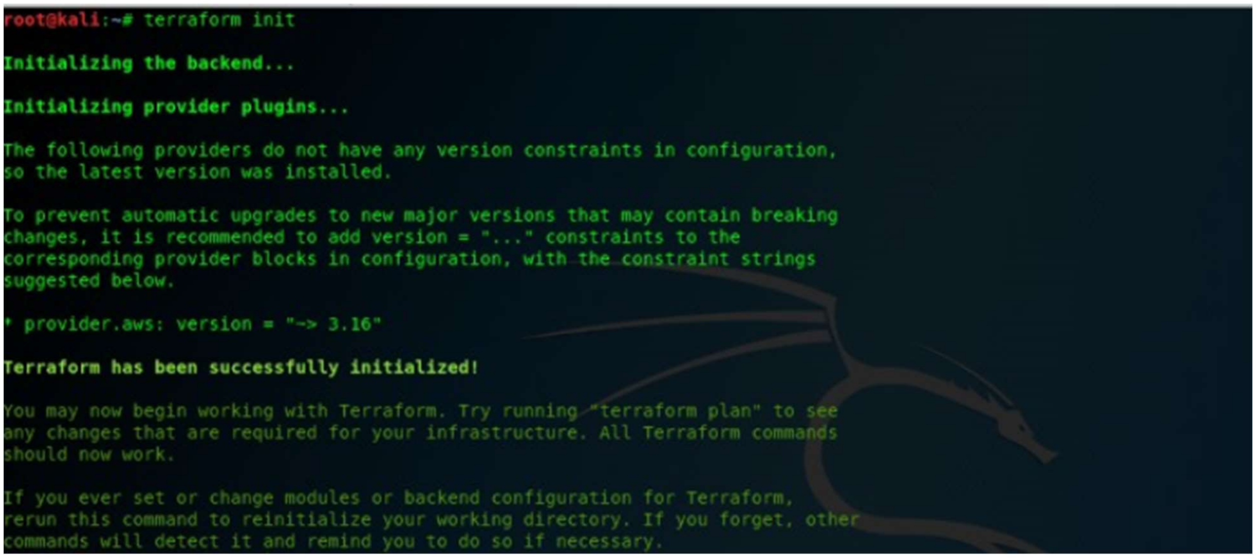
ASSIGNMENT -1 SPCM

Terraform scripts to perform following tasks on AWS

cloud Platform

1. Creating two t2.micro ec2 instances



```
root@kali:~# terraform init

Initializing the backend...

Initializing provider plugins...

The following providers do not have any version constraints in configuration,
so the latest version was installed.

To prevent automatic upgrades to new major versions that may contain breaking
changes, it is recommended to add version = "..." constraints to the
corresponding provider blocks in configuration, with the constraint strings
suggested below.

* provider.aws: version = "~> 3.16"

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
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```
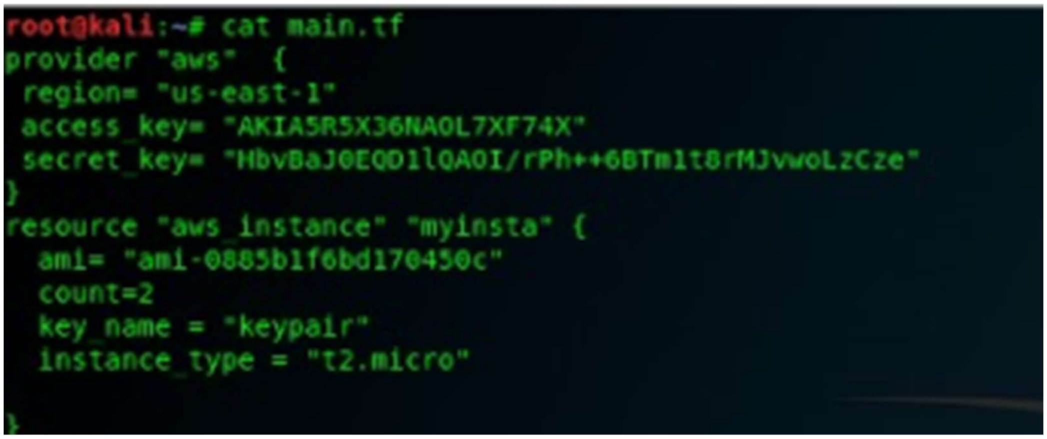
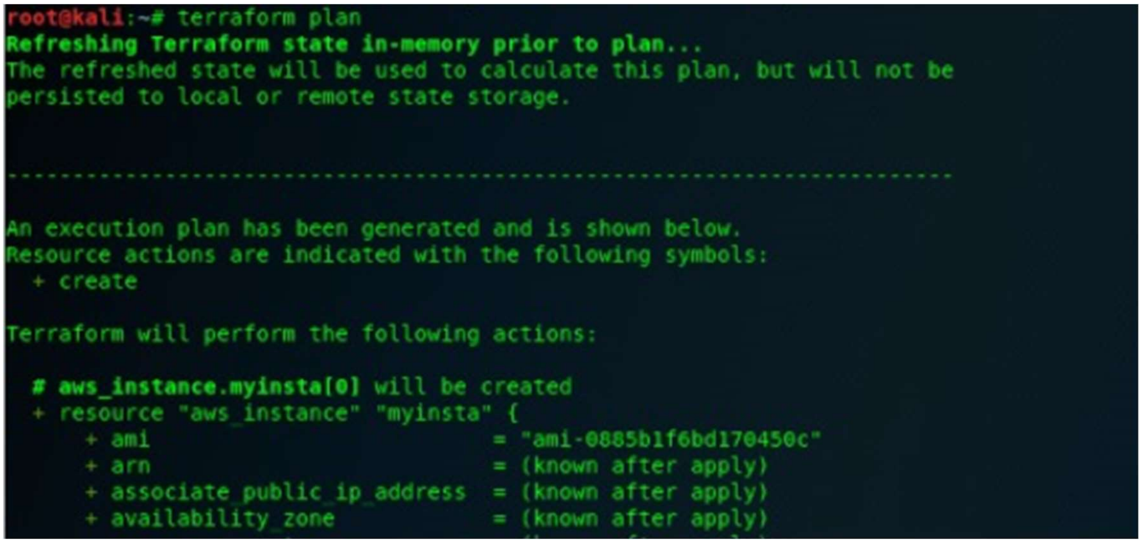
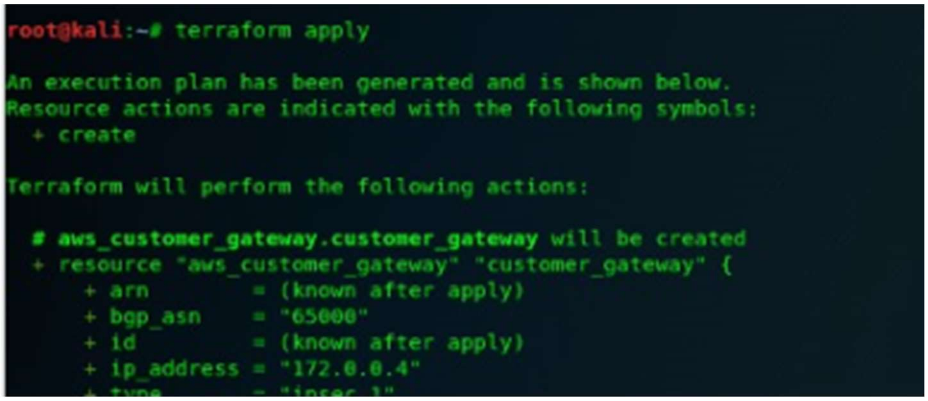



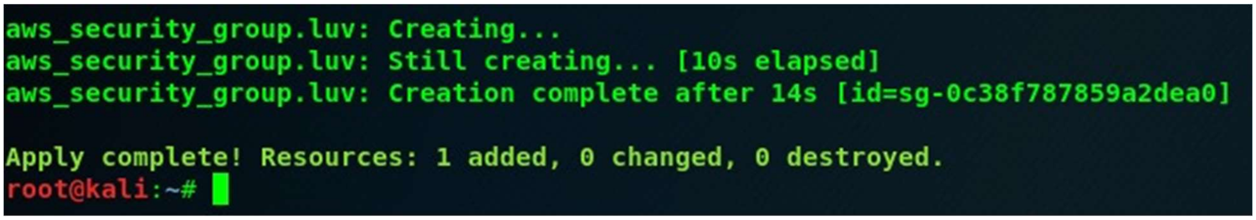
```
root@kali:~# cat main.tf
provider "aws"  {
 region= "us-east-1"
 access_key= "AKIA5R5X36NAOL7XF74X"
 secret_key= "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"
}
resource "aws_instance" "myinsta" {
  ami= "ami-0885b1f6bd170450c"
  count=2
  key_name = "keypair"
  instance_type = "t2.micro"

