

7 Days DevOps Deloitte Day 2 Test 2

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1. A company needs a fast and cost-effective way to deploy operating systems for their applications, with minimal manual effort and quick setup times. Which technology should they use?

- a) Bare metal servers
- b) Virtualization with VMware
- c) Docker containers
- d) Dedicated hardware on AWS EC2

Answer: c) Docker containers

Docker containers allow rapid, lightweight, and portable application deployment.

2. A web application running in Docker containers crashes frequently, disrupting user access. The company wants a solution to monitor and automatically restart containers to maintain uptime. Which tool should they implement?

- a) Jenkins
- b) Kubernetes
- c) Manual container monitoring
- d) AWS ECS without scaling

Answer: b) Kubernetes

Kubernetes automates container management and restarts crashed containers to ensure availability.

3. Your team is deploying a Kubernetes cluster with multiple pods running a web application. To ensure incoming traffic is evenly distributed across these pods, which configuration should you implement?

- a) Use a round-robin algorithm with an external load balancer
- b) Configure pods to run only on a single node
- c) Manually assign users to specific pods
- d) Increase the number of nodes in the cluster

Answer: a) Use a round-robin algorithm with an external load balancer

External load balancers distribute traffic efficiently across pods.

4. A company is running a microservices-based application where the search service is hosted on Google Cloud, and the chat service is on AWS. What is this deployment strategy called?

- a) Hybrid cloud

- b) Multi-cloud strategy
- c) Polyglot architecture
- d) Kubernetes-based orchestration

Answer: b) Multi-cloud strategy

Multi-cloud strategy involves using multiple cloud providers for different services.

5. Your team needs to quickly create a fully managed Kubernetes cluster on AWS, avoiding the manual setup of master nodes. Which tool should you use?
- a) eksctl
 - b) kubectl
 - c) Terraform
 - d) Docker Swarm

Answer: a) eksctl

eksctl simplifies the creation of AWS EKS clusters with minimal manual setup.

6. A Kubernetes deployment with four pods is experiencing uneven traffic distribution, causing some pods to become overloaded. How can you ensure traffic is evenly distributed across all pods?
- a) Configure a load balancer with a round-robin algorithm
 - b) Increase the number of pods in the deployment
 - c) Use a single-node setup for all pods
 - d) Manually assign users to pods

Answer: a) Configure a load balancer with a round-robin algorithm

A round-robin load balancer ensures even traffic distribution across pods.

7. A company using AWS EKS wants their application to be accessible from the internet. Which type of load balancer should they configure in Kubernetes?
- a) ClusterIP
 - b) NodePort
 - c) AWS ELB with LoadBalancer type
 - d) Internal Kubernetes load balancer

Answer: c) AWS ELB with LoadBalancer type

The LoadBalancer type integrates AWS ELB to expose services to the internet.

8. An application in Kubernetes needs to ensure that any failed pods are automatically recreated to maintain high availability. Which Kubernetes

feature should you use?

- a) Deployment controller
- b) Replica sets
- c) Horizontal pod autoscaling
- d) Manual pod management

Answer: a) Deployment controller

Deployment controllers maintain desired pod states and recreate failed pods.

9. Your Kubernetes cluster is running on AWS EKS with multiple nodes. If a node goes down, you want the pods to be automatically shifted to another node. Which feature of Kubernetes enables this?

- a) Fault tolerance through multi-node clusters
- b) Pod scaling
- c) Deployment rollback
- d) NodePort configuration

Answer: a) Fault tolerance through multi-node clusters

Kubernetes supports automatic pod rescheduling in case of node failure.

10. A developer is deploying a Kubernetes cluster and wants to know the IP addresses of all pods in the cluster. Which command should they use?

- a) `kubectl get nodes`
- b) `kubectl get pods -o wide`
- c) `kubectl describe pods`
- d) `kubectl list pods`

Answer: b) `kubectl get pods -o wide`

This command lists pods with their IP addresses and additional details.

11. A company wants to host sensitive application images securely without exposing them to the public. Which solution should they choose?

- a) Docker Hub with private images
- b) AWS Elastic Container Registry (ECR)
- c) Kubernetes with ClusterIP service
- d) Public Docker repositories

Answer: b) AWS Elastic Container Registry (ECR)

AWS ECR is a secure solution for hosting private container images.

12. A Kubernetes cluster is running on AWS EKS. The team needs to manage the cluster and interact with its resources. Which command-line tool should they use?

- a) `eksctl`
- b) `kubectl`

- c) Terraform
- d) Docker CLI

Answer: b) kubectl

kubectl is the standard tool for managing Kubernetes resources.

13. Your Kubernetes deployment has replicas of an application running across multiple pods. You want to scale the deployment to handle increased traffic. Which command should you use?

- a) kubectl scale deployment
- b) kubectl get pods -o wide
- c) eksctl create cluster
- d) kubectl describe deployment

Answer: a) kubectl scale deployment

This command increases or decreases the number of replicas in a deployment.

14. An organization is deploying a production application on AWS EKS and needs to expose it to the public internet. What type of Kubernetes service should they use?

- a) ClusterIP
- b) NodePort
- c) LoadBalancer
- d) ReplicaSet

Answer: c) LoadBalancer

The LoadBalancer service exposes applications to the internet through cloud load balancers.

15. Your team is tasked with automating the lifecycle of application deployments, including code testing and frequent updates. Which tool would you use to streamline these processes?

- a) SonarQube
- b) Jenkins
- c) Docker Compose
- d) AWS CloudFormation

Answer: b) Jenkins

Jenkins automates application builds, testing, and deployments efficiently.