# Module 8: Terraform Assignment - 2

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**Course Offered: -Advanced Cloud Computing and Devops**
**Assignment By: -Intellipaat**
**Trainer: -Kumar**
**Date Of Submission: -03/03/2025**

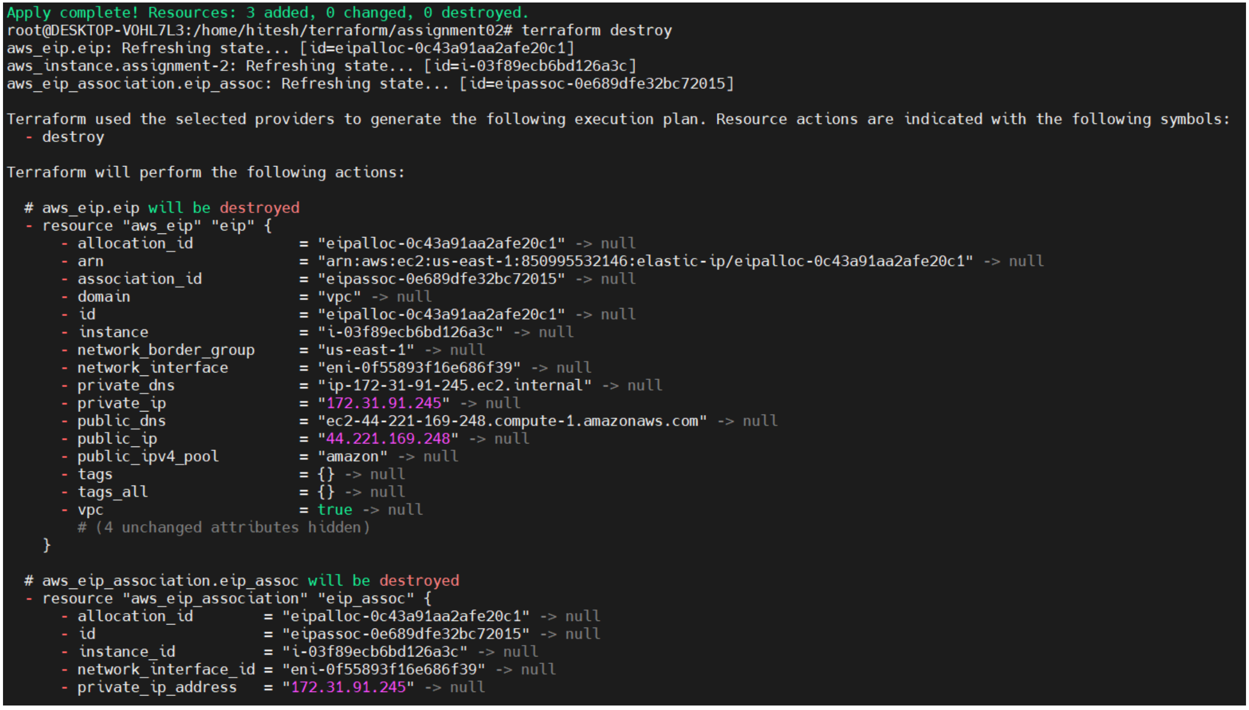
**Tasks To Be Performed:**

1. Destroy the previous deployment
2. Create 2 EC2 instances in Ohio and N.Virginia respectively
3. Rename Ohio’s instance to ‘hello-ohio’ and Virginia’s instance to ‘hello-virginia’

