Wissenhive

AWS – Solution Architect Training Certification

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About the Program

The AWS Certified Solutions Architect - Associate (SAA-C02) examination is intended for individuals who perform in a solutions architect role. This exam validates an examinee's ability to effectively demonstrate knowledge of how to architect and deploy secure and robust applications on AWS technologies.

The hottest trend in the information technology landscape is cloud computing. Every organization, big or small, is transferring their applications, infrastructure, and legacy systems to the cloud. As a result, cloud computing professionals are in high demand. Amazon Web Services has the lion's share in the existing cloud services market. So, you can find many online searches every day for AWS certification benefits.

The demand for AWS professionals is high in the present times. So, it is obvious for aspiring cloud computing personnel to search for reasons to pursue AWS certifications. The benefits of AWS certifications can help aspiring cloud computing professionals to see the hidden opportunities in AWS career.

Wissenhive's AWS Solution Architect Associate will allow you to enhance skills and gain knowledge in CICD, Cloud Formation, Step Functions, ECS, EMR, Glue, SWF, OpsWorks, AWS Organizations, Elastic-Transcoder, AppSync, Workspaces, Single Sign-On, and many more.

In this course, students learn about the detailed concept of AWS solutions, which includes

- The AWS Fundamentals: IAM, Load Balancing, EC2, EBS, Auto Scaling, Route 53, EFS, ElastiCache, RDS, CloudFront, S3.
- In-Depth understanding of CLI: From setup and advanced usage
- In-Depth Database comparison: RDS, DynamoDB, Aurora, ElastiCache, Neptune, Redshift, Athena, ElasticSearch
- AWS Messaging and integration: SNS, SQS, and Kinesis
- Monitoring, Troubleshooting & Auditing of AWS CloudTrail and CloudWatch
- AWS Serverless: DynamoDB, AWS Lambda, Cognito, API Gateway
- Deep understanding of VPC & Networking

Key Training Features

- Lifetime Training Access
- Study Guides
- Assessments
- On Demand Doubt Clearance Session
- 24/7 support
- Flexible Scheduling

Target Audience

The AWS Solution Architect Associate is ideal for IT professionals who are already working or want to make a career as

- Operational Support Engineer
- Cloud Software Engineer
- System Integrator — Cloud
- Cloud Developer
- AWS Solutions Architect
- AWS SysOps Administrator
- Senior AWS Cloud Architect

Pre- Requisites

There are no prerequisites for the AWS Solution Architect Associate, but Wissenhive recommends at least having one of the following:

- One year of experience in designing and deploying cloud architecture on the AWS platform
- Familiarity with a scripting language

OR

- One high-level programming language knowledge
- AWS Solutions Architect Certification Training Course

Why AWS – Solution Architect ?

AWS is leading the pack in cloud computing. Whether you are a web developer, database or system admin, Big data analyst, or IoT developer chances are you have used these services. This AWS Architect Certification Training will help you become an AWS Certified Solutions Architect. Furthermore, you can also pursue other career paths like AWS Solutions Architect, AWS Engineer, AWS DevOps Engineer, Cloud Architect among others. In order to avail of these opportunities, you need structured AWS training with an updated curriculum as per current industry requirements and best practices. Apart from a strong theoretical understanding, you need to work on various real-life projects and work on different services for storage, network, database, computing, etc. Additionally, you need the advice of an expert who is currently working in the industry and tackling real-life challenges.

How will AWS Architect Certification Training help your career?

Your career will greatly benefit from the addition of an AWS Certification because:

- Amazon Web Services (SAA-C02) certification is rated as the most valued IT Certification globally – Global Knowledge Study
- In the latest Magic Quadrant report released by Gartner, AWS maintained its position as the king of cloud Infrastructure as a service (IaaS) providers
- The public cloud market – cloud apps (software-as-a-service); cloud development and data platforms (platform-as-a-service); and cloud infrastructure (infrastructure-as-a-service) – will reach $411 billion by 2022.

