# LAB – VPC Peering Connection (Virtual Private Cloud)

**Use case**

Client has requested that you design and implement 2 separate VPC networks in AWS to host an Application within an EC2 instance deployed into each VPC. You have been provided the below requirements to help with a smooth provisioning process.

## DevVPC Requirements

### Data Center Virginia

1. VPC Name: **Dev-VPC**
    - VPC
        - CIDR: **10.38.0.0/20**
2. Public subnet name: **DevPublicSubnet**
    - Public Subnet
        - CIDR: **10.38.0.0/24**
3. Private subnet name: **DevPrivateSubnet**
    - Private subnet
        - CIDR: **10.38.1.0/24**
4. Configure
    - Private Route Table
    - Public Route Table

## ProdVPC Requirements

### Data Center Ohio

1. VPC Name: **Prod-VPC**
    - VPC
        - CIDR: **10.39.0.0/20**
2. Public subnet name: **ProdPublicSubnet**
    - Public Subnet
        - CIDR: **10.39.0.0/24**
3. Private subnet name: **ProdPrivateSubnet**
    - Private subnet
        - CIDR: **10.39.1.0/24**
5. Configure
    - Private Route Table
    - Public Route Table
6. Create Security Groups

- Security group for Bastion Host
  - Bastion-sg
- Security group for DevApp in Dev VPC
  - DevApp-sg
- Security group for ProdApp in Prod VPC
  - ProdApp-sg

7. Deploy Bastion Host in Prod VPC
   - Use Windows OS AMI
8. Deploy ProdAppServer in Prod VPC
   - Use Amazon Linux OS AMI
9. Deploy DevAppServer in Dev VPC
   - Use Linus OS AMI
10. Create VPC Peering Connection in Ohio Data Center
    - Prod – As Requester
    - Dev – As Accepter
11. Accept peering connection in Virginia Data center
12. Configure Private Route table of DevApp to accept peering route from Prod VPC CIDR
13. Configure Private Route table of ProdApp to accept Peering route from Dev VPC CIDR
14. In ProdApp-sg
    - Allow all traffic for bastion-sg
15. In bastion-sg
    - Allow all traffic
16. In DevApp-sg
    - Allow all traffic for the private IP of DevAppServer
17. Log into your Bastion
    - Ssh into ProdAppServer
    - Ping Private IP of DevAppServer
18. You should get a successful Ping

**Question:**

How do you determine what is a private and public network?

**Answer:**

a. By associating your private subnet with your private RT
   a. If a route table has internet gateway associated to it, then it is public.

b. By associating your public subnet with your public RT
   a. If a route table has NAT gateway associated to it, then it is private.