AWS
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NOV. 27 – DEC. 1, 2023 | LAS VEGAS, NV

NET314-R

How to connect multiple VPCs across locations

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AWS

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How this works

1. 300 level
2. Overview and level set of Amazon VPC sharing and peering, AWS Transit Gateway, and AWS Cloud Wan
3. It depends. So let’s get interactive!

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This icon appears at the end of builds to indicate when the diagram is complete.

Amazon VPC sharing and peering

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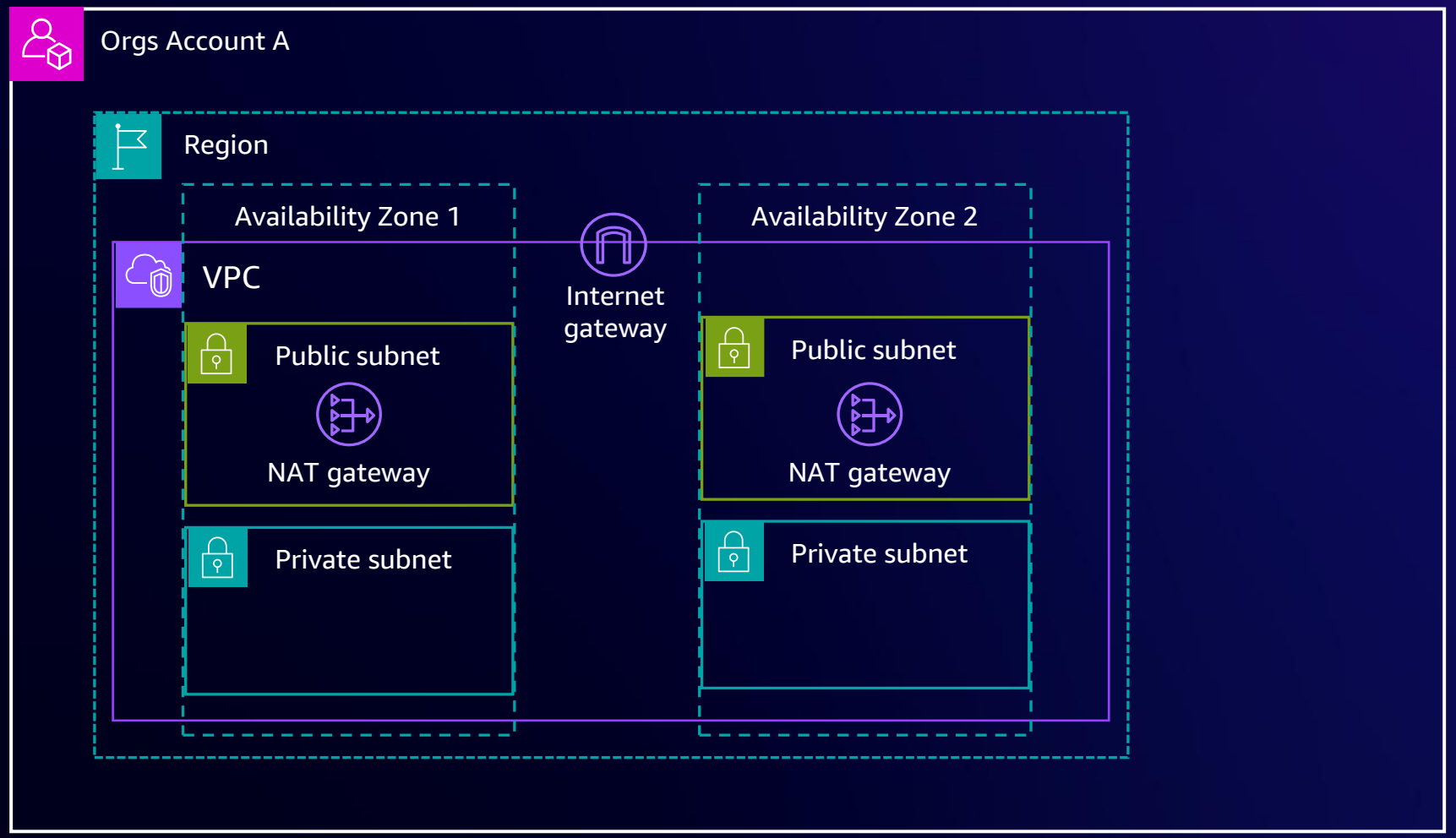
Amazon VPC sharing



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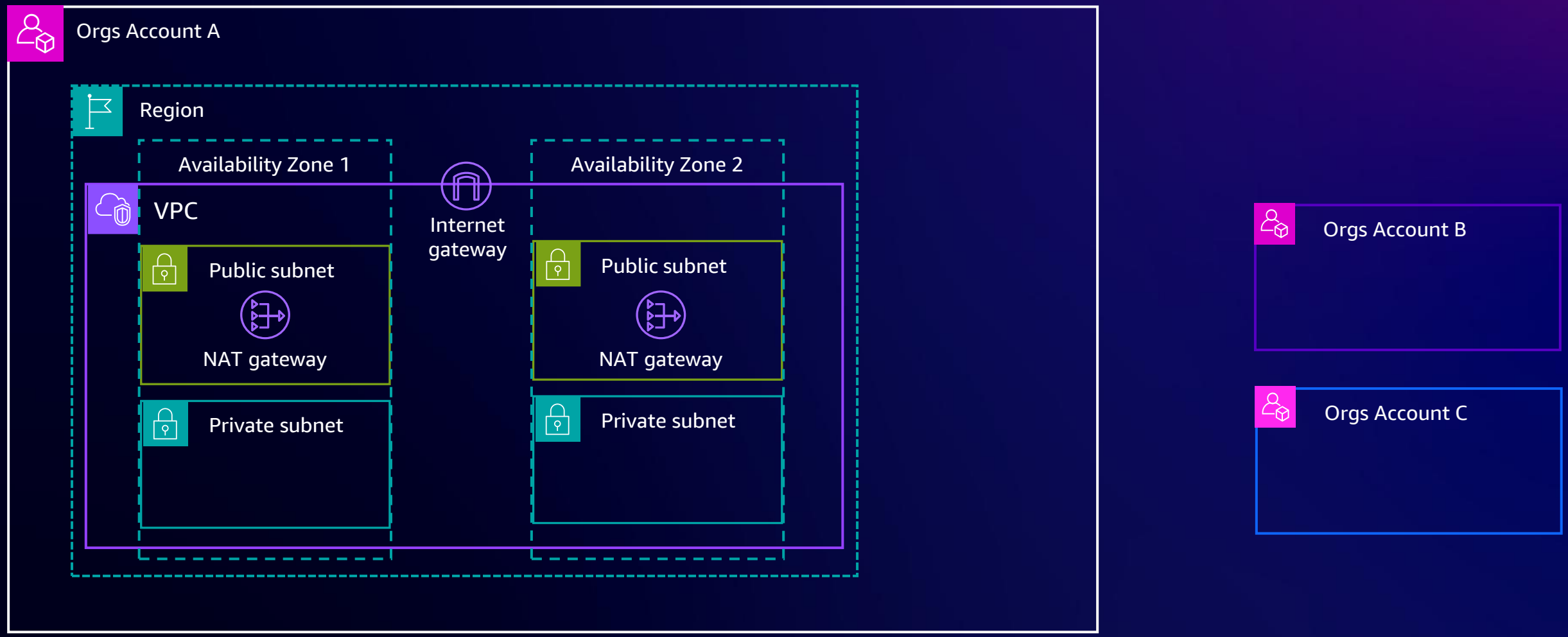
Amazon VPC sharing



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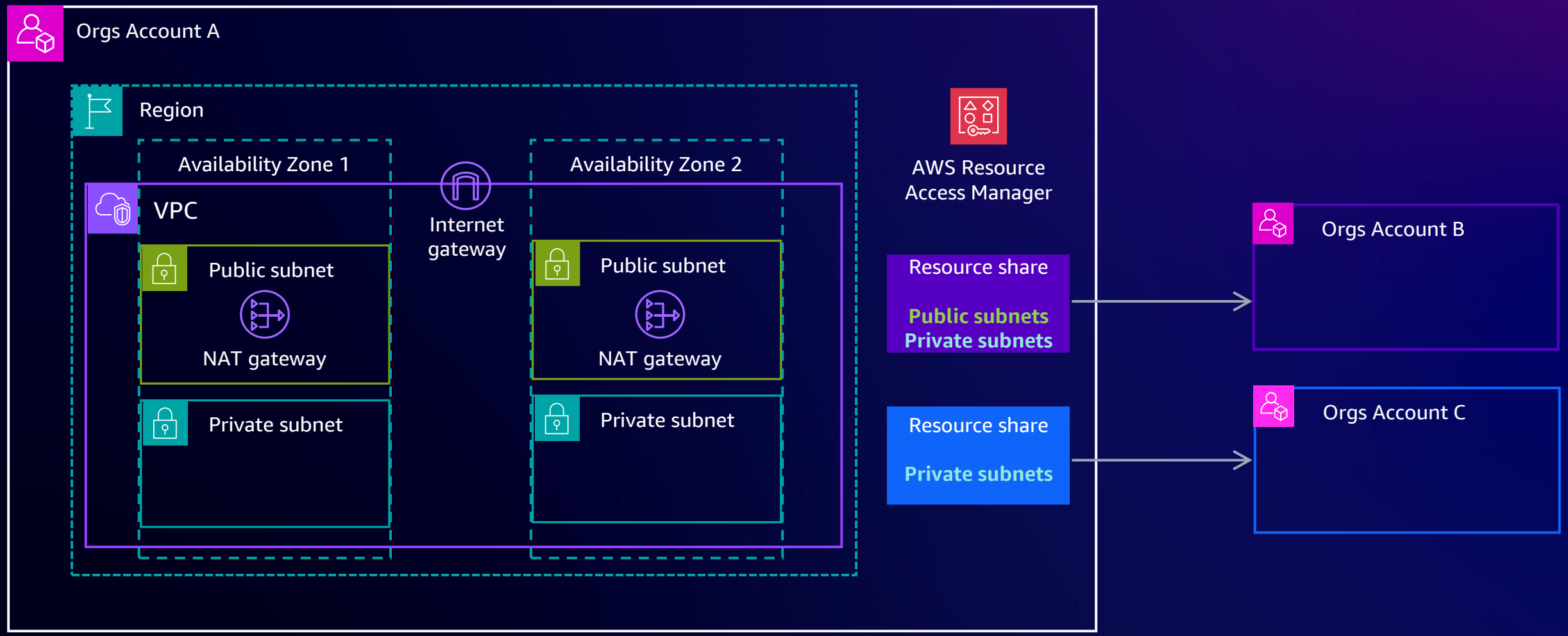
Amazon VPC sharing



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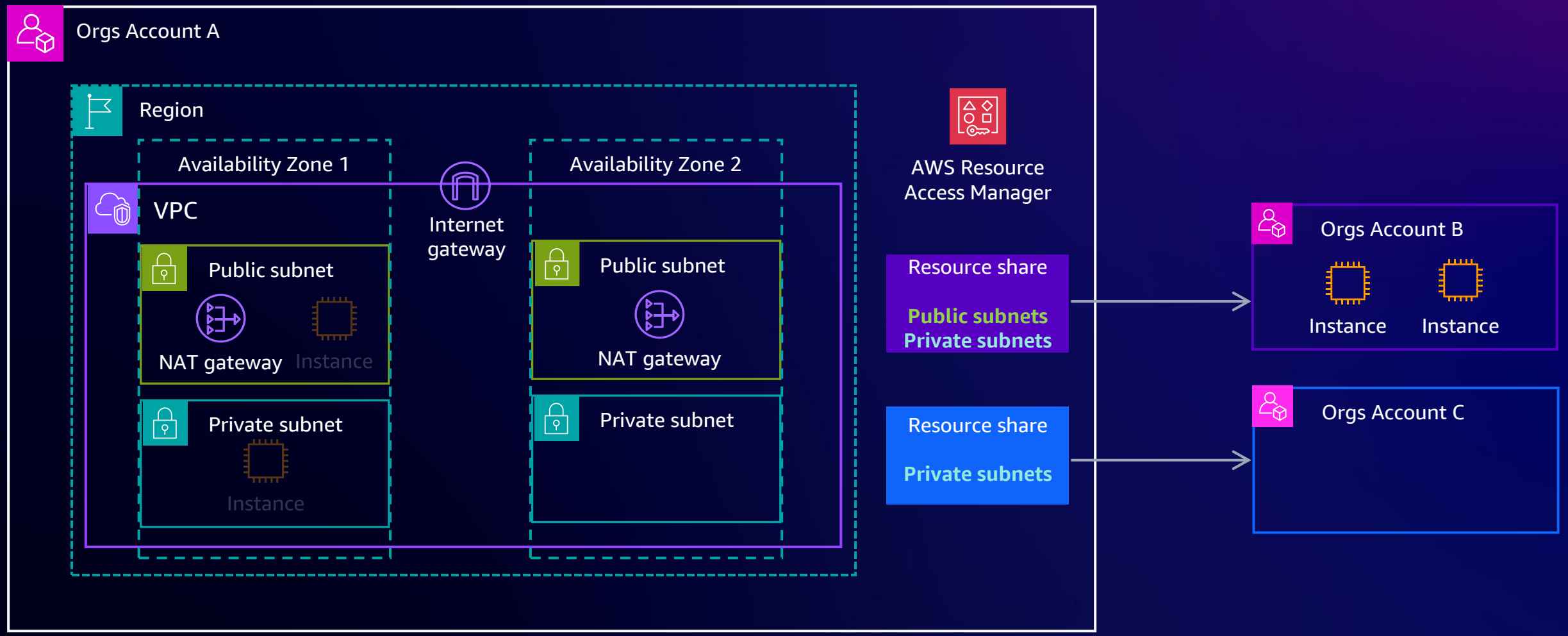

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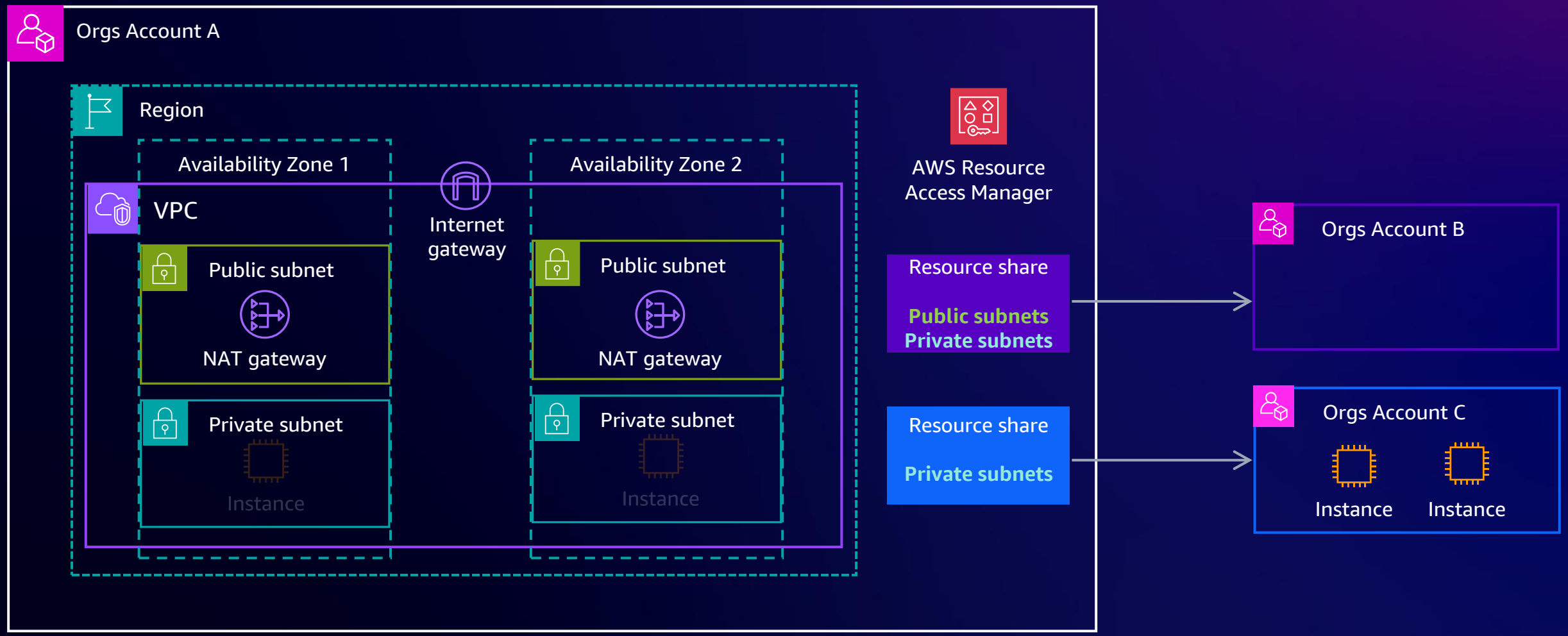

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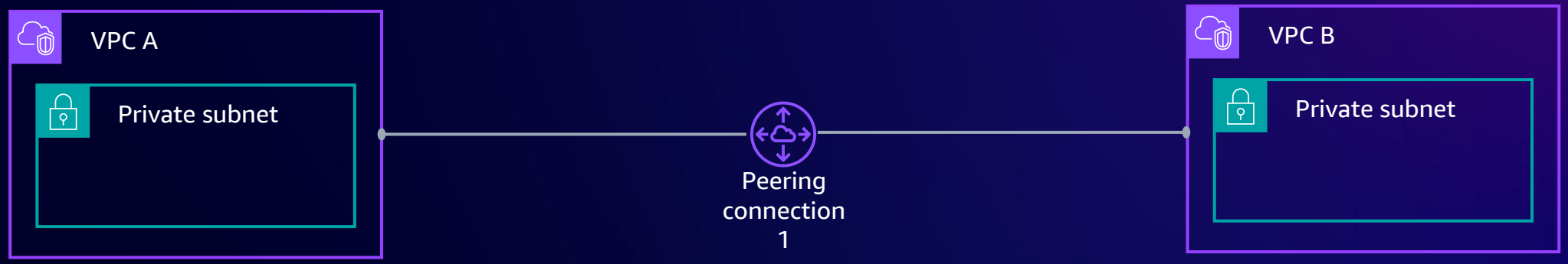
Amazon VPC peering



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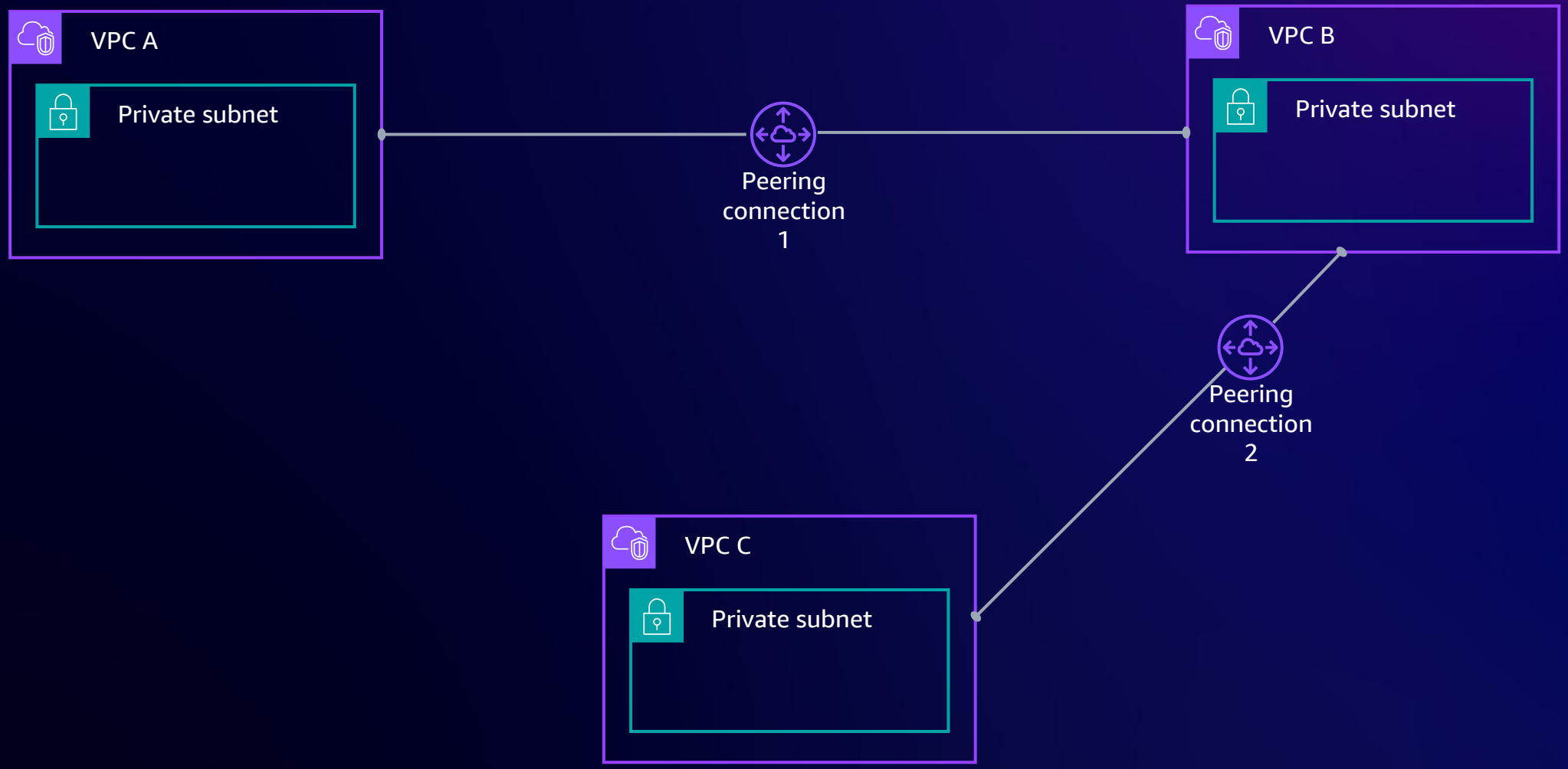

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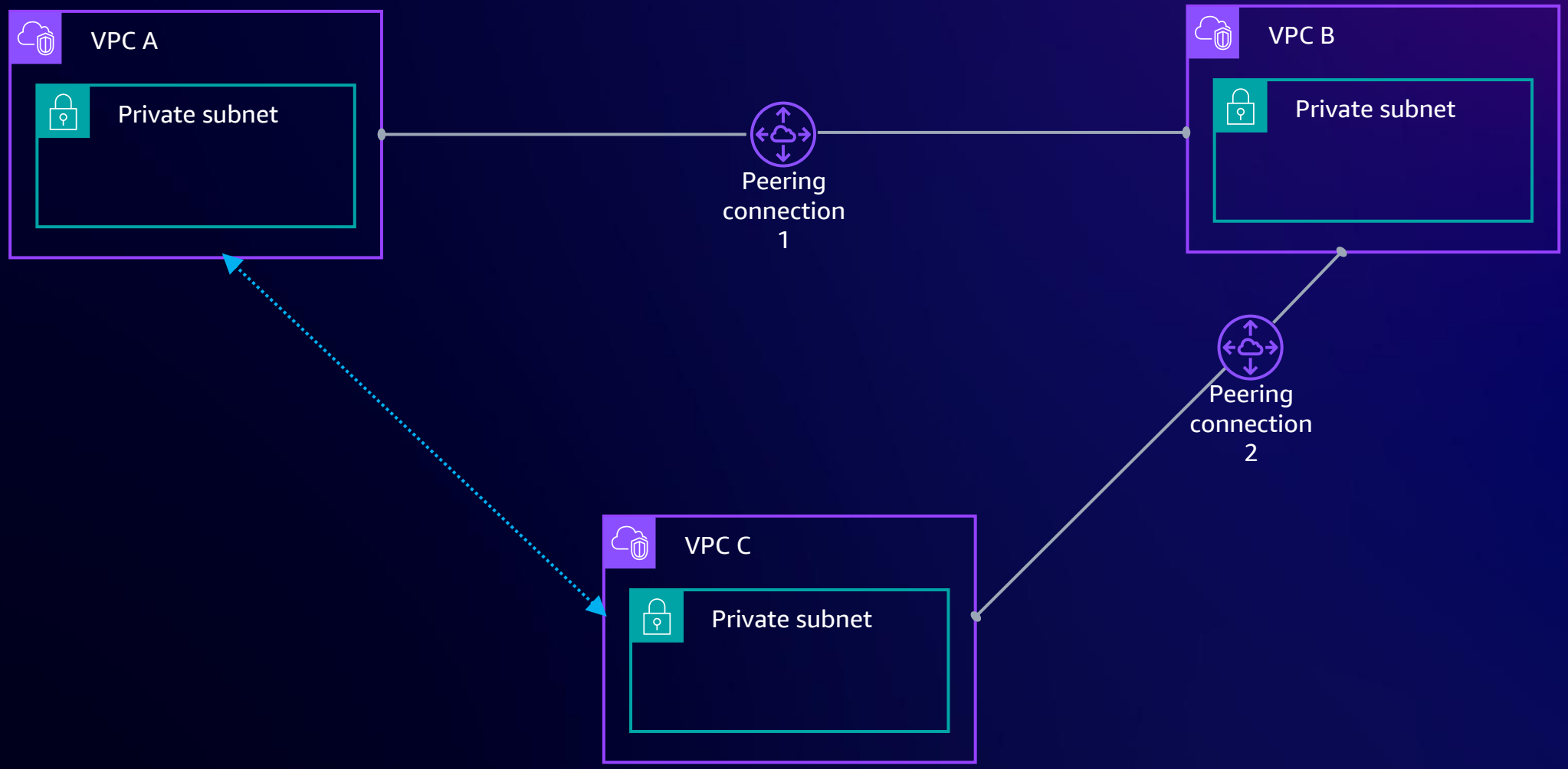

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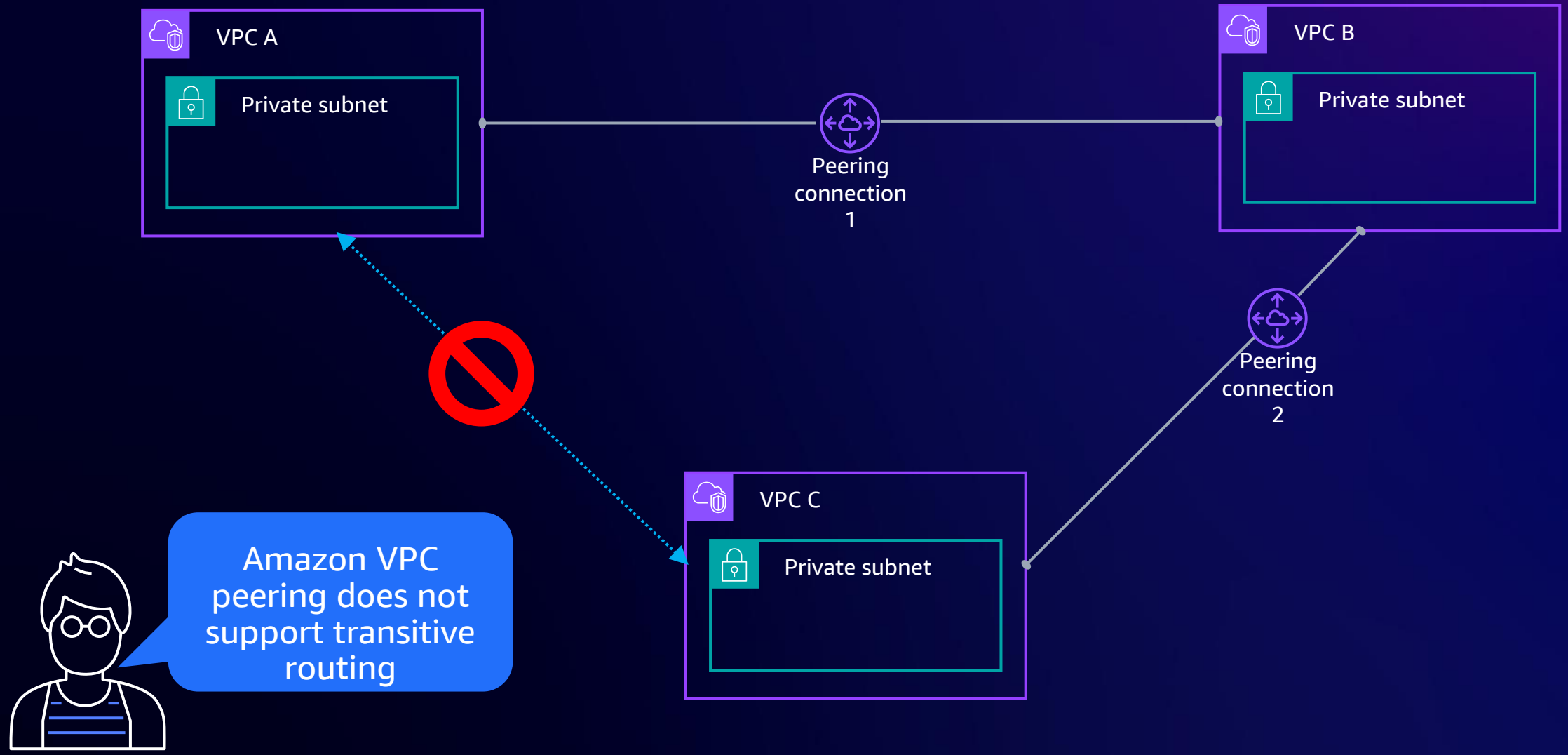

