AWS Academy Cloud Foundations

Course Introduction

Module overview

Topics

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

Activities

- AWS Documentation scavenger hunt

Module objectives

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

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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
- Billing
- 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 8: Databases

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

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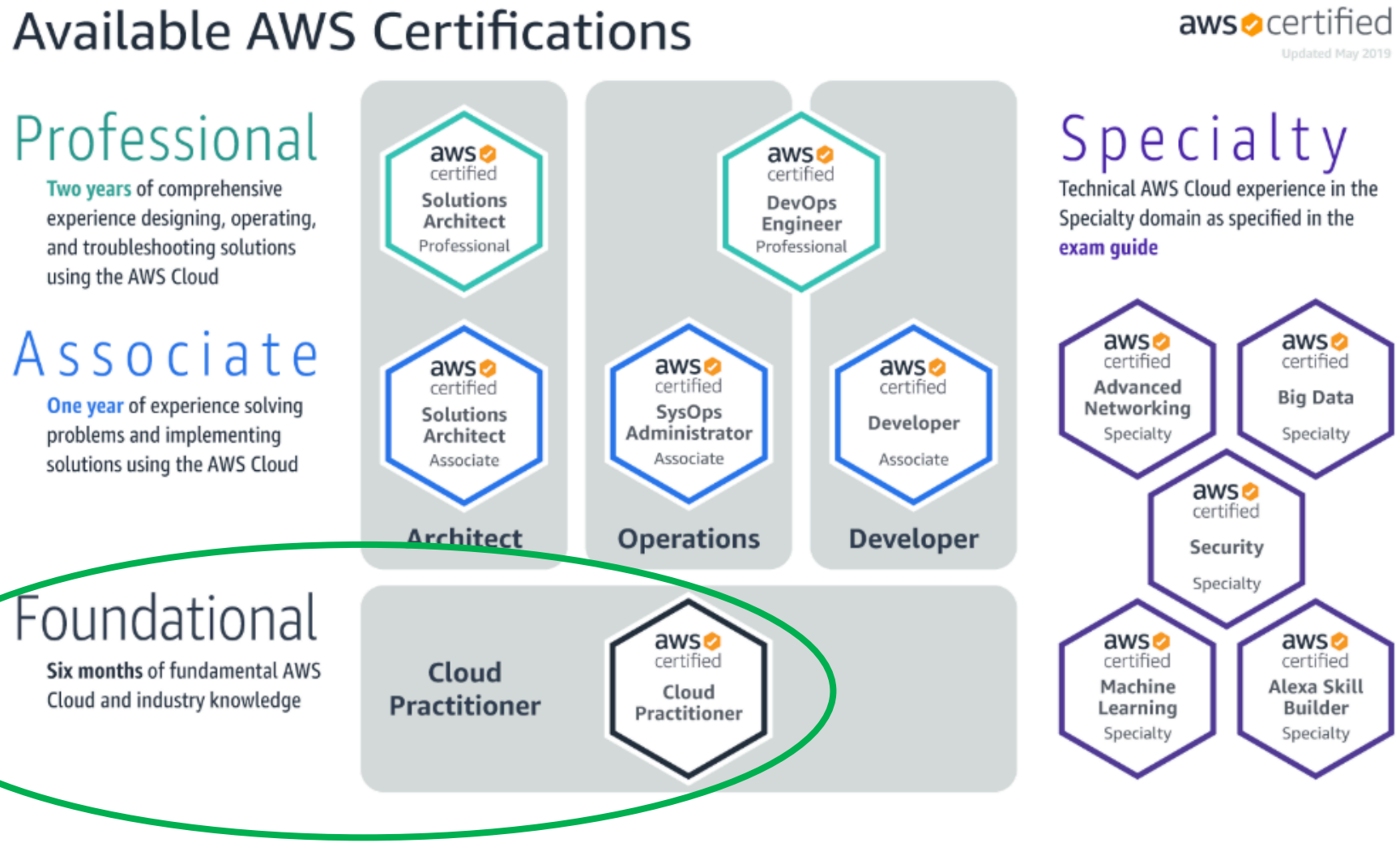
AWS certification exams



*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

Course Introduction

Section 3: AWS Documentation

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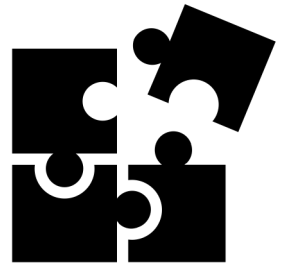
AWS Documentation

- 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

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Module summary

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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