**Experiment No. 2.3**

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**Branch: MCA - CCD Section/Group: MCD-1/ Grp A**

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**Subject Name: CI/CD Pipelines Subject Code: 22CAP-781**

1. **Aim/Overview of the practical:**

a. Create AWS free tier account

b. Install Terraform in local system

c. Initialize terraform and create VPC, Public Subnet, Internet Gateways, Routing Table and create 3 instances inside VPC.

d. Execute terraform plan and apply the changes using terraform apply.

e. After performing step c., destroy all the instances.

1. **Code for practical:**

**a. Create AWS free tier account:**

* Go to the AWS Free Tier website: AWS Free Tier.
* Click on the "Create an AWS Account" button and follow the instructions to set up AWS account.

**b. Install Terraform in the local system:**

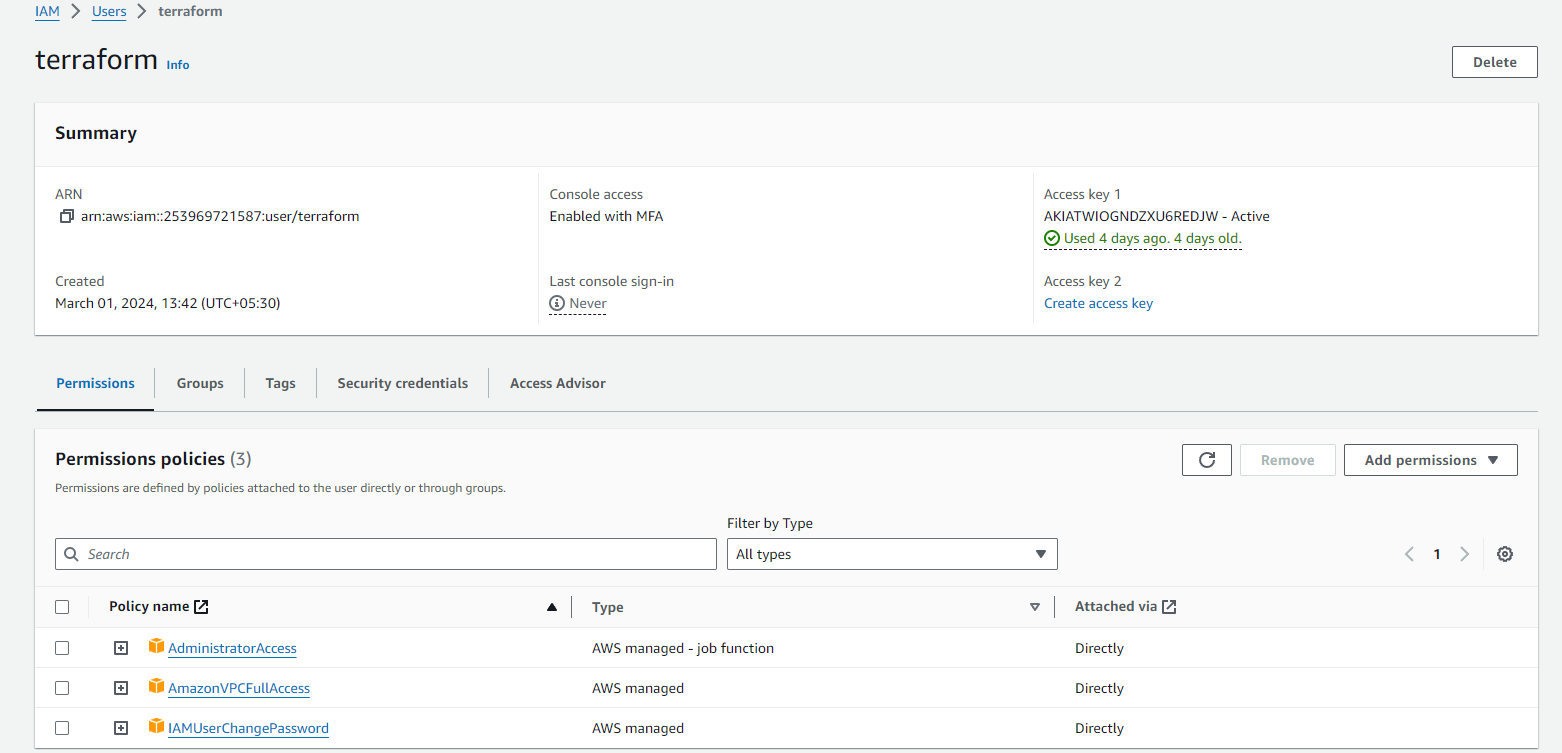
* Download the Terraform binary for your operating system from the official Terraform website.
* Extract the downloaded archive to a directory.
* Add the directory containing the Terraform binary to your system's PATH.

