Experiment : 5

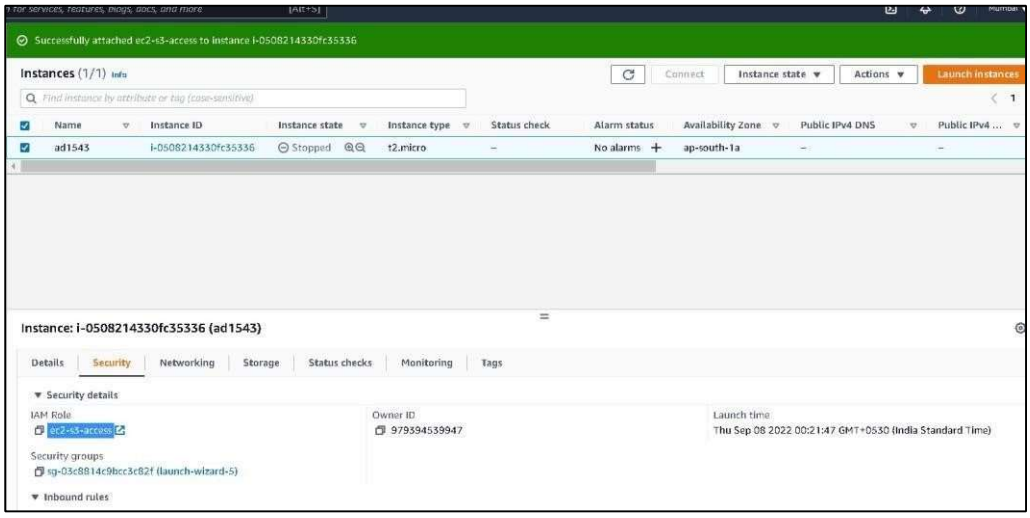
Title : Automation and Optimization with Amazon S3

Aim : Automate Files backup to aws S3 bucket on Linux machine. **Pre-requisites :** AWS Console, Amazon S3, crontab, aws cli

Procedure :

Steps:

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



(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.

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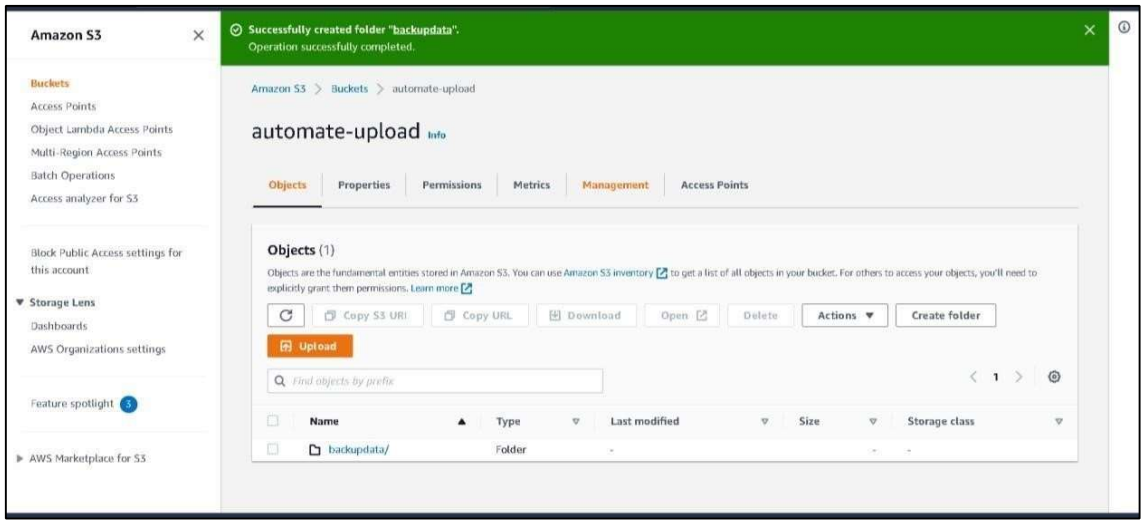