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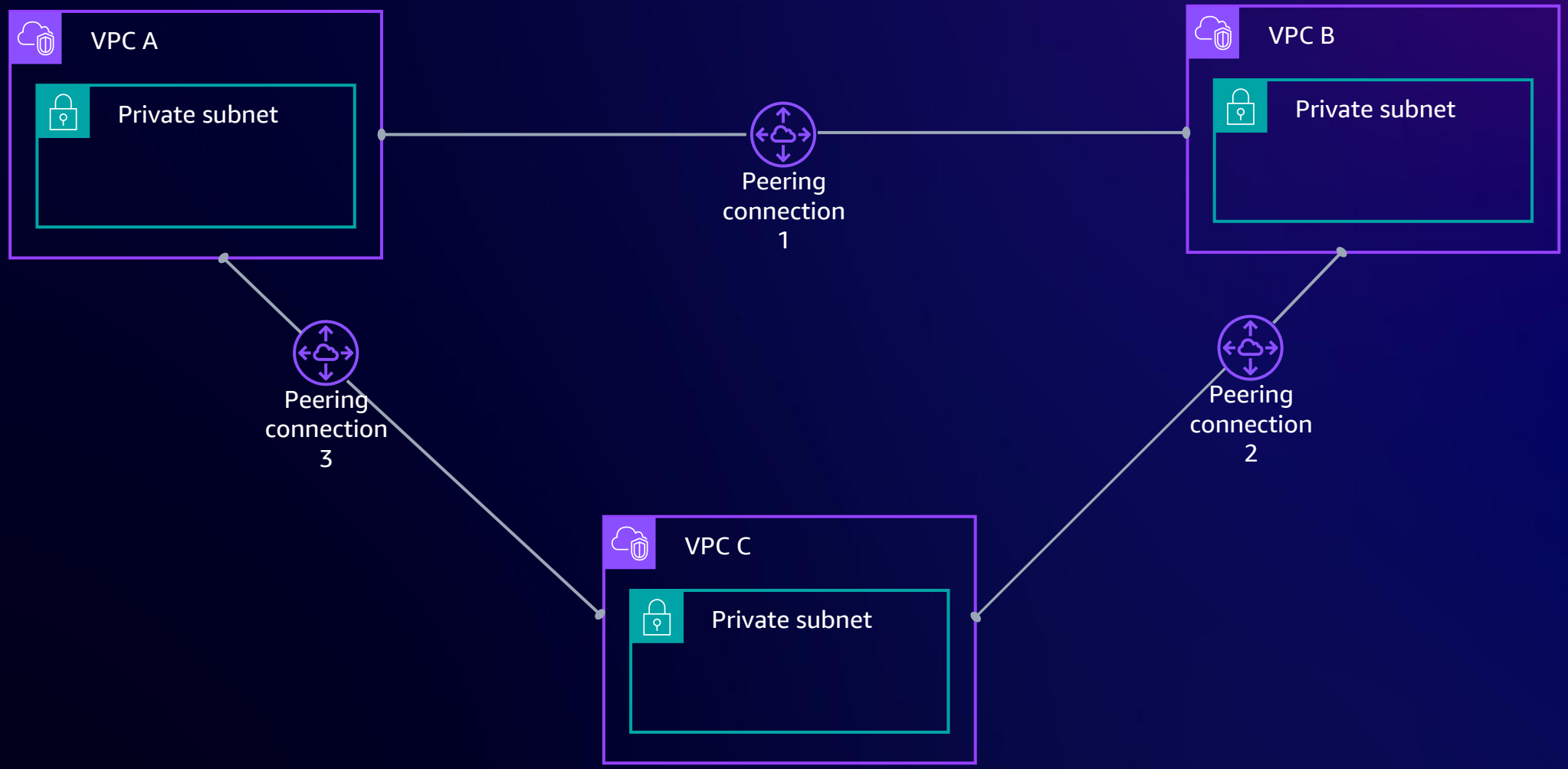

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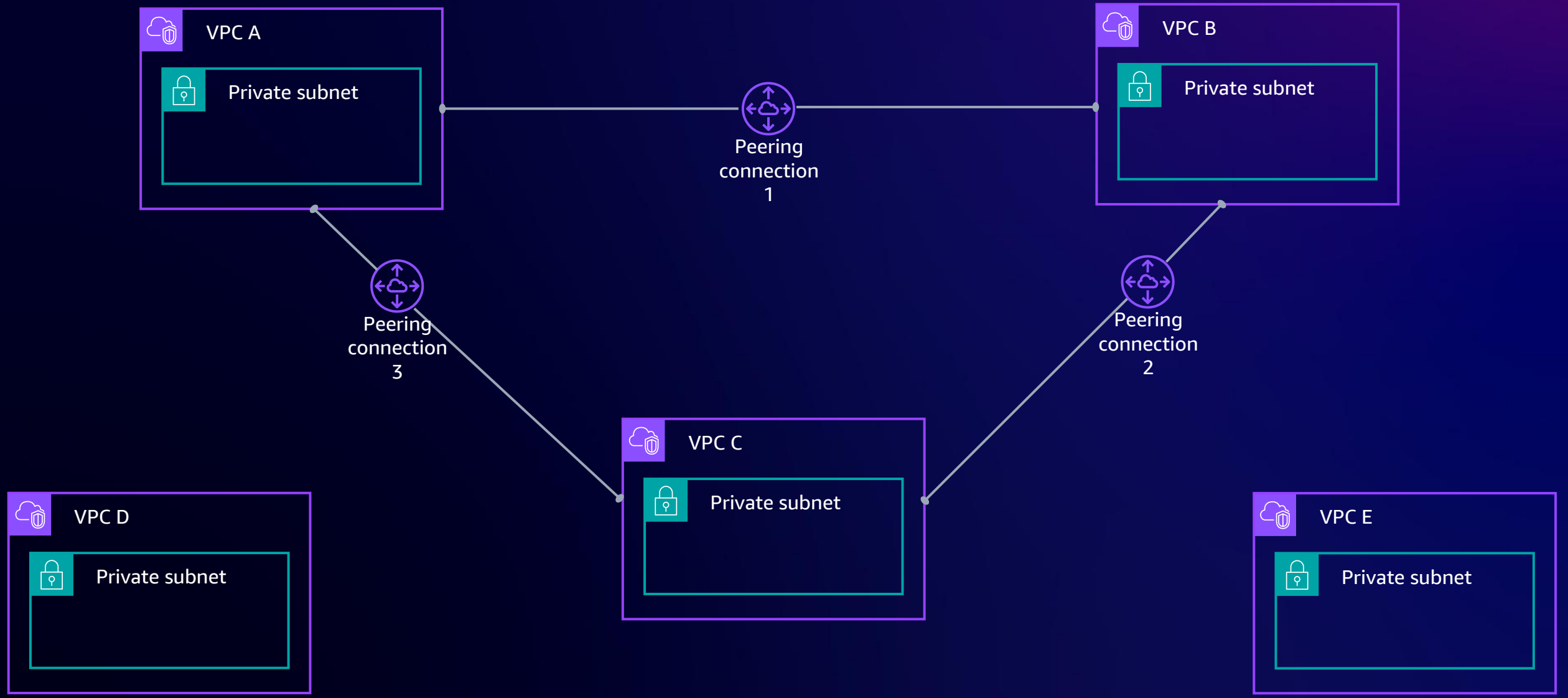

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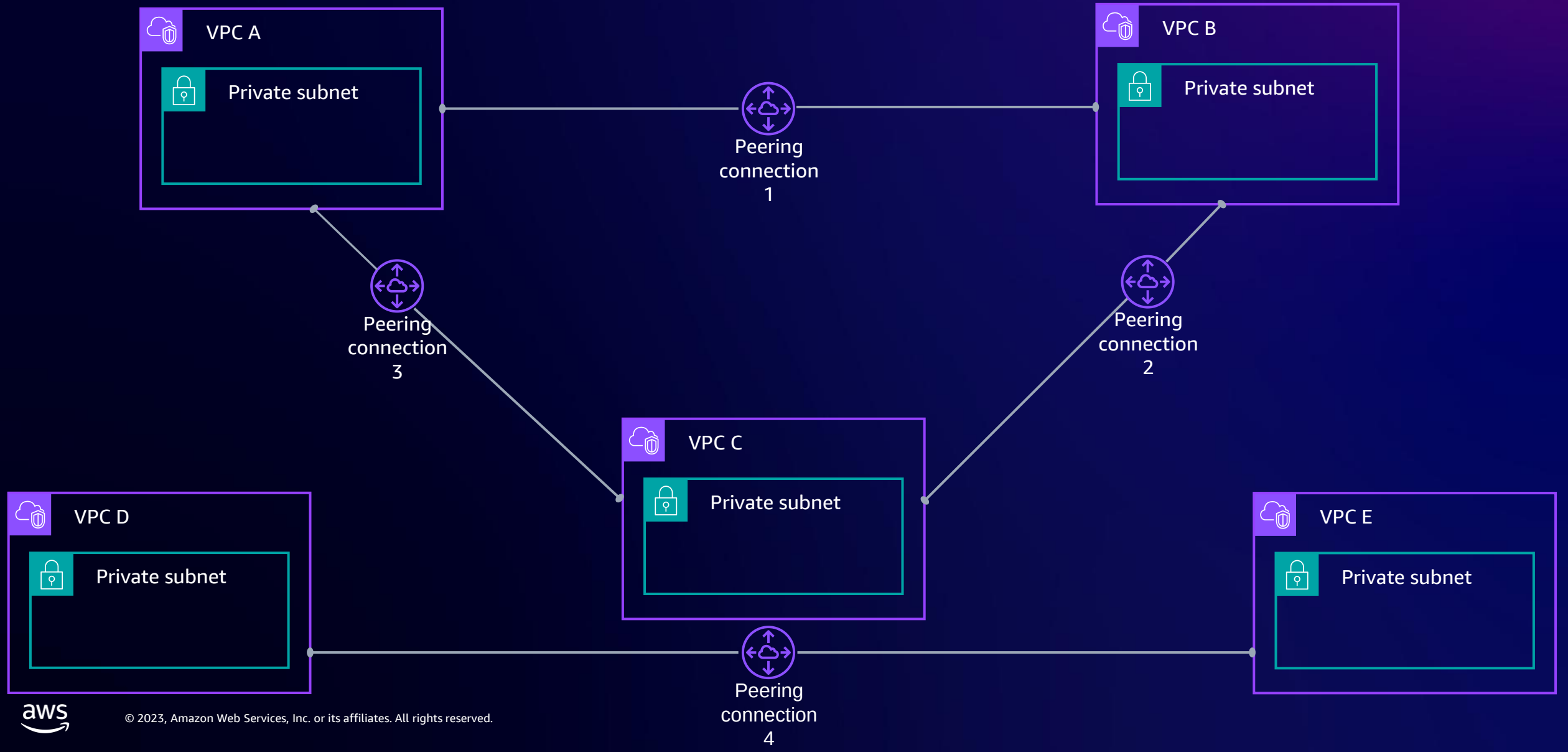

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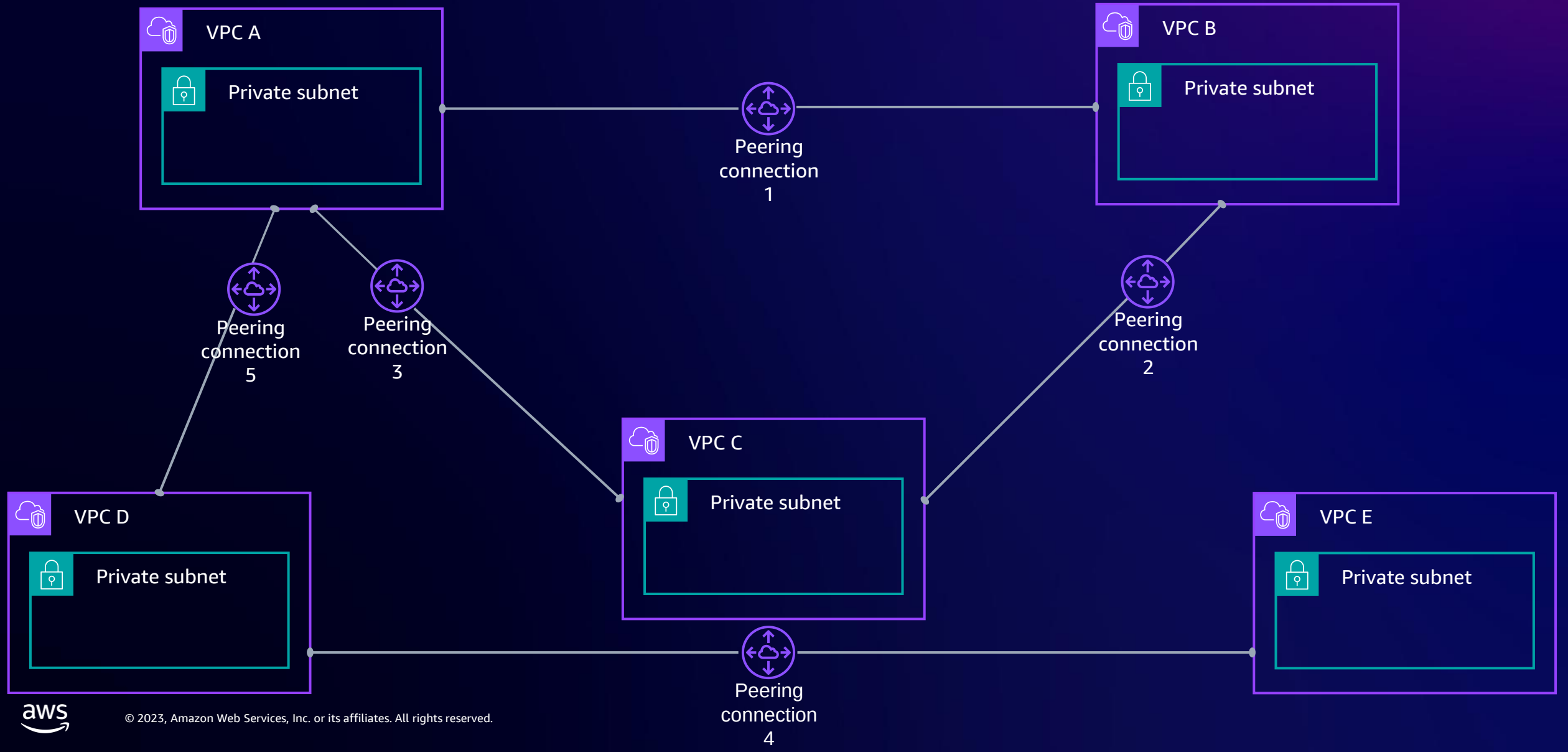

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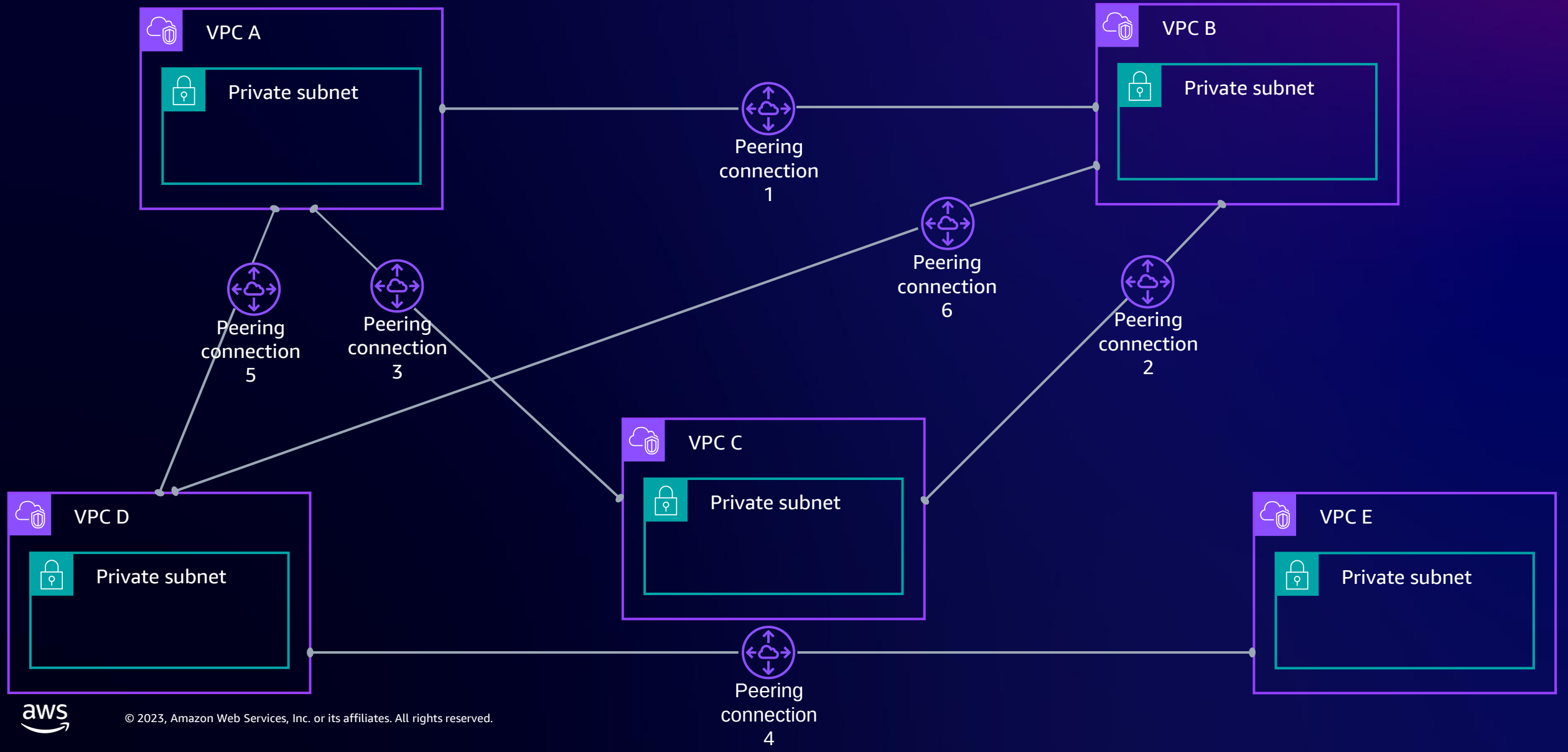

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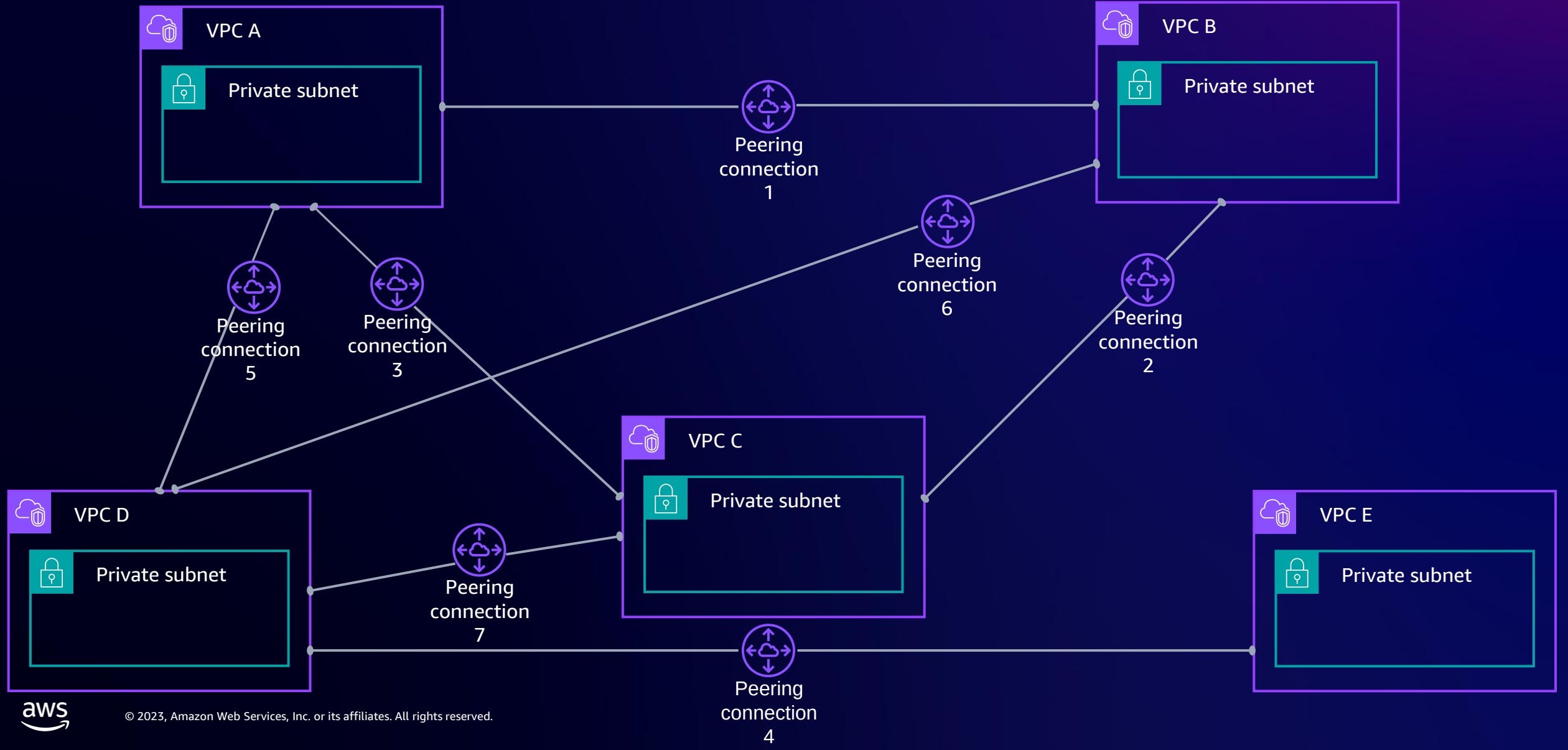

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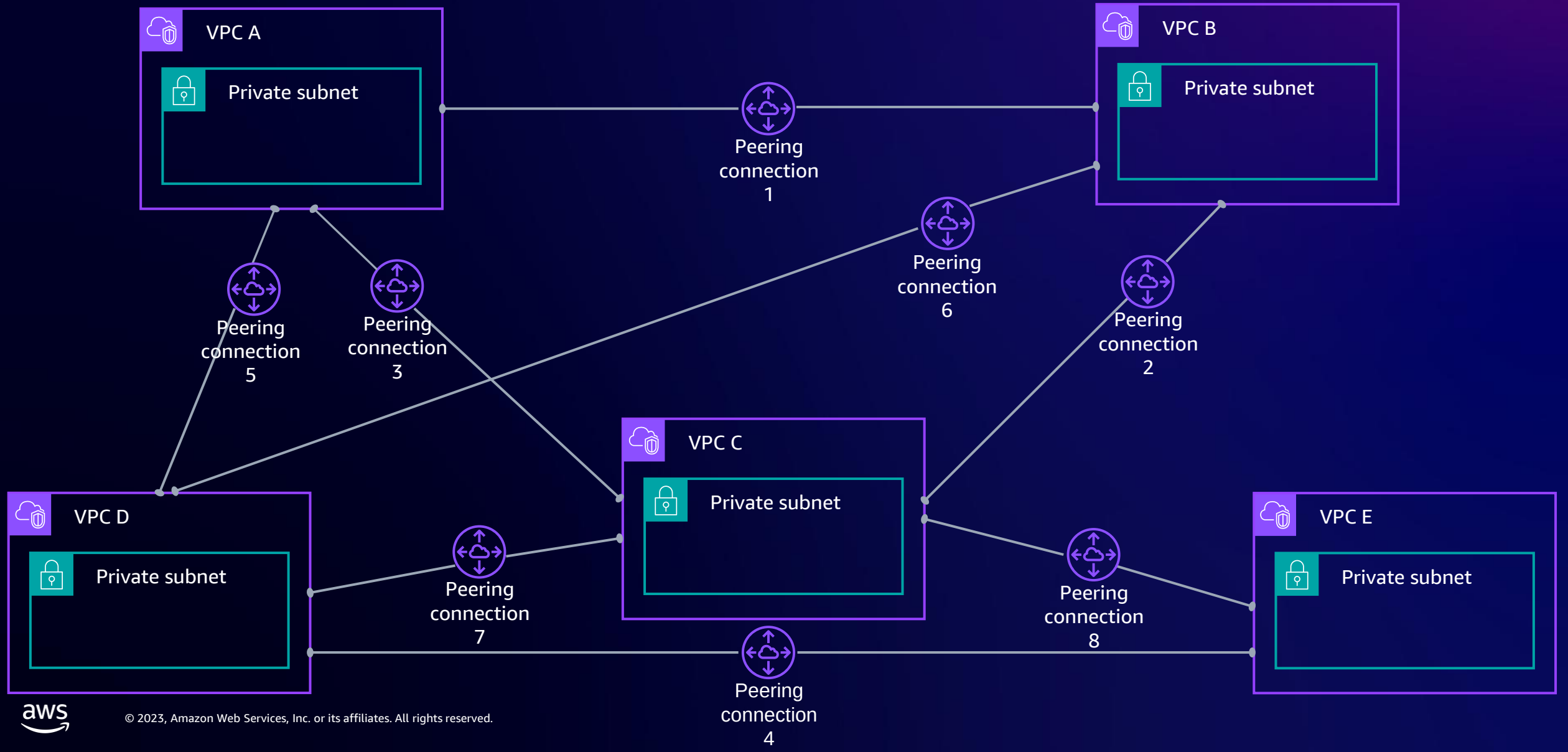

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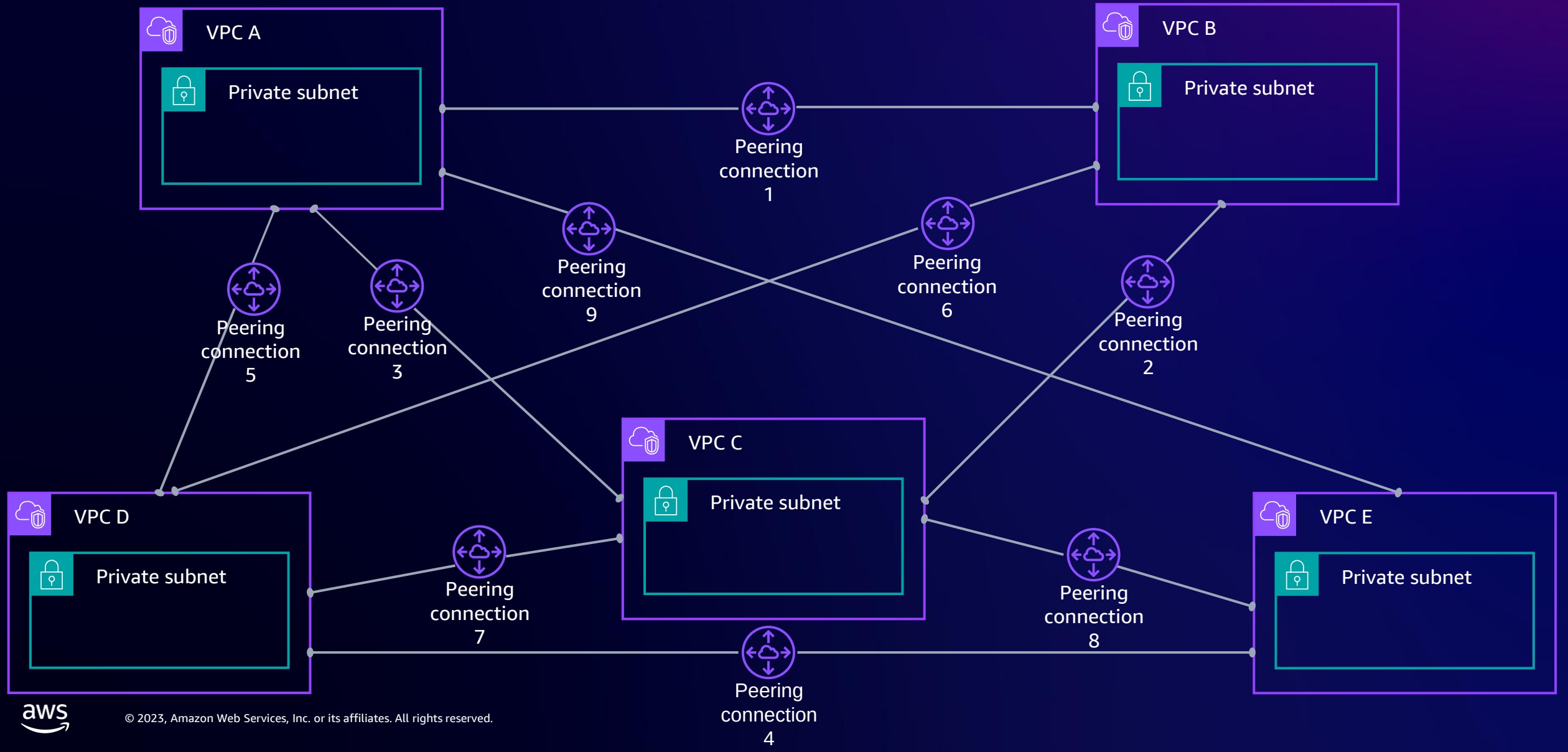

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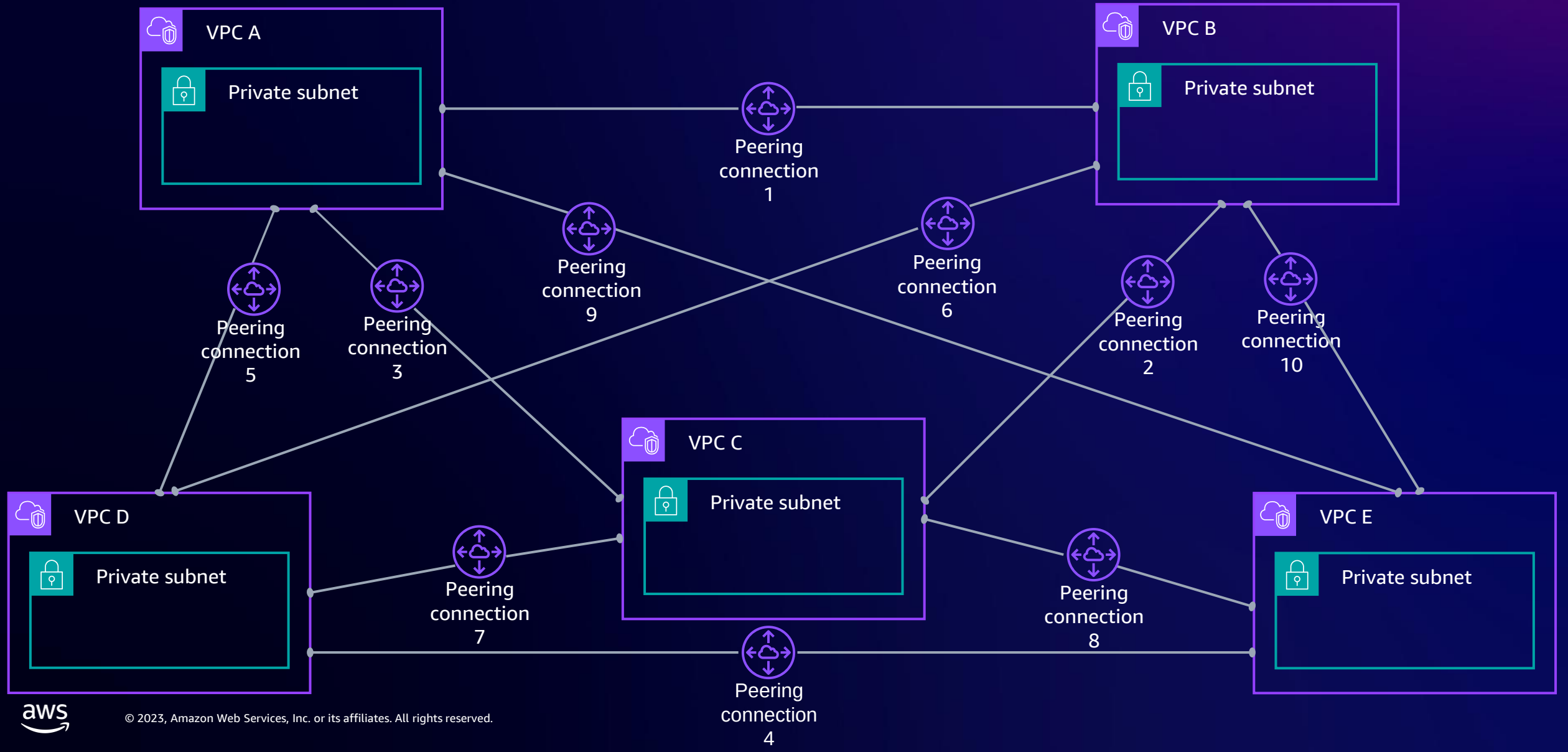