}
```



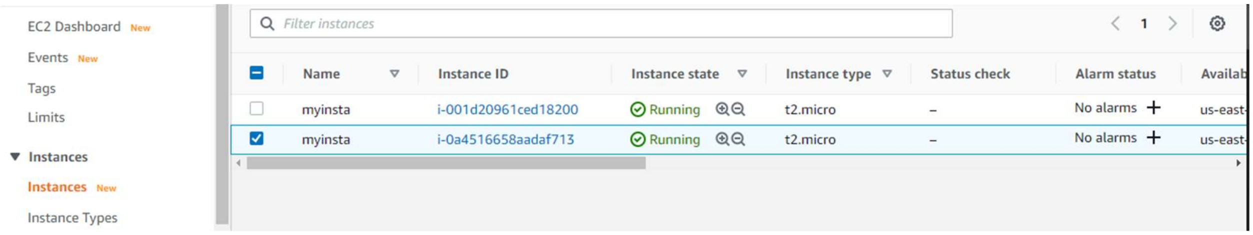
```
root@kali:~# terraform plan
Refreshing Terraform state in-memory prior to plan...
The refreshed state will be used to calculate this plan, but will not be
persisted to local or remote state storage.


------------------------------------------------------------------------

An execution plan has been generated and is shown below.
Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_instance.myinsta[0] will be created
  + resource "aws_instance" "myinsta" {
      + ami                          = "ami-0885b1f6bd170450c"
      + arn                          = (known after apply)
      + associate_public_ip_address  = (known after apply)
      + availability_zone            = (known after apply)
```



```
root@kali:~# terraform apply

An execution plan has been generated and is shown below.
Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_customer_gateway.customer_gateway will be created
  + resource "aws_customer_gateway" "customer_gateway" {
      + arn        = (known after apply)
      + bgp_asn    = "65000"
      + id         = (known after apply)
      + ip_address = "172.0.0.4"
      + type       = "ipsec.1"
```

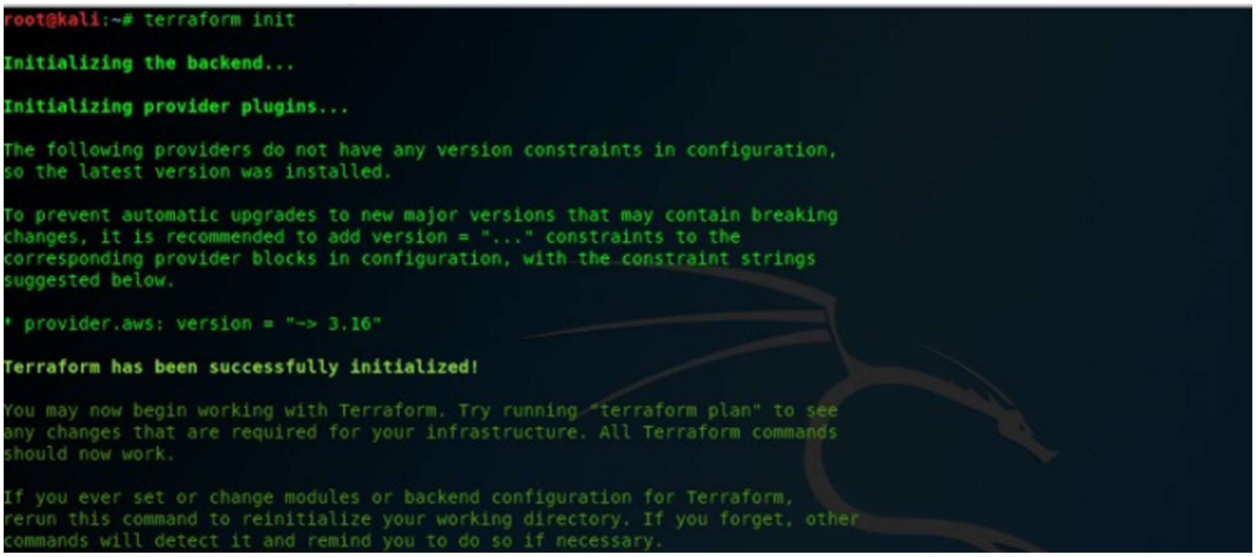


