Kubernetes - Deploying application workloads

In this lab, we will deploy the application by leveraging the docker image, to a kubernetes cluster.

Learning Outcomes

After completing the lab, you will be able to:

1. Describe how to create Kubernetes Pods
2. Understand the benefits and challenges of using Pods in Kubernetes
3. Run your workload inside a pod

Prerequisites before Kubernetizing

Before starting the lab, verify the pages image created in the previous lab exists in docker hub

Start the minikube

1. Start minikube locally `minikube start --driver=virtualbox`
2. Verify the kubectl context `kubectl config get-contexts` is set to minikube. If not, set it to minikube `kubectl config use-context minikube`

Execute your workload inside kubernetes pod

1. Create the Pod to host the container

```
kubectl run pages --image=[docker-username]/pages:1.0 --im
age-pull-policy=IfNotPresent
```

2. Verify the created objects

```
kubectl get po -o wide
```

3. Access the application by port-forwarding on `localhost:8080`

```
kubectl port-forward po/pages 8080:8080

curl localhost:8080
```

4. Stop the port-forward by pressing `CTRL-C`
5. Delete the created object

```
kubectl delete po pages
```