



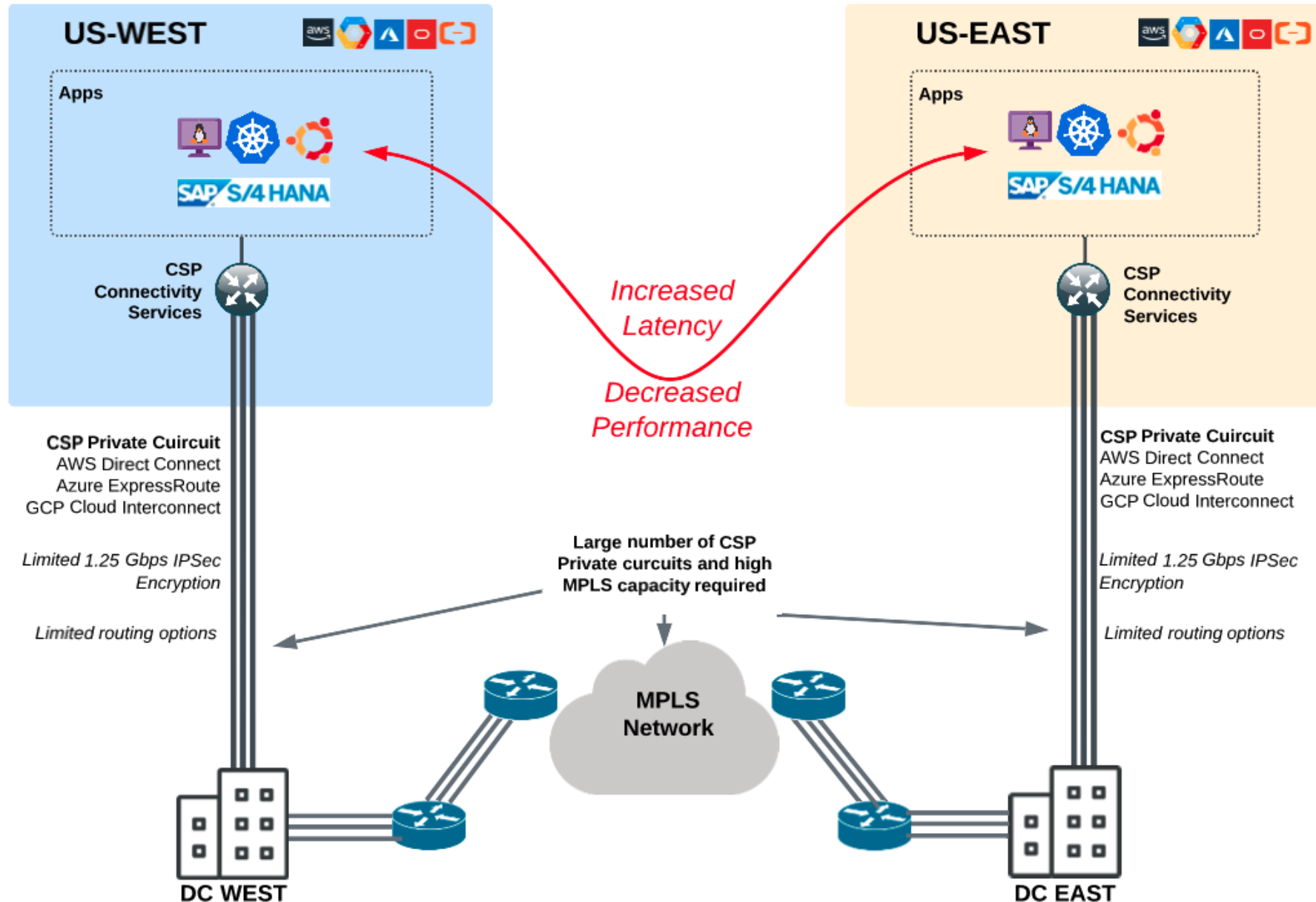
Cloud Backbone

ACE Team



Existing Backbone Solution (Issues)

