**Course Name: AWS DevOps Training**

**Mode: Classroom / Online**

**Min :24 hrs**

**Course Introduction:**

AWS DevOps training helps to master the skills necessary to develop, deploy, and maintain applications on the AWS platform. Gain an in-depth understanding of the core principles of the DevOps methodology and use cases applicable to any development scenario.

**Module 1: Introduction to AWS & AWS DevOps**

* Overview of Virtualization
* What is Cloud Computing
* Overview of AWS
* AWS Global Infrastructure – Regions, Zones and Edge Locations
* What is DevOps
* Overview of AWS DevOps

**Module 2: Elastic Compute Cloud & Autoscaling**

• Compute Capacity in the AWS Cloud: Amazon EC2

• Creating instances & Types of EC2 Instances

• Working with AMI

* Security Groups, Key Pairs, Tenancy – Shared vs Dedicated
* Elastic IP vs Public IP
* Elastic Network Interfaces
* Pricing Model
* What is Autoscaling and its benefits
* Lifecycle of Autoscaling
* Autoscaling components and policies.

**Lab 1:** Creating an Amazon EC2 Linux Instance

**Lab2:** Creating an Amazon EC2 Windows Instance

**Lab3:** Maintaining High Availability with Autoscaling

**Module 3: AWS EBS ,EFS & S3**

* Overview of EBS
* EBS Features
* EBS Types – SSD & HDD
* EBS Lifecycle & Snapshots
* Overview of EFS
* Working of EFS
* Setting up and Using EFS
* Working with S3

**Lab1:** Restoring an Amazon EBS Volume from a Snapshot

**Lab2:** Sharing files using EFS

**Lab 3:** Working with S3

**Module 4: AWS Cloudfront**

* Overview of CloudFront
* Working with Web & RTMP Distributions
* Transfer Acceleration in S3

**Lab:** Setting up Web Distribution using CloudFront

**Module 5: Amazon CloudWatch**

* Overview of CloudWatch
* Monitoring using AWS Metrics
* Monitor Custom Metrics
* Monitor and Store Logs
* Set Alarms
* View Graphs and Statistics
* Monitor and React to Resource Changes

**Module 6: AWS CloudFormation**

* CloudFormation Concepts
* Validating CloudFormation Templates
* Deployment Strategies with CloudFormation
* CloudFormation: Stack Policies
* CloudFormation: Update Policy

**Hands-on Lab:** Creating CloudFormation Stack using various methods.

**Module 7: Route 53**

* What is Domain name
* What is DNS Server
* Why we need Route 53
* Functions of Route 53 & Pricing

**Lab1:** Routing Traffic to resources using AWS route 53

**Module 8: Configuration Management: EC2 Systems Manager**

* Resource Groups
* Insights Dashboard
* Inventory
* Automation
* Run Command
* Patch Manager
* Maintenance Window
* State Manager

**Module 9: Run and Manage Web Apps: AWS Elastic Beanstalk**

* Features
* Working with Elastic Beanstalk
* Environment Details
* Intended Usage and Restrictions

**Module 10: ECS (Elastic Container Service) & Elastic Kubernetes Service**

* What is AWS ECS?
* Features of AWS ECS?
* Components of ECS
* Docker Basics for AWS ECS
* ECS Launch Types – EC2 and Fargate
* Overview of EKS
* Working with EKS Clusters
* EKS Networking

**Lab1**: Creating Task Definition, Scheduling Tasks, Configuring Services and Cluster using EC2 & Fargate Launch Types

**Lab 2:** Working with AWS EKS

**Module 11: Serverless Computing: AWS Lambda**

* Overview of Serverless Compute
* How Lambda Works?
* Bring your own code
* Completely automated administration
* Built-in fault tolerance
* Automatic scaling

**Labs:** Working with Serverless Functions

**Module 12: Private Git Hosting: AWS CodeCommit**

* Introducing AWS CodeCommit
* How Does AWS CodeCommit Work?
* How Is AWS CodeCommit Different from File Versioning in Amazon S3?
* How Do I Get Started with AWS CodeCommit?
* Collaboration
* Encryption
* Access Control
* High Availability and Durability
* Unlimited Repositories
* Easy Access and Integration
* Notifications and Custom Scripts

**Module 13:** [**AWS CodeBuild**](https://aws.amazon.com/codebuild/)

* Build and Test Your Code
* Preconfigured Build Environments
* Customize Build Environments
* Configurable Settings
* Specify Build Commands
* Select Compute Type
* Choose Source Integrations
* Continuous Integration and Delivery Workflows
* Security and Permissions
* Monitoring

**Module 14 :**[**AWS CodePipeline**](https://aws.amazon.com/codepipeline/)

* Workflow Modelling
* Parallel Execution
* AWS Integrations
* Pre-Built Plugins
* Custom Plugins
* Declarative Templates
* Access Control

**Module 15: AWS CodeDeploy**

* Introduction & Setup
* CodeDeploy Applications, Deployment Groups and Configurations