

How to deploy SpringBoot WebAPI to Azure Container Instance(ACI)

1. Create an Azure Container Registry

`az acr create --resource-group myRG --name myregistryluiscoco1974 --sku Basic --location westeurope`

2. Create a Spring Boot Web API in VSCode

https://github.com/luiscoco/SpringBoot_Sample2-created-WebAPI-with-VSCode

3. Create the Docker image and run it

Execute the following command to build the Docker image:

```
docker build -t springbootapi:latest .
```

Tag the Image for Azure Container Registry (ACR). Once the image is built, you'll need to tag it with the Azure Container Registry's address.

Assume your ACR login server is myregistryluiscoco1974.azurecr.io, type this command:

```
docker tag springbootapi:latest myregistryluiscoco1974.azurecr.io/springbootapi:latest
```

Run the Docker container, to start a container from your image, use the docker run command:

```
docker run -p 8080:8080 myregistryluiscoco1974.azurecr.io/springbootapi:latest
```

4. Log in to an Azure Container Registry (ACR) using Docker

4.1. Using Azure CLI

Install Azure CLI: Make sure you have the Azure CLI installed on your machine.

Log in to Azure: Open a terminal or command prompt and log in to your Azure account:

```
az login
```

Follow the instructions to complete the login process.

Get ACR Login Server Name: Retrieve your ACR's login server name. Replace myregistryluiscoco1974 with your actual ACR name.

```
az acr show --name myregistryluiscoco1974 --query loginServer --output table
```

It will return something like myregistryluiscoco1974.azurecr.io.

Login to ACR: Use the Azure CLI to log in to your ACR.

This command automatically uses the credentials stored from your Azure login to authenticate with ACR.

```
az acr login --name myregistryluiscoco1974
```

This command will handle the authentication with Docker for you.

4.2. Using Docker Login Command

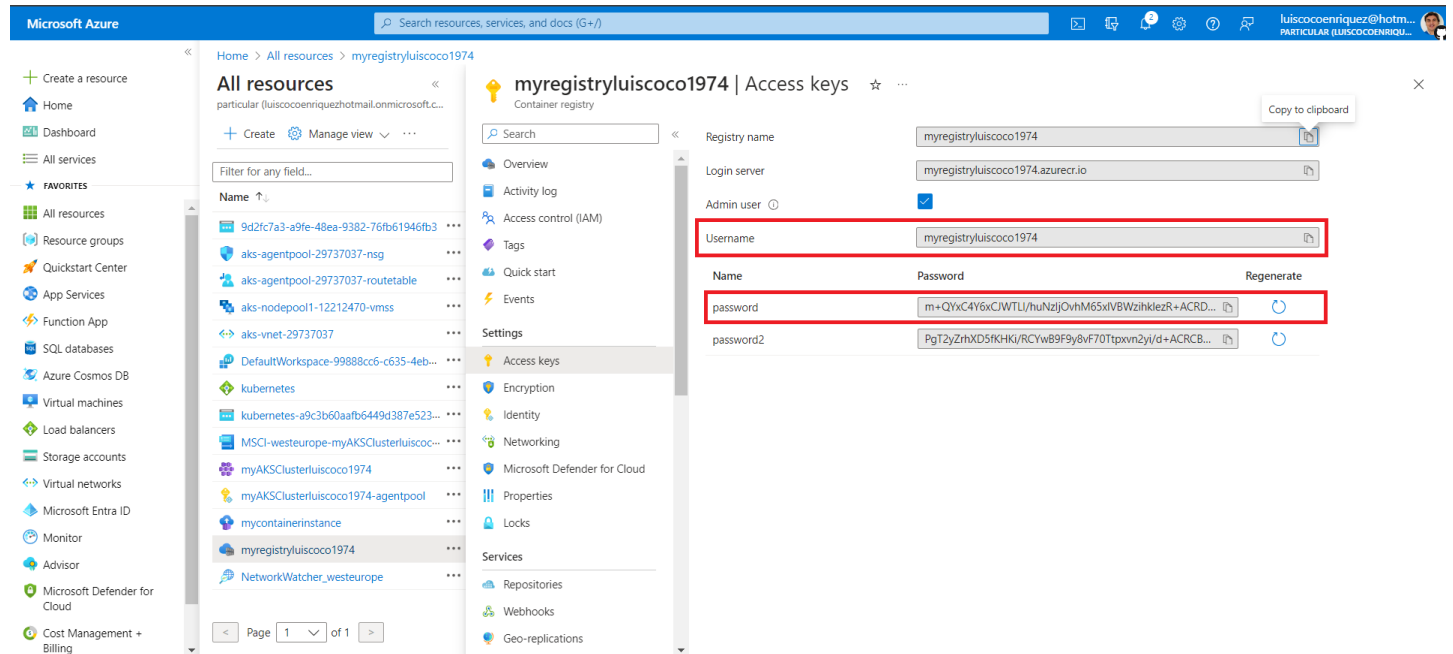
Get ACR Credentials: First, retrieve your ACR's username and password. Replace myregistryluiscoco1974 with your actual ACR name.

```
az acr credential show --name myregistryluiscoco1974
```