Existing Backbone using expensive on-prem-private circuits and MPLS Backbone



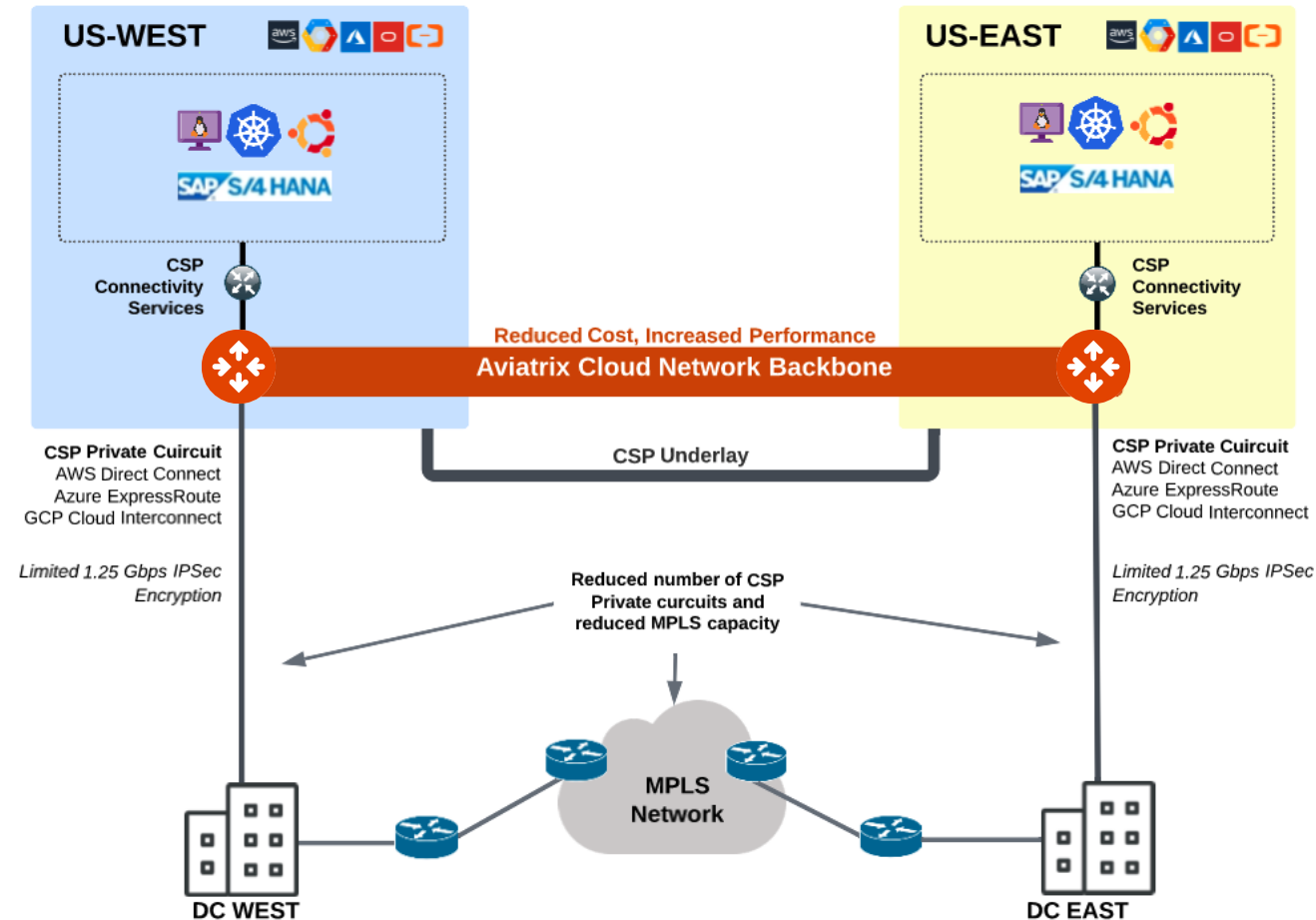


Aviatrix Backbone Use Cases

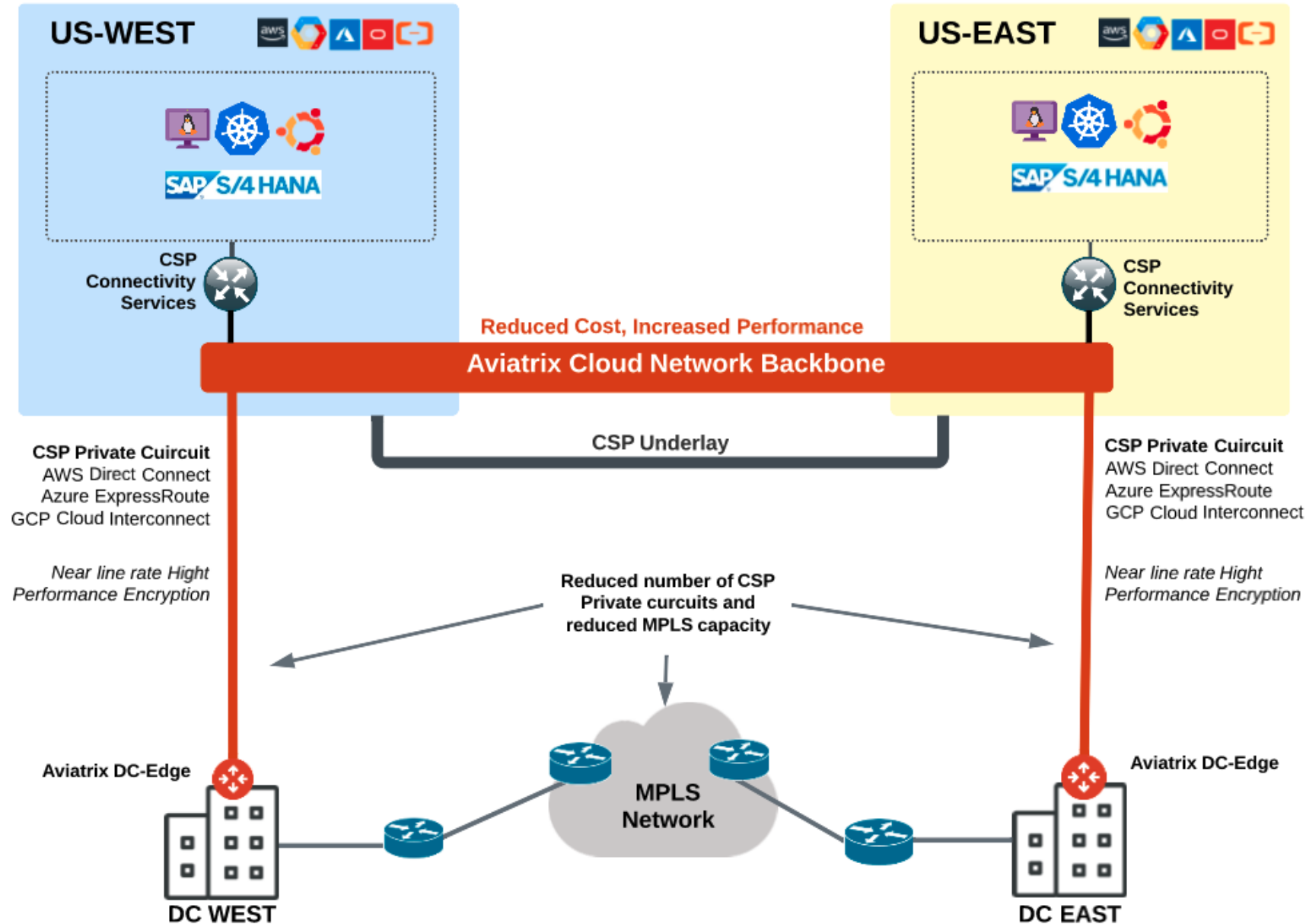
Aviatrix Backbone Use-Cases

- Aviatrix Backbone to CSP Native Transit (AWS TGW, Azure vWAN, etc.)
- Aviatrix Backbone to Aviatrix Spoke Gateways in CSP VPC/VNET
- Aviatrix Backbone to Edge Locations (Hybrid Connectivity)
 - To Data Center/Colo without Aviatrix Edge
 - To Data Center/Colo with Aviatrix Edge
- Fully Integrated Aviatrix Solution
- Aviatrix Backbone for Centralized Internet Egress using the Aviatrix Cloud Firewall
- Aviatrix Backbone for Centralized Firewall Service Insertion

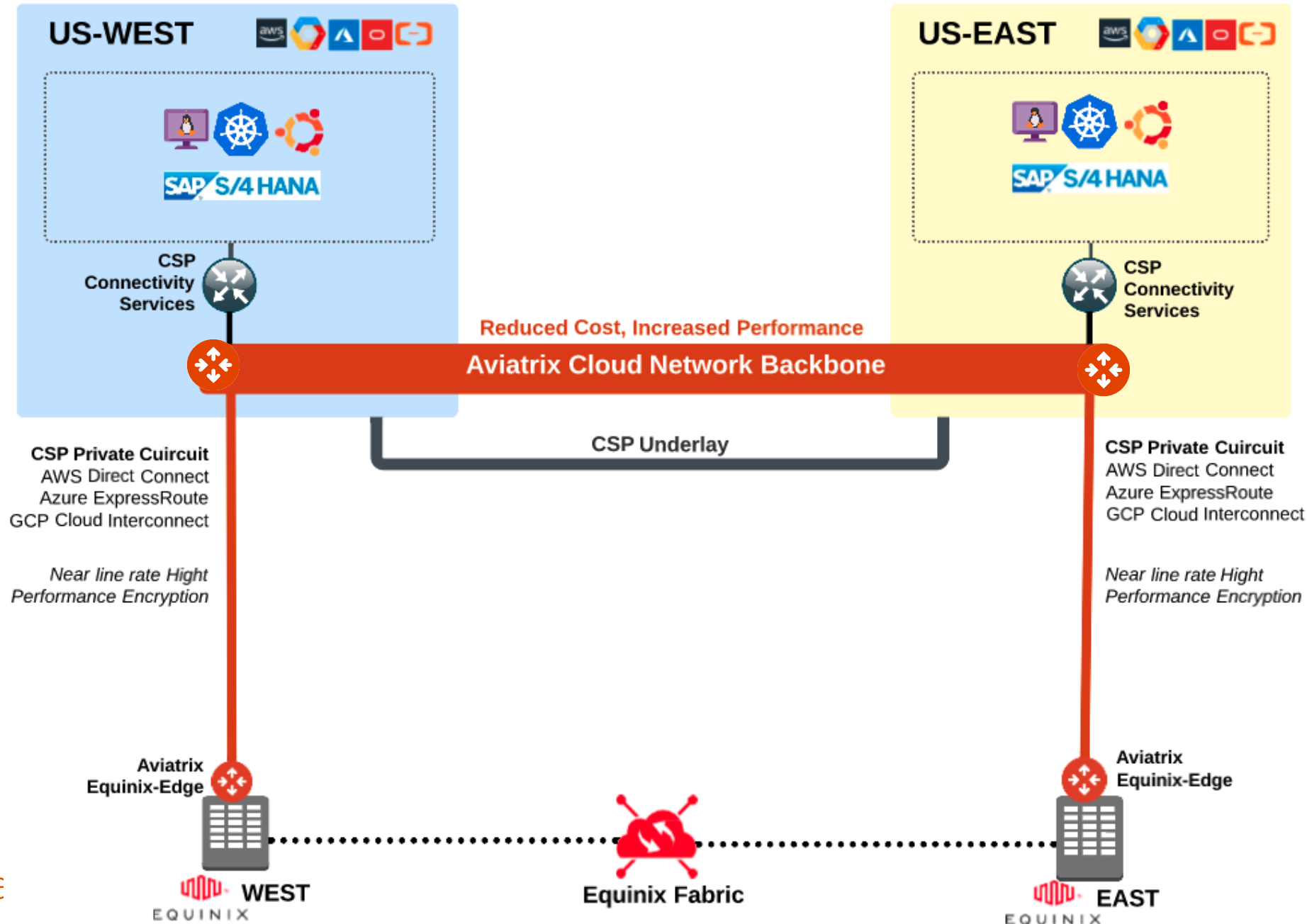
Cloud Backbone with Aviatrix Leveraging CSP Underlay



