CYBERIUM X

AWS

## Amazon Web Services

aws

INTRODUCTION

Amazon Web Services (AWS) is one of the most widely used cloud computing platforms, offering a vast range of services for computing, storage, networking, security, and more. As organizations rapidly move to the cloud, there is a growing demand for professionals with expertise in AWS.

The AWS Training Course is designed to provide learners with a comprehensive understanding of AWS services, architecture, and best practices. This course covers everything from basic cloud concepts to advanced deployment strategies, ensuring participants gain the knowledge and hands-on experience needed to work effectively with AWS.

Whether you are an IT professional, developer, system administrator, or cloud enthusiast, this course will help you build a strong foundation in cloud computing and prepare you for AWS-related roles in the industry. Through a structured learning approach, hands-on labs, and real-world scenarios, participants will develop practical cloud skills and gain confidence in working with AWS infrastructure.

By the end of this course, learners will have a solid grasp of AWS architecture and the ability to design, deploy, and manage cloud-based solutions efficiently.

Course duration- 30 Hours
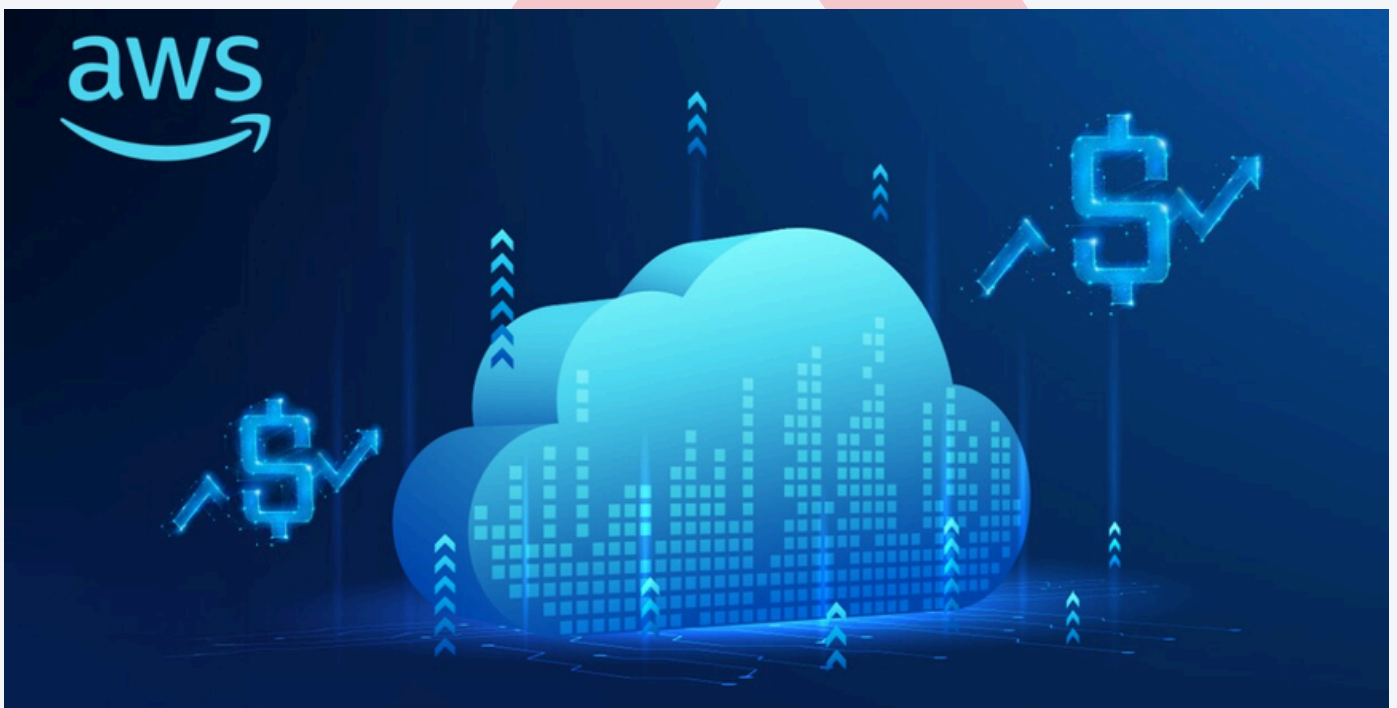
AWS SYLLABUS

Module 01- Introduction to AWS Cloud

1. What is Cloud Computing?
2. Benefits of Cloud Computing
3. AWS Global Infrastructure
4. AWS Regions, Availability Zones & Edge Locations
5. Core AWS Services Overview

