

AWS Academy Cloud Foundations

# Course Introduction



## Topics

- Course objectives and overview
- AWS certification exam information
- AWS Documentation

## Activities

- AWS Documentation scavenger hunt

After completing this module, you should be able to:

- Recognize the purpose of the AWS Academy Cloud Foundations course
- Recognize the course structure
- Recognize the AWS certification process
- Navigate the AWS Documentation website

Course Introduction

# Section 1: Course objectives and overview

# Course prerequisites

- General Required Knowledge
  - IT technical knowledge
  - IT business knowledge
- Preferred Knowledge
  - Familiarity with cloud computing concepts
  - Working knowledge of distributed systems
  - Familiarity with general networking concepts
  - Working knowledge of multi-tier architectures



# Course objectives

After completing this course, you should be able to:

- Define the AWS Cloud.
- Explain the AWS pricing philosophy.
- Identify the global infrastructure components of AWS.
- Describe security and compliance measures of the AWS Cloud including AWS Identity and Access Management (IAM).
- Create an AWS Virtual Private Cloud (Amazon VPC).
- Demonstrate when to use Amazon Elastic Compute Cloud (EC2), AWS Lambda and AWS Elastic Beanstalk.
- Differentiate between Amazon S3, Amazon EBS, Amazon EFS and Amazon S3 Glacier.
- Demonstrate when to use AWS Database services including Amazon Relational Database Service (RDS), Amazon DynamoDB, Amazon Redshift, and Amazon Aurora.
- Explain AWS Cloud architectural principles.
- Explore key concepts related to Elastic Load Balancing (ELB), Amazon CloudWatch, and Auto Scaling.



# Course outline

- Module 1: Cloud Concepts Overview
- Module 2: Cloud Economics and Billing
- Module 3: AWS Global Infrastructure Overview
- Module 4: AWS Cloud Security
- Module 5: Networking and Content Delivery
- Module 6: Compute
- Module 7: Storage
- Module 8: Databases
- Module 9: Cloud Architecture
- Module 10: Automatic Scaling and Monitoring



# Module 1: Cloud Concepts Overview

## Module sections:

- Introduction to cloud computing
- Advantages of cloud computing
- Introduction to Amazon Web Services (AWS)
- Moving to the AWS Cloud – The AWS Cloud Adoption Framework (AWS CAF)





# Module 2: Cloud Economics and Billing

## Module sections:

- Fundamentals of pricing
- Total Cost of Ownership
- AWS Organizations
- AWS Billing and Cost Management
- Technical support



# Module 3: AWS Global Infrastructure Overview

## Module sections:

- AWS Global Infrastructure
- AWS services and service category overview



# Module 4: AWS Cloud Security

## Module sections:

- AWS shared responsibility model
- AWS Identity and Access Management (IAM)
- Securing a new AWS account
- Securing accounts
- Securing data on AWS
- Working to ensure compliance



# Module 5: Networking and Content Delivery

## Module sections:

- Networking basics
- Amazon VPC
- VPC networking
- VPC security
- Amazon Route 53
- Amazon CloudFront



# Module 6: Compute

## Module sections:

- Compute services overview
- Amazon EC2
- Amazon EC2 cost optimization
- Container services
- Introduction to AWS Lambda
- Introduction to AWS Elastic Beanstalk



# Module 7: Storage

## Module sections:

- Amazon Elastic Block Store (Amazon EBS)
- Amazon Simple Storage Service (Amazon S3)
- Amazon Elastic File System (Amazon EFS)
- Amazon Simple Storage Service Glacier



## Module sections:

- Amazon Relational Database Service (Amazon RDS)
- Amazon DynamoDB
- Amazon Redshift
- Amazon Aurora



# Module 9: Cloud Architecture

## Module sections:

- AWS Well-Architected Framework
- Reliability and availability
- AWS Trusted Advisor





# Module 10: Automatic Scaling and Monitoring

## Module sections:

- Elastic Load Balancing
- Amazon CloudWatch
- Amazon EC2 Auto Scaling



Course Introduction

## Section 2: AWS certification exam information

# AWS certification exams

## Available AWS Certifications

aws certified  
Updated May 2019

### Professional

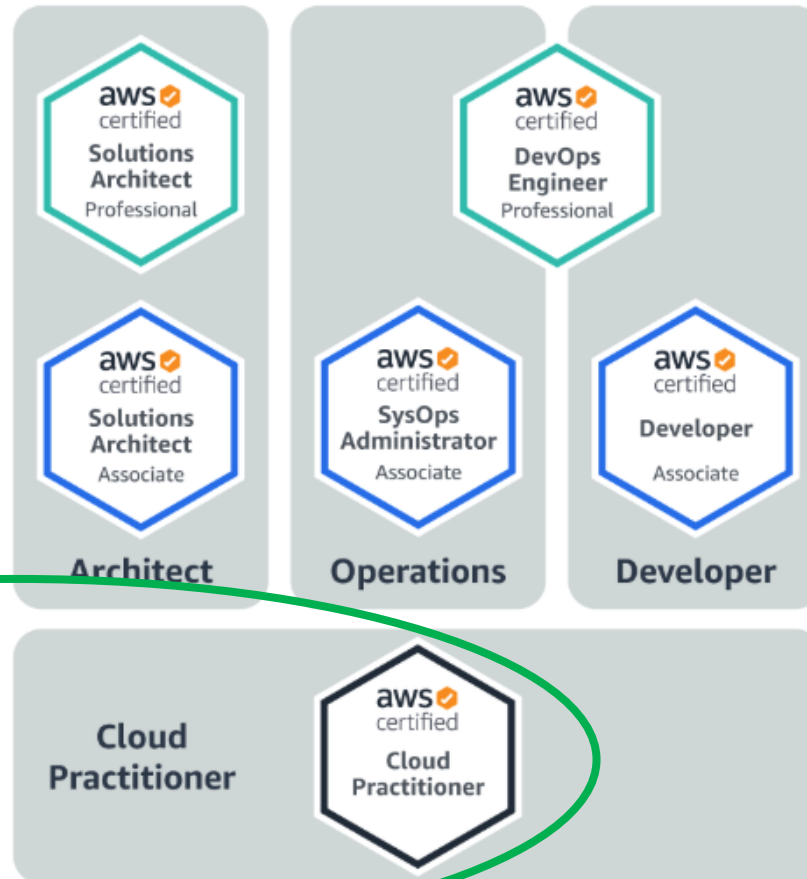
Two years of comprehensive experience designing, operating, and troubleshooting solutions using the AWS Cloud

### Associate

One year of experience solving problems and implementing solutions using the AWS Cloud

### Foundational

Six months of fundamental AWS Cloud and industry knowledge



### Specialty

Technical AWS Cloud experience in the Specialty domain as specified in the [exam guide](#)



*This course helps prepare you for the **AWS Cloud Practitioner** certification exam*

# AWS Certified Cloud Practitioner exam

- Details about the exam—including how to register for it—are at <https://aws.amazon.com/certification/certified-cloud-practitioner/>
  - Download and carefully read the [AWS Certified Cloud Practitioner Exam Guide](#)
  - Download the [sample exam questions](#)
- See the recommended path to attain the certification at <https://aws.amazon.com/training/path-cloudpractitioner/>
  - AWS Academy Cloud Foundations covers much of the same material found in the Cloud Practitioner Essentials course, but in greater depth.
  - There is additional free digital training available at [aws.training](https://aws.training)



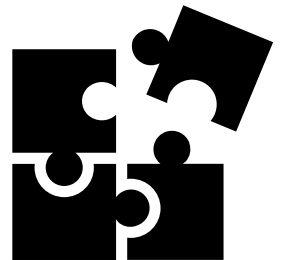
Course Introduction

# Section 3: AWS Documentation

- Find user guides, developer guides, API references, tutorials, and more.
  - <https://docs.aws.amazon.com/>
- **Whitepapers** are also available at <https://aws.amazon.com/whitepapers/>, including these which are recommended reading for the AWS Cloud Practitioner exam:
  - [Overview of Amazon Web Services](#)
  - [Architecting for the Cloud: AWS Best Practices](#)
  - [How AWS Pricing Works](#)
  - [The Total Cost of \(Non\) Ownership of Web Applications in the Cloud](#)

# Activity - AWS Documentation Scavenger Hunt

- Navigate the AWS Documentation website
- Start from the main page at <https://docs.aws.amazon.com>
- Five challenge questions for the class appear in the following slides



# AWS Documentation Scavenger Hunt – Question 1

- Question #1: What guides and references exist for the Amazon EC2 service?
- Answer:
  - User Guides for Linux and Windows
  - API Reference
  - AWS CLI Reference
  - EC2 Instance Connect Reference
  - User Guide for Auto Scaling
  - VM Import/Export User Guide



# AWS Documentation Scavenger Hunt – Question 2

- Question #2: Can you find the documentation that describes how to create an Amazon S3 bucket?
- Answer:
  - From <https://docs.aws.amazon.com/> click **S3**
  - Click the **Getting Started Guide**
  - Click **Create a Bucket**

# AWS Documentation Scavenger Hunt – Question 3

- Question #3: Can you find a one-sentence summary of the AWS Cloud9 service?
- Answer:
  - AWS Cloud9 is a cloud-based integrated development environment (IDE) that you use to write, run, and debug code.

# AWS Documentation Scavenger Hunt – Question 4

- Question #4: Which programming languages does the AWS Lambda service API support?
- Answer:
  - From the main AWS Documentation page, click the **AWS Lambda** link
  - Click the **API Reference** link
  - Click **Getting Started > Tools** to find a table that lists the following languages: **Node.js, Java, C#, Python, Ruby, Go,** and **PowerShell**

# AWS Documentation Scavenger Hunt – Question 5

- Question #5: Find the tutorial that describes how to run a serverless Hello World application, then scroll through the documented steps. What two AWS services does the tutorial have you use?
- Answer:
  - From the main AWS Documentation page, click **Tutorials and Projects**
  - In the **Websites & Web Apps** area, click the tutorial.
  - The tutorial has you use **AWS Lambda** and **Amazon CloudWatch**.

Course Introduction

# Module wrap-up

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

- Recognize the purpose of the AWS Academy Cloud Foundations course
- Recognize the course structure
- Recognize the AWS certification process
- Navigate the AWS Documentation website

# Additional resources



- [AWS Certification](#)
- [AWS Certified Cloud Practitioner](#)
- [AWS Documentation](#)

# Thank you

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