Praveen Madupu
Mb: +91 98661 30093
Sr. Database Administrator

Detailed explanation of the **AWS Certified Solutions Architect – Associate (SAA)** certification.
Everything you need to know: what it is, its purpose, domains, exam structure, preparation, job impact, and practical tips.

AWS Certified Solutions Architect – Associate (SAA) — Full Guide

1. Overview

- **Level**: Associate (mid-level)
- **Provider**: Amazon Web Services (AWS)
- **Goal**: To validate your ability to **design cost-effective, fault-tolerant, scalable, secure, and resilient cloud architectures** on AWS.
- **Ideal For**:
  - Cloud Architects
  - Solutions Architects
  - DevOps Engineers
  - SysOps / IT Infrastructure Engineers
  - Anyone planning AWS architecture and solutions

2. Skills Measured

The exam measures how well you can:

- **Design** AWS-based architectures
- **Select appropriate AWS services** for a given scenario
- **Use best practices** for security, cost optimization, reliability, and performance
- **Understand architectural trade-offs** in design

3. Exam Structure

Feature	Details
Format	Multiple Choice (1 correct) & Multiple Response (2+ correct)
Delivery	Online (proctored) or at a testing center
Duration	130 minutes
Questions	~65
Passing Score	Scaled score: 720 / 1000 (not % based)
Cost	150 USD
Languages	English, Japanese, Korean, Simplified Chinese, and others

4. Exam Domains (Weightings)

AWS updates these occasionally; current (as of 2024):

Domain	Weight	Focus Areas
Domain 1: Design Secure Architectures	30%	- Identity and Access Management (IAM) - Data protection (KMS, encryption) - Network security (VPC, Security Groups, NACLs)
Domain 2: Design Resilient Architectures	26%	- High availability (HA) & fault-tolerance - Disaster recovery (RTO/RPO) - Multi-AZ, Multi-Region architectures
Domain 3: Design High-Performing Architectures	24%	- Compute selection (EC2, Lambda, ECS, EKS) - Database performance (RDS, DynamoDB, Aurora) - Storage performance (S3, EBS, EFS)

Domain	Weight	Focus Areas
Domain 4: Design Cost-Optimized Architectures	20%	- Right-sizing resources - Pricing models (On-demand, Reserved, Spot) - Cost optimization tools (Trusted Advisor, Cost Explorer)

5. Prerequisites

No mandatory prerequisites, but recommended:

- **1 year** of hands-on AWS experience
- Familiarity with:
  - AWS global infrastructure
  - Networking concepts (subnets, CIDR, routing)
  - Basic security best practices
  - Monitoring and cost management

6. Core AWS Services You Must Know

You should be comfortable with **key building blocks**:

Category	Key Services to Study
Compute	EC2, Lambda, ECS, EKS, Auto Scaling, Elastic Load Balancing
Storage & CDN	S3, Glacier, EBS, EFS, Storage Gateway, CloudFront
Databases	RDS (MySQL, PostgreSQL, MariaDB), Aurora, DynamoDB, ElastiCache
Networking	VPC, Subnets, Route Tables, Security Groups, NACLs, Direct Connect, VPN, PrivateLink
Security & IAM	IAM, KMS, CloudTrail, Config, WAF, Shield
Monitoring & Management	CloudWatch, CloudTrail, Trusted Advisor, AWS Config
Migration & Tools	AWS Migration Hub, DMS, Snowball

7. Preparation Strategy

Here's a proven step-by-step plan:

1. **Understand Exam Guide & Domains**
   - Download the official exam guide.
2. **Hands-On Practice**
   - Use a free-tier AWS account.
   - Practice building:
     - VPC with private/public subnets
     - Load-balanced web apps (EC2 + ALB + Auto Scaling)
     - S3 bucket policies
     - RDS with Multi-AZ failover
     - Lambda + API Gateway serverless setup
3. **Study Materials**
   - AWS whitepapers (esp. *Well-Architected Framework*, *Security Best Practices*)
   - Online courses:
     - A Cloud Guru / Pluralsight
     - Udemy (e.g., Stephane Maarek's course)
   - Practice tests:
     - Whizlabs
     - Tutorials Dojo

4. **Practice Exams**
    - At least 5–7 timed exams to build speed and accuracy.
5. **Review Weak Areas**
    - Use the AWS docs and FAQs to clarify services.

8. Career Impact

- **Highly recognized** in the industry.
- Demonstrates **architecture design expertise**.
- Helps in roles such as:
    - Cloud Solution Architect
    - Cloud Engineer
    - DevOps Architect
    - Systems Architect
- **Salary boost**: Often leads to higher compensation packages.
- **Foundation** for Professional-level certs (AWS Certified Solutions Architect – Professional).

