



Certified

Solutions Architect - Associate

Duration: 60 Hours

Training Journey

| | | | | | | |
|---------------------|------------------------------------|--|-----------------------------------|---------------------------|-----------------------------------|-------------------|
| Good Course Content | Self-Prepared each topic Soft Copy | Each topic Theory Discussion(good for interview) | Hands on/practical –(80 to 90) % | Test/ Quiz/group Activity | Resume preparation/Mock Interview | Real Time Project |
|---------------------|------------------------------------|--|-----------------------------------|---------------------------|-----------------------------------|-------------------|

Major topics

| Compute | Storage | Database | Networking | Troubleshooting | New topic Discussion |
|--|------------------------------|------------------|------------------------------|--|---|
| EC2-Instance EC2-EBS EC2-ELB Autoscaling ENI Migration Lightsail Lambda Elastic Beanstalk | S3 EFS Glacier | RDS Dynamo dB | VPC Cloudfront Route53 | Troubleshooting in every topic based on real time issues | AWS Trusted Advisor, Kinesis, Transcoder, Redshift, ElastiCache, Snowball. Single Sign on |
| | Management | Security | Application Integration | Additional Topics | |
| | Cloudwatch Cloudformation | IAM | SNS SQS | Migration VPN AWS D | |

Topics in Detail

Cloud Computing

- 1) Cloud Computing Introduction
- 2) On premise datacenter vs Cloud Computing
- 3) Cloud Computing Service providers
- 4) Virtualization
- 5) Cloud Computing Service Model
- 6) Cloud Computing Deployment Model

AWS Introduction

- 1) About AWS
- 2) Uses
- 3) Reliability
- 4) Regions
- 5) Availiblity Zone
- 6) Edge Location
- 7) Creating AWS Account
- 8) Free tier limit
- 9) AWS solution architect(Associate) Course content

AWS Billing

- 1) AWS Pricing Strategies
- 2) Instance pricing model
- 3) AWS Free Tier Eligible
- 4) Estimating Amazon EC2 costs
- 5) AWS Calculator
- 6) AWS Budget
- 7) AWS Billing and Cost Management

EC2 Instance

- 1) EC2 Introduction
- 2) Instance –windows, Linux, HTTP, Adding script, Password Authentication
- 3) Tagging
- 4) Launch template
- 5) Elastic IP
- 6) Security group

7) Keypair

8) ENI

9) Customize AMI – Backup Restore, Migration

EC2 EBS

1. EBS Introduction

2. Creating Volume

3. Attaching Volume

4. Making partition and accessing it

5. Detach and attach to other instance

6. Creating snapshot

7. Create volume in other subnet using snapshot

8. Attaching to other instance

9. Modifying Volume

10. Migrating volume from one region to other

11. Migrating volume from one account to other

12. Modifying Instance

13. Troubleshoot lost key pair of linux instance

EC2 ELB

1) ELB Introduction

2) CLB -- with linux and windows

3) ALB -- with linux and windows

4) Configure log files in S3 bucket

EC2 Autoscaling

1) Autoscaling Introduction

2) Autoscaling Configuration

3) Scale in

4) Scale out

5) Integrating Autoscaling with ALB

Simple Storage Service (S3)

- 1) S3 Introduction
- 2) Creating Bucket
- 3) Uploading different files and accessing it
- 4) Cross region replication (CRR)
- 5) Versioning
- 6) Bucket Policy
- 7) Bucket ACL
- 8) AWS Free tier limit

IAM

- 1) IAM Introduction
- 2) Users
- 3) Creating users with different policies
- 4) Password types
- 5) MFA
- 6) Policies –default and custom
- 7) Role – default and custom
- 8) Group

AWS CLI

- 1) AWS CLI Setup Introduction
- 2) CLI setup AWS Instance – IAM user credential or IAM role
- 3) CLI setup Local server – IAM user credential or IAM role
- 4) S3 operation with CLI
- 5) EC2 instance operation with CLI
- 6) High Availability Lab

Elasticbean stalk(PAAS)

- 1) Paas Introduction
- 2) Elasticbean stalk introduction
- 3) Deploying PHP Application
- 4) Accessing
- 5) Monitoring

6) To check the instance and s3 bucket

7) Terminating Application

Lightsail

1) Paas Introduction

2) Lightsail introduction

3) Deploying wordpress Application

4) Accessing

5) Management in Lightsail

6) Terminating

RDS

1) Paas Introduction

2) Traditional DB and AWS DB

3) RDS Introduction

4) Deploying mysql – accessing through linux and windows

5) Deploying mssql server – accessing through windows

6) Automatic backup

7) Deleting RDS

8) RDS Integration with S3 bucket

Dynamodb

1) Paas Introduction

2) Dynamodb Introduction

3) Creating table

4) Creating Items

5) Backup

6) Integrate dynamodb with lambda and s3 bucket

SNS

1) Messaging service importance

2) Creating topics

3) Create subscription

4) Confirm subscription

5) Publish message

Cloudwatch

1) Monitoring and managing tool introduction

2) Configure Cloudwatch alert to get notification for each and every activity of EC2 console.

3) Configure Cloudwatch alarm to stop the instance in case cpu utilization cross 80% of the usage

4) Create a metric graph to monitor CPU utilisation of webserver instance.

5) Create a metric graph to monitor Network in out utilisation of ftp instance.

Lambda

1) Introduction to serverless technology - Lambda

2) Create two Lambda function to start and stop EC2 Instance

3) Create three Lambda function to start, stop and terminate EC2 Instance and Add with Cloudwatch to trigger it after a fixed duration of creation—Additionally add SNS topic to get notification

4) Create Lambda function to start and stop EC2 Instance and Add with Cloudwatch ---use UTC time

5)) Create Lambda function to get trigger from s3 bucket and store the data in dynamodb.

EFS

1) EFS Introduction

2) Creating EFS

3) Manage Network

4) Attach to EC2 Instance manually

5) Attach to EC2 Instance through script

6) Attach to EC2 Instance aws console

VPC

1) VPC Introduction

2) Create 2 VPC with one subnet in Mumbai.

3) Launch one windows server in both VPC and try to connect internally each other using RDP and HTTP.

4) VPC peering same region.

5) VPC peering different region different account.

6) Create public and private Network.

7) Accessing DBserver using Webserver.

- 8) SG and ACL
- 9) Using multi region VPC with ALB and EFS

Cloudformation

- 1) Introduction to IaC
- 2) How to Use cloudformation sample template
- 3) Create a S3 bucket using cloudformation
- 4) Configure Wordpress server using cloudformation.
- 5) Configure Lamp Server
- 6) Create EC2 Instance using cloudformation.

Cloudfront

- 1) CDN Introduction
- 2) CDN configuration with S3 bucket
- 3) Geolocation – blacklist and whitelist
- 4) Accessing CDN
- 5) Speed evaluation

Route53

- 1) DNS Introduction
- 2) Registering new domain in freenom.com
- 3) Host Domain name in AWS Route53
- 4) Map domain name with Instance IP
- 5) Map domain name with load balancer link
- 6) Map domain name with S3 bucket link
- 7) Routing Introduction
- 8) Configure Routing Policies- Latency and failover
- 9) Configure failover with common storage EFS

VM Migration

- 1) What is Migration
- 2) When to migrate
- 3) Migrate condition
- 4) VM migration

5) DB Migration

VPN

- 1) What is VPN
- 2) Use cases
- 3) Remote Access connection
- 4) Site to site connection

AWS Active directory

- 1) Introduction
- 2) Configuration
- 3) Managed Server Configuration

