

# Building your network architecture for VMware Cloud™ on AWS

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# MEET YOUR PRESENTER

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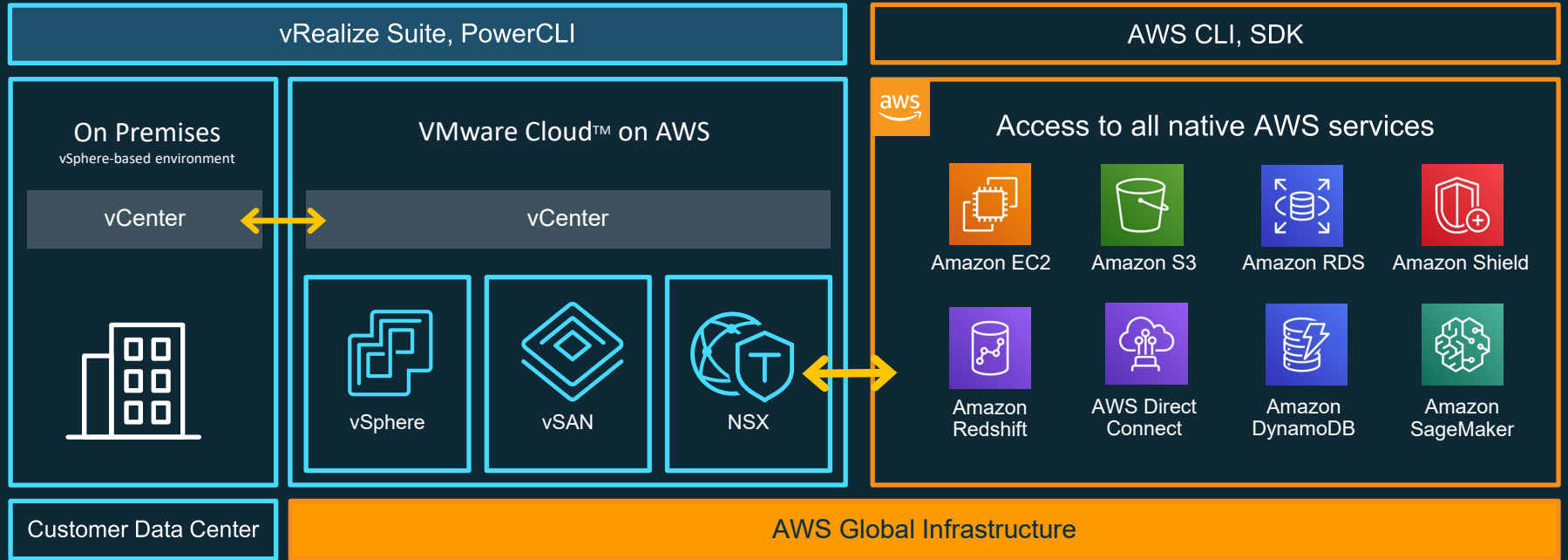
# Learning objectives

1. Understand VMware Cloud On AWS networking
2. Understand hybrid network architecture implementation
3. Learn how to build hybrid connectivity with AWS Direct Connect
4. Learn how to build global connectivity with VMware Transit Connect
5. Useful links

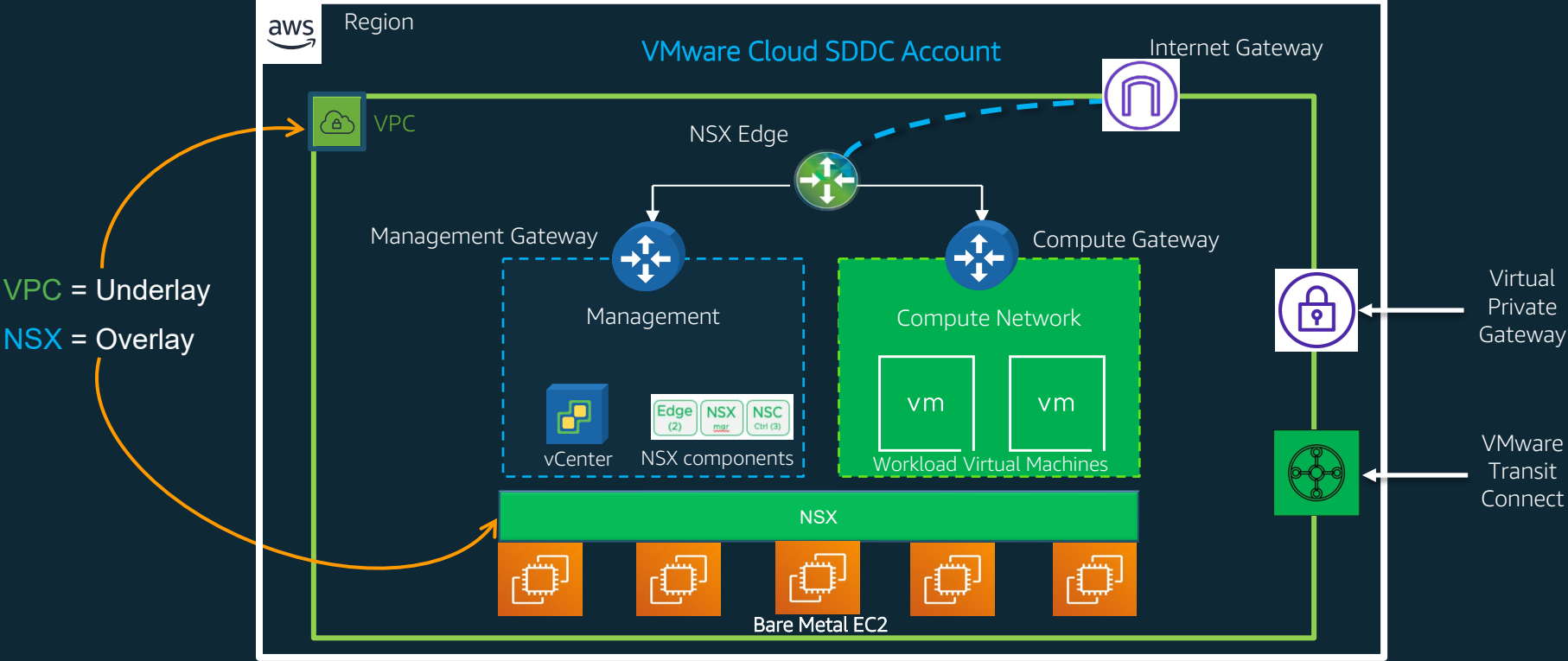
# VMware Cloud On AWS - what is it?

