

Terraform-Assignment 1

us-east-2.console.aws.amazon.com/ec2/home?region=us-east-2#LaunchInstances:

Services Search [Alt+S] Ohio

C2 > ... > Launch an instance

Success Successfully initiated launch of instance (i-069b8eb76d5cca3dd)

▶ Launch log

Next Steps

Q What would you like to do next with this instance, for example "create alarm" or "create backup" 1 2 3

Create billing and free tier usage alerts To manage costs and avoid surprise bills, set up email notifications for billing and free

Connect to your instance Once your instance is running, log into it from your local computer.

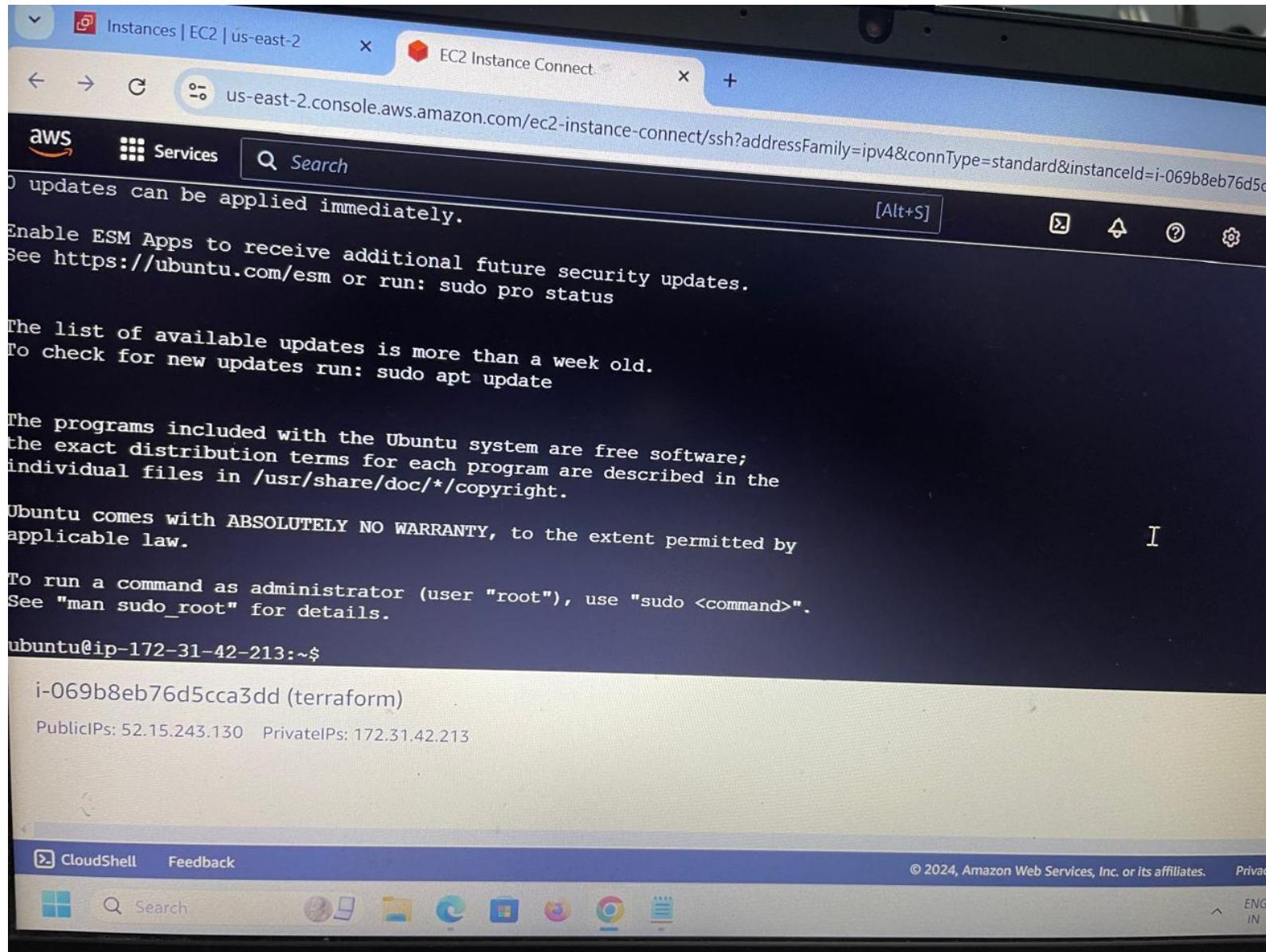
Connect to instance

Connect an RDS database Configure the connection between an EC2 instance and a database to allow traffic flow between them.

Create EBS snapshot policy Create a policy that controls creation, retention, and deletion of EBS snapshots

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Search



Instances | EC2 | us-east-2 EC2 Instance Connect Install | Terraform | HashiCorp D

us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard&instanceId=i-069b8eb76d5

aws Services Search [Alt+S]

```
Get:26 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:27 http://us-east-2.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:28 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1848 kB]
Get:29 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [299 kB]
Get:30 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [909 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [179 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.4 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.2 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7588 B]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 28.1 MB in 10s (2758 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
7 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-42-213:~$ wget -O https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyring.gpg
echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com \$"
sudo tee /etc/apt/sources.list.d/hashicorp.list
sudo apt update && sudo apt install terraform
```

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213

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us-east-2 EC2 Instance Connect Install | Terraform | HashiCorp

aws Services Search [Alt+S]

```
After this operation, 89.1 MB of additional disk space will be used.
Get:1 https://apt.releases.hashicorp.com jammy/main amd64 terraform amd64 1.9.7-1 [28.0 M]
