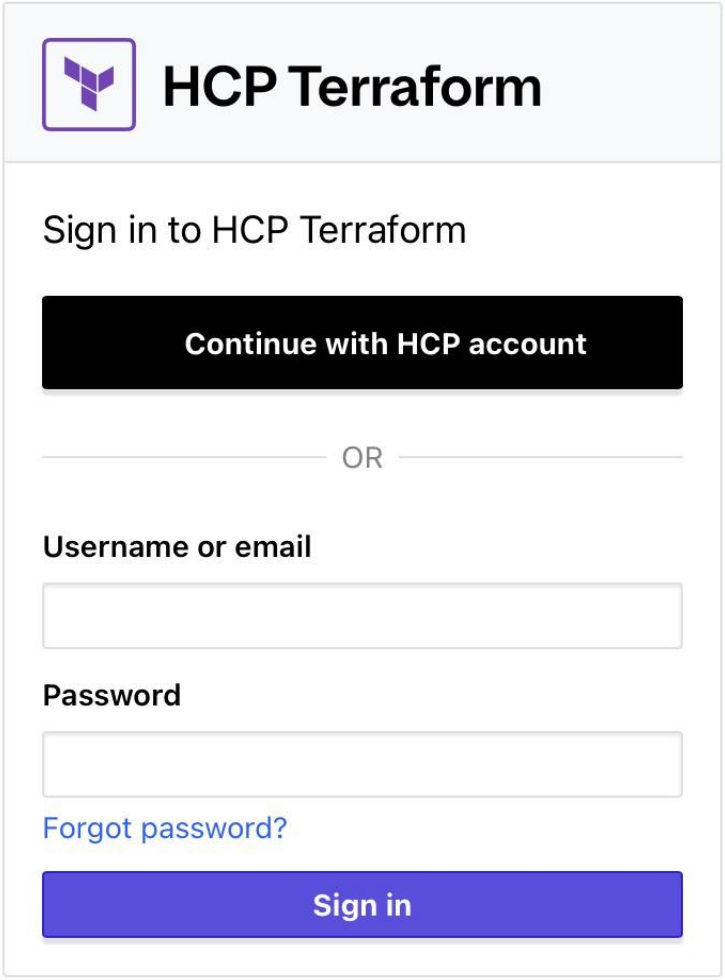
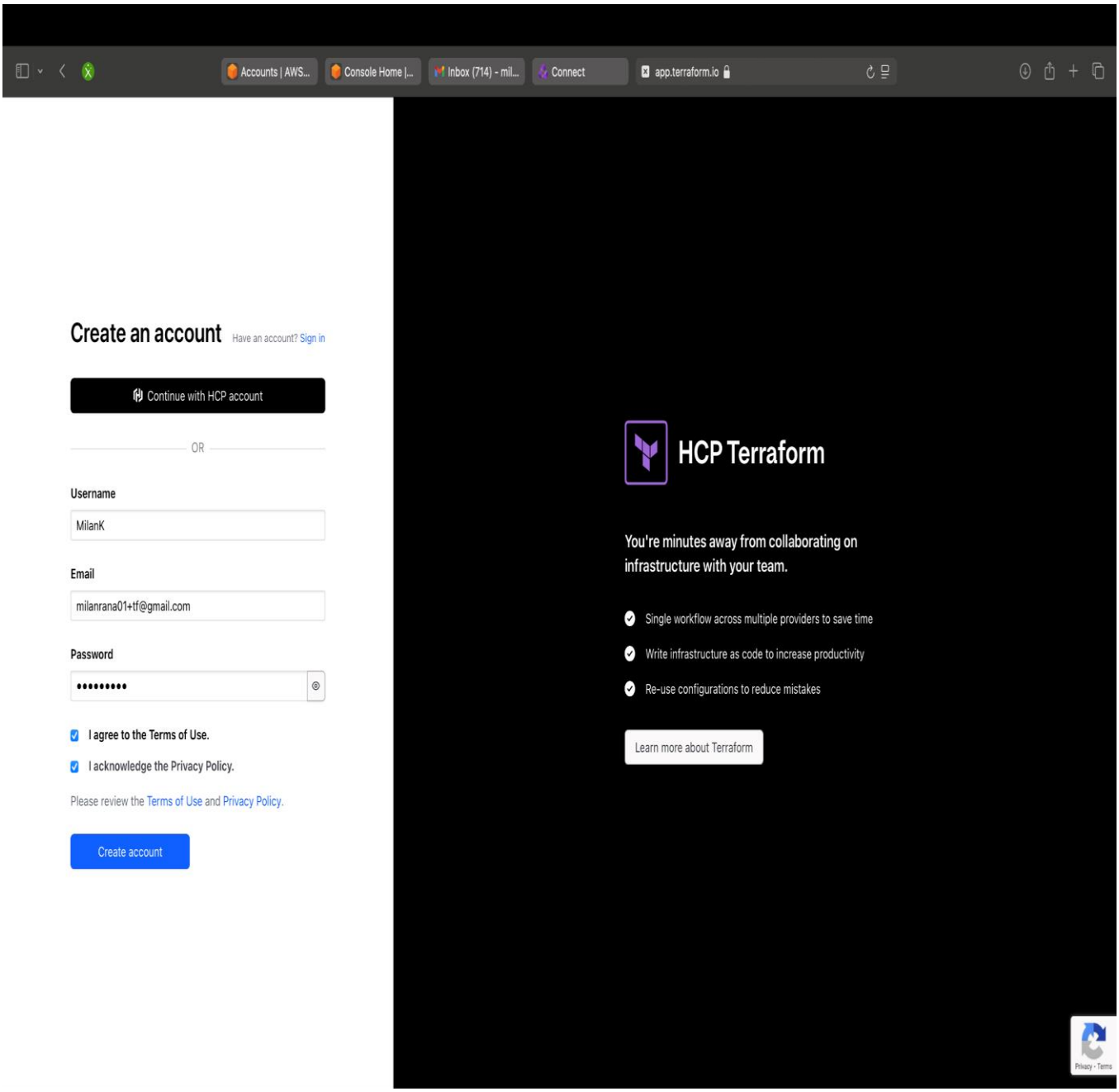
Create an account in TFE CLOUD

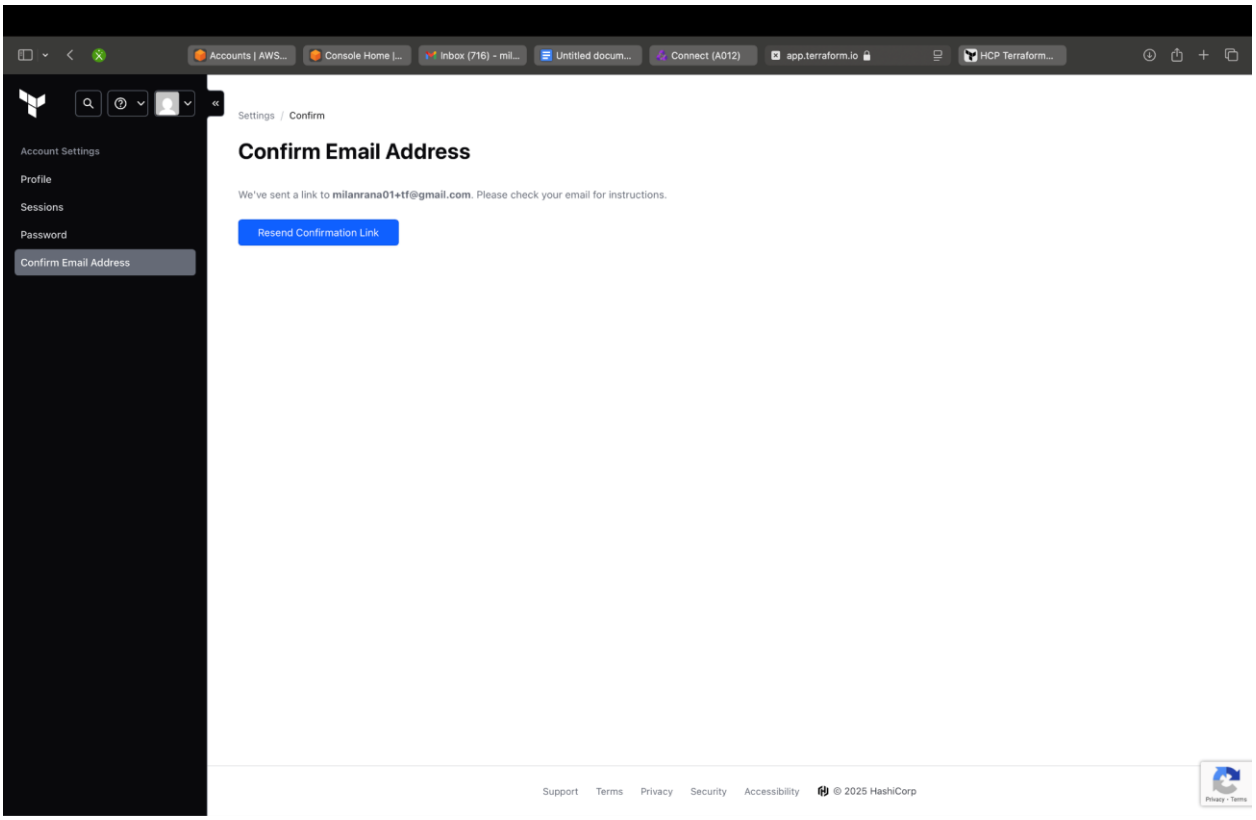
https://app.terraform.io/public/signup/account