Career Option with Salary Compensation

Technical Support Engineer

- Minimum - $45,000/year
- Avg Salary - $66,000/year
- Maximum - $96,000/year

Cloud Solutions Architect

- Minimum - $80,000/year
- Avg Salary - $126,000/year
- Maximum - $161,000/year

Cloud Software Engineer

- Minimum - $75,000/year
- Avg Salary - $100,000/year
- Maximum - $146,000/year

Development Operations

- Minimum - $65,000/year
- Avg Salary - $96,000/year
- Maximum - $139,000/year

System Integration Engineer

- Minimum - $63,000/year
- Avg Salary - $83,000/year
- Maximum - $120,000/year

About AWS- Solution Architect Exam

Exam Content

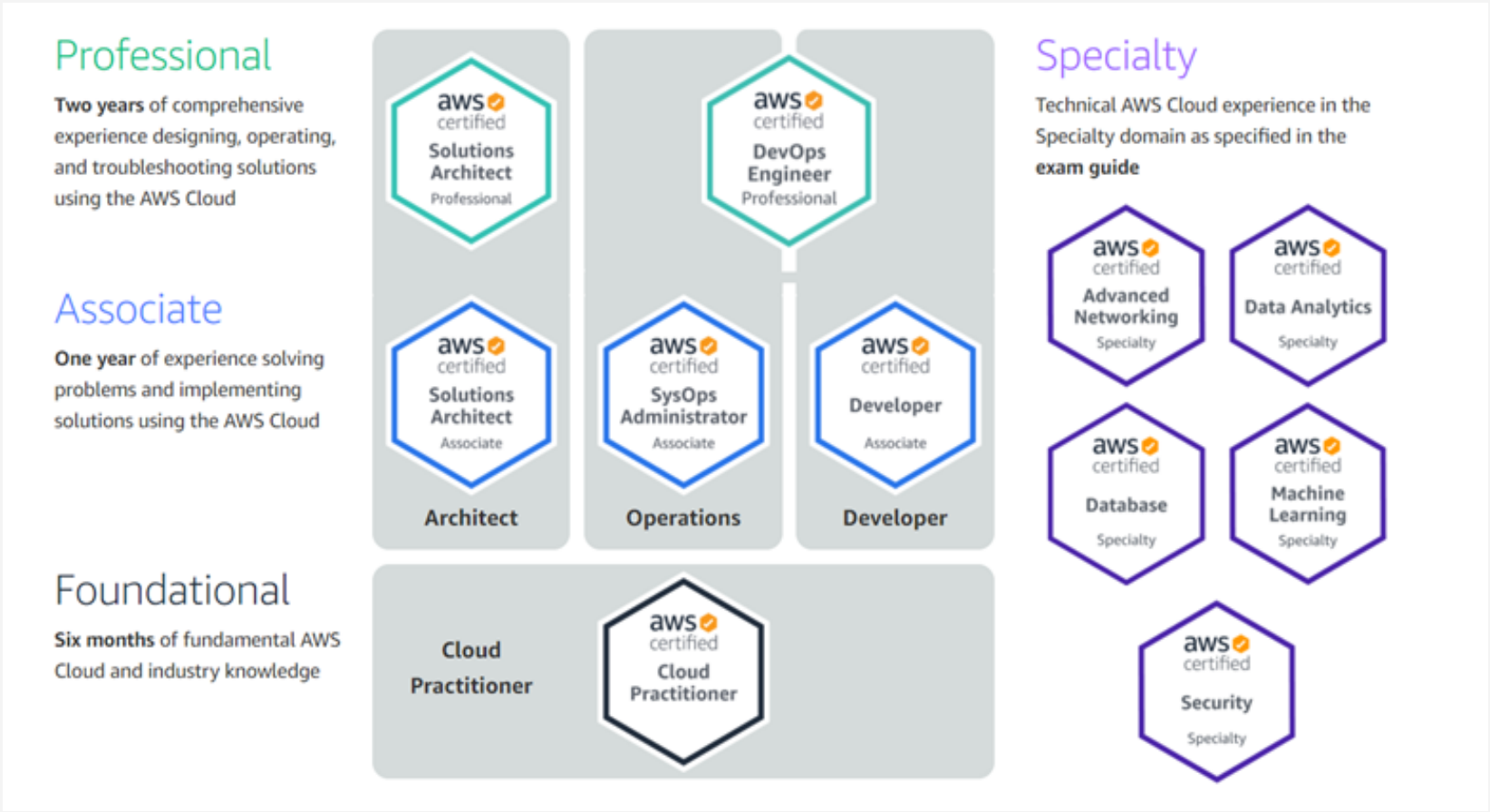
Response Types

There are two types of questions on the examination:

- Multiple choice: Has one correct response and three incorrect responses (distractors).
- Multiple responses: Has two correct responses out of five response options.
  Select one or more responses that best complete the statement or answer the question. Distractors, or incorrect answers, are response options that an examinee with incomplete knowledge or skill would likely choose. However, they are generally plausible responses that fit in the content area defined by the test objective. Unanswered questions are scored as incorrect; there is no penalty for guessing.

  Unscored Content Your examination may include unscored items that are placed on the test to gather statistical information. These items are not identified on the form and do not affect your score.