Fetched 28.0 MB in 1s (43.6 MB/s)
Selecting previously unselected package terraform.
(Reading database ... 65783 files and directories currently installed.)
Preparing to unpack .../terraform_1.9.7-1_amd64.deb ...
Unpacking terraform (1.9.7-1) ...
Setting up terraform (1.9.7-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.
I
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-42-213:~$ |
```

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213

Instances | EC2 | us-east-2 EC2 Instance Connect Install | Terraform | HashiCorp

us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard&insta

aws Services Search [Alt+S] main.tf *

GNU nano 6.2

```
provider "aws" {
    region= "us-east-2"
    access_key= "AKIAQLVQQZIXVQ6DWBJ6"
    secret_key= "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"
}

resource "aws_instance" "assignment1" {
    ami= "ami-00eb69d236edcfaf8"
    instance_type= "t2.micro"
    key_name= "terraform"
    tags= {
        Name= "assignment1"
    }
}
```

Help Exit Write Out Where Is Cut Execute Location
^G ^X ^O ^W ^K ^T ^C Go To Line
Read File Replace ^R ^U ^J
PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213

i-069b8eb76d5cca3dd (terraform)

Instances | EC2 | us-east-2 EC2 Instance Connect Install | Terraform | HashiCorp

← → C us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard

aws Services Search [Alt+S]

```
ubuntu@ip-172-31-42-213:~$ terraform init
Initializing the backend...
Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v5.70.0...
- Installed hashicorp/aws v5.70.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
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!

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

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
ubuntu@ip-172-31-42-213:~$
```

i-069b8eb76d5cca3dd (terraform)
Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Instances | EC2 | us-east-2 EC2 Instance Connect Install | Terraform | HashiCorp

us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard

aws Services Search [Alt+S]

```
+ instance_market_options (known after apply)
- maintenance_options (known after apply)
- metadata_options (known after apply)
- network_interface (known after apply)
+ private_dns_name_options (known after apply)
+ root_block_device (known after apply)
}
```

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

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take "terraform apply" now.

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213

```
aws instance.assignment1: Creating...
aws instance.assignment1: Still creating... [10s elapsed]
aws instance.assignment1: Still creating... [20s elapsed]
aws instance.assignment1: Creation complete after 21s [id=i-009cb5dcb69f3ea33]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-42-213:~$
```

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213

Instances (2) Info

Last updated less than a minute ago

Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
assignment1	i-009cb5dcb69f3ea33	Running	t2.micro	2/2 checks passed	View alarms +
terraform	i-069b8eb76d5cca3dd	Running	t2.micro	2/2 checks passed	View alarms +

Select an instance

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ENG IN 21:27 07-10-2024

The screenshot shows the AWS Instances page with two instances listed:

- assignment1 (Instance ID: i-009cb5dcb69f3ea33) is in the Running state, t2.micro type, with 2/2 checks passed.
- terraform (Instance ID: i-069b8eb76d5cca3dd) is in the Running state, t2.micro type, with 2/2 checks passed.

The interface includes a search bar, filters for all states, and buttons for Connect, Instance state, Actions, and Launch instances.

Terraform-Assignment 2



Services

Search

[Alt+S]

```
}
```

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

Do you really want to destroy all resources?

Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

```
aws_instance.assignment1: Destroying... [id=i-009cb5dab69f3ea33]
aws_instance.assignment1: Still destroying... [id=i-009cb5dab69f3ea33, 10s elapsed]
aws_instance.assignment1: Still destroying... [id=i-009cb5dab69f3ea33, 20s elapsed]
aws_instance.assignment1: Still destroying... [id=i-009cb5dab69f3ea33, 30s elapsed]
aws_instance.assignment1: Still destroying... [id=i-009cb5dab69f3ea33, 40s elapsed]
aws_instance.assignment1: Destruction complete after 40s
```

Destroy complete! Resources: 1 destroyed.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

CloudShell

Feedback

[←](#) [→](#)

us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard



Services

Search

[Alt+S]

```
GNU nano 6.2
ami= "ami-00eb69d236edcfaf8"
instance_type= "t2.micro"
key_name= "terraform"
tags= {
  Name= "assignment2"
}
}

resource "aws_eip" "eip" {
  vpc=true
}

resource "aws_eip_association" "eip_assoc" {
  instance_id= aws_instance.assignment2.id
  allocation_id= aws_eip.eip.id
}
```

I

[^G Help](#)
[^X Exit](#)[^O Write Out](#)
[^R Read File](#)[^W Where Is](#)
[^\\ Replace](#)[^K Cut](#)
[^U Paste](#)[^T Execute](#)
[^J Justify](#)[^C Locate](#)
[^/ Go To](#)

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213



Services

Search

[Alt+S]

```
with aws_eip.eip,  
on main.tf line 17, in resource "aws_eip" "eip":  
17:   vpc=true
```

```
use domain attribute instead
```

```
(and one more similar warning elsewhere)
```

Do you want to perform these actions?

Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.

I

Enter a value: yes

```
aws_eip_association.eip_assoc: Creating...  
aws_eip_association.eip_assoc: Creation complete after 1s [id=eipassoc-05ac6e045a32b8507]
```

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213



```
    private_dns_name_options (known after apply)
    root_block_device (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.assignment1: Creating...
aws_instance.assignment1: Still creating... [10s elapsed]
aws_instance.assignment1: Still creating... [20s elapsed]
aws_instance.assignment1: Creation complete after 21s [id=i-009cb5dcb69f3ea33]
```

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-42-213:~\$ terraform destroy

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Terraform-Assignment 3



Services

Search [Alt+S]

Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

```
aws_eip_association.eip_assoc: Destroying... [id=eipassoc-05ac6e045a32b8507]
aws_eip_association.eip_assoc: Destruction complete after 1s
aws_instance.assignment2: Destroying... [id=i-024f54837cb7d91ef]
aws_eip.eip: Destroying... [id=eipalloc-0d42124fc98504e7f]
aws_eip.eip: Destruction complete after 1s
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 10s elapsed]
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 20s elapsed]
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 30s elapsed]
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 40s elapsed]
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 50s elapsed]
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 1m0s elapsed]
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 1m10s elapsed]
aws_instance.assignment2: Destruction complete after 1m11s
```

