Anomaly Detection Pipeline using Terraform

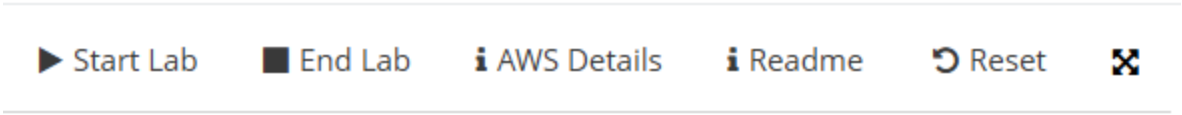
Goal : Deploying the anomaly detection pipeline with Terraform

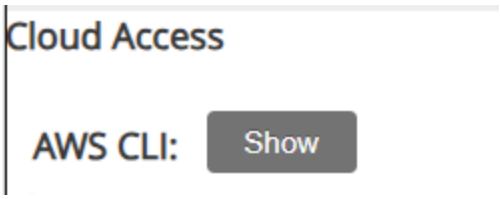
In order to do this lab using IaC Terraform, you need `terraform` and `aws cli` installed in your local environment and `boto3` installed as well for the producer script.

Step 1 : Clone the github repo from the following url - https://github.com/imnb57/anomalyDetector-Terraform.git

Step 2 : Configure aws cli

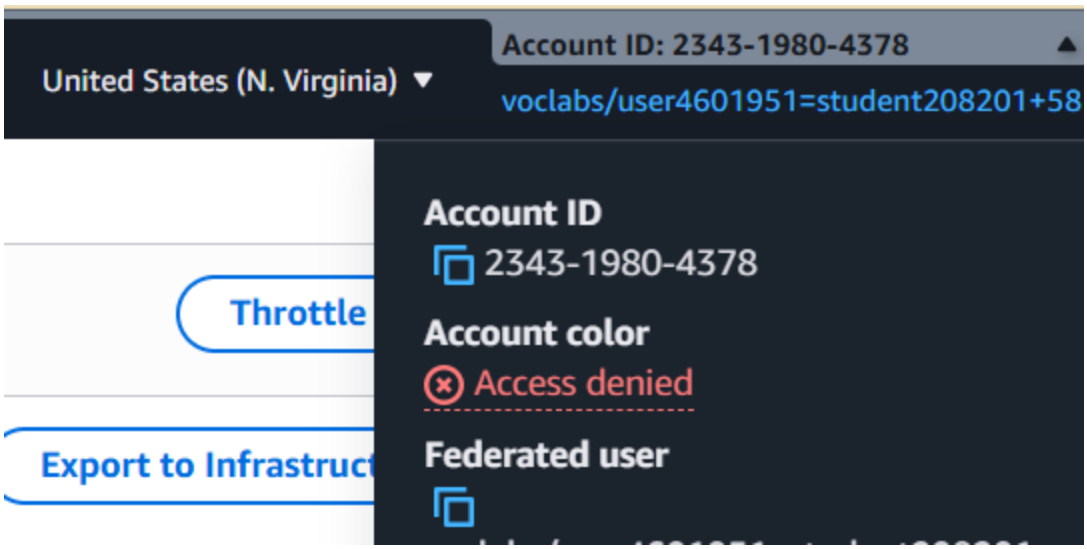
- Open this path `~/.aws/credentials`
- Copy and paste the aws cli credentials of your sandbox environment , click on the `AWS Details` button
- Click on `show`
- Copy and paste the credentials in above opened file and save





Step 3: Make sure terraform is installed from this url - Install | Terraform | HashiCorp Developer

Step 4: Make sure to insert the AWS Account ID in main.tf line 120 and line 207 , get the ID from the console, top right corner.



Step 5: Now head over to the cloned project directory in VSCode or IDE of your choice and run these command

- `terraform init`
- `terraform plan -out=planA`
- `terraform -auto-approve planA`

Step 6 : Now cd to the producer script folder and run this command

- `python producer.py`

Step 7 : Let this run for a few minutes and head over to the console and view your created resources like S3, Kinesis streams, Firehose, Lambda to view real time data ingestion and streaming

You should now open the s3 bucket to view the detected anomalies.

You can stop the producer script now from your terminal.

> In this setup you do not need to make notebook instances as you did in classroom.

```
## This code was written for a sandbox environment where the resources use
d a provisioned role called LabRole
## Uncomment the code for firehose and lambda role policy if you use anothe
r aws      account for creating a new role.
```

After this whole operation run this command `terraform destroy` to destroy all resources.