

Syllabus

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/Hibernet
- ❑ 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, Redshift

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
- CloudHSM

Section 16: Migration Service and Disaster Recovery

- Database Migration Services
- DataSync Overview
- AWS Backups
- Hands on API Gateways

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Section 17: Monitoring

- ❑ Understanding CloudWatch
- ❑ Setup Alarms for Metric 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