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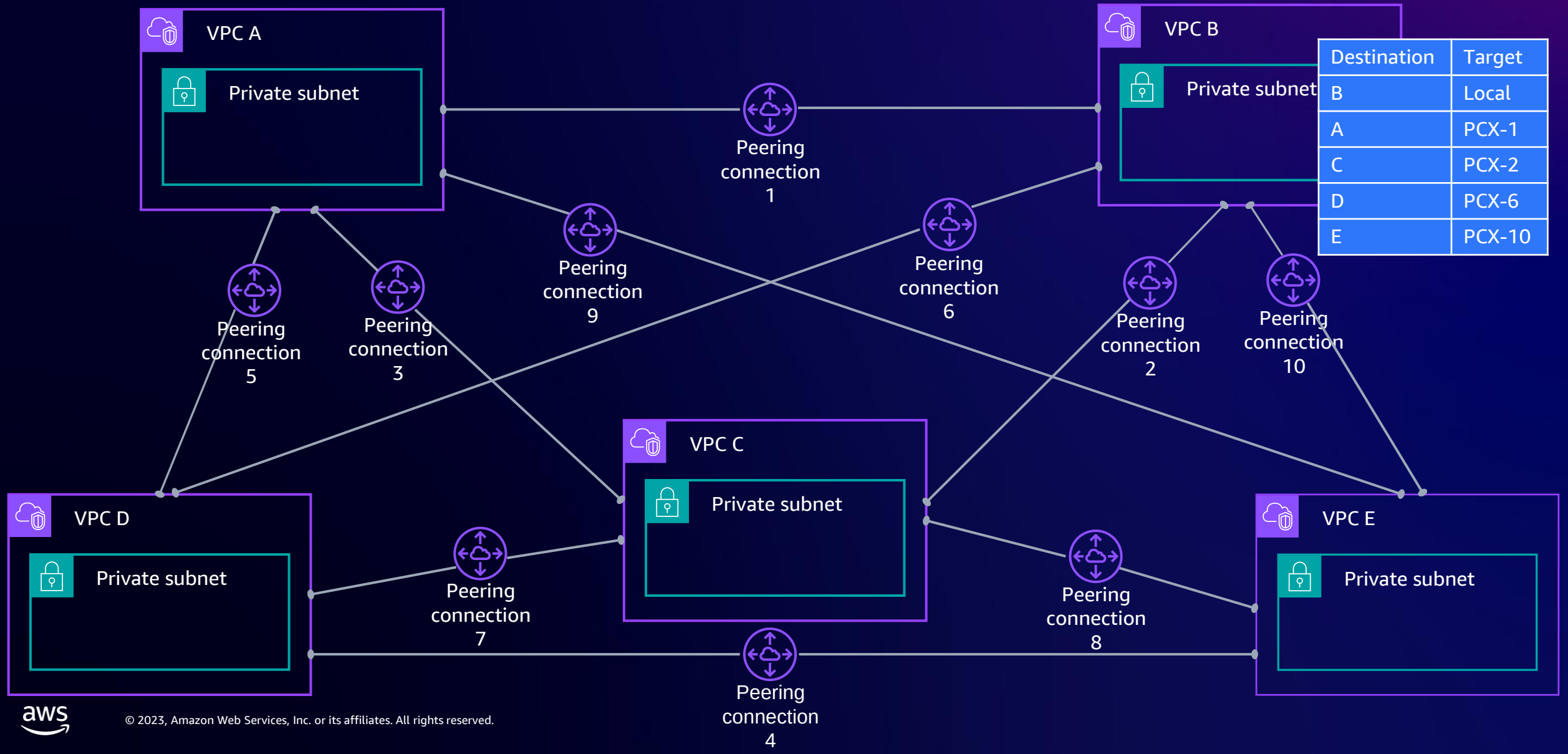

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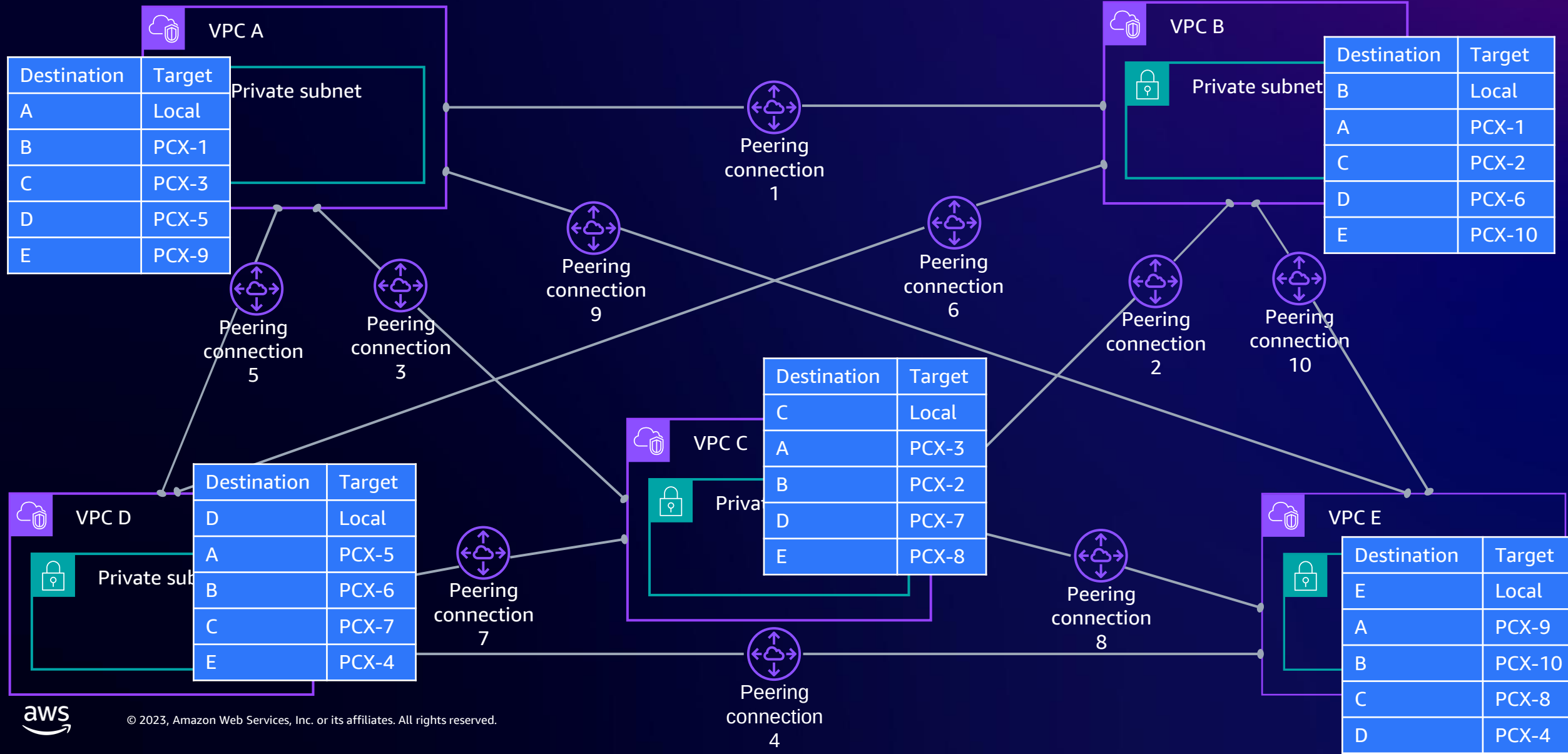

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AWS Transit Gateway

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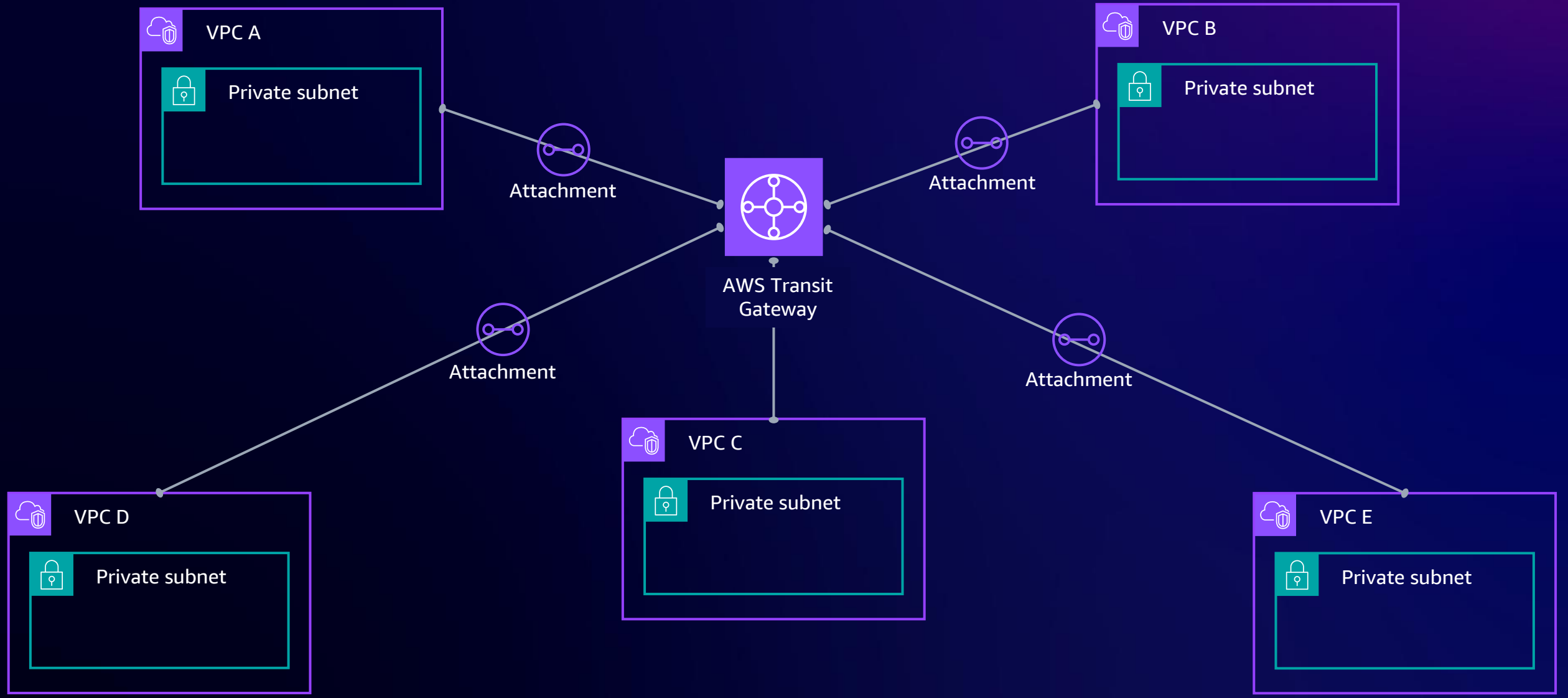
AWS Transit Gateway



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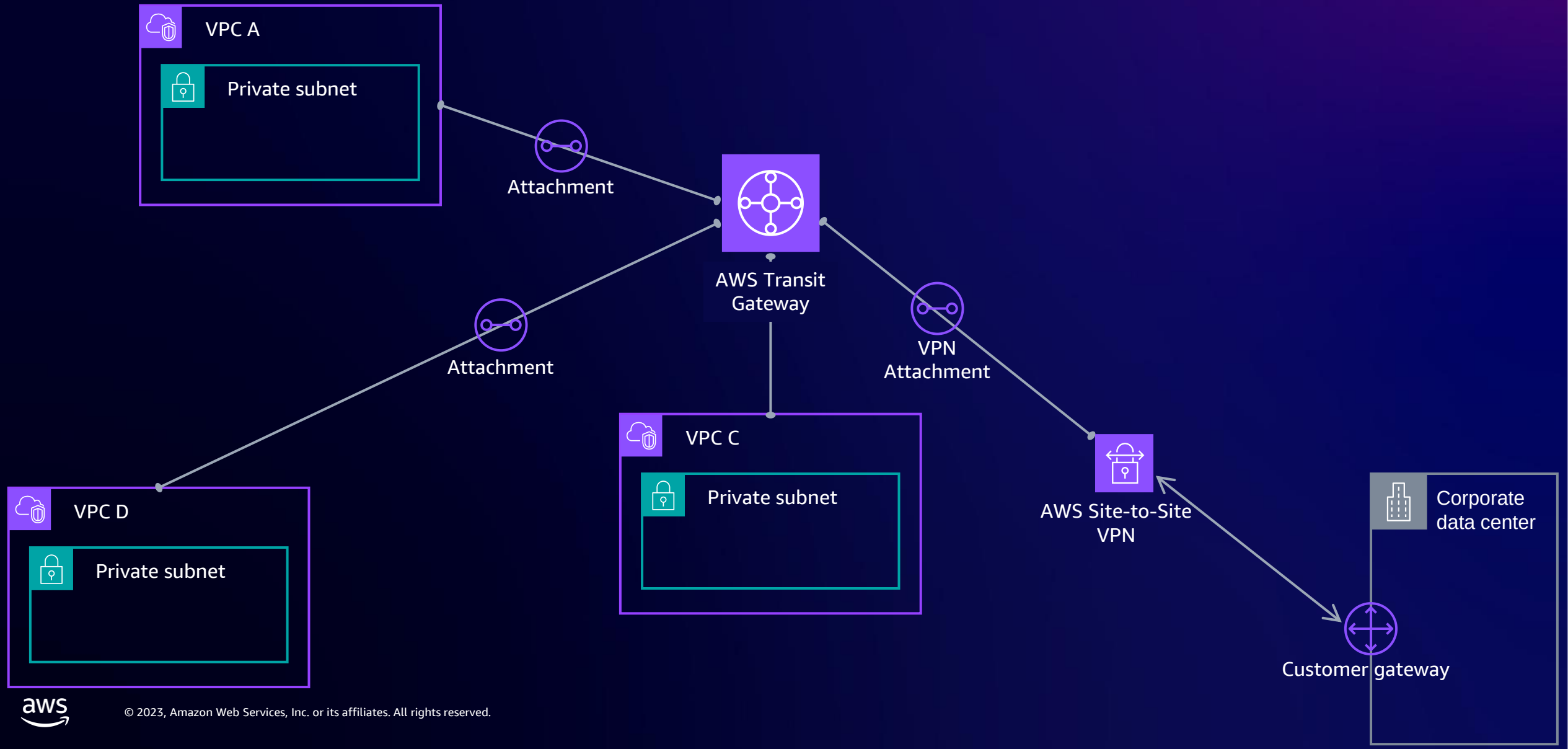
AWS Transit Gateway – Site-to-Site VPN



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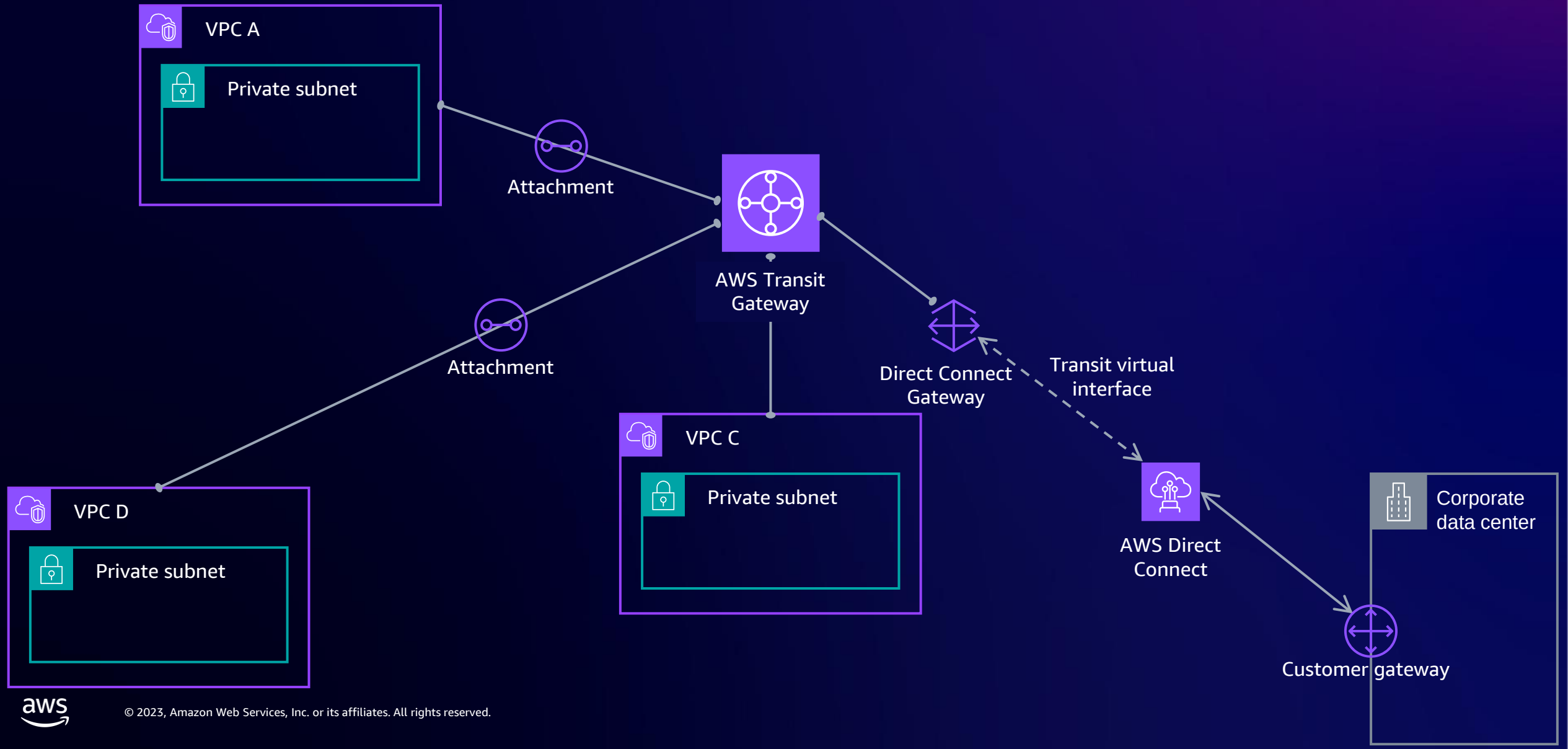
AWS Transit Gateway – Direct Connect



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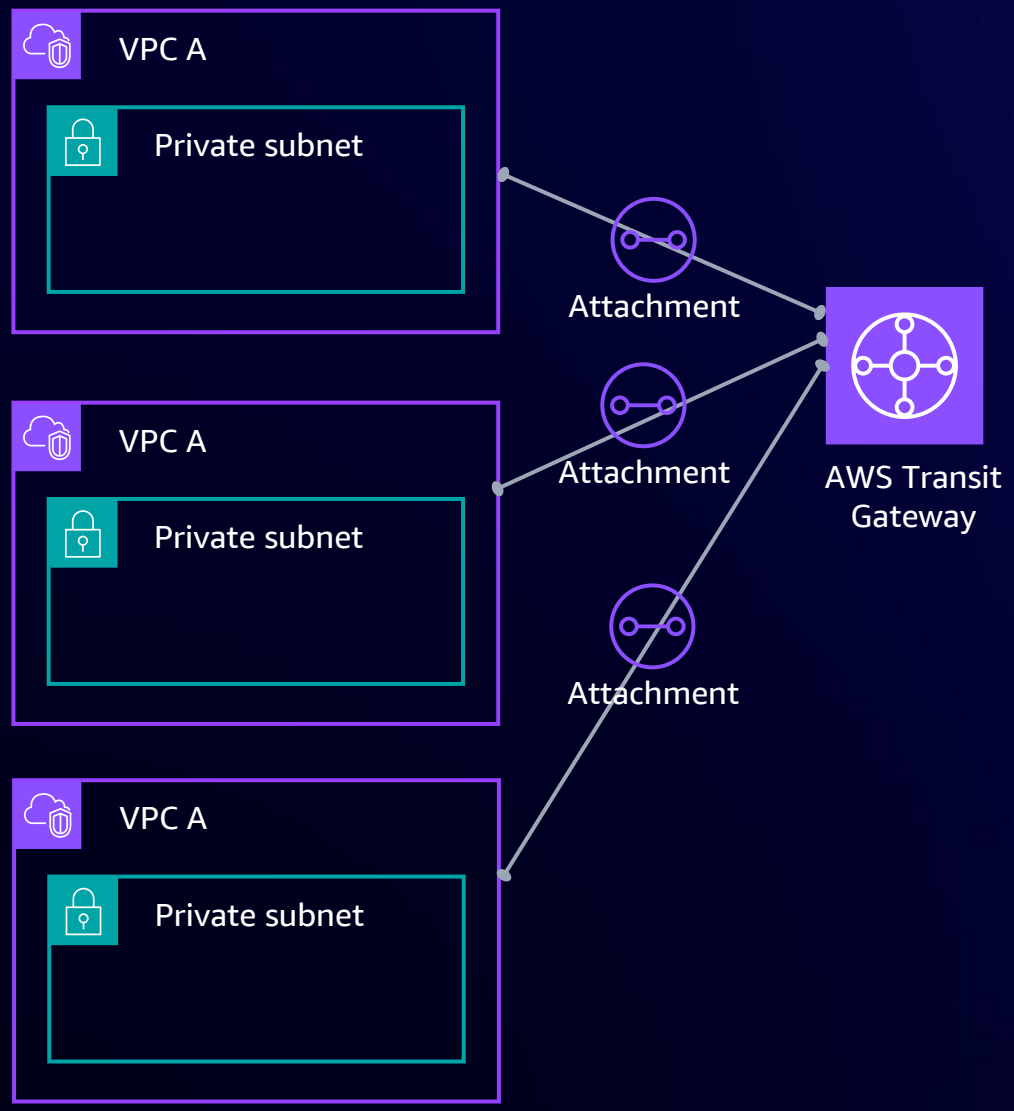
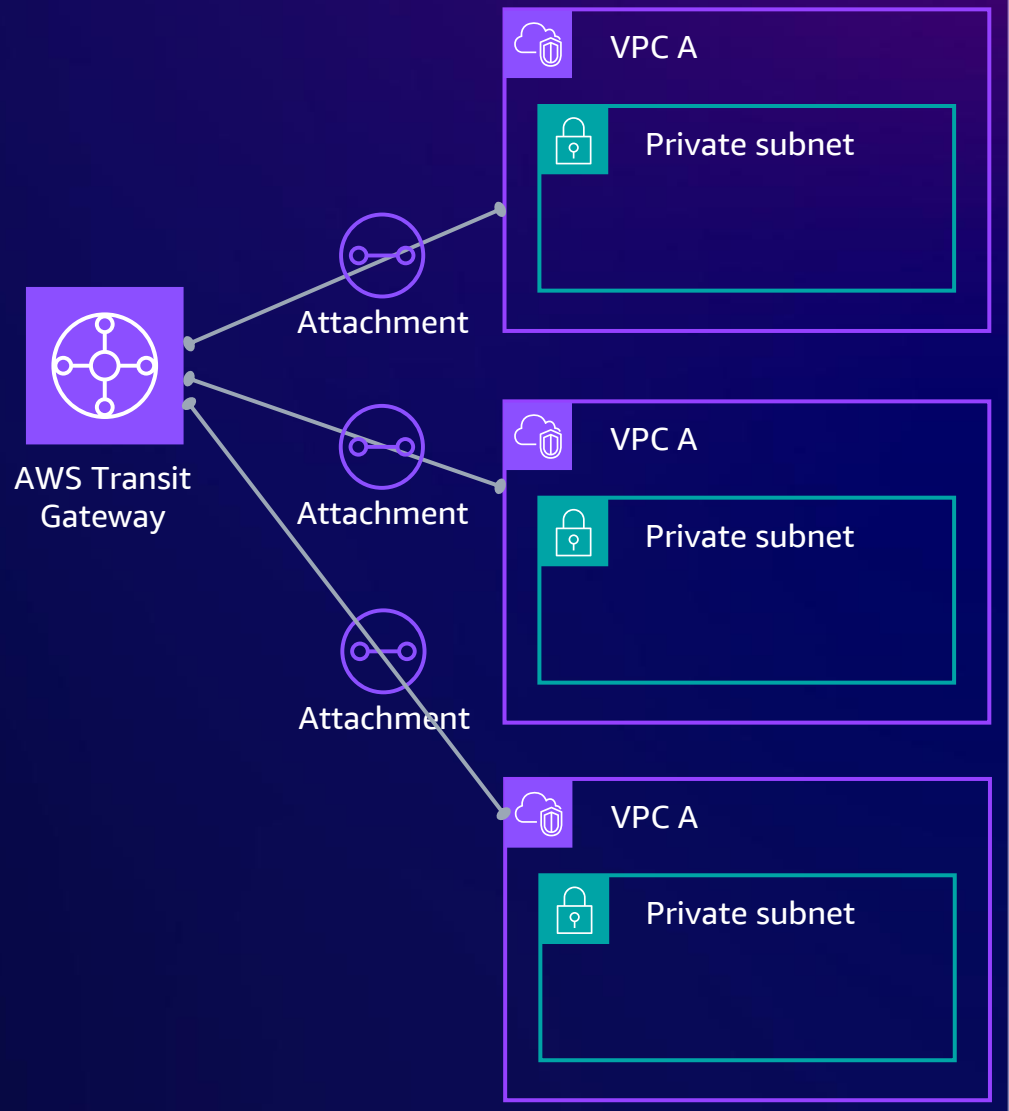
AWS Transit Gateway Peering





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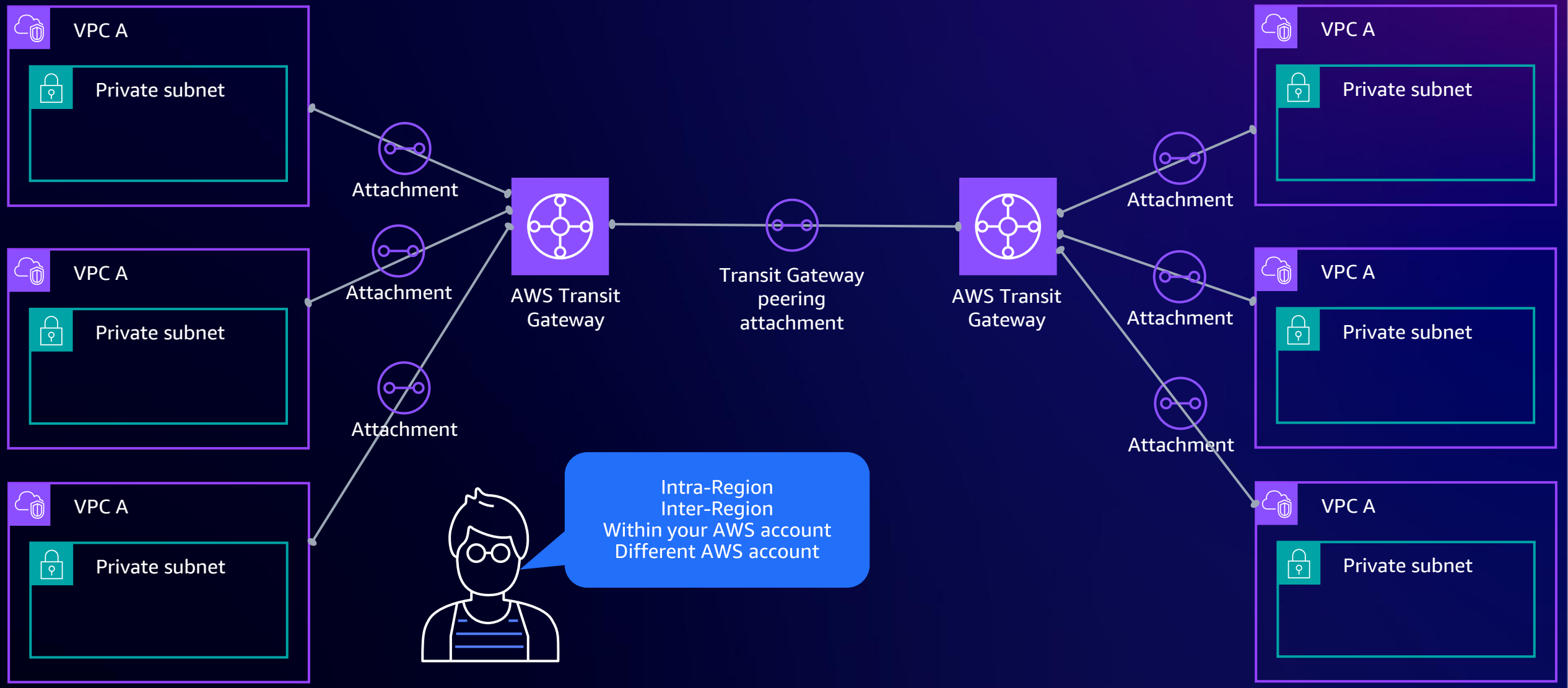

