

GithubActions: How to create from Github an Azure ResourceGroup with Azure SDK for .NET

With this simple C# application, I would like to show you how to create a IaC (Infrastructure as Code) solution combining Github actions workflow and Azure SDK for .NET

1. Create Azure Resource Group with Azure SDK for .NET

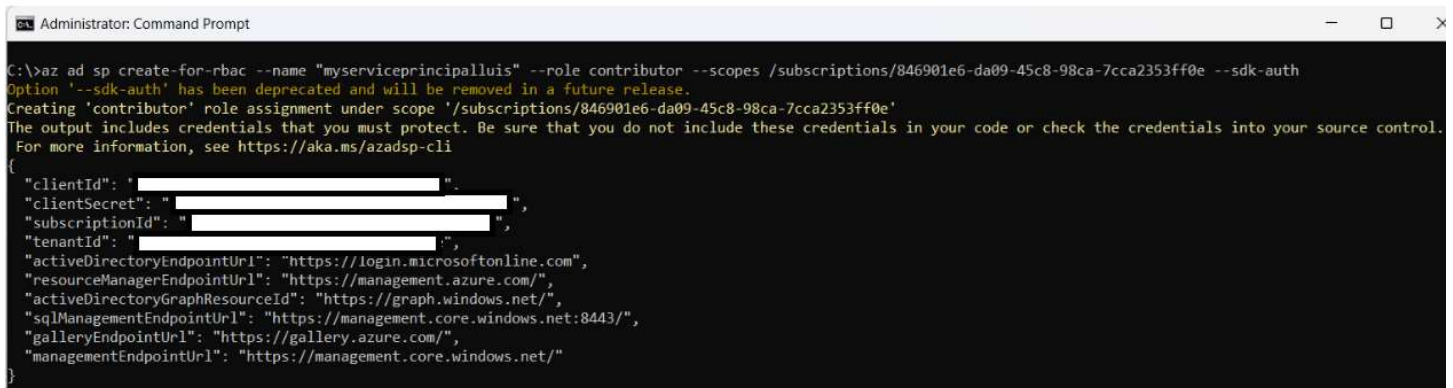
This section is explained in the following Github repo:

