



Prepare to pass  
the AWS  
Certified  
Solutions  
Architect –  
Associate Exam

Live Virtual Class

## Course Description

The AWS Solutions Architect Certification Training Course is a primer course designed to help you pass the AWS Certified Solutions Architect Associate Exam with ease. The course provides essential hands-on training on designing, planning, and scaling cloud deployments and implementations for Solutions Architects. Utilizing best practices and recommended design strategies, you will be able to design highly available, fault-tolerant, scalable and cost-effective cloud solutions for your clients.

## What will I learn?

By the end of this course, you will be able to identify all core AWS services, their features and limitations, as well as understand how these services fit into cloud-based solutions. What's more, you can gain all these benefits through our corporate training engagements, which also includes live lectures and hands-on demonstrations.

## Enrolled already? Here is a bonus just for you!

As a bonus, when you take this course, you will be automatically enrolled into our AWS Exam Preparation Workshop. This is an online self-paced revision course that comes with 240 practice exam questions to help you prepare for the actual AWS Certification exams

<b>Instructor-Led Live Virtual Class</b>	<b>Hands-On Lab Exercises &amp; How-To-Guides</b>
<b>Lifetime Access to LMS</b>	<b>24/7 Expert Support</b>
<b>Assignments to re-enforce concepts taught</b>	<b>Certificate of Completion</b>
<b>Free enrolment in the pre-recorded AWS Exam Prep Workshop at the end of the course</b>	<b>240 Practice Exam Questions to help you prepare for the AWS Exams!</b>

## New Syllabus – SAA-C01 (Release February 2018)

# Course Curriculum

## Introduction to Cloud Computing and AWS Global Infrastructure

### Learning Objectives

In this lesson, you will learn the basics of cloud computing and its core concepts. We will also examine the different services of AWS and learn about the AWS Global Infrastructure. We will show you how to setup an AWS Free Tier Account which you will use during this course so that you can gain hands-on experience with the labs.

### Topics

- Introduction to Cloud Computing
- Intro to Amazon AWS – Discussion on Use Cases
- About the AWS Certified Solutions Architect – Associate Certification
- The AWS Global Infrastructure

### Labs

- Setup an AWS Free Tier Account
  - Create Billing Alarms
- Controlling Costs

## Amazon Identity and Access Management - IAM

### Learning Objectives

In this lesson, we look at Amazon Identity and Access Management (IAM) which is a core foundation service of the AWS platform. IAM helps to ensure that you correctly design solutions for both authentication and authorization of services on your AWS account. With IAM, you can design a complete end-to-end security solutions and configure advanced features like Identify Federation to enable Single-Sign-On Services.

### Topics

- What is IAM?
- Root Account, IAM Users, Groups and Roles
- Access Methodology
- Authentication and Authorization
- Policies
- Identity Federation and Security Token Service

### Labs

- Initial IAM Configuration
- Configuring IAM Users, Groups and Roles and creating policies

## Amazon Simple Storage Service, Glacier, Storage Gateway and Snowball

### Learning Objectives

In this lesson, we look at Amazon Simple Storage Service (S3), Amazon Glacier, Amazon Storage Gateway Service and the Snowball Service for data migration. We learn how to select the appropriate storage platform for our business needs and design and configure storage versioning and lifecycle management to ensure maximum security and cost control. We also look at ingress and egress of data to and from AWS.

### Topics

- S3 Object Storage Concepts
- S3 Storage Features, Concepts Options and Classes
- Amazon Glacier
- Storage Gateway
- Amazon Snowball

### Labs

- S3 Buckets Creation and Setup
- Versioning and Lifecycle Management
- Cross Region Replication
- Static Website Hosting

## Amazon Virtual Private Cloud (VPC) and Direct Connect

### Learn Objectives

In this lesson, we will look at Amazon Virtual Private Cloud. (VPC), and discover how we can build a complete virtual data centre in the cloud. We build out a complete VPC in the AWS platform from scratch to illustrate all the core components that go into building VPCs. We look how you can extend the corporate data centre into the VPC cloud via a site to site VPN tunnel and then provide a high-level overview of Amazon Direct Connect.

### Topics

- Types of VPCs
- Default vs. Non-Default VPC
- VPC Components including subnets, route tables, Internet Gateways and Virtual Private Gateways
- NAT Instances vs. NAT Gateways
- VPC Security
- VPC Peering

### Labs

- Build out a VPC manually

## Amazon Elastic Compute Cloud (EC2) and Elastic Block Store (EBS), Elastic Container Service (ECS) & Lambda

### Learning Objectives

In this lesson, we look at Amazon Elastic Compute Cloud (EC2), and discover all there is to know about virtual servers in the cloud. We look at concepts such as Amazon Machine Image, instance types, pricing options and looking at cost control strategies. We then move on to Elastic Block Store (EBS) which is block storage for your EC2 Instances. We demonstrate how we can attach virtual disks to your servers, modify EBS volumes and take backups or snapshots for security and data protection.

