

AWS Certified Solutions Architect – Professional

Course Duration: 30-40Hrs

Course code: SAP-C02

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Course Overview

The AWS Certified Solutions Architect – Professional course is designed for IT professionals and cloud architects who want to master advanced cloud design and architecture. This course focuses on solving complex business problems by building secure, scalable, and cost-optimized AWS solutions. Participant will gain expertise in designing multi-tier applications, enterprise-wide cloud solutions, automation strategies, and hybrid architecture. The course covers key AWS services, security best practices, and cost management techniques to help businesses maximize efficiency and reduce risks.

What You'll Learn

- ❖ By completing this course, you will be able to:
- ❖ Design complex AWS architectures for high availability and scalability.
- ❖ Optimize cost, performance, and security in cloud environments.
- ❖ Implement automation and infrastructure as code using AWS services.
- ❖ Migrate and modernize on-premises applications to AWS.
- ❖ Secure cloud workloads with IAM, encryption, and compliance frameworks.
- ❖ Develop disaster recovery and fault-tolerant solutions.
- ❖ Implement multi-account AWS strategies with security best practices.
- ❖ Prepare effectively for the AWS Certified Solutions Architect – Professional exam.

Target Audience

This course is ideal for:

- ❖ Cloud Architects design large-scale AWS solutions.
- ❖ Solutions Engineers optimizing cloud security, cost, and performance.
- ❖ IT Professionals managing enterprise cloud environments.
- ❖ Individuals aiming for the AWS Certified Solutions Architect – Professional certification.

Pre-Requisites

To make the most of this course, participants should have:

- ❖ Experience designing AWS-based applications.
- ❖ Strong understanding of AWS core services (Compute, Networking, Storage, Databases).
- ❖ Knowledge of security best practices and IAM policies.
- ❖ Hands-on experience with infrastructure as code (CloudFormation, Terraform, etc.).
- ❖ Completion of the AWS Certified Solutions Architect – Associate certification (recommended).

Course Content

Module 1: Introduction to AWS Advanced Architecture

- Understanding enterprise cloud architecture
- Key AWS services for professional architects
- Multi-tier architecture best practices

Module 2: Security and Identity Management

- Advanced IAM policies and permission management
- Implementing Zero Trust Architecture on AWS
- Encryption techniques and compliance strategies

Module 3: Networking and Hybrid Cloud Architecture

- Designing high-performance network architectures
- Implementing hybrid connectivity (VPN, Direct Connect, Transit Gateway)
- Securing network communications and optimizing routing

Module 4: Compute and Storage Optimization

- Choosing the right EC2 instances and auto-scaling strategies
- Advanced storage solutions (Amazon S3, EFS, FSx, and more)
- Hands-on: Building cost-effective, scalable AWS compute environments

Module 5: Advanced Database and Data Management

- Managing large-scale databases (Amazon RDS, DynamoDB, Aurora)
- Implementing multi-region database architectures
- Data migration and caching strategies

Module 6: Automation and Infrastructure as Code

- AWS CloudFormation and Terraform best practices
- Automating deployments with CI/CD pipelines
- Hands-on: Deploying infrastructure using CloudFormation

Module 7: Cost Optimization Strategies

- Reducing cloud costs with AWS pricing models
- Using AWS Cost Explorer and Trusted Advisor
- Hands-on: Optimizing AWS environments for cost efficiency

Module 8: High Availability and Disaster Recovery

- Designing fault-tolerant AWS architectures
- Backup and disaster recovery planning
- Hands-on: Implementing AWS Multi-AZ and multi-region solutions

Module 9: Application Modernization and Serverless Architectures

- Migrating traditional applications to AWS
- Implementing microservices and event-driven architectures
- Hands-on: Building serverless applications with AWS Lambda and API Gateway

Module 10: Multi-Account AWS Strategy and Governance

- AWS Organizations and best practices for managing multiple accounts
- Implementing AWS Control Tower for governance and security
- Compliance and auditing strategies

Module 11: Final Capstone Project

- Designing and implementing a real-world AWS enterprise solution
- Applying best practices learned throughout the course
- Hands-on: Deploying a complete AWS architecture with automation

Exam Preference

Exam Code	SAP-C02
Category	Professional
Exam Format	75 Questions (Multiple choice and Responses)
Total Score	1000
Passing Score	750
Exam Duration	180 Minutes

