Interview Questions:

1. What is the architecture of Kubernetes? Explain the role of the master node and worker nodes.

Answer: Kubernetes follows a client-server architecture with a master node and worker nodes. The master node manages the cluster, while the worker nodes run the containers.

2. What is the role of the API server in Kubernetes?

Answer: The API server is the central management point for all cluster operations. It exposes the Kubernetes API, allowing clients to interact with the cluster.

3. How does scaling up and down of applications work in Kubernetes?

Answer: Scaling in Kubernetes involves adjusting the number of replicas of a deployment or stateful set. Scaling up increases the number of replicas, while scaling down decreases it.

4. What is the purpose of the kubelet in Kubernetes?

Answer: The kubelet is an agent that runs on each node and communicates with the master node. It manages the containers and ensures they are running and healthy.

5. Explain the concept of rolling updates and rollbacks in Kubernetes.

Answer: Rolling updates in Kubernetes allow for the gradual rollout of new versions of a deployment, ensuring zero downtime. Rollbacks can be performed to revert to a previous stable version if issues arise.

6. How does networking work in Kubernetes? What is the difference between the cluster network and the service network?

Answer: The cluster network enables communication between nodes and pods within the cluster, while the service network enables communication between services.

7. What are persistent volumes in Kubernetes? How are they managed?

Answer: Persistent volumes provide persistent storage for stateful applications. They can be dynamically provisioned using storage classes or manually created by an administrator.

8. What is the purpose of the DNS add-on in Kubernetes?

Answer: The DNS add-on provides DNS-based service discovery within the cluster, allowing pods and services to communicate with each other using their names.

9. How does the Kubernetes dashboard help in managing and monitoring the cluster?

Answer: The Kubernetes dashboard is a web-based graphical interface that provides a visual representation of

the cluster. It allows users to view and manage resources, monitor performance, and troubleshoot issues.

10. What is the role of the metrics server in Kubernetes?

Answer: The metrics server collects resource usage data from nodes and pods, providing valuable insights for monitoring and performance analysis.