

The exam guide to

AWS SOLUTIONS ARCHITECT CERTIFICATION



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1. Introduction

AWS Solution Architect - Associate

The following information is from this [AWS Web Page](#)

The AWS Certified Solutions Architect – Associate exam is intended for individuals with experience designing distributed applications and systems on the AWS platform. Exam concepts you should understand for this exam include:

- Designing and deploying scalable, highly available, and fault tolerant systems on AWS
- Lift and shift of an existing on-premises application to AWS
- Ingress and egress of data to and from AWS

- Selecting the appropriate AWS service based on data, compute, database, or security requirements
- Identifying appropriate use of AWS architectural best practices
- Estimating AWS costs and identifying cost control mechanisms

Candidate Overview

Eligible candidates for this exam have:

- One or more years of hands-on experience designing available, cost efficient, fault tolerant, and scalable distributed systems on AWS
- In-depth knowledge of at least one high-level programming language

- Ability to identify and define requirements for an AWS-based application
- Experience with deploying hybrid systems with on-premises and AWS components
- Capability to provide best practices for building secure and reliable applications on the AWS platform

Exam overview

- 55 Multiple choice and multiple answer questions
- 80 minutes to complete the exam
- Exam Registration fee is USD 150
- Available in English, Japanese, Simplified Chinese, Korean, French, and German

- Practice Exam Registration fee is USD 20

How Cloud Academy can help?

Cloud Academy is a great place to start studying for AWS Certified Solutions Architect. Cloud Academy has many courses that cover the required knowledge for the associate level.

The three-part “AWS Solutions Architect Associate Level Certification” series thoroughly addresses the skills you’ll need for the exam.

In addition to courses, Cloud Academy has ten essential labs on AWS Solutions Architect-related topics. Cloud Academy quizzes and CloudCareer help a lot in preparing for the exam and testing your level of knowledge.

2. Requirements and General Structure of the AWS Solutions Architect Certification

Amazon Web Services (AWS) is the largest public cloud on earth. Their services have lead the public cloud market since the very dawn of cloud computing. AWS started in 2007 with one service (Simple Storage Service – S3), and has since expanded rapidly in all directions while, at the same time, consistently dropping prices (they currently have more than one million active customers). In 2013, Amazon introduced their certification tracks which measured professional administrators' AWS expertise. AWS tracks focus on three areas: Solutions Architects, Developers, and SysOps. In this E-Book, we will address the skills required for passing the AWS solutions architect exam – Associate level.

Although there are many information sources on AWS, your first stop for reliable information (after Cloud Academy, of course) should be AWS documentation.

Basic requirements

Linux and other Operating Systems

You don't need to be expert in any one operating system, but you'll need to know how to access (using Windows RDP or Linux Shell) and manage EC2 Instances from the command line. Familiarity with the basic principles of virtualization can also be useful.

Networking

Good understanding of TCP/IP networking concepts, IP addresses, CIDR is necessary. You should be very comfortable with configuring and working with AWS Virtual Private Clouds (VPC). Experience using network route tables, access control lists, firewalls, NAT, HTTP, DNS, IP and OSI are all helpful.

Security and Reliability

You must understand how AWS access control lists, security groups, and IAM work. And you're

expected to be comfortable with high availability and design for failure best practices, along with those related to disaster recovery. Your application security experience should include public key encryption, SSH, access credentials, and X.509 certificates to pass AWS Solutions Architect exam.

Storage and Databases

You should have at least a basic understanding of your OS' file systems to be able to properly work with Amazon's Elastic Block Store (EBS) and Simple Storage Service (S3). Understanding RDBMS (using MySQL, Oracle, SQL Server), and NoSQL will also be expected.

Enterprise architectures and Software life cycle

Be familiar with loose coupling and stateless systems, web servers (Apache, nginx, IIS), caching, application servers, and load balancers, along with message queuing and RESTful Web Services, XML, and JSON. A strong understanding on how to

interact with AWS (AWS SDK, AWS API, Command Line Interface, AWS CloudFormation) and the software development lifecycle are also assumed.

Time and resources

Amazon recommends that you have at least one year of practical experience with AWS before doing the AWS certified solutions architect – associate level. The exam blueprint lists all the elements you'll need to focus on. One month of focused study before the exam is a reasonable time.

WARNING!

Don't look for leaked exam questions (brain dumps), as all candidates agree to an NDA prohibiting them before signing up for the exam – besides the fact that many of the question sets available on the web are misleading or downright wrong. In any case, it's good to have a real evaluation of your level of mastery that only an honest exam result can give you. The Solutions Architect exam questions are meant to test the real level of the candidate, as they are written by AWS experts, and don't contain filler questions.

