# Experiment 5

## Automation and Optimization with Amazon S3

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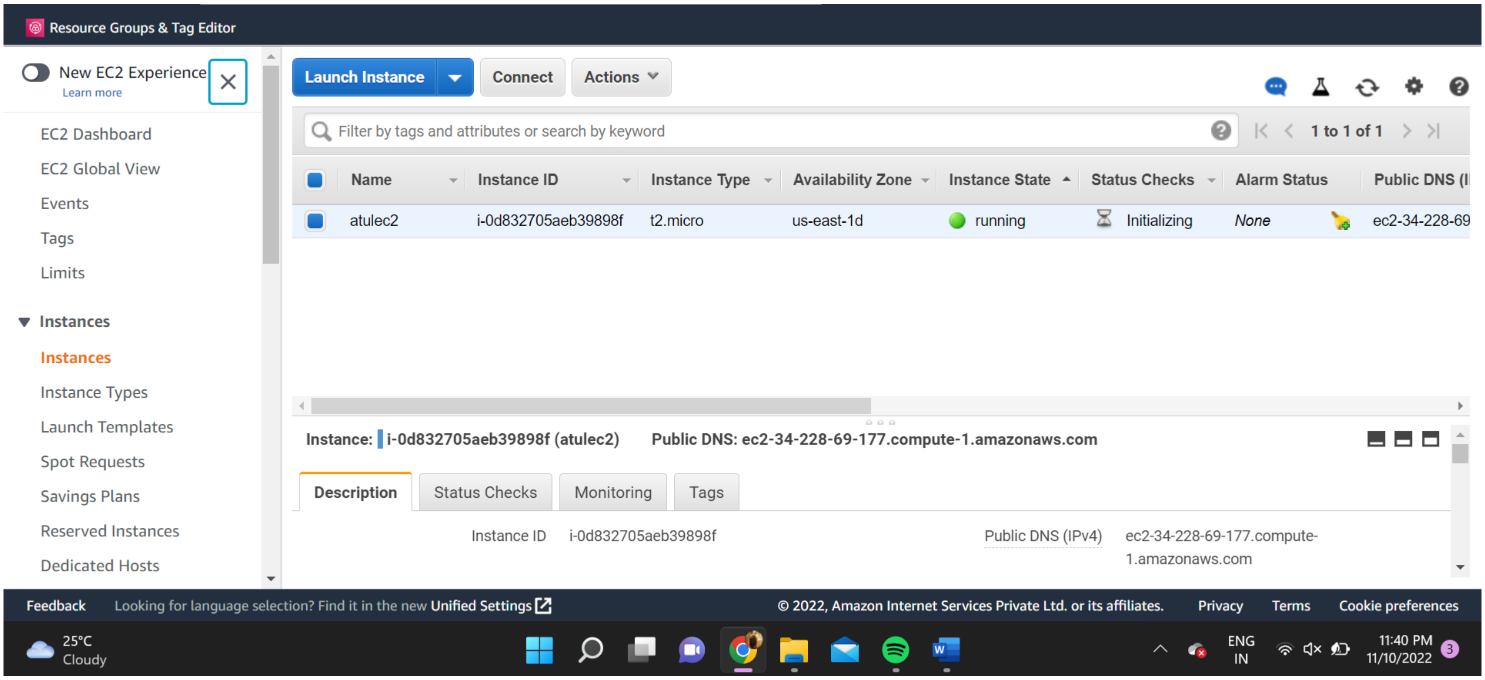
**Aim** : Automate Files backup to aws S3 bucket on Linux machine.

# Procedure :

Steps:

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



| Name | Instance ID | Instance Type | Availability Zone | Instance State | Status Checks | Alarm Status | Public DNS (I |
|---|---|---|---|---|---|---|---|
| atulec2 | i-0d832705aeb39898f | t2.micro | us-east-1d | running | Initializing | None | ec2-34-228-69 |

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

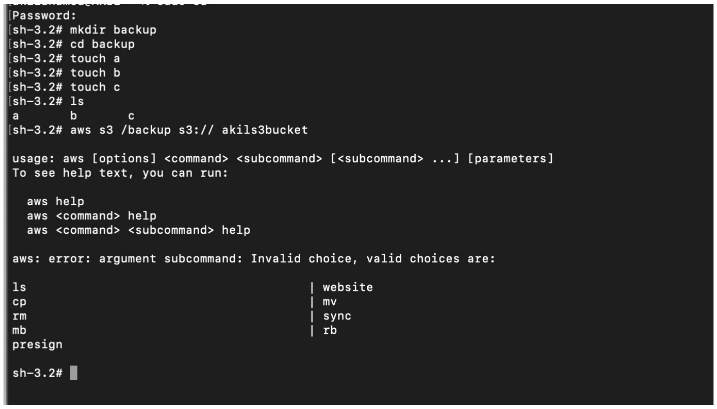
Instance ID    i-0d832705aeb39898f

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)

