



AWS Cloud Developer Associate Training Curriculum

— STRUCTURE —



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"Become a AWS Certified Cloud Developer by joining our comprehensive Training Program"

About Croma Campus:

Croma Campus Training & Development Private Limited is an education platform since 2010 providing rigorous industry-relevant programs designed and delivered in collaboration with world-class faculty and industry.

- Hands-On Live Projects
- Simulation Test Papers
- Industry Cases Studies
- 61,640+ Satisfied Learners
- 140+ Training Courses
- 100% Certification Passing Rate
- Live Instructor Classroom / Online Training
- 100% Placement Assistance

Course Objectives:

- Understand the core concepts of AWS Cloud
- Leverage AWS developer tools to deploy your applications
- Rich hands-on labs to understand concepts better
- Understand and create VPC and auto-scaling
- Ability to deploy and operate EC2, EBS and ELB service
- Ability to create IAM users, groups, policies and roles
- DynamoDB – No SQL database use case

Course Description:

The course is designed based on official certification requirements outlined by AWS Cloud provider for AWS Certified Developer – Associate. After this course, you will be able to appear for the certification exam, "AWS Certified Developer – Associate". The exam fee is 150 USD with Single attempts at an additional cost.

- Gives an edge over other professionals in the same field, in term of pay package.
- All roads are leading to Cloud, and everyone is adopting Cloud computing. Hence, would require Cloud Engineers to drive their journey to cloud
- Helpful for People are trying to transition to Cloud Engineer roles
- Verifies that you are aware of the latest features of Cloud
- The certification helps to speak more confidently about this technology at my company when networking with others.

Certification Details:

- Format: Multiple choice, multiple answer
- Type: Associate/Practitioner
- Delivery Method: Testing center or online proctored exam
- Time: 130 minutes to complete the exam
- Cost: 150 USD (Practice exam: 20 USD)
- Language: Available in English, Japanese, Korean, and Simplified Chinese

Croma Campus Training Program Deliverables:

- **Session Recordings** - Original Class Room Voice & Video Recording
- **Training Material** - Soft Copy Handbooks
- **Assignments** | 25+ Hands-on Exercises
- **Test Papers** - We provide **Practice Test** as part of our course to help you prepare for the actual certification exam.
- **Live Case Studies**
- **Live Projects** - Hands-on exercises and Project work. You will work on real time industry-oriented projects and assignments for each module to practice.
- **Key focus on Hands-on exercises and Project work.** You will work on real time industry-oriented projects.
- Faculty with more than **10+ Years of Experience** in the Industry.
- **Technical Resume Designing & Job Assistance:** With more than 100+ Clients across the Globe and we help learners to get a good job in their respective field. We also help learners with resume preparation.
- **Interview Q&A**
- **About Croma Campus Training Certificate:** Croma Campus will provide you with an industry-recognized (Certified by **ISO 9001:2015** & **E-Cell IIT Jodhpur**) course completion certificate which has lifelong validity.
- **How I Unlock my Croma Campus Certificate:** Attend Complete Batch & Submit at least One Completed Project.

Course Content:

Module 1: AWS Fundamentals

- Overview
- User Sign Up
- Overview Amazon Management Console
- Management Activity and Billing overview
- Amazon Pricing

Module 2: AWS Big Picture

- An Overview of AWS
- EC2- An overview
- EBS- An Overview
- Security Group-An Overview
- Elastic IP- An overview
- Cloud Front-An Overview
- S3- An overview
- Glacier- An overview
- IAM – An Overview
- RDS- AN overview

Module 3: Amazon EC2- Win Server 2012

- Launch Windows server 2012 Instance
- Decrypt Password and download RDP shortcut client

- Connect to the EC2 Windows 2012 instance
- Terminate the Windows server 2012 Instance

Module 4: Amazon EC2- Security Groups

- Creating Security Groups
- Modify Security Groups
- Delete Security Groups

Module 5: Amazon Elastic Block Store

- Create Standard Volume
- Create and delete snapshots
- Create Provisioned I/o Volume
- Assign volumes to Windows server 2012 and Ubuntu 14.04 server
- Disassociate and Delete volumes

Module 6: Amazon Elastic Load Balancing (ELB)

- Launch Two Ubuntu EC2 Instances- apache web servers with user data
- Edit HTML files to both the servers
- Test your web Servers through internet
- Create Elastic Load Balancer
- Add both the Ubuntu servers to ELB
- Test your Elastic Load Balancer
- Delete your Elastic Load Balancer

Module 7: AWS Route53

- What is Route53
- Route-53 demo integration with ELB you created

Module 8: AWS S3

- AWS S3- Overview and pricing
- Create Bucket and Folder
- Upload, download, share and delete object
- Delete Bucket

Module 9: Amazon EC2- Ubuntu 14.04 with user data and metadata

- Launch the EC2 Ubuntu cloud server
- Using User-data of web-server
- Validate user data is executed successfully
- Fetch information about VM from metadata URL