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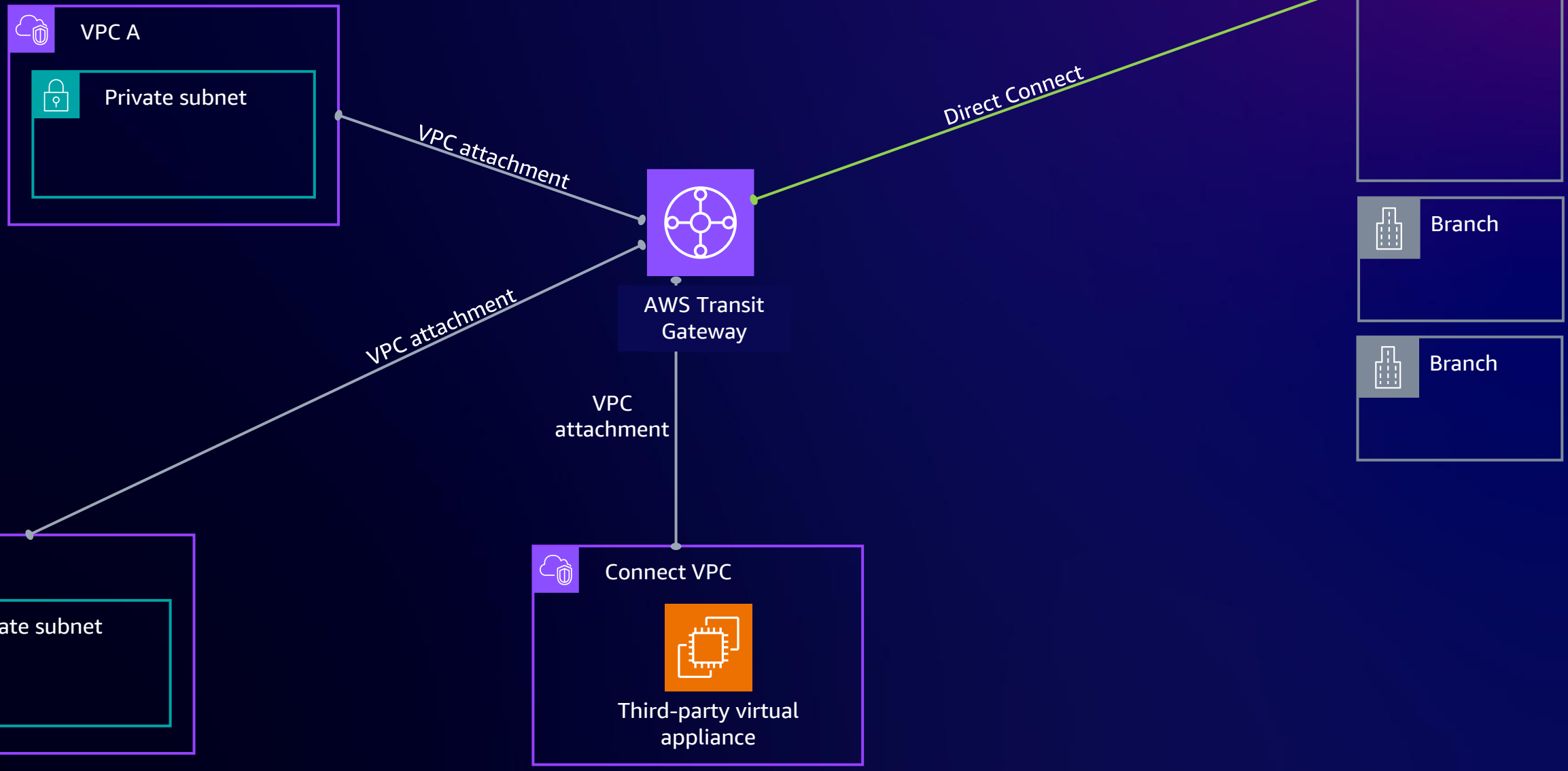
AWS Transit Gateway connect – SD-WAN



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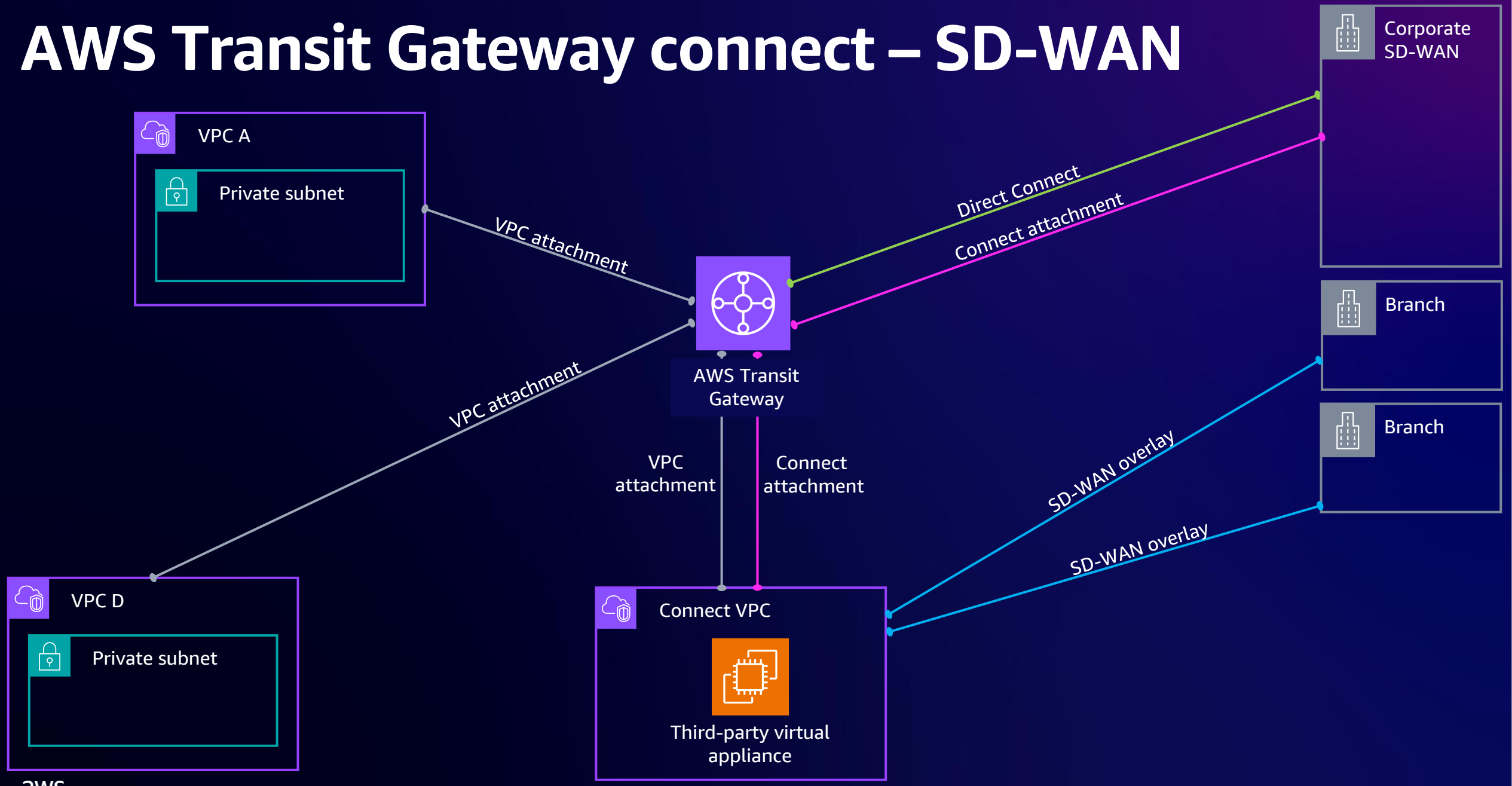
AWS Transit Gateway connect – SD-WAN



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AWS Cloud Wan

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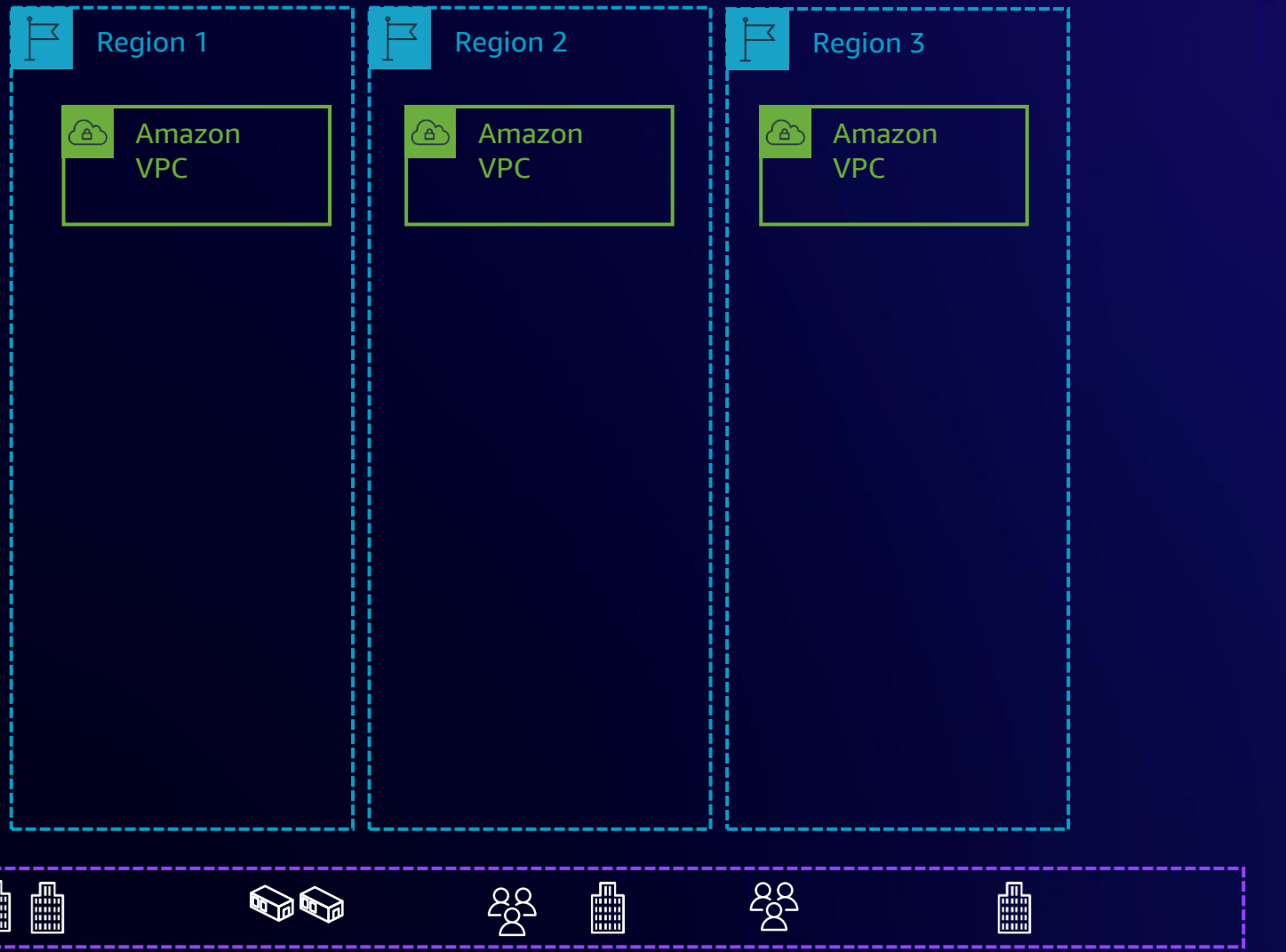
AWS Cloud WAN



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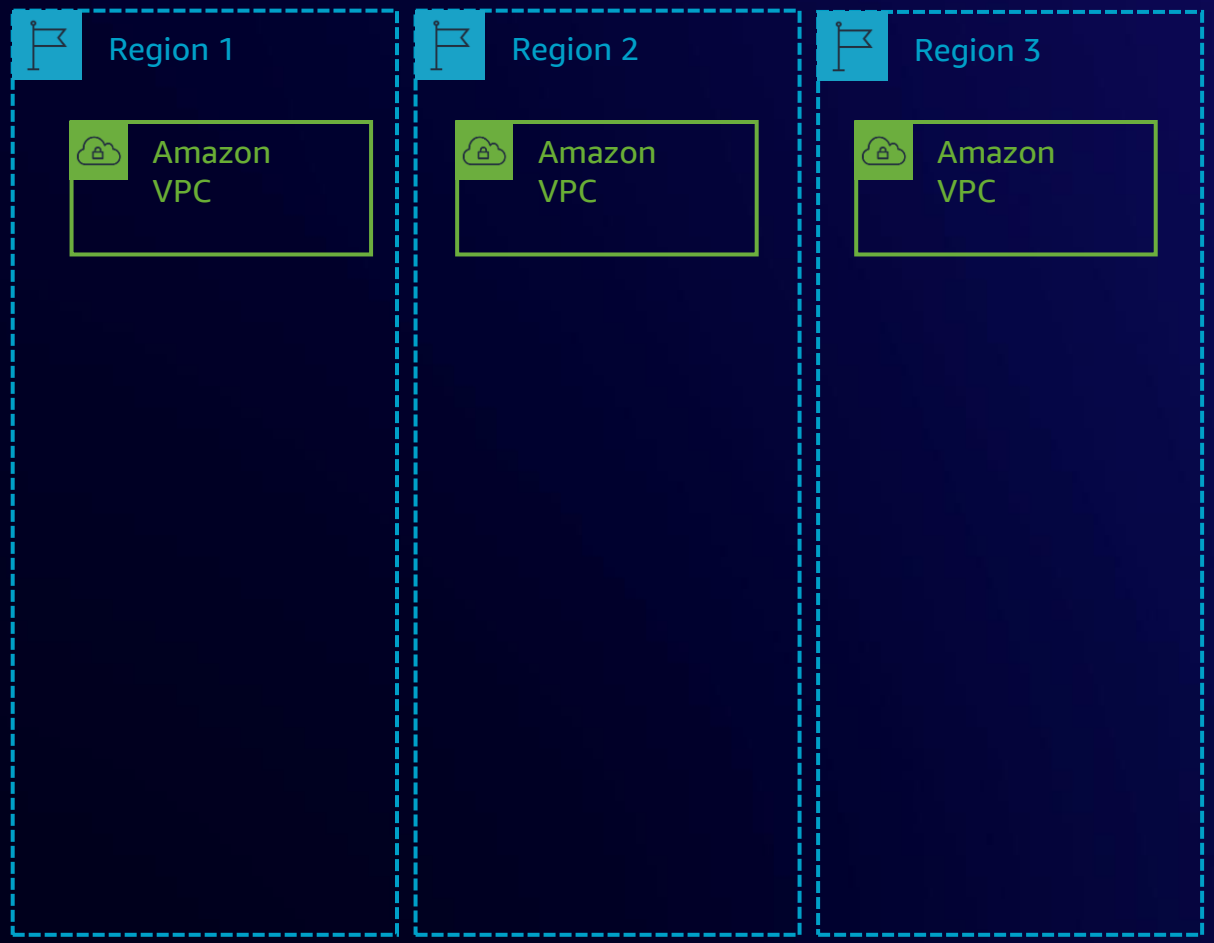
AWS Cloud WAN



Global network: high-level container for your network objects

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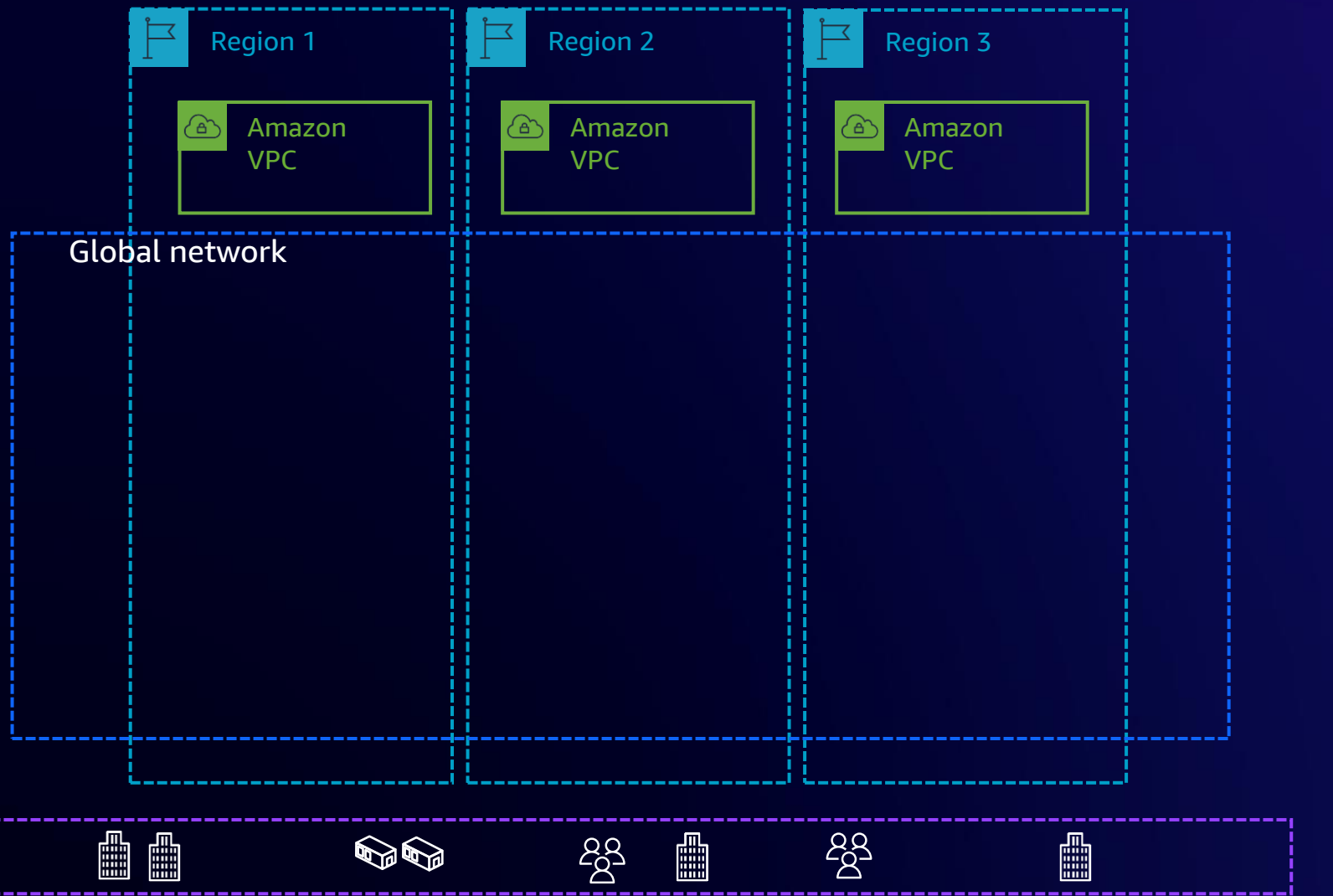
AWS Cloud WAN



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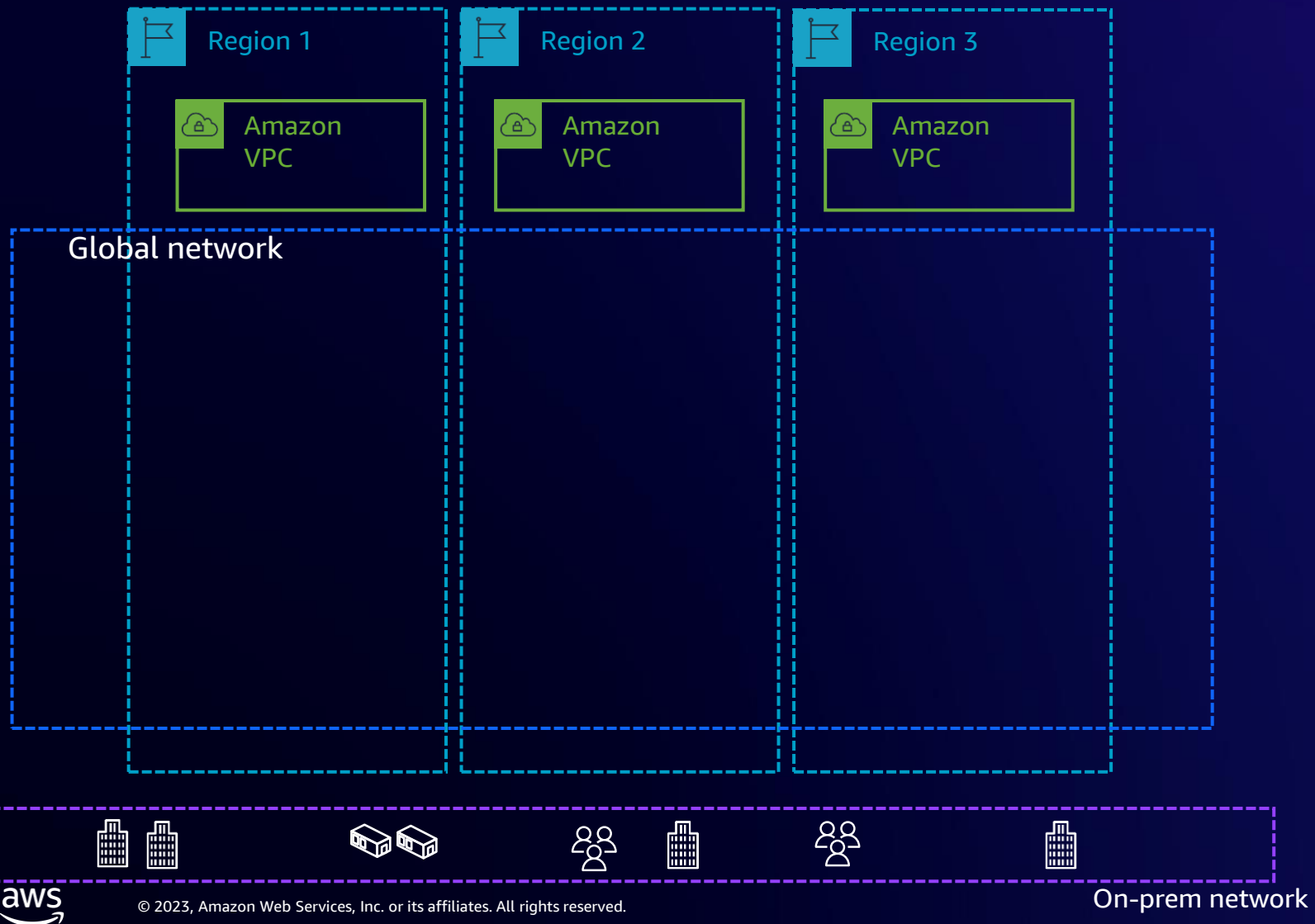

Global network: high-level container for your network objects

Core network: Cloud WAN global network managed by AWS

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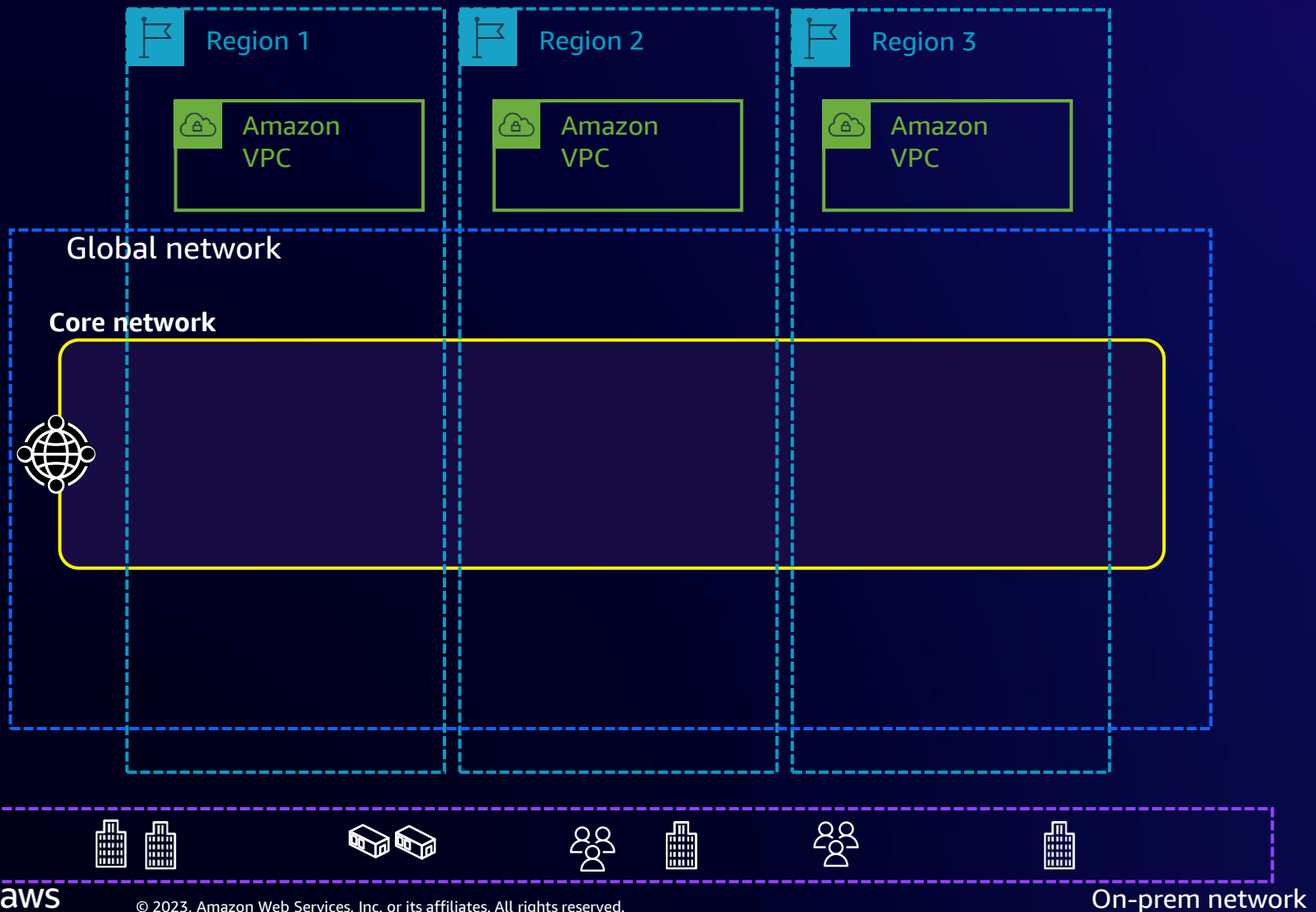

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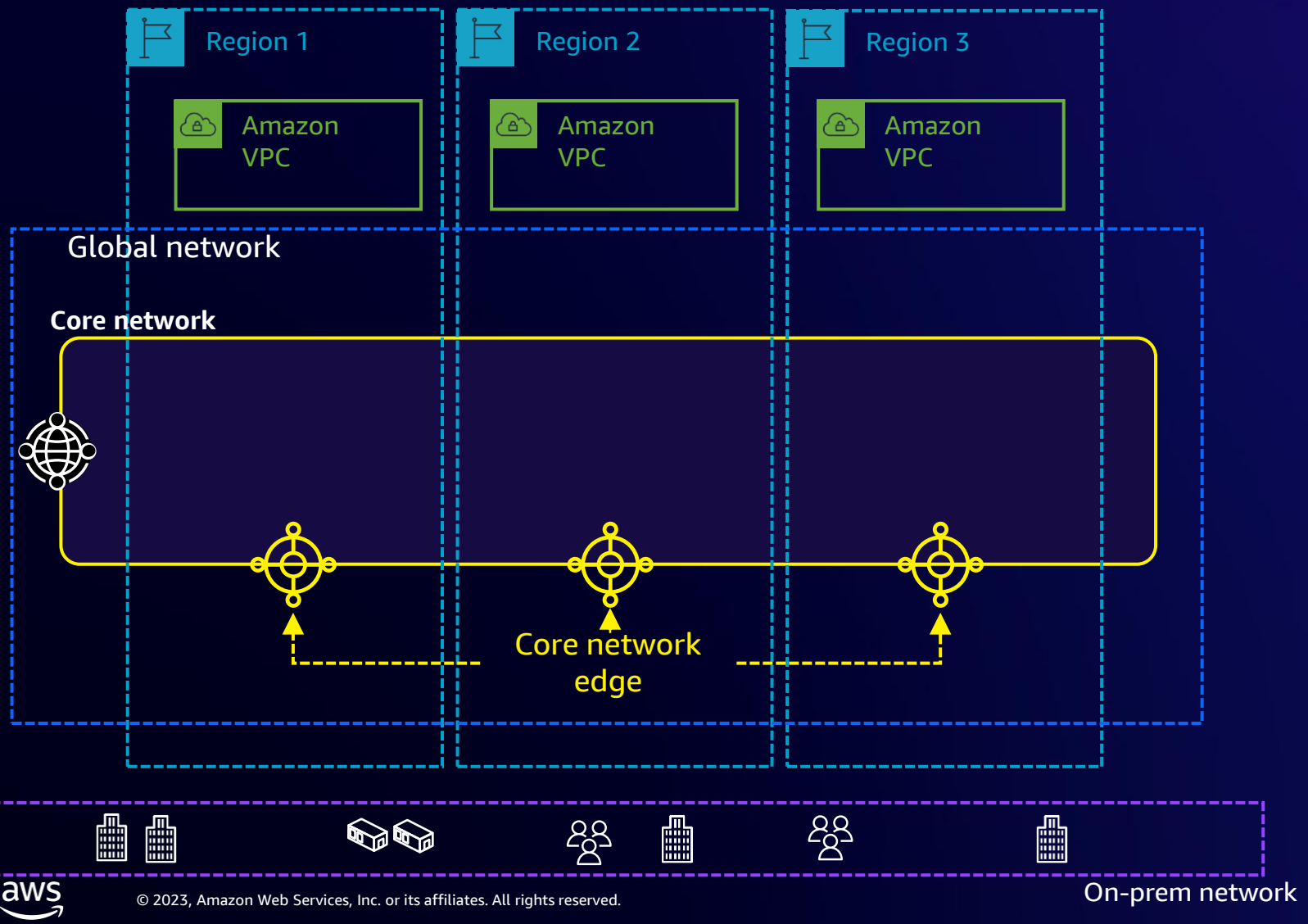

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Core network edge: Regional connection point

