

Amazon Web Services Solution Architect

- Introduction to Cloud Computing
- Introduction to Amazon Web Services (AWS)
- Compute Services (EC2, AMI Etc.)
- EC2 Instances
- Amazon Elastic Block Store (EBS)
- LOAD BALANCING & Auto Scaling
- Network & Security
- Elastic Beanstalk, Amazon Virtual Private Cloud (VPC)
- Amazon Route 53, CloudFront
- Security & Identity Services, IAM
- Storage & Content Delivery Services, Amazon S3 & Amazon Glacier, EFS
- Database Services (RDS, NoSQL Service)
- Management Tools (Amazon Cloud watch, Cloud Formation)
- Application Services (SES, SQS, SNS)

Introduction to Cloud Computing

1. Overview of Cloud
2. Cloud Deployment Models
3. Cloud Services
4. Future of Cloud Technologies
5. Advantages and Disadvantages of Cloud

Introduction to Amazon Web Services (AWS)

1. What is AWS?
2. How to create an account for AWS
3. AWS Free Usage Tier
4. AWS Certification
5. AWS management Console
6. Services provided by AWS

Compute Services

Elastic Compute Cloud (EC2)

1. Amazon EC2?
2. Features of Amazon EC2
3. EC2 infrastructure Management
4. EC2 Dashboard
5. Pricing for Amazon EC2

Regions and Availability Zone Concepts

1. Regions
2. Availability Zones and Endpoints
3. Management of instances in an Availability Zone

Amazon Machine Images (AMI)

1. AMI Management
2. Windows, Linux AMIs Working
3. Shared and Paid AMI
4. Making an AMI Public

EC2 Instances

1. Instance Type and its Life cycle
2. States of EC2
3. Difference between reboot, stop, and terminate
4. Working with EC2 windows and Linux instance
5. Installation instance in public and private subnet
6. Security via Key Pairs
7. EC2 Class and VPC Security Groups

8. Elastic IP's Management
9. EC2 instances Pricing Model
10. Amazon command line interface in EC2

Amazon Elastic Block Store (EBS)

1. Features of Amazon EBS
2. EBS volumes
3. Management of EBS volumes
4. Volume size Management
5. EBS snapshots

Load Balancing

1. Load balancer Creation
2. Internal and external load balancer
3. Load balancing protocols
4. Security groups
5. Health check
6. Cross-zone load balancing

Auto Scaling

1. Introduction to Auto Scaling?
2. Auto scaling Components
3. Benefits of auto scaling
4. Launch configuration
5. Configuration of auto scaling policies
6. Advantages of using auto scaling with ELB

Network & Security

1. Security Groups
2. Elastic IPs
3. Key Pairs
4. Network Interfaces

Elastic Beanstalk

1. Deploy, manage, scale an application
2. How management complexity are reduced
3. Workflow of Elastic Beanstalk
4. Create Application
5. Launch Environment
6. Manage Environment
7. Modifying the properties of the deployment

Networking Services

Amazon Virtual Private Cloud (VPC)

1. What is Amazon VPC?
2. VPC Essentials
3. Default and Non-default VPC
4. VPC Networking and ACL
5. Security Groups
6. DNS and DHCP Options Sets
7. VPC Peering and Endpoints
8. Subnet Routing
9. VPC Internet Gateway
10. Elastic IP addresses and network interfaces
11. VPC integration with many other AWS services
12. Creating a NAT instance in a VPC
13. Configuring a Web application in VPC

Amazon Route 53

1. Route 53 as your DNS service
2. Using Traffic Flow
3. Route 53 Health Checks
4. Configuring DNS Failover
5. Latency Based Routing
6. Weighted Routing Policies

Cloud Front

Storage & Content Delivery Services

Amazon S3

1. Storage
2. Data as objects
3. Lifecycles of S3
4. Managing Buckets
5. Accessing S3 storage via tools
6. Creation of a static website using S3 storage

Amazon Glacier

1. Low-cost storage service
2. Storage for data backup and archival
3. Pricing model for Glacier storage
4. Working with vaults and archives

EFS Elastic File System

Security & Identity Services

1. Identity Access Management (IAM)
2. IAM Features
3. Getting Started with IAM
4. Creation of user, groups, roles
5. Managing policies
6. Credential Report
7. IAM Console and the Sign-in Page

Database Services

Relational Database Service (RDS)

1. RDS Essentials
2. Launching RDS instance
3. Selecting the Engine
4. Configuring the Database Engine
5. Managing RDS Database
6. Setting up automatic backups
7. Authorizing access to the DB

DynamoDB (NoSQL Service)

1. DynamoDB overview
2. What is NoSQL database?
3. How It Works
4. Using the DynamoDB Console
5. Creating Tables and Loading Sample Data
6. Query and Scan Operations in DynamoDB

Management Tools

Amazon CloudWatch

1. Amazon CloudWatch Architecture
2. List of services monitored by CloudWatch
3. Collect and track metrics
4. Monitoring memory and disk Metrics
5. Monitoring logs, Graphs
6. Set Alarms

Cloud Formation

1. Building AWS infrastructure as a code
2. Design a template
3. Create a Stack

4. Create a Template from your Existing Resources

Cloud Trail

Application Services

Amazon Simple Email Service (SES)

1. Simple email service overview
2. Configuring Amazon email service
3. Amazon SES and Deliverability
4. Amazon SES Email-Sending Process
5. Email format and Limits of SES Amazon

Simple Queue Service (SQS)

1. Simple Queue service overview
2. SQS for background work task
3. Creating a Queue
4. Confirming the Queue exists
5. Add a permission to the Queue

Amazon Simple Notification Service (SNS)

1. Simple Notification Service overview
2. Publishers and subscribers
3. Subscribing to topic via Email