



Module 15: Bridging to Certification

AWS Academy Cloud Architecting

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Welcome to Module 15: Bridging to Certification.

Module overview

Sections

1. Certification exam resources
2. Additional resources



This module includes the following sections:

1. Certification exam resources
2. Additional resources

Module objectives

At the end of this module, you should be able to:

- Identify how to prepare for the AWS Certified Solutions Architect - Associate exam
- Identify where to find resources



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Section 1: Certification exam resources

Module 15: Bridging to Certification



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Introducing Section 1: Certification exam resources.

Certification exam domain 1 objectives

Domain 1: Design Resilient Architectures (30%)

- 1.1 Design a **multi-tier** architecture solution
- 1.2 Design **highly available** and/or **fault-tolerant** architectures
- 1.3 Design **decoupling mechanisms** using AWS services
- 1.4 Choose appropriate **resilient storage**



Domain 1 of the AWS Certified Solutions Architect - Associate examination is *Design Resilient Architectures*. It is 30 percent of the exam and covers the following objectives:

- 1.1 Design a multi-tier architecture solution
- 1.2 Design highly available and/or fault-tolerant architectures
- 1.3 Design decoupling mechanisms using AWS services
- 1.4 Choose appropriate resilient storage

This information can be found in the [exam guide](#).

Certification exam domain 2 objectives

Domain 2: Design High-Performing Architectures (28%)

- 2.1 Identify elastic and scalable compute solutions for a workload
- 2.2 Select high-performing and scalable storage solutions for a workload
- 2.3 Select high-performing networking solutions for a workload
- 2.4 Choose high-performing database solutions for a workload



Domain 2 of the AWS Certified Solutions Architect - Associate examination is *Design High-Performing Architectures*. It is 28 percent of the exam and covers the following objectives:

- 2.1 Identify elastic and scalable compute solutions for a workload
- 2.2 Select high-performing and scalable storage solutions for a workload
- 2.3 Select high-performing networking solutions for a workload
- 2.4 Choose high-performing database solutions for a workload

This information can be found in the [exam guide](#).

Certification exam domain 3 objectives

Domain 3: Design Secure Applications and Architectures (24%)

- 3.1 Design **secure access** to AWS resources
- 3.2 Design **secure application tiers**
- 3.3 Select appropriate **data security options**



Domain 3 of the AWS Certified Solutions Architect - Associate examination is *Design Secure Applications and Architectures*. It is 24 percent of the exam and covers the following objectives:

- 3.1 Design secure access to AWS resources
- 3.2 Design secure application tiers
- 3.3 Select appropriate data security options

This information can be found in the [exam guide](#).

Certification exam domain 4 objectives

Domain 4: Design Cost-Optimized Architectures (18%)

- 4.1 Identify **cost-effective storage** solutions
- 4.2 Identify **cost-effective compute and database** services
- 4.3 Design **cost-optimized network** architectures



Domain 4 of the AWS Certified Solutions Architect - Associate examination is *Design Cost-Optimized Architectures*. It is 18 percent of the exam and covers the following objectives:

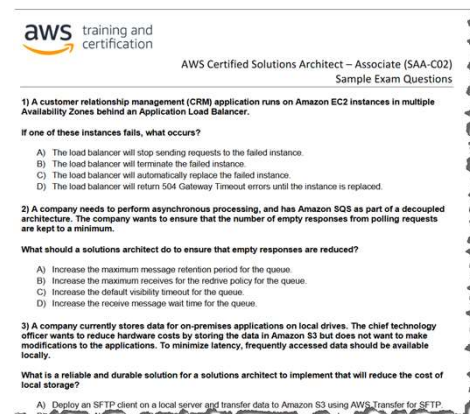
- 4.1 Identify cost-effective storage solutions
- 4.2 Identify cost-effective compute and database services
- 4.3 Design cost-optimized network architectures

This information can be found in the [exam guide](#).

Exam guide and sample questions



Exam Guide



Sample Exam Questions



Review the [Exam Guide](#), which contains the content outline and target audience for the certification exam.

Perform a self-assessment to identify your knowledge or skills gaps. AWS offers [Sample Exam Questions](#) for the AWS Certified Solutions Architect - Associate exam.

Exam readiness training

The screenshot displays the AWS training page for the AWS Certified Solutions Architect – Associate exam. It features three main sections:

- COURSE:** Exam Readiness: AWS Certified Solutions Architect – Associate. Includes links for ABOUT and SCHEDULE, and a FIND A CLASS button.
- CURRICULUM:** Exam Readiness: AWS Certified Solutions Architect – Associate (Digital). Includes links for ABOUT and MODULES, and a SIGN IN button.
- Exam Readiness Intensive Workshop: AWS Certified Solutions Architect - Associate.** Get ready for your certification with a focused five-day workshop.