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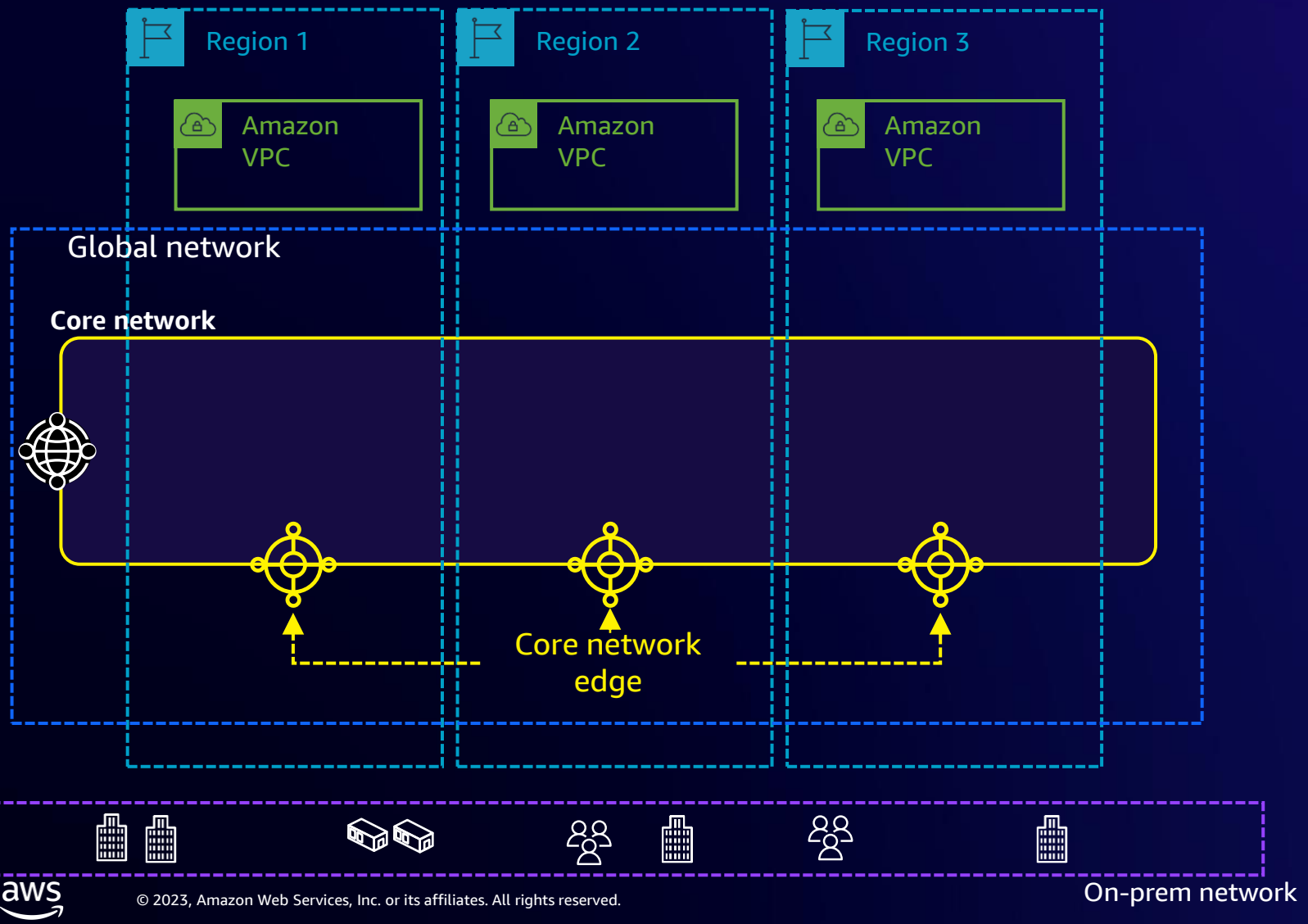

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Segments: Dedicated Routing Domains

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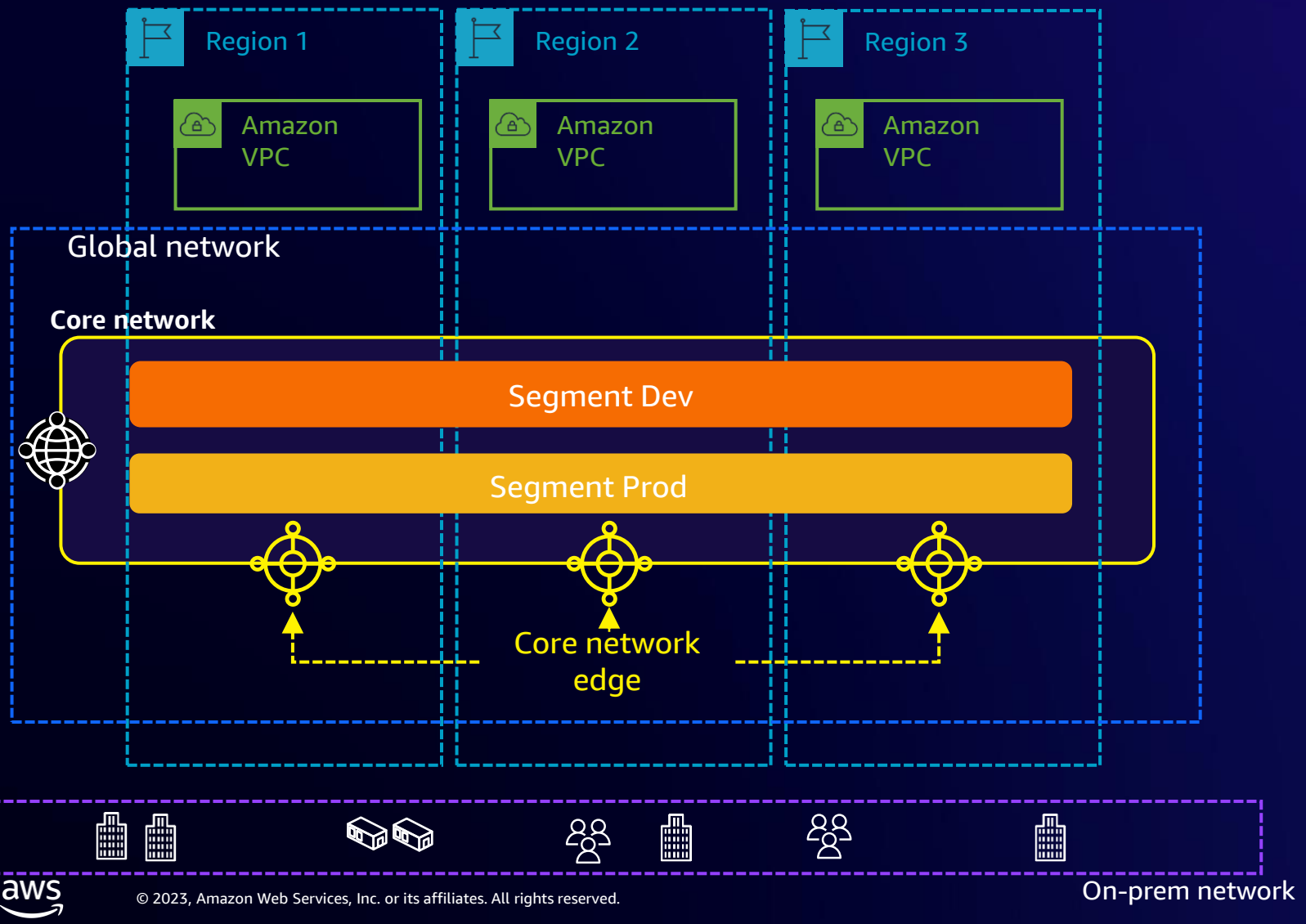

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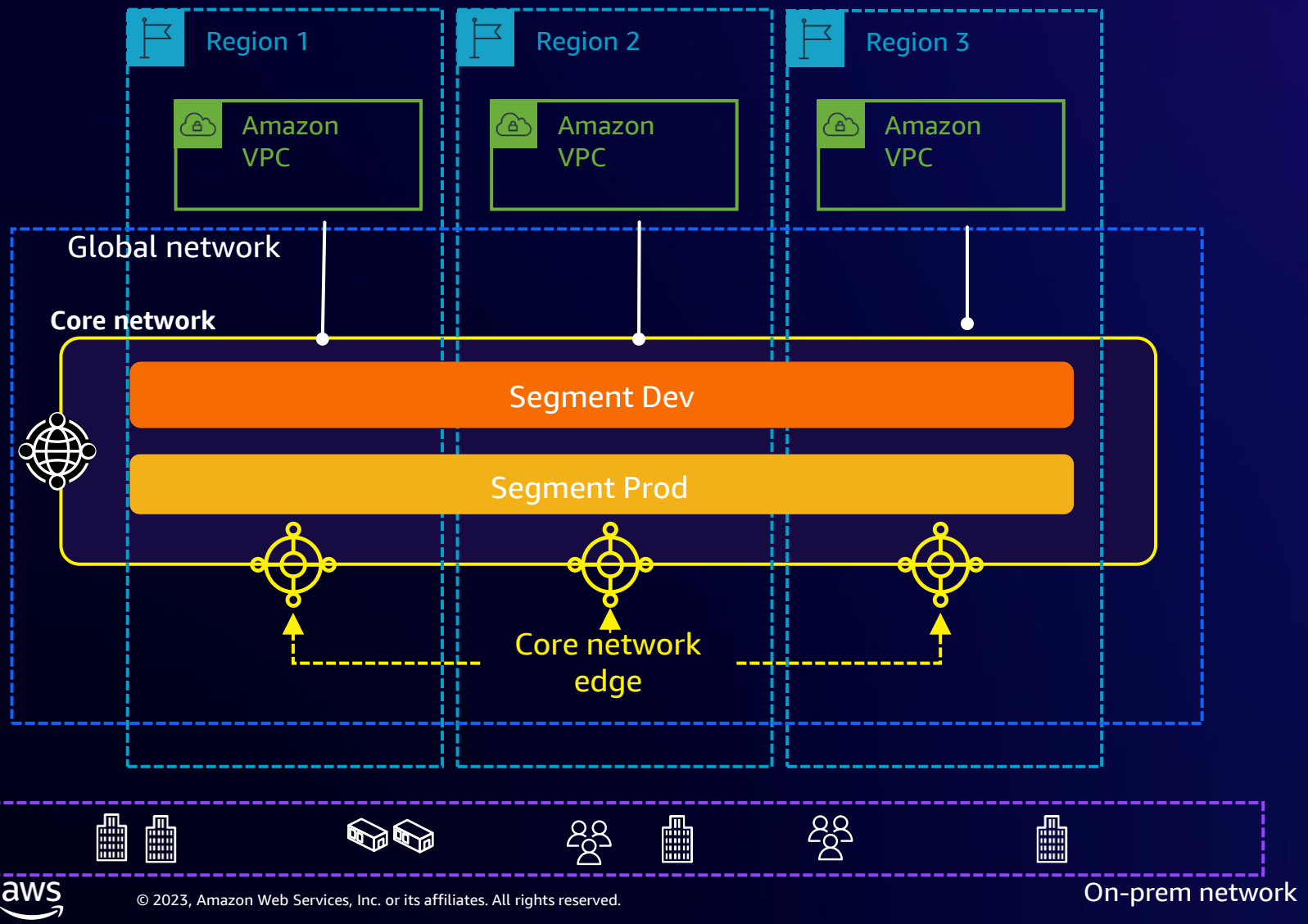

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Attachments: Connections or resources you add in global network

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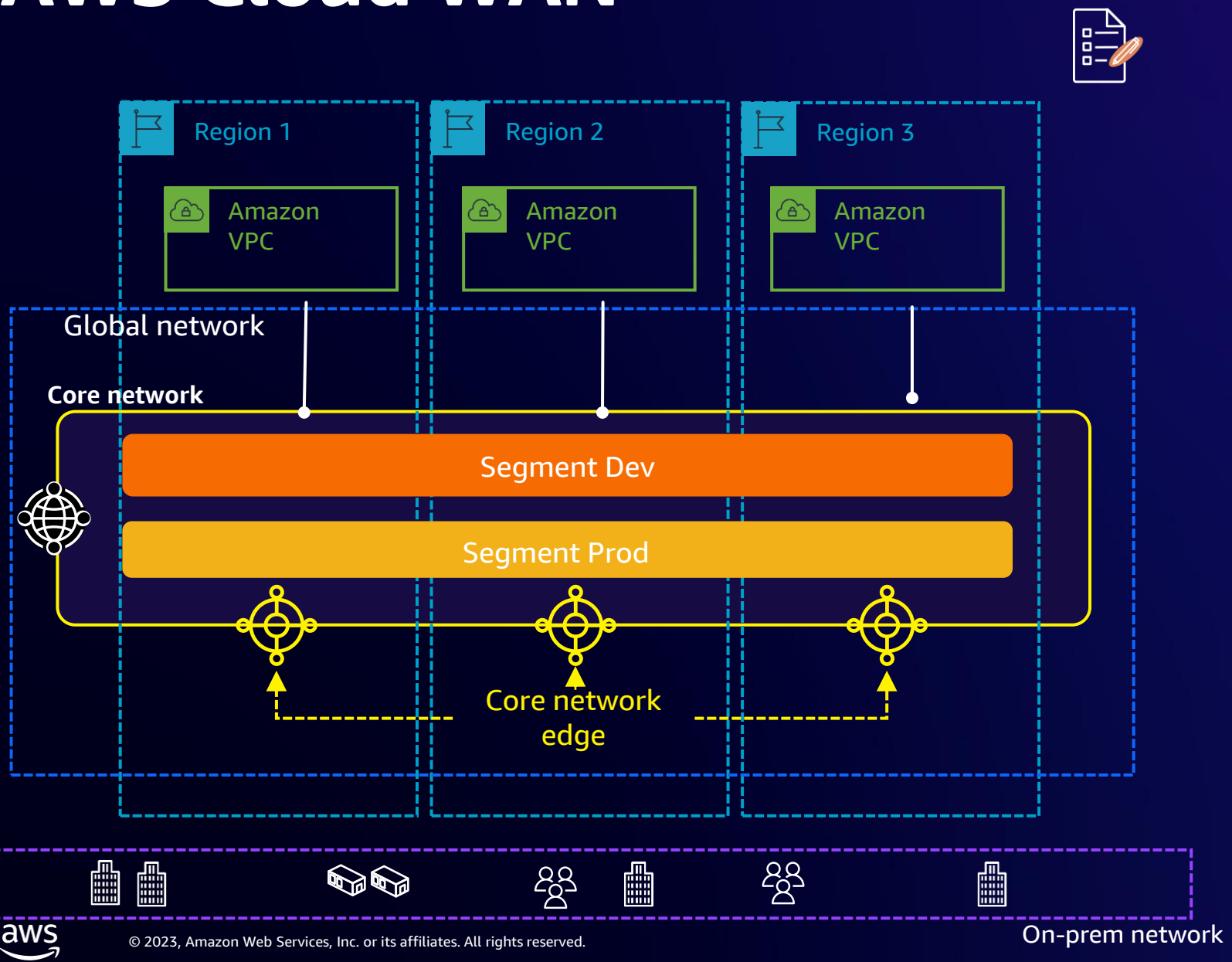

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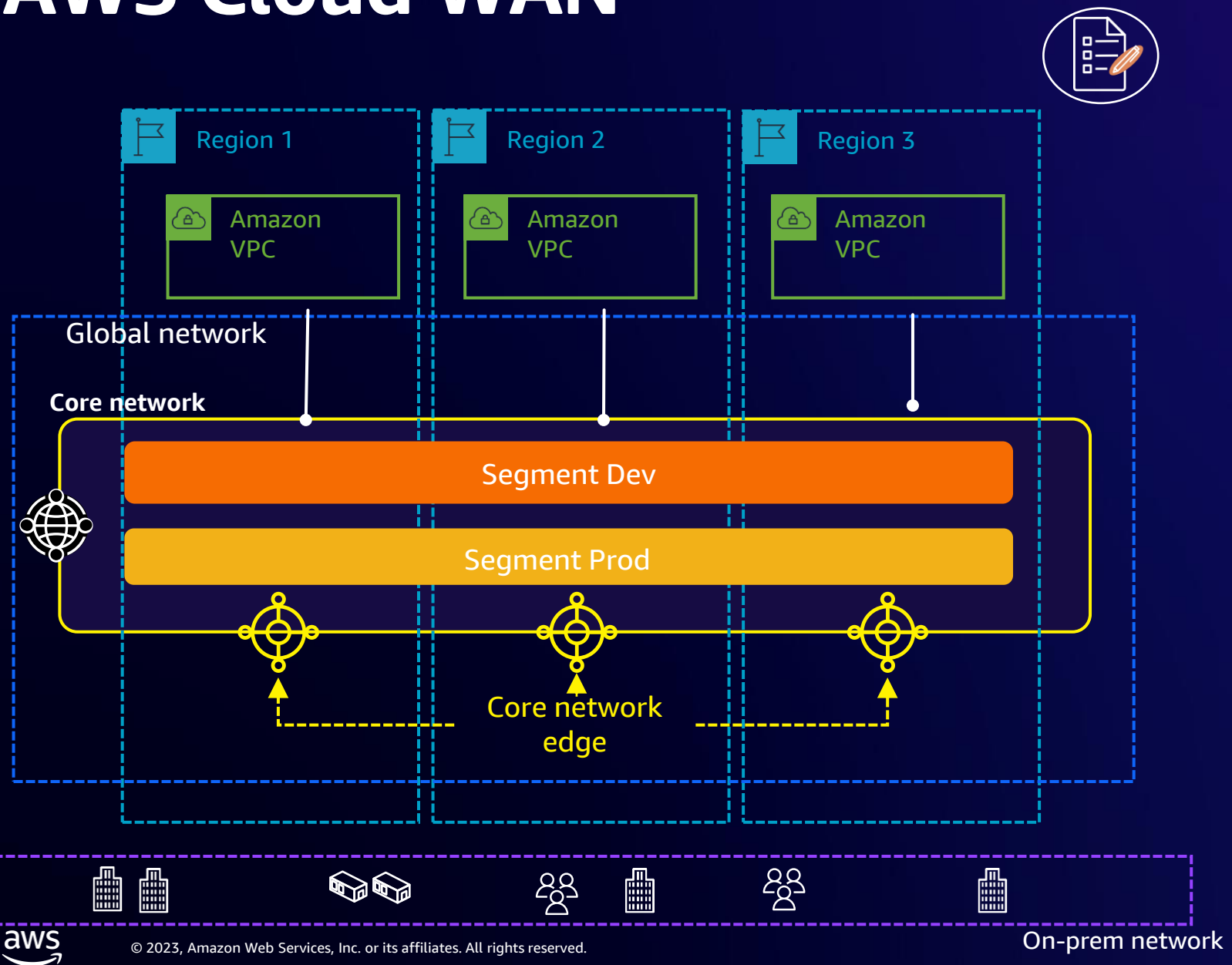

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Core network policy: Single doc with global configuration

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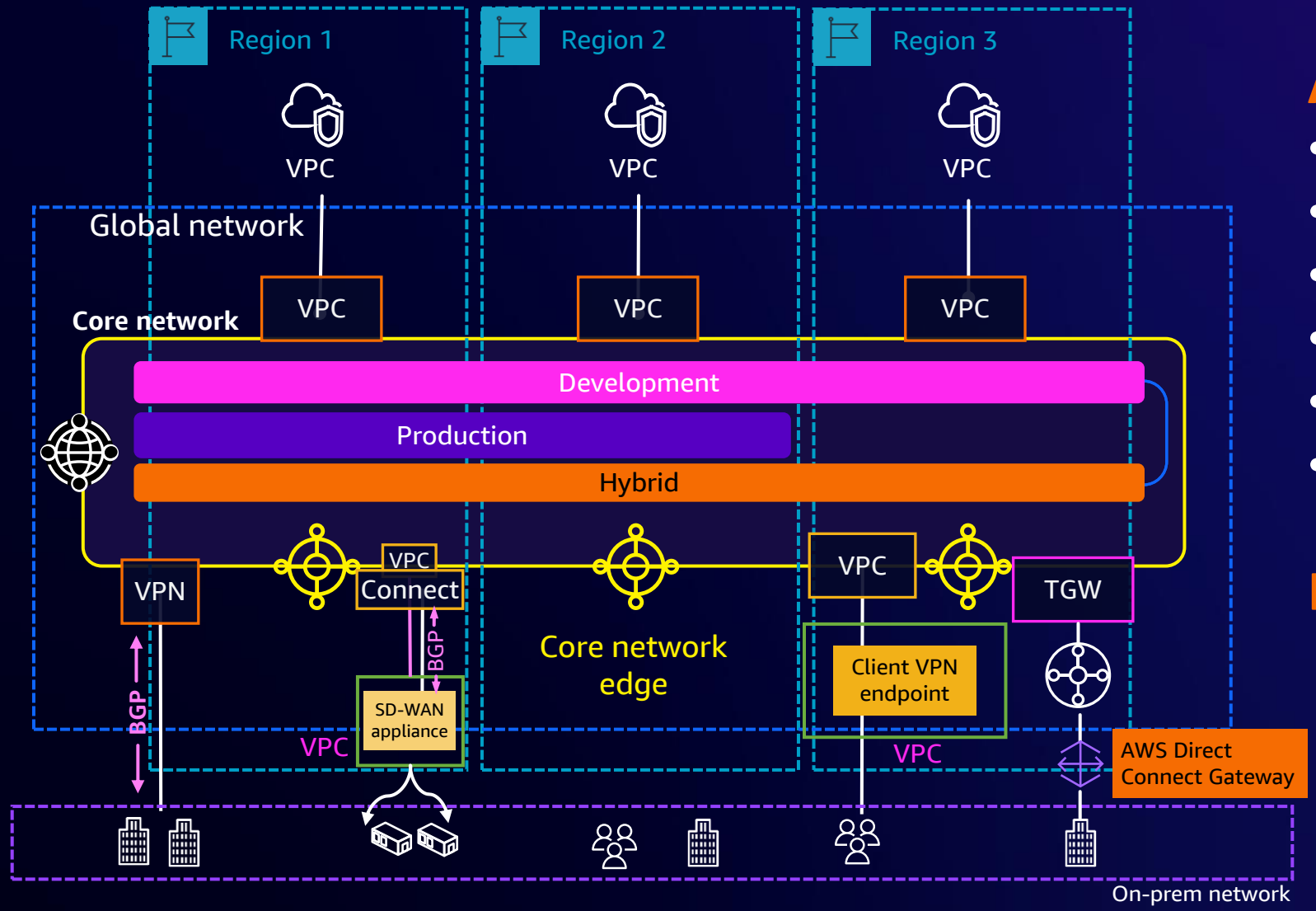
AWS Cloud WAN VPC and hybrid connectivity



Attach your things

- VPCs
- S2S VPN
- SD-WAN (Connect)
- Client VPN
- TGW peering
- Firewalls

Route traffic globally!

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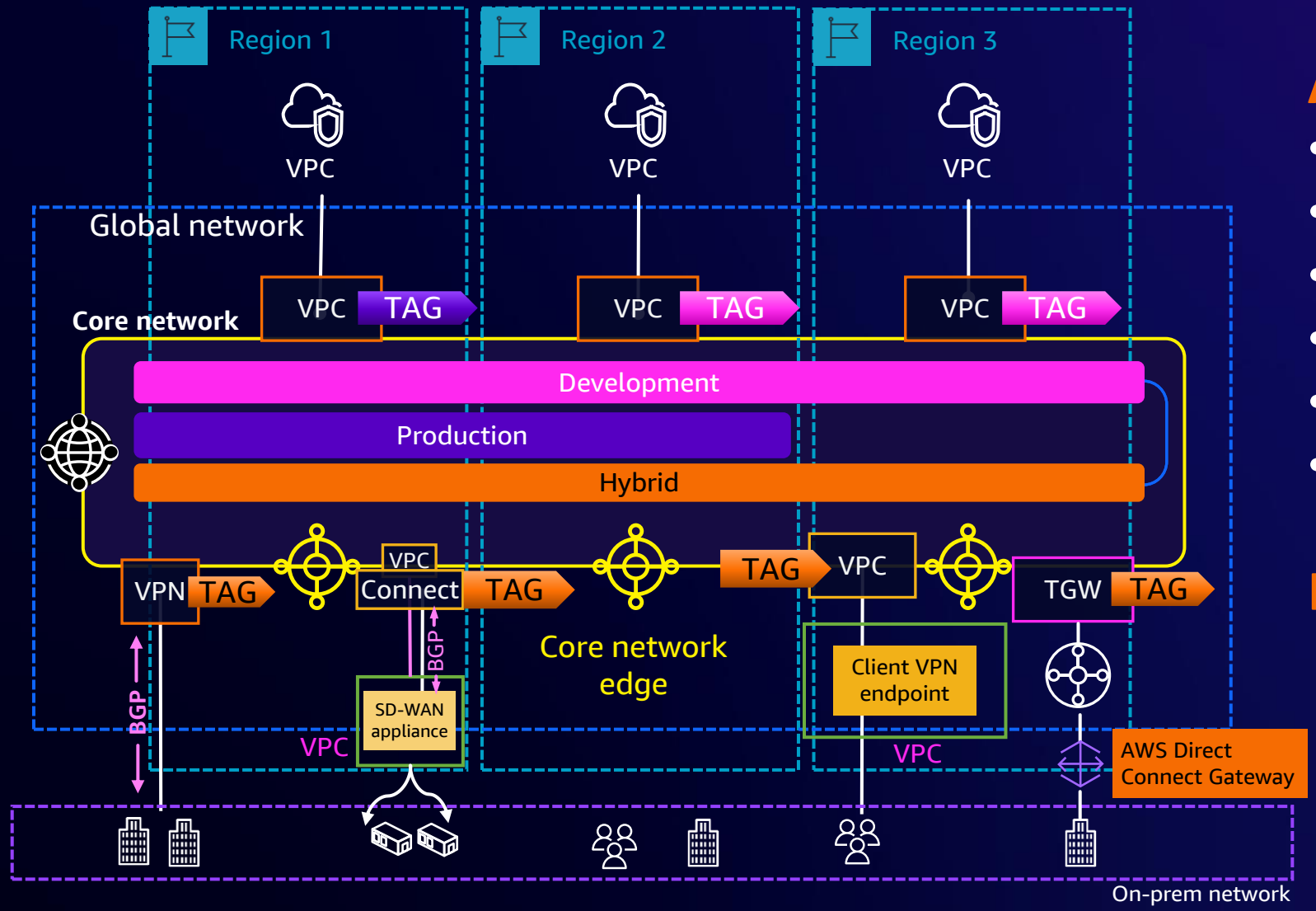
AWS Cloud WAN VPC and hybrid connectivity



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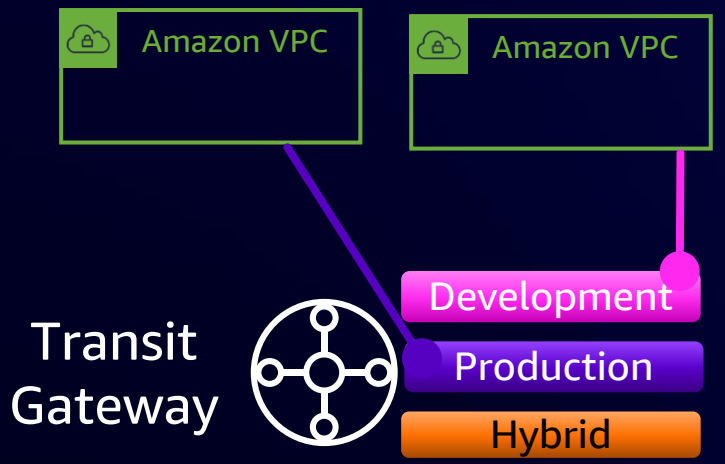
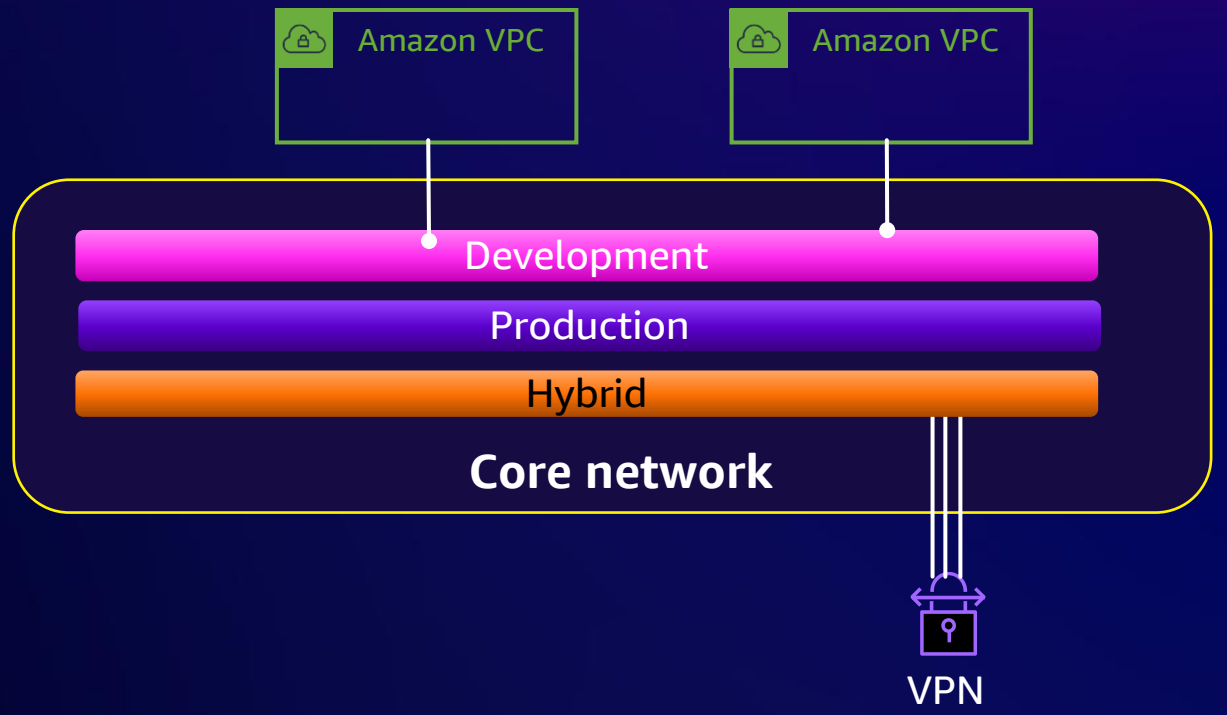
Attaching AWS Transit Gateway



