

Rotation of secrets in Secrets Manager with Demo

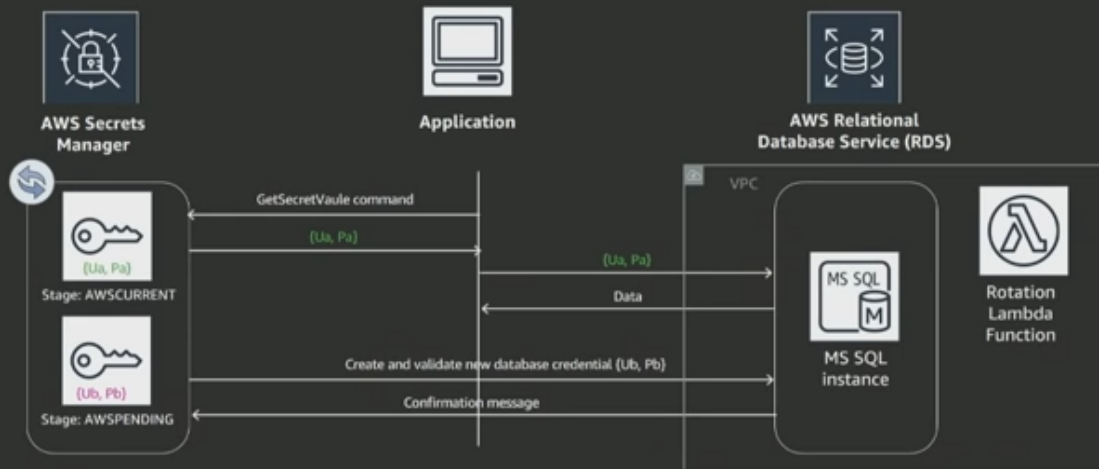
Rotation of secrets in Secrets Manager with Demo

You can configure AWS Secrets Manager to automatically rotate the secret for a secured service or database. Secrets Manager already natively knows how to rotate secrets for [supported Amazon RDS databases](#). However, Secrets Manager also can enable you to rotate secrets for other databases or third-party services. Because each service or database can have a unique way of configuring its secrets, Secrets Manager uses a Lambda function that you can customize to work with whatever database or service that you choose. You customize the Lambda function to implement the service-specific details of how to rotate a secret.

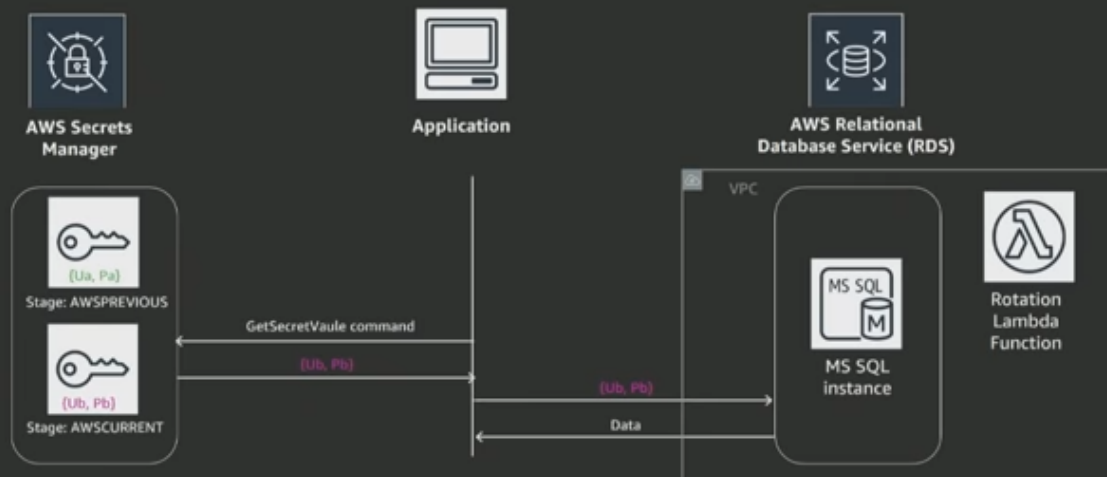
When you enable rotation for a secret by using the **Credentials for RDS database**, **Credentials for Redshift cluster**, or **Credentials for DynamoDB database** secret type, Secrets Manager provides a Lambda rotation function for you and populates the function's Amazon Resource Name (ARN) in the secret automatically. You typically don't need to do anything for this to work other than to provide a few details. For example, you specify which secret has permissions to rotate the credentials, and how often you want to rotate the secret.

