Modern Requirements4DevOps
Customization & Troubleshooting Guide

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USER CUSTOMIZATIONS

MANUALLY ENABLING WINDOWS FEATURES

If an organization has restrictions in its working environment that don't permit you to enable or modify the "Windows Feature" settings, follow these instructions to enable the window features manually.

1. Open the **Control Panel** and change the **View by** field value to "**Category**" (if not selected by default).

2. Select the **Programs** option.
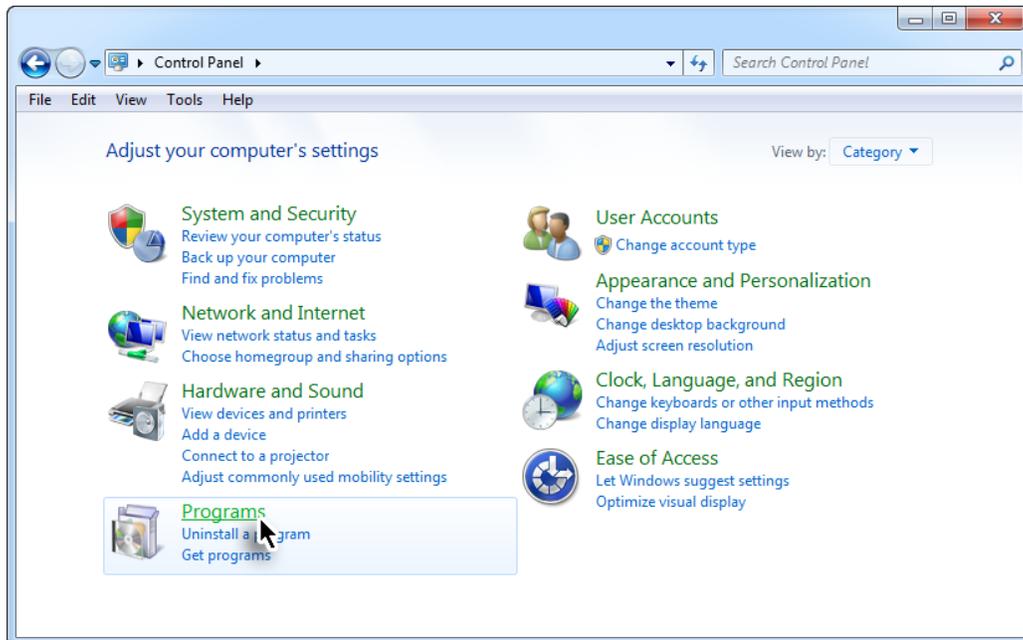
3. Select the **"Turn Windows features on or off"** option under the Programs and Features category.
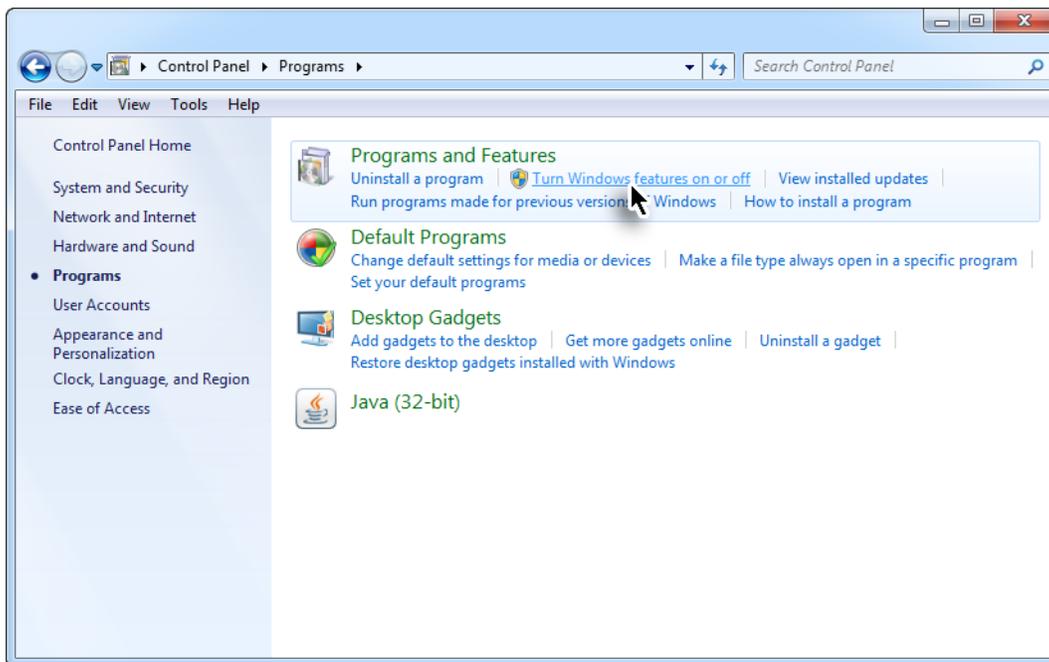
The **Windows Feature** screen will be displayed.

4. Select the highlighted features required for Modern Requirements4DevOps.

5. If Win8 or a more recent version is installed on the machine please enable the features highlighted in the following image as well:
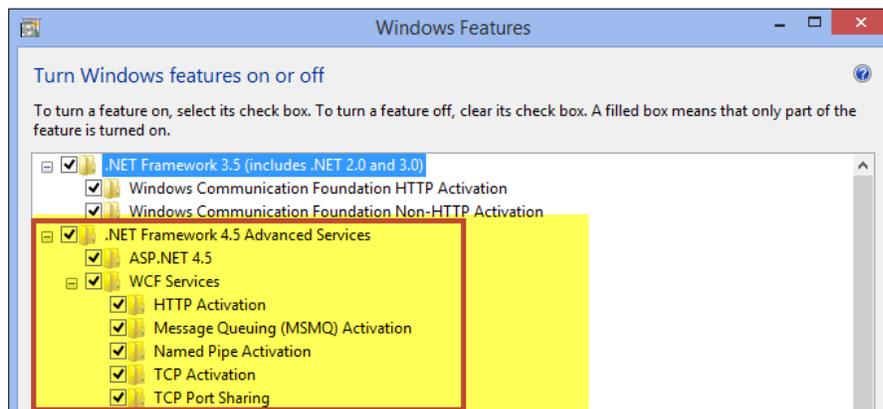
ADDING IIS BINDING INFORMATION IN CONFIGURATION FILES

If you have bound any IP on the system, you must update the web configuration file using the following steps:
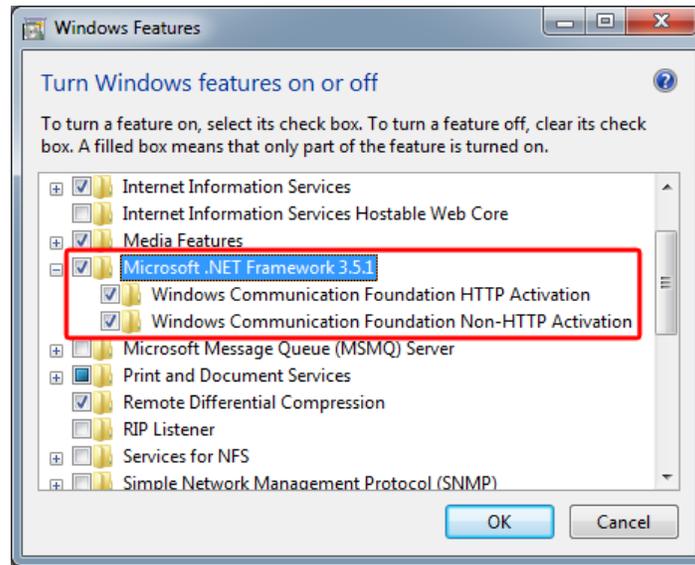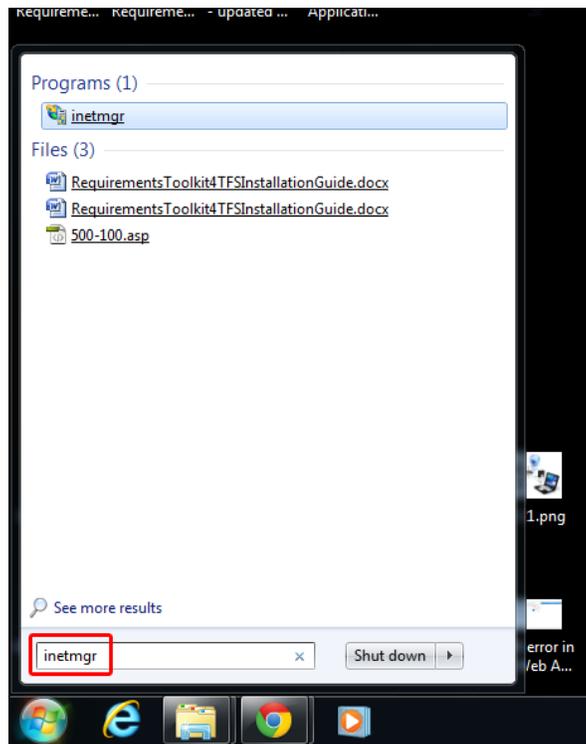
1. Invoke **inetmgr** through Windows's Run command/Start Menu.

2. Expand the node on the left-hand side of the panel of the Internet Information Services (IIS) Manager.
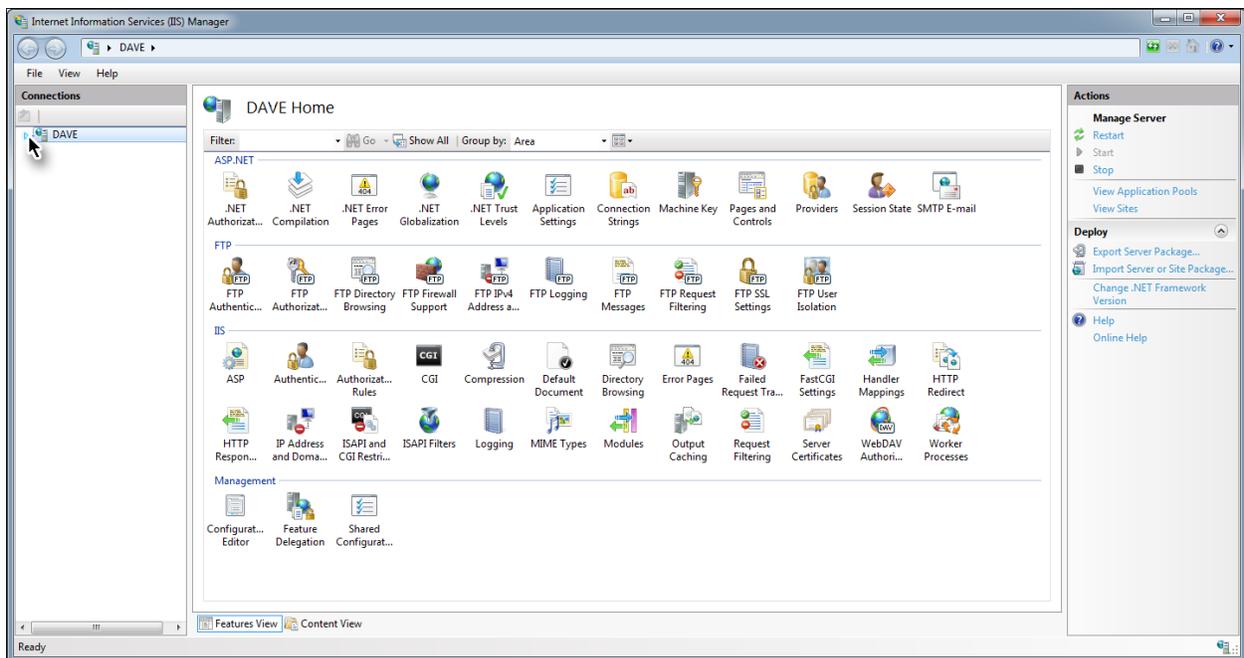
3. Select the **Application Pools** option.
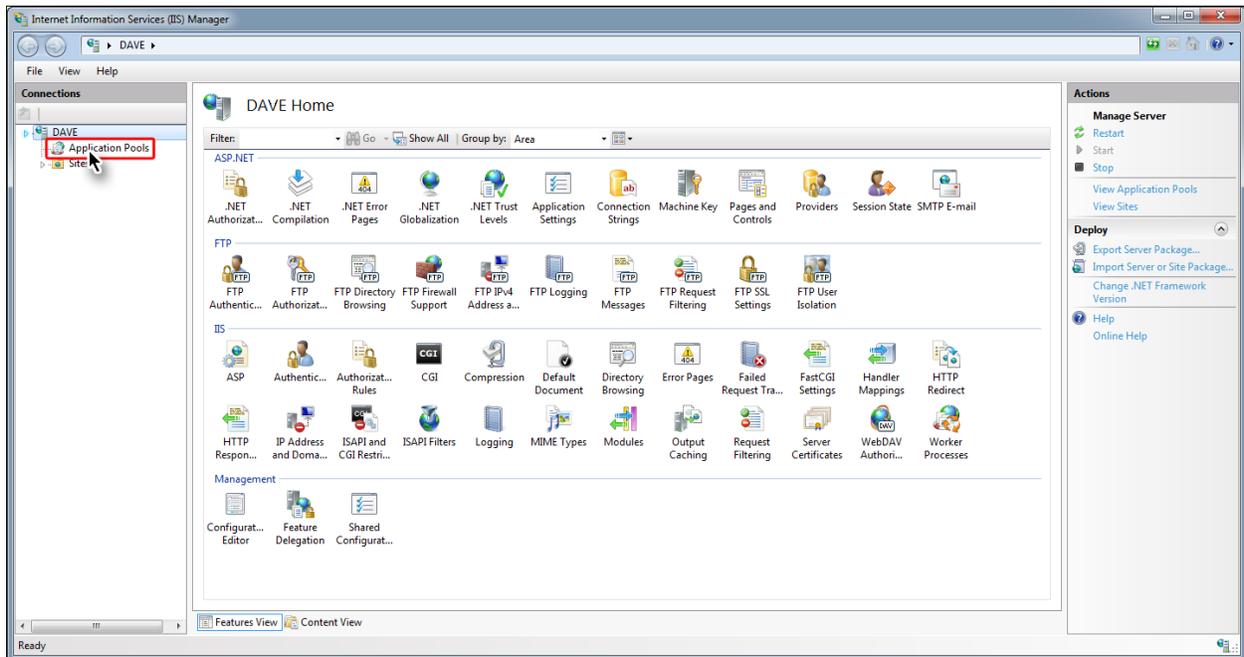
4. Right-click **ModernRequirements4DevOps 2019** and select **Edit Binding**. The **Site Bindings** window will be displayed. The "IP Address" field will display which IP has been bound, if any.
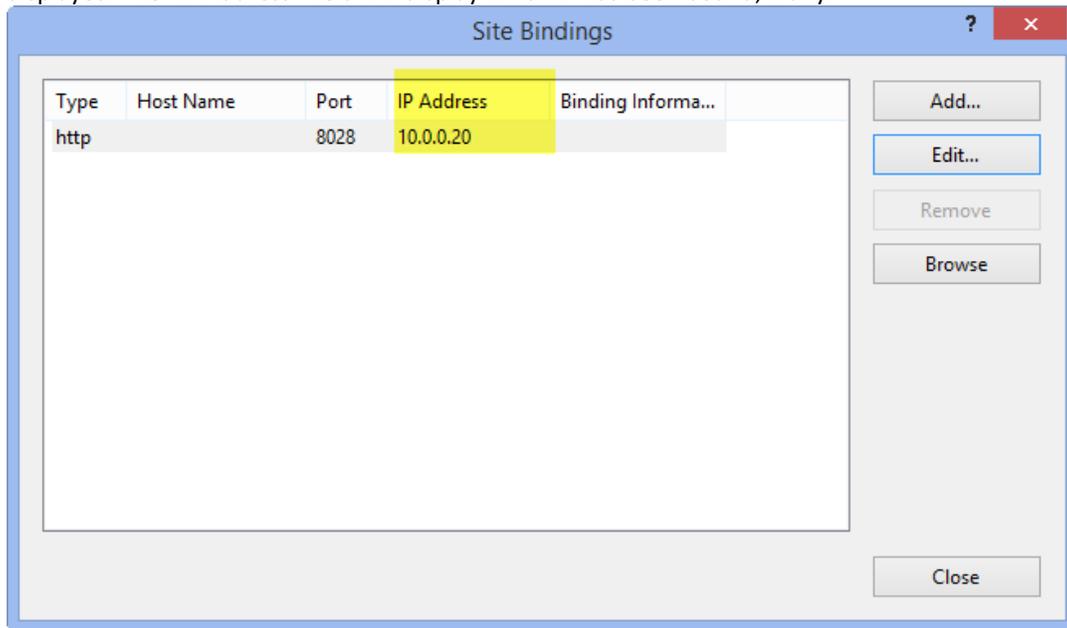
5. Note the IP Address value, e.g.**10.0.0.20** (displayed in the image above), and go to the installation directory, i.e.
    <Default Installation Drive>:\Program Files\Modern Requirements\ModernRequirements4DevOps 2019\User Interface
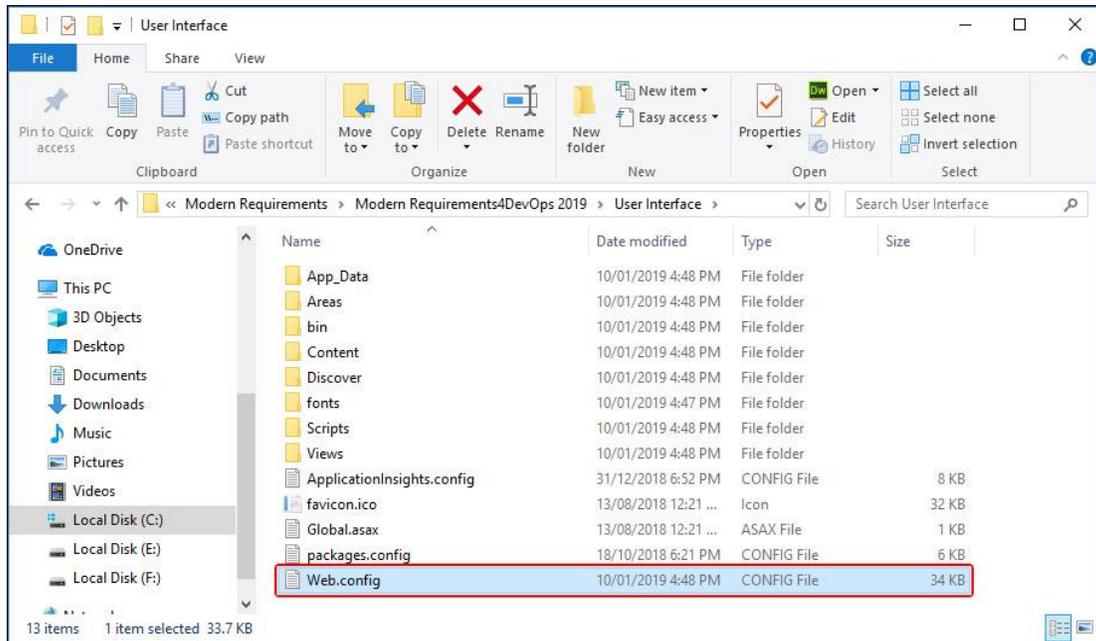
6. Select the **Web.config** file among the list displayed in the folder (refer to the highlighted line in the image above).
7. Open the file in Notepad.
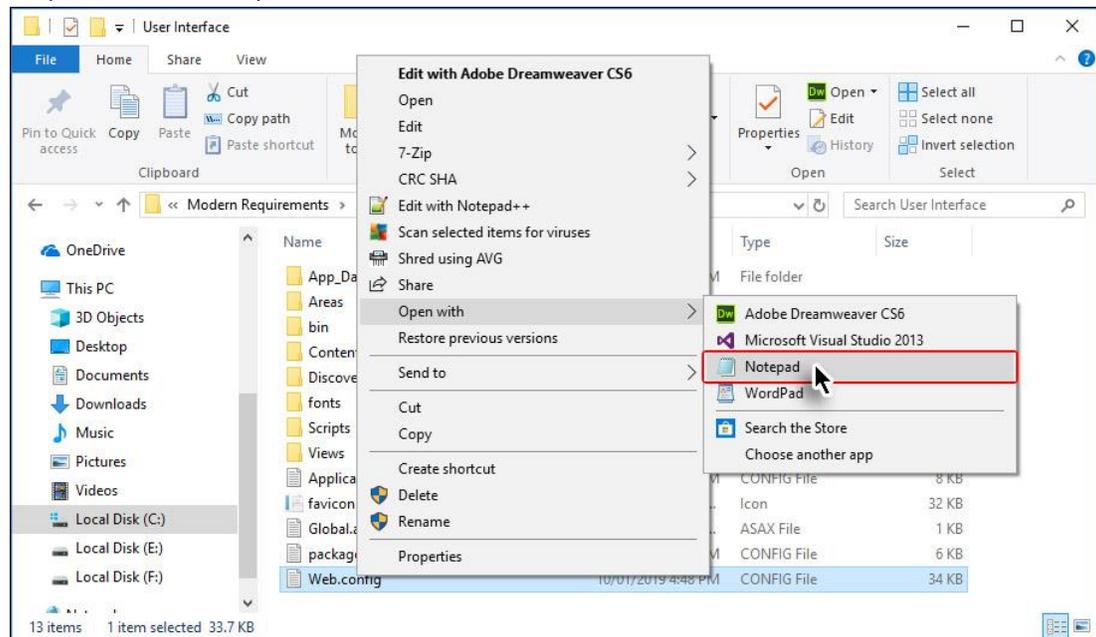
8. Search for the tag **<add key="ServiceAddress" value="....."/>** (selected in the following image) and update its value, http://<machine name>:8027/ with the IP address bound and noted above, i.e. value=http://10.0.0.20:8027/
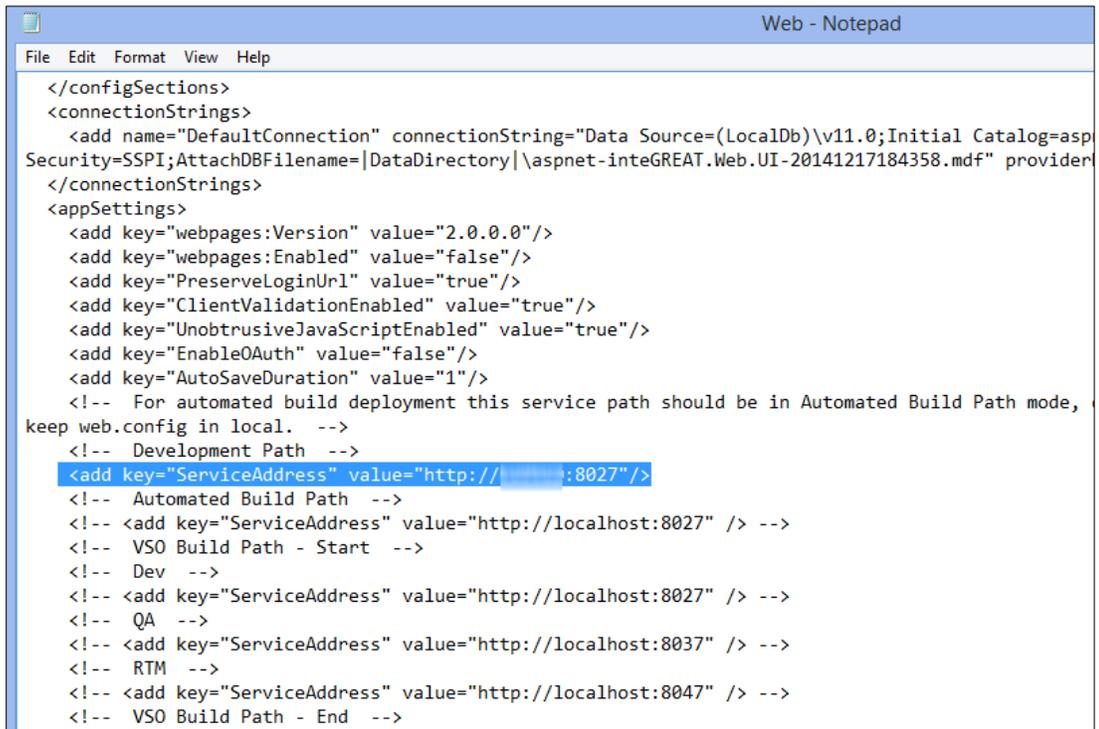
```
Web - Notepad

File   Edit   Format   View   Help

   </configSections>
   <connectionStrings>
     <add name="DefaultConnection" connectionString="Data Source=(LocalDb)\v11.0;Initial Catalog=asp
Security=SSPI;AttachDBFilename=|DataDirectory|\aspnet-inteGREAT.Web.UI-20141217184358.mdf" provider
   </connectionStrings>
   <appSettings>
     <add key="webpages:Version" value="2.0.0.0"/>
     <add key="webpages:Enabled" value="false"/>
     <add key="PreserveLoginUrl" value="true"/>
     <add key="ClientValidationEnabled" value="true"/>
     <add key="UnobtrusiveJavaScriptEnabled" value="true"/>
     <add key="EnableOAuth" value="false"/>
     <add key="AutoSaveDuration" value="1"/>
     <!--  For automated build deployment this service path should be in Automated Build Path mode,
keep web.config in local.  -->
     <!--  Development Path  -->
     <add key="ServiceAddress" value="http://        :8027"/>
     <!--  Automated Build Path  -->
     <!-- <add key="ServiceAddress" value="http://localhost:8027" /> -->
     <!--  VSO Build Path - Start  -->
     <!--  Dev  -->
     <!-- <add key="ServiceAddress" value="http://localhost:8027" /> -->
     <!--  QA  -->
     <!-- <add key="ServiceAddress" value="http://localhost:8037" /> -->
     <!--  RTM  -->
     <!-- <add key="ServiceAddress" value="http://localhost:8047" /> -->
     <!--  VSO Build Path - End  -->
```

9. Save the file and close it.

If you aren't allowed to save the Notepad file with changes on the same directory, save it on desktop first. Then copy it back to this directory, i.e. location and replace.

