

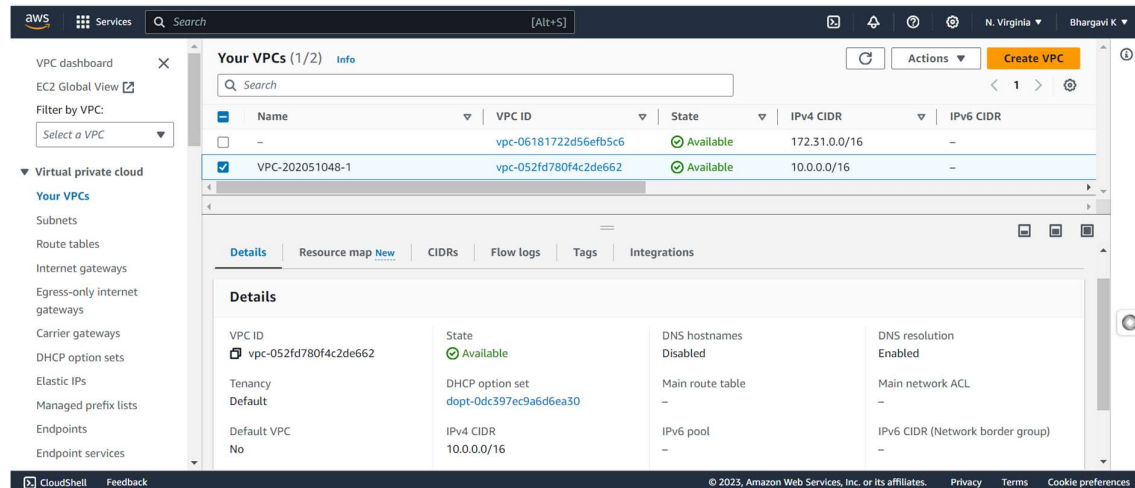
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Assessment 9: VPC Peering

For this assignment I've created 2 VPC's in two different regions. I'll try to ping the private instance of Mumbai region from public instance of Virginia region.

This is the first VPC:

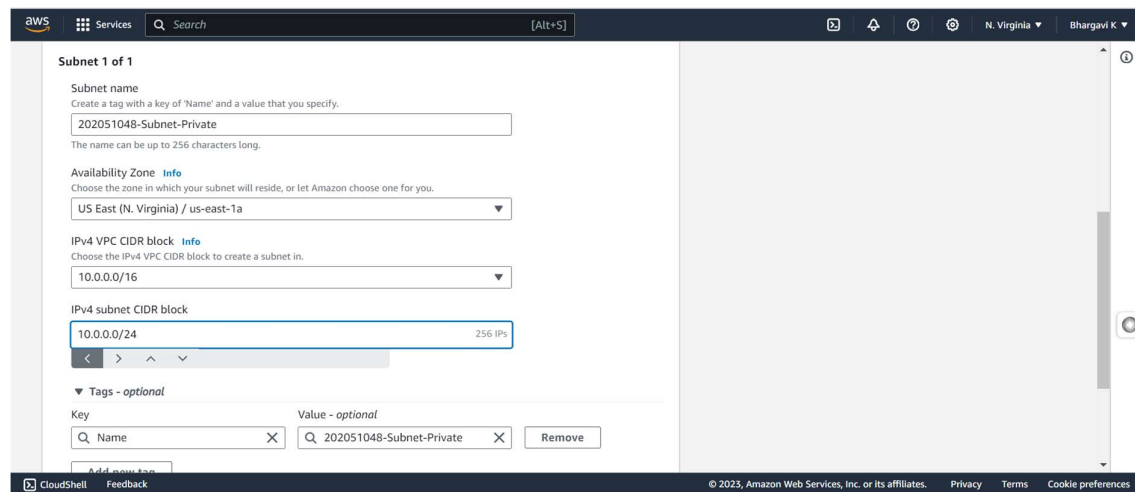


The screenshot shows the AWS Management Console interface for VPCs. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC components like subnets, route tables, and internet gateways. The main content area displays 'Your VPCs (1/2)' with a table listing two VPCs. The second VPC, 'vpc-202051048-1', is selected, and its details are shown in the 'Details' tab. The details include VPC ID, State (Available), DNS hostnames (Disabled), DNS resolution (Enabled), Tenancy (Default), DHCP option set (dopt-0dc397ec9a6d6ea30), Main route table, Main network ACL, Default VPC (No), IPv4 CIDR (10.0.0.0/16), IPv6 pool, and IPv6 CIDR (Network border group).

