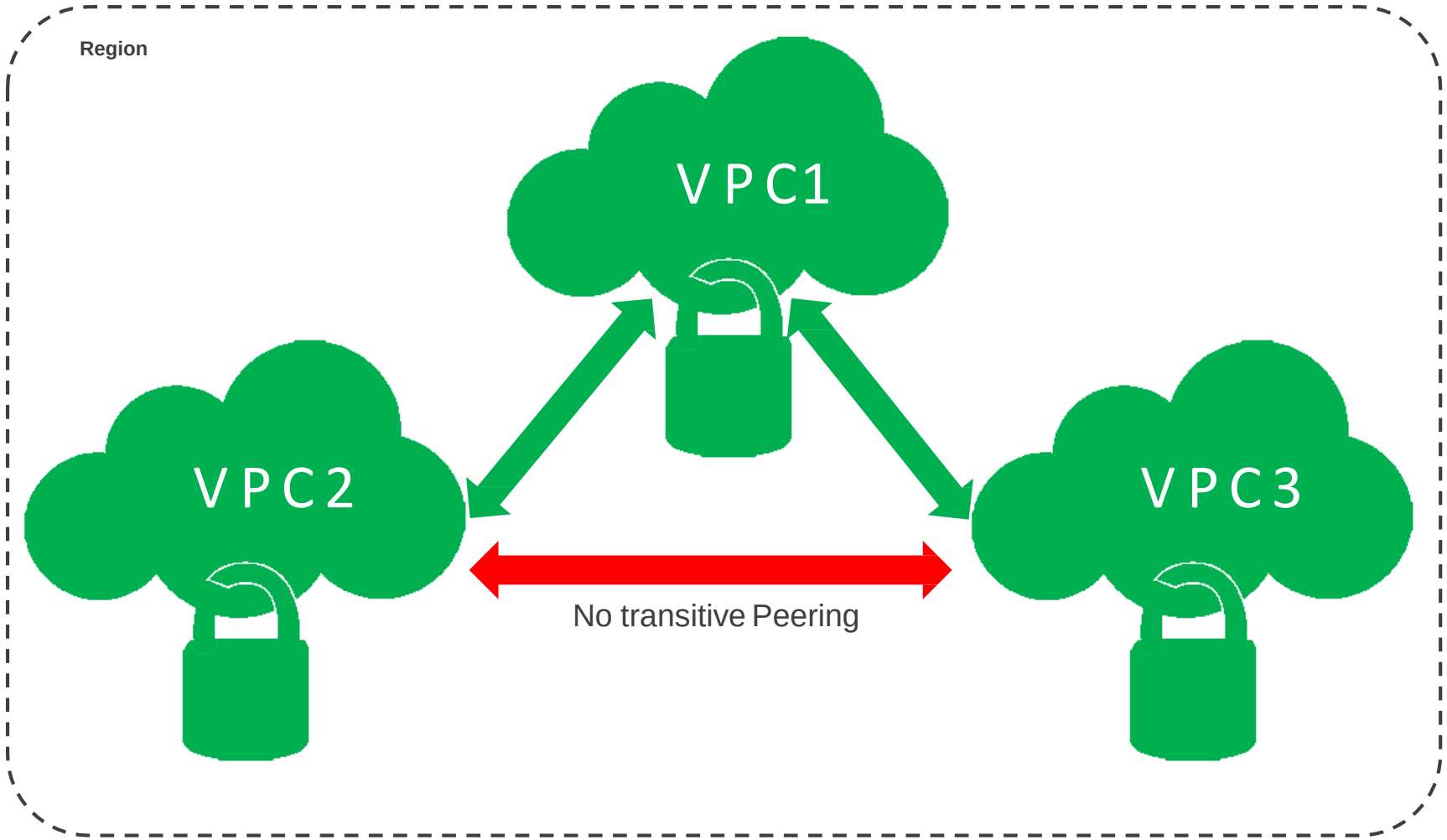
Understanding and Configuring VPC Peering, VPN, and Direct Connect

VPC Peering



Single Region Inter-VPC routing

Same or different AWS account

No overlapping network addresses

50 VPC peers per VPC, up to 125 by request

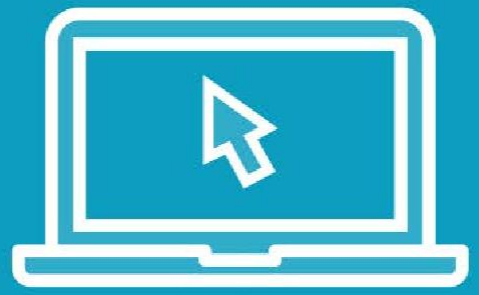
VPC Peering

DNS is supported

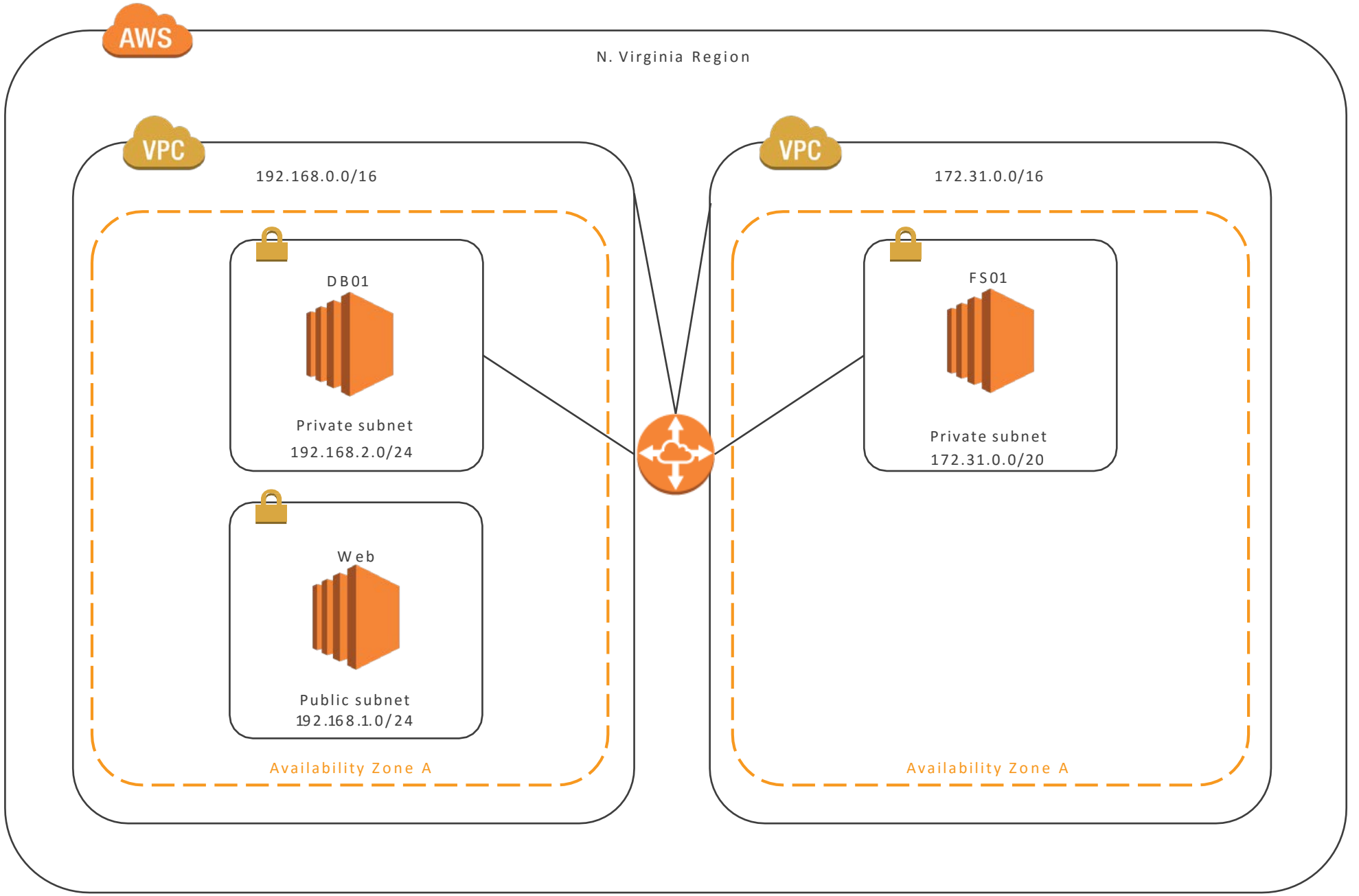
Use route tables to configure routing

Update the inbound or outbound rules for your VPC security groups to reference security groups in the peered VPC

Demo



Configuring VPC Peering


AWS
N. Virginia Region
VPC
192.168.0.0/16
DB01
Private subnet
192.168.2.0/24
Web
Public subnet
192.168.1.0/24
Availability Zone A
VPC
172.31.0.0/16
FS01
Private subnet
172.31.0.0/20
Availability Zone A

