

```

==> Checking for `sudo` access (which may request your password)...
Password:
==> This script will install:
/opt/homebrew/bin/brew
/opt/homebrew/share/doc/homebrew
/opt/homebrew/share/man/man1/brew.1
/opt/homebrew/share/zsh/site-functions/_brew
/opt/homebrew/etc/bash_completion.d/brew
/opt/homebrew

Press RETURN/ENTER to continue or any other key to abort:
==> /usr/bin/sudo /usr/sbin/chown -R vignesh:admin /opt/homebrew
==> Downloading and installing Homebrew...
remote: Enumerating objects: 6188, done.
remote: Counting objects: 100% (2629/2629), done.
remote: Compressing objects: 100% (66/66), done.
remote: Total 6188 (delta 2596), reused 2563 (delta 2563), pack-reused 3559 (from 4)
==> Updating Homebrew...
==> Downloading https://ghcr.io/v2/homebrew/portable-ruby/portable-ruby/blobs/sha256:7645e2d653a335798838f6502e7834dfdbec5629429a1a34da5dbb2c57d63e
##### 100.0%
==> Pouring portable-ruby-3.3.8.arm64_big_sur.bottle.tar.gz
Warning: /opt/homebrew/bin is not in your PATH.
Instructions on how to configure your shell for Homebrew
can be found in the 'Next steps' section below.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
https://docs.brew.sh/Analytics
No analytics data has been sent yet (nor will any be during this install run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
https://github.com/Homebrew/brew#donations

==> Next steps:
- Run these commands in your terminal to add Homebrew to your PATH:
  echo >> /Users/vignesh/.zprofile
  echo 'eval "$(/opt/homebrew/bin/brew shellenv)'" >> /Users/vignesh/.zprofile
  eval "$(/opt/homebrew/bin/brew shellenv)"
- Run brew help to get started
- Further documentation:
  https://docs.brew.sh

vignesh@Vignesh ~ % echo 'eval "$(/opt/homebrew/bin/brew shellenv)'" >> ~/.zprofile
vignesh@Vignesh ~ % eval "$(/opt/homebrew/bin/brew shellenv)"
vignesh@Vignesh ~ % brew tap hashicorp/tap
==> Tapping hashicorp/tap
Cloning into '/opt/homebrew/Library/Taps/hashicorp/homebrew-tap'...
remote: Enumerating objects: 5411, done.
remote: Counting objects: 100% (580/580), done.
remote: Compressing objects: 100% (210/210), done.
remote: Total 5411 (delta 466), reused 379 (delta 370), pack-reused 4831 (from 4)
Receiving objects: 100% (5411/5411), 990.37 KiB | 5.16 MiB/s, done.
Resolving deltas: 100% (3668/3668), done.
Tapped 2 casks and 32 formulae (92 files, 1.3MB).
vignesh@Vignesh ~ % brew install hashicorp/tap/terraform
==> Fetching hashicorp/tap/terraform
==> Downloading https://releases.hashicorp.com/terraform/1.11.4/terraform_1.11.4
##### 100.0%
==> Installing terraform from hashicorp/tap
 /opt/homebrew/Cellar/terraform/1.11.4: 5 files, 84.8MB, built in 4 seconds
==> Running `brew cleanup terraform`...
Disable this behaviour by setting HOMEBREW_NO_INSTALL_CLEANUP.
Hide these hints with HOMEBREW_NO_ENV_HINTS (see `man brew`).
vignesh@Vignesh ~ % terraform -v
Terraform v1.11.4
on darwin_arm64
vignesh@Vignesh ~ % █

