



Amazon Cloud Solutions Architect Curriculum

[AWS Certified Solutions Architect](#) – Associate Level Detailed Course Curriculum Duration: 5.0 Months

[Delivery Method](#): AWS Instructor-Lead Intended Audience:

This course is intended for:

- Entry level professionals to build Information Cloud Technology skills through broad based training and certification in the 'Cloud Computing' sector
- Solution Architects or Solution Design Engineers who are relatively new to AWS and want to fast track their AWS Certification.
- Solution Architects or Solution Design Engineers who are preparing to take the AWS Certified Solutions Architect – Associate exam Course Breakdown

Introduction to Information Technology

-On Premise Overview

-Stack IT Business Process

-Stack IT ON-PREM Server Architecture

-Development Methodologies and their Frameworks

- Agile Methodology: Agile Ceremonies and Artifacts

- Waterfall Methodology
- What is the SDLC?
- SDLC Demystified (In-Depth)
- What is a server? What are components of a server?
- Discuss Cloud Key Terms

Introduction to Linux

- The Command Line:** What is it, how does it work and how do I get to one.
- Basic Navigation:** An introduction to the Linux directory system and how to get around it.
- More About Files:** Find out some interesting characteristics of files and directories in a Linux environment.
- Manual Pages:** Learn how to make the most of the Linux commands you are learning.
- File Manipulation:** How to make, remove, rename, copy and move files and directories.
- Vi Text Editor:** Discover a powerful Linux based text editor.
- Wildcards:** Also referred to as globbing, this is a means to refer to several files in one go.
- Permissions:** Learn to identify and change the permissions of files and directories and what the consequences of these are.
- Filters:** An introduction to various commands that allow us to mangle data in interesting and useful ways.
- Grep and Regular Expressions:** Master a powerful pattern matching language that is useful for analyzing and processing data.
- Piping and Re-direction:** Join commands together in powerful combinations.
- Process Management:** See what is currently running on your Linux system and what state the system is in, learn how to kill programs that have hung and put jobs in the background.
- Scripting:** Be happy. Get the computer to do tedious and repetitive tasks for you.
- Advanced Scripting**

Introduction to AWS

- Why Should I Learn and Get Certified with AWS?
- How to Sign up for AWS
- Identity and Access Management & S3
- Identity and Access Management 101
- Identity and Access Management - Step By Step
- Create a Billing Alarm - Step By Step

Simple Storage Service- S3

- Create an S3 Bucket - Step By Step
- S3 Pricing Tiers
- S3 Security and Encryption
- S3 Versioning - Step By Step
- Lifecycle Management with S3 - Step By Step
- S3 Object Lock and Glacier Vault Lock
- S3 Performance
- S3 Select and Glacier Select [SAA-C02]
- AWS Organizations and Consolidated Billing [SAA-C02]
- Sharing S3 Buckets Across Accounts - Lab [SAA-C02]
- Cross-Region Replication - Step By Step
- Transfer Acceleration
- AWS DataSync [SAA-C02]
- CloudFront
- Create a CloudFront Distribution - Step By Step
- CloudFront Signed URLs and Cookies [SAA-C02]
- Snowball
- Snowball - Step By Step
- Storage Gateway

- Athena vs. Macie [SAA-C02]
- S3 and IAM Summary
- HANDS-ON LAB Creating a Static Website Using Amazon S3
- HANDS-ON LAB Introduction to AWS Identity and Access Management (IAM) - 2020
- EC2 101 - Elastic Compute Cloud
- Launch Our First EC2 Instance: Part 1 - Step By Step
- Launch Our First EC2 Instance: Part 2 - Step By Step
- Security Groups - Step By Step
- EBS 101
- EBS Volumes and Snapshots - Step By Step
- AMI Types (EBS vs. Instance Store)
- ENI vs. ENA vs. EFA [SAA-C02]
- Encrypted Root Device Volumes and Snapshots - Step By Step
- Spot Instances and Spot Fleets [SAA-C02]
- EC2 Hibernate [SAA-C02]
- CloudWatch 101
- CloudWatch - Step By Step
- AWS Command Line (CLI) - Step By Step
- Identity and Access Management Roles - Step By Step
- Using Bootstrap Scripts - Step By Step
- Instance Metadata - Step By Step
- EFS - Lab [SAA-C02]
- Amazon FSx for Windows and Amazon FSx for Lustre [SAA-C02]
- EC2 Placement Groups
- HPC on AWS [SAA-C02]
- AWS WAF [SAA-C02]
- EC2 Summary
- HANDS-ON LAB Using AWS Tags and Resource Groups in AWS
- HANDS-ON LAB Creating and Working with an EC2 Instance in AWS