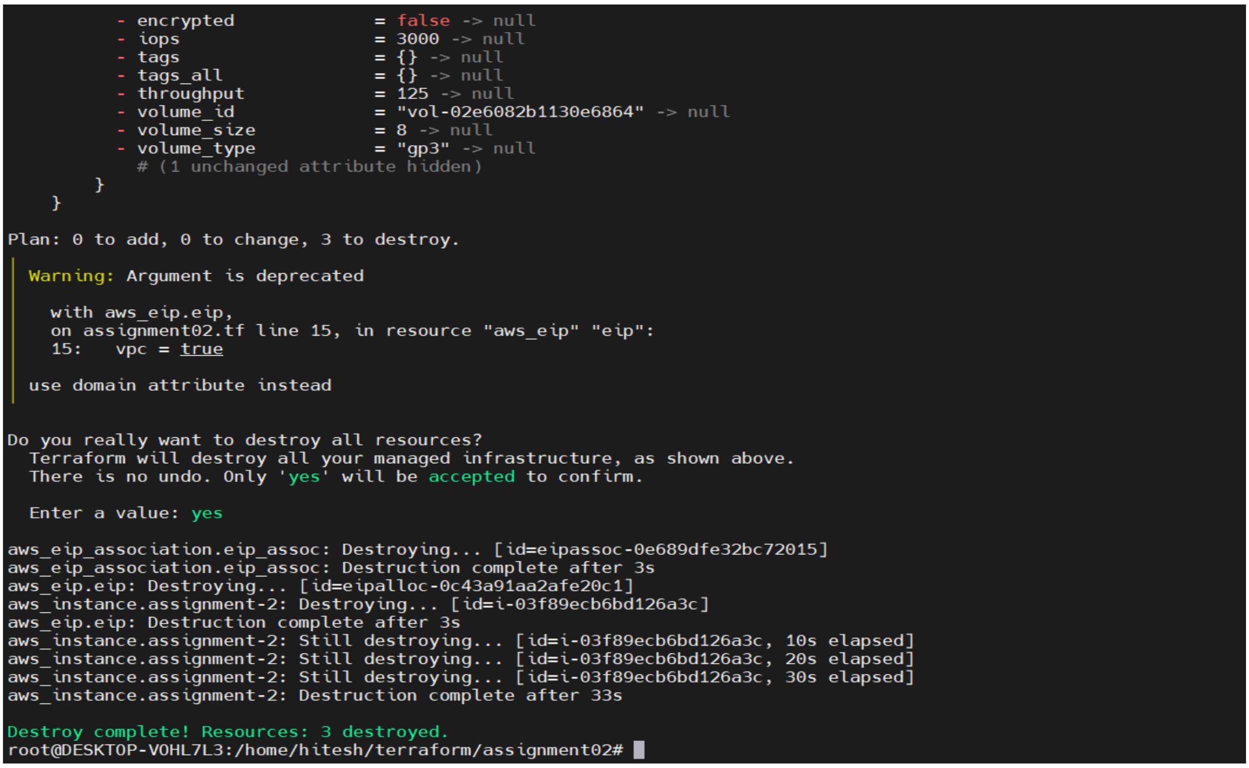
# SOLUTION

1. Destroy the previous deployment.

   Now in this task we need to run another command for destroy the deployment.the command is **terraform destroy**



