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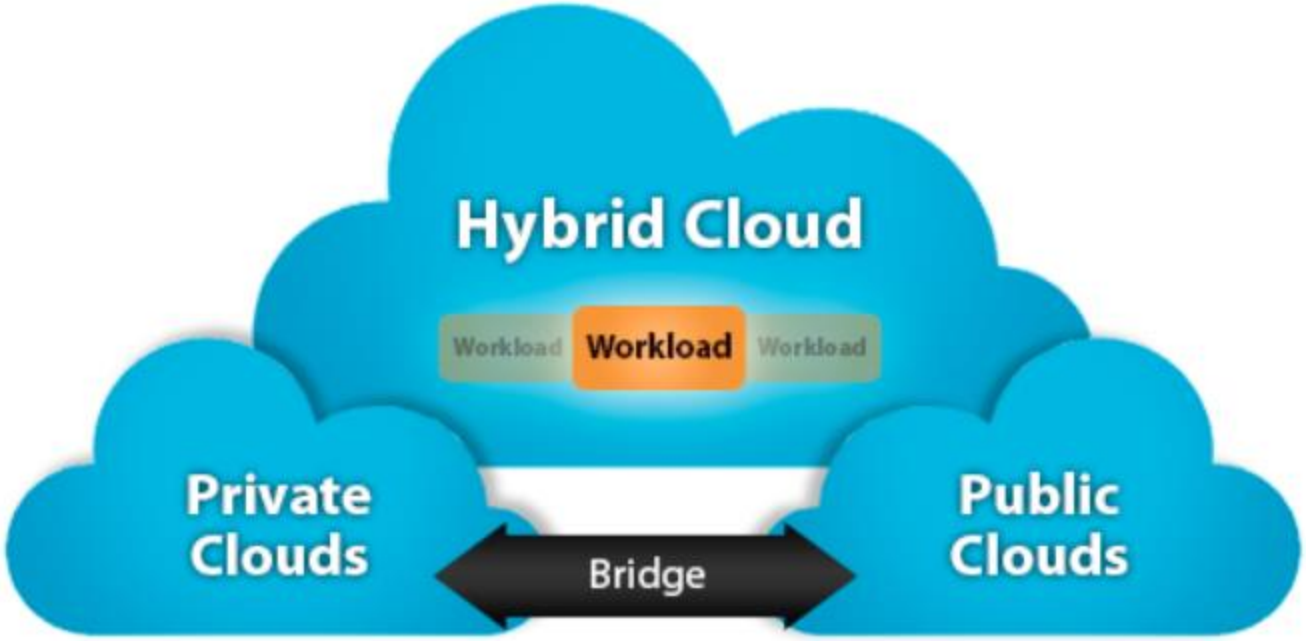
# Aviatrix Secure Edge and Hybrid Cloud Overview

ACE Team

# Need for Hybrid Cloud




The **flexibility to shift workloads** between on-premises and cloud is offered by hybrid cloud.

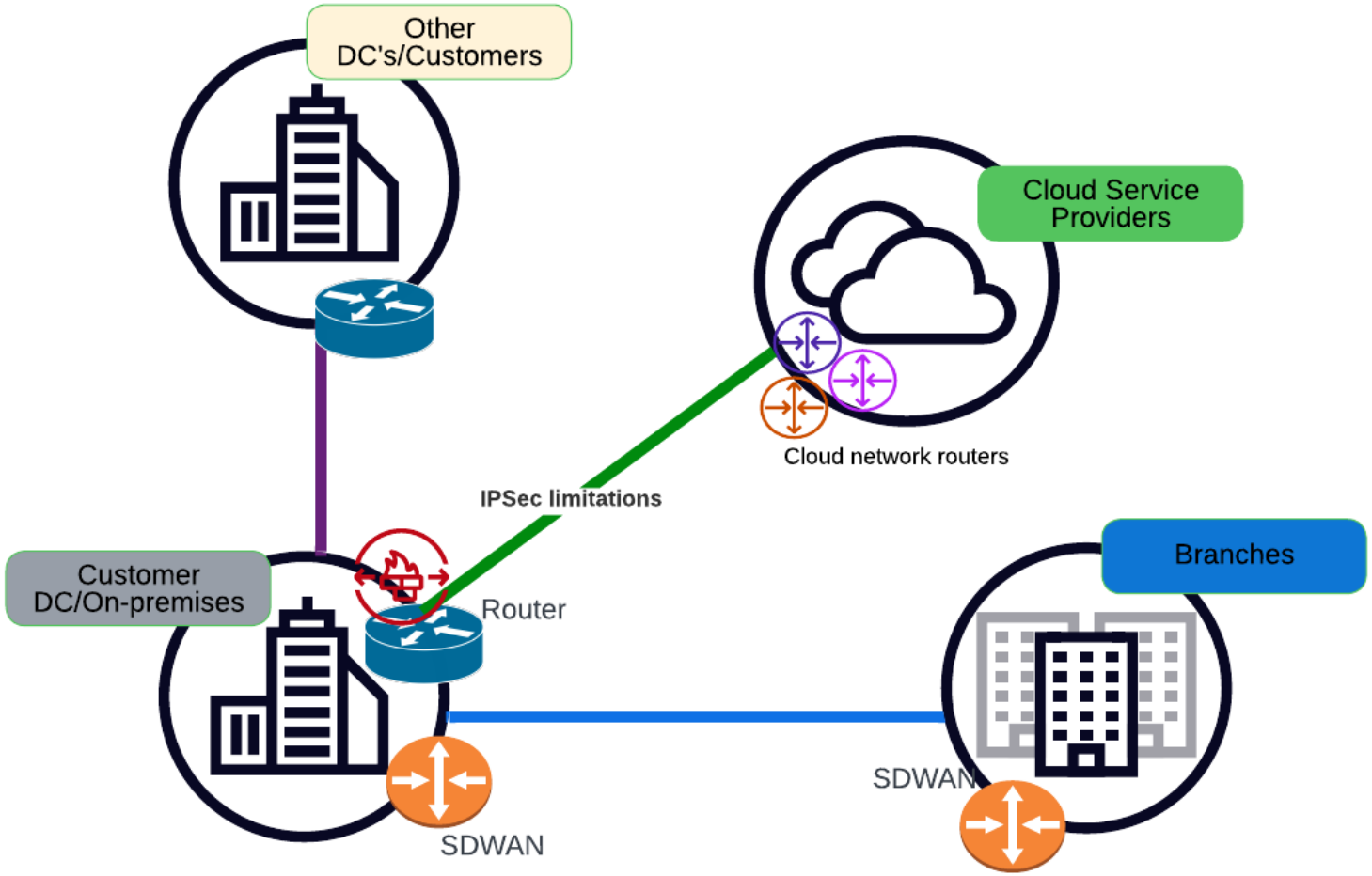
**Cost-effective scaling and resource utilization** are enabled through hybrid cloud.

**Redundancy and disaster recovery** capabilities are provided by hybrid cloud.

Compliance with **data residency requirements** is allowed by hybrid cloud.

A **phased approach to cloud** adoption is enabled by hybrid cloud.

