

## Architecting on AWS (AWS-ARCH)

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### Course Summary

#### Description

This course covers the fundamentals of building IT infrastructure on the AWS platform. Students learn how to optimize the AWS Cloud by understanding how AWS services fit into cloud-based solutions. In addition, students explore AWS Cloud best practices and design patterns for architecting optimal IT solutions on AWS, and build a variety of infrastructures in guided, hands-on activities. The course also covers how to create fledgling architectures and build them into robust and adaptive solutions.

#### Objectives

After taking this course, students will:

- Make architectural decisions based on AWS architectural principles and best practices
- Leverage AWS services to make your infrastructure scalable, reliable, and highly available
- Leverage AWS Managed Services to enable greater flexibility and resiliency in an infrastructure
- Make an AWS-based infrastructure more efficient to increase performance and reduce costs
- Use the Well-Architected Framework to improve architectures with AWS solution

#### Topics

- The Simplest Architectures
- Adding a Compute Layer
- Adding a Database Layer
- Networking in AWS Part 1
- Networking in AWS Part 2
- AWS Identity and Access Management (IAM)
- Elasticity, High Availability, and Monitoring
- Automation
- Caching
- Building Decoupled Architectures
- Microservices and Serverless Architectures
- RTO/RPO and Backup Recovery Setup
- Optimizations and Review

#### Audience

This course is intended for Solutions architects and Solution design engineers

#### Prerequisites

We recommend that attendees of this course have the following prerequisites:

- Courses taken: AWS Technical Essentials
- Working knowledge of distributed systems
- Familiarity with general networking concepts
- Working knowledge of multi-tier architectures
- Familiarity with cloud computing concepts

#### Duration

Three Days