6WIND
Cloud Networking for AI

EQUINIX

Carrier-Grade Cloud Networking at the Digital Edge

6WIND and Equinix deliver high-performance, multi-service networking at global interconnection hubs, eliminating networking as a bottleneck to digital transformation

Challenges

- *Fragmented networking*
- *Multiple clouds*
- *Distributed environment*

The Joint Solution

- *Carrier-grade networking*
- *Multi-service consolidation*
- *High-performance connections*
- *Full automation*

Use Cases

- *Multi-cloud routing hub*
- *Virtual internet / peering edge*
- *High-bandwidth interconnect gateway*
- *Multi-cloud firewall services*
- *Secure cloud on-ramp protection*
- *Multi-cloud VPN hub*
- *Secure partner / ecosystem connectivity*
- *Secure hybrid cloud access*
- *Cloud egress cost optimization*
- *Centralized multi-cloud internet breakout*

Executive Summary

Modern enterprises operate in an increasingly distributed environment, spanning multicloud, edge locations, remote users, and data-intensive applications. Workloads ranging from real-time analytics and AI-driven services to IoT and private 5G are driving new requirements for low-latency, secure, and highly scalable networking. Traditional WAN and hardware-centric architectures cannot keep pace, particularly across multicloud routing, NaaS delivery, and hybrid cloud deployments.

6WIND Virtual Service Router (VSR) on Equinix Network Edge joint solution delivers end-to-end, multi-service cloud networking at the digital edge. It combines Equinix's global, software-defined interconnection platform with 6WIND's high-performance, cloud-native networking software. The joint solution provides carrier-grade routing, firewalling, and encrypted connectivity services across 33 global Network Edge metros.

Challenge

- Enterprises are struggling with fragmented networking at the digital edge. Routing-only, overlay-centric solutions often fall short on latency, security at scale, and day-to-day operability, especially across multi-cloud, NaaS, and hybrid environments. Long-distance data paths and backhauling increase latency, degrading user experience, and AI workload performance.
- Multiple clouds, SaaS, and edge environments require seamless interconnection that legacy WAN architectures often have difficulty delivering at scale.
- Distributed environments expand the attack surface while traditional appliances struggle to scale encryption, firewalling, and segmentation.
- With as-a-Service delivery, customers avoid hardware refreshes and long provisioning cycles, and shift to an OPEX model that scales with demand while reducing egress and suboptimal routing costs.
- Managing disparate routing, firewall, and VPN instances across multi-cloud environments creates fragmented toolchains and inconsistent policy enforcement, increasing operational overhead and risk of configuration drift.

The Joint Solution

By deploying 6WIND VSR on Equinix Network Edge, customers can leverage rapid, low-latency connectivity across global metros, supporting multicloud, hybrid cloud, NaaS, and telco workloads.

The solution is deployed as a Virtual Border Router (vBR), Virtual Firewall (vFW), Virtual Security Gateway (vSecGW), or Virtual Carrier Grade NAT (vCGNAT), delivering scalable routing, security enforcement, and high-scale IPsec VPN connectivity close to cloud and ecosystem interconnection points. The architecture is API-first and automation-ready, with integrated lifecycle management, telemetry, and policy control.

- Deploy carrier-grade networking at the digital edge in minutes, with no physical hardware required.
- Multi-service consolidation: router + firewall + CGANT + VPN in a single, cloud-native software stack.
- Private, high-performance connections to public clouds, SaaS providers, partners, and ecosystems via Equinix Fabric.
- Full automation via YANG/NETCONF APIs and Kubernetes-native deployment.

Primary Use Cases

6WIND VSR on Equinix Network Edge can be deployed as a vBR, vFW, vSecGW, or vCGNAT.