# Problem
# Existing Hybrid and multi-cloud network solution challenges



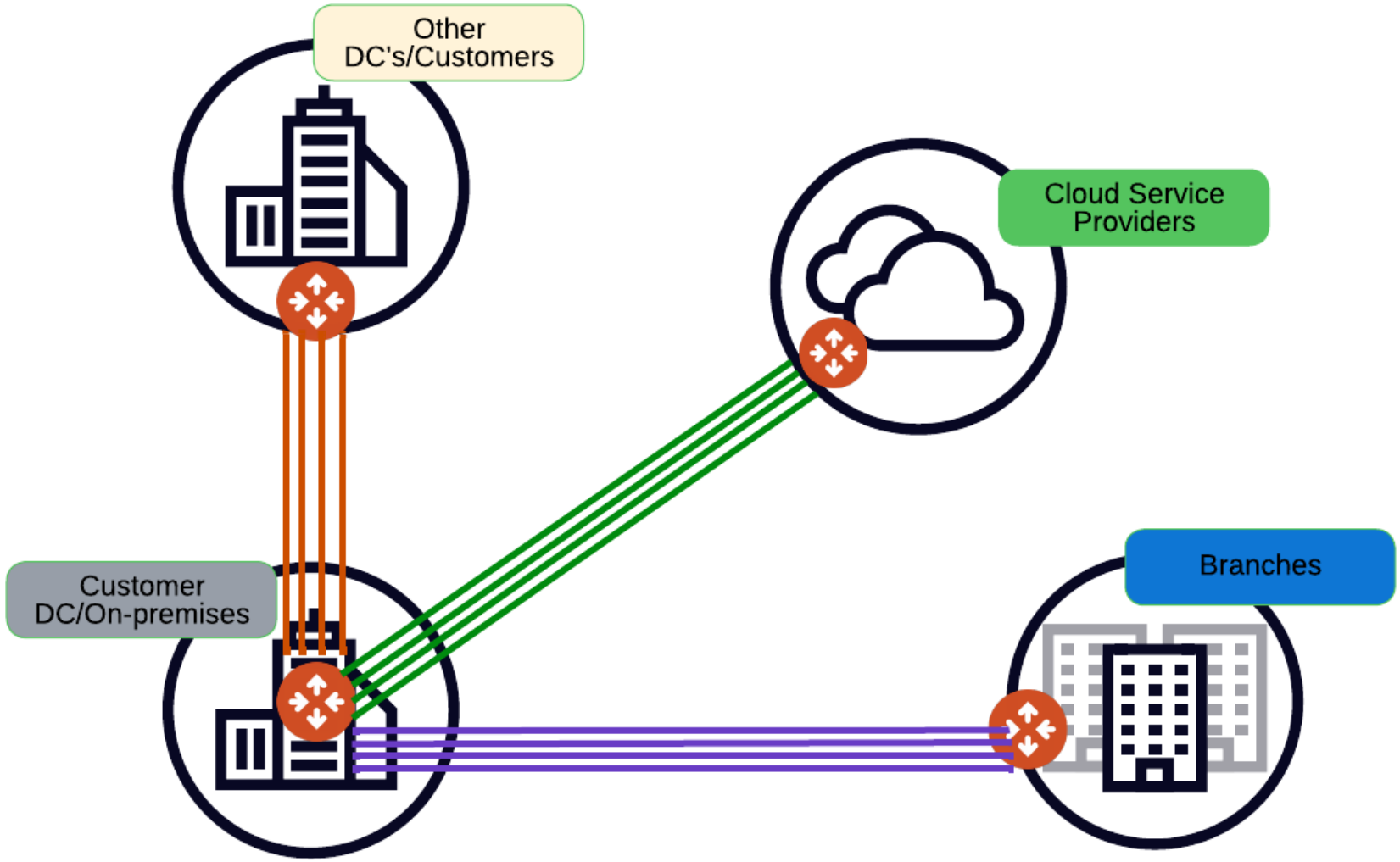

**Performance limitations** due to encryption requirement and disparate network stacks

**Complex Routing and Deployment complexities** connecting applications across Cloud, On-premises and business partner locations

**Operational difficulties** in visibility, troubleshooting, and management

**High costs** of managing hybrid-cloud connectivity manually.

# Solution with Aviatrix Transit Edge – Secure high performance hybrid cloud solution




Provides **high-performance encrypted connectivity** for hybrid cloud deployments.

Integrates with **Equinix and Megaport** for on-demand interconnectivity.

Utilizes **cloud-native transit gateways** features like dynamic routing and active mesh resiliency.

Enhances **visibility** with real-time network insights and seamless integration with enterprise tools

Automates deployments via **Terraform** and CI/CD pipelines, reducing operational complexity.

# Aviatrix Secure High-Performance Datacenter Edge

## *Problem*

Companies are increasingly using cloud environments, but they still need to connect their data centers to the cloud.

- Traditional methods force you to choose between high-speed connections and secure connections.
- Setting up and managing these connections can be complex and time-consuming.
- You may not have good visibility into how your network is performing.

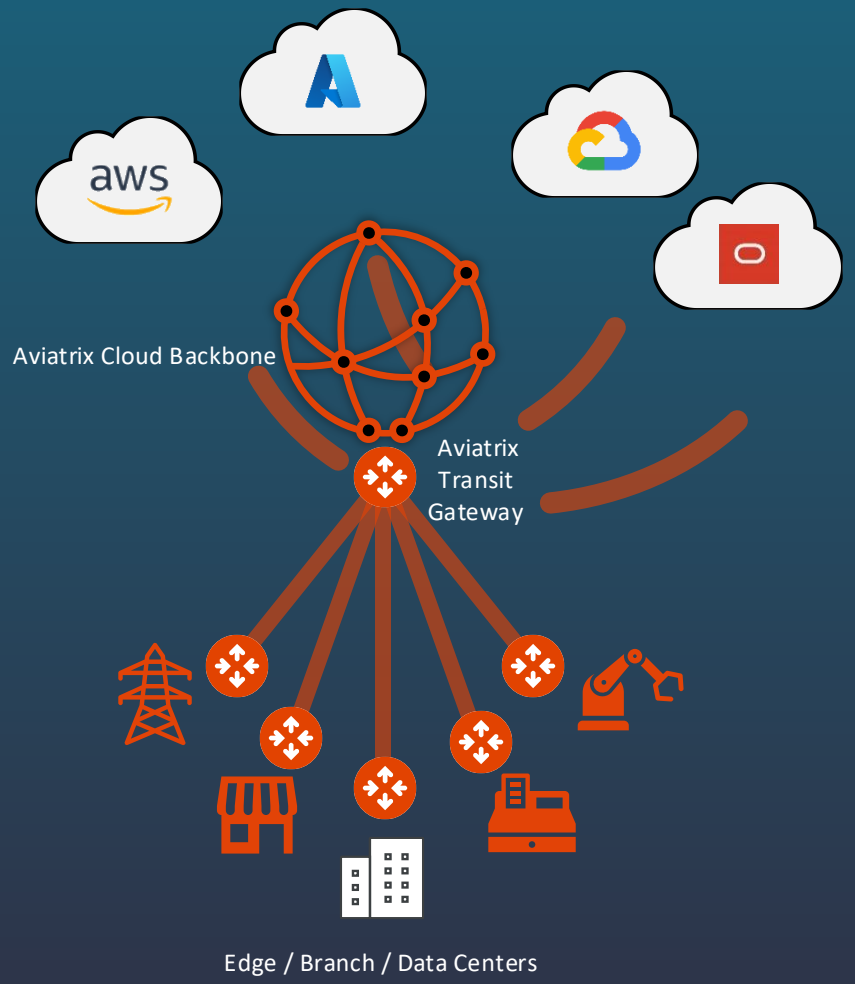
## *Solution using Aviatrix*

- **Line-rate encryption:** Keeps your data safe while moving it between your data center and the cloud at super-fast speeds.
- **Centralized control:** Makes it easy to manage and troubleshoot your connections from a single place.
- **Advanced features:** Provides things like dynamic routing, network segmentation, and support for multiple cloud providers.

