

✚ Introduction to Cloud Computing

- What is Cloud computing?
- Introduction to Cloud Service Models
- Why Cloud computing
- A Utility model for Cloud
- Problems with Traditional Computing
- Knowledge Check

✚ AWS Overview

- What is AWS
- History and Evolution of AWS
- AWS free tier-Limits and usages
- Introduction to AWS Management Console
- Overview of AWS Products and Services
- Knowledge Check

✚ Elastic Compute Cloud essentials

- Regions and availability zones
- Amazon Machine Images
- Pricing Model in EC2 Instances
- Deciding between on-demand instances, spot instances, reserved instances, scheduled instances& dedicated Hosts.
- EC2 Reserved instances Market Place
- Knowledge Check

✚ EC2 Instances

- Building EC2 windows & Linux Instances
- Working with Security Groups
- Assigning Elastic IP's
- Creating your own AMI
- Placement Group
- Knowledge Check

+ Elastic Block Store (EBS)

- Creating and deleting Volumes
- Attaching and detaching volumes and increasing the volume size
- Mounting and un-mounting the attached volume
- Creating snapshots
- Knowledge Check

+ Elastic Load Balancer

- Creating a Load Balancer
- Internal and External Load Balancer
- Security groups for the load Balancer
- Configure health check for the Load Balancer
- Adding multiple instance for the Load Balancer
- Cross zone Load Balancing
- Knowledge Check

+ Auto Scaling

- What is Auto Scaling
- Auto Scaling components
- Creation of Launch Configuration
- Configuration of Auto scaling policies based on the Load on EC2 Instance
- Advantages of Auto Scaling with Elastic Load Balancer (ELB)
- Knowledge Check

+ Amazon Simple Storage Service (S3)

- Creating and deleting buckets
- Adding and deleting objects
- Working with permissions of S3
- Life-cycles in S3
- Hosting a static website using S3 Storage
- Knowledge Check

+ Identity and Access Management

- What is IAM, IAM Features & Resources
- IAM Users, Groups & Policies
- IAM Roles
- IAM Identity Federation
- IAM Encryption using KMS
- KMS Features & Resources

+ Virtual Private Cloud (VPC)

- Creating a New VPC
- Subnets, Route Tables, NACL's & Security Groups
- Creation of Internet Gateway & Connecting to instances in the gateway
- VPN & Direct Connect
- Knowledge Check

+ Rational Database Service (RDS)

- Discussion on types of Databases available in AWS
- Creating Database Engine
- Configuring Database Engine
- Setting up automatic backup's
- Knowledge Check

+ Amazon DynamoDB

- What's is DynamoDB
- SQL vs NoSQL
- Creation of DynamoDB table
- Primary Concept
- Insertion, Search & delete in DynamoDB
- Capacity Provisioning
- Knowledge Check

+ Cloud Watch

- Monitoring the AWS Service Health Dashboard
- Debugging Cloud related issues
- Getting Statistics for specific EC2 Instance
- Setting up notifications

+ Simple Notification Services (SNS)

- What is SNS
- SNS Topic Delivery
- Creation of a topic & Subscription
- Setting notification for EC2 instance changes

+ Simple Queue Service (SQS)

- About SQS
- Types of SQS queues
- Queuing Chain Pattern
- SQS Key Features

+ Elastic Beanstalk

- Creation of Web-App using Elastic Beanstalk
- Building a sample application using Beanstalk
- Modifying the properties of the deployment

+ Amazon Route53

- What is DNS and Route53
- Understanding DNS
- What are different Route53 policies

+ Cloud Formation

- Building AWS infrastructure as a code
- CloudFormation Use case
- How does AWS CloudFormation work?
- What is a stack?
- Utilization of templates

+ AWS Lambda

- What is Serverless Computing?
- Amazon Lambda (faas)
- Features of AWS Lambda
- Creation of Lambda Functions
- Example of how Lambda trigger a service

+ EFS (Elastic File System)

- Creating Elastic File System

+ DevOps Tools Overview

- What is DevOps in Cloud
- Code Pipeline
- Code Commit
- Code Build
- Code Deploy