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Assignment 2 – Terraform

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Terraform PPT

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Case Study – Terraform

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Terraform Assignment - 2

You have been asked to:

- Destroy the previous deployment
- Create a new EC2 instance with an Elastic IP

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```
resource "aws_instance" "jenkins_instance" {
  instance_type = "t2.micro"
  vpc_security_group_ids = [ "sg-00c36799c2c7a977d" ]
  tags = {
    Name = "jenkins_instance"
  }
  key_name = "hotfix"
  ami = "ami-04505e74c0741db8d"
  availability_zone = "us-east-1c"
  subnet_id = "subnet-0224f7014f970ee00"
}
```

```
resource "aws_eip" "lb" {
  instance = "i-0a101636015beb376"
  vpc      = true
}
```



```
root@ip-172-31-93-95:~# ls
snap  terraform
root@ip-172-31-93-95:~# cd terraform
root@ip-172-31-93-95:~/terraform# ls
creds.tf  ec2.tf  terraform.tfstate  terraform.tfstate.backup
root@ip-172-31-93-95:~/terraform# vi creds.tf
root@ip-172-31-93-95:~/terraform# vi ec2.tf
root@ip-172-31-93-95:~/terraform# vi ec2.tf
root@ip-172-31-93-95:~/terraform# terraform plan
```



```
root@ip-172-31-93-95:~/terraform# vi ec2.tf
root@ip-172-31-93-95:~/terraform# 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.jenkins_instance will be created
+ resource "aws_instance" "jenkins_instance" {
  + ami                  = "ami-04505e74c0741db8d"
  + arn                  = (known after apply)
  + associate_public_ip_address = (known after apply)
  + availability_zone     = "us-east-1c"
  + cpu_core_count       = (known after apply)
  + cpu_threads_per_core = (known after apply)
  + disable_api_termination = (known after apply)
  + ebs_optimized        = (known after apply)
  + get_password_data     = false
  + host_id               = (known after apply)
  + id                   = (known after apply)
  + instance_initiated_shutdown_behavior = (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              = "hotfix"
  + 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)
```

```
root@ip-172-31-93-95:~/terraform# 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.jenkins_instance will be created

```
+ resource "aws_instance" "jenkins_instance" {  
  + ami                  = "ami-04505e74c0741db8d"  
  + arn                  = (known after apply)  
  + associate_public_ip_address = (known after apply)  
  + availability_zone     = "us-east-1c"  
  + cpu_core_count        = (known after apply)  
  + cpu_threads_per_core   = (known after apply)  
  + disable_api_termination = (known after apply)  
  + ebs_optimized          = (known after apply)  
  + get_password_data      = false  
  + host_id                = (known after apply)  
  + id                    = (known after apply)  
  + instance_initiated_shutdown_behavior = (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               = "hotfix"  
  + 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)
```

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

root@ip-172-31-93-95:~/terraform# vi ec2.tf

root@ip-172-31-93-95:~/terraform# terraform plan

aws_instance.jenkins_instance: Refreshing state... [id=i-0a101636015beb376]

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_eip.lb will be created

```
+ resource "aws_eip" "lb" {
  + allocation_id      = (known after apply)
  + association_id     = (known after apply)
  + carrier_ip         = (known after apply)
  + customer_owned_ip  = (known after apply)
  + domain             = (known after apply)
  + id                 = (known after apply)
  + instance           = "i-0a101636015beb376"
  + network_border_group = (known after apply)
  + network_interface  = (known after apply)
  + private_dns        = (known after apply)
  + private_ip         = (known after apply)
  + public_dns         = (known after apply)
  + public_ip          = (known after apply)
  + public_ipv4_pool    = (known after apply)
  + tags_all           = (known after apply)
  + vpc                = true
}
```

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



```
root@ip-172-31-93-95:~/terraform# terraform apply
aws_instance.jenkins_instance: Refreshing state... [id=i-0a101636015beb376]
```

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_eip.lb will be created

```
+ resource "aws_eip" "lb" {
  + allocation_id      = (known after apply)
  + association_id     = (known after apply)
  + carrier_ip         = (known after apply)
  + customer_owned_ip  = (known after apply)
  + domain             = (known after apply)
  + id                 = (known after apply)
  + instance           = "i-0a101636015beb376"
  + network_border_group = (known after apply)
  + network_interface  = (known after apply)
  + private_dns        = (known after apply)
  + private_ip         = (known after apply)
  + public_dns         = (known after apply)
  + public_ip          = (known after apply)
  + public_ipv4_pool    = (known after apply)
  + tags_all           = (known after apply)
  + vpc                = true
}
```

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

Do you want to perform these actions?