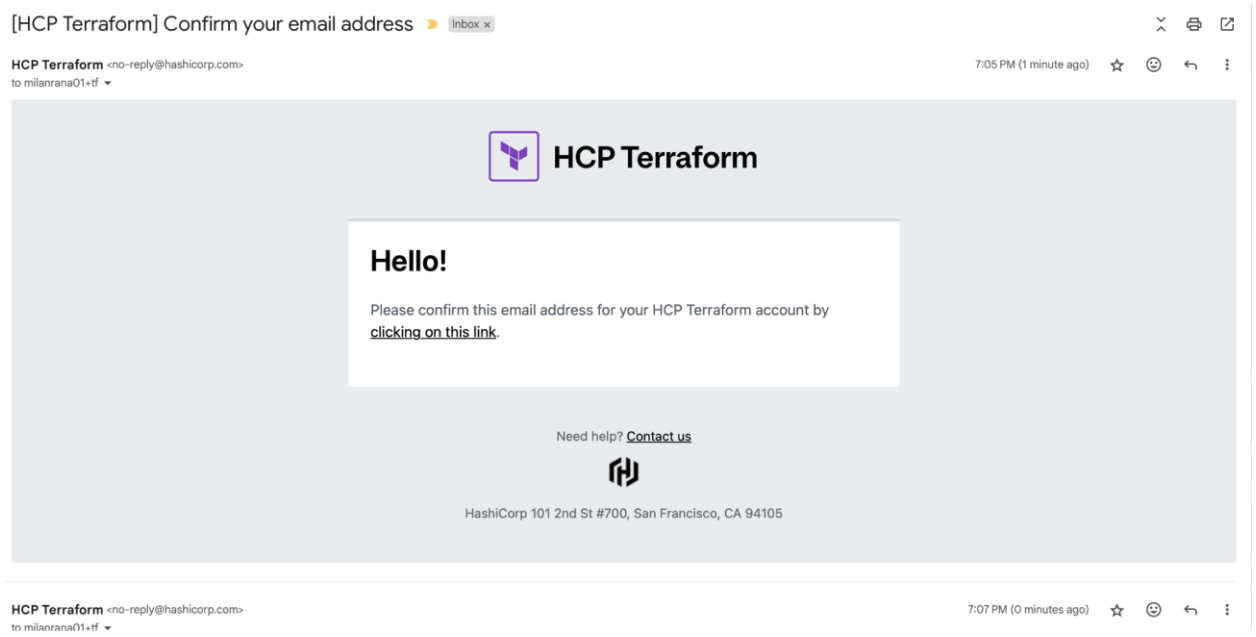


Click on free account. Enter your details

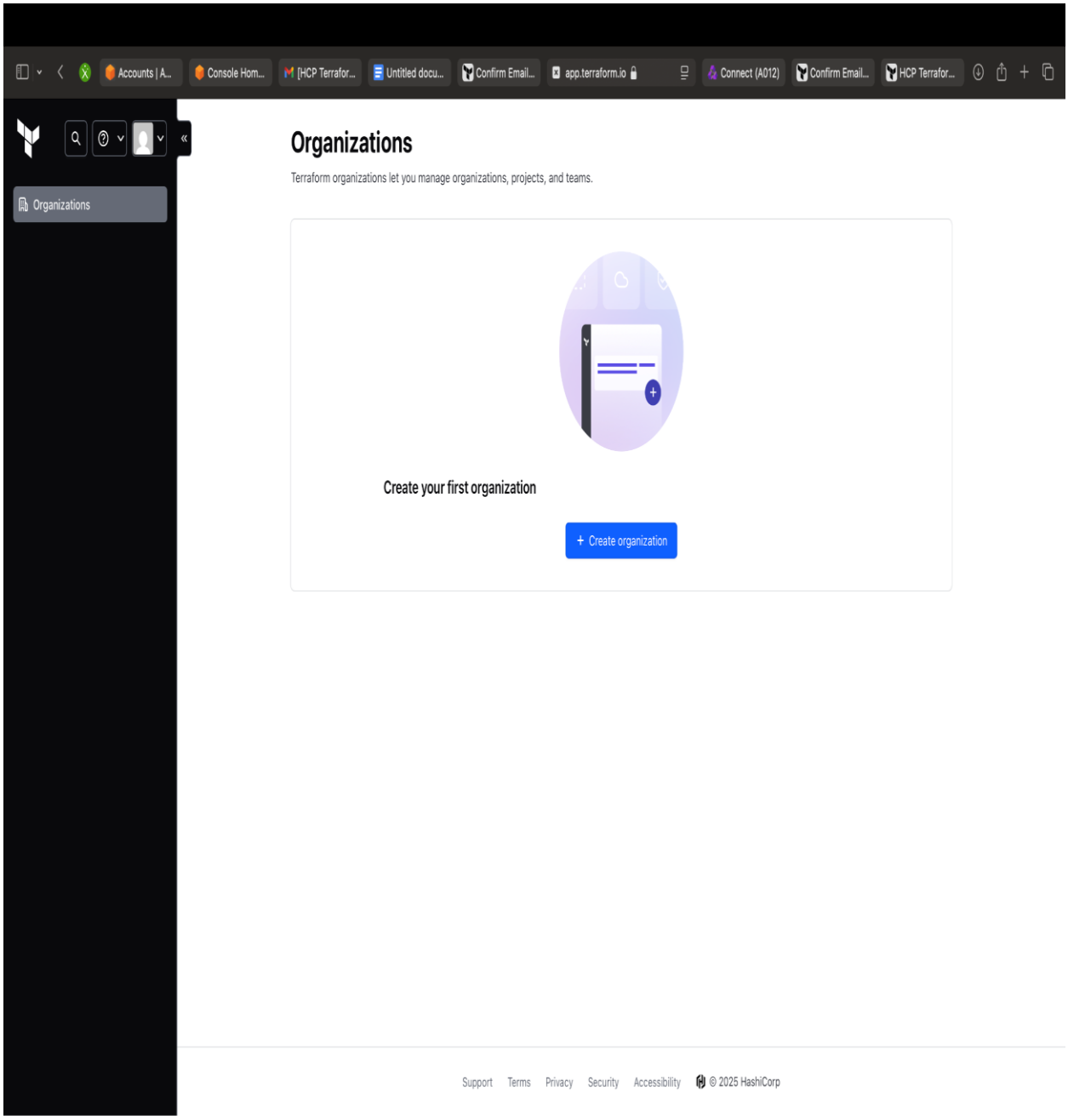


Once entered, you will be in the TFE Cloud, click on confirmation link that should send an email to you to verify

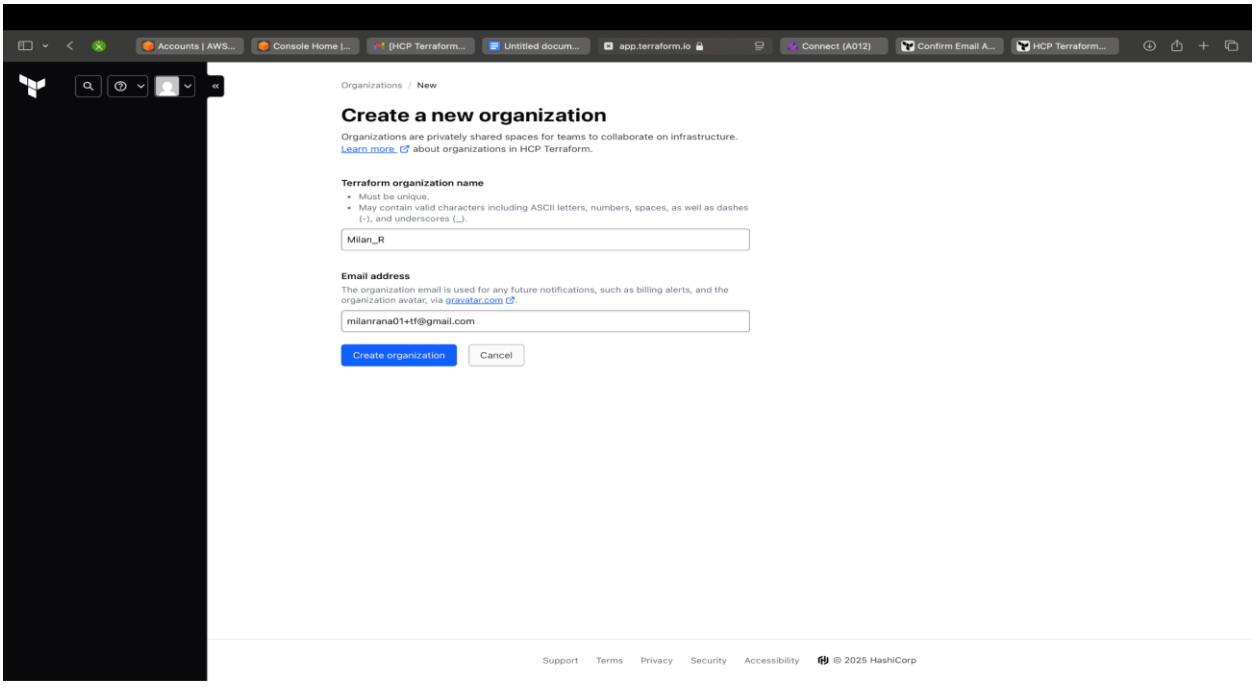




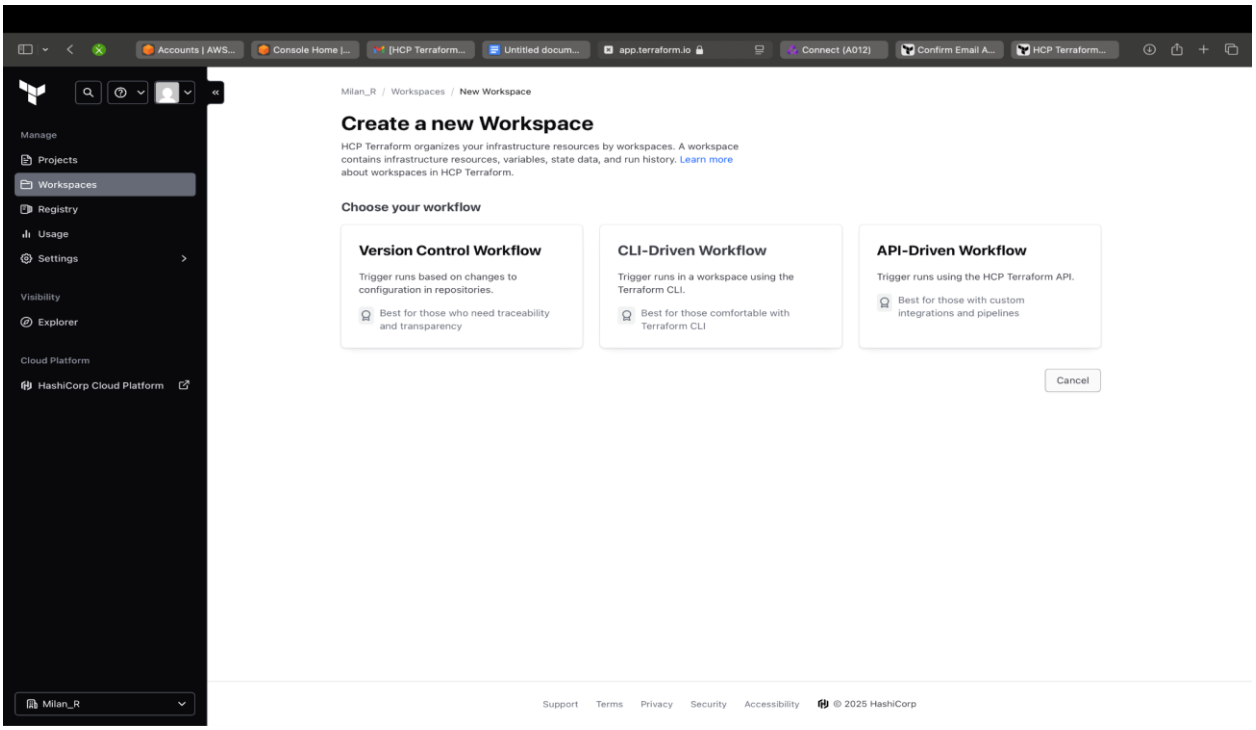
It takes you to the organization page that is basically a way Terraform let you manage organizations, projects, and teams.