## *Business Benefits*

- **Protect sensitive data:** Safeguard critical customer information with end-to-end encryption.
- **Disaster recovery:** Ensures you can still access critical data and systems if there's a problem.
- **Faster cloud migrations:** Makes it easier and faster to move your applications and data to the cloud.
- **Support for edge computing:** Provides the foundation for connecting remote locations and processing data closer to where it's generated.
- **Securely connect to partners:** Enables secure data exchange with your business partners.

# Aviatrix Secure Edge

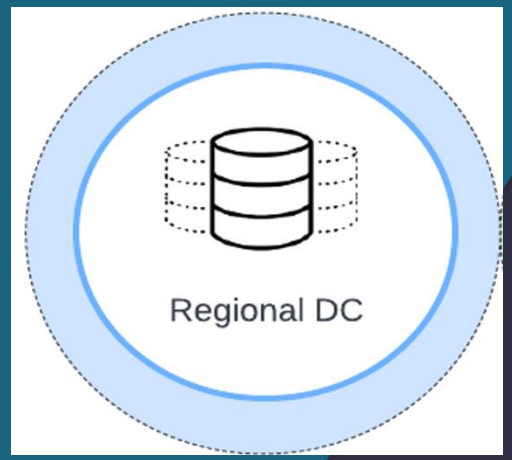



- Extends the cloud operational model to the edge
- Designed for Multi-cloud connectivity
- Single unified control and management plane
- Encrypt high-speed circuits at line-rate with High Performance Encryption
- Secure edge with distributed firewall and network segmentation
- Provides deep traffic visibility and granular controls for edge locations
- Remote orchestration of edge hardware and software with full lifecycle management.
- High-Availability Edge Gateways for failover.
- Flexible form factors to support data center high throughput needs.

## Use- Cases Examples:

| | | | | |
|---|---|---|---|---|
| **Secure High-Performance Data Center Edge** | **Secure M&A Connectivity and Onboarding** | **Secure High-Performance Data Connectivity for LLM** | **Zero Trust Network Access** | **Cloud Visibility and Tooling** |

# Aviatrix Secure Edge locations






## Regional Data Centers

Server infrastructure in customer data centers. Mixed workloads which some continue to reside in DCs. These workloads also require access to and from cloud.