6. Create a directory ‹‹backup››.
   Type: mkdir backup
7. Go inside the “backup” directory.
8. Make some test files. Type : touch a

```
2022-09-19 08:27:17 paint-ad1543
[root@ip-172-31-32-239 ec2-user]# aws s3 ls automate-upload
                           PRE backupdata/
[root@ip-172-31-32-239 ec2-user]# mkdir backup
[root@ip-172-31-32-239 ec2-user]# cd backup
[root@ip-172-31-32-239 backup]# touch a
[root@ip-172-31-32-239 backup]# touch b
[root@ip-172-31-32-239 backup]# touch c
[root@ip-172-31-32-239 backup]# ls
a  b  c
[root@ip-172-31-32-239 backup]# aws s3 sync /root/backup s3://automate-upload

The user-provided path /root/backup does not exist.
[root@ip-172-31-32-239 backup]# aws s3 /backup s3://automate-upload
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-172-31-32-239 backup]# pwd
/home/ec2-user/backup
[root@ip-172-31-32-239 backup]# aws s3 sync /home/ec2-user/backup s3://automate-upload
upload: ./c to s3://automate-upload/c
upload: ./b to s3://automate-upload/b
upload: ./a to s3://automate-upload/a
[root@ip-172-31-32-239 backup]#
```

9. List them by cmd – ls

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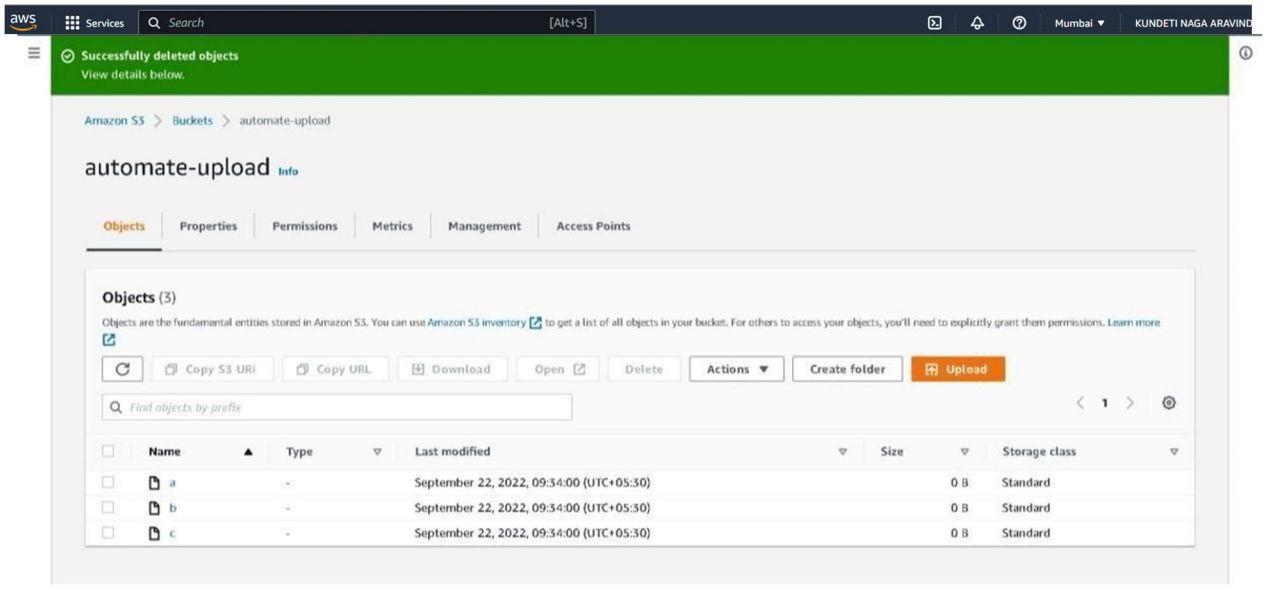
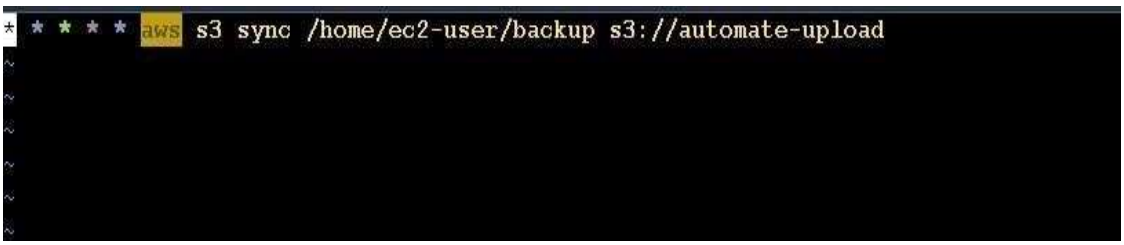
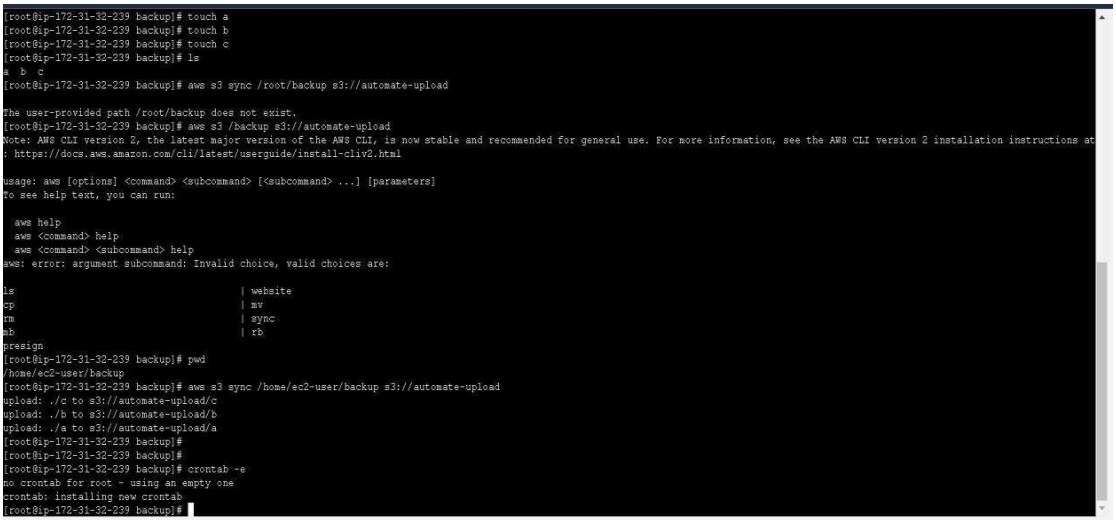


