

Terraform(multipleDeployments) with Graphical Visualization -Resources-

aws_ec2_instance & aws_s3_bucket

1A. Before Deployment- ec2_instance

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Resource	Count
Instances (running)	0
Dedicated Hosts	0
Elastic IPs	0
Instances	1
Key pairs	0
Load balancers	0
Placement groups	0
Security groups	1
Snapshots	0
Volumes	0

Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

Service health

Region: US East (N. Virginia)

Status: ✔ This service is operating normally

Account attributes

Supported platforms: VPC

Default VPC: vpc-0e7e58068b7e21cd1

Settings: EBS encryption

Zones: EC2 Serial Console

Default credit specification

Console experiments

Explore AWS

Save up to 90% on EC2 with Spot Instances

Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. [Learn more](#)

Amazon GuardDuty Malware Protection

GuardDuty now provides agentless malware detection in Amazon EC2 & EC2 container workloads. [Learn more](#)

Get Up to 40% Better Price Performance

T4g instances deliver the best price performance for burstable general purpose workloads in Amazon EC2. [Learn more](#)

1B. Before Deployment-VS Code

```
main.tf
resource "aws_instance" "tf-ec2" {
  count = 5
  provider = aws
  ami = "ami-0c02fb55956c7d316"
  instance_type = "t2.micro"
  tags = {
    Name = "terraformS35353-${count.index}"
  }
}
```

```
Plan: 5 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.tf-ec2[2]: Creating...
aws_instance.tf-ec2[0]: Creating...
aws_instance.tf-ec2[1]: Creating...
aws_instance.tf-ec2[3]: Creating...
aws_instance.tf-ec2[4]: Creating...
aws_instance.tf-ec2[3]: Still creating... [10s elapsed]
aws_instance.tf-ec2[4]: Still creating... [10s elapsed]
aws_instance.tf-ec2[1]: Still creating... [10s elapsed]
aws_instance.tf-ec2[0]: Still creating... [10s elapsed]
aws_instance.tf-ec2[2]: Still creating... [10s elapsed]
aws_instance.tf-ec2[3]: Still creating... [20s elapsed]
aws_instance.tf-ec2[0]: Still creating... [20s elapsed]
aws_instance.tf-ec2[4]: Still creating... [20s elapsed]
aws_instance.tf-ec2[2]: Still creating... [20s elapsed]
aws_instance.tf-ec2[0]: Still creating... [20s elapsed]
aws_instance.tf-ec2[1]: Still creating... [30s elapsed]
aws_instance.tf-ec2[3]: Still creating... [30s elapsed]
aws_instance.tf-ec2[2]: Still creating... [30s elapsed]
aws_instance.tf-ec2[4]: Creation complete after 32s [id=i-0934d4561a1841d64]
aws_instance.tf-ec2[2]: Creation complete after 32s [id=i-0c72ba1c9ace4b2ed]
aws_instance.tf-ec2[0]: Creation complete after 32s [id=i-073b091edf3d81d33e]
aws_instance.tf-ec2[1]: Creation complete after 32s [id=i-03ced093f85174046]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.
```

1C. After Deployment- ec2_instance(5)

Instances (6) Info

Find instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 .
<input type="checkbox"/>	terraform535...	i-03cede93f85174046	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-52-70-126-158.co...	52.70.126.15
<input type="checkbox"/>	terraform535...	i-0934d4561a1841d64	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-52-91-18-131.com...	52.91.18.131
<input type="checkbox"/>	terraform535...	i-073b91edf3d81d53e	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-3-82-188-100.com...	3.82.188.100
<input type="checkbox"/>	terraform535...	i-00d52f93725c28eb8	Terminated	t2.micro	-	No alarms	us-east-1a	-	-
<input type="checkbox"/>	terraform535...	i-0c72ba1c9ace4b2ed	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-3-82-110-242.com...	3.82.110.242
<input type="checkbox"/>	terraform535...	i-0eddeb53a25486452	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-52-205-41-43.com...	52.205.41.43

Select an instance

2A. Before Deployment- aws_s3_bucket

Amazon S3

Buckets

Account snapshot

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

[View Storage Lens dashboard](#)

