



Virtual Private Cloud...

PREPARED BY:

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OBJECTIVE:

To determine working of two VPC's connected in two different regions and to develop a model which connects their private instances.

What is AWS VPC?

Amazon Virtual Private Cloud (VPC) provides us a logical isolated section of the Amazon Web Services (AWS) Cloud where we can launch AWS resources in a virtual network. We have complete control over virtual networking environment, which includes our own IP address range, configuring Internet gateway, creation of subnets, configuration of route tables and network gateways etc.

What is VPC Peering?

A VPC peering connection is a networking connection between two different VPCs in different AWS accounts/regions that enables you to route traffic between them using private IPv4/IPv6 addresses. With this configuration we can privately connect two different networks of two different VPC's and make them behave as a single network. **Note:** In order to form VPC peering both the network must not have overlapped CIDR's otherwise they won't connect, and VPC peering is not Transitive must be established for each VPC that needs to be communicated.

Flow Diagram:

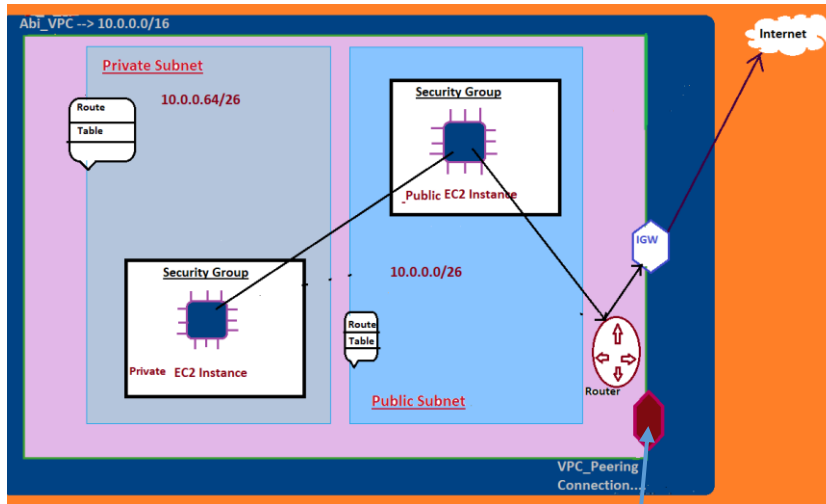


fig: 1 Abi_VPC

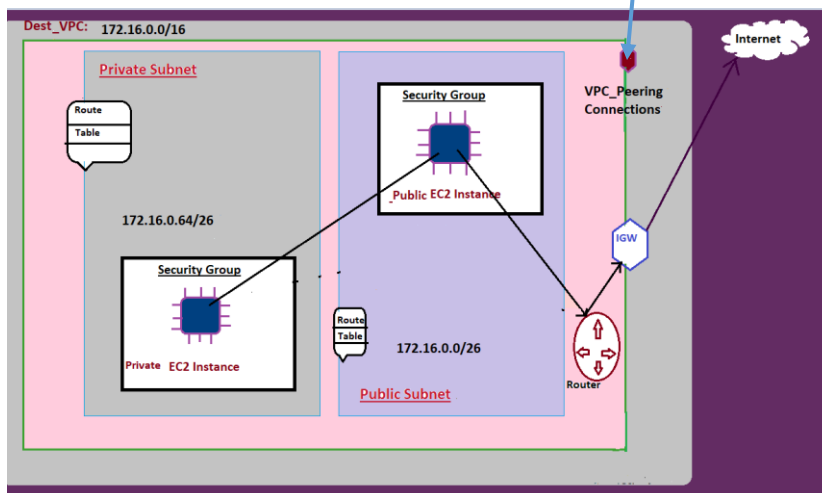


fig: 2 Dest_VPC

Explanation:

In this project We have two separate VPC's one in North Virginia (with name as Abi_VPC) with Ip address range 10.0.0.0/16 and more in Ohio (With name as Destination_VPC) with Ip address range 172.16.0.0/16. In Dest_VPC I've configured public subnet with IP range 172.16.0.0/26, and private subnet with IP range 172.16.0.64/26, attached an Internet Gateway IGW to the public subnet so that it can connect to the Internet. After this configuration two EC2 instances are launched one in public subnet which could be accessed from Internet and one more in private subnet. We have configured public instance such a way that it could be accessed (i-e SSH) from internet, but private instance is configured in such a way that it

could only be accessed (i.e SSH) through public instance and this public instance is also known as **Bastion Host**. We use Bastion host to ssh into our private EC2 instance. In order to achieve this configuration we need to edit the inbound rule of security group for private Instance to allow SSH from public Instance security group. And also we need add the ssh key pair of private instance in the public Instance in order to grant ssh key access. The same has been configured in Abi_VPC.

After this configuration, we need to form a VPC peering without this we cannot form connection between the instances. For this we need to send peering request from one vpc to another be it in same or cross region/account, later modify the route tables of both VPC's and the destination would be CIDR of other VPC. After peering we can now easily ping the other instances.