**c. Initialize Terraform and create 3 instances on AWS:**

* Create a new directory for your Terraform configuration.
* Inside the directory, create a file named **main.tf** with the following content

terraform {  
 required\_providers {  
 aws = {  
 source = "hashicorp/aws"  
 version = "~> 5.0"  
 }  
 }  
}  
  
resource "aws\_instance" "web" {  
 ami = "ami-00381a880aa48c6c6"  
 instance\_type = "t3.micro"  
  
 tags = {  
 Name = "Arkay"  
 }  
}  
  
provider "aws" {  
 region = "eu-north-1"  
 access\_key = "AKIATWIOGNDZXU6REDJW"  
 secret\_key = "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"  
}  
  
resource "aws\_vpc" "main" {  
 cidr\_block = "10.0.0.0/24"  
}  
  
resource "aws\_subnet" "main" {  
 vpc\_id = aws\_vpc.main.id  
 cidr\_block = "10.0.0.0/24"  
  
 tags = {  
 Name = "Arkay"  
 }  
}  
  
resource "aws\_internet\_gateway" "gw" {  
 vpc\_id = aws\_vpc.main.id  
  
 tags = {  
 Name = "Arkay"  
 }  
}  
  
resource "aws\_route\_table" "bar" {  
 vpc\_id = aws\_vpc.main.id  
  
 route {  
 cidr\_block = "10.0.0.0/16"  
 gateway\_id = aws\_internet\_gateway.gw.id  
 }  
  
 tags = {  
 Name = "Arkay"  
 }  
}  
  
  
resource "aws\_route\_table\_association" "a" {  
 subnet\_id = aws\_subnet.main.id  
 route\_table\_id = aws\_route\_table.bar.id  
}

* Go to IAM, and create a user and create access key and secret key.

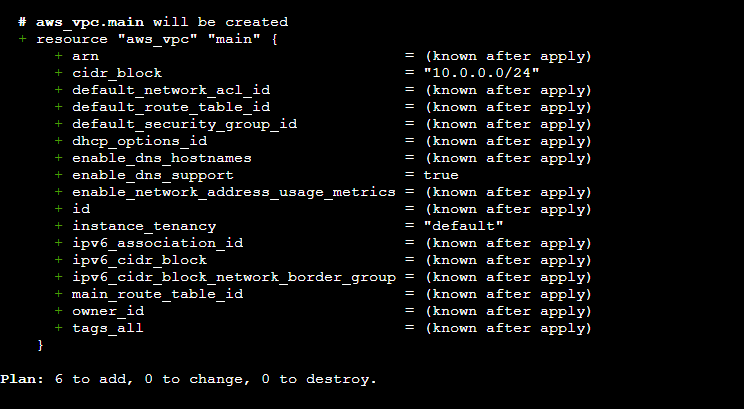


* Open a terminal, navigate to the directory, and run the following command:

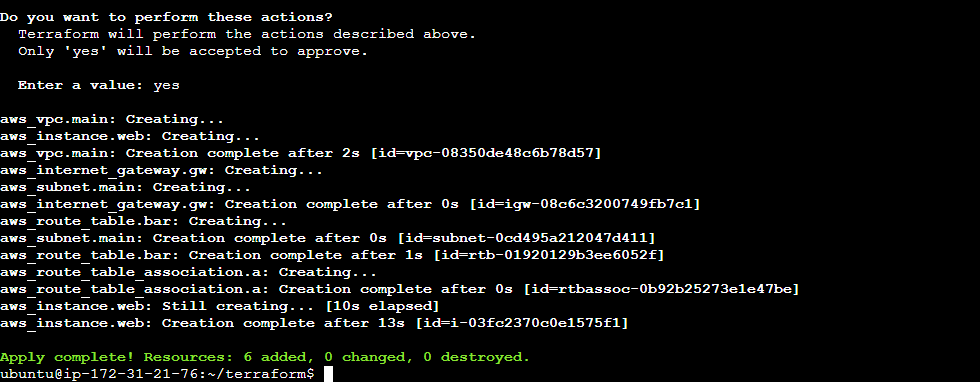
***terraform init***

**d. Execute Terraform plan and apply the changes:**

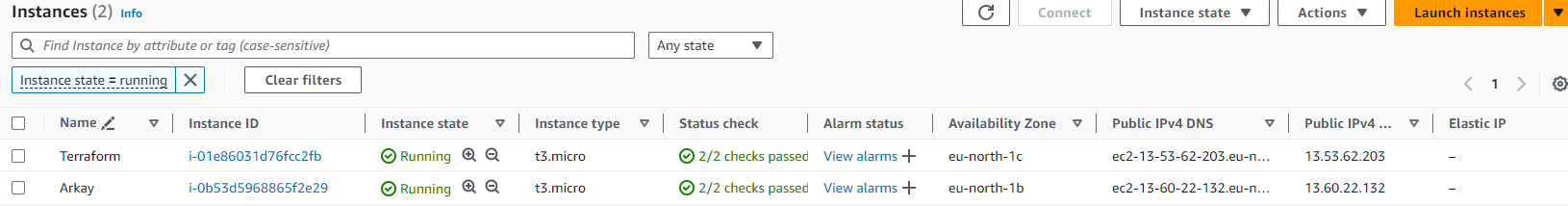
***terraform plan***

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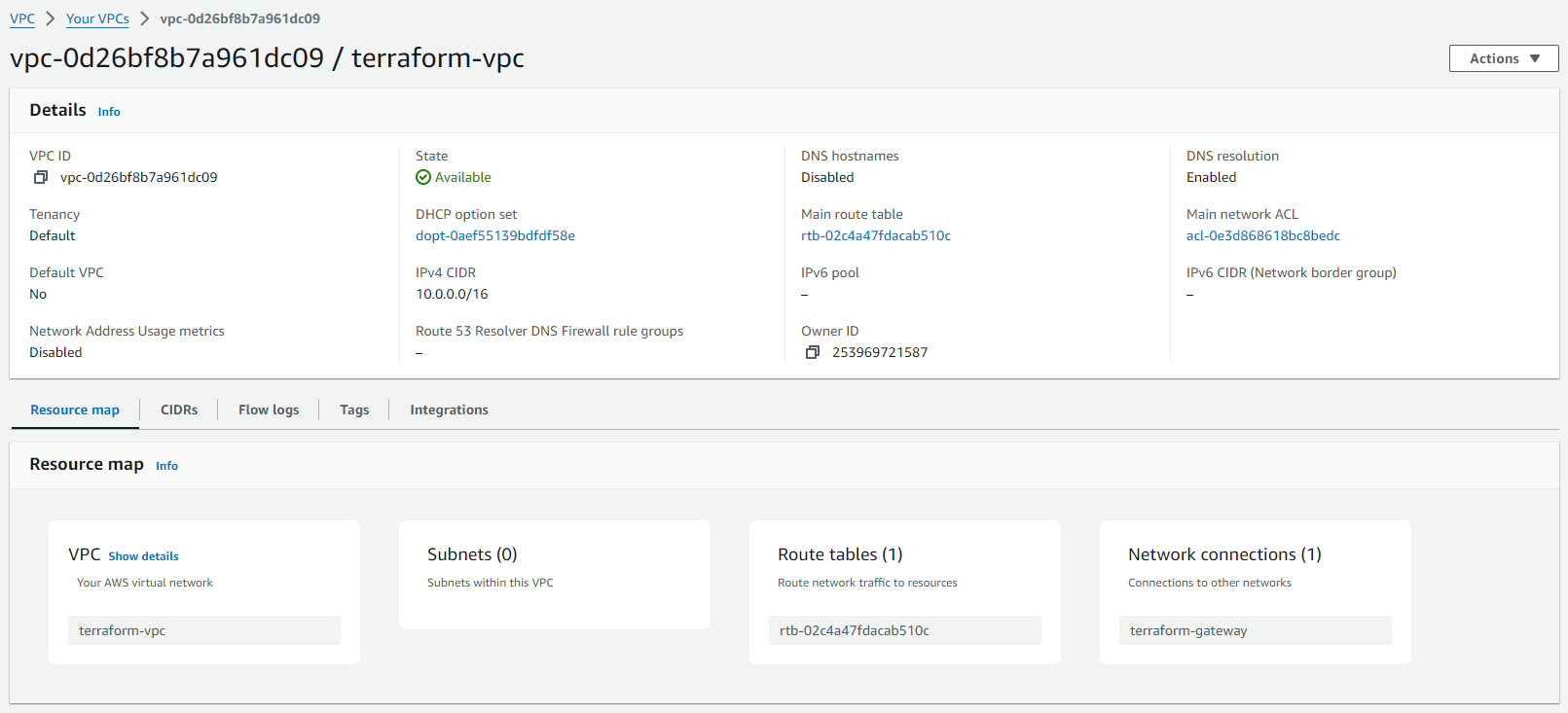
***terraform apply***