Buckets Info

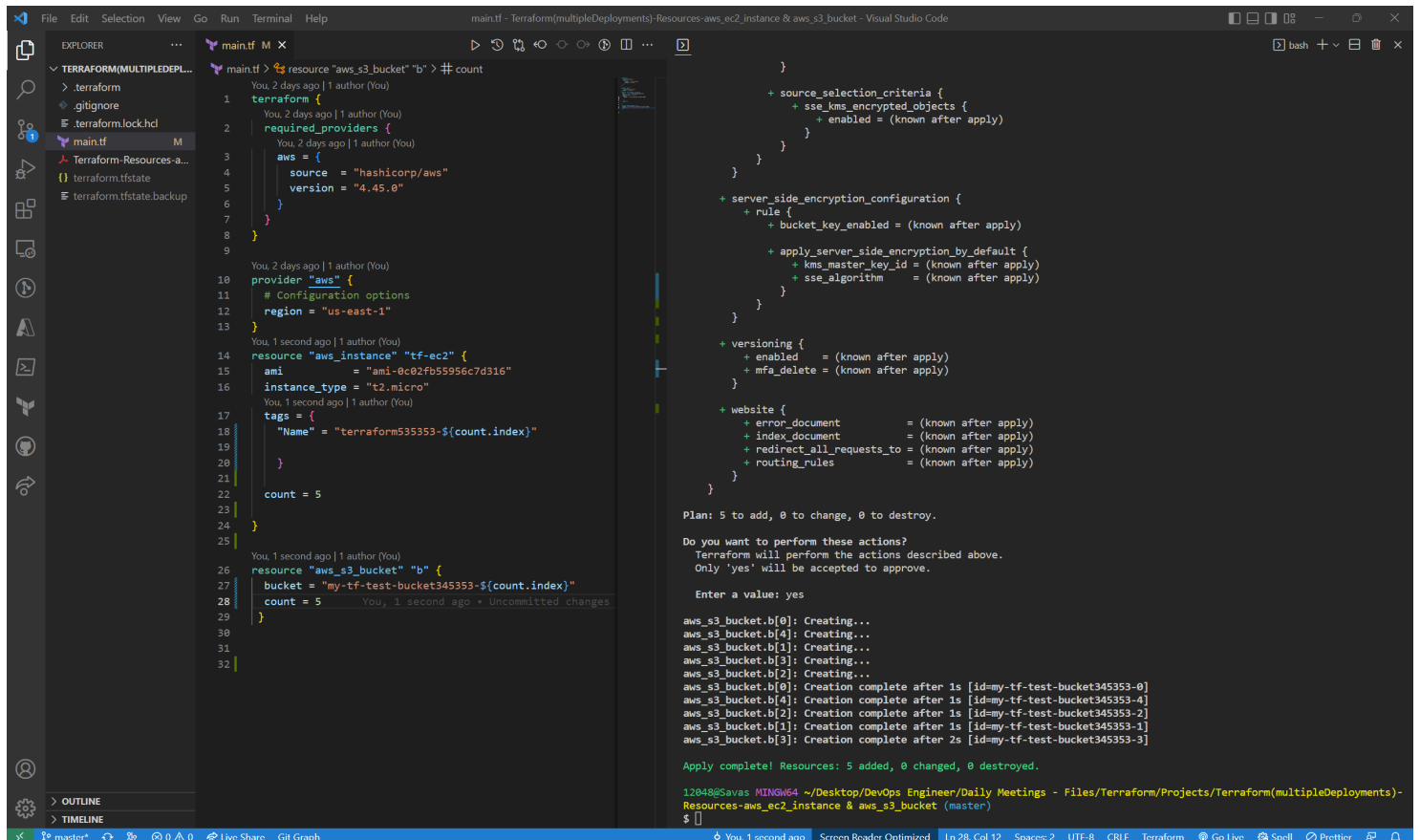
Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

Name	AWS Region	Access	Creation date
No buckets			

[Create bucket](#)

2B. Before Deployment-VS Code



```
main.tf
1 terraform {
2   required_providers {
3     aws = {
4       source = "hashicorp/aws"
5       version = "4.45.0"
6     }
7   }
8 }
9
10 provider "aws" {
11   # Configuration options
12   region = "us-east-1"
13 }
14 resource "aws_instance" "tf-ec2" {
15   ami           = "ami-0c02fb5595ec7d316"
16   instance_type = "t2.micro"
17   tags = {
18     "Name" = "terraform535353-${count.index}"
19   }
20 }
21 count = 5
22 }
23
24 resource "aws_s3_bucket" "b" {
25   bucket = "my-tf-test-bucket345353-${count.index}"
26   count = 5
27 }
28
29
30
31
32
```

```

+ source_selection_criteria {
+   sse_kms_encrypted_objects {
+     enabled = (known after apply)
+   }
+ }
+ server_side_encryption_configuration {
+   rule {
+     bucket_key_enabled = (known after apply)
+   }
+   apply_server_side_encryption_by_default {
+     kms_master_key_id = (known after apply)
+     sse_algorithm     = (known after apply)
+   }
+ }
+ versioning {
+   enabled = (known after apply)
+   mfa_delete = (known after apply)
+ }
+ website {
+   error_document      = (known after apply)
+   index_document      = (known after apply)
+   redirect_all_requests_to = (known after apply)
+   routing_rules       = (known after apply)
+ }
}

Plan: 5 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.

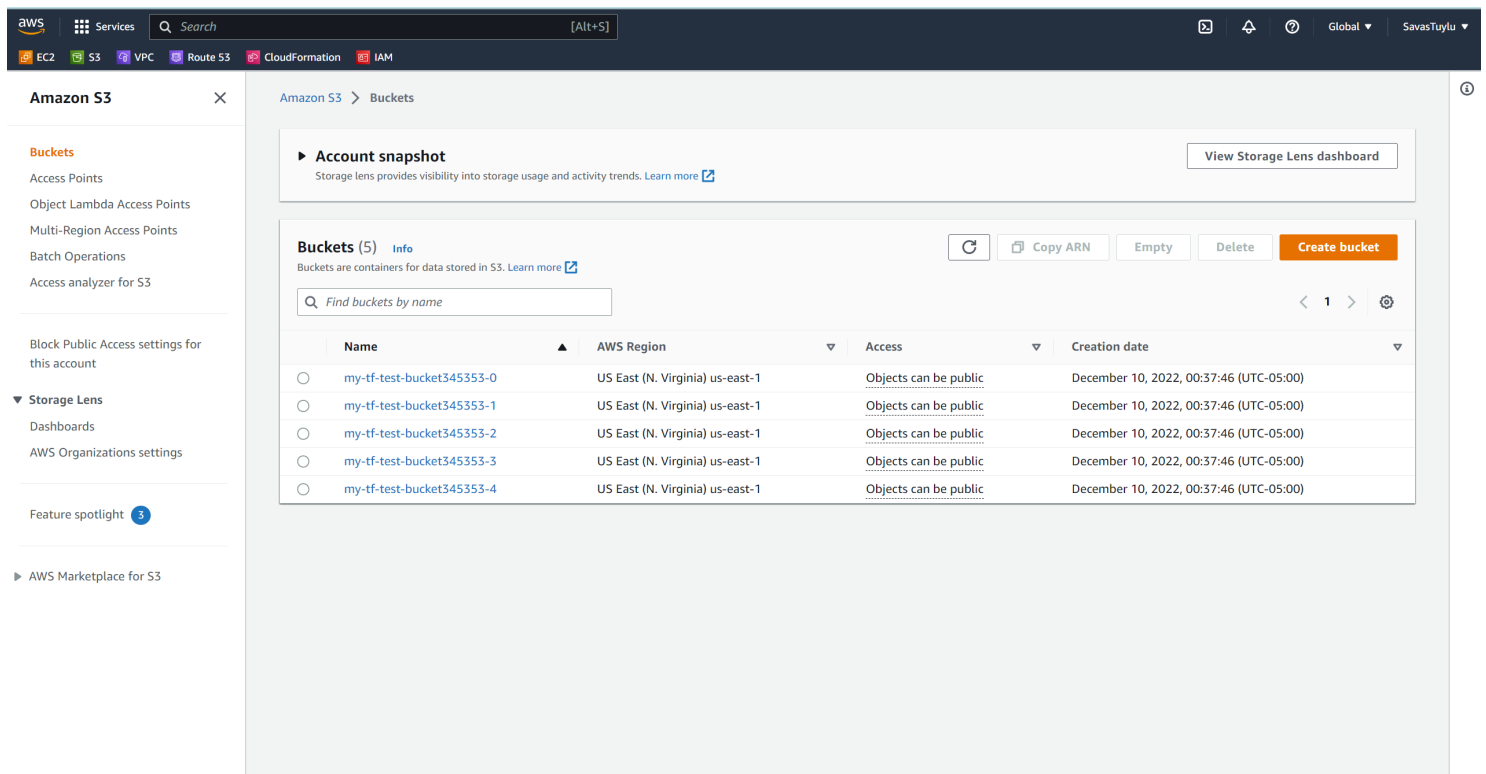
Enter a value: yes

aws_s3_bucket.b[0]: Creating...
aws_s3_bucket.b[4]: Creating...
aws_s3_bucket.b[1]: Creating...
aws_s3_bucket.b[3]: Creating...
aws_s3_bucket.b[2]: Creating...
aws_s3_bucket.b[0]: Creation complete after 1s [id=my-tf-test-bucket345353-0]
aws_s3_bucket.b[4]: Creation complete after 1s [id=my-tf-test-bucket345353-4]
aws_s3_bucket.b[2]: Creation complete after 1s [id=my-tf-test-bucket345353-2]
aws_s3_bucket.b[1]: Creation complete after 1s [id=my-tf-test-bucket345353-1]
aws_s3_bucket.b[3]: Creation complete after 2s [id=my-tf-test-bucket345353-3]

Apply complete! Resources: 5 added, 0 changed, 0 destroyed.

12848@Savas MINGW64 ~/Desktop/DevOps Engineer/Daily Meetings - Files/Terraform/Projects/Terraform(multipleDeployments)-Resources-aws_ec2_instance & aws_s3_bucket (master)
$
```

2C. After Deployment- aws_s3_bucket(5)



Amazon S3 Buckets

Account snapshot

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

View Storage Lens dashboard

Buckets (5) Info

Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

Name	AWS Region	Access	Creation date
my-tf-test-bucket345353-0	US East (N. Virginia) us-east-1	Objects can be public	December 10, 2022, 00:37:46 (UTC-05:00)
my-tf-test-bucket345353-1	US East (N. Virginia) us-east-1	Objects can be public	December 10, 2022, 00:37:46 (UTC-05:00)
my-tf-test-bucket345353-2	US East (N. Virginia) us-east-1	Objects can be public	December 10, 2022, 00:37:46 (UTC-05:00)
my-tf-test-bucket345353-3	US East (N. Virginia) us-east-1	Objects can be public	December 10, 2022, 00:37:46 (UTC-05:00)
my-tf-test-bucket345353-4	US East (N. Virginia) us-east-1	Objects can be public	December 10, 2022, 00:37:46 (UTC-05:00)

1

After Deployment - Public IP of EC2[2] in Portal

The screenshot shows the AWS Management Console with the 'Instances' page selected. The instance 'terraform535353-2' is highlighted in the list. The details for this instance are shown below the list, including the public IP address 44.202.90.6.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
terraform535353-5	i-073d91edf3d81d53e	Terminated	t2.micro	-	No alarms	us-east-1a	-
terraform535353	i-00d52f93725c28eb8	Terminated	t2.micro	-	No alarms	us-east-1a	-
terraform535353-2	i-0c72ba1c9ace4b2ed	Terminated	t2.micro	-	No alarms	us-east-1a	-
terraform535353-4	i-082209e4df948b28	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-3-86-39-140.comp...
terraform535353-0	i-0eddeb53a25486452	Terminated	t2.micro	-	No alarms	us-east-1a	-
terraform535353-3	i-0fd93f2d61b1bbcb3	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-3-84-6-40.compute...
terraform535353-1	i-00a67d250bdce75c9	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-44-203-139-85.co...
terraform535353-2	i-0fe04a3a6f9832a09	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-44-202-90-6.comp...
terraform535353-0	i-0df0d34df3290f242	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-52-91-245-38.com...

Instance: i-0fe04a3a6f9832a09 (terraform535353-2)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

Instance summary | Info

Instance ID: i-0fe04a3a6f9832a09 (terraform535353-2)

Public IPv4 address: 44.202.90.6 | [open address](#)

Private IPv4 addresses: 172.31.86.113

Public IPv4 DNS: ec2-44-202-90-6.compute-1.amazonaws.com | [open address](#)

Instance state: Running

Private IP DNS name (IPv4 only): ip-172-31-86-113.ec2.internal

Instance type: t2.micro

Auto-assigned IP address: VPC ID

After Deployment - Public IP of EC2[2] in VS code

The screenshot shows the Visual Studio Code editor with the Terraform configuration file 'main.tf' open. The configuration defines a Terraform instance and an S3 bucket. The output of the 'terraform console' command is shown in the right-hand pane, displaying the public IP address of the EC2 instance.

```
main.tf
1 resource "aws_s3_bucket" "b" {
2   count = 5
3   provider = aws
4   source = "hashicorp/aws"
5   version = "4.45.0"
6 }
7
8
9
10 provider "aws" {
11   # Configuration options
12   region = "us-east-1"
13 }
14
15 resource "aws_instance" "tf-ec2" {
16   ami = "ami-0c02fb55956c7d318"
17   instance_type = "t2.micro"
18   tags = {
19     "Name" = "terraform535353-${count.index}"
20   }
21   count = 5
22 }
23
24
25
26 resource "aws_s3_bucket" "b" {
27   bucket = "my-tf-test-bucket345353-${count.index}"
28   count = 5
29 }
30
31
32
```