### Topics

- EC2 Instance Types, Pricing Options and Key Components
- Amazon Machine Images (AMI)
- EC2 Instance Root/Boot Volume Types
- Types of IP Addressing
- Elastic Network Interfaces
- EC2 Security, including access and encryption concepts
- Elastic Block Store (EBS) features, concepts and configuration
- EBS Security
- Elastic File System (EFS)
- ECS
- Lambda

### Labs

- Launching EC2 Instances
- Modifying EC2 Instances
- Configuring EBS Volumes
- EC2 CLI

## Auto Scaling & Elastic Load Balancers

### Learn Objectives

In this lesson, we look at Amazon Elastic Load Balancers (ELB) and review the core configuration components in designing ELBs to distribute traffic across a fleet of EC2 instances. We discuss the configuration options associated with ELBs and look at how to design our health checks. We then move onto Amazon Auto Scaling which is a critical feature of cloud computing. Amazon Auto Scaling helps us provision new EC2 instance based on demand. We can then scale out and scale in to ensure that we deploy sufficient compute resource to cope with the load and keep costs under control at the same time.

### Topics

- Types of Elastic Load Balancers
- ELB Features, Configuration and Limitations
- Benefits of Auto Scaling
- Auto Scaling Components, Scaling Plans and Health Checks

**Labs**

- Configure Elastic Load Balancers to distribute traffic across a fleet of EC2 Instances
- Design and Deploy an Auto Scaling Configuration for a typical use case

## Amazon Route 53 & DNS

**Learning Objectives**

In this lesson, we look at Amazon Route 53 and DNS. We examine how you can register domain names with Route 53, create both private and public hosted zones. We also examine the various routing policies to better manage your DNS traffic and proceed to provide a high-level overview of some advanced concepts.

**Topics**

- DNS Basics
- Hosted Zones and Record Types
- Route 53 Routing Policies
- Advanced Concepts

**Labs**

- Design and deploy various routing policies for your web traffic

## Amazon Database Services, RDS, Redshift, ElastiCache and DynamoDB

**Learning Objectives**

In this lesson, we look at core fundamentals of databases on AWS. We examine the Amazon Relational Database Services (RDS), look at how data-warehousing is implemented using Redshift and then evaluate the features that come with Amazon's NoSQL DynamoDB Service. We also take a quick overview of Amazon ElastiCache service which is an in-memory caching solution in the cloud.

**Topics**

- AWS RDS Concepts and Features
- Amazon Redshift Database concepts and features
- Amazon ElastiCache
- Amazon DynamoDB NoSQL Service
- Databases on EC2 Instances

**Labs**

- Create a MySQL Database in a Multi-AZ Configuration
- Launch DynamoDB Table and configure options

## Deployment Solutions with CloudFormation, Elastic Beanstalk & OpsWorks

### Learning Objectives

In this lesson, we look at management and design strategies for applications and infrastructure deployments. With CloudFormation, we can design and deploy infrastructure as code which enable us to build out templates for our deployments. With Elastic Beanstalk, we can upload application code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring. We then move onto OpsWorks, looking at its core components and features and how to create chef recipes for OpsWorks.

### Topics

- Overview of CloudFormation, features and concepts
- Overview of Elastic Beanstalk, features and concepts
- Configuring OpsWorks and Chef recipes to deploy end to end solutions in the cloud

### Labs

- Creating a sample deployment for CloudFormation
- Deploying an app using Elastic Beanstalk
- Create an OpsWorks Stack and deploy an app in the stack.

## Analytics with Amazon EMR, Kinesis and Data Pipeline

### Learning Objectives

In this lesson, we look at core analytics services offered on the Amazon platform. We look at typical use cases for Amazon Elastic Map Reduce, Kinesis and Data Pipeline services.

### Topics

- Examine analytical tools available on Amazon AWS
- Overview of EMR, its core components and features
- Overview of Kinesis types, features and use cases
- Data Pipeline Concepts and features

## Management Tools including CloudWatch, CloudTrail, Trusted Advisor and AWS Organization

### Learning Objectives

In this lesson, we look at core management services offered on the Amazon platform. We look at how to configure and utilize services offered by Amazon CloudWatch, CloudTrail and Trusted Advisor.

### Topics

- CloudWatch Monitoring concepts, features, limitations and configuration options
- CloudTrail Auditing
- Using the Trusted Advisor to gain insight into Performance, Security, Cost Optimization and Fault Tolerance configurations of your AWS workloads.
- AWS Organization

### Labs

- Configure CloudWatch Alerts and Alarms
- Review Trusted Advisor Reports

## Amazon SNS, SWF, SQS, Elastic Transcoder and API Gateway

### Learning Objectives

In this lesson, we look at the core application and messaging services available on the AWS Platform. We provide a high-level overview of the core services, their features and limitations and focus on core exam concepts to help you in your AWS Certification. We discuss concepts around decoupling which is a critical element when designing solutions to be highly available and scalable that offers resilience in the cloud.

### Topics

- Amazon Simple Notification Service core concepts, features and components
- Amazon Simple Workflow Service core concepts, features and components
- Amazon Elastic Transcoder core concepts, features and components
- Amazon API Gateway

### Labs

- Configure an SNS Notification

## AWS Cost Optimization

### Learning Objectives

In this lesson we look at architectural design strategies to effectively manage costs and maximize return on investment

### Topics

- Determine how to design cost-optimized storage.
- Determine how to design cost-optimized compute.

## Whitepaper Review & Revision

### Learning Objectives

In this final lesson, we look at some whitepapers and FAQs that you need to review to prepare for the exam. We also offer helpful hints and tips on how to handle exam style questions and enrol you into our 240 Practice Exam Simulator to help you prepare for the official AWS Exams!

### Topics

- Architecting for the Cloud: AWS Best Practices
- AWS Well-Architected Framework