Creating IAM Users:

Login as a root or user with Administrator policy

Go to IAM Service

Create the user and review the options

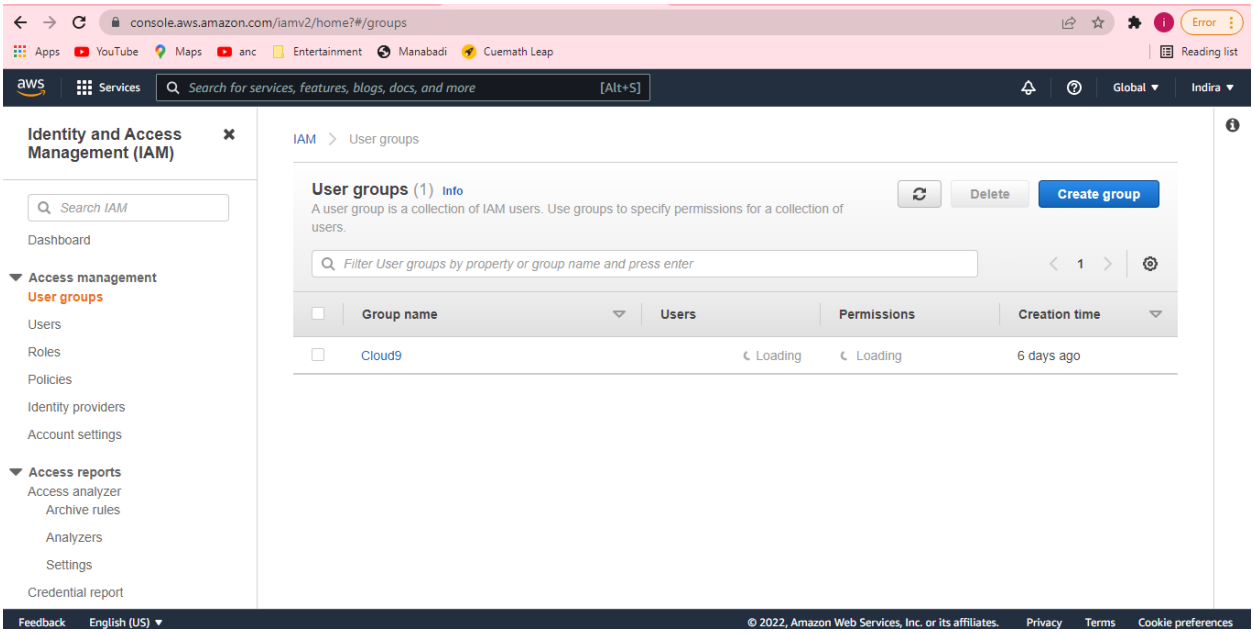


Figure 1Created group

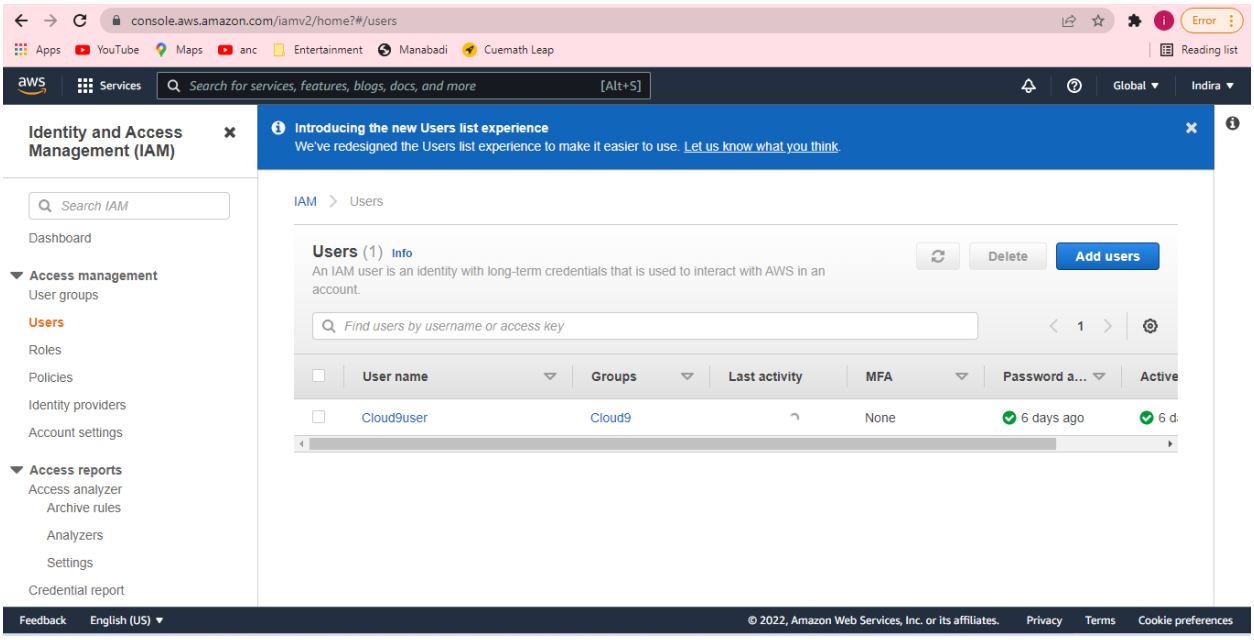


Figure 2Created user

Validate Programmatic Access to IAM User:

- You need to make sure that AWS CLI is set up on your system.

