AWS Interview Prep Guide

Top 25 AWS Interview Questions & Strategy

Prepared for GoHackersCloud Students

Created: September 20, 2025

Top 25 AWS Interview Questions (with pointers)

1. Explain the core components of AWS and the AWS global infrastructure (Regions, AZs, Edge Locations).

   Discuss Regions vs Availability Zones vs Edge Locations. Explain how to design for low latency and high availability using Regions/AZs. Mention data residency considerations.

2. How does Amazon S3 work and what are common use-cases and storage classes?

   Describe S3 object storage, buckets, eventual consistency (historically), storage classes (Standard, Intelligent-Tiering, Infrequent Access, Glacier, Deep Archive). Discuss lifecycle policies, versioning, encryption, and typical use-cases (backup, hosting, data lake).

3. What is IAM and how would you implement least privilege?

   Explain IAM users, groups, roles, policies, and identity federation. Describe applying least privilege: deny-by-default, fine-grained policies, role-based access, permission boundaries, and IAM Access Advisor & Access Analyzer.

4. Compare EC2, ECS, EKS, and Lambda — when to use each?

   EC2 for full control VMs, ECS for container orchestration, EKS for Kubernetes, Lambda for serverless. Mention scaling, operational overhead, cost trade-offs.

5. What is VPC and how do you design a secure network (subnets, route tables, NAT, IGW)?

   Discuss VPC basics, public/private subnets, route tables, Internet Gateway, NAT Gateway/Instance, Security Groups vs NACLs, VPC endpoints (S3, DynamoDB), and best practices.

6. Explain how Auto Scaling Groups and Elastic Load Balancers work together.

   Describe ALB/ELB/NLB, health checks, target groups, scaling policies, warm-up, connection draining. Discuss blue/green or rolling deployments.

7. How do you design a highly available and fault-tolerant architecture in AWS?

   Use multiple AZs, multi-region patterns, RDS Multi-AZ, S3 durability, Route53 failover, caching, replication strategies.

8. What is Amazon RDS and how do you choose between RDS and DynamoDB?

   RDS is relational (MySQL, Postgres, Aurora). DynamoDB is NoSQL, serverless, scales horizontally. Choose based on relational needs, query patterns, scaling.

9. Describe AWS Lambda cold start and strategies to mitigate it.

   Explain cold vs warm starts, factors (runtime, package size, VPC ENIs). Mitigation: provisioned concurrency, smaller packages, efficient init.

10. How do you secure data at rest and in transit in AWS?

    TLS for in-transit, server-side/client-side encryption for at-rest, KMS, SSE-S3/SSE-KMS, EBS/RDS encryption, IAM policies.

11. Explain CloudFormation / IaC and benefits compared to manual provisioning.

    Templates, stacks, drift detection. Benefits: repeatability, version control, automation, CI/CD.

12. How do CloudWatch, X-Ray and CloudTrail differ and when to use each?

    CloudWatch: metrics/logs. CloudTrail: API audit trail. X-Ray: distributed tracing.

13. What is Route 53 and explain routing policies.

    Route53 is DNS + health checks. Policies: simple, weighted, latency, geolocation, failover.

14. How would you optimize cost on AWS?

    Rightsize, Reserved/Spot instances, lifecycle rules, savings plans, tagging, scheduling non-prod.

15. Explain encryption key management in AWS (KMS vs CloudHSM).

    KMS: managed key service. CloudHSM: dedicated HSM. Discuss CMKs, key policies, rotation.

16. Difference between EBS, EFS, and S3 — when to use each?

    EBS: block for single EC2. EFS: shared NFS. S3: object storage.

17. How do you implement CI/CD on AWS?
    CodeCommit/Build/Deploy/Pipeline or third-party. Discuss strategies, rollback, artifact storage.
18. What are security best practices for AWS accounts and multi-account strategy?
    Organizations, SCPs, separate accounts, centralized logging, IAM least privilege, MFA, GuardDuty.
19. How would you migrate an on-premises application to AWS?
    6 R's migration, Migration Hub, DMS, SMS, Snowball, cutover strategy.
20. Explain how SQS and SNS work and differences between them.
    SNS: pub/sub push. SQS: queue with pull. Combined for fan-out.
21. How does AWS ElastiCache help application performance?
    Redis/Memcached, in-memory caching, eviction policies, persistence, cache-aside pattern.
22. Talk about container networking and load balancing for EKS/ECS.
    CNI plugins, service mesh, ALB Ingress, Fargate networking, service discovery.
23. How to debug a failing EC2 instance that won't boot?
    Check logs, detach volume, inspect, check status, metadata.
24. What is the AWS Well-Architected Framework and its pillars?
    Operational Excellence, Security, Reliability, Performance Efficiency, Cost Optimization.
25. Design a scalable web application architecture on AWS.
    Route53, ALB, ASG, ECS/EKS/Lambda, RDS/Aurora, ElastiCache, S3+CloudFront, VPC, DR planning.

How to use GoHackersCloud certifications to crack interviews

1) Follow the Learning Path End-to-End

Complete the GoHackersCloud path (videos → labs → practice tests → capstone). Use checklists and trackers to show progress.

2) Hands-on Labs & Projects

Mention specific labs completed (VPC, CI/CD, migration). Keep GitHub README with diagrams and commands.

3) Practice Tests & Mock Interviews

Use GoHackersCloud timed practice tests. Schedule mock interviews for feedback.

4) Build a Certification-backed Portfolio

Add resume section 'Certifications & Cloud Projects' with badges, links, and outcomes.

5) Use Labs for STAR Stories

Frame answers with Situation-Task-Action-Result referencing lab challenges.

6) Emphasize Automation & IaC

Show CloudFormation/Terraform templates to demonstrate automation.

7) Know Cost, Security & Trade-offs

Practice trade-offs with cost vs performance vs reliability.

8) Soft Skills & Communication

Practice explaining architectures simply; mentors can help with communication.

9) Leverage Mentorship and Resume Reviews

Book mentor sessions for resume tailoring.

10) Continuous Learning & Badge Display

Keep certs up-to-date, display badges on LinkedIn/resume.

Suggested 4-week interview prep plan using GoHackersCloud

Week 1 — Core Services & Fundamentals

Watch CLF/SAA videos, complete 5 core labs, take 1 practice test.

Week 2 — Advanced Topics & Networking

Deep-dive into VPC, Load Balancers, AutoScaling, CloudFormation; design lab; 2 mock interviews.

Week 3 — Serverless, Databases & Security

Lambda, DynamoDB, KMS, GuardDuty labs; STAR answers; update GitHub projects.

Week 4 — Mock Interviews & Polish

Full-length mocks; finalize resume/LinkedIn; review top 25 Qs; mentor review.

Resume / LinkedIn tips

• Show certs & GoHackersCloud badges near top. • Add 3–5 project highlights with measurable outcomes. • Link GitHub labs and one-page portfolio.

Good luck — use GoHackersCloud labs, practice tests, and mentorship to turn theory into demonstrable results.