## Office/branch locations

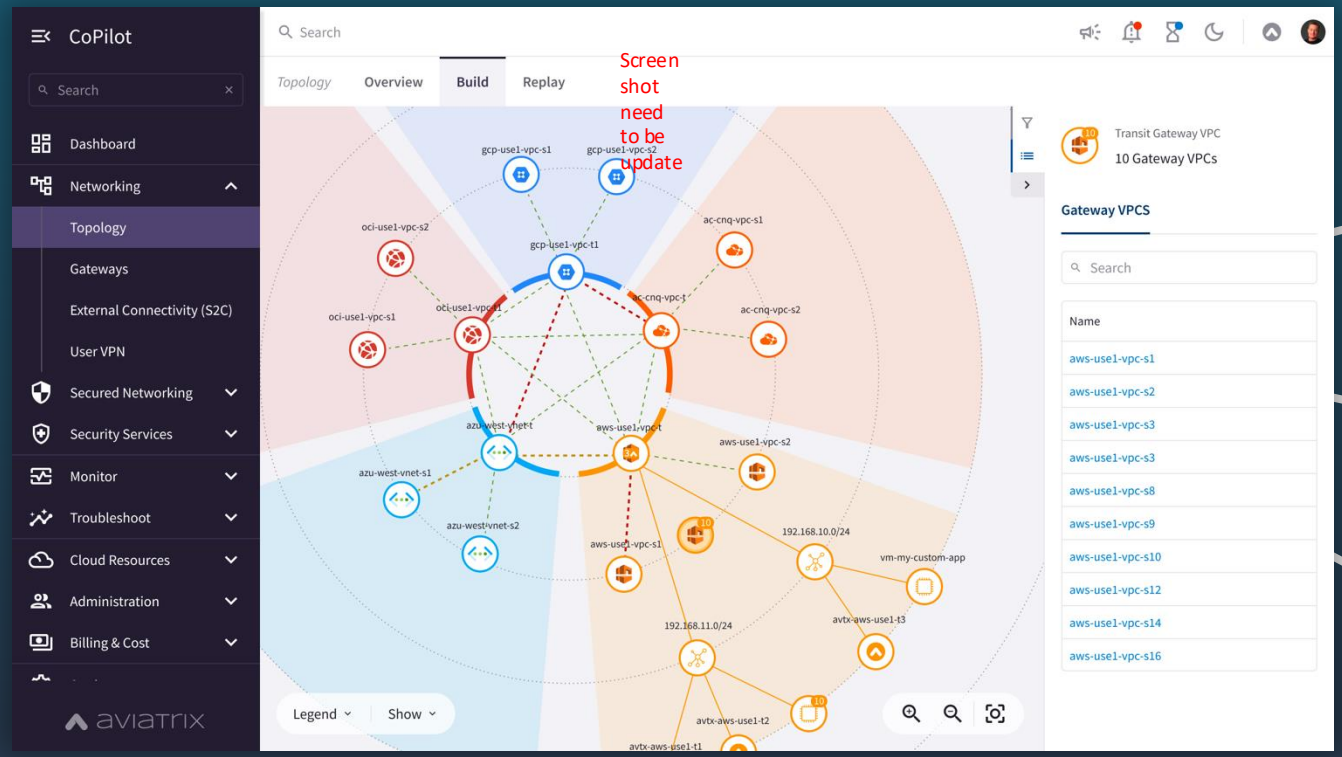
Access to workloads from cloud

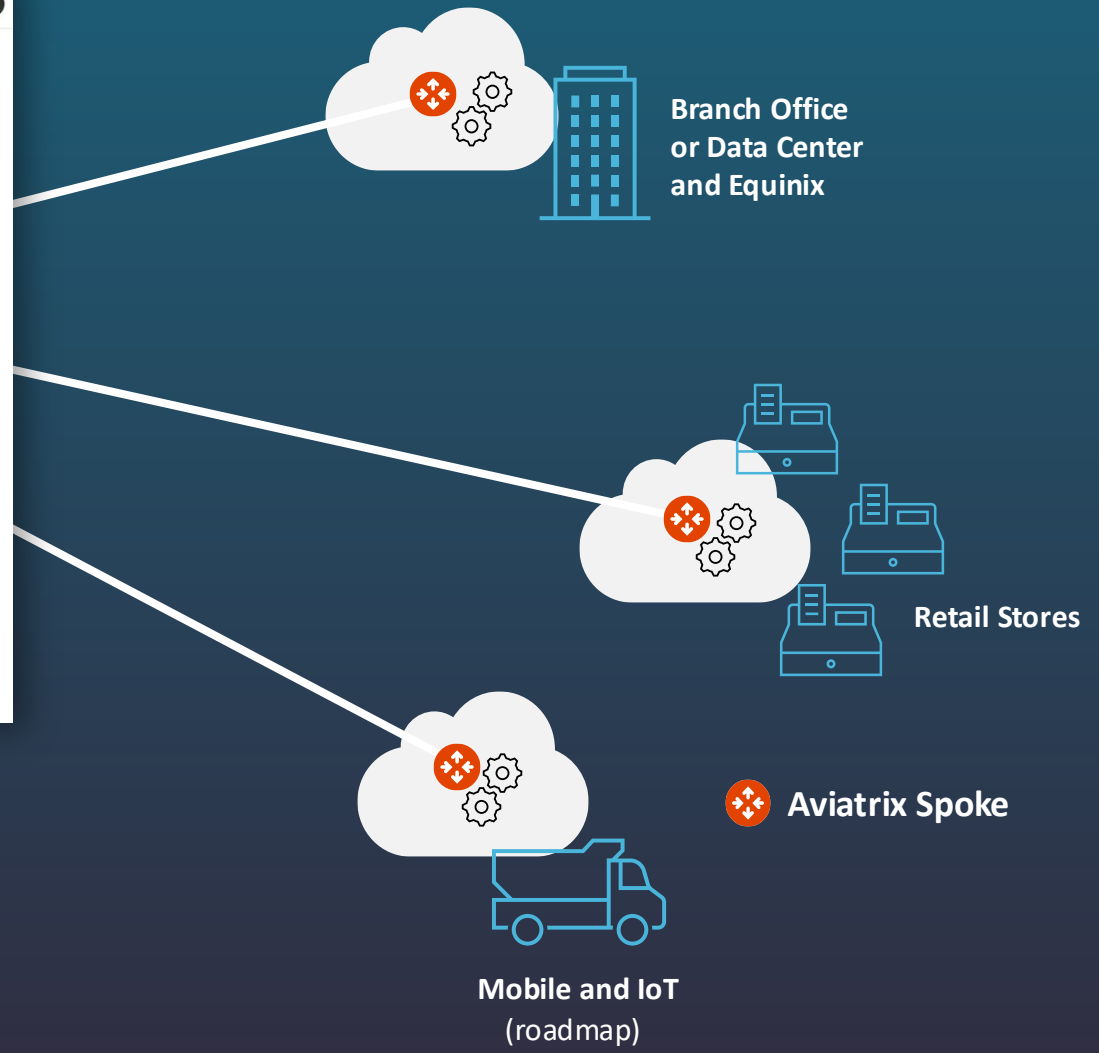
- Partner locations –SaaS hosted applications
- Enterprise branch/office locations

## Mid Mile Providers

Hosted infrastructure and VNF providers where customers aggregate the network connections and use private connectivity to cloud

# Extend Cloud to the Edge




- **Extend the Cloud Operational Model to the Edge**
- **Manage Your Edge Like a VPC or VNet**
- **Infrastructure as Code Automation**

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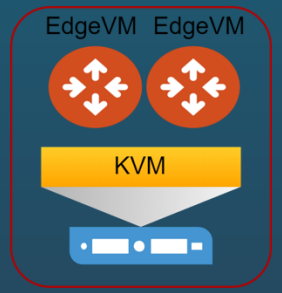
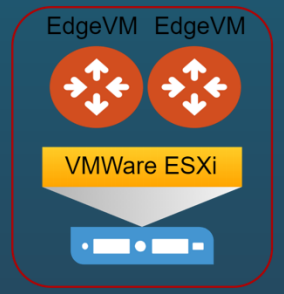
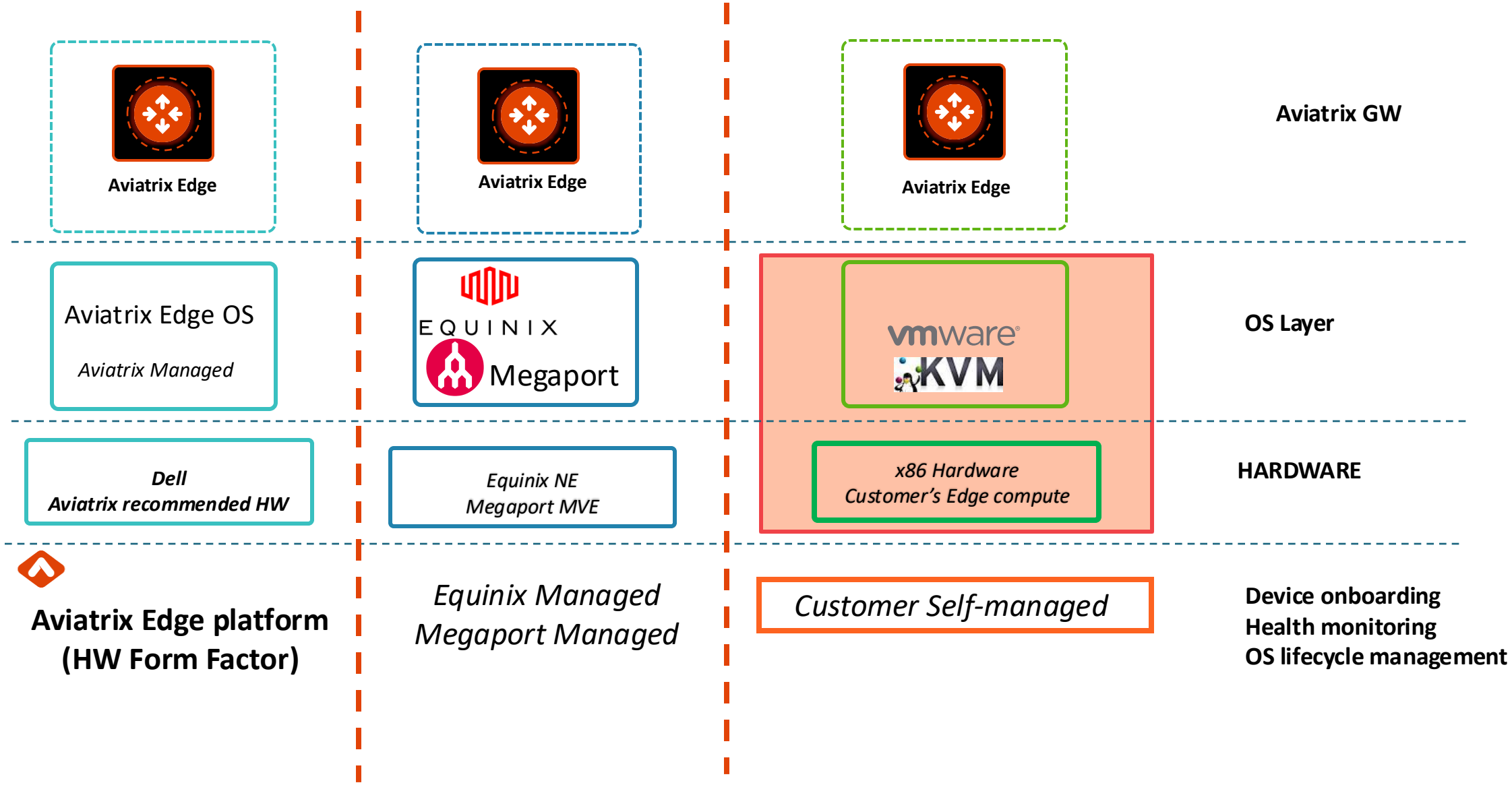
# Aviatrix Secure Edge

