**Assignment 10 – Kubernetes Test Questions 1**

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**Questions:**

Create a new pod called my-web image nginx

Allow the pod to be able to set system\_time

The container should sleep for 2200 seconds

Create a new deployment called my-project, with image

nginx and 1 replica .Next upgrade the deployment to version nginx:1.25 using

rolling update.Make sure that version upgrade is recorded in the resource annotation.

Set up a Kubernetes deployment named app-server using the my-app-server:v1 image and initially scale it to 5 replicas. Ensure that the deployment is configured to maintain the desired number of pods, even if some pods fail.

**Question 1:**

1. Run this command, **kubectl run my-web --image=nginx --command sleep 2200 --dry-run=client -o yaml > nginx.yml**
   1. A screen shot of a computer

      Description automatically generated
2. Edit the output file, add security context (S**YS\_TIME**) to the code
   1. A screenshot of a computer

      Description automatically generated
3. Run the YAML file, **kubectl apply -f nginx.yml**
   1. A screen shot of a computer

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**Question 2:**

1. Run this command, **kubectl create deployment my-project --image=nginx**
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2. Change image of the deployment; **kubectl set image deployment/my-project nginx=nginx:1.25 --record**
   1. A screenshot of a computer program

      Description automatically generated
3. Check rollout history, **kubectl rollout history deployment my-project**
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**Question 3:**

1. Run this command,
2. **kubectl create deployment app-server --image=** **haffizhissham0/node\_app-demo:v1 –replicas=5**
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**Bonus - Batch deployment for all three questions:**

1. Run this Create a YAML file for the first question, save it as **q1.yml**
   1. **nano q1.yml**

 apiVersion: v1

 kind: Pod

 metadata:

 creationTimestamp: null

 labels:

    run: my-web

 name: my-web

 spec:

 containers:

 - command:

    - sleep

    - "2200"

    image: nginx

    securityContext:

       capabilities:

          add: ["SYS\_TIME"]

    name: my-web

    resources: {}

 dnsPolicy: ClusterFirst

 restartPolicy: Always

 status: {}

1. Create a Deployment bash file, copy the script below and save it as **deployment.sh**
   1. Run bash script, **bash deployment.sh** to create deployments/pods

 #!/bin/bash

 # Question 1

 printf "\n\n"

 echo "question 1 run YAML file 'q1.yml'"

 kubectl apply -f q1.yml

 # Question 2

 printf "\n\n"

 echo "question 2 part 1"

 kubectl create deployment my-project --image=nginx

 printf "\n"

 echo "question 2 part 2, change image version with record annotation"

 kubectl set image deployment/my-project nginx=nginx:1.25 --record

 printf "\n"

 echo "question 2 part 3, show  deployment history"

 kubectl rollout history deployment my-project

 #Question 3

 printf "\n\n"

 echo "question 3"

 kubectl create deployment app-server --image=haffizhissham0/node\_app-demo:v1 --replicas=5

 # Show all deployments/pods

 printf "\n\n"

 echo "Show all deployments/pods"

 kubectl get deployment

 kubectl get pod

 sleep 10s

 printf "\n"

 echo "Wait 10s to show all deployment/pods"

 kubectl get deployment

 kubectl get pod

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     Description automatically generated

1. Create a **Deployment Delete** bash file, copy script below and save the file as **delete-deployment.sh**
   1. Run bash script, bash **delete-deployment.sh** to delete previous deployments/pods create

 #!/bin/bash

 # Show all deployments/pods before destroying those

 printf "\n\n"

 echo "Show all deployments/pods"

 kubectl get deployment

 kubectl get pod

 # Destroy my-web pod created on question (1)

 printf "\n\n"

 echo "Destroy my-web pod"

 kubectl delete pod my-web

 # Destroy my-project deployment created on question (2)

 printf "\n\n"

 echo "Destroy my-project deployment"

 kubectl delete deployment my-project

 # Destroy app-server deployment created on question (3)

 printf "\n\n"

 echo "Destroy app-server deployment"

 kubectl delete deployment app-server

 # Show all deployments/pods after destroyed

 printf "\n\n"

 echo "Wait 15s to show all deployment/pods after destroyed"

 sleep 15s

 printf "\n"

 kubectl get deployment

 kubectl get pod

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