# VMware Cloud on AWS

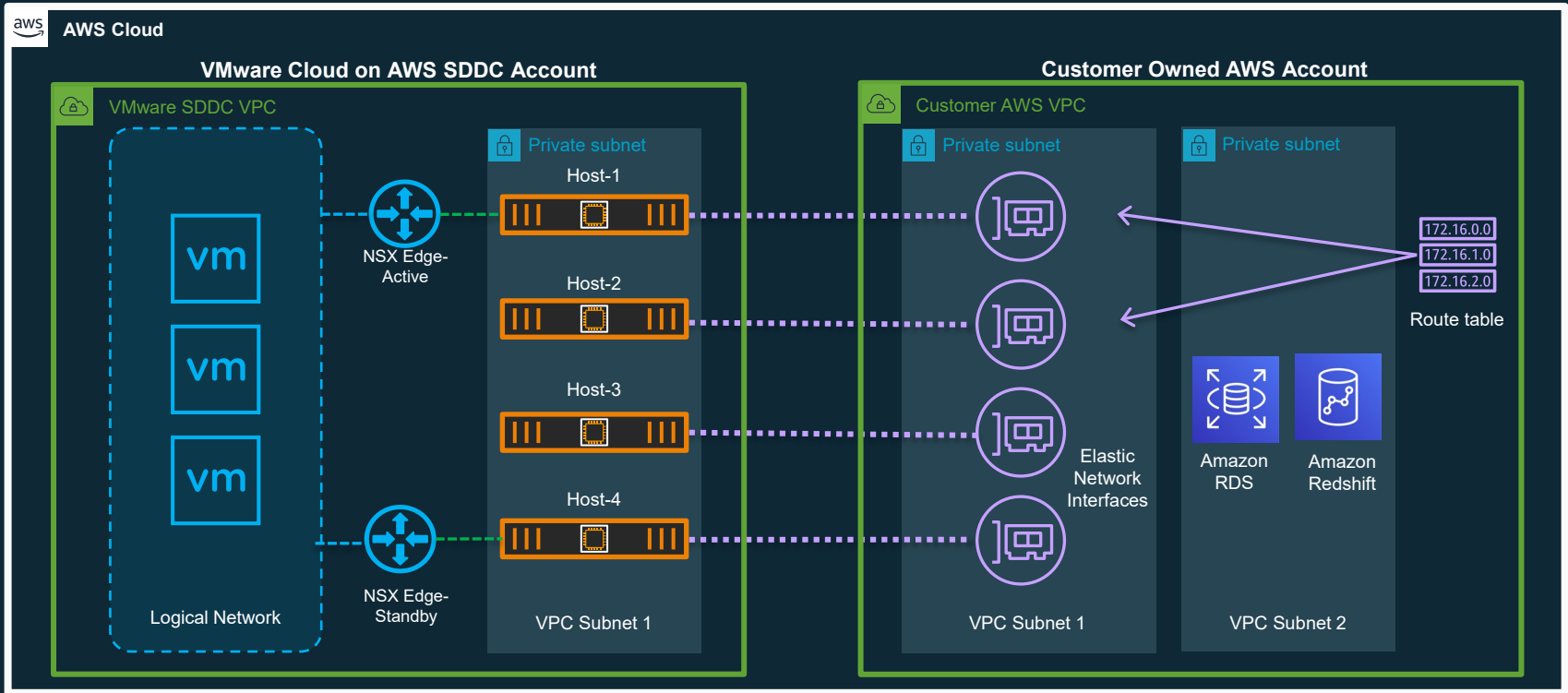
Innovation jointly engineered by VMware and AWS



# Basic network architecture



# AWS customer VPC connectivity



# Hybrid cloud network architectures for VMware Cloud on AWS



# What is hybrid cloud networking?

***“Hybrid cloud network is a network that enables data transfer between on-premises IT resources, private clouds and public clouds.”***

*VMware definition*

Source: <https://www.vmware.com/topics/glossary/content/hybrid-cloud-networking>

# Hybrid cloud network using AWS Direct Connect

# What is AWS Direct Connect?

***AWS Direct Connect*** enables customers to have low latency, secure, and private connections to AWS for workloads which require higher speed or lower latency than the internet.



