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aws certified

Solutions Architect

Professional

AWS Solutions Architect
Professional

AWS Certified Solutions Architect – Professional (SAP-C01)

♣ Course Overview:

Specifically designed to help you prepare for the AWS Solutions Architect - Professional Certification, this hands-on oriented Learning Path provides over 50 hours of interactive content comprised of hands-on labs and a preparation exam. This training content has been carefully created to help you study for this AWS certification. The certification demands that the candidate demonstrates the ability to architect and deploy AWS solutions for different scenarios following AWS's best practices. The AWS Solution Architect Professional Certification requires its candidates to be comfortable architecting, securing, migrating, optimizing deployments and managing full production operations on AWS.

♣ Course Outline:

Overview of AWS Essentials

- ➢ AWS Accounts
- ➢ Regions, AZs, and Edge Infrastructure.
- ➢ High Availability, Fault Tolerance, and Disaster Recovery.
- ➢ Disaster Recovery: RPO and RTO.
- ➢ Data Persistence.
- ➢ The OSI 7-Layer Networking Model.

Accounts

- ➢ Accounts Introduction.
- ➢ IAM Overview
- ➢ Identity and Resource Policies
- ➢ IAM Roles and Temporary Security Credentials
- ➢ Cross-Account Access: Resource Permissions vs. Cross-Account Roles
- ➢ Accessing S3 with AWS IAM Roles

Account Management

- ➢ AWS Accounts and AWS Organizations
- ➢ Service Control Policies
- ➢ AWS Account Limits
- ➢ AWS Support Tiers
- ➢ AWS Config

> AWS Service Catalog

Cost and Cost Optimization

> Resource Billing Modes: On-Demand, Reserved, and Spot

Advanced Identity in AWS

> Identity Federation
> IAM Permissions Boundaries
> Policy Evaluation Logic

VPC Essentials

> VPC Basics
> AWS Resource Access Manager (RAM)
> VPC Routing
> Network Access Control Lists (NACLs)
> Security Groups (SGs)
> Public vs. Private Subnets, Internet Gateways, and IP Addressing
> Egress-Only Gateways
> DNS in a VPC
> VPC Flow Logs

Advanced and Hybrid VPC Networking

> Using VPC Endpoints
> Peering VPCs
> AWS Site-to-Site VPN
> AWS Direct Connect Architecture
> AWS Transit Gateway

Account and Service Security

> AWS Key Management Service (KMS)
> AWS CloudHSM
> AWS Certificate Manager (ACM)
> AWS Directory Service

Network Security

> AWS WAF and Shield
> AWS GuardDuty

Elastic Compute Cloud (EC2)

- EC2 Concepts
- Creating and Using AMIs
- Virtualization and EC2 Instance Type: Deep Dive
- EC2 Storage and Snapshots
- EC2 Instance Profiles and Roles
- HPC and Placement Groups
- Custom Logging to CloudWatch

Containers

- Containers
- ECS Architecture
- ECS Security

Serverless

- Serverless and Event-Driven Architecture
- Lambda Architecture
- Lambda Layers
- API Gateway

Scaling Architectures

- AWS Service Resilience
- Stateless Architectures
- Deciding between Spot and Reserved Instances
- CImplementing Auto Scaling Groups (ASGs)
- Multi-AZ Implementations
- Elastic Load Balancers - Essentials
- Elastic Load Balancers - Classic Load Balancers
- Elastic Load Balancers - Application Load Balancers
- Elastic Load Balancers - Network Load Balancers

CloudFront Essentials

- CCloudFront Architecture.
- Creating and Working with Distributions
- Working with Custom Origins
- CloudFront and Security
- Optimizing Caching
- Lambda@Edge
- Logging, Reporting, and Monitoring

Amazon Route 53 (R53)

- Route 53 Architecture

➢ Advanced Route 53 Concepts

Object Storage: Amazon Simple Storage Service (S3)