AWS also offers *Exam Readiness: AWS Certified Solutions Architect - Associate* training in [classroom](#) and [free digital training](#) formats. This training helps you prepare for the AWS certification exam. AWS develops the training so that the content is current with the newest best practices. The training teaches you how to interpret exam questions and allocate your study time. It also reviews sample exam questions in each topic area. It teaches you how to interpret the concepts that are tested so that you can more easily eliminate incorrect responses.

There is also a 5-day, instructor-led [Exam Readiness Intensive Workshop](#) that can help you prepare for the exam.

Practice exam



Register at [AWS Training](#)



When you are ready, you can register to take a practice exam at [AWS Training](#). The practice exam supplements the exam guide and helps you test your knowledge before you take the final exam.

AWS whitepapers and guides

AWS Whitepapers & Guides

Expand your knowledge of the cloud with AWS technical content authored by AWS and the AWS community, including technical whitepapers, technical guides, reference material, and reference architecture diagrams.

[AWS Whitepapers & Guides](#) website



It's a good idea to broaden your technical understanding by reading whitepapers and other technical content. AWS, independent analysts, and AWS Partner Network (APN) Partners create many of these helpful resources.

You can find whitepapers, technical guides, reference material, and architecture diagrams on the [AWS Whitepapers & Guides](#) website.

AWS Well-Architected Framework

Read the AWS Well-Architected Framework and Pillar whitepapers

AWS Well-Architected

Learn, measure, and build using architectural best practices

[AWS Well-Architected Framework](#) website



Framework



Security



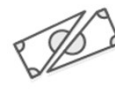
Operational
Excellence



Reliability



Performance
Efficiency



Cost
Optimization



Sustainability



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To prepare for the AWS Certified Solutions Architect - Associate exam, focus on reading the whitepapers for the AWS Well-Architected Framework and each of the Pillars:

- [AWS Well-Architected Framework whitepaper](#)
- [Security Pillar whitepaper](#)
- [Operational Excellence Pillar whitepaper](#)
- [Reliability Pillar whitepaper](#)
- [Performance Efficiency Pillar whitepaper](#)
- [Cost Optimization Pillar whitepaper](#)
- [Sustainability Pillar whitepaper](#)

AWS frequently asked questions

FAQs

Select from the following list of Product and Technical FAQs. Browse through these FAQs to find answers to common questions. If you're a new customer of one of the services below, we encourage you to read through the relevant articles.

Compute

[Amazon EC2 FAQ](#)

[Amazon EC2 Auto Scaling FAQ](#)

[Amazon EC2 Windows FAQ](#)

[Amazon EC2 Container Registry FAQ](#)

[Amazon EC2 Container Service FAQ](#)

[Amazon Lightsail FAQ](#)

[AWS Batch FAQ](#)

[AWS Elastic Beanstalk FAQ](#)

[AWS Fargate FAQ](#)

[AWS Lambda FAQ](#)

[AWS Serverless Application Repository FAQ](#)

[Elastic Load Balancing FAQ](#)

[Virtual Cloud on AWS FAQ](#)

[Storage](#)

[Amazon EBS FAQ](#)

[Amazon S3 FAQ](#)

[Amazon Glacier FAQ](#)

[Amazon FSx FAQ](#)

Machine Learning

[AWS SageMaker FAQ](#)

[AWS Comprehend FAQ](#)

[AWS Lex FAQ](#)

[AWS Polly FAQ](#)

[AWS Rekognition FAQ](#)

[Amazon Machine Learning FAQ](#)

[AWS Translate FAQ](#)

[AWS Transcribe FAQ](#)

[AWS DeepLens FAQ](#)

Analytics

[Amazon Athena FAQ](#)

[Amazon Elastic MapReduce FAQ](#)

[Amazon CloudSearch FAQ](#)

[Amazon Elasticsearch Service FAQ](#)

[Amazon Kinesis FAQ](#)

[Amazon Redshift FAQ](#)

[Amazon EMR FAQ](#)

Review the FAQs for:

- Amazon EC2
- Amazon S3
- Amazon VPC
- Amazon Route 53
- Amazon RDS
- Amazon SQS

[AWS FAQs](#) website



Browse the [product and technical frequently asked questions \(FAQs\)](#) to familiarize yourself with commonly raised questions and issues.