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
-	vpc-06181722d56efb5c6	Available	172.31.0.0/16	-
VPC-202051048-1	vpc-052fd780f4c2de662	Available	10.0.0.0/16	-

Details

VPC ID	vpc-052fd780f4c2de662	State	Available	DNS hostnames	Disabled	DNS resolution	Enabled
Tenancy	Default	DHCP option set	dopt-0dc397ec9a6d6ea30	Main route table	-	Main network ACL	-
Default VPC	No	IPv4 CIDR	10.0.0.0/16	IPv6 pool	-	IPv6 CIDR (Network border group)	-



The screenshot shows the 'Subnet 1 of 1' configuration page in the AWS Management Console. The page includes fields for Subnet name, Availability Zone, IPv4 VPC CIDR block, and IPv4 subnet CIDR block. There is also a section for Tags - optional.

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
202051048-Subnet-Private
The name can be up to 256 characters long.

Availability Zone
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
US East (N. Virginia) / us-east-1a

IPv4 VPC CIDR block
Choose the IPv4 VPC CIDR block to create a subnet in.
10.0.0.0/16

IPv4 subnet CIDR block
10.0.0.0/24 (256 IPs)

Tags - optional
Key: Name, Value: 202051048-Subnet-Private

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Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
US East (N. Virginia) / us-east-1b

IPv4 VPC CIDR block Info
Choose the IPv4 VPC CIDR block to create a subnet in.
10.0.0.0/16

IPv4 subnet CIDR block
10.0.1.0/24 256 IPs

▼ **Tags - optional**

Key Value - optional
Q Name X Q 202051048-SubnetPublic X Remove

Add new tag
You can add 49 more tags.

Remove

Add new subnet

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VPC dashboard
EC2 Global View
Filter by VPC: Select a VPC

▼ **Virtual private cloud**

- Your VPCs
- Subnets**
- Route tables
- Internet gateways
- Egress-only internet gateways
- Carrier gateways
- DHCP option sets
- Elastic IPs
- Managed prefix lists
- Endpoints
- Endpoint services

You have successfully created 1 subnet: subnet-06bfb0ccb8ab8c9a1

Subnets (8) Info

Find resources by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR
<input type="checkbox"/>	-	subnet-0c581eb4579d3b0a5	Available	vpc-06181722d56efb5c6	172.31.32.0/20
<input type="checkbox"/>	-	subnet-0fd5197836b59d99c	Available	vpc-06181722d56efb5c6	172.31.16.0/20
<input type="checkbox"/>	202051048-Subnet-Private	subnet-0d7bf5c9318a16be4	Available	vpc-052fd780f4c2de662 VPC...	10.0.0.0/24
<input type="checkbox"/>	202051048-SubnetPublic	subnet-06bfb0ccb8ab8c9a1	Available	vpc-052fd780f4c2de662 VPC...	10.0.1.0/24

Select a subnet

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The subnets are created.

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VPC settings

Resources to create Info
Create only the VPC resource or the VPC and other networking resources.
☒ VPC only ☐ VPC and more

Name tag - optional
Creates a tag with a key of 'Name' and a value that you specify.
202051048-VPC-2

IPv4 CIDR block Info
☒ IPv4 CIDR manual input
☐ IPAM-allocated IPv4 CIDR block

IPv4 CIDR
10.1.0.0/16
CIDR block size must be between /16 and /28.

IPv6 CIDR block Info
☒ No IPv6 CIDR block
☐ IPAM-allocated IPv6 CIDR block
☐ Amazon-provided IPv6 CIDR block
☐ IPv6 CIDR owned by me

Tenancy Info
Default

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Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 2

Subnet name
Create a tag with a key of 'Name' and a value that you specify.

The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the IPv4 VPC CIDR block to create a subnet in.

IPv4 subnet CIDR block
 4,096 IPs

Tags - optional
Key: Value - optional: [Remove](#)
[Add new tag](#)

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The name can be up to 256 characters long.

Availability Zone [Info](#)
Choose the zone in which your subnet will reside, or let Amazon choose one for you.

IPv4 VPC CIDR block [Info](#)
Choose the IPv4 VPC CIDR block to create a subnet in.

IPv4 subnet CIDR block
 4,096 IPs

Tags - optional
Key: Value - optional: [Remove](#)
[Add new tag](#)
You can add 43 more tags.
[Remove](#)
[Add new subnet](#)

[Cancel](#) [Create subnet](#)

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VPC dashboard

EC2 Global View

Filter by VPC:

Select a VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

Network ACLs

Security groups

You have successfully created 2 subnets: subnet-087b3a032484413ba, subnet-03637af9498d48dc3

Subnets (2)

[Find resources by attribute or tag](#)

[Clear filters](#)

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
<input type="checkbox"/>	202051048-Subnet-Private	subnet-03637af9498d48dc3	Available	vpc-0fb9af1161f82080c 2020...	10.1.2.0/24	--
<input type="checkbox"/>	20205048-Subnet-Public	subnet-087b3a032484413ba	Available	vpc-0fb9af1161f82080c 2020...	10.1.1.0/24	--

Select a subnet

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We'll then start the peering connection:

The first screenshot shows the 'Create peering connection' page. Under 'Peering connection settings', the 'Name' field is set to '202051048-PC'. The 'Select a local VPC to peer with' section shows 'vpc-0fb9af1161f82080c (202051048-VPC-2)' selected. Below this, a table lists VPC CIDRs for the selected VPC:

CIDR	Status	Status reason
10.1.0.0/16	Associated	-

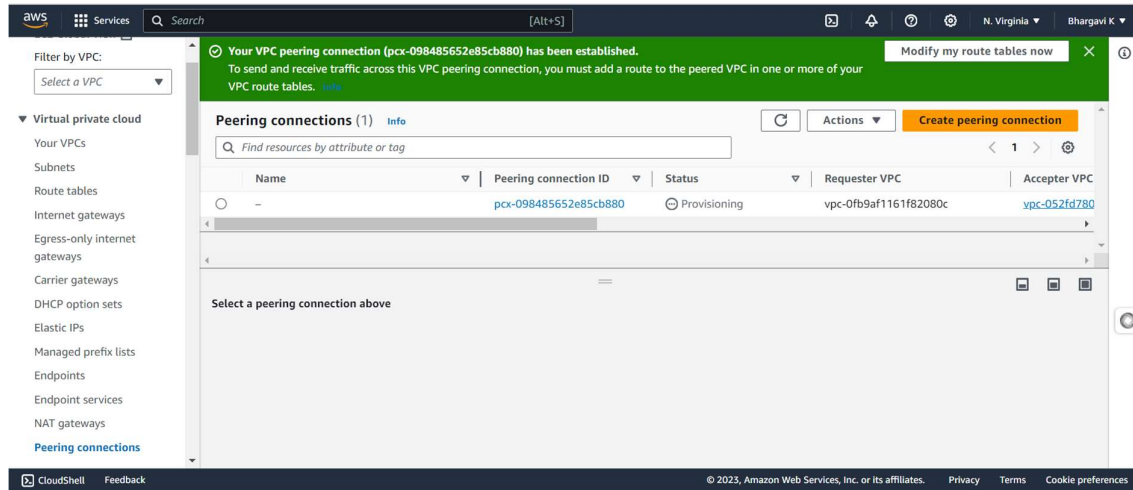
The 'Select another VPC to peer with' section has 'My account' selected under 'Account' and 'This Region (ap-south-1)' selected under 'Region'.

The second screenshot shows the same page with 'Another Region' selected under 'Account' and 'US East (N. Virginia) (us-east-1)' selected under 'Region'. The 'VPC ID (Acceptor)' field is set to 'vpc-052fd780f4c2de662'.