Results:

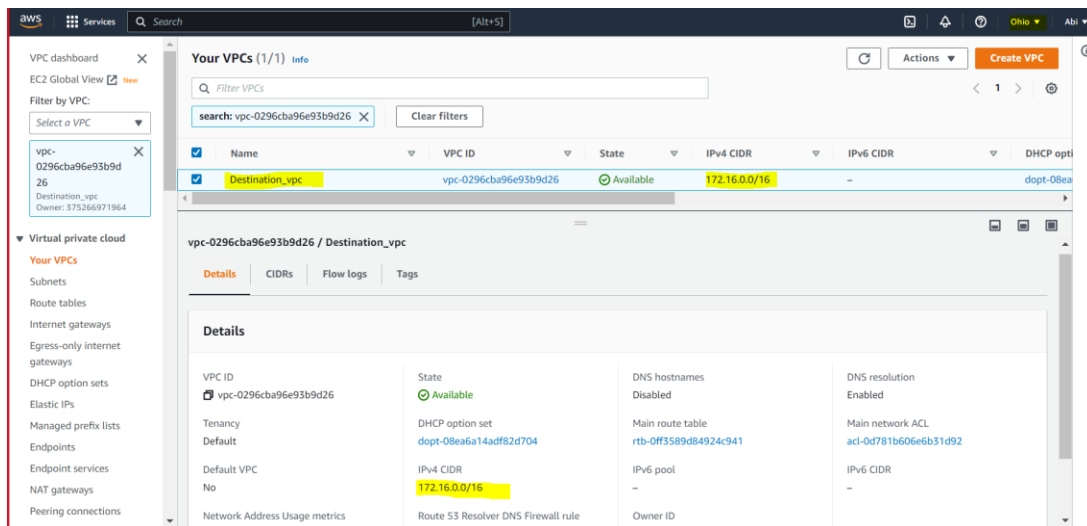


fig: 3 Dest_VPC with address range.

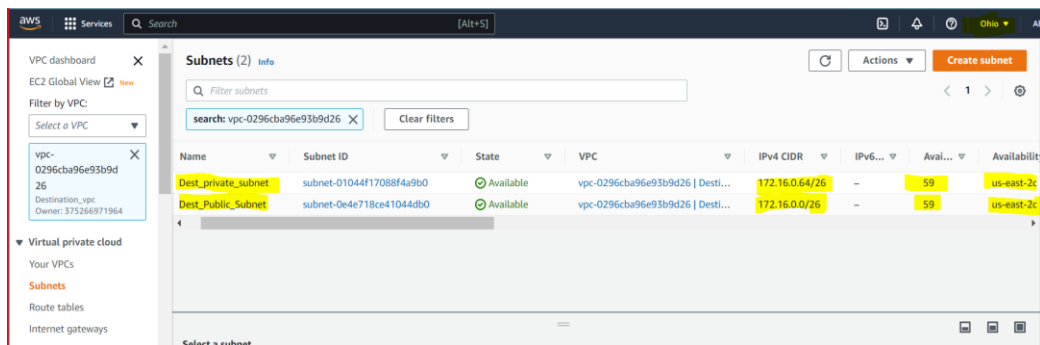


fig: 4 Public and Private Subnet range of Dest_VPC.

Route tables (1/3) Info

Filter route tables

search: vpc-0296cba96e93b9d26 X Clear filters

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC	Ow...
<input checked="" type="checkbox"/> Dest_public_Route	rtb-01b4efb09d6eedfd9	subnet-0e4e718ce4104...	-	No	vpc-0296cba96e93b9d26 De...	3752f
<input type="checkbox"/> Dest_Private_Route	rtb-087c0b4348feb804d	subnet-01044f17088f4...	-	No	vpc-0296cba96e93b9d26 De...	3752f
<input type="checkbox"/> -	rtb-0ff3589d84924c941	-	-	Yes	vpc-0296cba96e93b9d26 De...	3752f

rtb-01b4efb09d6eedfd9 / Dest_public_Route

Details Routes Subnet associations Edge associations Route propagation Tags

Routes (2)

Filter routes Both

Destination	Target	Status	Propagated
0.0.0.0/0	igw-082cea2c8f404fc94	Active	No
172.16.0.0/16	local	Active	No

fig: 5 Public Route table of Dest_VPC with internet gateway(IGW) attached .

Instances (1/2) Info

Find Instance by attribute or tag (case-sensitive)

Connect Instance state Actions Launch instances

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input checked="" type="checkbox"/> Dest_PublicInstance	i-0ce2d0b28875a7994	Running	t2.micro	Initializing	No alarms +	us-east-2c	-
<input type="checkbox"/> Dest_Private_Instance	i-05e3c03b51cd4686f	Pending	t2.micro	-	No alarms +	us-east-2c	-

Instance: i-0ce2d0b28875a7994 (Dest_PublicInstance)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID i-0ce2d0b28875a7994 (Dest_PublicInstance)	Public IPv4 address 3.144.81.150 open address	Private IPv4 addresses 172.16.0.23
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-172-16-0-23.us-east-2.compute.internal	Private IP DNS name (IPv4 only) ip-172-16-0-23.us-east-2.compute.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 3.144.81.150 [Public IP]	VPC ID vpc-0296cba96e93b9d26 (Destination_vpc)	

fig: 6 Instance created in Public_Subnet of Dest_VPC.

Instances (1/2) Info Refresh Connect Instance state Actions Launch instances

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
Dest_PublicInstance	i-0ce2d0b28875a7994	Running	t2.micro	Initializing	No alarms	us-east-2c	-
Dest_Private_Instance	i-05e3c03b51cd4686f	Running	t2.micro	-	No alarms	us-east-2c	-

Instance: i-05e3c03b51cd4686f (Dest_Private_Instance)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-05e3c03b51cd4686f (Dest_Private_Instance)	-	172.16.0.123
IPv6 address	Instance state	Public IPv4 DNS
-	Running	-
Hostname type	Private IP DNS name (IPv4 only)	Elastic IP addresses
IP name: ip-172-16-0-123.us-east-2.compute.internal	ip-172-16-0-123.us-east-2.compute.internal	-
Answer private resource DNS name	Instance type	AWS Compute Optimizer finding
IPv4 (A)	t2.micro	Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address	VPC ID	
-	vpc-0296cba96e93b9d26 (Destination_Vpc)	

fig: 7 Instance created in Private_Subnet of Dest_VPC.

Instances (1/2) Info Refresh Connect Instance state Actions Launch instances

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
Dest_PublicInstance	i-0ce2d0b28875a7994	Running	t2.micro	Initializing	No alarms	us-east-2c	-
Dest_Private_Instance	i-05e3c03b51cd4686f	Running	t2.micro	-	No alarms	us-east-2c	-

Instance: i-05e3c03b51cd4686f (Dest_Private_Instance)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Disabled	Thu Dec 01 2022 02:04:26 GMT+0530 (India Standard Time) (1 minute)	amazon/amzn2-ami-kernel-5.10-hvm-2.0.20221103.3-x86_64-gp2
Instance auto-recovery	Lifecycle	Stop-hibernate behavior
Default	normal	disabled
AMI Launch index	Key pair name	State transition reason
0	Ohio_Keypair	-
Credit specification	Kernel ID	State transition message
standard	-	-
Usage operation	RAM disk ID	Owner
RunInstances	-	375266971964
Enclaves Support	Boot mode	Allow tags in instance metadata
-	-	Disabled
Use RBN as guest OS hostname	Answer RBN DNS hostname IPv4	

fig: 8 Private Instance with SSH key pair.

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Dest_PublicInstance	i-0ce2d0b28875a7994	Running	t2.micro	Initializing	No alarms	us-east-2c	-
Dest_Private_Instance	i-05e3c03b51cd4686f	Running	t2.micro	-	No alarms	us-east-2c	-

Instance: i-0ce2d0b28875a7994 (Dest_PublicInstance)

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

▼ Security details

IAM Role: --

Owner ID: [REDACTED]

Launch time: Thu Dec 01 2022 02:03:08 GMT+0530 (India Standard Time)

Security groups

sg-00ccb4b47d7fbee31 (Dest_Public_SG)

▼ Inbound rules

Filter rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups
-	sgr-077e3316311ba743b	0 - 65535	TCP	0.0.0.0/0	Dest_Public_SG
-	sgr-04bd6868ca9a3af7e	22	TCP	0.0.0.0/0	Dest_Public_SG

fig: 9 Public Instance's Inbound Security Group.

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Dest_Private_Instance	i-05e3c03b51cd4686f	Running	t2.micro	2/2 checks passed	No alarms	us-east-2c	-
Dest_PublicInstance	i-0ce2d0b28875a7994	Running	t2.micro	2/2 checks passed	No alarms	us-east-2c	-

Instance: i-05e3c03b51cd4686f (Dest_Private_Instance)

▼ Inbound rules

Filter rules

Name	Security group rule ID	Port range	Protocol	Source	Security groups
-	sgr-0854cb1b235e8c1a3	22	TCP	sg-00ccb4b47d7fbee31	Dest_Private_SG
-	sgr-0414be8b858e4048c	All	ICMP	0.0.0.0/0	Dest_Private_SG

▼ Outbound rules

Filter rules

Name	Security group rule ID	Port range	Protocol	Destination	Security groups
-	sgr-04522b934c110f37f	All	All	0.0.0.0/0	Dest_Private_SG

fig: 10 Private Instance's Inbound Security Group with allowed SSH from public instance.