General Structure of the exam

Question Weighting:

1. Designing highly available, cost efficient, fault tolerant, scalable systems **60%**
2. Implementation/Deployment **10%**
3. Data Security **20%**
4. Troubleshooting **10%**

CLOUD ACADEMY TIP

You should definitely check out the sample exam questions that AWS provides for free. Since some of the exact questions might pop up on the actual exam, it would pay to not only learn the correct answers, but learn why those answers are correct. There is also a practice exam that will cost you US\$20, but in our opinion it's definitely money well spent. At the end of the practice exam you are given a score, which is a pretty good indication of whether you are ready to undertake the AWS Certification Exam. You can register for the practice exam [here](#).

Response Limits

You will select from among four or more response options, choosing the option or options that best complete the statement or answer the question. If your knowledge is still incomplete, it's easy to incorrectly choose a distractor option, but proper preparation should usually make the correct response obvious.

Test item formats used in this examination are:

Multiple-choice: You select the single option that best answers the question or completes a statement. The option can be embedded in a graphic on which you “points and click” to complete your selection.

Multiple-response: You selects all of the displayed options that correctly answer the question or complete a statement.

Sample Directions: You read the statement or question and from the response options, select only the option(s) that represent the most correct or best answer(s), given the information.

3. Who needs this Certification and what job opportunities does it bring?

Over the past few years, there has been no area within the tech world that's been attracting the kind of attention showered on Cloud Computing. Technology vendors are working hard to deliver products and solutions sporting the “Cloud Computing” touch and name, with new cloud functionality being announced almost daily. As such, training programs and certifications are of great value for both employees and their companies. Cloud Computing IT certifications guide candidates towards certain tracks with clear defined objectives and outcomes, and they demonstrate the presence skills employers find very desirable.

The Cloud is Creating Jobs

Companies like Amazon and Google obviously have a serious need for IT administrators who understand the specific concerns of the cloud. But other companies, as they come to realize how important the cloud can be for their business plans, are joining the hunt as well. Below is a list of what we believe are some of the current professions that would benefit from the AWS Certified Solutions Architect Certification:

- *Network System Administrators*
- *Network Communications Analysts*
- *System Security Specialists*
- *Systems analysts*
- *Database Administrators*
- *Solutions Architects*
- *IT Educators*
- *Project Managers*

Did you know?

"There are 3.9 million jobs in the U.S. affiliated with cloud computing today with 384,478 in IT alone. The median salary for IT professionals with cloud computing experience is \$90,950 and the median salary for positions that pay over \$100,000 a year is \$116,950. Globally there are 18,239,258 cloud computing jobs,"

(Forbes.com)

Job Opportunities

Once you pass the AWS Solutions Architect Certification, a wealth of new job opportunities present themselves, many of which you probably never even considered. Some of the world's most innovative Big Data companies couldn't accomplish anything without AWS and, more importantly, without AWS Certified Solutions Architects. Some of the Companies currently using AWS for their Big Data operations are General Electric, IBM, SPLUNK, and The Weather Company. Perhaps you'll find yourself working for a medical company, building a solution to map patients' genomes to predict diseases. If you love to travel you might land yourself a job at the popular online travel site, Expedia, who use Amazon AWS to host the travel suggestion service, "Expedia Service." Let's not forget Netflix, possibly AWS's biggest Customer, who trust AWS with the highly-available and fault-tolerant content delivery of its films and media.

Due to the sheer volume and fluctuating usage patterns of its customer base, Netflix relies on Amazon's infrastructure capabilities for rapid scaling, server, and storage deployment. I can only imagine that they have employed hundreds if not thousands of AWS Solutions Architects.

The possibilities are endless, and with the cloud market expected to grow exponentially over the next few years, we think that getting the AWS Certified Solutions Architect certification now is a great, forward thinking long term career step.

4. How to use Cloud Academy to study



Video Courses

Cloud Academy has more than three hundred videos covering all the core AWS Services (not to mention services offered by other cloud providers like Google and Azure). In this e-book, however, we've hand-picked those we believe will be most valuable to you as you work towards AWS Solutions Architect certification:

**Highly
recommended:**

[AWS Solutions Architect Level Certification Course - Part 1 of 3](#)

EC2, EBS, S3, IAM

[AWS Solutions Architect Level Certification Course - Part 2 of 3](#)

EC2, Networking, VPC, CloudWatch, Design Principles, Database Config, Cloudfront, Route53

[AWS Solutions Architect Level Certification Course - Part 3 of 3](#)

RDS, DynamoDB, Glacier, Elastic Beanstalk, CloudFormation, SQS, SES, SWF

Recommended:*Beginner-level*

- AWS Technical Fundamentals - AWS 110
- Load Balancing with ELB
- Introduction to IAM
- Databases on AWS - Part 1 and Part 2
- Storage on AWS
- Amazon RDS Introductory course: running your database in the cloud
- Amazon EBS 101

