

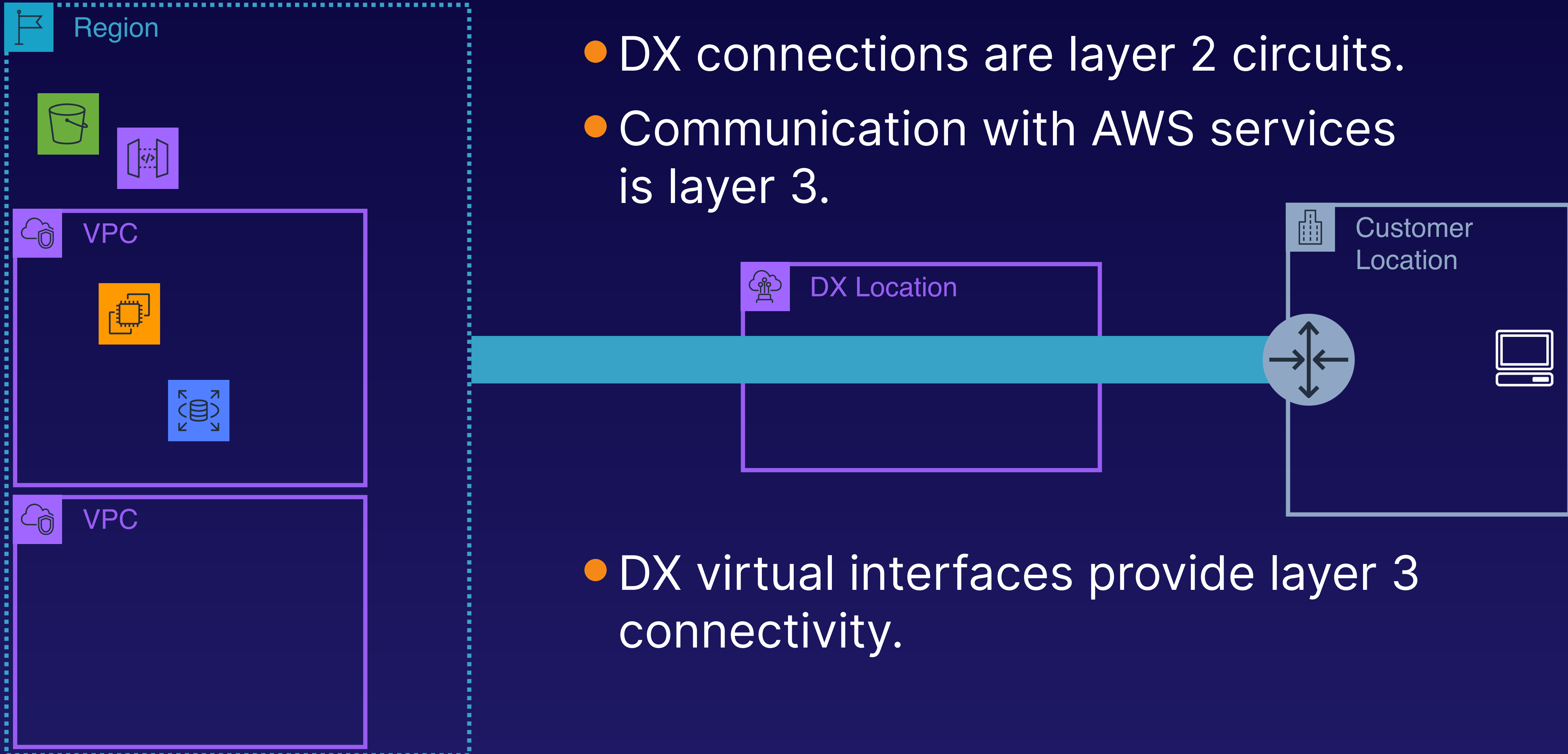
Virtual Interfaces (VIFs)