10. Switch back to the IIS Manger window and restart both inteGREAT services under the Sites folder.

EMAIL CONFIGURATION FOR THE FEEDBACK OPTION

All the configurations regarding emails are now done using Admin Panel (for the Embedded version). Please refer to that section for details. This section is for users currently using the Standalone version of the application.

The email configuration is essential if you want to use the Feedback option in the Simulation Module. This is because Modern Requirements4DevOps automatically sends out emails to concerned stakeholders to get their feedback. If the email settings are not properly configured, these emails can't be sent out and the feedback option won't function properly. Take the following steps (elaborated from next page onwards) to configure the email settings for Modern Requirements4DevOps:

1. Navigate to the following location on your computer: "**C:\Program Files\Modern Requirements\ModernRequirements4DevOps 2019\Service**"
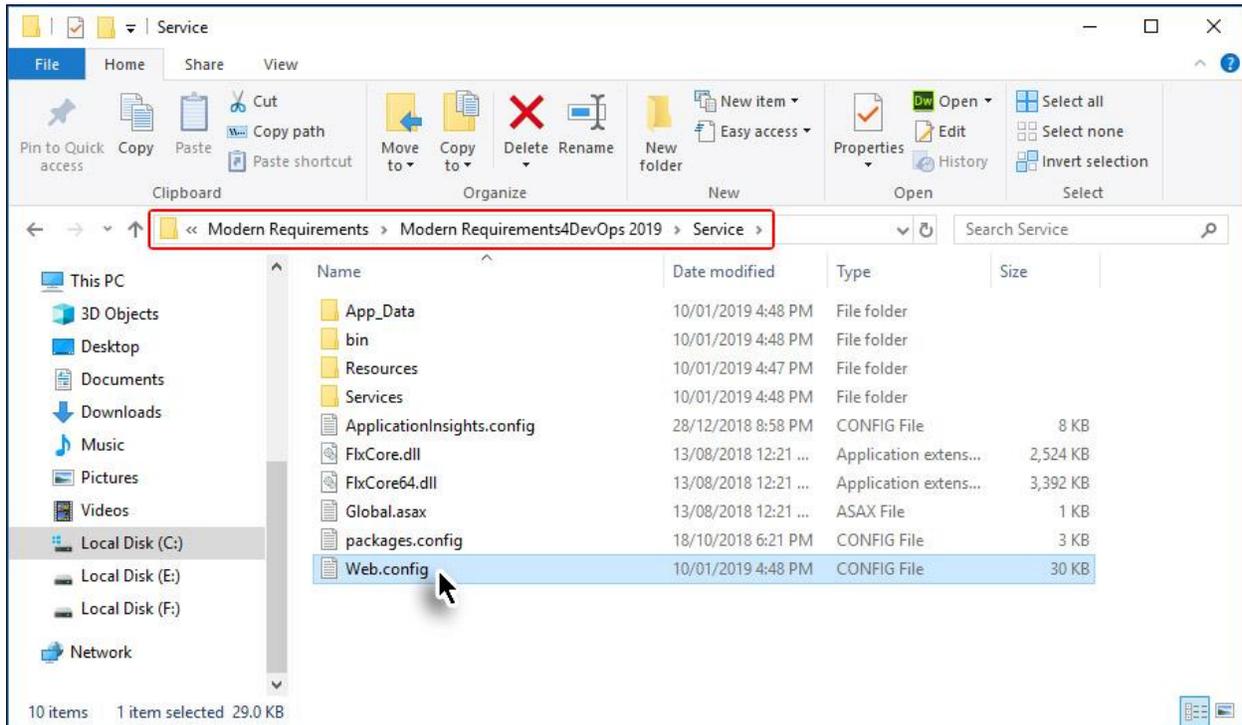
2. Copy the "**Web.config**" file to another location (e.g. desktop) for editing.

3. Open the file using a text editor (e.g. Notepad).
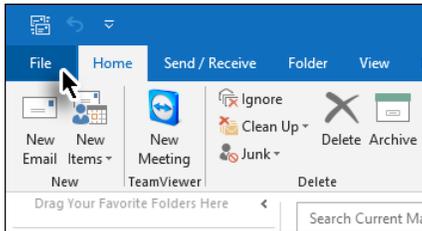

Note: The highlighted section in the image above displays the section of the file that needs to be configured properly.

4. Now open your email client/email reader (e.g. Microsoft Outlook).

Note: The following steps show the process for Microsoft Outlook. If you're using another email reader, refer to its documentation for relevant steps.

5. Click on **File**

6. Click on **Account Settings→Account Settings….**
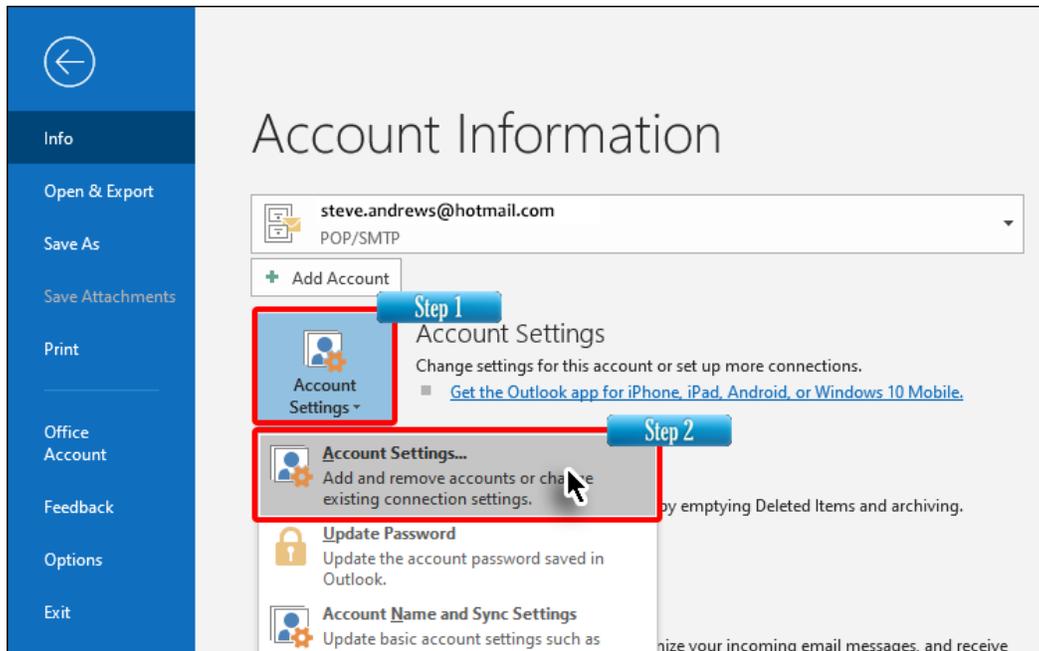
7. Double-click the desired email account from the list.
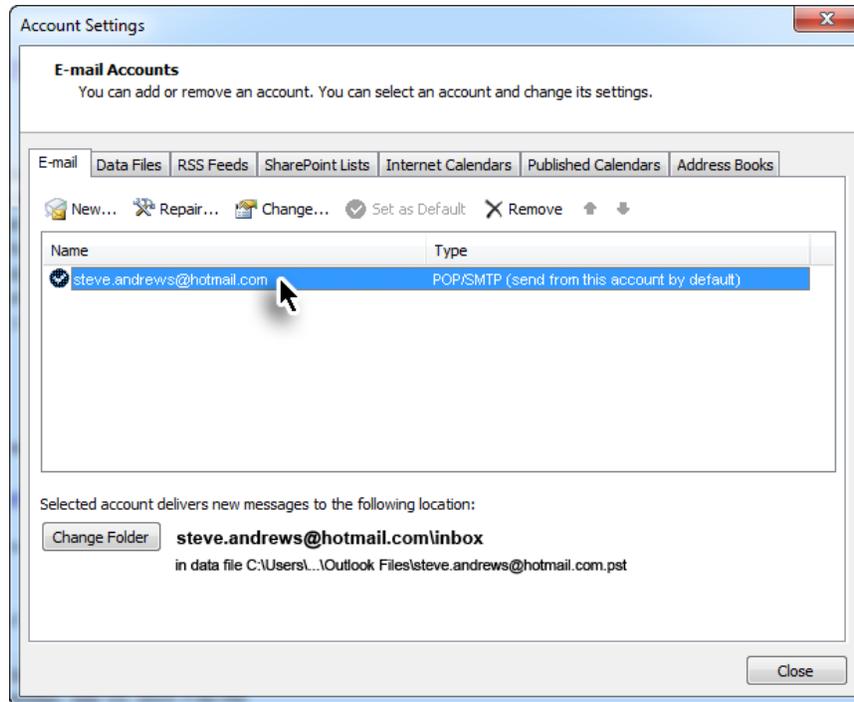
8. Note down the information highlighted in the window.
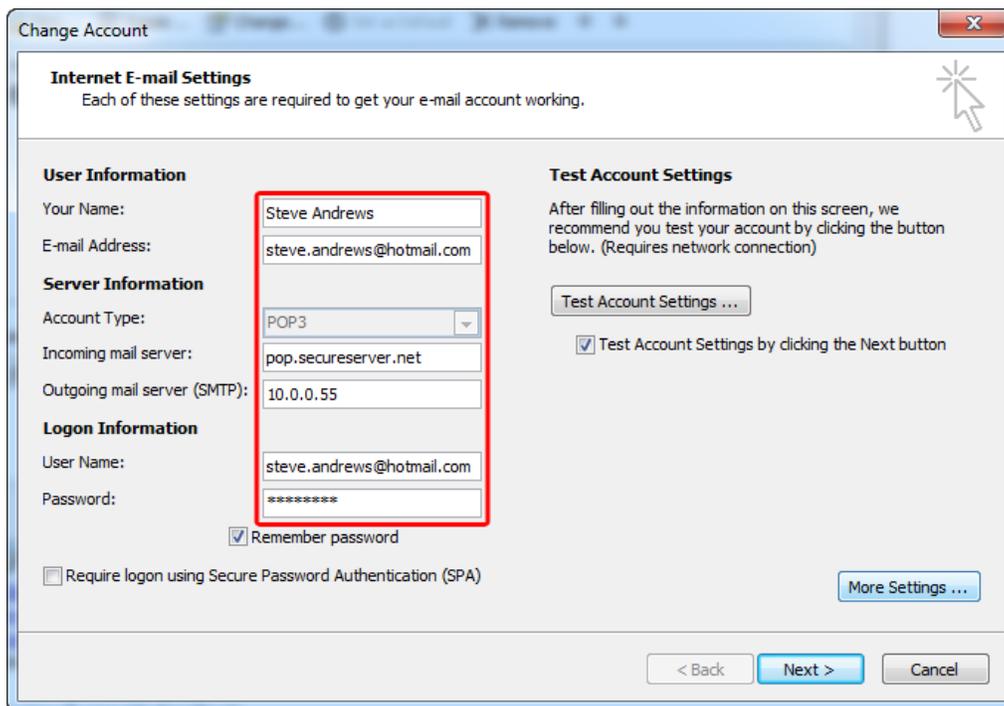
9. Click the **More Settings…** button.

Change Account

Internet E-mail Settings
Each of these settings are required to get your e-mail account working.

User Information
Your Name: Steve Andrews
E-mail Address: steve.andrews@hotmail.com

Server Information
Account Type: POP3
Incoming mail server: pop.secureserver.net
Outgoing mail server (SMTP): 10.0.0.55

Logon Information
User Name: steve.andrews@hotmail.com
Password: ********

☑ Remember password

☐ Require logon using Secure Password Authentication (SPA)

Test Account Settings
After filling out the information on this screen, we recommend you test your account by clicking the button below. (Requires network connection)

Test Account Settings ...

☑ Test Account Settings by clicking the Next button

More Settings ...

< Back   Next >   Cancel

10. Open the **Advanced** tab.
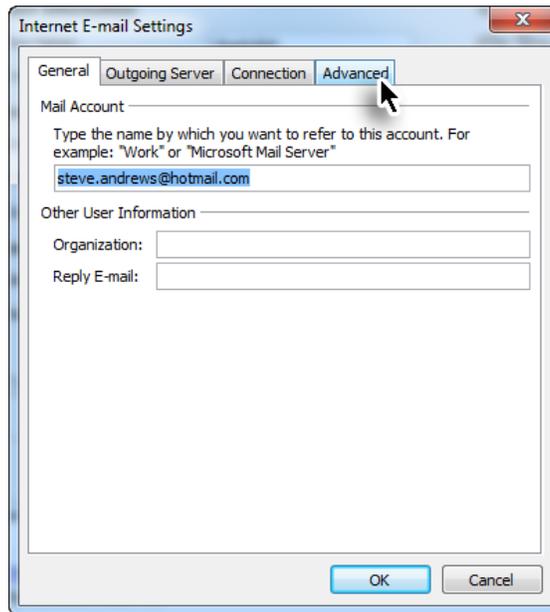
11. Note down the SMTP port highlighted in the window.
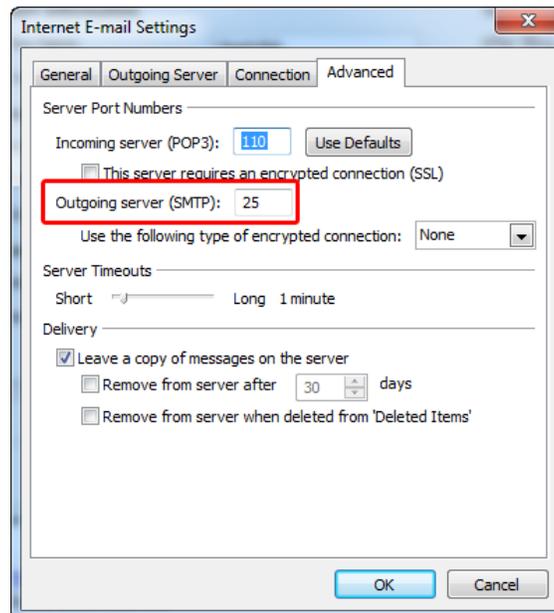
12. After noting down all the required information, close down all the windows in Microsoft Outlook.
13. Switch back to the "**Web.config**" file opened in the text editor.

14. Update the **mail settings** section using the information gathered from Microsoft Outlook.

15. Save the "**Web.config**" file and replace the older version with the updated version at its original location (i.e. "**C:\Program Files (x86)\Modern Requirements\ModernRequirements4DevOps2018 Update X\Service**")

This completes the email configuration process for the Feedback Option.

FIX FOR ACTIVATION LOST AFTER THE VM MACHINE RESTART (STANADALONE)

For any general Virtual Machine (of any O.S):

1. If you're navigated to the Activation page again after license activation, as displayed below:
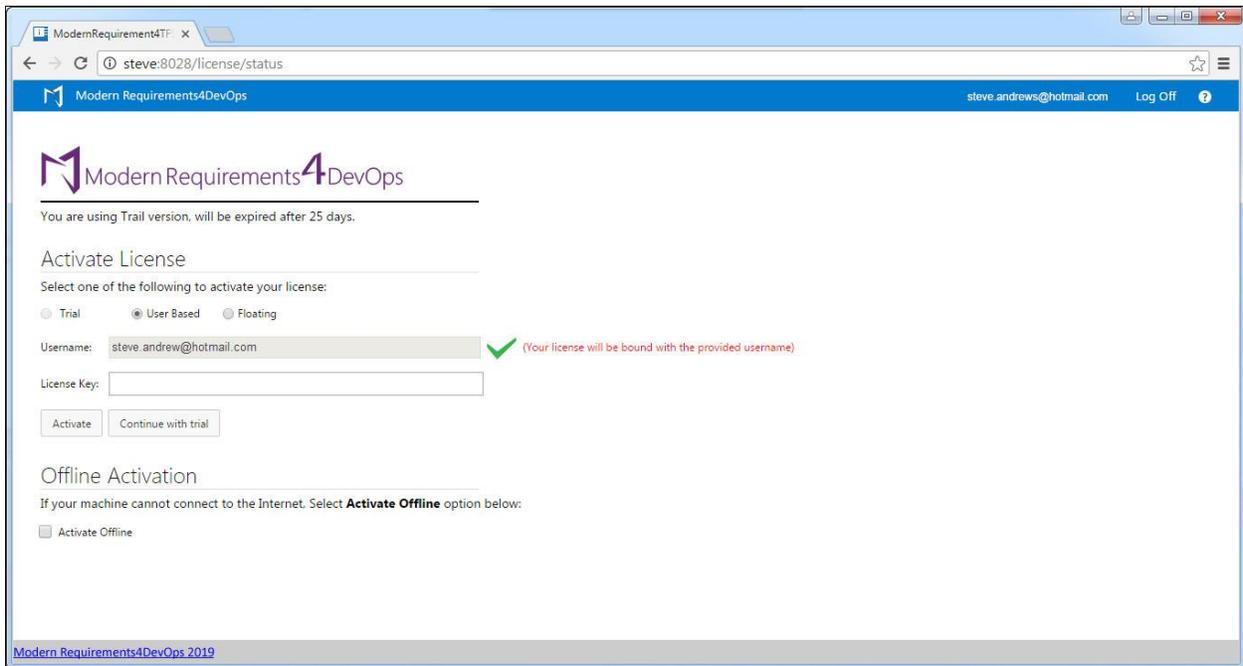
Or you're navigated there following the error message, "An error occurred while processing your request" as displayed below:
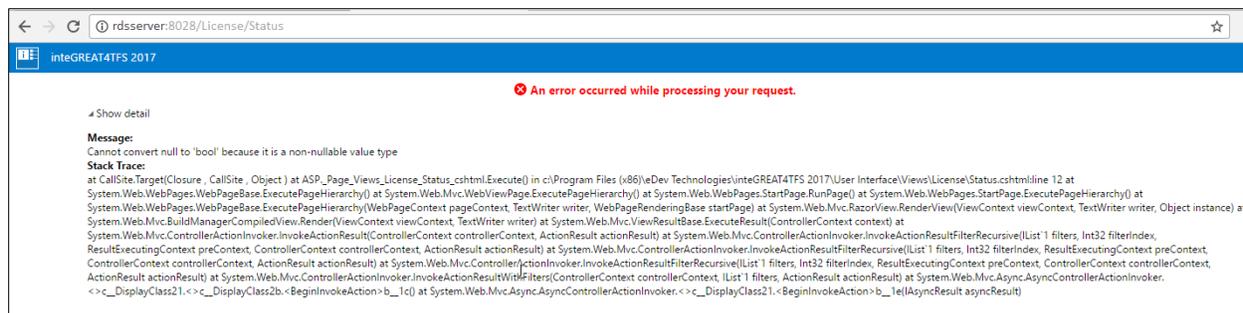
2. Using Remote Desktop option, connect with the VM Machine where Modern Requirements4DevOps has been deployed.
3. Go to the Run window (by clicking the Keyboard shortcut: [<windows key> + 'R']) and typing "gpedit.msc." Refer to the screen shot below:
4. Go to Computer Configuration->Administrative Templates->System->UserProfiles.
5. Select "**Do not forcefully unload the user registry at user logoff**" as highlighted below.
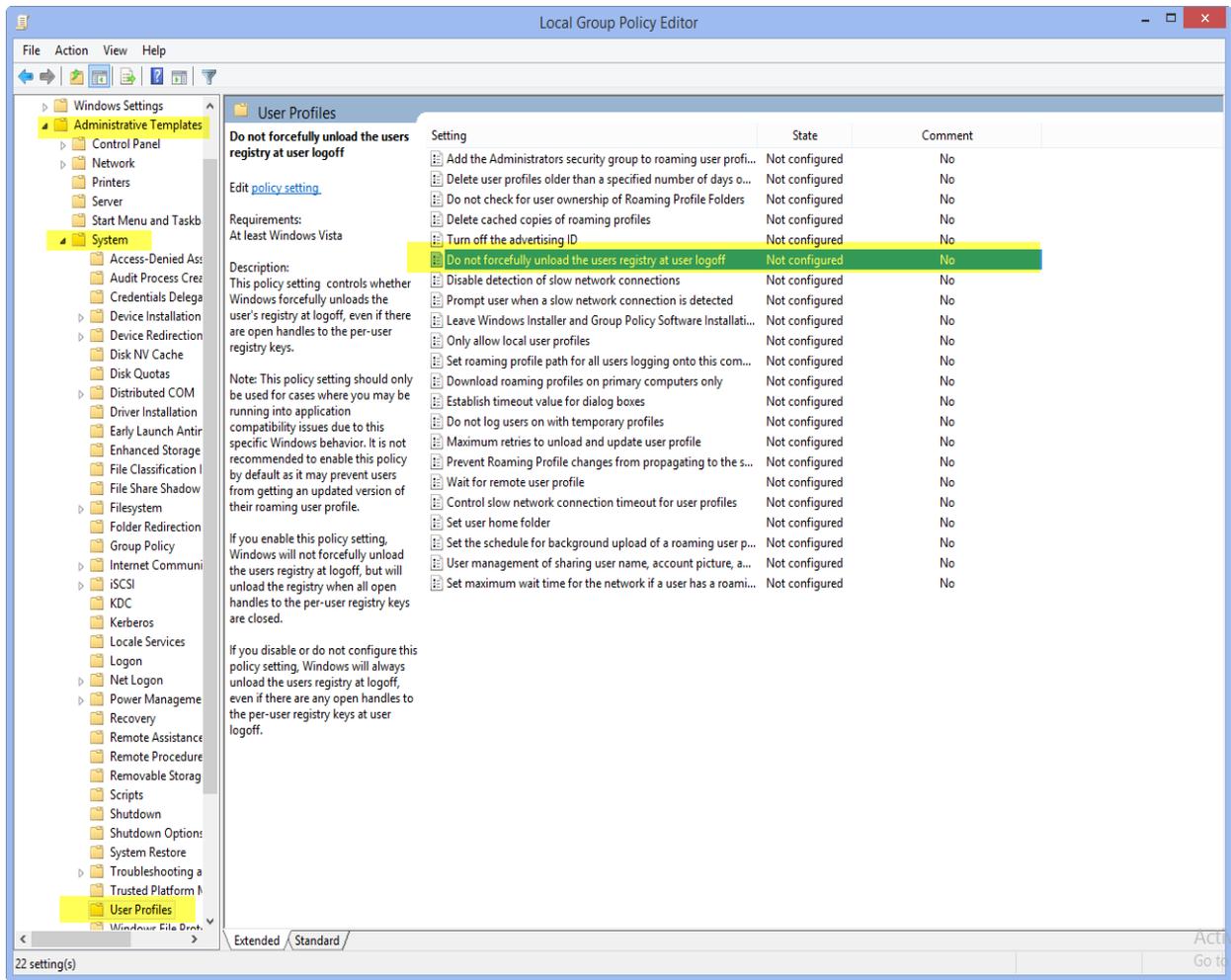
6. Change the setting from "Not Configured" to "Enabled," and click **Apply.** Once done, restart the VM machine and check if the issue has been resolved.
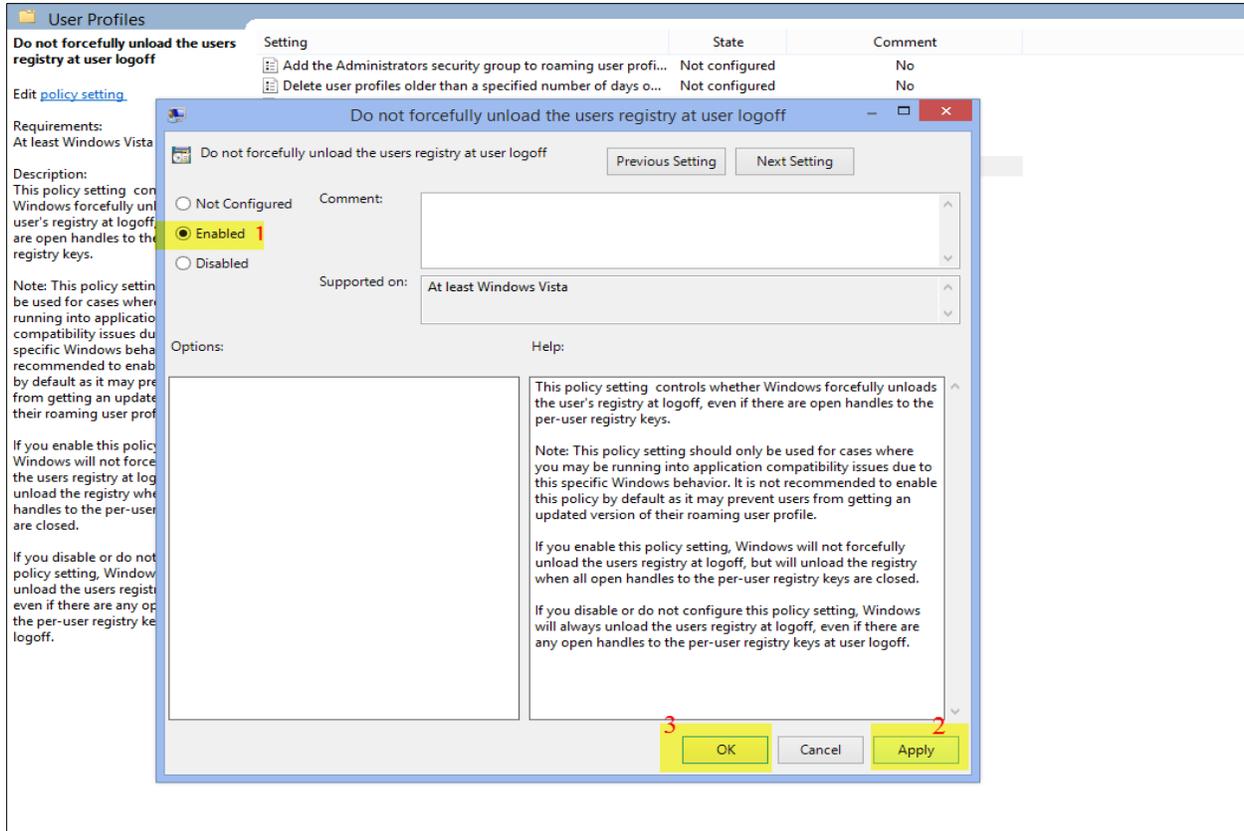
If VDI (Virtual Desktop Infrastructure) has been implemented, follow these steps:

1. Using Remote Desktop option, connect with the VM Machine where Modern Requirements4DevOps has been deployed.
2. Go to the Run window and type %public%.
3. Select the "Public Documents" folder.
4. Confirm that the following file exists in the folder:
   "username.bin" in case offline activation was done by the user
   "username.orf" in case online activation was done by the user
5. If Yes, kindly mention this in your email along with the log files (<Default Drive>:\inetpub\wwwroot\walog) at: support@edevtech.com
6. If No, please ask the VDI administrator to share the image of VM after activating the license from all users. That image will be present on all licensing information.

HOW TO UPDATE THE WINDOWS CREDENTIALS FOR MODERN REQUIREMENTS4DEVOPS

During the installation of Modern Requirements4DevOps, user login credentials are provided. These Windows credentials are saved in the Modern Requirements4DevOps settings and are used while running the application. If you change your Windows password after the installation, these settings become obsolete and you may face problems running the application. For a seamless operation of Modern Requirements4DevOps, the saved settings of the Windows credentials should be consistent with the current Windows credentials. If you change your password after installing Modern Requirements4DevOps, take the following steps to update the saved settings:

1. Invoke **inetmgr** through Windows's Run command/Start Menu.
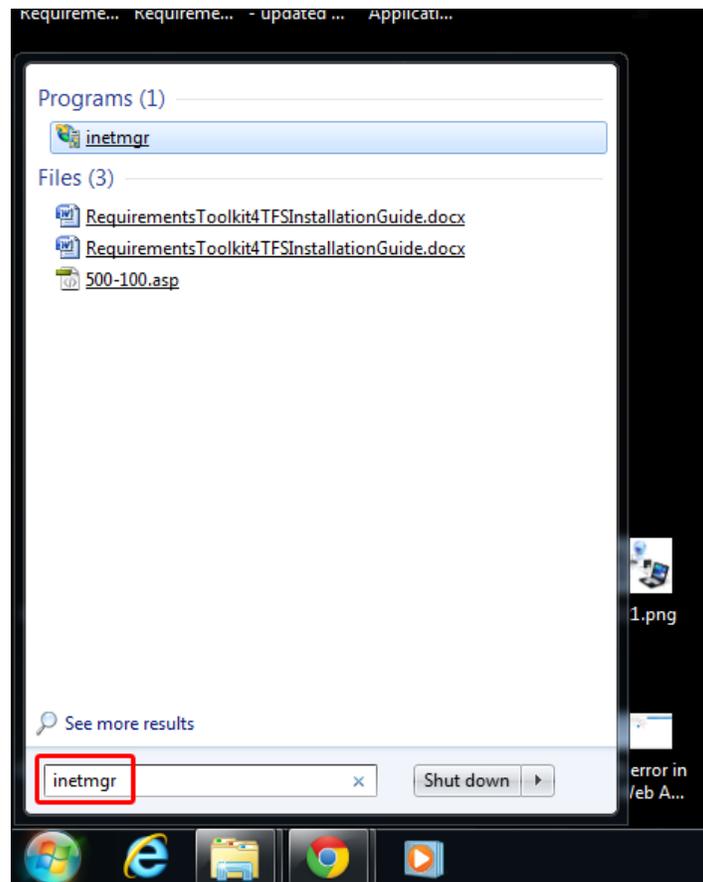
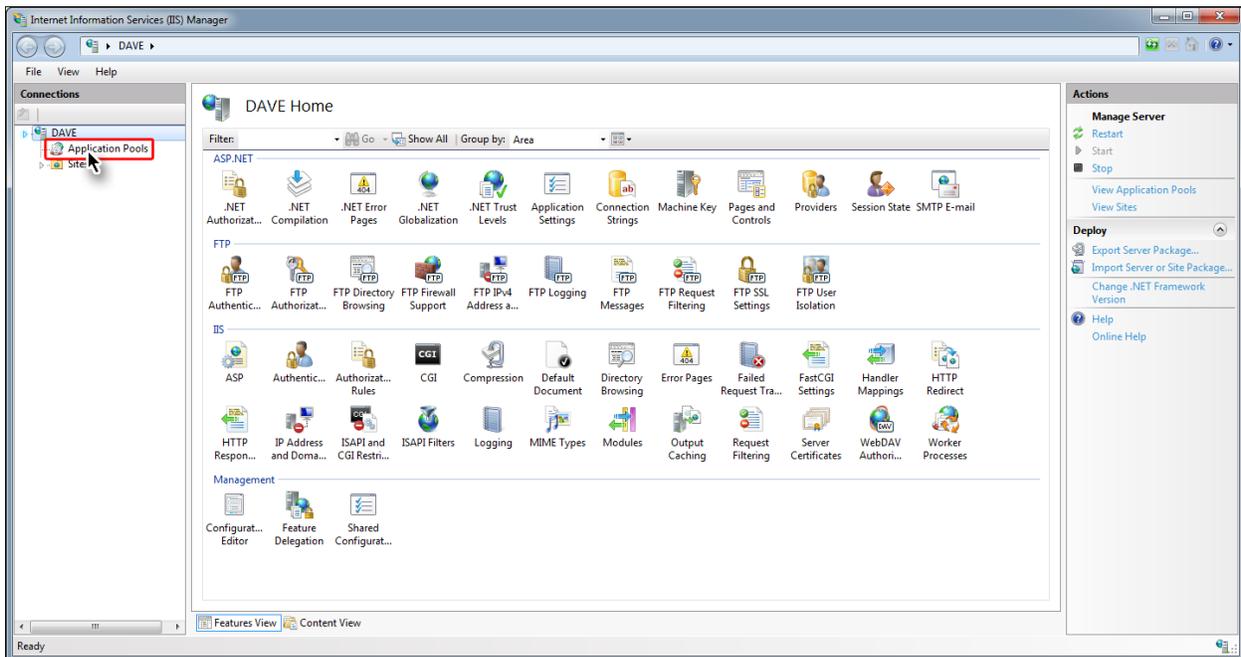2. Expand the node in the panel of the IIS Manager on the left-hand side.
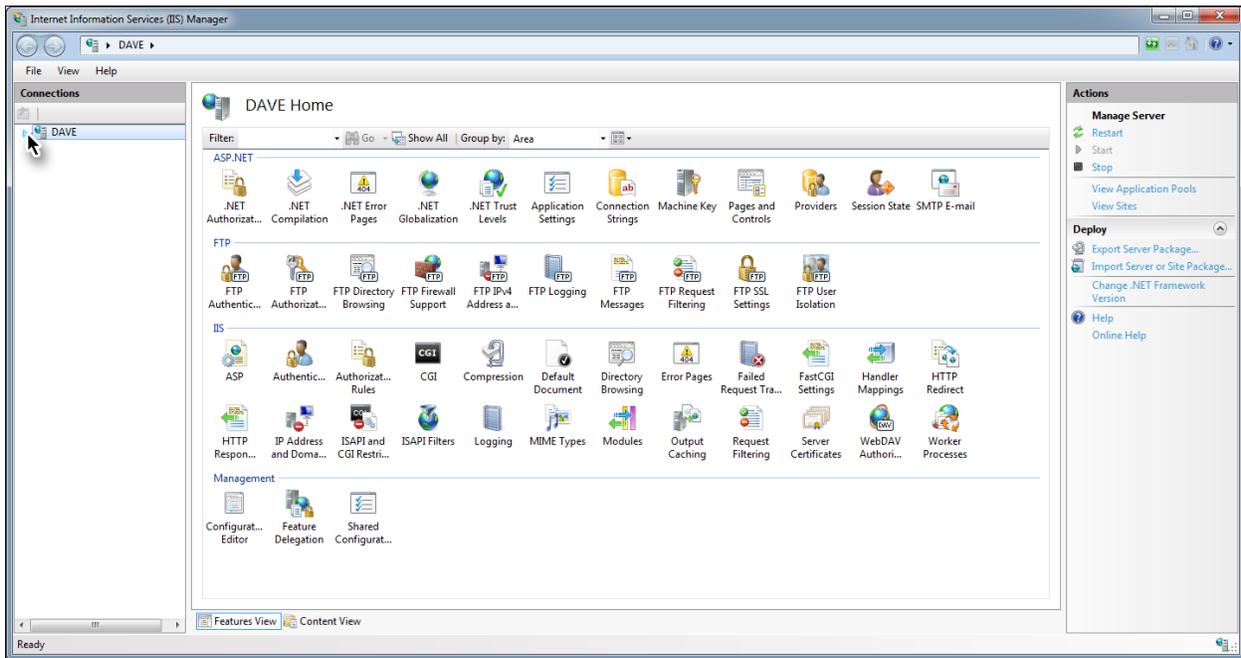
3. Select the **Application Pools** option.

4. Select **inteGREAT4TFSsrv** and click **Advanced Settings…** under **Edit Application Pool** on the right-hand side.
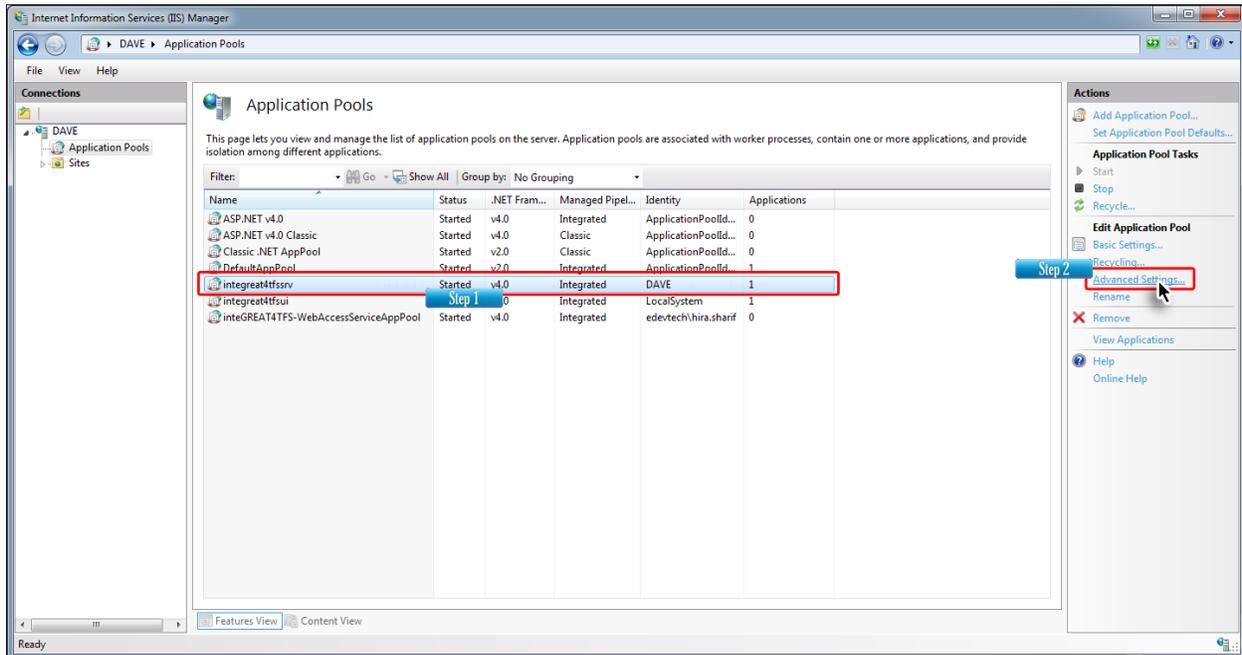
5. Select the **Identity** option under the **Process Model** section and click the … button.
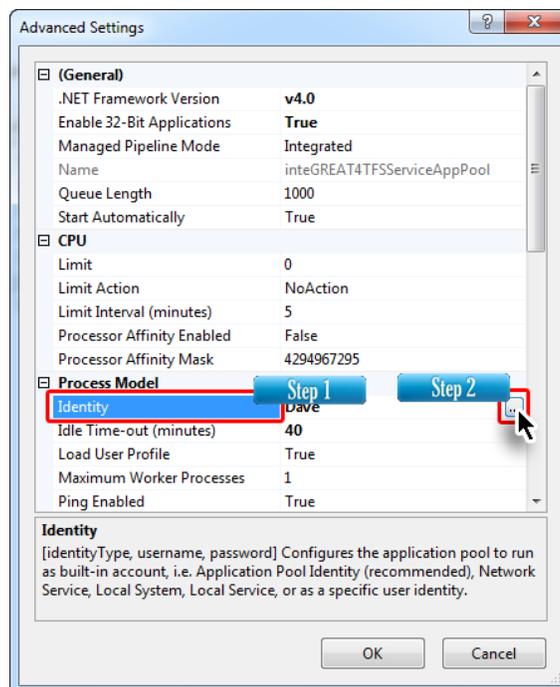
6.   Select the **Custom account** option and click the **Set…** button.
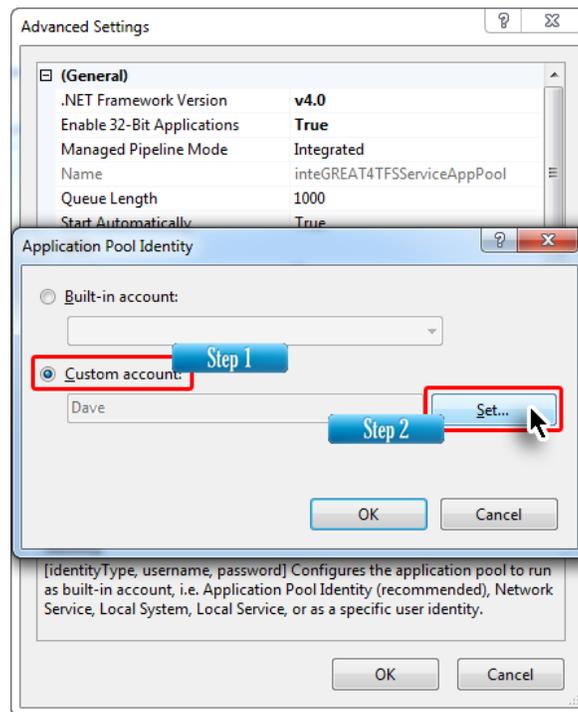
7.   Enter the latest *Windows credentials and click **OK**.
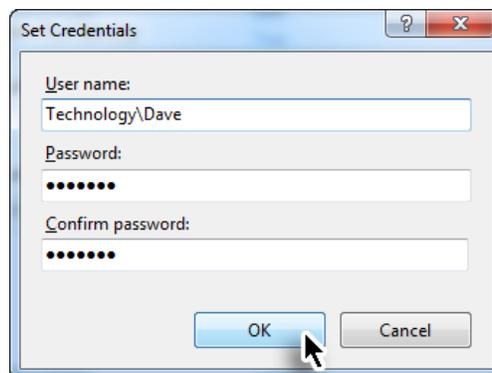
*The User name should be given in the format of <Domain\Username> as displayed in the image above. The settings will be saved by clicking OK.

8. Start **inteGREAT4TFSsrv** by clicking **Start** under the **Application Pool Tasks** on the right-hand side of the panel.
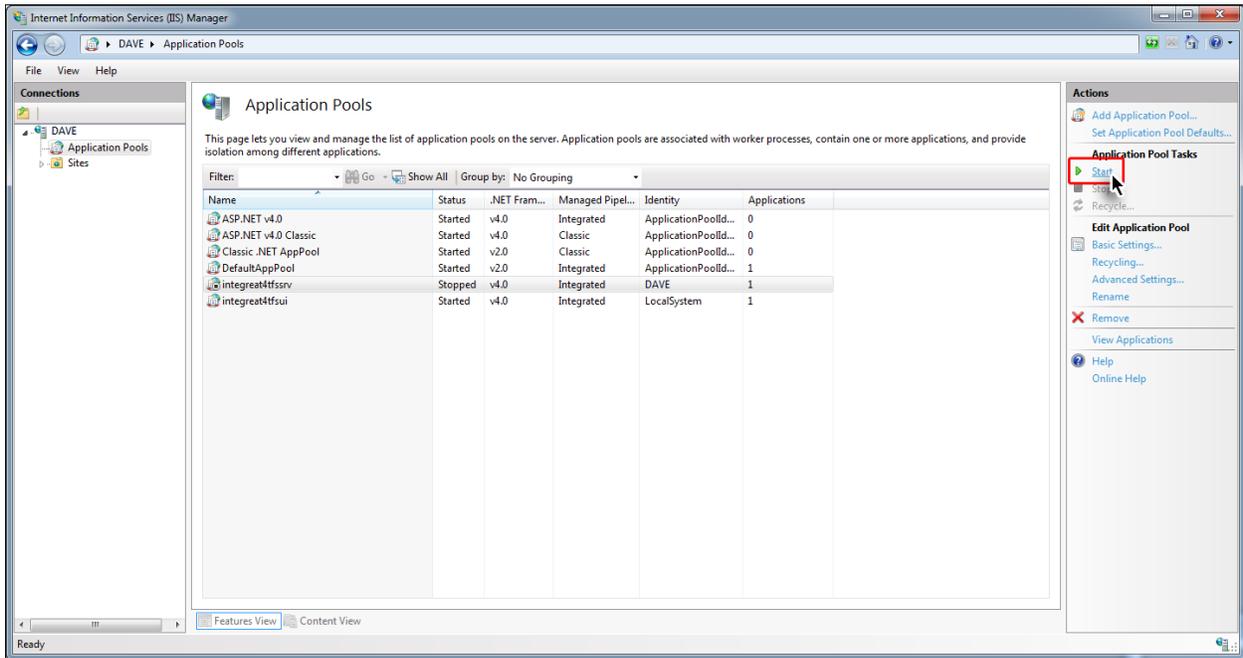
Close all windows to complete the process.