```
aws_security_group.luv: Creating...
aws_security_group.luv: Still creating... [10s elapsed]
aws_security_group.luv: Creation complete after 14s [id=sg-0c38f787859a2dea0]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
root@kali:~#
```



☐	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availab
☐	myinsta	i-001d20961ced18200	✓ Running	t2.micro	–	No alarms +	us-east
☑	myinsta	i-0a4516658aadaf713	✓ Running	t2.micro	–	No alarms +	us-east

2. Creating a VPN on AWS



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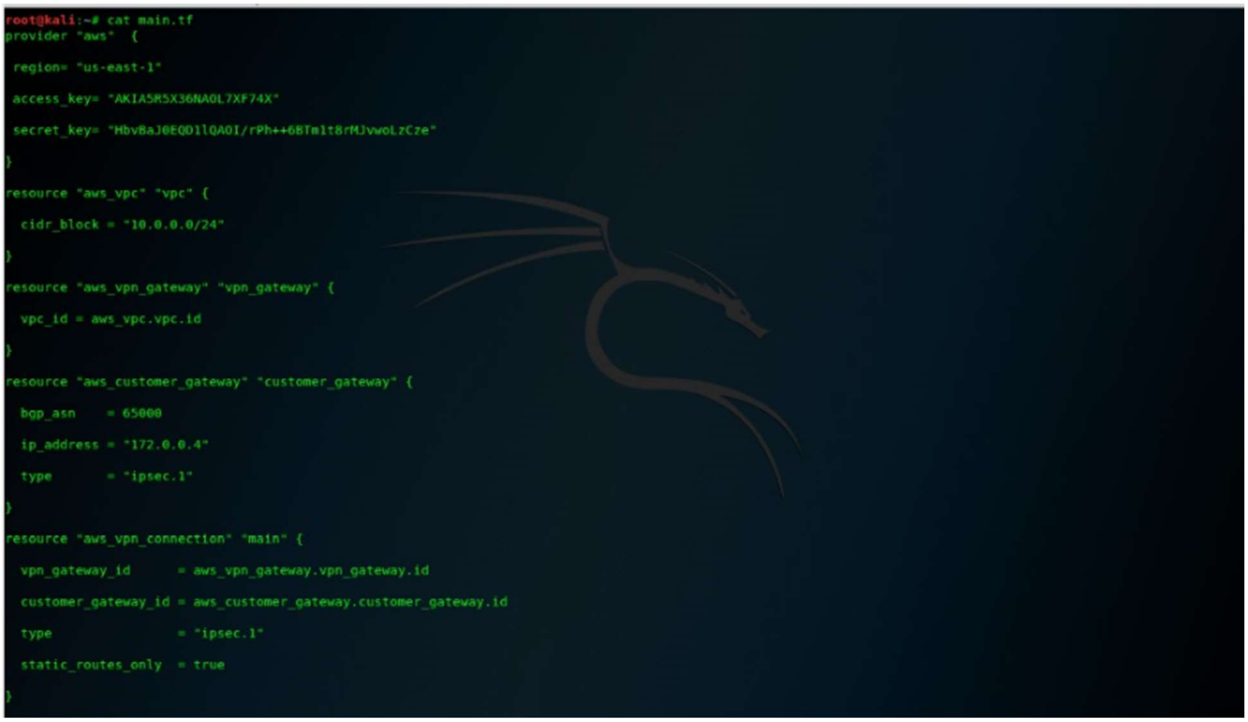
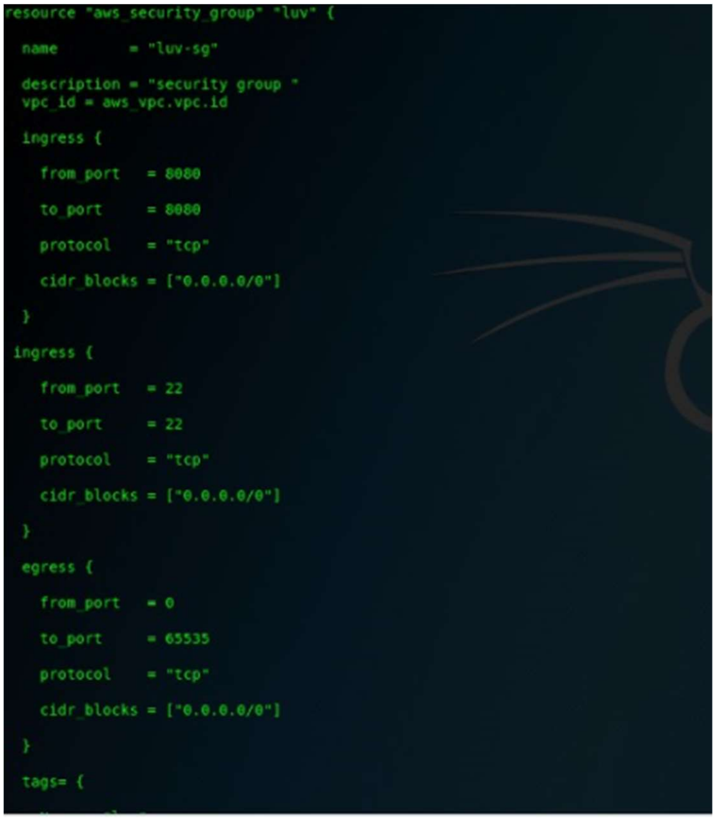
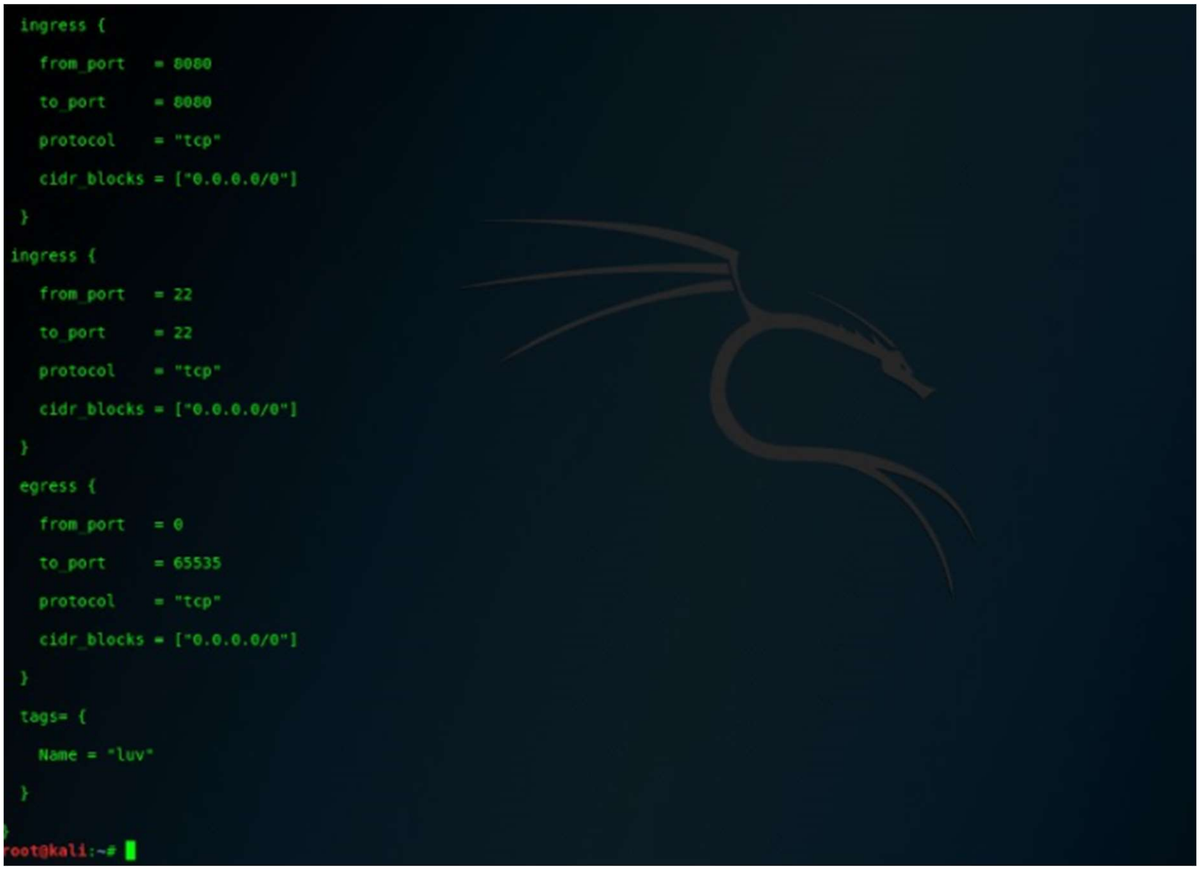