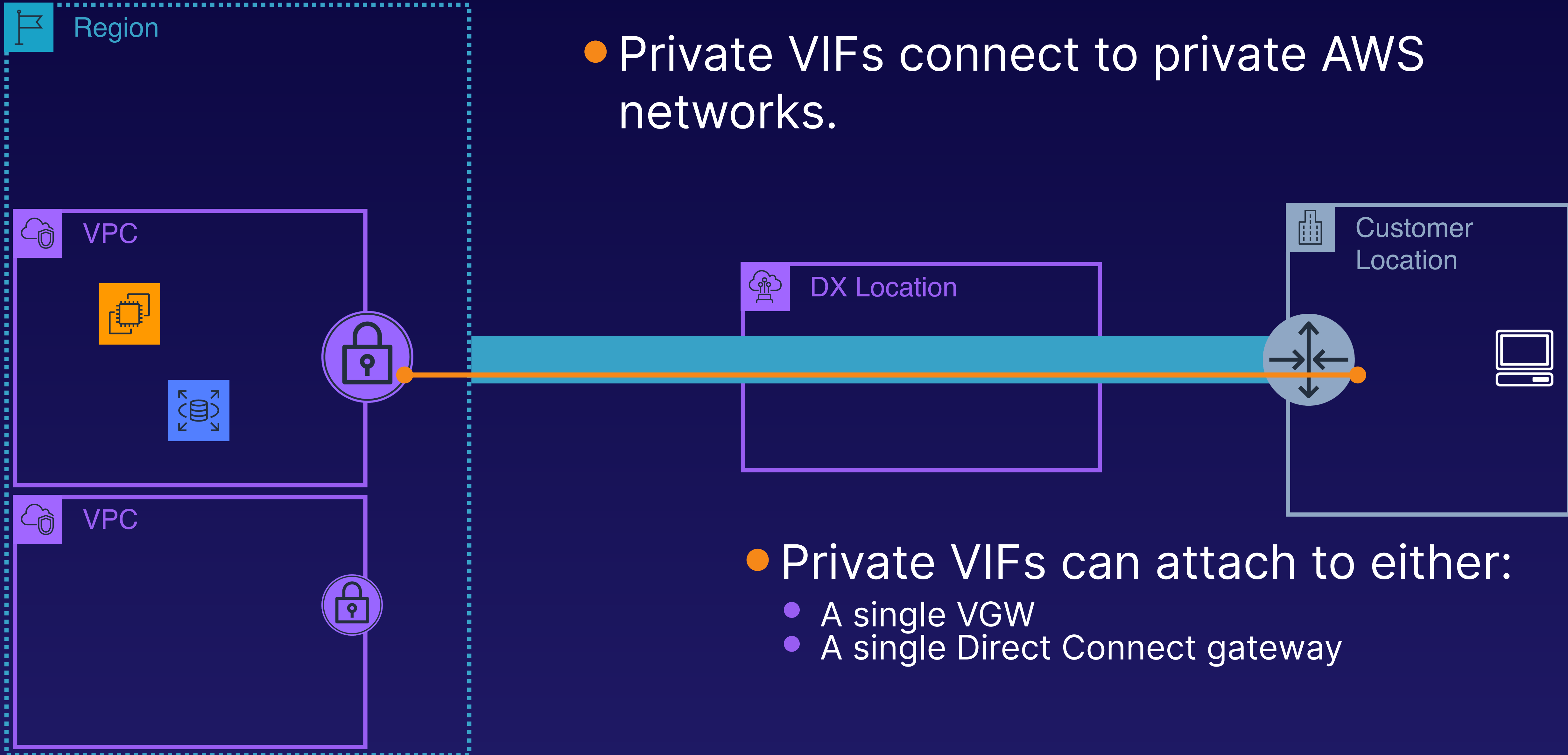
Steven Moran

TECHNICAL INSTRUCTOR

Why Do We Need Virtual Interfaces?