HOW TO USE TEAM CONTEXT IN TFS 2019

Normally users access an Azure DevOps Project as a whole, however if different teams are to be given access to relevant portions of the project then users have to configure this setting as elaborated in the following steps:
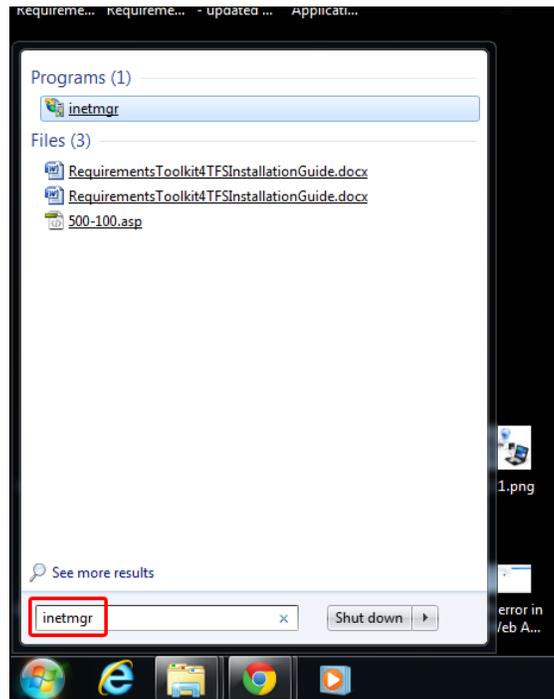
1. Invoke **inetmgr** through Windows's Run command/Start Menu.

2. Expand the node on the left-hand side of the panel of the Internet Information Services (IIS) Manager.
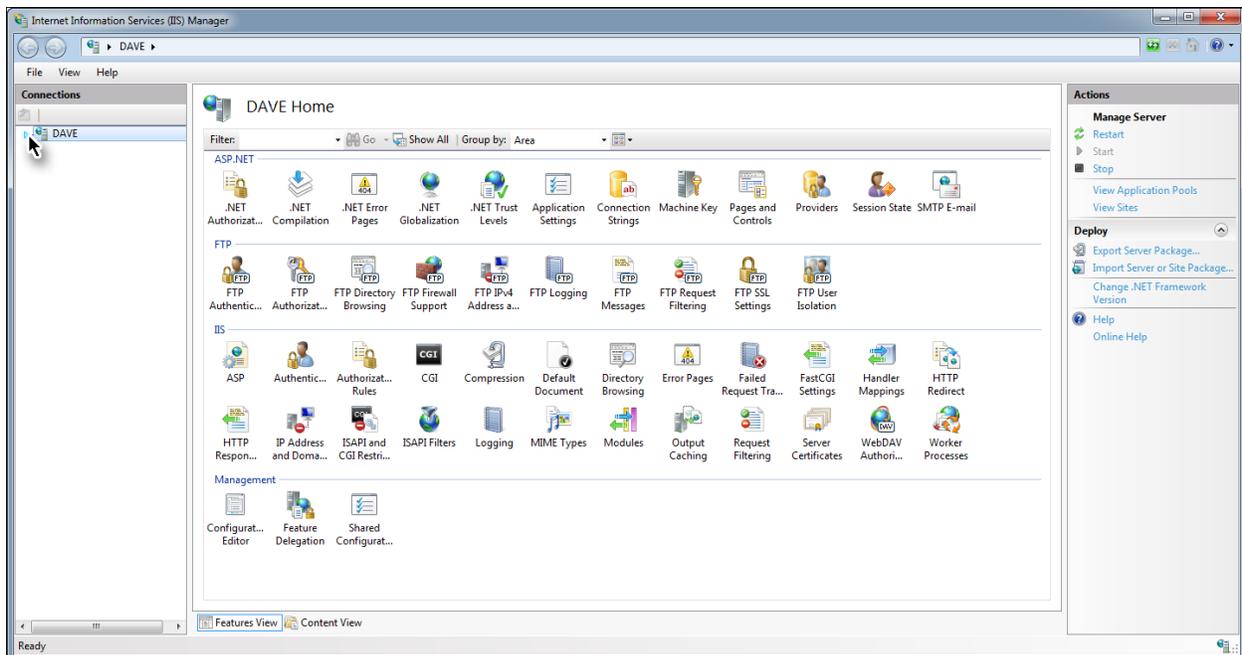
3. Expand the **Sites** node.

4. Select **Modern Requirements4DevOps 2019 Update 1** node.
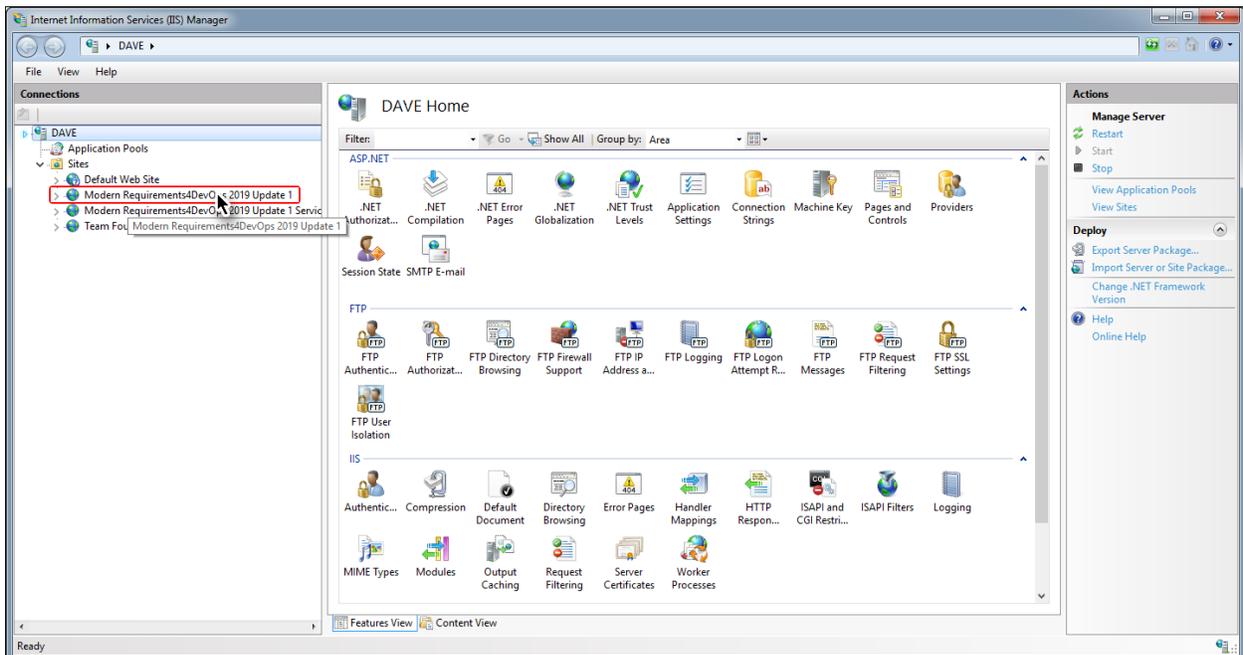
5. Select the **Application Settings** option in the middle panel.

6. Double-click on the **Embed.Tfs2019** option in the list.

7. Set value to "**true**" and click the **OK** button.

Edit Application Setting   ?   ✕

Name:

Embed.Tfs2019

Value:

true

OK   Cancel

8. Close **IIS Manager**.

Internet Information Services (IIS) Manager

| ◄ ► ▶ DAVE ► |

File   View   Help

Connections

- DAVE
  - Application Pools
  - Sites
    - Default Web Site
    - Modern Requirements4DevOps 2019 Update 1
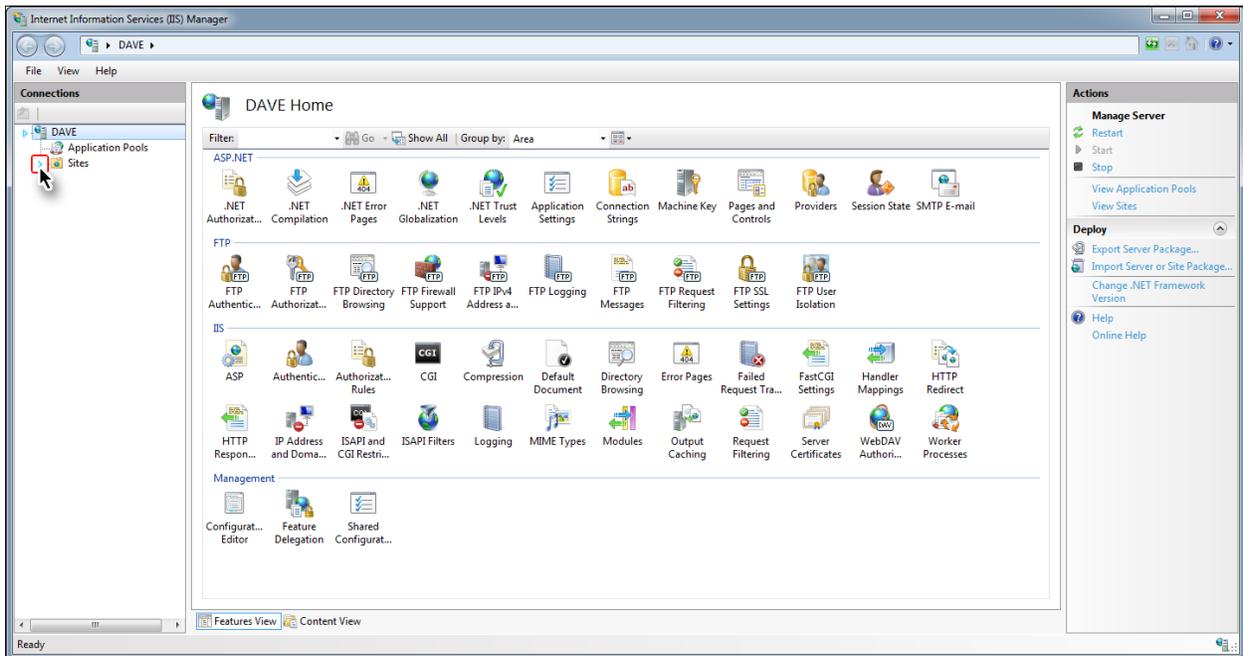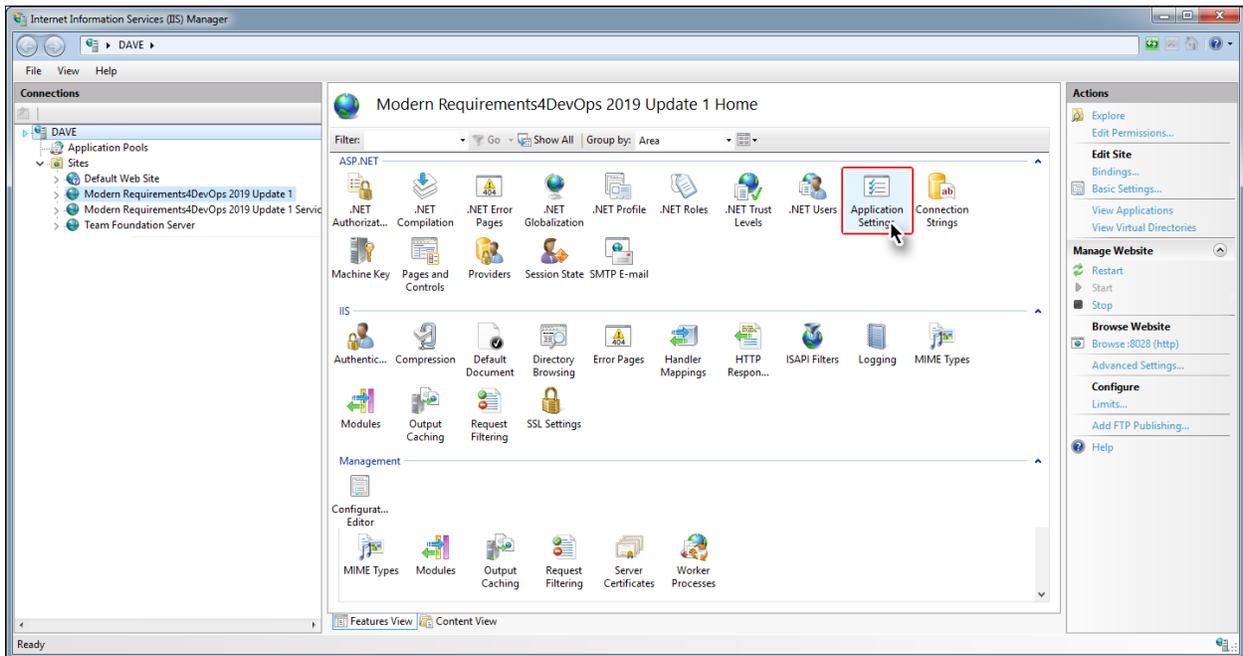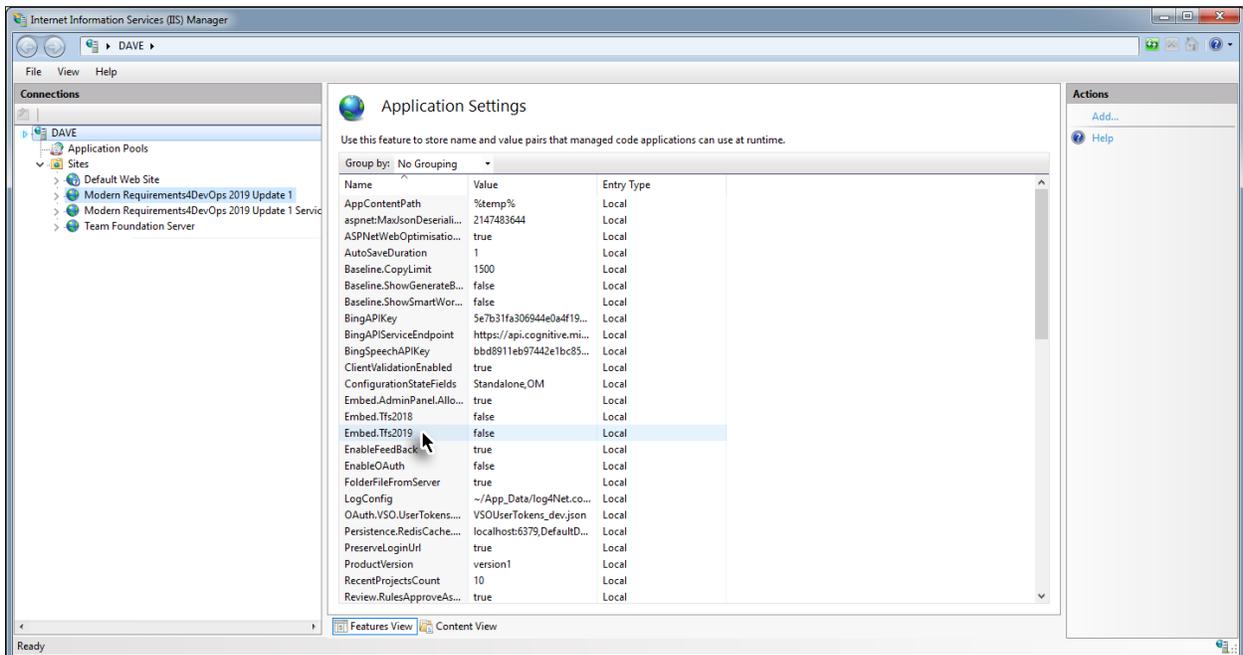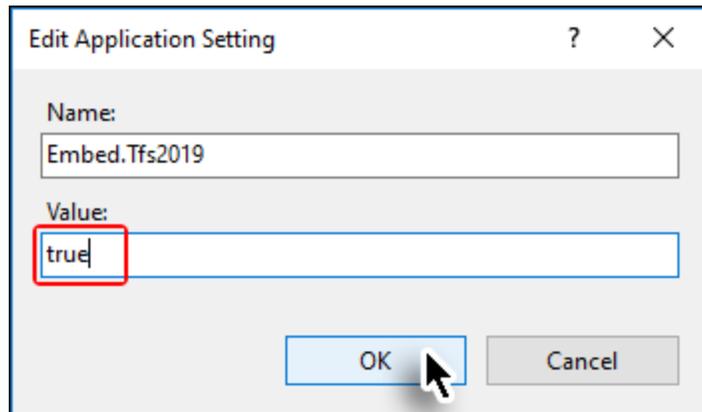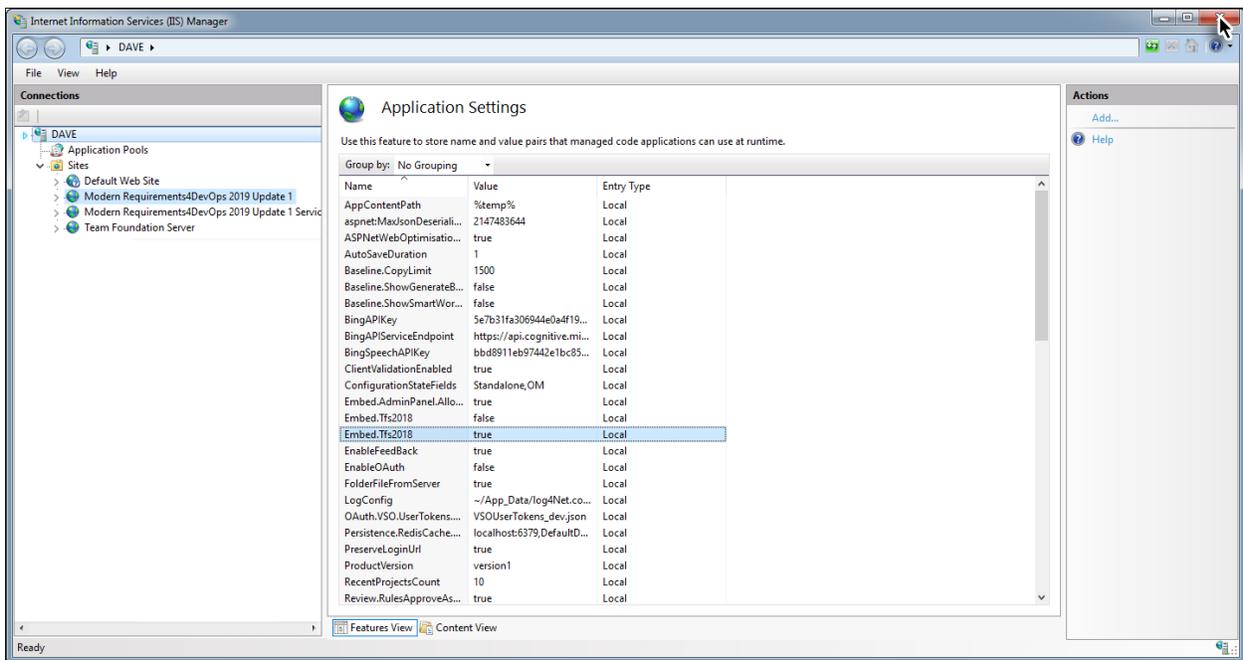   - Modern Requirements4DevOps 2019 Update 1 Servic
    - Team Foundation Server

Application Settings

Use this feature to store name and value pairs that managed code applications can use at runtime.

Group by: No Grouping

Name	Value	Entry Type
AppContentPath	%temp%	Local
aspnet:MaxJsonDeseriali...	2147483644	Local
ASPNetWebOptimisatio...	true	Local
AutoSaveDuration	1	Local
Baseline.CopyLimit	1500	Local
Baseline.ShowGenerateB...	false	Local
Baseline.ShowSmartWor...	false	Local
BingAPIKey	5e7b31fa306944e0a4f19...	Local
BingAPIServiceEndpoint	https://api.cognitive.mi...	Local
BingSpeechAPIKey	bbd8911eb97442e1bc85...	Local
ClientValidationEnabled	true	Local
ConfigurationStateFields	Standalone,OM	Local
Embed.AdminPanel.Allo...	true	Local
Embed.Tfs2018	false	Local
Embed.Tfs2018	true	Local
EnableFeedBack	true	Local
EnableOAuth	false	Local
FolderFileFromServer	true	Local
LogConfig	~/App_Data/log4Net.co...	Local
OAuth.VSO.UserTokens....	VSOUserTokens_dev.json	Local
Persistence.RedisCache....	localhost:6379,DefaultD...	Local
PreserveLoginUrl	true	Local
ProductVersion	version1	Local
RecentProjectsCount	10	Local
Review.RulesApproveAs...	true	Local

Features View   Content View

Ready

Actions

Add...

Help

Users can now select the relevant team of their desired project and it becomes visible in the User Interface.
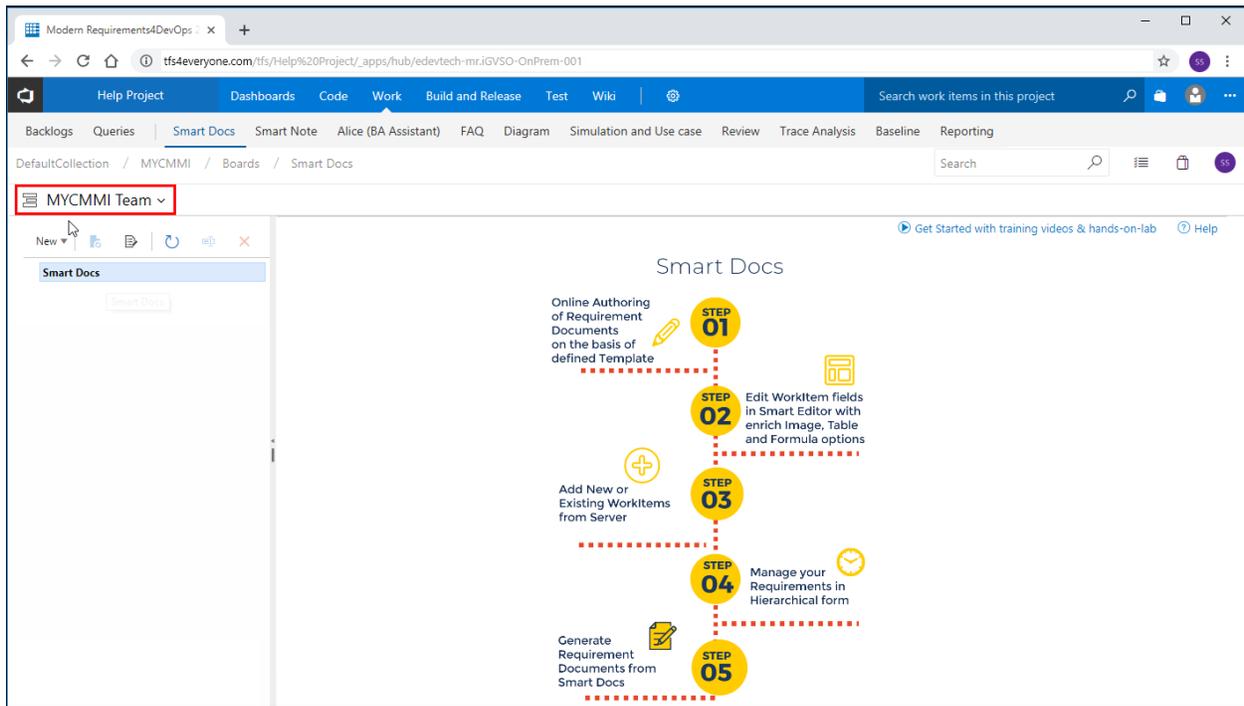
Note: By enabling the "Team" drop down, MR application will not work in 'Internet Explorer' and 'Edge' browsers.

