AWS for DevOps - Interview Prep Guide

1. What is AWS?

Amazon Web Services (AWS) is a comprehensive and widely adopted cloud computing platform offered by Amazon. It provides on-demand IT resources such as compute power, storage, databases, networking, and more, on a pay-as-you-go basis.

2. Why AWS is the First Choice in Industry?

- Market Leader (over 30% cloud market share)
- Global Reach (availability zones in many countries)
- Scalability & Reliability
- Huge Ecosystem of tools and services
- Security & Compliance
- Strong DevOps Support

3. Total Number of AWS Services?

As of 2025, AWS offers over 200 fully featured services across various domains such as:

- Compute
- Storage
- Networking
- Machine Learning
- DevOps & CI/CD
- Security
- Monitoring
- Databases
- Developer Tools

4. How Many AWS Services Should a DevOps Engineer Learn?

You should master services in key categories:

- Compute: EC2, ECS, EKS, Fargate, Lambda
- Networking: VPC, Security Groups, ELB
- Storage: S3, EBS
- Monitoring: CloudWatch, CloudTrail, X-Ray
- CI/CD: CodeBuild, CodeDeploy, CodePipeline
- IAM & Security: IAM, KMS
- Cost Management: Billing, Cost Explorer, Budgets

5. Easy Explanation of Common AWS Services

- EC2 (Elastic Compute Cloud): Virtual machines in the cloud. Run Linux/Windows servers.
- VPC (Virtual Private Cloud): Private network inside AWS.
- EBS (Elastic Block Store): Persistent block storage for EC2.
- S3 (Simple Storage Service): Object storage for files, backups, static content.
- IAM: Manage users, roles, and access permissions.
- CloudWatch: Monitoring metrics, logs, alarms.
- Lambda: Serverless function execution.
- AWS Code Services: CodeBuild (build), CodeDeploy (deploy), CodePipeline (CI/CD automation).
- Billing & Cost Management: Track usage, set budgets, explore costs.
- AWS KMS: Manage encryption keys securely.
- AWS CloudTrail: Logs API-level activities for auditing.
- AWS EKS: Managed Kubernetes service.
- AWS ECS: Manage Docker containers.
- AWS Fargate: Serverless containers for ECS/EKS.

- ELK: Logging and monitoring stack (Elasticsearch, Logstash, Kibana). Use OpenSearch in AWS.

6. Cloud-Agnostic CI/CD Skills

CI/CD is offered by all clouds. Learn universal tools:

- Source Control: Git, GitHub, GitLab
- Build: Jenkins, GitHub Actions, CodeBuild
- Testing: Selenium, JUnit, PyTest
- Artifact: DockerHub, Nexus, Artifactory
- Containers: Docker, Podman
- Orchestration: Kubernetes, ECS
- Monitoring: Prometheus, Grafana, CloudWatch
- IaC: Terraform, Ansible, CloudFormation
- Pipeline Mgmt: CodePipeline, GitHub Actions

7. Additional Key AWS Services to Learn

- Route 53: DNS management
- Elastic Load Balancer: Traffic distribution
- CloudFormation: Infra as code
- AWS Systems Manager: EC2 management
- Auto Scaling Groups: Auto-scaling EC2
- AWS Secrets Manager: Store secrets
- SNS/SQS: Messaging services

8. Final Summary for Interview

"AWS is a leading cloud provider offering over 200 services. It is popular due to its global infrastructure, reliability, and depth of services. As a DevOps engineer, I focus on services like EC2, S3, IAM, VPC, CloudWatch, Lambda, EKS, ECS, and CI/CD tools like CodePipeline and CodeBuild.

I also understand cross-platform CI/CD principles using tools like Jenkins, GitHub Actions, Docker, and Terraform. I ensure my skills are cloud-agnostic, though I specialize in AWS. I also work with security (IAM, KMS), cost management, and infrastructure as code (CloudFormation, Terraform)."