Welcome!

Hands-on with AWS VPC's

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Pearson

Day 1

About This Class

- You will have access to the recording within 24 hours of the completion of this course.
- To get the most out of this course, please do not follow along in your AWS account during the live class.
- Please do your best to eliminate distractions as the lessons build upon each other.
- Make a goal and write it down! For example, complete all the demos in your own AWS account within 1 week.

Explore the Default VPC

- Automatically created in every AWS region for your account
- Configured to maximize ease of use
- Not configured according to security best practices
- I delete these when I create an AWS account

Demo: Default VPC

- Examine Subnets, Access Lists, and Route Tables
- The Security of the Default VPC
- Remove a Default VPC

Poll Slide

- What is the scope of an AWS VPC?
- Global
- Regional
- Availability Zone

Poll Slide

- What is the scope of a subnet?
- Global
- Regional
- Availability Zone
- Single Datacenter

Demo: Create a VPC

- Choose a region
- Configure CIDR Range
- Configure multiple subnets and an Internet Gateway

Poll Slide

- What is maximum CIDR range of a VPC?
- /24
- /20
- /16
- /8

Poll Slide

- Which route table is used for new subnets in an existing VPC by default?
- Default route table
- VPC route table
- Main route table

Poll Slide

- What is a public subnet?
- A subnet that has a route to a NAT Gateway
- A subnet that has a network ACL that allows Internet traffic
- A subnet that has a route to the Internet Gateway

Poll Slide

- Which of the following are characteristics of an Elastic IP address? (Choose two.)
- An Elastic IP can be detached from one EC2 instance and attached to another.
- An Elastic IP is a private IP address.
- An Elastic IP is a public IP address.
- You are only billed for Elastic IP addresses when they are attached to a running instance.

Poll Slide

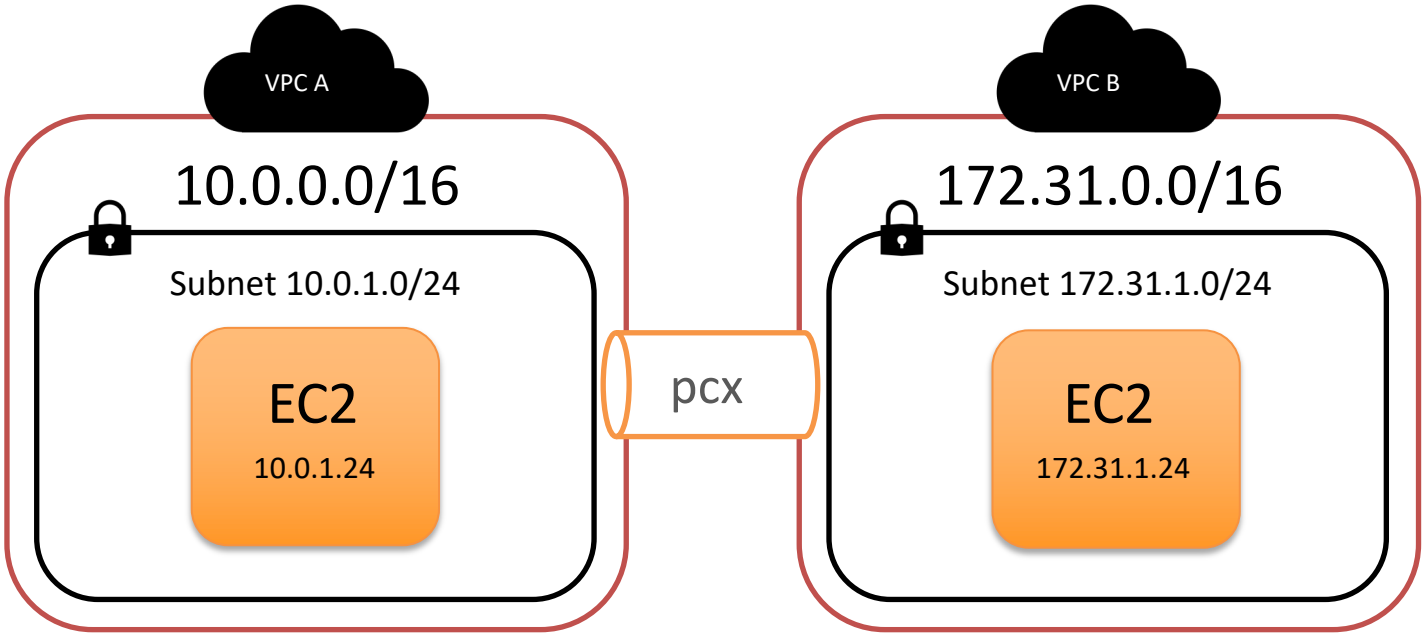
- What type of firewall is a Network ACL?
- Stateful
- Stateless
- Layer 7
- Advanced

