

Terraform Assignment - 1

You have been asked to:

- Create an EC2 service in the default subnet in the ohio region

->Created the IAM user

Gave the access of the EC2 full access

Login to the IAM user

Create the EC2 instance

```
root@ip-172-31-8-77:~# cat terra.tf
provider "aws" {
  access_key = "AKIAVNPLXOGUOSZZY7UF"
  secret_key = "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"
  region     = "ap-south-1"
}

resource "aws_instance" "NHI" {
  tags = {
    Name = "pointer"
    env  = "NHI"
  }
  ami          = "ami-03bb6d83c60fc5f7c"
  instance_type = "t2.micro"
  key_name     = "Newword"
  security_groups = ["default"]
}
```

i-02aa32bb2f6f3a724 (Terraform)

PublicIPs: 65.1.148.212 PrivateIPs: 172.31.8.77

Run the below command :

terraform init (command to download the required plugins to run the script/login/create)

terraform plan (command called dry run to check whether the script is runnable or not)

terraform apply (Run the command to create whatever you written in the script)

terraform destroy (Whatever we created if we want to delete just run the command)

```
root@ip-172-31-8-77:~# terraform init
```

Initializing the backend...

Initializing provider plugins...

- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.40.0

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@ip-172-31-8-77:~#
```

WARNING: This plan contains sensitive information and should be kept secure as necessary.

```
root@ip-172-31-8-77:~# terraform plan
```

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.NHI will be created
+ resource "aws_instance" "NHI" {
  + ami                    - "ami-03eb6d83c60fc5f7c"
  + arch                  - (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)
  + 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               - "Newword"
  + monitoring             - (known after apply)
  + outpost_arn            - (known after apply)
  + password_data         - (known after apply)
  + placement_group        - (known after apply)
  + placement_partition_number - (known after apply)
  + primary_network_interface_id - (known after apply)
  + private_dns            - (known after apply)
  + private_ip             - (known after apply)
  + public_dns             - (known after apply)
  + public_ip              - (known after apply)
  + secondary_private_ips  - (known after apply)
  + security_groups        - [
    + "default",
  ]
  + source_dest_check      - true
  + spot_instance_request_id - (known after apply)
  + subnet_id              - (known after apply)
  + tags                   - {
    + "Name" - "pointer"
    + "env"  - "NHI"
  }
  + tags_all               - {
    + "Name" - "pointer"
    + "env"  - "NHI"
  }
  + tenancy                - (known after apply)
  + user_data              - (known after apply)
  + user_data_base64       - (known after apply)
  + user_data_replace_on_change - false
  + vpc_security_group_ids - (known after apply)
}
```

Plan: 1 to add, 0 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly these actions if you run "terraform apply" now.

```
root@ip-172-31-8-77:~#
```

```

root@ip-172-31-8-77:~# terraform apply
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.NHI will be created
+ resource "aws_instance" "NHI" {
  ami              - "ami-03b66d83c60fc5f7c"
  ami             - (known after apply)
  associate_public_ip_address - (known after apply)
  availability_zone - (known after apply)
  cpu_cores_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)
  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         - "Newwared"
  monitoring       - (known after apply)
  outpost_arn      - (known after apply)
  password_data    - (known after apply)
  placement_group  - (known after apply)
  placement_partition_number - (known after apply)
  primary_network_interface_id - (known after apply)
  private_dns      - (known after apply)
  private_ip       - (known after apply)
  public_dns       - (known after apply)
  public_ip        - (known after apply)
  secondary_private_ips - (known after apply)
  security_groups  - [
    + "default",
  ]
  source_dest_check - true
  spot_instance_request_id - (known after apply)
  subnet_id        - (known after apply)
  tags             - {
    + "Name" - "pointer"
    + "env"  - "NHI"
  }
  tags_all        - {
    + "Name" - "pointer"
    + "env"  - "NHI"
  }
  tenancy         - (known after apply)
  user_data       - (known after apply)
  user_data_base64 - (known after apply)
  user_data_replace_on_change - false
  vpc_security_group_ids - (known after apply)
}

Plan: 1 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.

Enter a value: yes

aws_instance.NHI: Creating...
aws_instance.NHI: Still creating... [10s elapsed]
aws_instance.NHI: Still creating... [20s elapsed]
aws_instance.NHI: Still creating... [30s elapsed]
aws_instance.NHI: Creation complete after 31s [id=1-09d7e6d9c0e0e3dd9]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
root@ip-172-31-8-77:~#