Destroy complete! Resources: 3 destroyed.
ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Instances | EC2 | us | EC2 Instance Conn | Install | Terraform | elastic ip means - | allocation id mean | +

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

Search [Alt+S] N. Virginia prasadcheekati@rediffmail

Instances Info Last updated less than a minute ago C Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive) All states < 1 > Name Instance ID Instance state Instance type Status check Alarm status

No instances You do not have any instances in this region Launch instances

Select an instance X

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This screenshot shows the AWS EC2 Instances page. At the top, there are several tabs: 'Instances | EC2 | us' (highlighted in orange), 'EC2 Instance Conn', 'Install | Terraform', 'elastic ip means -', 'allocation id mean', and a '+' button. The URL in the address bar is '-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances'. The main content area has a dark header with 'Instances Info' and a search bar. Below the header, it says 'Last updated less than a minute ago' and features a 'C' icon, a 'Connect' button, and dropdown menus for 'Instance state', 'Actions', and 'Launch instances'. A search bar with placeholder text 'Find Instance by attribute or tag (case-sensitive)' is followed by a 'All states' dropdown and navigation arrows (< 1 >). The table below has columns for 'Name', 'Instance ID', 'Instance state', 'Instance type', 'Status check', and 'Alarm status'. A message 'No instances' is displayed, followed by 'You do not have any instances in this region' and a large 'Launch instances' button. At the bottom, a sidebar says 'Select an instance' with a gear icon and an 'X' button. The footer includes copyright information, links to 'Privacy', 'Terms', and 'Cookie preferences', and system status indicators like 'ENG IN' and '23:25 07-10-2024'.

Instances | EC2 | us X Launch an instance X EC2 Instance Conn X Install | Terraform |

← → C us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connId=

aws Services Search [Alt+S] main.tf *

```
GNU nano 6.2
provider "aws" {
    alias= "NV"
    region= "us-east-1"
    access_key= "AKIAQLVQQZIXVQ6DWBJ6"
    secret_key= "x/X7i8PVHjH4UiJMjLYKo457GyPHPktjLOoccC14N"
}

provider "aws" {
    alias= "ohio"
    region= "us-east-2"
    access_key= "AKIAQLVQQZIXVQ6DWBJ6"
    secret_key= "x/X7i8PVHjH4UiJMjLYKo457GyPHPktjLOoccC14N"
}

resource "aws_instance" "assignment3-1" {
    provider= aws.NV
    ami= "ami-0866a3c8686eaeeba"
```

Help Write Out Where Is
Exit Read File Replace Cut Execute
^G ^O ^W ^K ^T
^X ^R ^\ ^U Paste
^I Justify

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IP:

← → ⌂



us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?address=



Services



Search

```
GNU nano 6.2
resource "aws_instance" "assignment3-1" {
    provider= aws.NV
    ami= "ami-0866a3c8686eaeeba"
    instance_type= "t2.micro"
    key_name= "virginia"
    tags= {
        Name= "hello-virginia"
    }
}
resource "aws_instance" "assignment3-2" {
    provider= aws.ohio
    ami= "ami-00eb69d236edcfaf8"
    instance_type= "t2.micro"
    key_name= "terraform"
    tags= {
        Name= "hello-ohio"
    }
}
```

^G
^X

Help
Exit

^O
^R

Write Out
Read File

^W
^V

Where Is
Replace

^K
^U

Cut
Paste



Services

Search

```
aws_instance.assignment2: Still destroying... [id=i-024f54837cb7d91ef, 1m10s elapsed]
aws_instance.assignment2: Destruction complete after 1m11s
Destroy complete! Resources: 3 destroyed.
ubuntu@ip-172-31-42-213:~$ sudo nano main.tf
ubuntu@ip-172-31-42-213:~$ terraform init
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.70.0
```

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 should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213



Services

Search

[Alt+S]

```
+ instance_market_options (known after apply)
- maintenance_options (known after apply)
+ metadata_options (known after apply)
+ network_interface (known after apply)
+ private_dns_name_options (known after apply)
+ root_block_device (known after apply)
}
```

Plan: 2 to add, 0 to change, 0 to destroy.