AWS – Certification Path



Course Curicullum

Module 01 - Introduction to Cloud Computing & AWS

1.1 What is Cloud Computing
1.2 Cloud Service & Deployment Models
1.3 How AWS is the leader in the cloud domain
1.4 Various cloud computing products offered by AWS
1.5 Introduction to AWS S3, EC2, VPC, EBS, ELB, AMI
1.6 AWS architecture and the AWS Management Console, virtualization in AWS (Xen hypervisor)
1.7 What is auto-scaling
1.8 AWS EC2 best practices and cost involved.
Hands-on Exercise – Setting up of AWS account, how to launch an EC2 instance, the process of hosting a website and launching a Linux Virtual Machine using an AWS EC2 instance.

Module 02 - Elastic Compute and Storage Volumes

2.1 Introduction to EC2
2.2 Regions & Availability Zones(AZs)
2.3 Pre-EC2, EC2 instance types
2.4 Comparing Public IP and Elastic IP
2.5 Demonstrating how to launch an AWS EC2 instance
2.6 Introduction to AMIs, Creating and Copying an AMI
2.7 Introduction to EBS
2.8 EBS volume types
2.9 EBS Snapshots
2.10 Introduction to EFS
2.11 Instance tenancy- Reserved and Spot instances
2.12 Pricing and Design Patterns.

Course Curicullum

Hands-on Exercise –
1. Launching an EC2 instance
2. Creating an AMI of the launched instance
3. Copying the AMI to another region
4. Creating an EBS volume
5. Attaching the EBS volume with an instance
6. Taking backup of an EBS volume
7. Creating an EFS volume and mounting the EFS volume to two instances.

Module 03 - Load Balancing, Autoscaling and DNS

3.1 Introduction to Elastic Load Balancer
3.2 Types of ELB – Classic, Network and Application
3.3 Load balancer architecture
3.4 Cross-zone load balancing
3.5 Introduction to Auto Scaling, vertical and horizontal scaling, the lifecycle of Auto Scaling
3.6 Components of Auto Scaling, scaling options and policy, instance termination
3.7 Using load balancer with Auto Scaling
3.8 Pre-Route 53 – how DNS works
3.9 Routing policy, Route 53 terminologies, Pricing.

Hands-on Exercise –
1. Creating a Classic ELB
2. Creating an Application ELB
3. Creating an auto-scaling group
4. Configuring an auto-scaling group
5. Integrating ELB with Auto Scaling
6. Redirect traffic from domain name to ELB using Route 53.

Course Curicullum

Module 04 - Virtual Private Cloud

4.1 What is Amazon VPC,
4.2 VPC as a networking layer for EC2,
4.3 IP address and CIDR notations,
4.4 Components of VPC – network interfaces, route tables, internet gateway, NAT,
4.5 Security in VPC – security groups and NACL, types of VPC, what is a subnet, VPC peering with scenarios, VPC endpoints, VPC pricing and design patterns.

Hands-on Exercise –
1. Creating a VPC and subnets,
2. Creating a 3 Tier architecture with security groups,
3. NACL, Internet gateway and NAT gateway,
4. Creating a complete VPC architecture.

Module 05 - Storage - Simple Storage Service (S3)

5.1 Introduction to AWS storage
5.2 Pre-S3 – online cloud storage
5.3 API, S3 consistency models
5.4 Storage hierarchy, buckets in S3
5.5 Objects in S3, metadata and storage classes, object versioning, object lifecycle management, cross-region replication, data encryption, connecting using VPC endpoint, S3 pricing.

Course Curicullum

Hands-on Exercise –
1. Creating an S3 bucket
2. Uploading objects to the S3 bucket
3. Enabling object versioning in the S3 bucket
4. Setting up lifecycle management for only a few objects
5. Setting up lifecycle management for all objects with the same tag
6. Static website hosting using S3.

Module 06 - Databases and In-Memory Datastores

6.1 What is a database, types of databases, databases on AWS
6.2 Introduction to Amazon RDS
6.3 Multi-AZ deployments, features of RDS
6.4 Read replicas in RDS, reserved DB instances
6.5 RDS pricing and design patterns
6.6 Introduction to Amazon Aurora, benefits of Aurora, Aurora pricing and design patterns
6.7 Introduction to DynamoDB, components of DynamoDB, DynamoDB pricing and design patterns
6.8 What is Amazon Redshift, advantages of Redshift
6.9 What is ElastiCache, why ElastiCache.

Hands-on Exercise –
1. Launching a MySQL RDS instance
2. Modifying an RDS instance
3. Connecting to the DB instance from your machine
4. Creating a multi-az deployment
5. Create an Aurora DB cluster
6. Creating an Aurora replica
7. Creating a DynamoDB table.

Course Curicullum

Module 07 - Management and Application Services

7.1 Introduction to CloudFormation
7.2 CloudFormation components
7.3 CloudFormation templates
7.4 The concept of Infrastructure-as-a-code
7.5 Functions and pseudo parameters
7.6 Introduction to Simple Notification Service, how does SNS work
7.7 Introduction to Simple Email Service, how does SES work
7.8 Introduction to Simple Queue Service, how does SQS work.