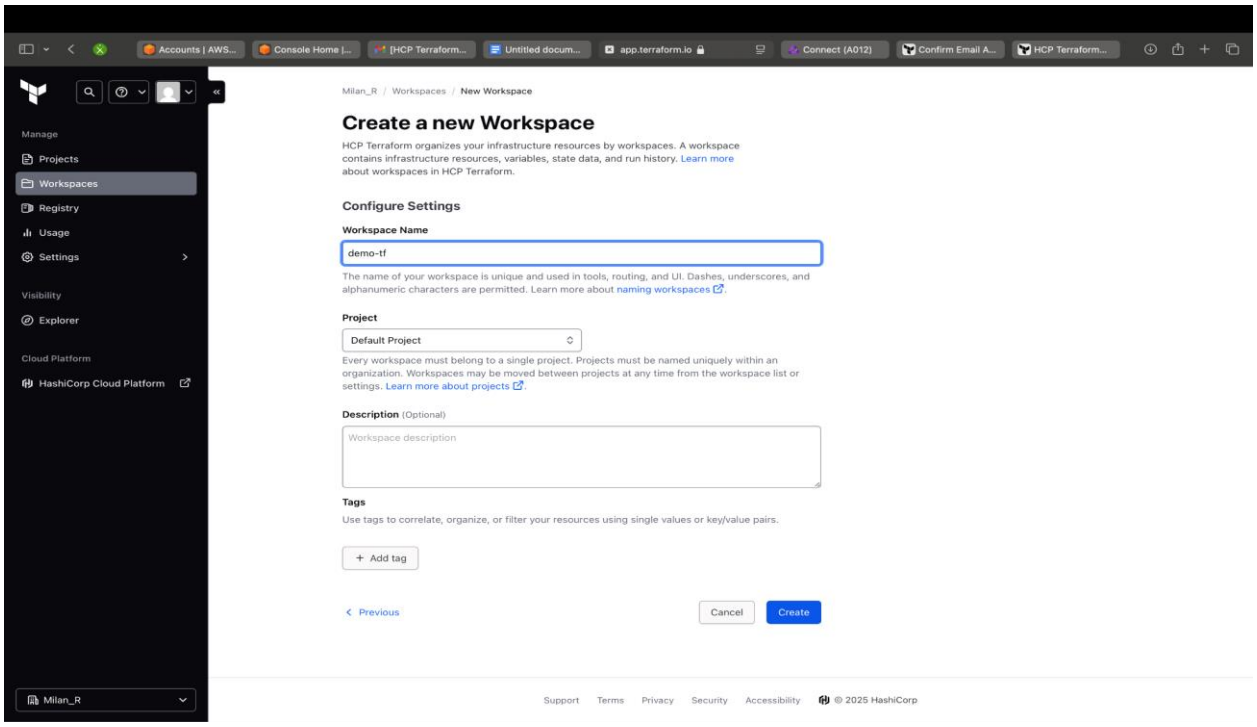
Enter Details to create the org.



It should land you the below page, where we will be using the CLI driven workflow for the sake of this workshop

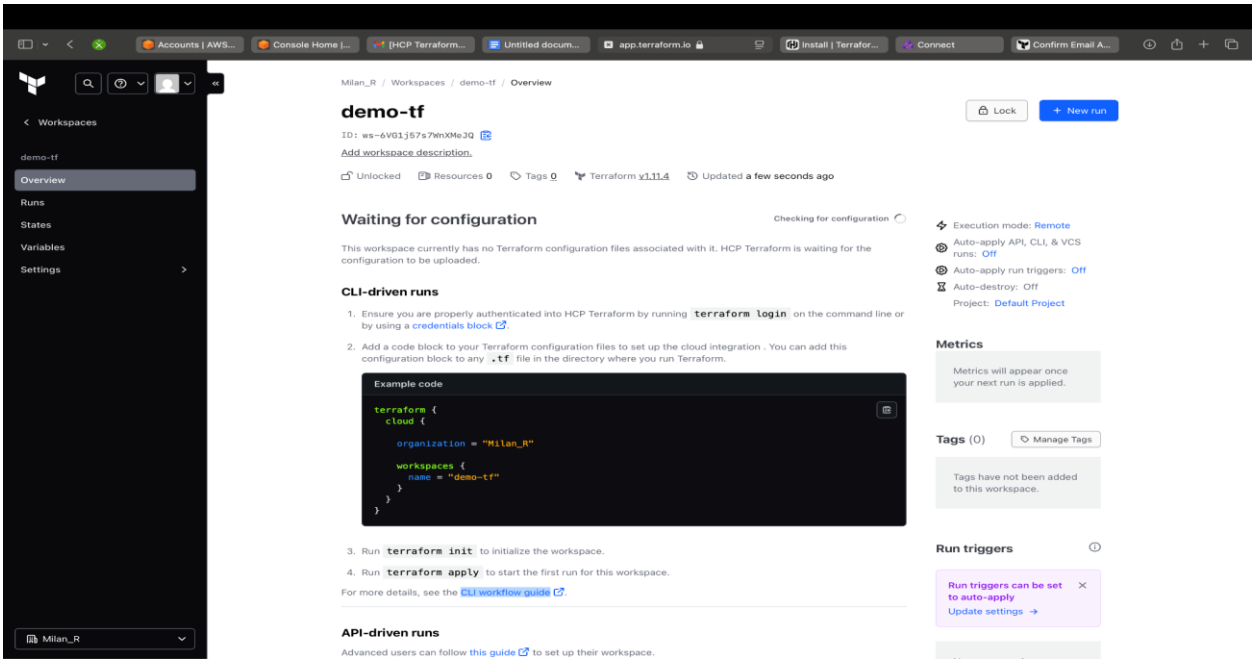


Selecting the cli driven option should take you to the page to create a workspace, enter details and click enter



Once the Workspace gets created, you can follow further instructions in the below link to set up tf in your local and then we can connect our aws with tfe cloud.

Link-https://developer.hashicorp.com/terraform/install#darwin



Manual Terraform Installation

1. Download Terraform –

Visit the official download page: **https://developer.hashicorp.com/terraform/downloads**

Choose the Correct Version

- **Apple Silicon (M1/M2/M3)**: Select arm64 architecture
- **Intel Macs**: Select amd64 architecture

2. Make Terraform System-Wide Accessible

- Move the downloaded binary to your system PATH: -sudo mv terraform /usr/local/bin/

3. Set Execute Permissions

- Ensure the binary has execute permissions: - chmod +x /usr/local/bin/terraform

Note: Usually already has execute permissions, but this ensures it works

4. Verify Installation

Test that Terraforms is properly installed:

Alternative Verification Commands

- Check version (short form)

