

# Architecting on AWS (AWS)

NWV\_310 | Expert-Led Live | 5G Core | ⚙️⚙️⚙️

Course Duration: 3 days

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.

## Intended Audience

Architecting on AWS is for solutions architects, solution-design engineers, and developers seeking an understanding of AWS architecting.

## Objectives

After completing this course, the learner will be able to:

- Identify AWS architecting basic practices
- Practice building a multi-tier architecture in AWS
- Compare and contrast AWS storage products and database services based on business scenarios
- Identify the role of monitoring, load balancing, and auto scaling responses based on business needs
- Discuss AWS automation tools that will help you build, maintain, and evolve your infrastructure
- Discuss hybrid networking, network peering, and gateway and routing solutions
- Explore AWS container services for an infrastructure-agnostic, portable application environment
- Explore AWS backup, recovery solutions, and best practices to ensure resiliency

## Course Prerequisites

[AWS Cloud Practitioner Essentials \(AWS\)](#)

## Outline

### 1. Architecting Fundamentals

- 1.1 AWS services and infrastructure
- 1.2 AWS Well-Architected Framework

Exercise: Hands-on Lab: Explore the AWS Management Console and AWS Command Line Interface

### 2. Account Security

- 2.1 Principals and identities
- 2.2 Security policies

### 3. Networking 1

- 3.1 VPC fundamentals and VPC traffic security

### 4. Compute

- 4.1 EC2 instances, storage and pricing
- 4.2 AWS Lambda

Exercise: Hands-On Lab: Build your Amazon VPC infrastructure

### 5. Storage

- 5.1 Amazon S3
- 5.2 Shared file systems

### 6. Database Services

- 6.1 Amazon RDS
- 6.2 Amazon DynamoDB
- 6.3 Database caching and migration tools

Exercise: Hands-on Lab: Create a database layer in your Amazon VPC infrastructure

### 7. Monitoring and Scaling

- 7.1 Alarms and events

### 7.2 Load balancing and auto scaling

Exercise: Hands-on Lab: Configure high availability in your Amazon VPC

### 8. Automation

- 8.1 AWS CloudFormation and Infrastructure management

### 9. Containers

- 9.1 Microservices, Containers, and Container services

### 10. Networking 2

- 10.1 VPC endpoints and VPC peering
- 10.2 AWS Transit Gateway

### 11. Serverless

- 11.1 Amazon API Gateway
- 11.2 Amazon SQS and SNS
- 11.3 Amazon Kinesis
- 11.4 AWS Step Functions

Exercise: Hands-on Lab: Build a serverless architecture

### 12. Edge Services

- 12.1 Amazon Route 53
- 12.2 Amazon CloudFront
- 12.3 DDoS protection
- 12.4 AWS Outposts

Exercise: Hands-on Lab: Configure an Amazon CloudFront distribution

### 13. Backup and Recovery

- 13.1 Disaster planning and recovery strategies
- 13.2 AWS Backup

Exercise: Hands-on Lab: Capstone lab – Build an AWS Multi-Tier architecture

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