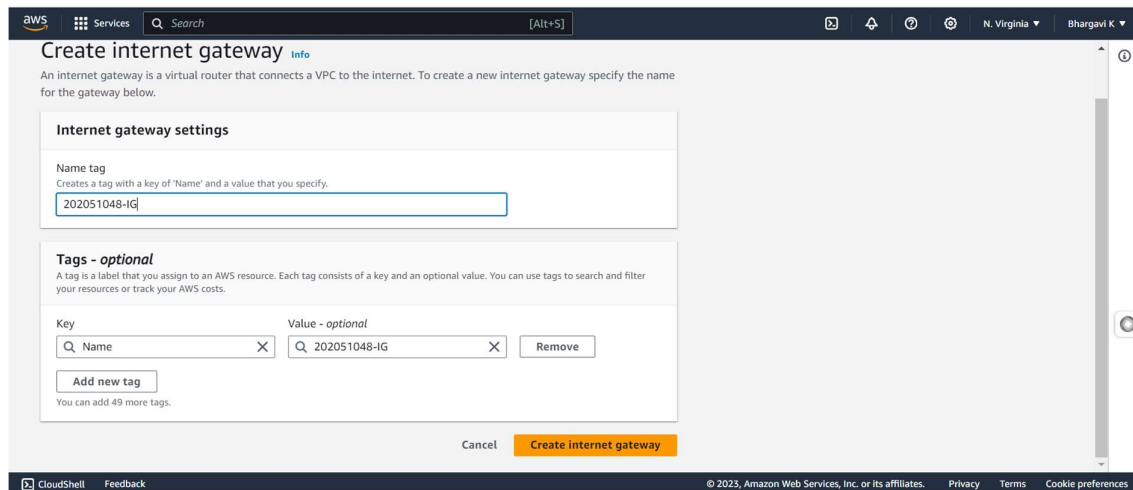
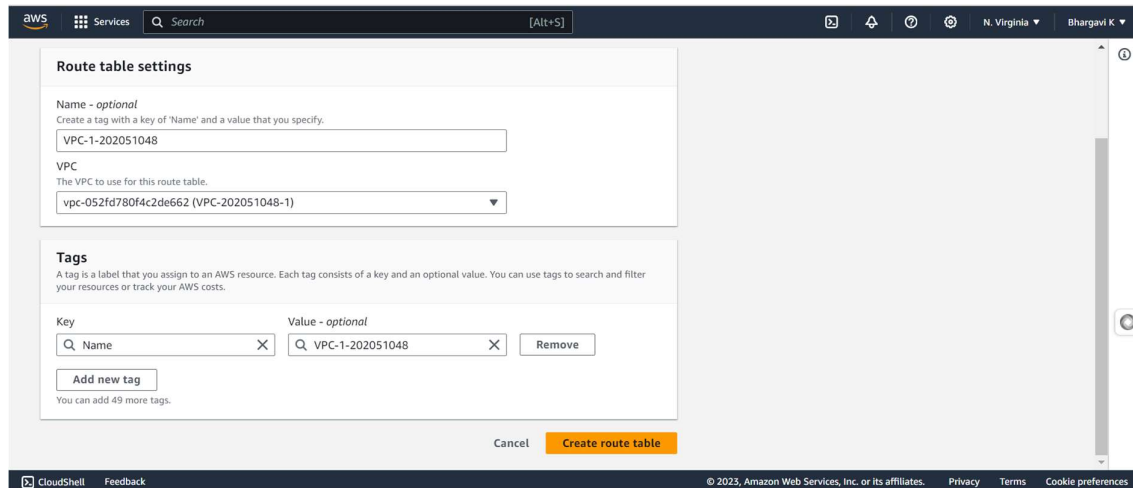
The third screenshot shows the 'Peering connections' list with one connection in a 'Pending acceptance' state. A modal dialog titled 'Accept VPC peering connection request' is open, asking for confirmation to accept the request. The dialog displays the following details:

Requester VPC	Acceptor VPC	Requester CIDRs
vpc-0fb9af1161f82080c	vpc-052fd780f4c2de662 / VPC-202051048-1	10.1.0.0/16
Acceptor CIDRs		Acceptor Region
-		N. Virginia (us-east-1)
Requester owner ID	Acceptor owner ID	
756870351100 (This account)	756870351100 (This account)	

The dialog has 'Cancel' and 'Accept request' buttons.