6WIND VNF	Use Case	Customer Problem	Joint Solution Delivers
vBR	Multi-Cloud Routing Hub	Building unified routing policies across clouds often requires costly hardware routers in every location.	Scalable routing, faster metro deployment, and can reduce infrastructure cost versus hardware routers, with cost advantages that increase as deployment scale grows.
	Virtual Internet / Peering Edge	Delivering high-scale internet routing to service providers, peering partners, and internet exchanges, without physical border routers.	Software-defined peering edge deployed in minutes across global metros.
	High-Bandwidth Interconnect Gateway	Data-intensive workloads such as AI clusters, replication, and cloud bursting require high-bandwidth, low-latency routing.	High throughput with low CPU footprint, optimized for AI and data-intensive workloads.
vFW	Multi-Cloud Firewall Services	Enterprises connecting multiple clouds must deliver consistent low-latency connectivity while enforcing scalable security policies across all environments.	Rapid security deployment in global metros, reduced latency to cloud workloads, and flexible scaling.
	Secure Cloud On-Ramp Protection	Inspecting inbound traffic and consistently enforcing security policies before it reaches cloud workloads.	Policy enforcement close to cloud interconnection points without hardware firewall limitations.
vSecGW	Multi-Cloud VPN Hub	High-performance IPsec gateways connecting sites and SD-WAN edges to multiple cloud providers are hard to achieve with traditional VPN appliances.	High-scale VPN tunnel capacity and simplified deployment of encrypted network services.
	Secure Partner / Ecosystem Connectivity	Ensuring encrypted connections for the entire ecosystem between partners, customers, and service providers.	Secure hybrid connectivity across the Equinix ecosystem with high throughput.
	Secure Hybrid Cloud Access	Encrypted connectivity between on-premises, colocation, and cloud workloads at scale.	End-to-end encryption with massive tunnel scale.
vCGNAT	Cloud Egress Cost Optimization	Hyperscaler NAT Gateways charge premium per-GB rates for traffic processing and egress, which can make cloud costs unpredictable and limit cloud adoption for data-intensive workloads.	Edge-based NAT/CGNAT via Equinix's price-optimized internet access, can deliver significant cost reductions.
	Centralized Multi-Cloud Internet Breakout	Multiple cloud environments require separate NAT instances per cloud and per region, increasing costs and fragmenting internet traffic policy without unified control.	Single CG-NAT instance on Equinix Network Edge consolidates internet breakout across all clouds with unified policy control.

STRATEGIC BENEFITS

Performance

Delivers high throughput with low latency. Edge-based routing eliminates backhaul bottlenecks. Optimized for AI, analytics, and data-intensive workloads.

Cost Efficiency

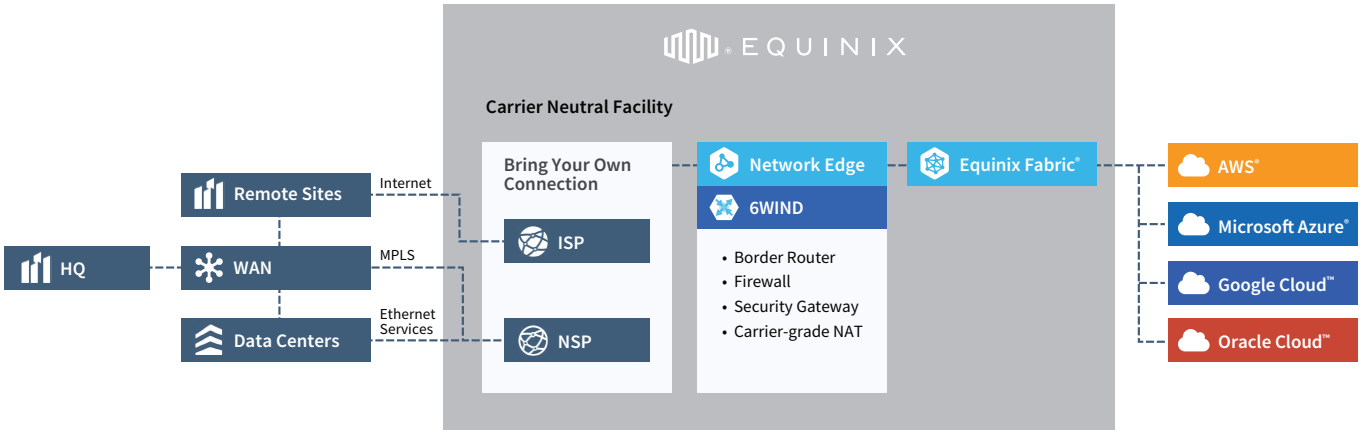
Can deliver lower TCO vs. hardware appliances and reduce cloud egress and infrastructure costs. Pay-as-you-grow licensing and NaaS delivery model.

Agility & Scale

Deploy in minutes across global metros. Scale dynamically with demand via an API-first architecture for full automation.

Security & Governance

Provides an integrated firewall, IPsec, and DDoS protection in a single solution. Includes multi-tenant segmentation and a neutral, sovereign, cloud-agnostic architecture.



Customer Outcome

Equinix and 6WIND bring together global interconnection infrastructure and software-defined networking intelligence, so enterprises can deploy high-performance routing, low-latency firewalling, encrypted connectivity, and carrier-grade NAT at the edge, without networking becoming a bottleneck to growth.

The result is seamless connectivity across clouds and on-premises environments, with the performance, security, cost efficiency, and governance modern digital operations demand.

Ready to deploy carrier-grade cloud networking at the digital edge?
Learn more at 6wind.com/network-edge or contact us at equinixedge@6wind.com.