

AWS certified solution architect associate (SAA-C02)

Course Introduction

In this course we will start with basics and deep dive into the individual elements of the AWS platform. People who may have already taken a beginner level course may skip few sections, but we would highly recommend going through each section as it will be a recap.

This course is primarily aimed at AWS certified solution architect associate (SAA-C02) or AWS Certified SysOps Associate.

AWS is constantly evolving their platform, in 2019 there have been over 1500 new product releases.

As 2021 progresses we will continuously update this course with new content so you will never have to worry about missing out.

Who this course is for:

- AWS Absolute Beginners. No prior AWS experience necessary
- Existing Solutions Architects
- Programmers Interested in Deploying Applications on AWS
- People interested in hosting highly scalable, fault tolerant applications (such as WordPress and Joomla) on the AWS cloud.
- People who are aiming to clear AWS Certified Solutions Architect Associate level - only.
- *After the certification: We strongly recommend the students to refer below links to understand more about certification and choosing career path.
- AWS Certified Solutions Architect Associate – For further information, please refer here.

COURSE CONTENT

Section 1: Introduction

- Introduction to Cloud Computing
- Services Models in Cloud Computing
- Why Should I Learn AWS?

Section 2: AWS - Overview

- The History Of AWS
- AWS – Bird's eye view
- How to Sign Up To AWS.
- The Exam Blueprint

Section 3: Identity Access Management

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- Root Account Vs IAM user
- Multi-Factor Authentication for Users
- IAM Password Policies
- Creating Customer Managed Policies.
- Groups
- Roles
- AWS Directory Service
- IAM Policies
- Resource Access Manager (RAM)
- AWS Single Sign-On
- Advanced IAM Summary

Section 4: S3

- Create A Billing Alarm
- S3
- Let's Create an S3 Bucket
- S3 Pricing Tiers
- S3 Security and Encryption
- S3 Version Control
- S3 Lifecycle Management and Glacier
- S3 Lock Policies & Glacier Vault Lock
- S3 Performance
- S3 Select & Glacier Select
- AWS Organizations
- Sharing S3 Buckets Between Accounts
- Cross Region Replication
- Transfer Acceleration
- DataSync Overview
- CloudFront Overview
- CloudFront Lab
- CloudFront Signed URL's and Cookies
- Snowball Overview
- Storage Gateway
- Athena vs Macie
- Summary

Section 5: Linux Introduction

- Basics of Linux for AWS

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- Linux Installation and Basic commands overview
- Web Server and Services Configurations

Section 6: EC2

- EC2 101
- Let's Get Our Hands Dirty with EC2
- Security Groups Basics
- EBS 101
- Volumes & Snapshots
- AMI Types (EBS vs Instance Store)
- ENI vs ENA vs EFA
- Encrypted Root Device Volumes & Snapshots
- Spot Instances & Spot Fleets
- EC2 Hibernate
- CloudWatch 101 & Lab
- The AWS Command Line
- Using IAM Roles with EC2
- Using Boot Strap Scripts
- EC2 Instance Meta Data
- Elastic File System
- FSX for Windows & FSX for Lustre
- EC2 Placement Groups
- HPC On AWS
- AWS WAF
- EC2 Summary

Section 7: Databases On AWS

- Databases 101
- Let's Create an RDS Instance
- RDS Backups, Multi-AZ & Read Replicas
- RDS Backups, Multi-AZ & Read Replicas - Lab
- DynamoDB
- Advanced DynamoDB
- Redshift
- Aurora
- ElastiCache
- Database Migration Services (DMS)
- Caching Strategies on AWS

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- EMR Overview
- Databases Summary

Section 8: Route53

- DNS 101
- Route53 - Register A Domain Name Lab
- Route53 Routing Policies Available On AWS
- Simple Routing Policy Lab Weighted Routing Policy Lab
- Latency Routing Policy
- Failover Routing Policy
- Geolocation Routing Policy
- Geo-proximity Routing Policy (Traffic Flow Only)
- Multi-value Answer
- Route53 Summary

Section 9: VPCs

- Introduction to VPCs
- Build A Custom VPC - Part 1
- Build A Custom VPC - Part 2
- Network Address Translation (NAT)
- Access Control Lists (ACL)
- Custom VPCs and ELBs
- VPC Flow Logs
- Bastions
- Direct Connect
- Setting Up A VPN Over A Direct Connect Connection
- Global Accelerator
- VPC End Points
- VPC Private Link
- Transit Gateway
- VPN Hub
- Networking Costs on AWS
- Summary

Section 10: HA Architecture

- Load Balancers Theory
- Load Balancers and Health Checks Lab
- Advanced Load Balancer Theory

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- Autoscaling Theory
- Autoscaling Groups Lab
- HA Architecture
- HA Word Press Site
- Setting Up EC2
- Adding Resilience and Autoscaling
- Cleaning Up
- CloudFormation
- Elastic Beanstalk
- Highly Available Bastions
- On Premise Strategies
- Summary

Section 11: Automation

- Introducing CloudFormation
- CloudFormation Lab
- Introducing ElasticBeanstalk
- Elastic Beanstalk Lab
- AWS OpsWorks
- Automation Summary

Section 12: Applications

- SQS
- SWF
- SNS
- Elastic Transcoder
- API Gateway
- Kinesis
- Web Identity Federation - Cognito
- Summary

Section 13: Security

- Reducing Security Threats
- KMS
- CloudHSM
- Parameter Store

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Section 14: Serverless

- **Lambda Concepts**
- **Let's Build a Serverless Webpage**
- **Let's Build an Alexa Skill**
- **Serverless Application Model**
- **Elastic Container Service (ECS)**

