

Architecting on AWS

Course AWS-03

3 Days

Instructor-led, Hands on

Course Information

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.

This course is intended for solutions architects, solution-design engineers, developers seeking an understanding of AWS architecting and individuals seeking the AWS Solutions Architect-Associate certification.

At Course Completion

Upon successful completion of this course, students will:

Learn to identify services and features that make up the core of AWS solutions and apply them using the AWS Well-Architected Framework. You'll gain experience designing cloud computing environments that are scalable, secure, and resilient. This hands-on course covers compute services like EC2, database services like RDS and DynamoDB, and modern architectures including containers and serverless architecture. You'll also explore automation tools and monitoring solutions that support the creation of highly available IT solutions, helping you build the skills needed to become an AWS Certified Solutions Architect.

Prerequisites

We recommend that attendees of this course have:

- AWS Cloud Practitioner Essentials classroom or digital training, or Working knowledge of distributed systems
- Familiarity with general networking concepts
- Familiarity with IP addressing
- Working knowledge of multi-tier architectures
- Familiarity with cloud computing concepts

Contact ISInc for more information at 916.920.1700 or by visiting our website at <http://www.isinc.com>

Course Outline

Module 1: Introductions & Course Map Review

- Overview of course structure, AWS certification path, and key learning outcomes

Module 2: Architecting Fundamentals Review

- Explore AWS services and infrastructure models, learn how to identify services and features to build resilient solutions, and review the AWS Well-Architected Framework.
- Hands-on Lab: Deploy an EC2 instance using the AWS CLI.

Module 3: Account Security

- Apply best practices for IAM policies, account federation, and managing multiple AWS accounts.

Module 4: Networking Part 1

- Design AWS networking with VPCs, routing, subnets, NACLs, and security groups to support highly available IT solutions.

Module 5: Compute

- Understand compute options in AWS including EC2 instance types, high-performance computing, and serverless architecture options.
- Hands-on Lab: Build a VPC and deploy EC2 resources.

Module 6: Storage

- Compare AWS storage services including S3, EBS, and EFS. Learn data migration techniques and storage class use cases.

Module 7: Database Services

- Use Amazon RDS, DynamoDB, and Redshift for different database workloads. Learn to build fault-tolerant and scalable database layers.
- Hands-on Lab: Create a highly available RDS instance.

Module 8: Monitoring and Scaling

- Monitor resources using CloudWatch and CloudTrail. Respond to events with automated scaling solutions.

Module 9: Automation

- Automate deployments using AWS CloudFormation and manage resources through AWS Systems Manager.

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Module 10: Containers

- Implement container-based architectures on AWS using ECS and EKS. Explore how containers support modern application development.

Module 11: Networking Part 2

- Dive deeper into AWS networking with VPC endpoints, Transit Gateway, hybrid cloud integration, and Route 53 for DNS.

Module 12: Serverless Architecture

- Build scalable applications using AWS Lambda, API Gateway, SQS, and Step Functions.
- Hands-on Lab: Design and deploy a serverless architecture.

Module 13: Edge Services

- Reduce latency and improve performance using AWS Global Accelerator, CloudFront, and WAF.
- Hands-on Lab: Deploy CloudFront with an S3 backend.

Module 14: Backup and Recovery

- Explore AWS Backup and recovery strategies to ensure business continuity and resiliency in the cloud