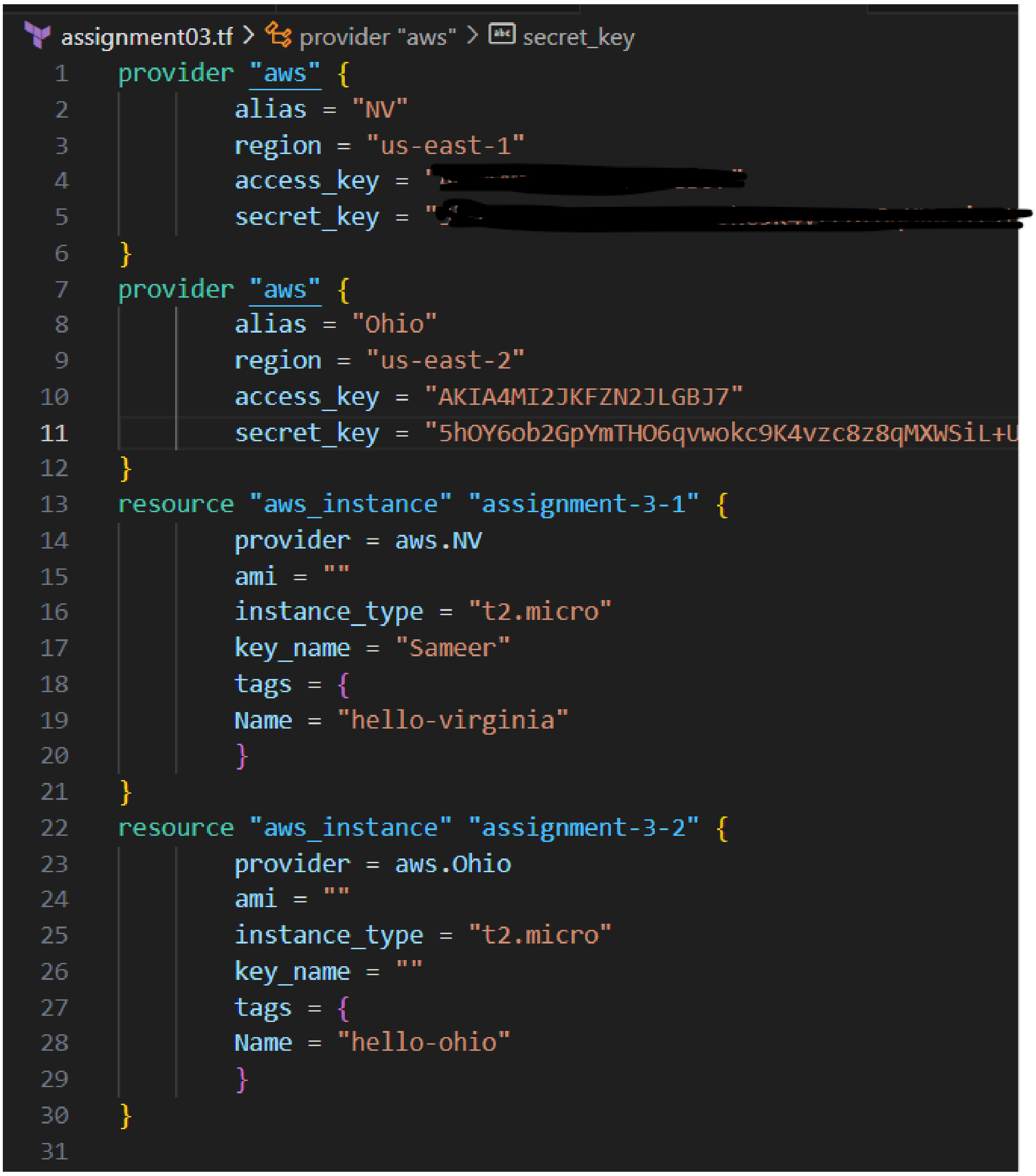
```
Apply complete! Resources: 3 added, 0 changed, 0 destroyed.
root@DESKTOP-VOHL7L3:/home/hitesh/terraform/assignment02# terraform destroy
aws_eip.eip: Refreshing state... [id=eipalloc-0c43a91aa2afe20c1]
aws_instance.assignment-2: Refreshing state... [id=i-03f89ecb6bd126a3c]
aws_eip_association.eip_assoc: Refreshing state... [id=eipassoc-0e689dfe32bc72015]

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

Terraform will perform the following actions:

  # aws_eip.eip will be destroyed
  - resource "aws_eip" "eip" {
      - allocation_id            = "eipalloc-0c43a91aa2afe20c1" -> null
      - arn                      = "arn:aws:ec2:us-east-1:850995532146:elastic-ip/eipalloc-0c43a91aa2afe20c1" -> null
      - association_id           = "eipassoc-0e689dfe32bc72015" -> null
      - domain                   = "vpc" -> null
      - id                       = "eipalloc-0c43a91aa2afe20c1" -> null
      - instance                 = "i-03f89ecb6bd126a3c" -> null
      - network_border_group     = "us-east-1" -> null
      - network_interface        = "eni-0f55893f16e686f39" -> null
      - private_dns              = "ip-172-31-91-245.ec2.internal" -> null
      - private_ip               = "172.31.91.245" -> null
      - public_dns               = "ec2-44-221-169-248.compute-1.amazonaws.com" -> null
      - public_ip                = "44.221.169.248" -> null
      - public_ipv4_pool         = "amazon" -> null
      - tags                     = {} -> null
      - tags_all                 = {} -> null
      - vpc                      = true -> null
        # (4 unchanged attributes hidden)
    }

  # aws_eip_association.eip_assoc will be destroyed
  - resource "aws_eip_association" "eip_assoc" {
      - allocation_id        = "eipalloc-0c43a91aa2afe20c1" -> null