Be sure to review the following FAQs:

- Amazon Elastic Compute Cloud (Amazon EC2)
- Amazon Simple Storage Service (Amazon S3)
- Amazon Virtual Private Cloud (Amazon VPC)
- Amazon Route 53
- Amazon Relational Database Service (Amazon RDS)
- Amazon Simple Queue Service (Amazon SQS)

Section 2: Additional resources

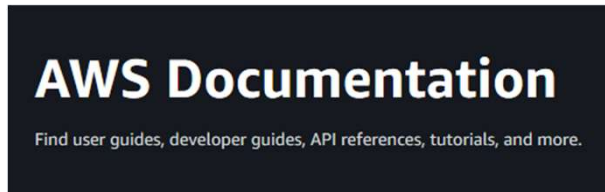
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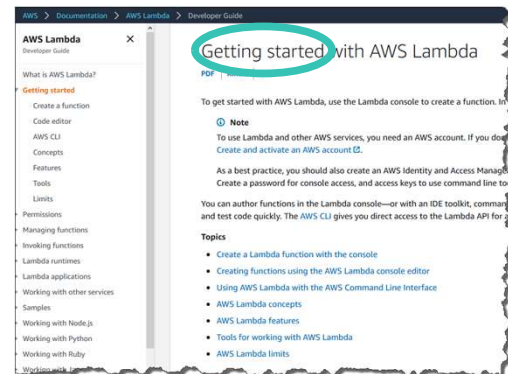
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Introducing Section 2: Additional resources.

AWS Documentation



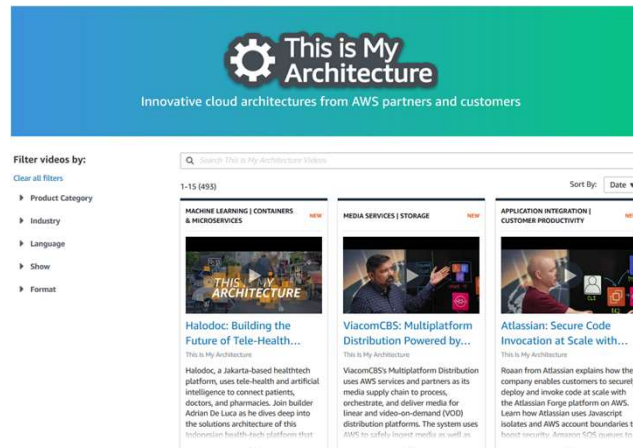
[AWS Documentation](#) website



You can find user guides, developer guides, API references, tutorials and projects, SDKs and toolkits, and various other general resources in the [AWS Documentation](#).

The AWS service developer guides contain a *Getting started* section with step-by-step tutorials that can help familiarize you with the services.

This is My Architecture video series



[This is My Architecture](#) website

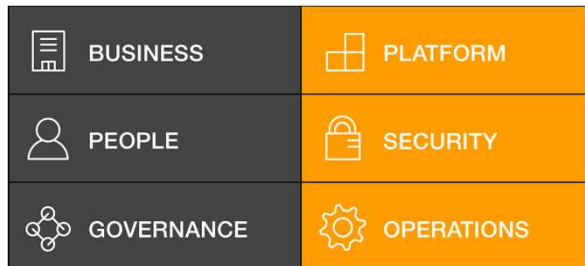


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[This is My Architecture](#) is a video series that can help you learn about the innovative cloud architectures that APN Partners and customers have built.

AWS Cloud Adoption Framework



AWS CAF perspectives

[AWS Cloud Adoption Framework](#) website

- Provides guidance and best practices to help organizations build a comprehensive approach to cloud computing
- Can be used across the organization and throughout the IT lifecycle to accelerate successful cloud adoption
- Is organized into six perspectives that consist of sets of capabilities



Each organization's cloud adoption journey is unique. However, for any organization to successfully migrate its IT portfolio to the cloud, three elements (people, process, and technology) must be in alignment. Business and technology leaders in an organization must understand the organization's current state, target state, and the transition necessary to achieve the target state. In this way, they can set goals and create processes for staff.

The AWS Cloud Adoption Framework ([AWS CAF](#)) provides guidance and best practices to help organizations identify gaps in skills and processes. It also helps organizations build a comprehensive approach to cloud computing—both across the organization and throughout the IT lifecycle—to accelerate successful cloud adoption.

At the highest level, the AWS CAF organizes guidance into six areas of focus, called *perspectives*. Perspectives span people, processes, and technology. Each perspective consists of a set of *capabilities*, which covers distinct responsibilities that functionally related stakeholders own or manage.

Capabilities within each perspective are used to identify which areas of an organization require attention. By identifying gaps, prescriptive work streams can be created that support a successful cloud journey.

