

# 100 Days of AWS — Day 21- AWS System Manager — Part 2

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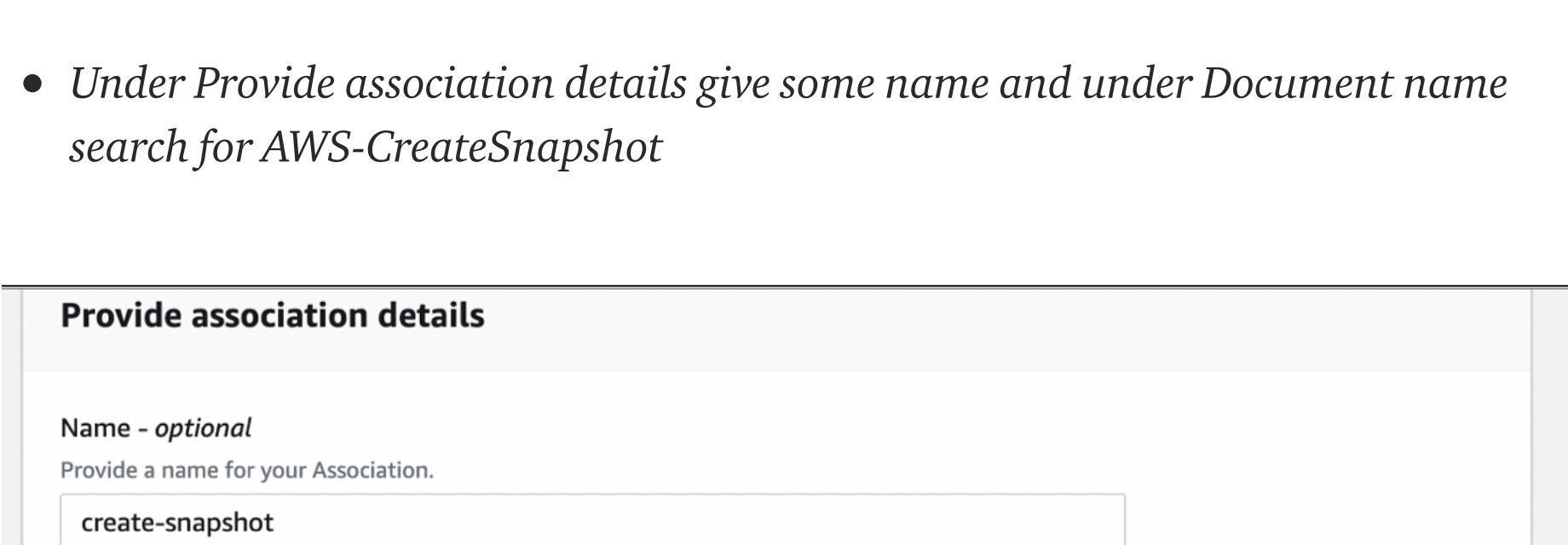
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Welcome to Day 21 of 100 Days of AWS. The topic for today is AWS System Manager — Part 2. To check the first part <https://www.101daysofdevops.com/courses/100-days-of-aws/lessons/day-20-aws-system-manager-part-1/>

Today we are going to explore few more features with AWS System Manager.

## What is AWS Systems Manager State Manager

- AWS Systems Manager State Manager is a secure and scalable configuration management service that automates the process of keeping your Amazon EC2 and hybrid infrastructure in a state that you define.
- One of the use case I found out of AWS System Manager State Manager is to run the command on a scheduled basis(eg: SnapShot Creation)
- Go To Node Management → State Manager → Create association



- Under Provide association details give some name and under Document name search for AWS-CreateSnapshot

Provide association details

Name - optional

Provide a name for your Association.

create-snapshot

Document

Document

AWS-ASGEnterStandby

Document description

Change the Standby state of an EC2 instance in an autoscaling group

Use the service-linked role **AWSServiceRoleForAmazonSSM** to allow State Manager to manage AWS resources on your behalf.

Document name prefix: Equals: AWS-CreateSnapshot

Clear filters

Name	Owner	Platform types	Document type
<input type="radio"/> AWS-CreateSnapshot	Amazon	Windows, Linux, MacOS	Automation

- In the Provide associations details give name, under Document name search for

Provide association details

Name - optional

Provide a name for your Association.

create-snapshot

Document

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Document description

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Name	Owner	Platform types	Document type
<input type="radio"/> AWS-CreateSnapshot	Amazon	Windows, Linux, MacOS	Automation

- Fill all the details like instance id, schedule, arn etc. Click on Create Associations.