      - id                   = "eipassoc-0e689dfe32bc72015" -> null
      - instance_id          = "i-03f89ecb6bd126a3c" -> null
      - network_interface_id = "eni-0f55893f16e686f39" -> null
      - private_ip_address   = "172.31.91.245" -> null
```



```
          - encrypted             = false -> null
          - iops                  = 3000 -> null
          - tags                  = {} -> null
          - tags_all              = {} -> null
          - throughput            = 125 -> null
          - volume_id             = "vol-02e6082b1130e6864" -> null
          - volume_size           = 8 -> null
          - volume_type           = "gp3" -> null
            # (1 unchanged attribute hidden)
        }
    }

Plan: 0 to add, 0 to change, 3 to destroy.
│
│ Warning: Argument is deprecated
│
│   with aws_eip.eip,
│   on assignment02.tf line 15, in resource "aws_eip" "eip":
│   15:   vpc = true
│
│ use domain attribute instead
│
│

Do you really want to destroy all resources?
  Terraform will destroy all your managed infrastructure, as shown above.
  There is no undo. Only 'yes' will be accepted to confirm.

  Enter a value: yes

aws_eip_association.eip_assoc: Destroying... [id=eipassoc-0e689dfe32bc72015]
aws_eip_association.eip_assoc: Destruction complete after 3s
aws_eip.eip: Destroying... [id=eipalloc-0c43a91aa2afe20c1]
aws_instance.assignment-2: Destroying... [id=i-03f89ecb6bd126a3c]
aws_eip.eip: Destruction complete after 3s
aws_instance.assignment-2: Still destroying... [id=i-03f89ecb6bd126a3c, 10s elapsed]
aws_instance.assignment-2: Still destroying... [id=i-03f89ecb6bd126a3c, 20s elapsed]
aws_instance.assignment-2: Still destroying... [id=i-03f89ecb6bd126a3c, 30s elapsed]
aws_instance.assignment-2: Destruction complete after 33s

Destroy complete! Resources: 3 destroyed.
root@DESKTOP-VOHL7L3:/home/hitesh/terraform/assignment02# █
```