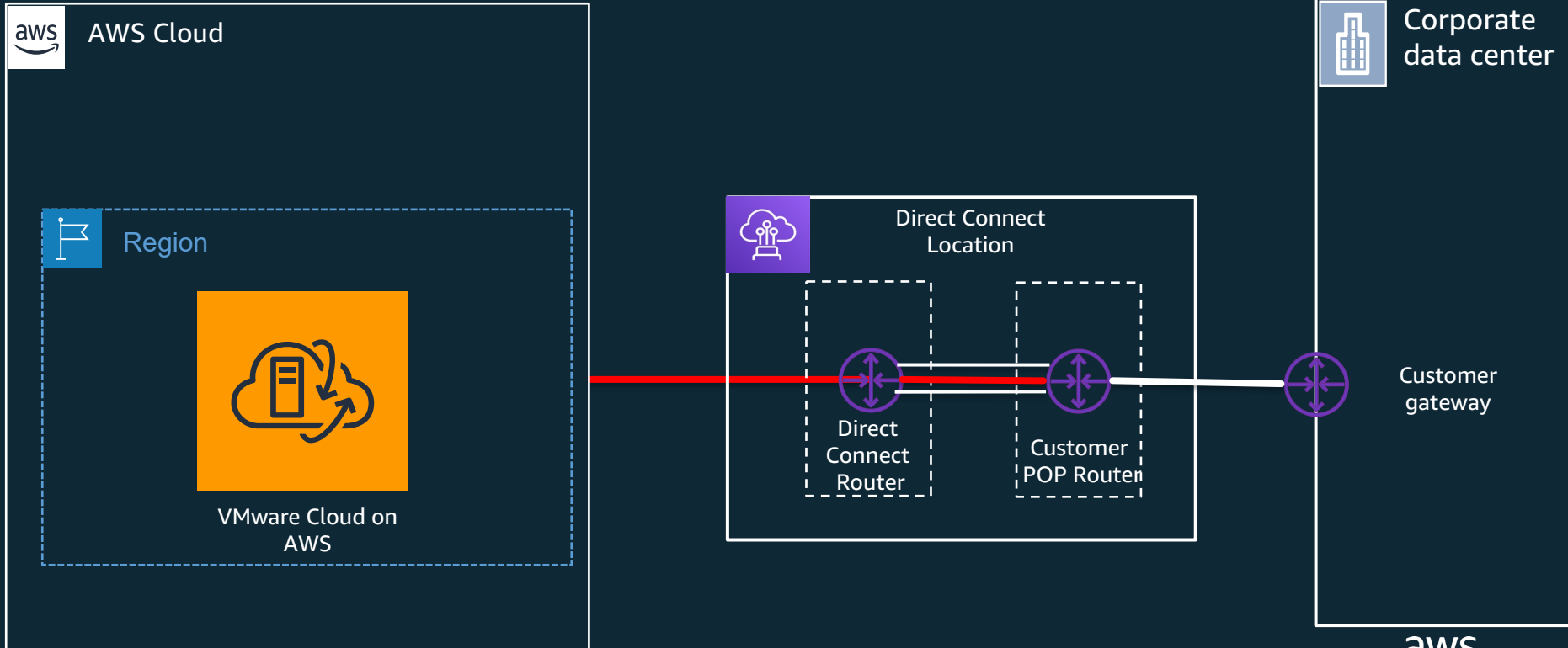
# Supported virtual interface types

- ✓ Public Virtual Interface ( Public VIF)
- ✓ Private Virtual Interface (Private VIF)
- ✓ Transit Virtual Interface (Public VIF)

# Benefits of AWS Direct Connect

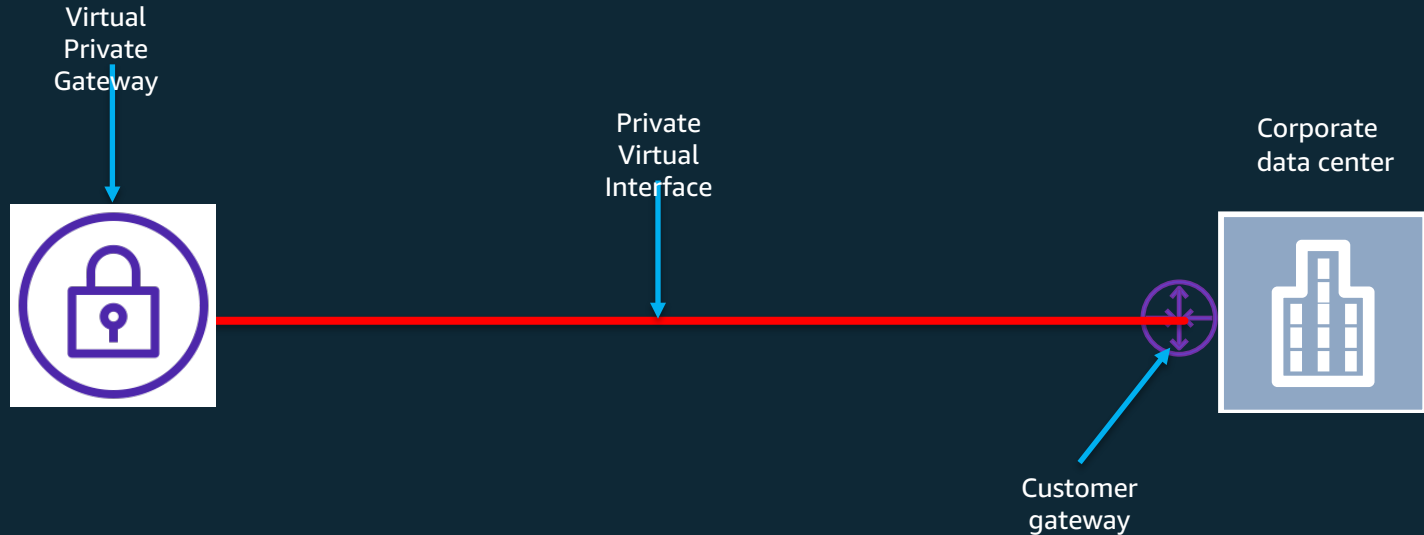
- ✓ Low latency network connectivity to VMware Cloud on AWS
- ✓ High network bandwidth to VMware Cloud on AWS
- ✓ Ability to use hybrid vMotion for migration
- ✓ Ability to unlock all scalable networking features on VMware Cloud on AWS
- ✓ Secure and private connectivity to VMware Cloud on AWS

# How does it work?



# Private virtual interface

## ✓ Private Virtual Interface ( Private VIF)

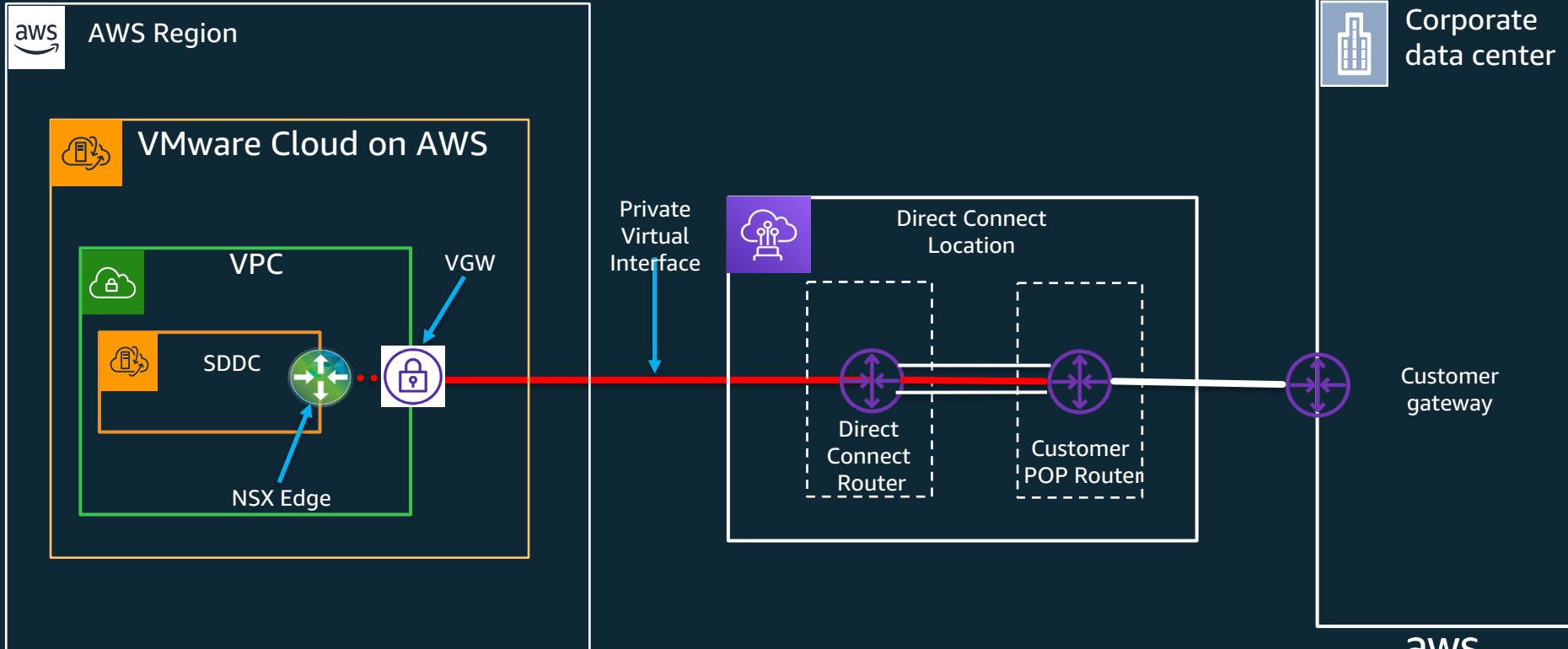


**Private Virtual Interface terminates on a Virtual Private Gateway**

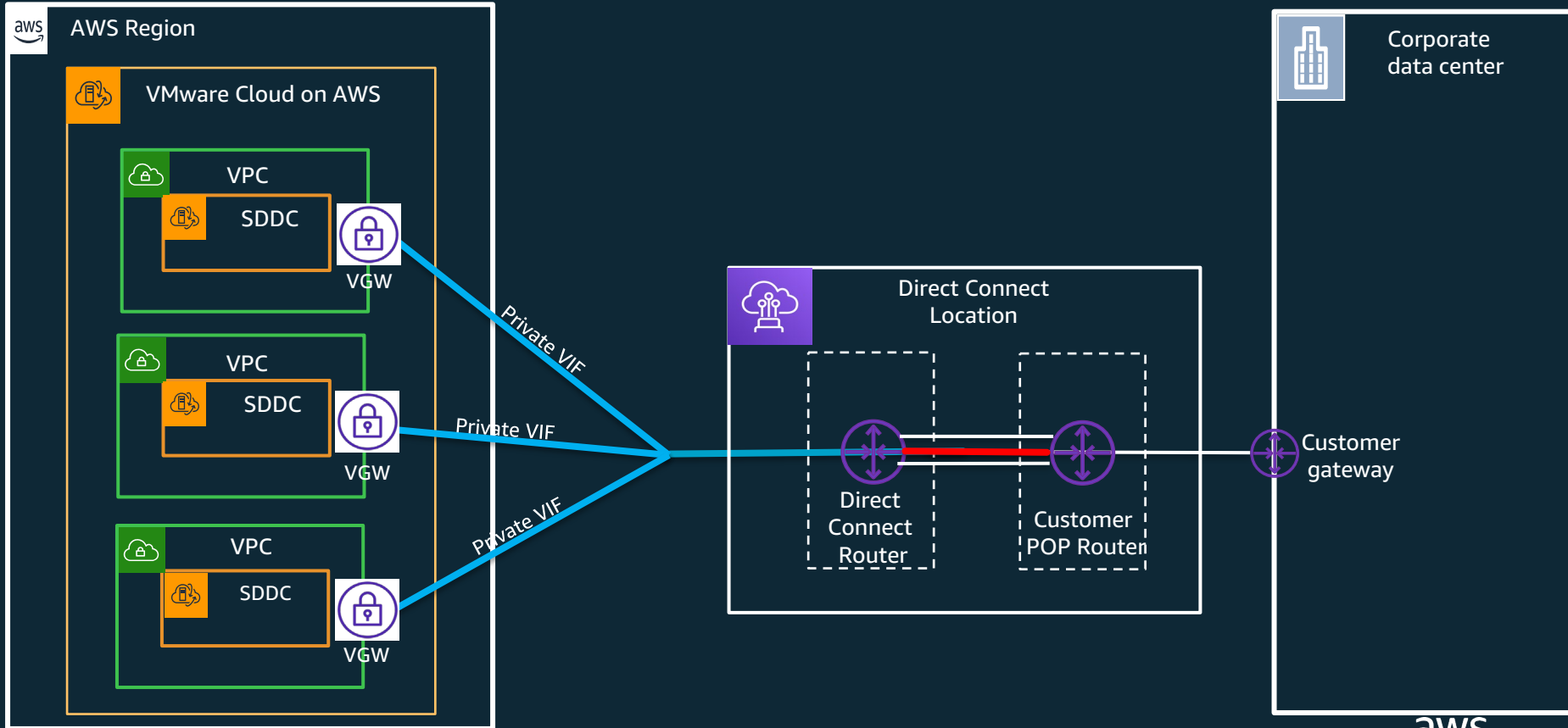


# Supported virtual interface types

## ✓ Private Virtual Interface ( Private VIF)



# Private VIF - Scalability



# Standard Interface & BGP Configuration...

```
interface GigabitEthernet0/1 ← Physical Interface that fiber is plugged into  
no ip address
```

```
interface GigabitEthernet0/1.333 ← Sub-interface (Generally matches VLAN)  
description "Direct Connect to your Amazon VPC or AWS Cloud" ← Just a description  
encapsulation dot1q 333 ← VLAN Association  
ip address 169.254.255.6/30 255.255.255.252
```

```
router bgp 65000 ← BGP ASN  
neighbor 169.254.255.5/30 remote-as 7224  
neighbor 169.254.255.5/30 P@ssw0rd!$1$zvovlUsp$UrqWP2awtiG8ZbXo9BwCB ← BGP MD5 Password  
network 172.20.10.0/24,172.20.11.0/24,10.3.10.0/24,10.3.20.0/24,10.3.30.0/24  
exit
```