Day 2

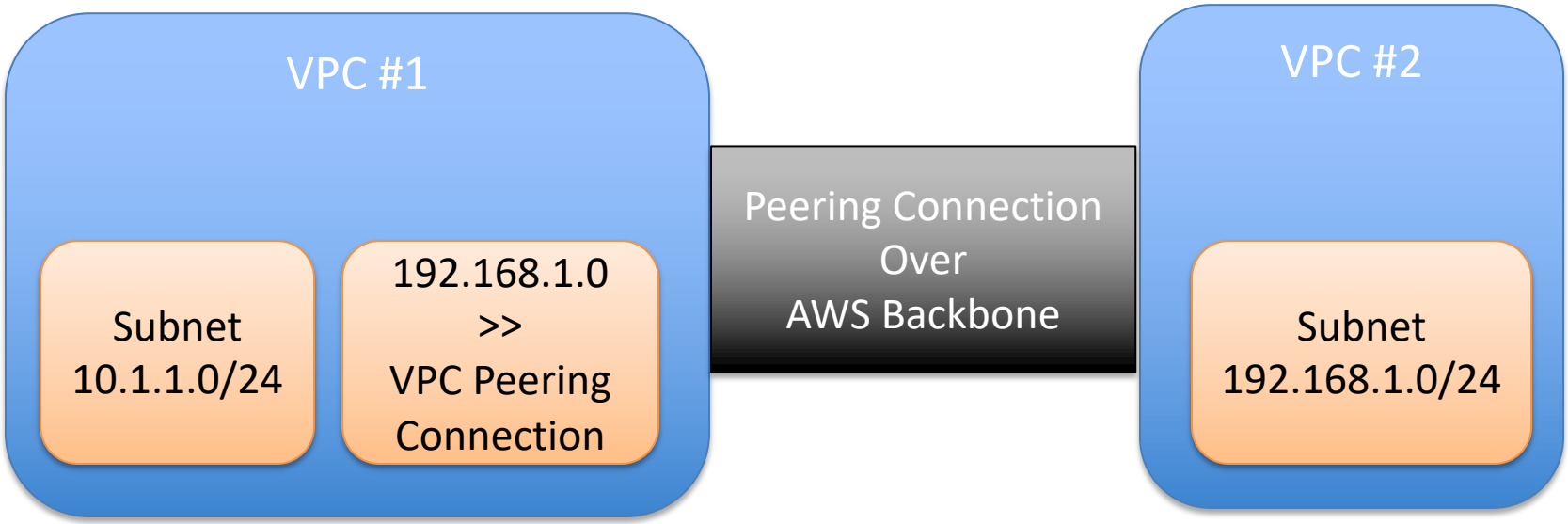
VPC Peering

- Connect multiple VPCs using a direct routing connection
- Instances act as if they were on the same network.
- Works within and across accounts
- No special hardware or single points of failure
- Soft limit of 50 VPC peers per VPC (125 max)
- To establish a peer relationship the owner of one VPC sends a request

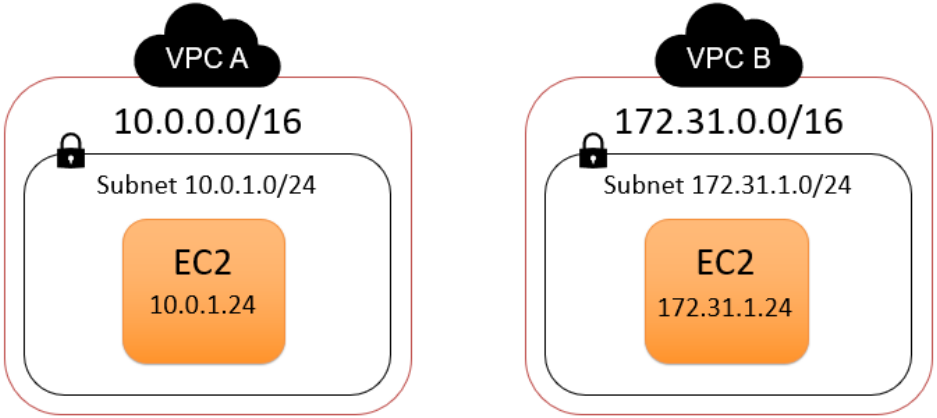
VPC Peering


VPC A
10.0.0.0/16
Subnet 10.0.1.0/24
EC2
10.0.1.24
pcx
VPC B
172.31.0.0/16
Subnet 172.31.1.0/24
EC2
172.31.1.24