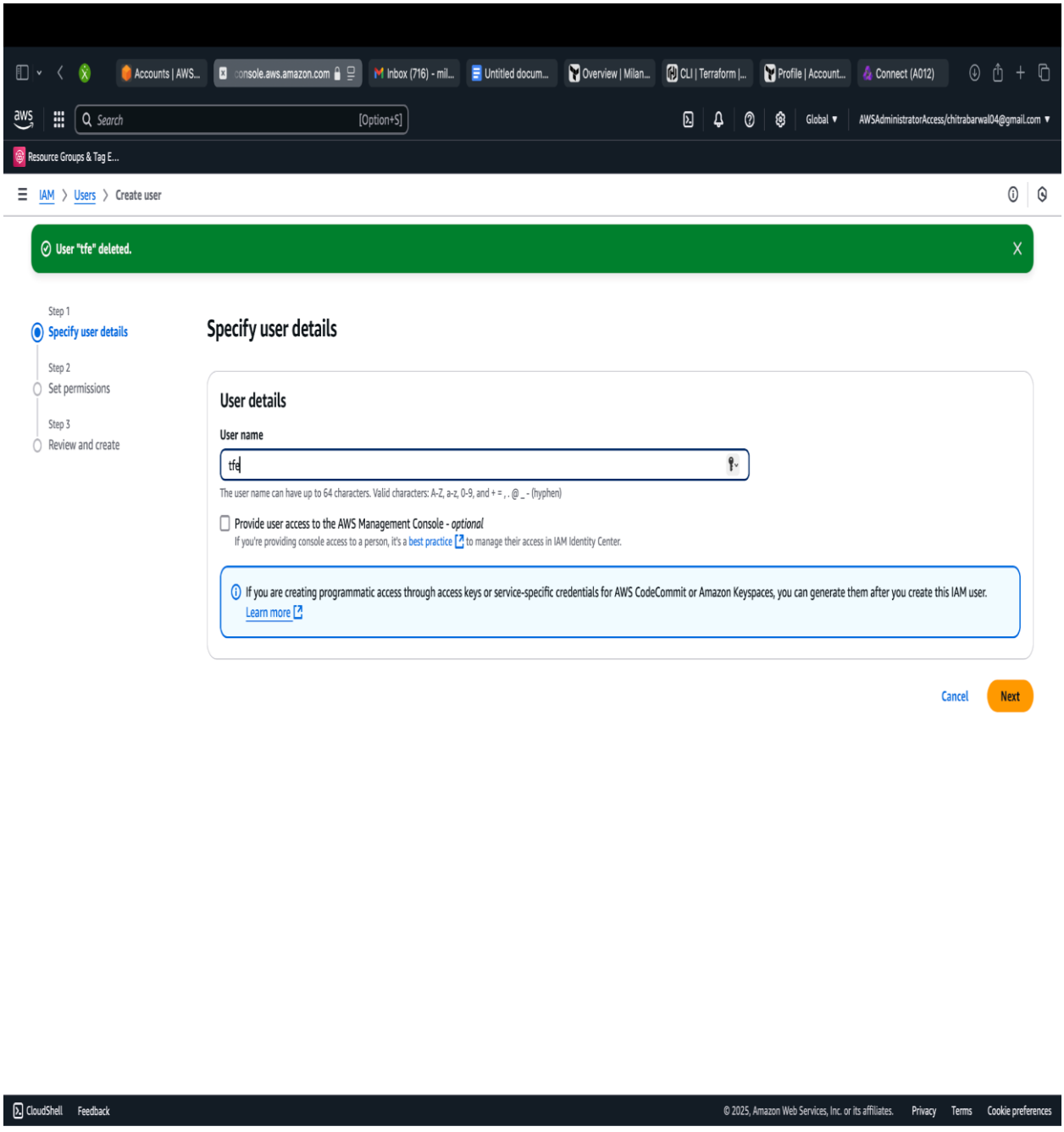
  terraform -v

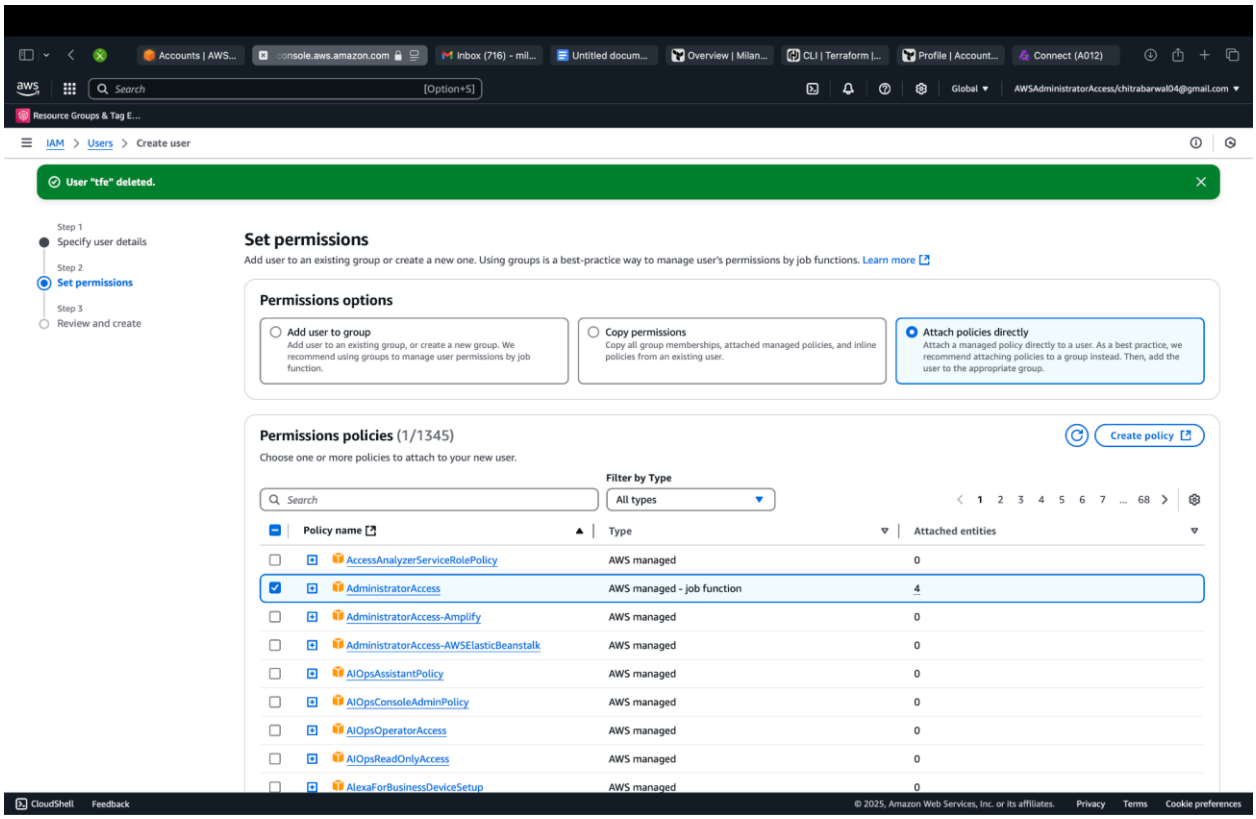
- Show help to confirm it's working

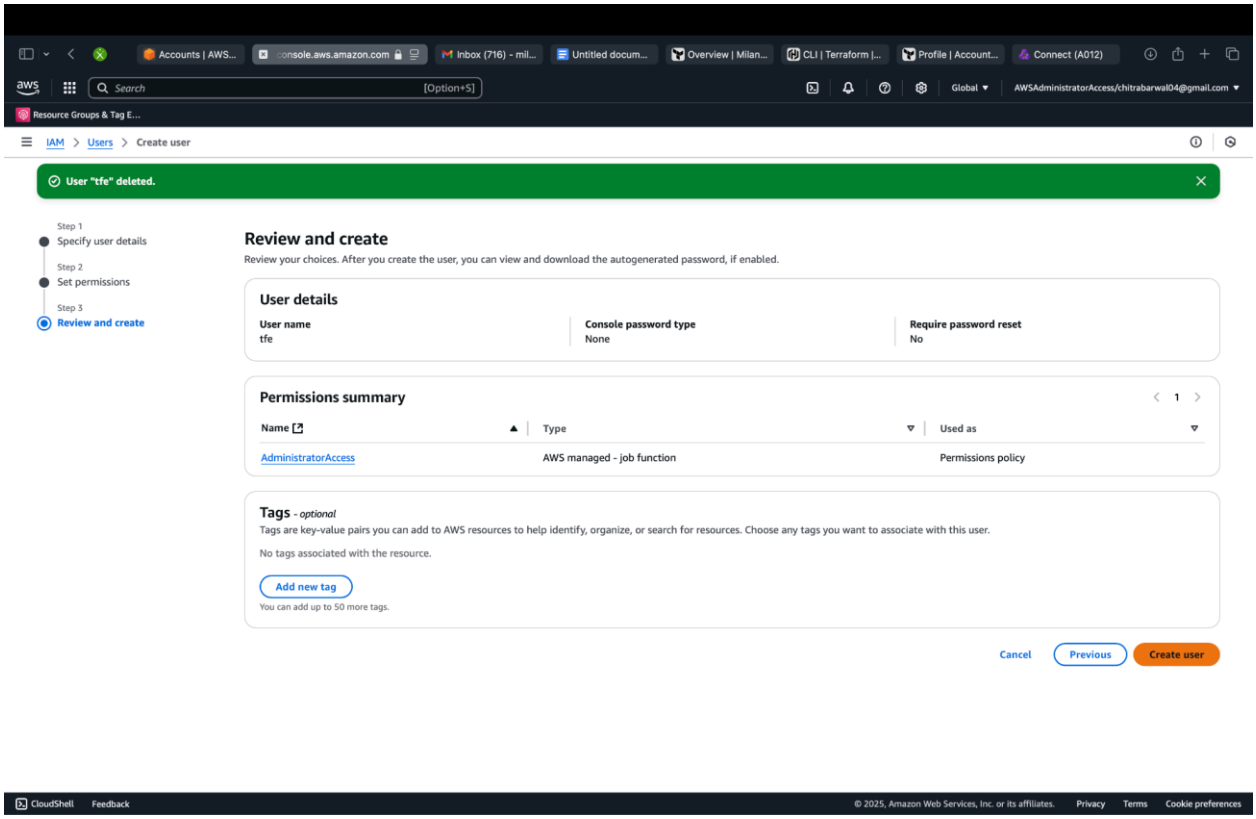
  terraform --help

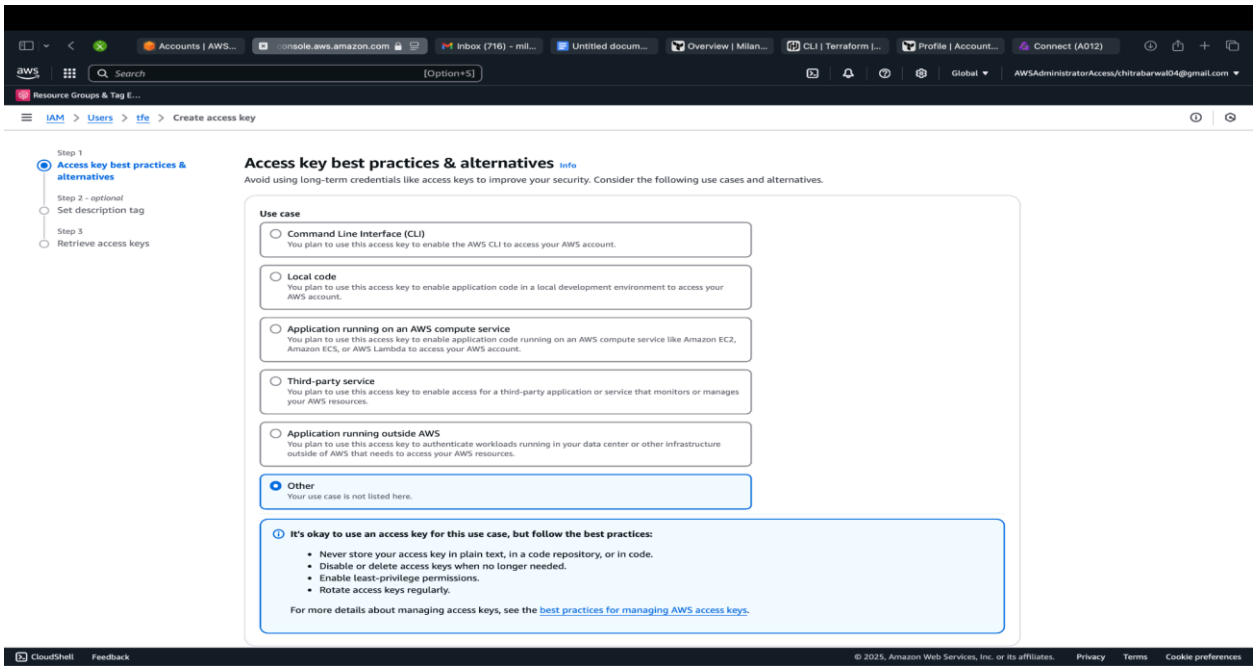
Set Up at AWS end-

Create a tfe user in your AWS account with AWS managed admin Policy

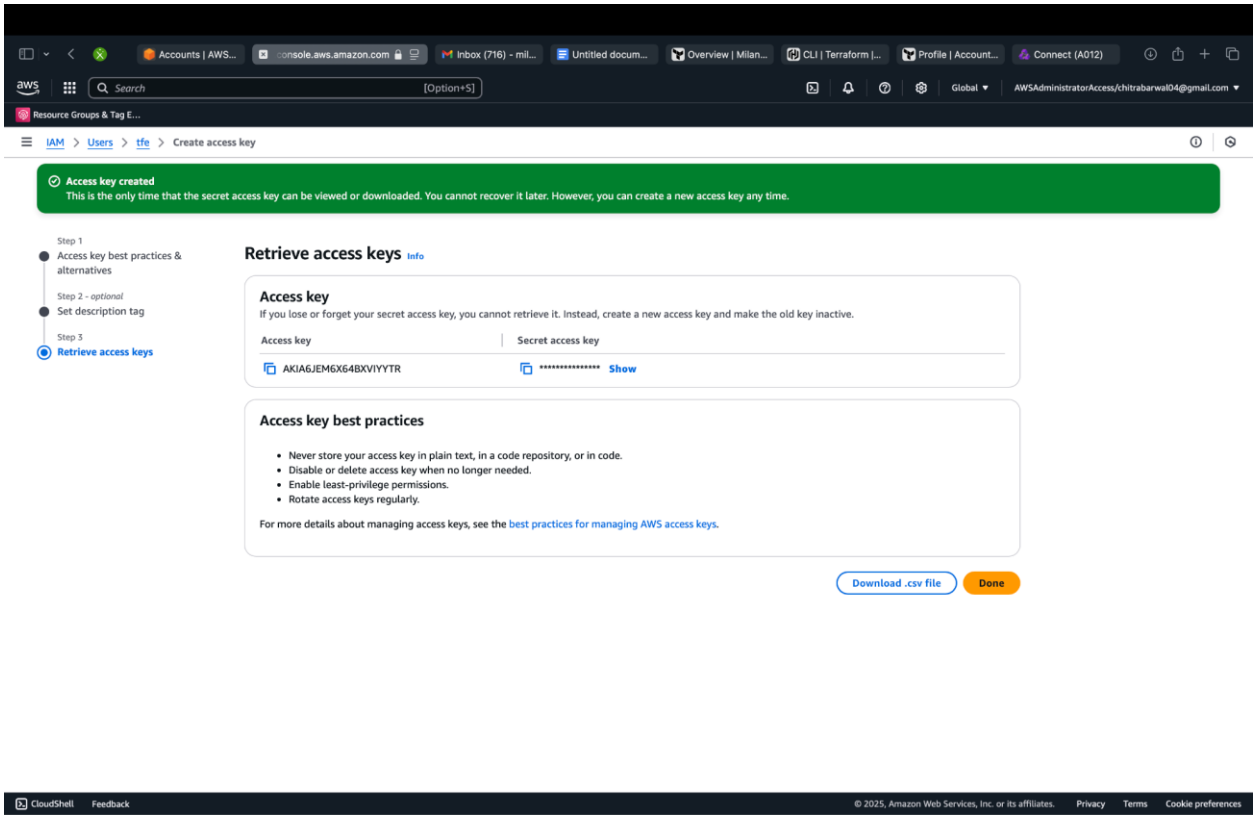



Accounts | AWS...
Inbox (716) - mil...
Untitled docum...
Overview | Milan...
CLI | Terraform |...
Profile | Account...
Connect (A012)
Search
[Option+S]
Global
AWSAdministratorAccess/chitrabarwal04@gmail.com
Resource Groups & Tag E...
IAM > Users > Create user
User "tfe" deleted.
Step 1
Specify user details
Step 2
Set permissions
Step 3
Review and create
Set permissions
Add user to an existing group or create a new one. Using groups is a best-practice way to manage user's permissions by job functions. Learn more
Permissions options
Add user to group
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.
Copy permissions
Copy all group memberships, attached managed policies, and inline policies from an existing user.
Attach policies directly
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.
Permissions policies (1/1345)
Choose one or more policies to attach to your new user.
Create policy
Filter by Type
All types
Policy name
Type
Attached entities
AccessAnalyzerServiceRolePolicy AWS managed 0
AdministratorAccess AWS managed - job function 4
AdministratorAccess-Amplify AWS managed 0
AdministratorAccess-AWSElasticBeanstalk AWS managed 0
AIOpsAssistantPolicy AWS managed 0
