

## Creating IAM Users:

Login as a root or user with Administrator policy

Go to IAM Service

Create the user and review the options

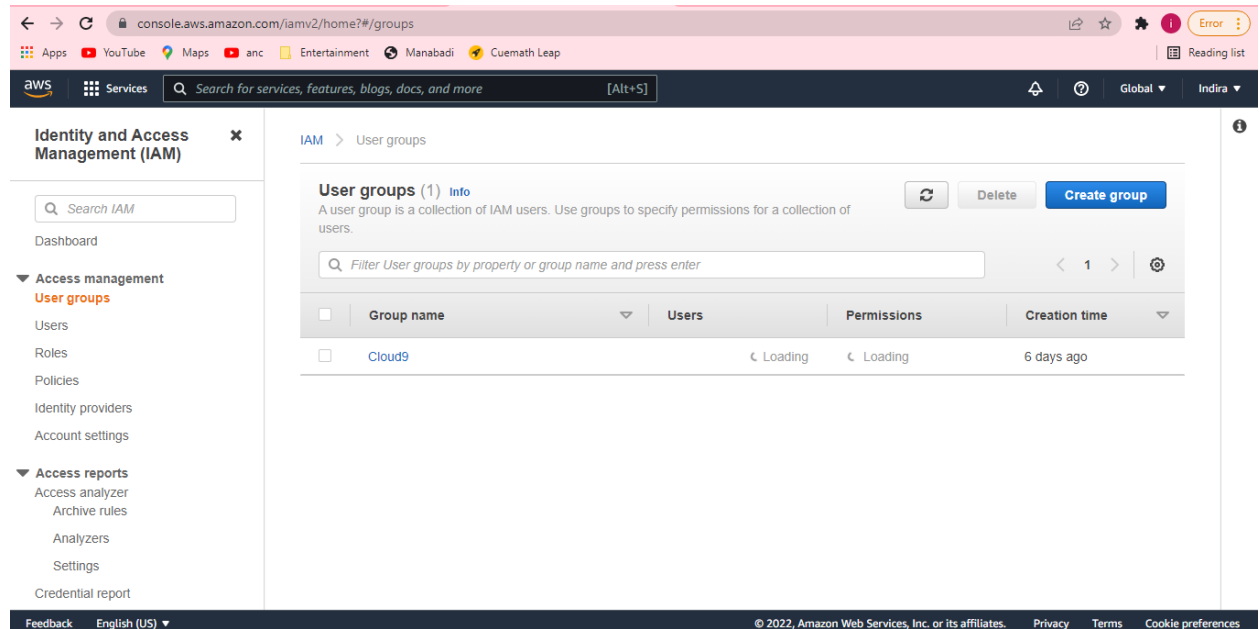


Figure 1 Created group

