Architecting on AWS

Course Overview

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.

Target Audience

Solutions architects

Solution design engineers

Anyone who needs to understand the scope of cloud architectures

Prerequisites

- AWS Cloud Practitioner Essentials
- Working knowledge of distributed systems
- Familiarity with general networking concepts
- Working knowledge of multi-tier architectures
- Familiarity with cloud computing concepts
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Duration

3 Days

Certifications

AWS Solutions Architect-Associate

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APPLIED TECHNOLOGY ACADEMY

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Course Outline

- **Lesson 1:** Architecting Fundamentals Review
- **Lesson 2:** Account Security
- **Lesson 3:** Networking, Part 1
- **Lesson 4:** Compute
- **Lesson 5:** Storage
- **Lesson 6:** Database Services
- **Lesson 7:** Monitoring and Scaling
- **Lesson 8:** Automation
- **Lesson 9:** Containers
- **Lesson 10:** Networking Part 2
- **Lesson 11:** Serverless Architecture
- **Lesson 12:** Edge Services
- **Lesson 13:** Backup and Recovery

Course Objectives

- Identify AWS architecting basic practices.
- Explore using the AWS management tools: The AWS Console, Command Line Interface (CLI), and CloudFormation in a lab environment.
- Examine the enforcement of accounts security using policies.
- Identify the elements that build an elastic, secure, virtual network that includes private and public subnets.
- Practice building an AWS core networking infrastructure.
- Determine strategies for a layered security approach to Virtual Private Cloud (VPC) subnets.
- Identify strategies to select the appropriate compute resources based on business use-cases.
- Practice building a VPC and adding an Elastic Cloud Compute (EC2) instance in a lab environment.
- Practice installing an Amazon Relational Database Service (RDS) instance and an Application Load Balancer (ALB) in the VPC you created.
- Compare and contrast AWS storage products and services, based on business scenarios.
- Compare and contrast the different types of AWS database services based on business needs.
- Practice building a highly available, auto-scaling database layer in a lab.
- Explore the business value of AWS monitoring solutions.
- Identify and discuss AWS automation tools that will help you build, maintain and evolve your infrastructure.
- Discuss network peering, VPC endpoints, gateway and routing solutions based on use-cases.
- Discuss hybrid networking configurations to extend and secure your infrastructure.
- Discuss the benefits of microservices as an effective decoupling strategy to power highly available applications at scale.
- 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.
- Practice building a serverless infrastructure in a lab environment.
- Discuss the ways in which AWS edge services address latency and security.
- Practice building a CloudFront deployment with an S3 backend in a lab environment.
- Explore AWS backup, recovery solutions, and best practices to ensure resiliency and business continuity.
- Build a highly available and secure cloud architecture based on a business problem, in a project-based facilitator-guided lab.