AIOpsConsoleAdminPolicy AWS managed 0
AIOpsOperatorAccess AWS managed 0
AIOpsReadOnlyAccess AWS managed 0
AlexaForBusinessDeviceSetup AWS managed 0
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Accounts | AWS...
Inbox (716) - mil...
Untitled docum...
Overview | Milan...
CLI | Terraform |...
Profile | Account...
Connect (A012)
Search
[Option+S]
Global
AWSAdministratorAccess/chitrabarwal04@gmail.com
Resource Groups & Tag E...
IAM > Users > Create user
User "tfe" deleted.
Step 1
Specify user details
Step 2
Set permissions
Step 3
Review and create
Review and create
Review your choices. After you create the user, you can view and download the autogenerated password, if enabled.
User details
User name
tfe
Console password type
None
Require password reset
No
Permissions summary
Name
Type
Used as
AdministratorAccess
AWS managed - job function
Permissions policy
Tags - optional
Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.
No tags associated with the resource.
Add new tag
You can add up to 50 more tags.
Cancel
Previous
Create user
CloudShell
Feedback
© 2025, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

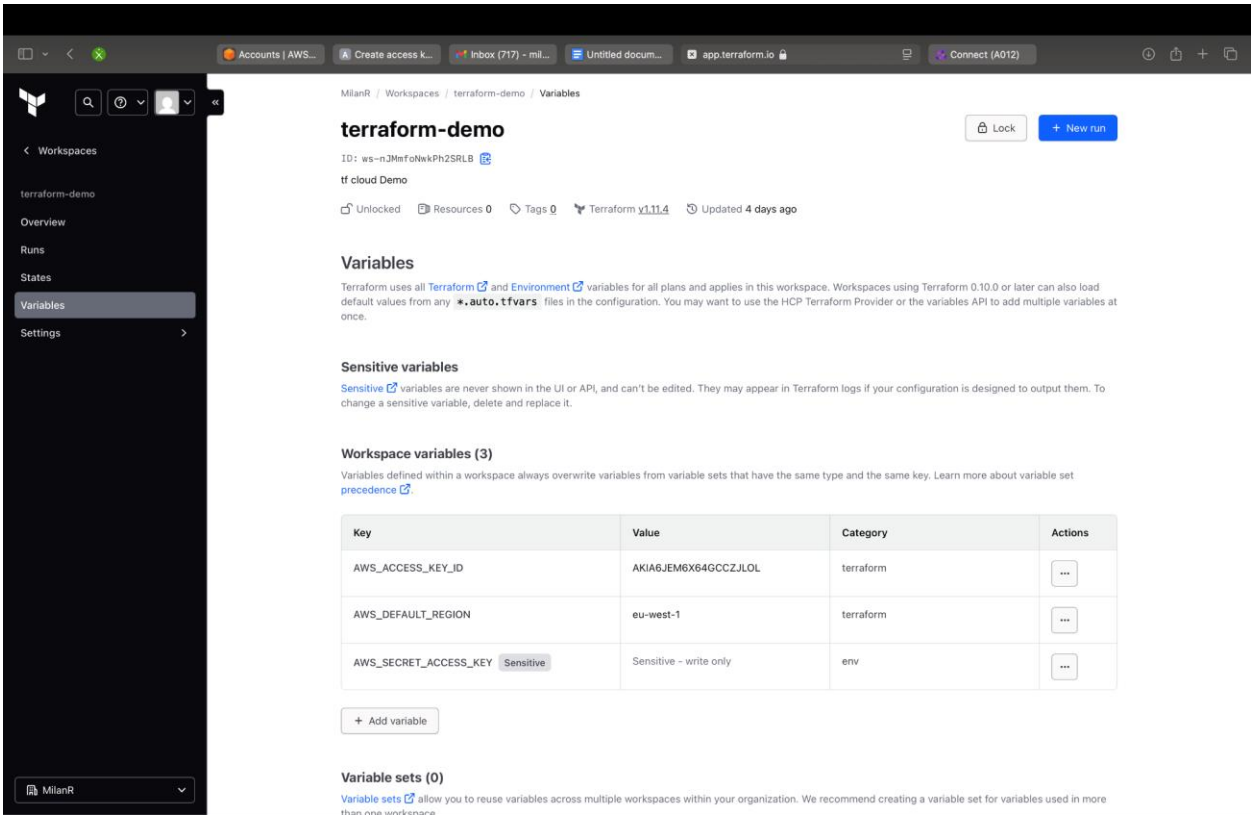


Note the secret Key and access key

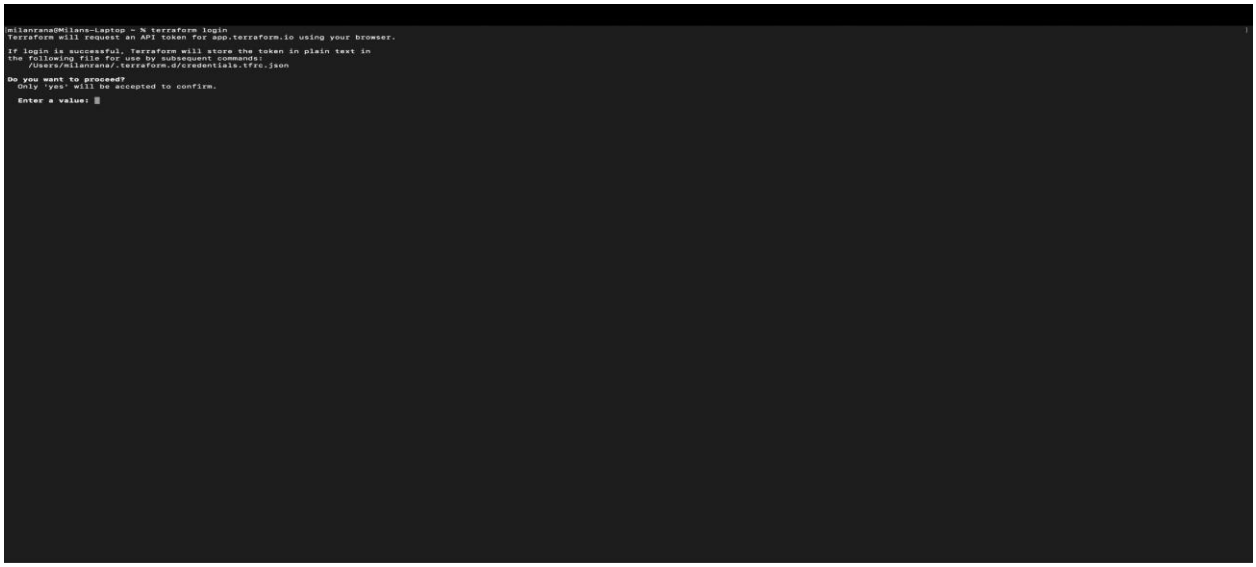


Go to your variable in workspace and create the following variables as shown.

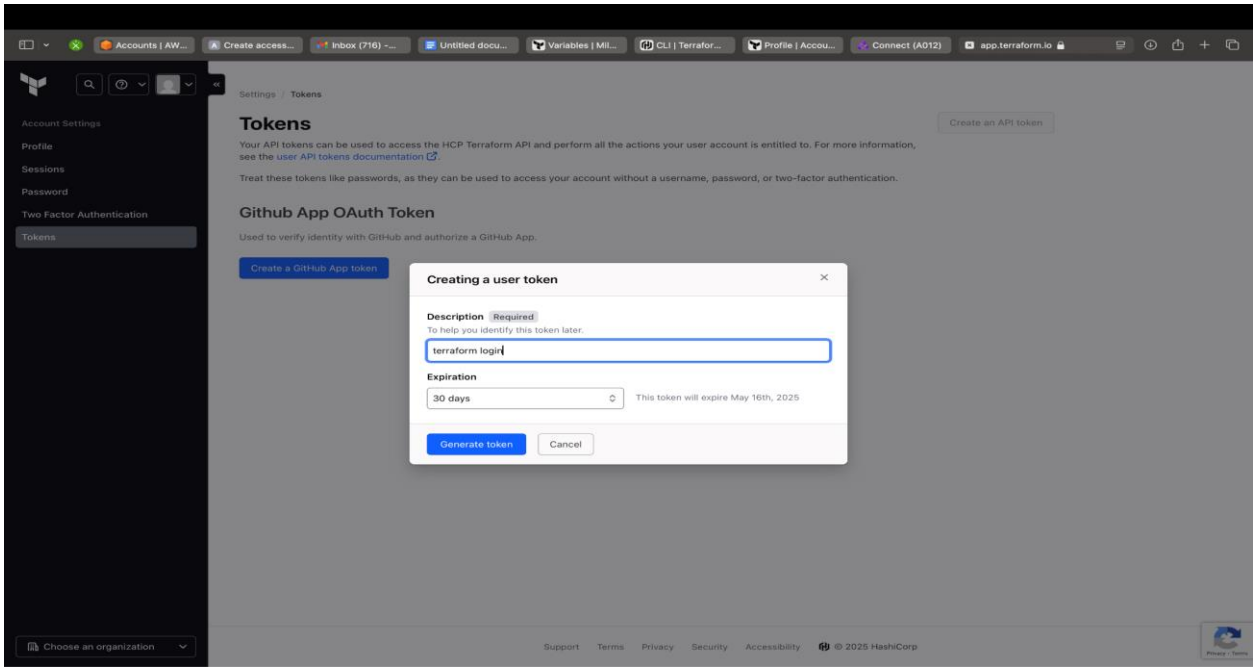
You would need to enter the values of the access key and secret Key created in last step Here. This step basically links your AWS account and terraform.