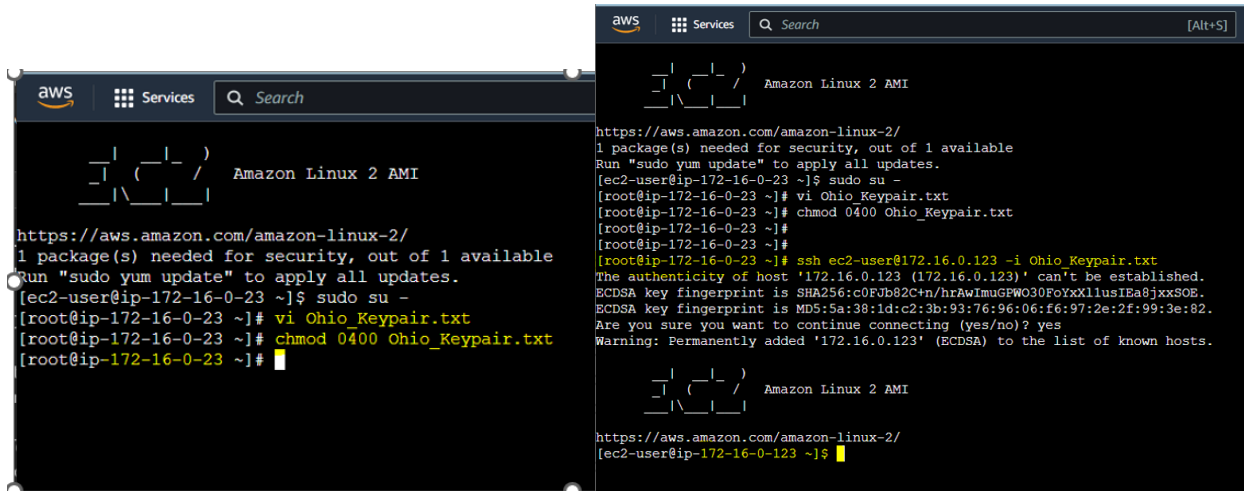


fig: 11 Bansion Host Configuration of Dest_VPC

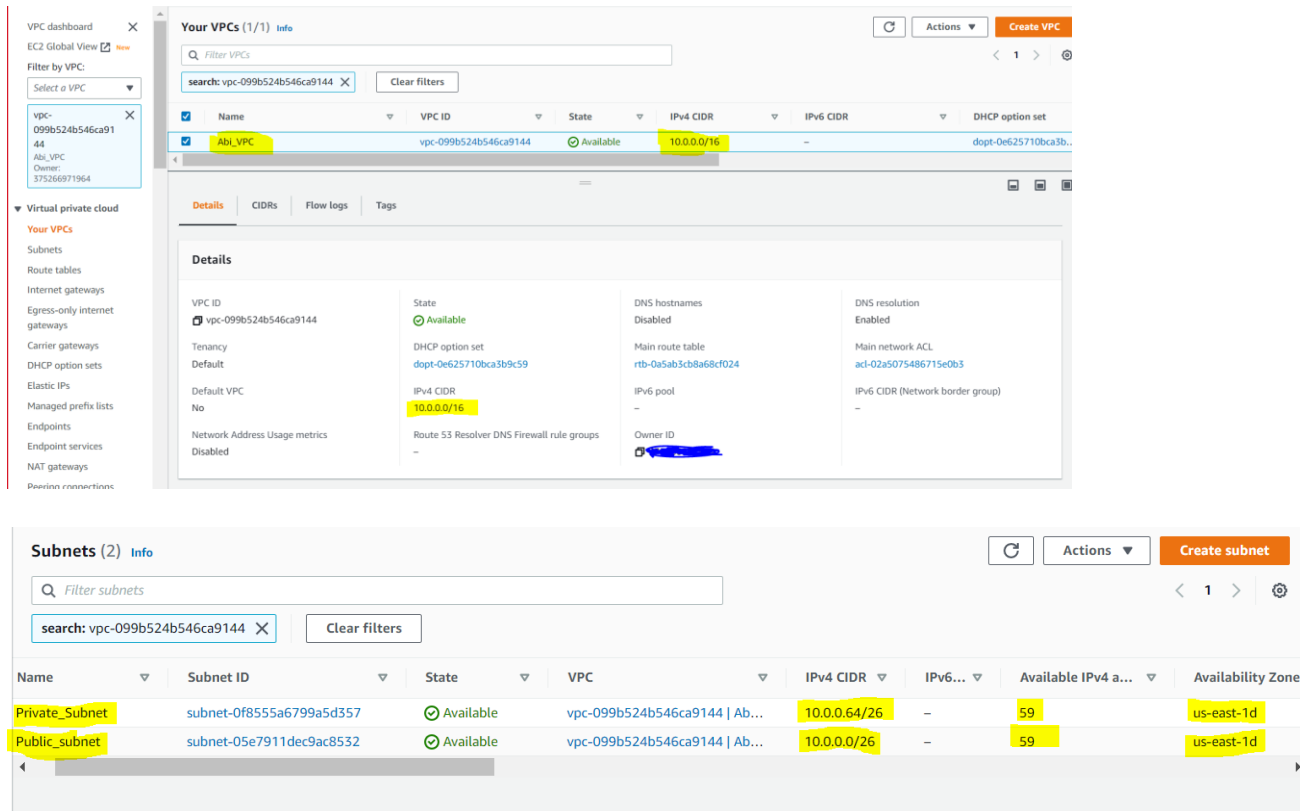


fig: 12 Abi_VPC with its public and private subnets and ranges

Route tables (1/3) Info

Filter route tables

search: vpc-099b524b546ca9144 X Clear filters

Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
-	rtb-0a5ab3cb8a68cf024	-	-	Yes	vpc-099b524b546ca9144 Abi_VPC
<input checked="" type="checkbox"/> Public_Route	rtb-05f7a5cdae3455d22	subnet-05e7911dec9ac...	-	No	vpc-099b524b546ca9144 Abi_VPC
<input type="checkbox"/> Private_Route	rtb-0eb545f9194870de0	subnet-0f8555a6799a5...	-	No	vpc-099b524b546ca9144 Abi_VPC

rtb-05f7a5cdae3455d22 / Public_Route

Details Routes Subnet associations Edge associations Route propagation Tags

Routes (2)

Filter routes Both

Destination	Target	Status	Propagated
0.0.0.0/0	igw-0104f2d2248e89a51	Active	No
10.0.0.0/16	local	Active	No

fig: 13 Public Route and its route table of Abi_VPC.

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

Connect Instance state Actions Launch instances

Name	Instance ID	Instance state	Instance type	Status ch...	Alarm status	Availability Zone	Public ...	Public IPv4 ...
<input checked="" type="checkbox"/> Public_Instance	i-02a9232cdf81b43ef	Running	t2.micro	Initializing..	No alarms	us-east-1d	-	54.166.208.154
<input type="checkbox"/> Private_Instance	i-0bd34825870dc51db	Running	t2.micro	-	No alarms	us-east-1d	-	-

Instance: i-02a9232cdf81b43ef (Public_Instance)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID i-02a9232cdf81b43ef (Public_Instance)	Public IPv4 address 54.166.208.154 open address	Private IPv4 addresses 10.0.0.47
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-10-0-0-47.ec2.internal	Private IP DNS name (IPv4 only) ip-10-0-0-47.ec2.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 54.166.208.154 [Public IP]	VPC ID vpc-099b524b546ca9144 (Abi_VPC)	Auto Scaling Group name
IAM Role	Subnet ID	

fig: 14 Public and Private Instance created in Abi_VPC.

fig: 15 Private Instance with its key pair attached.

