

Experiment 5

Automation and Optimization with Amazon S3

Name : **Dhawal Gupta**

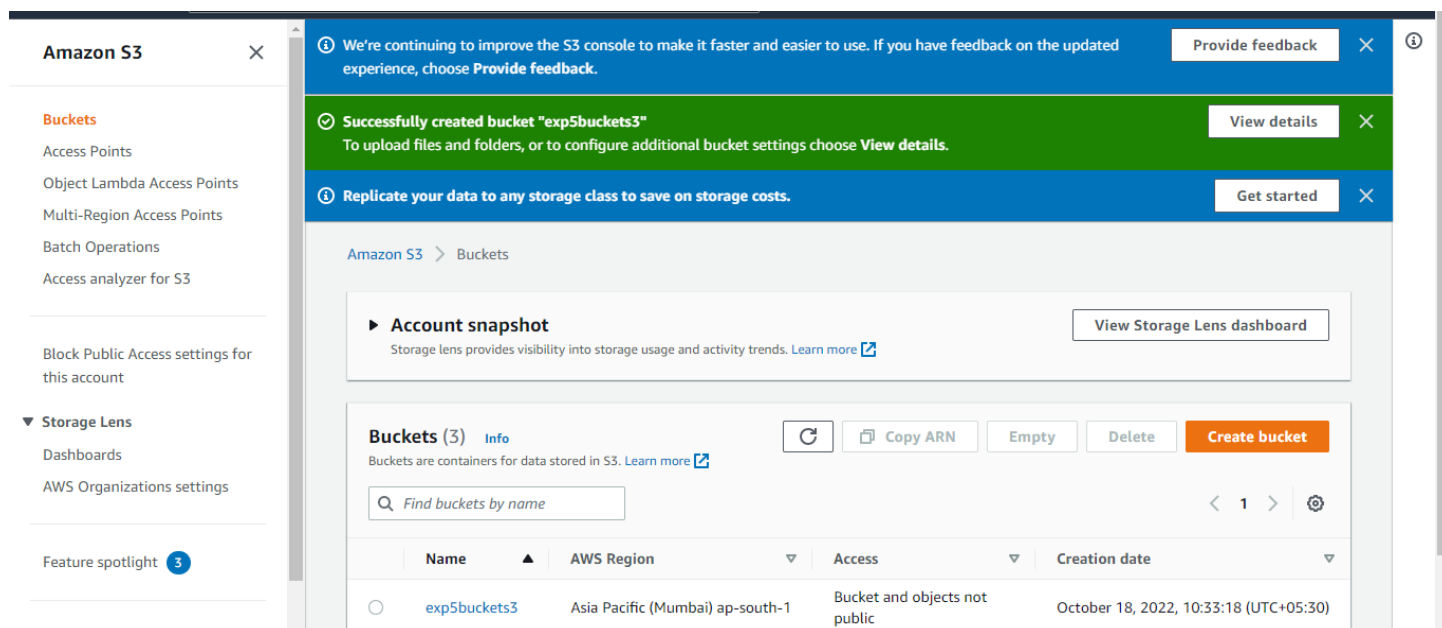
Reg No : **RA2011028010081**

Aim : Automate Files backup to aws S3 bucket on Linux machine.

Procedure :

Steps:

1. Create a S3 bucket.
2. Create a EC2 instance.
3. Give EC2 instance Role to access S3.



Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access analyzer

Archive rules

Analyzers

Settings

New! Securely access AWS services from your data center with IAM Roles Anywhere. [Learn more](#)

Role aws-ec2-s3-access created. [View role](#)

IAM > Roles

Roles (3) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Search

< 1 > ⚙

Role name

Trusted entities

Last activity

aws-ec2-s3-access

AWS Service: ec2

-

AWSServiceRoleForSupport

AWS Service: support (Service-Linked Role)

-

AWSServiceRoleForTrustedAdvisor

AWS Service: trustedadvisor (Service-Linked Role)

-

Roles Anywhere Info

Authenticate your non AWS workloads and securely provide access to AWS services.