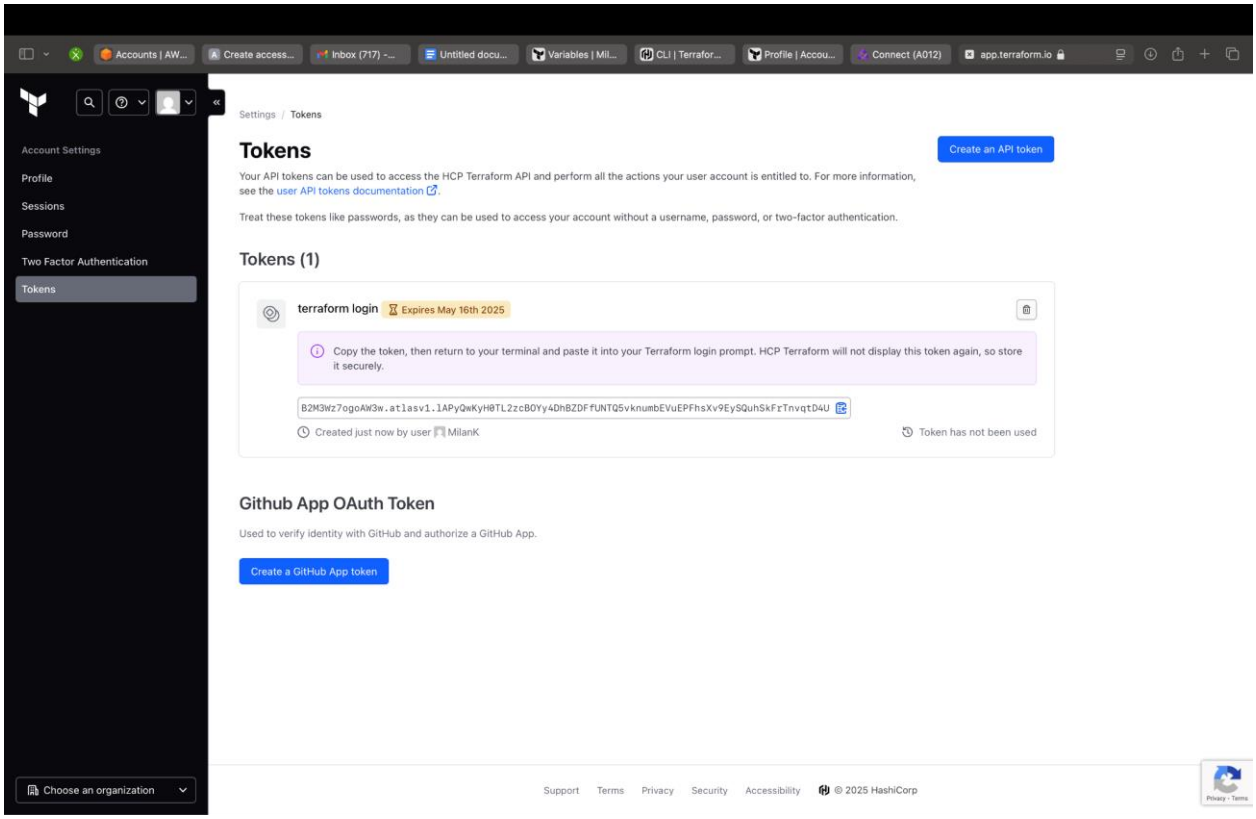
On terminal /cmd use command terraform login and yes to confirm

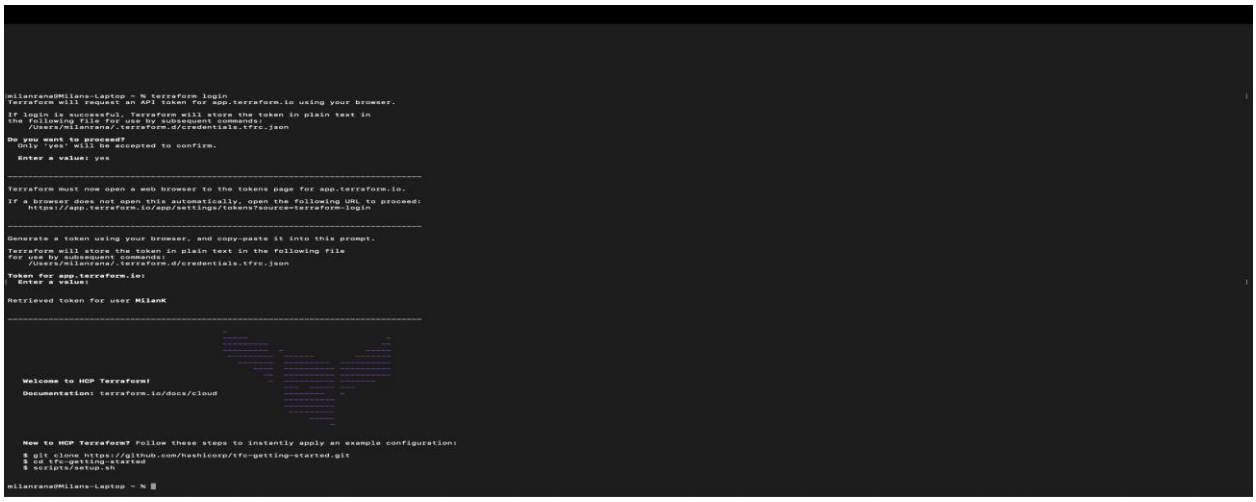


It should take u to generate a token on your tfe.



Copy the token generated and put it in termial/cmd





Create a folder for this demo and navigate into it

- Create a Terraform configuration file as per TFE workspace instructions
- Use vim <filename.tf> to create the file
- Press i to enter insert mode
- Paste the required configuration code
- Press Esc to exit insert mode
- Type :wq! to save and exit the file

Once saved u can check the content of file using cat

```
milanrana@Milans-Laptop tfe-project % cat tfc.tf
terraform {
  cloud {

    organization = "MilanR"

    workspaces {
      name = "terraform-demo"
    }
  }
}
milanrana@Milans-Laptop tfe-project %
```

Similarly create a main.tf file to create your first resource as below and save the file and do cat to see if it is saved as per expectations

```
milanrana@Milans-Laptop tfe-project % cat main.tf
provider "aws" {
  region = "eu-west-1"  # Replace with your desired AWS region
}

resource "aws_s3_bucket" "example" {
  bucket = "my-demo-bucket-unique"

}
milanrana@Milans-Laptop tfe-project %
```

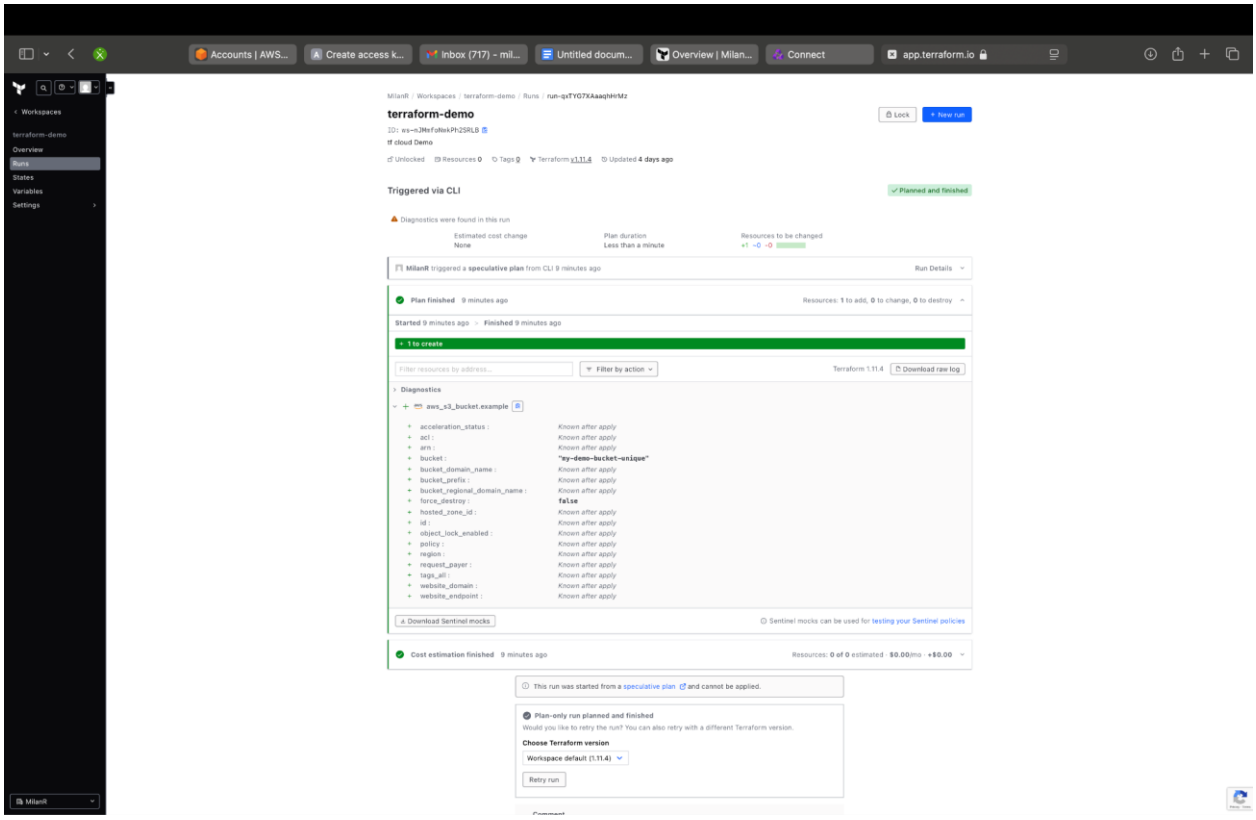
Run terraform init to initialize

```
milanrana@Milans-Laptop tfe-project % terraform init
Initializing HCP Terraform...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.94.1

HCP Terraform has been successfully initialized!

You may now begin working with HCP Terraform. Try running "terraform plan" to
see any changes that are required for your infrastructure.

If you ever set or change modules or Terraform Settings, run "terraform init"
again to reinitialize your working directory.
milanrana@Milans-Laptop tfe-project %
```