Edit the route table.



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VPC > Route tables > rtb-0b64e0fa91e27739b > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	Internet Gateway	-	No
	igw-0f68109a00e50765d		

Add route

Cancel Preview Save changes

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EC2 > Instances > Launch an instance

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

202051048-EC2-Public

Add additional tags

Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Summary

Number of instances

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...read more

ami-0fc5d935ebf8bc3bc

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel Launch instance

Review commands

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Network settings

VPC - required

vpc-052fd780f4c2de662 (VPC-202051048-1)

10.0.0.0/16

Subnet

subnet-06bfb0ccb8ab8c9a1

202051048-SubnetPublic

VPC: vpc-052fd780f4c2de662 Owner: 756870351100 Availability Zone: us-east-1b IP addresses available: 251 CIDR: 10.0.1.0/24

Create new subnet

Auto-assign public IP

Enable

Firewall (security groups)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group Select existing security group

Security group name - required

launch-wizard-9

This security group will be added to all network interfaces. The name can't be edited after the security group is created. Max length is

Summary

Number of instances

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...read more

ami-0fc5d935ebf8bc3bc

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel Launch instance

Review commands

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VPC - required Info

vpc-052fd780f4c2de662 (VPC-202051048-1)

Subnet Info

subnet-0d7bf5c9318a16be4 202051048-Subnet-Private

Auto-assign public IP Info

Disable

Firewall (security groups) Info

Create security group Select existing security group

Security group name - required

launch-wizard-10

Description - required Info

launch-wizard-10 created 2023-11-01T05:21:49.638Z

Summary

Number of instances Info

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...read more

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel Launch Instance

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VPC dashboard EC2 Global View

Filter by VPC: Select a VPC

Virtual private cloud

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

Network ACLs

Security groups

Subnets (1/5) Info

Find resources by attribute or tag

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
-	subnet-03159a5937cd942d4	Available	vpc-05124e828d8809042	172.31.16.0/20	-
-	subnet-0ed6a8712932ebe9f	Available	vpc-05124e828d8809042	172.31.0.0/20	-
202051048-Subnet-Private	subnet-03637af9498d48dc3	Available	vpc-0fb9af1161f82080c 2020...	10.1.2.0/24	-
-	subnet-066ab42882d9dc827	Available	vpc-05124e828d8809042	172.31.32.0/20	-
202051048-Subnet-Public	subnet-087b3a032484413ba	Available	vpc-0fb9af1161f82080c 2020...	10.1.1.0/24	-

Route table: rtb-05ceb5f7b6371166

Edit route table association

Routes (3)

Filter routes

Destination	Target
10.0.0.0/16	pcx-098485652e85cb880
10.1.0.0/16	local
0.0.0.0/0	pcx-098485652e85cb880

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The destination of the second VPC has been added here and target of peering connection have been added here.

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VPC dashboard EC2 Global View

Filter by VPC: Select a VPC

Virtual private cloud

Subnets

Route tables

Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

Route tables (1/5) Info

Find resources by attribute or tag

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC
-	rtb-0ae700c2549948c2d	-	-	Yes	vpc-052
202051048-Subnet-Private	rtb-0fc7b162f7eef48a5	-	-	No	vpc-052
-	rtb-086106c463bfddea	-	-	Yes	vpc-061
VPC-1-202051048	rtb-01d6913045acdeae8	-	-	No	vpc-052
202051048-Public-Subnet	rtb-0b64e0fa91e27739b	subnet-06bfb0ccb8ab8c9...	-	No	vpc-052

Destination	Target	Status	Propagated
0.0.0.0/0	igw-0f68109a00e50765d	Active	No
10.0.0.0/16	local	Active	No
10.1.0.0/16	pcx-098485652e85cb880	Active	No

