

# About AWS and the Exam

CHAPTER 0

# What Is AWS?

# AWS Solutions Architect – Associate Exam Domains (SAA-C03)



<b>Domain</b>	<b>% of Exam</b>
1.0 – Design Secure Architectures	30%

# AWS Solutions Architect – Associate Exam Domains (SAA-C03)



Domain	% of Exam
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2.0 – Design Resilient Architectures	26%

# AWS Solutions Architect – Associate Exam Domains (SAA-C03)

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3.0 – Design High-Performing Architectures	24%

# AWS Solutions Architect – Associate Exam Domains (SAA-C03)



Domain	% of Exam
1.0 – Design Secure Architectures	30%
2.0 – Design Resilient Architectures	26%
3.0 – Design High-Performing Architectures	24%
4.0 – Design Cost-Optimized Architectures	20%

# Why Use AWS?

# Why Use AWS?

- Popularity
- Large corporations trust it
- Many available services
- Learning materials



# How to Get Started with AWS

# How to Get Started with AWS

- <https://aws.amazon.com/>
  - Click “Create an AWS Account”



# **AWS Certifications**

# AWS Certifications

- [AWS Certification - Validate AWS Cloud Skills - Get AWS Certified \(amazon.com\)](https://aws.amazon.com/certification/)

## FOUNDATIONAL

Knowledge-based certification for foundational understanding of AWS Cloud.

**No prior experience needed.**



## ASSOCIATE

Role-based certifications that showcase your knowledge and skills on AWS and build your credibility as an AWS Cloud professional. **Prior cloud and/or strong on-premises IT experience recommended.**



## PROFESSIONAL

Role-based certifications that validate advanced skills and knowledge required to design secure, optimized, and modernized applications and to automate processes on AWS.

**2 years of prior AWS Cloud experience recommended.**



## SPECIALTY


Dive deeper and position yourself as a trusted advisor to your stakeholders and/or customers in these strategic areas. **5+ years of experience in AWS Cloud recommended.**



# Preparation Resources

# Preparation Resources



- This AWS Certified Solutions Architect – Associate course
  - Books
  - Amazon videos
  - Practice tests
  - AWS documentation
- 

# Benefits of Certification



# Benefits of Certification

- Knowledge
- Proof of knowledge
  - For employers
- Job opportunities
- Pay increase
- Confidence

# **AWS CSA-A Overview**

# Who Should Take this Exam?



AWS Certified Solutions Architect - Associate showcases knowledge and skills in AWS technology, across a wide range of AWS services. The focus of this certification is on the design of cost and performance optimized solutions, demonstrating a strong understanding of the AWS Well-Architected Framework. This certification can enhance the career profile and earnings of certified individuals and increase your credibility and confidence in stakeholder and customer interactions.

This exam does not require deep hands-on coding experience, although familiarity with basic programming concepts would be an advantage.

<https://aws.amazon.com/certification/certified-solutions-architect-associate>

# Who Should Take this Exam?



AWS Certified Solutions Architect - Associate is a great starting point on the AWS Certification path for individuals who may have any of the following:

- Experience in AWS technology
- Strong on-premises IT experience and understanding of mapping on-premises to cloud
- Experience working in other cloud services

<https://aws.amazon.com/certification/certified-solutions-architect-associate>

# What You'll Learn

Preparing for and attaining this certification will showcase:

- Knowledge and skills in compute, networking, storage, and database AWS services as well as AWS deployment and management services
- Knowledge and skills in deploying, managing, and operating workloads on AWS as well as implementing security controls and compliance requirements
- Knowledge and skills in using the AWS Management Console and the AWS Command Line Interface (CLI) Understanding of the AWS Well-Architected Framework, AWS networking, security services, and the AWS global infrastructure
- Ability to identify which AWS services meet a given technical requirement and to define technical requirements for an AWS-based application

<https://aws.amazon.com/certification/certified-solutions-architect-associate>

# Exam Overview

Level: Associate

Length: 130 minutes to complete the exam

Cost: 150 USD

Visit Exam pricing for additional cost information.

Format: 65 questions, either multiple choice or multiple response.

Delivery method: Pearson VUE; testing center or online proctored exam.