- **Edge Platform Deployment Options**
  - **Aviatrix Edge Platform (AEP as HW Form Factor)**
  - **Equinix Network Edge**
  - **Megaport Virtual Edge**
  - **Self Managed on your own location**
- **Virtual Formfactor**
  - ESXi
  - KVM
  - Upto ~10G Throughput
- **Hardware Formfactor (Edge Platform)**
  - For Enterprise DC/Colo (Dell Power Edge R450)
- **Single Terraform Provider**
  - Multicloud Networking Software (MCNS)




# Aviatrix Edge – Enabled platforms



# Aviatrix Edge Flavors

## Edge as Transit (EaT)

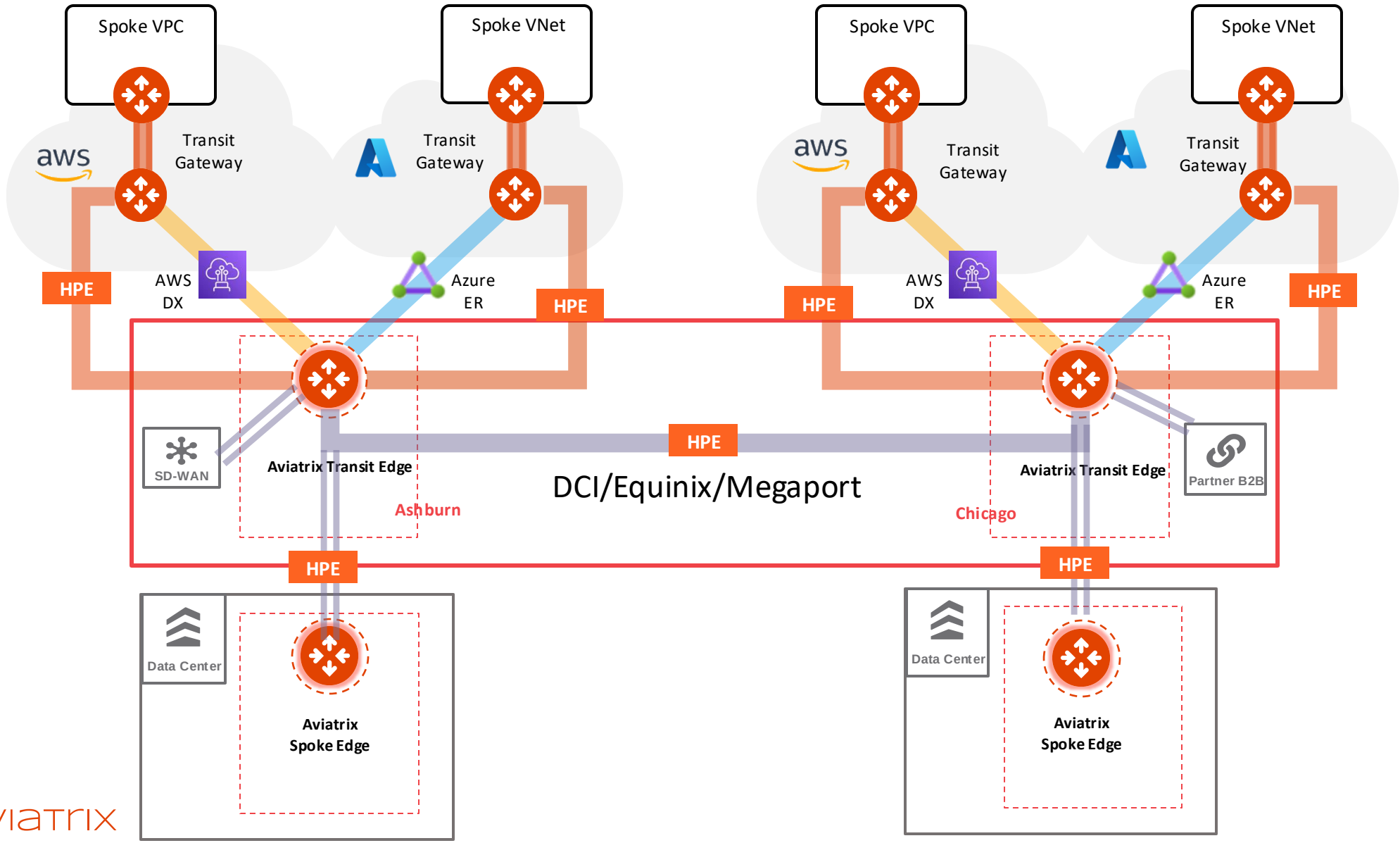
- Has LAN, WAN and Management Interfaces
- Similar to Aviatrix Spoke Gateway on CSP
- Can Peer to Aviatrix Transit Gateway on CSP or Other EaT.
- Only EaS can attach to EaT
- DCF for Site2Cloud connections.
- Deployed centrally within the Hybrid-cloud infrastructure
- Revolve around integrating remote sites and on-premises resources with cloud environments

## Edge as Spoke (EaS)

- Has  WAN and Management Interfaces.
- Similar to Aviatrix Transit Gateway on CSP.
- Can attach to Aviatrix Transit Gateway on CSP or EaT.
- Support Local Internet Breakout
- DCF Functionality
- Support Vlan connectivity with multiple Vlan interfaces with VRRP support
- Typically deployed at branch offices, remote sites, or data centers.
- involve connecting and managing traffic in multi-cloud or inter-region architectures

# Aviatrix Hybrid Cloud Networking

Seamless and Secure hybrid cloud networking at distributed edge and mid-mile locations.

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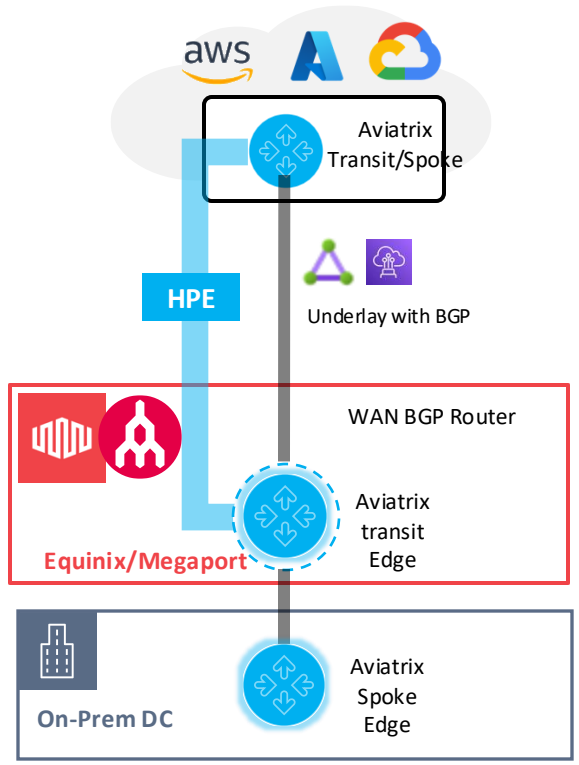
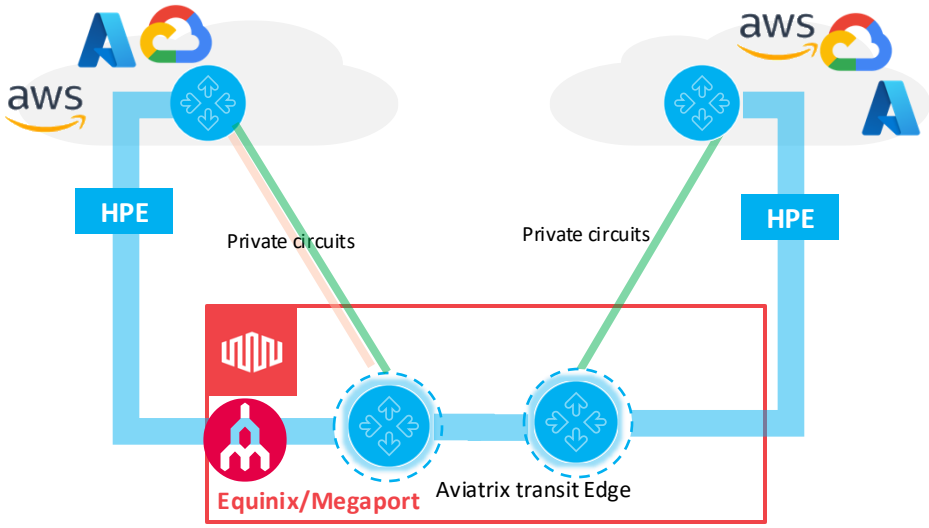
# Aviatrix Edge as Transit with MidMile Providers

