



*All the concepts covered with deep lectures followed by practical Demos along with frequently asked interview oriented questions.*

***Project work is given at the end of the training***

***Sessions Cover (Admin - Architect – DevOps)***

## **1. Introduction to AWS**

- a. What is Cloud Computing
- b. Advantages of Cloud Computing
- c. Cloud services - IaaS, SaaS & PaaS
- d. Who should learn AWS
- e. Opportunities in cloud
- f. Job roles in Cloud

## **2. Networking**

- a. VPC (Virtual Private Cloud)
- b. Private & Public Subnets
- c. Internet Gateways
- d. VPC Wizards
- e. Route Tables & Routes
- f. Elastic IPs
- g. Securing VPC
- h. Security groups & NACLs
- i. VPC peering
- j. VPC Access Methods
- k. VPN
- l. Direct Connect
- m. NAT instance & NAT Gateway

## **3. EC2 (Elastic Compute Cloud)**

- a. EC2 Instances
- b. Amazon Machine Images

- c. Instance Types, generations & sizes
  - i. On-Demand Instances
  - ii. Spot Requests
  - iii. Scheduled Instances
  - iv. Dedicated Hosts
- d. Improving performance of EC2
- e. Migrating EC2 to different regions

#### **4. EBS (Elastic Block Store)**

- a. Volume Types
  - i. General Purpose SSD
  - ii. Provisioned IOPS
  - iii. Cold HDD
  - iv. Throughput Optimized HDD
  - v. Magnetic
- b. Creating Snapshots
- c. Creating volumes from snapshots
- d. Resizing volumes
- e. Migrating volumes to another regions
- f. Securing EBS volumes
- g. Instance store

#### **5. Elastic Load Balancer (ELB)**

- a. Application Load Balancer
- b. Classic Load Balancer

#### **6. Auto Scaling**

- a. Launch Configuration
- b. Setting up Auto scaling
- c. Integration with cloud watch

#### **7. IAM (Identity & Access Management)**

- a. User & Service management
- b. Managing passwords
- c. Managing users, groups, roles
- d. Policies
- e. Identity Providers

- f. Activating Multi Factor Authentication
- g. Identity federation
- h. Cross Account Access
- i. Giving API,CLI SDK based access
- j. Setting up AWS command line interface

## **8. Simple Services**

- a. Simple Queue Service (SQS)
- b. Simple Email Service (SES)
- c. Simple Notification Service (SNS)

## **9. Cloud Watch & Trusted Adviser**

- a. Basic & Detailed Monitoring of AWS services
- b. Creating custom Dashboards
- c. Namespaces
- d. Add widgets
- e. Setting up alarms
- f. Events, Rules & Metrics
- g. Configuring alerts
- h. Integrating with auto scaling and EC2 actions
- i. Trusted Adviser

## **10. RDS (Relational Database Service)**

- a. Oracle, MySql, MariaDB
- b. OLTP
- c. Dynamo DB
- d. Taking automated Backups
- e. Setting up multi A-Z
- f. Configuring Read Replicas
- g. Improving performance of RDS
- h. Elastic Cache
  - i. Redis
  - ii. Memcached
- i. Redshift for data warehousing

## **11. AWS Storage services**

- a. S3 (Simple Storage Service )

- b. Storage types
  - i. Standard Storage
  - ii. Standard - Infrequently Accessed
  - iii. Reduced redundancy
- c. Encrypting objects
- d. Uploading, deleting & downloading objects
- e. Versioning
- f. Life cycle management
- g. Eventually moving to cheap storage and expiring objects
- h. Logging
- i. Static website hosting
- j. Cross-region replication
- k. Events
- l. Glacier

## **12. Cloud Front CDN (Content Delivery Network)**

- a. Edge location
- b. Origin
- c. Configuring CDN
- d. Improving application performance

## **13. Cloud Formation**

- a. Infrastructure as Code
- b. Understanding JSON & yaml
- c. Automating AWS resources
- d. Designing Templates
- e. Debugging Templates
- f. Functions ( Base64, FindInMap, GetAttr, GetAZs, If, Join, Select)

## **14. DevOps & Developer Tools in Cloud**

- a. Code commit, Code build
- b. Code pipeline, Code deploy
- c. Ops Work (Chef integration)
- d. EC2 Container Service (Docker Integration)
- e. Improving application performance
- f. Elastic beanstalk & Jenkins integration