

AWS Cloud DevOps (3 Months)

Duration: 3 Months (~120 Hours)

Mode: Live Online / Classroom

Tools & Technologies: CodeCommit, CodeBuild, CodePipeline, CodeDeploy, ECS, EKS, Lambda, API Gateway, CloudFormation, Terraform, CloudWatch, X-Ray

Certifications Prepared: AWS Certified Developer – Associate, AWS Certified DevOps Engineer – Professional

Syllabus

Week 1: Infrastructure as Code (IaC)

- CloudFormation: Templates, Stacks, Parameters
- Terraform: Providers, State, Variables
- Best Practices in IaC
- Hands-on: EC2 + S3 using CloudFormation
- Assignment

Week 2: AWS Developer Tools

- CodeCommit (Git Repo)
- CodeBuild (Automated Builds)
- CodeDeploy (App Deployment)
- CodePipeline (CI/CD Orchestration)
- Hands-on: End-to-End CI/CD pipeline
- Assignment

Week 3: Deployment Strategies

- Blue-Green Deployments
- Canary Releases
- Rolling Updates
- Elastic Beanstalk Intro
- Hands-on: Node.js App Deployment with Blue-Green Strategy
- Assignment

Week 4: Containers on AWS (ECS)

- ECS Cluster Setup (EC2 vs Fargate)
- Task Definitions, Services, Scaling
- Load Balancing for Containers

- Hands-on: Deploy Microservices on ECS
- Assignment
- Mock Interview 1

Week 5: Kubernetes on AWS (EKS)

- EKS Cluster Setup (eksctl)
- Worker Node Management
- IAM Roles for Service Accounts
- Deployments with Helm Charts
- Hands-on: App Deployment on EKS
- Assignment

Week 6: Serverless & Event-Driven

- Lambda Functions & Triggers
- API Gateway Integration
- EventBridge Overview
- Hands-on: Serverless API with Lambda + API Gateway
- Assignment

Week 7: Monitoring & Security

- CloudWatch Logs & Alarms for CI/CD
- X-Ray for Distributed Tracing
- GuardDuty & Inspector for Security
- Hands-on: Monitoring CI/CD Workflows
- Assignment

Week 8: Capstone Project & Interview

- Project: CI/CD Pipeline (CodePipeline + EKS + CloudWatch)
- Resume Prep for DevOps Role
- Assignment
- Mock Interview 2

Learning Outcomes

- Build and manage CI/CD pipelines with CodeCommit, CodeBuild, CodePipeline, and CodeDeploy
- Automate deployments with CloudFormation and Terraform
- Deploy and scale containers with ECS and EKS
- Implement serverless architectures using Lambda and API Gateway

- Prepare for AWS Certified Developer – Associate and AWS Certified DevOps Engineer – Professional