Module 02- AWS Pricing and Billing Overview

1. AWS Free Tier and Pricing Models
2. AWS Cost Explorer
3. AWS Pricing Calculator
4. AWS Billing Dashboard
5. Cost Optimization Strategies

Module 03- AWS Identity and Access Management (IAM)

1. Introduction to IAM
2. Creating Users, Groups, and Roles
3. IAM Policies and Permissions
4. Multi-Factor Authentication (MFA)
5. Best Practices for IAM Security

Module 04- AWS Budgets

1. Overview of AWS Budgets
2. Setting Up Cost and Usage Budgets
3. Forecasting AWS Costs
4. Budget Alerts and Notifications

Module 05- Amazon EC2 (Elastic Compute Cloud)

1. Introduction to Amazon EC2
2. Launching and Managing EC2 Instances
3. Launching Windows Instances
4. Launching Linux Instances
5. Connecting to EC2 via SSH & RDP
6. Instance Types and Pricing
7. Elastic IPs and Security Groups
8. EC2 Instance Storage (EBS)
9. EC2 Snapshot and Recovery

Module 06- AWS Auto Scaling

1. Introduction to Auto Scaling
2. Creating an Auto Scaling Group
3. Scaling Policies and Metrics
4. Maintaining High Availability

Module 07- AWS Load Balancer

1. Introduction to Elastic Load Balancing (ELB)
2. Types of Load Balancers (ALB, NLB, CLB)
3. Load Balancer Configuration
4. Health Checks and Traffic Distribution

Module 08- Amazon EBS (Elastic Block Store)

1. Introduction to Amazon EBS
2. EBS Volume Types
3. Creating and Attaching EBS Volumes
4. Snapshots and Backup Strategies
5. Encrypting EBS Volumes

Module 09- Amazon VPC (Virtual Private Cloud)

1. Introduction to VPC
2. Subnets, Route Tables, and Internet Gateways
3. Security Groups vs. Network ACLs
4. NAT Gateways
5. VPC Peering

Module 10- Amazon S3 (Simple Storage Service)

1. Introduction to Amazon S3
2. Storage Classes and Use Cases
3. Uploading and Managing Objects
4. Bucket Policies and Access Control
5. Bucket Versioning
6. Static Web Hosting
7. Data Encryption and Security

Module 11- AWS DataSync

1. Overview of AWS DataSync
2. Transferring Data Between S3 Buckets
3. Data Migration Between On-Premise and AWS
4. Automating Data Transfers
5. Ensuring Data Security

Module 12- AWS Elastic Beanstalk

1. Introduction to Elastic Beanstalk
2. Deploying Applications Automatically
3. Supported Platforms (Java, Python, Node.js, etc.)
4. Environment Configuration and Scaling
5. Monitoring and Troubleshooting

Module 13- Amazon Route 53

1. **Introduction to DNS and Route 53**
2. **Registering a Domain Name**
3. **Configuring Hosted Zones**
4. **Routing Policies (Simple, Weighted, Failover, etc.)**
5. **Domain Registration and Health Checks**

Module 14- Amazon RDS (Relational Database Service)

1. **Introduction to Amazon RDS**
2. **Supported Databases (MySQL, PostgreSQL, Oracle, etc.)**
3. **Establishing a connection between EC2 instance and Database Instance**
4. **Snapshots**
5. **Automated Backups**

Module 15- Amazon SNS (Simple Notification Service)

1. **Introduction to Amazon SNS**
2. **Creating and Managing Topics**
3. **Configuring Message Delivery (Email, SMS, Lambda, etc.)**
4. **Integrating with Other AWS Services**

Module 16- Amazon EventBridge

1. Introduction to Amazon EventBridge
2. Event-Driven Architecture
3. Setting Up Rules and Targets
4. Configuring Cronjobs
5. Integrating with AWS Lambda and S3

Module 17- Amazon CloudWatch

1. Monitoring AWS Resources
2. Setting Up Alarms and Logs
3. CloudWatch Metrics and Dashboards
4. Automated Event Response with CloudWatch

Module 18- AWS Lambda

1. Introduction to Serverless Computing
2. Writing and Deploying Lambda Functions
3. Configuring Triggers and Permissions
4. Integrating Lambda with S3
5. Lambda Use Cases and Best Practices

Final Project & Hands-On Lab

1. Real-World Case Study – Implementing AWS Services in a Practical Scenario
2. AWS Certification Preparation – Reviewing Exam Objectives and Practice Questions