Execution

☒ Simple execution

Execute on targets.

☐ Rate control

Execute safely on multiple targets by defining concurrency and error thresholds.

Input parameters

InstanceId

(Required) ID of EC2 Instance to change standby state for within ASG

String

AutomationAssumeRole

(Required) The ARN of the role that allows Automation to perform the actions on your behalf.

LambdaRoleArn

(Optional) The ARN of the role that allows Lambda created by Automation to perform the actions on your behalf. If not specified a transient role will be created to execute the Lambda function.

String

Specify schedule

☒ On Schedule

Run association at cron/rate intervals.

☐ No schedule

Run association once.

- But I believe there is a much better way to achieve this using data life cycle manager. Check the below blog for more info

100 Days of AWS

Edit description

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## AWS Systems Manager Parameter Store

AWS System Manager Parameter store provides secure, hierarchical storage for configuration data management and secrets management. You can store data such as:

- passwords
- database strings
- license codes

Which you can then be programmatically accessed via the SSM API.

Parameter store is offered at no additional charge(unless you are going with advanced option, check this link for more info <https://aws.amazon.com/systems-manager/pricing/>)

Go to the parameter store <https://us-west-2.console.aws.amazon.com/systems-manager/parameters> → Create parameter. Give your parameter some name, select Type as String and then give your parameter value you want to store. Click on Create parameter at the bottom of the screen.

Name

my-test-parameter

Description - Optional

Tier

Parameter Store offers standard and advanced parameters.

☒ Standard

Can store more than 10,000 parameters. Parameter value size up to 4 KB. Parameter policies are not available. No additional charge.

☐ Advanced

Can store more than 10,000 parameters. Parameter value size up to 4 KB. Parameter policies are available. Charge apply.

Type

☒ String

Any string value.

☐ SecureString

Secure string using KMS keys.

☐ SecureString

Secure string using KMS keys from your account or another account.

Data type

text

Value

abc123

Maximum length: 4096 characters.

Tags - Optional

You can use tags to organize and restrict access to your parameter.

Add tag

Cancel

Create parameter

- If you want to retrieve the secret via commandline

```
aws ssm get-parameters --names "my-test-parameter"

{
  "Parameters": [
    {
      "Name": "my-test-parameter",
      "Type": "String",
      "Value": "abc123",
      "Version": 1,
      "LastModifiedDate": "2022-04-25T15:29:52.540000-07:00",
      "ARN": "arn:aws:ssm:us-west-2:XXXXXX:parameter/my-test-parameter",
      "DataType": "text"
    }
  ],
  "InvalidParameters": []
}
```

- To store the secret string, under Type select SecureString. Under KMS key either select the AWS provided key or you can use your own key.

Parameter details

Name

my-secure-secret

Description - Optional

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Secure string using KMS keys from your account or another account.

KMS key source

☒ My current account

Use the default KMS key for this account or specify a customer-managed key for this account. [Learn more](#)

☐ Another account

Use a KMS key from another account. [Learn more](#)

KMS key ID

alias/aws/cm

☒ You have selected the default AWS managed key. All users in the current AWS account and Region will have access to this parameter. To restrict access to the parameter, use a customer-managed key (CMK) instead. [Learn more](#)

Value

abc123

Maximum length: 4096 characters.

Tags - Optional

You can use tags to organize and restrict access to your parameter.

Add tag

Cancel

Create parameter

- To get the secret via command line, this time you need to use —with-decryption flag

```
aws ssm get-parameters --names "my-secure-secret" --with-decryption

{
  "Parameters": [
    {
      "Name": "my-secure-secret",
      "Type": "SecureString",
      "Value": "abc123",
      "Version": 1,
      "LastModifiedDate": "2022-04-25T15:33:41.781000-07:00",
      "ARN": "arn:aws:ssm:us-west-2:XXXXX:parameter/my-secure-secret",
      "DataType": "text"
    }
  ],
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```
aws ssm put-parameter --name "secret-password" --value 'abc123' --type SecureString --key-id arn:aws:kms:us-west-2:XXXXX:key/XXXXX

{
  "Version": 1,
  "Tier": "Standard"
}
```

- To create the secret via command line

Parameter details

Name

my-secure-secret

Description - Optional

Tier

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      "LastModifiedDate": "2022-04-25T15:33:41.781000-07:00",
      "ARN": "arn:aws:ssm:us-west-2:XXXXX:parameter/my-secure-secret",
      "DataType": "text"
    }
  ],
  "InvalidParameters": []
}
```

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