



SD-WAN vGR KEY BENEFITS

- Improves Network Performance by Prioritizing Business Critical Apps & Services & Data Steering
- Enhanced Security and Control with Network Data Flows and Data Encryption
- Simplify Network Infrastructure with SaaS Breakout & Avoid Data Backhauling

PRODUCT OVERVIEW

SD-WAN as a Cloud-Based Solution

The AmZetta zWAN vGR is a virtual SD-WAN gateway designed to serve as the central hub for distributed enterprise networks. Deployable on any standard x86 virtual machine or cloud instance, the vGR consolidates and optimizes traffic from branch offices, data centers, and remote users. It provides centralized control over all zWAN Gateway Routers, dynamically steering traffic through secure overlay tunnels to improve application performance and reduce latency. As a “virtual concentrator,” the vGR can scale to accommodate growing sites without requiring specialized hardware, leveraging widely available servers for cost efficiency.

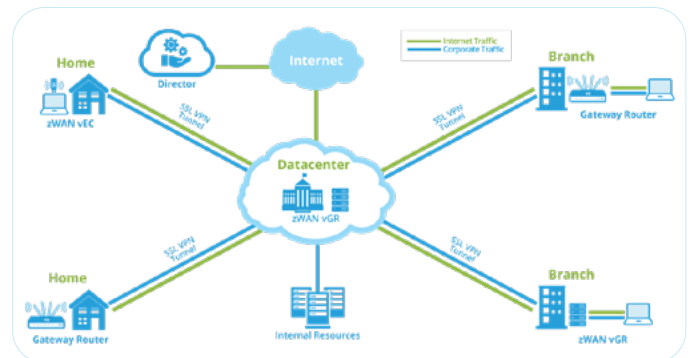


Figure 1: Example SD-WAN architecture with zWAN components – zWAN vGR in a datacenter consolidates and secures traffic from branches, remote workers, and cloud services.

The zWAN vGR is primarily designed to serve as a central data center (DC) hub or SD-WAN concentrator, aggregating traffic from remote branches, field offices, and mobile users into a secure, policy-driven network fabric. Deployed in a core network or cloud environment, the vGR enables centralized routing, intelligent traffic management, and end-to-end encryption across the SD-WAN infrastructure.

In addition to its primary role, the vGR also offers the flexibility to function as a virtual gateway router for smaller branch sites. This makes it an adaptable solution for organizations looking to standardize on a virtualized platform, extend secure connectivity to edge locations, or deploy in environments where physical hardware is impractical.

Key Features:

Advanced Dynamic Routing: vGR constantly monitors link quality (bandwidth, loss, latency, jitter) and uses dynamic path selection to send each application's flows over the best available WAN link. This ensures mission-critical applications are always routed over optimal paths, while unused bandwidth is automatically leveraged.

Multi-WAN Connectivity: The vGR supports any combination of transport links (broadband Internet, MPLS, LTE/5G, etc.), providing transport independence to reduce costs and increase reliability. All WAN links can be active simultaneously (active-active or active-passive), enabling seamless failover and load-balancing of traffic.

Zero-Touch Provisioning: Like other zWAN devices, the vGR can onboard itself automatically to the zWAN Director. Out of the box it pulls its configuration from the cloud management server, eliminating manual setup on-site. Once booted, it automatically registers with AmZetta's Director portal for secure provisioning and policy deployment, minimizing deployment time and labor.

Secure Overlay Tunnels: The vGR establishes encrypted VPN tunnels to all branches and endpoints. It integrates stateful firewall and encryption, protecting data in transit. In practice, every connection between a branch router and the vGR is secured with IPsec/SSL, giving "always-on" confidentiality and integrity.

Intelligent QoS & Traffic Shaping: zWAN vGR provides granular traffic controls. It classifies traffic by application/user and applies quality-of-service rules to prioritize voice, video or business-critical data over lower-priority flows. Traffic shaping and policing ensure that time-sensitive traffic meets SLAs (e.g. VoIP jitter under 30ms) even under link congestion.

Centralized Management: The vGR is managed from AmZetta's zWAN Director (cloud or on-prem). All site configurations, policies, and analytics are centrally stored. Network admins gain single-pane visibility of the entire WAN fabric and can push software updates and security policies to every site in minutes, greatly simplifying operations.

Key Benefits:

Cost Efficiency: By leveraging inexpensive Internet links instead of or in addition to expensive MPLS, vGR greatly reduces network costs. Organizations typically see 25–75% WAN cost savings versus legacy MPLS designs.

Scalability: The virtual appliance model means the network can grow without forklift upgrades. New branches or users can be added simply by deploying a software router or endpoint and connecting it to the vGR. zWAN vGR allows businesses to scale their networks efficiently, accommodating new locations or increased traffic without significant infrastructure changes. Whether scaling to tens or thousands of sites, the centralized design and minimal per-site hardware enable smooth expansion.

