Architecting on AWS

SAA-C02 (AWS Certified Solutions Architect Associate)

Our Learning Exclusive

- Custom exam prep software and materials
- Exam delivery in classroom with 98% success
- Course specific thinQtank® Learning publications to promote fun exciting learning
- Extended hours of training including immersive hands-on exercises
- WE DO NOT "TEACH THE TEST" We always deliver valuable hands-on experience
- Receive all reading material and study guides when you register
- Courses taught by certified expert AWS engineers

Course Duration

- Three days of instructor-led learning
- 60% lecture, 40% hands-on labs/demonstrations

Prerequisites

- 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

Target Audience

- Solutions architects
- Solution-design engineers
- Developers seeking an understanding of AWS architecting

Exam Information

- SAA-C02 – AWS Certified Solutions Architect Associate

Delivery Methods

- Instructor-Led Training
- Immersive Live-Online Training
- On-Site and Custom Delivery

Exclusive Tools and Learning Package

- Comprehensive video training package
- Video series on top AWS Services EXPLAINED!
- Compiled AWS Digital Learning Library
- Access your course materials (including updates and changes) 24/7
  - Reference your course materials anytime
  - Course content changes and updates are included

amazon web services | Partner Network

AUTHORIZED TRAINING PARTNER

thinQtank® LEARNING

Course Overview

thinQtank® Learning is offering a unique three-day training camp comprised of three days of intense instructor-led learning for Architecting AWS Enterprise Solutions. As with all our AWS Training Experiences - exams are delivered in the classroom.

Through a series of use case scenarios and practical learning, learners learn to identify services and features to build resilient, secure, and highly available IT solutions in the AWS Cloud. Our expert AWS Instructors emphasize best practices using the AWS Well-Architected Framework and guide learners through the process of designing optimal IT solutions, based on real-life scenarios. At the end of the course, learners practice building a solution and apply what is learned with confidence.

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 shows learners the fundamentals of building IT infrastructure on the AWS platform. Learners learn how to optimize the AWS Cloud by understanding AWS services and how they fit into cloud-based solutions. They explore best practices and design patterns to help architect optimal IT solutions on AWS, then build and explore a variety of infrastructures through guided, hands-on activity. Learners learn how to create fledgling architectures and build them into robust and adaptive solutions.

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Course Objectives

In this course, learners will learn how to:

- 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.

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Course Modules and Labs

- Module 1: Architecting Fundamentals Review
  - AWS Services and Infrastructure
  - Infrastructure Models
  - AWS API Tools
  - Securing your infrastructure
  - The Well-Architected Framework
  - Hands-on lab: Explore Using the AWS API Tools to Deploy an EC2 Instance
- Module 2: Account Security
  - Security Principals
  - Identity and Resource-Based Policies
  - Account Federation
  - Introduction to Managing Multiple Accounts
- Module 3: Networking, Part 1
  - IP Addressing
  - Amazon Virtual Private Cloud (VPC), Patterns and Quotas
  - Routing
  - Internet Access
  - Network Access Control Lists (NACLs)
  - Security Groups
- Module 4: Compute
  - Amazon Elastic Cloud Compute (EC2)
  - EC2 Instances and Instance Selection
  - High Performance Computing on AWS
  - Lambda and EC2, When to Use Which
  - Hands-On Lab: Build Your Amazon VPC Infrastructure
- Module 5: Storage
  - Shared File Systems
  - Shared EBS Volumes
  - Amazon S3, Security, Versioning and Storage Classes
  - Data Migration Tools
- Module 6: Database Services
  - AWS Database Solutions
  - Amazon Relational Database Services (RDS)
  - DynamoDB, Features and Use Cases
  - Redshift, Features, Use Cases, Comparison with RDS
  - Scaling
  - Caching and Migrating Data
  - Hands-on Lab: Create a Database Layer in Your Amazon VPC Infrastructure
- Module 7: Monitoring and Scaling
  - Monitoring: CloudWatch, CloudTrail, VPC Flow Logs
  - Invoking Events
  - Elastic Load Balancing
  - Auto Scaling Options and Monitoring Cost
  - Hands-on Lab: Configure High Availability in Your Amazon VPC
- Module 8: Automation
  - CloudFormation
  - AWS Systems Manager
- Module 9: Containers
  - Microservices
  - Monitoring Microservices with X-Ray
  - Containers
- Module 10: Networking Part 2
  - VPC Peering & Endpoints
  - Transit Gateway
  - Hybrid Networking
  - Route 53
- Module 11: Serverless Architecture
  - Amazon API Gateway
  - Amazon SQS, Amazon SNS
  - Amazon Kinesis Data Streams & Kinesis Firehose
  - Step Functions
  - Compare Amazon SQS to Amazon MQ
  - Hands-on Lab: Build a Serverless Architecture
- Module 12: Edge Services
  - Amazon CloudFront
  - AWS Web Application Firewall (WAF), DDoS and Firewall Manager
  - Compare AWS Global Accelerator and Amazon CloudFront
  - AWS Outposts
  - Hands-On Lab: Configure an Amazon CloudFront Distribution with an Amazon S3 Origin
- Module 13: Backup and Recovery
  - Planning for Disaster Recovery
  - AWS Backup
  - Recovery Strategies
- Capstone Lab: Build an AWS Multi-Tier Architecture
  - Participants review the concepts and services learned in class and build a solution based on a scenario. The lab environment provides partial solutions to promote analysis and reflection. Participants deploy a highly available architecture. The instructor is available for consultation.

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