HOW TO CONFIGURE LOAD BALANCING FOR MODERN REQUIREMENTS4DEVOPS

This section describes the configuration process of load balancing for Modern Requirements4DevOps using detailed steps. It acts only as a framework to show how to configure load balancing for Modern Requirements4DevOps. Installation steps are not covered here. For installation steps of individual applications, refer to their respective sections in the guide.

The configuration process consists of the following seven steps:

1. Setup/Install the desired load balancing environment.
2. Install Modern Requirements4DevOps on all servers.
3. Configure the shared network drive for shared workspace.
4. Install/configure the shared Redis server.
5. Change the User Interface Configuration file (web.config).
6. Change the Service Configuration file (web.config)
7. Repeat steps 5 and 6 for all servers on which Modern Requirements4DevOps has been installed for load balancing.

While most of the steps are straightforward, steps 5 and 6 are described in further detail below. Also note that both of these steps refer to different files with same name.

CHANGE THE USER INTERFACE CONFIGURATION FILE

The location of this file in Program Files is highlighted in the following image:
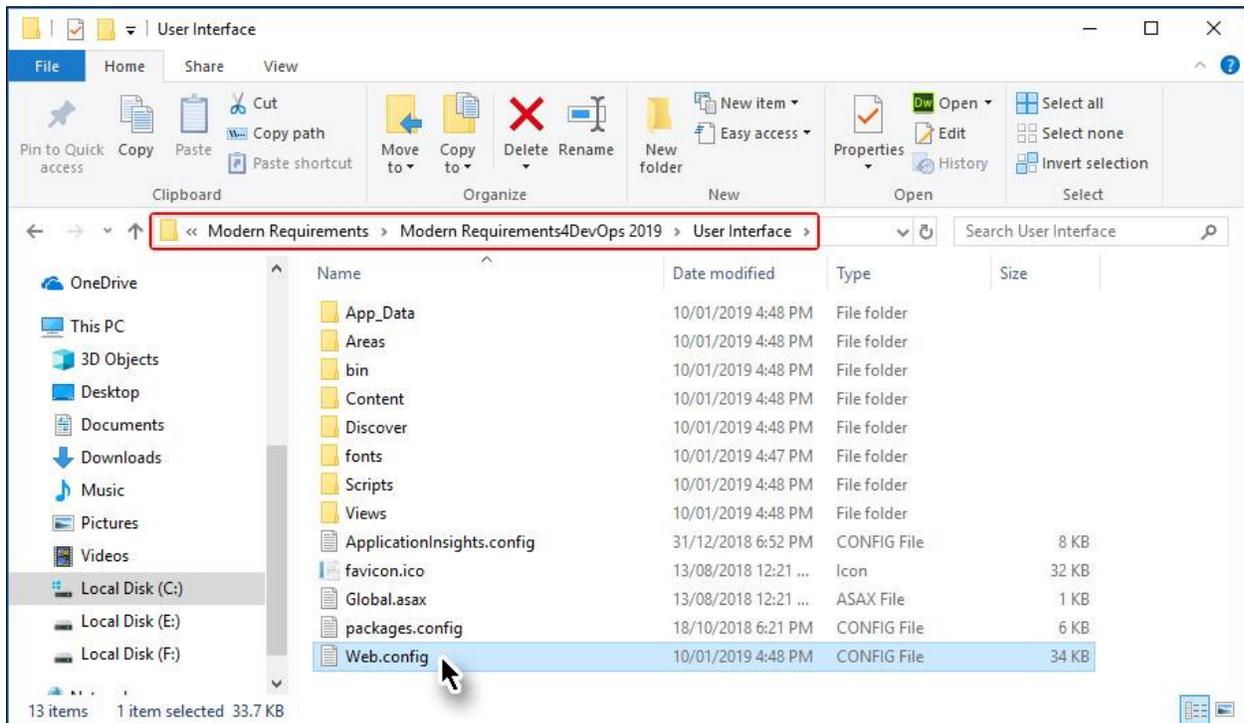
To complete this step carry out the following elementary steps:

1. Open the **Web.config** file (as mentioned above) in editable mode.
2. Edit the following to set the shared drive *path: <add key="AppContentPath" value="<shared drive path>" />

* The shared drive path is setup in step 3 of the overall configuration process (mentioned in the previous section).

3. Comment the **SessionState timout** command as the following: `<!--<sessionState timeout="40" />-->`
4. Uncomment the following section:

```
<!--
<sessionState timeout="40" mode="Custom" customProvider="LocalRedisCache01">
  <providers>
    <add name="RedisCacheAzure01" type="Microsoft.Web.Redis.RedisSessionStateProvider" host="igwa-session.redis.cache.windows.net" port="6380" accessKey="ub6
    <add name="LocalRedisCache01" type="Microsoft.Web.Redis.RedisSessionStateProvider" databaseId="0" host="127.0.0.1" port="6379" ssl="false" accessKey="" 
  </providers>
</sessionState>
-->
```

5. In the above section, set **customProvider** value to "RedisCacheAzure01".
6. Make the following comment in the section above: `<add name="LocalRedisCacheAzure01" type="Microsoft.Web.Redis.Redis.........`
7. Set the Redis host, port and access key (password) value in the following line of the above section: `<add name="RedisCacheAzure01" type="Microsoft.Web.Redis.Redis.........`

CHANGE THE SERVICE CONFIGURATION FILE

The location of this file in Program Files is highlighted in the following image:
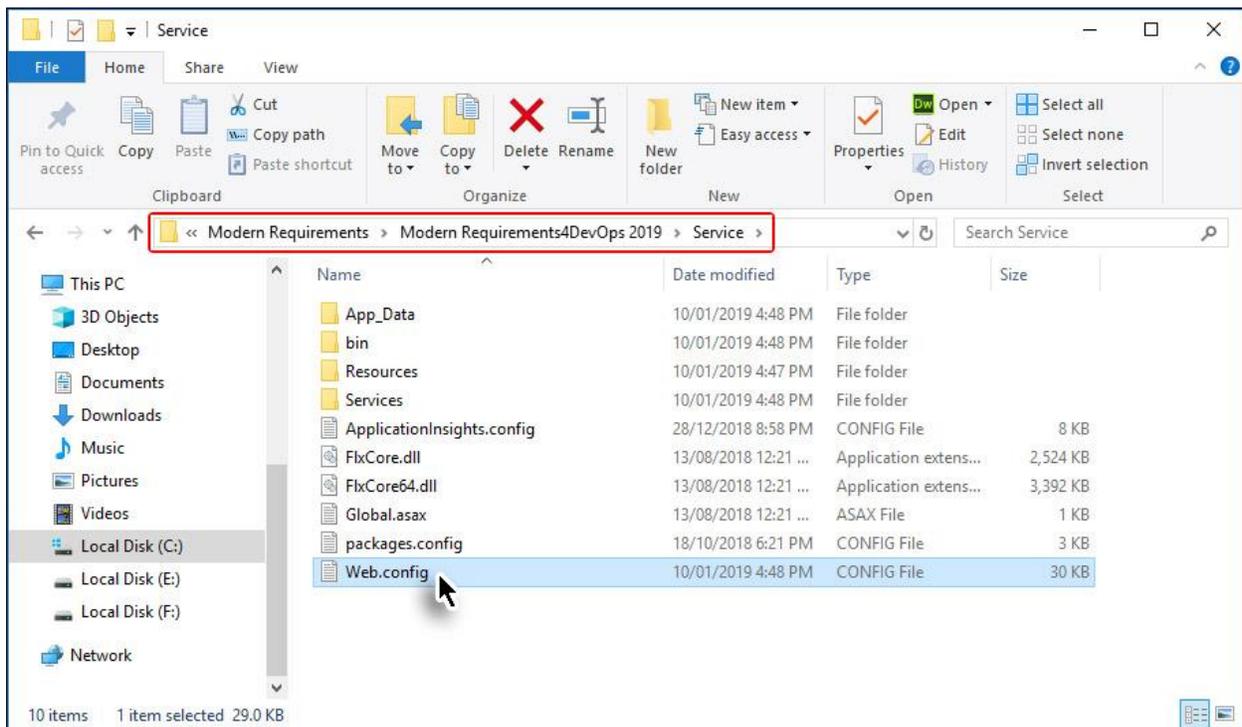
To complete this step, carry out the following elementary steps:

1. Open the **Web.config** file (as mentioned above), in editable mode.
2. Set the shared drive path for the workspace folder key (the same path assigned in step 3)
   `<addkey="WorkspaceFolder" value="%public%Documents">`
3. Set the **EnableLoadBalancer** key value to "true":
   `<addkey="EnableLoadBalancer" value="true">`
4. Set the Redis storage value host, port and *password

```
<add key="Persistence.RedisCache.ConnectionString" value="localhost:6379,DefaultDatabase=2,Password=,ssl=false" />
```

*Note: The values for these attributes are determined while installing Redis Server in step 4 of the overall configuration process (mentioned at the beginning of this section).

HOW TO CHANGE THE COLOR (RGB) VALUE FOR A WORK ITEM

You can change the color for a work item by performing the following steps:

1. Go to the location <Modern Requirements4DevOps Installation Drive>:\Program Files\Modern Requirements\Modern Requirements4DevOps 2019\User Interface\App_Data
2. Open the file **ColorCodeMapping.xml** in Notepad.
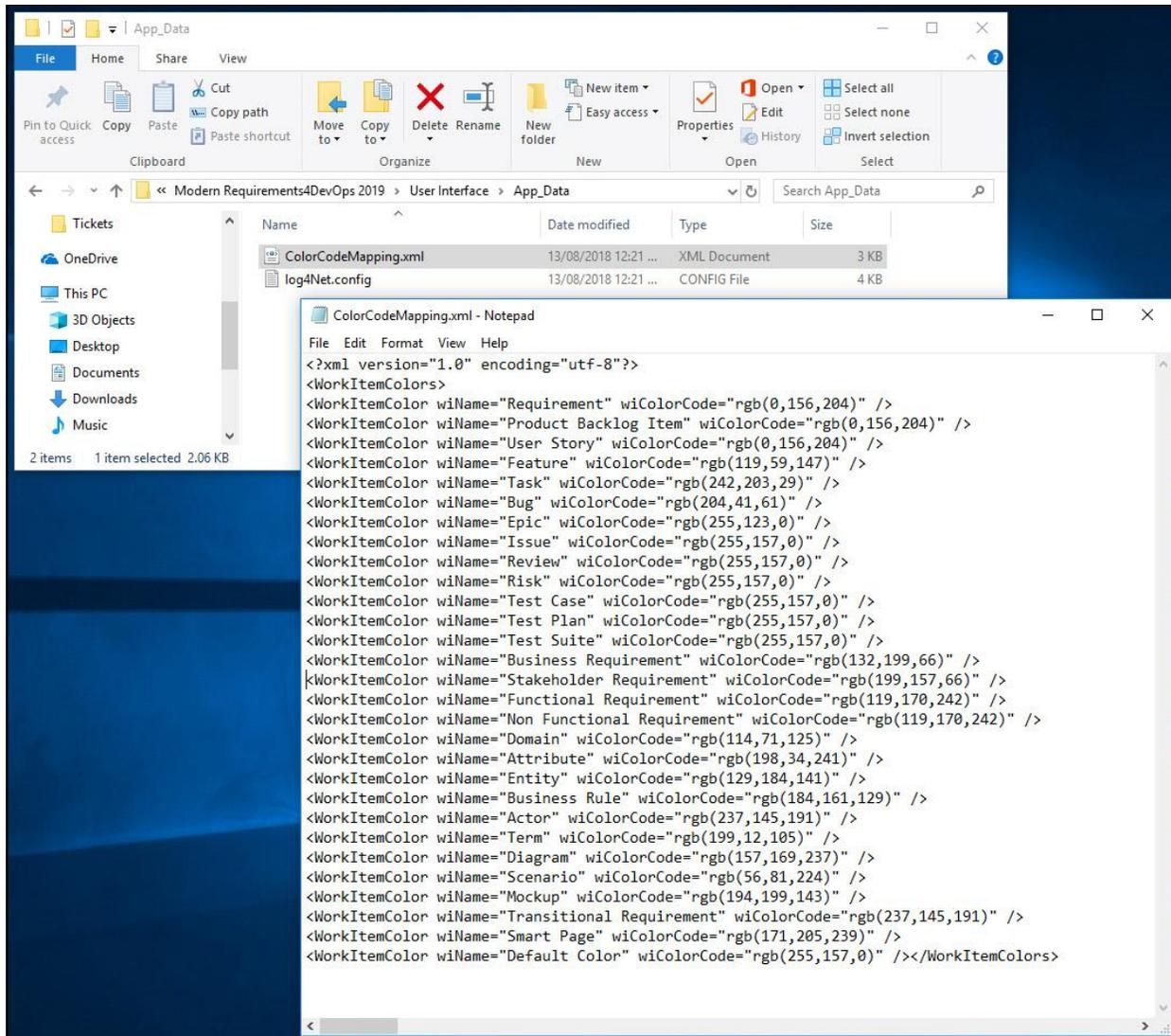
3. Change the desired color code for a work item.
4. Save the file. If you don't have admin rights save the file on desktop and replace it with the existing file in the same folder.
5. Restart IIS.

HOW TO UPDATE THE WORK ITEM TYPE FOR SIMULATION, DIAGRAM AND USECASE

Default mapping is embedded in the application to support the "Work Item to File Type" functionality. When you create a new file, a page work item is also created in the connected team project in accordance with the work item type stated in this file.

Complete the following steps to update the work item type of a page work item:

1. Access the following path: <Windows installation folder>\Program Files\Modern Requirements\Modern Requirements4DevOps 2019\Service\App_Data
2. Look for the XML file 'WIToFileTypeMapping' in the folder and open it.
3. Look for the field '<WorkItem id="<WI Type>" />' in the respective module section and update the "<WI Type>" value accordingly.

4. Save the file at some other location (e.g. desktop).
5. Copy the file from the saved location and paste it in the same installation folder (as mentioned earlier in step 1)
6. Restart the application service from IIS Manager. Refer to Appendix for process details.
7. Log in to the application.
8. Type "inetmgr" on the Run command.

The IIS Manager window will open.
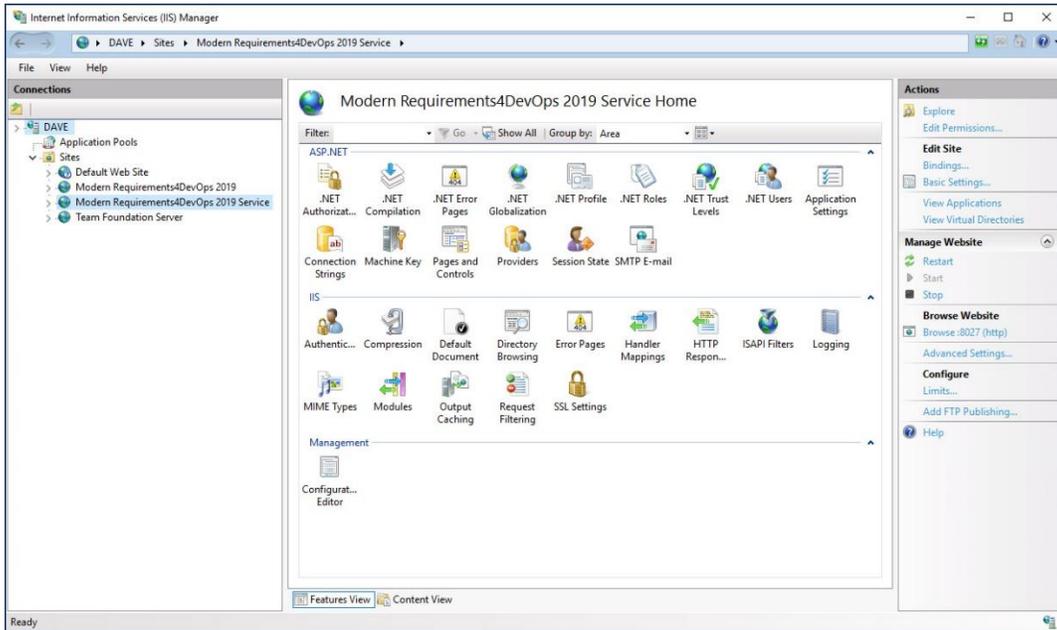
9. In the IIS Manager window, select the **Modern Requirements4DevOps 2019 Service** option on the left-hand side.
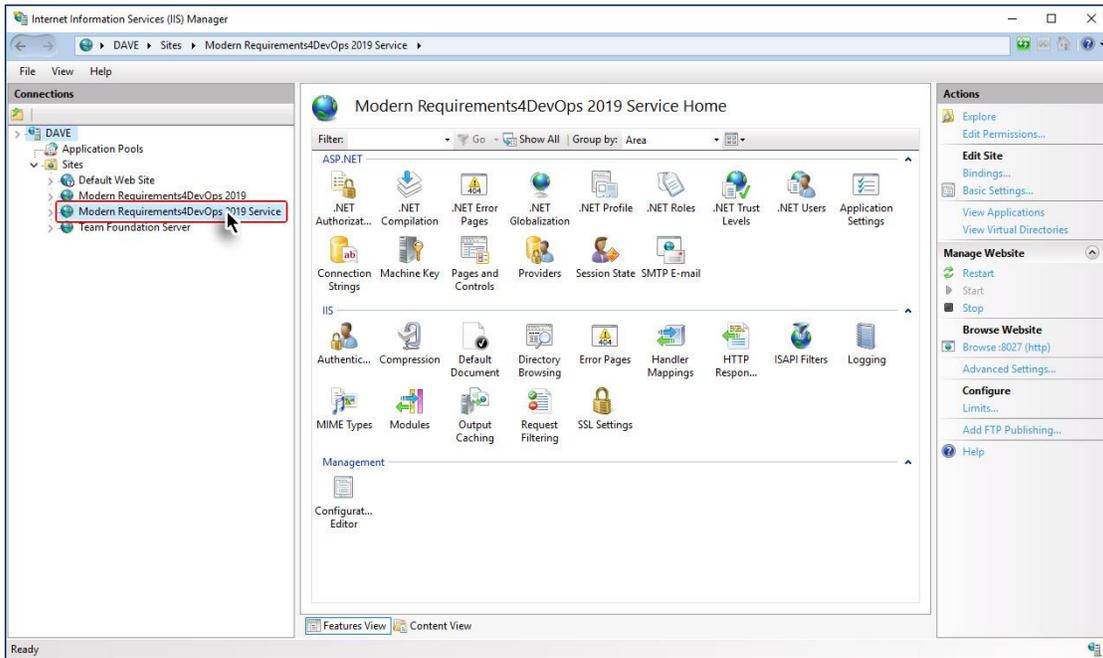
10. Look for the section called **Manage Web Site** on the right-hand side of the panel. Click **Stop** followed by **Start**.
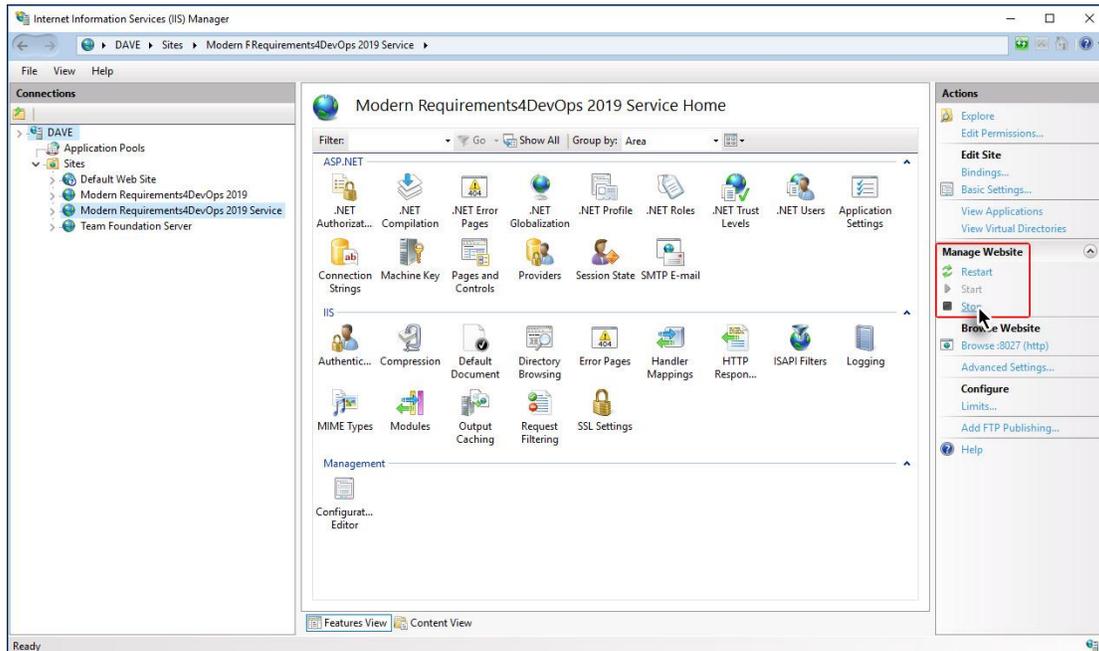
HOW TO CHANGE THE LOCATION OF THE BASELINE FILE

Modern Requirements4DevOps creates a local working folder on the machine where Modern Requirements4DevOps is installed. The path can be changed but this one is recommended when you're installing and using Modern Requirements4DevOps for the first time.

By manually changing the location of Modern Requirements4DevOps folder (different then that used during the existing installation), all existing created project data and files will become inaccessible. This approach isn't going to work for the existing projects by just copying existing content to new location. Changing any existing file or removing it from the location might corrupt the whole project data.

The following steps need to be performed to update the location:

1. Go to the location : <Modern Requirements4DevOps Installation Drive>:\Program Files\Modern Requirements\Modern Requirements4DevOps 2019\Service
2. Open "web.config" file, find the following tag : <add key="WorksapceFolder" value="%public%/Documents"/>
3. Update the value of "WorkspaceFolder" with the required location**.
4. Save the web.config file.
5. Restart the IIS service.

**A location can be a shared Data Drive, or a separate drive/folder.

P.S: By doing this with the existing installation, all existing created project data and files will be inaccessible.