terraform console

```
120488Savas MINGW64 ~/Desktop/DevOps_Engineer/Dail
y Meetings - Files/Terraform/Projects/Terraform(mu
ltipleDeployments)-Resources-aws_ec2_instance & aw
s_s3_bucket (master)
$ terraform console
> aws_instance.tf-ec2.public_ip

Error: Missing resource instance key

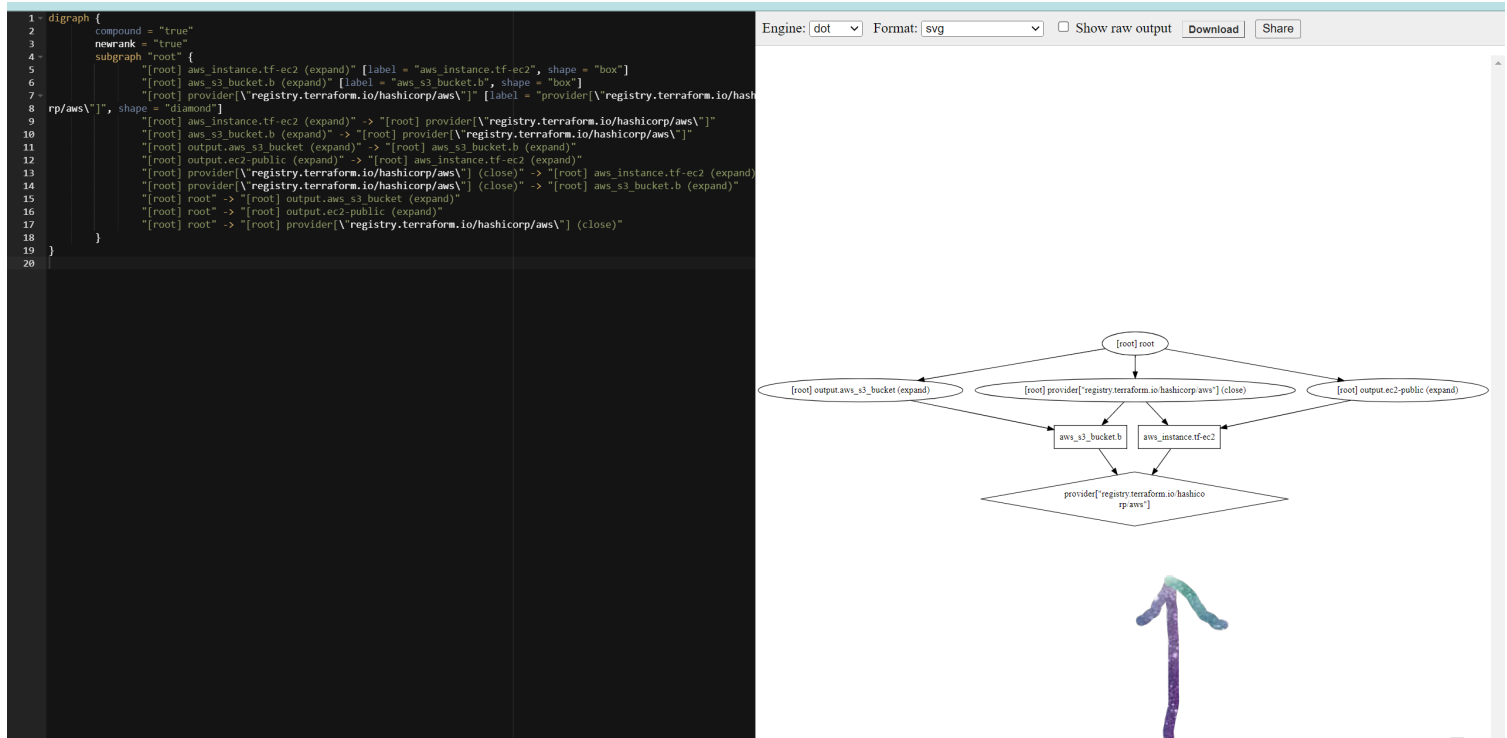
on <console-input> line 1:
(source code not available)

Because aws_instance.tf-ec2 has "count" set,
its attributes must be accessed on specific
instances.

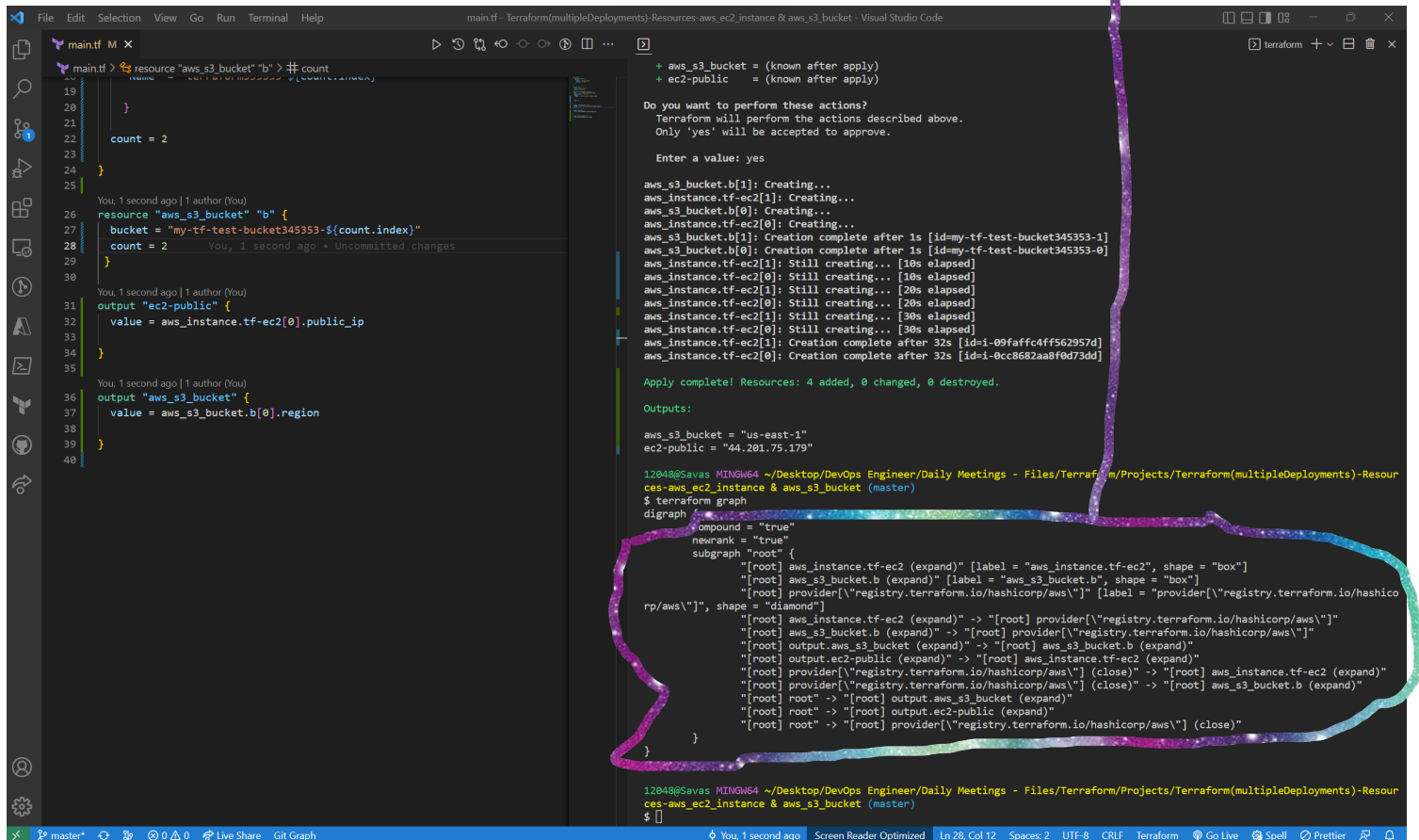
For example, to correlate with indices of a
referring resource, use:
  aws_instance.tf-ec2[count.index]

> aws_instance.tf-ec2[2].public_ip
"44.202.90.6"
>
```