```

```

Press RETURN/ENTER to continue or any other key to abort:
==> /usr/bin/sudo /usr/sbin/chown -R vignesh:admin /opt/homebrew
==> Downloading and installing Homebrew...
remote: Enumerating objects: 6188, done.
remote: Counting objects: 100% (2629/2629), done.
remote: Compressing objects: 100% (66/66), done.
remote: Total 6188 (delta 2596), reused 2563 (delta 2563), pack-reused 3559 (from 4)
==> Updating Homebrew...
==> Downloading https://ghcr.io/v2/homebrew/portable-ruby/portable-ruby/blobs/sha256:7645e2d653a335798838f6582e7834dfdbeeec5629429a1a34da5d8b2c57d63e
##### 100.0%
==> Pouring portable-ruby-3.3.8.arm64_big_sur.bottle.tar.gz
Warning: /opt/homebrew/bin is not in your PATH.
Instructions on how to configure your shell for Homebrew
can be found in the 'Next steps' section below.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
https://docs.brew.sh/Analytics
No analytics data has been sent yet (nor will any be during this install run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
https://github.com/Homebrew/brew#donations

==> Next steps:
- Run these commands in your terminal to add Homebrew to your PATH:
  echo >> /Users/vignesh/.zprofile
  echo 'eval "$(/opt/homebrew/bin/brew shellenv)"' >> /Users/vignesh/.zprofile
  eval "$(/opt/homebrew/bin/brew shellenv)"
- Run brew help to get started
- Further documentation:
  https://docs.brew.sh

vignesh@Vignesh ~ % echo 'eval "$(/opt/homebrew/bin/brew shellenv)"' >> ~/.zprofile
vignesh@Vignesh ~ % eval "$(/opt/homebrew/bin/brew shellenv)"
vignesh@Vignesh ~ % brew tap hashicorp/tap
==> Tapping hashicorp/tap
Cloning into '/opt/homebrew/Library/Taps/hashicorp/homebrew-tap'...
remote: Enumerating objects: 5411, done.
remote: Counting objects: 100% (580/580), done.
remote: Compressing objects: 100% (210/210), done.
remote: Total 5411 (delta 466), reused 379 (delta 370), pack-reused 4831 (from 4)
Receiving objects: 100% (5411/5411), 990.37 KiB | 5.16 MiB/s, done.
Resolving deltas: 100% (3668/3668), done.
Tapped 2 casks and 32 formulae (92 files, 1.3MB).
vignesh@Vignesh ~ % brew install hashicorp/tap/terraform
==> Fetching hashicorp/tap/terraform
==> Downloading https://releases.hashicorp.com/terraform/1.11.4/terraform_1.11.4
##### 100.0%
==> Installing terraform from hashicorp/tap
📦 /opt/homebrew/Cellar/terraform/1.11.4: 5 files, 84.8MB, built in 4 seconds
==> Running 'brew cleanup terraform'...
Disable this behaviour by setting HOMEBREW_NO_INSTALL_CLEANUP.
Hide these hints with HOMEBREW_NO_ENV_HINTS (see 'man brew').
vignesh@Vignesh ~ % terraform -v
Terraform v1.11.4
on darwin_arm64
vignesh@Vignesh ~ % aws --version
aws-cli/2.24.14 Python/3.12.9 Darwin/24.4.0 exe/x86_64
vignesh@Vignesh ~ % cd ..
vignesh@Vignesh /Users % cd vignesh
vignesh@Vignesh ~ % cd multi-region-ec2
vignesh@Vignesh multi-region-ec2 % terraform init
Initializing the backend...
Initializing provider plugins...

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.
vignesh@Vignesh multi-region-ec2 %

```

Search

[Option+S]

VPC

EC2

S3

CloudTrail

IAM

> Users

Identity and Access Management (IAM)

Q Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

User created successfully

You can view and download the user's password and email instructions for signing in to the AWS Management Console.

Users (1) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

Q Search

<input type="checkbox"/>	User name	▲ Path	▼ Group	Last activity	MFA	Password age	Console last
<input type="checkbox"/>	terraform-user	/	0	-	-	∞	-

```

+ associate_public_ip_address      = (known after apply)
+ availability_zone                 = (known after apply)
+ cpu_core_count                   = (known after apply)
+ cpu_threads_per_core             = (known after apply)
+ disable_api_stop                  = (known after apply)
+ disable_apl_termination          = (known after apply)
+ ebs_optimized                    = (known after apply)
+ enable_primary_ipv6              = (known after apply)
+ get_password_data                = false
+ host_id                          = (known after apply)
+ host_resource_group_arn          = (known after apply)
+ iam_instance_profile             = (known after apply)
+ id                               = (known after apply)
+ instance_initiated_shutdown_behavior = (known after apply)
+ instance_lifecycle               = (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                         = (known after apply)
+ 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)
+ private_dns                      = (known after apply)
+ private_ip                       = (known after apply)
+ public_dns                       = (known after apply)
+ public_ip                       = (known after apply)
+ secondary_private_ips            = (known after apply)
+ security_groups                  = (known after apply)
+ source_dest_check                = true
+ spot_instance_request_id         = (known after apply)
+ subnet_id                       = (known after apply)
+ tags                             = {
+   "Name" = "EC2-West"
+ }
+ tags_all                         = {
+   "Name" = "EC2-West"
+ }
+ tenancy                          = (known after apply)
+ user_data                        = (known after apply)
+ user_data_base64                 = (known after apply)
+ user_data_replace_on_change      = false
+ vpc_security_group_ids           = (known after apply)

+ capacity_reservation_specification (known after apply)

+ cpu_options (known after apply)

+ ebs_block_device (known after apply)

+ enclave_options (known after apply)

+ ephemeral_block_device (known after apply)

+ 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 to take exactly these actions if you run `"terraform apply"` now.

vignesh@Vignesh multi-region-ec2 %