VPC Peering Routing

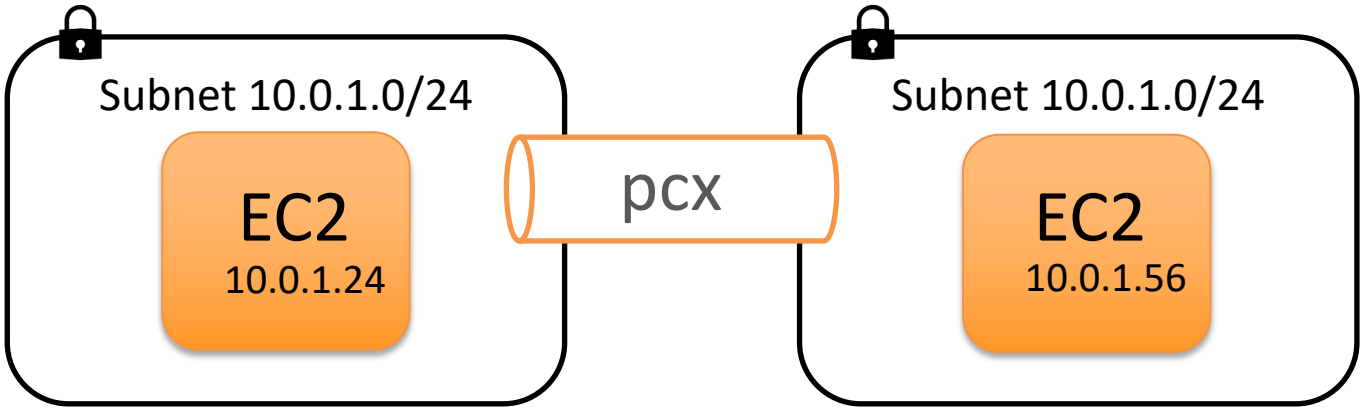


Route Tables

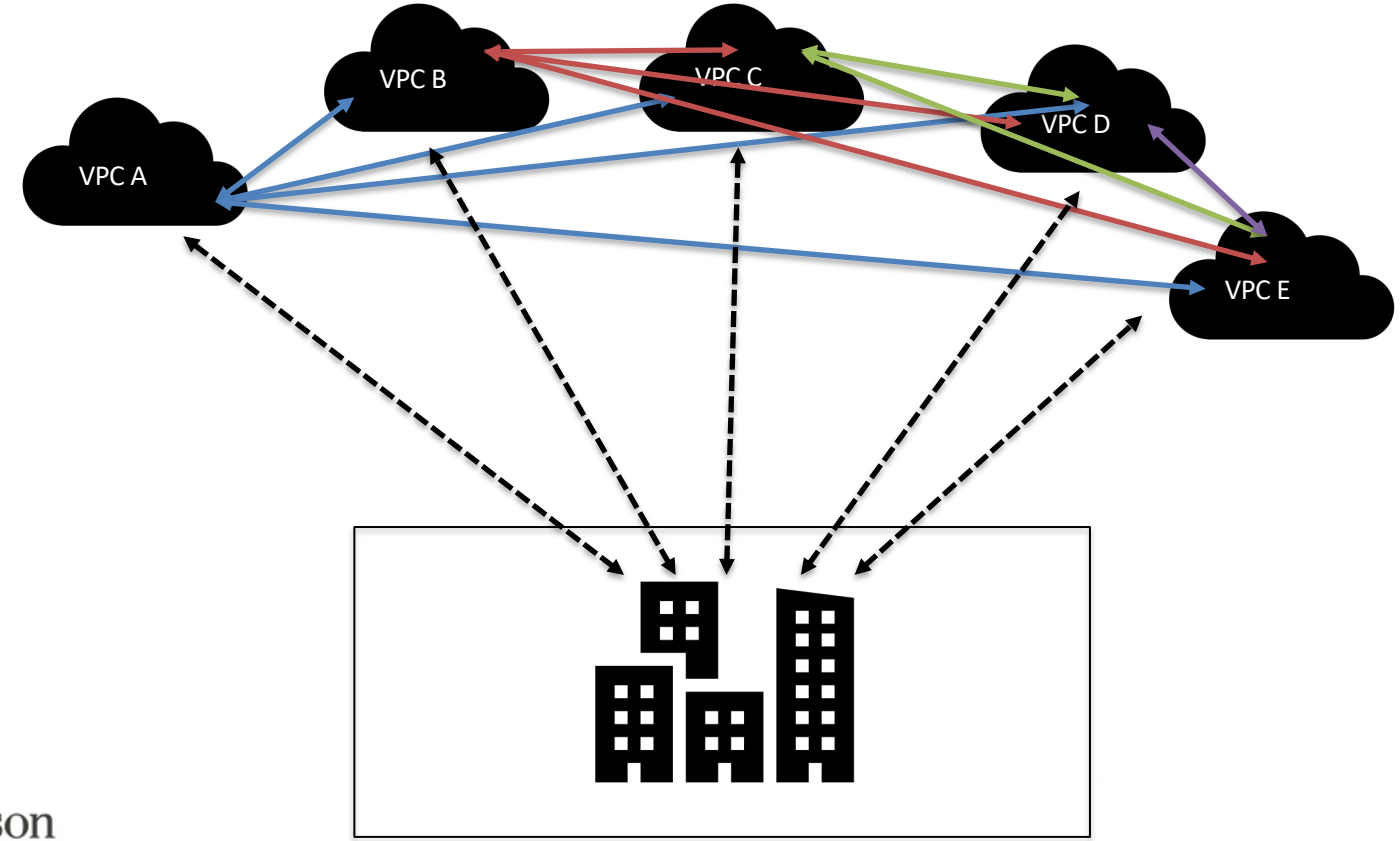


	Destination	Target
VPC A	10.0.0.0/16	Local
	172.31.0.0/16	pcx-*nnnnnn* nn
VPC B	172.31.0.0/16	Local
	10.0.0.0/16	pcx-*nnnnnn* nn