Terraform will perform the actions described above.


```
# aws_eip.lb will be created
+ resource "aws_eip" "lb" {
  + allocation_id      = (known after apply)
  + association_id     = (known after apply)
  + carrier_ip         = (known after apply)
  + customer_owned_ip  = (known after apply)
  + domain             = (known after apply)
  + id                 = (known after apply)
  + instance            = "i-0a101636015beb376"
  + network_border_group = (known after apply)
  + network_interface   = (known after apply)
  + private_dns         = (known after apply)
  + private_ip          = (known after apply)
  + public_dns          = (known after apply)
  + public_ip           = (known after apply)
  + public_ipv4_pool     = (known after apply)
  + tags_all            = (known after apply)
  + vpc                 = true
}
```

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_eip.lb: Creating...

aws_eip.lb: Creation complete after 2s [id=eipalloc-0930316906c7d64d8]

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

root@ip-172-31-93-95:~/terraform#



Inbox (16,246) - mohit.rathore40X

Instances | EC2 Management CoX

Start Course - Intellipaat

aws_eip | Resources | hashicorpX

←

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https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:

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aws

Services

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⏪ 1 ⏩ ⚙️

<input type="checkbox"/>	Name ▾	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status	Availability Z
<input type="checkbox"/>	Docker	i-063a1a348b7acabae	⏸ Stopped 🔍	t2.micro	–	No alarms +	us-east-1a
<input type="checkbox"/>	kuber-M	i-0884689af8a0a7506	⏸ Stopped 🔍	t2.medium	–	No alarms +	us-east-1c
<input type="checkbox"/>	K-wroker-use	i-04de2ad14be77ec01	⏸ Stopped 🔍	t2.medium	–	No alarms +	us-east-1c
<input type="checkbox"/>	Terraform-use	i-095e77b80bc648464	✅ Running 🔍	t2.micro	✅ 2/2 checks passed	No alarms +	us-east-1c
<input checked="" type="checkbox"/>	jenkins_instance	i-0a101636015beb376	✅ Running 🔍	t2.micro	–	No alarms +	us-east-1c
<input type="checkbox"/>	vpc	i-0c15afad1b2e0d58e	⏸ Terminated 🔍	t2.micro	–	No alarms +	us-east-1b

Instance: i-0a101636015beb376 (jenkins_instance)

⚙️ ✕

Select an instance above

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

▼ Instance summary Info

Instance ID

📄

✅ Instance ID copied

kins_instance)

Public IPv4 address

📄

54.209.65.88 | open address 🔗

Private IPv4 addresses

📄

172.31.90.117

Feedback

English (US) ▾

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📅 01/04/2022


```
root@ip-172-31-93-95:~/terraform# terraform destroy
aws_instance.jenkins_instance: Refreshing state... [id=i-0a101636015beb376]
aws_eip.lb: Refreshing state... [id=eipalloc-0930316906c7d64d8]
```

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_eip.lb will be **destroyed**

```
- resource "aws_eip" "lb" {
  - allocation_id      = "eipalloc-0930316906c7d64d8" -> null
  - association_id     = "eipassoc-028264684efd8585f" -> null
  - domain             = "vpc" -> null
  - id                 = "eipalloc-0930316906c7d64d8" -> null
  - instance           = "i-0a101636015beb376" -> null
  - network_border_group = "us-east-1" -> null
  - network_interface   = "eni-0d945db5522a63566" -> null
  - private_dns         = "ip-172-31-90-117.ec2.internal" -> null
  - private_ip          = "172.31.90.117" -> null
  - public_dns          = "ec2-35-173-86-251.compute-1.amazonaws.com" -> null
  - public_ip           = "35.173.86.251" -> null
  - public_ipv4_pool     = "amazon" -> null
  - tags               = {} -> null
  - tags_all            = {} -> null
  - vpc                 = true -> null
}
```

aws_instance.jenkins_instance will be **destroyed**

```
- resource "aws_instance" "jenkins_instance" {
  - ami              = "ami-04505e74c0741db8d" -> null
  - arn              = "arn:aws:ec2:us-east-1:342508047718:instance/i-0a101636015beb376" -> null
}
```

