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Assignment 3 – Terraform

Notes

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DevOps Certification Training

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Terraform Assignment - 3

You have been asked to:

- Destroy the previous deployment
- Create 2 EC2 instances in Ohio and N.Virginia respectively
- Rename Ohio's instance to 'hello-ohio' and Virginia's instance to 'hello-virginia'

Download Attachment

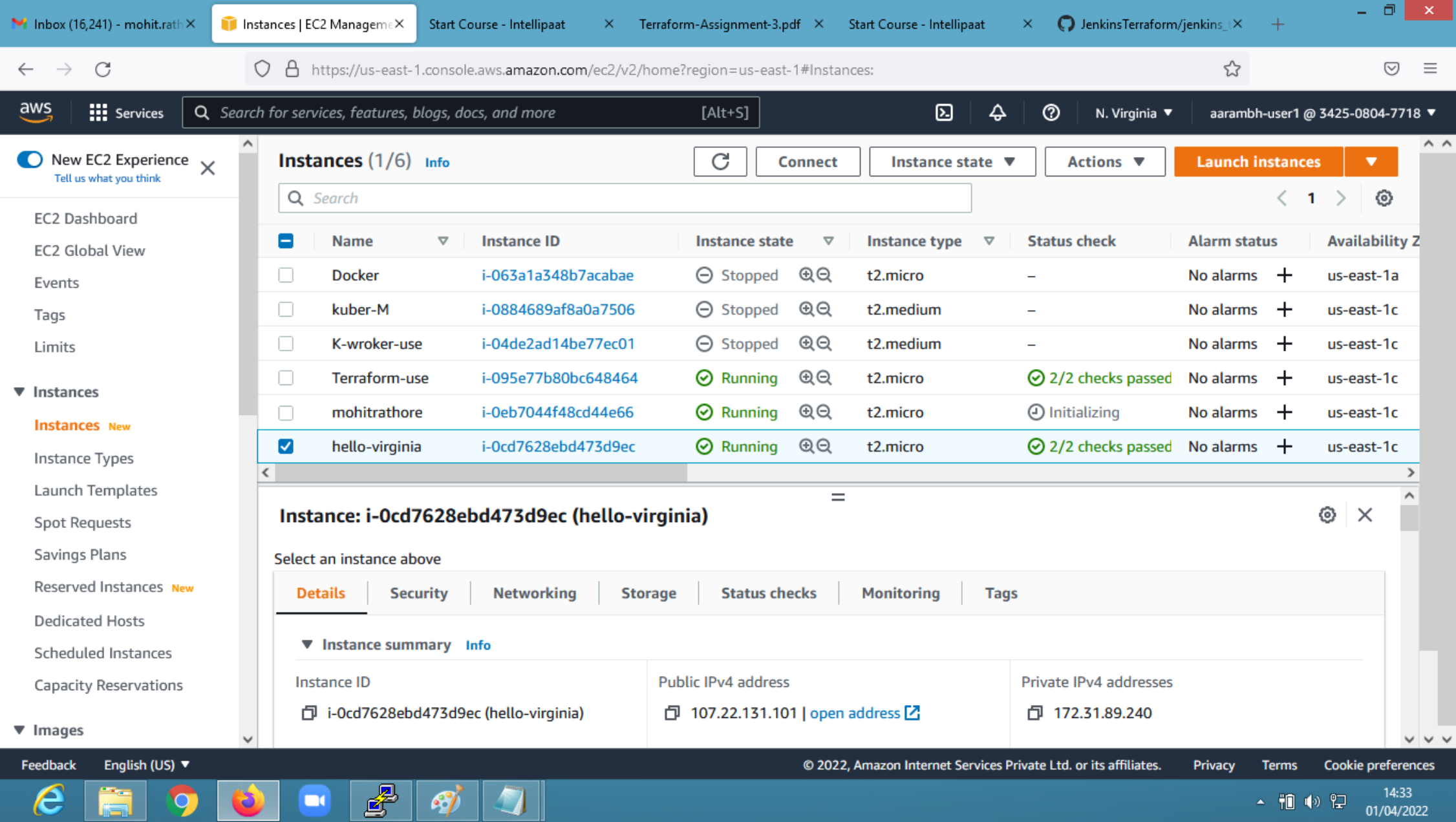
```
root@ip-172-31-93-95:~/terraform# vi creds.tf
# Configure the AWS Provider
provider "aws" {
  region = "us-east-1"
}
```

```
root@ip-172-31-93-95:~/terraform# vi ec2.tf
resource "aws_instance" "hello-virginia" {
        instance_type = "t2.micro"
        vpc_security_group_ids = [ "sg-00c36799c2c7a977d" ]
        associate_public_ip_address = true
        tags = {
          Name = "hello-virginia"
        }
        key_name = "hotfix"
        ami = "ami-0e472ba40eb589f49"
        availability_zone = "us-east-1c"
        subnet_id = "subnet-0224f7014f970ee00"
}

resource "aws_instance" "mohitrathore" {
        instance_type = "t2.micro"
        vpc_security_group_ids = [ "sg-00c36799c2c7a977d" ]
        associate_public_ip_address = true
        tags = {
          Name = "mohitrathore"
        }
        key_name = "hotfix"
        ami = "ami-0e472ba40eb589f49"
        availability_zone = "us-east-1c"
        subnet_id = "subnet-0224f7014f970ee00"
}
~
~
~
~
~
~
~
```

```
root@ip-172-31-93-95:~/terraform# vi creds.tf
root@ip-172-31-93-95:~/terraform# vi ec2.tf
root@ip-172-31-93-95:~/terraform# terraform plan

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.hello-virginia will be created
  + resource "aws_instance" "hello-virginia" {
      + ami                                  = "ami-0e472ba40eb589f49"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = true
      + availability_zone                    = "us-east-1c"
      + 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)
      + placement_group                      = (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.
root@ip-172-31-93-95:~/terraform# terraform apply

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.hello-virginia will be created
  + resource "aws_instance" "hello-virginia" {
      + ami                                  = "ami-0e472ba40eb589f49"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = true
      + availability_zone                    = "us-east-1c"
      + 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"
```

```
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.mohitrathore: Creating...
aws_instance.hello-virginia: Creating...
aws_instance.mohitrathore: Still creating... [10s elapsed]
aws_instance.hello-virginia: Still creating... [10s elapsed]
aws_instance.mohitrathore: Still creating... [20s elapsed]
aws_instance.hello-virginia: Still creating... [20s elapsed]
aws_instance.mohitrathore: Still creating... [30s elapsed]
aws_instance.hello-virginia: Still creating... [30s elapsed]
aws_instance.hello-virginia: Creation complete after 33s [id=i-0cd7628ebd473d9ec]
aws_instance.mohitrathore: Still creating... [40s elapsed]
aws_instance.mohitrathore: Still creating... [50s elapsed]
aws_instance.mohitrathore: Creation complete after 53s [id=i-0eb7044f48cd44e66]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.
root@ip-172-31-93-95:~/terraform# vi ec2.tf
root@ip-172-31-93-95:~/terraform# terraform apply
aws_instance.mohitrathore: Refreshing state... [id=i-0eb7044f48cd44e66]
aws_instance.hello-virginia: Refreshing state... [id=i-0cd7628ebd473d9ec]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the
following symbols:
  ~ update in-place

Terraform will perform the following actions:

  # aws_instance.hello-virginia will be updated in-place
  ~ resource "aws_instance" "hello-virginia" {
```