fig: 16 Public Instance with its Inbound Security group of Abi_VPC

Instances (1/2) Info

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status checks	Alarm status	Availability Zone	Public ...	Public IPv4 ...
Private_Instance	i-0bd34825870dc51db	Running	t2.micro	2/2 checks	No alarms	us-east-1d	-	-
Public_Instance	i-02a9232cdf81b43ef	Running	t2.micro	2/2 checks	No alarms	us-east-1d	-	18.234.58.167

Instance: i-0bd34825870dc51db (Private_Instance)

Details Security Networking Storage Status checks Monitoring Tags

▼ Security details

IAM Role: -

Owner ID: 375266971964

Launch time: Tue Dec 06 2022 14:25:25 GMT+0530 (India Standard Time)

Security groups: sg-0f37cf1fb4b84c92 (Private_SG)

▼ Inbound rules

Security group rule ID	Port range	Protocol	Source	Security groups	Description
sgr-00643fc6a81faf486	All	ICMP	0.0.0.0/0	Private_SG	-
sgr-06e5c4dd928f4723e	22	TCP	sg-01d9ad98bd41c62a3	Private_SG	-

fig: 17 Private Instance with allowed SSH from Public Instance.

```

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Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 1 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-47 ~]$ sudo su -
[root@ip-10-0-0-47 ~]# vi live.txt
[root@ip-10-0-0-47 ~]# chmod 0400 live.txt
[root@ip-10-0-0-47 ~]#

  _ | _ | )
 _ | ( _ | /
 _ | \ _ | _ |
Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 1 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-47 ~]$ sudo su -
[root@ip-10-0-0-47 ~]# vi live.txt
[root@ip-10-0-0-47 ~]# chmod 0400 live.txt
[root@ip-10-0-0-47 ~]# ssh ec2-user@10.0.0.70 -i live.txt
The authenticity of host '10.0.0.70 (10.0.0.70)' can't be established.
ECDSA key fingerprint is SHA256:35Xro/FQYVqv8BoPEkbq/FgB8kvTQwihRKfgZINr+xU.
ECDSA key fingerprint is MD5:ff:7b:64:ac:1e:54:4e:a7:67:15:33:e2:b3:ee:1b:f8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.0.70' (ECDSA) to the list of known hosts.

  _ | _ | )
 _ | ( _ | /
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Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-0-0-70 ~]$

