



AWS Solution Architect Associate

1. Introduction to Amazon Web Services Overview

- ✓ Introduction to Cloud Computing
- ✓ History of Amazon Web Services
- ✓ Why we should Care about Amazon Web Services
- ✓ Overview of all AWS products and Services

2. Designing highly available, cost-efficient, fault-tolerant, scalable systems

- ✓ How to design cloud services
- ✓ Planning and design
- ✓ Monitoring and logging
- ✓ Hybrid IT architectures

3. Compute Engines

- ✓ Overview of EC2
- ✓ EBS Volumes .
- ✓ EBS Snapshots
- ✓ EC2 AMIs
- ✓ EC2 Instance Types
- ✓ On-demand vs Spot vs Reserved
- ✓ Placement Groups
- ✓ Load Balancers
- ✓ Auto Scaling
- ✓ Lambda
- ✓ Beanstalk
- ✓ EC2 best practices
- ✓ EC2 costs and prices
- ✓ Creating Amazon EC2 Instances (for Linux)
- ✓ Creating Amazon EC2 Instances with Microsoft Windows
- ✓ Working with Amazon Elastic Block Store (EBS)
- ✓ Working with Elastic Load Balancing
- ✓ Configure an Amazon Machine Image (AMI)
- ✓ Maintaining High Availability with Auto Scaling (for Linux)



4. Storage & Content Delivery Network

- ✓ Elastic Block Storage (EBS)
- ✓ Instance Storage
- ✓ Ephemeral Storage
- ✓ Provisioned IOPS
- ✓ Cloud Front & Content Delivery Network
- ✓ Snowball
- ✓ Creating snapshots & Backups
- ✓ Switching from one storage type to other

5. VPC

- ✓ Overview of VPC
- ✓ VPC
- ✓ Subnets
- ✓ Route Tables
- ✓ Elastic Ips
- ✓ Internet Gateway
- ✓ NAT Gateways
- ✓ Network ACLs
- ✓ Security Groups
- ✓ VPC best practices
- ✓ VPC costs and prices
- ✓ Building Your First Amazon Virtual Private Cloud (VPC)

6. S3

- ✓ Overview of S3
- ✓ S3 Buckets
- ✓ Version Control
- ✓ Lifecycle Management (General Purpose, IA, Glacier)
- ✓ Cloudfront & CDNs
- ✓ Security & Encryption
- ✓ Import/Export & Snowball
- ✓ S3 best practices
- ✓ S3 costs and prices
- ✓ Create an AWS S3 bucket and upload a file
- ✓ Caching Static Files with Amazon CloudFront
- ✓ Installing and using CLI Tools to manage S3



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7. IAM

- ✓ Overview of IAM
- ✓ Users & Groups
- ✓ Roles & Policies
- ✓ Configuring IAM via AWS Management Console
- ✓ Multi Factor Authentication
- ✓ AWS Security Token Service (STS)
- ✓ IAM best practices
- ✓ IAM costs and prices

8. Route53

- ✓ Overview of Route53
- ✓ DNS
- ✓ Routing Policies
- ✓ Route53 best practices
- ✓ Route 53 costs and prices
- ✓ Configure a Route53 Zone

9. Databases

- ✓ Overview of databases
- ✓ RDS
- ✓ AMI/Self Install
- ✓ Licensing
- ✓ SQL vs NoSQL
- ✓ DynamoDB
- ✓ RedShift
- ✓ Elasticache
- ✓ Aurora
- ✓ Database Migration Services (DMS)
- ✓ Databases best practices
- ✓ Databases costs and prices
- ✓ Launch an RDS instance and connect to it remotely
- ✓ DMS demo



10. Application Service

- ✓ Overview of Application Services
- ✓ SQS
- ✓ SWF
- ✓ SNS
- ✓ Elastic Transcoder
- ✓ Application Services best practices
- ✓ Application Services costs and prices

11. Security Practices for Optimum Cloud Deployment

- ✓ AWS shared responsibility model
- ✓ AWS platform compliance
- ✓ AWS security attributes
- ✓ AWS administration and security services
- ✓ AWS CloudTrail
- ✓ Ingress vs. egress filtering, and which AWS services and features fit
- ✓ Amazon EC2 and S3 security feature sets
- ✓ Incorporating common conventional security products
- ✓ Design patterns
- ✓ DoS mitigation
- ✓ Encryption solutions (e.g., key services)
- ✓ Amazon CloudWatch for the security architect
- ✓ Trusted Advisor
- ✓ CloudWatch Logs
- ✓ Demonstration of ingress and egress filtering using Security Groups
- ✓ Configure CloudWatch to monitor your instances and alert

12. Disaster Recovery

- ✓ Overview of Disaster Recovery
- ✓ Recovery time objective
- ✓ Recovery point objective
- ✓ Using AWS products for Disaster Recovery



13. Troubleshooting

- ✓ Where to look for solutions to problems
- ✓ AWS Support
- ✓ Typical problems and how to resolve them

14. RDS(Relational Database Service)

- ✓ OLTP & OLAP
- ✓ DynamoDB (Managed NoSQL Database)
- ✓ Taking Backups & Creating Snapshots and recovery
- ✓ Multi Availability Zone (HA)
- ✓ Read Replica (For Faster performance)
- ✓ ElastiCache
- ✓ RedShift
- ✓ DMS(Data Migration Service)

15. Networking

- ✓ Creating a VPC(virtual Private Cloud)
- ✓ Creating Private & Public Subnets
- ✓ Creating Internet Gateways
- ✓ Creating and assigning Elastic IPS
- ✓ Configuring Routing & Route Tables
- ✓ Securing VPC
- ✓ VPC peering
- ✓ VPC access methods
- ✓ Customer Gateway
- ✓ Direct Connect
- ✓ NACL(Network Access Control List)

16. ELB(Elastic Load Balancing)

- ✓ Characteristics of ELB
- ✓ Configuring ELB via AWS management Console



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17. Logging & Monitoring Tools

- ✓ CloudWatch
- ✓ Cloud Trail
- ✓ Auto Scaling
- ✓ Auto Scaling Features
- ✓ How Auto Scaling works
- ✓ Configuring Auto Scaling