
DevOps Engineering on AWS

Duration: 3 Days Course Code: GK1979 Delivery Method: Virtual Learning

Overview:

This course covers key DevOps practices on AWS, including CI/CD, infrastructure as code, microservices, monitoring, and collaboration.

Through hands-on labs, learners build and deploy CloudFormation templates and CI/CD pipelines for EC2, serverless, and container-based applications, including multi-environment deployments. Start your AWS Developer journey by accessing Official AWS e-Learning for FREE. Learn AWS Development Tools Services Overview, AWS Application Services Overview, Introduction to AWS CodeBuild and more.

- **Course Level:** Intermediate

- **Duration:** 3 Days

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Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

This course is intended for: - Developers- DevOps Engineers- SysOps Engineers- DevOps Architects- System Administrators

Objectives:

- **In this course, you will:**
 - Use DevOps best practices to develop, deliver, and maintain applications and services at high velocity on AWS
 - List the advantages, roles and responsibilities of small autonomous DevOps teams
 - Leverage AWS Cloud9 to write, run and debug your code
 - Deploy various environments with AWS CloudFormation
 - Host secure, highly scalable, and private Git repositories with AWS CodeCommit
 - Integrate Git repositories into CI/CD pipelines
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Prerequisites:

Required:

- Intermediate knowledge of administering Linux or Windows systems at the command-line level
- Two or more years of experience provisioning, operating, and managing AWS environments
- Working knowledge of one or more high-level programming languages (C#, Java, PHP, Ruby, Python, etc.)

Recommended:

- Developing on AWS
- Cloud Operations on AWS

Testing and Certification

The DevOps Engineering on AWS course leads to AWS Certified DevOps Engineer - Professional Certification

Follow-on-Courses:

- GK1980 - Advanced Architecting on AWS
- GK4532 - Migrating to AWS
- GK821495 - AWS Well-Architected Best Practices

Content:

Day 1

Module 1: Introduction to DevOps

- What is DevOps?
- Amazon's DevOps journey
- DevOps foundations

Module 2: Infrastructure Automation

- Infrastructure as Code overview
- AWS CloudFormation templates
- Template updates and drift detection
- Demonstration: Stacks, parameters, and resource imports

Module 3: AWS Toolkits

- AWS CLI and SDKs
- AWS SAM CLI and AWS CDK
- AWS Cloud9
- Demo: CLI ; CDK
- Hands-on lab: Provision infrastructure with CloudFormation

Module 4: CI/CD with AWS Dev Tools

- CI/CD pipeline concepts
- AWS CodeCommit, CodeBuild, CodeDeploy, CodePipeline
- Lab: Deploy application to EC2 using CodeDeploy

Module 5: CI/CD Continued

- AWS CodePipeline
- Jenkins integration demo
- Lab: Automating deployments with CodePipeline

Day 2

Module 6: Introduction to Microservices

- Microservices fundamentals

Module 7: Containers ; DevOps

- Docker deployments
- Amazon ECS, ECR, EKS, and Fargate
- Demo: Container CI/CD pipeline

Module 8: Serverless DevOps

- AWS Lambda and serverless workflows
- AWS SAM ; Serverless Application Repository
- AWS Step Functions
- Demos + Lab: Deploy serverless app with CI/CD

Module 9: Deployment Strategies

- Continuous deployment
- AWS deployment approaches

Module 10: Automated Testing

- Testing fundamentals
- Unit, integration, load, and fault tests
- Service integrations Day 3

Module 11: Security Automation

- DevSecOps fundamentals
- Pipeline security practices
- Threat detection tools
- Demo: Security Hub, GuardDuty, Config, Inspector

Module 12: Configuration Management

- Config management concepts
- AWS tooling
- Lab: Blue/green deployments with ECS

Module 13: Observability

- Observability fundamentals
- AWS monitoring tools
- Lab: CI/CD observability automation

Module 14: Reference Architecture (Optional)

- DevOps reference architectures

Module 15: Course Summary

- DevOps practice review
- CI/CD recap
- AWS certification guidance

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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