2. Create 2 EC2 instances in Ohio and N.Virginia respectively.

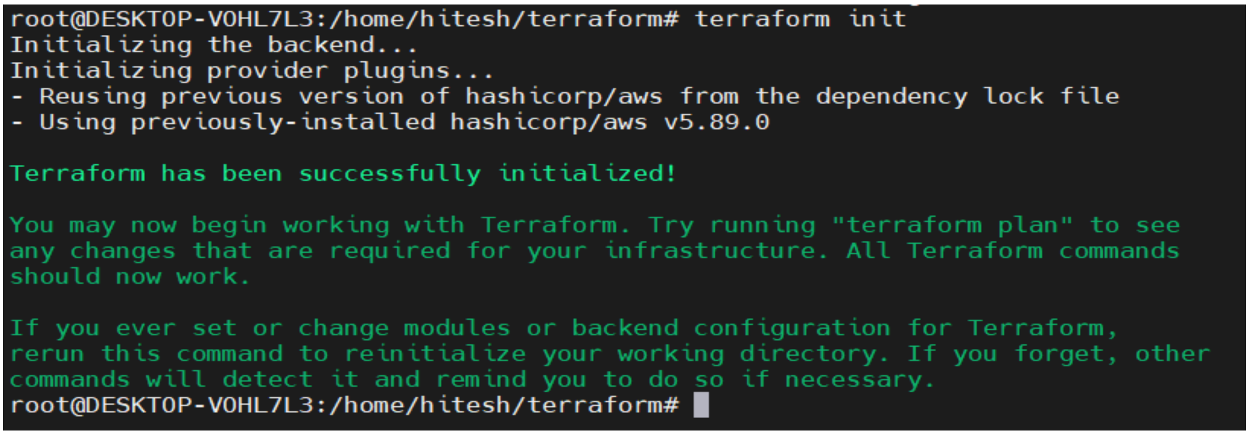
```
provider "aws" {
    alias = "NV"
    region = "us-east-1"
    access_key = ""
    secret_key = ""
}
provider "aws" {
    alias = "Ohio"
    region = "us-east-2"
    access_key = ""
    secret_key = ""
}
resource "aws_instance" "assignment-3-1" {
    provider = aws.NV
    ami = ""
    instance_type = "t2.micro"
    key_name = "Sameer"
    tags = {
    Name = "hello-virginia"
    }
}
resource "aws_instance" "assignment-3-2" {
    provider = aws.Ohio
    ami = ""
    instance_type = "t2.micro"
    key_name = ""
    tags = {
    Name = "hello-ohio"
    }
}
```



```
provider "aws" {
        alias = "NV"
        region = "us-east-1"
        access_key = [redacted]
        secret_key = [redacted]
}
provider "aws" {
        alias = "Ohio"
        region = "us-east-2"
        access_key = "AKIA4MI2JKFZN2JLGBJ7"
        secret_key = "5hOY6ob2GpYmTHO6qvwokc9K4vzc8z8qMXWSiL+U
}
resource "aws_instance" "assignment-3-1" {
        provider = aws.NV
        ami = ""
        instance_type = "t2.micro"
        key_name = "Sameer"
        tags = {
        Name = "hello-virginia"
        }
}
resource "aws_instance" "assignment-3-2" {
        provider = aws.Ohio
        ami = ""
        instance_type = "t2.micro"
        key_name = ""
        tags = {
        Name = "hello-ohio"
        }
}