VIF Types – Private VIFs

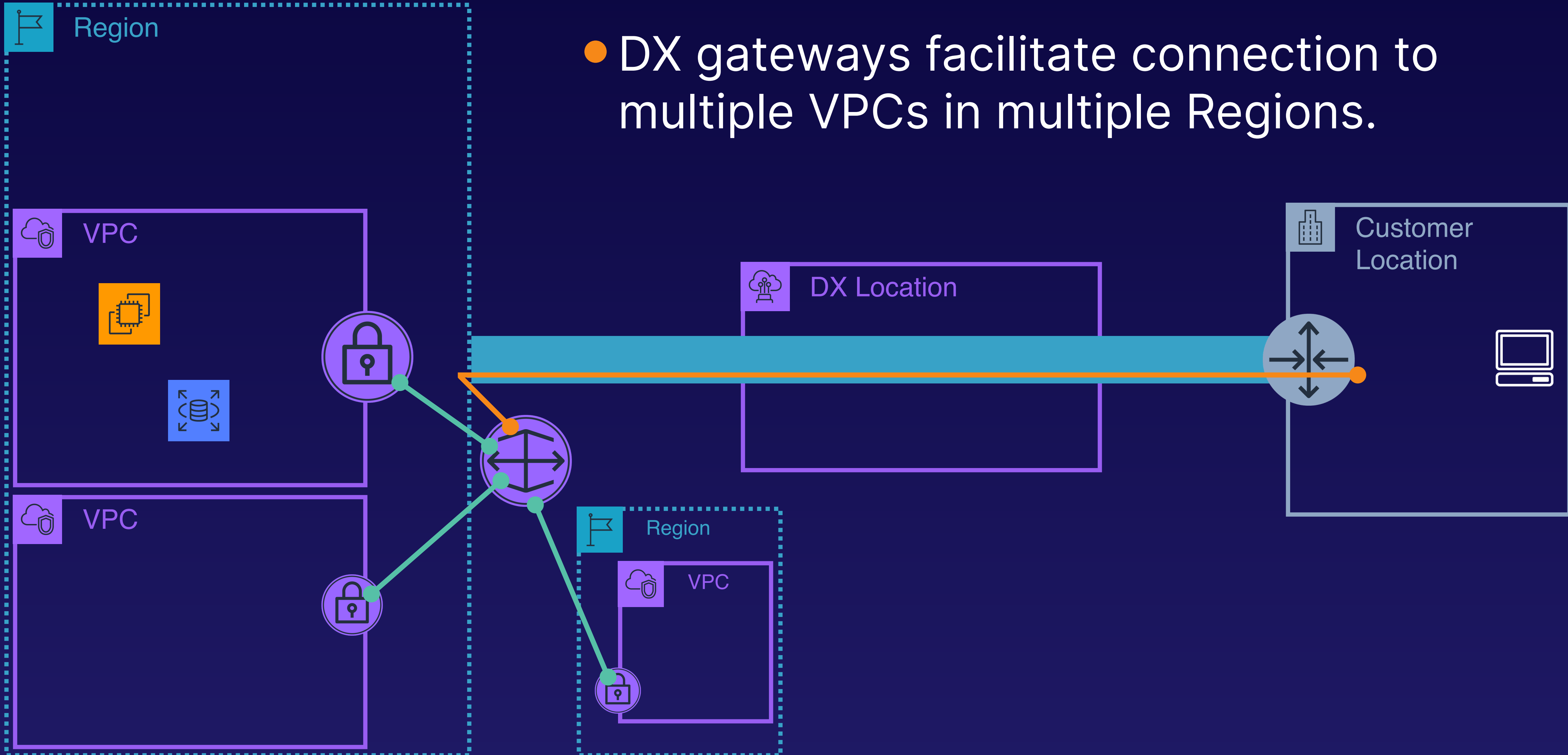


- Private VIFs connect to private AWS networks.

