DevOps Questions

AWS

1. AWS services used in DevOps.
2. What happens if we forget the public key of an EC2 instance?
3. What are security groups?
4. What is RDS?
5. How to connect EC2 instances to the local machine.
6. What is the difference between a public and private subnet?
7. S3 bucket globally rename it or not?
8. How to access the internet in a private subnet?
9. What are default settings of security groups?
10. Elastic Load Balancer (ELB): Working methodology.
11. Auto Scaling Groups (ASG) uses.
12. EBS: How to mount volume in instance.
13. Types of storage in AWS.
14. CloudWatch for EC2.
15. CloudFront.
16. Edge Locations.
17. How do you monitor Amazon VPC?
18. What is an Elastic IP?
19. What is a Terraform State file?
20. Security groups vs NACLs.
21. VPC components.
22. How do you launch instances in AWS EC2?
23. What is EC2?
24. How do you manage users and permissions in AWS?
25. What is Amazon EKS?
26. What is IAM?
27. What is AMI?
28. How can you provide permission in IAM?
29. What is ELB?
30. What are the main services in AWS?
31. Relational database in AWS.
32. EC2 instance auto-scaling.
33. Explain VPC and its components like Public & Private subnets, NAT, IGW, and security groups.
34. Explain EC2 and RDS backups and how they work.
35. What is S3?
36. S3 versioning.
37. How to access S3 and RDS from an EC2 instance?
38. What is EBS?

39. What is EFS?
40. How to configure VPC in Terraform?
41. AWS services (EC2, RDS, EFS, EBS, Load Balancer, IGW, NAT Gateway).
42. T2 micro.
43. Difference between on-prem and cloud.
44. How to migrate apps and databases from on-prem to cloud.
45. AWS Elastic Search.
46. AWS IAM roles.
47. Amazon EBS-backed vs. instance-store backed instances.
48. AWS EC2 Instance types.
49. Cross-region S3.
50. NAT gateway purpose.
51. The pem key is lost, and I need to connect via SSH.
52. Connect to a private subnet via SSH from a local machine.
53. Connectivity between two VPCs in private subnets.
54. AutoScaling in AWS why?
55. What is meant by IAM server?
56. What do you mean by AMI in a server?

Linux

1. Linux basic commands.
2. What is Bash?
3. Disk management.
4. Bash scripting.
5. How to run Bash scripts.
6. Linux distributions.
7. Difference between top and nice commands.
8. Command to check server load.
9. How to rename a file in Linux?
10. Basic Linux commands.
11. Linux troubleshooting commands.
12. Commands for disk, memory, and CPU usage.
13. Linux patching.
14. How to add a user to your system?
15. Authentication methods used by SSH.
16. Operating system-related questions.
17. About Linux.
18. Write and explain all Linux commands you know.
19. Linux commands for disk, memory, CPU usage, and grep.
20. IP address and hostname change on Linux (by command line).
21. Configuration of DNS on Linux.
22. Public and Private DNS.
23. Command executed when a user logs into Linux.

24. How to check IP address in Linux.
25. How to log in to an Ubuntu machine.
26. Steps to launch an EC2 instance (using Ubuntu).
27. Can we connect to an EC2 server without using a key pair?
28. rm -i command in Linux.
29. How to save and exit a file in the Vi editor.
30. Can you name some commands in Linux?
31. SCP & SSH differentiate?

Git

1. Robert John is using Git for his work. What is the most effective approach to restructure his commit history when he has multiple commits for a single task?
2. What happens when you run the following command on the Git repository?
   git reset --soft HEAD^
3. Which Git command can configure the use of vimdiff as the default Git merge tool?
4. How does Git merge handle whitespace differences between versions?
5. Difference between centralized vs. distributed VCS.
6. What is the difference between Git pull and Git fetch?
7. Git rebase vs merge.
8. Command used to create a branch.
9. Differentiates between Git remote and Git clone.
10. Branching strategies.
11. Types of version controls.
12. Basic Git commands.
13. Command to rename a directory or a file.
14. How to checkout code from GitHub?
15. Difference between Git merge and Git rebase.
16. Difference between Git pull and Git fetch.
17. What is a merge conflict in Git and how do you resolve it?
18. Command to create a new branch in Git.
19. Command to checkout from one branch to another in Git.
20. Git vs. GitHub differences.
21. Git commands.
22. User access management in Git.
23. Checkout command in Git.
24. Purpose of the git rebase command.
25. Difference between git pull and fetch.
26. What are pull request strategies?
27. What are all git commands? What all the things you performed in your project?
28. What is .gitignore file?
29. How do u configure git in Jenkins?

