Amazon Web Services (AWS)
Training Objectives
- Compute (EC2)
- Storage (S3, EBS, EFS, Storage Gateway and Snowball)
- Database (RDS, DMS and Redshift)
- Network and Content Delivery (Route 53, VPC and Cloud Front)
- Management Tools (Cloud Watch, Cloud Formation and Cloud Trail)
- Security & Identity Compliance (IAM, Trusted Advisor, Config andInspector)
- Application Services (SWF and Elastic Transcoder)
- Messaging (SNS, SQS and SES)
- Developer tools (Code Commit, Code Build, Code Deploy and Code Pipeline)

Basic Concepts and Elastic Compute Cloud (EC2)
- Introduction
- Cloud Computing
- Signing Up For a Free Tier Account
- Free Tier Limitations
- Creating a Billing Alarm
- AWS Global Infrastructure
- Accessing Global Infrastructure via ManagementConsole
- Elastic Compute Cloud (EC2)
- Amazon Machine Image (AMI)
- Security Groups
- AWS Certificate Manager (ACM)

Getting Started with Amazon EC2 Linux Instances
- Choosing AMI, Instance Type & Configuring InstanceDetails
- Configuring Advanced Details
- Configuring Storage, Tag, Security Group & Key Pair
- Connecting to Linux Instance from Mac
- Connecting to Linux Instance from Windows PC

Getting Started with Amazon EC2 Windows Instances
- Launching a Windows Instance

- Getting connected to Windows Instance from Mac
- Getting Connected to Windows Instance fromWindows PC

Public IPs vs. Elastic IPs
- Static Behaviour of Elastic IPs
- Performing Manual Failover using Elastic IPs
- Understanding Elastic IP Charges

An Introduction to Command Line Interface (CLI)
- Install the AWS Command Line Interface on MicrosoftWindows
- Configure the AWS Command Line Interface

Launch an Instance via Command Line Interface
- Create a security group and define its inbound rules
- Create a key pair and download the private key
- Launch an EC2 Instance
- Load Balancer
- Overview of Load Balancer
- Creating Internet-Facing ELB—>Steps
- Creating SGs for ELB and EC2 Instances
- Selecting a LB Type and Defining It
- Assigning SG to ELB & Uploading SSL Certificate
- Configuring Health Check for Our EC2 Instances
- Registering EC2 Instances and Tagging

Auto Scaling
- An Introduction to Auto Scaling• Benefits of Auto Scaling
- Components of Auto Scaling
- Auto Scaling Basic Lifecycle
- Creating Launch Configuration
- Start Configuring Our ASG
- Configuring Advanced Details
- Configuring Scaling Policies
- Configuring Notifications, Reviewing and Launching Auto Scaling Group
- Testing our Auto Scaling Group

- Setting Up a Scaled & Load Balanced App - Configuring Schedule Based Policies
- Setting Up a Scaled & Load Balanced Application via CLI

Virtual Private Cloud (VPC)
- VPC Essentials
- Subnets
- Other Basic Concepts
- Default vs. Non-Default VPC
- Internet Gateway (IGW)
- NAT Gateway
- Route Tables
- Building our First Non-Default VPC
- Access Control List (ACL)
- Configuring our Access Control List
- Overview of VPC Peering
- VPC Peering Configuration

Route 53
- Overview of Route 53
- Benefits and Functionalities of Route 53
- Hosted Zones, Name Servers and SOA
- Routing domain's traffic to an instance in a VPC
- Routing our domain's traffic towards the Load Balancer
- Performing DNS failover using the Health Check feature

Identity & Access Management (IAM)
- An Introduction to Identity and Access Management(IAM)
- Overview of Roles
- Creating Users
- Signing In On Behalf Of Sub Accounts
- Creating and Managing Groups
- Implementation of Roles
- Password Policy
- Enabling Multi-Factor Authentication

Elastic Block Store (EBS) - Volumes
- An Introduction to Elastic Block Store(EBS)
- Benefits of EBS Volumes
- Amazon EBS Volume Types
- General Purpose SSD (gp2) Volumes

- Provisioned IOPS SSD (io1) Volumes
- Throughput Optimized HDD (st1) Volumes
- Cold HDD (sc1) Volumes
- Magnetic Volumes
- Attaching EBS Volumes via AWS Management Console
- Creating EBS Volumes via Command Line Interface(CLI)
- Attaching EBS Volumes via Command Line Interface(CLI)
- Making an EBS Volume Available for Use
- Expanding the Storage Space of an EBS Volume on Windows
- Viewing Volume Information
- Detaching an EBS Volume from an Instance via AWS Management Console
- Detaching an EBS Volume from an Instance via Command Line Interface(CLI)
- Deleting an EBS Volume

Elastic Block Store (EBS) - Snapshots
- An Introduction to Snapshots
- Creating Snapshots via AWS Management Console
- Creating Snapshots via Command Line Interface (CLI)
- Viewing Snapshot Information
- Creating Volumes from Snapshots via AWSManagement Console
- Creating Volumes from Snapshots via Command LineInterface (CLI)
- Deleting EBS Snapshots
- Copying EBS Snapshot via AWS Management Console
- Copying an EBS Snapshot via Command Line Interface(CLI)
- Overview of Sharing an Amazon EBS Snapshot
- Sharing an EBS Snapshot via AWS Management Console
- Sharing an EBS Snapshot via Command Line Interface(CLI)

Simple Storage Service (S3) and Glacier
- Buckets and Objects

- Creating Bucket and Uploading Objects
- Editing Permissions for S3 Bucket
- Hosting a Static Website
- Versioning
- Lifecycle
- Cross-Region Replication
- Overview of Glacier
- Creating Vault via AWS Management Console
- Creating Vault via Command Line Interface (CLI)

Database
- Introduction to Relational Database Service (RDS)
- DB Subnet Group
- Configuring Database and EC2 Security Groups
- VPC and RDS
- Creating a DB Instance Running the MySQL DatabaseEngine
- Connecting to our RDS DB Instance via MySQLWorkbench
- Introduction to DynamoDB
- Creating an Example Table in DynamoDB

CloudFormation, Elastic Beanstalk and OpsWorks
- An Introduction to CloudFormation
- Deploying a Load-Based Auto Scaling Architecture Using CloudFormation Sample
- Elastic Beanstalk
- OpsWorks

Simple Notification Service (SNS) and Cloudwatch
- Overview of SNS
- Simple Notification Service Setup
- Cloudwatch

Storage Gateway and Snowball
- An Introduction to Storage Gateway
- Gateway-Stored Volume Architecture
- Gateway Virtual Tape Library (VTL)
- AWS Import/Export Snowball

DevOps Tools Overview
- What is DevOps in Cloud
- Code Pipeline
- Code Commit, Code Build
- Code Deploy
- Lambda

Amazon White Papers review
- Security
- Reliability
- Performance Efficiency
- Cost Optimization
- Operational Excellence

Common Troubleshooting Issues and SolutionsTroubleshooting

Connectivity Issues

Disaster Recovery