



# DevOps Engineering on AWS

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DevOps Engineering on AWS teaches you how to use the combination of DevOps cultural philosophies, practices, and tools to increase your organization's ability to develop, deliver, and maintain applications and services at high velocity on AWS. This course covers continuous integration (CI), continuous delivery (CD), infrastructure as code, microservices, monitoring and logging, and communication and collaboration. Hands-on labs give you experience building and deploying AWS CloudFormation templates and CI/CD pipelines that build and deploy applications on Amazon Elastic Compute Cloud (Amazon EC2), serverless applications, and container-based applications. Labs for multi-pipeline workflows and pipelines that deploy to multiple environments are also included.

### Course Contents

- Module 0: Course overview
- Module 1: Introduction to DevOps
- Module 2: Infrastructure Automation
- Module 3: AWS Toolkits
- Module 4: Continuous integration and continuous delivery (CI/CD) with development tools
- Module 5: Introduction to Microservices
- Module 6: DevOps and containers
- Module 7: DevOps and serverless computing
- Module 8: Deployment strategies
- Module 9: Automated testing
- Module 10: Security automation
- Module 11: Configuration management
- Module 12: Observability
- Module 13: Reference architecture (Optional module)
- Module 14: Course summary

You have access to the labs for another 14 days after the course. This way you can repeat exercises or deepen them individually.

**E-Book** You will receive the original course documentation by Amazon Web Services as an e-book.

### Target Group

- DevOps engineers
- DevOps architects
- Operations engineers
- System administrators
- Developers

### Prerequisites

- Previous attendance at the Cloud 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

Practical lab exercises with the AWS environment are part of the training. In order to be able to carry out these successfully, an internet-capable notebook (Windows, Linux, MacOS) is a prerequisite.

**Important:** Therefore, please bring your notebook to the course! If this is not possible, please contact us in advance.

### This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

[www.expertech-training.com/go/AWDO](http://www.expertech-training.com/go/AWDO)

### Reservation

On our Website, you can reserve a course seat for 7 days free of charge and in a non-committal manner. This can also be done by phone under +49 6074/4868-0.

### Guaranteed Course Dates

To ensure reliable planning, we are continuously offering a wide range of guaranteed course dates.

### Your Tailor-Made Course!

We can precisely customize this course to your project and the corresponding requirements.

Training	Prices, excl. of V.A.T.	
Classes in Germany	3 Days	€ 2,095
Online Training	3 Days	€ 2,095
Date/course venue	Course language German	
28/05-30/05/24 <input type="checkbox"/> Online		

Status 03/08/2024



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### Module 1: The cloud journey

Common off-cloud architecture  
Introduction to Cloud Air  
Monolithic architecture  
Migration to the cloud  
Guardrails  
The six R's of migration  
The Twelve-Factor Application Methodology  
Architectural styles and patterns  
Overview of AWS Services  
Interfacing with AWS Services  
Authentication  
Infrastructure as code and Elastic Beanstalk  
Demonstration: Walk through creating base infrastructure with AWS CloudFormation in the AWS console  
Hands-on lab 1: Deploy your monolith application using AWS Elastic Beanstalk

### Module 2: Gaining Agility

DevOps  
CI/CD  
Application configuration  
Secrets management  
CI/CD Services in AWS  
Demonstration: Demo AWS Secrets Manager

### Module 3: Monolith to MicroServices

Microservices  
Serverless  
A look at Cloud Air  
Microservices using Lambda and API Gateway  
SAM  
Strangling the Monolith  
Hands-on lab: Using AWS Lambda to develop microservices

### Module 4: Polyglot Persistence & Distributed Complexity

Polyglot persistence  
DynamoDB best practices  
Distributed complexity  
Step functions

### Module 5: Resilience and Scale

Decentralized data stores  
Amazon SQS  
Amazon SNS  
Amazon Kinesis Streams  
AWS IoT Message Broker

Serverless event bus  
Event sourcing and CQRS  
Designing for resilience in the cloud  
Hands-on lab: Exploring the AWS messaging options

### Module 6: Security and Observability

Serverless Compute with AWS Lambda  
Authentication with Amazon Cognito  
Debugging and traceability  
Hands-on lab: Developing microservices on AWS  
Hands-on lab 8: Automating deployments with CloudFormation