Docker

1. Commands of Docker.
2. What is Docker Hub?
3. Dockerfile: How will you write it?
4. Difference between Docker image and container.
5. Where to use RUN and EXEC commands in Docker?
6. Docker volume creation and mounting.
7. Docker log.
8. Execute a command in Docker container (docker exec -it ...).
9. Run vs CMD in Dockerfile.
10. What is Docker containerization?
11. Difference between CMD and ENTRYPOINT in Dockerfile.
12. What is Docker?
13. What is a Dockerfile?
14. Difference between CMD and RUN in Dockerfile.
15. Difference between CMD and ENTRYPOINT in Dockerfile.
16. What is ARG in Dockerfile?
17. How to build an image in Docker?
18. Docker scenario: Updating an application in a container without disrupting others.
19. Docker networks.
20. Docker compose.
21. How to stop a Docker container?
22. What is Docker?
23. Why use Docker instead of directly providing code to the client?
24. Steps to do containerization.
25. Docker networking.
26. Docker file and its use.
27. Commands for containers (list, start, stop, remove).
28. How to run a Docker container.
29. Docker commands for creating containers and volume mapping.
30. Deployment file for Docker.
31. Write a Dockerfile for nginx.
32. What is the logging driver in Docker?
33. Docker-compose file to build an image.
34. Docker up, Docker run, Docker start in detail.
35. List Docker commands?
36. What is meant by Dockerfile?

Kubernetes

1. Difference between Kubernetes and Docker.

2. What is a replication set?
3. Kubernetes structure.
4. Networking in Kubernetes.
5. Replica set.
6. How to get a pod?
7. How to launch a pod in Kubernetes?
8. What is Kubernetes architecture?
9. Kubernetes scaling deployment.
10. Deployment strategies in Kubernetes.
11. What is node affinity and pod affinity?
12. What is the default Kubernetes network?
13. Commands in Kubernetes.
14. How to kill Kubernetes pods?
15. How to deploy a microservice in Kubernetes?
16. Kubernetes fmt command.
17. How to handle replicas and crash issues?
18. StatefulSet with PV.
19. What is Ingress? Which Ingress are you working on?
20. What is Kubernetes, and why use it?
21. Kubernetes architecture (control plane, worker, and master nodes).
22. Different Kubernetes strategies.
23. Kubernetes stateful set and daemon set.
24. Deployment vs. StatefulSet.
25. Commands for Kubernetes (create deployment, pods, services).
26. Service types in Kubernetes.
27. How to deploy MySQL DB in a Kubernetes cluster.
28. PV and PVC in Kubernetes.
29. Kubernetes manifest files.
30. How to resolve pod issues.
31. How to connect two Kubernetes nodes.
32. Explain Kubernetes architecture.
33. How do u access the pod through browser?
34. How do u check logs of pod?

Jenkins

1. How to manage credentials in Jenkins.
2. What plugins are used in Jenkins?
3. Jenkins pipeline.
4. Multi-pipeline in Jenkins.
5. Working of Jenkins.
6. Jenkins workspace.
7. Jenkins default port number?
8. Jenkins port number?

9. How do you backup Jenkins?
10. How can you integrate monitoring tools in Jenkins?
11. How will you configure Kubernetes in Jenkins?
12. What is a node in Jenkins?
13. Write a Groovy script for the Jenkins pipeline and explain the stages.
14. What are Jenkins environment variables?
15. What are the types of jobs in Jenkins?
16. How to secure Jenkins?
17. Where are Jenkins files and source code stored?
18. Master and slave in Jenkins.
19. Run deployment on a specific slave node.
20. Jenkins server backup.
21. How to get Jenkins password back if lost?
22. How to take Jenkins Backup plugin?
23. What will u do when build is failing in Jenkins?