```
root@kali:~# cat main.tf
provider "aws"  {

 region= "us-east-1"

 access_key= "AKIA5R5X36NA0L7XF74X"

 secret_key= "HbvBaJ0EQD1lQA0I/rPh++6BTmlt8rMJvwoLzCze"

}

resource "aws_vpc" "vpc" {

  cidr_block = "10.0.0.0/24"

}

resource "aws_vpn_gateway" "vpn_gateway" {

  vpc_id = aws_vpc.vpc.id

}

resource "aws_customer_gateway" "customer_gateway" {

  bgp_asn    = 65000

  ip_address = "172.0.0.4"

  type       = "ipsec.1"

}

resource "aws_vpn_connection" "main" {

  vpc_gateway_id      = aws_vpn_gateway.vpn_gateway.id

  customer_gateway_id = aws_customer_gateway.customer_gateway.id

  type                = "ipsec.1"

  static_routes_only  = true

}
```



```
resource "aws_security_group" "luv" {
  name        = "luv-sg"
  description = "security group "
  vpc_id = aws_vpc.vpc.id
  ingress {
    from_port   = 8080
    to_port     = 8080
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
 ingress {
    from_port   = 22
    to_port     = 22
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
  egress {
    from_port   = 0
    to_port     = 65535
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
  tags= {
```



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  ingress {
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    cidr_blocks = ["0.0.0.0/0"]
  }
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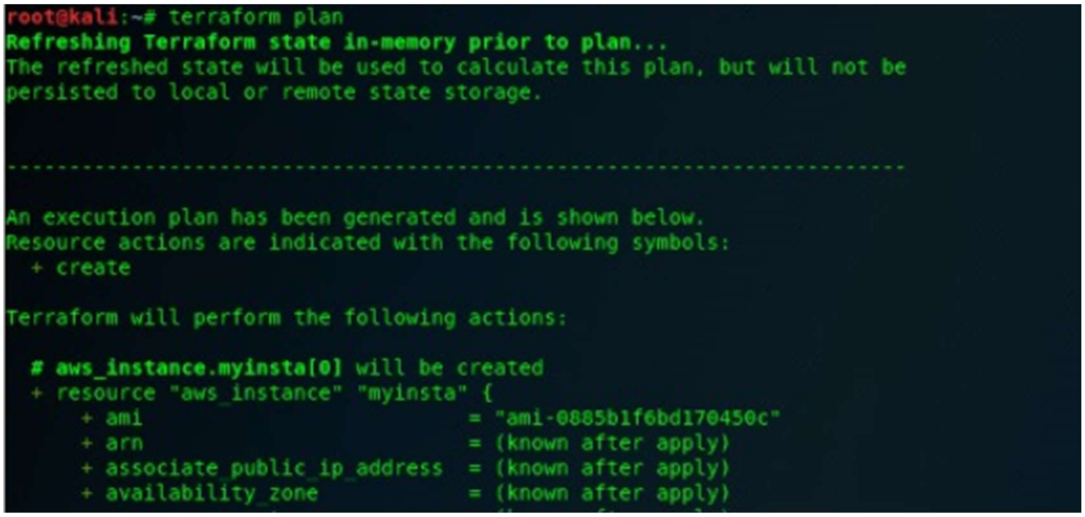
    from_port   = 0
    to_port     = 65535
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }
  tags= {
    Name = "luv"
  }
}
root@kali:~#
```