➢ Introduction
➢ S3 Architecture
➢ S3 Storage Tiers, Intelligent-Tiering, and Lifecycle Policies
➢ Versioning and Locking
➢ Controlling Access to S3 Buckets
➢ Cross-Region Replication
➢ Object Encryption
➢ Optimizing S3 Performance
➢ Glacier Architecture

Amazon Elastic File System (EFS)

➢ EFS Architecture

Amazon FSx

➢ FSx Architecture

AWS Storage Gateway

➢ File Gateways vs. Volume Gateways vs. Tape Gateway

Databases Introduction

➢ EC2 Self-Managed Databases
➢ Database Data Models and Engines

SQL Databases

➢ Amazon Relational Database Service (RDS)
➢ Amazon Aurora Architecture
➢ Aurora Global Database
➢ Aurora Serverless
➢ Amazon Athena

NoSQL Databases

➢ DynamoDB Architecture
➢ Advanced DynamoDB
➢ Amazon Neptune
➢ Amazon Quantum Ledger Database (QLDB)
➢ Amazon DocumentDB (with MongoDB Compatibility)

Amazon ElastiCache

- ➢ ElastiCache Architecture

Amazon EMR

- ➢ MapReduce Essentials
- ➢ EMR Architecture
- ➢ EMR Cost and Performance Optimization

Amazon Kinesis

- ➢ What Is Kinesis?
- ➢ Data Firehose
- ➢ Data Analytics in Kinesis

AWS Redshift

- ➢ Redshift Architecture
- ➢ Disaster Recovery in Redshift

AWS IoT Platform

- ➢ AWS IoT Architecture

Amazon QuickSight

- ➢ QuickSight Basics

Search and Analytics Engines

- ➢ Elasticsearch

Monitoring Your AWS Account

- ➢ AWS CloudWatch
- ➢ CloudWatch Logs
- ➢ AWS CloudTrail
- ➢ Route 53 Logging
- ➢ S3 Logging

AWS Systems Manager

- ➢ Systems Management with AWS Systems Manager
- ➢ Parameter Store

AWS CloudFormation

- ➢ CloudFormation Overview
- ➢ Stack Updates
- ➢ Template Portability and Reuse
- ➢ Stack References and Nested Stacks
- ➢ Stack Roles
- ➢ StackSets
- ➢ Using CloudFormation for Disaster Recovery
- ➢ Custom Resources

AWS Elastic Beanstalk

- ➢ Elastic Beanstalk Architecture

AWS OpsWorks

- ➢ OpsWorks Architecture

AWS Data Pipeline

- ➢ Data Pipeline Essentials

AWS Migration Services

AWS Snow*

- ➢ Migrating Data to AWS with Snowball and Snowmobile

Simple Queue Service (SQS)

- ➢ SQS Architecture

Simple Notification Service (SNS)

- ➢ Using SNS within AWS Architectures

Amazon MQ

- ➢ Amazon MQ Essentials

Workflow Orchestration

- ➢ Step Functions and Simple Workflow Service

Prerequisites:

- AWS Certified Solutions Architect – Associate
- 2 or more years of hands-on experience designing and deploying cloud architecture on AWS
- Ability to evaluate cloud application requirements and make architectural recommendations for implementation, deployment, and provisioning applications on AWS
- Ability to provide best practice guidance on the architectural design across multiple applications and projects of the enterprise
- Familiarity with a scripting language
- Familiarity with Windows and Linux environments
- Familiarity with AWS CLI, AWS APIs, AWS Cloud Formation templates, the AWS Billing Console, and the AWS Management Console
- Explain and apply the five pillars of the AWS Well-Architected Framework
- Map business objectives to application/architecture requirements
- Design a hybrid architecture using key AWS technologies (e.g., VPN, AWS Direct Connect)
- Architect a continuous integration and deployment process

Who Can Attend:

- This learning path is suitable for those wanting to pass the AWS Solutions Architect - Professional Certification Exam.

Number of Hours: 50hrs

Certification: AWS Certified Solutions Architect – Professional (SAP-C01)

Key Features:

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials

- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification