AWS SysOps Administrator – Associate Level

Additional Features

Learning Objectives

By the end of this lesson, you will be able to:

◉ Ensure compliance with corporate standards using AWS Service Catalog

◉ Implement bucket policies with wildcards

◉ Solve common CloudFront errors

AWS Service Catalog

AWS Service Catalog

Allows organizations to create and manage catalogs of IT services that are approved for use on AWS

Includes virtual machine images, servers, softwares, and databases to complete a multi-tier architecture

Manages the commonly deployed IT services to achieve consistent governance and meet IT compliance requirements

Enables the users to quickly deploy only the approved IT services they need

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Benefits of AWS Service Catalog

1   Ensures compliance with corporate standards

2   Centrally manages an IT service lifecycle

3   Helps employees to quickly find and deploy approved IT services

4   Connects with ITSM/ITOM software

Create a Portfolio Using an IAM User

Problem Statement:

Create an AWS Service Catalog portfolio using an IAM user.

Assisted Practice: Guidelines

Steps to create a portfolio::

1. Login to the AWS Service Catalog console

2. Choose **Create portfolio**

3. Enter the necessary details and choose **Create**

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Case Studies

**Wiley**

Wiley Case Study

Purpose

- Wiley is using AWS to give developers self-service capabilities, launch new applications in minutes instead of weeks, and enable the creation of new digital-publishing platforms.

Challenges

- Wiley wanted to move several key applications, such as the application it uses to transact with its authors, to the cloud.
- Wiley also wanted to introduce more automation into its development processes. To give its developers more autonomy and to enable automation, it decided to pursue a cloud-first strategy.

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Why Amazon Web Services

- AWS Service Catalog enables self-service and automation for developers.
- It also gives users the ability to centrally manage and deploy common IT services, including virtual servers, software, databases, and multi-tier application architectures.
- Using AWS Service Catalog, developers can access and deploy IT services through a self-service portal.
- AWS Professional Services helped Wiley develop the architecture and implement AWS Service Catalog which trained Wiley software developers to easily create and deploy IT services via the catalog.
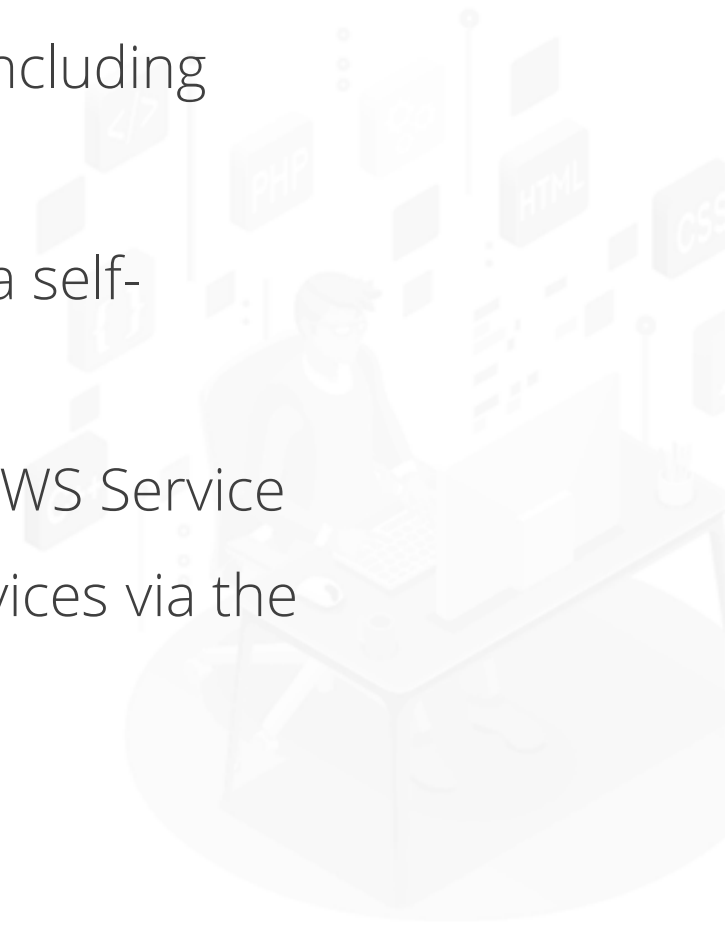
Benefits

The various benefits of using AWS Service Catalog are listed below:

1	Automated deployment
2	Fast product delivery
3	Reusable artifacts
4	DevOps automation

Cloudticity

Cloudticity

Uses AWS to automatically deploy and scale its application platform

Helps customers to securely implement their own resources and gives them agility and scalability

Designs the builds and migrates and manages healthcare systems in the cloud for a growing customer base

Runs its oxygen managed services platform on AWS and uses AWS Service Catalog to create and manage catalogs of IT services

Bucket Policies with Wildcards

Implement Bucket Policies with Wildcards

Problem Statement:

Implement bucket policies using wildcards.

ASSISTED PRACTICE

Assisted Practice: Guidelines

Steps to implement bucket policies with wildcards:

1. Configure IAM role and create an S3 bucket

2. Launch an EC2 instance

3. Attach an S3 bucket policy with wildcards

Common CloudFront Errors

Common CloudFront Errors

AccessDeniedException

You do not have the required access to perform this action. HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards. HTTP Status Code: 400

Common CloudFront Errors

InternalFailure

The request processing has failed because of an unknown error, an exception, or a failure. HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly. HTTP Status Code: 400

Common CloudFront Errors

InvalidClientTokenID

The X.509 certificate or the AWS access key ID provided does not exist in the records.
HTTP Status Code: 403

InvalidParameter

Parameters that must not be used together were used together.
HTTP Status Code: 400

Common CloudFront Errors

ServiceUnavailable

The request has failed due to a temporary failure of the server.
HTTP Status Code: 503

ValidationError

The input fails to satisfy the constraints specified by an AWS service.
HTTP Status Code: 400

Multi-Access Direct Connect Gateway

Multi-Access Direct Connect Gateway

1 Enables you to connect between on-premises networks and Amazon VPC in any region

2 Doesn't support regions like Beijing and Ningxia using AWS Direct Connect connections

3 Associates up to 10 VPCs with the Direct Connect from multiple accounts

Inter-Region VPC Peering

Inter-Region VPC Peering

Allows VPC resources, like EC2 instances, RDS databases, and Lambda functions, running in different AWS regions to communicate with each other through a private IP

Provides a simple and cost-effective way to share resources between regions or replicate data for geographic redundancy

Encrypts inter-region traffic with no single point of failure or bandwidth bottleneck

CloudFormation Best Practices

CloudFormation Best Practices

CloudFormation best practices are as follows:

1	Creating the template
2	Creating or adding stacks to a stack set
3	Updating stacks in a stack set

CloudFormation: Failed Rollback

CloudFormation: Failed Rollback

Common causes of a failed rollback are as follows:

| 1 | Resource change outside CloudFormation |

| 2 | Insufficient permission and limitation errors |

| 3 | Unstabilized resources |

Key Takeaways

- AWS Service Catalog allows organizations create and manage catalogs of IT services that are approved for use on AWS.

- Cloudticity helps customers securely implement their own resources and gives them agility and scalability.

- Multi-Access Direct Connect gateway enables you to connect between on-premises networks and Amazon VPC in any region.