```

+ disable_api_termination      = (known after apply)
+ ebs_optimized                = (known after apply)
+ enable_primary_ipv6          = (known after apply)
+ get_password_data            = false
+ host_id                      = (known after apply)
+ host_resource_group_arn      = (known after apply)
+ iam_instance_profile         = (known after apply)
+ id                           = (known after apply)
+ instance_initiated_shutdown_behavior = (known after apply)
+ instance_lifecycle           = (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                     = (known after apply)
+ 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)
+ private_dns                  = (known after apply)
+ private_ip                   = (known after apply)
+ public_dns                   = (known after apply)
+ public_ip                    = (known after apply)
+ secondary_private_ips        = (known after apply)
+ security_groups              = (known after apply)
+ source_dest_check            = true
+ spot_instance_request_id     = (known after apply)
+ subnet_id                    = (known after apply)
+ tags                         = {
+   + "Name" = "EC2-West"
+ }
+ tags_all                     = {
+   + "Name" = "EC2-West"
+ }
+ tenancy                      = (known after apply)
+ user_data                    = (known after apply)
+ user_data_base64             = (known after apply)
+ user_data_replace_on_change  = false
+ vpc_security_group_ids       = (known after apply)

+ capacity_reservation_specification (known after apply)

+ cpu_options (known after apply)

+ ebs_block_device (known after apply)

+ enclave_options (known after apply)

+ ephemeral_block_device (known after apply)

+ 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.

