AWS Certified Cloud Practitioner (CLF-C01), Skill Labs

Course Specifications

Course Number: ACI76-022SL_rev1.0
Lab Length: Approximately 9 hours

AWS Fundamentals (CLF-C01)

Introduction
Objective

Welcome to the AWS Fundamentals lab. In this module, you will be provided with the instructions and devices needed to develop your hands-on skills.

Public cloud computing can be defined as running and accessing different computing services on externally hosted and maintained hardware. The hardware is situated in data centers located across the world to provide availability and redundancy for clients.

These public providers are known as Cloud Services Providers (CSPs). There are several CSPs available to create and run the needed services. The most popular and well-known CSPs are Google Cloud, Microsoft Azure, and Amazon Web Services (AWS),

AWS is one of the leading CSP's globally, and as of 2022, boasts 35% of all global cloud market infrastructure (of c.$200 billion), making Amazon the largest CSP used by world-leading businesses.

AWS offers clients a vast number of cloud services to customers. The core cloud services offered by AWS include Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS).

In this module, the basic cloud services will be discussed and explored with the main focus on AWS Cloud Services.

Alert: A pre-populated AWS account will be used to complete the exercises in this module. It will not be necessary to sign-up for a free account through Amazon Web Services. It is important to note that certain restrictions have been applied to the lab environment. These include that only specific resources can be created in the specified region. If the region is changed, the steps in the tasks will not function accordingly.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – Basic Cloud Concepts

After completing this module, you should be able to:

- View AWS Global Footprint.
- Use the AWS Pricing and Calculator.

Exam Objectives

The following exam objectives are covered in this module:

- 1.1 Define the AWS Cloud and its value proposition.

AWS Security & Compliance Concepts (CLF-C01)

Introduction
Objective

Welcome to the AWS Security and Compliance Concepts lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

AWS offers integrated solutions to help make sure users and organizations are within government and regulatory guidelines. This lab will explore AWS Artifact to see how AWS aids in staying compliant. This lab will also discuss logging activities and services used to keep track of these logs in the AWS environment.

Overview
Learning Outcomes:

In this module, you will complete the following exercises:

- Exercise 1 – AWS Compliance Information
- Exercise 2 – AWS Logs and Auditing

After completing this module, you should be able to:

- Explore AWS Artifact.
- Explore CloudTrail.

Exam Objectives:

The following exam objective is covered in this module:

- 2.2 Define AWS cloud security and compliance concepts

AWS Security Services (CLF-C01)

Introduction
Objective

Welcome to the AWS Security Services lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

The cloud's security may be bolstered with AWS's many security services. The cloud can also integrate thousands of third-party apps now available. This module will go into a few of these services and introduce you to the abundance of resources available for researching cloud services and their implementations.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – AWS Knowledge Resources

- Exercise 2 – AWS Security Services

After completing this module, you should be able to:

- Explore and describe AWS Knowledge Center.
- Explore and describe Customer Enablement — support.
- Explore and describe AWS documentation.
- Explore and describe AWS blog.
- Explore and describe third-party security marketplace.
- Create a Virtual Private Cloud.
- Explore and configure AWS Network ACL.
- Explore and configure security groups.
- Explore and configure network access analyzer.
- Describe AWS WAF and Shield.

Exam Objectives

The following exam objective is covered in this module:

- 2.4 Identify resources for security support.

AWS Deployment Methods (CLF-C01)

Introduction
Objective

Welcome to the AWS Deployment Methods lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

The AWS Management Console is a web-based management interface used to create and manage resources and services on the AWS Cloud Platform. Different services are available on the AWS Cloud Platform to perform different functionalities. Some of the most used services include the EC2, RDS, and S3.

Amazon Elastic Compute Cloud (EC2) service is used to create different virtual machines which can be used for a specific function and is referred to as Infrastructure as a Service (IaaS).

The Relational Database Service (RDS) is used to create different types of databases and is known as Platform as a Service (PaaS).

To create a scalable cloud storage solution, the S3 service can be used.

In this lab, the different methods to create and manage services on Amazon Web Services will be explored.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – Exploring AWS in the Management Console
- Exercise 2 – Exploring the AWS CloudShell

After completing this module, you should be able to:

- Access the AWS Management Console.
- Access the AWS CloudShell.

Exam Objectives

The following exam objectives are covered in this module:

- 3.1 Define methods of deploying and operating in the AWS Cloud.

