SPCM LAB

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Lab Exercise 9– Creating Multiple EC2 Instances with for_each in Terraform

1. Create a Terraform Directory:

   • Create a file named main.tf

```
terraform-ec2-for-each > 🌀 main.tf
  6    variable "instances" {
 14      ami = "ami-0e670eb768a5fc3d4"
 15      instance_type = "t2.micro "
 16      },
 17      "instance3" = {
 18      ami = "ami-0e670eb768a5fc3d4"
 19      instance_type = "t2.micro "
 20      }
 21      }
 22    }
 23    resource "aws_instance" "ec2_instances" {
 24      for_each = var.instances
 25      ami = var.instances[each.key].ami
 26      instance_type = var.instances[each.key].instance_type
 27      tags = {
 28      Name = "EC2-Instance-${each.key}"
 29      }
 30    }
 31
```

2. Intitalize and apply

```
>
PS D:\6 th sem\SPCM\SPCM LAB\teraform lab files\terraform-ec2-for-each
> terraform init

Initializing the backend...

Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v5.38.0...
- Installed hashicorp/aws v5.38.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the pr
ovider
selections it made above. Include this file in your version control re
pository
so that Terraform can guarantee to make the same selections by default
 when
you run "terraform init" in the future.

Terraform has been successfully initialized!
```

```
Plan: 2 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.ec2_instances["instance3"]: Creating...
aws_instance.ec2_instances["instance2"]: Creating...
aws_instance.ec2_instances["instance2"]: Still creating... [10s ela
d]
aws_instance.ec2_instances["instance3"]: Still creating... [10s ela
d]
aws_instance.ec2_instances["instance2"]: Still creating... [20s ela
d]
aws_instance.ec2_instances["instance3"]: Still creating... [20s ela
d]
aws_instance.ec2_instances["instance2"]: Creation complete after 22
id=i-08b22368fc23e302e]
aws_instance.ec2_instances["instance3"]: Still creating... [30s ela
d]
aws_instance.ec2_instances["instance3"]: Creation complete after 33
id=i-05dcbbe18956b71c0]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
```

AWS verify

Instances (3) Info								
							🔄	Connect	Instance state ▽	Actions ▽	**Launch instances** ▼

☐	Name ✎	▽	Instance ID	Instance state	▽	Instance type	▽	Status check	Alarm status	Availability Zone	▽	Public IPv4 DN
☐	EC2-Instance-i...		i-05dcbbe18956b71c0	⊘ Running ⊕ ⊖		t2.micro		⊘ 2/2 checks passed	View alarms +	ap-south-1b		ec2-13-233-15
☐	EC2-Instance-i...		i-08b22368fc23e302e	⊘ Running ⊕ ⊖		t2.micro		⊘ 2/2 checks passed	View alarms +	ap-south-1b		ec2-13-126-11
☐	EC2-Instance-i...		i-024d0e5c173a685d6	⊘ Running ⊕ ⊖		t2.micro		⊘ 2/2 checks passed	View alarms +	ap-south-1b		ec2-52-66-249

Clean up

```
cbbe18956b71c0, 10s elapsed]
aws_instance.ec2_instances["instance2"]: Still destroying... [id=i-08b
22368fc23e302e, 10s elapsed]
aws_instance.ec2_instances["instance3"]: Still destroying... [id=i-05d
cbbe18956b71c0, 20s elapsed]
aws_instance.ec2_instances["instance1"]: Still destroying... [id=i-024
d0e5c173a685d6, 20s elapsed]
aws_instance.ec2_instances["instance2"]: Still destroying... [id=i-08b
22368fc23e302e, 20s elapsed]
aws_instance.ec2_instances["instance2"]: Still destroying... [id=i-08b
22368fc23e302e, 30s elapsed]
aws_instance.ec2_instances["instance3"]: Still destroying... [id=i-05d
cbbe18956b71c0, 30s elapsed]
aws_instance.ec2_instances["instance1"]: Still destroying... [id=i-024
d0e5c173a685d6, 30s elapsed]
aws_instance.ec2_instances["instance1"]: Destruction complete after 31
s
aws_instance.ec2_instances["instance2"]: Destruction complete after 31
s
aws_instance.ec2_instances["instance3"]: Still destroying... [id=i-05d
cbbe18956b71c0, 40s elapsed]
aws_instance.ec2_instances["instance3"]: Destruction complete after 41
s


Destroy complete! Resources: 3 destroyed.
PS D:\6 th sem\SPCM\SPCM LAB\teraform lab files\terraform-ec2-for-each
```

Instances (3) Info						
				🔄	Connect	Instance state ▽	Actions ▽	**Launch instances**

☐	Name ✎	▽	Instance ID	Instance state	▽	Instance type	▽	Status check	Alarm status	Availability Zone	▽	Publ
☐	EC2-Instance-i...		i-05dcbbe18956b71c0	⊖ Terminated ⊕ ⊖		t2.micro		–	View alarms +	ap-south-1b		–
☐	EC2-Instance-i...		i-08b22368fc23e302e	⊖ Terminated ⊕ ⊖		t2.micro		–	View alarms +	ap-south-1b		–
☐	EC2-Instance-i...		i-024d0e5c173a685d6	⊖ Terminated ⊕ ⊖		t2.micro		–	View alarms +	ap-south-1b		–