6. I couldn't find any selfssl.exe that I 'd believe. That's why I used IIS Express development certificate . SSLconfiguration also required additional binding:

https localhost 443

### 1.19. Make sure that the created page is accessible via https https://IP/simplewebsite (make screenshot).

### 1.20. Open certificate settings (make screenshot)



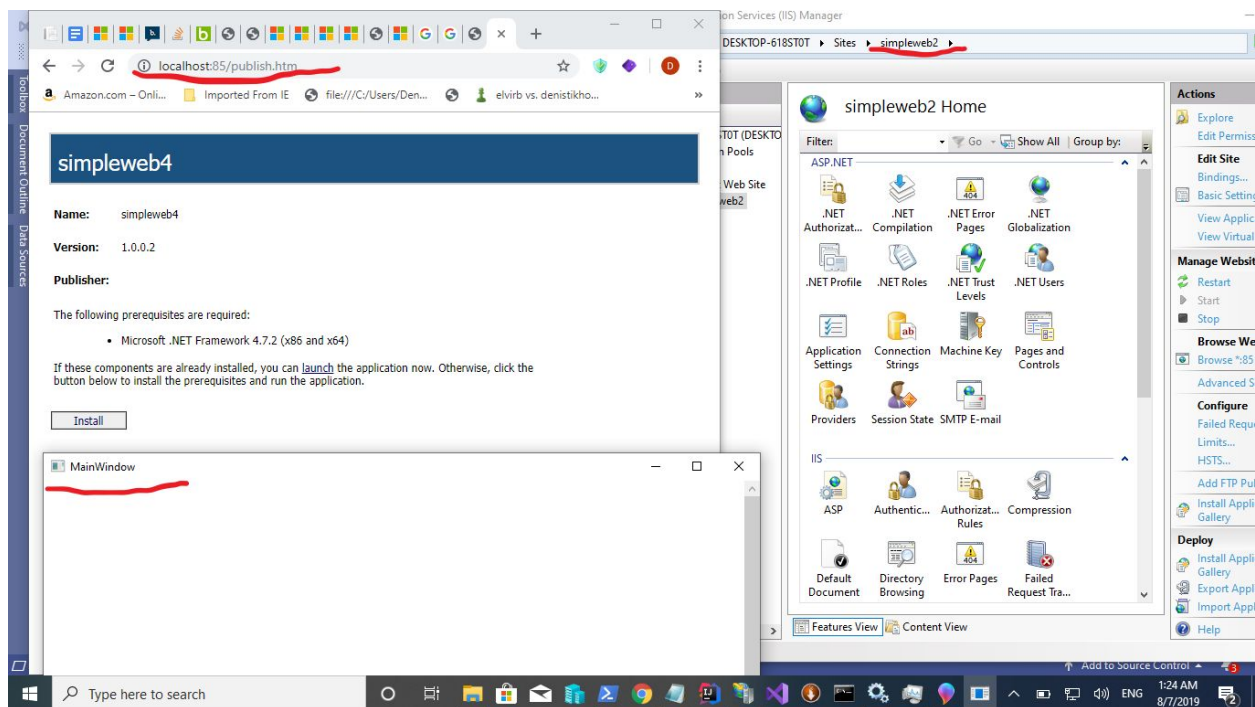
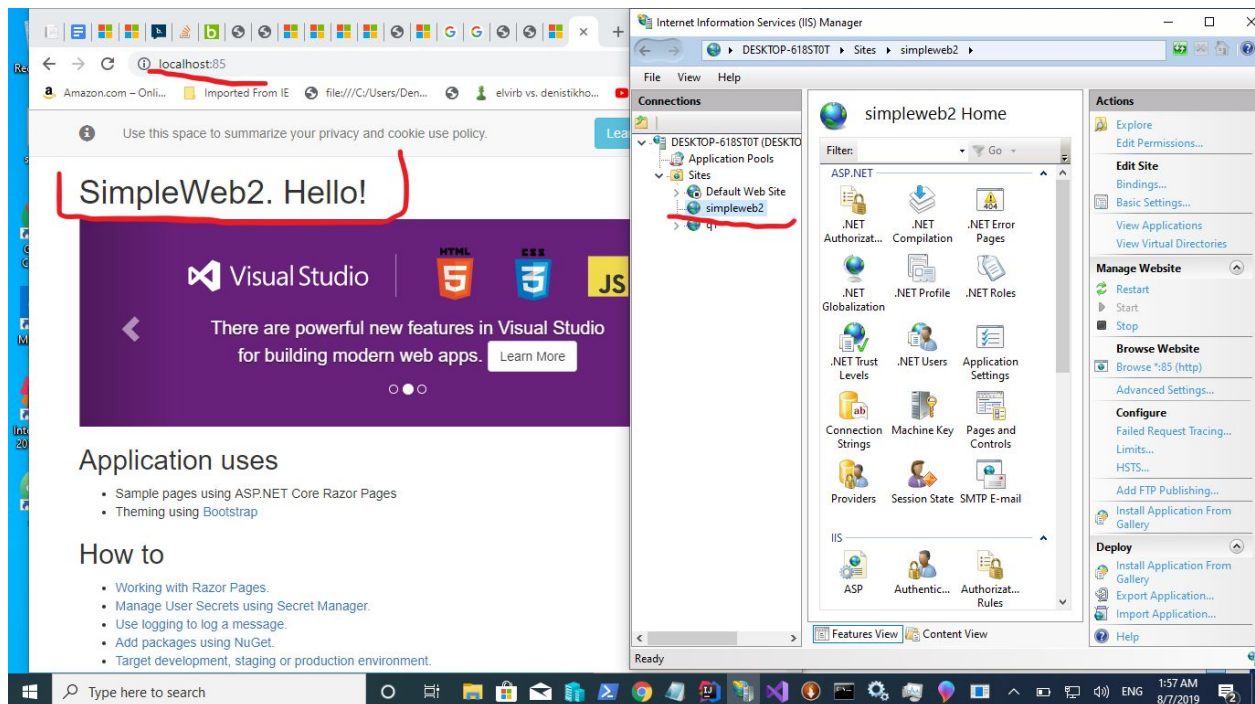
## 2.1. See which versions of the .Net Framework are already installed.



### 2.3. If the .Net Framework was installed before IIS, use aspnet\_iisreg to install ASP.NET under IIS with all rights to the metabase

C:\Windows\Microsoft.NET\Framework64\v4.0.30319\aspnet\_regiis.exe

- 2.4. Similar to p.1.2, create a simple WEB site using ASP.NET (.Net Framework)
- 2.5. Publish website as simplewebsite2. It should be available at the address with port 85 (make screenshots).



## 2.6. Configure authentication for a test application (take a screenshot of the browser and IIS settings)