https://github.com/luiscoco/Azure_SDK_Sample1_CreateResourceGroup

2. 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
```



```
Administrator: Command Prompt  
C:\>az ad sp create-for-rbac --name "myserviceprincipalluis" --role contributor --scopes /subscriptions/846901e6-da09-45c8-98ca-7cca2353ff0e --sdk-auth  
Option '--sdk-auth' has been deprecated and will be removed in a future release.  
Creating 'contributor' role assignment under scope '/subscriptions/846901e6-da09-45c8-98ca-7cca2353ff0e'  
The output includes credentials that you must protect. Be sure that you do not include these credentials in your code or check the credentials into your source control.  
For more information, see https://aka.ms/azadsp-cli  
{  
  "clientId": "XXXXXXXXXXXXXXXXXXXXXXXXXXXX",  
  "clientSecret": "XXXXXXXXXXXXXXXXXXXXXXXXXXXX",  
  "subscriptionId": "XXXXXXXXXXXXXXXXXXXXXXXXXXXX",  
  "tenantId": "XXXXXXXXXXXXXXXXXXXXXXXXXXXX",  
  "activeDirectoryEndpointUrl": "https://login.microsoftonline.com/",  
  "resourceManagerEndpointUrl": "https://management.azure.com/",  
  "activeDirectoryGraphResourceId": "https://graph.windows.net/",  
  "sqlManagementEndpointUrl": "https://management.core.windows.net:8443/",  
  "galleryEndpointUrl": "https://gallery.azure.com/",  
  "managementEndpointUrl": "https://management.core.windows.net/"  
}
```

We verify the above command in Azure Portal:

Microsoft Azure

Search resources, services, and docs (G+/I)

Home > particular | App registrations

Overview

Preview features

Diagnose and solve problems

Manage

Users

Groups

External Identities

Roles and administrators

Administrative units

Delegated admin partners

Enterprise applications

Devices

App registrations

Identity Governance

Application proxy

Starting June 30th, 2020 we will no longer add any new features to Azure Active Directory Authentication Library (ADAL) and Azure Active Directory Graph. We will continue to provide technical support and security updates but we will no longer provide feature updates. Applications will need to be upgraded to Microsoft Authentication Library (MSAL) and Microsoft Graph. [Learn more](#)

All applications | Owned applications | Deleted applications | Applications from personal account

Start typing a display name or application (client) ID to filter these r... Add filters

6 applications found

Display name	Application (client) ID	Created on	Certificates & secrets
FunctionApp1	352b0eb1-0fa6-413f-9223-0f992cd850b0	11/19/2023	Current
mynewazureapplicationforweb	9477d6f7-a3e0-470d-a095-b397d37ff6be	12/5/2023	-
myseviceprincipalluis	b47e48b4-895f-4bd7-818e-2da0deb8cd0c	12/17/2023	Current
sample420231124142236	dff4ae6c-7380-43f8-94d4-8a8904b1e301	11/24/2023	Current
sampleactivedirectoryauth	270dfd4f-6e05-4532-89fe-049c15f79c4f	11/28/2023	Current
terraform	60c58c1a-116a-4869-912c-75c09309b506	4/19/2022	Expired

We click in the application name we registered "myseviceprincipalluis"

We can see the "Application (client) ID" and the "Directory (tenant) ID"

Microsoft Azure

Search resources, services, and docs (G+/I)

Home > particular | App registrations > myseviceprincipalluis

Search

Delete | Endpoints | Preview features

Overview

Quickstart

Integration assistant

Manage

Branding & properties

Authentication

Essentials

Display name : myseviceprincipalluis

Application (client) ID : b47e48b4-895f-4bd7-818e-2da0deb8cd0c

Object ID : 0608bb70-3254-44e0-8f4d-9e6780e2f055

Directory (tenant) ID : e099cebd-5eea-41a3-88db-bcb9a9c8a83e

Supported account types : All Microsoft account users

Client credentials : 0 certificate, 1 secret

Redirect URIs : Add a Redirect URI

Application ID URI : Add an Application ID URI

Managed application in l... : myseviceprincipalluis

For creating a new Secret we click in the "Client Credential" link

Microsoft Azure

Search resources, services, and docs (G+/I)

Home > myseviceprincipalluis

Search

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Authentication

Essentials

Display name : myseviceprincipalluis

Application (client) ID : b47e48b4-895f-4bd7-818e-2da0deb8cd0c

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Directory (tenant) ID : e099cebd-5eea-41a3-88db-bcb9a9c8a83e

Supported account types : All Microsoft account users

Client credentials : 0 certificate, 1 secret

Redirect URIs : Add a Redirect URI

Application ID URI : Add an Application ID URI

Managed application in l... : myseviceprincipalluis

We press "New client secret" in for creating a new Secret:

We also have to obtain the **subscriptionId**, in the Azure Portal we navigate to the Subscription service

3. We create the Github repository secret for storing the AZURE CREDENTIALS

In the Github repo select "**Settings**" option and then "**Secrets and variables**"

We create a new **Secret** for storing the **AZURE_CREDENTIALS**:

```
Administrator: Command Prompt
C:\>az ad sp create-for-rbac --name "myserviceprincipalluis" --role contributor --scopes /subscriptions/846901e6-da09-45c8-98ca-7cca2353ff0e --sdk-auth
Option '--sdk-auth' has been deprecated and will be removed in a future release.
Creating 'contributor' role assignment under scope '/subscriptions/846901e6-da09-45c8-98ca-7cca2353ff0e'
The output includes credentials that you must protect. Be sure that you do not include these credentials in your code or check the credentials into your source control.
For more information, see https://aka.ms/azadsp-cli
{
  "clientId": "b47e48b4-895f-4bd7-818e-2da0deb8cd0c",
  "clientSecret": "Bhd8Q~OY7xS.C0gQ5~yXQu4xjZZQChyKL9yqnb0I",
  "subscriptionId": "846901e6-da09-45c8-98ca-7cca2353ff0e",
  "tenantId": "e099cebd-5eea-41a3-88db-bcb9a9cba83e",
  "activeDirectoryEndpointUrl": "https://login.microsoftonline.com",
  "resourceManagerEndpointUrl": "https://management.azure.com/",
  "activeDirectoryGraphResourceId": "https://graph.windows.net/",
  "sqlManagementEndpointUrl": "https://management.core.windows.net:8443/",
  "galleryEndpointUrl": "https://gallery.azure.com/",
  "managementEndpointUrl": "https://management.core.windows.net/"
}
```

