



# Developing on AWS

This course is designed to help students design and build secure, reliable and scalable applications based on AWS. This course covers fundamental concepts and basic programming for developing applications in AWS. We will show you how to work with AWS code libraries, SDKs and IDE toolkits to efficiently develop and deploy code on the AWS platform.

## Course Contents

- Module 1: Course Overview
- Module 2: Building a Web Application on AWS
- Module 3: Getting Started with Development on AWS
- Module 4: Getting Started with Permissions
- Module 5: Getting Started with Storage
- Module 6: Processing Your Storage Operations
- Module 7: Getting Started with Databases
- Module 8: Processing Your Database Operations
- Module 9: Processing Your Application Logic
- Module 10: Managing the APIs
- Module 11: Building a Modern Application
- Module 12: Granting Access to Your Application Users
- Module 13: Deploying Your Application
- Module 14: Observing Your Application
- Module 15: Course Wrap-up

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

This course is intended for experienced:

- Software developers
- Solution architects
- IT workers who want to improve their developing skills using AWS Services

## Prerequisites

We recommend that attendees of this course have:

- AWS Technical Essentials
- Working knowledge of AWS core services
- Programming experience in any one of the following languages:
  - o Python
  - o .NET
  - o Java

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

## 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.	
<b>Classes in Germany</b>	<b>3 Days</b>	<b>€ 2,095</b>	
<b>Classes in Austria</b>	<b>3 Days</b>	<b>€ 2,095</b>	
<b>Online Training</b>	<b>3 Days</b>	<b>€ 2,095</b>	
<b>Date/course venue</b>	<b>Course language German</b>		
28/05-30/05/24	Hamburg	10/09-12/09/24	Düsseldorf
28/05-30/05/24	Online	10/09-12/09/24	Frankfurt
11/06-13/06/24	Online	10/09-12/09/24	Online
11/06-13/06/24	Wien	10/09-12/09/24	Online
09/07-11/07/24	München	19/11-21/11/24	Hamburg
09/07-11/07/24	Online	19/11-21/11/24	Online

Status 03/21/2024



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### Module 0: Introductions & Course Map review

Welcome and course outcomes

### Module 1: Architecting Fundamentals Review

AWS Services and Infrastructure

Infrastructure Models

AWS API Tools

Securing your infrastructure

The Well-Architected Framework

### Hands-on lab: Explore Using the AWS API Tools to

#### Deploy an EC2 Instance

### Module 2: Account Security

Security Principals

Identity and Resource-Based Policies

Account Federation

Introduction to Managing Multiple Accounts

### Module 3: Networking, Part 1

IP Addressing

Amazon Virtual Private Cloud (VPC), Patterns and

Quotas

Routing

Internet Access

Network Access Control Lists (NACLs)

Security Groups

### Module 4: Compute

Amazon Elastic Cloud Compute (EC2)

EC2 Instances and Instance Selection

High Performance Computing on AWS

Lambda and EC2, When to Use Which

### Hands-On Lab: Build Your Amazon VPC Infrastructure

### Module 5: Storage

Shared File Systems

Shared EBS Volumes

Amazon S3, Security, Versioning and Storage Classes

Data Migration Tools

### Module 6: Database Services

AWS Database Solutions

Amazon Relational Database Services (RDS)

DynamoDB, Features and Use Cases

Redshift, Features, Use Cases and Comparison with

RDS

Scaling

Caching and Migrating Data

### Hands-on Lab: Create a Database Layer in Your

#### Amazon VPC Infrastructure

### Module 7: Monitoring and Scaling

Monitoring: CloudWatch, CloudTrail, and VPC Flow

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Invoking Events

Elastic Load Balancing

Auto Scaling Options and Monitoring Cost

### Hands-on Lab: Configure High Availability in Your

#### Amazon VPC

### Module 8: Automation

CloudFormation

AWS Systems Manager

### Module 9: Containers

Microservices

Monitoring Microservices with X-Ray

Containers

### Module 10: Networking Part 2

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Hybrid Networking

Route 53

### Module 11: Serverless Architecture

Amazon API Gateway

Amazon SQS, Amazon SNS

Amazon Kinesis Data Streams & Kinesis Firehose

Step Functions

Compare Amazon SQS to Amazon MQ

### Hands-on Lab: Build a Serverless Architecture

### Module 12: Edge Services

Amazon CloudFront

AWS Web Application Firewall (WAF), DDoS and

Firewall Manager

Compare AWS Global Accelerator and Amazon

CloudFront

AWS Outposts

### Hands-On Lab: Configure an Amazon CloudFront

#### Distribution with an Amazon S3 Origin

Module 13: Backup and Recovery

Planning for Disaster Recovery

AWS Backup

Recovery Strategies

### Capstone Lab: Build an AWS Multi-Tier Architecture

Participants review the concepts and services learned in class and build a solution based on a

scenario. The lab environment provides partial solutions to promote analysis and reflection.

Participants deploy a highly available architecture.

The instructor is available for consultation.

Use the Online Course Supplement (OCS) to review

use cases, investigate data, and answer architecting design questions.