AWS VPC Access

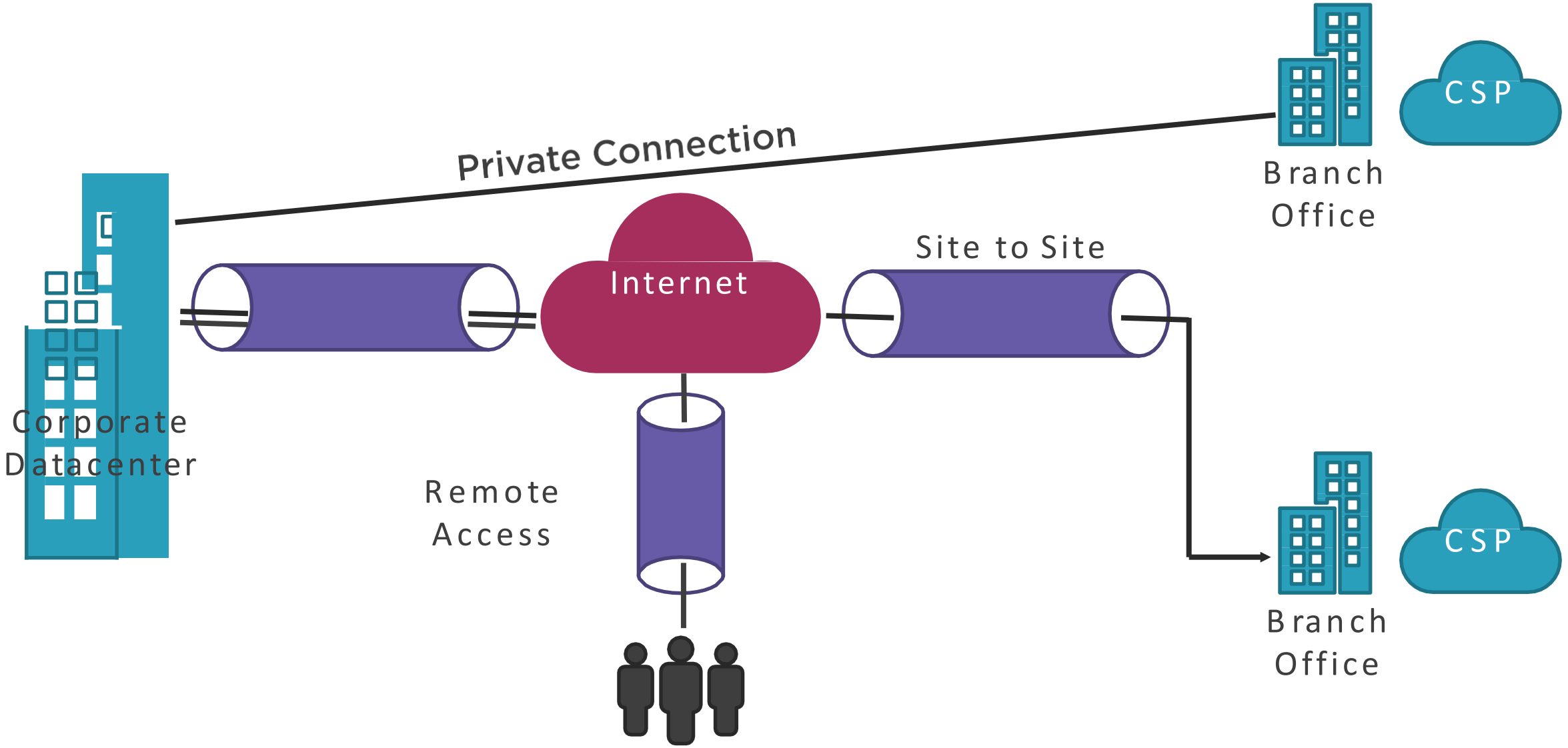
VPN

- Hardware-based VPN
- Direct Connect
- VPN CloudHub
- Software VPN

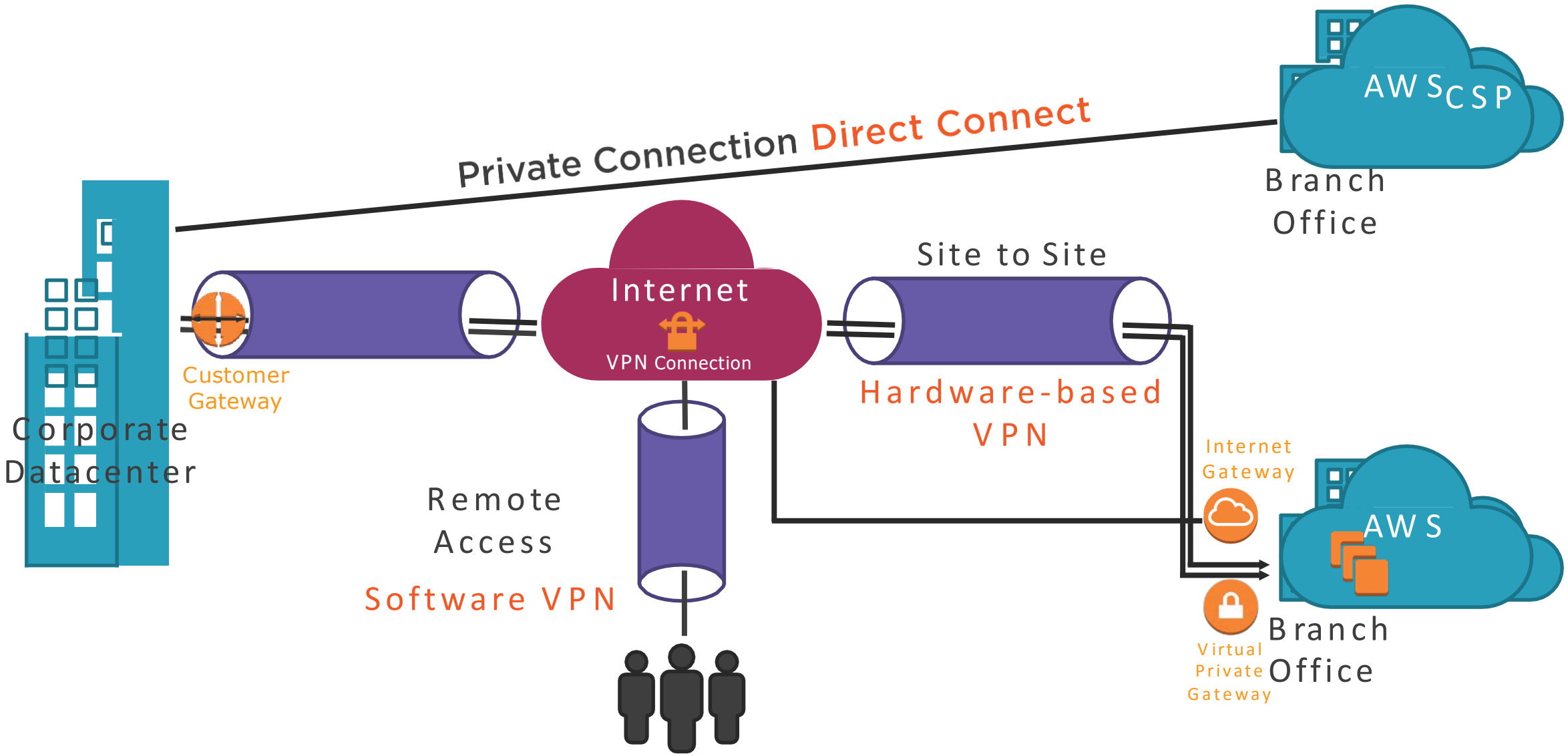
Gateways

- Internet Gateway (IGW)
- Virtual Private Gateway