9. Tips & Best Practices

- **Elimination strategy**: Remove obviously wrong answers first.
- **Cost and performance trade-offs**: Always think in AWS best practices (scalable, fault-tolerant, cost-efficient).
- **Time management**: Don't spend too long on any one question.
- **Flag and revisit**: AWS exams allow flagging to review at the end.
- **Read carefully**: Many questions are scenario-based with hidden hints.

10. Example Question

A company wants to run a high-traffic website. They need a cost-effective architecture with high availability across two regions. Which solution is best?

- A. Deploy in a single region with Multi-AZ RDS.
- B. Use CloudFront with an S3 static website in one region.
- C. Deploy EC2 and RDS instances in multiple regions behind Route 53 latency-based routing. ✅
- D. Use spot instances in one AZ to save costs.

7-day AWS Certified Solutions Architect – Associate (SAA) learning plan assuming:

- dedicate **4–5 focused hours per day**.
- **basic IT knowledge** (networking, Linux, etc.).
- use a mix of **theory**, **hands-on labs**, and **practice tests**.

🗓️ 7-Day AWS SAA Learning Plan

Day 1 – Orientation & Core Compute

Goal: Understand exam, AWS global infrastructure, and core compute services.

- 📖 Read the **exam guide** and understand the 4 domains & weightings.
- 🌎 AWS Global Infrastructure (Regions, AZs, Edge Locations).
- 💻 Core Compute:
  - EC2: Launch types, instance families, AMIs.
  - Auto Scaling Groups (ASG) and Elastic Load Balancing (ALB, NLB).
- 🛠️ Lab: Launch an EC2 instance, attach EBS, create an AMI, configure a load balancer.

Day 2 – Storage & Databases

Goal: Learn how data is stored and accessed efficiently.

- 📖 S3 (buckets, policies, versioning, lifecycle, replication).
- 📦 EBS vs EFS vs Instance Store.
- 🗄️ Databases:
  - RDS & Aurora (Multi-AZ, Read Replicas).
  - DynamoDB (provisioned vs on-demand).
  - ElastiCache (Redis vs Memcached).
- 🛠️ Lab: Set up S3 bucket with versioning, static website hosting, create RDS instance with Multi-AZ.

Day 3 – Networking & Security

Goal: Design secure, scalable network architectures.

- 🕸️ VPC fundamentals: subnets, route tables, Internet/NAT gateways.
- 🔒 Security: Security Groups, NACLs, IAM roles & policies, KMS, Secrets Manager.
- 🧱 Edge & Hybrid: CloudFront, Direct Connect, VPN.
- 🛠️ Lab: Create a custom VPC with public & private subnets, attach IGW, test access rules.

Day 4 – High Availability, Scalability, and Resilience

Goal: Build fault-tolerant, highly available architectures.

- 🛡️ Multi-AZ vs Multi-Region strategies.
- 🧩 DNS and Routing: Route 53 (routing policies: latency, failover, weighted).
- 📁 Disaster Recovery: Backup & Restore, Pilot Light, Warm Standby, Multi-Site.
- 🛠️ Lab: Configure Route 53 latency-based routing between two regions.

Day 5 – Cost Optimization & Monitoring

Goal: Understand AWS economics and observability.

- 💲 Pricing models: On-Demand, Reserved, Spot, Savings Plans.
- 📊 Monitoring:
  - CloudWatch metrics, alarms, logs.

  - CloudTrail for auditing.
  - Trusted Advisor for recommendations.
- 🛠️ Lab: Set CloudWatch alarms for EC2, analyze billing via Cost Explorer.

Day 6 – Review & Practice Scenarios

Goal: Apply knowledge to real exam-style questions.

- 🔄 Review all 4 domains (focus on weak areas).
- 🧠 Practice scenario-based solutions:
  - High traffic web app across regions.
  - Migrating from on-prem to AWS.
  - Designing a cost-optimized analytics pipeline.
- 📝 Take at least one full-length timed practice test (Whizlabs/Tutorials Dojo/Udemy).

Day 7 – Final Polishing

Goal: Get fully exam-ready.

- 📝 Review all wrong answers from practice tests — understand *why* correct answers are correct.
- 📄 Skim AWS whitepapers:
  - AWS Well-Architected Framework
  - Security Best Practices
  - Disaster Recovery Strategies
- 🧘 Relax & confidence boost: Quick flash-cards / notes review, light lab work.
- 🏁 Schedule or sit the exam if you're scoring consistently **≥ 80%** in practice tests.

💡 **Tips for Success**

- Focus on **why** a service fits a scenario, not just what it does.
- Think in **AWS best practice language**: scalability, fault tolerance, elasticity, cost optimization.
- Flag tough questions in the real exam — revisit at the end.