HOW TO DELETE OBSOLETE NFR TEMPLATES FROM FAQ MODULE

The obsolete NFR templates of the FAQ module appear when you try to create a new topic in the FAQ Module.
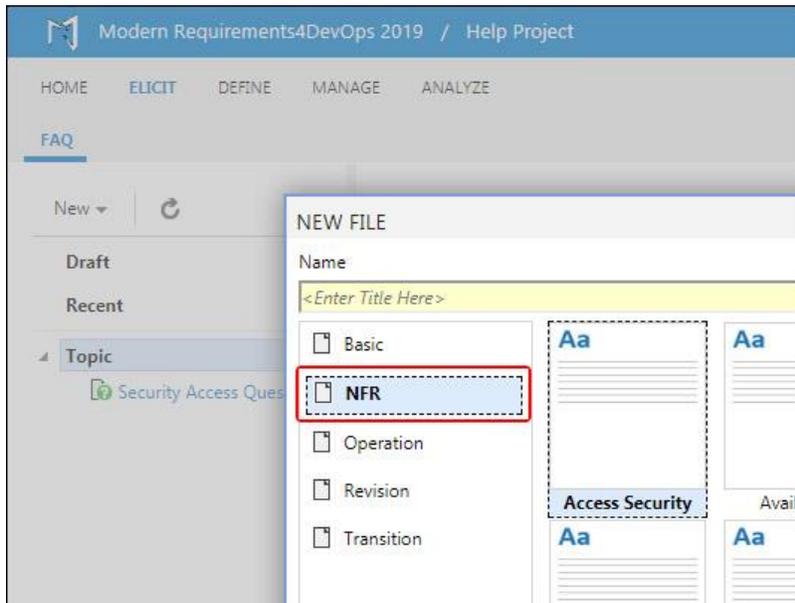
These templates appear due to a folder created during the installation of older versions of Modern Requirements4DevOps (at that time called inteGREAT4TFS). The following folder needs to be manually deleted by the users to get rid of these obsolete templates:

C:\Users\Public\Documents\inteGREAT4TFS\QWizard Templates\NFR
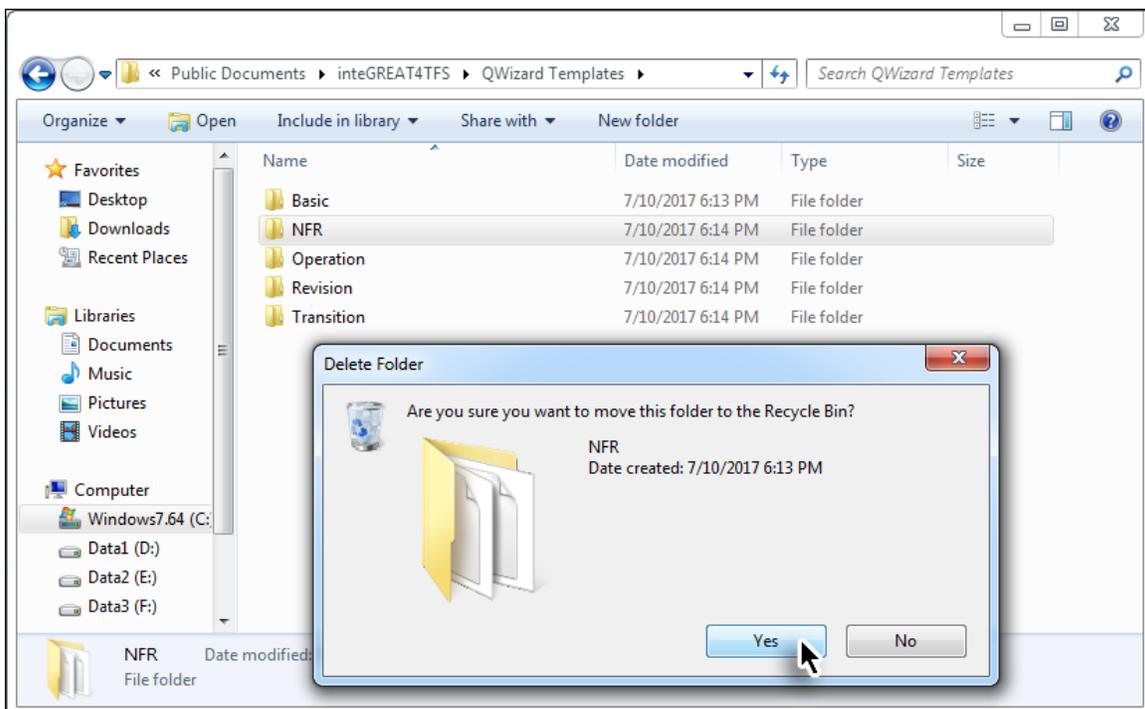
After deleting the folder you should re-sign in or refresh the application to confirm the disposition of the obsolete templates.
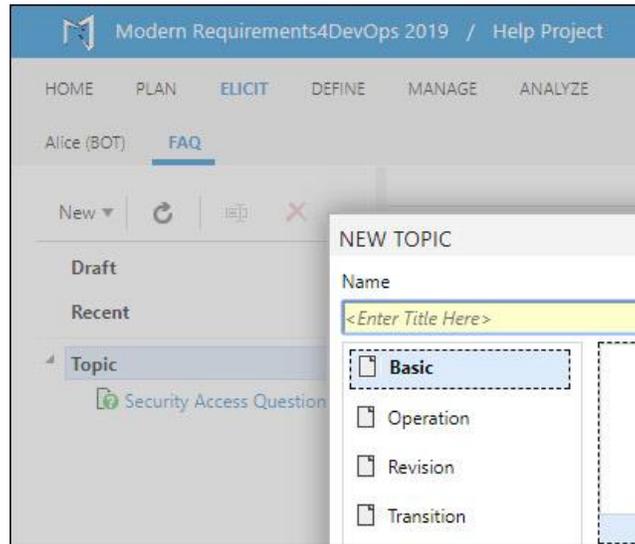
THE DEPLOYMENT INSTRUCTION PAGE APPEARING INSTEAD OF THE LICENSE STATUS PAGE (EMBEDDED)

For the embedded version, you may check the status of the license for Modern Requirements4DevOps by entering the following URL:
<machine name>:8028/License/Status e.g. steve:8028/License/Status. This URL usually displays the status page similar to the one shown below.
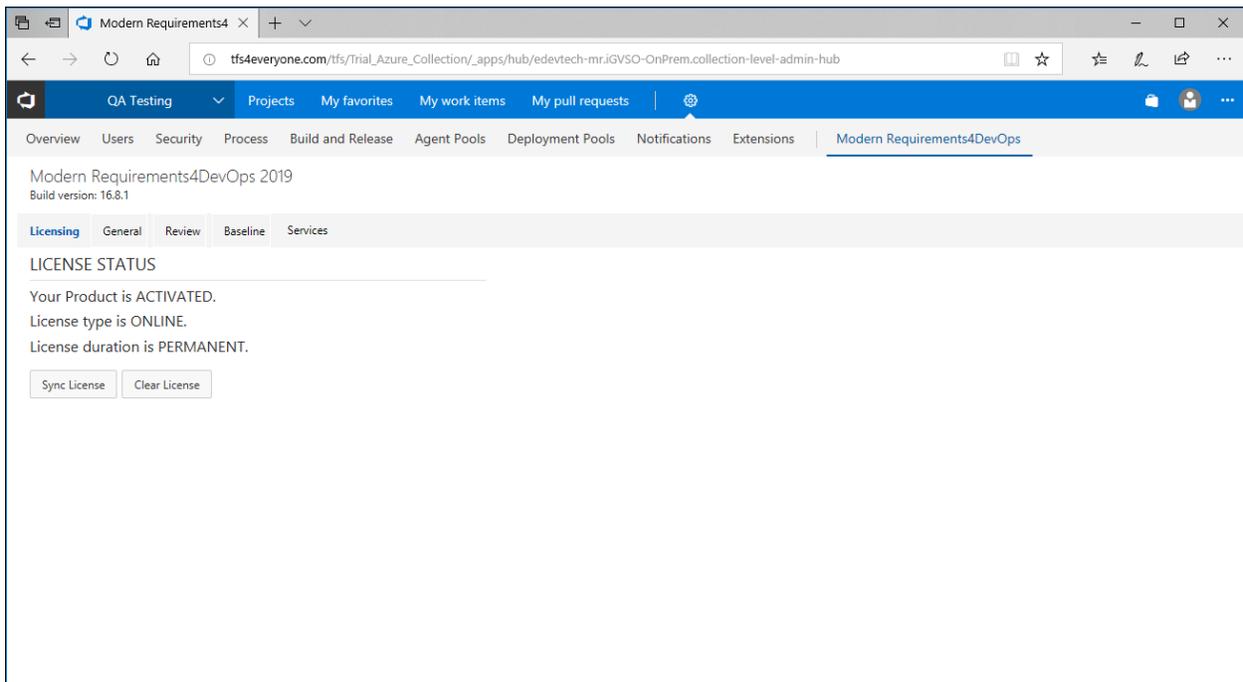
You may come across a situation where, instead of the license status page, the deployment instruction page is displayed as shown below.
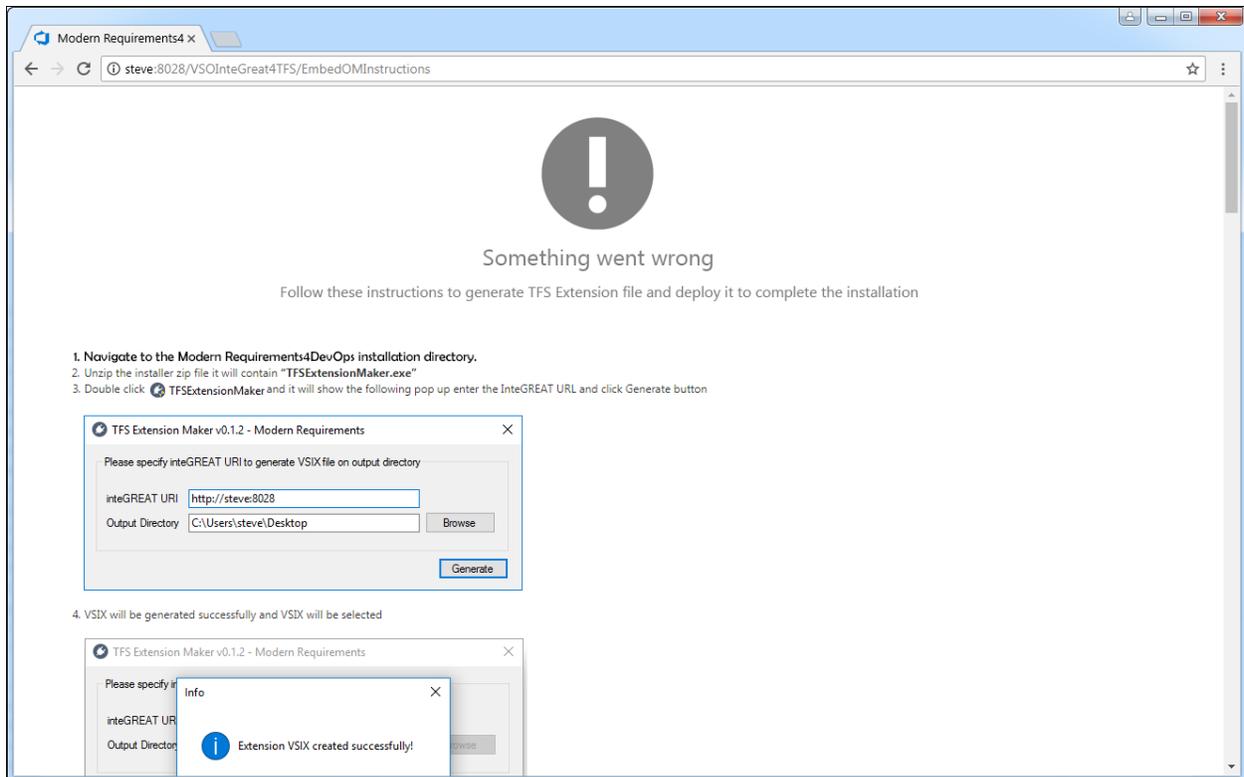
This situation occurs when you're using Visual Studio Team Services, but haven't used any of the Modern Requirements4DevOps modules in the current session yet. In other words, you have been using the container environment but haven't actually used Modern Requirements4DevOps so far. Therefore the status check for the license won't work in this scenario. But after you click any of the Modern Requirements4DevOps modules this problem won't persist.

"UNEXPECTED ERROR" MESSAGE (STANDALONE)

Occasionally you may come across the "unexpected error" message as displayed in the following image.
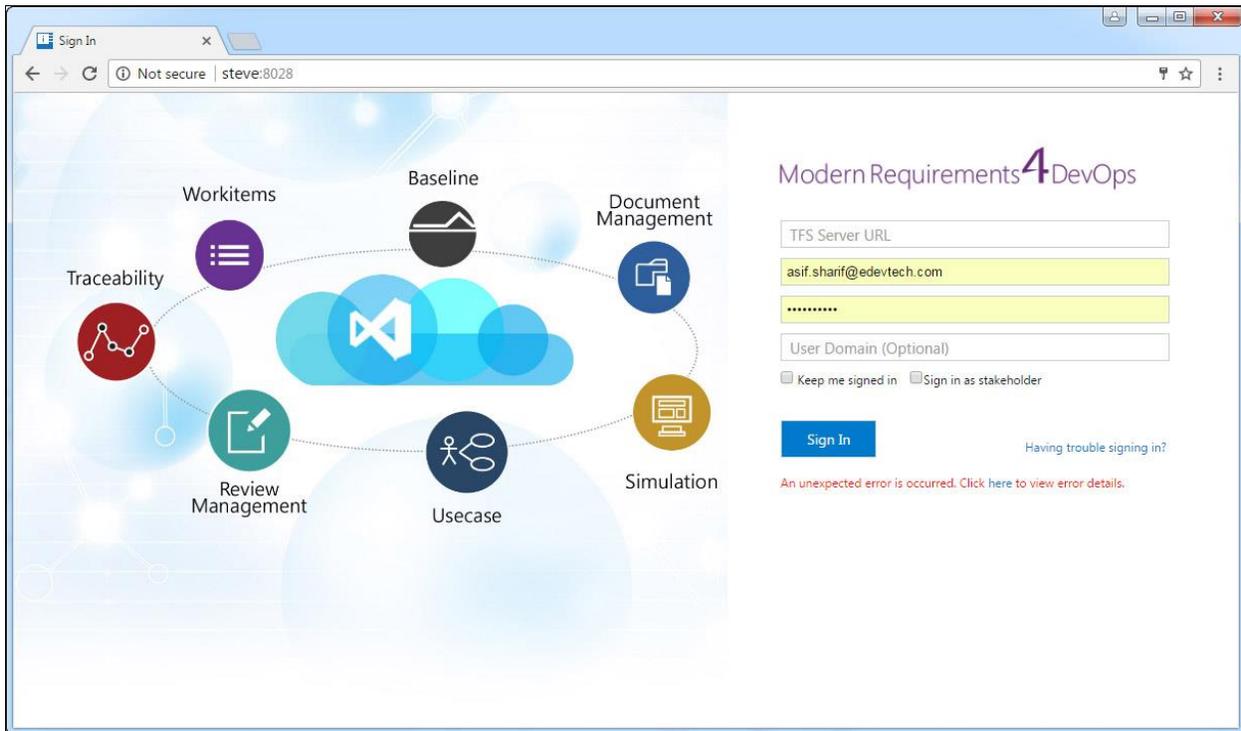
The solution to this error starts at the same Sign-in page.

1. Open the **Click here** link, as shown below.
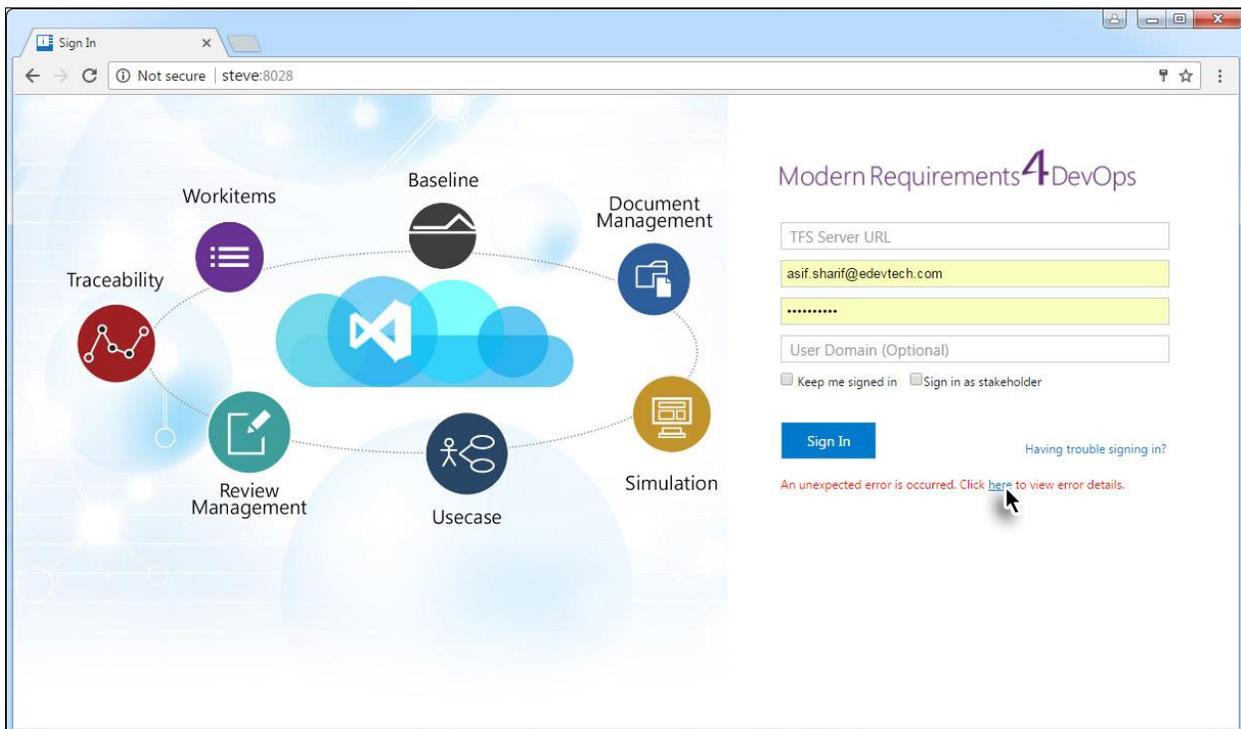
You'll be taken to the Diagnostics page which briefly describes the precise root cause of the error.

2. Open the **click here for solution** link.
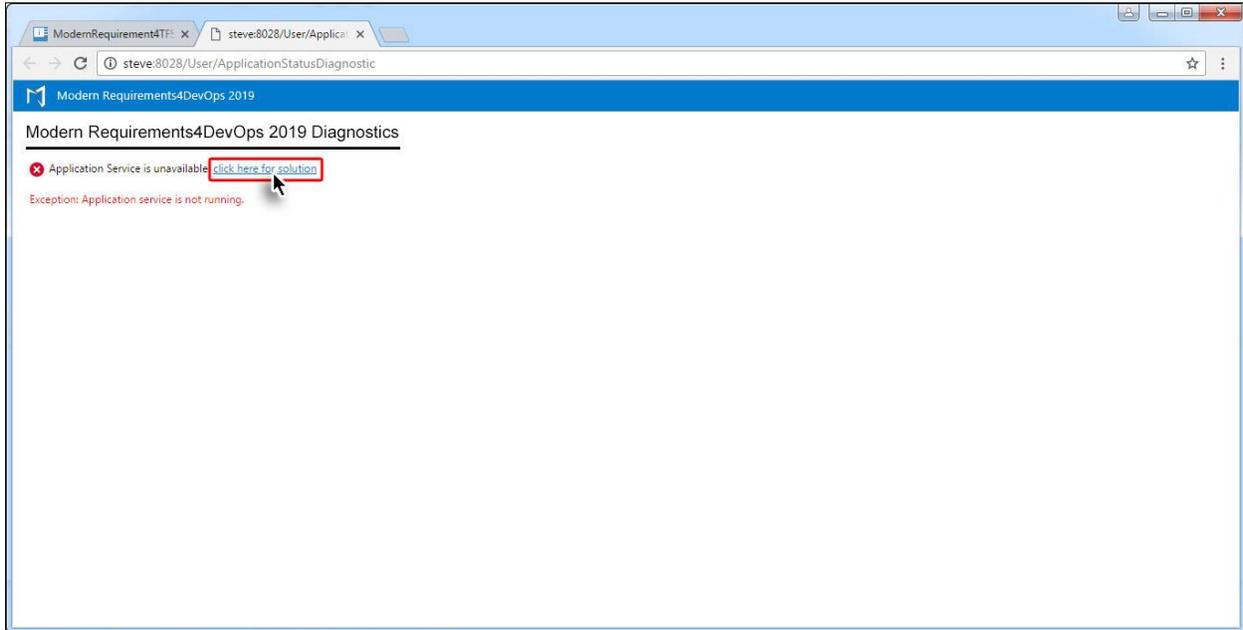
You'll be redirected to the solutions page, where you can browse through the detailed solution for the relevant root cause of the error.
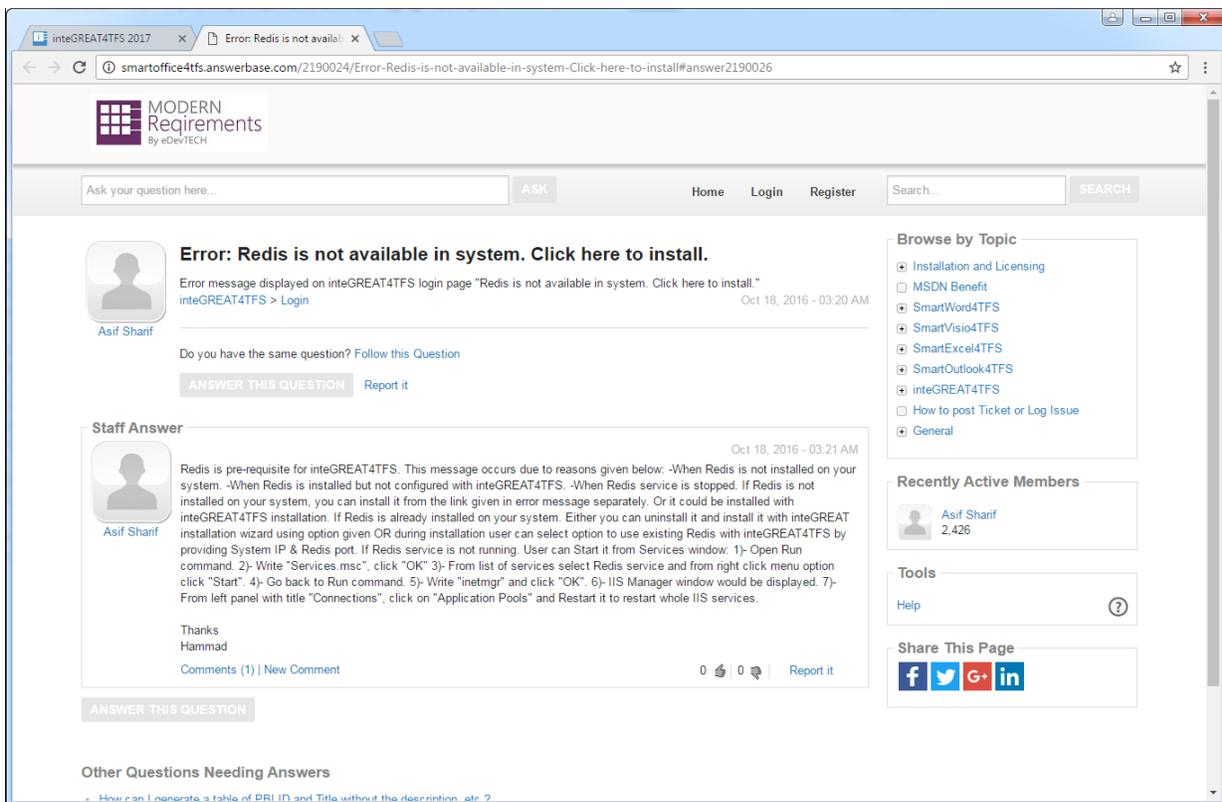
3. Follow the solution provided in the answer to solve the problem in question.

