



AWS Secrets Manager

AWS Secrets Manager

This presentation introduces AWS Secrets Manager, a secure and efficient solution for managing sensitive information in the cloud.

What is AWS Secrets Manager?



- **Securely manage secrets:** Centralized storage.
- **Dynamic retrieval:** Access secrets at runtime.
- **Automated rotation:** Enhance security posture.
- **Access control and monitoring:** Audit and compliance.



Why Use AWS Secrets Manager?

- Secret means something that is meant to be kept unknown or unseen by others.

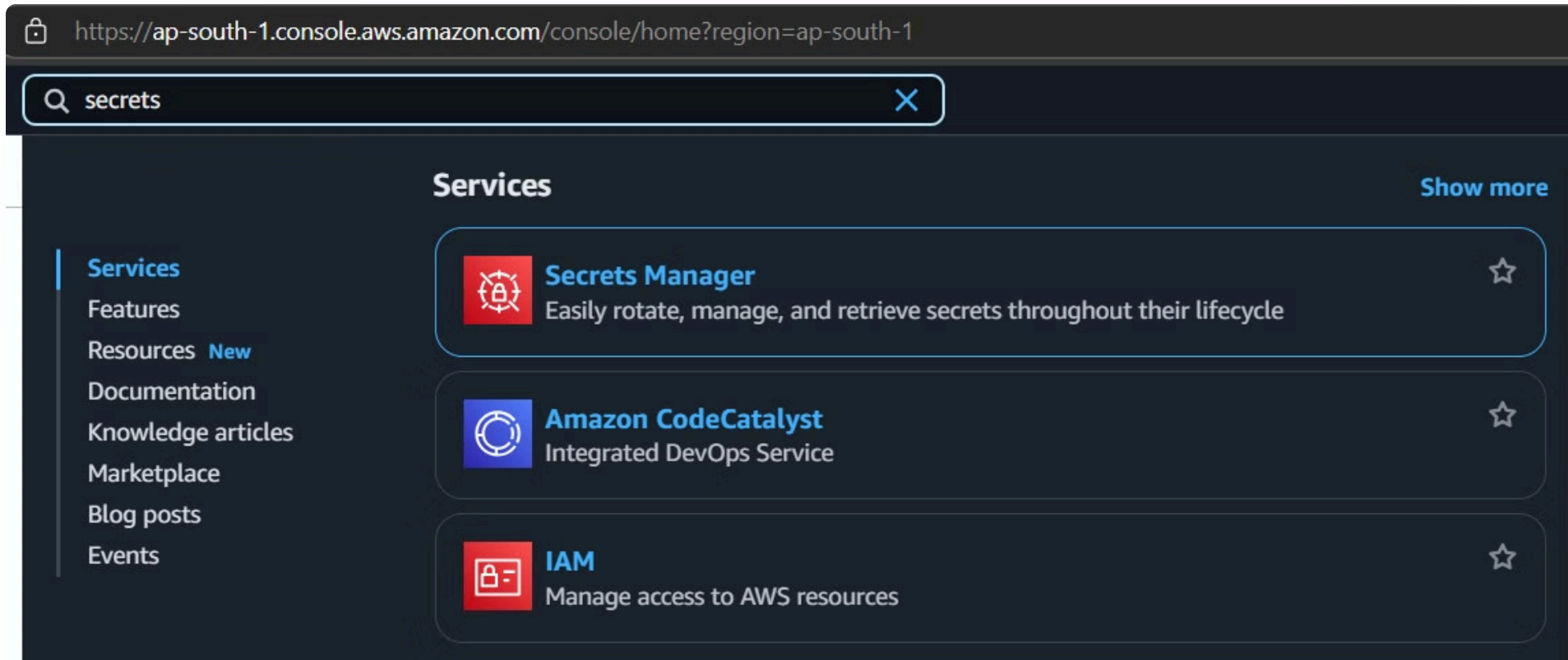
How do you keep something unknown or unseen if it has to be shared in order to be used?