```

Now We need to run this code in terraform.so first command is

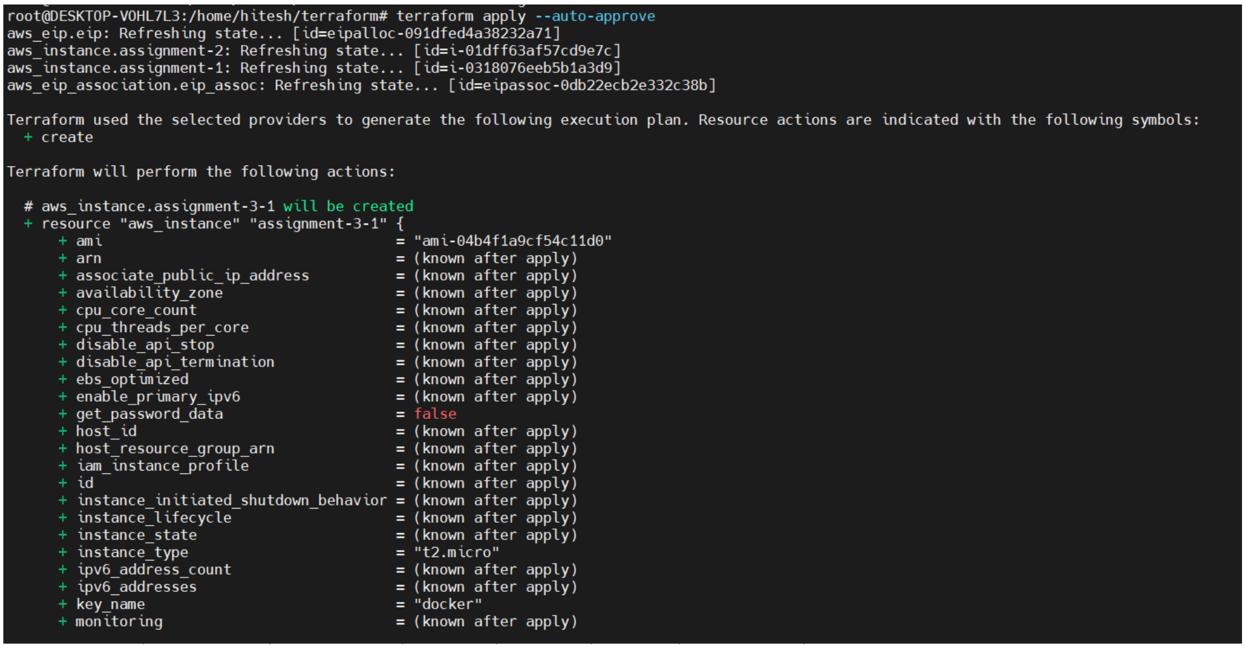
**terraform init**



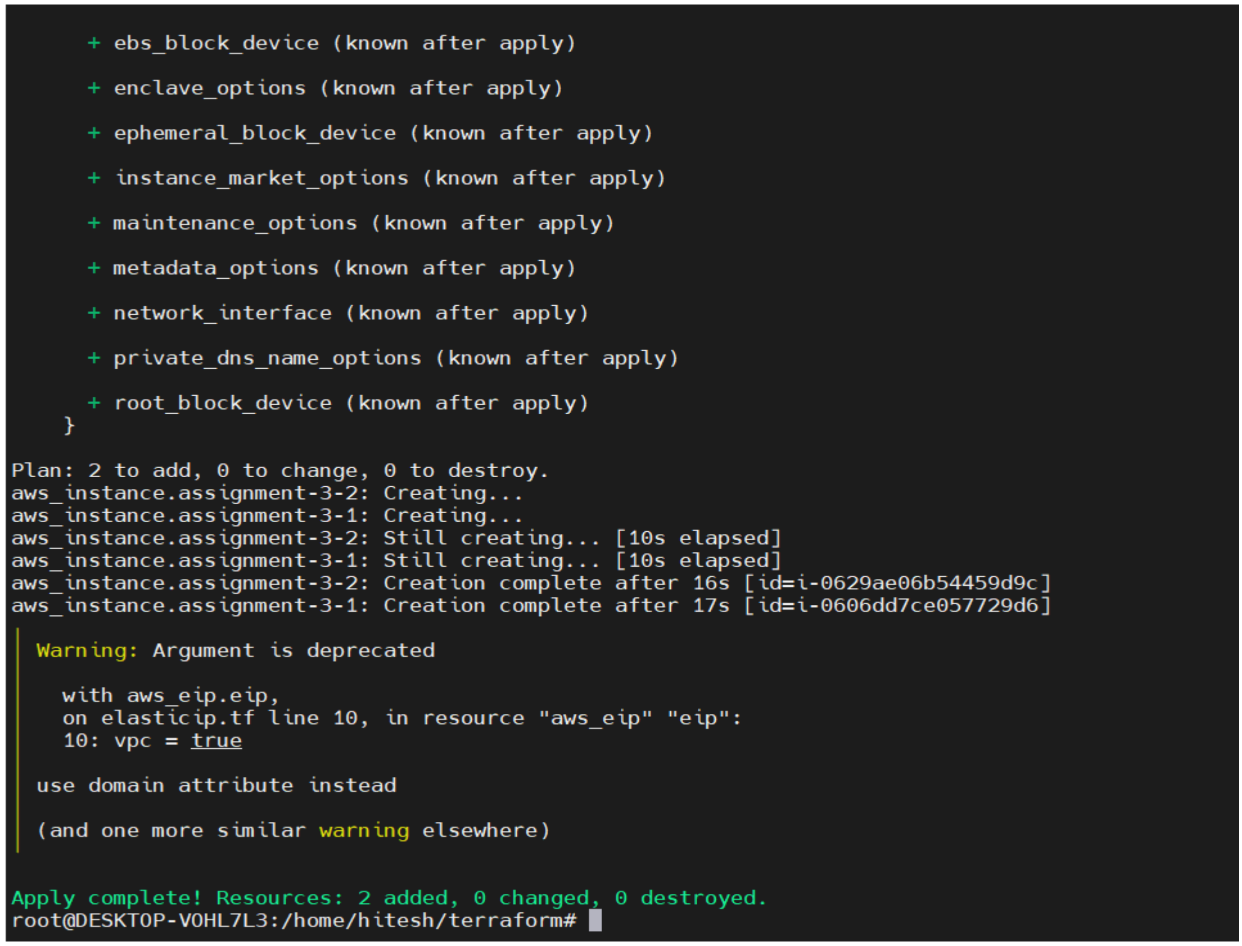
```
root@DESKTOP-VOHL7L3:/home/hitesh/terraform# terraform init
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.89.0

Terraform has been successfully initialized!

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

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
root@DESKTOP-VOHL7L3:/home/hitesh/terraform# █
```