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Resource actions are indicated with the following symbols:
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Terraform will perform the following actions:

  # aws_instance.myinsta[0] will be created
  + resource "aws_instance" "myinsta" {
      + ami                          = "ami-0885b1f6bd170450c"
      + arn                          = (known after apply)
      + associate_public_ip_address  = (known after apply)
      + availability_zone            = (known after apply)
```

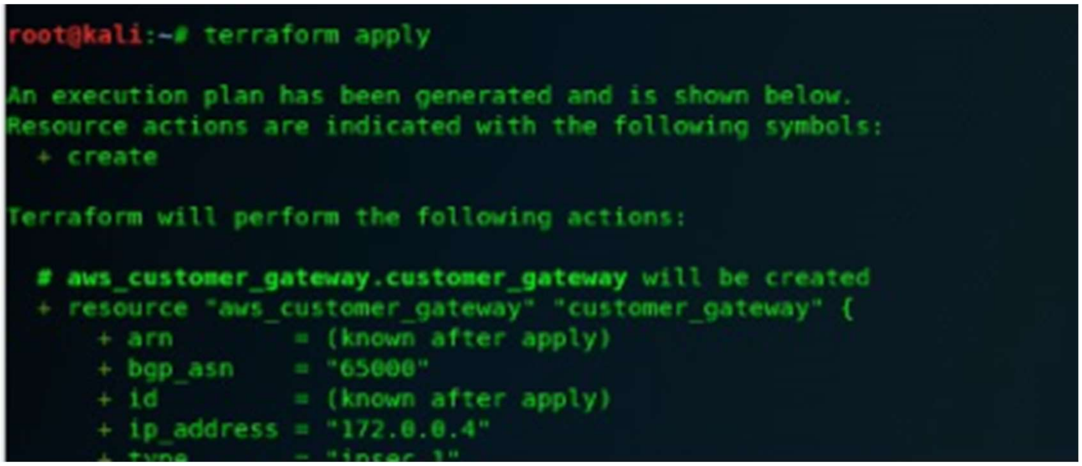

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  # aws_customer_gateway.customer_gateway will be created
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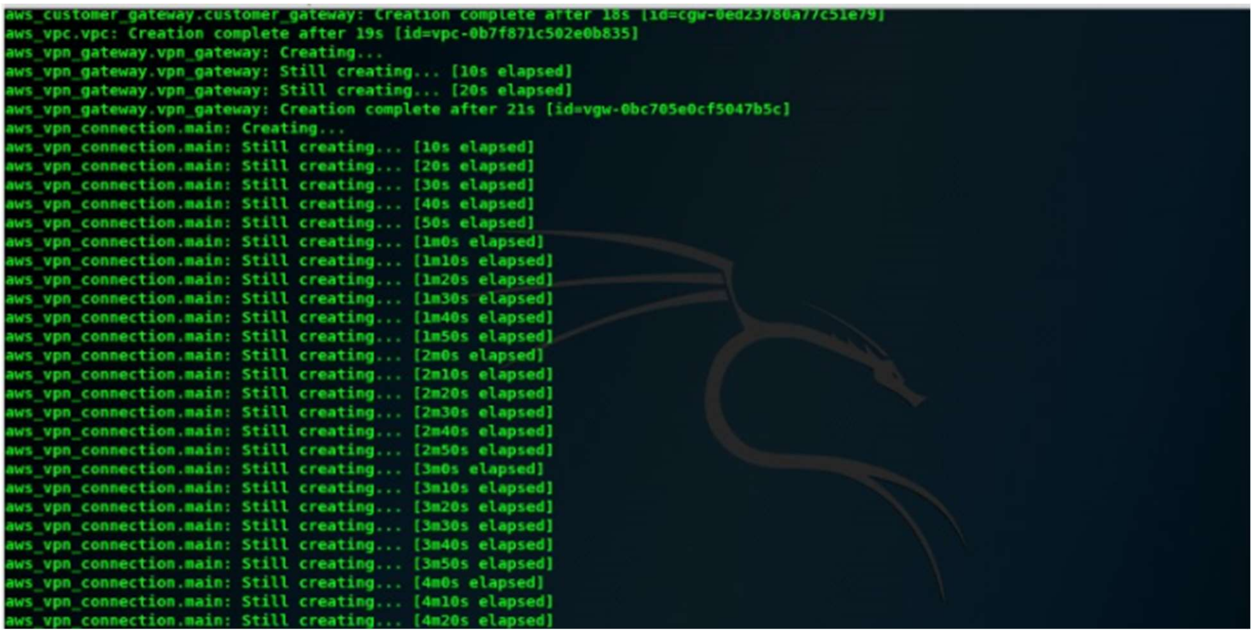

```
aws_customer_gateway.customer_gateway: Creation complete after 18s [id=cgw-0ed23780a77c51e79]
aws_vpc.vpc: Creation complete after 19s [id=vpc-0b7f871c502e0b835]
aws_vpn_gateway.vpn_gateway: Creating...
aws_vpn_gateway.vpn_gateway: Still creating... [10s elapsed]
aws_vpn_gateway.vpn_gateway: Still creating... [20s elapsed]
aws_vpn_gateway.vpn_gateway: Creation complete after 21s [id=vgw-0bc705e0cf5047b5c]
aws_vpn_connection.main: Creating...
aws_vpn_connection.main: Still creating... [10s elapsed]
aws_vpn_connection.main: Still creating... [20s elapsed]
aws_vpn_connection.main: Still creating... [30s elapsed]
aws_vpn_connection.main: Still creating... [40s elapsed]
aws_vpn_connection.main: Still creating... [50s elapsed]
aws_vpn_connection.main: Still creating... [1m0s elapsed]
aws_vpn_connection.main: Still creating... [1m10s elapsed]
aws_vpn_connection.main: Still creating... [1m20s elapsed]
aws_vpn_connection.main: Still creating... [1m30s elapsed]
aws_vpn_connection.main: Still creating... [1m40s elapsed]
aws_vpn_connection.main: Still creating... [1m50s elapsed]
aws_vpn_connection.main: Still creating... [2m0s elapsed]
aws_vpn_connection.main: Still creating... [2m10s elapsed]
aws_vpn_connection.main: Still creating... [2m20s elapsed]
aws_vpn_connection.main: Still creating... [2m30s elapsed]
aws_vpn_connection.main: Still creating... [2m40s elapsed]
aws_vpn_connection.main: Still creating... [2m50s elapsed]
aws_vpn_connection.main: Still creating... [3m0s elapsed]
aws_vpn_connection.main: Still creating... [3m10s elapsed]
aws_vpn_connection.main: Still creating... [3m20s elapsed]
aws_vpn_connection.main: Still creating... [3m30s elapsed]
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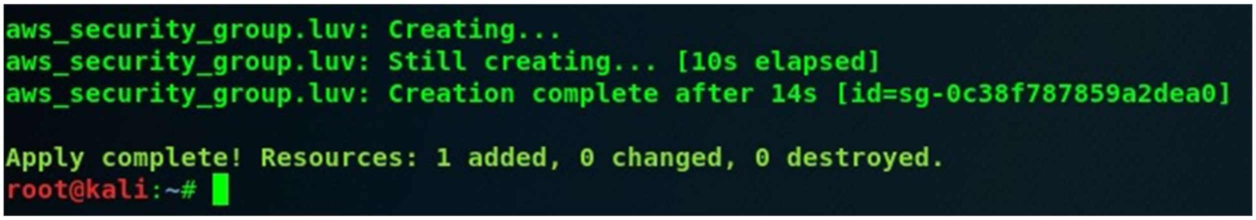