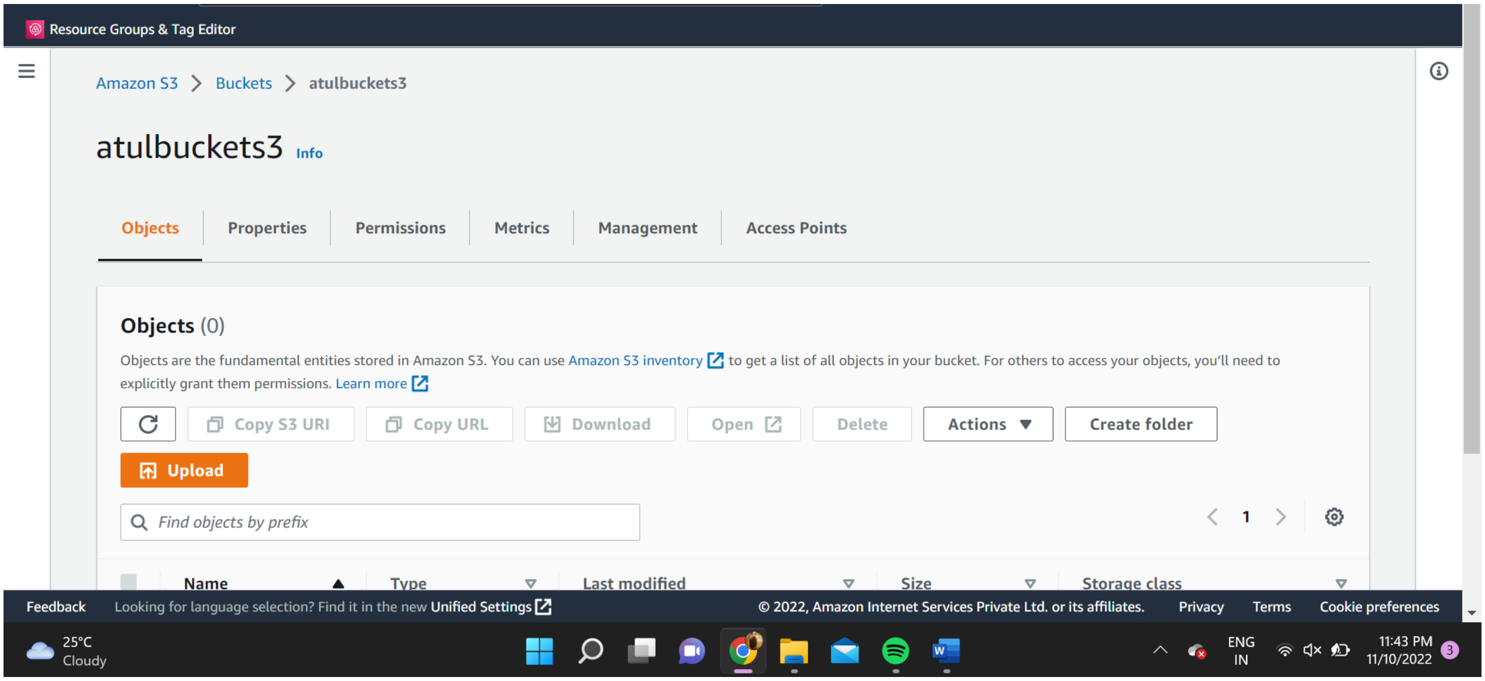
4. Connect to your EC2 instance CLI.
5. Type “sudo su” to give access root directory.

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



atulbuckets3

Objects (0)