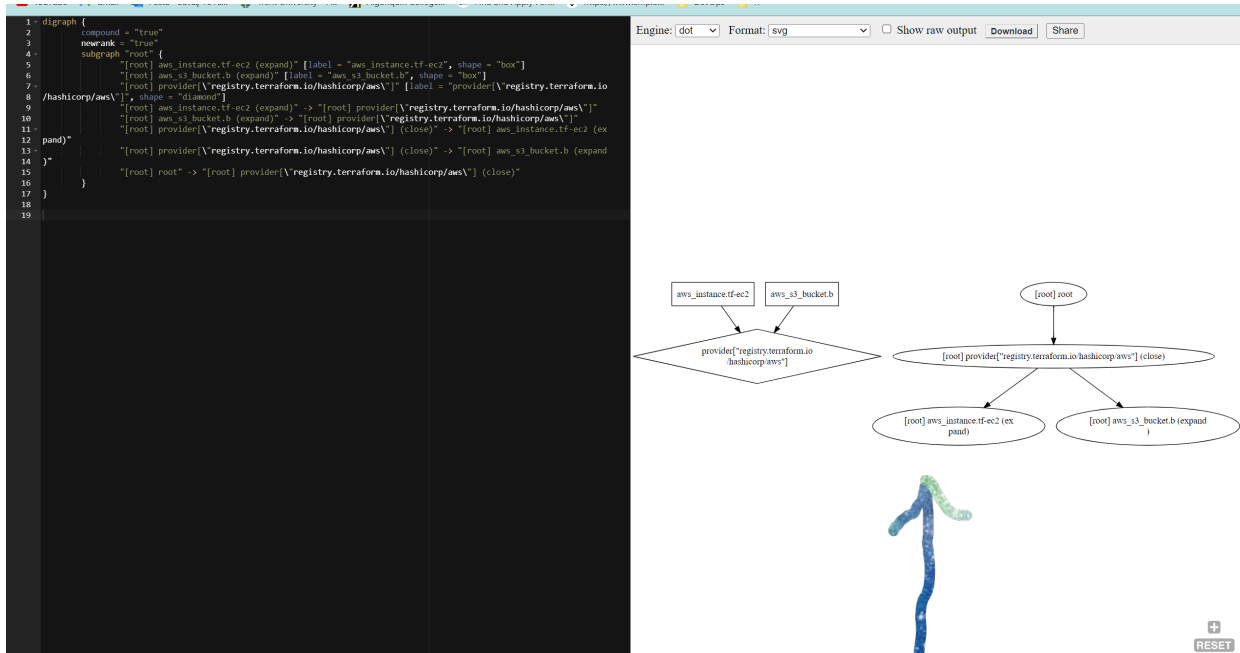
After Deployment: Graphical Visualization of main.tf



After Deployment: VS Code



After Destroying: Graphical Visualization of main.tf



After Destroying: VS Code