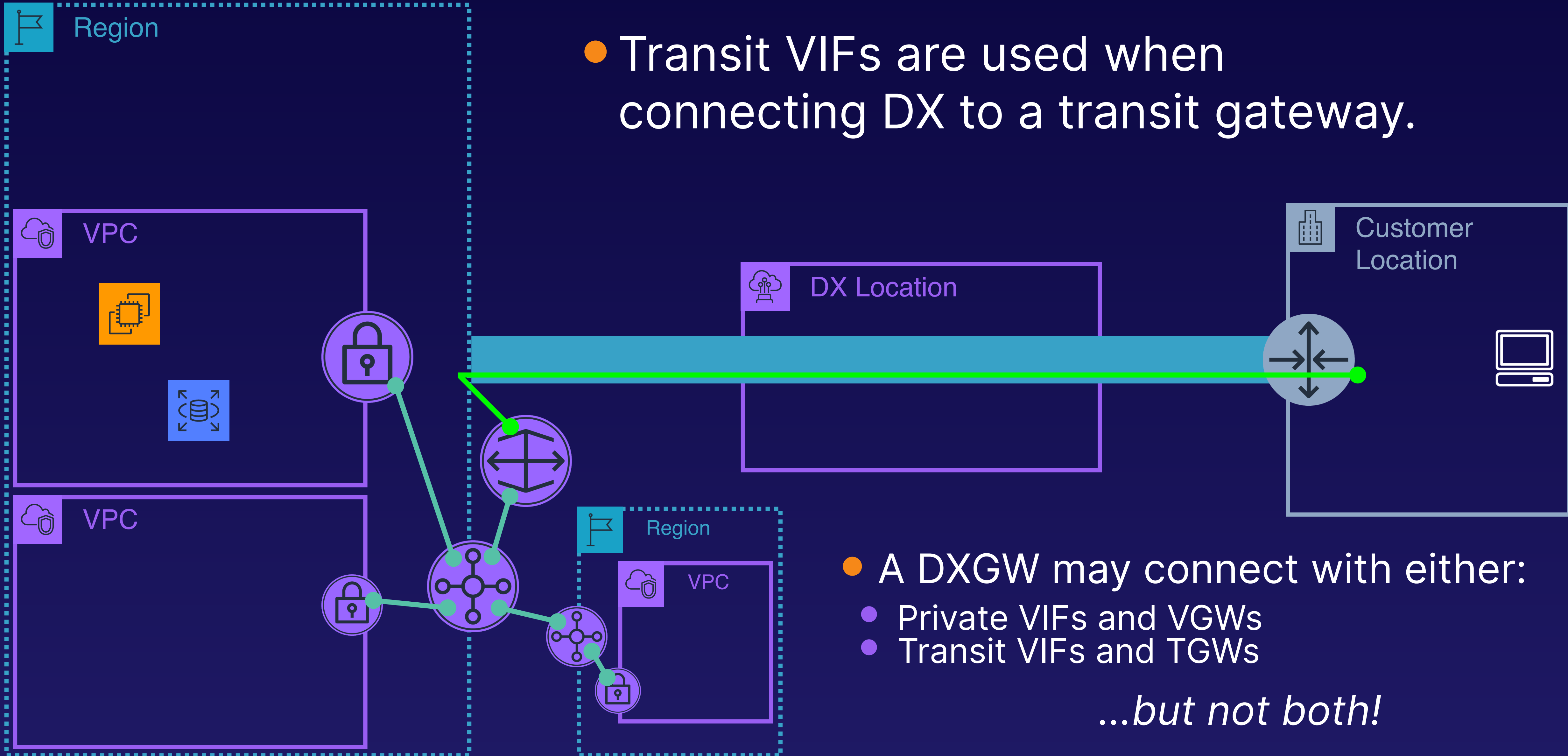
- Private VIFs can attach to either:
 - A single VGW
 - A single Direct Connect gateway