Recommended:*Intermediate-level*

- How to Architect with a Design for Failure Approach
- Automated data management with EBS, S3 and Glacier
- AWS Automation: how to use CloudFormation
- Understanding VPC

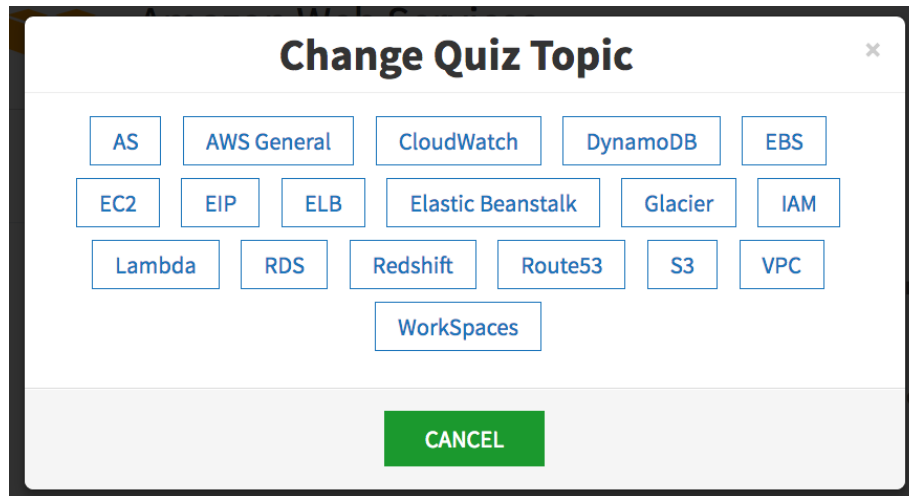
CLOUD ACADEMY TIP

If you're exclusively focused on passing your Solutions Architect certification, then there are a few Cloud Academy videos that you can safely ignore. From my experience, I haven't seen any questions in the Solutions Architect exam pertaining to either using the AWS Command Line Interface or installing and running third party applications like WordPress. They are, of course, outstanding videos filled with useful information, but they're just not that relevant to this certification.



Quizzes and AWS Certification Prep

Cloud Academy provides a quizzes with which you can test yourself on various AWS Services. But more importantly, we have a 250 question AWS Solutions Architect certification prep quiz aimed at helping you prepare adequately for the exam.



Quizzes - This screen-shot (of a menu accessible by clicking on the "Select AWS Service" button at the top left of any quiz question page) is from the Cloud Academy Quizzes Page. We're working on having a quiz available for each AWS Service. Currently that is not the case and the above services are the only ones that are currently available. See below for our recommendations concerning which quizzes we believe are most needed for the AWS Solutions Architect Certification.

Cloud Academy AWS Quizzes can be found [here](#).

**Recommended
quizzes:**

- AS (Auto Scaling)
- AWS General
- CloudWatch
- DynamoDB
- EBS(Elastic Block Storage)
- EC2 (Elastic Compute Cloud)
- EIP(Elastic IP)
- ELB (Elastic Load Balancing)
- Glacier
- IAM(Identity and Access Management)
- RDS (Relational Database Service)
- Route53
- S3 (Simple Storage Service)
- VPC (Virtual Private Cloud)

AWS Solutions Architect - Associate



The AWS Solutions Architect Certification (Associate Level) is designed to certify that you can design and deploy scalable, highly available, and fault tolerant systems, that you understand which AWS services are needed for different situations and, using best practices, how to migrate on-premise infrastructure to the cloud.

Enter

Certification Prep - At Cloud Academy, you can use the Certification Paths to learn and test specifically those skills you'll need to pass certification. Obviously the one in the screen-shot above "AWS Solutions Architect - Associate" is the one that is recommended by Cloud Academy as it designed to confirm that you can design and deploy scalable, highly available, and fault tolerant applications.

The AWS Solutions Architect associate level certification Path can be found [here](#).

CLOUD ACADEMY TIP

If you are pressed for time and aren't sure which quizzes or preparation tools you should take, we definitely recommend doing the AWS Solutions Architect - Associate Prep listed above over the individual quizzes.













Labs

*Our hands--on labs are designed for a learn--by--doing approach. Once you start a lab you will access the real AWS console in a live environment. The lab will guide you through the whole process and will notify you for every successful step. The AWS Certified Solutions Architect (Associate) practical stream provides hands--on lab activities to help you understand how to design distributed applications and systems on the AWS platform. These subjects (all covered by Cloud Academy labs) are recommended by Amazon for anyone who is interested in using AWS services and getting certified: **Virtual Private Clouds (VPCs), EC2 and EBS; Elastic Load Balancing (ELB) and AutoScaling; RDS and DynamoDB.***

Cloud Academy Labs can be found [here](#).