Deploy as virtual service- No hardware requirement

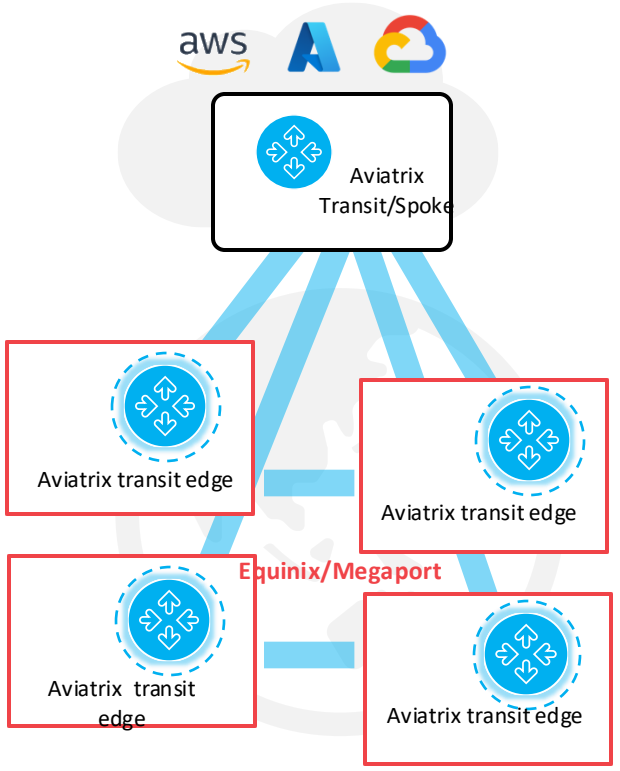
**Hybrid Connectivity**
**for End-to-End Encryption and reduced complexity**




**Multi-Cloud Connectivity**




**Expand Cloud Networking Globally**

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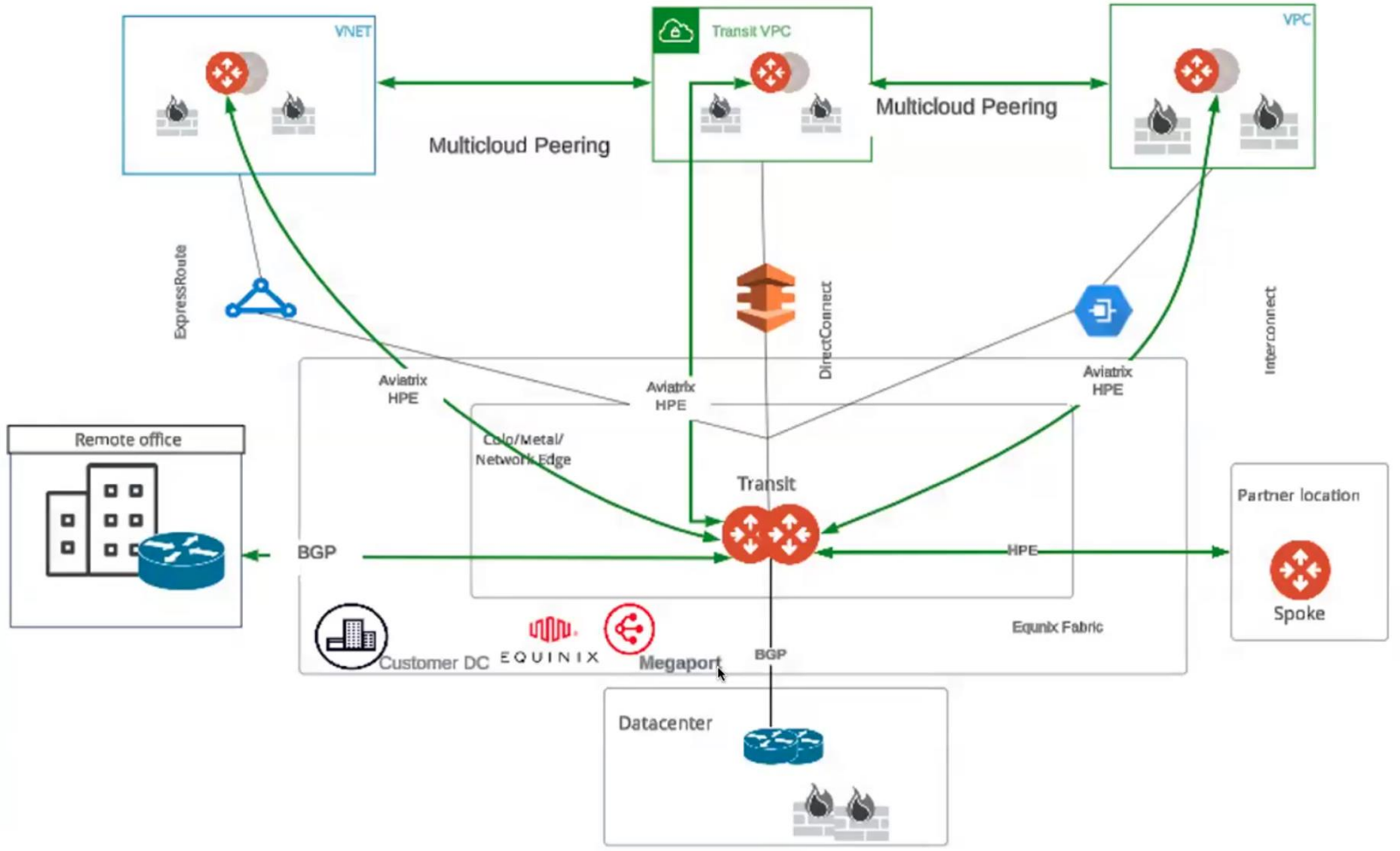
# Aviatrix Edge as Transit(EaT) with Site-2-Cloud (S2C)