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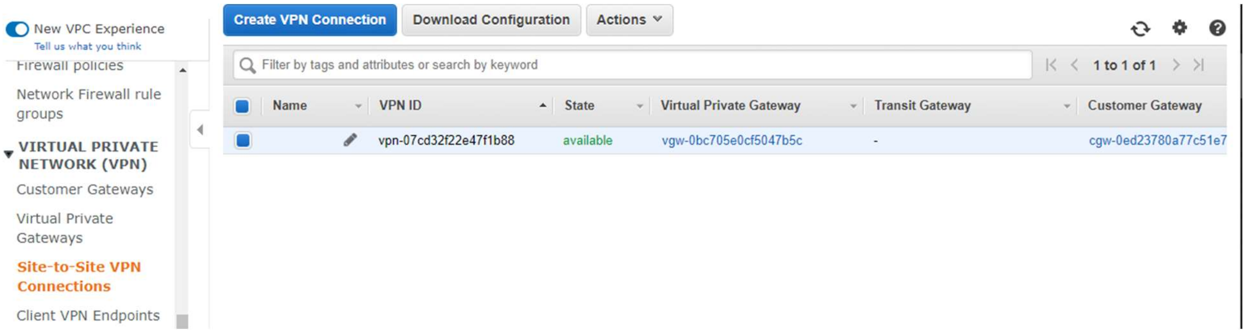
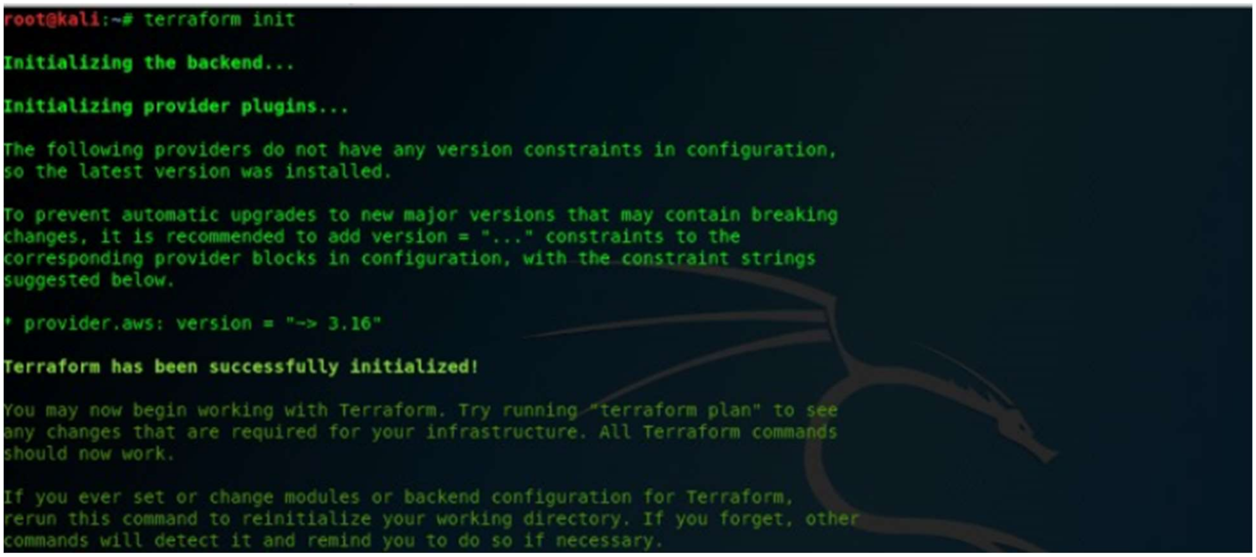


Name	VPN ID	State	Virtual Private Gateway	Transit Gateway	Customer Gateway
	vpn-07cd32f22e47f1b88	available	vgw-0bc705e0cf5047b5c	-	cgw-0ed23780a77c51e7

