

AWS Certified DevOps Engineer – Professional (DOP-C02) Course Outline

Exam Code: DOP-C02

Duration: 40–50 Hours

Level: Advanced

Delivery Mode: Online / Offline

Certification Body: Amazon Web Services (AWS)

Target Audience: DevOps Engineers, Cloud Engineers, Solutions Architects, Systems Administrators with 2+ years on AWS

Module 1: Introduction to DevOps on AWS

- What is DevOps and AWS DevOps Philosophy
 - Overview of AWS Developer Tools and DevOps Services
 - AWS Shared Responsibility Model
 - DOP-C02 Certification Overview
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Module 2: SDLC Automation

- Source Control with AWS CodeCommit
 - Build Automation with AWS CodeBuild
 - Continuous Integration with AWS CodePipeline
 - Artifact Management and Versioning
 - Deployment Models (Blue/Green, Canary, Rolling Updates)
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Module 3: Configuration Management and Infrastructure as Code (IaC)

- Introduction to IaC: CloudFormation and AWS CDK
 - Configuration Management with AWS OpsWorks and Systems Manager
 - Automation with AWS CLI, SDKs, and APIs
 - Declarative vs Imperative Infrastructure Management
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Module 4: Resilient Cloud Infrastructure

- Designing for High Availability and Scalability
 - Fault-Tolerant and Self-Healing Architectures
 - Multi-AZ and Multi-Region Deployment Strategies
 - Using Auto Scaling and Load Balancers (ALB, NLB)
 - Monitoring with CloudWatch and Trusted Advisor
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Module 5: Monitoring, Logging, and Performance Tuning

- AWS CloudWatch Logs, Metrics, and Alarms
 - CloudTrail for Governance and Auditing
 - Distributed Tracing with AWS X-Ray
 - Application Performance Monitoring (APM)
 - Cost Optimization and Performance Tuning Strategies
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Module 6: Security, Compliance, and Governance

- IAM Best Practices (Roles, Policies, Permission Boundaries)
 - Secrets Management with AWS Secrets Manager and Parameter Store
 - Secure Access via IAM Federation and SSO
 - Encryption: KMS, CloudHSM, and TLS/SSL
 - Compliance Frameworks and Automated Security Checks
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Module 7: Incident and Event Response

- Designing for Resilience and Disaster Recovery
 - Operational Excellence in the Cloud
 - Automated Response Using AWS Lambda
 - Runbooks and Playbooks with AWS Systems Manager
 - EventBridge for Event-Driven Automation
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Module 8: Exam Preparation & Practice

- Understanding the DOP-C02 Exam Format and Domains
- Hands-On Labs and Case Studies

- Exam Tips and Time Management
- Official AWS Whitepapers and Learning Paths