Docker Scenario-Based Interview Questions & Answers

1. Scenario: Pod CrashLoopBackOff

Answer: Check logs: kubectl logs <pod-name>

Describe pod: kubectl describe pod <pod-name>

Check liveness/readiness probes and app startup behavior.

2. Scenario: Exposing an Application

Answer: Use a Service (ClusterIP, NodePort, or LoadBalancer).

For external access, use Ingress with an Ingress Controller.

3. Scenario: Zero Downtime Deployment

Answer: Use Deployments with rolling update strategy.

Specify maxUnavailable and maxSurge.

4. Scenario: Accessing Secrets

Answer: Store secrets in Kubernetes Secret resources.

Mount as environment variables or volumes in Pods.

5. Scenario: Scaling Applications

Answer: Use kubectl scale or set replicas in Deployment.

Use HorizontalPodAutoscaler for CPU-based scaling.

6. Scenario: Debugging a Pod

Answer: Use kubectl exec -it <pod-name> -- /bin/sh

Use ephemeral containers or init containers for deeper debugging.

7. Scenario: Resource Limits

Answer: Set requests and limits in Pod specs to control resource usage.

8. Scenario: Persistent Storage

Answer: Use PersistentVolume and PersistentVolumeClaim.

Use dynamic provisioning with StorageClasses.

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9. Scenario: Configuration Management

Answer: Use ConfigMaps to store config data.

Mount them as env variables or volumes.

10. Scenario: Rolling Back a Deployment

Answer: Use kubectl rollout undo deployment/<deployment-name> to revert to the previous version.