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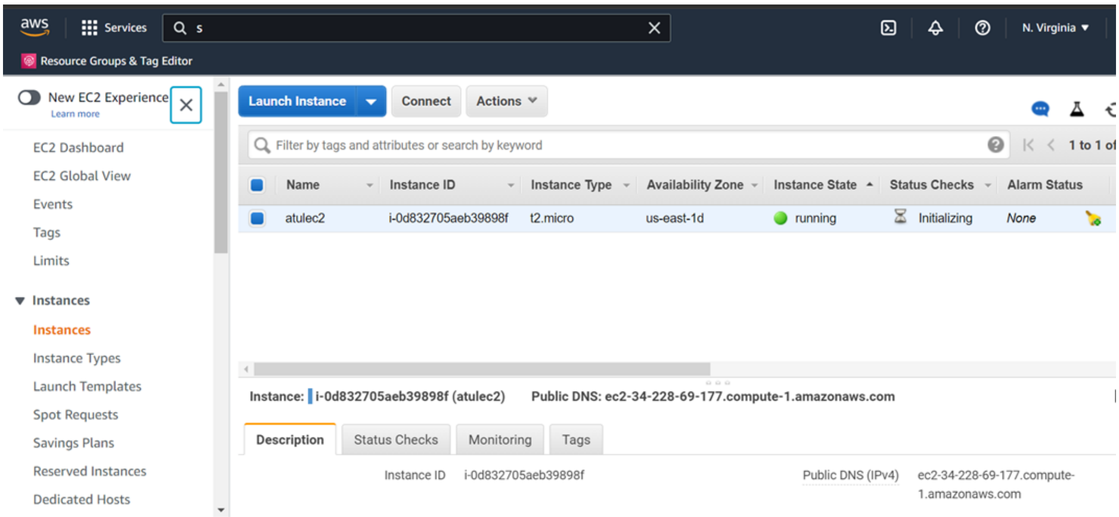
EXPERIMENT- 5
AUTOMATION AND OPTIMIZATION WITH AMAZON S3

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 an EC2 instance.
3. Give EC2 instance Role to access S3.



Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status
atulec2	i-0d832705aeb39898f	t2.micro	us-east-1d	running	Initializing	None

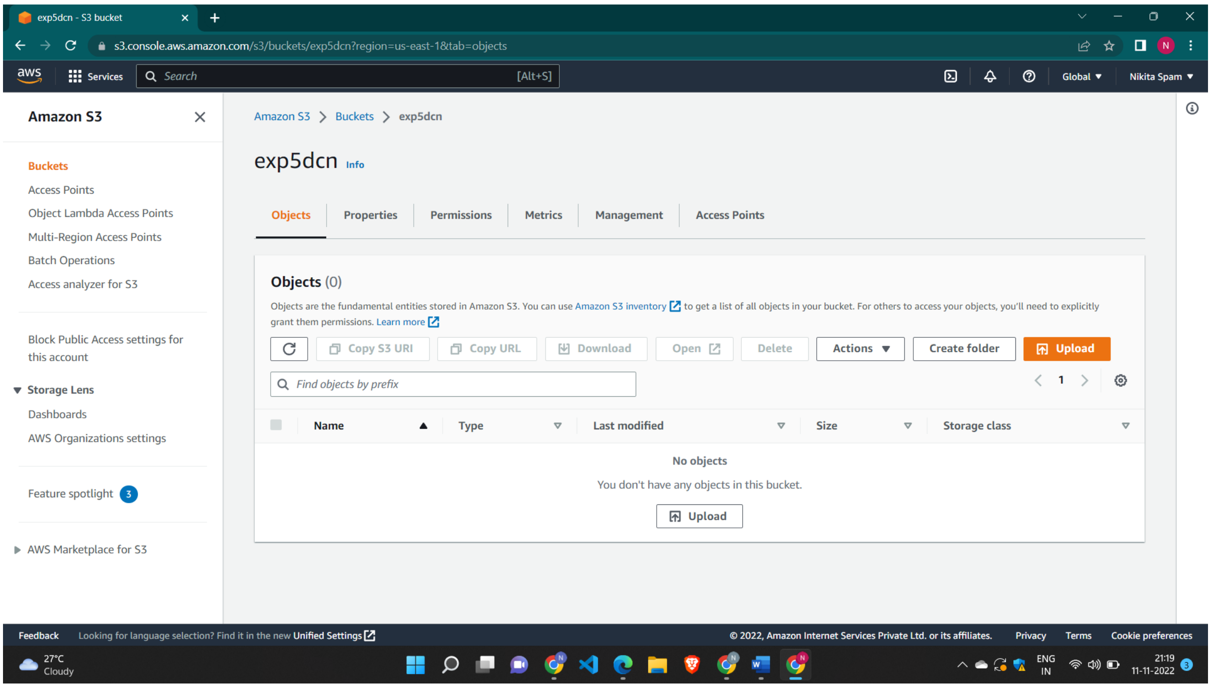
Instance: i-0d832705aeb39898f (atulec2) Public DNS: ec2-34-228-69-177.compute-1.amazonaws.com

