CKA MOCK EXAM 2.0

time:2 hours

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

Question 1

Scale the deployment presentation to 3 pods.

Question 2

Create a Persistent Volume with the given specification.

Volume Name: pv-demo

Storage:100Mi

Access modes: ReadWriteMany

HostPath: /pv/host-data

Question 3

Monitor the logs of pod foo and:  
✑ Extract log lines   
✑ Write them to /opt/KUTR00101/foo

Question 4

There is a pod running in node my-pod

Take a backup of the pod ETCD database on /root/apna-backup.db

and then delete the pod and restore the backup and pod

/var/lib/apnabackup

And check the file apnabackup in /var/lib

pod must be running.

Question 5

. Temporarily stop the kube-scheduler, this means in a way that you can start it again afterwards.

Create a single Pod named manual-schedule of image httpd:2.4-alpine, confirm it's created but not scheduled on any node.

Now you're the scheduler and have all its power, manually schedule that Pod on node with nodename. Make sure it's running.

Start the kube-scheduler again and confirm it's running correctly by creating a second Pod named manual-schedule2 of image httpd:2.4-alpine on controlplane

Question 6

Create a pod called pod-cka with two containers, as given below:

Container 1 - name: cool1, image: nginx

Container2 - name: cool2, image:

busybox,

command: sleep 3000

Question 7

create a deployment named source-ip-app that uses the image registry.k8s.io/echoserver:1.4 .

Question 8

create a pod that will have two containers, one main container and another sidecar container that will collect the main containers logs

using kubectl, view the logs from the container named "sidecar"

main container args

args: [ 'sh', '-c', 'while true; do echo "$(date)\n" >> /var/log/main-container.log; sleep 5; done']

sidecar args

args: [ /bin/sh, -c, 'tail -f /var/log/main-container.log' ]

check the logs

Question 9

Create a new PersistentVolume named safari-pv. It should have a capacity of 2Gi, accessMode ReadWriteOnce, hostPath /Volumes/Data and no storageClassName defined.

Next create a new PersistentVolumeClaim in Namespace project-tiger named safari-pvc . It should request 2Gi storage, accessMode ReadWriteOnce and should not define a storageClassName. The PVC should bound to the PV correctly.

Finally create a new Deployment safari in Namespace project-tiger which mounts that volume at /tmp/safari-data. The Pods of that Deployment should be of image httpd:2.4.41-alpine.

Question 10

Create a new deployment called **mockpod**, with image nginx:1.16 and 1 replica.

Next upgrade the deployment to version 1.17 using rolling update

Make sure that the version upgrade is recorded in the resource annotation

Question 11

write a command into /opt/course/100/cluster\_events.sh which shows the latest events in the whole cluster, ordered by time (metadata.creationtimestamp). use kubectl for it.

now delete the kube-proxy pod running on node controlpane node and write the events this caused into /opt/course/100/pod\_kill.log.

Question 12

create a new user “sam” .grant him access to the cluster.

user “sam” should have permission to create and delete secrets. the private key exists at location: expirationSeconds 65 days

/root/sam/.key and csr at /root/sam.csr

Question 13

use json path query to retrieve the osimages of all the nodes and store it in a file "all-nodes-os-info.txt" at root location.

note: the osimage are under the nodelnfo section under status of each node.

Question 14

list the services on your linux operating system that are associated with kubernetes. save the output to a file named services.csv.

Question 15

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 16

create a static pod named my-static-pod in namespace default on cluster3-controlplane1. it should be of image nginx:1.16-alpine and have resource requests for 10m cpu and 20mi memory.

then create a nodeport service named static-pod-service which exposes that static pod on port 80 and check if it has endpoints and if it's reachable through the controlplane internal ip address

Question 17

Create a NodePort service to expose a pod named my-pod on port 8080, with the NodePort set to 30060.