1. Azure_02_02_2022

Wednesday, February 2, 2022   11:20 PM

Agenda

Prerequisite

Account in Azure devops
Azure Portal should be the same Github

1. What is CI/DD pipeline
2. Azure Deveops
3. How to connect Github with Deveops
4. How to configure the Azure Deveops pipeline
5. How to continuously integrate and Deployed to the production Azure side

Docker

Development + Testing   =====> Deveops(Continous Integration + Continous Deployment)......
Production Server

Development ---------- .Net Core
Testing ------------------.Net Core

Step 1:
D:\CAC2022\Azure>dotnet new webapi -n SimpleApi

Step 2:
D:\CAC2022\Azure>md Tests
D:\CAC2022\Azure>md Tests
D:\CAC2022\Azure\Test>dotnet new xunit -n SimpleApi.Tests

```
D:\CAC2022\Azure>md Test

D:\CAC2022\Azure>cd Test

D:\CAC2022\Azure\Test>dotnet new xunit -n SimpleApi.Tests
The template "xUnit Test Project" was created successfully.

Processing post-creation actions...
Running 'dotnet restore' on SimpleApi.Tests\SimpleApi.Tests.csproj...
  Determining projects to restore...
  Restored D:\CAC2022\Azure\Test\SimpleApi.Tests\SimpleApi.Tests.csproj (in 829 ms).
Restore succeeded.
```

D:\CAC2022\Azure\Test>dir

```
D:\CAC2022\Azure\Test>dir
 Volume in drive D has no label.
 Volume Serial Number is 1049-0965

 Directory of D:\CAC2022\Azure\Test

02/02/2022  09:57 PM    <DIR>          .
02/02/2022  09:57 PM    <DIR>          ..
02/02/2022  09:57 PM    <DIR>          SimpleApi.Tests
               0 File(s)              0 bytes
               3 Dir(s)  41,263,931,392 bytes free
```

Step 3:

D:\CAC2022\Azure\Test>cd SimpleApi.Tests
D:\CAC2022\Azure\Test\SimpleApi.Tests>Dotnet build

```
D:\CAC2022\Azure\Test\SimpleApi.Tests>dotnet build
Microsoft (R) Build Engine version 16.11.2+f32259642 for .NET
Copyright (C) Microsoft Corporation. All rights reserved.

  Determining projects to restore...
  All projects are up-to-date for restore.
  SimpleApi.Tests -> D:\CAC2022\Azure\Test\SimpleApi.Tests\bin\Debug\net5.0\SimpleApi.Tests.dll

Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:03.93
```

Step 4:

It is used for code testing.

D:\CAC2022\Azure\Test\SimpleApi.Tests> dotnet test

```
D:\CAC2022\Azure\Test\SimpleApi.Tests>dotnet test
  Determining projects to restore...
  All projects are up-to-date for restore.
  SimpleApi.Tests -> D:\CAC2022\Azure\Test\SimpleApi.Tests\bin\Debug\net5.0\SimpleApi.Tests.dll
Test run for D:\CAC2022\Azure\Test\SimpleApi.Tests\bin\Debug\net5.0\SimpleApi.Tests.dll (.NETCoreApp,Version=v5.0)
Microsoft (R) Test Execution Command Line Tool Version 16.11.0
Copyright (c) Microsoft Corporation.  All rights reserved.

Starting test execution, please wait...
A total of 1 test files matched the specified pattern.

Passed!  - Failed:     0, Passed:     1, Skipped:     0, Total:     1, Duration: < 1 ms - SimpleApi.Tests.dll (net5.0)
```

D:\CAC2022\Azure\SimpleApi.Tests> cd..
D:\CAC2022\Azure\Test> cd..
D:\CAC2022\Azure>

```
D:\CAC2022\Azure\Test\SimpleApi.Tests>cd..

D:\CAC2022\Azure\Test>cd..

D:\CAC2022\Azure>dir
 Volume in drive D has no label.
 Volume Serial Number is 1049-0965

 Directory of D:\CAC2022\Azure

02/02/2022  09:57 PM    <DIR>          .
02/02/2022  09:57 PM    <DIR>          ..
02/02/2022  09:56 PM    <DIR>          SimpleApi
02/02/2022  09:57 PM    <DIR>          Test
               0 File(s)              0 bytes
               4 Dir(s)  41,259,884,544 bytes free
```

Step 5:

D:\CAC2022\Azure>cd SimpleApi
D:\CAC2022\Azure\SimpleApi>dotnet build

```
D:\CAC2022\Azure>cd SimpleApi

D:\CAC2022\Azure\SimpleApi>dotnet build
Microsoft (R) Build Engine version 16.11.2+f32259642 for .NET
Copyright (C) Microsoft Corporation. All rights reserved.

  Determining projects to restore...
  All projects are up-to-date for restore.
  SimpleApi -> D:\CAC2022\Azure\SimpleApi\bin\Debug\net5.0\SimpleApi.dll

Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:02.85

D:\CAC2022\Azure\SimpleApi>dotnet watch run
```

D:\CAC2022\Azure>dir

```
D:\CAC2022\Azure\SimpleApi>cd..

D:\CAC2022\Azure>dir
 Volume in drive D has no label.
 Volume Serial Number is 1049-0965

 Directory of D:\CAC2022\Azure

02/02/2022  09:57 PM    <DIR>          .
02/02/2022  09:57 PM    <DIR>          ..
02/02/2022  09:59 PM    <DIR>          SimpleApi
02/02/2022  09:57 PM    <DIR>          Test
               0 File(s)              0 bytes
               4 Dir(s)  41,255,690,240 bytes free
```

Step 6:

D:\CAC2022\Azure>

```
D:\CAC2022\Azure>dotnet new sln --name SimpleApi
The template "Solution File" was created successfully.
```

Step 7:
dotnet sln SimpleApi.sln add SimpleApi/SimpleApi.csproj

```
D:\CAC2022\Azure>dotnet sln  SimpleApi.sln add SimpleApi/SimpleApi.csproj
Project `SimpleApi\SimpleApi.csproj` added to the solution.
```

Step 8:

D:\CAC2022\Azure>dotnet sln SimpleApi.sln add Test/SimpleApi.Tests/SimpleApi.Tests.csproj

```
D:\CAC2022\Azure>dotnet sln  SimpleApi.sln add Test/SimpleApi.Tests/SimpleApi.Tests.csproj
Project `Test\SimpleApi.Tests\SimpleApi.Tests.csproj` added to the solution.
```

Step 9:

D:\CAC2022\Azure>dotnet build

```
D:\CAC2022\Azure>dotnet build
Microsoft (R) Build Engine version 16.11.2+f32259642 for .NET
Copyright (C) Microsoft Corporation. All rights reserved.

  Determining projects to restore...
  All projects are up-to-date for restore.
  SimpleApi.Tests -> D:\CAC2022\Azure\Test\SimpleApi.Tests\bin\Debug\net5.0\SimpleApi.Tests.dll
  SimpleApi -> D:\CAC2022\Azure\SimpleApi\bin\Debug\net5.0\SimpleApi.dll

Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:02.94

D:\CAC2022\Azure>
```

2. Azure_04_02_2022

Wednesday, February 2, 2022   11:22 PM