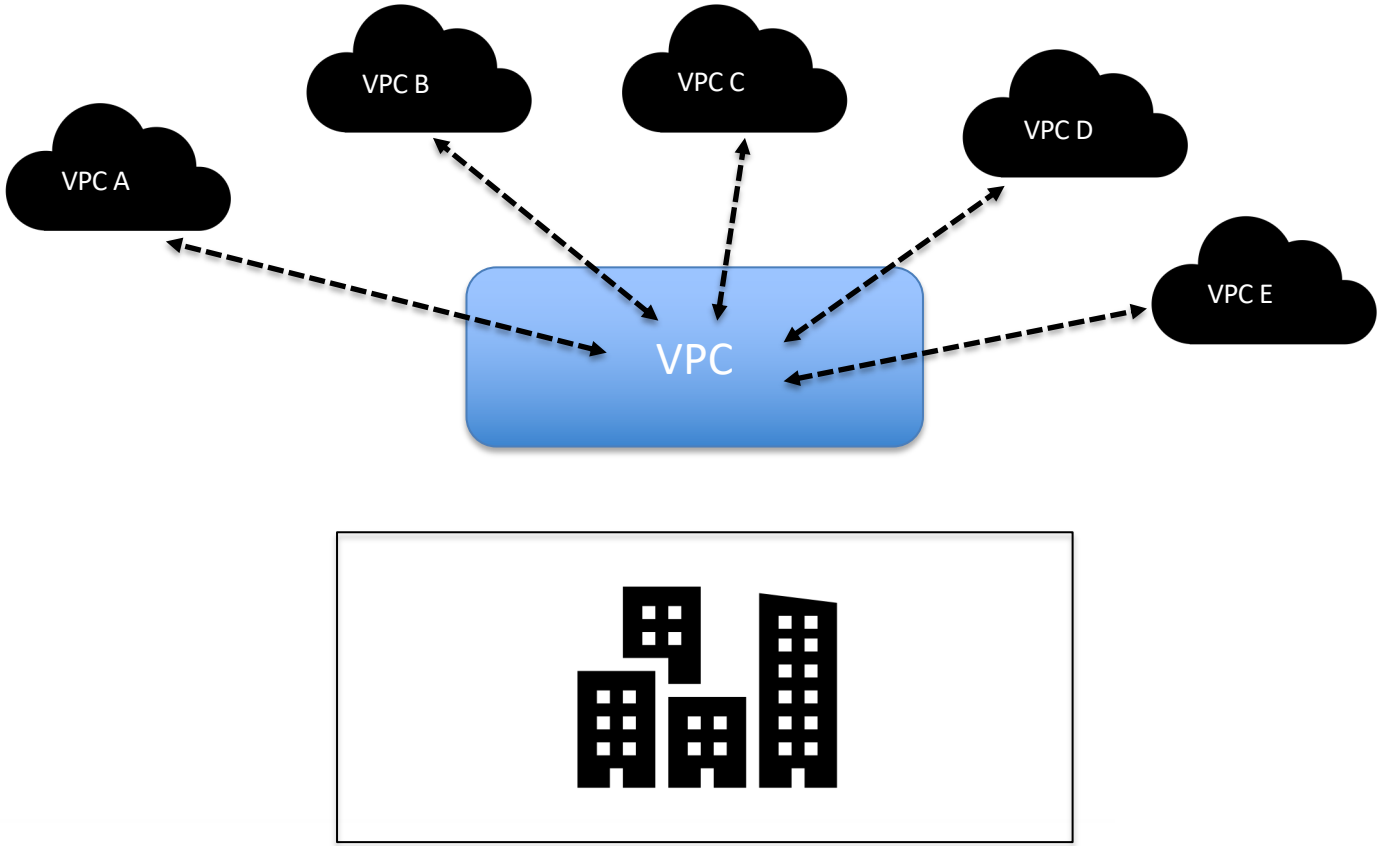
Overlapping Networks



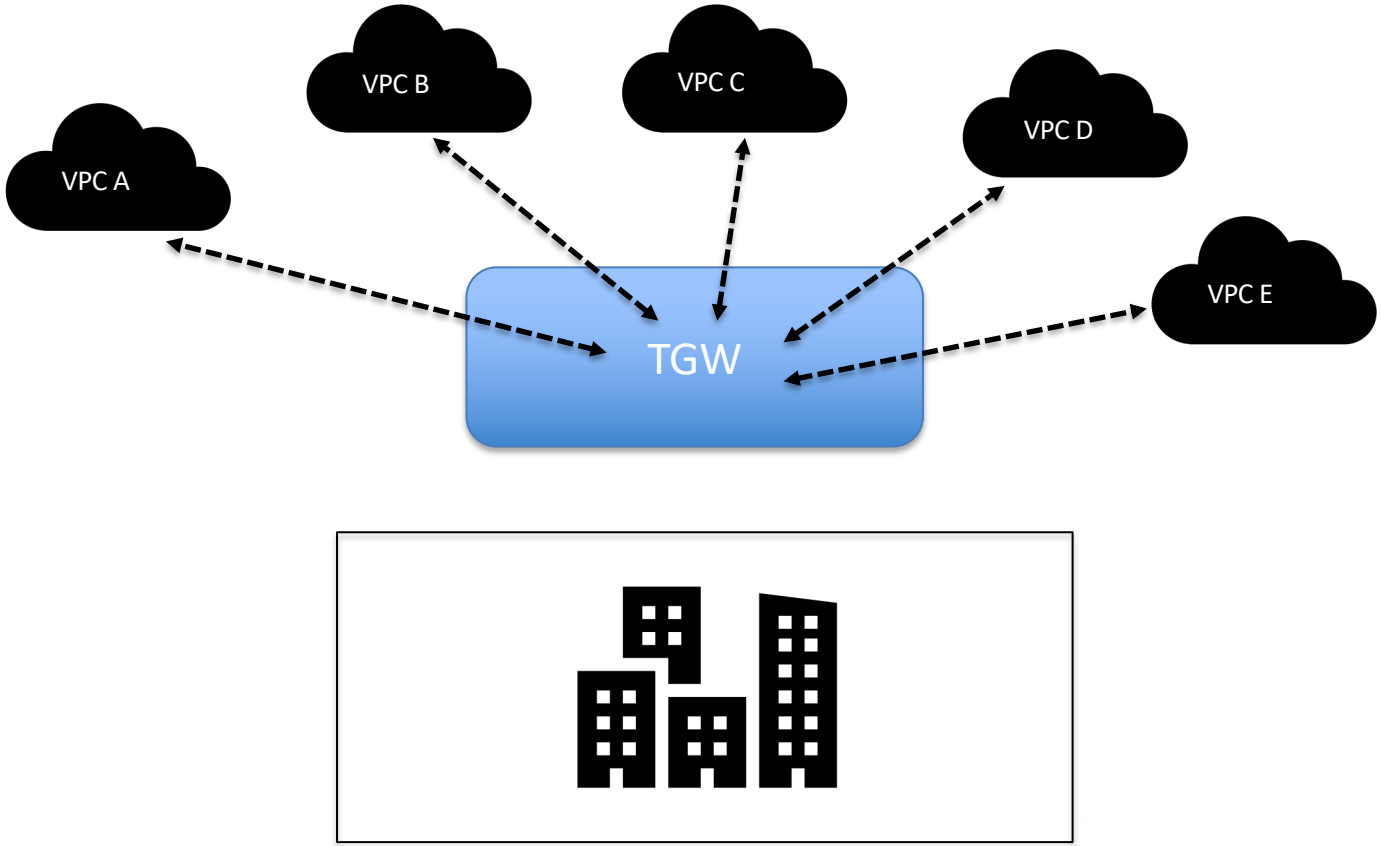
Connecting Many VPCs



Transit VPC



Transit Gateway



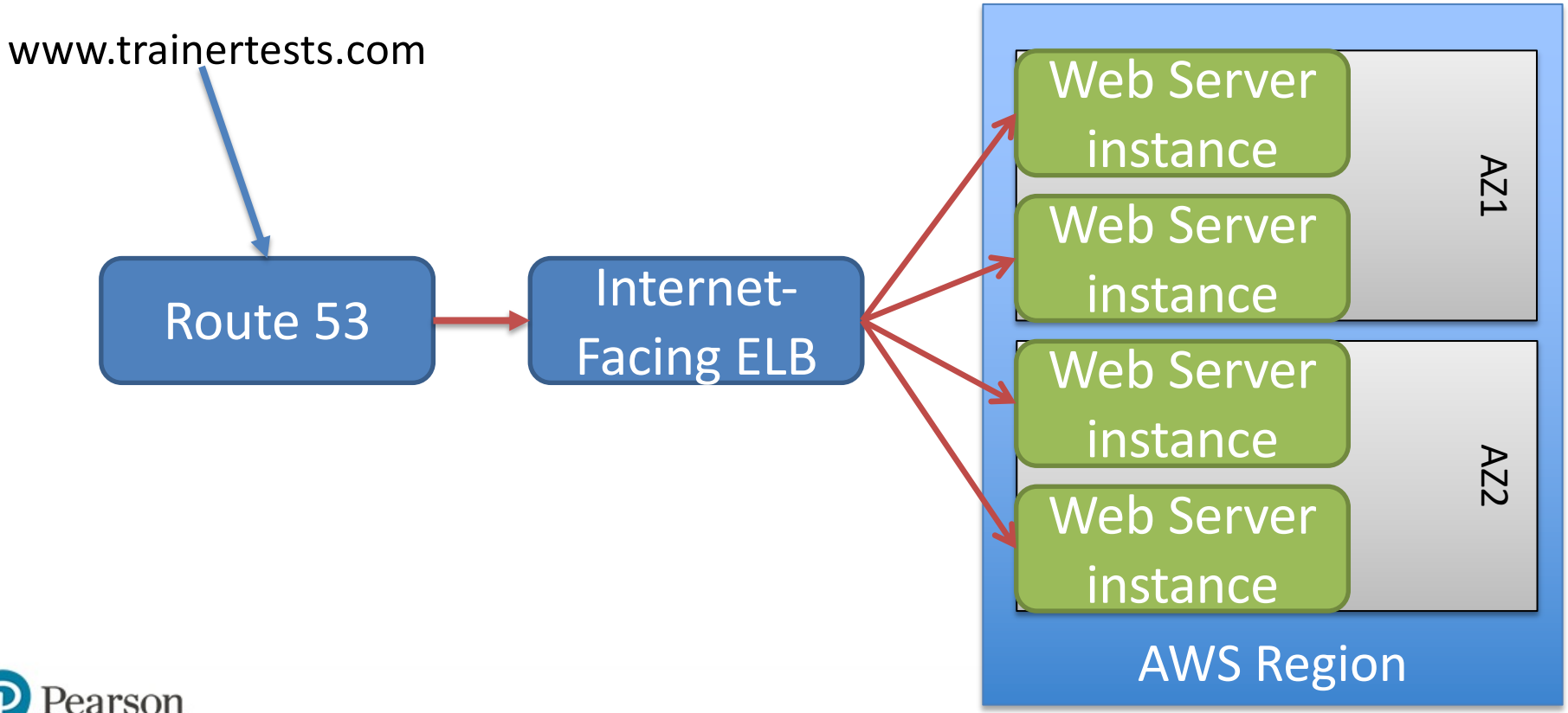
Poll Slide

- What steps must be complete to use a VPC Peering connection? (Choose two.)
- Route Tables must be configured to send traffic over the VPC Peering connection
- A VPN must be established over the VPC Peering connection
- The Peering Connection must be accepted
- A Virtual Private Gateway must be created