- Launch the terminal or shell and run the **aws configure** command to configure with new keys.
- You can create a sample bucket and validate to confirm that your credentials are configured to the user in the right account.

- Here are the steps I have followed.

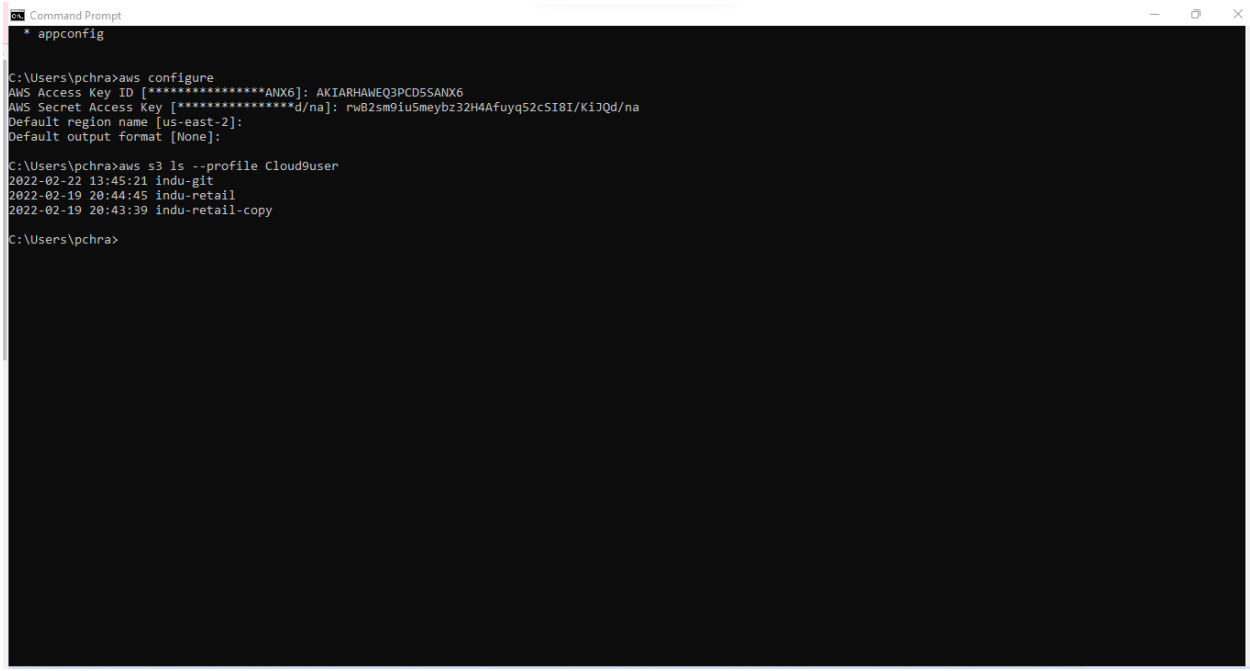
    - Configure credentials using profile by Cloud9user

1. `aws configure --profile Cloud9user`

- Create an s3 bucket with some unique name.