← /30 Private P2P address

← Neighbor Peer Address

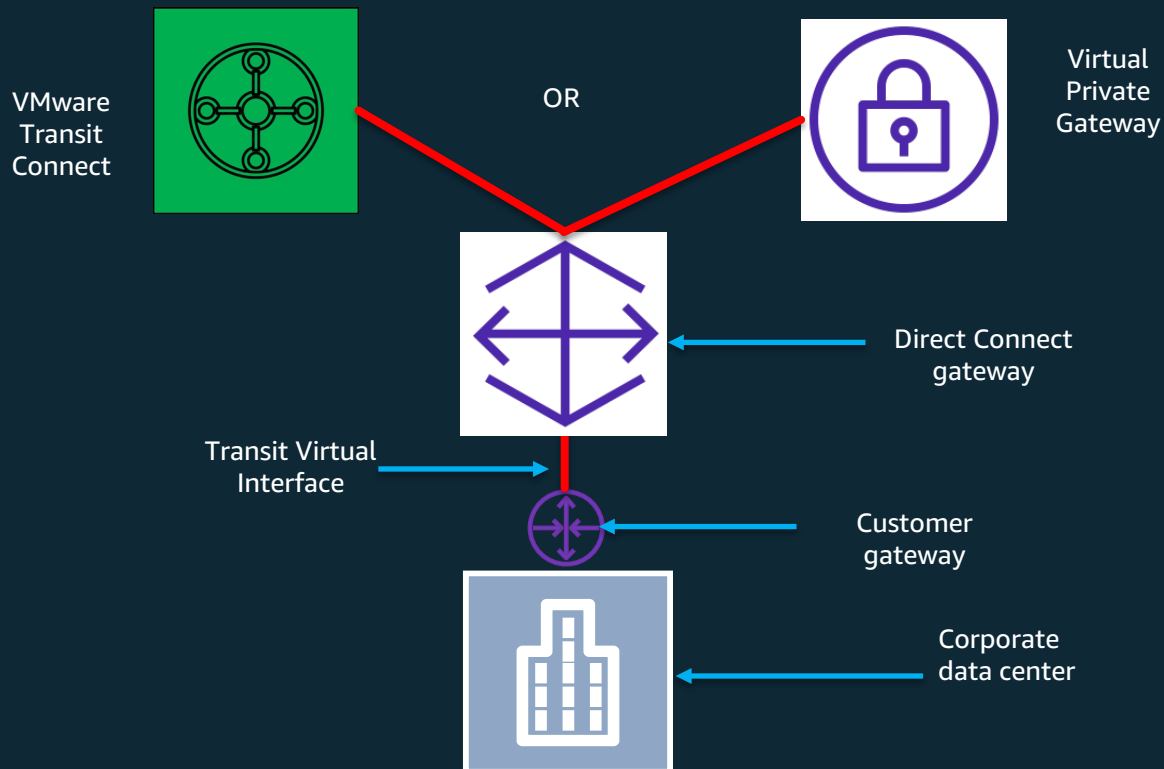
← Route Advertisement to AWS

# Private virtual interface demo



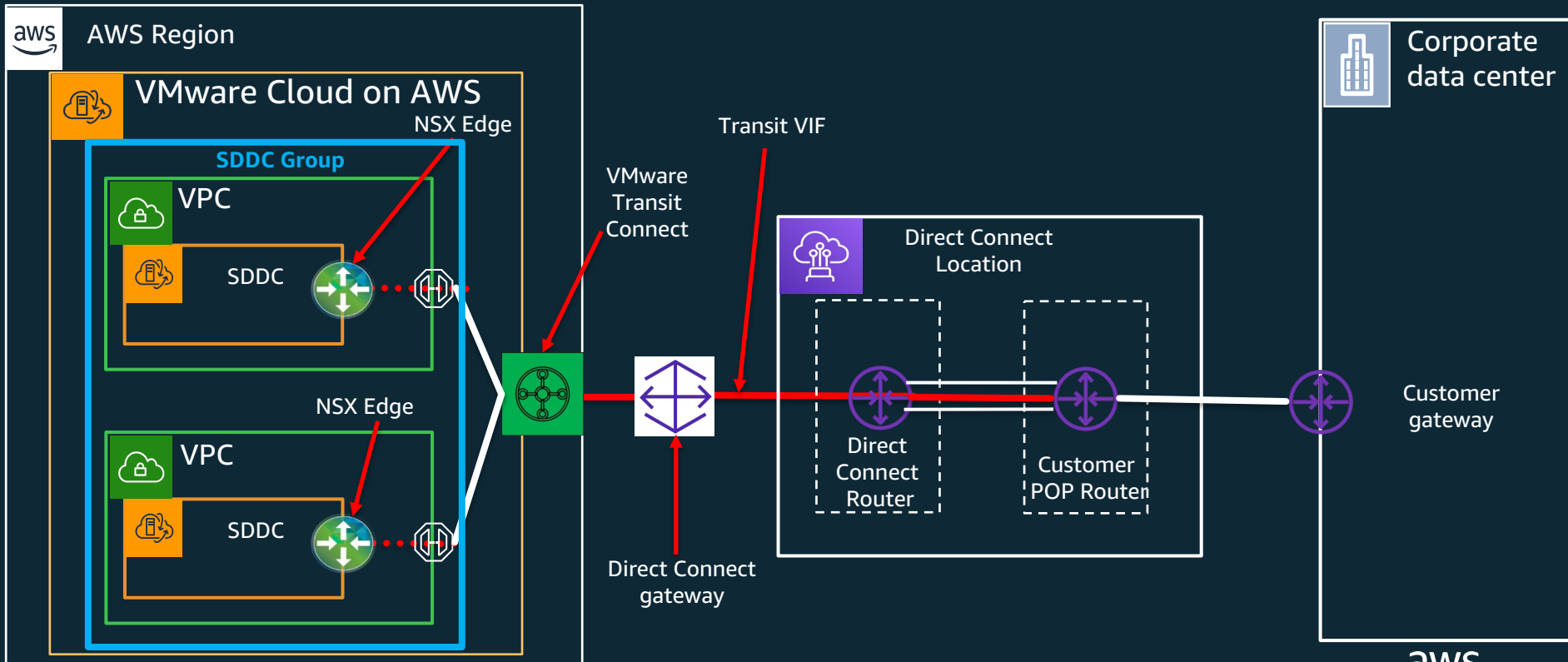