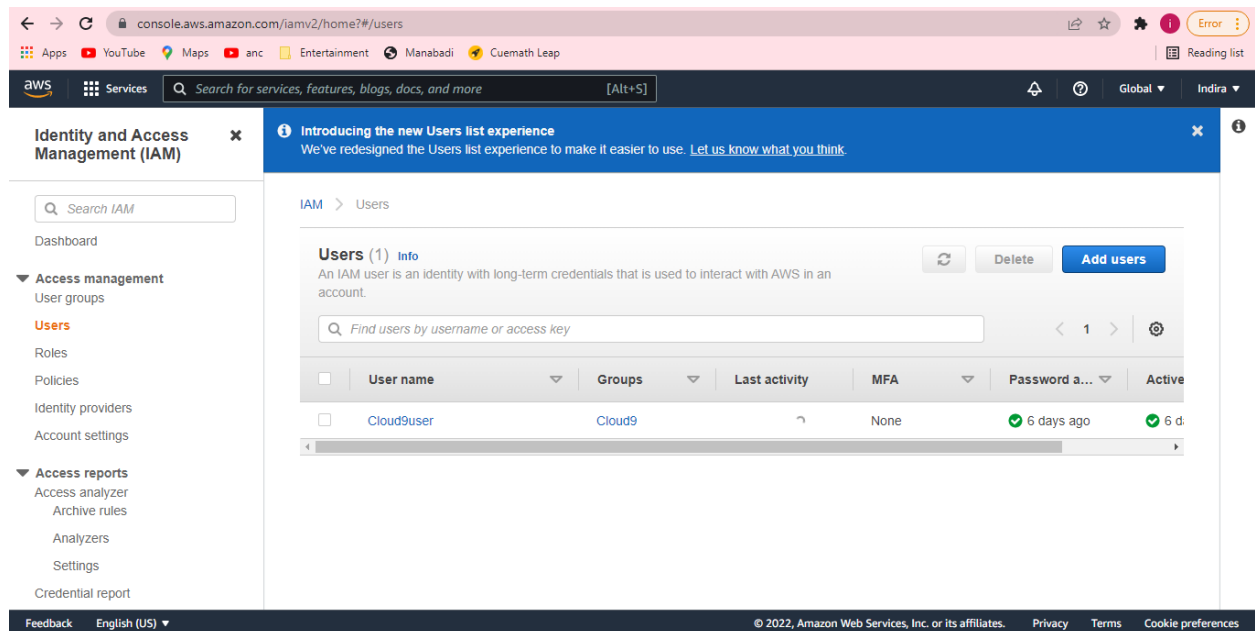


Figure 2 Created user

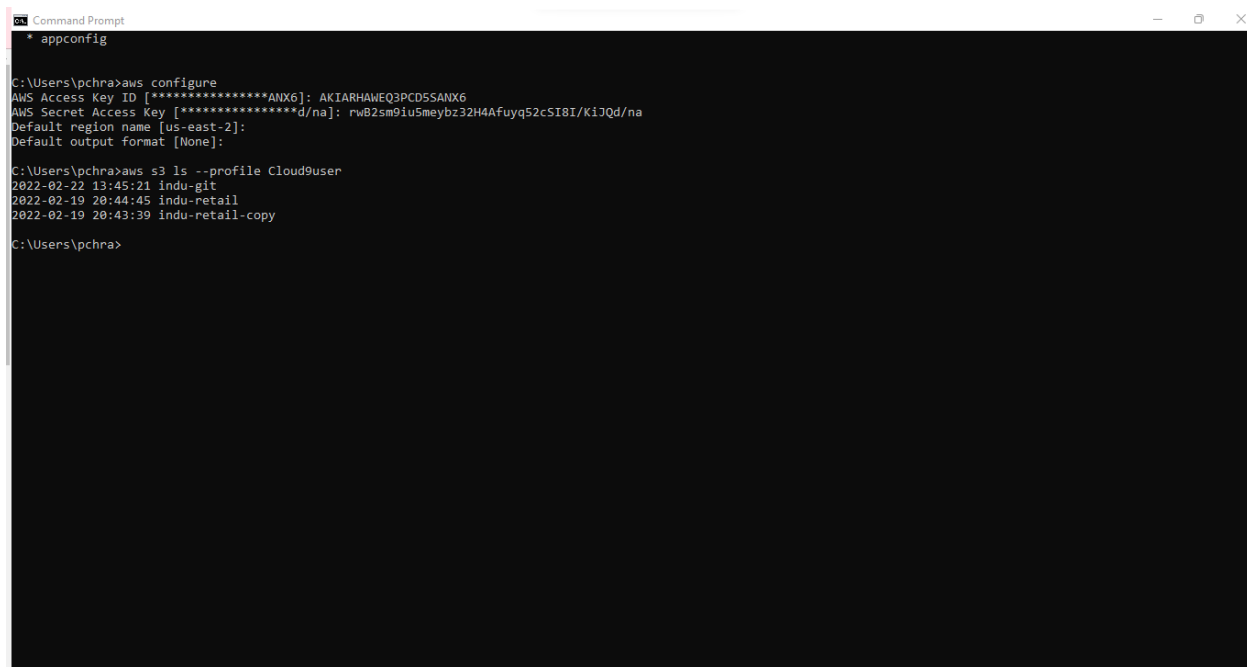
## Validate Programmatic Access to IAM User:

- 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.