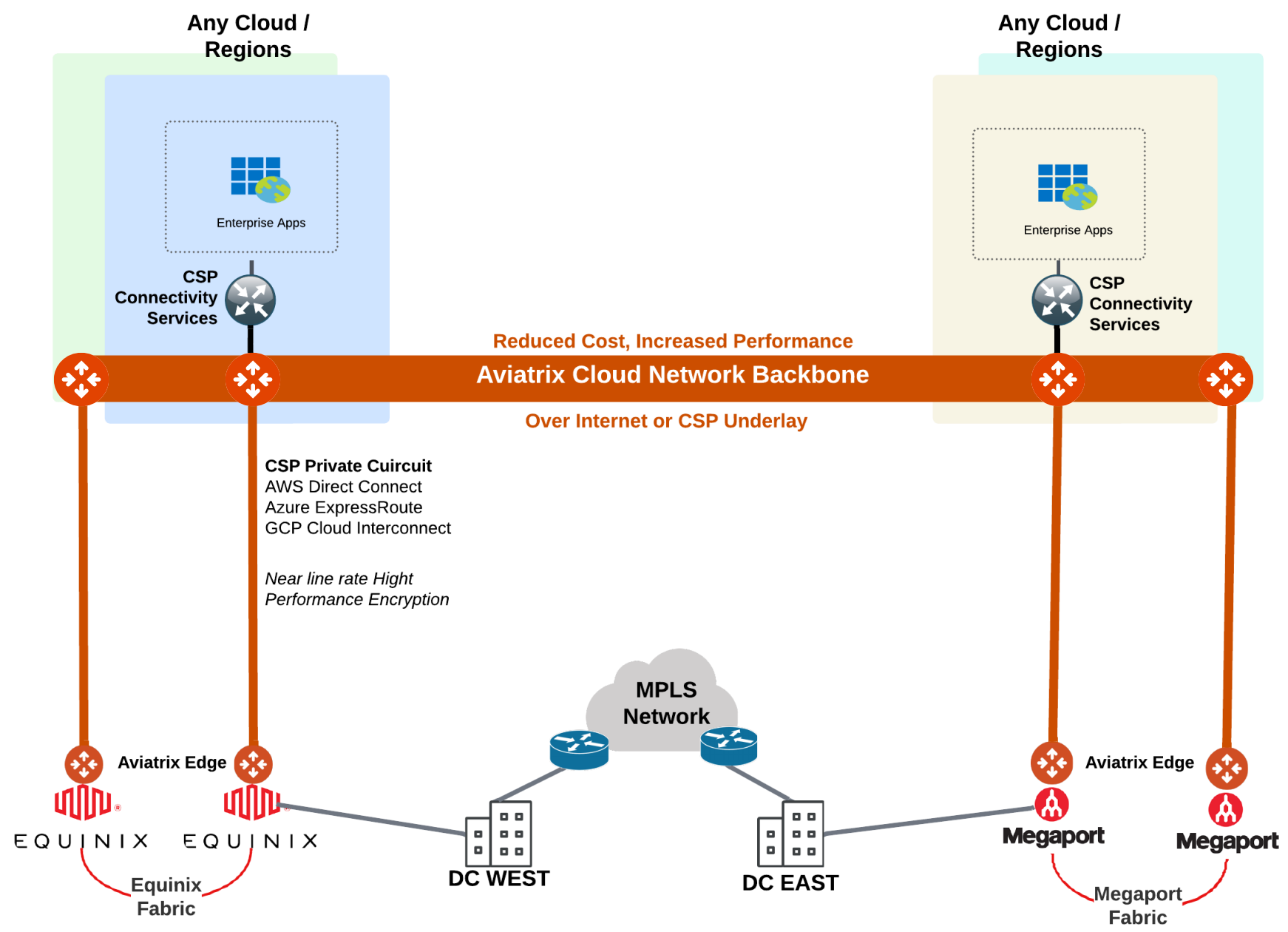
Extend Cloud Backbone to Data Center with Aviatrix DC Edge



Extend Cloud Backbone to Colocations with Midmile Providers (Equinix and Megaport)



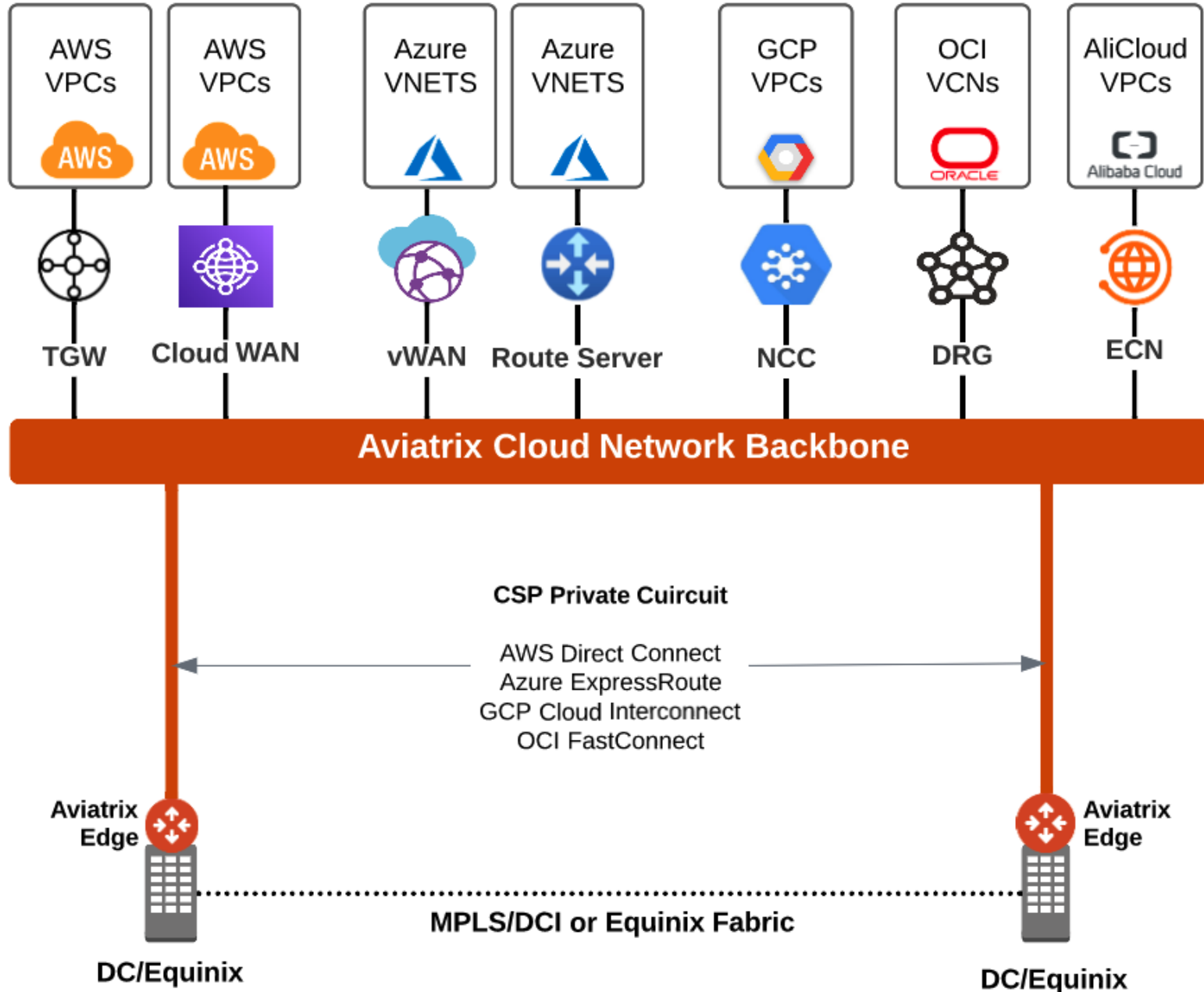
Extend Cloud Backbone to Colocations with Midmile Providers (Equinix and Megaport)