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee "terraform apply" now.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213



```
+ private_dns_name_options (known after apply)
+ root_block_device (known after apply)
}
```

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.assignment3-1: Creating...
aws_instance.assignment3-2: Creating...
aws_instance.assignment3-1: Still creating... [10s elapsed]
aws_instance.assignment3-2: Still creating... [10s elapsed]
aws_instance.assignment3-1: Creation complete after 13s [id=i-05193cf5eda70]
aws_instance.assignment3-2: Still creating... [20s elapsed]
aws_instance.assignment3-2: Still creating... [30s elapsed]
```

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213



Services

Search

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.

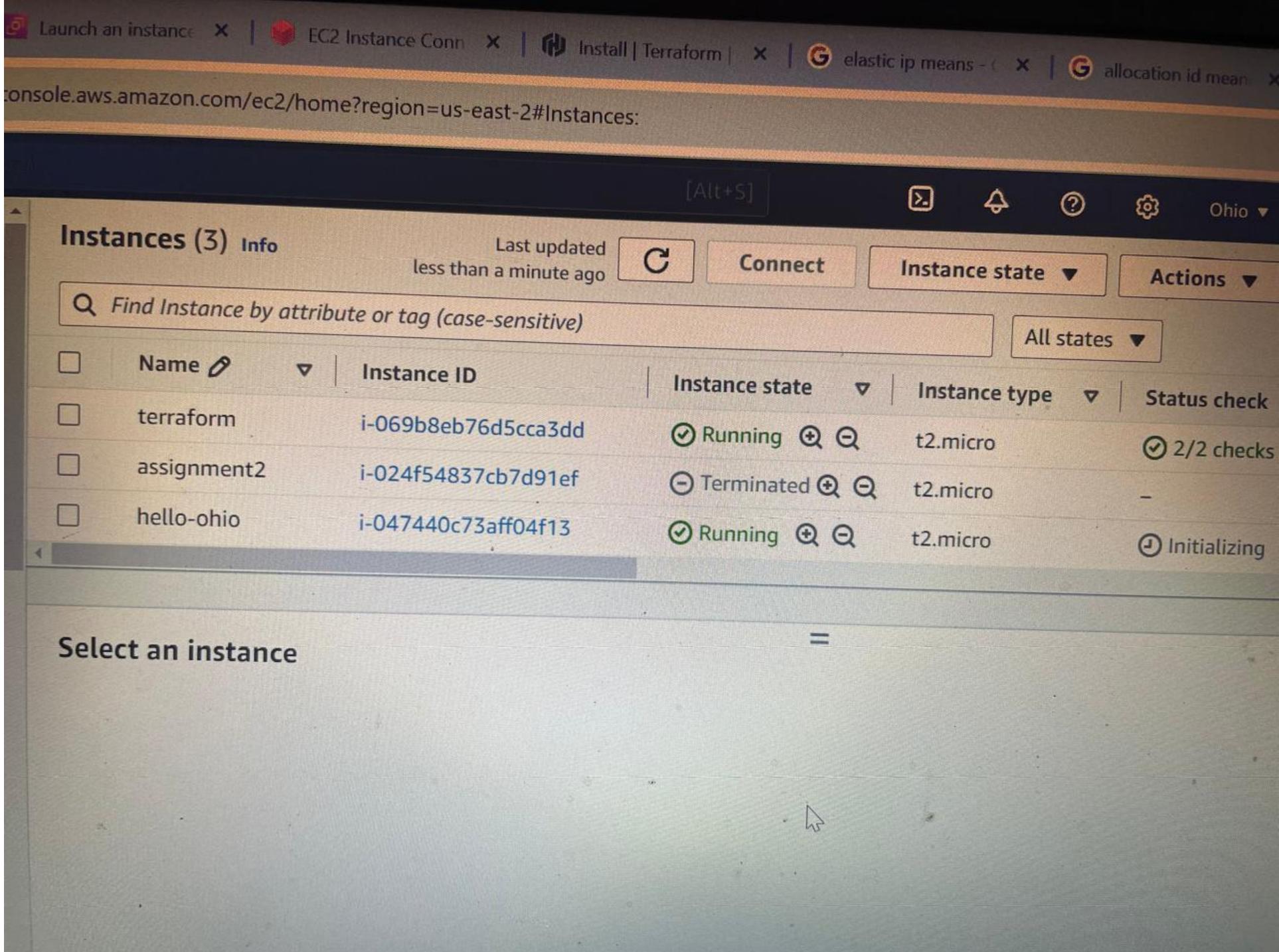
Enter a value: yes

