

VERSION

2.5

PROFESSIONAL

ELYSIUM
ACADEMY
AWS CLOUD -
SOLUTIONS
ARCHITECT
ASSOCIATE
(SAA-C02)

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ACADEMY**

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ELYSIUM
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SR. CODE

EAPL/PROF/PRTC23

COURSE CODE

EAPSA

SUB CATEGORY

CLOUD COMPUTING



TOTAL DURATION
90
HOURS



THEORY TAKEN
25
HOURS



PRACTICAL TAKEN
65
HOURS

COURSE DESCRIPTION



The fundamental applications of cloud computing, specifically choosing AWS services, are covered in the course. The following services are covered by the course. As a major contender in the world of cloud computing, AWS is something that every IT professional should become familiar with. The audience for this training was novices.

COURSE GOALS



- Identify Use Cases for AWS
- AWS such as EC2, S3, Cloud IAM and More
- Monitoring and Management of your cloud resources
- Certification Options
- Additional Resources to learn more.

FUTURE SCOPE



The world is moving toward the cloud, and the demand for AWS Solutions Architects will only increase. The up scaling of cloud computing has led to a paradigm shift in how companies do business. It's now possible for any company to have its own data center, but with a lot more security, scalability, and cost-effectiveness.

DESIGN RESILIENT ARCHITECTURES

01

CHAPTER

GET STARTED WITH AWS

- a. What is Cloud?
- b. Types of Cloud Deployment models
- c. Cloud Services
- d. Public cloud types
- e. AWS overview
- f. AWS Regions & Zones
- g. Introduction to Aws management console
- h. AWS services



02

CHAPTER

INITIATED AMAZON WEB SERVICES

- a. Assistance Global utilities
- b. Get work with service quotas
- c. Hands on in Comparing Savings Plans & a Quick look at Aws.Compile Optimizer Dashboard
- d. Budget billing dashboard
- e. Budget categories
- f. Security Credentials
- g. Access management console
- h. Work protocol IAM
- i. Hands on Cost Explorer
- j. Aws Purchasing option
- k. Cost management Introduction
- l. Service quotas & Throttling in Axis



03

CHAPTER

ELASTIC COMPUTE CLOUD (EC2)

- a. What is EC2?
- b. Define AMI
- c. Launch Amazon Ec2 instance
- d. Configure Security groups
- e. PEM & PPK
- f. Commit Linux terminal commands
- g. Add volume in EC2 Linux
- h. Deploy Windows server instance
- i. Scenario based architecture
- j. connect to an Ec2 Instance by Using RDP
- k. managing licensing & cost in Ec2
- l. migrating AWS with snowball and outposts
- m. Advanced EC2 networking & connectivity options



02
HRS



04
HRS

04

CHAPTER

AMAZON ELASTIC BLOCK STORE

- a. Managing data retention and classification in AWS
- b. Data Recovery options on AWS
- c. Features of Amazon EBS
- d. Modify EBS volumes
- e. Encrypting EBS volumes for security
- f. Take Snapshots
- g. Restore Snapshots
- h. Convert into AMI
- i. Deploy cross region instance from AMI
- j. Managing AMI



02
HRS



05
HRS

- k. Protecting your data with AWS backups
- l. Working with Instance stores in AWS
- m. Amazon fully managed file system service
- n. Understanding EFS: Amazon's Elastic file system

05

CHAPTER

INSTANCE CATEGORIES

- a. Distinguish between reboot, stop and terminate
- b. Define spot instances
- c. Brief about saving plans
- d. What are reserved instances
- e. Detail about capacity reservation
- f. Instance types


02
HRS


03
HRS

06

CHAPTER

SCALABLE STORAGE SERVICE (S3)

- a. Configure S3 Bucket & website upload option with S3
- b. Amazon S3
- c. Sharing & Accessing S3 objects with presigned URLs & Access point
- d. What is object storage?
- e. Managing object life cycle & versioning in S3
- f. Define Scalable Storage in the cloud
- g. Characteristic Versioning & encryption
- h. Deploy buckets using S3
- i. Analyse your storage
- j. Cross-region replications process
- k. Hosting static website with Amazon S3
- l. Enhancing security & Access control in S3