3.Creating a S3 bucket



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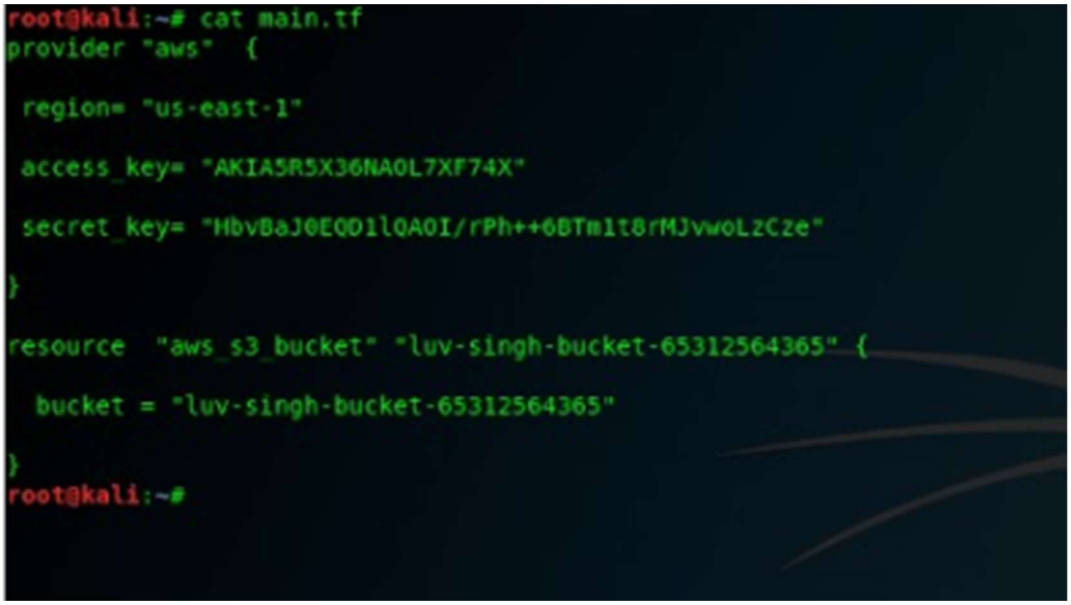

```
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 region= "us-east-1"

 access_key= "AKIA5R5X36NAOL7XF74X"

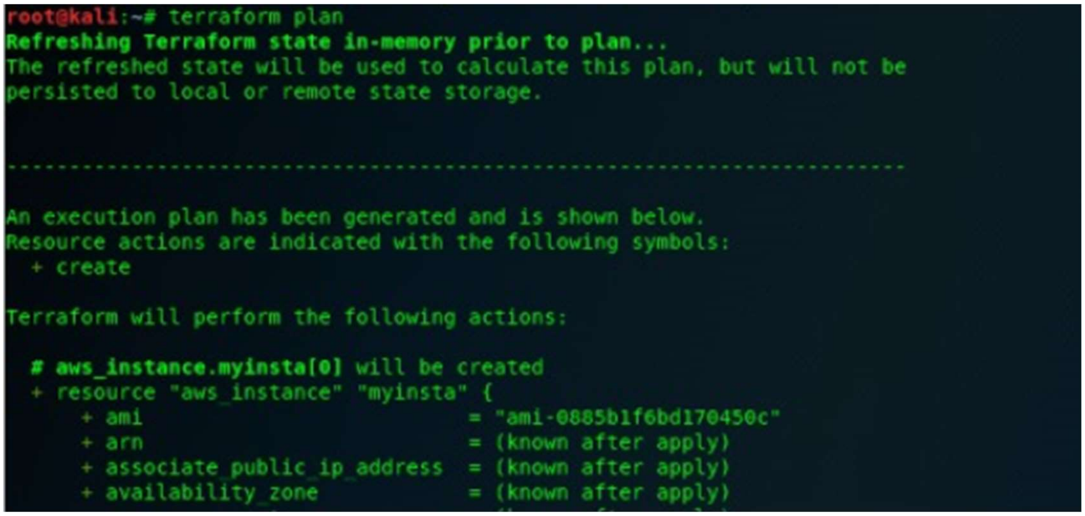
 secret_key= "HbvBaJ0EQD1lQA0I/rPh++6BTm1t8rMJvwoLzCze"

}

resource  "aws_s3_bucket" "luv-singh-bucket-65312564365" {

  bucket = "luv-singh-bucket-65312564365"

}
root@kali:~#
```



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      + arn                          = (known after apply)
      + associate_public_ip_address  = (known after apply)
      + availability_zone            = (known after apply)
```

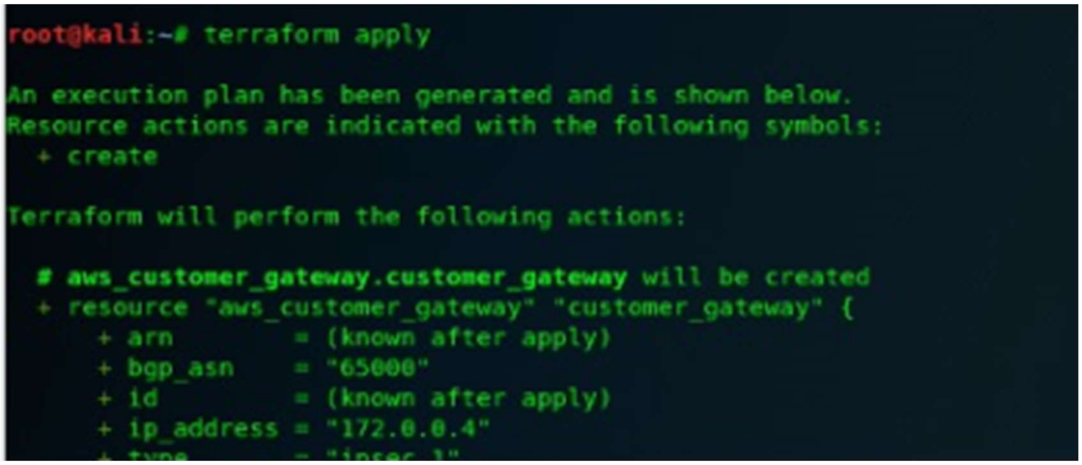

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Terraform will perform the following actions:

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      + arn        = (known after apply)
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      + ip_address = "172.0.0.4"
      + type       = "ipsec.1"
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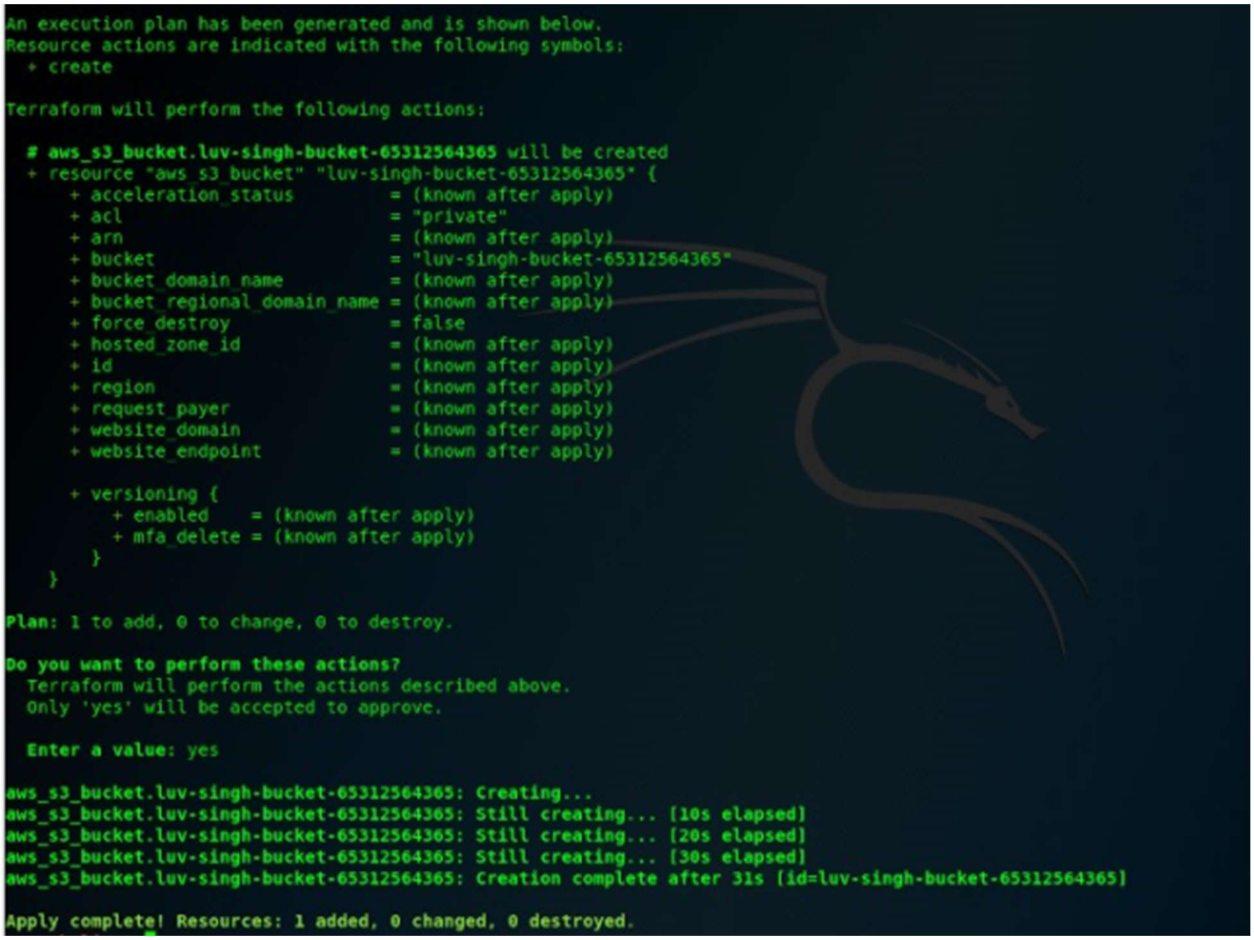

