NOTES

#KubernetesIn30Days challenge :-

#Day26 :-

"Kubernetes Interview questions-3"

1) How does Kubernetes handle container scaling automatically.

Ans:- K8s supports horizontal pod Autoscaling (HPA), which automatically adjust the no. of Pod replicas based on CPU or custom metrics. When a defined threshold is exceeded K8s scales up or down by creating or terminating pods



2) What is Namespace in K8s ? why it is used.

Ans:- Namespace is a logical partition within a Kubernetes cluster. It allows you to create multiple virtual clusters within a physical cluster, providing isolation and resource management. Namespaces help organize and secure workloads in multi tenant environments.

3) How do you troubleshoot a K8s pod that is not running as expected.

Ans:- You can use cmds like

→ Kubectl describe

→ Kubectl logs

→ Kubectl exec.

4) Suppose your team wants to rollout a new version of App with zero downtime. How do you achieve this in kubernetes.

Ans :- → Use Kubernetes Deployment / statefulset with rolling updates

→ create newer version of container image and update the image tag in the deployment manifest.



→ Apply the updated manifest to the cluster, and Kubernetes will automatically rollout the new version while maintaing the required no. of replica count.

5) In a Multi-tenant environment, one tenant's pod are consuming excessive resources, impacting others. How would you address resource isolation.

Ans :- • Implement Kubernetes ResourceQuotas and LimitRanges to limit resources usage per namespace

• Use Network policies to control traffic b/w

tenants.

- consider deploying tenants in separate K8s cluster or using namespace based isolation.

6) You've been tasked with ensuring that the Kubernetes cluster is highly available - How would you design a high-availability K8s Architecture

Ans:- ① setup the Multiple Master Nodes (3/5) in an HA configuration

② Distribute the worker Nodes across the AZs or DCs.

③ Implement the Backup and Recovery procedures for etcd & K8s controlplane database

④ Use LB to distribute load to master Nodes.

⑤ Employ Monitoring and Alerting to detect and respond to cluster issues promptly.



Thats All for Today!

Thank You!