- Customer Gateway (CG)

VPN Types


Private Connection
CSP
Branch Office
Site to Site
Internet
Corporate Datacenter
Remote Access
CSP
Branch Office

AWS VPC Access



AWS Direct Connect

Predictable bandwidth

Predictable performance / consistent network experience

1Gbps or 10Gbps

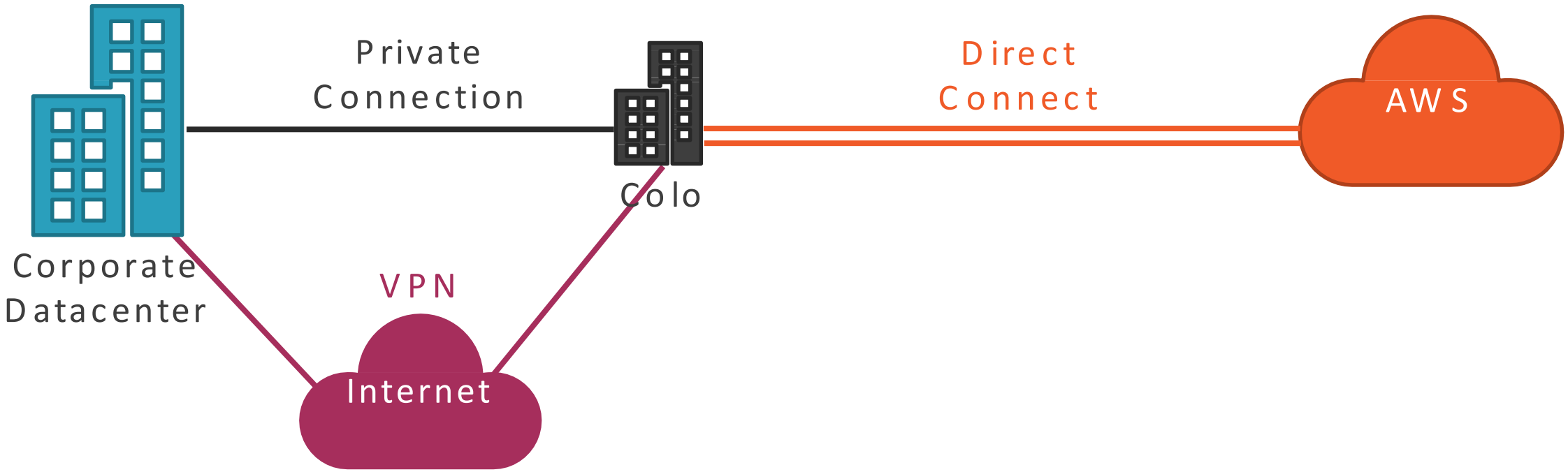
Less than 1Gbps though AWS Partner Network (APN)

Support for VLAN Trunking (802.1Q)

Direct Connect can be partitioned into multiple virtual interfaces (VIFS)