- Run the following command to list the newly created bucket.

1. `aws s3 ls --profile Cloud9user`



IAM Identity-based Policies:

Let us review the following policies to understand how permissions on services are typically defined.

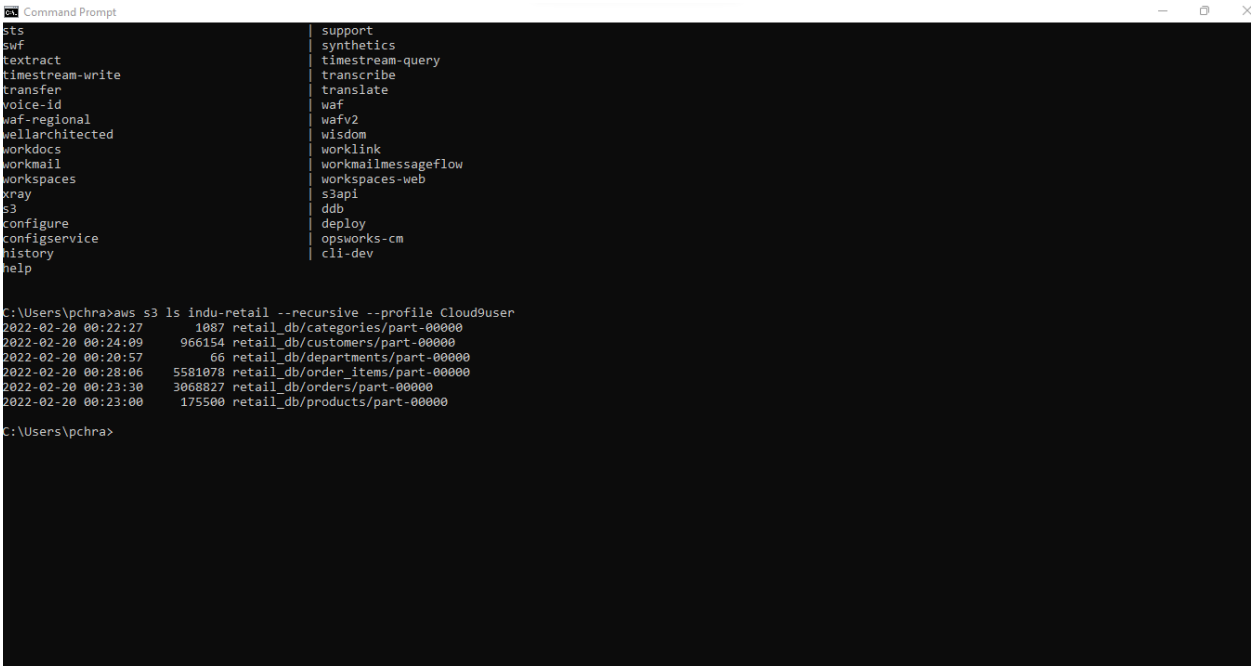
AmazonS3FullAccess
AmazonS3ReadOnlyAccess

Let us perform a few tasks related to Identity-based Policies.

Create a new user **itvsupport1** with only programmatic access.
Configure AWS CLI with profile **itvsupport1**.
Attach AmazonS3ReadOnlyAccess to **itvsupport1**.