```
aws_instance.assignment3-1: Creating...
aws_instance.assignment3-2: Creating...
aws_instance.assignment3-1: Still creating... [10s elapsed]
aws_instance.assignment3-2: Still creating... [10s elapsed]
aws_instance.assignment3-1: Creation complete after 13s [id=i-05193cf5ed]
aws_instance.assignment3-2: Still creating... [20s elapsed]
aws_instance.assignment3-2: Still creating... [30s elapsed]
aws_instance.assignment3-2: Creation complete after 31s [id=i-047440c73af]
```

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213



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

[Alt+S]

Last updated less than a minute ago

Instances (1) Connect Instance state ▾ Actions ▾ Launch

Find Instance by attribute or tag (case-sensitive)

All states ▾

<input type="checkbox"/> Name	Instance ID	Instance state	Instance type	Status check
<input type="checkbox"/> hello-virginia	i-05193cf5eda70e711	Running	t2.micro	Initializing

Select an instance

=



Services Search [Alt+S] □ 🔔 ?

Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat ...

aws Mac ubuntu Microsoft Red Hat >

Browse more AMIs Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type Free tier eligible

ami-0866a3c8686eaeeba (64-bit (x86)) / ami-0325498274077fac5 (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Ubuntu Server 24.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Architecture: 64-bit (x86) ▾

AMI ID	Username	i
ami-0866a3c8686eaeeba	ubuntu	Verified provider

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Number 1 Software Canonical ami-0866a3c8686eaeeba Virtual ser t2.micro Firewall (se New securi Storage (vo 1 volume(s) Cancel

Terraform-Assignment 4

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.assignment3-1: Creating...
aws_instance.assignment3-2: Creating...
aws_instance.assignment3-1: Still creating... [10s elapsed]
aws_instance.assignment3-2: Still creating... [10s elapsed]
aws_instance.assignment3-1: Creation complete after 13s [id=i-05193cf5]
aws_instance.assignment3-2: Still creating... [20s elapsed]
aws_instance.assignment3-2: Still creating... [30s elapsed]
aws_instance.assignment3-2: Creation complete after 31s [id=i-047440c73]
```

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

ubuntu@ip-172-31-42-213:~\$ terraform destroy

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Terraform elastic ip means -

Do you really want to destroy all resources?
Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

```
aws_instance.assignment3-1: Destroying... [id=i-05193cf5eda70e711]
aws_instance.assignment3-2: Destroying... [id=i-047440c73aff04f13]
aws_instance.assignment3-1: Still destroying... [id=i-05193cf5eda70e711, 10s elapsed]
aws_instance.assignment3-2: Still destroying... [id=i-047440c73aff04f13, 10s elapsed]
aws_instance.assignment3-1: Still destroying... [id=i-05193cf5eda70e711, 20s elapsed]
aws_instance.assignment3-2: Still destroying... [id=i-047440c73aff04f13, 20s elapsed]
aws_instance.assignment3-1: Still destroying... [id=i-05193cf5eda70e711, 30s elapsed]
aws_instance.assignment3-2: Still destroying... [id=i-047440c73aff04f13, 30s elapsed]
aws_instance.assignment3-1: Still destroying... [id=i-047440c73aff04f13, 40s elapsed]
aws_instance.assignment3-2: Destruction complete after 40s
aws_instance.assignment3-1: Still destroying... [id=i-05193cf5eda70e711, 50s elapsed]
aws_instance.assignment3-1: Destruction complete after 51s
```