Instance ID i-0d832705aeb39898f

Public DNS (IPv4) ec2-34-228-69-177.compute-1.amazonaws.com

(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



Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. Learn more

No objects

You don't have any objects in this bucket.

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

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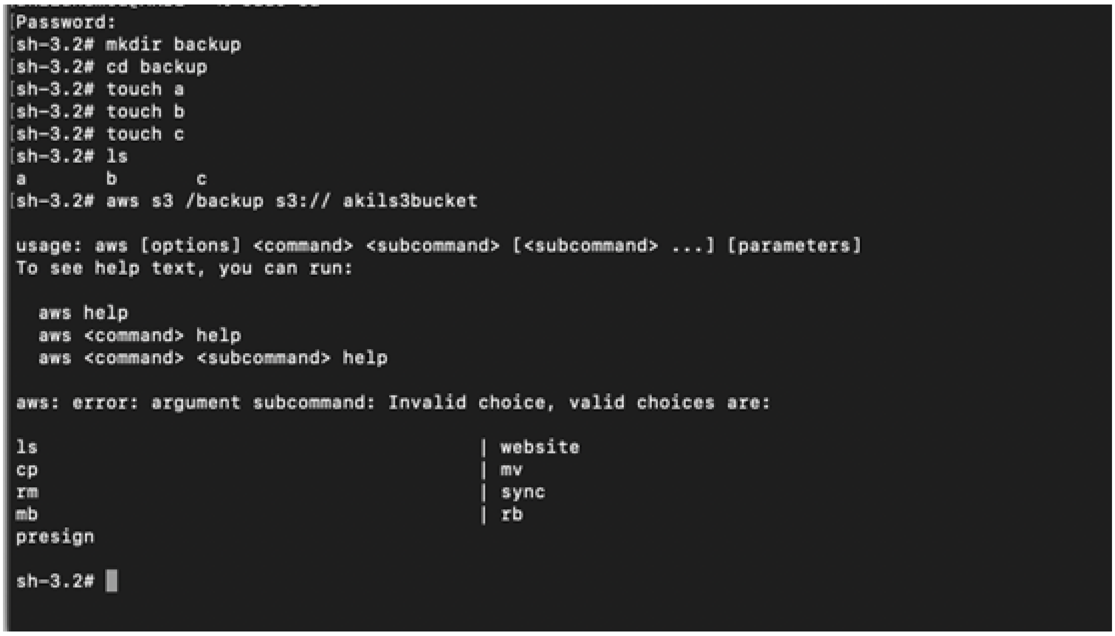
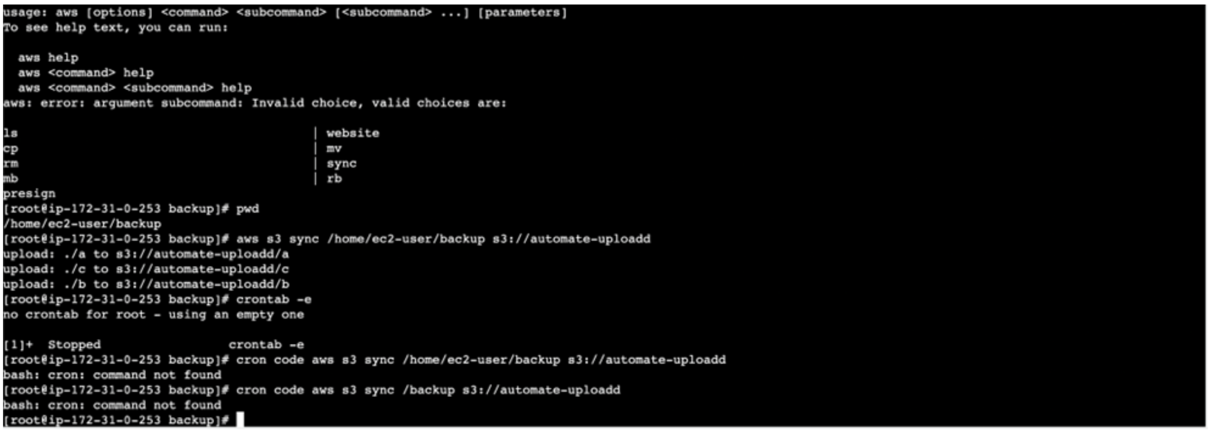
6. Create a directory “backup”. Type: mkdir backup
7. Go inside the “backup” directory.
8. Make some test files. Type : touch a



```
Password:
sh-3.2# mkdir backup
sh-3.2# cd backup
sh-3.2# touch a
sh-3.2# touch b
sh-3.2# touch c
sh-3.2# ls
a        b        c
sh-3.2# aws s3 /backup s3:// akils3bucket

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

sh-3.2# 
```

9. List them by cmd – ls
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

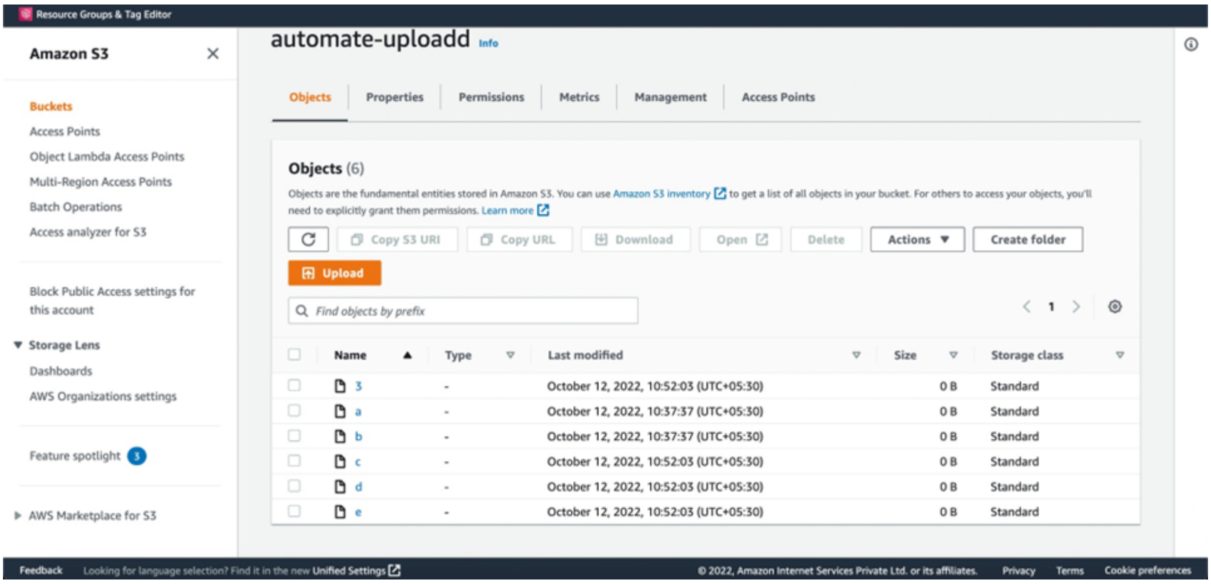


```
usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:

  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]# 
```

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.



automate-uploadd

Objects (6)

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Name	Type	Last modified	Size	Storage class
3	-	October 12, 2022, 10:52:03 (UTC+05:30)	0 B	Standard
a	-	October 12, 2022, 10:37:37 (UTC+05:30)	0 B	Standard
b	-	October 12, 2022, 10:37:37 (UTC+05:30)	0 B	Standard
c	-	October 12, 2022, 10:52:03 (UTC+05:30)	0 B	Standard
d	-	October 12, 2022, 10:52:03 (UTC+05:30)	0 B	Standard
e	-	October 12, 2022, 10:52:03 (UTC+05:30)	0 B	Standard

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