

AWS DevOps & CI/CD Training | DevOps Professional Certification

Module 1 – Introduction to DevOps on AWS

- Overview of DevOps
- DevOps Culture and Automation
- Cloud Application Lifecycle
- CI/CD and Continuous Delivery
- AWS DevOps Ecosystem
- Overview of AWS Developer Tools
- Modern DevOps Architecture

Module 2 – Infrastructure as Code with AWS CloudFormation

- Introduction to Infrastructure as Code (IaC)
- CloudFormation Concepts
- Templates and Resources
- Parameters and Variables
- Stacks and Version Management
- Automated Infrastructure Deployment
- CloudFormation Best Practices

Module 3 – Automated Deployment with AWS CodeDeploy

- Overview of AWS CodeDeploy
- Deployment to Amazon EC2
- Revision Management
- Automated Application Deployment
- Error Handling and Recovery
- Deployment Best Practices

Module 4 – CI/CD with AWS Developer Tools

- Introduction to CI/CD Pipelines
- AWS CodeCommit
- AWS CodeBuild
- AWS CodeDeploy
- AWS CodePipeline
- Build Automation
- Automated Testing
- Continuous Deployment

Module 5 – Microservices and Container Architectures

- Introduction to Microservices

- Distributed Architecture
- Containerization with Docker
- Amazon ECS
- ECS Clusters and Services
- Containerized Task Management
- Deployment and Scaling

Module 6 – Serverless Development and Deployment

- Introduction to Serverless Architectures
- AWS Lambda
- AWS Serverless Application Model (SAM)
- Automated Function Deployment
- Event Management
- Serverless Best Practices

Module 7 – Advanced Deployment Strategies

- Rolling Deployments
- Blue/Green Deployments
- Canary Deployments
- Reducing Production Deployment Risks
- Rollback Management
- Automated Validation

Module 8 – DevOps Security and Governance

- Security in CI/CD Pipelines
- IAM Access Management
- Secrets Management
- Permission Control
- Deployment Validation
- AWS Environment Governance
- DevSecOps Best Practices

Module 9 – Observability and Monitoring

- Introduction to Observability
- Amazon CloudWatch
- Metric Collection
- Log Management
- Alerts and Notifications
- Application Performance Monitoring
- Troubleshooting and Incident Analysis

Module 10 – AWS DevOps Capstone Project

- Creating Automated Infrastructure with AWS CloudFormation
- Setting Up a Source Code Repository
- Building a Complete CI/CD Pipeline

- Automating Tests
- Deploying to Amazon ECS
- Implementing a Blue/Green Deployment
- Monitoring with Amazon CloudWatch
- Integrating Security Controls