```

fig: 18 Bansion Host Configuration of Abi_VPC

Pinging from Dest_VPC to Abi_VPC: ...

```
aws Services Search [Alt+S]
Last login: Tue Dec 6 09:59:49 2022 from ec2-3-16-146-3.us-east-2.compute.amazonaws.com

 _ | _ | _ |
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 _ | \ _ | _ |

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 1 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-16-0-23 ~]$ ping google.com
PING google.com (142.250.191.206) 56(84) bytes of data.
64 bytes from ord38s31-in-f14.1e100.net (142.250.191.206): icmp_seq=1 ttl=35 time=16.4 ms
64 bytes from ord38s31-in-f14.1e100.net (142.250.191.206): icmp_seq=2 ttl=35 time=16.5 ms
^Z
[1]+  Stopped                  ping google.com
[ec2-user@ip-172-16-0-23 ~]$ ping 172.16.0.123
PING 172.16.0.123 (172.16.0.123) 56(84) bytes of data.
64 bytes from 172.16.0.123: icmp_seq=1 ttl=255 time=0.483 ms
64 bytes from 172.16.0.123: icmp_seq=2 ttl=255 time=0.445 ms
^Z
[2]+  Stopped                  ping 172.16.0.123
[ec2-user@ip-172-16-0-23 ~]$ ping 18.234.58.167
PING 18.234.58.167 (18.234.58.167) 56(84) bytes of data.
64 bytes from 18.234.58.167: icmp_seq=1 ttl=228 time=11.6 ms
64 bytes from 18.234.58.167: icmp_seq=2 ttl=228 time=11.7 ms
64 bytes from 18.234.58.167: icmp_seq=3 ttl=228 time=11.7 ms
^Z
[3]+  Stopped                  ping 18.234.58.167
[ec2-user@ip-172-16-0-23 ~]$ ping 10.0.0.47
PING 10.0.0.47 (10.0.0.47) 56(84) bytes of data.
^Z
[4]+  Stopped                  ping 10.0.0.47
```

fig: 19 Connection Results from Public Instance of Dest_VPC before VPC_Peering ..

```
[ec2-user@ip-172-16-0-23 ~]$ ssh ec2-user@172.16.0.123 -i Ohio_keypair.txt
Last login: Tue Dec 6 09:58:40 2022 from 172.16.0.23

 _ | _ | _ |
 _ | ( _ | /
 _ | \ _ | _ |

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-16-0-123 ~]$ ping 172.16.0.23
PING 172.16.0.23 (172.16.0.23) 56(84) bytes of data.
64 bytes from 172.16.0.23: icmp_seq=1 ttl=255 time=0.313 ms
64 bytes from 172.16.0.23: icmp_seq=2 ttl=255 time=0.511 ms
^Z
[1]+  Stopped                  ping 172.16.0.23
[ec2-user@ip-172-16-0-123 ~]$ ping 18.234.58.167
PING 18.234.58.167 (18.234.58.167) 56(84) bytes of data.
^Z
[2]+  Stopped                  ping 18.234.58.167
[ec2-user@ip-172-16-0-123 ~]$ ping 10.0.0.47
PING 10.0.0.47 (10.0.0.47) 56(84) bytes of data.
^Z
[3]+  Stopped                  ping 10.0.0.47
[ec2-user@ip-172-16-0-123 ~]$ ping 10.0.0.70
PING 10.0.0.70 (10.0.0.70) 56(84) bytes of data.
^Z
[4]+  Stopped                  ping 10.0.0.70
[ec2-user@ip-172-16-0-123 ~]$
```

fig: 20 Connection Results from Private Instance of Dest_VPC before VPC_Peering..

Pinging from Abi_VPC to Dest_VPC: ...

```
Last login: Tue Dec 6 10:04:34 2022 from ec2-18-206-107-27.compute-1.amazonaws.com

 _ | _ | _ )
 _ | ( _ | /   Amazon Linux 2 AMI
 _ | \ _ | _ |

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 1 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-47 ~]$ ping google.com
PING google.com (142.251.16.102) 56(84) bytes of data.
64 bytes from bl-in-f102.1e100.net (142.251.16.102): icmp_seq=1 ttl=95 time=1.94 ms
64 bytes from bl-in-f102.1e100.net (142.251.16.102): icmp_seq=2 ttl=95 time=1.93 ms
^Z
[1]+  Stopped                  ping google.com
[ec2-user@ip-10-0-0-47 ~]$ ping 10.0.0.70
PING 10.0.0.70 (10.0.0.70) 56(84) bytes of data.
64 bytes from 10.0.0.70: icmp_seq=1 ttl=255 time=0.582 ms
64 bytes from 10.0.0.70: icmp_seq=2 ttl=255 time=0.589 ms
^Z
[2]+  Stopped                  ping 10.0.0.70
[ec2-user@ip-10-0-0-47 ~]$ ping 3.139.95.136
PING 3.139.95.136 (3.139.95.136) 56(84) bytes of data.
64 bytes from 3.139.95.136: icmp_seq=1 ttl=228 time=11.5 ms
64 bytes from 3.139.95.136: icmp_seq=2 ttl=228 time=11.6 ms
^Z
[3]+  Stopped                  ping 3.139.95.136
[ec2-user@ip-10-0-0-47 ~]$ ping 172.16.0.23
PING 172.16.0.23 (172.16.0.23) 56(84) bytes of data.
^Z
[4]+  Stopped                  ping 172.16.0.23
```