Module 10: Amazon EC2 and EBS System operations

- EC2- Advanced theory ec2 EBS vs instance store
- EC2- Operations (Status checks)
- EC2 – Creating your own AMI
- EC2 – Launching instance using own AMI
- EC2 – copy snapshot across region and share across accounts

- EBS – Snapshot
- EBS- creating volume using snapshot
- EBS – copy EBS snapshot across region and share across accounts
- EBS - upgrade volume types
- Security groups - create, edit and modify rules

Module 11: AWS Elastic File System

- AWS elastic File System – Overview and pricing
- Create EFS share and mount to an ec2 instance
- Store and retrieve from EFS

Module 12: AWS S3

- AWS S3- Overview and pricing
- Create Bucket and Folder
- Upload, download, share and delete object
- Delete Bucket
- File Versioning (S3 version control)
- Create a static website on s3
- Create a server less webpage
- Cross Region replication
- CORS configuration
- S3 Life cycle management
- S3 security and encryption

Module 13: AWS Cloud Front

- Cloud Front overview and pricing
- Create an origin bucket for Cloud Front
- Upload file to origin bucket
- Create CDN distribution and use origin bucket
- Access files through Cloud Front distribution

Module 14: AWS other storage options

- Storage Gateway – Overview and pricing
- Snowball – Overview and Pricing
- Glacier – Overview and pricing
- Glacier – Live demo by instructor using fast glacier client

Module 15: AWS - IAM (Identity and Access Management)

- What is IAM? – A comprehensive introduction
- AWS federation with Active directory- Theory only
- Web Identity Federation - Theory Only
- Security Token Service – Theory only
- Getting started with IAM
- IAM user- groups
 - Creating a user and group
 - Adding a user to the group
 - Password policy setup for users
 - Attaching policy to users

- Enabling dual /Multifactor authentication to the users
- IAM roles (Hands on lab by students)
 - Creating a role
 - Launching a EC2 instance using a S3 full access role
 - Deleting a role

Module 16: AWS CLI

- Working with the AWS CLI
- Launch instance with s3 and ec2 full access
- Configure AWS cli client
- Create a security group using cli
- Create a key pair using cli
- Launch an ec2 instance using cli
- Stop an ec2 instance using cli
- Terminate an ec2 instance using cli
- Create an s3 bucket using cli
- Upload and download an object from your local machine to s3 through cli
- List buckets through cli
- Delete buckets through cli

Module 17: AWS DynamoDB Database using Python SDK

- AWS Database options: RDS and DynamoDB DB differences
- Describe Amazon DynamoDB
- DynamoDB Provisioned throughput
- Using web identity to connect to authenticate with DynamoDB - Overview
- DynamoDB Indexes
- Aspects of DynamoDB
- Lab: Configure python SDK to access to DynamoDB
- Create tables using python SDK
- Put item in using SDK
- Scan and Query API call using python SDK
- Delete item using SDK

Module 18: AWS Route 53

- Route 53 - routing options
- Simple routing – Hand-on lab
- weighted routing policy lab
- latency based routing lab
- Geolocation based routing lab
- Failover routing lab

Module 19: AWS- Virtual Private Cloud (VPC)

- What is VPC? – A comprehensive introduction
- Networking bottlenecks
- Understanding VPC configurations
 - VPC with single public subnet
 - VPC with public and private subnet
 - VPC Peering

- Access control List
- Configuring VPC Instances (Hands on lab by students)
 - Creating a VPC
 - Subnets
 - Internet Gateway
 - Routing
 - Configuring a NAT Gateway
 - Creating security groups
 - Launching instances in public and private subnets
- NAT vs Bastions
- VPC Flow Logs
- VPC clean up

Module 20: AWS Cloud Formation

- Infrastructure as Code using Cloud Formation
- Cloud formation – Create a new stack
- Create and deploy sample template in JSON format
- Use existing templates and deploy

Module 21: Compute Part II operations

- Bash Scripting
- Lambda

Module 22: Application Development and Deployment Best Practices

- Application deployment using AWS Elastic Beanstalk
- Deploy java beanstalk environment
- Deploy web application to environment
- Terminate beanstalk environment

Module 23: AWS - Simple Notification Service (SNS)

- Simple Notification Service (SNS) – Overview and use case
- Create SNS notification
- Subscribe for notification

Module 24: AWS- SQS and SWF (Theory only)

- Simple Queue Service (SQS) – Overview and use case
- Simple Workflow (SWF) - Overview and use case

Module 25: Placement Guide

- Tips to clear an Interview
- Common Interview questions and answers
- AWS Cloud Sysops Interview Questions and Answers
- Resume Building Guide
- Attempt for AWS Cloud Sysops Associate Global Certification Exam
- Earn Credentials and Start applying for Jobs