Amazon Web Services (AWS)

Duration: 50 Hours

Section 1: Fundamentals of AWS Cloud Computing
❑ Introduction to Cloud Computing
❑ Cloud Environment Architecture
❑ Cloud Computing Models
❑ Introduction to Amazon Web Services
❑ AWS Global Infrastructure

Section 2: Elastic Compute Cloud
❑ Launching our first EC2 instance
❑ EC2 instance types & Pricing Models
❑ Creating AMI and Image Templates
❑ Understanding Security Groups - a Server side Firewall

Section 3: Virtual Private Cloud
❑ Introduction to Network Switches & Virtual Private Cloud
❑ VPC & Subnets
❑ Private and Public Subnets
❑ Internet Gateways, VPC Peering & NAT Gateways
❑ VPN Setup
❑ IP Addressing in AWS

Section 4: Storage
❑ Introduction to Block & Object storage mechanism
❑ Introduction to Elastic Block Store - EBS
❑ EBS Snapshots
❑ EBS Volume Types
❑ Instance Store Volumes
❑ Introduction to Simple Storage Service (S3)
❑ Features of S3
❑ Storage Types

- ❏ Static Website Hosting
- ❏ Versioning
- ❏ Life Cycle Policy
- ❏ Cross Region Replication
- ❏ Encryption
- ❏ Basics of Athena
- ❏ Introduction to EFS
- ❏ Connect a drive via network
- ❏ Share the drive among multiple servers

Section 5: Elastic Load Balancers and Elasticity
- ❏ Understanding High Availability Configuration
- ❏ ELB Configuration with Classic and Application Load Balancers
- ❏ Auto Scaling

Section 6: Identity & Access Management
- ❏ Understanding the IAM Policies
- ❏ IAM User, IAM Policy and IAM Role

Section 7: Databases
- ❏ Introduction to Relational Databases
- ❏ Creating our first database structure in MySQL
- ❏ Getting started with DynamoDB
- ❏ Know about ElastiCache

Section 8: Decoupling Applications
- ❏ Amazon SQS
- ❏ Amazon SNS
- ❏ Amazon SES
- ❏ Kinesis Overview

Section 9: Domain Name System
- ❏ Introduction to DNS

- ❏ Understanding DNS Records
- ❏ Introduction to Route53
- ❏ Register a Domain using Route 53
- ❏ Manage DNS Hosts

Section 10: AWS CloudFront
- ❏ Introduction to CloudFront
- ❏ CloudFront with S3
- ❏ CloudFront Advanced Concepts

Section 11: AWS ECS
- ❏ Getting Started with Containerization
- ❏ ECS Services and Tasks
- ❏ Load Balancing in ECS
- ❏ ECS Scaling

Section 12: AWS Storage Extras
- ❏ AWS Snowball
- ❏ Storage Gateways
- ❏ Hands on API Gateways

Section 13: Serverless Computing
- ❏ Serverless Introduction
- ❏ Lambda
- ❏ Setting up Server Auto Start with a Lambda Function
- ❏ Elastic Beanstalk
- ❏ Host a Sample PHP website using Elastic Beanstalk

Section 14: AWS CLI and SDK
- ❏ Getting Started with AWS CLI
- ❏ AWS CLI setup on EC2 instances
- ❏ Connect EC2 instance with other AWS services like S3 or SNS or SES

Section 15: AWS Encryptions

- ❏ AWS Security
- ❏ KMS Overview
- ❏ SSM Parameter Store
- ❏ CouldHSM

Section 16: Migration Service and Disaster Recovery
- ❏ Database Migration Services
- ❏ DataSync Overview
- ❏ AWS Backups

Section 17: Monitoring
- ❏ Understanding CloudWatch
- ❏ Setup Alarms for Matrix changes
- ❏ Auditing AWS environment with CloudTrail
- ❏ Schedule Event Rules using Target based services

Section 18: Other Services
- ❏ AWS Key Management Service
- ❏ Systems Manager Parameter Store