# Role: Aws Cloud & DevOps Engineer

### Job description

Must have total experience in IT 8+ years, Relevant Experience 5+ years.

AWS Automation specialist with expertise in automation of operations, processes and infrastructure as code

Must be an expertin AWS Infrastructure design and architecture

Strong experience in Terraform for IaC provisioning; Good to have AWS Cloudformation

Understanding of DevOps tools and process Version control, Pipeline for provisioning and deployment Experience in Terraform including setup of terraform environment, developing TF scripts, importing

existing environments is required

Experience in ANSIBLE for orchestration, and operations automation is required. Experience with other automation tools like Chef, Puppet, Jenkins would be an advantage

Develop and maintain automation and orchestration software and scripting to integrate with all underlying public and private cloud technologies.

Good in designing automated solutions across core cloud services like automated landing zone, automated infra and security operational tasks

Implement fully automated server build, management, monitoring and deployment solutions spanning multiple platforms, tools and technologies.

#### **DESIRED SKILLS**

Good to have Certification in terraform

Understanding of scripting and Automation skills to streamline Dev/Ops are desirable. Python,

Powershell, Jenkins, Ansible

AWS Certified (Solutions Architect - Associate/Professional)

# AWS Cloud Engineer Interview Questions (3-8 Years Experience)

## This list is categorized based on the key areas mentioned in the job description:

- 1. General AWS Experience (5 questions)
  - 1. What are the three main service models offered by AWS (laaS, PaaS, SaaS)? Briefly explain each.
  - 2. Explain the concept of a VPC (Virtual Private Cloud) in AWS. What are the benefits of using a VPC?
  - 3. How do you handle security in an AWS environment? Briefly describe some key security services offered by AWS.
  - 4. What are the different ways to manage costs in AWS?
  - 5. Have you ever migrated on-premises workloads to AWS? If so, what challenges did you face and how did you overcome them?

# 2. Infrastructure Design and Automation (10 questions)

- 1. What are the advantages of using Infrastructure as Code (IaC) tools?
- 2. Explain the difference between Terraform and CloudFormation. When would you choose one over the other?
- Describe your experience with Terraform. What are some features you find most useful?
- 4. Walk us through your process for setting up a Terraform environment.
- 5. Can you explain how you would use Terraform to create an EC2 instance with specific configurations?
- 6. How do you handle state management in Terraform?
- 7. Have you ever used Terraform to import existing infrastructure into your code? If so, how did you approach it?
- 8. Describe your experience with Ansible. What playbooks have you developed for AWS infrastructure management?
- 9. How do you integrate Ansible with Terraform for infrastructure provisioning and configuration management?
- 10. What other IaC tools or orchestration tools are you familiar with (e.g., Chef, Puppet)?

# 3. DevOps and Automation (10 questions)

- 1. Explain the different stages of a typical CI/CD pipeline.
- 2. What version control system (e.g., Git) are you familiar with? How would you manage your Terraform and Ansible code in a version control system?
- 3. Have you used Jenkins for CI/CD automation? If so, how did you configure it for your deployments?
- 4. How do you ensure the security of your automation scripts?
- 5. Describe your experience with scripting languages like Python or PowerShell. How have you used them for automating AWS tasks?
- 6. How do you monitor and troubleshoot issues that arise during automated deployments?
- 7. What strategies do you use for testing your infrastructure as code scripts?
- 8. How do you handle rollbacks in case of failed deployments?
- 9. Explain the concept of infrastructure as code testing tools like Terratest or Kitchen. (Bonus point if they have experience)
- 10. How do you stay up-to-date with the latest advancements in AWS services and DevOps tools?

# 4. Security and Best Practices (5 questions)

- 1. Explain the concept of IAM (Identity and Access Management) in AWS. How do you manage user access and permissions in an AWS environment?
- 2. What are some best practices for securing S3 buckets?
- 3. How do you encrypt data at rest and in transit in AWS?
- 4. Describe your experience with security automation tools in AWS. (Bonus point if they have experience)

5. How do you stay informed about security vulnerabilities in AWS services?

# 5. Troubleshooting and Problem Solving (5 questions)

- 1. Describe a situation where you encountered an issue with your AWS infrastructure. How did you diagnose and troubleshoot the problem?
- 2. What tools and techniques do you use for troubleshooting issues in an AWS environment?
- 3. How do you approach logging and monitoring in your AWS infrastructure?
- 4. How do you handle unexpected spikes in traffic or resource utilization?
- 5. Describe your experience with disaster recovery planning in AWS.

# 6. Advanced AWS Services (10 questions)

- 1. Explain the concept of Amazon S3 object lifecycle management. How can you use it to optimize storage costs?
- 2. What are the different types of Amazon RDS database instances? When would you choose one over the other?
- 3. How would you design a highly available and scalable web application architecture on AWS?
- 4. Explain the benefits of using Amazon CloudFront for content delivery. When would you use it?
- 5. Describe your experience with Amazon DynamoDB. What are some use cases for this NoSQL database service?
- 6. How do you leverage AWS Lambda serverless functions for your applications?
- 7. Explain the concept of Amazon Cognito for user authentication. Why would you use it?
- 8. What are some key considerations for implementing serverless architectures on AWS?
- 9. How would you use Amazon CloudWatch for monitoring and logging your AWS resources?
- 10. Describe your experience with container orchestration tools like Amazon ECS or EKS. (Bonus point if they have experience)

# 7. Cost Optimization (5 questions)

- 1. Explain different AWS cost optimization strategies. How do you identify and eliminate unnecessary costs in an AWS environment?
- 2. What are Reserved Instances (RIs) and Savings Plans in AWS? How can you use them to save on costs?
- 3. How do you leverage AWS Cost Explorer and other tools for cost analysis and reporting?
- 4. Describe your experience with AWS Spot Instances. How can they be used for cost-effective computing?
- 5. How do you balance cost optimization with performance and scalability in your AWS deployments?

# 8. Scenario-Based Questions (5 questions)

- 1. You are tasked with migrating a large on-premises database to AWS. Describe your approach to this migration, considering downtime and data security.
- 2. Your application experiences a sudden surge in traffic. How would you troubleshoot and scale your AWS infrastructure to handle this spike?
- 3. A security vulnerability is discovered in one of your AWS services. Describe your incident response plan and how you would mitigate the risk.
- 4. You are tasked with designing a disaster recovery plan for your critical application running on AWS. What factors would you consider?
- 5. Explain how you would automate the provisioning and deployment of a new web application on AWS using IaC tools and CI/CD pipelines.

# 9. Soft Skills and Teamwork (5 questions)

- 1. Describe your experience working in a collaborative team environment. How do you effectively communicate technical concepts to non-technical stakeholders?
- 2. How do you stay up-to-date with the latest advancements in cloud technology?
- 3. How do you handle pressure and tight deadlines in a fast-paced environment?
- 4. Can you tell us about a time you faced a technical challenge and how you overcame it?
- 5. Why are you interested in working as an AWS Cloud Engineer?

# 10. AWS Certifications (5 questions)

- 1. Do you hold any AWS certifications (e.g., Solutions Architect Associate/Professional)?
- 2. How do you stay up-to-date on the latest AWS services and features?
- 3. Are you familiar with the AWS Well-Architected Framework?
- 4. Can you explain one of the design principles of the AWS Well-Architected Framework?
- 5. Why are AWS certifications valuable for a cloud engineer?

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