Hands-on Exercise –
1. Creating a CloudFormation stack
2. Launching a t2.micro
3. EC2 instance using CloudFormation
4. Using CloudFormation to automate an architectural deployment
5. Creating an SNS topic, creating a subscription within the topic
6. Setting up SES and sending a mail
7. Creating an SQS queue and sending a sample message.

Module 08 - Access Management and Monitoring Services

8.1 Pre-IAM, why access management
8.2 Amazon Resource Name (ARN), IAM features
8.3 Multi-factor authentication (MFA) in IAM, JSON
8.4 IAM policies, IAM permissions, IAM roles, identity federation, pricing
8.5 Introduction to CloudWatch, metrics and namespaces, CloudWatch architecture, dashboards in CW, CloudWatch alarms, CloudWatch logs, pricing and design patterns
8.6 Introduction to CloudTrail, tracking API usage.

Course Curicullum

Hands-on Exercise –
1. Creating IAM users and a group
2. creating an IAM policy and attach it to the group
3. creating an IAM role
4. Setup MFA for a user
5. Creating a CloudWatch dashboard and add metrics
6. Create a CloudWatch alarm which triggers according to CPU Utilization of an EC2 instance
7. Creating a billing alarm
8. Creating a log group
9. Creating a trail.

Module 09 - Automation and Configuration management

9.1 What is AWS Lambda
9.2 How Lambda is different from EC2
9.3 Benefits and limitations of Lambda
9.4 How does Lambda work
9.5 Use cases of Lambda, Lambda concepts
9.6 Integration S3 with Lambda
9.7 What is Elastic Beanstalk, how does Beanstalk work, Beanstalk concepts, Beanstalk pricing
9.8 What is configuration management
9.9 What is AWS OpsWorks, AWS OpsWorks benefits
9.10 CloudFormation vs OpsWorks, services in OpsWorks, AWS OpsWorks Stacks, OpsWorks pricing.

Course Curicullum

Hands-on Exercise –
1. Creating a Lambda function
2. Setting up Lambda triggers and destinations
3. Creating an Elastic Beanstalk application
4. Uploading a new version of the application to Beanstalk
5. Creating a stack in OpsWorks
6. Launching the instance using OpsWorks and automatically installing the application.

Module 10 - AWS Migration

10.1 What is Cloud migration
10.2 Why migration is important
10.3 Migration process in AWS, the 6 R's migration strategy
10.4 Virtual machine migration, migrating a local vm onto the AWS cloud
10.5 Migrating databases using Database Migration Service (DMS)
10.6 Migrating a local database to RDS
10.7 Migrating an on-premises database server to RDS using DMS, other migration services.

Module 11 - Architecting AWS – whitepaper

11.1 Important guidelines for creating a well-architected AWS framework that is resilient and perfomant
11.2 Designing of fault-tolerant and high-availability architecture
11.3 Resilient storage
11.4 Decoupling mechanism
11.5 Multi-tier architecture solution
11.6 Disaster recovery solution
11.7 Scalable and elastic solutions.

Course Curicullum

Module 12 - DevOps on AWS

12.1 What is DevOps,
12.2 Introduction to AWS DevOps,
12.3 AWS Developer tools – CodeCommit, CodeBuild, CodeDeploy and CodePipeline, integrating GitHub with CodePipeline,
12.4 Creating a DevOps lifecycle using AWS DevOps tools.

Module 13 - Amazon FSx and Global Accelerator

13.1 What is FSx
13.2 Types of FSx and FSx for Windows server
13.3 How does FSx for Windows File Server work, FSx for Lustre
13.4 Use cases of FSx
13.5 Automatic failover process
13.6 Supported clients and access methods
13.7 What is a Global Accelerator, How Global Accelerator works, Listeners and Endpoints
13.8 What are AWS Organizations, Features of AWS Organizations, Managing multiple accounts
13.9 What are ENIs, ENAs and EFAs, Working with network interfaces
13.10 Enhanced Networking with ENA, EFA with MPI, Monitoring an EFA

Course Curicullum

Hands-on Exercise:

1. Creating a shared FSx file system between two windows instances
2. Accessing one instance with multiple Elastic IPS using ENI
3. Using Global Accelerator to map instances from 2 regions into one domain name
4. Enabling Enhanced Networking on an Ubuntu instance

Module 14 - AWS Architect Interview Questions

14.1 Guidance for clearing the exam, most probable interview questions and other helpful tips for clearing the exam and interview.

Contact us

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If you have any further questions or would like to chat with us, give us a call

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