Experiment 5

Automation and Optimization with Amazon S3

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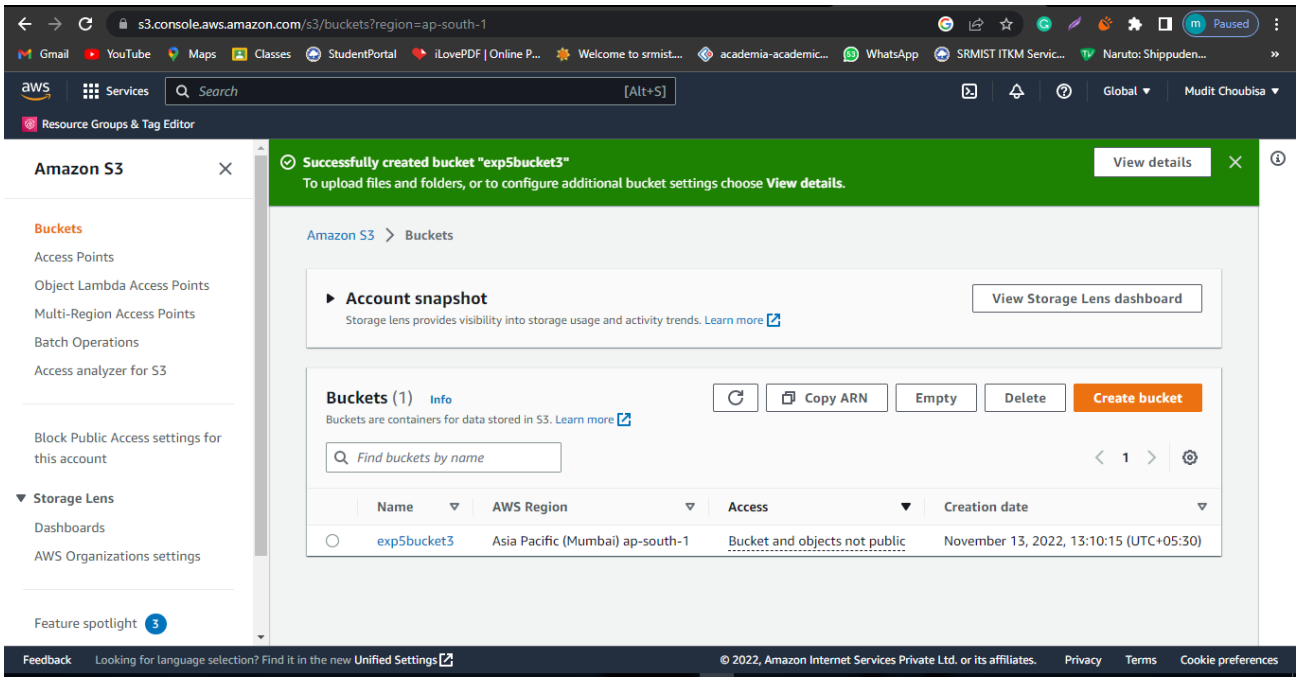
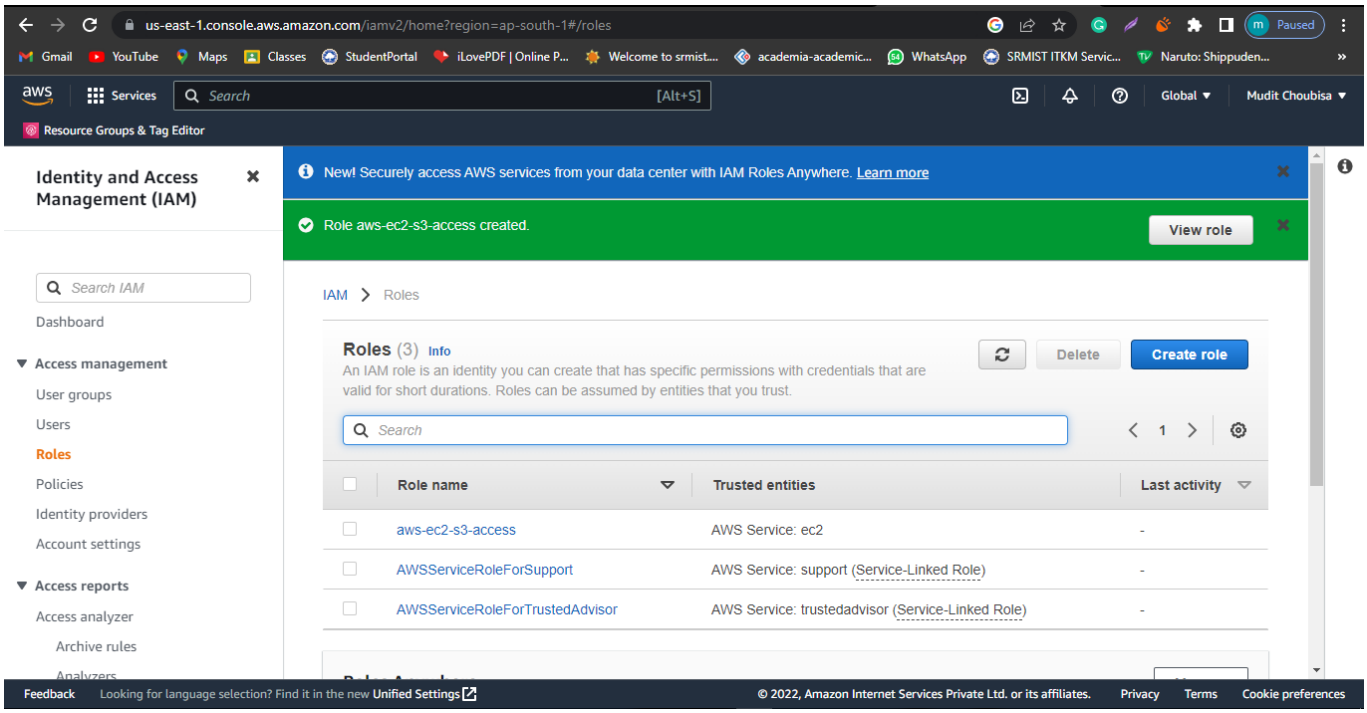
Aim : Automate Files backup to aws S3 bucket on Linux machine.

