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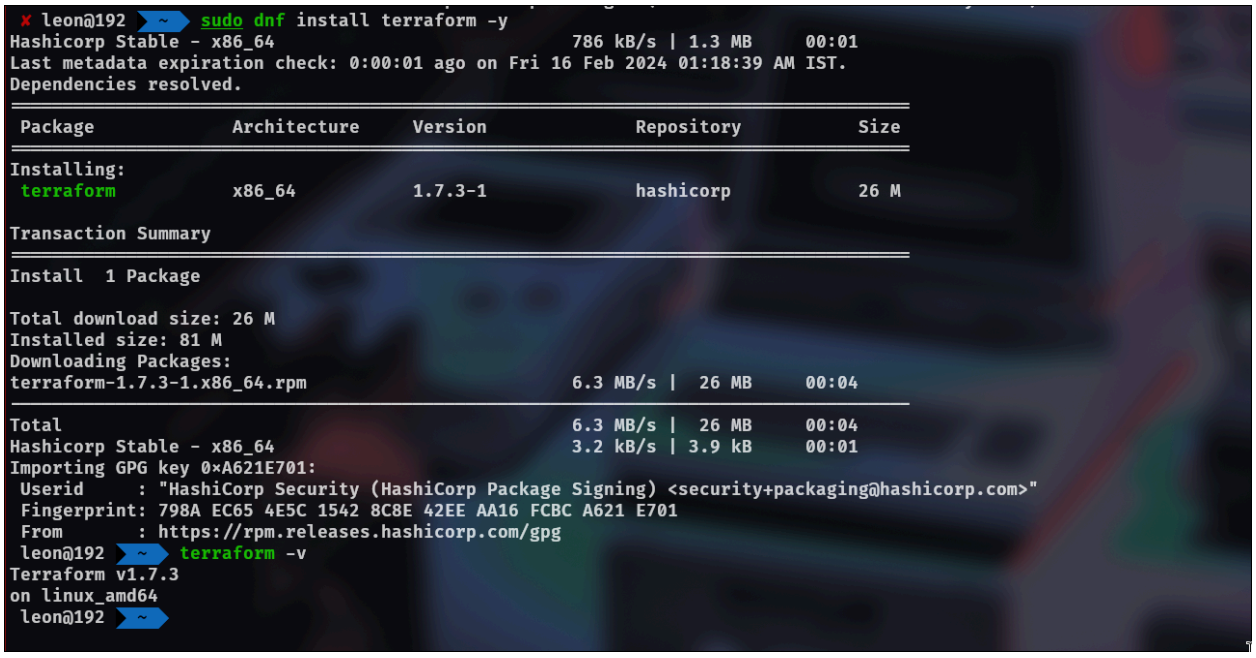
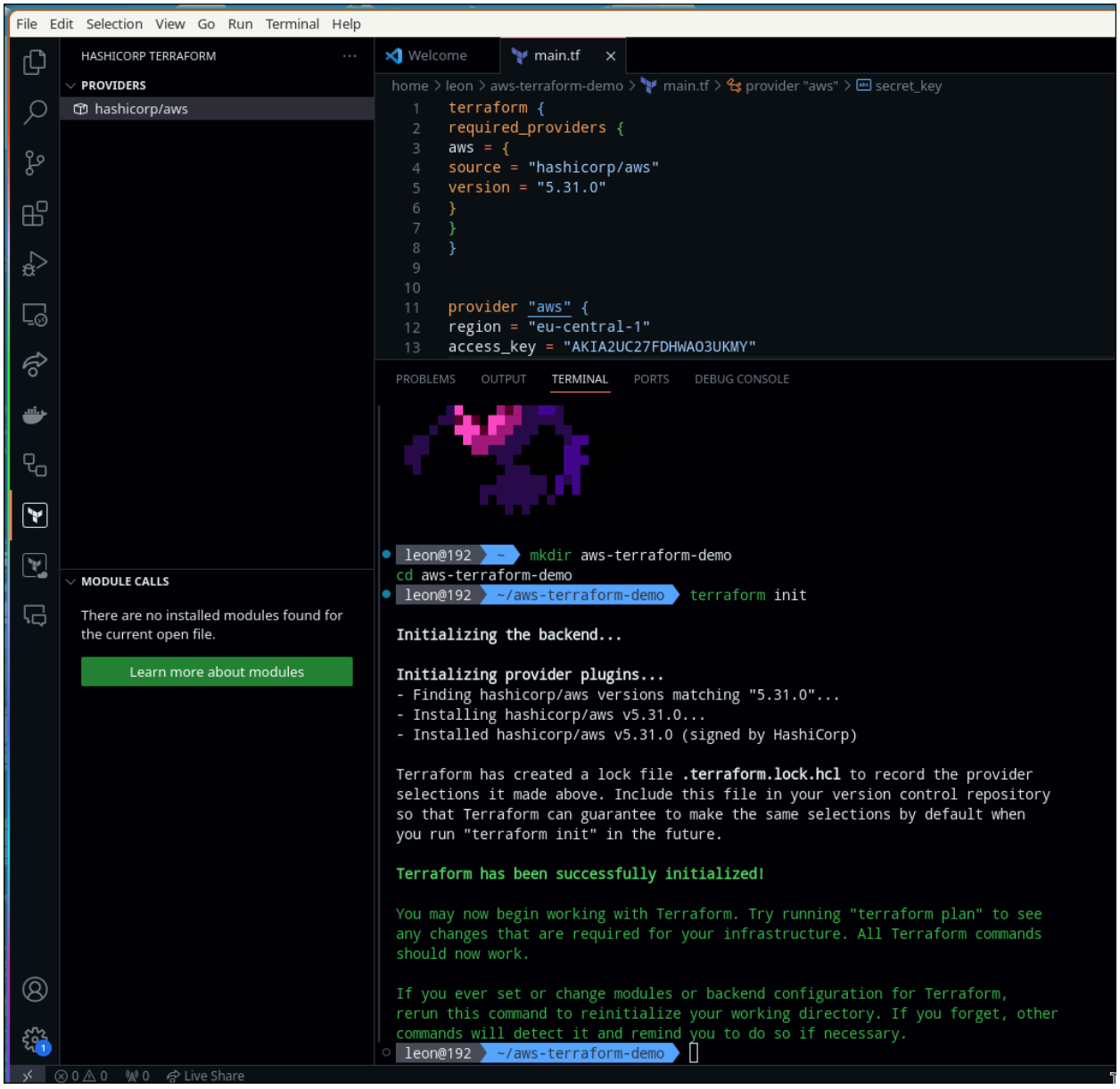
B2 DevOps

