

GithubActions: How to deploy .NET 8 Web API in Azure Web App

In this example we show you how to continuously deploy in Azure Web App a .NET 8 Web API

1. Creating the Service Principal and Obtaining Azure Credentials

Run this command for getting the Azure Credentials:

```
az ad sp create-for-rbac --name "myserviceprincipalluis" ^  
--role contributor ^  
--scopes /subscriptions/XXXXXXXXXXXXXXXXXXXXXXXXXXXX ^  
--sdk-auth
```

2. We create the Github repository secret for storing the AZURE_CREDENTIALS

We create a new Secret for storing the AZURE_CREDENTIALS:

```
{  
  "clientId": "b47e48b4-895f-4bd7-818e-2da0deb8cd0c",  
  "clientSecret": "Bhd8Q~0Y7xS.C0gQ5~yXQu4xjZZQChyKL9yqnb0I",  
  "subscriptionId": "846901e6-da09-45c8-98ca-7cca2353ff0e",  
  "tenantId": "e099cebd-5eea-41a3-88db-bcb9a9cba83e"  
}
```

3. Github actions main.yaml file

See this github repo for more information:

https://github.com/luisccoco/GithuActions_Azure_SDK_for_dotNET

To set up a GitHub Actions workflow for continuously deploying your Web API to Azure using the provided command, you need to create a .yaml file in your GitHub repository under the .github/workflows directory.

The file, often named main.yaml or something similar, defines the workflow. Below is an example of how your main.yaml file could look.

This workflow will trigger on every push to the main branch and will require you to set up Azure credentials as GitHub secrets.

```

name: Azure WebApp Deployment

on:
  push:
    branches:
      - main

jobs:
  build-and-deploy:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v2

      - name: Set up Python
        uses: actions/setup-python@v1
        with:
          python-version: '3.x'

      - name: Install Azure CLI
        run: |
          curl -sL https://aka.ms/InstallAzureCLIDeb | sudo bash

      - name: Login to Azure
        uses: azure/login@v1
        with:
          creds: ${ secrets.AZURE_CREDENTIALS }

      - name: Deploy to Azure Web App
        run: |
          az webapp up \
            --name myWebAppluiscoco19777 \
            --resource-group myRG \
            --location EastUS \
            --sku B1 \
            --os-type Windows \
            --runtime "dotnet:8"

```

4. Verify in Azure Portal the new Web app service

The screenshot shows the Microsoft Azure portal interface. The main content area displays the details for a new Web App service named **myWebAppluiscoco19777**. The service is in the **myRG** resource group, located in **East US**, with a **B1** SKU and **Windows** operating system. The **dotnet:8** runtime is configured. The **Default domain** is **mywebappluiscoco19777.azurewebsites.net**. The **Status** is **Running**. The **App Service Plan** is **86ef6f64-4b32-4191-8727-ca81cc8ed482_asp_6860 (B1: 1)**. The **Operating System** is **Windows**. The **Health Check** is **Not Configured**. The **Subscription ID** is **99888cc6-c635-4ebd-b0ac-1be1dace0089**.

← ↻ 🏠 <https://mywebappluiscoco19777.azurewebsites.net/weatherforecast>

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```
1  [  
2    {  
3      "date": "2023-12-22",  
4      "temperatureC": 34,  
5      "temperatureF": 93,  
6      "summary": "Mild"  
7    },  
8    {  
9      "date": "2023-12-23",  
10     "temperatureC": 43,  
11     "temperatureF": 109,  
12     "summary": "Sweltering"  
13   },  
14   {  
15     "date": "2023-12-24",  
16     "temperatureC": 7,  
17     "temperatureF": 44,  
18     "summary": "Scorching"  
19   },  
20   {  
21     "date": "2023-12-25",  
22     "temperatureC": 44,  
23     "temperatureF": 111,  
24     "summary": "Freezing"  
25   },  
26   {  
27     "date": "2023-12-26",  
28     "temperatureC": 19,  
29     "temperatureF": 66,  
30     "summary": "Balmy"  
31   }  
32 ]
```