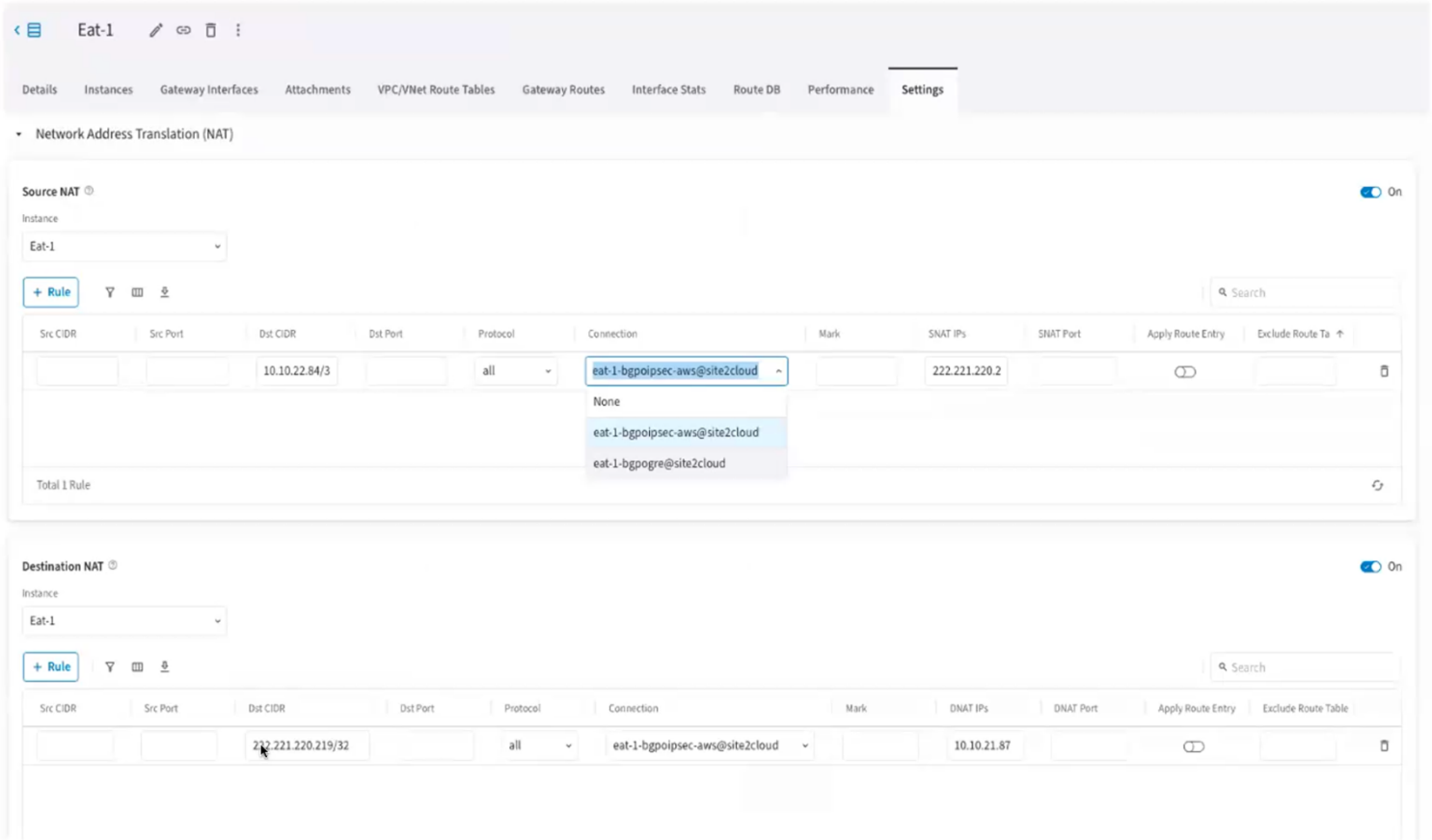

**S2C - BGPoIPSec, BGPoGRE (GA)**

**S2C- Static Routing (Preview)**

# Aviatrix Edge as Transit(EaT) with Site-2-Cloud (S2C)

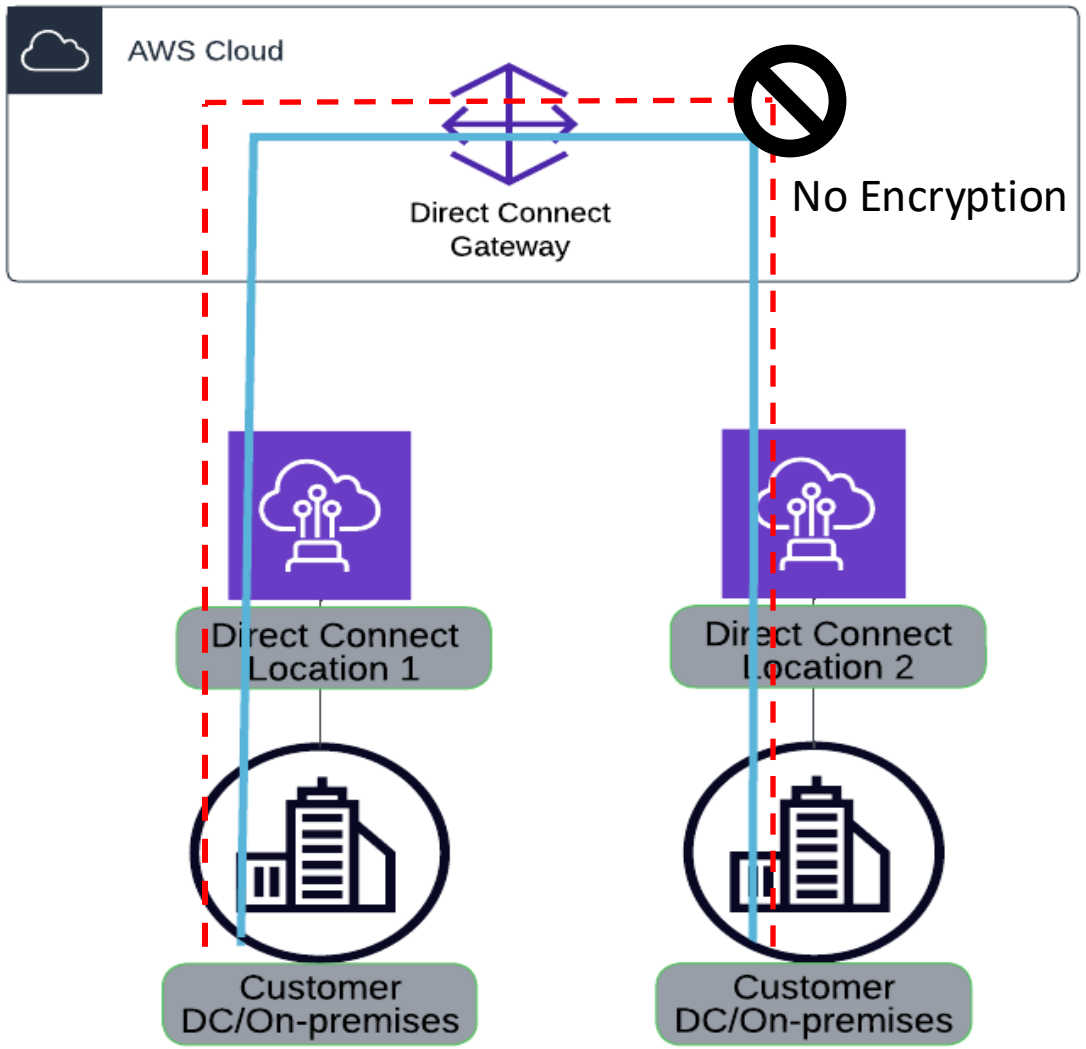
## Config (NAT for S2C connections on EaT)

SNAT/DNAT for these S2C connections on EaT are supported.

