



Course Curriculum: Your 10Module Learning Plan

## AWS Architect Certification Training

### About Edureka

Edureka is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like *Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming.*

We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

### About the Course

AWS Architect Certification Training from Edureka is designed to make you an expert in EC2, EIP, ELB, Auto Scaling, EBS, S3, Glacier, Snowball, Cloudfront, VPC, DynamoDB, Redshift, IAM, KMS, Cloudwatch and CloudTrail. The sessions will be conducted by Industry practitioners who will train you to leverage AWS services to make the AWS cloud infrastructure scalable, reliable, and highly available. This course is completely aligned to AWS Architect Certification - Associate Level exam conducted by Amazon Web Services.

## Module 1
## Introduction and getting started with AWS

**Learning Objectives** - In this module, you can learn about the different projects and services of AWS. You can also understand the Global Infrastructure of AWS. Different types of EC2 instances and instance purchasing options.

**Topics**

- ✓ Introduction to Cloud Computing
- ✓ Different AWS projects and services
- ✓ Setting up of the AWS account
- ✓ AWS Global Infrastructure and its benefits
- ✓ EC2 instances
- ✓ Different EC2 Instance purchasing options and placement groups

**Practical's to be covered:** Setting up an AWS account.

## Module 2
## Amazon EC2

**Learning Objectives** - This module talks about the introduction to the compute offering from AWS called EC2. We will cover different Amazon AMIs. This also includes a demo on launching an AWS EC2 instance, connecting with an instance and hosting a website on the AWS EC2 instance.

**Topics**

- ✓ Amazon AMI
- ✓ Demo on AMI creation, security groups, key pairs, various tenancy options
- ✓ Elastic IP vs Public IP

**Practical's to be covered:** Launching a free tier Ubuntu Instance, deploying a WordPress Blog on Amazon EC2 Windows Instance.

## Module 3
## Storage Services and AWS CLI

**Learning Objectives** - In this module, you can learn about the different storage services offered by AWS, and how they can be used to transfer data from one place to another.

**Topics**

- ✓ Traditional storage tiers
- ✓ Disadvantages of traditional storage over cloud
- ✓ AWS storage options: EBS, S3 & Glacier
- ✓ AWS Connecting Storage: Snowball & Storage Gateway
- ✓ AWS Command Line Interface (CLI)

**Practical's to be covered:** Restoring an Amazon EBS Volume from a Snapshot, hosting a website on Amazon S3, deploying an On-Premises Gateway (Gateway - Cached), running commands on AWS CLI.

### Module 4
### Virtual Private Cloud & Direct Connect

**Learning Objectives** - This module deals with the introduction to Amazon Virtual Private Cloud. It will help you understand how you can make public and private subnets with AWS VPC, along with a demo on creating VPC. This module will also provide an overview of AWS Direct Connect.

**Topics**

- ✓ Subnet and Subnet Mask
- ✓ VPC and its benefits
- ✓ Default and Non-default VPC
- ✓ Components of VPC
- ✓ Direct Connect

**Practical's to be covered:** Building a non-default VPC and launching an instance in it.

### Module 5
### Database Services

**Learning Objectives** - In this module, you can learn about the different database services offered by AWS to deal with structured and unstructured data.

**Topics**

- ✓ Different database services of AWS: Amazon RDS, DynamoBD, RedShift, ElastiCache

**Practical's to be covered:** Creating a Mysql DB Instance, creating table and running query in DynamoDB, launching a RedShift Cluster.

### Module 6
### Elastic Load Balancing & Auto Scaling

**Learning Objectives** - This module will help you learn the concepts of 'Scaling' and 'Load distribution techniques' in AWS. This module also includes a demo around load distribution and scaling your resources horizontally based on time or activity.

**Topics**

- ✓ Components and types of load balancing
- ✓ Auto scaling and its benefits
- ✓ The lifecycle of auto scaling
- ✓ Components and policies of auto scaling

**Practical's to be covered:** Working with Elastic Load Balancer, maintaining high availability with Auto Scaling.

### Module 7
### Route 53 & Management Tools

**Learning Objectives** - This module deals with Route 53 and the different management tools which covers monitoring AWS resources, setting up alerts and notifications for AWS resources and AWS usage billing with AWS CloudWatch.

**Topics**

- ✓ Overview of Route 53
- ✓ Management tools: CloudTrail, CloudWatch, CloudFormation, and Trusted Advisor

**Practical's to be covered:** Routing Traffic to AWS Resources through Route 53, Enabling CloudTrail, Log Delivery to a S3 Bucket, setting up a billing alert, creating Stack and deploying it in CloudFormation.

### Module 8
### Application Services, AWS Lambda & Elastic Beanstalk

**Learning Objectives** - In this module, you can learn about the different application services of AWS that are used for sending emails and notifications. This session also deals with the various compute services of AWS through which you can run your existing code on the cloud.

**Topics**

- ✓ AWS Application Services: SQS, SNS, SES
- ✓ AWS Compute Services: Lambda and Elastic Beanstalk

**Practical's to be covered:** Sending an Email through SES, running an application through Beanstalk and Copy an S3 object through Lambda.

### Module 9
### OpsWorks, Security & Identity Services

**Learning Objectives** - Through this module, you can understand how OpsWorks works, the various components of OpsWorks and how to create Chef Recipes for OpsWorks. You can also learn how to achieve distribution of access control with AWS using IAM

**Topics**

- ✓ Benefits, features and components of OpsWorks
- ✓ Benefits of Chef, Cookbook, Recipes
- ✓ OpsWorks lifecycle events
- ✓ Security and identity services
- ✓ IAM and KMS

**Practical's to be covered:** Creating a OpsWorks stack and deploy an app in the stack, creating an IAM user in AWS account, Encrypt data stored in a S3 bucket using an encryption key.

### Module 10
### Project Discussion & Mock Test

**Learning Objectives** - This module is primarily a demo of an AWS Project using a real-life case study. It also has a Q&A session to prepare learners for AWS certifications.

**Topics**

- ✓ Hands on Workshop
- ✓ Q/A
- ✓ Overview of AWS Certification

### What are the system requirements for this course?

The system requirements include Minimum 4 GB RAM, i3 processor or above,20 GB HDD

### How will I execute the practicals?

For executing the practicals you will be working on the cloud servers and various other services that Amazon provides. You can create a Free Tier account on AWS which will give you an access to all the AWS services. The step-wise guide for accessing these services will be available in the LMS and edureka's support team will assist you.

### Which case studies will be a part of the course?

**Problem Statement: Hosting a Website on Amazon Web Services**

- ✓ Configure a Virtual Private Cloud (VPC)
- ✓ Create an Application Server within your VPC
- ✓ Create a Database Server within your VPC
- ✓ Deploy Your App
- ✓ Scale and Load-Balance Your Web App within your VPC
- ✓ Associate a Domain Name with your website

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