

AWSC-10 - DEVOPS ENGINEERING ON AWS

Categoria: Amazon Web Services

INFORMAZIONI SUL CORSO



Durata:
3 Giorni



Categoria:
Amazon Web
Services



Qualifica Istruttore:
AWS Authorized
Instructor



Dedicato a:
Professionista IT



Produttore:
AWS

OBIETTIVI

In this course, you will learn to:

- 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
- Design and implement an infrastructure on AWS that supports DevOps development projects
- 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
- Automate build, test, and packaging code with AWS CodeBuild
- Securely store and leverage Docker images and integrate them into your CI/CD pipelines
- Build CI/CD pipelines to deploy applications on Amazon EC2, serverless applications, and container-based applications
- Implement common deployment strategies such as “all at once,” “rolling,” and “blue/green”
- Integrate testing and security into CI/CD pipelines
- Monitor applications and environments using AWS tools and technologies

PREREQUISITI

We recommend that attendees of this course have:

- Previous attendance at the Systems Operations on AWS or Developing on AWS courses
- Working knowledge of one or more high-level programming languages, such as C#, Java, PHP, Ruby, Python
- 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

CONTENUTI

Module 1: Course overview

- Course objective
- Suggested prerequisites
- Course overview breakdown

Module 2: Introduction to DevOps

- What is DevOps?
- The Amazon journey to DevOps
- Foundations for DevOps

Module 3: Infrastructure automation

- Introduction to Infrastructure Automation
- Diving into the AWS CloudFormation template
- Modifying an AWS CloudFormation template
- Demonstration: AWS CloudFormation template structure, parameters, stacks, updates, importing resources, and drift detection

Module 4: AWS toolkits

- Configuring the AWS CLI
- AWS Software Development Kits (AWS SDKs)
- AWS SAM CLI
- AWS Cloud Development Kit (AWS CDK)
- AWS Cloud9
- Demonstration: AWS CLI and AWS CDK
- Hands-on lab: Using AWS CloudFormation to provision and manage a basic infrastructure

Module 5 Continuous integration and continuous delivery (CI/CD) with development tools

- CI/CD Pipeline and Dev Tools
- Demonstration: CI/CD pipeline displaying some actions from AWS CodeCommit, AWS CodeBuild,
- AWS CodeDeploy and AWS CodePipeline
- Hands-on lab: Deploying an application to an EC2 fleet using AWS CodeDeploy

Module 6: Continuous integration and continuous delivery (CI/CD) with development tools (continued)

- AWS CodePipeline
- Demonstration: AWS integration with Jenkins
- Hands-on lab: Automating code deployments using AWS CodePipeline

Module 7: Introduction to Microservices

- Introduction to Microservices

Module 8: DevOps and containers

- Deploying applications with Docker
- Amazon Elastic Container Service and AWS Fargate
- Amazon Elastic Container Registry and Amazon Elastic Kubernetes service
- Demonstration: CI/CD pipeline deployment in a containerized application

Module 9: DevOps and serverless computing

- AWS Lambda and AWS Fargate
- AWS Serverless Application Repository and AWS SAM
- AWS Step Functions
- Demonstration: AWS Lambda and characteristics
- Demonstration: AWS SAM quick start in AWS Cloud9
- Hands-on lab: Deploying a serverless application using AWS Serverless Application Model (AWS SAM) and a CI/CD Pipeline

Module 10: Deployment strategies

- Continuous Deployment
- Deployments with AWS Services

Module 11: Automated testing

- Introduction to testing
- Tests: Unit, integration, fault tolerance, load, and synthetic
- Product and service integrations

Module 12: Security automation

- Introduction to DevSecOps
- Security of the Pipeline
- Security in the Pipeline
- Threat Detection Tools
- Demonstration: AWS Security Hub, Amazon GuardDuty, AWS Config, and Amazon Inspector

Module 13: Configuration management

- Introduction to the configuration management process
- AWS services and tooling for configuration management
- Hands-on lab: Performing blue/green deployments with CI/CD pipelines and Amazon Elastic Container Service (Amazon ECS)

Module 14: Observability

- Introduction to observability
- AWS tools to assist with observability
- Hands-on lab: Using AWS DevOps tools for CI/CD pipeline automations

Module 15: Reference architecture (Optional module)

- Reference architectures

Module 16: Course summary

- Components of DevOps practice
- CI/CD pipeline review
- AWS Certification

INFO

Esame: DOP-C01 - AWS Certified DevOps Engineer Professional

Materiale didattico: Materiale didattico ufficiale AWS in formato digitale

Costo materiale didattico: incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)