## Now We need to run this command is

## terraform apply --auto-approve



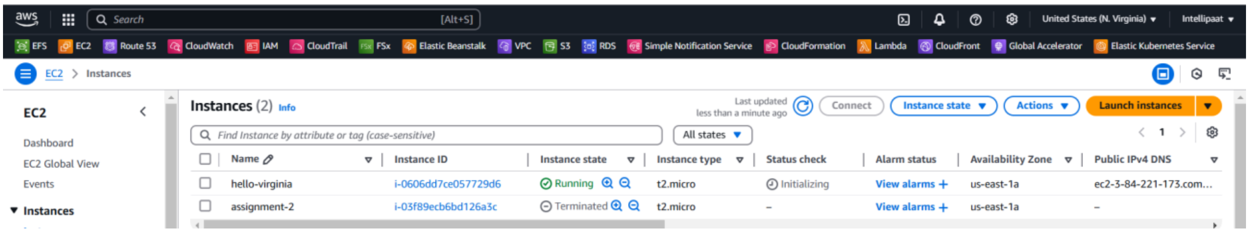
```
root@DESKTOP-VOHL7L3:/home/hitesh/terraform# terraform apply --auto-approve
aws_eip.eip: Refreshing state... [id=eipalloc-091dfed4a38232a71]
aws_instance.assignment-2: Refreshing state... [id=i-01dff63af57cd9e7c]
aws_instance.assignment-1: Refreshing state... [id=i-0318076eeb5b1a3d9]
aws_eip_association.eip_assoc: Refreshing state... [id=eipassoc-0db22ecb2e332c38b]

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_instance.assignment-3-1 will be created
  + resource "aws_instance" "assignment-3-1" {
      + ami                                  = "ami-04b4f1a9cf54c11d0"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = (known after apply)
      + availability_zone                    = (known after apply)
      + cpu_core_count                       = (known after apply)
      + cpu_threads_per_core                 = (known after apply)
      + disable_api_stop                     = (known after apply)
      + disable_api_termination              = (known after apply)
      + ebs_optimized                        = (known after apply)
      + enable_primary_ipv6                  = (known after apply)
      + get_password_data                    = false
      + host_id                              = (known after apply)
      + host_resource_group_arn              = (known after apply)
      + iam_instance_profile                 = (known after apply)
      + id                                   = (known after apply)
      + instance_initiated_shutdown_behavior = (known after apply)
      + instance_lifecycle                   = (known after apply)
      + instance_state                       = (known after apply)
      + instance_type                        = "t2.micro"
      + ipv6_address_count                   = (known after apply)
      + ipv6_addresses                       = (known after apply)
      + key_name                             = "docker"
      + monitoring                           = (known after apply)
```



```
      + ebs_block_device (known after apply)

      + enclave_options (known after apply)

      + ephemeral_block_device (known after apply)

      + instance_market_options (known after apply)

      + maintenance_options (known after apply)

      + metadata_options (known after apply)

      + network_interface (known after apply)

      + private_dns_name_options (known after apply)

      + root_block_device (known after apply)
    }

Plan: 2 to add, 0 to change, 0 to destroy.
aws_instance.assignment-3-2: Creating...
aws_instance.assignment-3-1: Creating...
aws_instance.assignment-3-2: Still creating... [10s elapsed]
aws_instance.assignment-3-1: Still creating... [10s elapsed]
aws_instance.assignment-3-2: Creation complete after 16s [id=i-0629ae06b54459d9c]
aws_instance.assignment-3-1: Creation complete after 17s [id=i-0606dd7ce057729d6]
│
│ Warning: Argument is deprecated
│
│   with aws_eip.eip,
│   on elasticip.tf line 10, in resource "aws_eip" "eip":
│   10:   vpc = true
│
│ use domain attribute instead
│
│ (and one more similar warning elsewhere)
│

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
root@DESKTOP-VOHL7L3:/home/hitesh/terraform# █
```