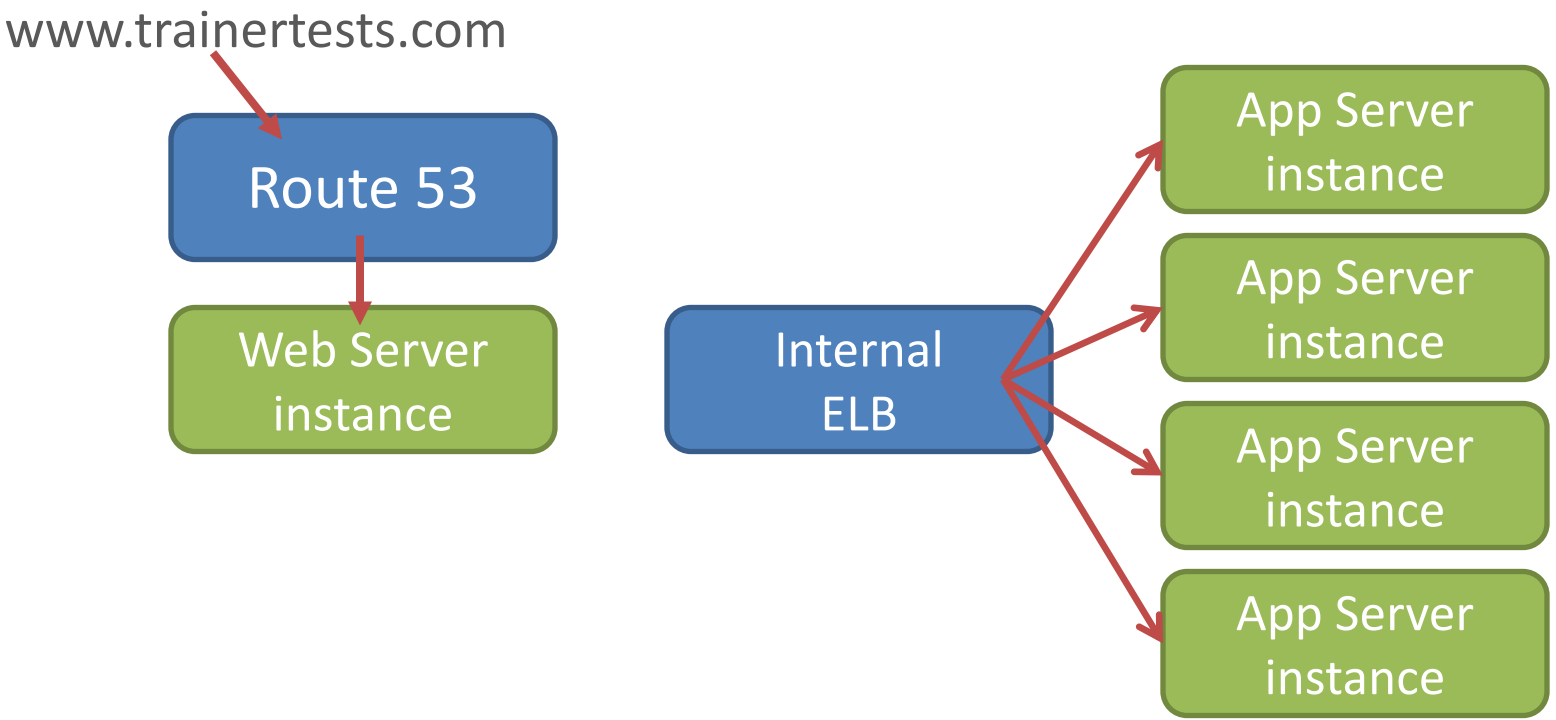
Poll Slide

- What can a Transit Gateway be used to connect?
- VPCs
- VPN
- DX Gateway
- Other Transit Gateways
- All of the above

