

# Architecting on AWS – Intensive Training («AWSA01»)

This course prepares you to become a AWS Certified Solutions Architect (Associate Level). You will learn how to optimize the use of the AWS Cloud by understanding AWS services and how these services fit into cloud-based solutions.

**Duration:** 3 days

**Price:** 2'500.–

**Course documents:** Digital original AWS courseware

**Vendor code:** AWSA01

## Content

*Architecting on AWS* is for solutions architects, solution-design engineers, and developers seeking an understanding of AWS architecting. In this course, you will learn to identify services and features to build resilient, secure and highly available IT solutions on the AWS Cloud.

Architectural solutions differ depending on industry, types of applications, and business size. AWS Authorized Instructors emphasize best practices using the AWS Well-Architected Framework, and guide you through the process of designing optimal IT solutions, based on real-life scenarios. The modules focus on account security, networking, compute, storage, databases, monitoring, automation, containers, serverless architecture, edge services, and backup and recovery. At the end of the course, you will practice building a solution and apply what you have learned with confidence.

### Day 1

#### Module 1: Architecting Fundamentals

- AWS services
- AWS infrastructure
- AWS Well-Architected Framework
- Hands-on lab: Explore and interact with the AWS Management Console and AWS Command Line Interface

#### Module 2: Account Security

- Principals and identities
- Security policies
- Managing multiple accounts

#### Module 3: Networking 1

- IP addressing
- VPC fundamentals
- VPC traffic security

#### Module 4: Compute

- Compute services
- EC2 instances
- Storage for EC2 instances
- Amazon EC2 pricing options
- AWS Lambda
- Hands-On Lab: Build your Amazon VPC infrastructure

## Day 2

### Module 5: Storage

- Storage services
- Amazon S3
- Shared file systems
- Data migration tools

### Module 6: Database Services

- Database services
- Amazon RDS
- Amazon DynamoDB
- Database caching
- Database migration tools
- Hands-on Lab: Create a database layer in your Amazon VPC infrastructure

### Module 7: Monitoring and Scaling

- Monitoring
- Alarms and events
- Load balancing
- Auto scaling
- Hands-on Lab: Configure high availability in your Amazon VPC

### Module 8: Automation

- AWS CloudFormation
- Infrastructure management

### Module 9: Containers

- Microservices
- Containers
- Container services

## Day 3

### Module 10: Networking 2

- VPC endpoints
- VPC peering
- Hybrid networking
- AWS Transit Gateway

### Module 11: Serverless

- What is serverless?
- Amazon API Gateway
- Amazon SQS
- Amazon SNS
- Amazon Kinesis
- AWS Step Functions
- Hands-on Lab: Build a serverless architecture

### Module 12: Edge Services

- Edge fundamentals
- Amazon Route 53

- Amazon CloudFront
- DDoS protection
- AWS Outposts
- Hands-On Lab: Configure an Amazon CloudFront distribution with an Amazon S3 origin

## Module 13: Backup and Recovery

- Disaster planning
- AWS Backup
- Recovery strategies
- Hands-on Lab: 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.

## Key Learnings

- Identify AWS architecting basic practices
- Summarize the fundamentals of account security
- Identify strategies to build a secure virtual network that includes private and public subnets
- Practice building a multi-tier architecture in AWS
- Identify strategies to select the appropriate compute resources based on business use cases
- Compare and contrast AWS storage products and services based on business scenarios
- Compare and contrast AWS database services based on business needs
- Identify the role of monitoring, load balancing, and auto scaling responses based on business needs
- Identify and discuss AWS automation tools that will help you build, maintain, and evolve your infrastructure
- Discuss hybrid networking, network peering, and gateway and routing solutions to extend and secure your infrastructure
- Explore AWS container services for the rapid implementation of an infrastructure-agnostic, portable application environment
- Identify the business and security benefits of AWS serverless services based on business examples
- Discuss the ways in which AWS edge services address latency and security
- Explore AWS backup, recovery solutions, and best practices to ensure resiliency and business continuity

## Methodology & didactics

This hybrid course comes in 3 instructor-led full day sessions with the instructor supervising the participants live. Each course consists of theory parts with live demos and practical lab exercises. The course can be attended either on-site at a physical Digicomp location or virtually via Zoom. Please also refer to each course's description for specific details regarding the prerequisites and the covered topics.