# Transit virtual interface

## ✓ Transit Virtual Interface ( Transit VIF)



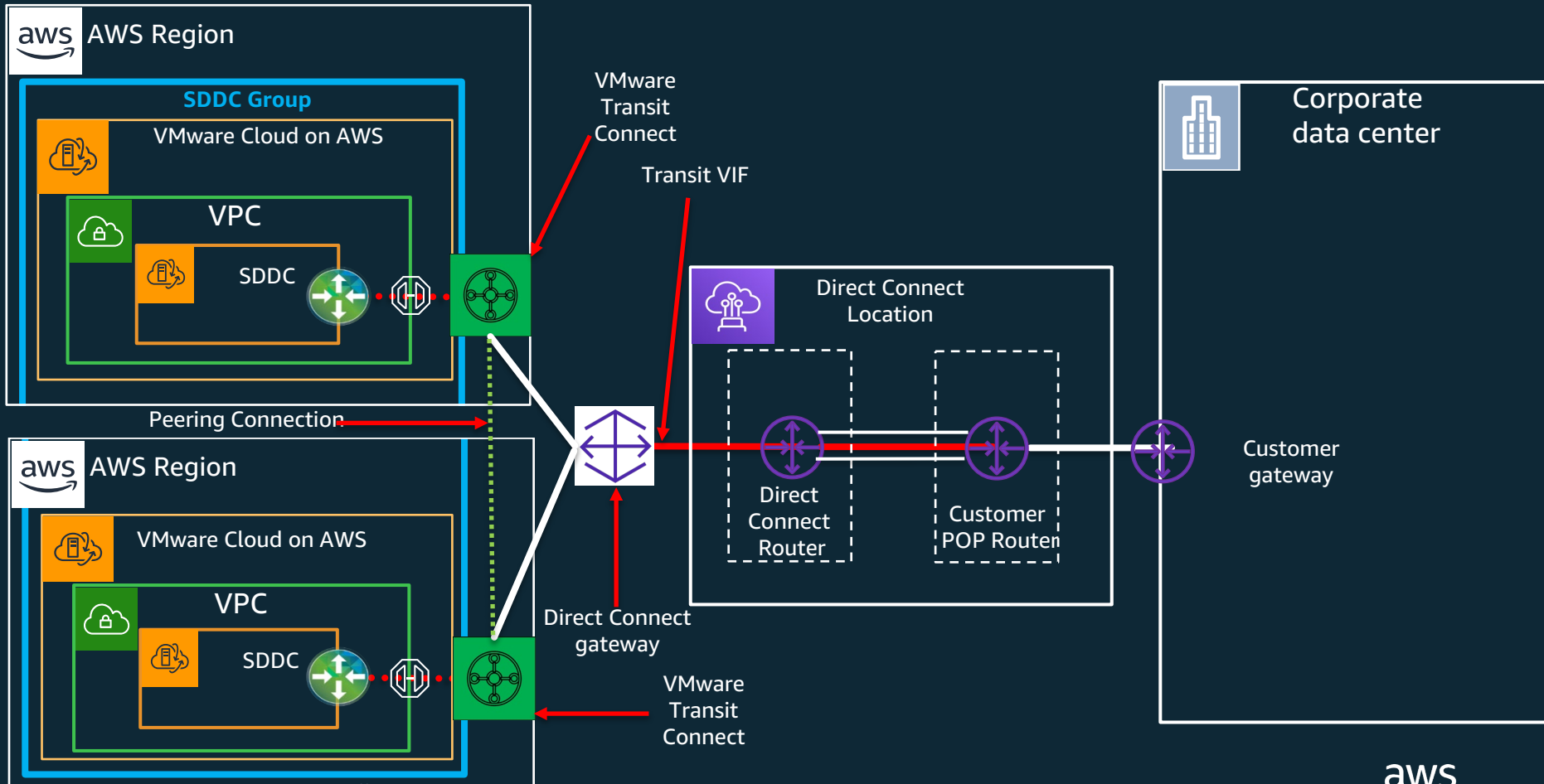
**Transit Virtual Interface terminates on a Direct Connect Gateway**