There's no substitute for hands-on experience.



When you are preparing for the AWS Certification exam, it's important to remember that hands-on experience has no substitute. Before you take an AWS Certification exam, AWS recommends that you have hands-on experience with relevant AWS products and services. AWS offers various resources to help you gain hands-on experience with AWS services.

Self-Paced Labs



[Self-Paced Labs](#) website



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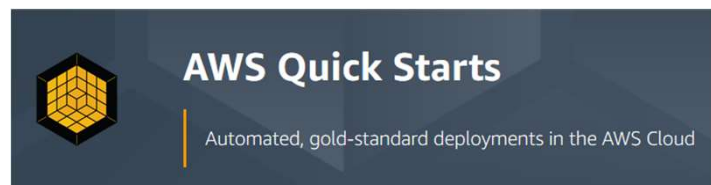
Self-paced labs are a way for you to get hands-on practice with AWS services and real world-cloud scenarios in a live AWS environment.

You can:

- Take an individual lab to get familiar with an AWS service.
- Follow a learning quest that will lead you through a sequence of labs so that you can learn how to work with related AWS services. When you complete a quest, you will earn a Quest Badge that you can display on your resume, website, or LinkedIn profile.

For more information about self-paced labs, see the [Self-Paced Labs](#) website.

AWS Quick Starts



[AWS Quick Starts](#) website

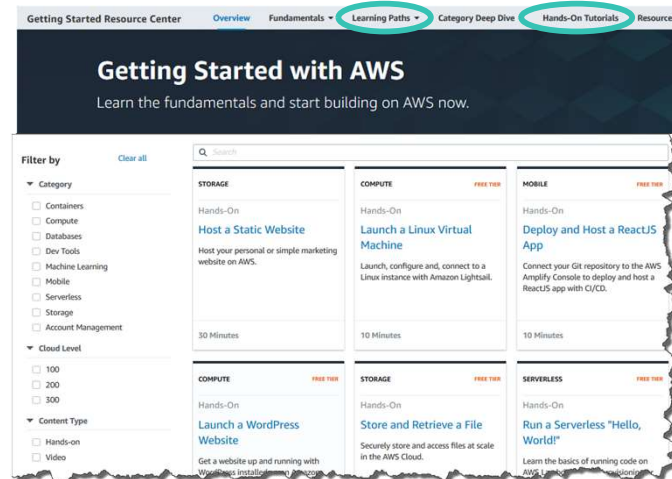


AWS solutions architects and partners build Quick Starts to help you deploy popular technologies on AWS. These technologies are based on AWS best practices for security and high availability. These accelerators reduce hundreds of manual procedures into a few steps, so you can build your production environment quickly and start to use it immediately.

Each Quick Start includes AWS CloudFormation templates that automate the deployment and a guide that discusses the architecture and provides step-by-step deployment instructions.

For more information, see [AWS Quick Starts](#).

Getting Started tutorials



[Getting Started with AWS website](#)



[Getting Started hands-on tutorials and learning paths](#) help you learn the fundamentals of AWS and start building on AWS right away.

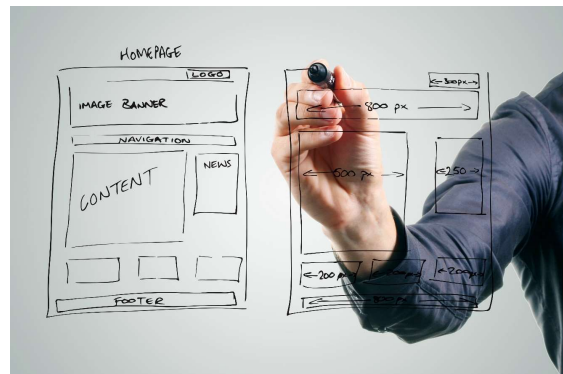
Optional course capstone project



The capstone project is one way to practice applying the knowledge that you have developed in the course to a real-world scenario. By completing and documenting the project, you will have an asset that you can add to your portfolio of work for future opportunities.