When you enable rotation for a secret with **Credentials for other database** or some **Other type of secret**, you must provide the code for the Lambda function. The code includes the commands that are required to interact with your secured service to update or add credentials.

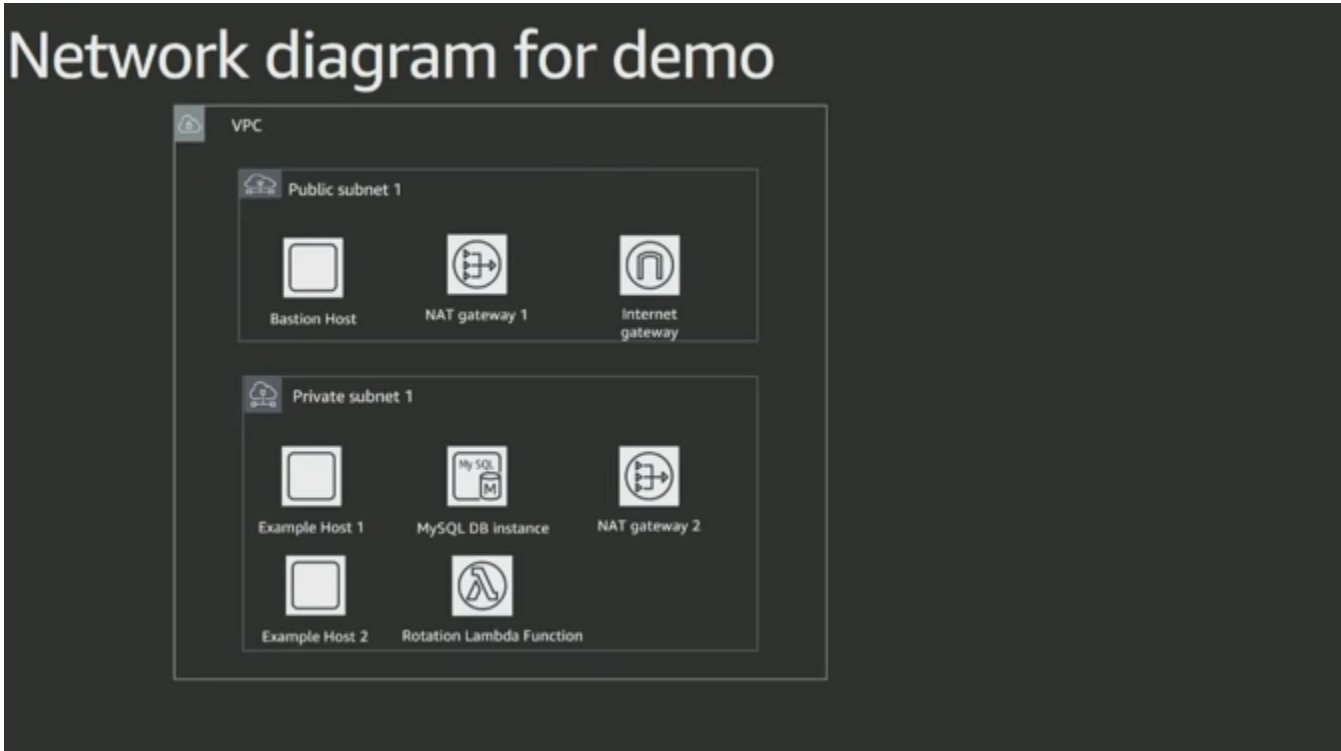
How rotation works



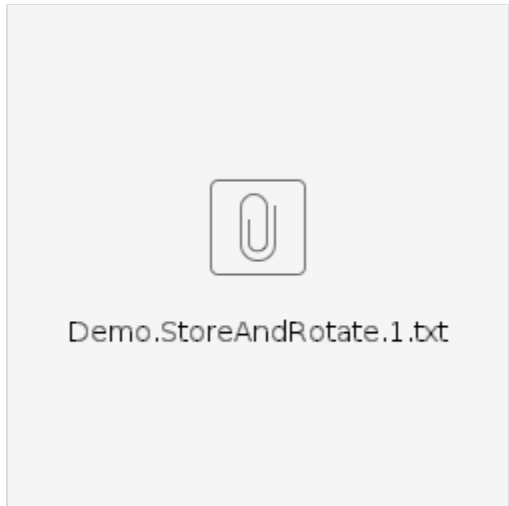
How rotation works



Demo -



The below cloud formation template will do the above provisioning,



Once the stack is created,

We can check for the EC2 instances created, one in public subnet and another in the private subnet.

Launch Instance ▼ Connect Actions ▼								
search : secrets Add filter								
<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)
<input type="checkbox"/>	mySecretsManager-Bastion-Host-us-east-1a	i-0d92272cff28e3f6c	t2.micro	us-east-1a	running	2/2 checks ...	None	ec2-52-21-62-115.comp...
<input checked="" type="checkbox"/>	mySecretsManager-Example-Host-us-east-1a	i-0f4fbb20333d5c00f	t2.micro	us-east-1a	running	2/2 checks ...	None	

We can also see the RDS instance created with no internet access.

Amazon RDS

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Dashboard

Databases

Query Editor

Performance Insights

Snapshots

Automated backups

Reserved instances

Proxies

RDS > Databases > mm119v87qs6j992

mm119v87qs6j992

Summary

DB identifier
mm119v87qs6j992

Role
Instance

CPU
1.36%

Current activity
1 Connections

We need to go to the secrets manager create a secret for this database and enable the rotation policy.

Secret details

Actions

Encryption key
DefaultEncryptionKey

Secret name
demo/secretsmanager

Secret ARN
arn:aws:secretsmanager:us-east-1:536285340728:secret:demo/secretsmanager-1bKdjz

Secret description
demo for password rotation.

Tags

Edit tags

Secret value Info

Retrieve and view the secret value.

