# VPC Peering:

* A VPC Peering connection is a networking connection between two VPCs that enables you to route traffic

between them using private IPv4 addresses or IPv6 addresses.

* Instances in either VPC can communicate with each other as if they are within the same network.

# Important Points to know about VPC Peering:

* You can create a VPC peering connection between your own VPCs, with a VPC in another account or with a VPC in a different AWS Region
* VPC Peering connection is one to one relationship between two VPCs
* You can create multiple VPC peering connections for each VPC, but transitive peering relationships are not supported.
* You can modify a VPC Peering connection to enable instances in their VPC to communicate with linked EC2 Classic Instances in the peer VPC
* There is no single point of failure for communication or a bandwidth bottleneck
* A VPC Peering connection helps you to facilitate the transfer of data
* The traffic remains in the private IP space

# Types of VPC Peering:

* Intra region VPC Peering (Same Account)
* Intra region VPC Peering (Different Account)
* Inter Region VPC Peering (Same Account)
* Inter Region VPC Peering (Different Account)

# Creation of Intra Region VPC Peering with same account

Follow these steps below to set up Intra Region peering same account

# Step 1:

* Create a AWS VPC
* Name: VPC-A in US East (N.Virginia) us-east-1 (You can change the region)

- CIDR: 10.0.0.0/16

# Step 2:

* Create a Public Subnet with CIDR 10.0.1.0/24
* Name: VPC-A-Public-subnet-1a

# Step 3:

* Create an internet gateway and attach a VPC-A
* Name: VPC-A-IGW

# Step 4:

* Create a Route table and name it VPC-A-Rtb and attach the public subnet to this RouteTable

# Step 5:

* Create a AWS VPC
* Name: VPC-B in US East (N.Virginia) us-east-1 (You can change the region)

- CIDR: 192.168.0.0/16

# Step 6:

* Create a Public Subnet with CIDR 192.168.1.0/24
* Name: VPC-B-Public-Subnet-1a

# Step 7:

* Create an Internet Gateway and attach to VPC-B
* Name: VPC-B-IGW

# Step 8:

* Create a Route table and name it VPC-B-Rtb and attach the public subnet to this Route table

# Step 9:

* Create the VPC Peering
* Name: VPC-A-to-VPC-B Peering

# Step 10:

* Accept the peering connection in both VPCs

# Step 11:

* Update the route tables in both VPCs to allow traffic to the other VPC
* In VPC-A route table, add a route for VPC-B’s CIDR Block to VPC-A-to-VPC-B-peering Connection
* In VPC-B route table, add a route for VPC-A’s CIDR Block to the VPC-A-to-VPC-B-Peering Connection

# Step 12:

* Launch an EC2 instance in both VPC’s public subnets

# Step 13:

* Update the security group Inbound rules for both instances to allow ICMP traffic

# Step 14:

* Test the connectivity between the instances using the ping command