Inbox (16,241) - mohit.rath
Instances | EC2 Manageme
Start Course - Intellipaat
Terraform-Assignment-3.pdf
Start Course - Intellipaat
JenkinsTerraform/jenkins_t
https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:
aws
Services
Search for services, features, blogs, docs, and more [Alt+S]
N. Virginia
aarambh-user1 @ 3425-0804-7718
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 (1/6) Info
Connect
Instance state
Actions
Launch instances
Search
1
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Z
Docker i-063a1a348b7acabae Stopped t2.micro – No alarms us-east-1a
kuber-M i-0884689af8a0a7506 Stopped t2.medium – No alarms us-east-1c
K-wroker-use i-04de2ad14be77ec01 Stopped t2.medium – No alarms us-east-1c
Terraform-use i-095e77b80bc648464 Running t2.micro 2/2 checks passed No alarms us-east-1c
mohitrathore i-0eb7044f48cd44e66 Running t2.micro Initializing No alarms us-east-1c
hello-virginia i-0cd7628ebd473d9ec Running t2.micro 2/2 checks passed No alarms us-east-1c
Instance: i-0cd7628ebd473d9ec (hello-virginia)
Select an instance above
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info
Instance ID
i-0cd7628ebd473d9ec (hello-virginia)
Public IPv4 address
107.22.131.101 | open address
Private IPv4 addresses
172.31.89.240
Feedback
English (US)
© 2022, Amazon Internet Services Private Ltd. or its affiliates.
Privacy
Terms
Cookie preferences
14:33
01/04/2022

```
root@ip-172-31-93-95:~/terraform# vi creds.tf
# Configure the AWS Provider
provider "aws" {
  region = "us-east-2"
}
```

```
root@ip-172-31-93-95:~/terraform# vi ec2.tf
resource "aws_instance" "hello-ohio" {
        instance_type = "t2.micro"
        vpc_security_group_ids = [ "sg-0e7d58dfd3e9d2f9e" ]
        associate_public_ip_address = true
        tags = {
          Name = "hello-ohio"
        }
        key_name = "ansible"
        ami = "ami-0fb653ca2d3203ac1"
        availability_zone = "us-east-2b"
        subnet_id = "subnet-0af2da7e5d934323d"
}
```

```
root@ip-172-31-93-95:~/terraform# vi creds.tf
root@ip-172-31-93-95:~/terraform# vi ec2.tf
root@ip-172-31-93-95:~/terraform# terraform plan

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.hello-ohio will be created
  + resource "aws_instance" "hello-ohio" {
      + ami                                  = "ami-0fb653ca2d3203ac1"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = true
      + availability_zone                    = "us-east-2b"
      + 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                             = "ansible"
      + monitoring                           = (known after apply)
      + outpost_arn                          = (known after apply)
      + password_data                        = (known after apply)
      + placement_group                      = (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 exactly these actions if you
run "terraform apply" now.
root@ip-172-31-93-95:~/terraform# terraform apply

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.hello-ohio will be created
  + resource "aws_instance" "hello-ohio" {
      + ami                                  = "ami-0fb653ca2d3203ac1"
      + arn                                  = (known after apply)
      + associate_public_ip_address          = true
      + availability_zone                    = "us-east-2b"
      + 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                             = "ansible"
```

```
      + network_interface_id  = (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.hello-ohio: Creating...
aws_instance.hello-ohio: Still creating... [10s elapsed]
aws_instance.hello-ohio: Still creating... [20s elapsed]
aws_instance.hello-ohio: Still creating... [30s elapsed]
aws_instance.hello-ohio: Creation complete after 32s [id=i-006fba2079c9aa851]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
root@ip-172-31-93-95:~/terraform#
```

New EC2 Experience
Tell us what you think

Instances (1/2) Info

Connect | Instance state | Actions | Launch instances

Search

1

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Z
NagiosServer	i-0706a3b62b5fea63a	Stopped	t2.micro	–	No alarms	us-east-2b
hello-ohio	i-006fba2079c9aa851	Running	t2.micro	2/2 checks passed	No alarms	us-east-2b

Instance: i-006fba2079c9aa851 (hello-ohio)

Select an instance above

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

Instance summary Info

Instance ID
i-006fba2079c9aa851 (hello-ohio)

IPv6 address
–

Public IPv4 address
3.142.48.164 | open address

Instance state
Running

Private IPv4 addresses
172.31.19.186

Public IPv4 DNS
ec2-3-142-48-164.us-east-2.compute.amazonaws.com | open address

```
Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
root@ip-172-31-93-95:~/terraform# terraform destroy
aws_instance.hello-ohio: Refreshing state... [id=i-006fba2079c9aa851]

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the
following symbols:
  - destroy

Terraform will perform the following actions:

  # aws_instance.hello-ohio will be destroyed
  - resource "aws_instance" "hello-ohio" {
      - ami                                  = "ami-0fb653ca2d3203ac1" -> null
      - arn                                  = "arn:aws:ec2:us-east-2:342508047718:instance/i-006fba2079c9aa851" -> null
      - associate_public_ip_address          = true -> null
      - availability_zone                    = "us-east-2b" -> null
      - cpu_core_count                       = 1 -> null
      - cpu_threads_per_core                 = 1 -> null
      - disable_api_termination              = false -> null
      - ebs_optimized                        = false -> null
      - get_password_data                    = false -> null
      - hibernation                          = false -> null
      - id                                   = "i-006fba2079c9aa851" -> null
      - instance_initiated_shutdown_behavior = "stop" -> null
      - instance_state                       = "running" -> null
      - instance_type                        = "t2.micro" -> null
      - ipv6_address_count                   = 0 -> null
      - ipv6_addresses                       = [] -> null
      - key_name                             = "ansible" -> null
      - monitoring                           = false -> null
      - primary_network_interface_id         = "eni-0655f9da0726fe4bf" -> null
      - private_dns                          = "ip-172-31-19-186.us-east-2.compute.internal" -> null
      - private_ip                           = "172.31.19.186" -> null
```

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
Capacity Reservations

Images
AMIs New

Instances (1/2) Info

Connect | Instance state | Actions | Launch instances

Search

1

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Z
NagiosServer	i-0706a3b62b5fea63a	Stopped	t2.micro	–	No alarms	us-east-2b
hello-ohio	i-006fba2079c9aa851	Terminated	t2.micro	–	No alarms	us-east-2b

Instance: i-006fba2079c9aa851 (hello-ohio)

Select an instance above

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

Instance summary Info

Instance ID
i-006fba2079c9aa851 (hello-ohio)

IPv6 address
–

Hostname type

Public IPv4 address
–

Instance state
Terminated

Private IPv4 addresses
–

Public IPv4 DNS
–