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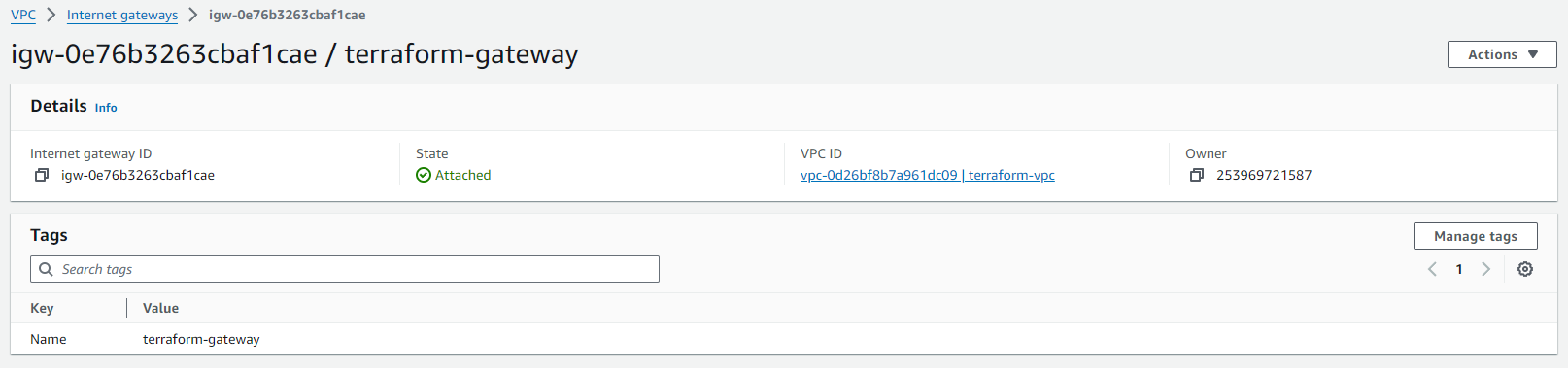
***Created Instance***



***Created VPC***

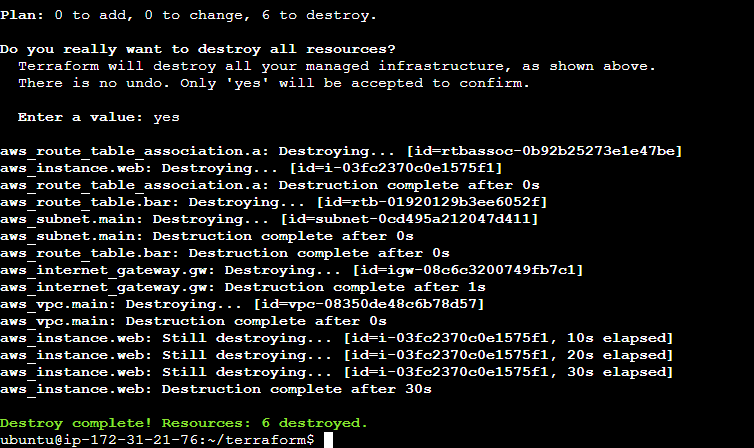


***Created Gateway***



**e. Destroy all the instances:**

***terraform destroy***

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