

### SD-WAN vEC KEY FEATURES

- Easily Installs in a Windows Based PC for Remote, Hybrid or Work-From-Anywhere Users
- Simple Software Deployment with No Additional Hardware Required
- Improve Worker Productivity with Automated LTE Backup Internet Connectivity

## PRODUCT OVERVIEW

### SD-WAN for Remote & Work-From-Home Users

The SD-WAN Virtual Edge Controller (vEC) is software that is installed on a Windows based PC for use by remote, hybrid and Work-From-Home (WFH) users. The vEC is Software Defined and connects to the SD-WAN Director in the Cloud. zWAN vEC was designed from the ground up to provide secure and reliable access for work-from-anywhere users to access apps, systems and services. Since the zWAN vEC installs on a user's PC this eliminates the need for a separate hardware device, which results in a significant cost savings for corporations.

The Work-From-Home shift due to COVID was assumed to be a temporary situation, as time has moved forward having a more mobile workforce has become the new norm. Today, organizations are adopting remote and hybrid work as a permanent model.

Setting up and creating a remote or Work-From-Anywhere model has been extremely challenging for enterprises, organizations and small-to-medium businesses. Many organizations have relied on their traditional VPN's to deliver corporate resources and applications to user's home networks posing hurdles to networking, security and visibility that these solutions are not designed to address. The zWAN vEC from AmZetta delivers secure access, provides network resiliency with multiple network links (WiFi and LTE), optimized performance for corporate data and applications, while providing analytics on user activities and application usage in a simple to deploy SD-WAN solution.

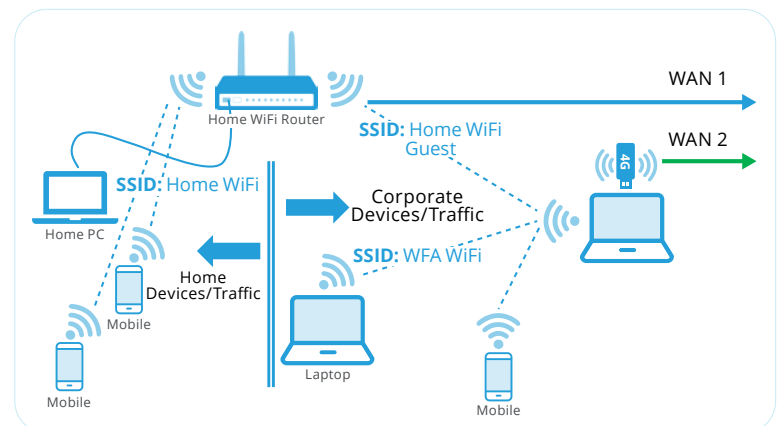


Figure 1: zWAN vEC in a Home Environment

## Features of AmZetta zWAN SD-WAN

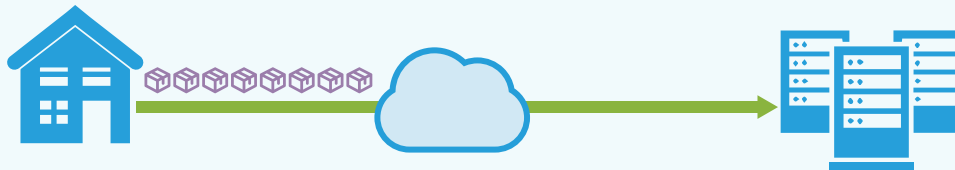
### zWAN Director – Cloud Management

Once installed, the zWAN vEC will automatically onboard to the zWAN Director in the Cloud. The Director is responsible for provisioning and managing the zWAN vEC. Alerts from zWAN vEC are routed to the Director for action. Similarly, the Director collects activity logs and network traffic related data from all zWAN vECs to generate dashboard displays for each zWAN vEC. The administrator can review alerts, view the dashboard, and review logs through the Director.

### Multipath Connectivity

zWAN vEC utilizes the network port connections to set up multipath connectivity over the underlay network, generally comprising of broadband or LTE. Fig. 2 shows a system with just a single communication link. Fig. 3 shows a setup with multipath communication links. zWAN vEC can be configured to preferentially utilize one path over the other, i.e., in the event of a failure of the preferred path, a dynamic switch is made to the available path, for high availability.

Having multiple paths ensures that in the event of a path failure, an alternate path is available for transmission to continue uninterrupted.

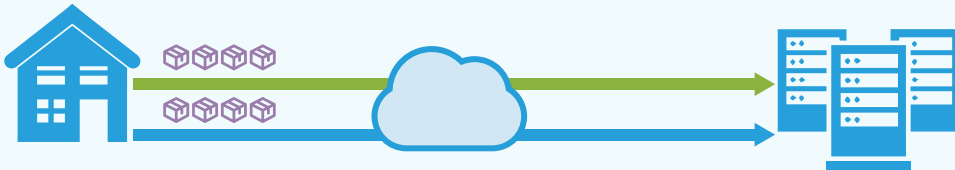


Single Communication Link, e.g.. Cable Modem All traffic flows through the single link

Figure 2: zWAN vEC Single Path Connectivity

### Load Balancing

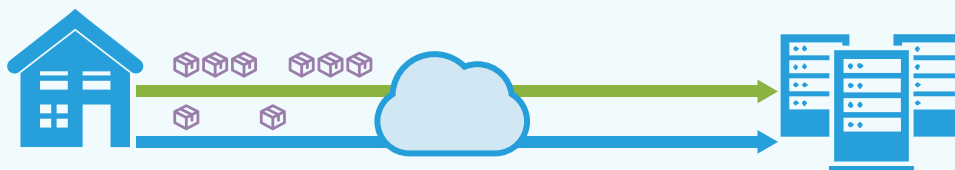
Using Load Balancing, the load can be transmitted over multiple paths. The load distribution can be symmetric, when the load is equally distributed, or can be asymmetric when the load may be unequally distributed. Fig. 3 shows symmetric load on the two paths, whereas Fig. 4 shows asymmetric load balancing.



#### Multiple Connectivity - Load Balancing/Symmetric

Multiple Communication Links, e.g. Cable Modem and LTE  
Traffic flows through both links in equal measure

Figure 3: zWAN vEC Load Balancing/Symmetric



#### Load Balancing/Asymmetric

Traffic flows in unequal measure 3:1 through the links

Figure 4: zWAN vEC Load Balancing/Asymmetric

### Autoflow Control

zWAN vEC can be configured to make path selection based on underlay network characteristics such as latency, jitter, or packet loss. This means the network flow can be steered to go over the path with the least latency. The network characteristics are measured periodically so that in the event of a change, the flow will be routed through the best available path, avoiding latency, jitter and packet loss.



Traffic flows through link with the lower latency

Figure 5: zWAN vEC Autoflow Control

### Zero-Touch Provisioning

The zWAN vEC supports a secure true zero-touch provisioning. In order to onboard a zWAN vEC in a remote location the only skill required is the ability to install the zWAN vEC software application. The zWAN vEC is automatically provisioned and configured to operational status. The network administrator can setup rules and policies that will be automatically applied when a zWAN vEC is onboarded.

### Deep Packet Inspection (DPI)

zWAN vEC analyzes encrypted network traffic through a process called deep packet inspection (DPI), and classifies the packets to identify the application transmitted through the network and the category the application belongs to. Each category can be either blacklisted (block) or whitelisted (allow). If an application falls in the blacklisted category, it will be denied network access and the flow will terminate. The path selection can also be based on the application or the category of application.

### Application Prioritization

When bandwidth constraints exist, zWAN vEC can prioritize applications for transmission, thereby ensuring higher priority applications are transmitted and lower priority applications are transmitted only after the needs of the higher priority applications are met.

### Bandwidth Augmentation

The available bandwidth can be augmented using network bonding, by combining more than one path to increase available bandwidth.

### Report Generation

The zWAN vEC sends IPFIX data relating to the network traffic and syslog to the Director for further analysis and for dashboard display. Dashboard charts provide invaluable insights into user activities with zWAN vEC. The dashboard can show the number of packets by application transmitted over the network for a predefined period (i.e., 1-minute). display. Dashboard charts provide invaluable insights into user activities with zWAN vEC.

### SaaS Breakout

The zWAN vEC can identify SaaS traffic deemed to be reputed and categorize it as such by using DPI and packet categorization techniques. zWAN vEC transmits such SaaS traffic directly to SaaS websites by the shortest available path, without sending the network traffic to the data center, thereby avoiding backhauling. In traditional networks, generally all network traffic gets sent to the data center for security reasons. With zWAN vEC, this unnecessary backhauling can be avoided.

### Internet Breakout

The zWAN vEC can identify general internet traffic and categorize it. Such traffic is normally sent to the data center for security scans. This means that SaaS traffic, which in today's environment constitutes the bulk of the traffic for most enterprises, does not have to be subjected to deep security scans, thereby reducing security costs.

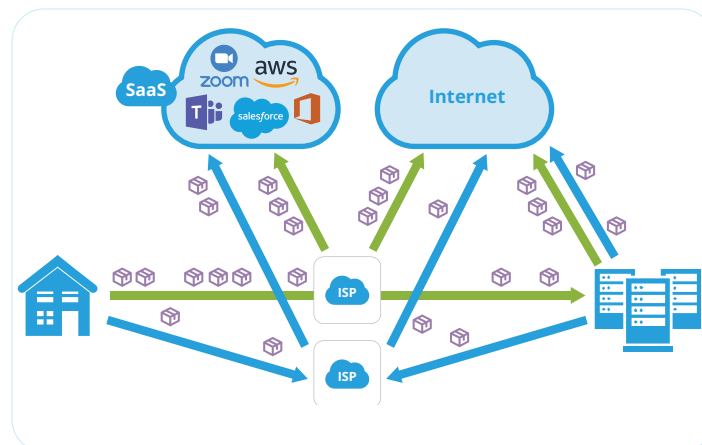


Figure 6: zWAN vEC SaaS Breakout / Internet Breakout

## AmZetta zWAN Solution

The AmZetta zWAN SD-WAN solution provides organizations the following components:



zWAN vEC (Virtual Edge Controller)	zWAN Director	zWAN Report Generator
The zWAN vEC integrates with existing routers and modems to allow for a quick and simple installation into the network fabric. Once connected to router, the vEC's zero-touch provisioning means there is no setup to be done after connecting.	The zWAN Director is the centralized manager for all the zWAN vEC devices. IT Teams can onboard, manage and monitor all Work-From-Home users and their devices via the Director.	View live dashboard and reports that visualize the productivity of the Work-From-Home users. View the applications, websites and activities performed by the Work-From-Home users.

## Conclusion

SD-WAN enhances application performance, user performance, reduces network expenses, unifies network connectivity and enables orchestration of application delivery across your network while enhancing network security. With the zWAN vEC all users can have a secure and reliable connection from their home network to the needed applications, data and services within the organization. Fast, secure, and being always connected are the key functions helping employees stay engaged, productive, and collaborating effectively.

## 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 vEC software download to get started in your evaluation.