Create routing



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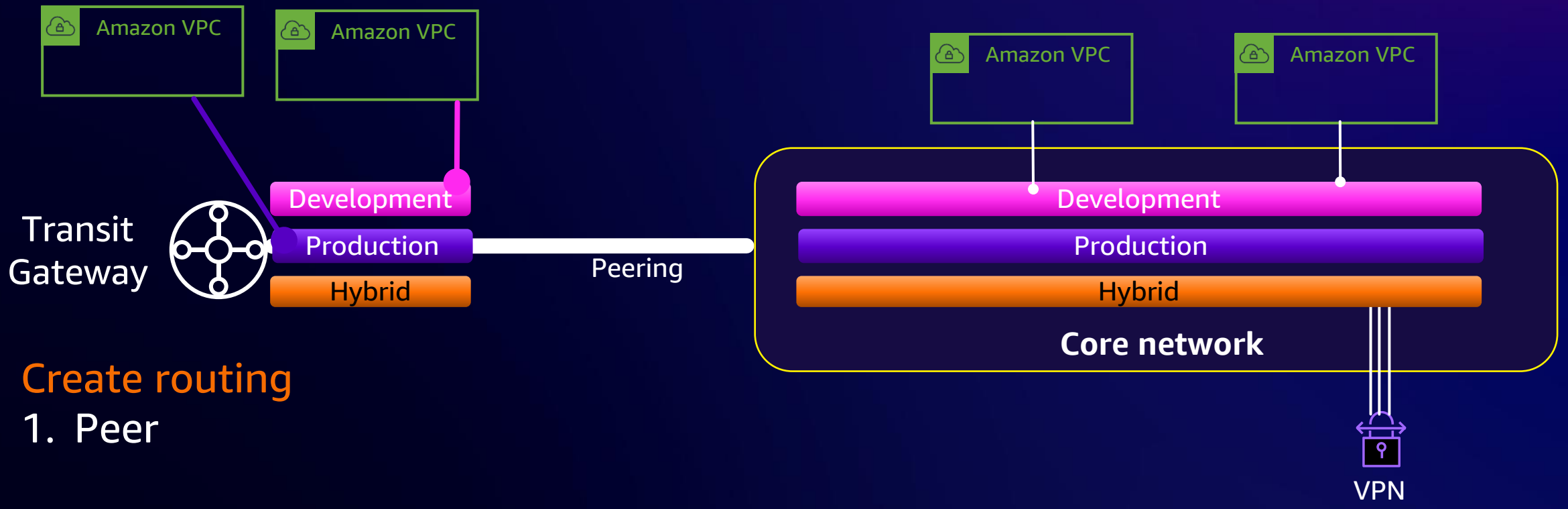

Create routing

1. Peer

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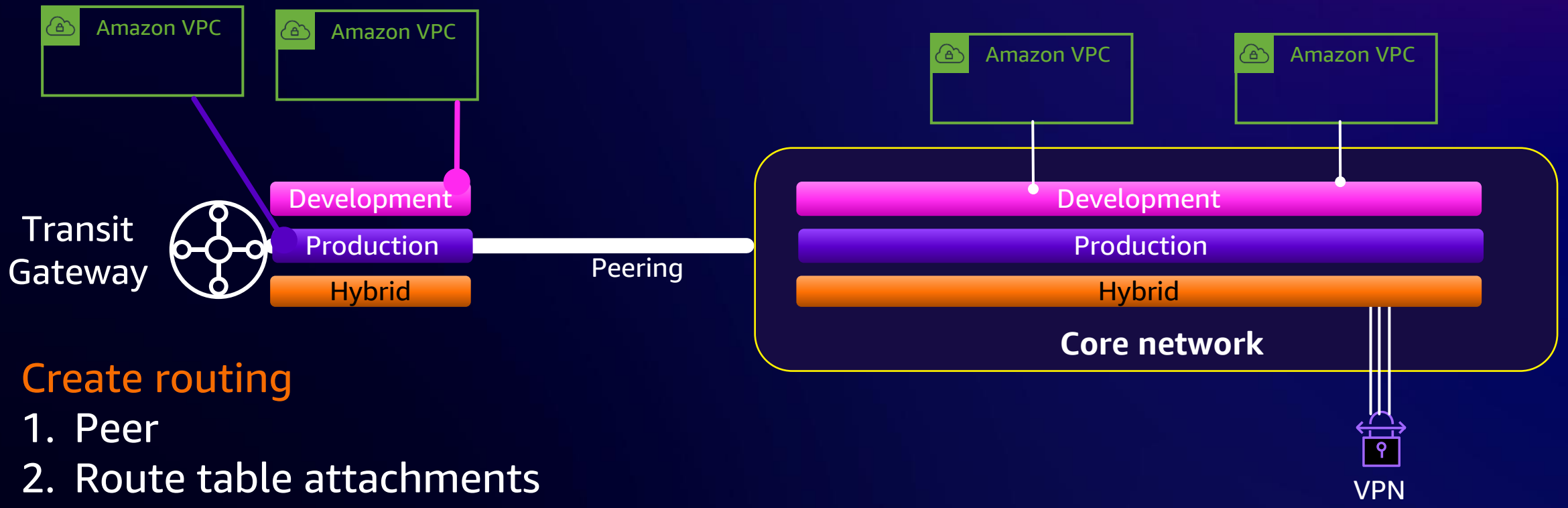
Attaching AWS Transit Gateway



Create routing

1. Peer
2. Route table attachments

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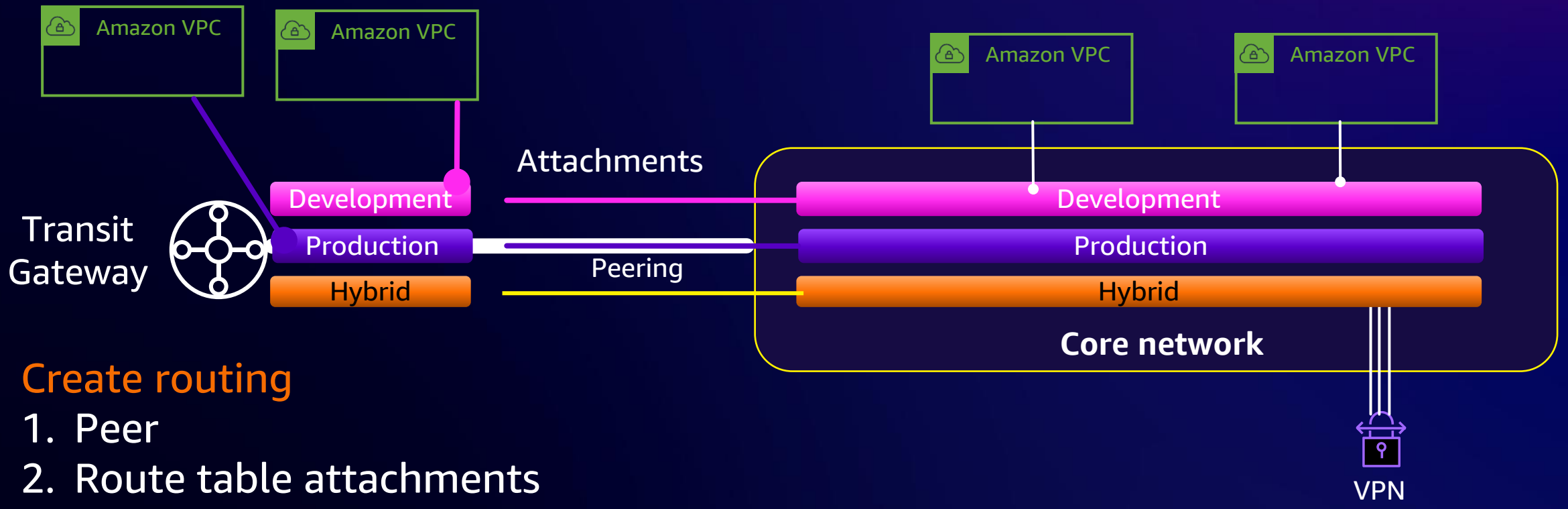
Attaching AWS Transit Gateway



Create routing

1. Peer
2. Route table attachments

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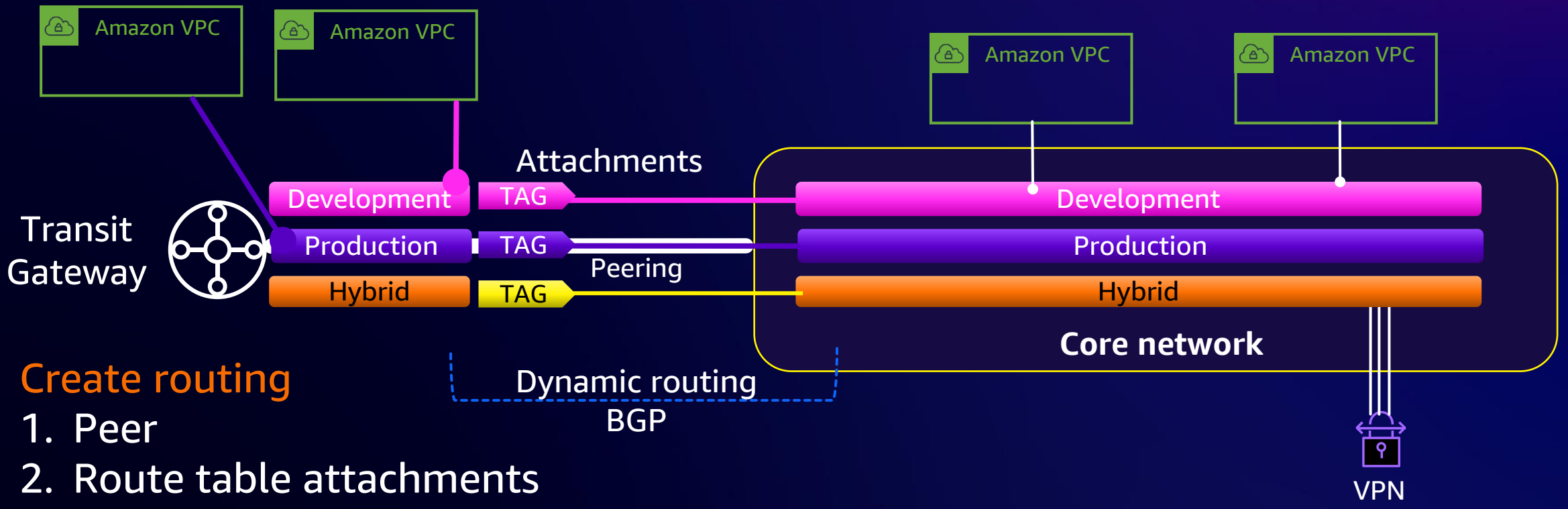
Attaching AWS Transit Gateway



Create routing

1. Peer
2. Route table attachments
3. Tag attachments

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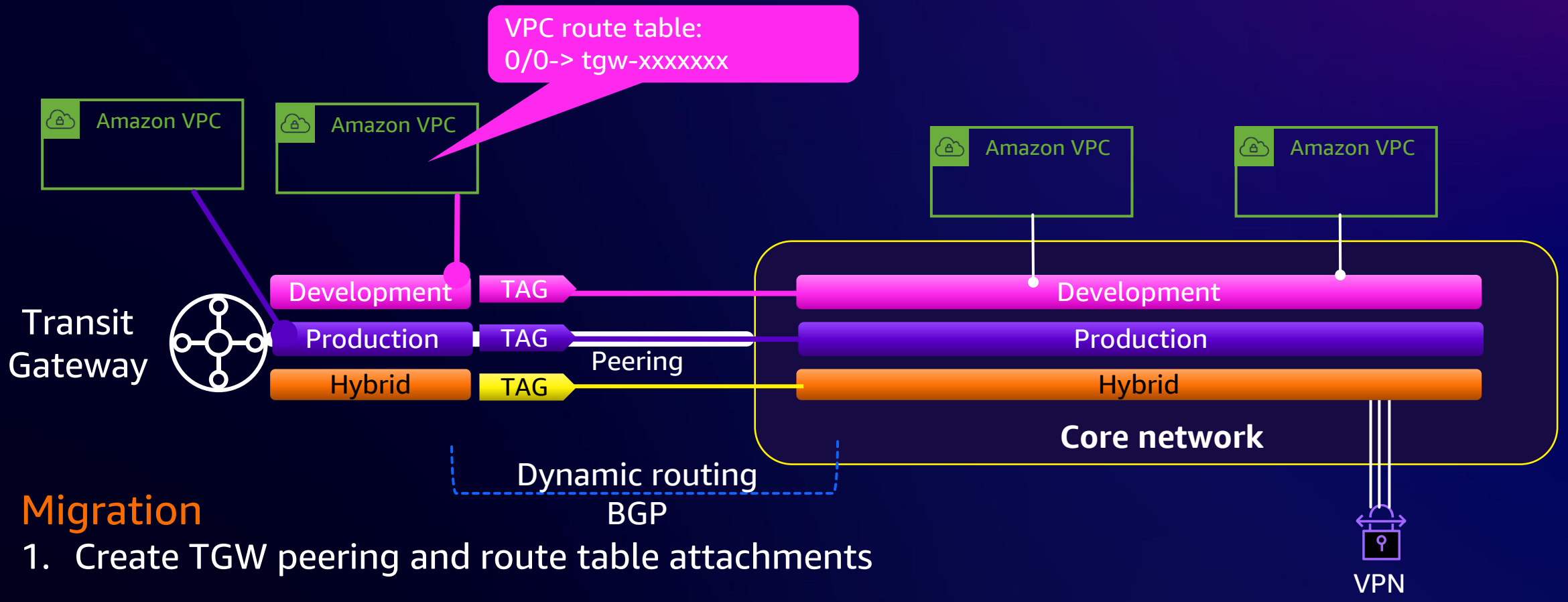
Migrating from AWS Transit Gateway



Migration

1. Create TGW peering and route table attachments

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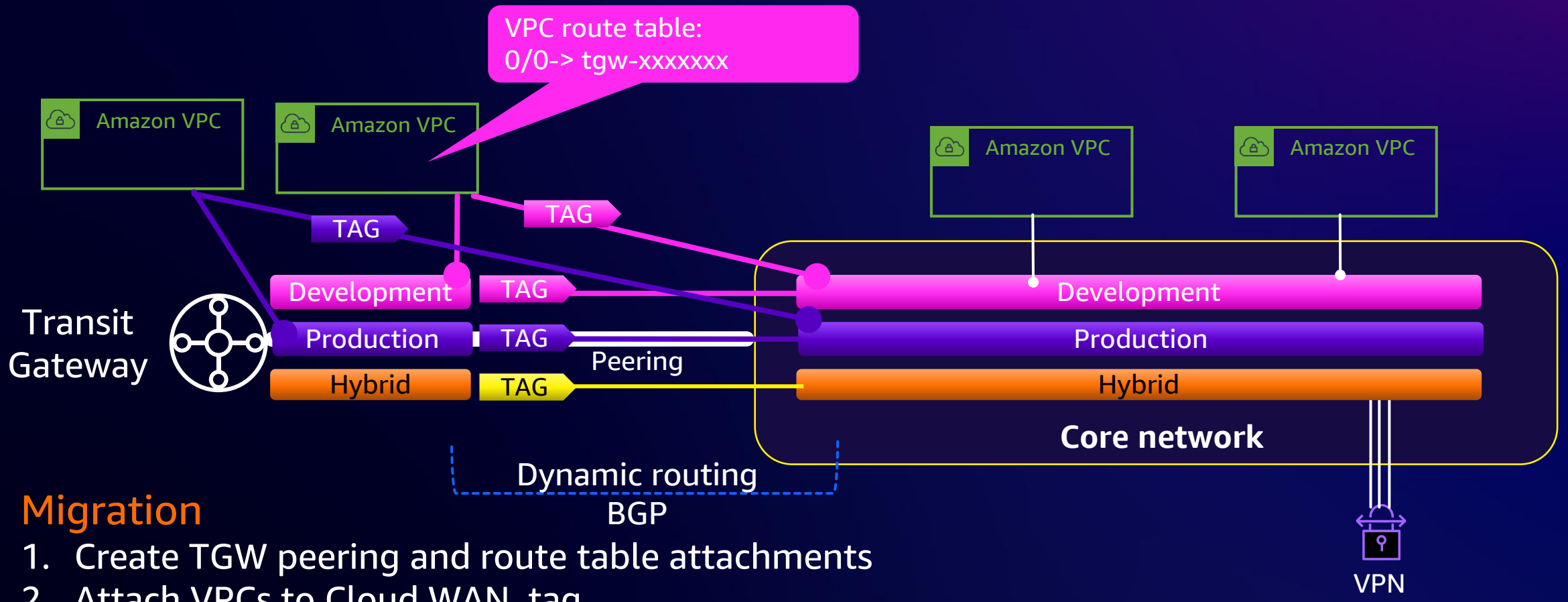
Migrating from AWS Transit Gateway



Migration

1. Create TGW peering and route table attachments
2. Attach VPCs to Cloud WAN, tag

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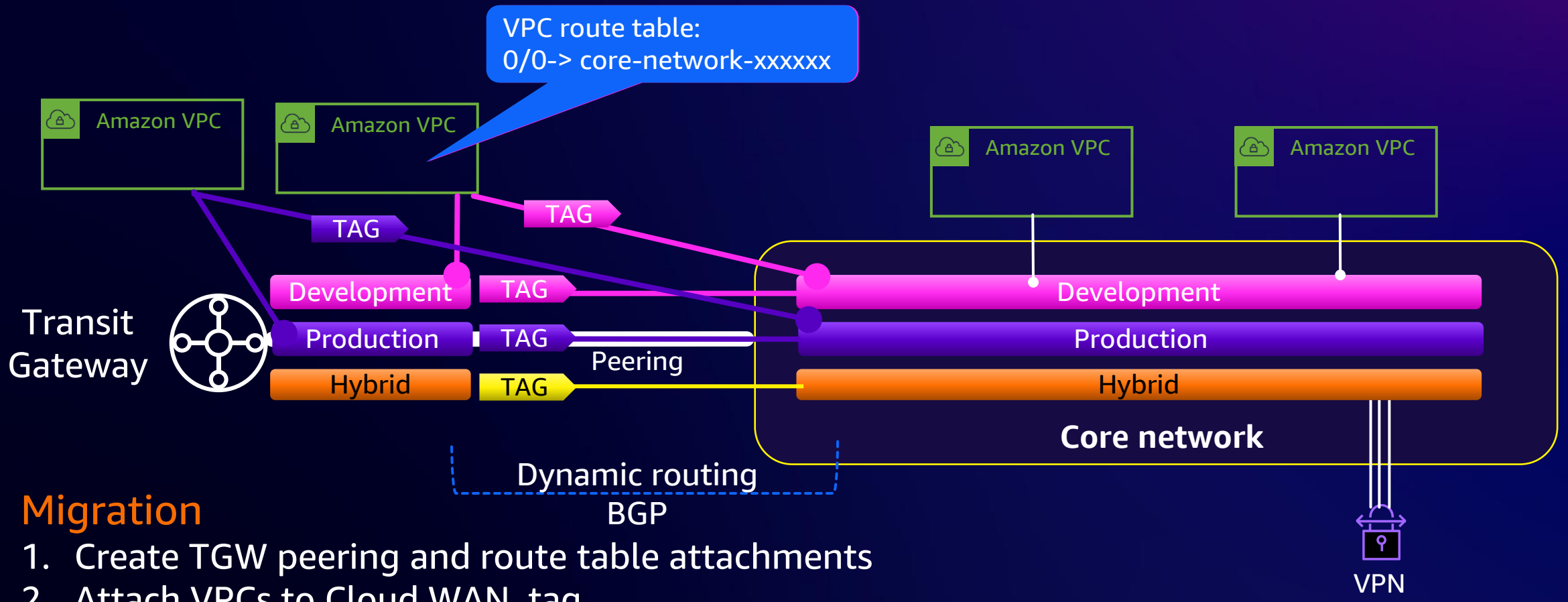
Migrating from AWS Transit Gateway



Migration

1. Create TGW peering and route table attachments
2. Attach VPCs to Cloud WAN, tag
3. Change VPC route table

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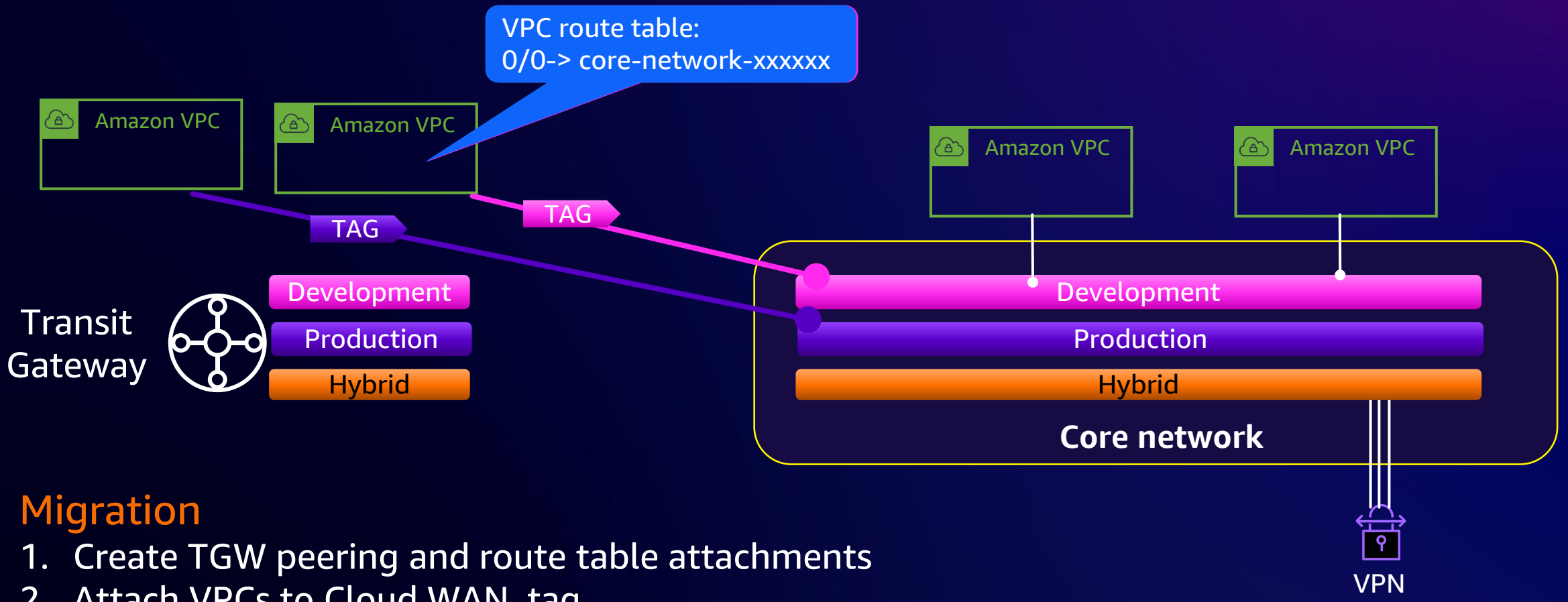
Migrating from AWS Transit Gateway



Migration

1. Create TGW peering and route table attachments
2. Attach VPCs to Cloud WAN, tag
3. Change VPC route table
4. Remove TGW VPC attachments and peering

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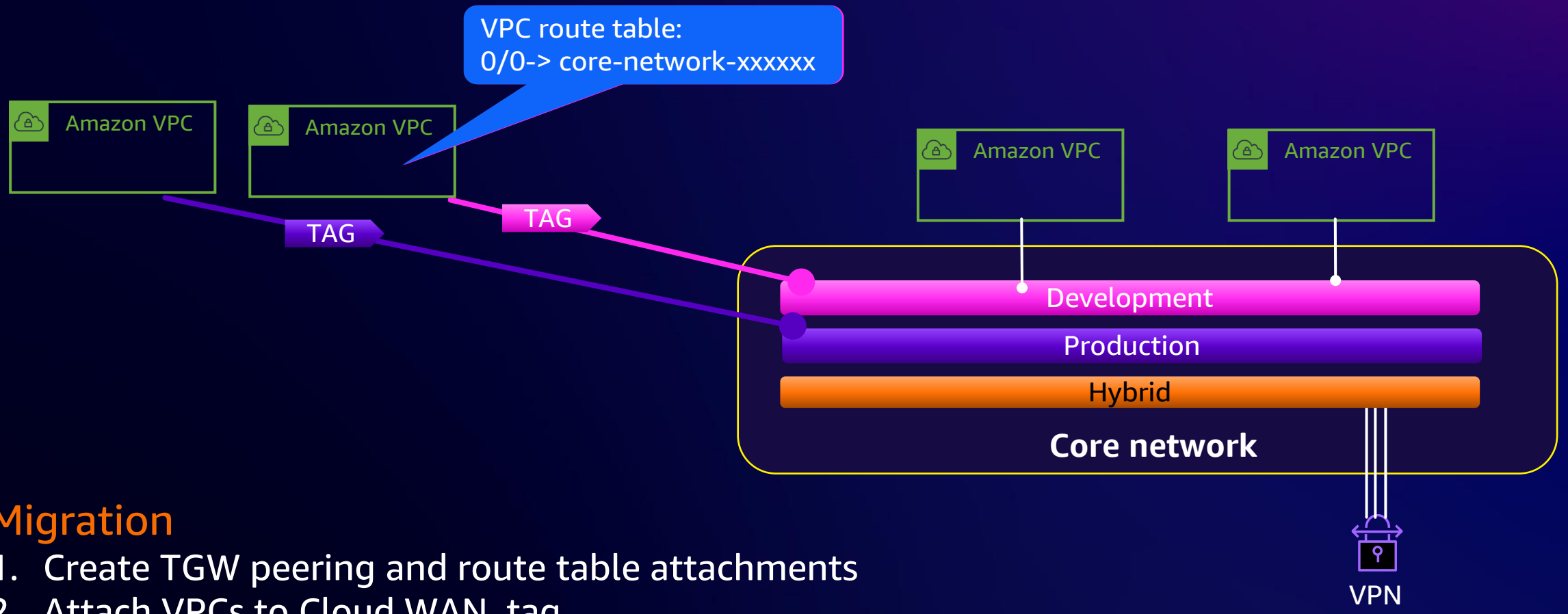
Migrating from AWS Transit Gateway



Migration

1. Create TGW peering and route table attachments
2. Attach VPCs to Cloud WAN, tag
3. Change VPC route table
4. Remove TGW VPC attachments and peering

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Time to get interactive!

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AWS Cloud WAN versus TGW

- Where are you in your AWS journey?
- What is the scale of your current TGW deployment?
- How happy are you with your third-party or home-grown automation tools?
- How many Regions – now and future?
- Do you prefer to use AWS backbone for hybrid networking?
- Do you need flat or segmented network architectures?
- Do you prefer native AWS automation?

AWS Cloud WAN versus TGW choice depends on multiple factors

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Reference architecture slides

VPC peering hybrid

AWS Cloud WAN and TGW differences

AWS Transit Gateway Routing – Association

AWS Transit Gateway Routing – Propagation

AWS Transit Gateway route table setup

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Further resources

Centralized outbound inspection architecture in AWS Cloud WAN

Inspecting network traffic between Amazon VPCs with AWS Cloud WAN

AWS Cloud WAN and AWS Transit Gateway migration and interoperability patterns

Best practices and considerations to migrate from VPC peering to AWS Transit Gateway

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NEW

AWS Networking Core

Digital badge and learning pathway

- Entry-level online assessment
- Verifiable digital badge
- Includes courses on new services

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Thank you!