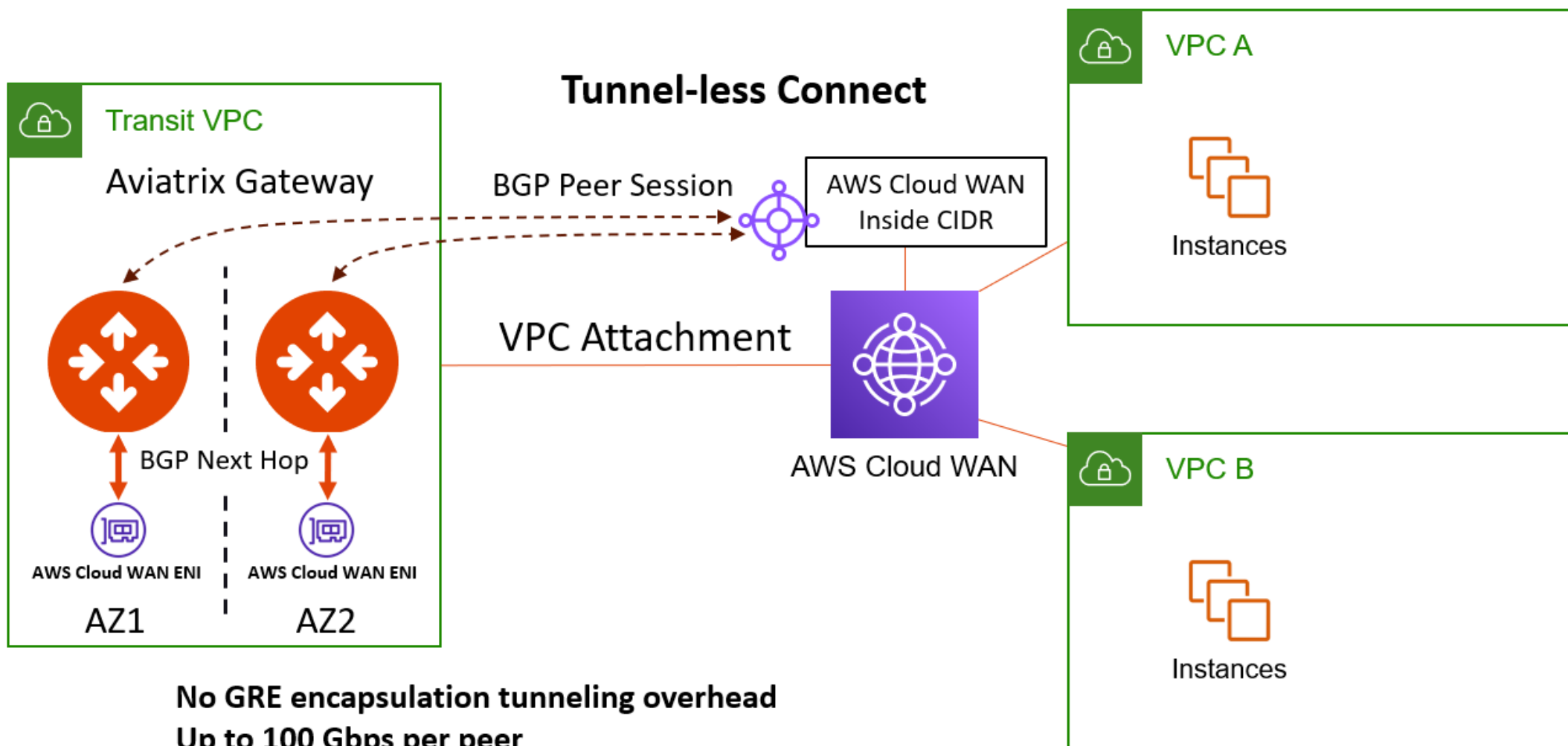


Aviatrix Backbone to CSP Native
Transit (AWS TGW, Azure vWAN, etc.)

Aviatrix Backbone with CSP Native Networking:



Integrating Aviatrix with AWS Cloud WAN



No GRE encapsulation tunneling overhead

Up to 100 Gbps per peer

Aviatrix Transit VPC is a VPC attachment to AWS Cloud WAN

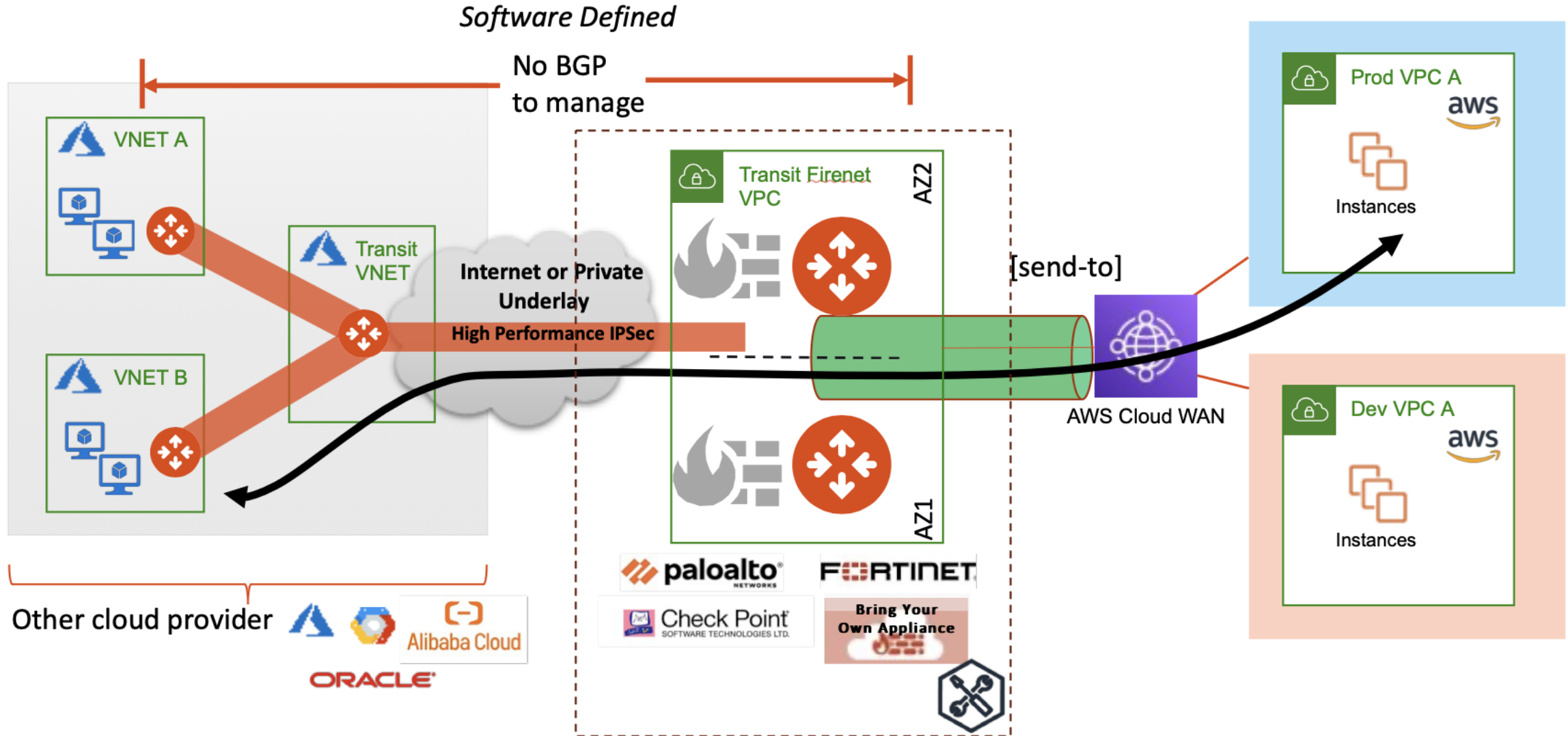
BGP Session to AWS Cloud WAN Inside CIDR

AWS Cloud WAN BGP Next Hop is in the Aviatrix Transit VPC

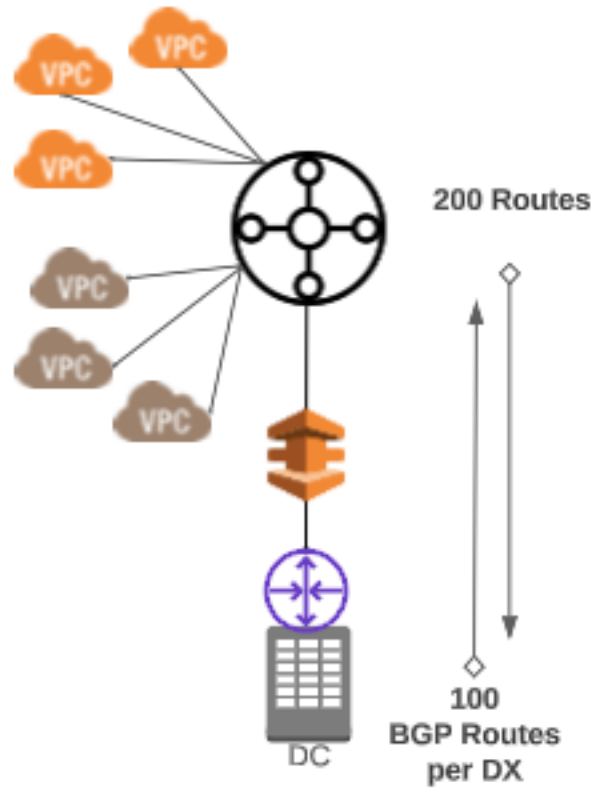
Does not yet support segmentation use cases