"IIS VERSION IS LOWER.." ERROR

If you encounter the following error message "ModernRequirements4DevOps cannot be installed on system with IIS Services version lower than 7.0"during installation, there could be multiple reasons for it.

1. IIS isn't installed on the targeted machine (on which you're trying to install Modern Requirements4DevOps).
2. IIS hasn't been properly or completely installed on the machine.
3. IIS has been properly installed but the version installed is below Version 7.0.

In these scenarios it's recommended to install IIS Manager completely for the successful installation of Modern Requirements4DevOps. Additionally, the IIS version installed should be greater than Version 7.0.

"400 BAD REQUEST" ERROR (EMBEDDED)

Internet Explorer by default doesn't allow storing cookies of sites which are inside the IFrame and have a different domain from the parent site. The embedded version of Modern Requirements4DevOps has an architecture where the parent site is https://*.visualstudio.com and IFrame site used is https://modernrequirements.info. This issue, however, is limited to Internet Explorer only. Firefox & Chrome don't show any problems in such scenario. To overcome this issue we need to direct IIS to send a custom header with every response it sends. This needs to be done on every IIS where Modern Requirements4DevOps will be deployed in the embedded version. The following steps are required to solve this issue:

1. Open IIS Manager.
2. Select the server name in Root.
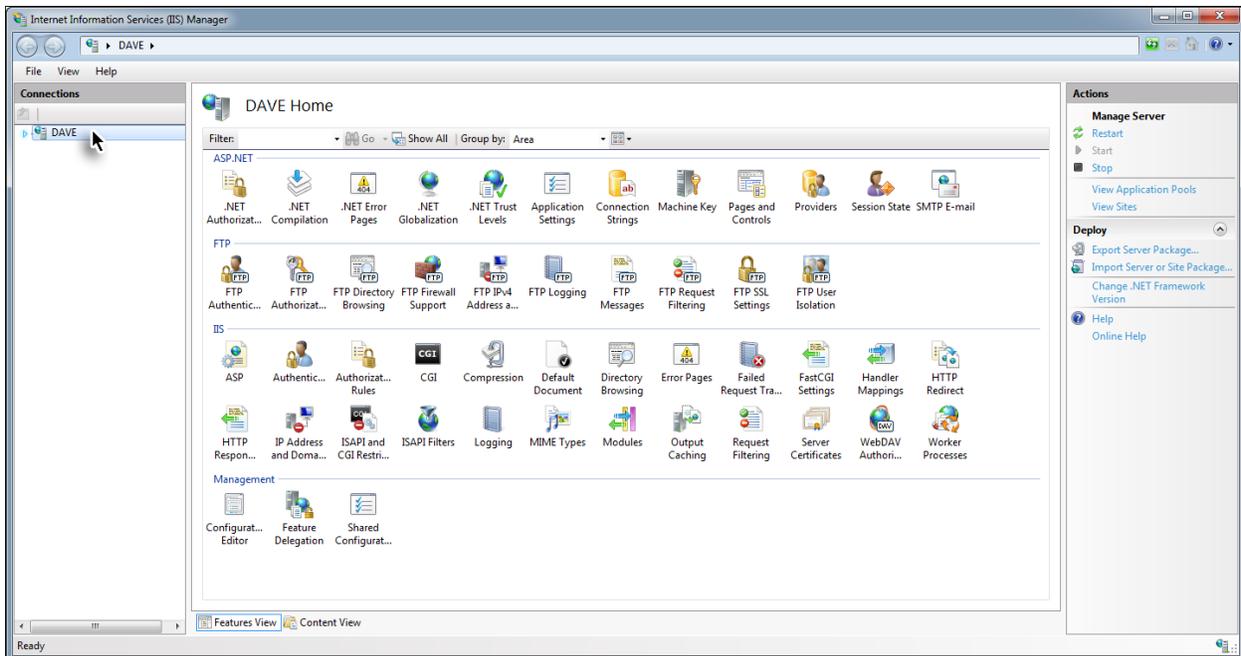
3.   Open the **HTTP Response Headers** option by double-clicking it.
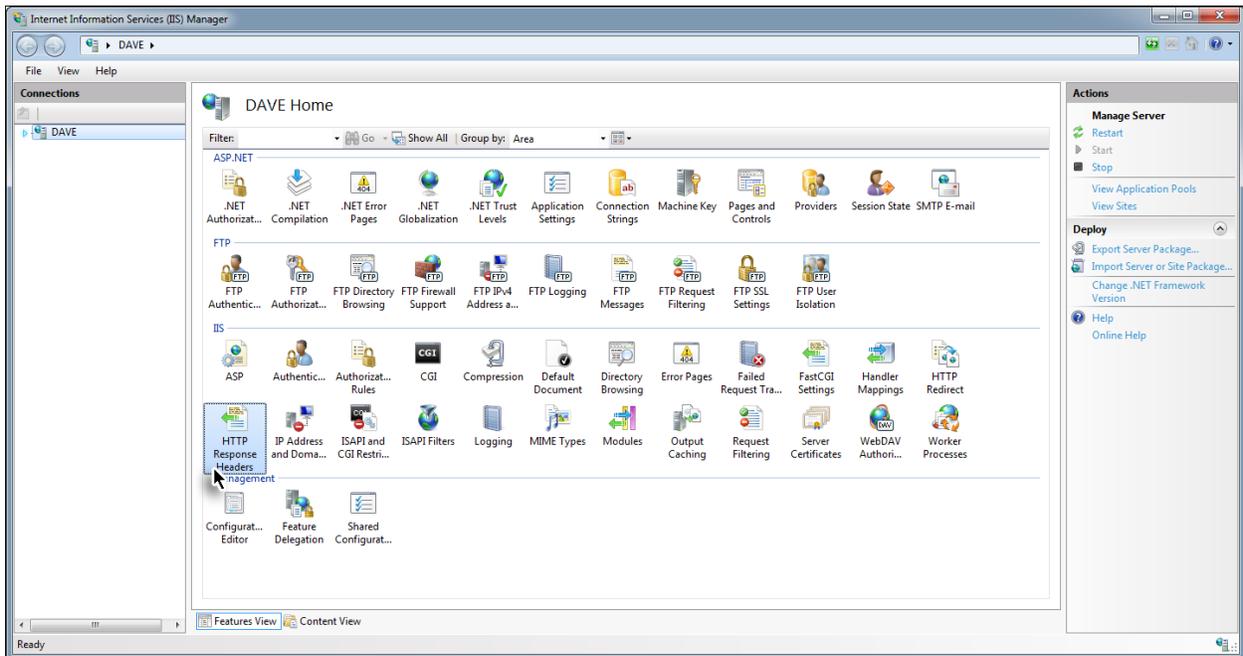
4.   Click the **Add…** option in the Actions panel.
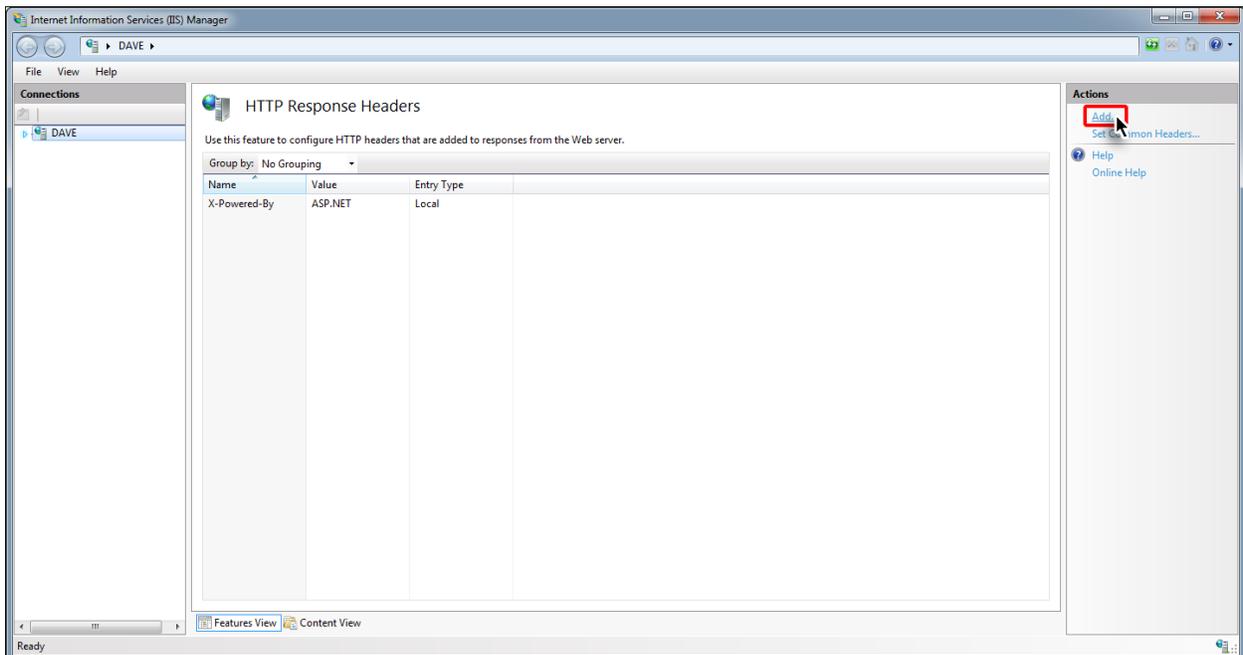
5. Enter the following values and click **OK**.
- Name = **p3p**
- Value = **CAO PSA OUR**
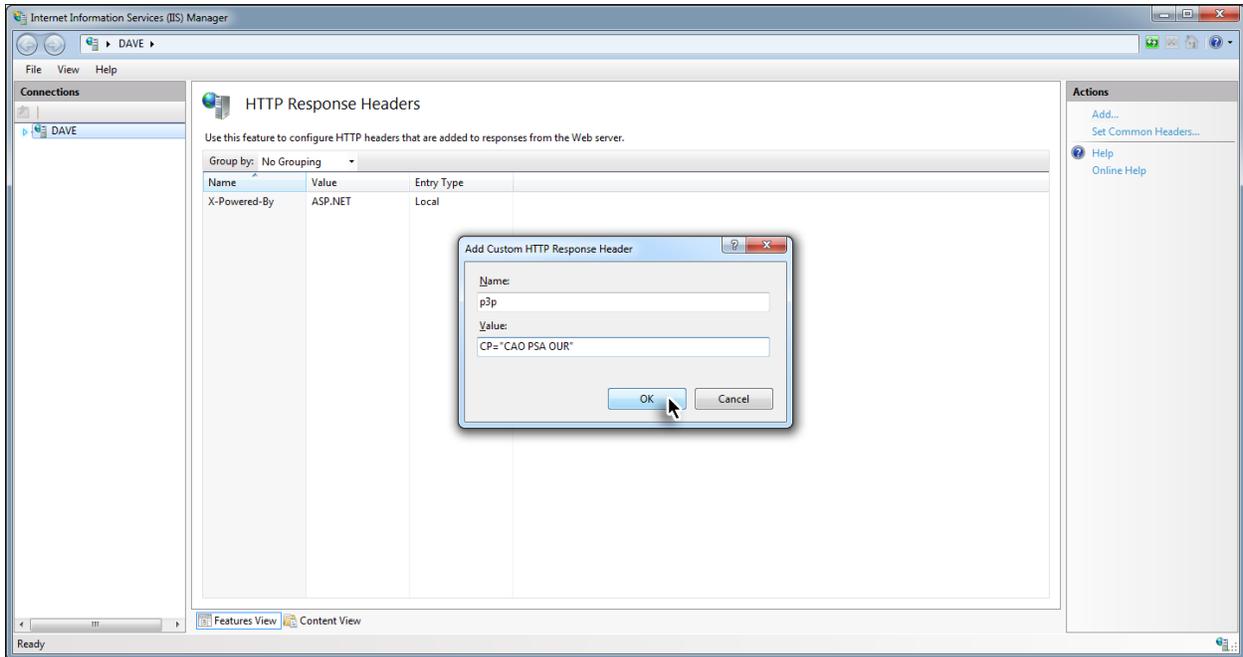
6. Again click the server name in Root.
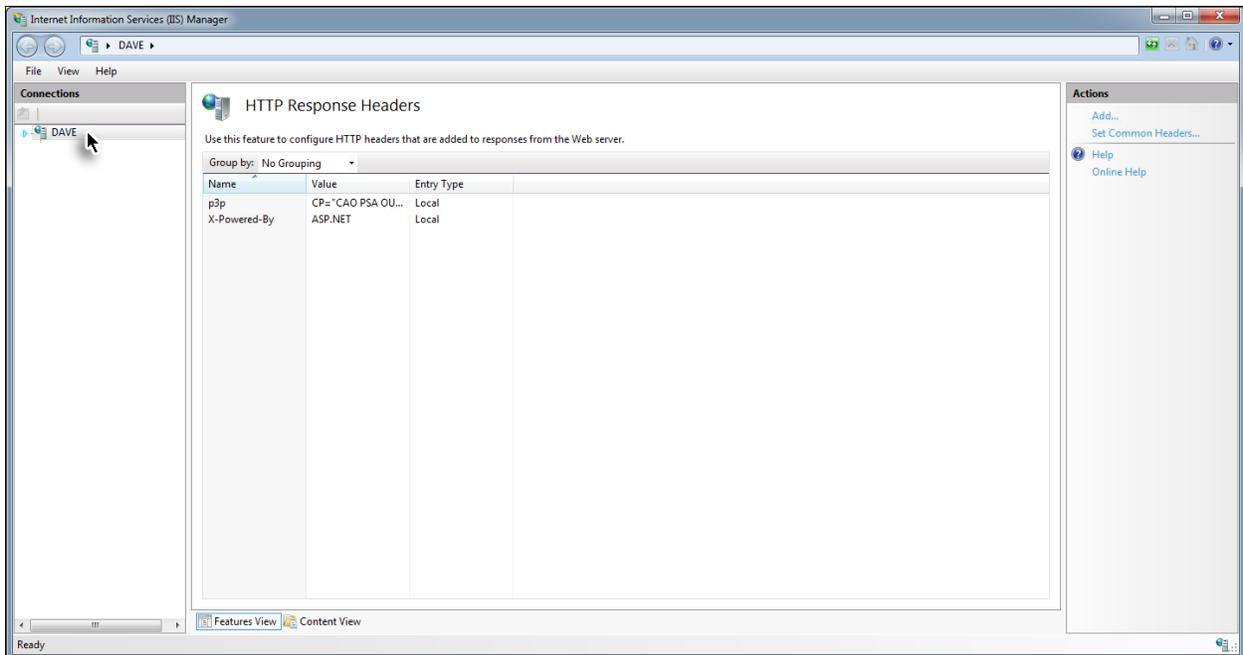
7. Restart IIS.
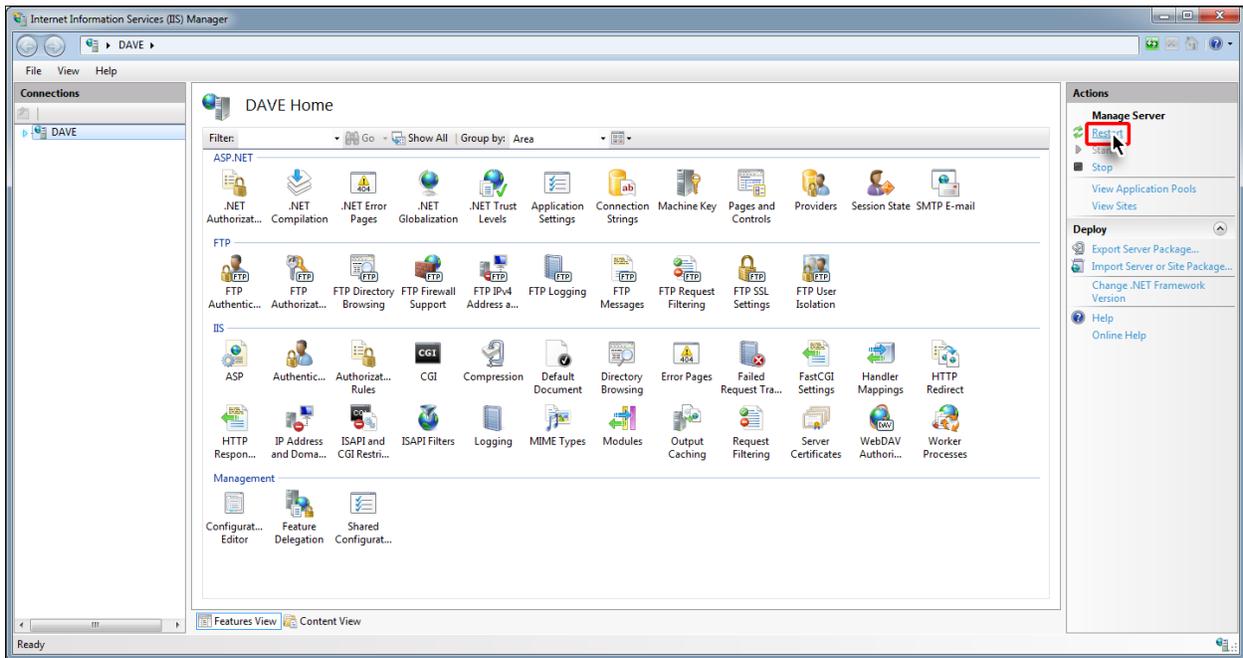
ENABLING HTTPS

By default the Modern Requirements4DevOps service runs on port 8028, hence to access the service <Host Name>:8028 is written in the browser. Users have the option to use a port of their choice using the following steps:

1. Invoke the Internet Information Services (IIS) Manager using "**inetmgr**" in Window's **Run** command.
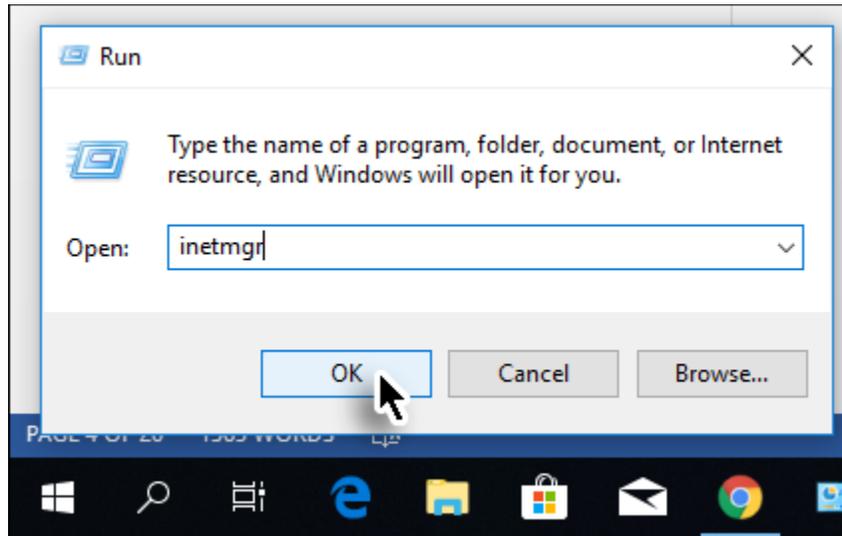
2. Expand the root node.
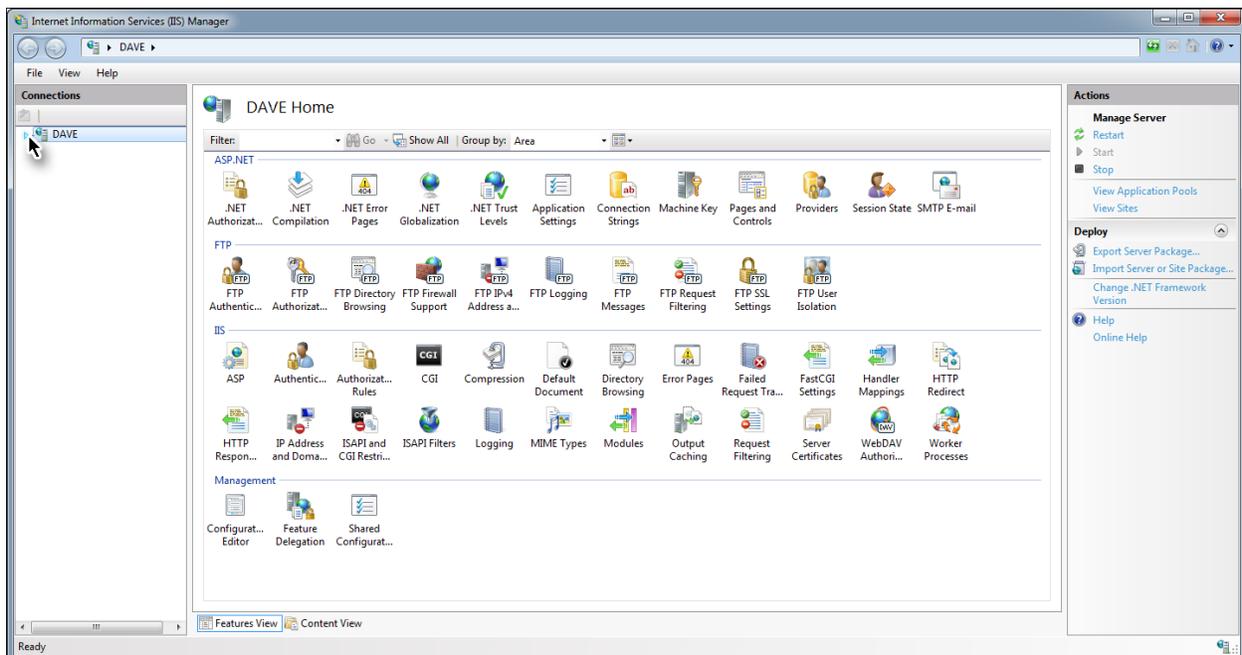
3. Expand the **Sites** node.
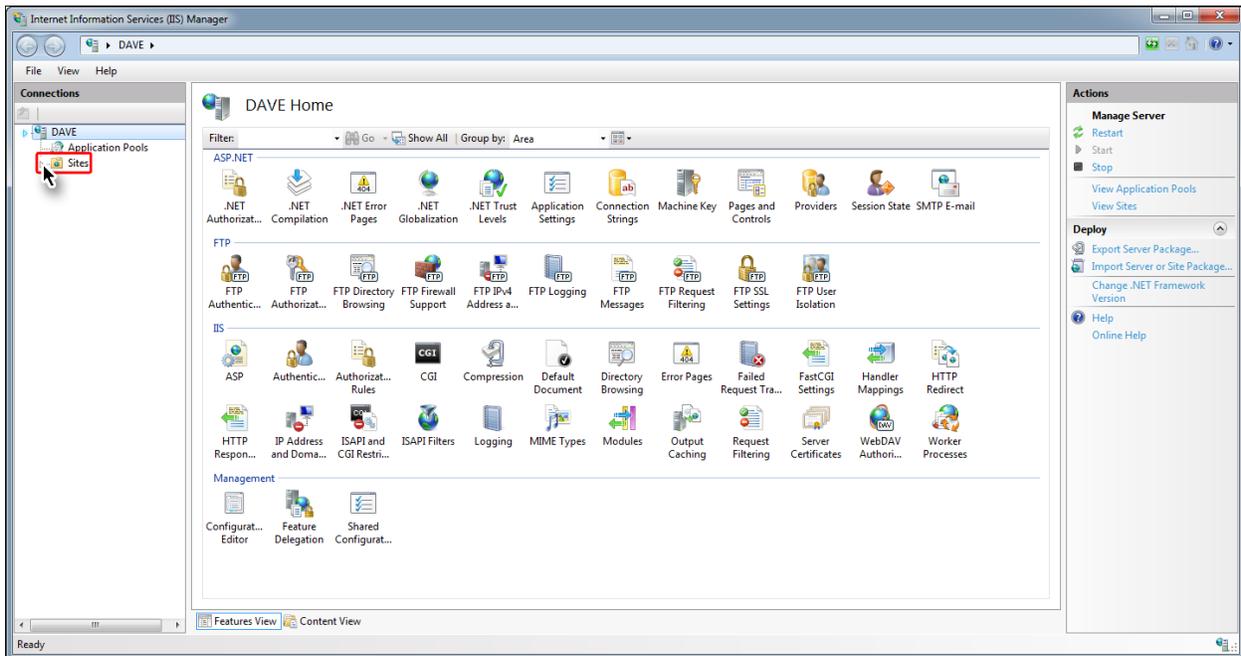
4. Right click on the **Modern Requirements4DevOps 2019** option.
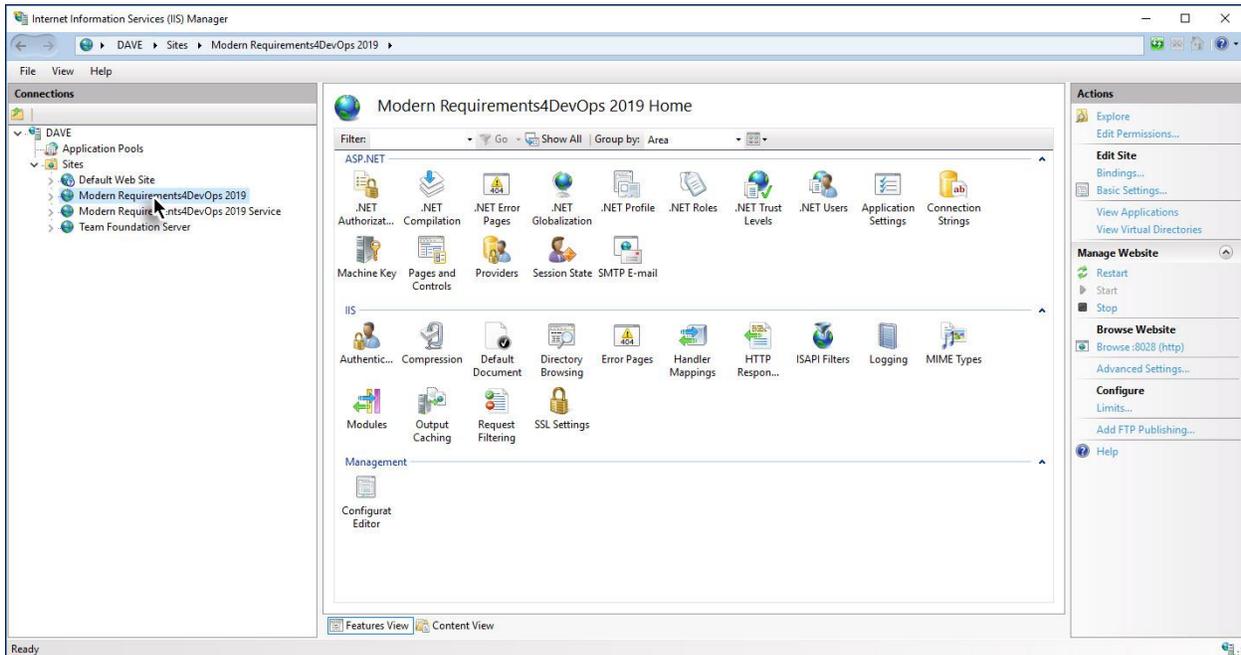
5. Select the **Edit Bindings…** option from the drop down menu.
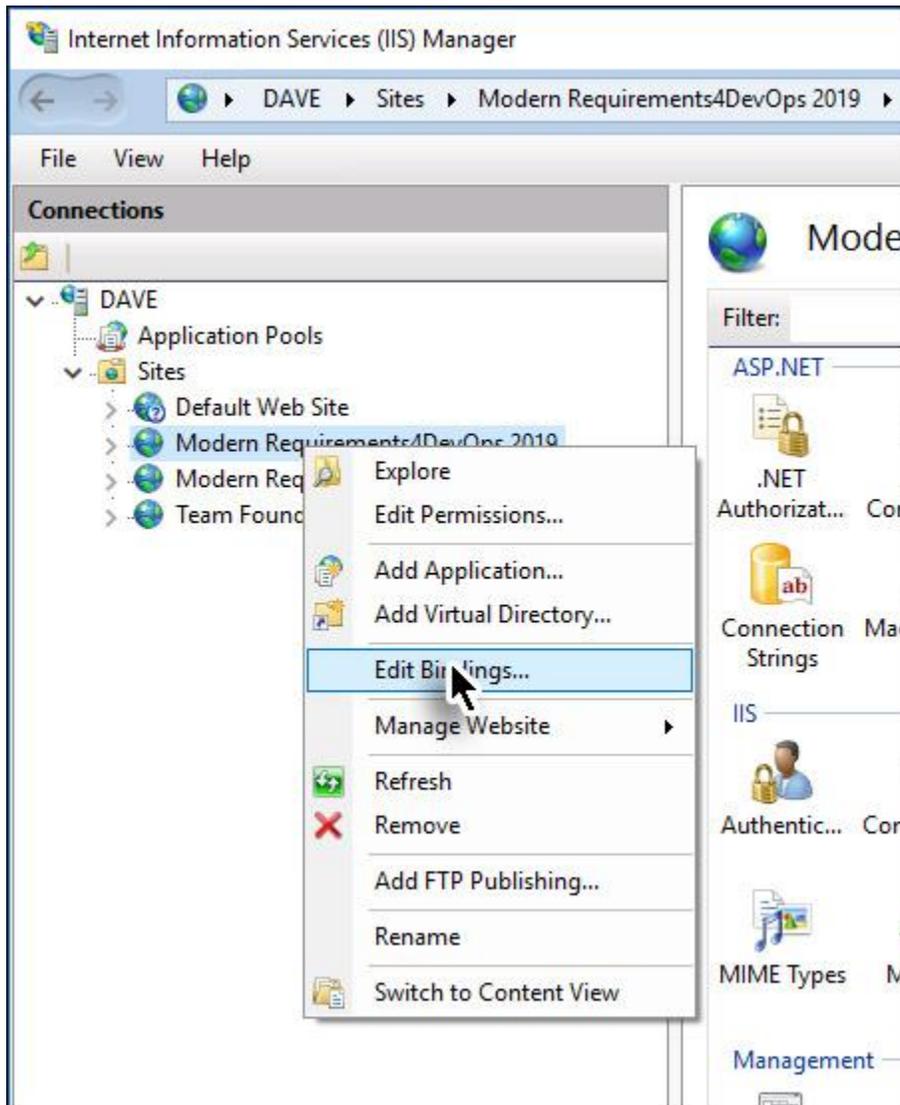
6. Click the **Add** button from the **Site Bindings** dialogue box.
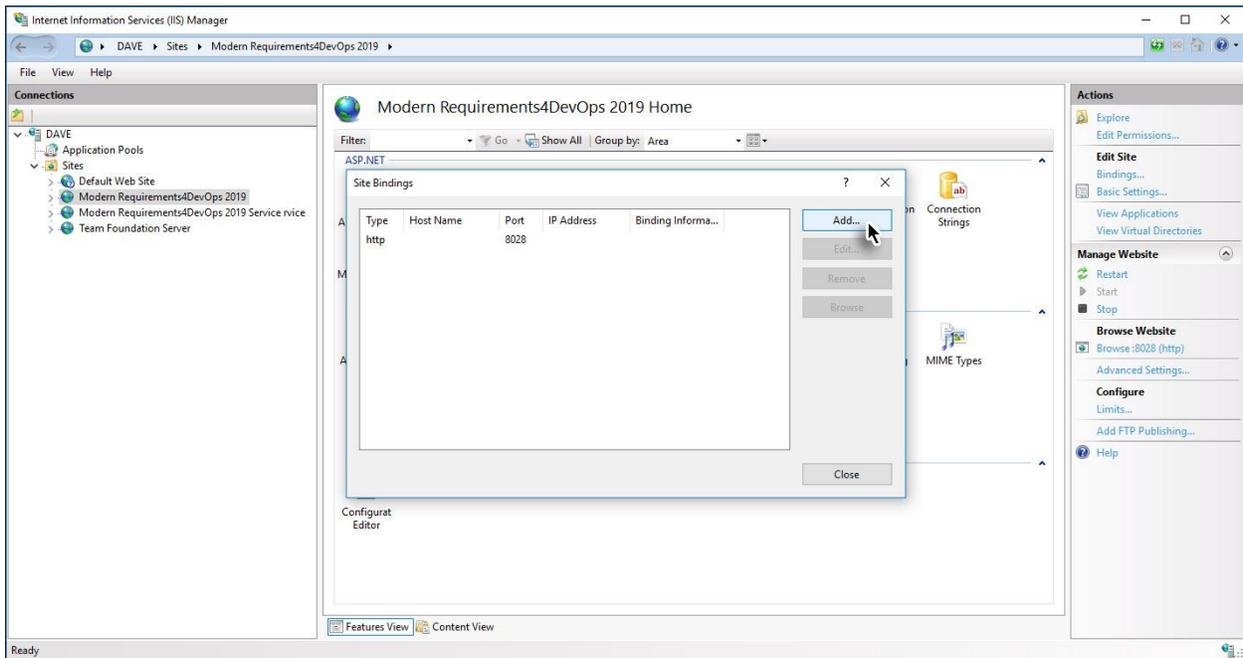
7. Change type from **http** to **https**.
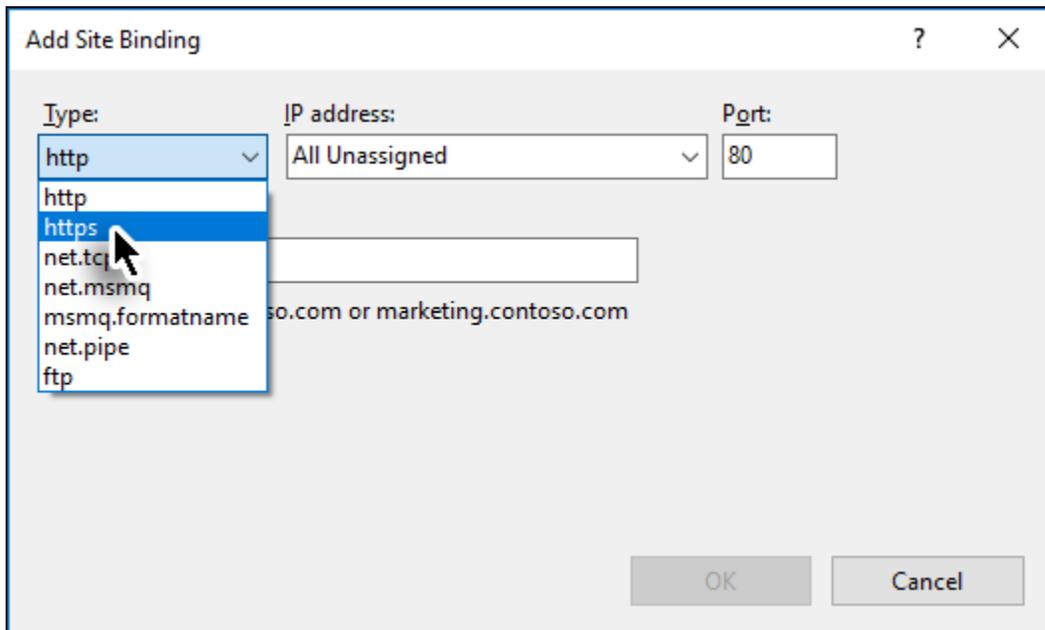
8. Provide any suitable port number.

9. Select the desired SSL certificate.

10. Click **OK** button.
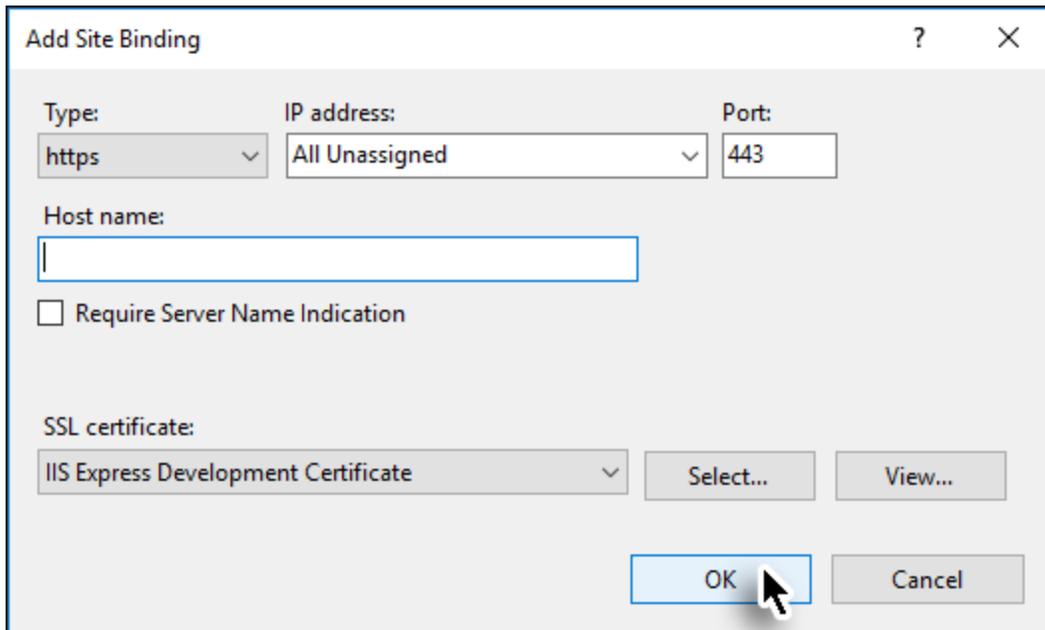
From now on Modern Requirements4DevOps would run using the new url in the format **https://<host name>:<port number>**
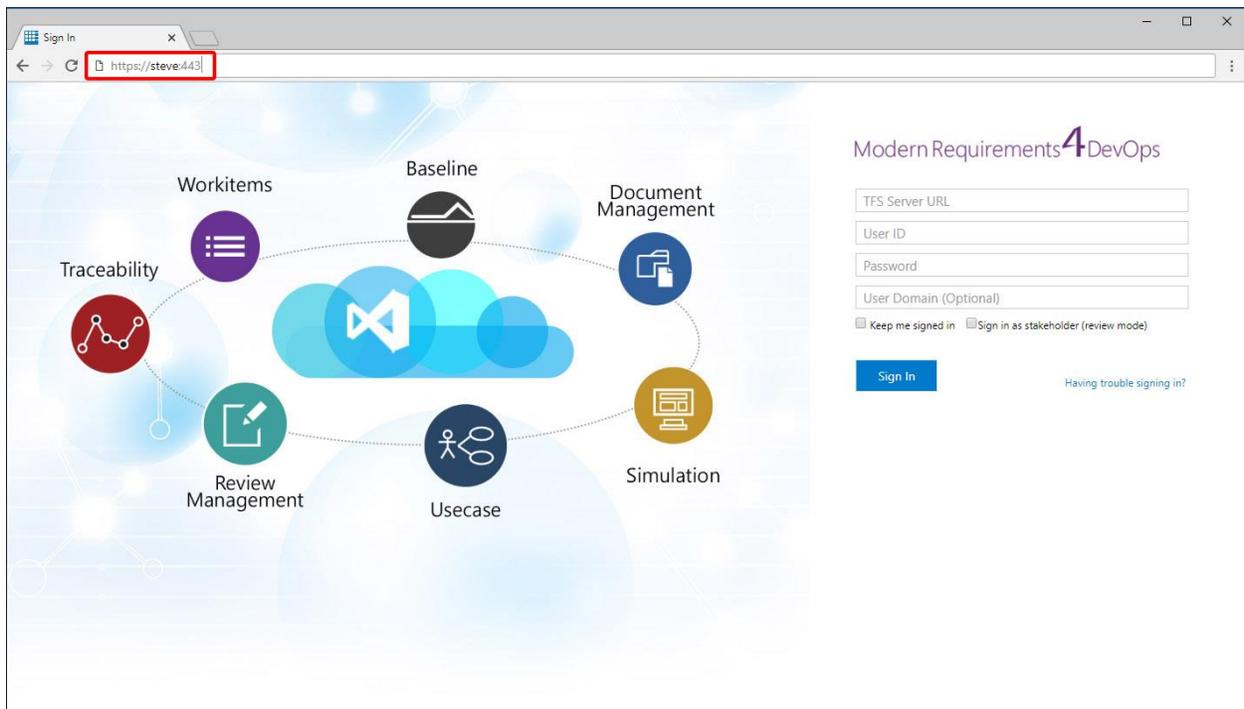
CHROME CONFIGURATION FOR HTTPS USERS

For the users who use HTTPS in Chrome browser (to access Modern Requirements4 DevOps), a couple of configurations need to be updated, for the application to run seamlessly. Following is the process:

1. Locate and open **Web.config** file in the Modern Requirement's installation folder, as mentioned in the following image.
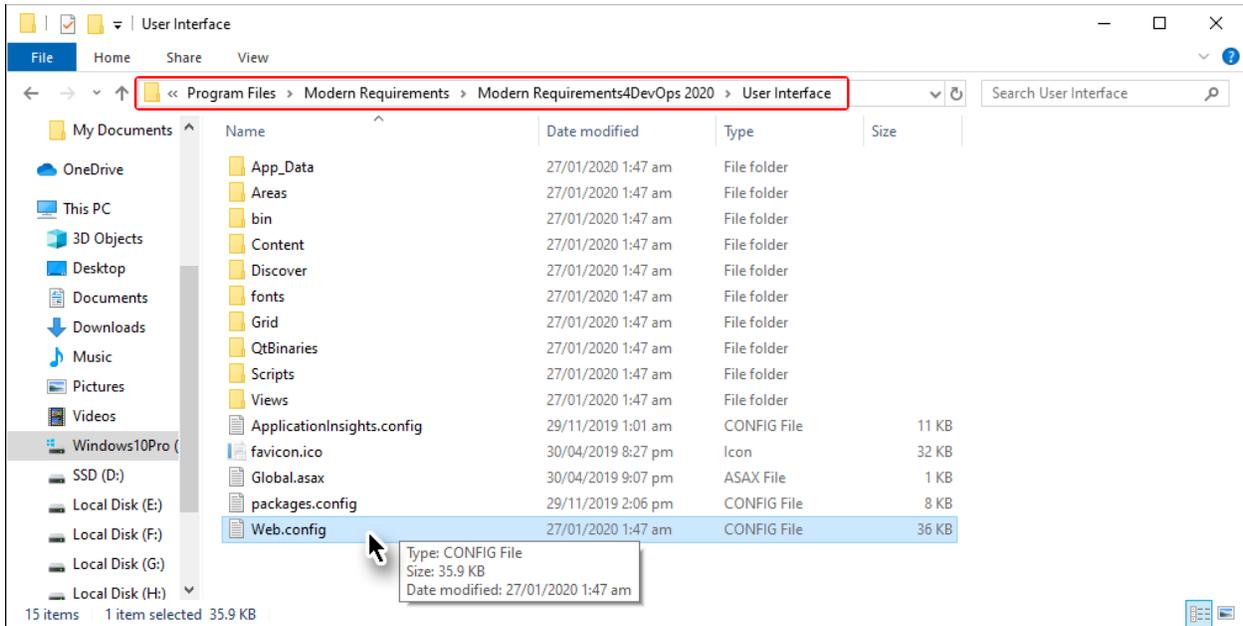
2. Search for the tag containing "**MRIsSecureSite**".

3. Change the value of key "MRIsSecureSite" to "**true**".

4. Next, search for "**<!-- For secure(https) site -->**"
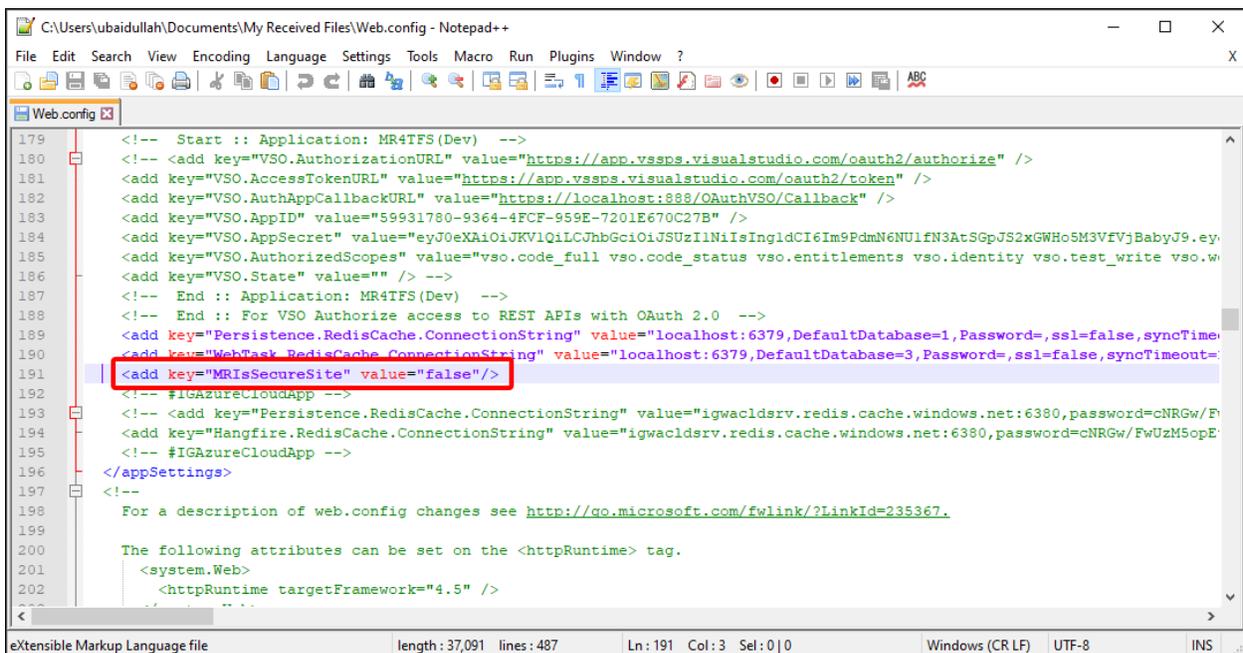
5. Uncomment the following tag (immediately below, as mentioned in the image).

6. Now make the next line, a comment.

7. Save and then close the **Web.config** file.