Please complete the session survey in the mobile app

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Reference architecture slides

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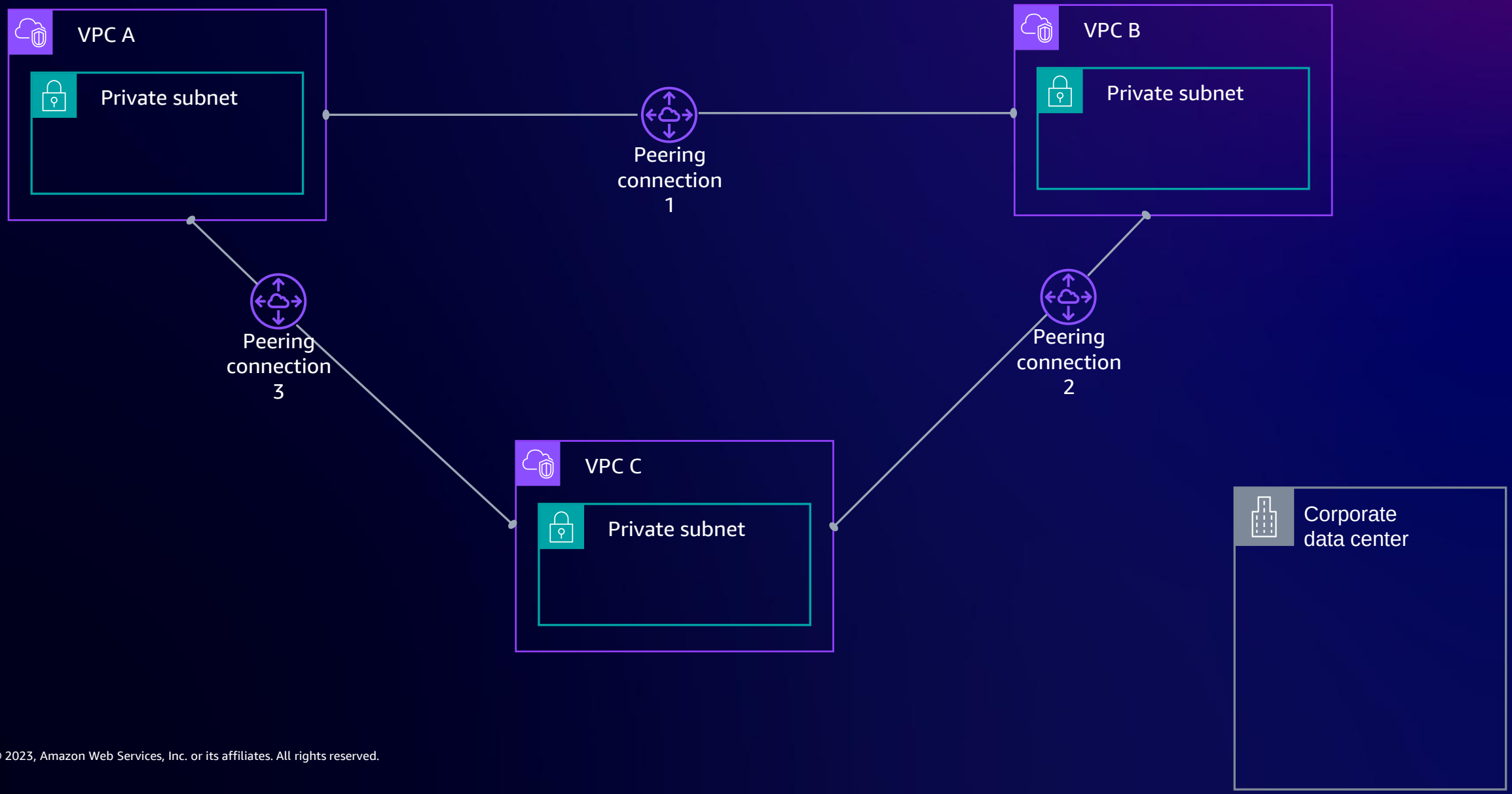
Amazon VPC peering with site-to-site VPN



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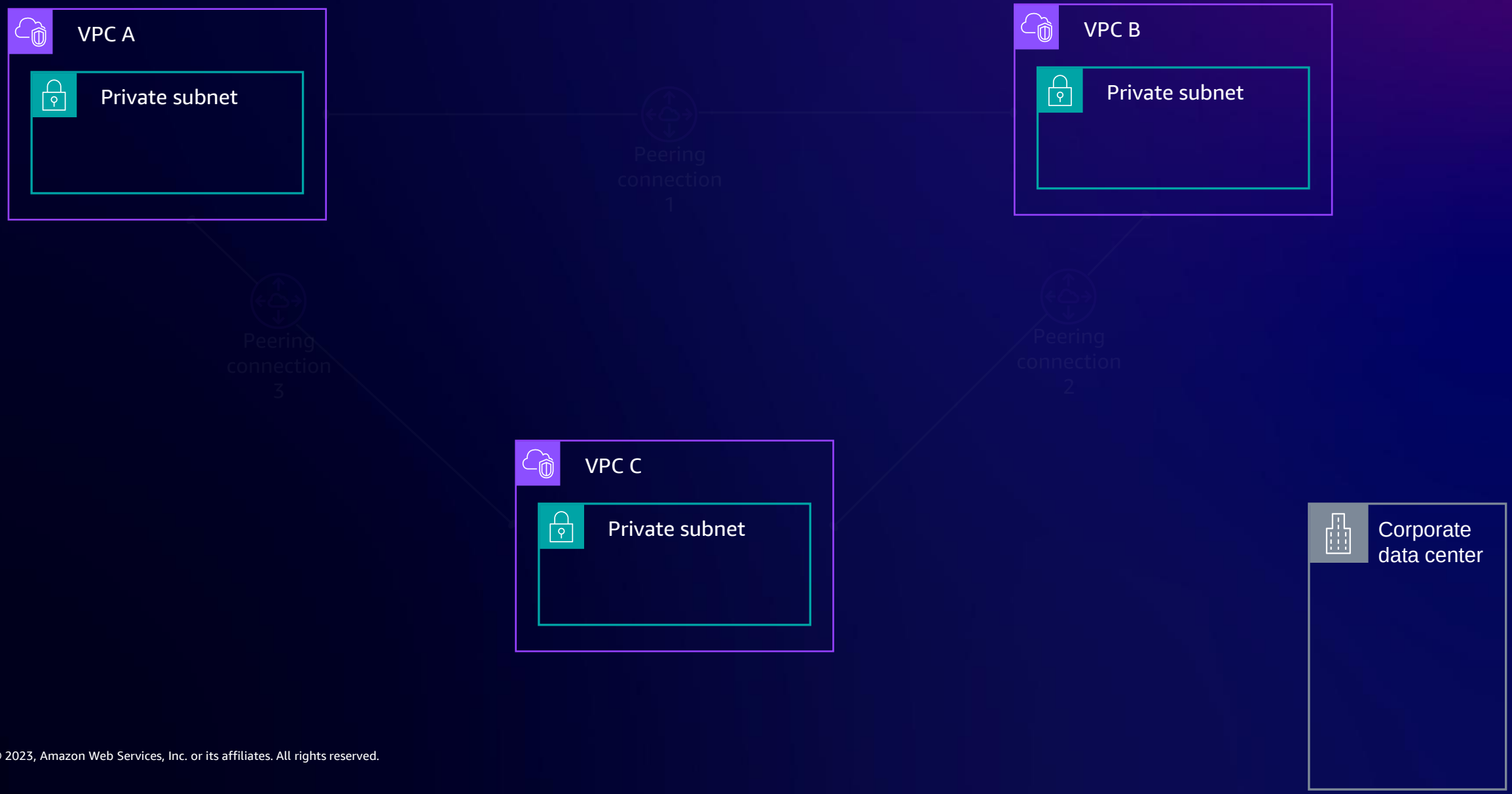
Amazon VPC peering with site-to-site VPN



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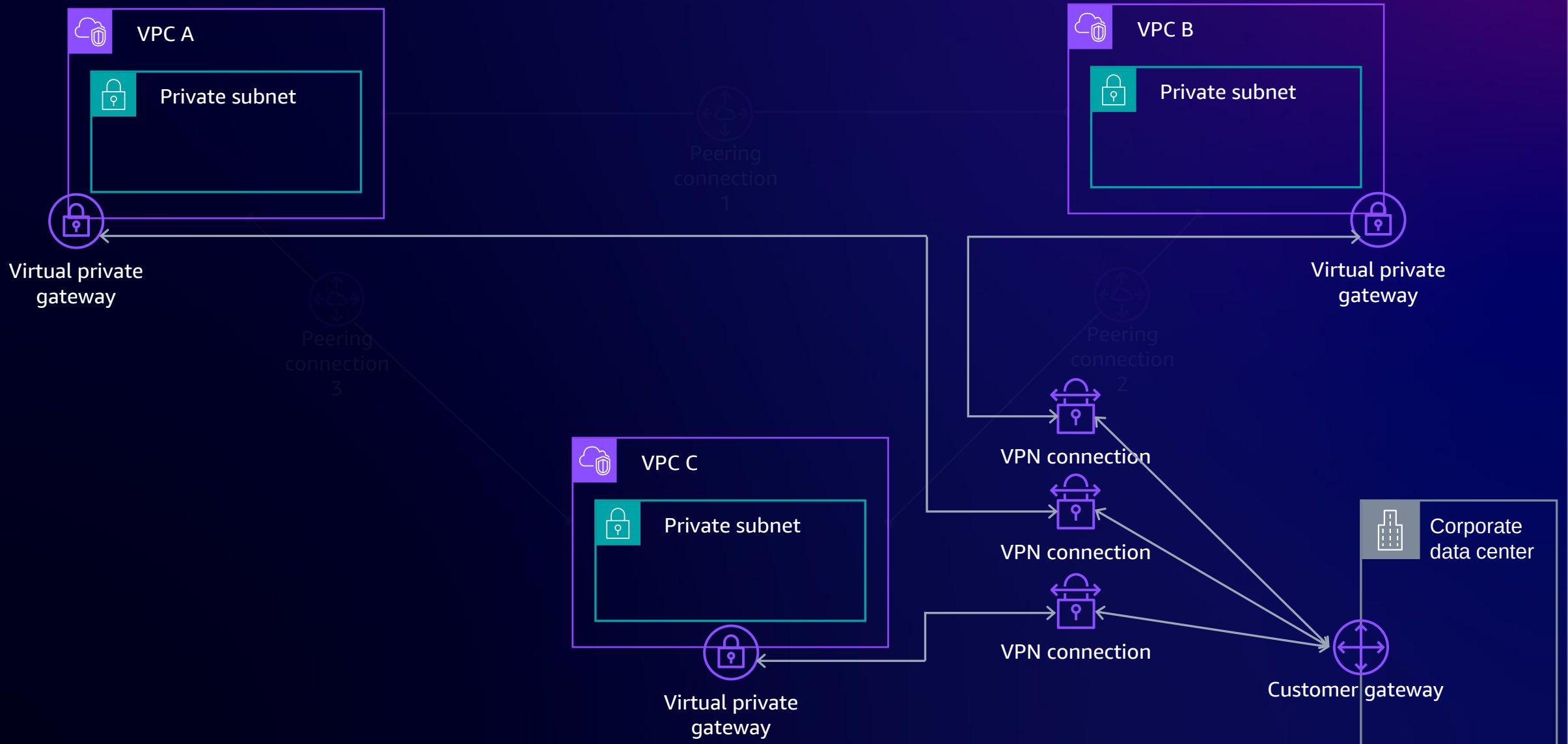
Amazon VPC peering with site-to-site VPN



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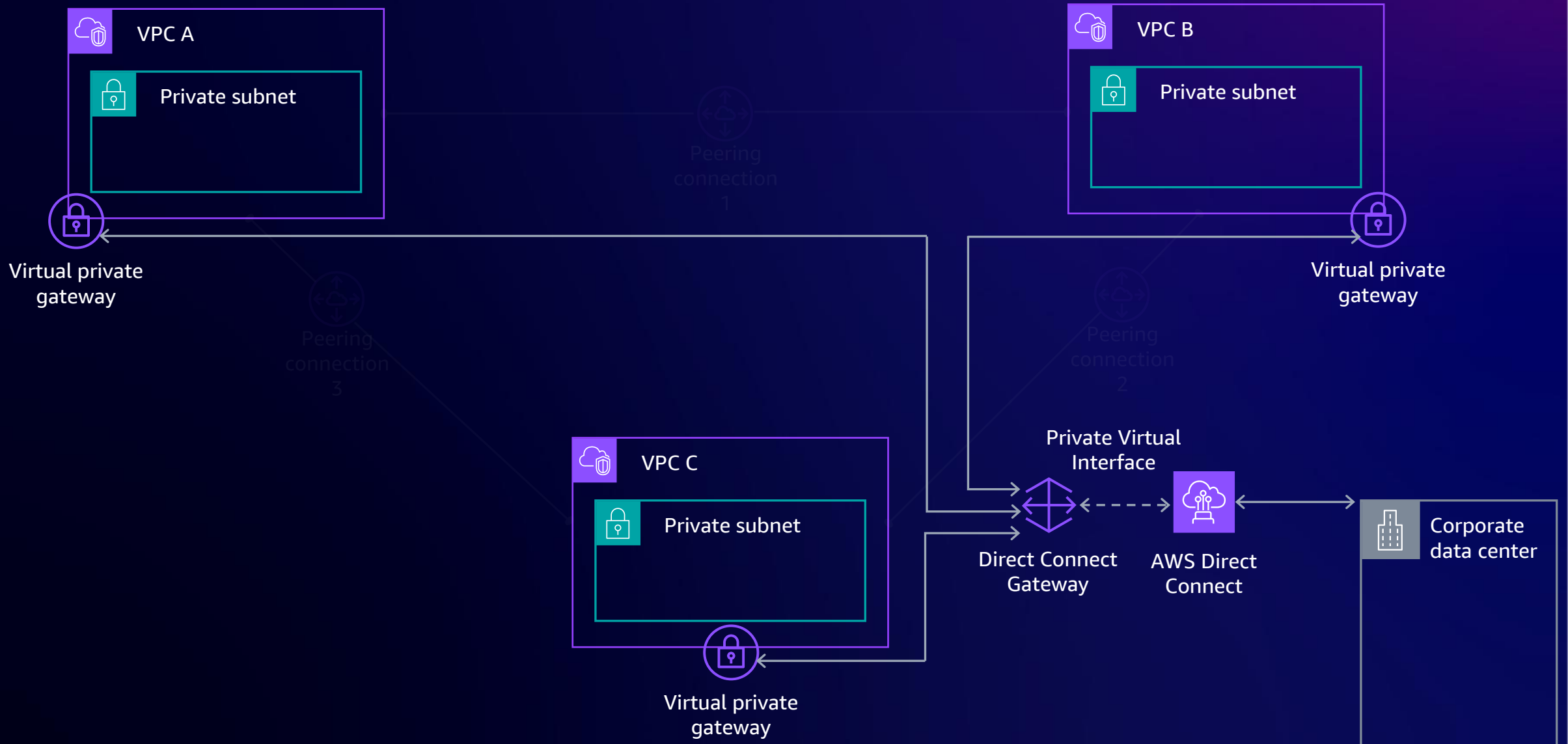
Amazon VPC peering with Direct Connect



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AWS Cloud WAN and TGW differences

AWS Cloud WAN	Transit Gateway
AWS Managed	**Customer Managed**
Global Managed Connectivity Service	Regional Routing Construct
Central Intent-based Policy Doc	Full Routing Configuration
Native Automation	DIY or Third-Party Automation
Global Segments	Route-Tables
Global SD-WANs (Connect GRE/Tunnel-less)	SD-WAN Interconnect
Prioritized Services Integration (Security, Connectivity, Automation)	Opportunistic Service Integrations
Intent-based Policy Abstractions	Enhanced Routing/Policy Constructs

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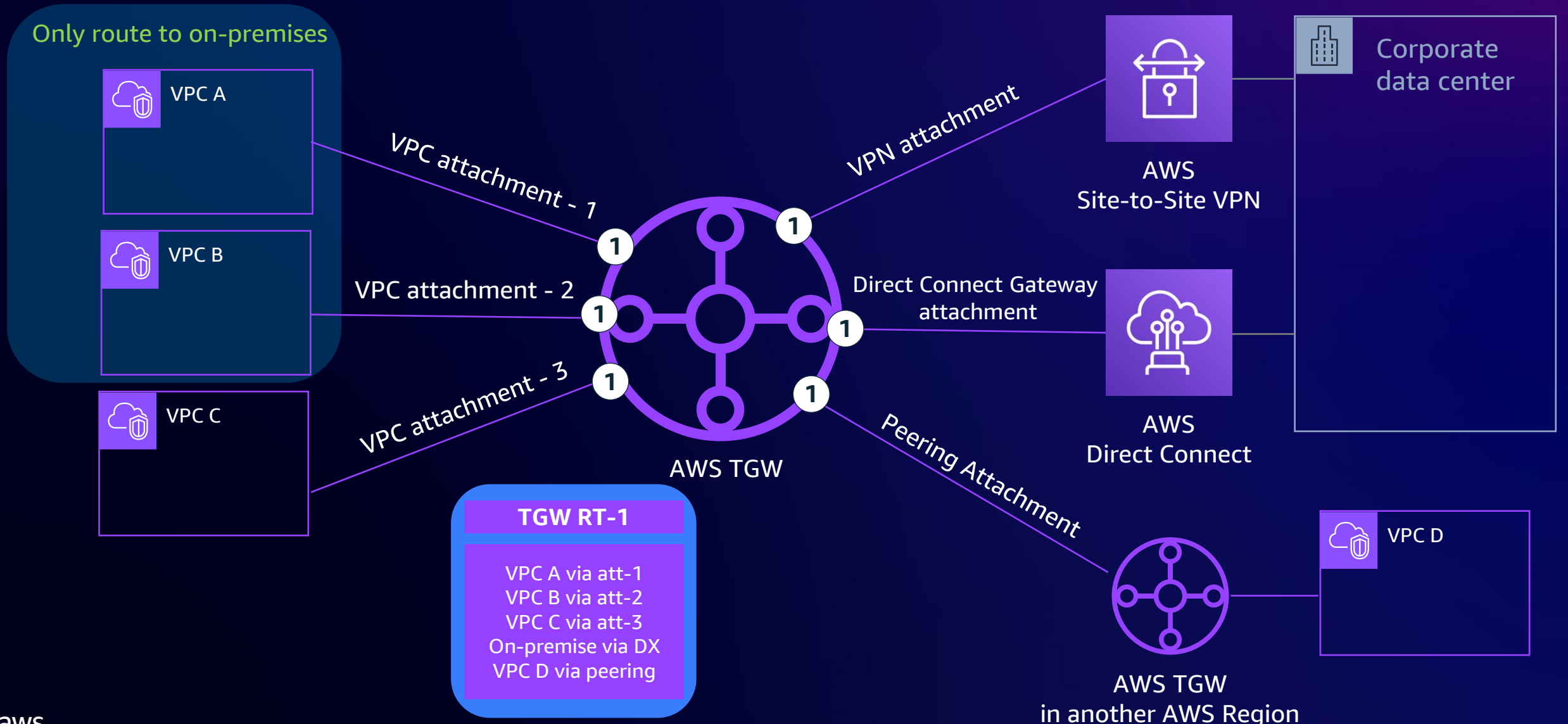
AWS Transit Gateway routing – Association



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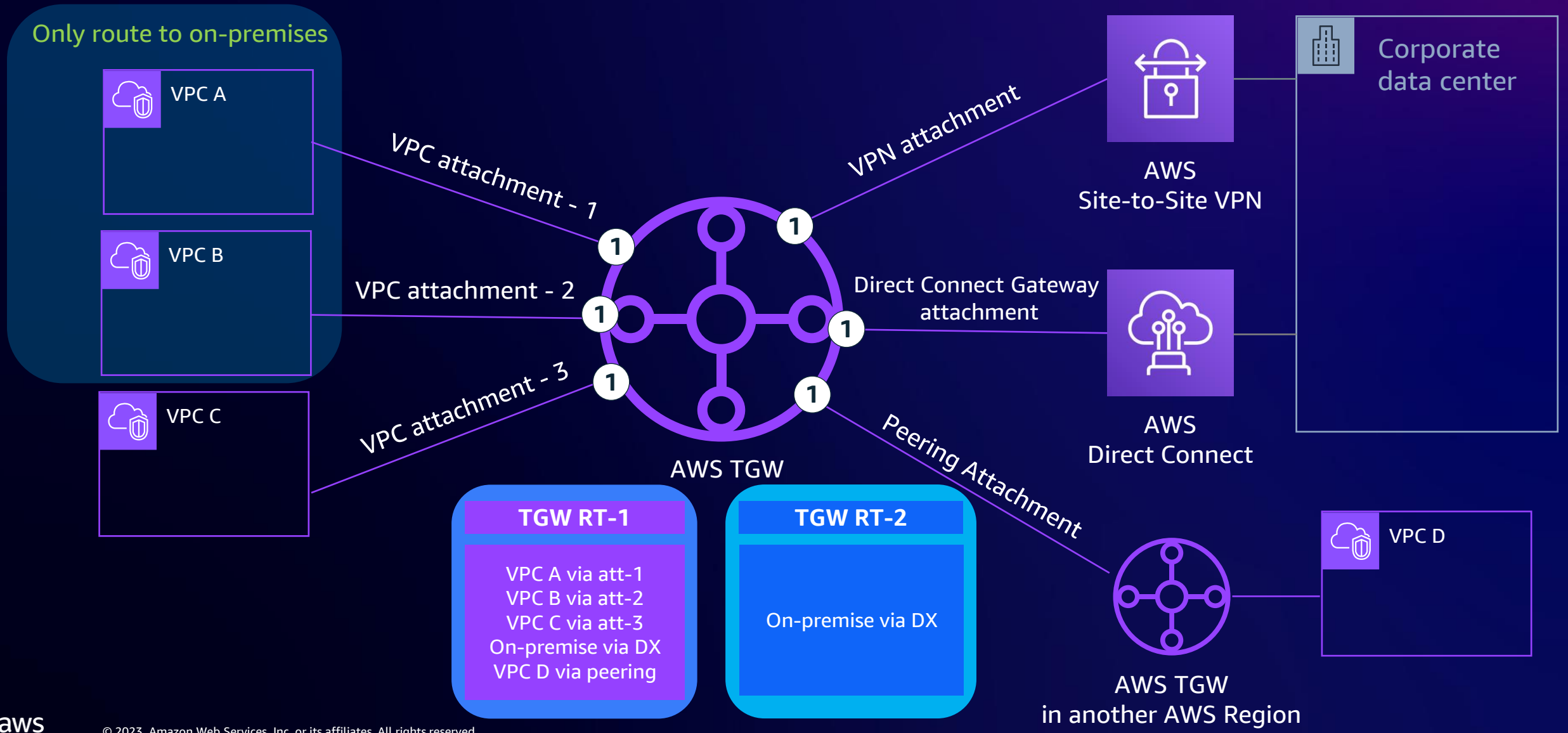
AWS Transit Gateway routing – Association



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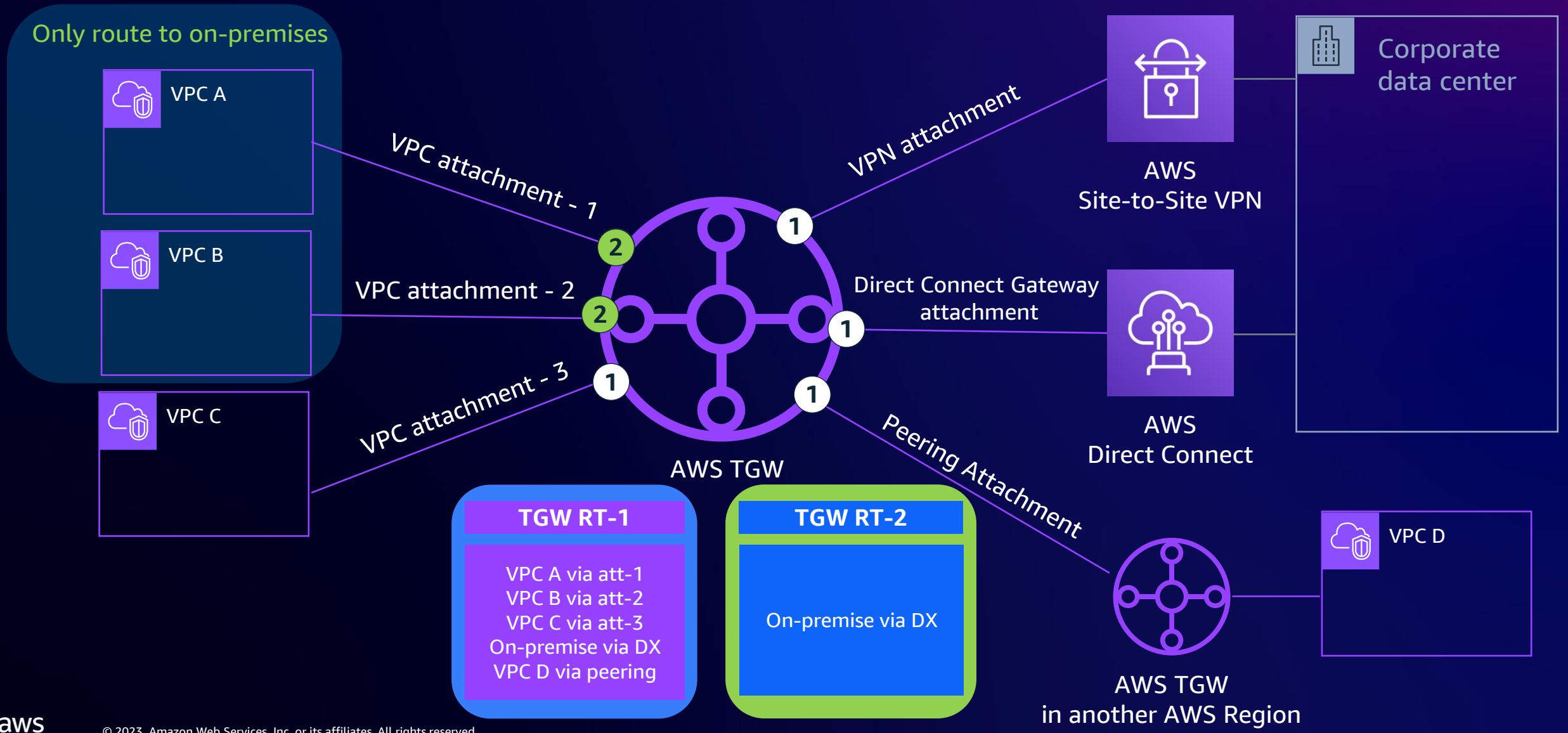
AWS Transit Gateway routing – Association



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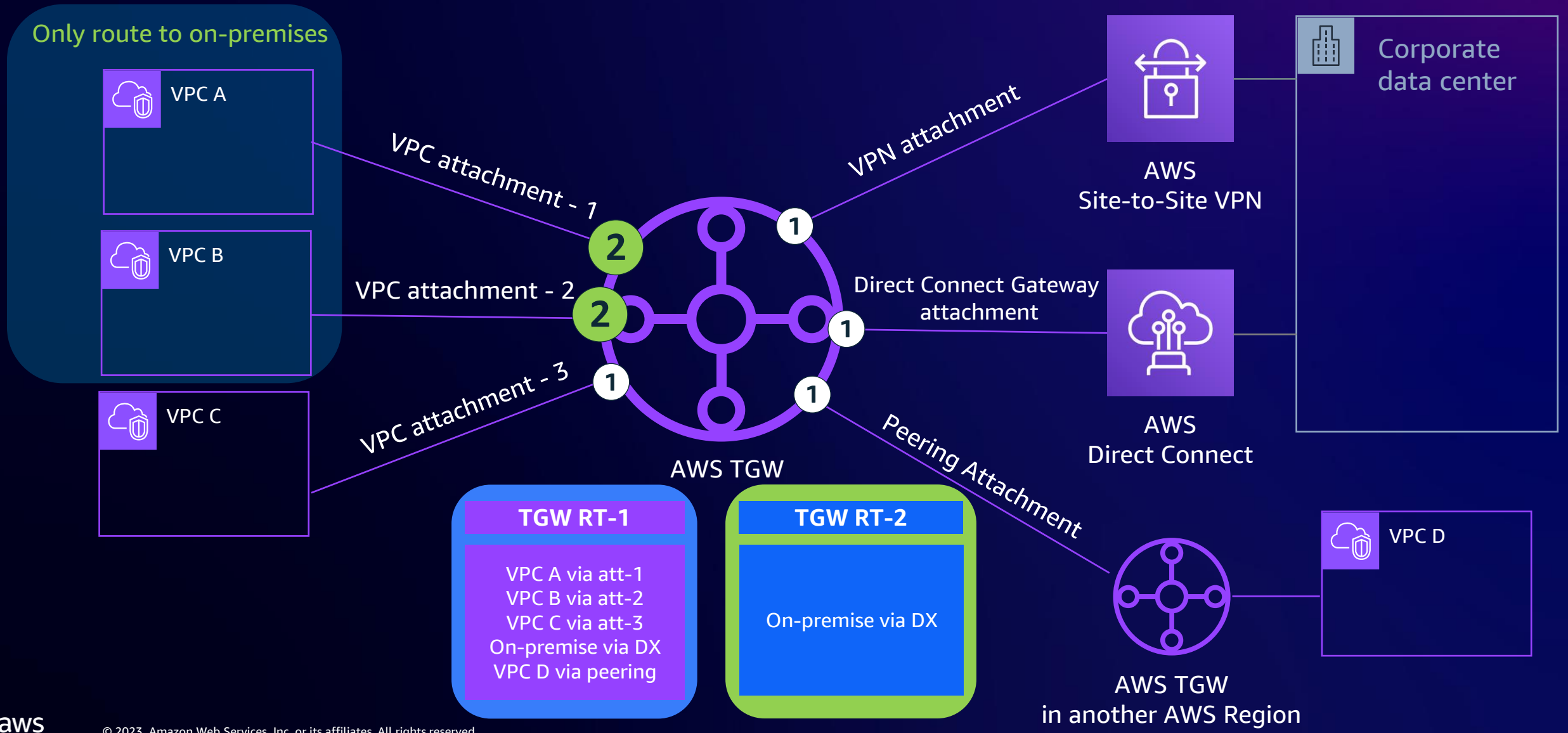
AWS Transit Gateway routing – Association



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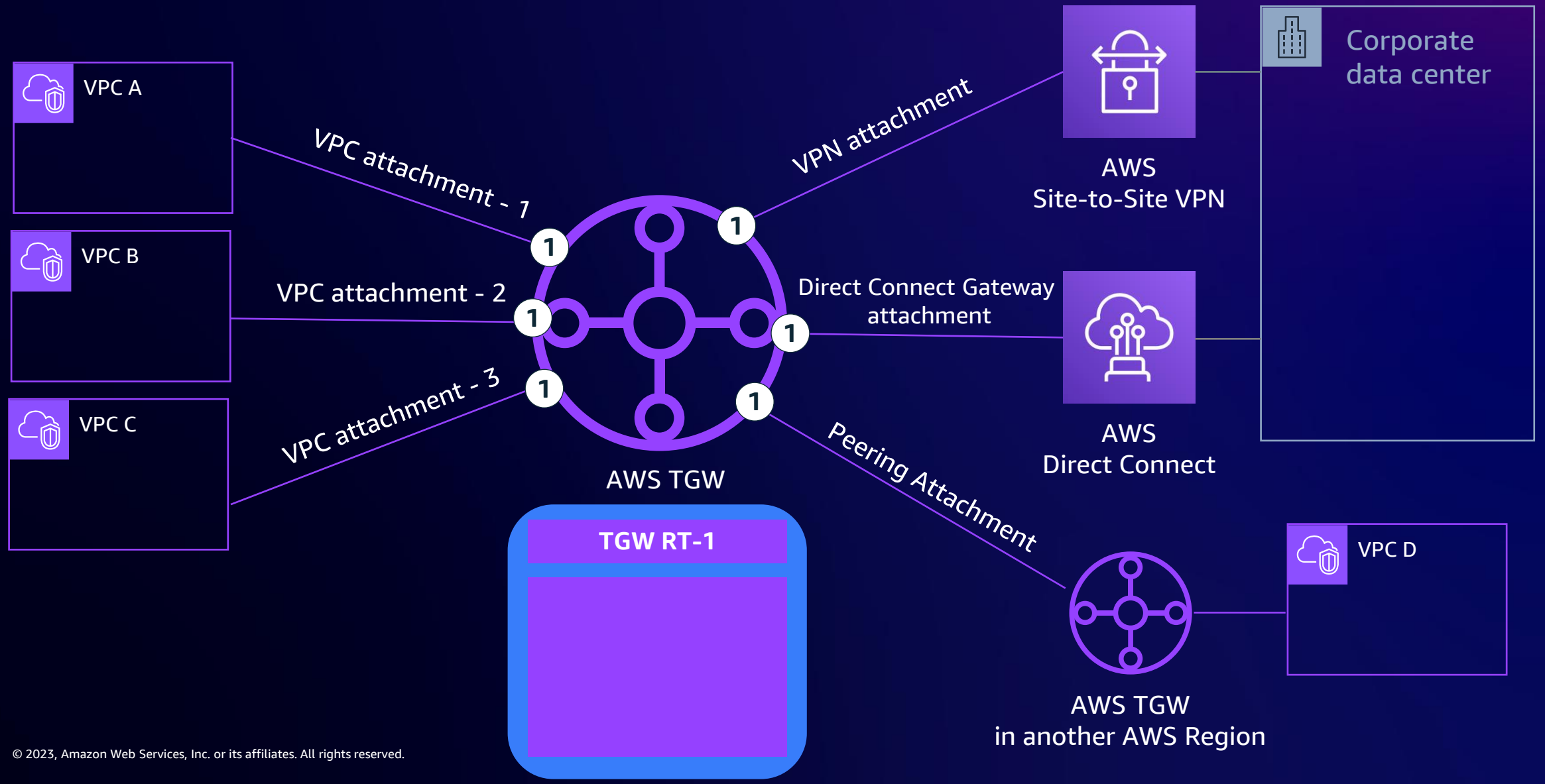
AWS Transit Gateway routing – Propagation



