

Secure Access to Management and Resources

4.3 Given a Scenario, Implement Identity and Access Management

Description

- In this episode, we will take a look at some of the ways in which we can securely access our cloud resources and management environments.

Resources

- <https://boto3.amazonaws.com/v1/documentation/api/latest/index.html>
- <https://cloud.google.com/sdk?hl=en>
- <https://learn.microsoft.com/en-us/rest/api/azure/#create-the-request>
- <https://ecma-international.org/publications-and-standards/standards/ecma-335/>

Learning Objectives

- List and describe secure ways to access cloud resources
- List and describe secure ways to access cloud management environments

Notes

- Secure access to the cloud resources
 - Web Portal
 - API
 - Secure Shell (SSH)
 - Remote Desktop Protocol (RDP)
 - Bastion host
 - Hardened device accessible from the internet
 - aka Jump Box
 - "Jump" from bastion host to access servers and other sensitive devices/data
- Secure access to the cloud management environment
 - Web portal
 - Programmatic access
 - Software development kit (SDK)
 - [Boto3 \(https://boto3.amazonaws.com/v1/documentation/api/latest/index.html\)](https://boto3.amazonaws.com/v1/documentation/api/latest/index.html)
 - [GPC Cloud SDK \(https://cloud.google.com/sdk?hl=en\)](https://cloud.google.com/sdk?hl=en)
 - Application programming interface (API)
 - [Azure REST API \(https://learn.microsoft.com/en-us/rest/api/azure/#create-the-request\)](https://learn.microsoft.com/en-us/rest/api/azure/#create-the-request)
 - [AWS API Reference \(https://boto3.amazonaws.com/v1/documentation/api/latest/index.html#api-reference\)](https://boto3.amazonaws.com/v1/documentation/api/latest/index.html#api-reference)
 - Common Language Infrastructure (CLI)
 - [CLI Standards Doc \(https://ecma-international.org/publications-and-standards/standards/ecma-335/\)](https://ecma-international.org/publications-and-standards/standards/ecma-335/)
 - A platform that makes it possible to utilize many high-level programming languages regardless of the environment
 - A component of the .NET Framework
 - Aims to promote language interoperability
 - allowing developers to choose the best language for a particular task
 - ensuring that the various components can work together seamlessly
 - Core components
 - Common Type System (CTS)
 - Shared data types

- Metadata
 - Describes the types that are defined
- Common Intermediate Language (CIL)
 - Whatever language is being used gets transformed into CIL
- Virtual Execution System
 - Loads and executes the CIL code
- Base Class Library (BCL)
 - A set of standard classes that can be used across different CLI-compliant languages