Aviatrix Cloud WAN Multicloud Connectivity & FIRENET

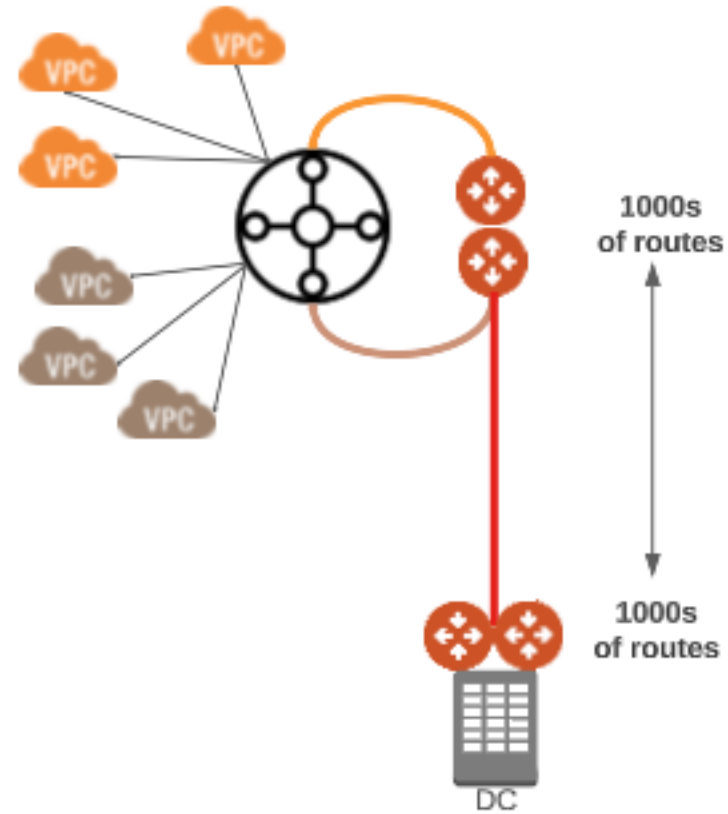
Aviatrix/Cloud WAN Encrypted Multicloud Connectivity