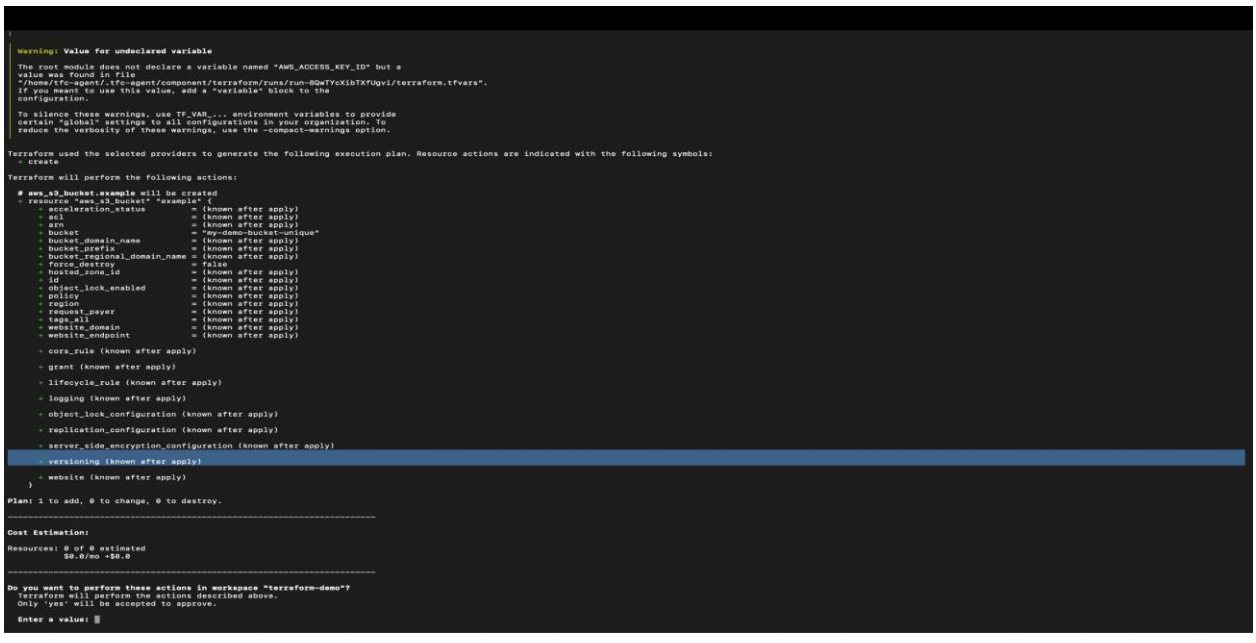
Followed by tfe plan

```
If you ever set or change modules or Terraform Settings, run "terraform init"
again to reinitialize your working directory.
milanrana@Milans-Laptop tfe-project % terraform plan
Running plan in HCP Terraform. Output will stream here. Pressing Ctrl-C
will stop streaming the logs, but will not stop the plan running remotely.

Preparing the remote plan...

To view this run in a browser, visit:
https://app.terraform.io/app/MilanR/terraform-demo/runs/run-qxTYG7XAaaqhHrMz

Waiting for the plan to start...

Terraform v1.11.4
on linux_amd64
Initializing plugins and modules...

  Warning: Value for undeclared variable

  The root module does not declare a variable named "AWS_DEFAULT_REGION" but
  a value was found in file
  "/home/tfc-agent/.tfc-agent/component/terraform/runs/run-qxTYG7XAaaqhHrMz/terraform.tfvars".
  If you meant to use this value, add a "variable" block to the
  configuration.

  To silence these warnings, use TF_VAR_... environment variables to provide
  certain "global" settings to all configurations in your organization. To
  reduce the verbosity of these warnings, use the -compact-warnings option.


  Warning: Value for undeclared variable

  The root module does not declare a variable named "AWS_ACCESS_KEY_ID" but a
  value was found in file
  "/home/tfc-agent/.tfc-agent/component/terraform/runs/run-qxTYG7XAaaqhHrMz/terraform.tfvars".
  If you meant to use this value, add a "variable" block to the
  configuration.

  To silence these warnings, use TF_VAR_... environment variables to provide
  certain "global" settings to all configurations in your organization. To
  reduce the verbosity of these warnings, use the -compact-warnings option.


Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_s3_bucket.example will be created
  + resource "aws_s3_bucket" "example" {
      + acceleration_status         = (known after apply)
      + acl                         = (known after apply)
      + arn                         = (known after apply)
      + bucket                      = "my-demo-bucket-unique"
      + bucket_domain_name          = (known after apply)
      + bucket_prefix               = (known after apply)
      + bucket_regional_domain_name = (known after apply)
      + force_destroy               = false
      + hosted_zone_id              = (known after apply)
      + id                          = (known after apply)
      + object_lock_enabled         = (known after apply)
      + policy                      = (known after apply)
      + region                      = (known after apply)
      + request_payer               = (known after apply)
      + tags_all                    = (known after apply)
      + website_domain              = (known after apply)
      + website_endpoint            = (known after apply)

      + cors_rule (known after apply)

      + grant (known after apply)

      + lifecycle_rule (known after apply)

      + logging (known after apply)
```