Note the username and one of the passwords from the output:

```
PS C:\SpringBoot WebAPI> az acr credential show --name myregistryluiscoco1974
{
  "passwords": [
    {
      "name": "password",
      "value": "m+QYxC4Y6xCJWTLI/huNzIj0vhM65x1VBWzihklezR+ACRDK1Lb0"
    },
    {
      "name": "password2",
      "value": "PgT2yZrhXD5fKHKi/RCYwB9F9y8vF70Ttpxvn2yi/d+ACRCB+AYZ"
    }
  ],
  "username": "myregistryluiscoco1974"
}
```

Docker Login: Use the docker login command with your ACR's login server URL and the credentials you just retrieved.



```
docker login myregistryluiscoco1974.azurecr.io -u <username> -p <password>
```

```
docker login myregistryluiscoco1974.azurecr.io -u myregistryluiscoco1974 -p m+QYxC4Y6xCJWTLI/h
```



Replace and with the credentials from the previous step.

5. We push the Docker image to the Azure ACR

```
docker push myregistryluiscoco1974.azurecr.io/springbootapi:latest
```

6. We create the Azure Container Instance(ACI) and we deploy it

```
az container create --resource-group myRG ^
--name mycontainerinstance ^
--image myregistryluiscoco1974.azurecr.io/Aspringbootapi:latest ^
--cpu 1 ^
--memory 1.5 ^
--registry-login-server myregistryluiscoco1974.azurecr.io ^
--registry-username myregistryluiscoco1974 ^
--registry-password m+QYxC4Y6xCJWTLI/huNzIjOvhM65x1VBWzihklezR+ACRDk1LbO ^
--dns-name-label myspringbootwebapidns ^
--ports 8080 ^
--location westeurope
```

7. In Azure Portal verify the Azure ACI

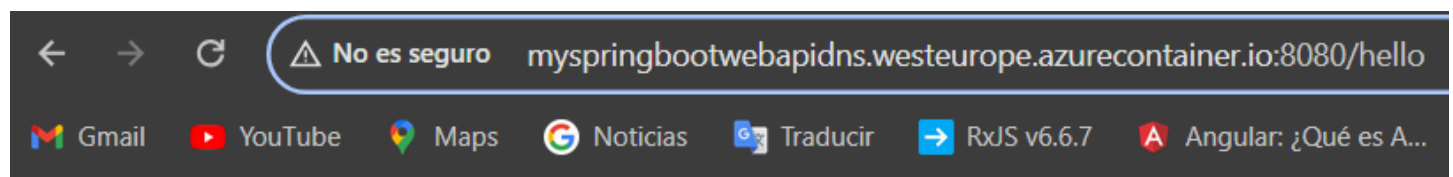
Visit in the Azure portal the Azure Container Instance ACI and copy the DNS:
myspringbootwebapidns.westeurope.azurecontainer.io

The screenshot shows the Azure Portal interface for a Container Instance named 'mycontainerinstance'. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, Settings, Containers, Identity, Properties, and Locks. The main area displays the 'Essentials' tab with the following details:

Property	Value
Resource group	myRG
Status	Running
Location	West Europe
Subscription	Subscription 1
Subscription ID	99888cc6-c635-4ebd-b0ac-1be1dace0089
Tags	Add tags
SKU	Standard
OS type	Linux
IP address (Public)	20.23.199.53
FQDN	myspringbootwebapidns.westeurope.azurecontainer.io
Container count	1

Visit the application endpoint:

<https://myspringbootwebapidns.westeurope.azurecontainer.io:8080/hello>



Hello, World!

Also visit the application actuator health endpoint:

<https://myspringbootwebapidns.westeurope.azurecontainer.io:8080/actuator/health>