-HANDS-ON LAB Using EC2 Roles and Instance Profiles in AWS

Databases on AWS

-Databases 101

-Create RDS Instance - Step By Step

-RDS: Backups, Multi-AZ, and Read Replicas

-RDS: Backups, Multi-AZ, and Read Replicas - Step By Step

-DynamoDB

-Advanced DynamoDB [SAA-C02]

-Redshift

-Aurora [SAA-C02]

-Elasticache

-Database Migration Service (DMS) [SAA-C02]

-Caching Strategies on AWS [SAA-C02]

-EMR Overview [SAA-C02]

-Databases Summary

HANDS-ON LAB Deploying an Amazon RDS Multi-AZ and Read Replica in AWS

-Advanced IAM

-AWS Directory Service [SAA-C02]

-IAM Policies [SAA-C02]

-AWS Resource Access Manager (RAM) [SAA-C02]

-AWS Single Sign-On [SAA-C02]

-Advanced IAM Summary [SAA-C02]

Route 53

-DNS 101

-Register a Domain Name - Step By Step

-Route 53 Routing Policies Available on AWS

- Route 53: Simple Routing Policy - Step By Step
- Route 53: Weighted Routing Policy - Step By Step
- Route 53: Latency-Based Policy - Step By Step
- Route 53: Failover Routing Policy - Step By Step
- Route 53: Geolocation Routing Policy - Step By Step
- Route 53: Geoproximity Routing Policy (Traffic Flow Only) -Step By Step
- Route 53: Multivalued Answer Policy - Step By Step
- DNS Summary
- Networking Fundamentals
- IP Addressing (IPV4/IPV6)

VPCs

- VPC Overview
- Create Your Own Custom VPC: Part 1 - Step By Step
- Create Your Own Custom VPC: Part 2 - Step By Step
- NAT Instances and NAT Gateways - Step By Step
- Network Access Control Lists vs. Security Groups - Step By Step
- Custom VPCs and ELBs - Step By Step
- VPC Flow Logs - Step By Step
- Bastions
- Direct Connect
- Setting Up Direct Connect [SAA-C02]
- Global Accelerator [SAA-C02]
- VPC Endpoints [SAA-C02]
- AWS PrivateLink [SAA-C02]
- AWS Transit Gateway [SAA-C02]
- AWS VPN CloudHub [SAA-C02]
- AWS Network Costs [SAA-C02]

-VPC Summary

HANDS-ON LAB Creating a Basic VPC and Associated Components in AWS

HANDS-ON LAB Working with AWS VPC Flow Logs for Network Monitoring - 2020

HA Architecture

-Elastic Load Balancers

-Load Balancers and Health Checks - Step By Step

-Advanced Load Balancer Theory [SAA-C02]

-Auto Scaling [SAA-C02]

-Launch Configurations and Auto Scaling Groups - Step By Step

-HA Architecture

-Building a Fault-Tolerant WordPress Site: Getting Set Up - Step By Step

-Building a Fault-Tolerant WordPress Site: Setting Up EC2 - Step By Step

-Building a Fault-Tolerant WordPress Site: Adding Resilience and Auto Scaling - Step By Step

-Building a Fault-Tolerant WordPress Site: Cleaning Up - Step By Step

-Building a Fault-Tolerant WordPress Site: CloudFormation - Step By Step

-Elastic Beanstalk

-High Availability with Bastion Hosts [SAA-C02]

-On-Premises Strategies with AWS [SAA-C02]

-HA Architecture Summary

HANDS-ON LAB Getting Started with CloudFormation

Applications

-SQS [SAA-C02]

-Simple Workflow Service

-Simple Notification Service

-Elastic Transcoder

-API Gateway

- Kinesis 101 [SAA-C02]
- Web Identity Federation and Cognito
- Event Processing Patterns [SAA-C02]
- Applications Summary
- HANDS-ON LAB Scaling EC2 Using SQS
- Security
- Reducing Security Threats [SAA-C02]
- Key Management Service (KMS) [SAA-C02]
- CloudHSM [SAA-C02]
- Systems Manager Parameter Store [SAA-C02]
- Secrets Manager [SAA-C02]
- AWS Shield [SAA-C02]
- Web Application Firewall (WAF) [SAA-C02]

Serverless

- Lambda
- Build a Serverless Web Page with API Gateway and Lambda - Step By Step
- Let's Build an Alexa Skill - Step By Step
- Serverless Application Model (SAM) [SAA-C02]
- Elastic Container Service (ECS) [SAA-C02]
- Serverless Summary

Migration

- Oracle Database Migration – On-Prem to AWS
 - Lift and Shift
 - Lift and Shape
- MySQL Database Migration- On-Prem to AWS
 - Lift and Shift
 - Lift and Shape
- AWS Server Migration Service (SMS)
- AWS Data Migration Service (DMS)

