Kubernetes Interview Questions

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INTERMEDIATE

1.

What is the difference between config map and secret? (Differentiate the answers as with examples)

Config maps ideally stores application configuration in a plain text format whereas Secrets store sensitive data like password in an encrypted format. Both config maps and secrets can be used as volume and mounted inside a pod through a pod definition file.

Config map:

```
            kubectl create configmap myconfigmap
  --from-literal=env=dev
```

Secret:

```
echo -n 'admin' > ./username.txt
echo -n 'abcd1234' ./password.txt
kubectl create secret generic mysecret --from-file=./username.txt --from-file=./password.txt
```

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2.

If a node is tainted, is there a way to still schedule the pods to that node?

3.

Can we use many claims out of a persistent volume? Explain?

4.

What kind of object do you create, when your dashboard like application, queries the Kubernetes API to get some data?

5.

What is the difference between a Pod and a Job? Differentiate the answers as with examples)

6.

How do you deploy a feature with zero downtime in Kubernetes?

7.

How to monitor that a Pod is always running?

8.

Levels

What are the types of multi-container pod patterns? (Explain each type with examples)

9.

What is the difference between replication controllers and replica sets?

10.

How do you tie service to a pod or to a set of pods?

11.

Having a Pod with two containers, can I ping each other? like using the container name?

12.

Does the rolling update with state full set replicas =1 makes sense?

13.

Different Ways to provide API-Security on Kubernetes?

14.

what does kube-proxy do?

15.

What runs inside the kubernetes worker nodes?

16.

Is there a way to make a pod to automatically come up when the host restarts?

17.

Is there any other way to update configmap for deployment without pod restarts?

18.

Do rolling updates declared with a deployment take effect if I manually delete pods of the replica set with kubectl delete pods or with the dashboard? Will the minimum required a number of pods be maintained?

19.

what is the difference between externalIP and loadBalancerIP ?

20.

In Kubernetes - A Pod is running 2 containers, when One container stops - another Container is still running, on this event, I want to terminate this Pod?

21.

what is the ingress, is it something that runs as a pod or on a pod?

22.

What happens if daemonset can be set to listen on a specific interface since the Anycast IP will be assigned to a network interface alias

23.

How to forward port `8080 (container) -> 8080 (service) -> 8080 (ingress) -> 80 (browser)` how is it done?

24.

Are deployments with more than one replica automatically doing rolling updates when a new deployment config is applied?

25.

If you have multiple containers in a Deployment file, does use the HorizontalPodAutoscaler scale all of the containers?

26.

Suppose you have to use database with your application but well, if you make a database container-based deployment. how would the data persist?   **Levels**

27.

If a pod exceeds its memory "limit" what signal is sent to the process?

ADVANCED

1.

Let's say a Kubernetes job should finish in 40 seconds, however on a rare occasion it takes 5 minutes, How can I make sure to stop the application if it exceeds more than 40 seconds?

When we create a job spec, we can give --activeDeadlineSeconds flag to the command, this flag relates to the duration of the job, once the job reaches the threshold specified by the flag, the job will be terminated.

```
kind: CronJob
apiVersion: batch/v1beta1
metadata:
  name: mycronjob
spec:
  schedule: "*/1 * * * *"
activeDeadlineSeconds: 200
  jobTemplate:
    metadata:
      name: google-check-job
    spec:
      template:
        metadata:
          name: mypod
        spec:
          restartPolicy: OnFailure
          containers:
            - name: mycontainer
              image: alpine
              command: ["/bin/sh"]
              args: ["-c", "ping -w 1 google.com"]
```

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2415&title=Let%26rsquo%3Bs+say+a+Kubernetes+job+should+finish+in+40+seconds%2C+however+on+a+rare+occasion+it+

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2.

How do you test a manifest without actually executing it?

3.

How do you initiate a rollback for an application?

4.

How do you package Kubernetes applications?

5.

What are init containers?

6.

What is node affinity and pod affinity?

7.

How do you drain the traffic from a Pod during maintenance?

8.

I have one POD and inside 2 containers are running one is Nginx and another one is wordpress So, how can access these 2 containers from the Browser with IP address?

9.

If I have multiple containers running inside a pod, and I want to wait for a specific container to start before starting another one.

10.

What is the impact of upgrading kubelet if we leave the pods on the worker node - will it break running pods? why?

Levels

11.

How service that selects apps based on the label and has an externalIP?

12.

Does the container restart When applying/updating the secret object (kubectl apply -f mysecret.yml)? If not, how is the new password applied to the database?

13.

How should you connect an app pod with a database pod?

14.

How to configure a default ImagePullSecret for any deployment?

15.

I have a configmap for 3 files that are going to be mounted in supposing "fluentd/etc/" and the respective files would be fluent.conf, kubernetes.conf, systemd.conf, config map in deployment.yaml is like this

- **volumeMounts:**
- **name: fluentd**
- **mountPath: /fluentd/etc**
- **name: varlog**
- **mountPath: /var/log**
- **name: container1**
- **mountPath: /var/lib/docker/containers**
- **readOnly: true**
- **securityContext:**
- **privileged: true**
- **terminationGracePeriodSeconds: 30**
- **volumes:**
- **name: varlog**
- **hostPath:**
- **path: /var/log**
- **name: container1**
- **hostPath:**
- **path: /var/lib/docker/containers**
- **name: fluentd**
- **configMap:**
- **name: fluentd-config**

When deploying you will get an error of mounting as read-only, which is effecting to fluent to read some of the mentioned sources in the configmap.how can we avoid this read-only error?

16.

If you have a pod that is using a ConfigMap which you updated, and you want the container to be updated with those changes, what should you do?

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DESCRIPTION

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