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Discover Learning

AWS ARCHITECT CERTIFICATION TRAINING

Course Curriculum : Your 13 module Learning Plan

https://www.edureka.co/cloudcomputing

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 Course

Edureka's AWS Architect Certification Training is curated by industry professionals as per the industry requirements & demands. It will help you prepare for the AWS Certified Solutions Architect (CSA) - Associate Exam. You will be able to effectively demonstrate knowledge of how to architect and deploy secure and robust applications on AWS.

Curriculum

Introduction To AWS

Learning Objectives: In this module, you will learn about the different services provided by AWS. You will be provided with an overview of important resources required for architecting an application.

Topics:

- Cloud Computing
- Cloud deployment and service models
- AWS Global Infrastructure and its benefits
- AWS Services
- Ways to access AWS Services

Hands-on:

- Sign-up for AWS free-tier account
- Create a S3 bucket through Console
- Create a S3 bucket through AWS CLI
- Launch an EC2 instance

Security Management In AWS

Learning Objectives: In this module, you will learn about security management in AWS using Identity Access Management (IAM) and Key Management Service.

Topics:

- User management through Identity Access Management (IAM)
- Various access policies across AWS Services
- API keys service access

- Best practices for IAM
- Key Management Service
- Access billing and create alerts on billing

Hands-on:

- Create new users who can login to AWS console
- Create role for an application to access S3
- Create policies for new user to have either admin or limited privileges
- Credential rotation for IAM users
- Login to AWS console via MFA
- Create API keys for accessing AWS Services
- Create Budget

Object Storage Options

Learning Objectives: In this module, you will learn about the different Object Storage Services offered by AWS, identify when to use a specific service, how to store/transfer data using these services and optimize the storage cost.

Topics:

- S3 bucket - Creation, Version Control, Security, Replication, Transfer Acceleration
- Storage classes in S3
- Life cycle policy in S3
- Cost optimization for S3
- CloudFront – Create and configure with S3
- Snowball
- Storage Gateway and its types

Hands-on:

- Hosting a Static Website on Amazon S3
- Versioning in AWS S3
- Replicating data across regions
- S3 Transfer acceleration
- Transfer and retrieve data from Glacier through lifecycle policy
- Upload a file to AWS S3 through a Website
- Accessing a static website through Cloud Front

Amazon EC2

Learning Objectives: EC2 (Elastic Compute Cloud) is the backbone of AWS. In this module, you will learn about the concepts associated with an EC2 instance and their usage. This module covers different Amazon AMIs, a demo on launching an AWS EC2 instance, ways to connect with an instance and how to host a website on AWS EC2 instance.

Topics:

- Start, stop and terminate an EC2 Instance
- Security Group
- AMI
- VPC, ENI, Public and Private IP
- Storage services
- EBS and its types
- EFS
- Cost optimization

Hands-on:

- Host your website inside EC2

- Create an AMI
- Create an Elastic IP
- Attaching an EBS volume externally
- To create a snapshot
- Mount EFS volumes

Load Balancing, Auto-Scaling And Route 53

Learning Objectives: In this module, you will learn the concepts of Load Balancing, Auto-Scaling and Route 53 to manage traffic.

Topics:

- Elastic Load Balancer and its types
- Comparison of Classic, Network and Application Load Balancer
- Auto-Scaling
- Components of Auto-Scaling
- Lifecycle of Auto-Scaling
- Auto-Scaling policy
- Working of Route 53
- Various Routing Policies

Hands-on:

- Create a Classic Load Balancer
- Create a Network Load Balancer
- Work with Application Load Balancer and Auto-Scaling
- Auto-Scaling and Scaling policy
- Point a sub-domain to EC2 box in Route 53

Database Services And Analytics

Learning Objectives: In this module, you will learn about the different database services offered by AWS to handle structured and unstructured data. This module also gives you knowledge on how to analyze your data.

