

Lab Exercise 6– Terraform Variables

Objective:

Learn how to define and use variables in Terraform configuration.

Prerequisites:

- Install Terraform on your machine.

Steps:

1. Create a Terraform Directory:

- Create a new directory for your Terraform project.

```
mkdir terraform-variables
```

```
cd terraform-variables
```

2. Create a Terraform Configuration File:

- Create a file named main.tf within your project directory.

main.tf

```
resource "aws_instance" "myinstance-1" {
  ami = var.myami
  instance_type = var.my_instance_type
  count = var.mycount
  tags = {
    Name= "My Instance"
  }
}
```

```
(base) → terraform-variables cat main.tf
resource "aws_instance" "myinstance-1-bhaves" {
  ami = var.myami
  instance_type = var.my_instance_type
  count = var.mycount
  tags = {
    Name = "My Instance"
  }
}

(base) → terraform-variables _
```

3. Define Variables:

- Open a new file named variables.tf. Define variables for region, ami, and instance_type.

variables.tf

```
variable "myami" {
  type = string
  default = "ami-08718895af4dfa033"
}

variable "mycount" {

  type = number
  default = 5
}

variable "my_instance_type" {
  type = string
  default = "t2.micro"
```

```
}  
▶(base) → terraform-variables cat variables.tf  
variable "myami" {  
    type = string  
    default = "ami-00bb6a80f01f03502"  
}  
  
variable "mycount" {  
  
    type = number  
    default = 5  
}  
  
variable "my_instance_type" {  
    type = string  
    default = "t2.micro"  
}  
  
▶(base) → terraform-variables
```

4. Initialize and Apply:

- Run the following Terraform commands to initialize and apply the configuration.

terraform init

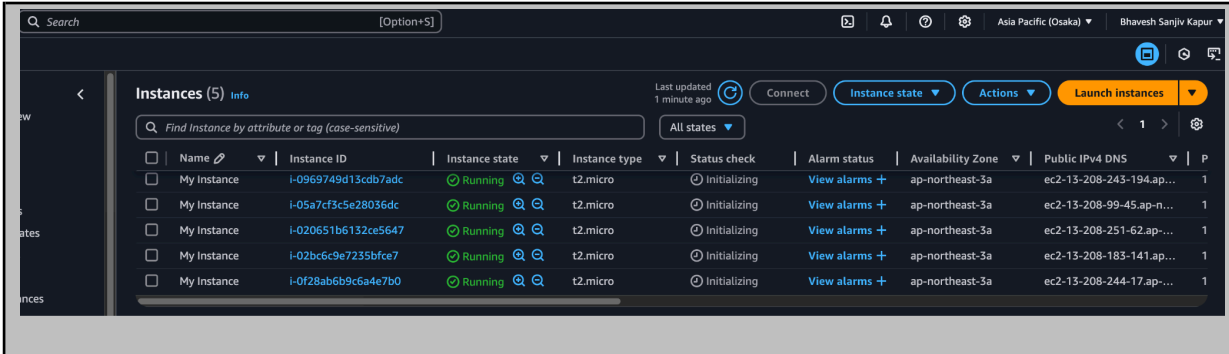
terraform plan

terraform apply -auto-approve

```
Plan: 5 to add, 0 to change, 0 to destroy.
aws_instance.myinstance-1[4]: Creating...
aws_instance.myinstance-1[1]: Creating...
aws_instance.myinstance-1[2]: Creating...
aws_instance.myinstance-1[3]: Creating...
aws_instance.myinstance-1[0]: Creating...
aws_instance.myinstance-1[3]: Still creating... [10s elapsed]
aws_instance.myinstance-1[2]: Still creating... [10s elapsed]
aws_instance.myinstance-1[0]: Still creating... [10s elapsed]
aws_instance.myinstance-1[4]: Still creating... [10s elapsed]
aws_instance.myinstance-1[1]: Still creating... [10s elapsed]
aws_instance.myinstance-1[1]: Still creating... [20s elapsed]
aws_instance.myinstance-1[4]: Still creating... [20s elapsed]
aws_instance.myinstance-1[0]: Still creating... [20s elapsed]
aws_instance.myinstance-1[2]: Still creating... [20s elapsed]
aws_instance.myinstance-1[3]: Still creating... [20s elapsed]
aws_instance.myinstance-1[1]: Creation complete after 22s [id=i-05a7cf3c5e28036dc]
aws_instance.myinstance-1[4]: Creation complete after 23s [id=i-020651b6132ce5647]
aws_instance.myinstance-1[2]: Creation complete after 23s [id=i-02bc6c9e7235bfce7]
aws_instance.myinstance-1[3]: Creation complete after 25s [id=i-0969749d13cdb7adc]
aws_instance.myinstance-1[0]: Creation complete after 25s [id=i-0f28ab6b9c6a4e7b0]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.
(base) → terraform-variables _
```

Observe how the region changes based on the variable override.



Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	P
My Instance	i-0969749d13cdb7adc	Running	t2.micro	Initializing	View alarms +	ap-northeast-3a	ec2-13-208-243-194.ap...	1
My Instance	i-05a7cf3c5e28036dc	Running	t2.micro	Initializing	View alarms +	ap-northeast-3a	ec2-13-208-99-45.ap-n...	1
My Instance	i-020651b6132ce5647	Running	t2.micro	Initializing	View alarms +	ap-northeast-3a	ec2-13-208-251-62.ap...	1
My Instance	i-02bc6c9e7235bfce7	Running	t2.micro	Initializing	View alarms +	ap-northeast-3a	ec2-13-208-183-141.ap...	1
My Instance	i-0f28ab6b9c6a4e7b0	Running	t2.micro	Initializing	View alarms +	ap-northeast-3a	ec2-13-208-244-17.ap...	1

5. Clean Up:

After testing, you can clean up resources.

```
terraform destroy
```

Confirm the destruction by typing yes.

6. Conclusion:

This lab exercise introduces you to Terraform variables and demonstrates how to use them in your configurations. Experiment with different variable values and overrides to understand their impact on the infrastructure provisioning process.