10. Now to sync these files of backup directory on the S3 bucket. Cmd : aws s3 sync localfilepath s3://bucketname
11. Now, we are going to create a cron job in order to automate this process.
    Cmd : crontab -e
    Enter the cmd : cron code aws s3 sync /directory s3://bucketname
    For e.g. : cron code for 1 min is * * * * *
    (you may use crontab.guru to create your own job expression)
    URL : https://crontab.guru/



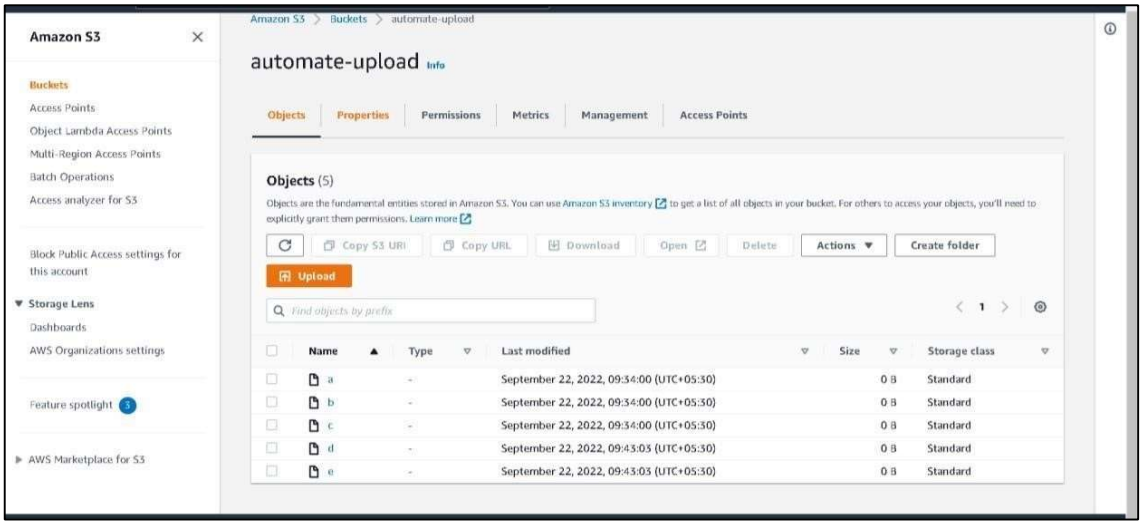


12. Restart the Crond service

    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.

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