<https://aws.amazon.com/certification/certified-solutions-architect-associate>

# What's New on the SAA-C03 Exam?

# What's New?

- Current SAA-C03 domains:

Domain	% of Exam
Domain 1: Design Secure Architectures	30%
Domain 2: Design Resilient Architectures	26%
Domain 3: Design High-Performing Architectures	24%
Domain 4: Design Cost-Optimized Architectures	20%
<b>TOTAL</b>	<b>100%</b>

- Previous SAA-C03 domains:

Domain	% of Examination
Domain 1: Design Resilient Architectures	30%
Domain 2: Design High-Performing Architectures	28%
Domain 3: Design Secure Applications and Architectures	24%
Domain 4: Design Cost-Optimized Architectures	18%
<b>TOTAL</b>	<b>100%</b>



# AWS Tools Covered in the Exam



- Refer to the exam objectives appendix for a complete list of tools, technologies, and concepts

## Analytics:

- Amazon Athena
- AWS Data Exchange
- AWS Data Pipeline
- Amazon EMR
- AWS Glue
- Amazon Kinesis
- AWS Lake Formation
- Amazon Managed Streaming for Apache Kafka (Amazon MSK)
- Amazon OpenSearch Service (Amazon Elasticsearch Service)
- Amazon QuickSight
- Amazon Redshift

## Application Integration:

- Amazon AppFlow
- AWS AppSync
- Amazon EventBridge (Amazon CloudWatch Events)
- Amazon MQ
- Amazon Simple Notification Service (Amazon SNS)
- Amazon Simple Queue Service (Amazon SQS)
- AWS Step Functions

## AWS Cost Management:

- AWS Budgets
- AWS Cost and Usage Report
- AWS Cost Explorer
- Savings Plans

## Compute:

- AWS Batch
- Amazon EC2
- Amazon EC2 Auto Scaling
- AWS Elastic Beanstalk
- AWS Outposts
- AWS Serverless Application Repository
- VMware Cloud on AWS
- AWS Wavelength

# AWS Tools Covered in the Exam

## Containers:

- Amazon Elastic Container Registry (Amazon ECR)
- Amazon Elastic Container Service (Amazon ECS)
- Amazon ECS Anywhere
- Amazon Elastic Kubernetes Service (Amazon EKS)
- Amazon EKS Anywhere
- Amazon EKS Distro

## Developer Tools:

- AWS X-Ray

## Front-End Web and Mobile:

- AWS Amplify
- Amazon API Gateway
- AWS Device Farm
- Amazon Pinpoint

## Database:

- Amazon Aurora
- Amazon Aurora Serverless
- Amazon DocumentDB (with MongoDB compatibility)
- Amazon DynamoDB
- Amazon ElastiCache
- Amazon Keyspaces (for Apache Cassandra)
- Amazon Neptune
- Amazon Quantum Ledger Database (Amazon QLDB)
- Amazon RDS
- Amazon Redshift
- Amazon Timestream

## Machine Learning:

- Amazon Comprehend
- Amazon Forecast
- Amazon Fraud Detector
- Amazon Kendra
- Amazon Lex
- Amazon Polly
- Amazon Rekognition
- Amazon SageMaker
- Amazon Textract
- Amazon Transcribe
- Amazon Translate

# AWS Tools Covered in the Exam

## Management and Governance:

- AWS Auto Scaling
- AWS CloudFormation
- AWS CloudTrail
- Amazon CloudWatch
- AWS Command Line Interface (AWS CLI)
- AWS Compute Optimizer
- AWS Config
- AWS Control Tower
- AWS License Manager
- Amazon Managed Grafana
- Amazon Managed Service for Prometheus
- AWS Management Console
- AWS Organizations
- AWS Personal Health Dashboard
- AWS Proton
- AWS Service Catalog
- AWS Systems Manager
- AWS Trusted Advisor
- AWS Well-Architected Tool

## Media Services:

- Amazon Elastic Transcoder
- Amazon Kinesis Video Streams

## Migration and Transfer:

- AWS Application Discovery Service
- AWS Application Migration Service (CloudEndure Migration)
- AWS Database Migration Service (AWS DMS)
- AWS DataSync
- AWS Migration Hub
- AWS Server Migration Service (AWS SMS)
- AWS Snow Family
- AWS Transfer Family

## Networking and Content Delivery:

- Amazon CloudFront
- AWS Direct Connect
- Elastic Load Balancing (ELB)
- AWS Global Accelerator
- AWS PrivateLink
- Amazon Route 53
- AWS Transit Gateway
- Amazon VPC
- AWS VPN

# AWS Tools Covered in the Exam

## Security, Identity, and Compliance:

- AWS Artifact
- AWS Audit Manager
- AWS Certificate Manager (ACM)
- AWS CloudHSM
- Amazon Cognito
- Amazon Detective
- AWS Directory Service
- AWS Firewall Manager
- Amazon GuardDuty
- AWS Identity and Access Management (IAM)
- Amazon Inspector
- AWS Key Management Service (AWS KMS)
- Amazon Macie
- AWS Network Firewall
- AWS Resource Access Manager (AWS RAM)
- AWS Secrets Manager
- AWS Security Hub
- AWS Shield
- AWS Single Sign-On
- AWS WAF

## Serverless:

- AWS AppSync
- AWS Fargate
- AWS Lambda

## Storage:

- AWS Backup
- Amazon Elastic Block Store (Amazon EBS)
- Amazon Elastic File System (Amazon EFS)
- Amazon FSx (for all types)
- Amazon S3
- Amazon S3 Glacier
- AWS Storage Gateway

# **AWS CSA-A Exam Objectives**

# What Does the Exam Evaluate?

- The exam also validates a candidate's ability to complete the following tasks:
  - Design solutions that incorporate AWS services to meet current business requirements and future projected needs
  - Design architectures that are secure, resilient, high-performing, and cost-optimized
  - Review existing solutions and determine improvements

# Target Candidate Description

- The target candidate should have at least 1 year of hands-on experience designing cloud solutions that use AWS services.
- For a detailed list of specific tools and technologies that might be covered on the exam, as well as lists of in-scope and out-of-scope AWS services, refer to the Appendix.