Destroy complete! Resources: 2 destroyed.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Terraform |

us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connTyp

aws Services Search [Alt+S]

GNU nano 6.2 main.tf *

```
provider "aws" {
  region= "us-east-2"
  access_key= "AKIAQLVQQZIXVQ6DWBJ6"
  secret_key= "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"
}

resource "aws_instance" "assignment4" {
  ami= "ami-00eb69d236edcfaf8"
  instance_type= "t2.micro"
  key_name= "terraform"
  tags= {
    Name= "assignment4"
  }
}

resource "aws_vpc" "assignment4-vpc" {
  cidr_block= "10.10.0.0/16"
}
```

Help Write Out Where Is Cut Execute
Exit Read File Replace Paste Justify

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213



Services

Search

GNU nano 6.2

}

```
resource "aws_vpc" "assignment4-vpc" {
    cidr_block= "10.10.0.0/16"
    tags= {
        Name= "assignment4-vpc"
    }
}
```

```
resource "aws_subnet" "assignment4-subnet" {
    vpc_id= "aws_vpc.assignment4-vpc.id"
    cidr_block= "10.10.0.0/18"
    availability_zone= "us-east-2a"
    tags= {
        Name= "assignment4-subnet"
    }
}
```

^G Help
^X Exit

^O Write Out
^R Read File

^W Where Is
^V Replace

^K Cut
^U Paste



Services

Search [Alt+S]

Quoted strings may not be split over multiple lines. To produce a multi-line string, character or use the "heredoc" multi-line template syntax.

```
ubuntu@ip-172-31-42-213:~$ sudo nano main.tf
ubuntu@ip-172-31-42-213:~$ terraform init
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.70.0
```



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 should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary.

```
ubuntu@ip-172-31-42-213:~$
```

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213



Services

Search

```
aws
  Services
    Search
      [Alt+S]
      ↵ ↶ ⌂ 4

      - instance_tenancy
      - ipv6_association_id
      - ipv6_cidr_block
      - ipv6_cidr_block_network_border_group
      - main_route_table_id
      + owner_id
      + tags
        + "Name" = "assignment4-vpc"
      }
      + tags_all
        + "Name" = "assignment4-vpc"
      }
    }
```

Plan: 3 to add, 0 to change, 0 to destroy.



Note: You didn't use the `-out` option to save this plan, so Terraform can't guarantee to take exactly "terraform apply" now.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213



Services

Search

```
}
```

Plan: 3 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.assignment4: Creating...
aws_vpc.assignment4-vpc: Creating...
aws_vpc.assignment4-vpc: Creation complete after 1s [id=vpc-04ed947b724142976]
aws_subnet.assignment4-subnet: Creating...
aws_subnet.assignment4-subnet: Creation complete after 0s [id=subnet-0866191dc59ee9aeb]
aws_instance.assignment4: Still creating... [10s elapsed]
aws_instance.assignment4: Creation complete after 12s [id=i-02544db0e083239cf]
```

Apply complete! Resources: 3 added, 0 changed, 0 destroyed.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

PublicIPs: 52.15.243.130 PrivateIPs: 172.31.42.213

Terraform-Assignment 5

Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Terraform | elastic

← → C ⚙️ us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard

aws Services Search [Alt+S]

Terraform will destroy all your managed infrastructure, as shown above.
There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