Procedure :

Steps:

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




us-east-1.console.aws.amazon.com/iamv2/home?region=ap-south-1#/roles
Gmail
YouTube
Maps
Classes
StudentPortal
iLovePDF | Online P...
Welcome to srmist...
academia-academic...
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SRMIST ITKM Servic...
Naruto: Shippuden...
Paused
aws
Services
Search
[Alt+S]
Global
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Resource Groups & Tag Editor
Identity and Access Management (IAM)
New! Securely access AWS services from your data center with IAM Roles Anywhere. Learn more
Role aws-ec2-s3-access created.
View role
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
Identity providers
Account settings
Access reports
Access analyzer
Archive rules
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.
Delete
Create role
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)
-
Feedback
Looking for language selection? Find it in the new Unified Settings
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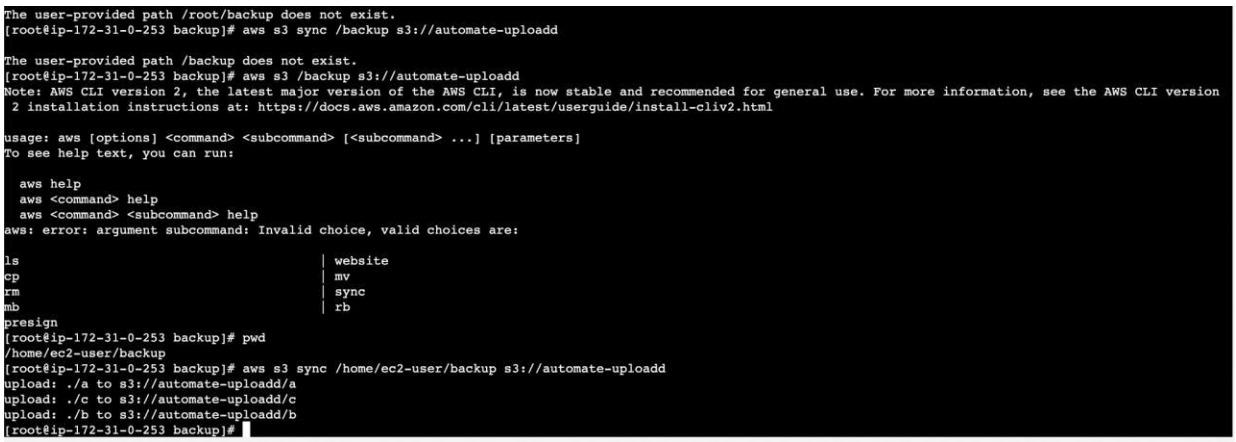
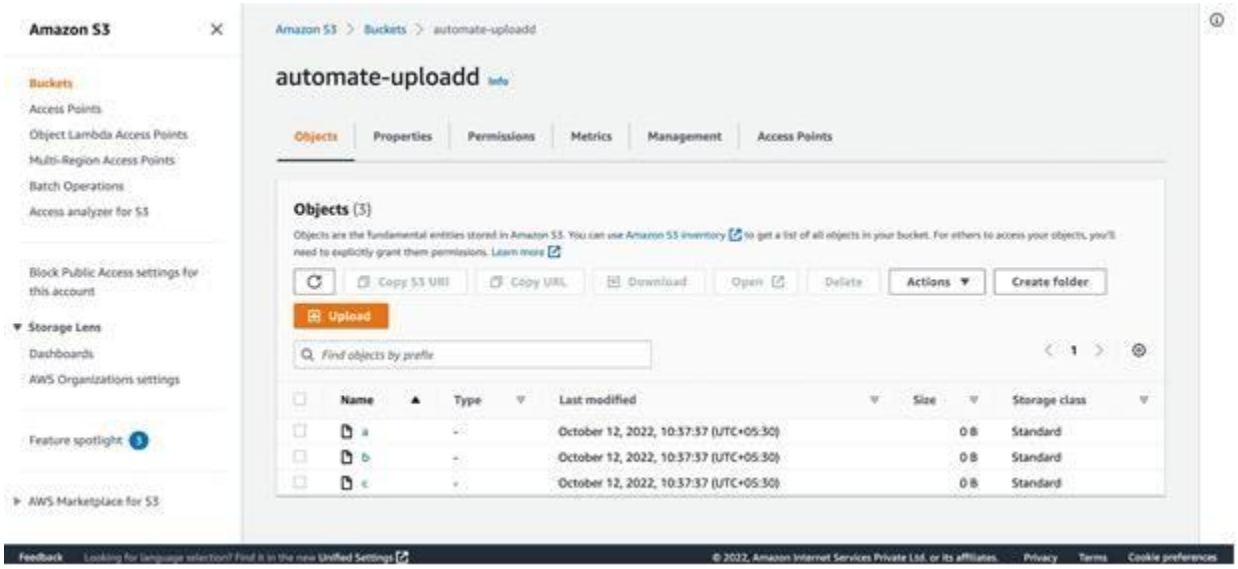
(or you may also grant access to your local linux machine using aws configure cmd and entering your IAM user credentials over there)