Aviatrix Backbone to overcome Native Limitations



Cloud Native

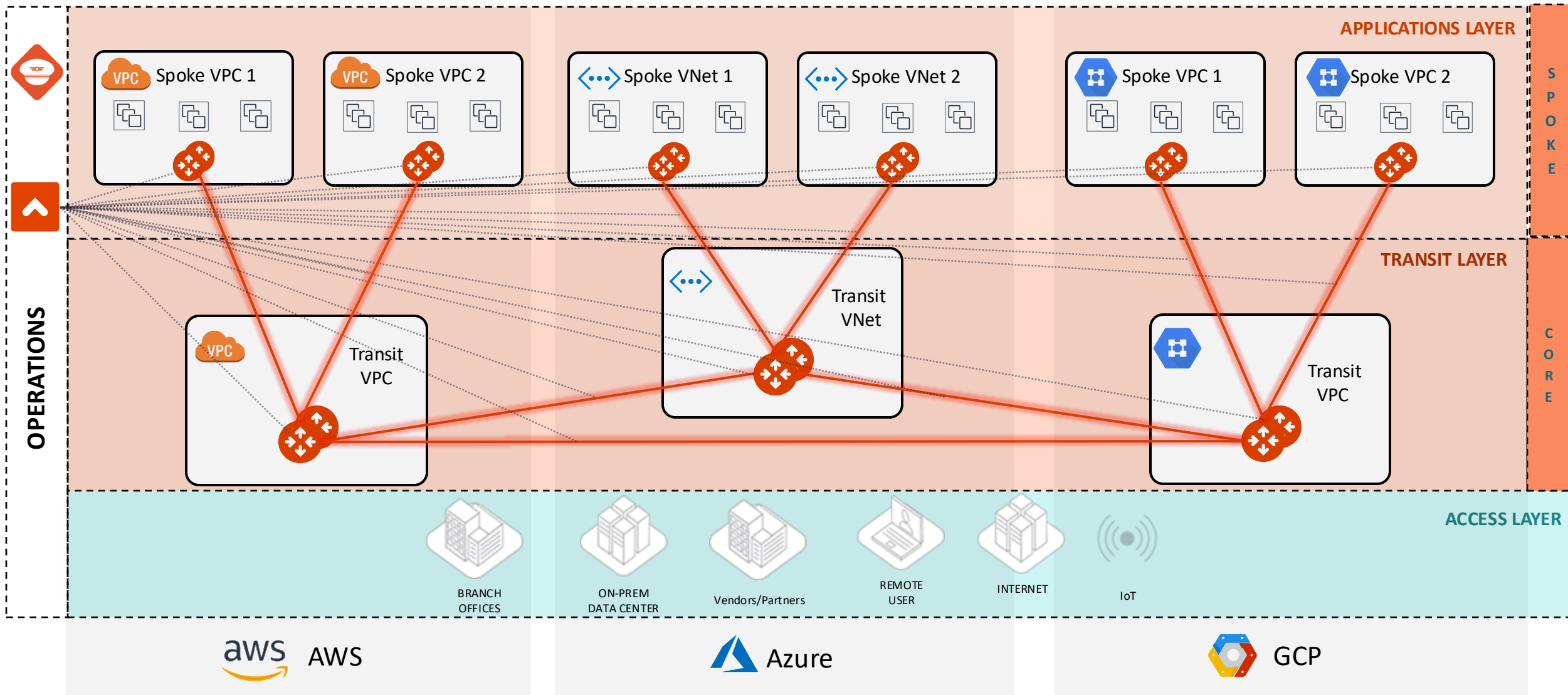


Aviatrix Integrated



Aviatrix Backbone to Aviatrix Spoke Gateways in CSP VPC/VNET

MCNA Deployment: the Foundations



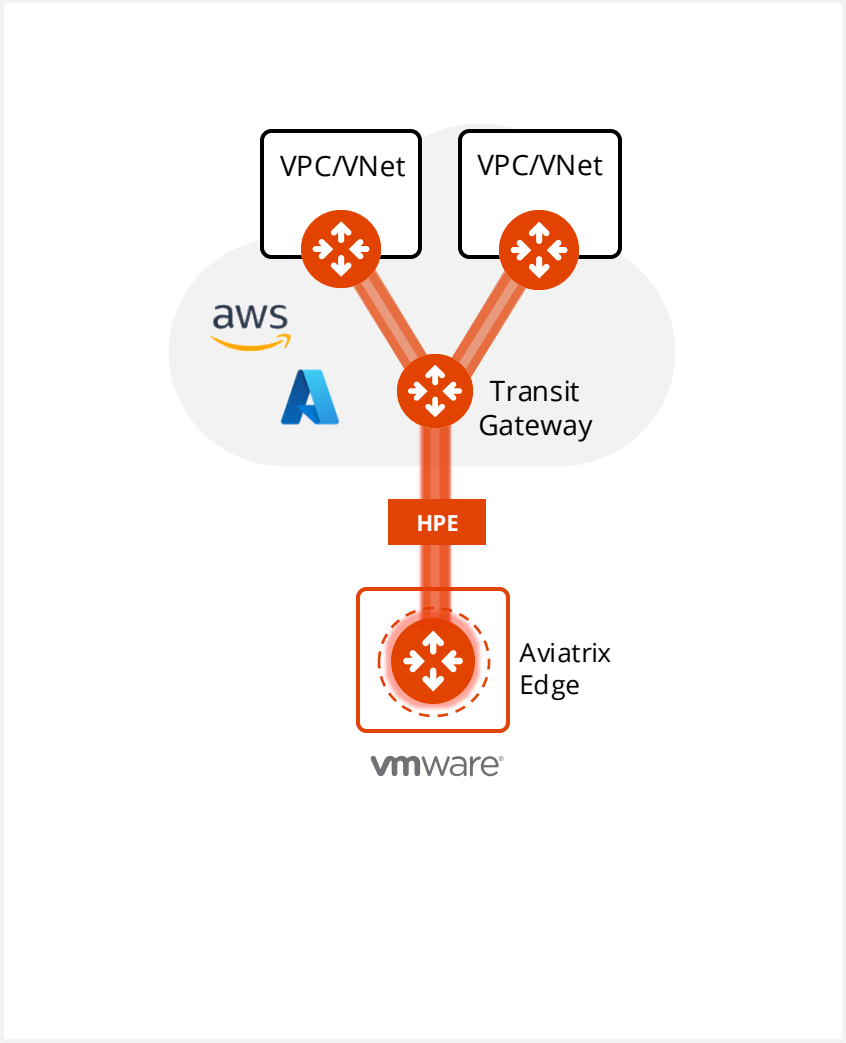


Aviatrix Backbone to Edge Locations

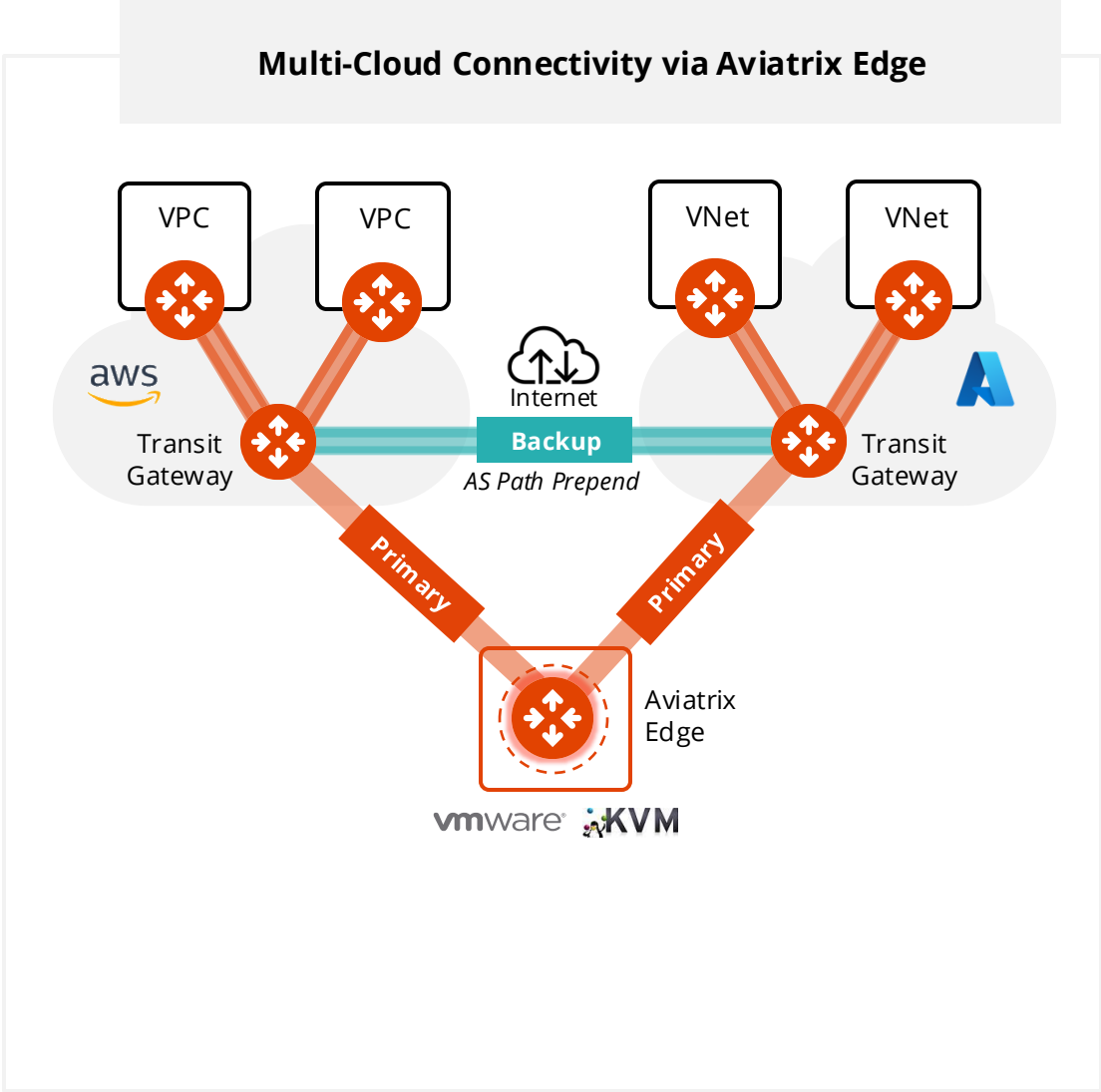
- To Data Center/Colo **with** Aviatrix Edge