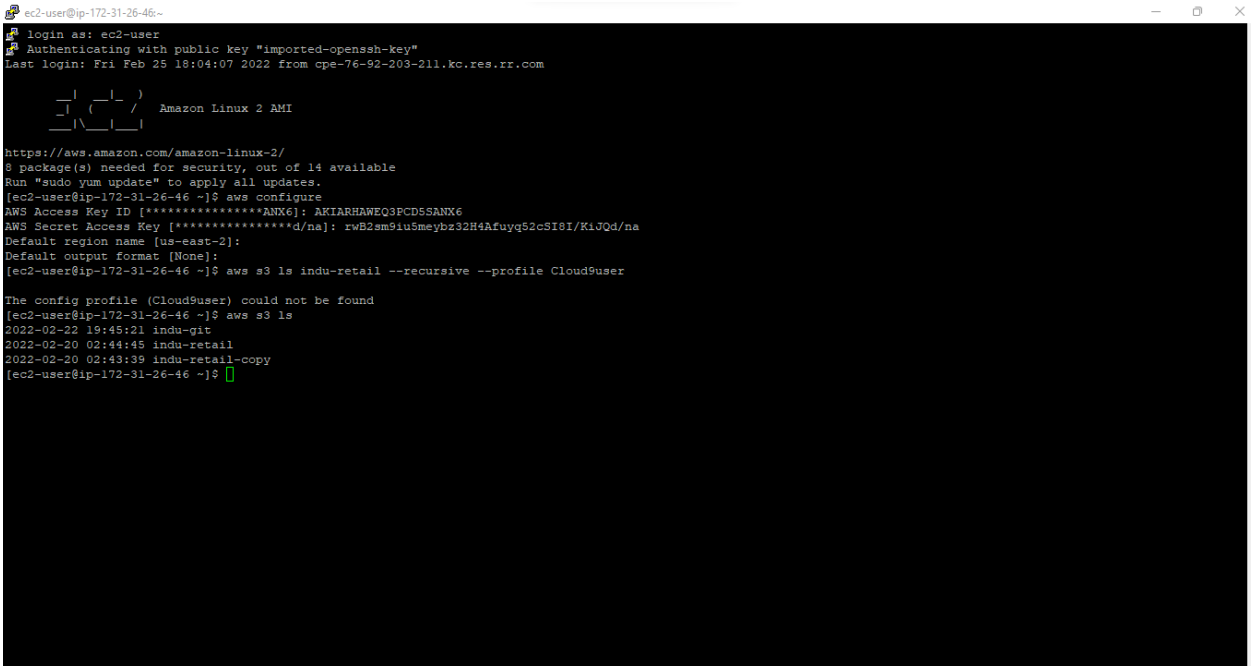
Make sure a bucket is created using AWS Web Console by logging in as admin or root user. I will be creating a bucket by the name **indu-retail**. If you already have such a bucket, you can directly copy files into S3.
Try running this command to copy files into the bucket.

aws s3 ls indu-retail --recursive --profile Cloud9user



Managing IAM Roles:

- Launch EC2 instance using this role. We will be using the Amazon Linux image as it will come with AWS CLI already setup.
- We don't need to configure AWS CLI as the permissions are assigned via role to this EC2 instance.
- If you provision, EC2 instance with other operating systems than Amazon Linux, then you need to install AWS CLI first.
- Login to the EC2 instance and run these commands.
- `aws s3 ls dg-retail1 --recursive`


ec2-user@ip-172-31-26-46:~
login as: ec2-user
Authenticating with public key "imported-openssh-key"
Last login: Fri Feb 25 18:04:07 2022 from cpe-76-92-203-211.kc.res.rr.com
__| __|_)
_| (/   Amazon Linux 2 AMI
___|___|___|
https://aws.amazon.com/amazon-linux-2/
8 package(s) needed for security, out of 14 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-26-46 ~]$ aws configure
AWS Access Key ID [****************ANX6]: AKIARHAWEQ3PCD5SANX6
AWS Secret Access Key [****************d/na]: 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
Default region name [us-east-2]:
Default output format [None]:
[ec2-user@ip-172-31-26-46 ~]$ aws s3 ls indu-retail --recursive --profile Cloud9user
The config profile (Cloud9user) could not be found
[ec2-user@ip-172-31-26-46 ~]$ aws s3 ls
2022-02-22 19:45:21 indu-git
2022-02-20 02:44:45 indu-retail
2022-02-20 02:43:39 indu-retail-copy
[ec2-user@ip-172-31-26-46 ~]$