```
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Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_s3_bucket.luv-singh-bucket-65312564365 will be created
  + resource "aws_s3_bucket" "luv-singh-bucket-65312564365" {
      + acceleration_status         = (known after apply)
      + acl                         = "private"
      + arn                         = (known after apply)
      + bucket                      = "luv-singh-bucket-65312564365"
      + bucket_domain_name          = (known after apply)
      + bucket_regional_domain_name = (known after apply)
      + force_destroy               = false
      + hosted_zone_id              = (known after apply)
      + id                          = (known after apply)
      + region                      = (known after apply)
      + request_payer               = (known after apply)
      + website_domain              = (known after apply)
      + website_endpoint            = (known after apply)

      + versioning {
          + enabled    = (known after apply)
          + mfa_delete = (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_s3_bucket.luv-singh-bucket-65312564365: Creating...
aws_s3_bucket.luv-singh-bucket-65312564365: Still creating... [10s elapsed]
aws_s3_bucket.luv-singh-bucket-65312564365: Still creating... [20s elapsed]
aws_s3_bucket.luv-singh-bucket-65312564365: Still creating... [30s elapsed]
aws_s3_bucket.luv-singh-bucket-65312564365: Creation complete after 31s [id=luv-singh-bucket-65312564365]

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

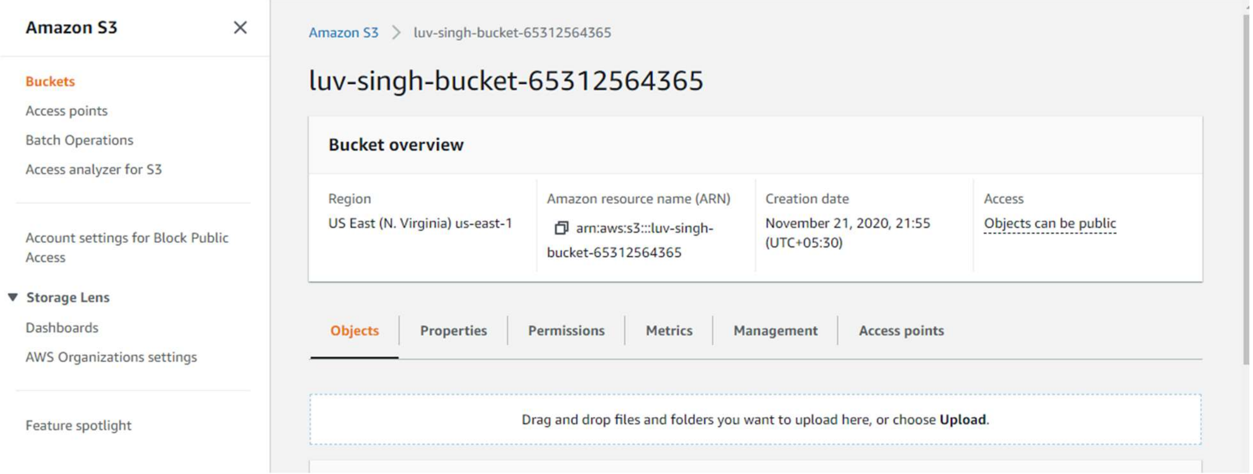

luv-singh-bucket-65312564365

Bucket overview

Region	Amazon resource name (ARN)	Creation date	Access
US East (N. Virginia) us-east-1	arn:aws:s3:::luv-singh-bucket-65312564365	November 21, 2020, 21:55 (UTC+05:30)	Objects can be public

Drag and drop files and folders you want to upload here, or choose **Upload**.

Submitted to: -

Dr. Hitesh Kumar Sharma

Submitted By: -

Lav Singh(500061158)