AWS Direct Connect

AWS Direct Connect

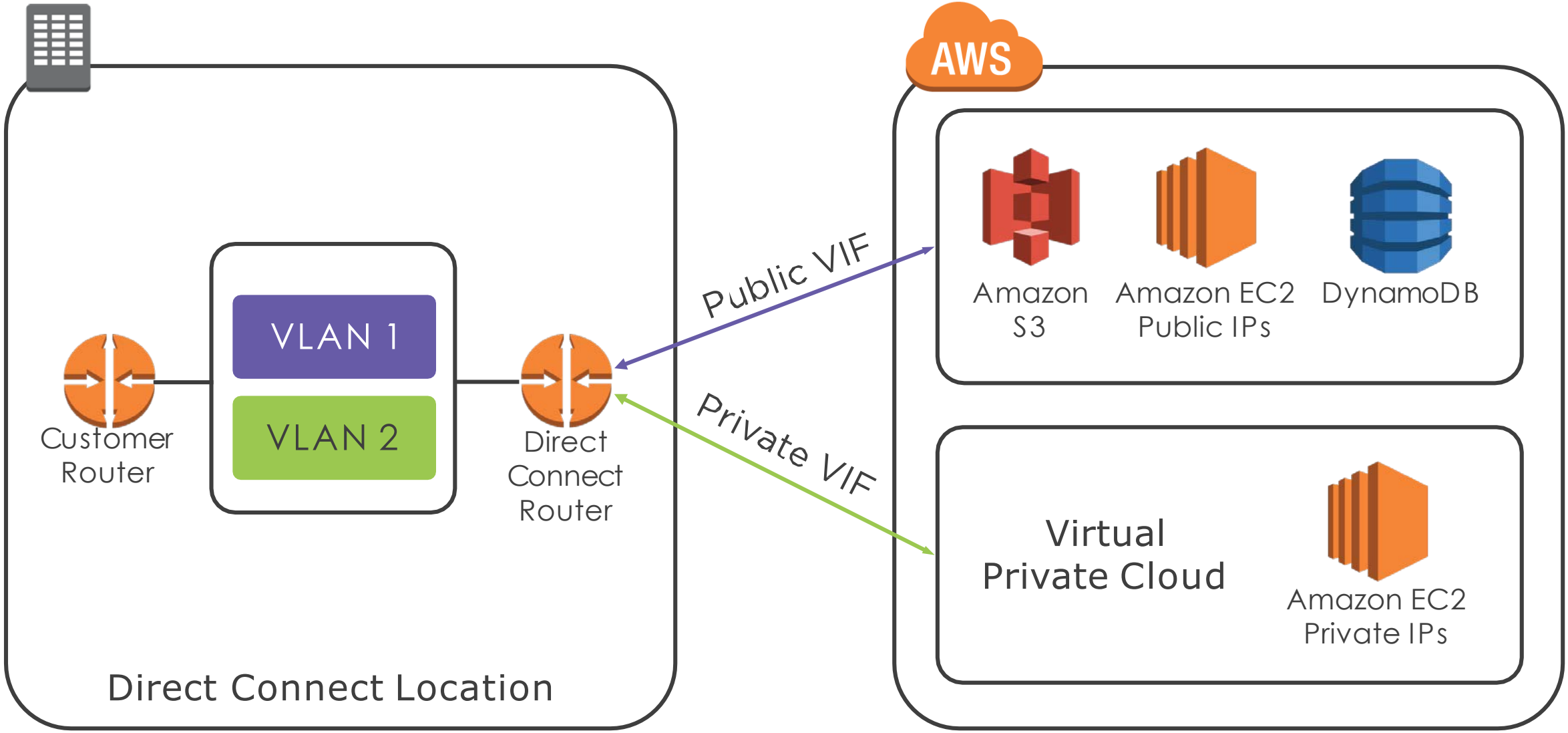


Virtual Interfaces

Direct Connect can be partitioned into multiple virtual interfaces (VIF)

Public connectivity to S3, EC2 and DynamoDB

Private connectivity to VPC


AWS
Amazon S3
Amazon EC2 Public IPs
DynamoDB
Public VIF
Private VIF
VLAN 1
VLAN 2
Customer Router
Direct Connect Router
Virtual Private Cloud
Amazon EC2 Private IPs
Direct Connect Location