The Code has been Successfully deployed.

## US-EAST-1

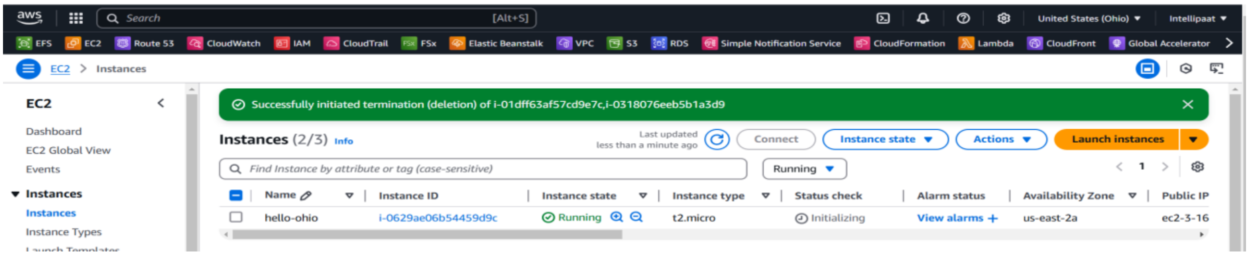


Instances (2) Info

Find Instance by attribute or tag (case-sensitive)

| □ | Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS |
|---|---|---|---|---|---|---|---|---|
| □ | hello-virginia | i-0606dd7ce057729d6 | Running | t2.micro | Initializing | View alarms + | us-east-1a | ec2-3-84-221-173.com... |
| □ | assignment-2 | i-03f89ecb6bd126a3c | Terminated | t2.micro | – | View alarms + | us-east-1a | – |

## US-EAST-2



Successfully initiated termination (deletion) of i-01dff63af57cd9e7c,i-0318076eeb5b1a3d9

Instances (2/3) Info

Find Instance by attribute or tag (case-sensitive)

| ■ | Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IP |
|---|---|---|---|---|---|---|---|---|
| □ | hello-ohio | i-0629ae06b54459d9c | Running | t2.micro | Initializing | View alarms + | us-east-2a | ec2-3-16 |