SPCM LAB

Experiment 1



Experiment 2



Experiment 3

lp

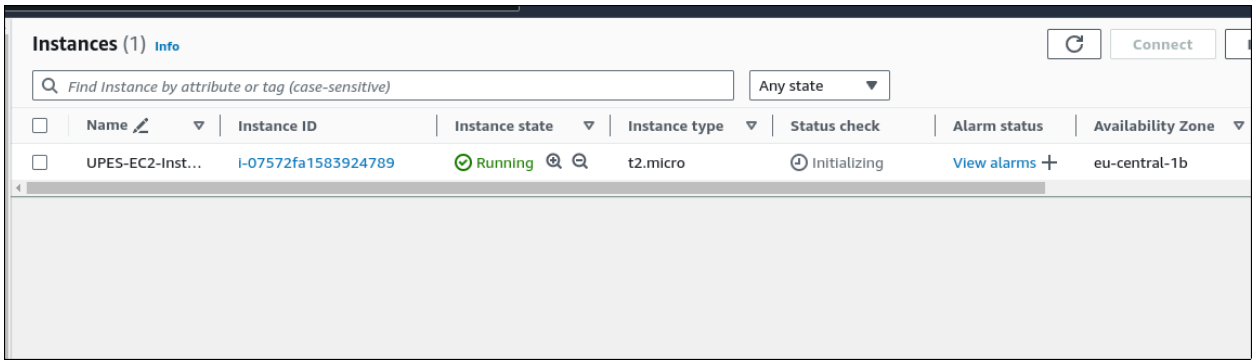
Welcome | main.tf | instance.tf

home > leon > aws-terraform-demo > instance.tf > resource "aws_instance" "My-instance"