Manage

Feedback

Looking for language selection? Find it in the new Unified Settings

© 2022 Amazon Internet Services Private Ltd. or its affiliates

Privacy

Terms

Cookie preferences

(or you may also grant access to your local linux machine using aws configure cmd and entering your IAM user credentials over there)

4. Connect to your EC2 instance CLI.
5. Type “sudo su” to give access root directory.
6. Create a directory “backup”. Type: mkdir backup
7. Go inside the “backup” directory.
8. Make some test files.

Type : touch a

```
The user-provided path /root/backup does not exist.
[root@ip-172-31-0-253 backup]# aws s3 sync /backup s3://automate-uploadd

The user-provided path /backup does not exist.
[root@ip-172-31-0-253 backup]# aws s3 /backup s3://automate-uploadd
Note: AWS CLI version 2, the latest major version of the AWS CLI, is now stable and recommended for general use. For more information, see the AWS CLI version
2 installation instructions at: https://docs.aws.amazon.com/cli/latest/userguide/install-cliv2.html

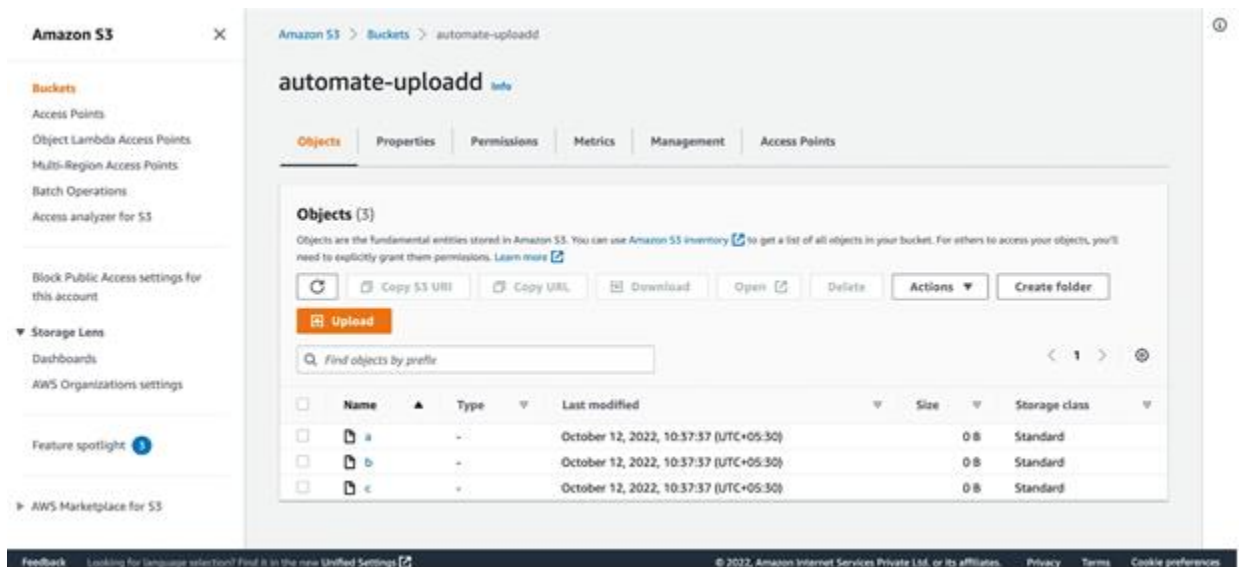
usage: aws [options] <command> [<subcommand> [<subcommand> ...] [parameters]]
To see help text, you can run:

    aws help
    aws <command> help
    aws <command> <subcommand> help
aws: error: argument subcommand: Invalid choice, valid choices are:

ls                                     website
cp                                     mv
rm                                     sync
mb                                     rb
presign

[root@ip-172-31-0-253 backup]# pwd
/home/ec2-user/backup
[root@ip-172-31-0-253 backup]# aws s3 sync /home/ec2-user/backup s3://automate-uploadd
upload: ./a to s3://automate-uploadd/a
upload: ./c to s3://automate-uploadd/c
upload: ./b to s3://automate-uploadd/b
[root@ip-172-31-0-253 backup]#
```

9. List Them By Cmd-Is



Now to sync these files of backup directory on the S3 bucket. Cmd : `aws s3 sync localfilepath s3://bucketname`