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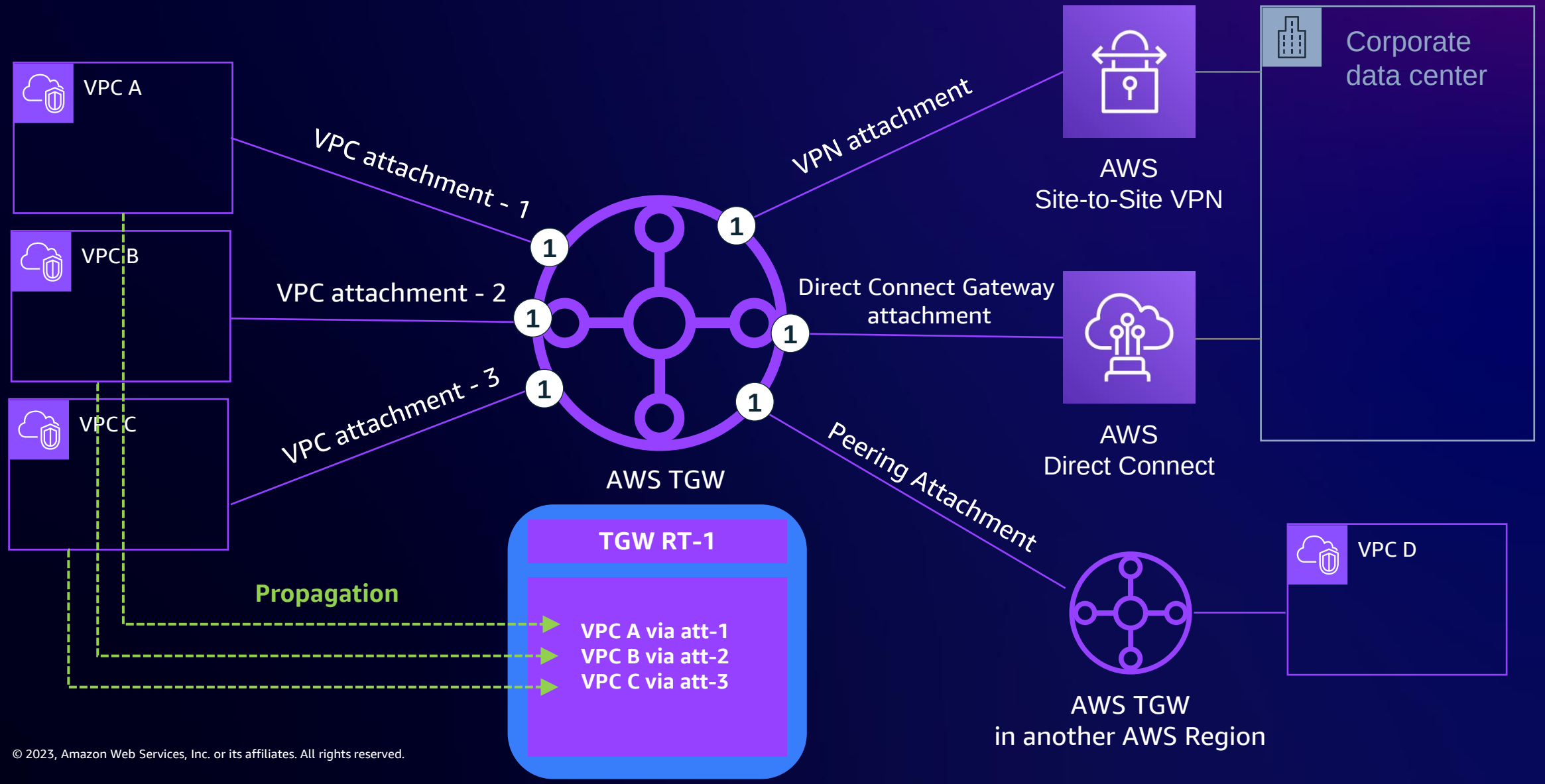
AWS Transit Gateway routing – Propagation



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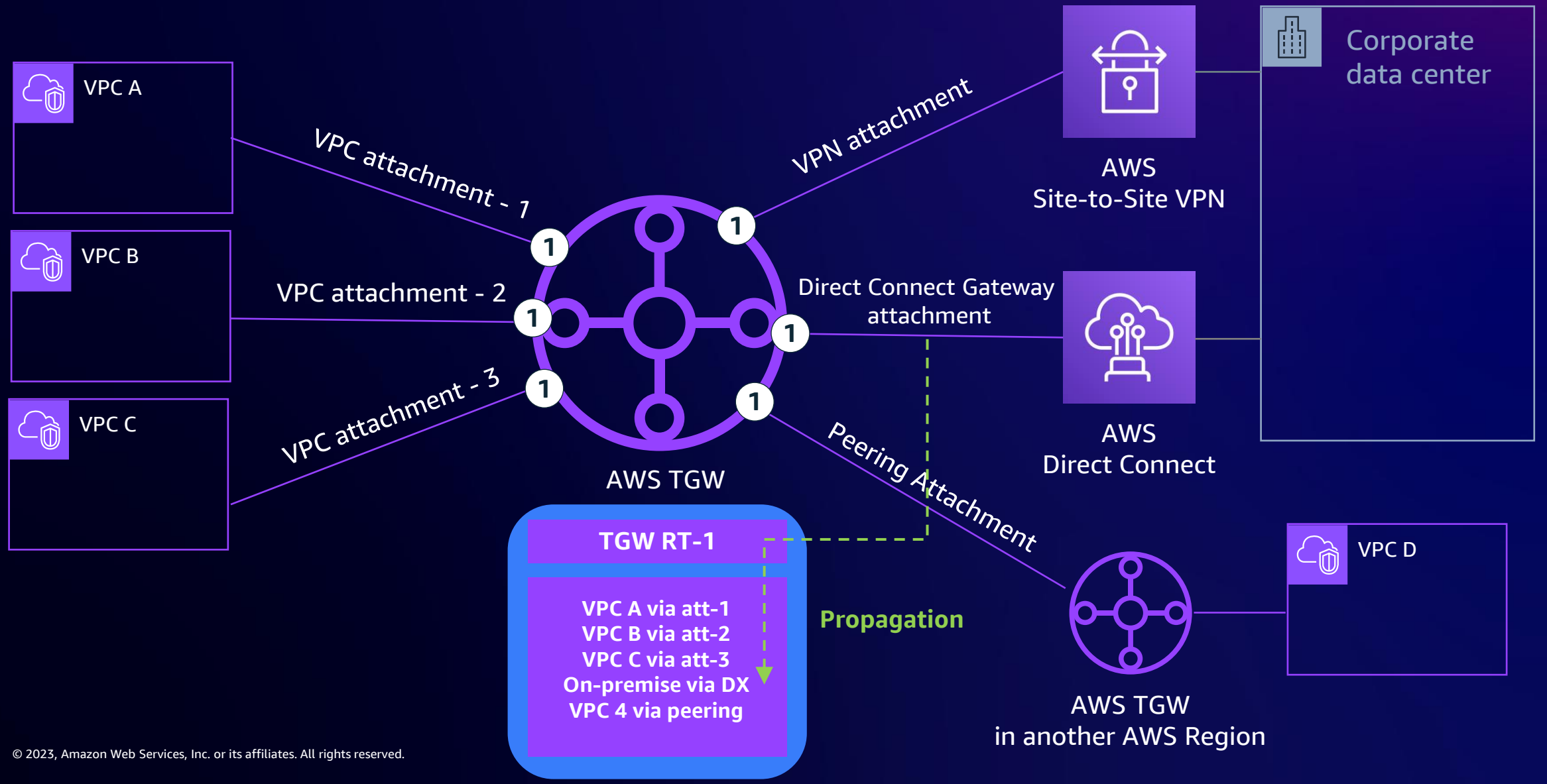
AWS Transit Gateway Routing - Propagation



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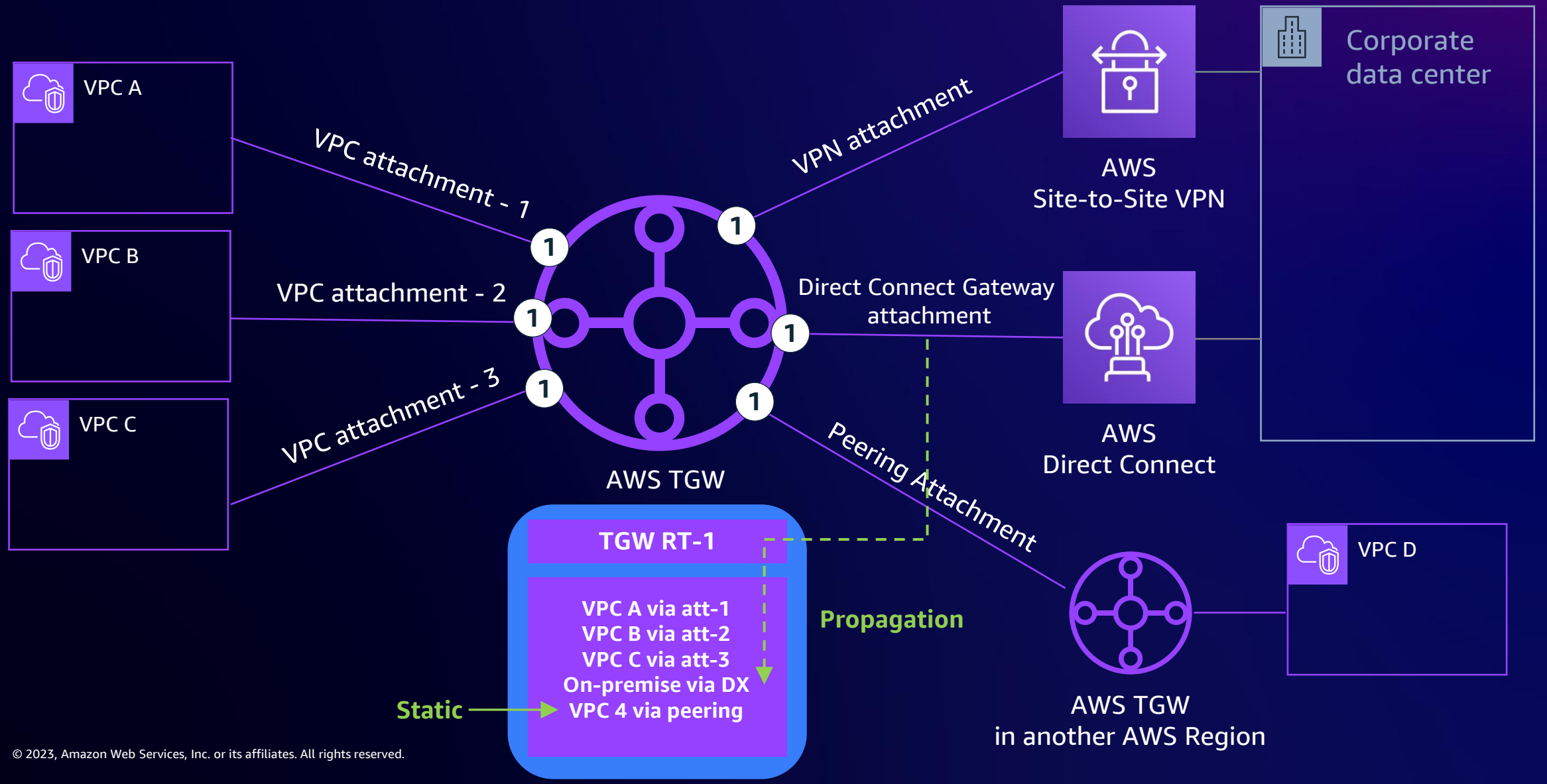
AWS Transit Gateway Routing - Propagation



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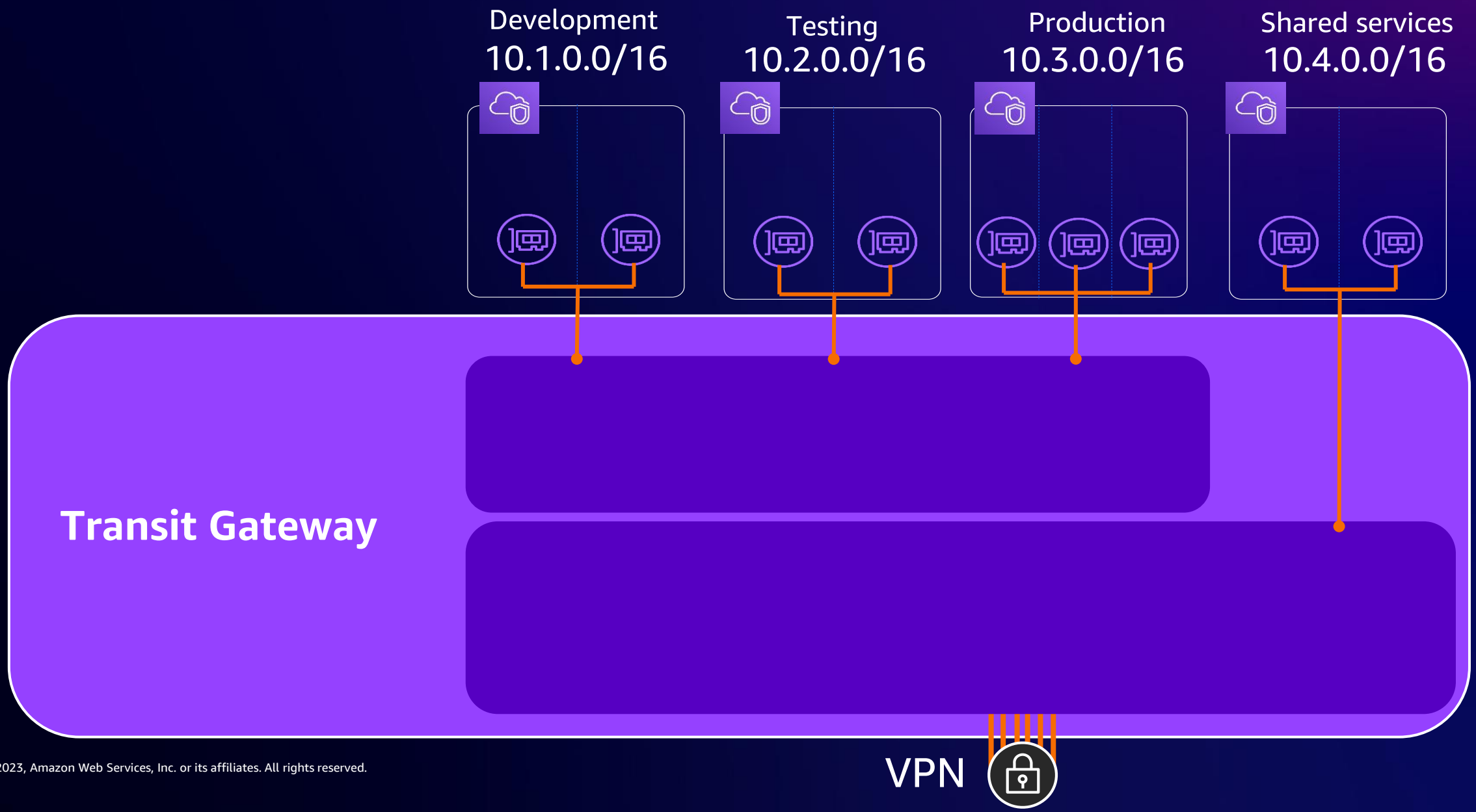
AWS Transit Gateway route table setup



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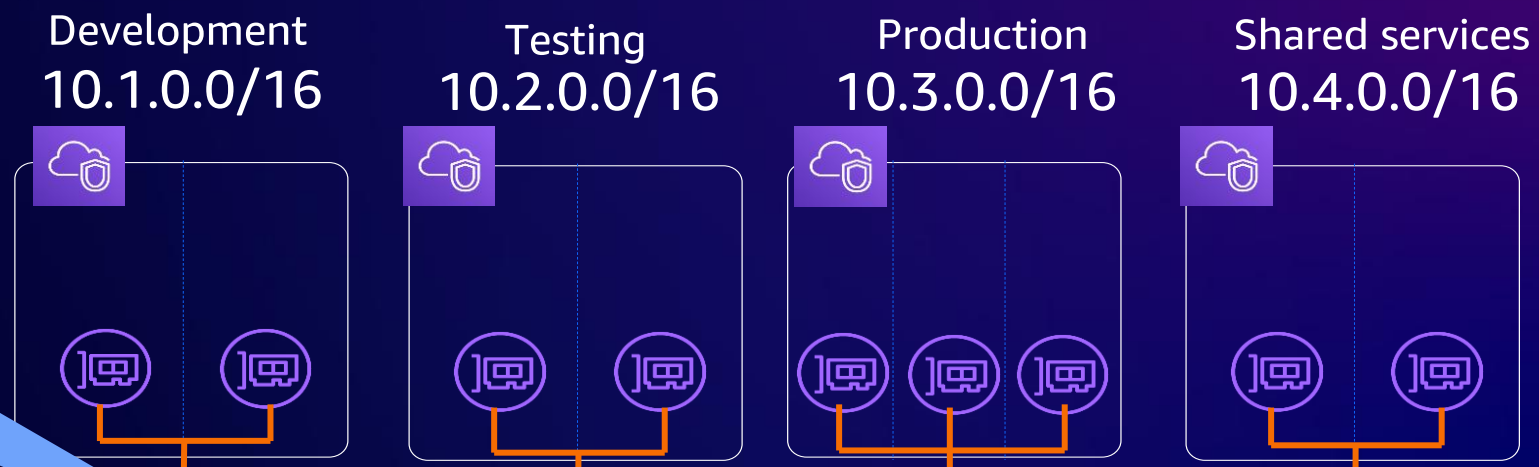
AWS Transit Gateway route table setup

VPN and shared services propagation



Transit Gateway

VPC

Route	Destination
10.0.0.0/8	VPN
10.4.0.0/16	vpc-att-4xxxx

VPN

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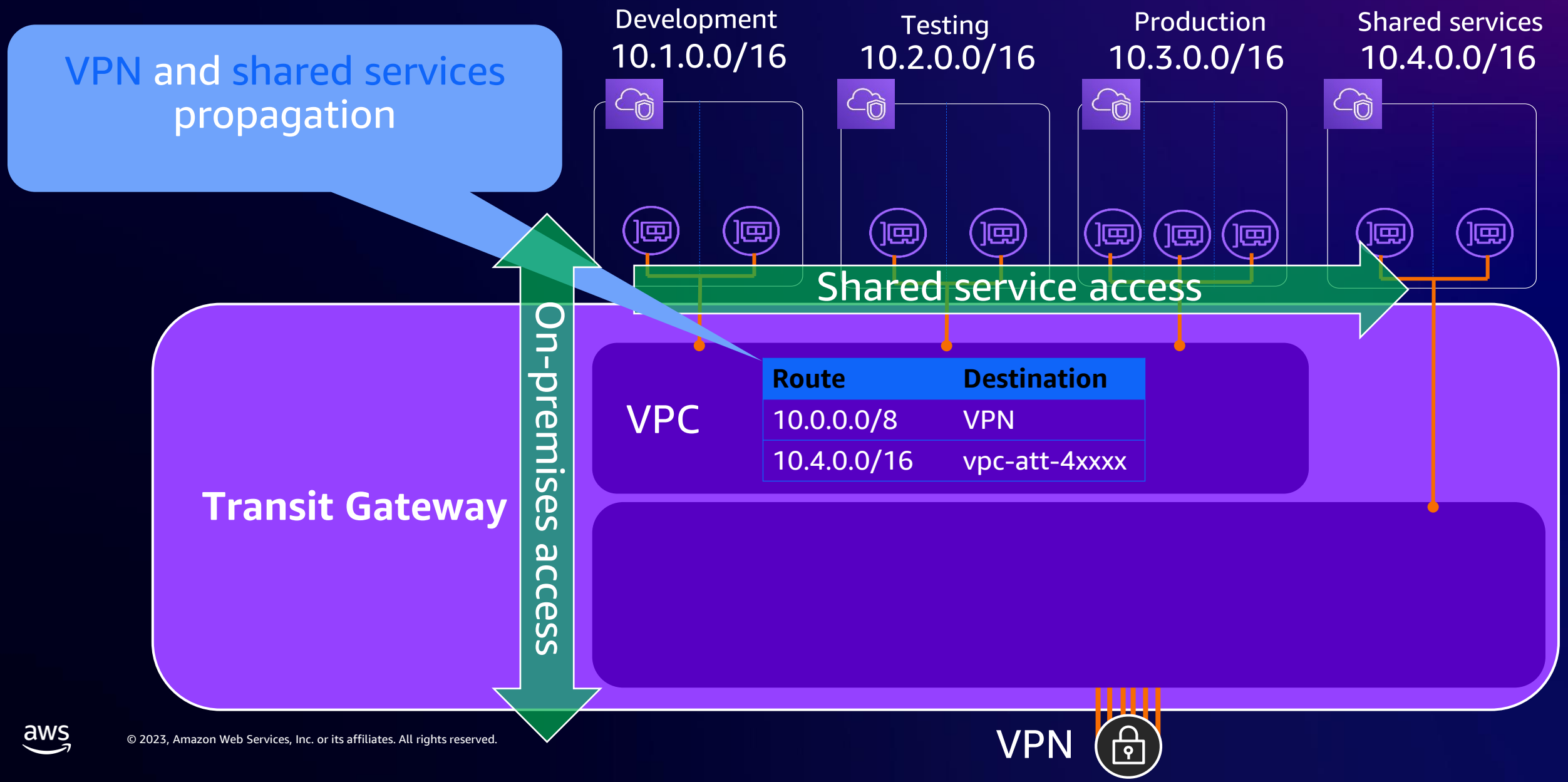
AWS Transit Gateway route table setup



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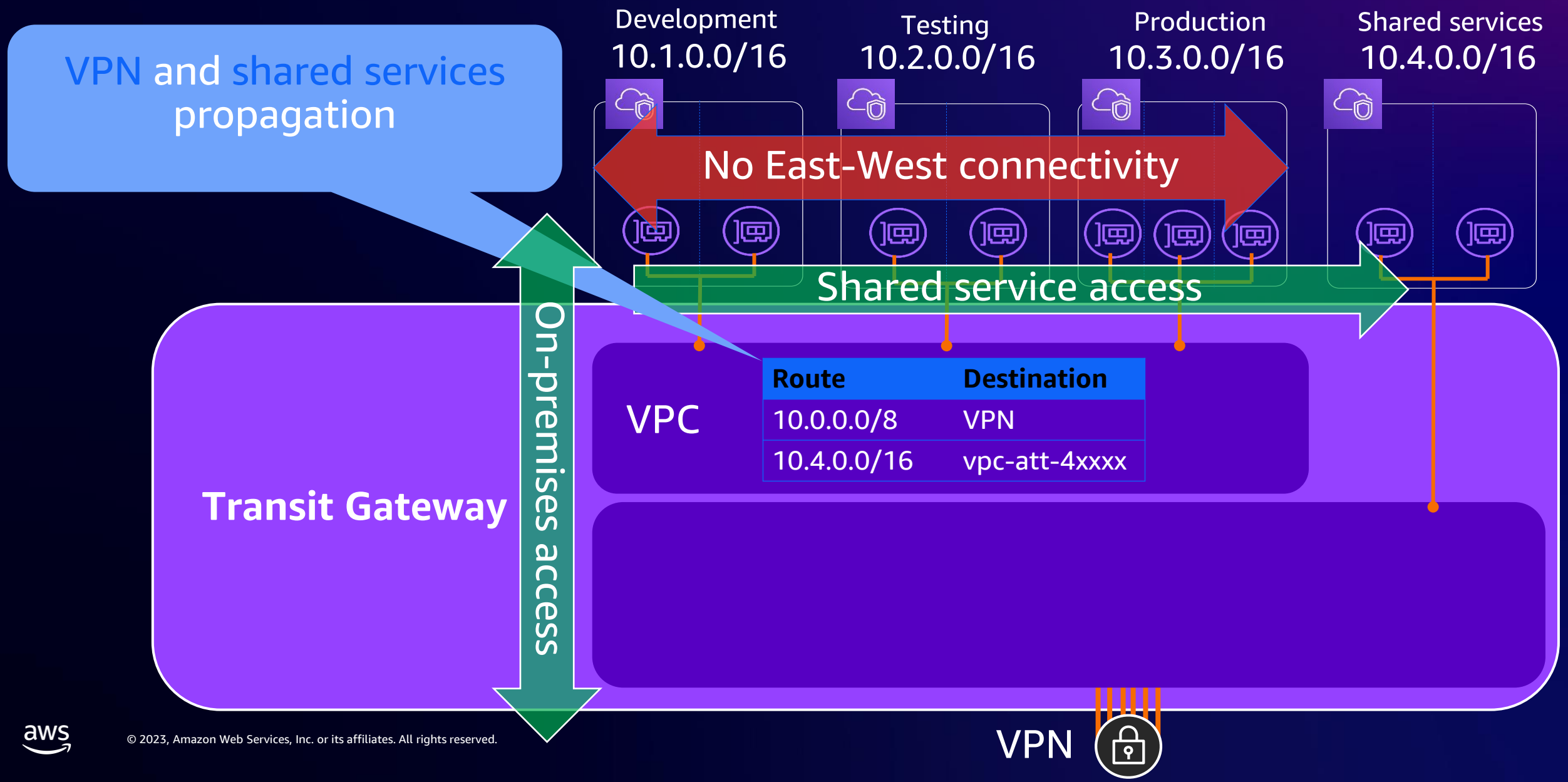
AWS Transit Gateway route table setup



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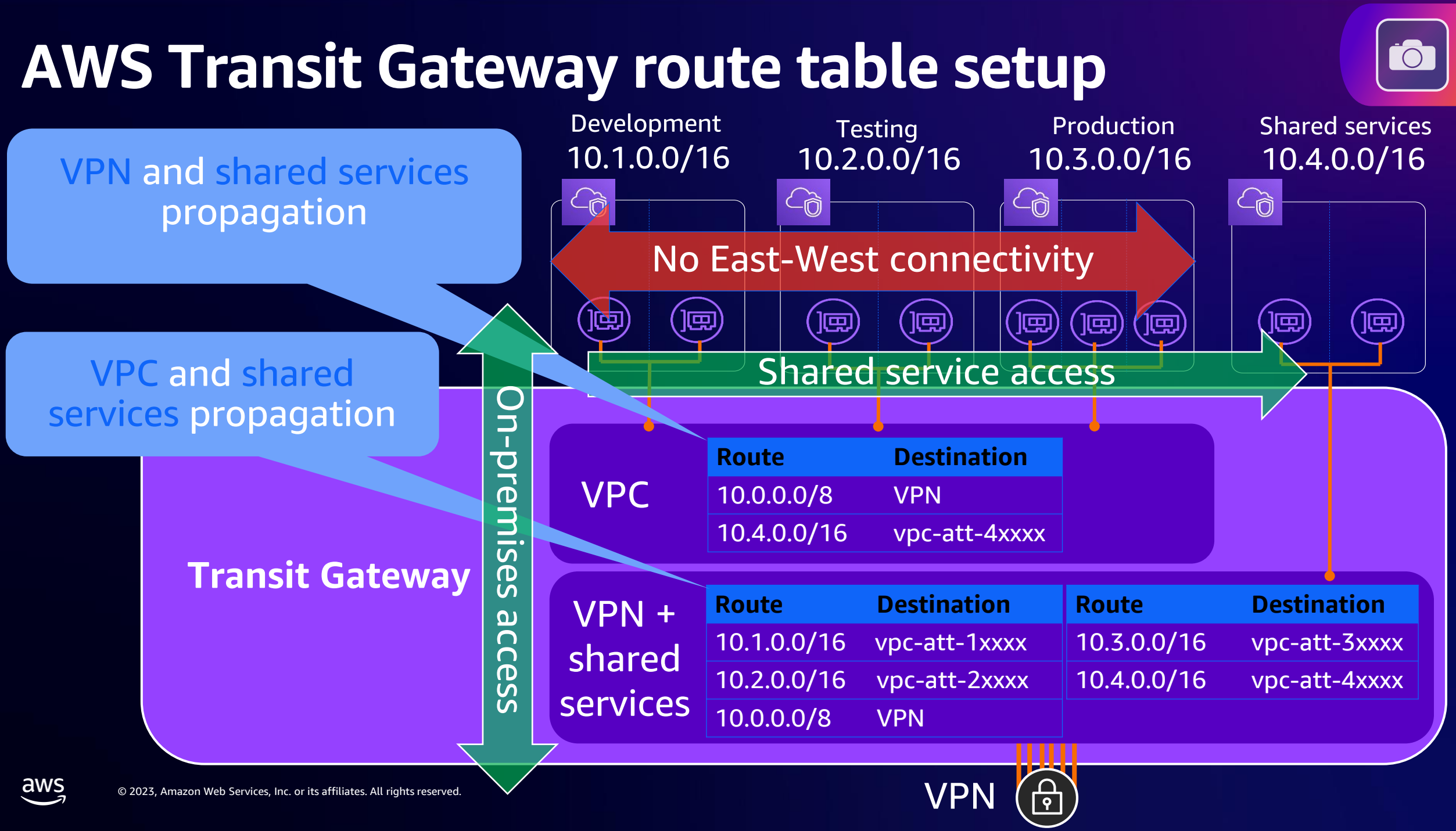
AWS Transit Gateway route table setup



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