fig: 21 Connection Results from Public Instance of Abi_VPC before VPC_Peering.

```
[ec2-user@ip-10-0-0-47 ~]$ ssh ec2-user@10.0.0.70 -i live.txt
Last login: Tue Dec 6 10:05:28 2022 from 10.0.0.47

 _ | _ | _ )
 _ | ( _ | /   Amazon Linux 2 AMI
 _ | \ _ | _ |

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-0-0-70 ~]$ ping 10.0.0.47
PING 10.0.0.47 (10.0.0.47) 56(84) bytes of data.
64 bytes from 10.0.0.47: icmp_seq=1 ttl=255 time=0.466 ms
64 bytes from 10.0.0.47: icmp_seq=2 ttl=255 time=0.600 ms
^Z
[1]+  Stopped                  ping 10.0.0.47
[ec2-user@ip-10-0-0-70 ~]$ ping 3.139.95.136
PING 3.139.95.136 (3.139.95.136) 56(84) bytes of data.
^Z
[2]+  Stopped                  ping 3.139.95.136
[ec2-user@ip-10-0-0-70 ~]$ ping 172.16.0.23
PING 172.16.0.23 (172.16.0.23) 56(84) bytes of data.
^Z
[3]+  Stopped                  ping 172.16.0.23
[ec2-user@ip-10-0-0-70 ~]$ ping 172.16.0.123
PING 172.16.0.123 (172.16.0.123) 56(84) bytes of data.
^Z
[4]+  Stopped                  ping 172.16.0.123
[ec2-user@ip-10-0-0-70 ~]$
```

fig: 22 Connection Results from Private Instance of Abi_VPC before VPC_Peering.

Peering:

Peering connection settings

Name - optional
Create a tag with a key of 'Name' and a value that you specify.

Select a local VPC to peer with
VPC ID (Requester)

VPC CIDRs for vpc-099b524b546ca9144 (Abi_VPC)

CIDR	Status	Status reason
10.0.0.0/16	Associated	-

Select another VPC to peer with
Account
☒ My account
☐ Another account

Region
☐ This Region (us-east-1)
☒ Another Region

VPC ID (Accepter)

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key

Value - optional

You can add 49 more tags.

Accept VPC peering connection request info

Are you sure you want to accept this VPC peering connection request? (pcx-070475deed45eff2e)

Requester VPC	Accepter VPC	Requester CIDRs
<input checked="" type="checkbox"/> vpc-099b524b546ca9144	<input checked="" type="checkbox"/> vpc-0296cba9e93b9d26 / Destination_vpc	<input checked="" type="checkbox"/> 10.0.0.0/16

Accepter CIDRs	Requester Region	Accepter Region
-	N. Virginia (us-east-1)	Ohio (us-east-2)

Requester owner ID	Accepter owner ID
<input checked="" type="checkbox"/> (This account)	<input checked="" type="checkbox"/> (This account)

fig: 23 Sending and accepting Peering request

Route tables (1/3) Info

search: vpc-099b524b546ca9144

	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	-	rtb-0a5ab3cb8a68cf024	-	-	Yes	vpc-099b524b546ca9144 Ab...	375266971964
<input checked="" type="checkbox"/>	Public_Route	rtb-05f7a5cdae3455d22	subnet-05e7911dec9ac...	-	No	vpc-099b524b546ca9144 Ab...	375266971964
<input type="checkbox"/>	Private_Route	rtb-0eb545f9194870de0	subnet-0f8555a6799a5...	-	No	vpc-099b524b546ca9144 Ab...	375266971964

rtb-05f7a5cdae3455d22 / Public_Route

Routes (3)

Destination	Target	Status	Propagated
0.0.0.0/0	igw-0104f2d2248e09a51	Active	No
10.0.0.0/16	local	Active	No
172.16.0.0/16	pcx-070475deed45eff2e	Active	No

fig: 24 Updated route table with CIDR of peered VPC.