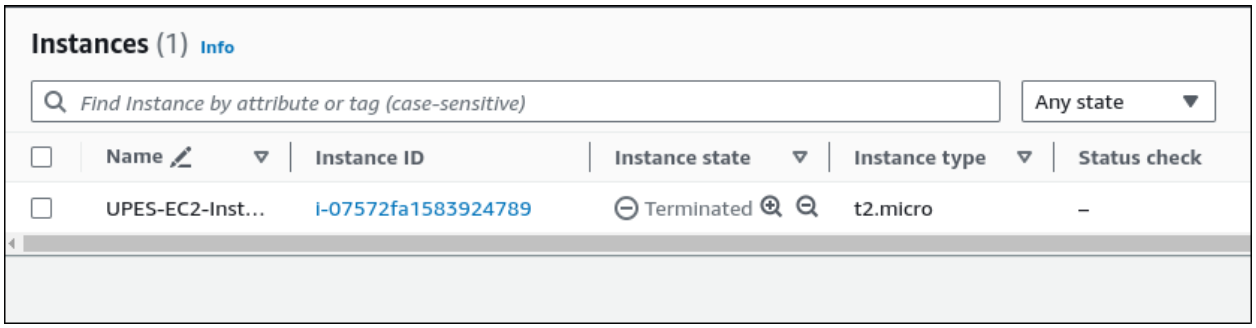
```
1  resource "aws_instance" "My-instance" {
2  instance_type = "t2.micro"
3  ami = "ami-0faab6bdbac9486fb"
4  count = 1
5  tags = {
6  Name = "UPES-EC2-Instnace"
7  }
8  }
9
```

```
leon@192 ~/aws-terraform-demo 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.My-instance[0] will be created
  + resource "aws_instance" "My-instance" {
      + ami                                  = "ami-0faab6bdbac9486fb"
      + 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)
      + 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                             = (known after apply)
      + 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)
      + public_dns                           = (known after apply)
      + public_ip                            = (known after apply)
      + secondary_private_ips                = (known after apply)
      + security_groups                      = (known after apply)
      + source_dest_check                    = true
      + spot_instance_request_id             = (known after apply)
      + subnet_id                            = (known after apply)
      + tags                                 = {
          + "Name" = "UPES-EC2-Instnace"
        }
      + tags_all                             = {
          + "Name" = "UPES-EC2-Instnace"
        }
      + 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.
```

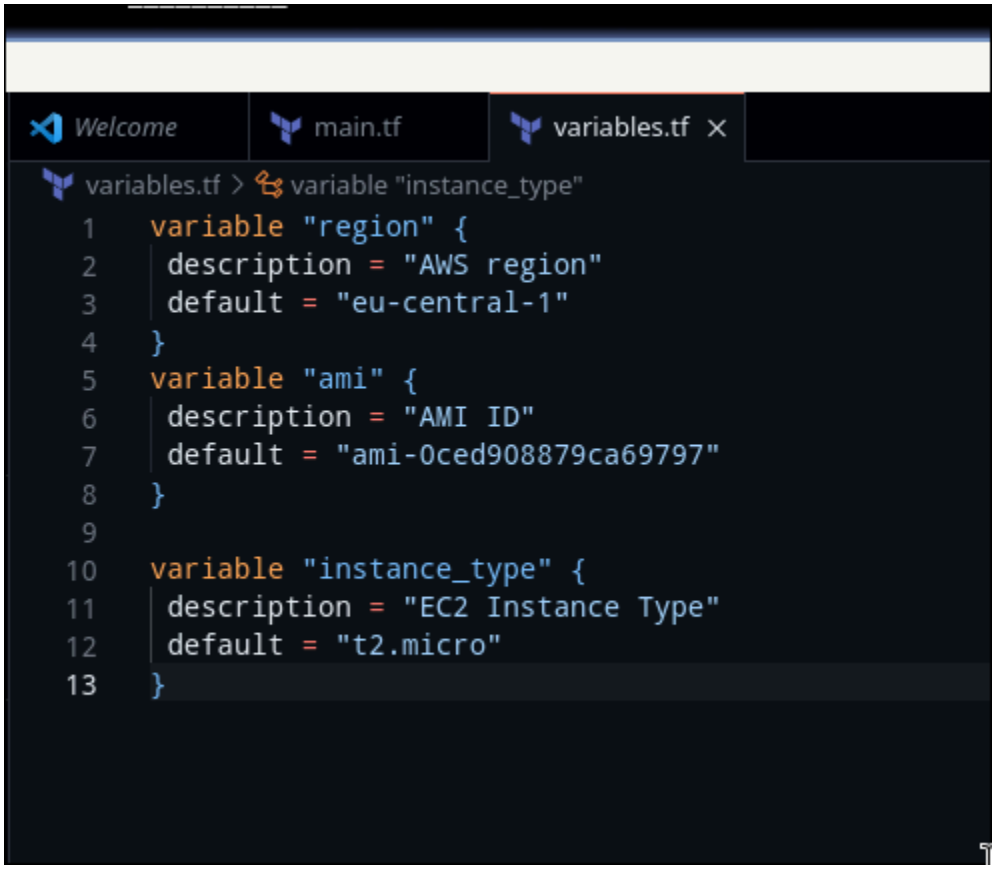
```
Plan: 1 to add, 0 to change, 0 to destroy.

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.My-instance[0]: Creating...
aws_instance.My-instance[0]: Still creating... [10s elapsed]
aws_instance.My-instance[0]: Still creating... [20s elapsed]
aws_instance.My-instance[0]: Still creating... [30s elapsed]
aws_instance.My-instance[0]: Creation complete after 35s [id=i-07572fa1583924789]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
```



