School of Computer Science

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

DEHRADUN, UTTARAKHAND



System Monitoring and Configuration Management

Lab File

(2024)

for

6th Semester

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LAB EXERCISE 4

Aim: Terraform Variables

Step 1: Create a Terraform Configuration File:

```
🔀 File Edit Selection View Go Run Terminal Help
D
      EXPLORER
                          ⋈ Welcome
                                         main.tf
                                                   × instance.tf
     ∨ SPCM-L... 🔓 🛱 ひ 🗗
                          🦖 main.tf > ધ terraform
                             1 terraform {
Q
       > .terraform
                                required_providers {
      aws = {
source = "hashicorp/aws"
      instance.tf
      main.tf
                                 version = "5.31.0"
₽
<del>L</del>
```

Step 2: Define Variables:

```
30
     variable "instance_ty"{
         type = string
31
         default="t2.micro"
32
34
     variable "ami"{
36
         type = string
37
         default="ami-03f4878755434977f"
38
40
41
     variable "instance_count"{
42
         type = number
43
         default=1
44
45
```

Step 3: Use Variables in instance.tf file:

```
EXPLORER
                       Main.tf
                                       Instance.tf X
                        🚩 Instance.tf > ધ variable "ami" > 🖭 default
> OPEN EDITORS
                              resource "aws_instance" "My-Instnace-01" {

✓ SPCM_LAB_TERRAFORM

                                  instance type = var.instance ty

✓ .terraform \ providers...

                                  ami = var.ami
  ≡ terraform-provider-...
                                  count= var.instance count
 tags = {
 1 Instance.tf
                                    Name = "UPES-EC2-Instnace"
 Main.tf
 {} terraform.tfstate
 resource "aws instance" "My-Instnace-02" {
                                   instance_type = var.instance_ty
                                  ami = var.ami
                                  count= var.instance count
                                  tags = {
                                   Name = "UPES-EC2-Instnace"
                              resource "aws_instance" "My-Instnace-03" {
                                  instance_type = var.instance_ty
                                  ami = var.ami
                                  count= var.instance count
                                  tags = {
                                    Name = "UPES-EC2-Instnace"
```

Step 4: Now do terraform initialize:

```
Microsoft Windows [Version 10.0.22621.3007]
(c) Microsoft Corporation. All rights reserved.

F:\SEM 6\SPCM_LAB\SPCM_LAB_TERRAFORM>terraform validate
Success! The configuration is valid.
```

Step 5: Now perform Terraform plan:

```
* tags_all
* "Name" = "UPES-EC2-Instnace"
} tenancy
tenancy
tuser_data
user_data
user_
```

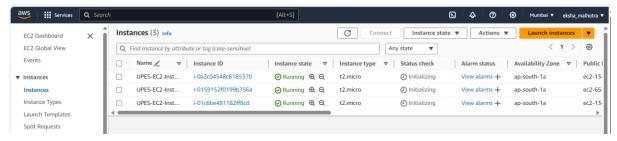
```
Do you want to perform these actions?

Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.

Enter a value: yes

aws_instance.My-Instnace-03[0]: Creating...
aws_instance.My-Instnace-02[0]: Creating...
aws_instance.My-Instnace-02[0]: Creating...
aws_instance.My-Instnace-02[0]: Still creating... [10s elapsed]
aws_instance.My-Instnace-01[0]: Still creating... [10s elapsed]
aws_instance.My-Instnace-03[0]: Still creating... [10s elapsed]
aws_instance.My-Instnace-02[0]: Still creating... [20s elapsed]
aws_instance.My-Instnace-03[0]: Still creating... [20s elapsed]
aws_instance.My-Instnace-01[0]: Still creating... [20s elapsed]
aws_instance.My-Instnace-02[0]: Creation complete after 26s [id=i-0a2c04548c6185370]
aws_instance.My-Instnace-01[0]: Creation complete after 27s [id=i-0159152f0199b756a]
aws_instance.My-Instnace-03[0]: Still creating... [30s elapsed]
aws_instance.My-Instnace-03[0]: Creation complete after 38s [id=i-01c6be481182ff8cd]

Apply complete! Resources: 3 added, 0 changed, 0 destroyed.
```



Step 6: Now perform Terraform Destroy to clean up:

```
- cpu_threads_per_core
- disable_api_stop
- disable
```

```
Plan: 0 to add, 0 to change, 3 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-Instnace-03[0]: Destroying... [id=i-01c6be481182ff8cd]
aws_instance.My-Instnace-01[0]: Destroying... [id=i-0159152f0199b756a]
aws_instance.My-Instnace-02[0]: Destroying... [id=i-0a2c04548c6185370]
aws_instance.My-Instnace-03[0]: Still destroying... [id=i-01c6be481182ff8cd, 10s elapsed] aws_instance.My-Instnace-01[0]: Still destroying... [id=i-0159152f0199b756a, 10s elapsed]
aws_instance.My-Instnace-02[0]: Still destroying... [id=i-0a2c04548c6185370, 10s elapsed] aws_instance.My-Instnace-02[0]: Still destroying... [id=i-0a2c04548c6185370, 20s elapsed] aws_instance.My-Instnace-03[0]: Still destroying... [id=i-01c6be481182ff8cd, 20s elapsed]
aws_instance.My-Instnace-01[0]: Still destroying... [id=i-0159152f0199b756a, 20s elapsed]
aws_instance.My-Instnace-03[0]: Still destroying... [id=i-01c6be481182ff8cd, 30s elapsed]
aws_instance.My-Instnace-02[0]: Still destroying... [id=i-0a2c04548c6185370, 30s elapsed] aws_instance.My-Instnace-01[0]: Still destroying... [id=i-0159152f0199b756a, 30s elapsed]
aws_instance.My-Instnace-01[0]: Destruction complete after 31s
aws_instance.My-Instnace-02[0]: Still destroying... [id=i-0a2c04548c6185370, 40s elapsed] aws_instance.My-Instnace-03[0]: Still destroying... [id=i-01c6be481182ff8cd, 40s elapsed]
aws_instance.My-Instnace-02[0]: Destruction complete after 41s
aws_instance.My-Instnace-03[0]: Destruction complete after 41s
Destroy complete! Resources: 3 destroyed.
```

