



Program szkolenia “DevOps Engineering on AWS”

Day 1

Module 0: Course overview

- Course objective
- Suggested prerequisites
- Course overview breakdown

Module 1: Introduction to DevOps

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

Module 2: 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 3: 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 4: 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

Day 2

Module 4: 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 5: Introduction to Microservices

- Introduction to Microservices

Module 6: 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 7: 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 8: Deployment strategies

- Continuous Deployment
- Deployments with AWS Services

Module 9: Automated testing

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

Day 3

Module 10: 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 11: 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 12: Observability

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

Module 13: Reference architecture (Optional module)

- Reference architectures

Module 14: Course summary

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