1.
  - 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`



```
* appconfig

C:\Users\pchra>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]:

C:\Users\pchra>aws s3 ls --profile Cloud9user
2022-02-22 13:45:21 indu-git
2022-02-19 20:44:45 indu-retail
2022-02-19 20:43:39 indu-retail-copy

C:\Users\pchra>
```

## 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.

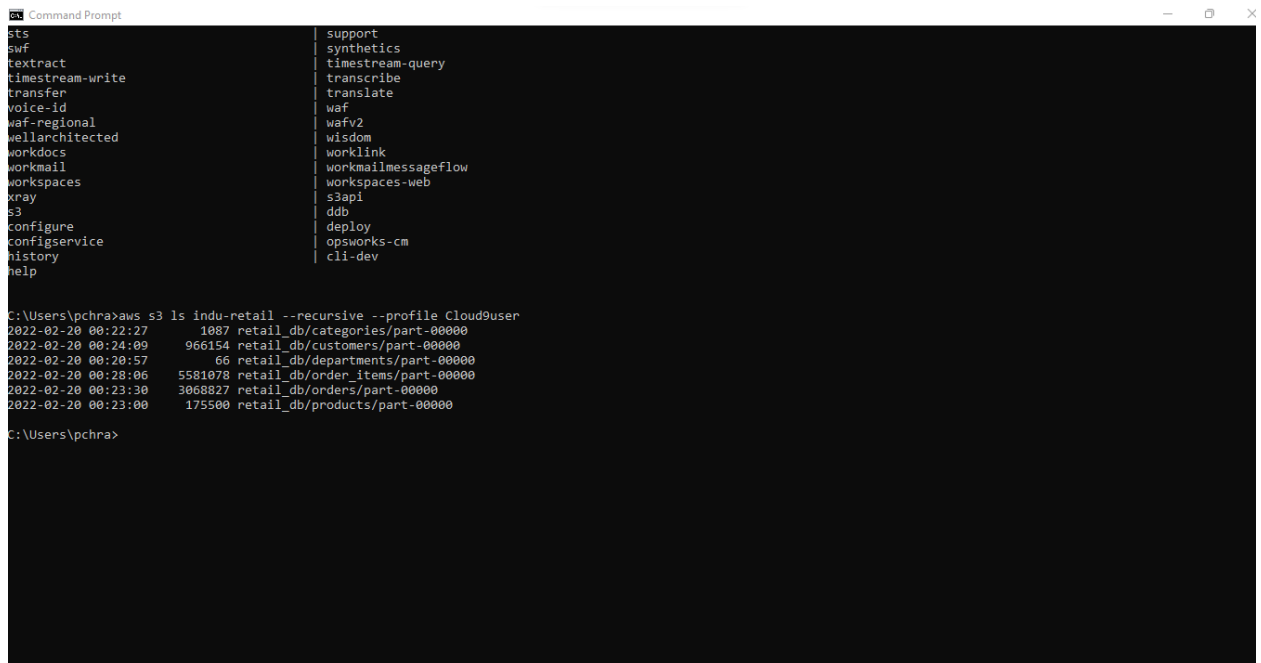
Configure AWS CLI with profile **itvsupport1**.

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
```



```
Command Prompt
sts
swf
textract
timestream-write
transfer
voice-id
waf-regional
wellarchitected
workdocs
workmail
workspaces
xray
s3
configure
configservice
history
help
support
synthetics
timestream-query
transcribe
translate
waf
wafv2
wisdom
worklink
workmailmessageflow
workspaces-web
s3api
ddb
deploy
opsworks-cm
cli-dev

C:\Users\pchnra>aws s3 ls indu-retail --recursive --profile Cloud9user
2022-02-20 00:22:27      1087 retail_db/categories/part-00000
2022-02-20 00:24:09    966154 retail_db/customers/part-00000
2022-02-20 00:20:57       66 retail_db/departments/part-00000
2022-02-20 00:28:06   5581078 retail_db/order_items/part-00000
2022-02-20 00:23:30   3068827 retail_db/orders/part-00000
2022-02-20 00:23:00   175500 retail_db/products/part-00000

C:\Users\pchnra>
```

## 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]: AKIARHAWEQ3PCD5S3ANX6

AWS Secret Access Key [\*\*\*\*\*d/na]: rwB2sm9iu5meybz32H4Afuyq52cSI8i/KlJQd/na

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 ~]\$