# AWS CSA-A (SAA-C03) Exam Domains

Domain	% of Exam
Domain 1: Design Secure Architectures	30%
Domain 2: Design Resilient Architectures	26%
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Domain 4: Design Cost-Optimized Architectures	20%
<b>TOTAL</b>	<b>100%</b>



# Exam Objectives

- Highest level is the domain
  - Example: Domain 1: Design Secure Architectures
- Next level is the task statement
  - Example: Task Statement 1: Design secure access to AWS resources.
  - Note: When you see the objectives mapped as “1.1” that refers to Domain 1, Task Statement 1
- The next levels are the knowledge and skills
  - Example: Knowledge of: Access and management across multiple accounts

# How to Read the Mapped Objectives

When an objective is referred to in this course, you may see something like this:

- Episode: Cloud Computing Defined
- Objective: **1.1 K1**
- This is shorthand to quickly point you to the objective covered in the exam objective document

The screenshot shows the AWS training and certification interface. At the top, the AWS logo and 'training and certification' text are visible. Below this, the content is organized into a hierarchy:

- Domain 1: Design Secure Architectures** (highlighted with a red box)
- Task Statement 1: Design secure access to AWS resources.** (highlighted with a red box)
- Knowledge of:** (highlighted with a red box)
  - Access controls and management across multiple accounts
  - AWS federated access and identity services (for example, AWS Identity and Access Management [IAM], AWS Single Sign-On [AWS SSO])
  - AWS global infrastructure (for example, Availability Zones, AWS Regions)
  - AWS security best practices (for example, the principle of least privilege)
  - The AWS shared responsibility model

Two red boxes at the bottom provide explanations for the shorthand notation:

- Objective 1.1 = Domain 1, Task Statement 1**
- K1 = 1<sup>st</sup> objective under "Knowledge of:"**



# **The Four Key Areas (Compute, Networking, Storage, and Databases)**



# The Four Key Areas



- Compute
  - The services AWS provides in the cloud
- Networking
  - Virtual networking in the cloud
- Storage
  - Archive: AWS Glacier, store large amounts of data at a lower cost
  - Live: S3 buckets, DBS volumes attached to EC2 instances
- Databases
  - AWS RDS enables storage of and manipulation of data in many ways



# Master the Knowledge Areas



# Knowledge Areas

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# Sample Exam Question



## AWS Certified Solutions Architect - Associate (SAA-C03) Sample Exam Questions

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**1) A company runs a public-facing three-tier web application in a VPC across multiple Availability Zones. Amazon EC2 instances for the application tier running in private subnets need to download software patches from the internet. However, the EC2 instances cannot be directly accessible from the internet.**

**Which actions should be taken to allow the EC2 instances to download the needed patches? (Select TWO.)**

- A) Configure a NAT gateway in a public subnet.
- B) Define a custom route table with a route to the NAT gateway for internet traffic and associate it with the private subnets for the application tier.
- C) Assign Elastic IP addresses to the EC2 instances.
- D) Define a custom route table with a route to the internet gateway for internet traffic and associate it with the private subnets for the application tier.
- E) Configure a NAT instance in a private subnet.

See [AWS-Certified-Solutions-Architect-Associate\\_Sample-Questions.pdf](#) resource for more information (see resources with the Take the Exam episode)

# Use the System



# Use the System

- Create an account
- Use free services and free types and classes
- Create an S3 bucket
- Create VPCs, subnets, NACLs, and more (that's what this course will show you!)
- Use AWS documentation
  - <https://docs.aws.amazon.com/index.html>

# Take Notes

# Take Notes

- Text notes
  - Note features and capabilities of tools
- Visual notes
  - Iconic memory is powerful!
  - Try diagramming networks
  - Draw cartoons (stick figures count) to help remember important tips

# **Be Mentally and Physically Prepared**

# Be Mentally and Physically Prepared

- Mental preparation
  - Know the topics
  - Know your learning style
  - Test yourself
  - Think positive, be confident on test day
- Physical preparation
  - Get a good night's sleep leading up to the exam
  - Drink plenty of water
  - Eat healthy foods
  - Sit with good posture during the exam

# Take the Exam

# Sample Exam Question



## AWS Certified Solutions Architect - Associate (SAA-C03) Sample Exam Questions

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