Pinging from Dest_VPC to Abi_VPC:

```
Last login: Tue Dec 6 13:03:04 2022 from ec2-3-16-146-4.us-east-2.compute.amazonaws.com

  _ | _ | _ )
  _ | ( _ /   Amazon Linux 2 AMI
  __| \__|__|

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 1 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-16-0-23 ~]$ ping 10.0.0.47
PING 10.0.0.47 (10.0.0.47) 56(84) bytes of data.
64 bytes from 10.0.0.47: icmp_seq=1 ttl=255 time=11.7 ms
64 bytes from 10.0.0.47: icmp_seq=2 ttl=255 time=11.7 ms
64 bytes from 10.0.0.47: icmp_seq=3 ttl=255 time=11.7 ms
^Z
[1]+  Stopped                  ping 10.0.0.47
[ec2-user@ip-172-16-0-23 ~]$ ping 10.0.0.70
PING 10.0.0.70 (10.0.0.70) 56(84) bytes of data.
64 bytes from 10.0.0.70: icmp_seq=1 ttl=255 time=11.7 ms
64 bytes from 10.0.0.70: icmp_seq=2 ttl=255 time=11.7 ms
^Z
[2]+  Stopped                  ping 10.0.0.70
```

fig: 25 Connection Results from Public Instance of Dest_VPC After VPC_Peering.

```
[ec2-user@ip-172-16-0-23 ~]$ ssh ec2-user@172.16.0.123 -i Ohio_keypair.txt
Last login: Tue Dec 6 10:09:25 2022 from 172.16.0.23

  _ | _ | _ )
  _ | ( _ /   Amazon Linux 2 AMI
  __| \__|__|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-16-0-123 ~]$ ping 10.0.0.47
PING 10.0.0.47 (10.0.0.47) 56(84) bytes of data.
64 bytes from 10.0.0.47: icmp_seq=1 ttl=255 time=11.8 ms
64 bytes from 10.0.0.47: icmp_seq=2 ttl=255 time=11.8 ms
^Z
[1]+  Stopped                  ping 10.0.0.47
[ec2-user@ip-172-16-0-123 ~]$ ping 10.0.0.70
PING 10.0.0.70 (10.0.0.70) 56(84) bytes of data.
64 bytes from 10.0.0.70: icmp_seq=1 ttl=255 time=11.5 ms
64 bytes from 10.0.0.70: icmp_seq=2 ttl=255 time=11.7 ms
64 bytes from 10.0.0.70: icmp_seq=3 ttl=255 time=11.7 ms
^Z
[2]+  Stopped                  ping 10.0.0.70
[ec2-user@ip-172-16-0-123 ~]$
```

fig: 26 Connection Results from Private Instance of Dest_VPC After VPC_Peering.

Pinging from Abi_VPC to Dest_VPC: ...

```
Last login: Tue Dec  6 15:51:38 2022 from ec2-18-206-107-27.compute-1.amazonaws.com

  _ | _ | _ )
  _ | ( _ | /
  _ | \ _ | _ |
                Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 1 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-47 ~]$ ping 172.16.0.23
PING 172.16.0.23 (172.16.0.23) 56(84) bytes of data.
64 bytes from 172.16.0.23: icmp_seq=1 ttl=255 time=12.5 ms
64 bytes from 172.16.0.23: icmp_seq=2 ttl=255 time=12.4 ms
64 bytes from 172.16.0.23: icmp_seq=3 ttl=255 time=12.5 ms
^Z
[1]+  Stopped                  ping 172.16.0.23
[ec2-user@ip-10-0-0-47 ~]$ ping 172.16.0.123
PING 172.16.0.123 (172.16.0.123) 56(84) bytes of data.
64 bytes from 172.16.0.123: icmp_seq=1 ttl=255 time=12.2 ms
64 bytes from 172.16.0.123: icmp_seq=2 ttl=255 time=12.3 ms
64 bytes from 172.16.0.123: icmp_seq=3 ttl=255 time=12.3 ms
^Z
[2]+  Stopped                  ping 172.16.0.123
```

fig: 27 Connection Results from Public Instance of Abi_VPC After VPC_Peering.

```
[ec2-user@ip-10-0-0-47 ~]$ ssh ec2-user@10.0.0.70 -i live.txt
Last login: Tue Dec  6 15:54:51 2022 from 10.0.0.47

  _ | _ | _ )
  _ | ( _ | /
  _ | \ _ | _ |
                Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-0-0-70 ~]$ ping 172.16.0.23
PING 172.16.0.23 (172.16.0.23) 56(84) bytes of data.
64 bytes from 172.16.0.23: icmp_seq=1 ttl=255 time=11.8 ms
64 bytes from 172.16.0.23: icmp_seq=2 ttl=255 time=12.0 ms
64 bytes from 172.16.0.23: icmp_seq=3 ttl=255 time=11.9 ms
^Z
[1]+  Stopped                  ping 172.16.0.23
[ec2-user@ip-10-0-0-70 ~]$ ping 172.16.0.123
PING 172.16.0.123 (172.16.0.123) 56(84) bytes of data.
64 bytes from 172.16.0.123: icmp_seq=1 ttl=255 time=12.3 ms
64 bytes from 172.16.0.123: icmp_seq=2 ttl=255 time=12.4 ms
^Z
[2]+  Stopped                  ping 172.16.0.123
[ec2-user@ip-10-0-0-70 ~]$
```

fig: 28 Connection Results from Private Instance of Abi_VPC After VPC_Peering.

