AWS Technological Interview Questions - Preparation Canvas

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1. Core AWS Services - **EC2** (Elastic Compute Cloud): Virtual servers - **S3** (Simple Storage Service): Object storage - **RDS** (Relational Database Service): Managed databases - **Lambda**: Serverless compute - **VPC** (Virtual Private Cloud): Networking - **IAM** (Identity and Access Management): Access control

Sample Questions: - Explain the difference between EC2 and Lambda. - How do you secure an S3 bucket? - What are the benefits of using RDS over installing your own database on EC2?

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2. Networking in AWS - Subnets (Public vs Private) - Internet Gateway, NAT Gateway - Security Groups vs NACLs - Route Tables

Sample Questions: - What is the difference between Security Groups and NACLs? - How do you connect two VPCs in different regions? - What happens if you delete a NAT gateway in a private subnet?

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3. Storage in AWS - S3: Object storage, lifecycle policies, versioning - EBS: Block storage for EC2 - EFS: Shared file storage - Glacier: Archival storage

Sample Questions: - Difference between S3 and EBS? - How do you implement lifecycle policies in S3? - Which storage service would you use for frequently accessed shared files?

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4. High Availability & Scaling - Load Balancers: ALB, NLB - Auto Scaling Groups - Multi-AZ vs Read Replicas - CloudFront (CDN)

Sample Questions: - What is the difference between ALB and NLB? - How do Auto Scaling Groups work? - When would you use Multi-AZ vs Read Replica in RDS?

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5. Security & IAM - IAM Roles, Policies, Users, Groups - MFA - KMS (Key Management Service) - Secrets Manager & Parameter Store

Sample Questions: - How do IAM roles differ from IAM users? - What is the principle of least privilege? - How do you store and manage application secrets securely?

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6. Monitoring & Logging - CloudWatch (Metrics, Logs, Alarms) - CloudTrail (API call auditing) - Trusted Advisor

Sample Questions: - Difference between CloudWatch and CloudTrail? - How do you set an alarm for high CPU utilization in EC2? - How would you troubleshoot unauthorized API activity?

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7. Migration & Hybrid Cloud - AWS Migration Hub - Database Migration Service (DMS) - Snowball (large data transfer)

Sample Questions: - How do you migrate an on-premises database to AWS? - What is AWS Snowball used for? - What are the challenges of hybrid cloud setups?

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8. Cost Management - Pricing Models: On-Demand, Reserved, Spot Instances, Savings Plans - Cost Explorer - Budgets and Alerts

Sample Questions: - When would you use Spot Instances? - Difference between Reserved Instances and Savings Plans? - How do you monitor and reduce AWS costs?

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9. Scenario-Based Questions

Q1: An EC2 instance cannot connect to the internet. How do you troubleshoot? - Check Security Group, NACL, Route Table, NAT/Internet Gateway.

Q2: S3 bucket data must be private but accessible to a web application. How? - Use IAM roles or pre-signed URLs.

Q3: Your application experiences high traffic. How do you scale it? - Configure an Auto Scaling Group behind a Load Balancer.

Q4: Logs show frequent failed login attempts on EC2. What do you do? - Restrict SSH access, enable MFA, use key pairs, consider Systems Manager Session Manager.

Q5: A company wants disaster recovery with RPO of 1 hour and RTO of 2 hours. How do you design? - Multi-AZ deployments, cross-region replication, frequent backups, failover plan.

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10. Tips for Interview Delivery - Always explain **why** you choose a service, not just what it does. - Use real-world examples: e.g., "For a high-traffic web app, I would use ALB with Auto Scaling to ensure availability." - Structure answers: **State the concept → Give an example → Explain benefit**. - If unsure, explain how you would find the answer using AWS documentation or CloudWatch logs.

Summary: This canvas covers AWS interview preparation with core services, networking, storage, scaling, security, monitoring, migration, cost management, and real-world scenarios. Use it to build confident, structured responses in technical interviews.