11.Now, we are going to create a cron job in order to automate this process. Cmd : `crontab -e`

Enter the cmd : cron code `aws s3 sync /directory s3://bucketname`

For e.g. : cron code for 1 min is `* * * * *`

(you may use crontab.guru to create your own job expression) URL : <https://crontab.guru/>

```

usage: aws [options] <command> [<subcommand> [<subcommand> ...] [parameters]]
To see help text, you can run:

aws help
aws <command> help
aws <command> <subcommand> help
aws: error: argument subcommand: Invalid choice, valid choices are:

ls                               | website
cp                               | mv
rm                               | sync
mb                               | rb
presign

[root@ip-172-31-0-253 backup]# pwd
/home/ec2-user/backup
[root@ip-172-31-0-253 backup]# aws s3 sync /home/ec2-user/backup s3://automate-uploadd
upload: ./a to s3://automate-uploadd/a
upload: ./c to s3://automate-uploadd/c
upload: ./b to s3://automate-uploadd/b
[root@ip-172-31-0-253 backup]# crontab -e
no crontab for root - using an empty one

[1]+  Stopped                  crontab -e
[root@ip-172-31-0-253 backup]# cron code aws s3 sync /home/ec2-user/backup s3://automate-uploadd
bash: cron: command not found
[root@ip-172-31-0-253 backup]# cron code aws s3 sync /backup s3://automate-uploadd
bash: cron: command not found
[root@ip-172-31-0-253 backup]#

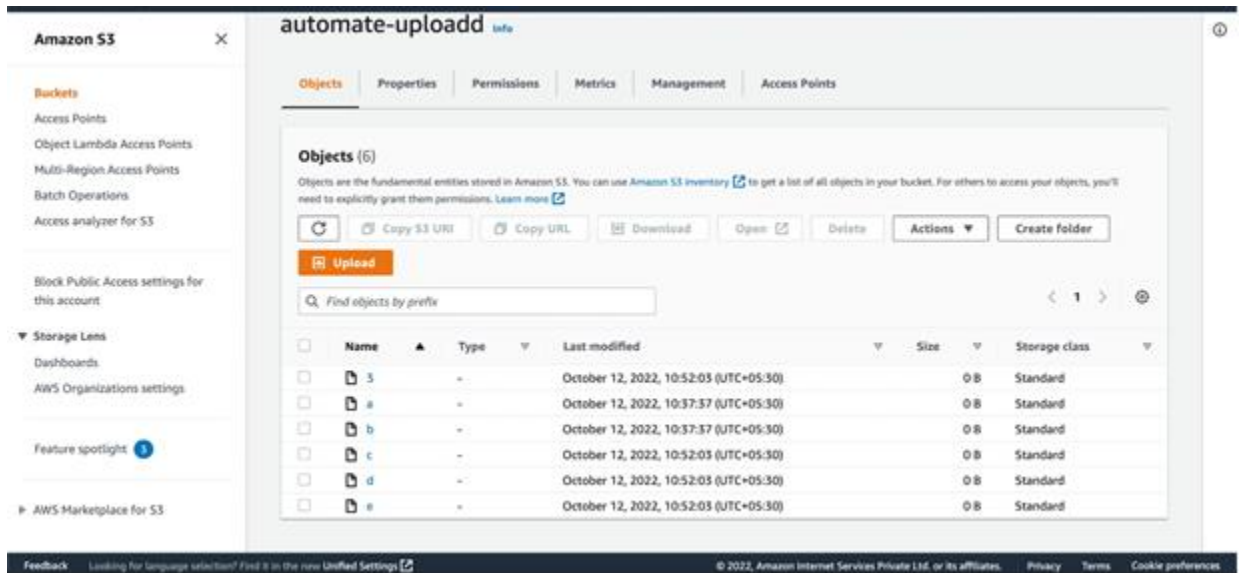
```

Restart the Crond service

Run “systemctl restart/stop/start cornd.service” to restart/stop/start your cron jobs respectively.

13. Now, we are going to create some test files to check if they are uploaded every minute or not.

14. File d and file e have been updated.



Result: We have successfully automated our local files/directory backup on Amazon S3 buckets using crontab.