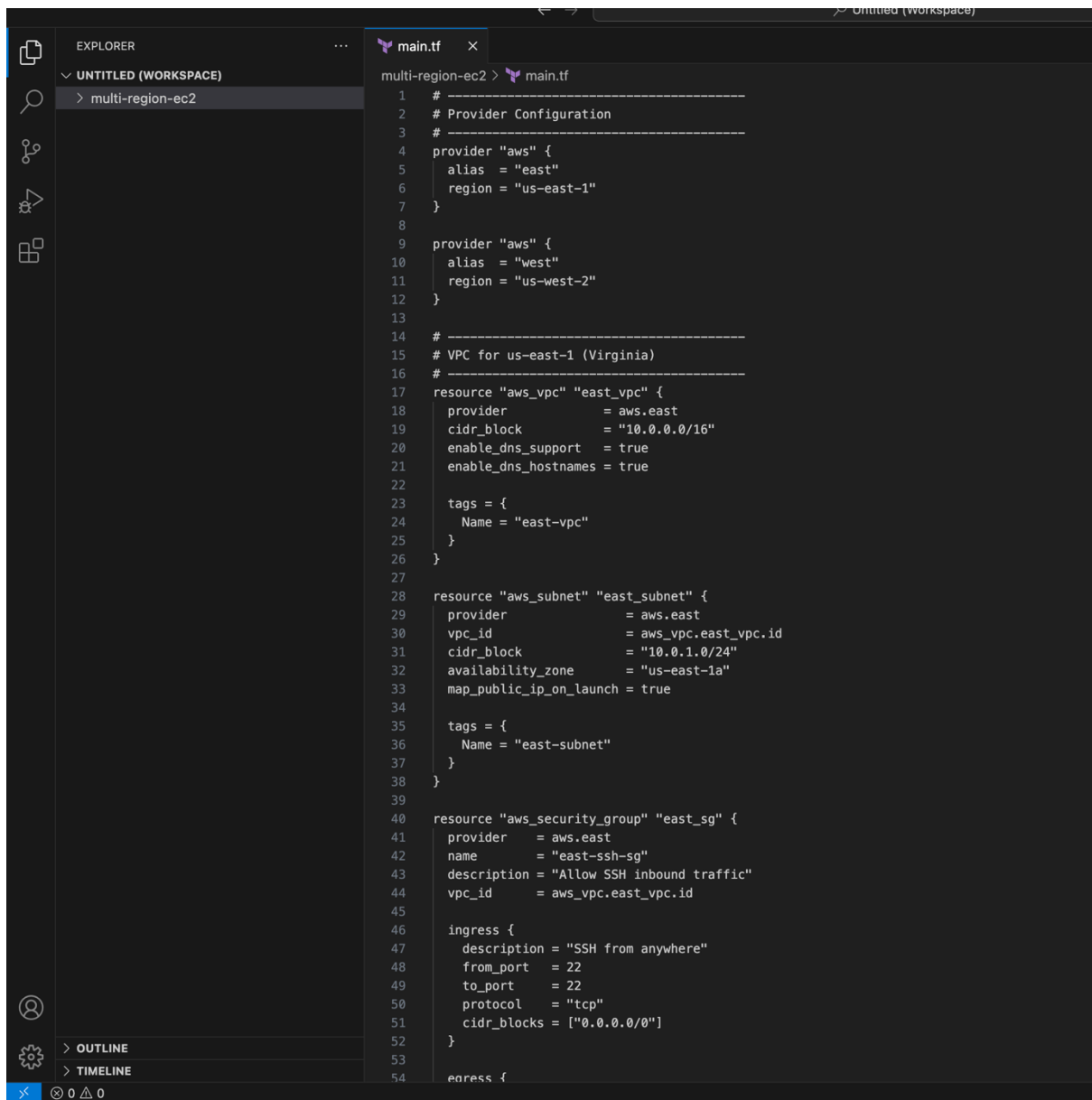
**Do you want to perform these actions?**

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

**Enter a value:** yes

aws\_instance.east\_instance: Creating...  
aws\_instance.west\_instance: Creating...





EXPLORER

main.tf

multi-region-ec2 > main.tf

multi-region-ec2

40 resource "aws\_security\_group" "east\_sg" {  
45  
46 ingress {  
47 description = "SSH from anywhere"  
48 from\_port = 22  
49 to\_port = 22  
50 protocol = "tcp"  
51 cidr\_blocks = ["0.0.0.0/0"]  
52 }  
53  
54 egress {  
55 from\_port = 0  
56 to\_port = 0  
57 protocol = "-1"  
58 cidr\_blocks = ["0.0.0.0/0"]  
59 }  
60  
61 tags = {  
62 Name = "east-security-group"  
63 }  
64 }  
65  
66 # -----  
67 # EC2 Instance in us-east-1 (Virginia)  
68 # -----  
69 resource "aws\_instance" "east\_instance" {  
70 provider = aws.east  
71 ami = "ami-0c2b8ca1dad447f8a"  
72 instance\_type = "t2.micro"  
73 subnet\_id = aws\_subnet.east\_subnet.id  
74 vpc\_security\_group\_ids = [aws\_security\_group.east\_sg.id]  
75  
76 tags = {  
77 Name = "EC2-East"  
78 }  
79 }  
80  
81 # -----  
82 # EC2 Instance in us-west-2 (Oregon)  
83 # -----  
84 resource "aws\_instance" "west\_instance" {  
85 provider = aws.west  
86 ami = "ami-0892d3c7ee96c0bf7"  
87 instance\_type = "t2.micro"  
88  
89 tags = {  
90 Name = "EC2-West"  
91 }  
92 }  
93