```
aws_subnet.assignment4-subnet: Destroying... [id=subnet-0866191dc59ee9aeb]
aws_instance.assignment4: Destroying... [id=i-02544db0e083239cf]
aws_subnet.assignment4-subnet: Destruction complete after 0s
aws_vpc.assignment4-vpc: Destroying... [id=vpc-04ed947b724142976]
aws_vpc.assignment4-vpc: Destruction complete after 0s
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 10s elapsed]
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 20s elapsed]
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 30s elapsed]
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 40s elapsed]
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 50s elapsed]
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 1m0s elapsed]
aws_instance.assignment4: Still destroying... [id=i-02544db0e083239cf, 1m10s elapsed]
aws_instance.assignment4: Destruction complete after 1m10s
```

Destroy complete! Resources: 3 destroyed.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Terraform

← → ⌂ ⚙ us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=tty

aws Services Search [Alt+S]

GNU nano 6.2 install-apache2.sh *

```
#!/bin/bash
sudo apt update -y
sudo apt install apache2 -y
sudo su
echo "Custom html page" > /var/www/html/index.html
```

I

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Te

← → C us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily= main

aws Services Search

GNU nano 6.2

```
provider "aws" {
    region= "us-east-2"
    access_key= "AKIAQLVQQZIXVQ6DWBJ6"
    secret_key= "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"
}

resource "aws_instance" "assignment5" {
    ami= "ami-00eb69d236edcfaf8"
    instance_type= "t2.micro"
    key_name= "terraform"
    user_data= "${file("install-apache2.sh")}"
    tags= {
        Name= "assignment5"
    }
}

output "IPv4" {
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Ex
^X Exit ^R Read File ^A Replace ^U Paste ^J Ju



Services

Search

GNU nano 6.2

main

```
secret_key= "x/X7i8PVHjH4UiJMjLYKo457GyPHPktjLOocC14N"  
}
```

```
resource "aws_instance" "assignment5" {  
    ami= "ami-00eb69d236edcfaf8"  
    instance_type= "t2.micro"  
    key_name= "terraform"  
    user_data= "${file("install-apache2.sh")}"  
    tags= {  
        Name= "assignment5"  
    }  
}
```

```
output "IPv4" {  
    value= aws_instance.assignment5.public_ip  
}
```

^G Help
^X Exit

^O Write Out
^R Read File

^W Where Is
^V Replace

^K Cut
^U Paste

^T Execute
^J Justify

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

```
Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Terraform |
← → C ⚙️ us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connTy
aws Services Search [Alt+S]
aws_instance.assignment4: Destruction complete after 1m10s
Destroy complete! Resources: 3 destroyed.
ubuntu@ip-172-31-42-213:~$ sudo nano install-apache2.sh
ubuntu@ip-172-31-42-213:~$ sudo nano main.tf
ubuntu@ip-172-31-42-213:~$ terraform init
Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.70.0
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
should now work.
If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
ubuntu@ip-172-31-42-213:~$
```

i-069b8eb76d5cca3dd (terraform)

Public IP: 52.15.243.172

Instances | EC2 | us Instances | EC2 | us EC2 Instance Conn Install | Terraform elastic ip means -

← → ⌂ us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&connType=standard&instanceId=

aws Services Search [Alt+S]

```
maintenance_options (known after apply)
+ metadata_options (known after apply)
- network_interface (known after apply)
- private_dns_name_options (known after apply)
- root_block_device (known after apply)
}
```

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

Changes to Outputs:

- + IPv4 = (known after apply)

Note: You didn't use the -out option to save this plan, so Terraform can't guarantee to take exactly "terraform apply" now.

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213

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← → C



us-east-2.console.aws.amazon.com/ec2-instance-connect/ssh?addressFamily=ipv4&co



Services

Search

[Alt+]

Changes to Outputs:

+ IPv4 = (known after apply)

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.assignment5: Creating...
aws_instance.assignment5: Still creating... [10s elapsed]
aws_instance.assignment5: Still creating... [20s elapsed]
aws_instance.assignment5: Still creating... [30s elapsed]
aws_instance.assignment5: Creation complete after 32s [id=i-0b66cc55ab69e0b]
```

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

Outputs:

IPv4 = "18.191.154.189"

ubuntu@ip-172-31-42-213:~\$

i-069b8eb76d5cca3dd (terraform)

Public IPs: 52.15.243.130 Private IPs: 172.31.42.213