Retrieve secret value

Rotation configuration Info

Rotate secret immediately

Edit rotation

Rotation status
Enabled

Rotation Interval
The schedule you have set for credentials rotation
30 Days

AWS Lambda function
The AWS Lambda function that has permissions to rotate this secret.
arn:aws:lambda:us-east-1:536285340728:function:SecretsManagerRotateExample

A lambda function will automatically be created,

Functions (67)

🔄

🔍 Add filter

SecretsManagerLambda : (all values)

Function name	Description	Runtime
SecretsManagerRotateExample	Conducts an AWS SecretsManager secret rotation for RDS MySQL using single user rotation scheme	Python 2.7

Now to login to this RDS database, 1st login to the Public Instance and ssh to the private instance.

Install aws2 cli and configure aws.

Run the below.

```
[ec2-user@ip-10-0-3-102 ~]$ HOST=$(aws2 secretsmanager get-secret-value --secret-id demo/secretsmanager | jq -r '.SecretString' | fromjson | .host')
```

```
[ec2-user@ip-10-0-3-102 ~]$ echo $HOST
```

```
mm119v87qs6j992.ccac5zy4egop.us-east-1.rds.amazonaws.com
```

```
[ec2-user@ip-10-0-3-102 ~]$ USERNAME=$(aws2 secretsmanager get-secret-value --secret-id demo/secretsmanager | jq -r '.SecretString' | fromjson | .username')
```

```
[ec2-user@ip-10-0-3-102 ~]$ echo $USERNAME
```

```
awsadmin
```

```
[ec2-user@ip-10-0-3-102 ~]$ PASSWORD=$(aws2 secretsmanager get-secret-value --secret-id demo/secretsmanager | jq -r '.SecretString' | fromjson | .password')
```

```
[ec2-user@ip-10-0-3-102 ~]$ echo $PASSWORD
```

```
y>%O2iZk~nCF>(wHDz9td0O7tty,,Qee
```

```
[ec2-user@ip-10-0-3-102 ~]$ mysql -h $HOST -u $USERNAME -p"$PASSWORD"
```

Warning: Using a password on the command line interface can be insecure.

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 37

Server version: 5.7.22 Source distribution

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
mysql>
```