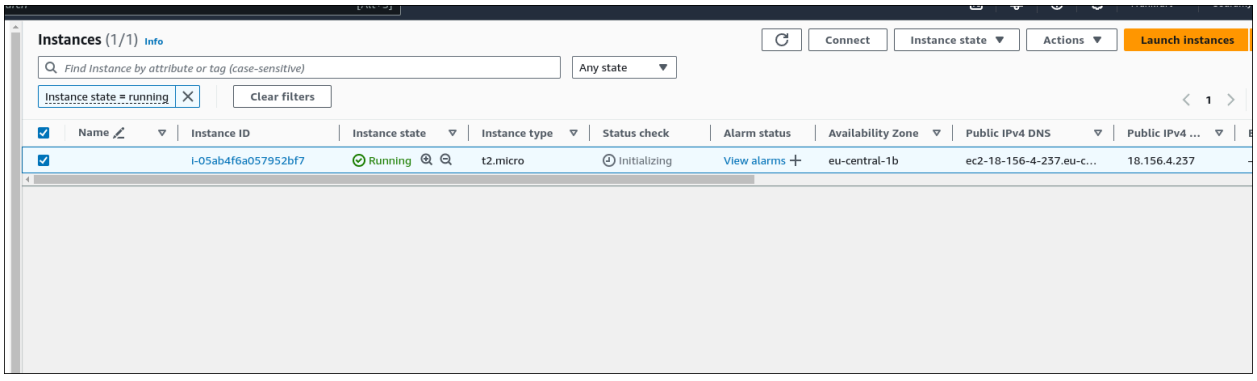
```
      - root_block_device {
          - delete_on_termination = true -> null
          - device_name           = "/dev/sda1" -> null
          - encrypted             = false -> null
          - iops                  = 100 -> null
          - tags                  = {} -> null
          - throughput            = 0 -> null
          - volume_id             = "vol-0c25d10f9168045d5" -> 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.My-instance[0]: Destroying... [id=i-07572fa1583924789]
aws_instance.My-instance[0]: Still destroying... [id=i-07572fa1583924789, 10s elapsed]
aws_instance.My-instance[0]: Still destroying... [id=i-07572fa1583924789, 20s elapsed]
aws_instance.My-instance[0]: Still destroying... [id=i-07572fa1583924789, 30s elapsed]
aws_instance.My-instance[0]: Destruction complete after 31s

Destroy complete! Resources: 1 destroyed.
```