Aviatrix Edge Use Cases

Extend the Aviatrix Platform to the Edge

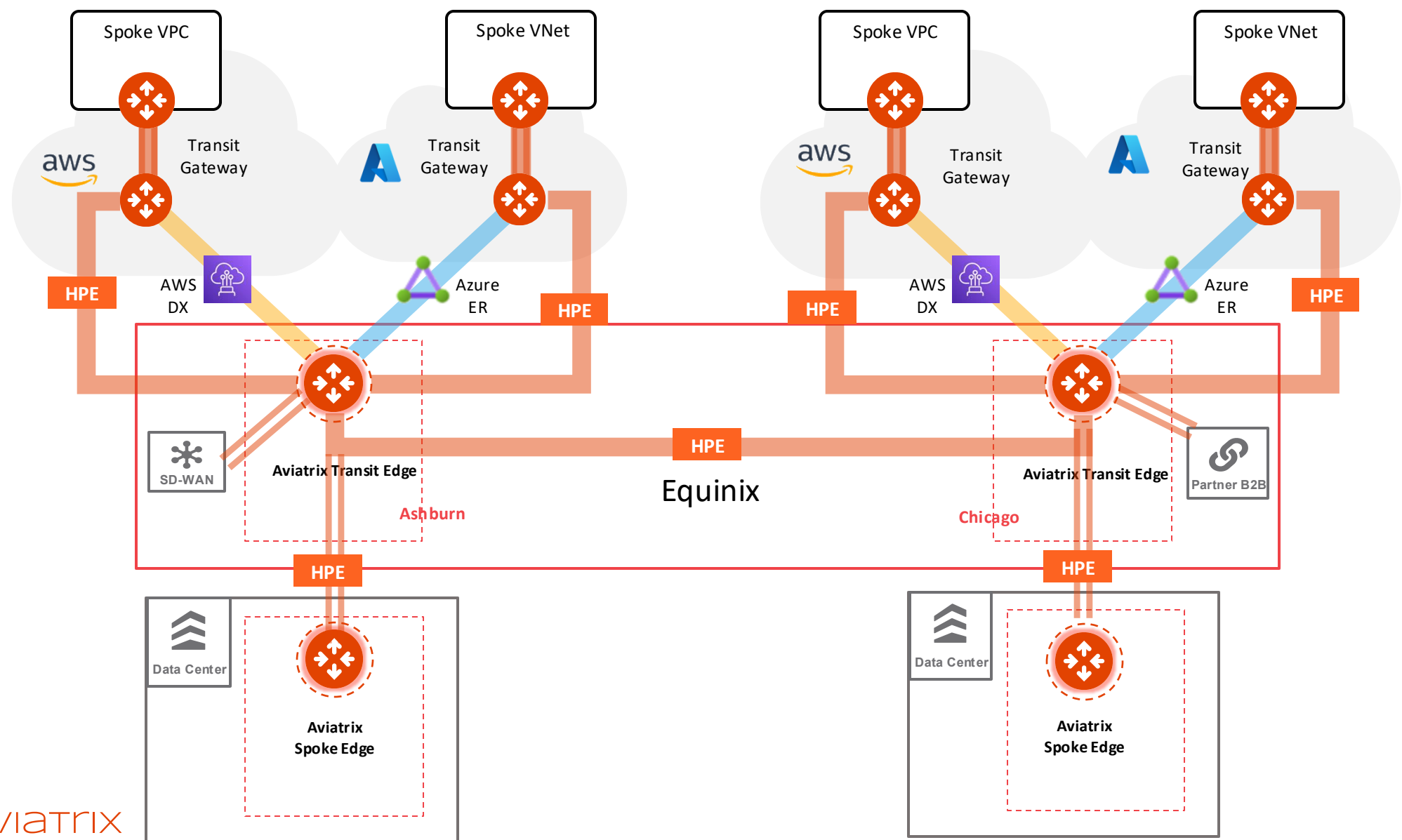


Multi-Cloud Connectivity via Aviatrix Edge



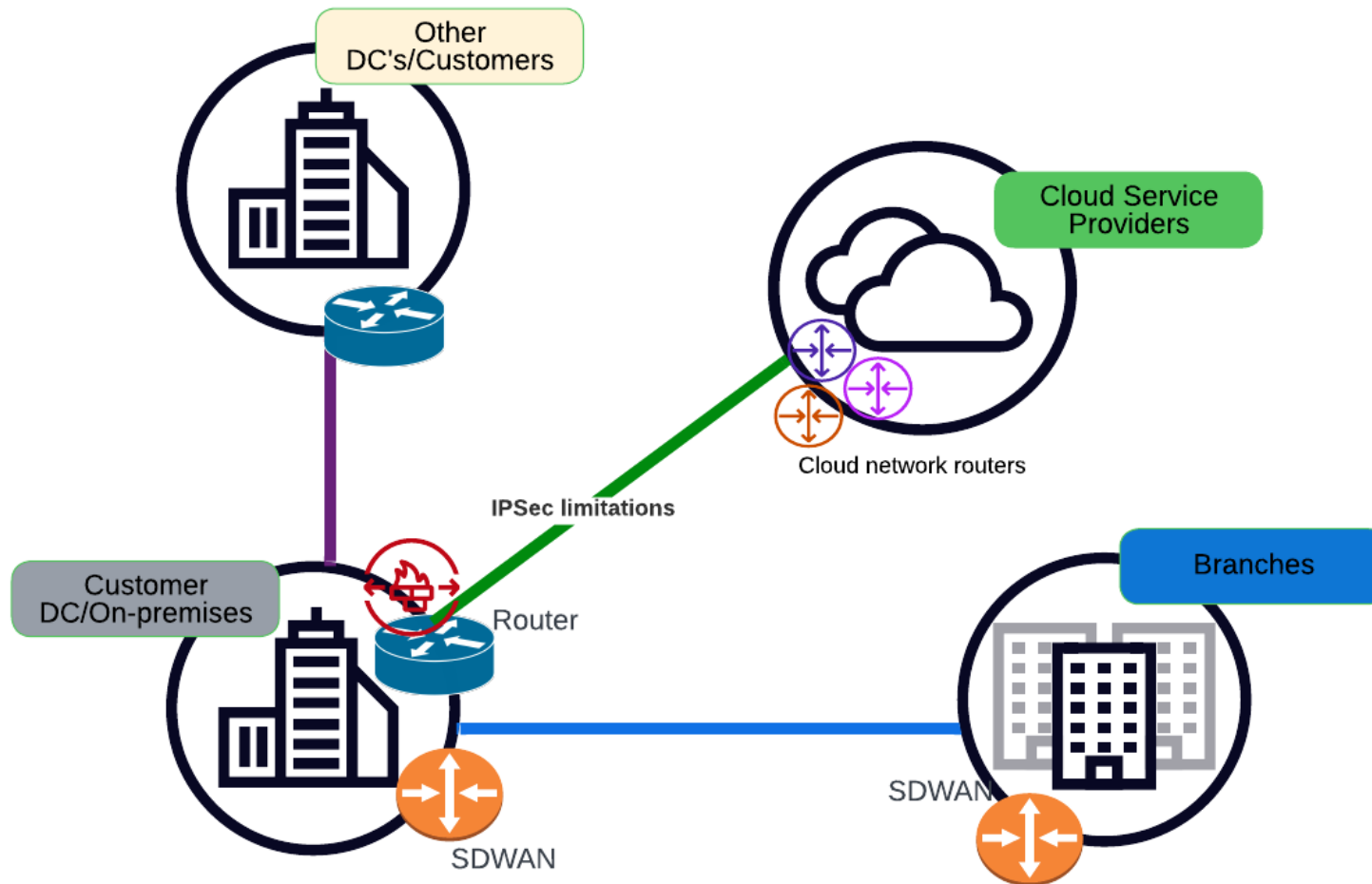
Aviatrix Hybrid Cloud Networking

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



Problem:

Existing Hybrid and multi-cloud network solution challenges



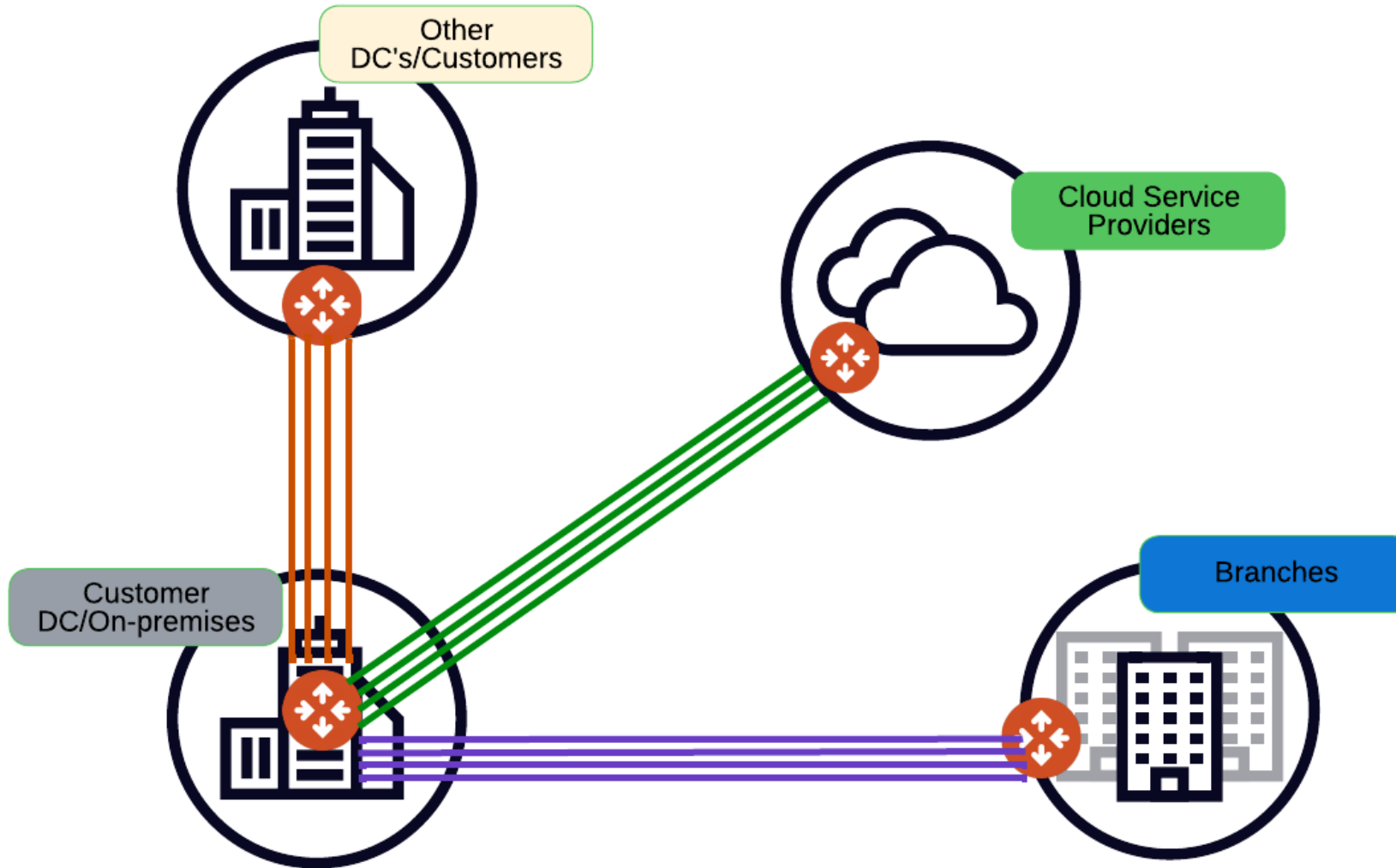
Performance limitations due to encryption requirement and disparate network stacks

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 Edge

• Edge Platform Deployment Options

- **Aviatrix Edge Platform (AEP as HW Formfactor)**
- **Equinix Network Edge**
- **Megaport Virtual Edge**
- **Self Managed**

• Virtual Formfactor

- ESXi
- KVM
- VNF T-Shirt size small, medium , large , X-large
- Upto ~10G Throughput

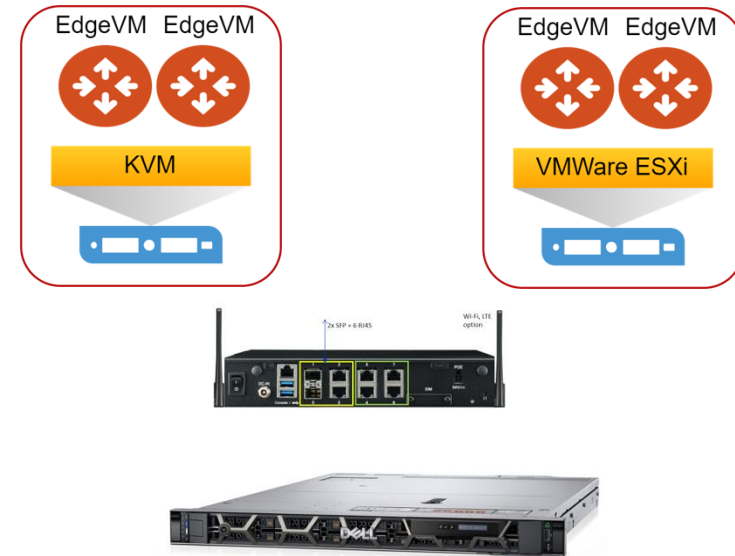
[Edge Virtual Form Factor Documention Link.](#)

• Hardware Formfactor (Edge Platform)

- For Branch/Remote Site FWA-1012-VC
- For Enterprise DC/Colo (Dell Server with 10/25G NIC)

• Single Terraform Provider

- Multicloud Networking Software (MCNS)