03
HRS


05
HRS

- m. Understanding different storage classes in S3
- n. Storing log files into S3 buckets

07

CHAPTER

IAM (IDENTITY ACCESS MANAGEMENT)

- a. What is IAM?
- b. Building a secure IAM strategy
- c. Create users & groups
- d. User access key id & secret access key id
- e. Deploy default policies
- f. IAM policies , IAM Roles
- g. Configure Customized policies
- h. Organize bucket policies
- i. Best practises for Root and IAM users
- j. Managing access across multiple AWS accounts
- k. Acceskey,secreat acceskey CLI



02
HRS



06
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08

CHAPTER

AWS NETWORK & SECURITY

- a. What is Elastic IP address?
- b. what is public IP, Private IP
- c. CIDR value monitoring with VPC flow logs
- d. Subnetting
- e. Deploy new VPC
- f. Create Subnets
- g. Deploy Route tables
- h. Configure Internet gateways
- i. What is VPC Peering?
- j. Define NAT



02
HRS



05
HRS

- k. private communication with VPC Endpoint
- l. create 2time Architecture
- m . Create 3time architecture using Upc

09

CHAPTER

DESIGN SECURE WORKLOADS & APPLICATIONS

- a. Designing VPC Architectures with Security components (for Example - Security groups, Route tables, network ACLs, NAT Gateways)
- b. Determining Network segmentation strategies (for example, using public subnets & Private Subnets)
- c. Configure Internet Gateways
- d. Configure NAT gateway for Internet Access



02
HRS



03
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10

CHAPTER

AWS HIGH-AVAILABILITY

- a. Define Load balancer
- b. What is Auto scaling?
- c. Autoscaling polices
- d. Deploy Application load balancer
- e. Configure Target groups
- f. Taken AMI
- g. Create Autoscaling configuration
- h. Configure Auto scaling groups
- i. Creating a lunch template
- j. Horizontal vs vertical scalling



02
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CHAPTER

AWS DATABASES

- a. Define RDS?
- b. Connect database for -time architecture.
- c. What is Dynamo?
- d. Understanding Dynamo DB
- e. Create MYSQL Database instance
- f. Access through client machine
- g. Create Dynamo Db
- h. Backup Dynamo Db
- i. What is Amazon Aurora?
- j. Implementing read replicas with RDS
- k. Selecting the best DB engine for your need



02
HRS



03
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CHAPTER

AWS MONITORING & SNS

- a. Sending notification with Amazon SNS
- b. Create Events & Schedule works
- c. Monitoring memory & disk metrics
- d. Collect and Track metrics
- e. Configure Alarm & assign SNS
- f. Define Cloud Trail
- g. Ordering message with amazon sqs
- h. Handling failed message with dead-letter quoesin SQS
- i. Message queiny with Amazon SQZ



02
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04
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CHAPTER

AMAZON ROUTE 53

- a. Define Route 53
- b. What is DNS?
- c. Define Traffic flow
- d. Create hosted zone
- e. Purchasing domain names
- f. Mapping IP address to domain name
- g. Hosting application using domain name


02
HRS


03
HRS

14

CHAPTER

AWS APPLICATION SERVICES

- a. Define LAMDA
- b. What is Elastic bean stalk?


01
HRS


02
HRS

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CHAPTER

DATA SECURITY OPTIONS

- a. Monitoring metrics with amazon managed service
- b. Cloud Watch Monitoring
- c. Auditing AWS activities with AWS cloud trail
- d. Cloud watch Alarms/Alerts
- e. Security Hub
- f. NACLs or Security Groups


02
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03
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CHAPTER

SERVERLESS

- a. When to use containers
- b. How to migrat applications into container
- c. Building graphql APIs with AWSApp sync
- d. Scaling database with amazon aurora serverless
- e. Running containers anywhere with amazon Ecs & Eks anywhere
- f. Storing & deploying container images with amazon ECR



04
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06
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