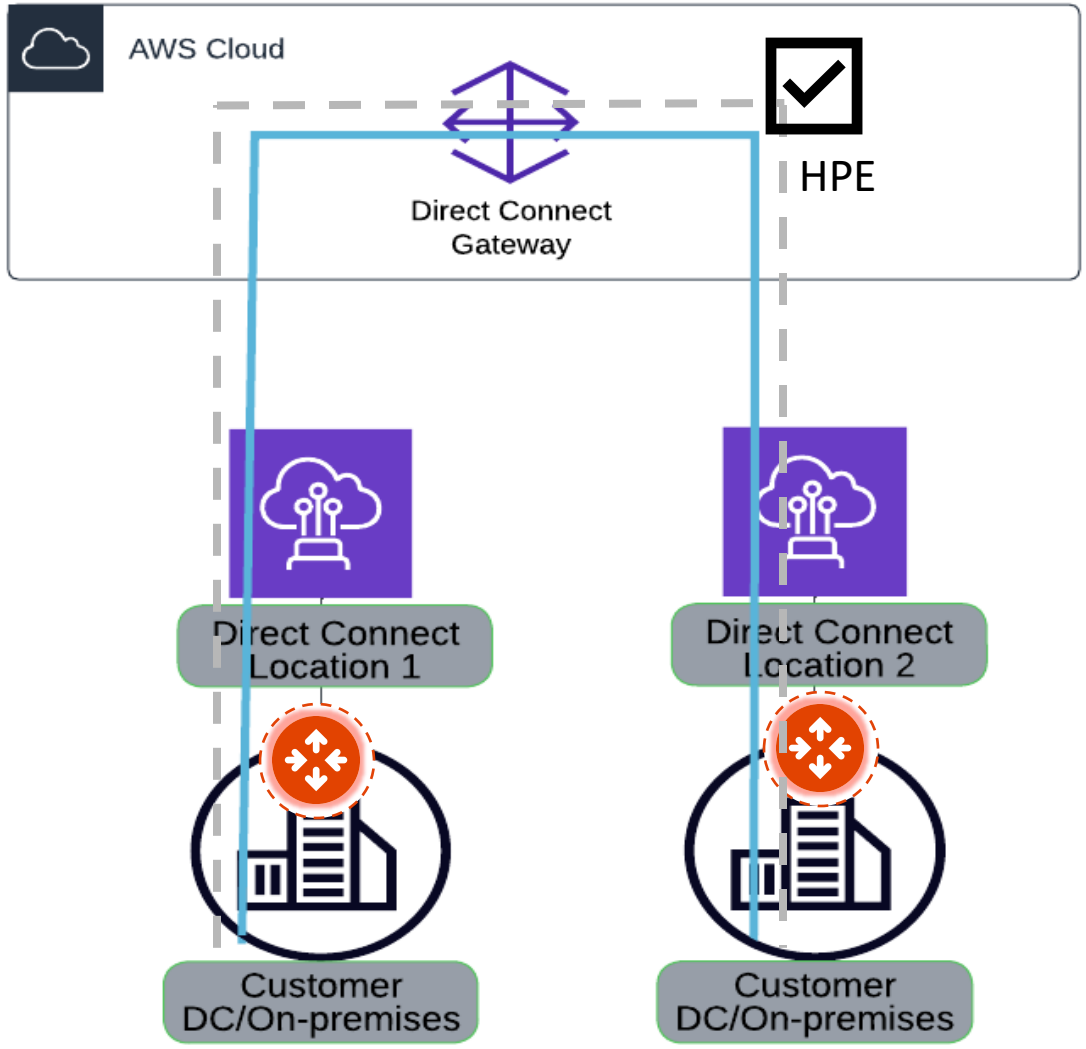


# AWS site link use case

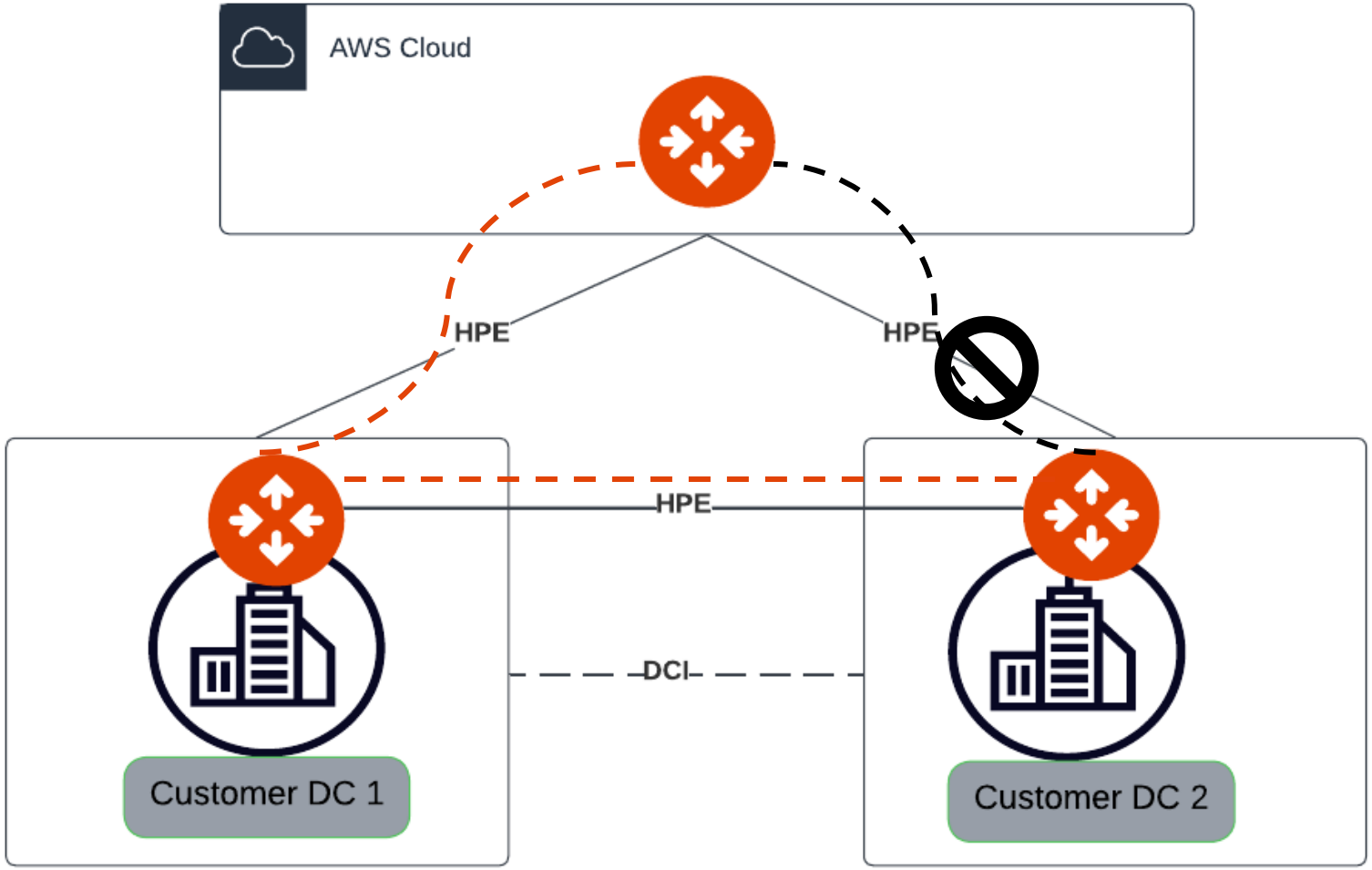
Before




After



# Aviatrix Edge-DC overlay use case

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