This course is intended for the following job roles:

- Solution Architect
- Cyber Security

**Why should you attend this specific course?** What are my benefits from taking this course? The **Voice of the Instructor answers these questions**. We have asked our instructor team to write a short text about WHY this course is very relevant for the respective job roles and what you can expect from attending the course. You can find this section in the course description under the «*Additional Information*» section.

## Requirements

We recommend that attendees of this course have attended the following two course (or equivalent knowledge):

- [AWS Cloud Practitioner Essentials – Intensive Training \(«AWSE03»\)](#)
- [AWS Security Essentials – Intensive Training \(«AWSE04»\)](#)
- [AWS Technical Essentials – Intensive Training \(«AWSE01»\)](#)

## Additional information

### Voice of the Instructor

Participating in the «Architecting on AWS» course offers several compelling reasons for individuals interested in designing and implementing solutions on the Amazon Web Services (AWS) platform. Here are some key benefits:

1. **Comprehensive AWS Architecture Knowledge:** The course provides an understanding of AWS services, architectural best practices, and design principles. You'll gain insights into how to architect scalable, reliable, and secure applications and infrastructure on AWS.
2. **Optimal Cloud Solutions:** AWS offers a vast array of services and features, and the course helps you navigate this ecosystem effectively. You'll learn how to select the right AWS services for different use cases, optimizing performance, cost, and scalability.
3. **Resilience and Availability:** Building highly available and resilient systems is critical for businesses. The course covers techniques for designing fault-tolerant architectures using AWS services such as Amazon EC2, Elastic Load Balancing, Auto Scaling, and Amazon Route 53. You'll learn to architect solutions that can withstand failures and ensure high availability.
4. **Security Best Practices:** Security is a top priority in the cloud. The course focuses on AWS security services, identity and access management (IAM), encryption, and network security. You'll understand how to architect secure and compliant solutions on AWS, protecting your data and applications.
5. **Cost Optimization:** AWS provides various pricing models and tools for optimizing costs. The course teaches you how to design cost-efficient architectures by leveraging services like Amazon S3 storage classes, Amazon EC2 instance types.
6. **Performance and Scalability:** AWS offers scalability and elasticity, allowing applications to handle variable workloads. The course covers concepts such as auto scaling, load balancing, and AWS database services, enabling you to architect systems that can scale seamlessly to meet demand.
7. **AWS Well-Architected Framework:** The course introduces the AWS Well-Architected Framework, which provides best practices and guidelines for designing and evaluating architectures. You'll learn how to apply these principles to assess and improve the security, performance, reliability, and cost efficiency of your solutions.
8. **Industry Demand and Career Opportunities:** AWS is widely adopted by organizations of all sizes, resulting in a high demand for skilled architects. By completing this course, you position yourself

as a qualified AWS architect, opening up various career opportunities in the cloud computing industry. 

9. Hands-on Experience: The course includes practical exercises, labs, and real-world scenarios, allowing you to apply the learned concepts in practice. This hands-on experience enhances your understanding and confidence in architecting solutions on AWS.

By participating in the «Architecting on AWS» course, you acquire the knowledge, skills, and practical experience needed to design and implement robust, scalable, secure, and cost-effective solutions on the AWS platform. Whether you are an architect, system administrator, developer, or IT professional, this course equips you with the expertise to leverage AWS services effectively and drive successful cloud deployments.

## Further courses

- Building Batch Data Analytics Solutions on AWS – Intensive Training («AWSB05»)
- Building Data Analytics Solutions Using Amazon Redshift – Intensive Training («AWSB06»)
- Building Streaming Data Analytics Solutions on AWS – Intensive Training («AWSB08»)
- Security Engineering on AWS – Intensive Training («AWSS04»)
- AWS Well-Architected Best Practices – Intensive Training («AWSE08»)
- Advanced Architecting on AWS – Intensive Training («AWSA02»)
- Architecting on AWS – JAM Day («AWSJAM»)
- Designing and Implementing Storage on AWS – Intensive Training («AWSA03»)
- Migrating to AWS – Intensive Training («AWSM01»)
- AWS Cloud Financial Management for Builders – Intensive Training («AWSA08»)

## Any questions?

We are happy to advise you on +41 44 447 21 21 or [info@digicomp.ch](mailto:info@digicomp.ch). You can find detailed information about dates on [www.digicomp.ch/courses-it-provider/amazon-web-services-aws/aws-solutions-architect/course-architecting-on-aws-intensive-training-awsa01](http://www.digicomp.ch/courses-it-provider/amazon-web-services-aws/aws-solutions-architect/course-architecting-on-aws-intensive-training-awsa01)