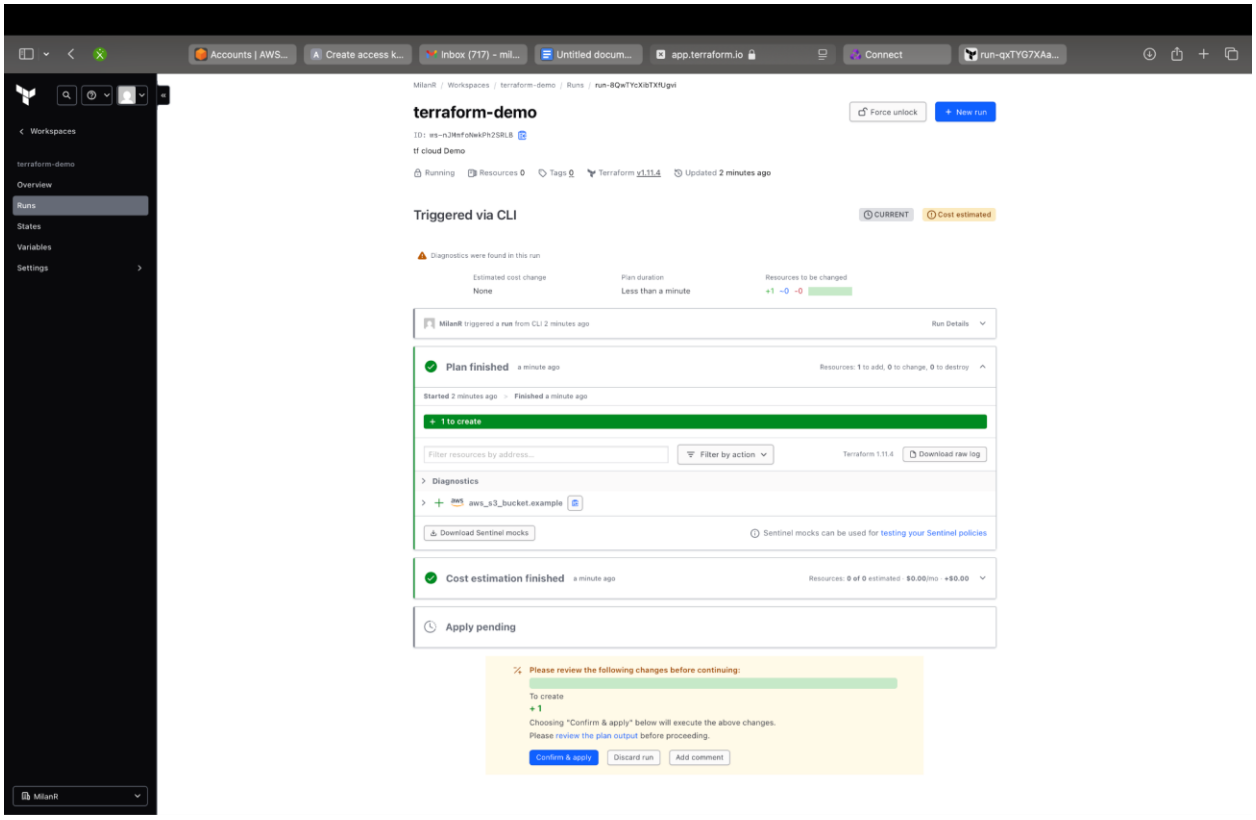
You can view the same in your workspace

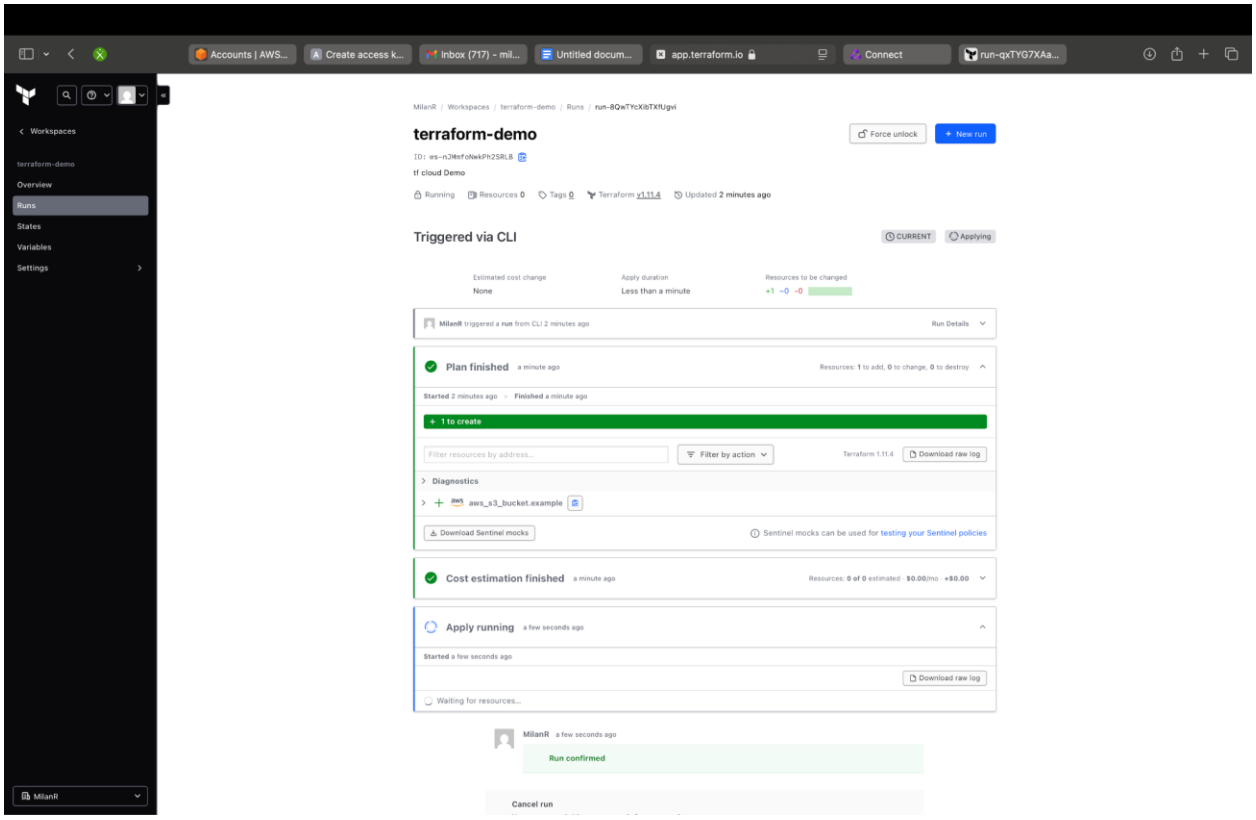


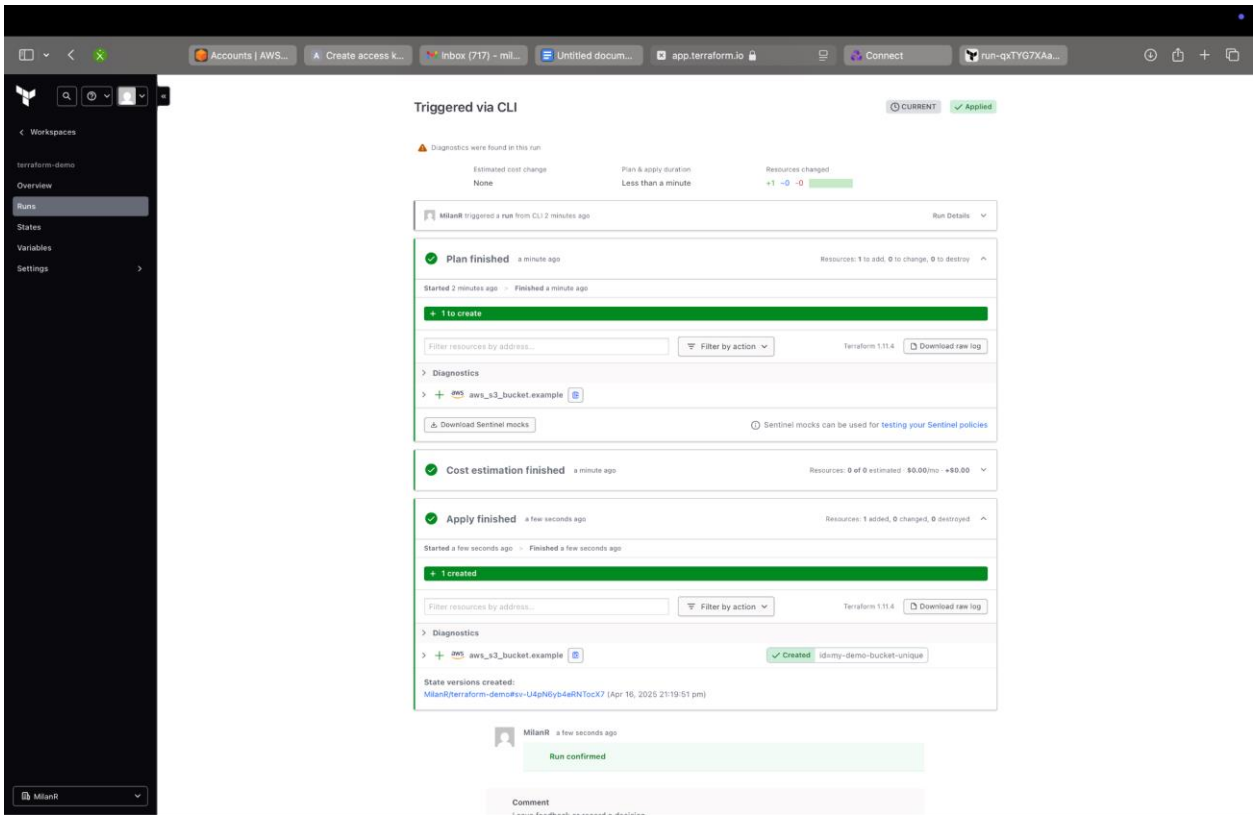
This will be followed by terraform apply



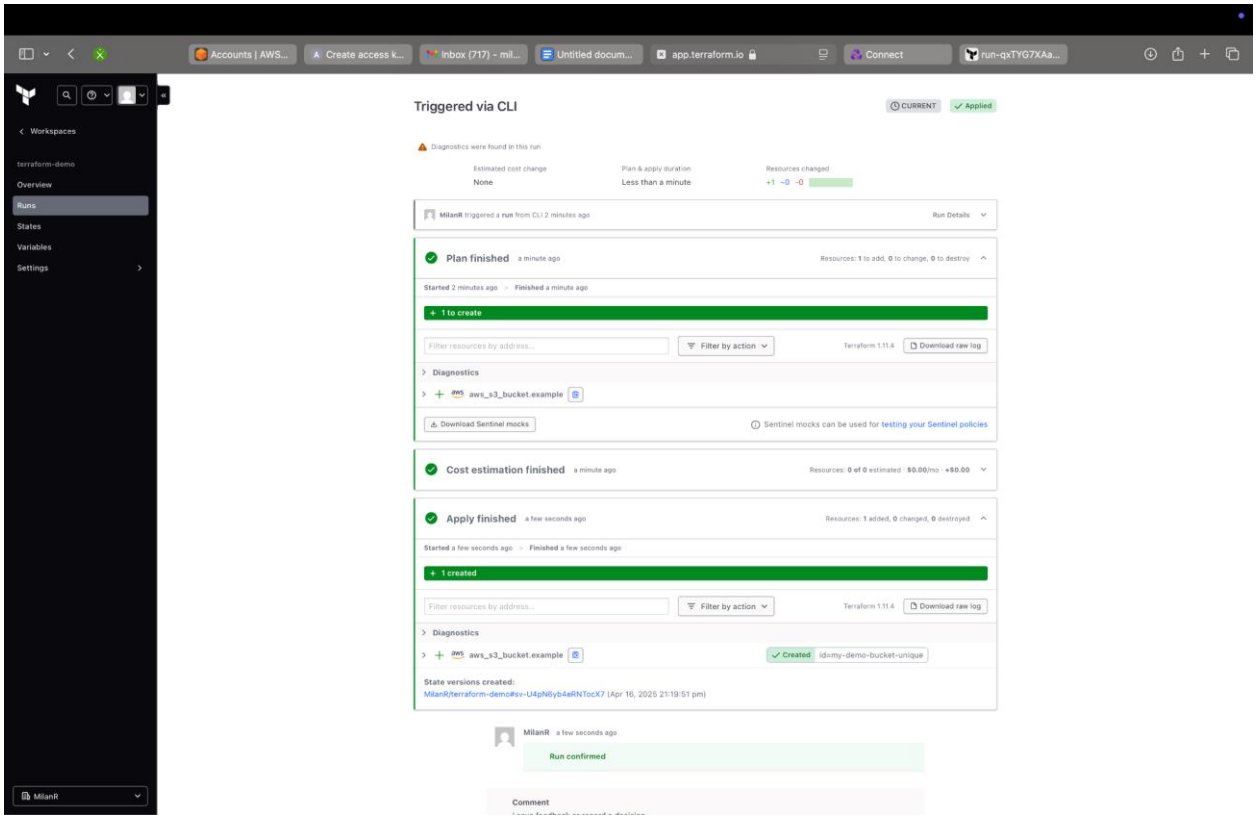
Similar view in UI, where you can confirm apply

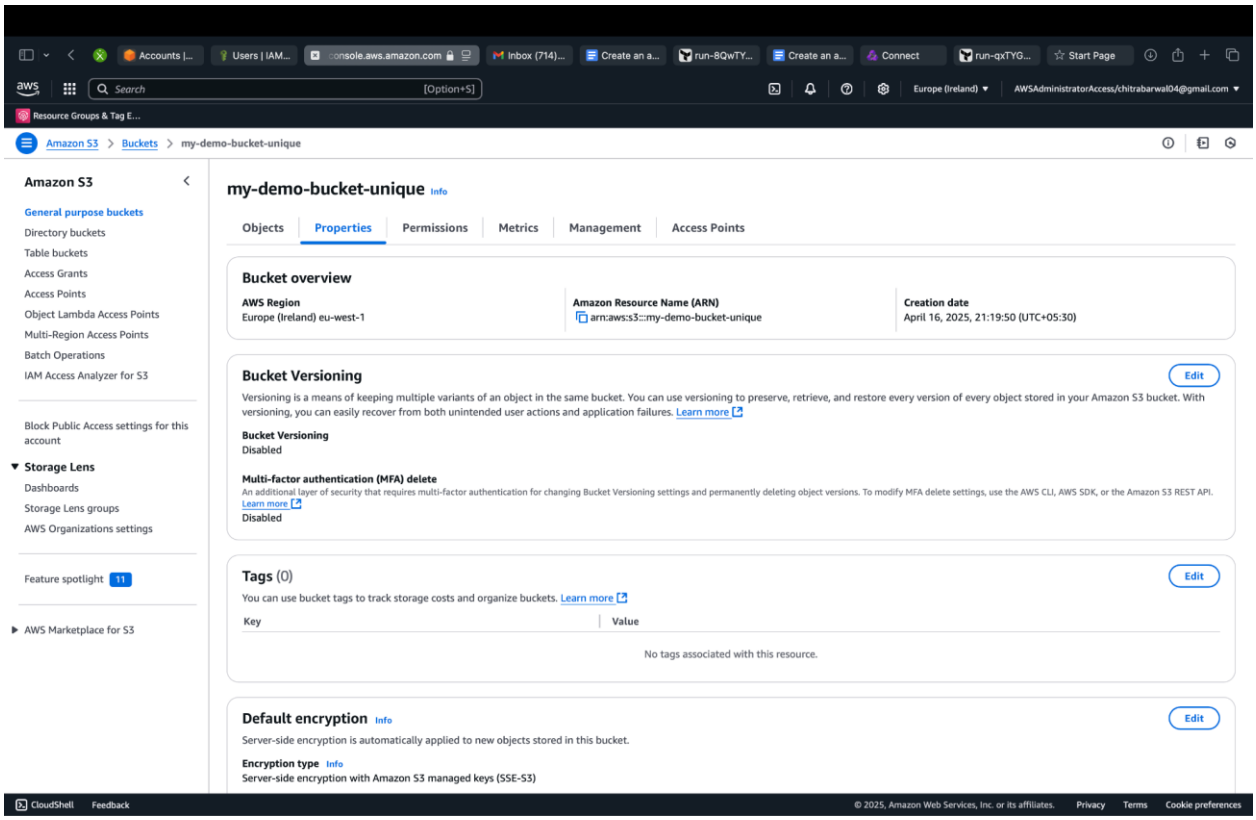






You can verify the same resource created in your AWS account by going to s3




Amazon S3 > Buckets > my-demo-bucket-unique
Amazon S3
General purpose buckets
Directory buckets
Table buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Storage Lens groups
AWS Organizations settings
Feature spotlight 11
AWS Marketplace for S3
my-demo-bucket-unique Info
Objects
Properties
Permissions
Metrics
Management
Access Points
Bucket overview
AWS Region
Europe (Ireland) eu-west-1
Amazon Resource Name (ARN)
arn:aws:s3:::my-demo-bucket-unique
Creation date
April 16, 2025, 21:19:50 (UTC+05:30)
Bucket Versioning
Edit
Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. Learn more
Bucket Versioning
Disabled
Multi-factor authentication (MFA) delete
An additional layer of security that requires multi-factor authentication for changing Bucket Versioning settings and permanently deleting object versions. To modify MFA delete settings, use the AWS CLI, AWS SDK, or the Amazon S3 REST API. Learn more
Disabled
Tags (0)
Edit
You can use bucket tags to track storage costs and organize buckets. Learn more
Key
Value
No tags associated with this resource.
Default encryption Info
Edit
Server-side encryption is automatically applied to new objects stored in this bucket.
Encryption type Info
Server-side encryption with Amazon S3 managed keys (SSE-S3)
CloudShell
Feedback
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