# Supported virtual interface types continued...





# Transit virtual interface continued



# Transit virtual interface demo



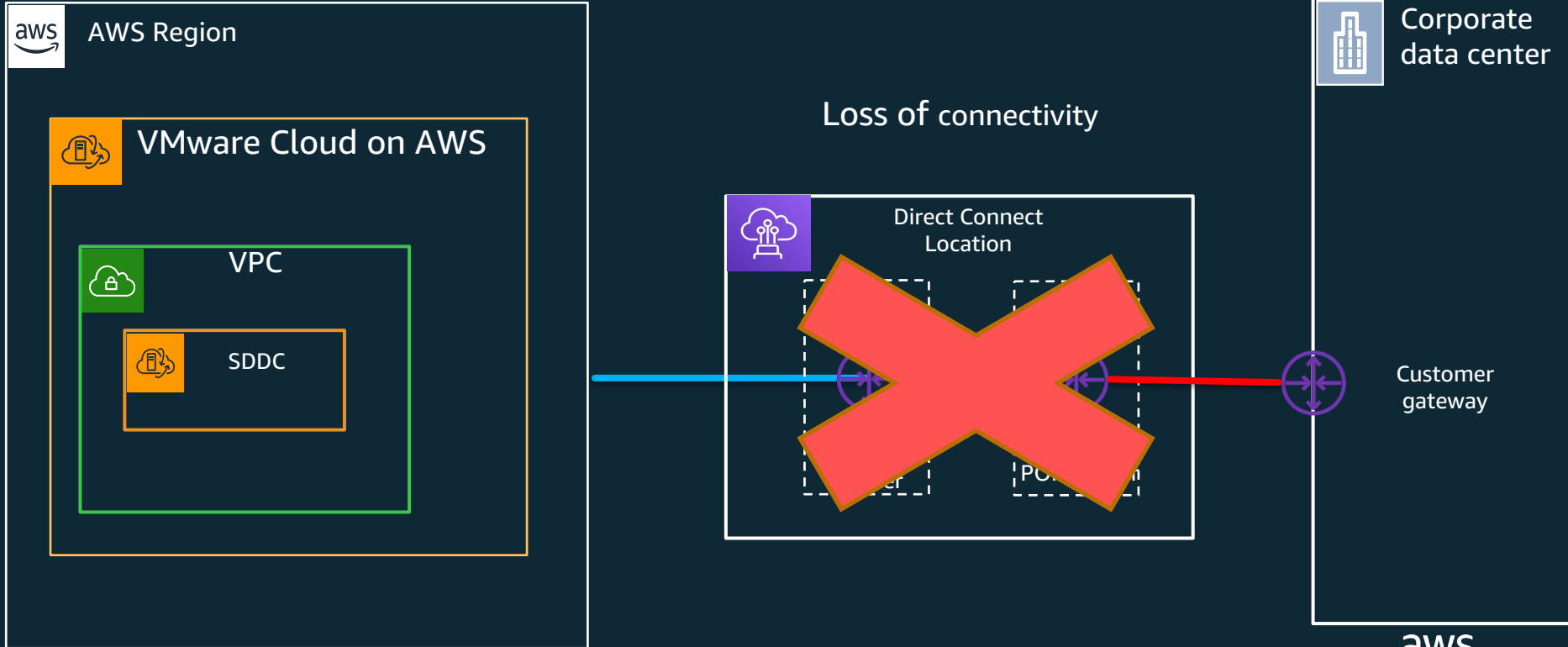
# Hybrid network resiliency with AWS Direct Connect

# Adding Redundancy

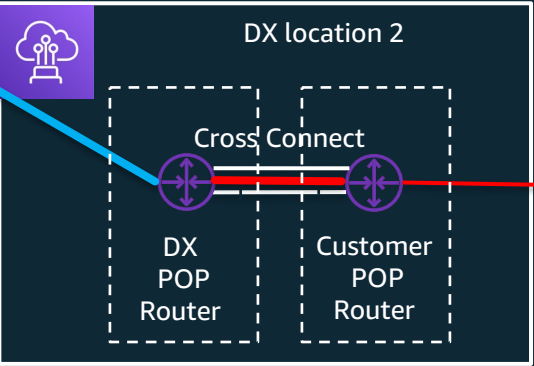
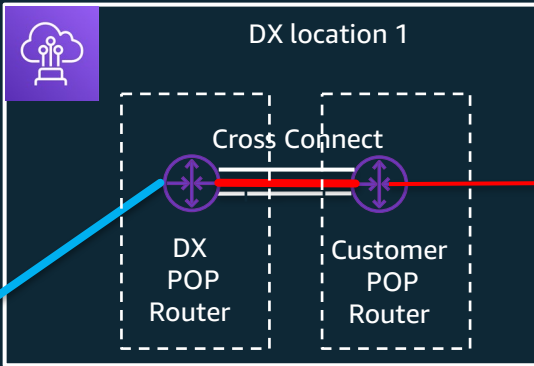
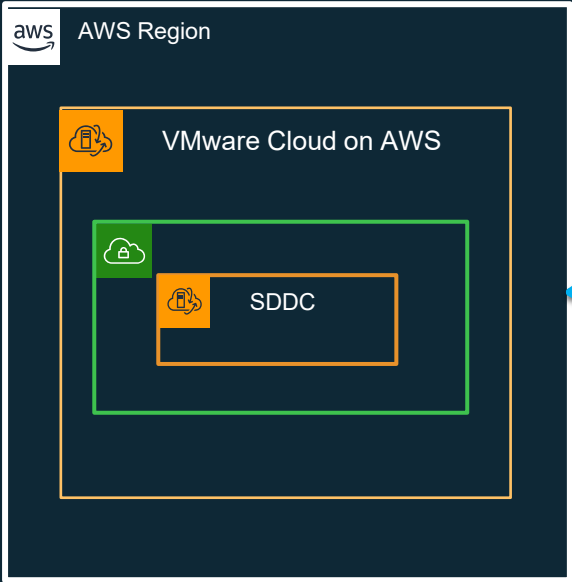
**“Everything fails, all the time.” – Werner Vogels**