Purpose of AWS Secrets Manager

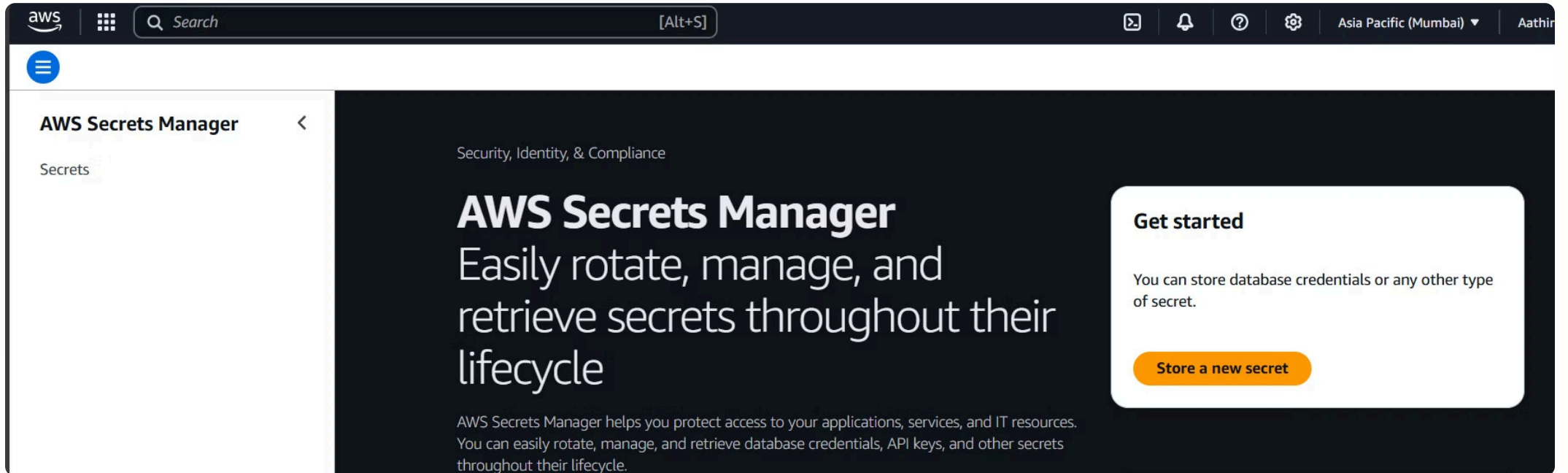
- Simplify and secure secrets management in the cloud.
- Secure **Storage, Retrieval, and Automatic Rotation.**
- Provide Fine-Grained Access Control
- Support Auditing and Monitoring
- Manage and protect secrets throughout their lifecycle.
- Compliance Considerations

Create AWS Secrets Manager Secret

- Log in to the AWS Management Console.
- Navigate to **"AWS Secrets Manager"**.



Create an AWS Secrets Manager Secret



- Choose **Secrets** in the navigation bar.
- Click "**Store a new secret**" on the dashboard.

Create an AWS Secrets Manager Secret

- Choose **"Secret Type"**
- Add **"Secret key and Value"**.

AWS Secrets Manager

>

Secrets

>

Store a new secret

Step 1

Choose secret type

Step 2

Configure secret

Step 3 - optional

Configure rotation

Step 4

Review

Choose secret type

Secret type

Info

☐ Credentials for Amazon RDS database

☐ Credentials for Amazon DocumentDB database

☐ Credentials for Amazon Redshift data warehouse

☐ Credentials for other database

☒ Other type of secret
API key, OAuth token, other.

Made with Gamma

Create an AWS Secrets Manager Secret

Key/value pairs [Info](#)

Key/value **Plaintext**

ClientID	SecretData	Remove
ClientSecret	SecurePassword	Remove

[+ Add row](#)

Encryption key [Info](#)

You can encrypt using the KMS key that Secrets Manager creates or a customer managed KMS key that you create.

aws/secretsmanager [Add new key](#)

[Cancel](#) [Next](#)

- Add **"Secret key and Value"**.
- Click **"next"**.

Create an AWS Secrets Manager Secret

- Add "**Secret Name and Description**".
- Click "**next**".

Step 1

Choose secret type

Step 2

Configure secret

Step 3 - optional

Configure rotation

Step 4

Review

Configure secret

Secret name and description [Info](#)

Secret name
A descriptive name that helps you find your secret later.

Secret name must contain only alphanumeric characters and the characters / _ + = . @ -

Description - optional

Maximum 250 characters.

Create an AWS Secrets Manager Secret

Tags - optional
No tags associated with the secret.
[Add](#)

Resource permissions - optional [Info](#)
Add or edit a resource policy to access secrets across AWS accounts.
[Edit permissions](#)

▶ Replicate secret - optional
Create read-only replicas of your secret in other Regions. Replica secrets incur a charge.

[Cancel](#) [Previous](#) [Next](#)

- Add "**Secret Name and Description**".
- Click "**next**".

Create an AWS Secrets Manager Secret

- Configure "**Rotation**" as optional.
- Click "**next**".

Configure rotation - *optional*

Configure automatic rotation [Info](#)

Configure AWS Secrets Manager to rotate this secret automatically.

☐ Automatic rotation

Rotation schedule [Info](#)

☒ Schedule expression builder

☐ Schedule expression

Time unit

Hours

Hours

23

Window duration - *optional*

4h

Enter the time in hours.

☒ Rotate immediately when the secret is stored. The next rotation will begin on your schedule.

Rotation function [Info](#)

Lambda rotation function [Info](#)

Choose a Lambda function that can rotate this secret.