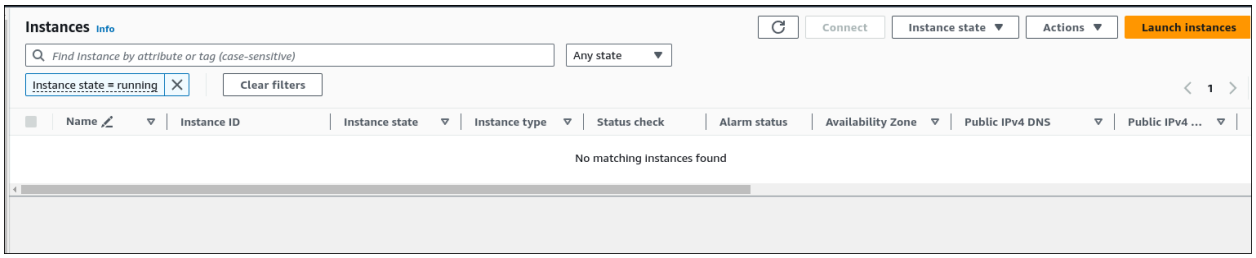
Experiment 4



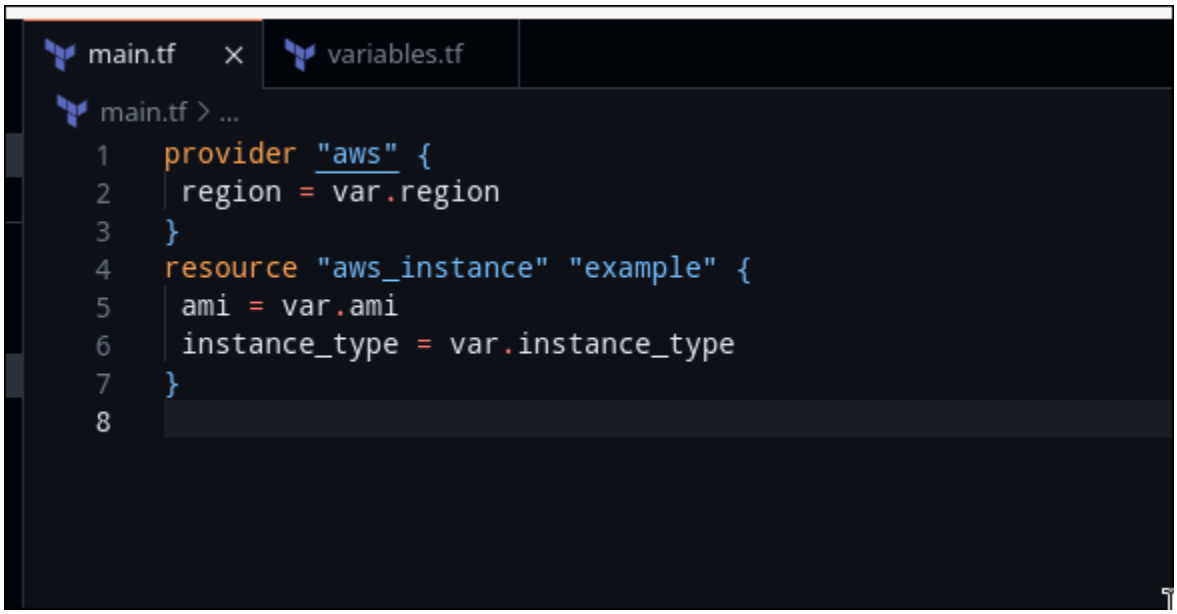
```
      + primary_network_interface_id          = (known after apply)
      + private_dns                           = (known after apply)
      + private_ip                            = (known after apply)
      + public_dns                            = (known after apply)
      + public_ip                             = (known after apply)
      + secondary_private_ips                 = (known after apply)
      + security_groups                       = (known after apply)
      + source_dest_check                     = true
      + spot_instance_request_id              = (known after apply)
      + subnet_id                             = (known after apply)
      + tags_all                              = (known after apply)
      + 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.example: Creating...
aws_instance.example: Still creating... [10s elapsed]
aws_instance.example: Still creating... [20s elapsed]
aws_instance.example: Still creating... [30s elapsed]
aws_instance.example: Still creating... [40s elapsed]
aws_instance.example: Creation complete after 45s [id=i-05ab4f6a057952bf7]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
leon@192  ~/terraform-variables
```



```
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.example: Destroying... [id=i-05ab4f6a057952bf7]
aws_instance.example: Still destroying... [id=i-05ab4f6a057952bf7, 10s elapsed]
aws_instance.example: Still destroying... [id=i-05ab4f6a057952bf7, 20s elapsed]
aws_instance.example: Still destroying... [id=i-05ab4f6a057952bf7, 30s elapsed]
aws_instance.example: Destruction complete after 32s

Destroy complete! Resources: 1 destroyed.
```



Experiment 5



main.tf | variables.tf

variables.tf > variable "instance_type"

```
variable "region" {
  description = "AWS region"
  default = "us-west-2"
}
variable "ami" {
  description = "AMI ID"
  default = "ami-0c55b159cbfafe1f0"
}
variable "instance_type" {
  description = "EC2 Instance Type"
  default = "t2.small"
}
```