> OUTLINE  
> TIMELINE

0 0 0

---

```

        + protocol          = "tcp"
        + security_groups    = []
        + self               = false
        + to_port            = 22
      },
    ]
    + name                   = "east-ssh-sg"
    + name_prefix            = (known after apply)
    + owner_id               = (known after apply)
    + revoke_rules_on_delete = false
    + tags                   = {
      + "Name" = "east-security-group"
    }
    + tags_all               = {
      + "Name" = "east-security-group"
    }
    + vpc_id                 = (known after apply)
  }

# aws_subnet.east_subnet will be created
+ resource "aws_subnet" "east_subnet" {
  + arn                                = (known after apply)
  + assign_ipv6_address_on_creation    = false
  + availability_zone                  = "us-east-1a"
  + availability_zone_id               = (known after apply)
  + cidr_block                         = "10.0.1.0/24"
  + enable_dns64                       = false
  + enable_resource_name_dns_a_record_on_launch = false
  + enable_resource_name_dns_aaaa_record_on_launch = false
  + id                                 = (known after apply)
  + ipv6_cidr_block_association_id     = (known after apply)
  + ipv6_native                        = false
  + map_public_ip_on_launch            = true
  + owner_id                           = (known after apply)
  + private_dns_hostname_type_on_launch = (known after apply)
  + tags                               = {
    + "Name" = "east-subnet"
  }
  + tags_all                           = {
    + "Name" = "east-subnet"
  }
  + vpc_id                             = (known after apply)
}

# aws_vpc.east_vpc will be created
+ resource "aws_vpc" "east_vpc" {
  + arn                                = (known after apply)
  + cidr_block                         = "10.0.0.0/16"
  + default_network_acl_id             = (known after apply)
  + default_route_table_id            = (known after apply)
  + default_security_group_id         = (known after apply)
  + dhcp_options_id                   = (known after apply)
  + enable_dns_hostnames               = true
  + enable_dns_support                 = true
  + enable_network_address_usage_metrics = (known after apply)
  + id                                 = (known after apply)
  + instance_tenancy                   = "default"
  + ipv6_association_id                = (known after apply)
  + ipv6_cidr_block                    = (known after apply)
  + ipv6_cidr_block_network_border_group = (known after apply)
  + main_route_table_id                = (known after apply)
  + owner_id                           = (known after apply)
  + tags                               = {
    + "Name" = "east-vpc"
  }
  + tags_all                           = {
    + "Name" = "east-vpc"
  }
}

```

**Plan:** 5 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 these actions if you run `"terraform plan"`.  
vignesh@Vignesh multi-region-ec2 %

```

    }
    + vpc_id = (known after apply)
  }

# aws_subnet.east_subnet will be created
+ resource "aws_subnet" "east_subnet" {
  + arn = (known after apply)
  + assign_ipv6_address_on_creation = false
  + availability_zone = "us-east-1a"
  + availability_zone_id = (known after apply)
  + cidr_block = "10.0.1.0/24"
  + enable_dns64 = false
  + enable_resource_name_dns_a_record_on_launch = false
  + enable_resource_name_dns_aaaa_record_on_launch = false
  + id = (known after apply)
  + ipv6_cidr_block_association_id = (known after apply)
  + ipv6_native = false
  + map_public_ip_on_launch = true
  + owner_id = (known after apply)
  + private_dns_hostname_type_on_launch = (known after apply)
  + tags = {
    + "Name" = "east-subnet"
  }
  + tags_all = {
    + "Name" = "east-subnet"
  }
  + vpc_id = (known after apply)
}

# aws_vpc.east_vpc will be created
+ resource "aws_vpc" "east_vpc" {
  + arn = (known after apply)
  + cidr_block = "10.0.0.0/16"
  + default_network_acl_id = (known after apply)
  + default_route_table_id = (known after apply)
  + default_security_group_id = (known after apply)
  + dhcp_options_id = (known after apply)
  + enable_dns_hostnames = true
  + enable_dns_support = true
  + enable_network_address_usage_metrics = (known after apply)
  + id = (known after apply)
  + instance_tenancy = "default"
  + ipv6_association_id = (known after apply)
  + ipv6_cidr_block = (known after apply)
  + ipv6_cidr_block_network_border_group = (known after apply)
  + main_route_table_id = (known after apply)
  + owner_id = (known after apply)
  + tags = {
    + "Name" = "east-vpc"
  }
  + tags_all = {
    + "Name" = "east-vpc"
  }
}