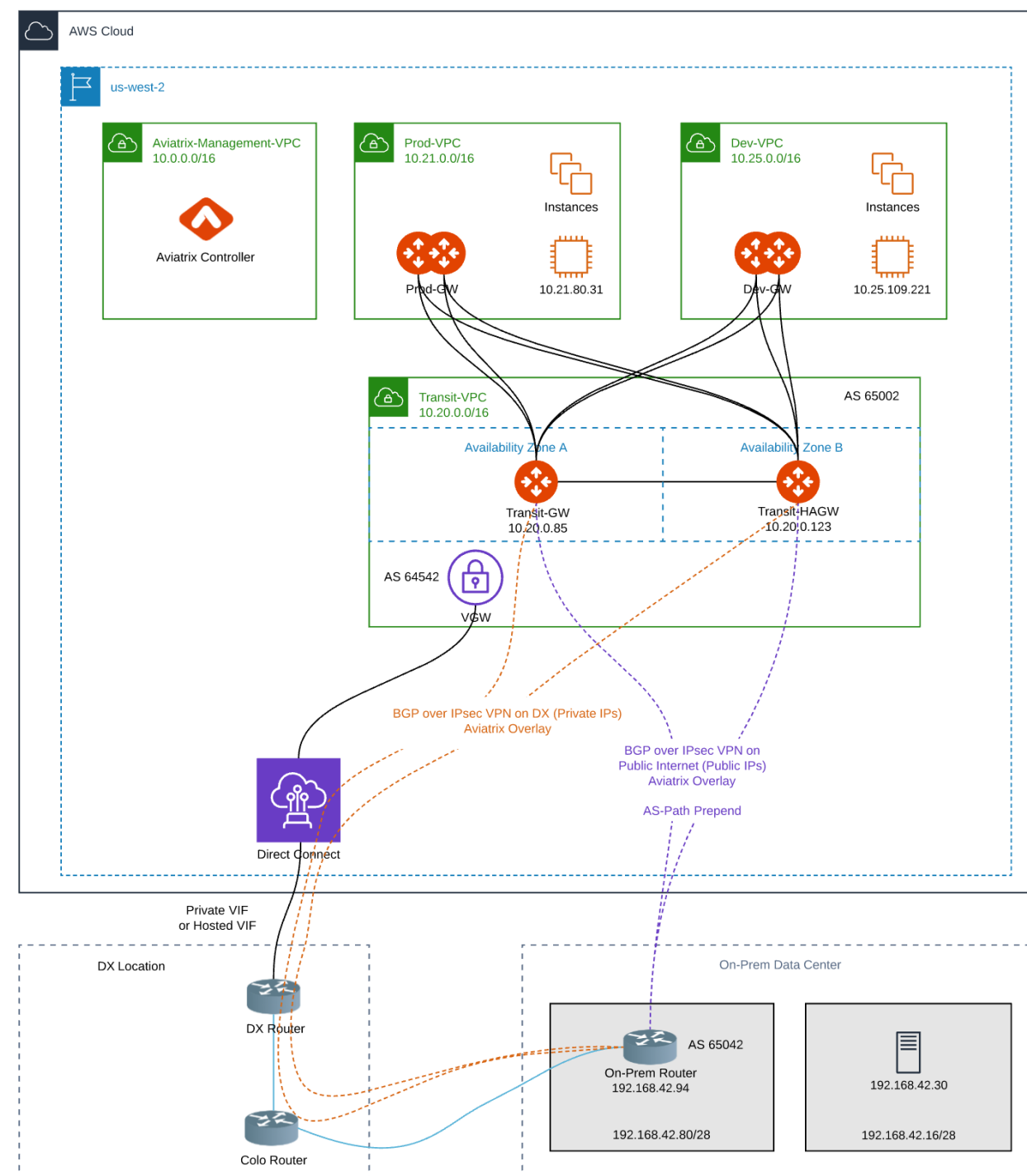


Aviatrix Backbone to Edge Locations

- To Data Center/Colo **without** Aviatrix Edge

High Speed DC Connectivity with Backup VPN

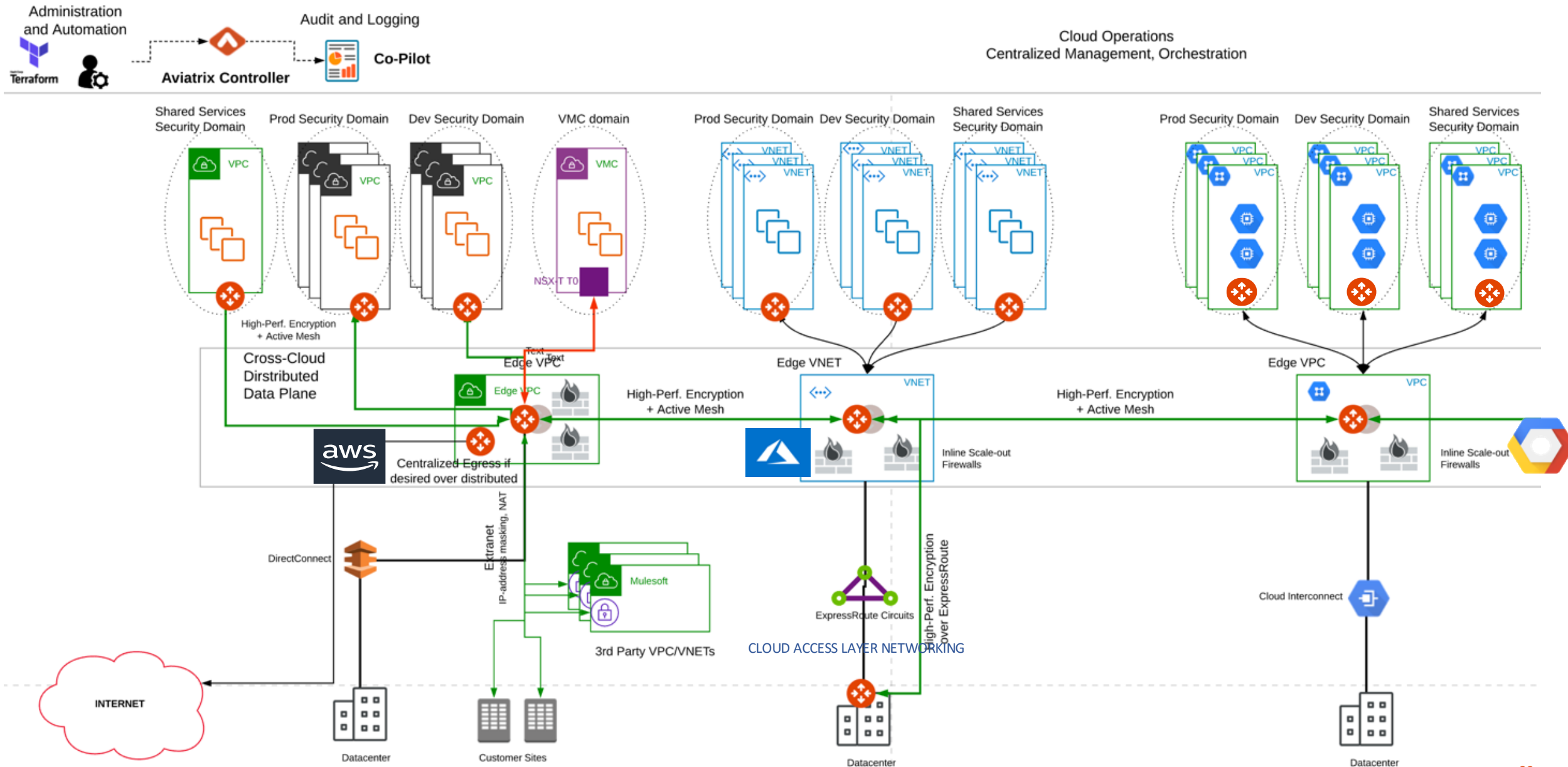
- Connecting on-prem data centers to the cloud via route-based Site2Cloud + BGP control plane, landing on Transit gateways
- Primary Site2Cloud is using private IPs to leverage the DX underlay
- Backup Site2Cloud is using public IPs to use the public Internet as underlay
- On both connections, ECMP can be enabled for Active/Active high performance or disabled (typically if on-prem has stateful firewalls)
- On-prem router is performing AS-path prepend on VPN routes advertised to Aviatrix transit over the VPN connection, to force Transit gateways to send traffic via the DX connection
- Additionally, on-prem router would use Weight or Local Pref, etc., to send traffic to the DX connection
- If DX connection goes down, traffic would automatically failover to Backup connection
- Branch connectivity is following a similar BGP-based Site2Cloud to Transit gateways, but it is typically only via VPN over the public Internet





Full Integrated Aviatrix Solution

Result: Aviatrix Solution that Meets Design Requirements





Next: Backbone-Enterprise Designs