**Lesson 4 Demo 6**

**Using Init Containers**

**Objective:** To create a Pod using an Init Container

**Tools required:** kubeadm, kubectl, kubelet, and etcd

**Prerequisites:** A Kubernetes cluster must be set up (follow steps of Lesson 2 Demo 1)

Steps to be followed:

1. Creating a Httpd Pod
2. Creating a Service
3. Verifying the Pods state

**Step 1: Creating an Httpd Pod**

1. Write the following code in the **init-container.yaml** file.

**apiVersion: v1**

**kind: Pod**

**metadata:**

**name: myapp-pod**

**labels:**

**app: myapp**

**spec:**

**containers:**

**- name: myapp-container**

**image: busybox:1.28**

**command: ['sh', '-c', 'echo The app is running! && sleep 3600']**

**initContainers:**

**- name: init-myservice**

**image: busybox:1.28**

**command: ['sh', '-c', "until nslookup myservice.$(cat /var/run/secrets/kubernetes.io/serviceaccount/namespace).svc.cluster.local; do echo waiting for myservice; sleep 2; done"]**

**Text

Description automatically generated**

1. Create a **Httpd** pod using the command below:

**kubectl create -f init-container.yaml**

Text

Description automatically generated

1. Verify the Pods state.

**kubectl get pods**

Graphical user interface, text, application

Description automatically generated

|  |
| --- |
| Note: If the Service is not created, the Pod will remain in the Init (pending) state. |

**Step 2: Creating a Service**

1. Write the following code in the **init-svc.yaml** file.

**kind: Service**

**apiVersion: v1**

**metadata:**

**name: myservice**

**spec:**

**ports:**

**- protocol: TCP**

**port: 80**

**targetPort: 9376**

Text

Description automatically generated

1. Create a service to run a Pod using the following command:

**kubectl create -f init-svc.yaml**

A screenshot of a computer

Description automatically generated with medium confidence

The Service has been created successfully.

**Step 3: Verifying the Pods state**

1. To verify the state of the Pod, use the following command:

Graphical user interface, text, application

Description automatically generated**kubectl get pods**

After adding a Service to the Pod, its state changes from pending to running, as shown in the screenshot above.