Internet-Facing ELB



Internal ELB



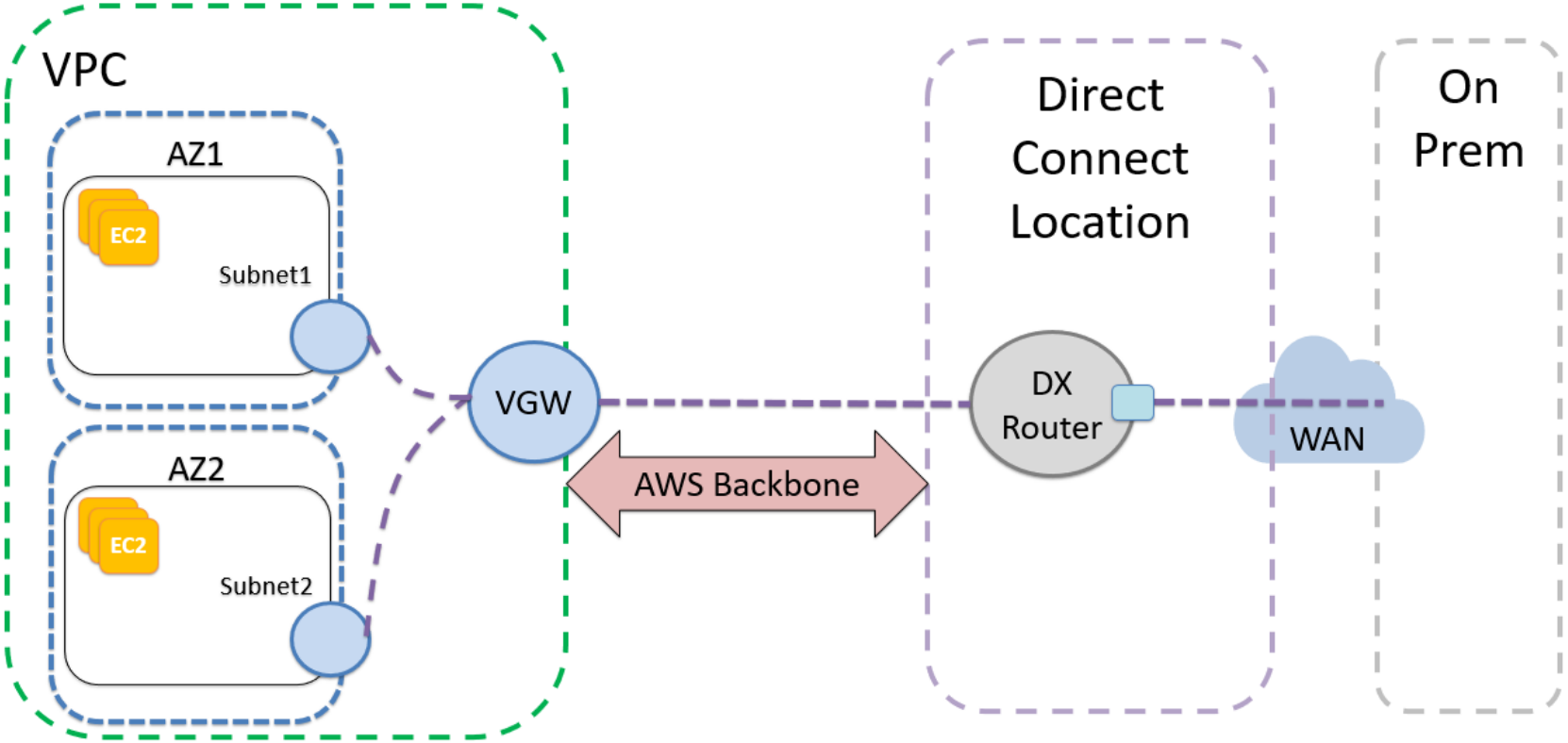
Poll Slide

- How does ELB help with application availability? (Choose two.)
- By distributing traffic across instances in multiple Azs
- By automatically rebooting instances if a host fails
- By performing periodic health checks on instances
- By using Route 53 failover routing to spread traffic across instances