Rapid Deployment: zWAN's automated provisioning cuts deployment times to days instead of weeks. Unlike traditional WAN setups (which may take months to provision MPLS circuits), zWAN uses existing Internet connections to link sites. In practice, once a server or VM is online with Internet access, it auto-provisions into the network, giving instant secure connectivity.

Enhanced Security: vGR enforces a secure mesh. All data between sites is encrypted, and the integrated firewall inspects and blocks threats at the gateway. By providing comprehensive, appropriate security controls and policies across the entire network, zWAN ensures branches are as protected as the headquarters. Traffic segmentation and micro-tunnels also mean east-west branch-to-branch traffic can be isolated.

Improved Application Performance: With application-aware routing, the vGR maximizes performance for critical services. It constantly monitors link metrics and dynamically steers traffic to avoid congestion. For example, if a primary link degrades, voice and video sessions are automatically rerouted to backup LTE or broadband links. vGR optimizes traffic flow and reduces latency, enhancing the performance of VoIP, video conferencing, CRM, and other business apps. Direct Internet breakout for SaaS apps further accelerates cloud performance by bypassing backhaul through HQ.

Flexible VPN Interoperability: vGR supports OpenVPN site-to-site authentication alongside IPsec/SSL, enabling secure connectivity with third-party VPNs and legacy systems. This allows seamless integration without requiring immediate hardware upgrades.

Ideal Use Cases:

Branch Office Connectivity: Suitable for SMB and enterprise branches needing reliable, high-performance links. vGR can serve as the hub for multiple branch routers (zWAN sGR or hardware), tying them together with secure tunnels. This simplifies branch networking by replacing multiple VPN concentrators or complicated router configs with a single, centrally-managed SD-WAN fabric.

Hybrid Cloud & Multi-Cloud Access: vGR's design excels in hybrid environments. It enables direct, high-speed connections from branches to public cloud services and data centers. Traffic to AWS, Azure, or SaaS applications can be routed optimally (and bypass the datacenter), improving response times. Organizations adopting a SASE framework can integrate vGR with cloud security services for unified cloud access.

VPN Replacement: For companies still using IPsec VPNs to connect remote sites, zWAN offers a next-gen replacement. Unlike traditional VPN (point-to-point tunnels), SD-WAN acts as a smart gateway that optimizes traffic across multiple links. This means better failover, aggregated throughput, and centralized policy enforcement. In short, vGR and zWAN can provide the same secure connectivity as a mesh of VPNs, but with much greater flexibility and performance.

Remote Workers & Teleworkers: When paired with zWAN vEC (virtual gateway routers), the vGR enables secure connectivity for home or mobile users. Instead of expensive VPN licenses, remote laptops can establish a zWAN tunnel back to the vGR hub, immediately gaining secure access to corporate resources.

Deployment Models & Compatibility:

The zWAN vGR runs as a software virtual appliance, offering flexible deployment options: on-premises or in the cloud. It can be installed on any 64-bit x86 server (VMware ESXi, KVM/QEMU, Hyper-V, etc.) or spun up as an instance in AWS, Azure, Google Cloud, or private cloud environments. This means organizations can deploy vGR in a corporate datacenter VM cluster or on an IaaS/VPC instance to serve as a regional gateway.

Deployment models include: On-Premises (customer-managed VM in local datacenter or colocation), Cloud-Hosted (vGR instance in public cloud with virtual network interfaces), or Hybrid/Co-Managed (AmZetta-hosted Director with customer-owned vGR). In all cases, the system requirements are modest. Each vGR instance requires a multi-core x86 CPU, sufficient RAM (e.g. 4–8 GB minimum, more for high-throughput scenarios), and standard Ethernet NICs. AmZetta recommends at least 4 vCPUs and 8+ GB of RAM for typical branch loads, though larger deployments can scale resources as needed. No specialized hardware is required any enterprise server or cloud VM meeting these specs will run the vGR software.

Conclusion:

The AmZetta zWAN vGR delivers enterprise-grade SD-WAN concentrator functionality in a virtual form factor. As part of the zWAN ecosystem, it interworks with physical or software gateway routers at branches and endpoint clients for homes. By centralizing traffic control in software, vGR cuts WAN costs, accelerates deployment, and strengthens security – all while making it easy to integrate branch sites, datacenters, and cloud environments. Prospective customers (IT managers, channel partners, etc.) can leverage vGR for cost-efficient, scalable, and secure branch connectivity. For more information or a demo, visit the zWAN product page or contact AmZetta solutions engineering.

How to Get Started?

AmZetta offers free 30-day evaluation with no obligation to purchase. Simply visit <https://AmZetta.com/Eval> and complete the Evaluation Form. An AmZetta Solutions Engineer will email you the vGR software download to get started in your evaluation.