5.2 AKS Cluster Deployment and Publish an Image to Azure Container Registry



This section will guide you to:

* Create and install Kubernetes Service and connect to AKS cluster using kubectl

**Development Environment:**

* Windows 10
* Windows Azure cloud

This guide has three subsections, namely:

5.2.1 Creating a Kubernetes Service

5.2.2 Connecting to the AKS Cluster using kubectl

5.2.3 Pushing the code to GitHub repositories

**Step 5.2.1:** Creating a Kubernetes Service

* An Azure account has been enabled in your practice lab. Refer DotNet Lab guide: Phase 4 to learn how to use the practice lab.
* Login to the Azure Portal with the Azure/Microsoft credentials provided in the lab.
* From the portal page, search for **Kubernetes Services** and click on it.
* In the Kubernetes Services listing page click on **+Add.**
* In the **Create Kubernetes Cluster** form, select an existing **Resource Group** or click **Create New.**
* For **Cluster Name** enter a globally unique name using alphanumeric characters and hyphen.
* Click **Review+Create.** Once validation is complete, click **Create.**
* Once deployment is complete, it will show up in the list of Kubernetes Services.

**Step 5.2.2:** Connecting to the AKS Cluster using kubectl

* To install Kubernetes CLI, we will first install the Azure CLI which contains the Kubernetes CLI.
* Go to <https://docs.microsoft.com/en-us/cli/azure/install-azure-cli?view=azure-cli-latest> and click **Install on Windows.**
* In the next page, click on **Download the MSI Installer.**
* Double click the MSI file once it's downloaded.
* Once it finishes installing, go to the Windows Start Menu and search for Azure Command Prompt and click on **Microsoft Azure Command Prompt.**
* This will open the az CLI terminal window.
* Type *az login* to setup the CLI account.
* This will open the Azure login page in the browser and complete the login process. Close the browser after a successful login and continue with the az terminal.
* Type the following to get the aks credentials: *az aks get-credentials --resource-group myResourceGroup --name myAKSCluster*
* To test the connection with the aks cluster, type: *kubectl get nodes.*
* This will display the list of nodes in your cluster.

**Step 5.2.3:** Pushing the code to your GitHub repositories

Open your command prompt and navigate to the folder where you have created your files.

cd <folder path>

Initialize your repository using the following command:

git init

Add all the files to your git repository using the following command:

git add .

Commit the changes using the following command:

git commit -m “Changes have been committed.”

Push the files to the folder you created initially using the following command:

git push -u origin master