Topics:

- Amazon RDS and its benefits
- Amazon Aurora
- Amazon DynamoDB
- ElastiCache
- Amazon RedShift
- AWS Kinesis

Hands-on:

- Storing an application data in MySQL DB using Relational Database Service (RDS)
- Creating Tables, loading sample data and running queries
- Redis Cache
- Visualize the web traffic using Kinesis Data Stream

Networking And Monitoring Services

Learning Objectives: This module introduces you to the Amazon Virtual Private Cloud. You will learn to implement networking using public and private subnets with VPC. Also, this module demonstrates how to monitor your services.

Topics:

- VPC – Benefits and Components
- CIDR Notations
- Network Access Control List v/s Security Groups

- NAT – Network Address Translation
- VPC peering
- AWS CloudWatch
- AWS CloudTrail
- Trusted Advisor

Hands-on:

- Create a Non-default VPC and attach it to an EC2 instance
- Accessing Internet Inside Private Subnet Using NAT Gateway
- Connect two instances in different VPC's using VPC peering
- Monitoring an EC2 instance using CloudWatch
- Enable CloudTrail and Store Logs in S3
- Explore the Trusted Advisor

Applications Services And AWS Lambda

Learning Objectives: In this module, you will learn about the different Application services offered by AWS, that are used for sending e-mails, notifications, and processing message queues. This module also deals with the latest trend of Serverless architecture using AWS Lambda.

Topics:

- AWS Simple Email Service (SES)
- AWS Simple Notification Service (SNS)
- AWS Simple Queue Service (SQS)
- AWS Simple Work Flow (SWF)
- AWS Lambda

Hands-on:

- Send an email through AWS SES
- Send a notification through SNS
- Send an e-mail through Lambda when an object is added to S3
- Send a notification through Lambda when a message is sent to SQS

Configuration Management and Automation

Learning Objectives: This module helps you gain knowledge on various AWS services and tools used for configuration management and Automation. **Topics:**

- AWS CloudFormation
- AWS OpsWorks - OpsWorks for Chef Automate, OpsWorks for Stack, OpsWorks for Puppet Enterprises
- AWS Elastic Beanstalk
- Differentiate between CloudFormation, OpsWorks, and Beanstalk

Hands-on:

- Installation of LAMP server in EC2 through CloudFormation
- AWS OpsWorks Stack
- Deploy a Web Application with DynamoDB using Beanstalk

AWS Architectural Designs – I

Learning Objectives: This module gives you an idea about the importance of AWS guidelines for Well Architected Framework. You will also learn about the Resilient and Performant architecture designs. **Topics:**

- Determine how to design high-availability and fault-tolerant architectures
- Choose reliable/resilient storage

- Determine how to design decoupling mechanisms using AWS services
- Determine how to design a multi-tier architecture solution
- Disaster Recovery Solution
- Choose performant storage
- Apply caching to improve performance
- Design solutions for elasticity and scalability

AWS Architectural Designs – II (Self-paced)

Learning Objectives: Adding to Module 10, this module covers the remaining three concepts behind AWS Well-Architected Framework – Securing Applications and Architectures, Designing Cost-Optimized Architectures, Defining Operationally Excellent Architectures.

Topics:

- Well-Architected Framework
- Specify Secure Applications and Architectures
- Design Cost-Optimized Architectures
- Define Operationally-Excellent Architectures

AWS Certified Solutions Architect Certification Exam Questionnaires (Self-Paced)

Learning Objectives: This module mainly contains exam questionnaires that will be discussed along with the guidance on taking up AWS Solution Architect Certification Exam. **Topics:**

- AWS Solution Architect Certification Exam Guide
- Certification Exam Questionnaires

DevOps on AWS (Self-paced)

Learning Objectives: In this module, you will learn how to implement DevOps tools on AWS.

Topics:

- Overview of DevOps - Lifecycle, Stages in DevOps
- AWS CodeCommit
- AWS CodePipeline
- AWS Code Deploy

Hands-on:

- Implement AWS CodeCommit
- Implement AWS CodePipeline

Projects

What are the system requirements for this AWS Architect Certification Training?

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

How will I execute practicals in this AWS Architect Certification Training?

In AWS Architect Certification Training, 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 andEdureka'ssupport team will assist you 24*7 for any doubts.