



Architecting on AWS

- 5 Days
- Lecture and Hands-on Labs

Course Overview

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.

Review this course online at <https://www.alta3.com/courses/aws-archit>

Who Should Attend

- Solutions architects
- Solution-design engineers
- Developers seeking an understanding of AWS architecting
- Individuals seeking AWS Solutions Architect-Associate certification

What You'll Learn

- Identify AWS architecting basic practices.
- Explore AWS management tools in a lab environment.
- Examine account security using policies.
- Identify elements for building an elastic, secure network.

Outline

Architecting Fundamentals Review

1. AWS Services and Infrastructure
2. Infrastructure Models
3. AWS API Tools
4. Securing your infrastructure
5. The Well-Architected Framework
6. Hands-on lab: Explore Using the AWS API Tools to Deploy an EC2 Instance ##### Account Security
7. Security Principals
8. Identity and Resource-Based Policies
9. Account Federation
10. Introduction to Managing Multiple Accounts ##### Networking Part 1
11. IP Addressing
12. Amazon Virtual Private Cloud (VPC), Patterns and Quotas
13. Routing

14. Internet Access
15. Network Access Control Lists (NACLs)
16. Security Groups ##### Compute
17. Amazon Elastic Cloud Compute (EC2)
18. EC2 Instances and Instance Selection
19. High Performance Computing on AWS
20. Lambda and EC2, When to Use Which
21. Hands-On Lab: Build Your Amazon VPC Infrastructure ##### Storage
22. Shared File Systems
23. Shared EBS Volumes
24. Amazon S3, Security, Versioning and Storage Classes
25. Data Migration Tools ##### Database Services
26. AWS Database Solutions
27. Amazon Relational Database Services (RDS)
28. DynamoDB, Features and Use Cases
29. Redshift, Features, Use Cases and Comparison with RDS
30. Scaling
31. Caching and Migrating Data
32. Hands-on Lab: Create a Database Layer in Your Amazon VPC Infrastructure ##### Monitoring and Scaling
33. Monitoring: CloudWatch, CloudTrail, and VPC Flow Logs
34. Invoking Events
35. Elastic Load Balancing
36. Auto Scaling Options and Monitoring Cost
37. Hands-on Lab: Configure High Availability in Your Amazon VPC ##### Automation
38. CloudFormation
39. AWS Systems Manager ##### Containers
40. Microservices
41. Monitoring Microservices with X-Ray
42. Containers ##### Networking Part 2
43. VPC Peering & Endpoints
44. Transit Gateway
45. Hybrid Networking
46. Route 53 ##### Serverless Architecture
47. Amazon API Gateway
48. Amazon SQS, Amazon SNS
49. Amazon Kinesis Data Streams & Kinesis Firehose
50. Step Functions
51. Compare Amazon SQS to Amazon MQ
52. Hands-on Lab: Build a Serverless Architecture ##### Edge Services
53. Amazon CloudFront
54. AWS Web Application Firewall (WAF), DDoS and Firewall Manager
55. Compare AWS Global Accelerator and Amazon CloudFront
56. AWS Outposts
57. Hands-On Lab: Configure an Amazon CloudFront Distribution with an Amazon S3 Origin ##### Backup and Recovery
58. Planning for Disaster Recovery
59. AWS Backup
60. Recovery Strategies

Labs

- Explore Using the AWS API Tools to Deploy an EC2 Instance
- Build Your Amazon VPC Infrastructure

- Create a Database Layer in Your Amazon VPC Infrastructure
- Configure High Availability in Your Amazon VPC
- Build a Serverless Architecture
- Configure an Amazon CloudFront Distribution with an Amazon S3 Origin

Prerequisites

- Attended AWS Essentials or have equivalent experience
- Working knowledge of distributed systems
- Familiarity with general networking concepts
- Working knowledge of multi-tier architectures
- Familiarity with cloud computing concepts
- AWS Technical Essentials