```
{
  "clientId": "b47e48b4-895f-4bd7-818e-2da0deb8cd0c",
  "clientSecret": "Bhd8Q~OY7xS.C0gQ5~yXQu4xjZZQChyKL9yqnb0I",
  "subscriptionId": "846901e6-da09-45c8-98ca-7cca2353ff0e",
  "tenantId": "e099cebd-5eea-41a3-88db-bcb9a9cba83e"
}
```

← ↻ 🏠 🔒 https://github.com/luisccoco/Azure_SDK_Sample1_CreateResourceGroup/settings/secrets/actions/new

Gracias por descarg... Gmail YouTube Maps Traducir Noticias Final PLC project Campus Virtual : Fa... mail

☰ luisccoco / Azure_SDK_Sample1_CreateResourceGroup

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⚙️ General

Access

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🗨️ Moderation options

Code and automation

🌿 Branches

🏷️ Tags

🔗 Rules

🎮 Actions

🔗 Webhooks

📁 Environments

📄 Codespaces

📄 Pages

Security

🔍 Code security and analysis

🔑 Deploy keys

🔒 Secrets and variables

Actions secrets / New secret

Name *

AZURE_CREDENTIALS

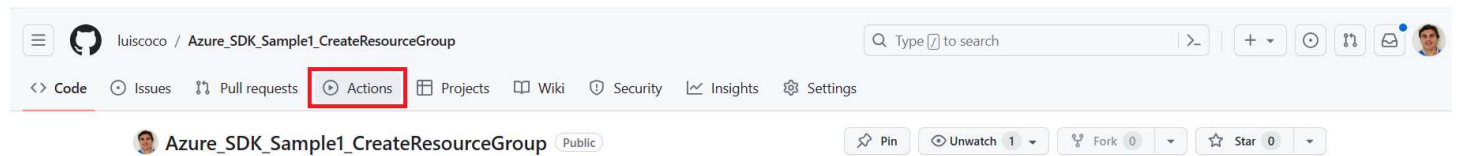
Secret *

```
{
  "clientId": "b47e48b4-895f-4bd7-818e-2da0deb8cd0c",
  "clientSecret": "Bhd8Q~OY7xS.C0gQ5~yXQu4xjZZQChyKL9yqnb0I",
  "subscriptionId": "846901e6-da09-45c8-98ca-7cca2353ff0e",
  "tenantId": "e099cebd-5eea-41a3-88db-bcb9a9cba83e"
}
```

Add secret

4. Github actions main.yaml file

We select the **Actions** button in the Github repository and we enter the **yaml**



Now we enter the **main.yaml** file source code

```
name: Azure C# Application

on:
  push:
    branches:
      - main
  pull_request:
    branches:
      - main

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

      - name: Setup .NET
        uses: actions/setup-dotnet@v1
        with:
          dotnet-version: '8.0.x' # specify your .NET version

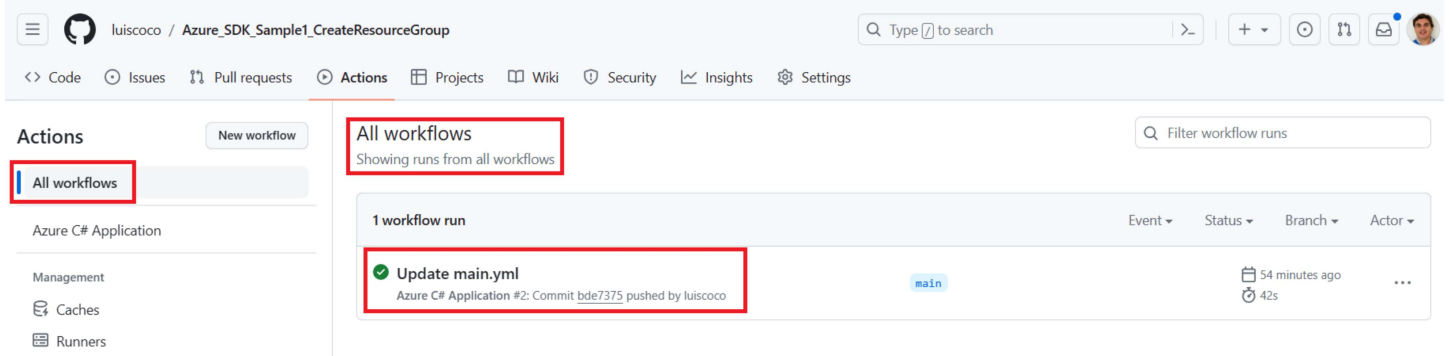
      - name: Install dependencies
        run: dotnet restore

      - name: Build
        run: dotnet build --configuration Release --no-restore

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

      - name: Run script
        run: dotnet run
```

We confirm the main.yaml file execution was succeeded



5. Navigate to ResourceGroups in Azure Portal

We verify the ResourceGroup was created

