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LIVE CLASSES

STUDY MATERIALS

Module 10 - Terraform

Terraform PPT

Assignment 1 - Terraform

Assignment 2 - Terraform

Assignment 3 - Terraform

Assignment 4 - Terraform


Assignment 5 - Terraform

Case Study - Terraform

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DevOps Certification Training



# Terraform Assignment - 4

You have been asked to:

- Destroy the previous deployments
- Create a VPC with the required components using Terraform
- Deploy an EC2 instance inside the VPC

Download Attachment

}



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

```
resource "aws_vpc" "main" {
```

```
    cidr_block = "20.0.0.0/16"
```

```
    tags={
```

```
        Name = "demo_vpc"
```

```
}
```

```
}
```

```
resource "aws_subnet" "main" {
```

```
    vpc_id      = "vpc-002f2bb0112437b86"
```

```
    cidr_block = "20.0.1.0/24"
```

```
    tags = {
```

```
        Name = "Main"
```

```
}
```

```
}
```

```
resource "aws_instance" "vpc" {
```

```
    instance_type = "t2.micro"
```

```
    vpc_security_group_ids = [ "sg-0551b860c4bf4f424" ]
```

```
    tags = {
```

```
        Name = "vpc"
```

```
}
```



```
Name = "demo_vpc"
}
}

resource "aws_subnet" "main" {

  vpc_id      = "vpc-002f2bb0112437b86"

  cidr_block = "20.0.1.0/24"

  tags = {

    Name = "Main"

  }

}

resource "aws_instance" "vpc" {
  instance_type = "t2.micro"
  vpc_security_group_ids = [ "sg-0551b860c4bf4f424" ]
  tags = {
    Name = "vpc"
  }
  key_name = "hotfix"
  ami = "ami-04505e74c0741db8d"
  availability_zone = "us-east-1b"
  subnet_id = "subnet-0165bce0ab1c8367a"
}
```

-- INSERT --

37,2

Bot





```
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  terraform.tfstate  terraform.tfstate.backup  vpc.tf
root@ip-172-31-93-95:~/terraform# vi creds.tf
root@ip-172-31-93-95:~/terraform# vi vpc.tf
root@ip-172-31-93-95:~/terraform# █
```



```
root@ip-172-31-93-95:~/terraform# vi vpc.tf
root@ip-172-31-93-95:~/terraform# terraform apply
aws_vpc.main: Refreshing state... [id=vpc-002f2bb0112437b86]
aws_subnet.main: Refreshing state... [id=subnet-0165bce0ab1c8367a]
```

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.vpc will be created
+ resource "aws_instance" "vpc" {
  + ami                  = "ami-04505e74c0741db8d"
  + arn                  = (known after apply)
  + associate_public_ip_address = (known after apply)
  + availability_zone     = "us-east-1b"
  + 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)
```

```
}  
  
+ root_block_device {  
  + delete_on_termination = (known after apply)  
  + device_name            = (known after apply)  
  + encrypted              = (known after apply)  
  + iops                    = (known after apply)  
  + kms_key_id             = (known after apply)  
  + tags                    = (known after apply)  
  + throughput             = (known after apply)  
  + volume_id              = (known after apply)  
  + volume_size            = (known after apply)  
  + volume_type            = (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.vpc: Creating...

aws\_instance.vpc: Still creating... [10s elapsed]

aws\_instance.vpc: Still creating... [20s elapsed]

aws\_instance.vpc: Still creating... [30s elapsed]

aws\_instance.vpc: Still creating... [40s elapsed]

aws\_instance.vpc: Creation complete after 41s [id=i-09e5b5dc7e22eef52]

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

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



regarding terraform script. X

Gmail - regarding terraform X

EC2 Management Console X

Your VPCs | VPC Managen X

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https://us-east-1.console.aws.amazon.com/vpc/home?region=us-east-1#vpcs:

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New VPC Experience

Tell us what you think

Gateways

Carrier Gateways

DHCP Options Sets

Elastic IPs

Managed Prefix Lists

Endpoints New

Endpoint Services

NAT Gateways

Peering Connections

SECURITY

Network ACLs

Security Groups

NETWORK ANALYSIS

Reachability Analyzer

Network Access Analyzer

DNS FIREWALL

Rule Groups New

Your VPCs (1/3) Info

🔄

Actions ▾

Create VPC

📄

🔍 Filter VPCs

< 1 > ⚙️

<input type="checkbox"/>	Name ▾	VPC ID ▾	State ▾	IPv4 CIDR ▾	IPv6 CIDR
<input type="checkbox"/>	-	vpc-07422ea0339907ce5	🟢 Available	172.31.0.0/16	-
<input checked="" type="checkbox"/>	demo_vpc	vpc-002f2bb0112437b86	🟢 Available	20.0.0.0/16	-
<input type="checkbox"/>	3-tier architecture	vpc-03b703bd043536472	🟢 Available	10.0.0.0/16	-

< [Progress Bar] >

⏏ ⏏ ⏏

vpc-002f2bb0112437b86 / demo\_vpc

Details

CIDRs

Flow logs

Tags

Details

VPC ID

📄 vpc-002f2bb0112437b86

State

🟢 Available

DNS hostnames

Disabled

DNS resolution

Enabled

Tenancy

DHCP options set

Main route table

Main network ACL

Feedback

English (US) ▾

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EC2 Management Console

Subnets | VPC Management

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New VPC Experience

Tell us what you think

VPC Dashboard

EC2 Global View New

Filter by VPC:

Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs

Subnets

Route Tables

Internet Gateways

Egress Only Internet Gateways

Carrier Gateways

DHCP Options Sets

Elastic IPs

Managed Prefix Lists

Endpoints New

Subnets (1/8) Info

🔄

Actions

Create subnet

🔍 Filter subnets

< 1 > ⚙️

<input type="checkbox"/>	-	subnet-09cf465f8a9d74f2f	🟢 Available	vpc-07422ea0339907ce5	172.31.0.0/20
<input checked="" type="checkbox"/>	Main	subnet-0165bce0ab1c8367a	🟢 Available	vpc-002f2bb0112437b86   de...	20.0.1.0/24

Details

Subnet ID

📄 subnet-0165bce0ab1c8367a

Available IPv4 addresses

📄 250

Network border group

📄 us-east-1

Default subnet

Subnet ARN

📄 arn:aws:ec2:us-east-1:342508047718:subnet/subnet-0165bce0ab1c8367a

IPv6 CIDR

-

VPC

vpc-002f2bb0112437b86 |

State

🟢 Available

Availability Zone

📄 us-east-1b

Route table

rtb-01f75e492ae9c6275

Auto-assign IPv6 address

IPv4 CIDR

📄 20.0.1.0/24

Availability Zone ID

📄 use1-az1

Network ACL

acl-0cb936a672ccabb9a

Auto-assign customer-owned IPv4

Feedback

English (US)

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New EC2 Experience

Tell us what you think

✕

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

Instances New

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

Instances (1/5) Info

🔄

Connect

Instance state ▾

Actions ▾

Launch instances ▾

🔍 Search

< 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"/>	vpc	i-09e5b5dc7e22eef52	✅ Running 🔍	t2.micro	✅ 2/2 checks passed	No alarms +	us-east-1b

Instance: i-09e5b5dc7e22eef52 (vpc)

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Select an instance above

Details

Security

Networking

Storage

Status checks

Monitoring

Tags

▼ Instance summary Info

Instance ID

📄 i-09e5b5dc7e22eef52 (vpc)

IPv6 address

–

Public IPv4 address

–

Instance state

✅ Running

Private IPv4 addresses

📄 20.0.1.133

Public IPv4 DNS

–

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