Capstone project: Customer requirements

1. Provide secure hosting of the MySQL database
2. Provide secure access for an administrative user
3. Provide anonymous access to web users
4. Run the website on a t2.small EC2 instance, and provide Secure Shell (SSH) access to administrators
5. Provide high availability to the website through a load balancer
6. Store database connection information in the AWS Systems Manager Parameter Store
7. Provide automatic scaling that uses a launch template

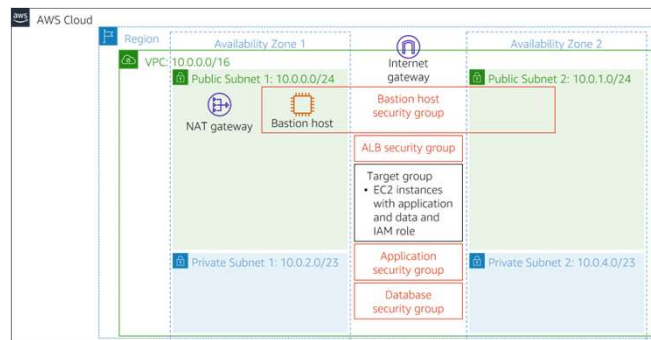


The requirements for the capstone project are:

1. Provide secure hosting of the MySQL database
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Capstone project: Resources

- PHP code stored in a .zip file
- MySQL dump file that contains the data
- AWS resources that are displayed in the architecture diagram



For the capstone project, a number of resources are provided to you. The diagram shows the resources that you will find when you log in to the development environment. The development environment is configured to maintain resources between sessions. Each session lasts 10 hours. In addition to the AWS resources, you have access to a .zip file that contains the PHP code for the website and a MySQL dump file that contains the data to store in the database.

For accessibility: Architecture diagram with VPC spread across two Availability Zones, where each Availability Zone has a public and private subnet. The public subnet in zone 1 has a NAT gateway and bastion host. The VPC has an internet gateway, application load balancer target group, and security groups for the bastion host, application load balancer, application servers, and database.
End of accessibility description.

Module wrap-up

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It's now time to review the module.

Module summary

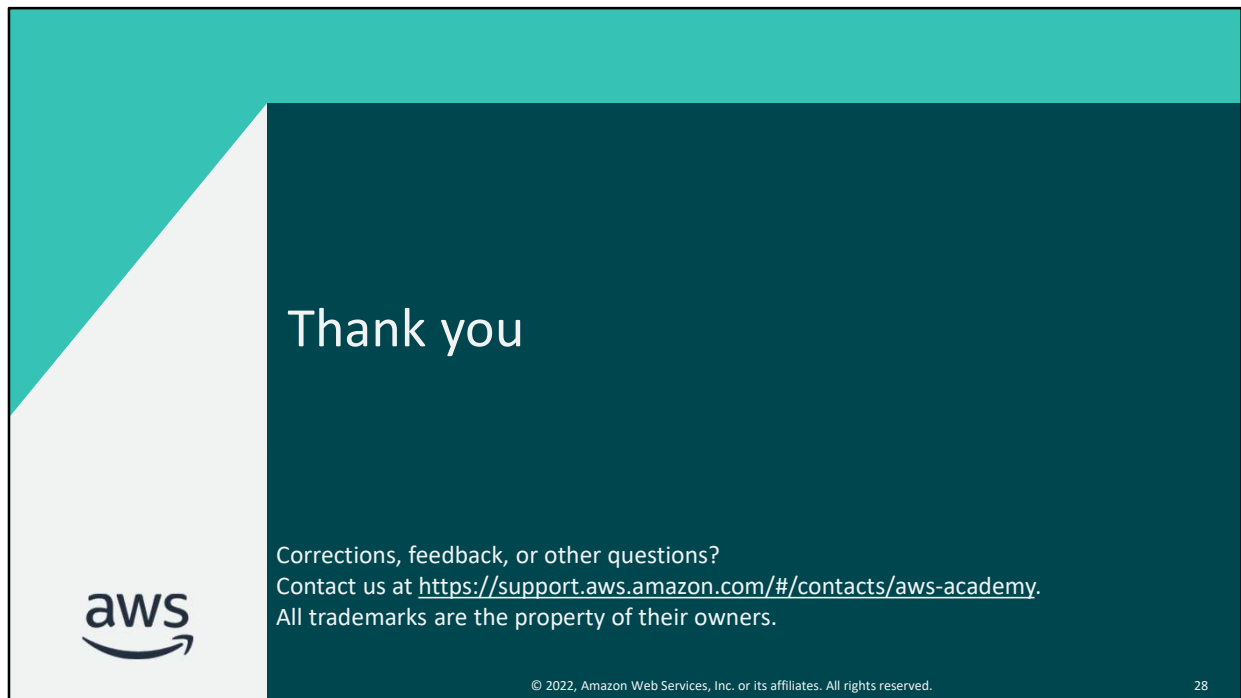
In summary, in this module, you learned how to:

- Identify how to prepare for the AWS Certified Solutions Architect - Associate exam
- Identify where to find resources



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Thank you for completing this module.