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

Name | Type | Last modified | Size | Storage class

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

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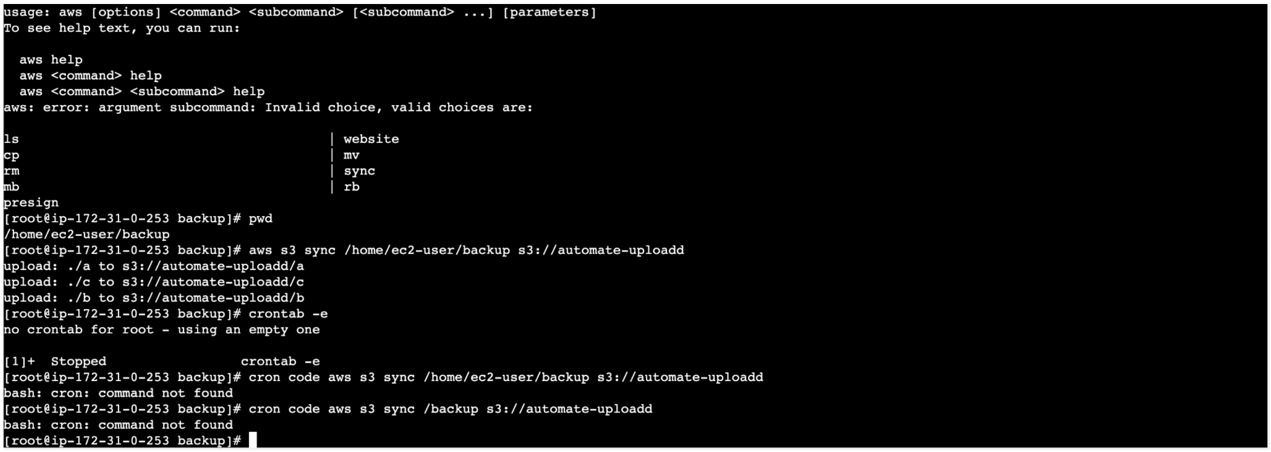
Now to sync these files of backup directory on the S3 bucket. Cmd : aws s3 sync localfilepath s3://bucketname

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.gu



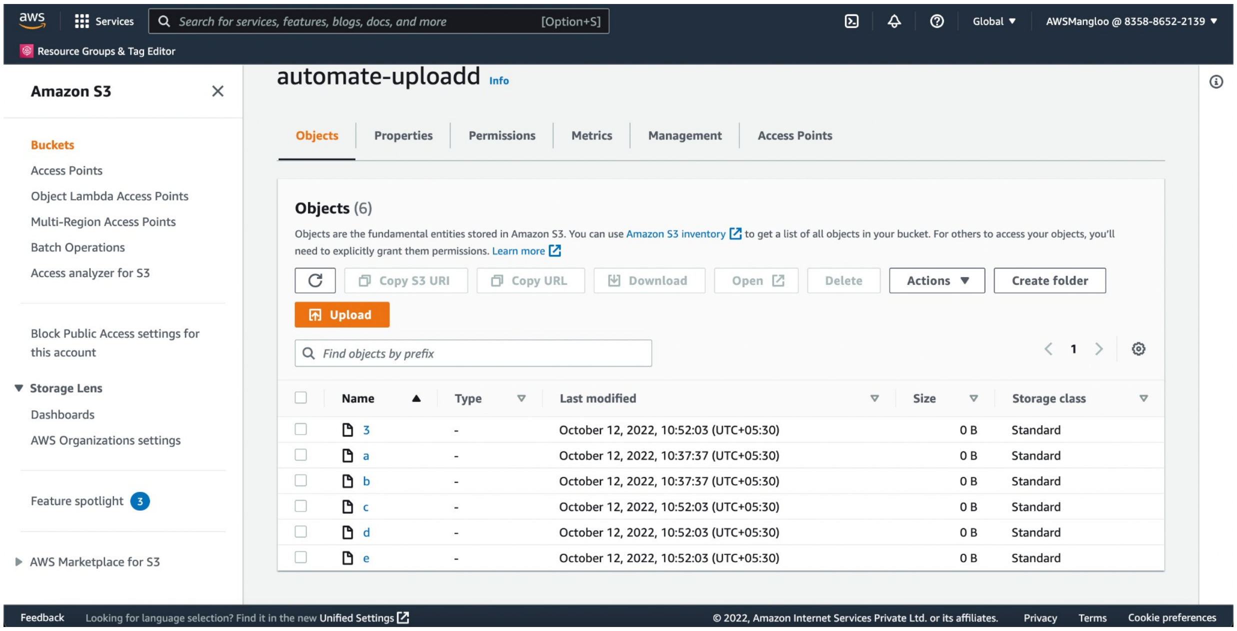
```
usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:

  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.


aws
Services
Search for services, features, blogs, docs, and more
[Option+S]
Global
AWSMangloo @ 8358-8652-2139
Resource Groups & Tag Editor
Amazon S3
Buckets
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
Access analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
AWS Organizations settings
Feature spotlight 3
AWS Marketplace for S3
Objects
Properties
Permissions
Metrics
Management
Access Points
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Find objects by prefix
1
Feedback
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automate-uploadd Info

Objects (6)

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

| 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