

## Working with Kubernetes

### Assignment 1 (Working with Pods)

#### Task 1: Install and configure Kubernetes(K8s) on your local system

Install K8s on a VM of your choice. You can also do this on your laptop. K8s can be installed on all major platforms such as MacOS, Windows and Linux.

Check the following link if needed for K8s Installation:

<https://kubernetes.io/docs/tasks/tools/>

#### Task 2: Write a simple manifest file for Kubernetes Pod having single container with following specification:

##### a) Pod Specifications

- name : pod-nginx
- label : webserver

##### b) Container Specifications

- name : ctr-nginx
- Image : nginx
- port : 80

## Task 3: Deploy the Manifest file and validate the output

Note: To carry out this task you need to be on a machine which has kubectl installed and configured correctly to communicate to a K8s cluster.

- a) Deploy the manifest file.

**Hint:** "kubectl apply -f file.yml" [file.yml is the yml file where you have defined your k8s pod and the container ]

- b) Validate if the pod has been created successfully.

**Hint:** "kubectl get pods" for validation or "kubectl describe pods pod-name" output for detailed output

## Task 4: Cleanup

- a) Delete the Pod created in Step 3a.

**Hint:** "kubectl delete pod pod-name"

- b) Delete the manifest file through which the pod was created

**Hint:** "kubectl delete -f file.yml"