```

```

root@ip-172-31-0-77:~# terraform destroy
aws_instance.nhi: Refreshing state... [id=i-09d7e6d9c9ade3dd5]

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_instance.nhi will be destroyed
- resource "aws_instance" "nhi" {
  ami              - "ami-02b8d83c60dc1f7c" -> null
  arch             - "arm"                  -> null
  associate_public_ip_address - true         -> null
  availability_zone - "ap-south-1b"         -> null
  cpu_cores_count  - 1                     -> null
  cpu_threads_per_core - 1                 -> null
  disable_api_stop - false                 -> null
  disable_api_termination - false          -> null
  ebs_optimized    - false                 -> null
  get_password_data - false                -> null
  hibernation      - false                 -> null
  id               - "i-09d7e6d9c9ade3dd5" -> null
  instance_initiated_shutdown_behavior - "stop" -> null
  instance_state   - "running"             -> null
  instance_type    - "t2.micro"             -> null
  ipv6_address_count - 0                   -> null
  ipv6_addresses   - []                   -> null
  key_name         - "NewMsd"              -> null
  monitoring       - false                 -> null
  placement_group  - 0                     -> null
  placement_group_name - "ami-0e0de5d48e8e6e2b" -> null
  primary_network_interface_id - "eni-172-31-14-80" -> null
  private_dns      - "ip-172-31-14-80"     -> null
  private_ip       - "172.31.14.80"        -> null
  public_dns       - "ec2-13-223-152-3.ap-south-1.compute.amazonaws.com" -> null
  public_ip        - "13.223.152.3"        -> null
  secondary_private_ips - []              -> null
  security_groups  - ["default"]           -> null
  source_dest_check - true                 -> null
  subnet_id        - "subnet-0437d5410f085e863" -> null
  tags             - {
    "Name" - "printer"
    "env"  - "nhi"
  } -> null
  tags_all        - {
    "Name" - "printer"
    "env"  - "nhi"
  } -> null
  tenancy         - "default"              -> null
  user_data_replace_on_change - false       -> null
  vpc_security_group_ids - ["sg-0fcd343e538e6994"] -> null

  capacity_reservation_specification {
    capacity_reservation_preference - "open" -> null
  }

  cpu_options {
    cores_count - 1 -> null
    threads_per_core - 1 -> null
  }

  credit_specification {
    cpu_credits - "standard" -> null
  }

  enclave_options {
    enabled - false -> null
  }

  maintenance_options {
    auto_recovery - "default" -> null
  }
}

```

```

    ] => null
- source_dest_check - true => null
- subnet_id - "subnet-0437d5410f085e863" => null
- tags - {
  - "Name" - "printer"
  - "env" - "NHI"
} => null
- tags_all - {
  - "Name" - "printer"
  - "env" - "NHI"
} => null
- tenancy - "default" => null
- user_data_replace_on_change - false => null
- vpc_security_group_ids - [
  - "sg-0fed343e5d38e6994",
] => null

- capacity_reservation_specification {
  - capacity_reservation_preference - "open" => null
}

- cpu_options {
  - core_count - 1 => null
  - threads_per_core - 1 => null
}

- credit_specification {
  - cpu_credits - "standard" => null
}

- enclave_options {
  - enabled - false => null
}

- maintenance_options {
  - auto_recovery - "default" => null
}

- metadata_options {
  - http_endpoint - "enabled" => null
  - http_protocol_ipv6 - "disabled" => null
  - http_put_response_hop_limit - 1 => null
  - http_tokens - "optional" => null
  - instance_metadata_tags - "disabled" => null
}

- private_dns_name_options {
  - enable_resource_name_dns_a_record - false => null
  - enable_resource_name_dns_aaaa_record - false => null
  - hostname_type - "ip-name" => null
}

- root_block_device {
  - delete_on_termination - true => null
  - device_name - "/dev/sda1" => null
  - encrypted - false => null
  - iops - 100 => null
  - tags - {} => null
  - tags_all - {} => null
  - throughput - 0 => null
  - volume_id - "vol-0732b808f9b19ttb8" => null
  - volume_size - 8 => null
  - volume_type - "gp2" => null
}
}

```

Plan: 0 to add, 0 to change, 1 to destroy.

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_instance.NHI: Destroying... [1d-1-09d7e6d9c9ceda3dd9]
aws_instance.NHI: Still destroying... [1d-1-09d7e6d9c9ceda3dd9, 10s elapsed]
aws_instance.NHI: Still destroying... [1d-1-09d7e6d9c9ceda3dd9, 20s elapsed]
aws_instance.NHI: Still destroying... [1d-1-09d7e6d9c9ceda3dd9, 30s elapsed]
aws_instance.NHI: Destruction complete after 40s

```

Destroy complete! Resources: 1 destroyed.

root@ip-172-31-8-77:~#