The ten Cloud Academy Labs you'll most useful for AWS Certified Solutions Architect exam prep:

 Create your first Amazon EC2 Instance (Linux) BEGINNER 1h:0m:0s 6 steps Unsupervised VIEW LAB	 Create your first Amazon EC2 Instance (Windows) BEGINNER 1h:0m:0s 6 steps Unsupervised VIEW LAB	 Managing instance volumes using EBS BEGINNER 26m:40s 6 steps Unsupervised VIEW LAB	 Create an EBS-Backed Linux AMI BEGINNER 30m:0s 4 steps Unsupervised VIEW LAB	 Create your first Amazon RDS database BEGINNER 2h:0m:0s 8 steps Unsupervised VIEW LAB
 Create your first Amazon Elastic Load Balancing (ELB) BEGINNER 1h:0m:0s 6 steps Supervised VIEW LAB	 Working with Amazon EC2 Auto Scaling Groups BEGINNER 1h:0m:0s 4 steps Unsupervised VIEW LAB	 Introduction to DynamoDB BEGINNER 1h:0m:0s 8 steps Unsupervised VIEW LAB	 Introduction to Virtual Private Cloud (VPC) BEGINNER 1h:0m:0s 9 steps Unsupervised VIEW LAB	 Serve your files using the CloudFront CDN BEGINNER 1h:0m:0s 9 steps Unsupervised VIEW LAB

5. Suggested Learning Paths



Learning Paths

Below are two suggested paths you might follow through our Cloud Academy material that should work well for your exam preparations.

The first should be adopted by people without much hands--on AWS experience.

The second should be effective for people with more experience with AWS practical applications, but mainly using the console.

You can of course use your own discretion to decide how to move through our material, however we do advise you to try and keep to a some kind of organized structure, skipping over material you feel you already understand well.

Key

(see following page)

GREEN: Hands-on Labs

BLUE: Video Training Courses

YELLOW: Quizzes

Minimal AWS Experience

- All Beginner recommended Videos
- AWS Essentials (7 Labs)
- Any quizzes whose service you learnt in the Labs or the recommended videos
- All Intermediate recommended Videos
- Any quizzes whose service you learnt in the Intermediate recommended Videos
- AWS Certified Solutions Architect - Associate (10 Labs)
- AWS Solutions Architect Level Certification Course - Parts 1, 2, and 3
- AWS Solutions Architect Prep

AWS Console Experience

- Any recommended Beginner videos you feel you don't know well.
- Any AWS Essentials Labs you feel you don't know well.
- Any quizzes whose service you learnt in the Labs or the recommended videos
- All Intermediate recommended Videos
- Any quizzes whose service you learnt in the Intermediate recommended Videos
- AWS Certified Solutions Architect - Associate (10 Labs)
- AWS Solutions Architect Level Certification Course - Parts 1, 2, and 3
- AWS Solutions Architect Prep

6. Final tips and Conclusions

There is no one thing that we can tell you to study that will magically help you to pass this exam. Rather, with this e-book, we've tried to describe the various resources that are at your disposal if you are a Cloud Academy member. Finally, we will leave you with a few more Cloud Academy Tips that will hopefully provide some more insight into successfully passing this exam.

[Read the recommended white papers](#)

These White Papers will give you a good understanding of AWS Security Compliance, Best Practices, Risk Compliance, and Storage Options. See *Documentation Recommended by Amazon* below.

[Exam blueprint](#)

Familiarize yourself with the AWS Certified Solutions Architect Exam Blueprint [here](#).

[Read all the FAQs](#)

Most AWS services have FAQs. You should try and read these for the main services that may be on the exam.

The FAQ's can be found [here](#).

[Learn the AWS architectures](#)

AWS has an architecture section where you can learn about the different scenarios in which a particular service can be used. Many AWS exam questions are scenario based, so you will need to know more than just service basics to pass the exam. You should also be familiar with the scenarios in which a particular service can be used. So you should definitely take a look at these architectures and try to understand them as best you can.

The Architecture Section can be found [here](#).

Documentation Recommended by Amazon

Architecting on AWS ([here](#))

AWS Cloud Computing Whitepapers ([here](#))

- *Overview of Amazon Web Services*
- *Overview of Security Processes*
- *AWS Risk & Compliance Whitepaper*
- *Storage Options in the Cloud*
- *Architecting for the AWS Cloud: Best Practices*

Utilization of the AWS Architecture Center website ([here](#))

About Cloud Academy

We help both companies and individual users learn everything about cloud computing, providing the best content and training in the industry. The content available at Cloud Academy cannot be found anywhere else online. Cloud Academy is a diverse, curated, centralized database and learning platform that can quickly get you off the ground in your cloud computing journey.

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