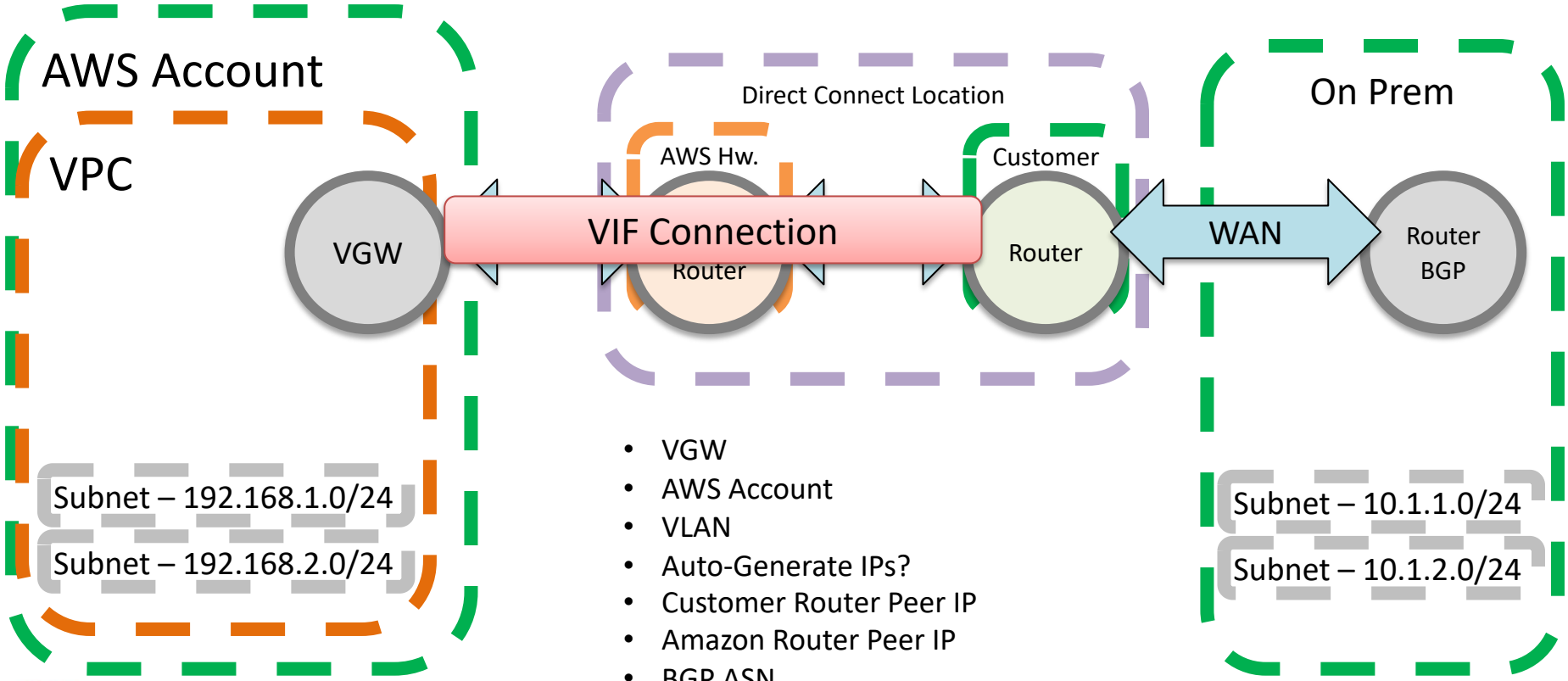
VPC Connectivity and Security

- VPC Flow Logs
- Direct Connect
- Direct Connect Gateway
- VPN Connections
- Transfer Charges Diagram

Direct Connect

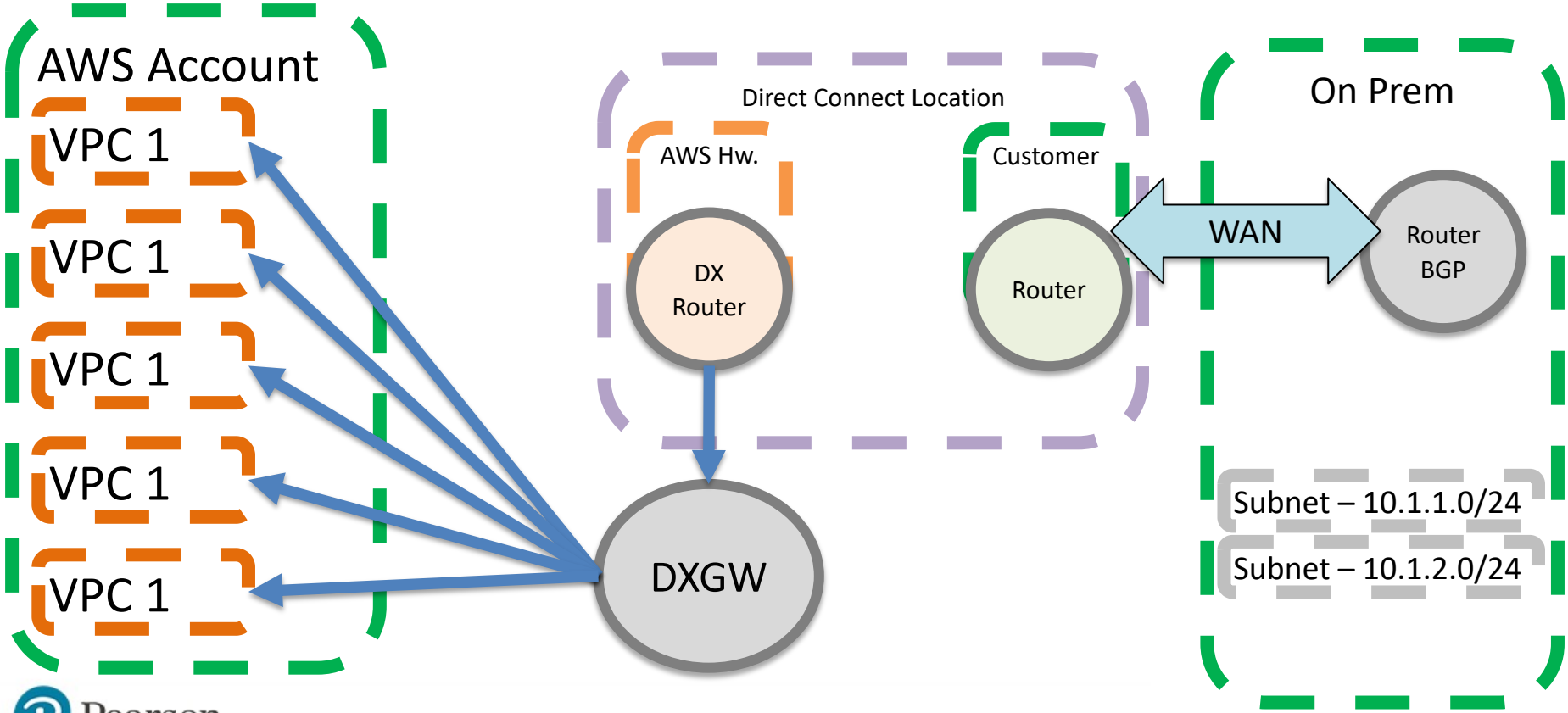


Direct Connect Private VIF



- VGW
- AWS Account
- VLAN
- Auto-Generate IPs?
- Customer Router Peer IP
- Amazon Router Peer IP
- BGP ASN

Direct Connect Gateway



Static Hardware VPN