Direct Connect Gateways

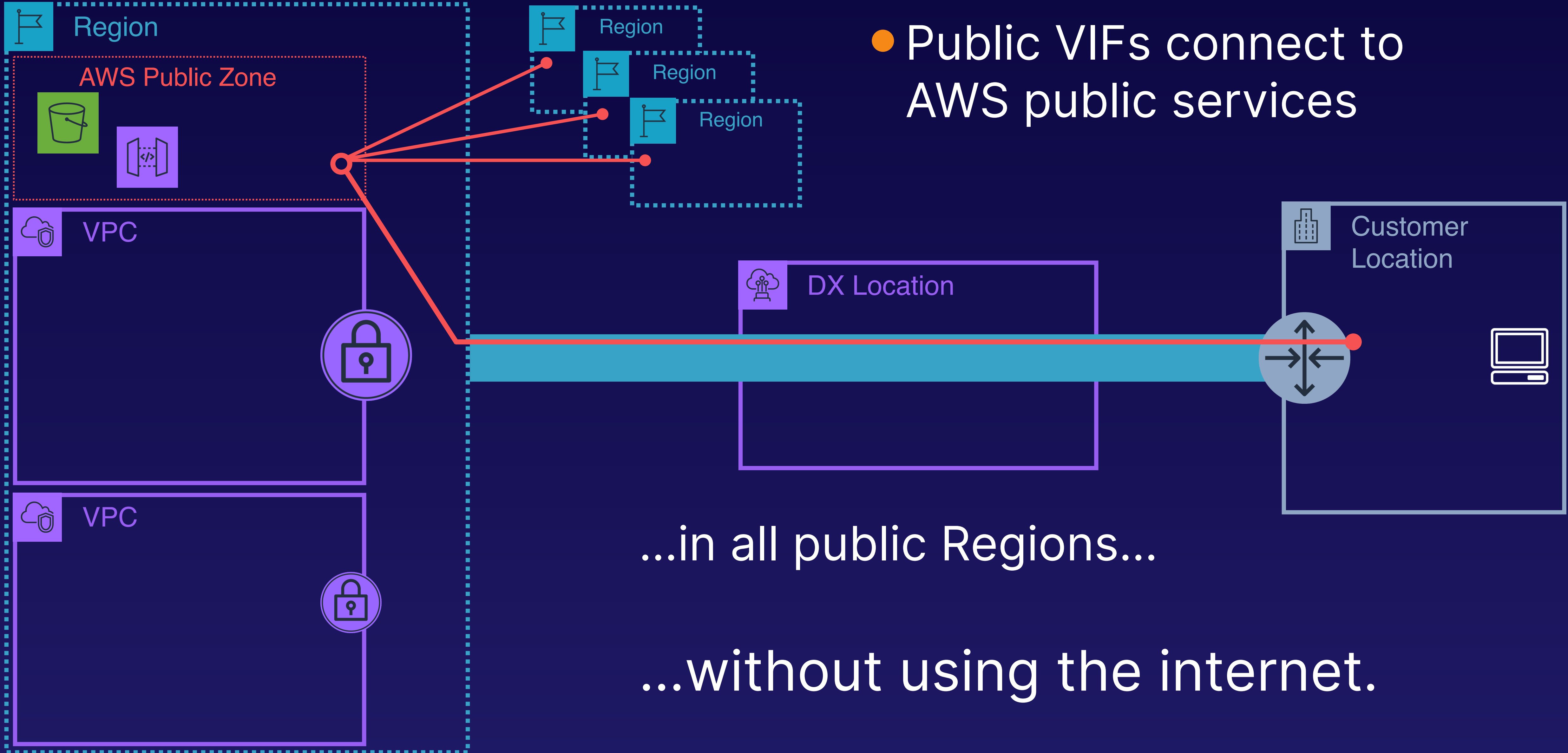
- DX gateways facilitate connection to multiple VPCs in multiple Regions.



