**Demo 2**

**Configuring Pods in Kubernetes Cluster**

**Objective:** To create and configure Pods

**Tools required:** kubeadm, kubectl

**Prerequisites: kubeadm** and **kubectl** should be installed

**Note 1:** This demo is based on Kubernetes version 1.23

Steps to be followed:

1. Configuring and setting up the Pod files
2. Configuring and setting up the Service file
3. Executing the Apache services

**Step 1: Configuring and setting up the Pod files**

1. Create the Pod file by using the below command:

**vi pod.yaml**

A picture containing graphical user interface

Description automatically generated

1. Write the following code in the **pod.yaml** file to create the Pod:

**apiVersion: v1**

**kind: Pod**

**metadata:**

**name: apache2**

**labels:**

**mycka: simplilearn**

**spec:**

**containers:**

**- name: mycontainer**

**image: docker.io/httpd**

**ports:**

**- containerPort: 80**

Text

Description automatically generated

Then, press **Esc**, write **:wq**, and then press enter

1. Create the Pod by using the following command:

**kubectl create -f pod.yaml**

Text

Description automatically generated

1. Create another Pod file:

**vi pod1.yaml**



1. Add the following code to it:

**apiVersion: v1**

**kind: Pod**

**metadata:**

**name: apache3**

**labels:**

**mycka: simplilearn**

**spec:**

**containers:**

**- name: mycontainer**

**image: docker.io/httpd**

**ports:**

**- containerPort: 80**

Text

Description automatically generated

1. Create the service of **pod1**:

**kubectl create -f pod1.yaml**



1. To verify the pods, run the following:

**kubectl get pods**

Text

Description automatically generated

**Step 2: Configuring and setting up the Service file**

1. Create a Service file:

**vi service.yaml**

Text

Description automatically generated

1. Write the following code in the **service.yaml** file to create the Service:

**kind: Service**

**apiVersion: v1**

**metadata:**

**name: myservice**

**spec:**

**selector:**

**mycka: simplilearn**

**ports:**

**- protocol: TCP**

**port: 8081**

**targetPort: 80**

Text

Description automatically generated

1. Create the Service by using the following command:

**kubectl create -f service.yaml** Text

Description automatically generated

1. To verify the Service, run the following:

Graphical user interface, text

Description automatically generated

**Step 3: Executing the Apache services**

1. To access the container in the Pod **apache2** and change the content in **htdocs/index.html**, use the following command:

**kubectl exec -it apache2 bash**

**echo “Hello from pod****1 ” > htdocs/index.html**

**cat htdocs/index.html**

**exit**

Text

Description automatically generated

1. To access the container in the Pod **apache3** and change the content in **htdocs/index.html**, use the following command:

**kubectl exec -it apache3 bash**

**echo “Hello from pod****2 ” > htdocs/index.html**

**cat htdocs/index.html**

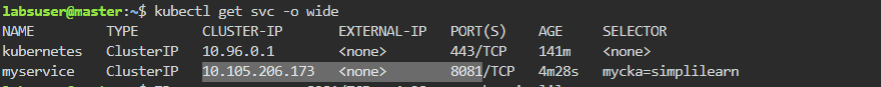
**exit**

Text

Description automatically generated

1. Verify that **myservice** is connected to **apache2** and **apache3** by using the following command:

**kubectl get svc -o wide**



**Note:** Note the Cluster IP and port number.

1. Run the following command and replace the IP and port number with your service IP:

**Curl <ClusterIP:PortNumber>**

1. Wait for the command to be executed and execute the above command again

Text

Description automatically generated