QUANTUM-AI
THE SCHOOL OF DATA AND AI

AWS SOLUTION ARCHITECT ASSOCIATE (AWS SAA-C03)

INDUSTRY-ORIENTED | PROJECT-BASED | CAREER-FOCUSED

Welcome to AWS Solution Architect-Associate

The AWS Certified Solutions Architect – Associate course is designed to help learners build skills in designing and deploying scalable, secure, and reliable cloud solutions using Amazon Web Services. The program covers core AWS services including compute, storage, networking, databases, and security.

Through hands-on labs, real-world scenarios, and practical architecture examples, students learn how to design cost-effective cloud infrastructures and implement best practices for high availability and performance. By the end of the course, participants are prepared to design cloud-based applications and confidently attempt the AWS Solutions Architect – Associate certification exam.



QUANTUM-AI
THE SCHOOL OF DATA AND AI

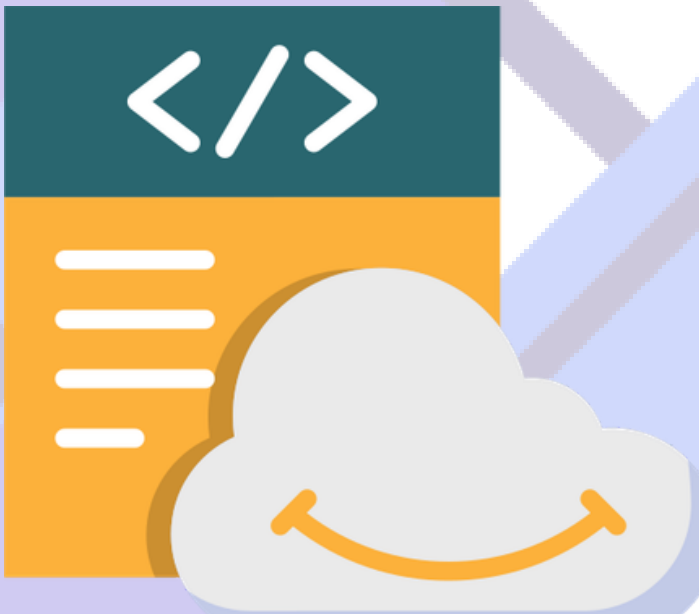
WHY QUANTUMAI?

Quantum AI combines advanced computing and artificial intelligence to solve complex problems faster and smarter. We focus on future-ready skills, practical learning, and real-world applications in Data, AI, and emerging technologies. Our industry-oriented training prepares students to lead innovation and build successful careers in tomorrow's technology-driven world.

COURSE OVERVIEW

The AWS Certified Solutions Architect – Associate course provides in-depth knowledge of designing, deploying, and managing scalable cloud solutions using Amazon Web Services. The program focuses on key AWS services such as EC2, S3, VPC, IAM, and RDS, along with cloud architecture best practices.

Through practical labs, real-world case studies, and guided exercises, learners gain hands-on experience in building secure, highly available, and cost-efficient cloud infrastructures. By the end of the course, students develop the skills required to design modern cloud architectures and successfully prepare for the AWS Solutions Architect – Associate certification.



Introduction to Cloud Computing (Theory)

1. **Core Elements of Cloud Architecture**

- Crux of Virtualization
- Key Concepts of Virtualization
- Basics of Networking
- Basics of Servers and Server OS

2. **Fundamental Pillars of Cloud Computing**

- Private Cloud
- Public Cloud
- Private Cloud vs. Public Cloud
- Brief Introduction of Infrastructure as a Service (IaaS)
- Brief Introduction of Platform as a Service (PaaS)
- Brief Introduction of Software as a Service (SaaS)

Compute Lab

- Create a EC2 windows machine and validate the accessibility.
- Create a EC2 linux machine and validate the accessibility.
- Extend disk drives in EC2 for windows and for 30GB and validate.
- Create a AMI and test the AMI.
- Create a snapshot for EC2 instance and terminate the instance and do the restoration.
- Move the snapshot from one region to another region.
- Enable termination protection and validate the EC2 by deleting the machine.
- Configure EC2 linux machine and install apache configuration.
- Upgrade EC2 memory and storage.
- How to automate EC2 Backup using Lifecycle Manager.
- EC2 Creation Using Placement Groups.
- Creating EC2 using AWS CLI.
- How to Upgrade or change instance type in stopped state

Networking Lab

- Create a VPC, Create a subnet, create internet gateway and routing table.
- Configure elastic IP and assign this to instance and test the connectivity.

- Configure a public subnet and private subnet and configure NAT Gateway and test the internet traffic
- for private network.
- Configure VPC to VPC Peering in Same Region and VPC to VPC in different Region Connectivity Test.
- ✓ Certificate provided
- ✓ Practical & Demos
- ✓ In Hindi/Urdu
- ✓ Expert Trainers
- How to Configure Network access Control List and Set priorities.
- Creating VPC using AWS CLI.

Storage Lab

- Create a S3 bucket and put some data and try to access.
- Create S3 bucket enable versioning and test for deleting the files and restoring through it.
- Managing S3 using aws cli.
- Managing S3 Bucket Policies for granular access.
- S3 Access logs and Transfer Acceleration.
- Configure Life cycle from S3 to glacier.
- How to create Presign URL for S3 Object.
- EBS types and its demo.
- Create S3 Glacier and upload some data on it.
- Create EFS and mount to linux machine

Databases Lab

- 11. Configure My SQL and Test
- 12. Configure Dynamo DB and Test
- 13. RDS Import and Export

Load Balancer Lab

- Create a EC2 two windows machines and install IIS and host a HTML File and check the website
- connectivity.
- Create a EC2 two linux machine and install apache and host HTML File and check the website.
- Create a application load balancer and test.
- Create a Network load balancer and test the load balancing.

- How to Establish a Load Balancer Between Two VPC.

Route 53 Lab

- If you have a domain purchased in godaddy or any provider then create a hosted zone in route 53 and
- create a record in route 53.
- Create a S3 Bucket and host a Static website using Route 53.
- Configure alias creation in route 53

Security Lab

- Configure IAM users and validate the connectivity from dashboard.
- Configure policy and attach policy to users.
- Configure groups and assign permission to groups.
- Configure different permissions to different users and do the testing.
- Configure google authenticator in mobile and validate multifactor authentication

loudwatch Lab

- How to setup alarm in Cloudwatch for different Metrics.
- How to Configure Cloudwatch Events

Cloudfront

- Create a sample page and configure cloudfront distribution.
- Configure GEO restrictions in cloudfront.

Advanced Topics with Labs: -

- Elastic Beanstalk
- Cloudtrail
- SNS Service
- Lambda
- AWS KMS
- Transit Gateway
- Snowball

QUANTUM-AI
THE SCHOOL OF DATA AND AI



BUILD SCALABLE APPLICATIONS

Learn AWS Solution Architect-Associate (AWS SAA-C03) with QuantumAI

Get In Touch

09870400650 info@quantumaico.com www.quantumaico.com

2nd Floor, Old dlf, C-I B, near Dr Lal Pathlabs, South City, Block C,
Old DLF Colony, Sector 14, Gurugram, Haryana 122001