AWS Global Infrastructure (CLF-C01)

Introduction
Objective

Welcome to the AWS Global Infrastructure lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

Amazon Web Services (AWS) has the biggest global infrastructure of any cloud provider, and it is constantly growing to better assist its customers in meeting their needs. For example, to provide the greatest possible service to American consumers and businesses, AWS offers a variety of American cities and data centers to choose from, creating a network of high redundancy and high availability.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – Explore AWS Regions and Availability Zones

After completing this module, you should be able to:

- Describe AWS Regions.
- Describe AWS Availability Zones.
- Describe AWS Global Edge Network.
- Explore and describe Availability Zones during VPC setup.
- Explore and describe AWS Regions during S3 setup.
- Explore and describe Availability Zones options during Amazon RDS setup.

Exam Objectives

The following exam objective is covered in this module:

- 3.2 Define the AWS global infrastructure.

AWS Computing Services (CLF-C01)

Introduction
Objective

Welcome to the AWS Computing Services lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

The term Compute refers to quantifiable amounts of processing power that may be requested, allotted, and used for various computing tasks. In cloud computing, compute is a catchall word for anything from CPU cycles to RAM to network bandwidth to disk space that a given software needs to run smoothly. In this module, you will explore the Compute category in AWS and set up an EC2 Virtual machine.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – AWS Compute Services
- Exercise 2 – Creating an EC2 Virtual Machine Using AWS Management Console

After completing this module, you should be able to:

- Explore and describe AWS App Runner.
- Explore and describe Elastic Beanstalk.
- Explore and describe AWS Outposts.
- Explore and describe AWS Lambda.
- Create a Virtual Private Cloud (VPC).
- Create an EC2 Virtual Machine in the AWS Management Console.

Exam Objectives

The following exam objective is covered in this module:

- *3.3* Identify the core AWS.

AWS Storage Services (CLF-C01)

Introduction
Objective

Welcome to the AWS Storage Services lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

Amazon Web Services (AWS) provides different Core services which enable customers to create scalable cloud solutions.

The following are some of the Core AWS services:

- Amazon S3
- Amazon Elastic Block Store
- Amazon S3 Glacier
- AWS Snowball
- Amazon Elastic File System
- AWS Storage Gateway

- AWS Managed Databases
- Amazon RDS
- Amazon DynamoDB
- Amazon Redshift

In this module, some of the specific core AWS will be created to demonstrate how these services function and can be accessed using the AWS Management Console.

Alert: A pre-populated AWS account will be used to complete the exercises in this module. It will not be necessary to sign up for a free account through Amazon Web Services. It is important to note that certain restrictions have been applied to the lab environment. These include that only specific resources can be created in the specified region. If the region is changed, the steps in the tasks will not function accordingly.

Overview
Learning Outcomes

In this module, you will complete the following exercises

- Exercise 1 – Create a Storage Solution in AWS

After completing this module, you should be able to:

- Create an S3 Storage Solution.

Exam Objectives

The following exam objectives are covered in this module:

- 3.3 Identify the core AWS services.

AWS Networking Services (CLF-C01)

Introduction
Objective

Welcome to the AWS Networking Services lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

In this module, the functions of the AWS VPC IP Address Manager will be explored.

Alert: A pre-populated AWS account will be used to complete the exercises in this module. It will not be necessary to sign up for a free account through Amazon Web Services. It is important to note that certain restrictions have been applied to the lab environment. These include that only specific resources can be created in the specified region. If the region is changed, the steps in the tasks will not function accordingly.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – Virtual Private Cloud (VPC) Concepts
- Exercise 2 – Amazon VPC IP Address Manager

After completing this module, you should be able to:

- Create a Virtual Private Cloud (VPC).
- Create a subnet in a VPC.
- Explore the Amazon VPC IP Address Manager.

Exam Objectives

The following exam objectives are covered in this module:

- 3.3 Identify the core AWS services.

AWS Database Services (CLF-C01)

Introduction
Objective

Welcome to the AWS Database Services lab. In this lab, you will be provided with the instructions and devices needed to develop your hands-on skills.

Amazon Web Services (AWS) provides different core services which enable customers to create scalable cloud solutions.

In this module, some of the specific core AWS services will be created to demonstrate how these services function and can be accessed using the AWS Management Console.

Overview
Learning Outcomes

In this module, you will complete the following exercises:

- Exercise 1 – Create a Database in AWS

After completing this module, you should be able to:

- Create a Virtual Private Cloud (VPC).
- Create an Amazon RDS Database.

Exam Objectives

The following exam objectives are covered in this module:

- 3.3 Identify the core AWS services.