C

[Create function](#) [↗](#)

Cancel

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Create an AWS Secrets Manager Secret

☰ [AWS Secrets Manager](#) > [Secrets](#) > Store a new secret ⓘ ⓘ

Step 1
Choose secret type

Step 2
Configure secret

Step 3 - optional
Configure rotation

Step 4
Review

Review

Secret type

Secret type
Other type of secret

Encryption key
aws/secretsmanager

Secret configuration

Secret name
Demo

Description
-

Tags
-

Resource permissions
-

Secret replication
Disabled

- See the preview.
- Click **"store"**.
- This will create new secret manager with keys stored.

Create an AWS Secrets Manager Secret

- Under the preview.

Rotation schedule
Automatic rotation
Disabled
Rotation schedule
-

Rotation function
Lambda rotation function
-
Secret that performs rotation
-

Sample code
Use these code samples to retrieve the secret in your application.

Java | JavaScript | C# | **Python3** | Ruby | Go | Rust

```
1 # Use this code snippet in your app.
2 # If you need more information about configurations
3 # or implementing the sample code, visit the AWS docs:
4 # https://aws.amazon.com/developer/language/python/
5
6 import boto3
7 from botocore.exceptions import ClientError
8
9
10 def get_secret():
11     secret_name = "Demo"
12     region_name = "ap-south-1"
13
14     # Create a Secrets Manager client
15
```

Python Line 1, Column 1 | Errors: 0 | Warnings: 0

[Download AWS SDK for Python](#)

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Store

Create an AWS Secrets Manager Secret



- The secret is successfully stored and listed

Retrieve Secrets from AWS Secret Manager

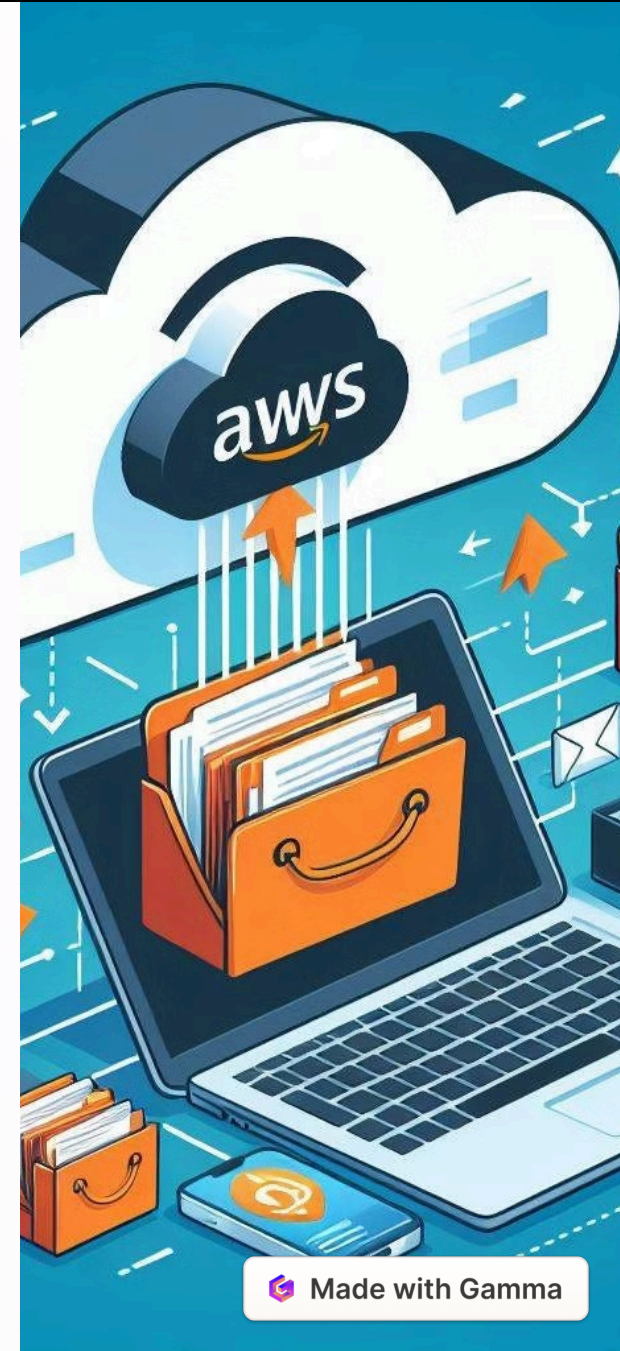
Stored under secret name: "Demo"

```
{ "ClientID": "SecretData", "ClientSecret": "SecurePassword" }
```

Use the secret for an API call:

User- ID : secret['ClientID'],

password : secret['ClientSecret']



Best Practices and Pricing

- Creating and Storing Secrets
- Implementing Secret Rotation
- Accessing Secrets from Applications
- Accessing Secrets from Applications
- Integrating with IAM
- Best Practices for Usage
- Pricing : Pay-as-you-go Model





THANK YOU