CI/CD Pipeline

1. Describe CI/CD Pipeline and how it works.
2. How will you integrate with Maven?
3. Maven commands.
4. What is a CI/CD deployment flow?
5. Tools integrated into Jenkins.
6. Have you written any Jenkins pipelines? Explain each step.
7. Jenkins job migration between servers.
8. Dockerfile and Jenkins pipeline integration.
9. Observability/monitoring in production (e.g., CloudWatch).

Terraform

1. What is Terraform, and what does it provide?
2. Terraform components.
3. Terraform plan vs Terraform apply.
4. Stages in Terraform.
5. How to configure a server using Terraform?
6. How to rename resources in Terraform?
7. How does Terraform trigger changes after editing or updating resources?
8. What is a Terraform state file?

9. What is Terraform?
10. Use of the provider in Terraform.
11. Difference between Ansible and Terraform.
12. Terraform commands.
13. Terraform modules.
14. Terraform state file.
15. Terraform code for an S3 bucket.
16. Integration of Jenkins with Terraform for managing AWS infrastructure.

DevOps

1. Why DevOps? How does it help in IT?
2. What is Prometheus and Grafana?
3. Prometheus and Grafana log case study.
4. Default port number of Prometheus and Grafana.
5. How Prometheus and Grafana work.
6. What is ECS?
7. What do you mean by DevOps?
8. What are the tools in DevOps?
9. What do you mean by CICD?

Testing

1. What is testNG and its annotations?
2. New feature added: What type of testing will you do?
3. Difference between verification and validation.
4. What is the defect lifecycle?
5. Examples of high severity and low priority bugs.

Miscellaneous

1. What is Ansible?
2. Ansible roles and playbooks.
3. Inventory file in Ansible.
4. Define Chef.
5. What is the Terraform state file?
6. How to change the username to another username in AWS?

General DevOps

- What is Terraform?
- What do you know about DevOps?
- What are the popular tools in DevOps?
- Explain the approach of DevOps.
- What challenges you faced in DevOps and how did you overcome them?

- What are CI/CD tools?
- How to handle secrets?
- Steps in Jenkins pipeline to trigger Kubernetes deployment.
- What are the stages of Jenkins?
- Define Maven.
- Explain troubleshooting performance for production systems.

Monitoring and Logging

- Use of Prometheus.
- How to connect Grafana with Prometheus?
- Creation of dashboards in Grafana.
- SonarQube integration with Git and Jenkins.
- How can you check application logs, memory, and CPU utilization?

Scripting and Configuration Management

- Playbook format (YAML or JSON).
- What is Ansible?
- How to use Ansible Vault?
- Integration process in Ansible.
- Explain bash scripting for automation.

Case Scenarios

- Deploy microservices with RDS as a dependency.
- Handle downtime in applications.
- How to deploy a microservice with port as an environment variable?
- How to resolve a situation with two failed nodes out of five in Kubernetes?
- If a pod restarts, how do you handle the issue?

Ansible

- About Ansible.
- Ansible theory questions (e.g., how instances are attached to each other).
- Difference between Ansible and Terraform.

Python/Shell Scripting

- Write a shell script/python script to send an alert via email when disk usage exceeds 75%.
- Write a bash script.
- Python features.
- What is a shell script?

Maven

- Maven lifecycle.
- What happens in mvn clean package command?
- What is a Maven build profile?
- POM stands for?

Networking

- Process of searching something on the internet.
- What is DNS and how does it work?
- Difference between DNS and CNAME.
- Difference between proxy, reverse proxy, and load balancer.
- Port numbers (HTTP, HTTPS, DNS, MySQL, FTP).
- Public vs. Private IP address.
- How private IP is mapped to a public IP.
- Subnets (e.g., /16, /24, /32 notation)

Monitoring Tools

- What are Prometheus and Grafana? How do they work?

Other Questions

- Explain project details.
- Explain a complex problem or difficulty and its resolution.
- Responsibilities in your current organization.
- Knowledge of web applications.
- HTTP vs. HTTPS.
- HTTP request types (GET, POST, PUT).
- What is auto-scaling?
- What is crontab?
- How to migrate app and DB from on-prem to cloud.

General/Project-Based

- Explain about your project.