# **Deploy a simple Hello-World application**

1. # create a single node cluster and configure kubectl to connect to the cluster  
   <https://kodekloud.com/p/practice-test-kubernetes-ckad-pods>
2. # check that kubectl is running  
   $ kubectl version
3. # review the public node IP address.

$ kubectl cluster-info

1. # review the nodes in the cluster  
   $ kubectl get nodes
2. # review the nodes  
   $ kubectl describe nodes  
   $ clear
3. # review the pods in the cluster  
   $ kubectl get pods
4. # create a pod, replicaset and deployment

kubectl run hello-world --replicas=1 --labels="app=hw" --image=gcr.io/google-samples/node-hello:1.0 --port=8080

1. # review objects created

$ kubectl get pods

1. # view details of the pod by using right click of mouse to copy and paste from CLI

$ kubectl describe pod hello-world -xxx-yyy

Questions:

* + What Namespace is the pod running in?
  + What is the final Event that occurs?

1. $ clear
2. # create a service to expose the pod on the node  
   $ kubectl expose deployment hello-world --type=NodePort --name=example-service
3. # review objects created   
   $ kubectl get all  
     
   Question:  
   What port is the service exposed on?
4. # scale up to 3 pods (replicas) in the cluster

kubectl scale --replicas=3 replicaset.apps/hello-world-xxxx

1. # http request to the container  
   What is the node IP address?  
   What is the node port?

$ curl http://<public-node-ip>:<node-port>

1. #result

Hello Kubernetes!

1. # now clean up

$ kubectl delete deployment hello-world

1. # check

$ kubectl get all

# **Deploy a PHP web app held in CDWUK repository in Docker Hub.**

1. # create a single node cluster and configure kubectl to connect to the cluster  
   <https://kodekloud.com/p/practice-test-kubernetes-ckad-pods>
2. # Use an alias for kubectl to save typing  
   $ alias k=kubectl   
   $ alias c=clear
3. $ k run php-app --labels="app=php-app" --image=cdwuk/php-app:v1.0.0 --restart=Never --port=80
4. # review objects created

$ k get pods

1. $ k create deployment php-app --image=cdwuk/php-app:v1.0.0
2. # review objects created

$ k get all

1. # create a service to expose the pod on the node  
   $ k expose deployment php-app --type=NodePort --name=php-service --port=80
2. $ k describe deploy php-app
3. # determine the NodePort port value

$ k get all

1. # Now add pods for a total of 3 – then review

$ k scale replicaset.apps/php-app-xxxxx --replicas=3

1. # http request to the container

# obtain the NodeIP and Node Port

$ curl http://<public-node-ip>:<node-port>

1. #result

<!doctype html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>My PHP Website</title>

</head>

<body>

<h1>My PHP Website</h1>

<p>Here is some static content.</p>

<p>Here is some dynamic content</p>

</body>

</html>

1. # now clean up

$ k delete deployment hello-world

1. # check

$ k get all