# Adding redundancy continued....

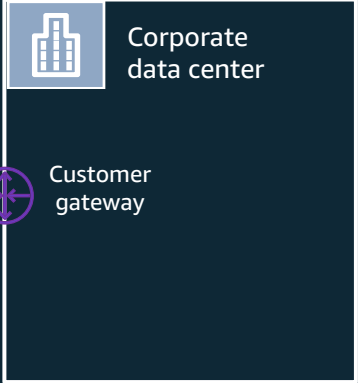


# Adding redundancy continued...



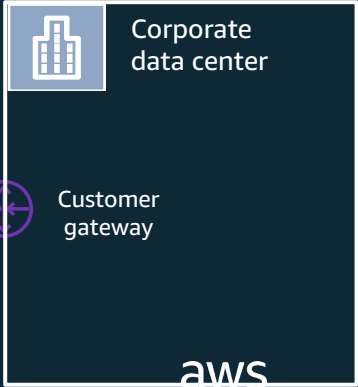
BGP route advertisement from on-premises

10.0.0.0/24

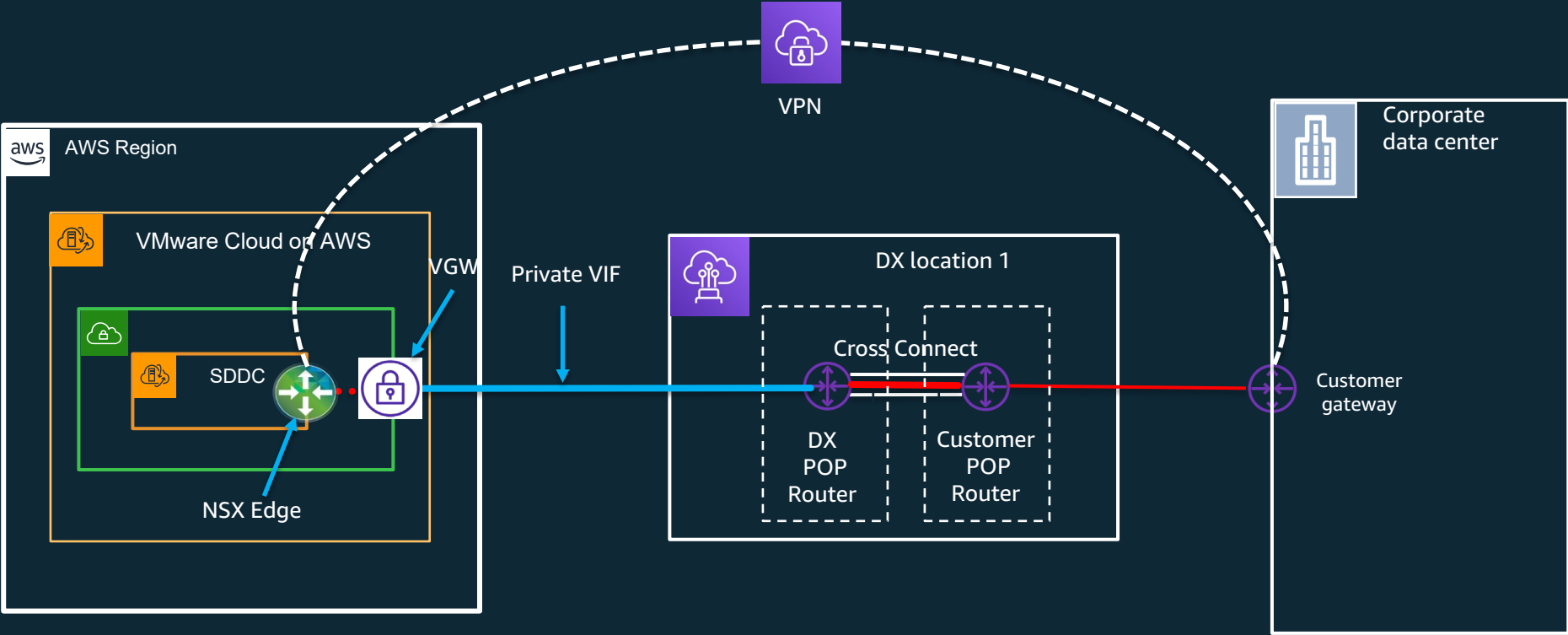


BGP route advertisement from on-premises

10.0.0.0/24



# Adding redundancy VPN backup





# Useful Links



AWS Direct Connect Integration With VMware Cloud on  
AWS



VMware Transit Connect Blog



AWS Direct Connect Resiliency  
Recommendation



Contact us

***Thank You!!***