CKA MOCK EXAM 4.0

time:2 hour

submission :output in form of screenshoots or in a file ..(choice is yours)

Question 1

Create a Network Policy named "mockchip" in default namespace

There should be two types, ingress and egress.

The ingress should block traffic from an IP range of your choice except some other IP range.Blocks ingress traffic from the IP range 192.168.0.0/16, except 192.168.1.0/24

Should also have namespace and pod selector.

Ports for ingress policy should be 6379

For Egress, it should allow traffic to an IP range of your choice on 5978 port.Allows egress traffic to the IP range 10.0.0.0/24 on TCP port

Question 2

1. There are various Pods in all namespaces. Write a command into **/opt/course/3/find\_pods.sh** which lists all Pods sorted by their **AGE** .

2. Write a second command into **/opt/course/3/find\_pods\_uid.sh** which lists all Pods sorted by field **metadata.uid** .

Use kubectl sorting for both commands

Question 3

1.Create a pod output-pod which write "**You will passed CKA Exam!"** into a file "output-pod.txt"

The Pod output-pod should be deleted automatically after writing the text to the file

Question 4

1. Create a deployment of nginx with the image of nginx of version **nginx:1.18**.
2. Upgrade the version to **nginx:1.19** and confirm the upgrade.
3. Now rollback the deployment to the previous version

Question 5

Create a deployment called “**alpine**” Perform a backup and restore of the etcd data store.

Question 6

1. Upgrade the Cluster (Master node)
2. Make sure to first drain a Node and make it available after upgrade.
3. Note: You may upgrade the cluster to any version you choose.

Question 7

Create a new service account with the name **pv2.0** Grant this Service account access to list all PersistentVolumes in the cluster by creating an appropriate cluster role called **pv2.0-role** and ClusterRoleBinding called **pv2.0-role-binding.**

Question 8

1. Create a YAML file to define a pod named test-cpu that uses the **alpine:latest** image.
2. Use **nodeSelector** to ensure the pod is scheduled only on nodes with the label **type=cpu**.

Question 9

1. Create a YAML file defining a Persistent Volume (PV) named **user-data-pv** Pvc named **user-data-pvc** with the following characteristics:
2. Capacity: 2Gi
3. Access Modes: ReadWriteOnce
4. Storage Class: Default
5. Uses the hostPath storage type with the path **/mnt/ssd**
6. Create mount the volume at /usr/share/nginx/html.
7. Verify that the Pod is running and using the Persistent Volume.

Question 10

Create a CronJob named show-date that runs every minute and executes the shell command echo "**Current date: $(date)**"

Watch the jobs as they are being scheduled

Identify one of the **Pods** that ran the CronJob and render the logs

Determine the number of successful executions the Cronjob will keep in its history

Question 11

Create a new namespace named ja.

Create a new network policy named my-policy in the ja namespace

Requirements:

1. Network Policy should allow PODS within the ja to connect to each other only on port 80. No other ports should be allowed

2. No PODs from outside of the ja should be able to connect to any pods inside the ja

Question 12

Schedule a pod as follows:

✑ Name: nginx-jaud00301

✑ Image: nginx

✑ Node selector: disk=hdd

Question 13

Create a pod with one container that will log to show currentdate and time and wait for one sec and run again.

Use kubectl to view the logs from this container within the pod named "pod-logging"

Question 14

Create a yaml file to create a secret named secret2, with key value pairs

user2=my\_user2

password2=P@ssword2

Verify that the secret was created with the correct data

Question 15

Create a nginx pod called dns-Mock using image nginx expose it internally with a service called dns-MOck-service

check if pod and service name are resolvable from within the cluster

use the image: busybox:1.28 for dns lookup

save the result in /root/nginx.svc

Question 16

CREATE A NEW

USER “MANAGEMENT". GRANT HIM ACCESS TO THE CLUSTER.USER

“YOURNAME" SHOULD HAVE PERMISSION TO

1.CREATE THE POD

2. LIST THE POD,

3. GET THE POD,

4. UPDATE AND DELETE

PODS.

THE PRIVATE KEY EXISTS AT LOCATION:/ROOT/MANAGEMENT/.KEY AND CSR AT

/ROOT/MANAGEMENT.CR

Question 17

Break the kube scheduler and schedule a node WITH POD NAME “moCK4” using NodeName:NODE01

Fix the kube scheduler

SHOW THE POD IS running