PROBLEMS OUTPUT TERMINAL PORTS DEBUG CONSOLE

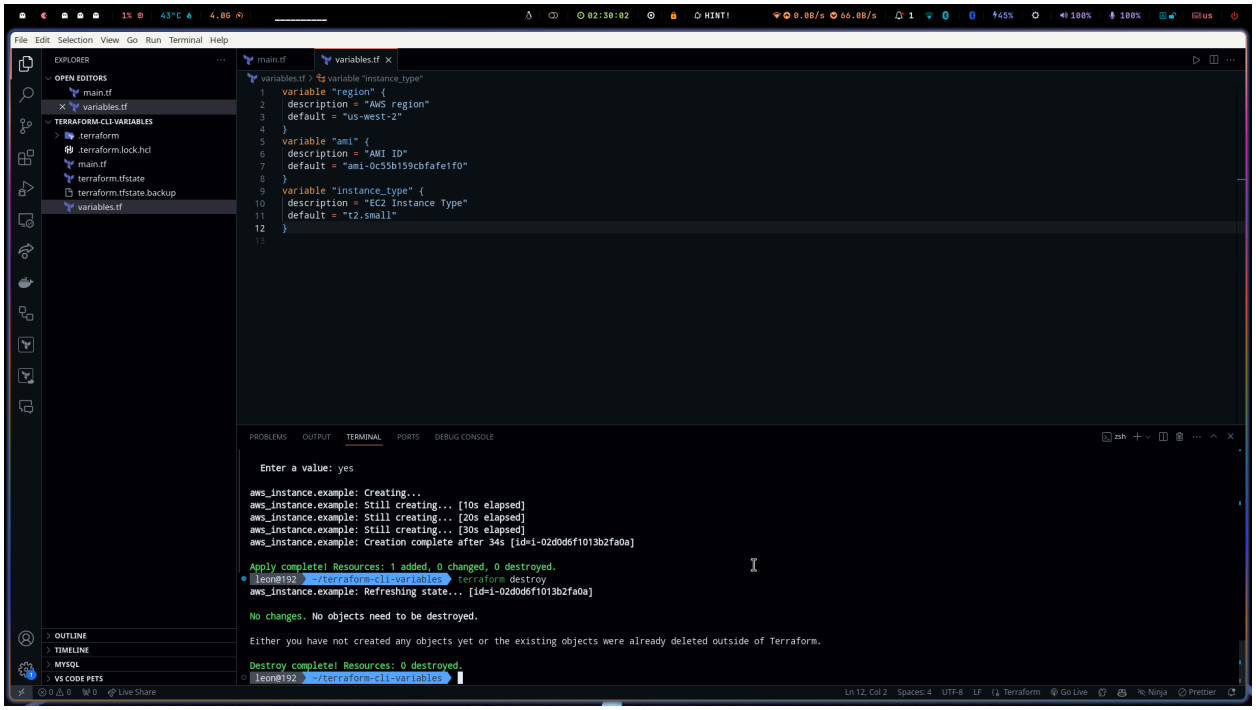
```
      + vpc_security_group_ids               = (known after apply)
    }

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.example: Creating...
aws_instance.example: Still creating... [10s elapsed]
aws_instance.example: Still creating... [20s elapsed]
aws_instance.example: Still creating... [30s elapsed]
aws_instance.example: Creation complete after 34s [id=i-02d0d6f1013b2fa0a]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
leon@192 ~/terraform-cli-variables
```

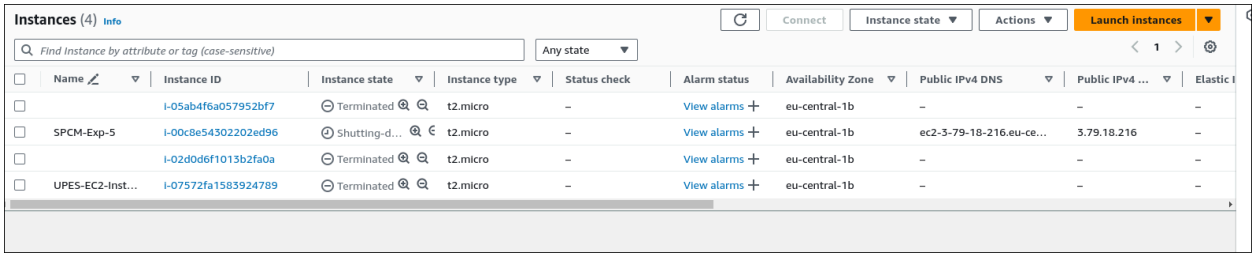
Instances (3) Info

Connect | Instance state | Actions | Launch instances

Find Instance by attribute or tag (case-sensitive) | Any state

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic I
	i-05ab4f6a057952bf7	Terminated	t2.micro	–	View alarms	eu-central-1b	–	–	–
	i-02d0d6f1013b2fa0a	Running	t2.micro	Initializing	View alarms	eu-central-1b	ec2-3-120-237-107.eu-...	3.120.237.107	–
UPES-EC2-Inst...	i-07572fa1583924789	Terminated	t2.micro	–	View alarms	eu-central-1b	–	–	–





Experiment 6