VIF Types – Transit VIFs



VIF Types – Public VIFs

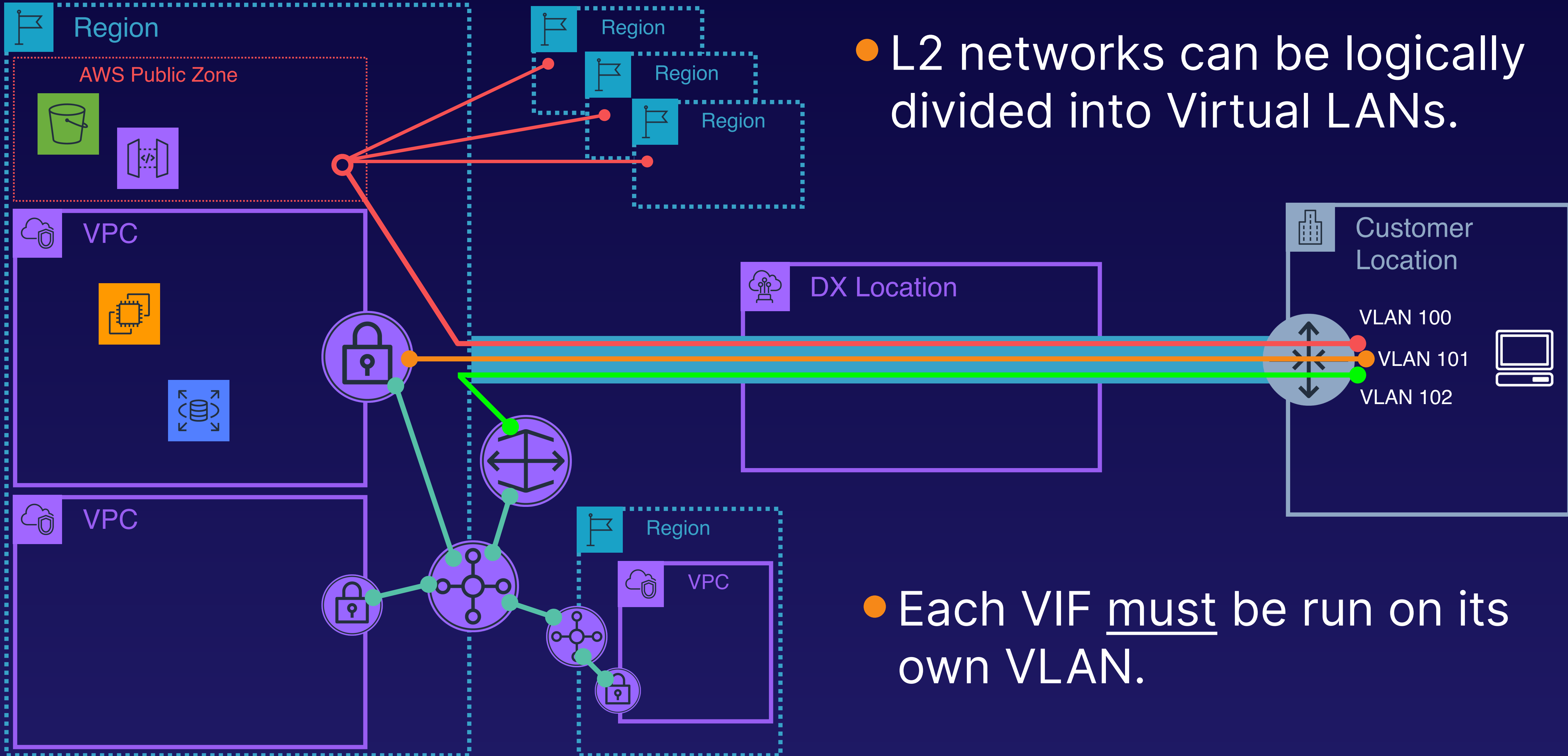


- Public VIFs connect to AWS public services

...in all public Regions...