```

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_vpc.east_vpc: Creating...
aws_instance.west_instance: Creating...
aws_vpc.east_vpc: Still creating... [10s elapsed]
aws_instance.west_instance: Still creating... [10s elapsed]
aws_vpc.east_vpc: Creation complete after 17s [id=vpc-03824c4cc736a4745]
aws_subnet.east_subnet: Creating...
aws_security_group.east_sg: Creating...
aws_instance.west_instance: Creation complete after 18s [id=i-06423380ece85709b]
aws_security_group.east_sg: Creation complete after 5s [id=sg-0bffb1c632fce6131]
aws_subnet.east_subnet: Still creating... [10s elapsed]
aws_subnet.east_subnet: Creation complete after 13s [id=subnet-09ace5a25ac30fb1b]
aws_instance.east_instance: Creating...

```



```

# aws_subnet.east_subnet will be created
+ resource "aws_subnet" "east_subnet" {
  + arn                                = (known after apply)
  + assign_ipv6_address_on_creation    = false
  + availability_zone                  = "us-east-1a"
  + availability_zone_id                = (known after apply)
  + cidr_block                          = "10.0.1.0/24"
  + enable_dns64                       = false
  + enable_resource_name_dns_a_record_on_launch = false
  + enable_resource_name_dns_aaaa_record_on_launch = false
  + id                                 = (known after apply)
  + ipv6_cidr_block_association_id      = (known after apply)
  + ipv6_native                         = false
  + map_public_ip_on_launch             = true
  + owner_id                           = (known after apply)
  + private_dns_hostname_type_on_launch = (known after apply)
  + tags                                = {
    + "Name" = "east-subnet"
  }
  + tags_all                            = {
    + "Name" = "east-subnet"
  }
  + vpc_id                              = (known after apply)
}

```

```

# aws_vpc.east_vpc will be created
+ resource "aws_vpc" "east_vpc" {
  + arn                                = (known after apply)
  + cidr_block                          = "10.0.0.0/16"
  + default_network_acl_id              = (known after apply)
  + default_route_table_id              = (known after apply)
  + default_security_group_id            = (known after apply)
  + dhcp_options_id                     = (known after apply)
  + enable_dns_hostnames                 = true
  + enable_dns_support                   = true
  + enable_network_address_usage_metrics = (known after apply)
  + id                                   = (known after apply)
  + instance_tenancy                     = "default"
  + ipv6_association_id                  = (known after apply)
  + ipv6_cidr_block                      = (known after apply)
  + ipv6_cidr_block_network_border_group = (known after apply)
  + main_route_table_id                  = (known after apply)
  + owner_id                             = (known after apply)
  + tags                                = {
    + "Name" = "east-vpc"
  }
  + tags_all                            = {
    + "Name" = "east-vpc"
  }
}

```

**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_vpc.east_vpc: Creating...
aws_instance.west_instance: Creating...
aws_vpc.east_vpc: Still creating... [10s elapsed]
aws_instance.west_instance: Still creating... [10s elapsed]
aws_vpc.east_vpc: Creation complete after 17s [id=vpc-03824c4cc736a4745]
aws_subnet.east_subnet: Creating...
aws_security_group.east_sg: Creating...
aws_instance.west_instance: Creation complete after 18s [id=i-06423380ece85709b]
aws_security_group.east_sg: Creation complete after 5s [id=sg-0bffb1c632fce6131]
aws_subnet.east_subnet: Still creating... [10s elapsed]
aws_subnet.east_subnet: Creation complete after 13s [id=subnet-09ace5a25ac30fb1b]
aws_instance.east_instance: Creating...
aws_instance.east_instance: Still creating... [10s elapsed]
aws_instance.east_instance: Creation complete after 16s [id=i-003947e9f865ffb22]

```

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

vignesh@Vignesh multi-region-ec2 %

aws

Search

[Option+S]

United States (Oregon)

terraform-user @ 3617-6957-5932

VPC

EC2

S3

CloudTrail

EC2 > Instances

EC2

Dashboard

EC2 Global View

Events

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Instances (1) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

Running

EC2-West

I-06423380ece85709b

Running

t2.micro

Initializing

View alarms +

us-west-2b

ec2-54-202-142-162.us...

54.202.142.1

aws

Search

[Option+S]

United States (N. Virginia)

terraform-user @ 3617-6957-5932

VPC

EC2

S3

CloudTrail

EC2 > Instances

EC2

Dashboard

EC2 Global View

Events

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Instances (1) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

EC2-East

I-003947e9f865ffb22

Running

t2.micro

Initializing

View alarms +

us-east-1a

ec2-44-203-56-187.co...

44.203.56.18