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EC2 Dashboard EC2 Global View Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

New

Images

AMIs

AMI Catalog

Elastic Block Store

CloudShell Feedback

Instances (1/2) Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

1

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
202051048-E...	i-0d3f9f6717fa74db	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a
202051048-E...	i-01075bee315898cab	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b

Instance: i-01075bee315898cab (202051048-EC2-Public)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary info

Instance ID i-01075bee315898cab (202051048-EC2-Public)

Public IPv4 address 54.161.136.254 [open address](#)

Private IPv4 addresses 10.0.1.20

IPv6 address -

Public IPv4 DNS -

Instance state Running

Hostname type Private IP DNS name (IPv4 only)

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EC2 Dashboard EC2 Global View Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

New

Images

AMIs

AMI Catalog

Elastic Block Store

CloudShell Feedback

Instances (1/3) Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

1

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
202051048-E...	i-0d3f9f6717fa74db	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a
202051048-E...	i-04e9e17ee9743a8eb	Terminated	t2.micro	-	No alarms	us-east-1c
202051048-E...	i-01075bee315898cab	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b

Instance: i-01075bee315898cab (202051048-EC2-Public)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary info

Port range	Protocol	Source	Security groups	Description
All	ICMP	0.0.0.0/0	launch-wizard-9	-
22	TCP	0.0.0.0/0	launch-wizard-9	-

Outbound rules

Filter rules

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EC2 Dashboard EC2 Global View Events

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

New

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

CloudShell Feedback

Instances (1/2) Info

Find Instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

1

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4
202051048-Pr...	i-06136b321532bfec6	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1b	-	-
202051048-P...	i-065e2025efa8b3f97	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a	ec2-13-127-124-2.ap-s...	13.127.124

Instance: i-06136b321532bfec6 (202051048-Private)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary info

Instance ID i-06136b321532bfec6 (202051048-Private)

Public IPv4 address -

Private IPv4 addresses 10.1.2.131

IPv6 address -

Public IPv4 DNS -

Instance state Running

Private IP DNS name (IPv4 only) ip-10-1-2-131.ap-south-1.compute.internal

Hostname type Private IP DNS name (IPv4 only)

IP name: ip-10-1-2-131.ap-south-1.compute.internal

Answer private resource DNS name -

Instance type t2.micro

Auto-assigned IP address VPC ID

AWS Compute Optimizer finding

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```
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ubuntu@ip-10-0-1-20:~$ ping 10.1.2.131
PING 10.1.2.131 (10.1.2.131) 56(84) bytes of data.
64 bytes from 10.1.2.131: icmp_seq=1 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=2 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=3 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=4 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=5 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=6 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=7 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=8 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=9 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=10 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=11 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=12 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=13 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=14 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=15 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=16 ttl=64 time=187 ms
64 bytes from 10.1.2.131: icmp_seq=17 ttl=64 time=187 ms
64 bytes from 10.1.2.131: icmp_seq=18 ttl=64 time=187 ms

i-01075bee315898cab (202051048-EC2-Public)
PublicIPs: 54.161.136.254 PrivateIPs: 10.0.1.20
```

```
aws Services Search [Alt+S] N. Virginia Bhargavi K
64 bytes from 10.1.2.131: icmp_seq=473 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=474 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=475 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=476 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=477 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=478 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=479 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=480 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=481 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=482 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=483 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=484 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=485 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=486 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=487 ttl=64 time=188 ms
64 bytes from 10.1.2.131: icmp_seq=488 ttl=64 time=188 ms
^C
-- 10.1.2.131 ping statistics --
488 packets transmitted, 488 received, 0% packet loss, time 487730ms
rtt min/avg/max/mdev = 187.467/187.788/188.642/0.105 ms
ubuntu@ip-10-0-1-20:~$

i-01075bee315898cab (202051048-EC2-Public)
PublicIPs: 54.161.136.254 PrivateIPs: 10.0.1.20
```

From instance of one VPC to another.

The instance has been pinged successfully.