...without using the internet.

How Is All of This Happening on a Single Circuit?



- L2 networks can be logically divided into Virtual LANs.

- Each VIF must be run on its own VLAN.

Private virtual interface settings

Virtual interface name

A name to help you identify the new virtual interface.

Name must contain no more than 100 characters. Valid characters are a-z, 0-9, and - (hyphen)

Connection

The physical connection on which the new virtual interface will be provisioned.

Virtual interface owner

The account that will own the virtual interface.

- My AWS account
 Another AWS account

Gateway type

Gateway type for this virtual interface.

- Direct Connect gateway
 Virtual private gateway

Direct Connect gateway

The Direct Connect gateway to which the new virtual interface will be attached.

VLAN

The Virtual Local Area Network number for the new virtual interface

Valid ranges are 1 - 4094

BGP ASN

The Border Gateway Protocol Autonomous System Number of your gateway

Valid ranges are 1 - 2147483647.

Additional settings

Address family - optional

Determines whether the virtual interface is created with an IPV4 or IPV6 peering.

- IPV4
 IPV6

Your router peer ip - optional

The BGP peer IP configured on your endpoint

Amazon router peer ip - optional

The BGP peer IP configured on the AWS endpoint.

BGP authentication key - optional

The password that will be used to authenticate the BGP session.

Jumbo MTU (MTU size 9001) - optional

Allow MTU size of 9001 on virtual interface.

- Enabled

Tags

Specified tags to help identify a AWS Direct Connect resource.

No tags associated with the resource

- Properties
 - VIF type
 - VIF name
 - DX connection name
 - VIF owner
 - Gateway (private and transit VIFs)
 - VLAN ID
 - BGP ASN
 - Other BGP settings
 - Jumbo MTU (private and transit VIFs)
 - Tags

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Allow MTU size of 9001 on virtual interface.

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No tags associated with the resource

- After creation:
 - Only tags may be edited.
 - Router configuration file may be downloaded.
- **DX dedicated** connections support:
 - Up to 50 public or private VIFs.
 - Only 1 transit VIF.
 - Hard limits.
- **DX hosted** connections only support a single VIF.

What Is a Hosted VIF?

- Allows a DX connection owned by one AWS account to be used by a different account.
- Hosted VIFs are created by the owner of the DX connection and offered to the other AWS account.

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The account that will own the virtual interface.

 My AWS account Another AWS account

Virtual interface owner

The account that will own the virtual interface.

What Is a Hosted VIF?

- Creator account identifies consumer account as the VIF owner.
- Can be any VIF type.
- All VIF properties are defined by creator account.

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Virtual interface owner

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- My AWS account
- Another AWS account

Virtual interface owner

The account that will own the virtual interface.

Direct Connect > Virtual Interfaces > DXVIF-FGE1UG95

DXVIF-FGE1UG95 Accept

General configuration

Virtual interface ID dxvif-fge1ug95	State confirming	Amazon side ASN 7224	AWS device CSOW-3rw6q0
Virtual interface name NewbProHostedVIF	VLAN 1267	Connection ID dxcon-fh8n8ipz	MTU 1500
AWS account 800	Region us-west-1	Location CoreSite LA1, Los Angeles, CA	Jumbo frame c true


- Hosted VIF must be accepted by consumer account before use.
- Private and Transit VIFs must be connected to an appropriate gateway.

Direct Connect > Virtual Interfaces > DXVIF-FGE1UG95

DXVIF-FGE1UG95

Accept

General configuration

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- Once the hosted VIF is accepted, the router configuration file can be downloaded by the **creator** account, not by the **consumer** account.

Virtual interfaces allow IP communication over DX connections.

Different VIF types are used to access different ranges of AWS services.

Hosted VIFs are used to share a DX connection with other AWS accounts.