Direct Connect

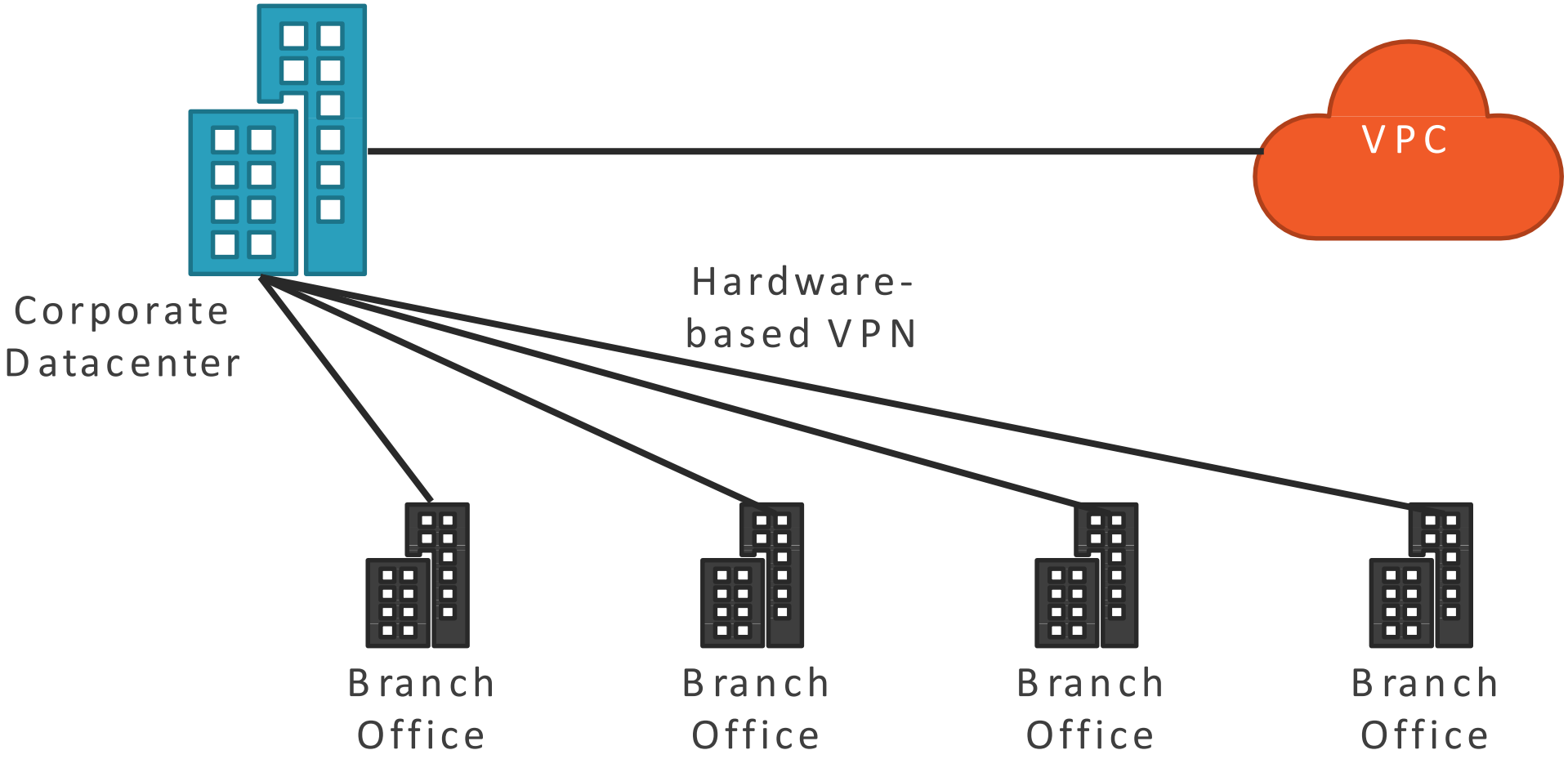
Deep Dive - AWS Direct Connect and VPNs:

https://youtu.be/SMvom9QjkPk

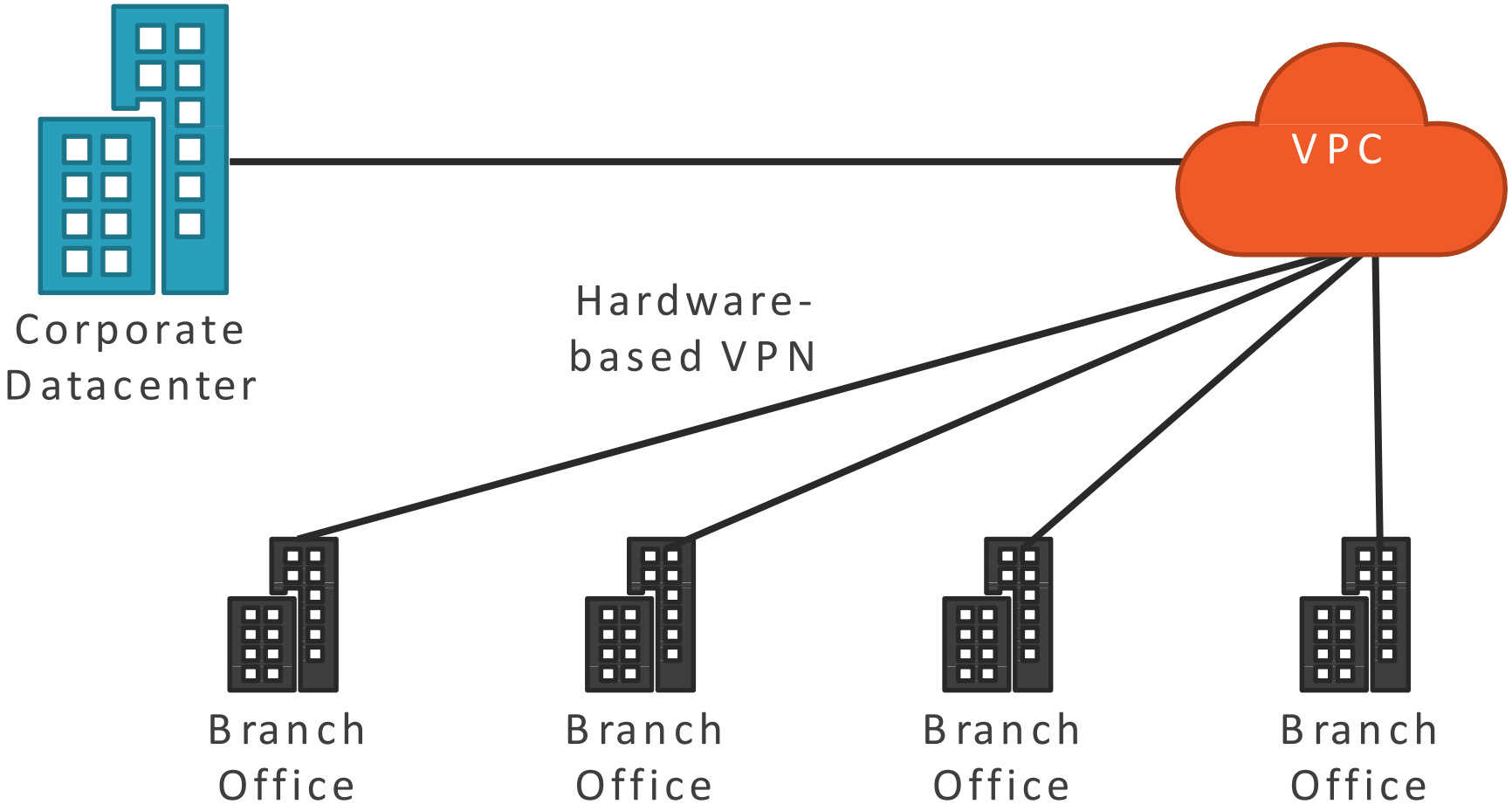
AWS Direct Connect:

https://aws.amazon.com/directconnect/

AWS VPN CloudHub



AWS VPN CloudHub



Summary

VPC peering

VPN access types

Direct connect