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



9. List Them By Cmd–ls



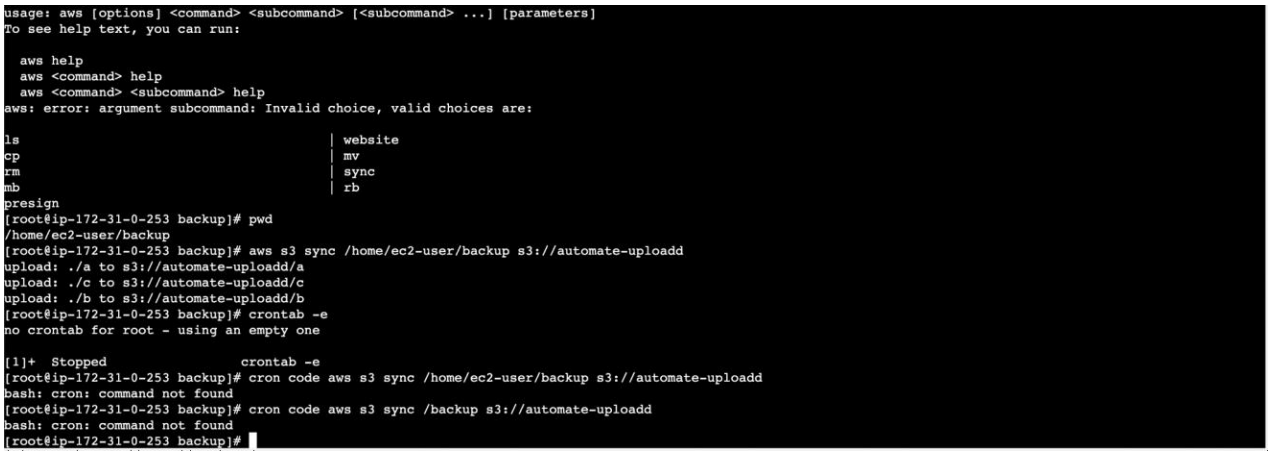
Now to sync these files of backup directory on the S3 bucket. Cmd : aws s3 sync localfilepath s3://bucketname

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/

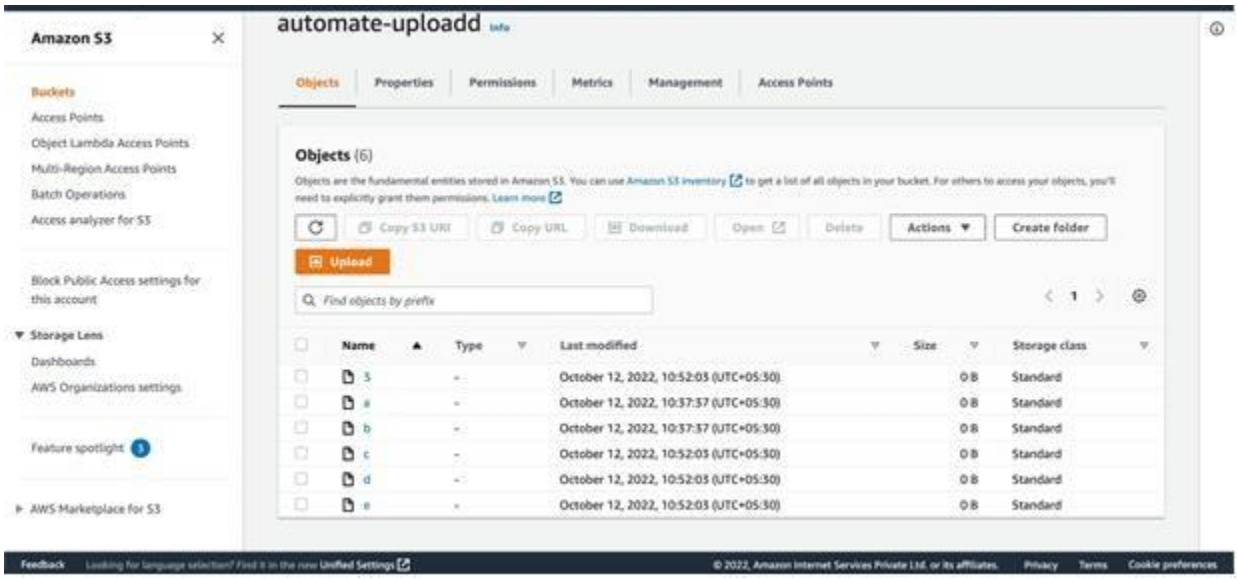


Restart the Crond service

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.