DEMOCRATIZING SD-WAN

SD-WAN Today

With over 40 vendors offering different SD-WAN solutions, service providers tend to adopt a multivendor approach and resell end-to-end black box, closed, vendor specific solutions that don't interconnect. These solutions work as an overlay, limiting service providers' differentiation and enterprises' capacity to support specific requirements.

Vendors, in turn, are launching their own services and are selling directly to enterprises, hence, compete with the service providers. Moreover, these solutions are a foot in the enterprise door for offering additional value added services, security being only the first.

Similar to OTT messaging and VoIP, SD-WAN is a new opportunity but also a threat to the service providers as they may become data pipes for enterprise services.

A complete SD-WAN system requires multi-domain expertise

❭ Networking: Routing, tunneling, path selection…

❭ Application optimization: Identify any application, optimize and prioritize each application and any data type (VoIP, Video, transactions…)

❭ Services: Security, management, network monitoring…

The one stop shop dilemma

A single vendor can't be an expert in all fields SD-WAN touches. But most claim they are as an excuse for their closed systems that set you up for vendor lock. On the other hand, application vendors have the capacity to best prioritize & optimize different parts of their traffic, even in the encrypted domain. Domain expert vendors can offer superior components in their technology domain. Unfortunately, SD-WAN solutions are closed and don't allow for this.

Introducing the Second Wave of SD-WAN by flexiWAN

Mission: Disrupt and Democratize the SD-WAN Market through an Open Source & Open Architecture SD-WAN Infrastructure

flexiWAN changes the closeness and vendor lock paradigm of SD-WAN by offering an open source SD-WAN infrastructure that includes the vRouter, management, orchestration and automation as well as code SD-WAN baseline functionality. flexiWAN features pre-designed integration points that allow for modification or replacement of core SD-WAN functionality as well as 3rd party logic. This allows service providers and enterprises to select best of breed elements of the SD-WAN technology. These include the basic elements of SD-WAN that manage and optimize the traffic as well as additional services such as DPI and application/traffic specific handling. With this open architecture, service providers and enterprises are not tied to a black box solution but have full control over the system. Moreover, SaaS application providers and MSPs can add elements that differentiate their service from competition by having close control over the way their traffic is handled based on dynamic feedback received from their application.

flexiWAN brings to networking the concept of integrations Slack brought to messaging
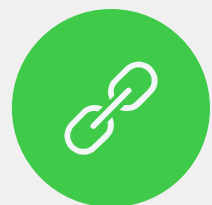
Application Quality Assurance

Allowing for high quality application service in single and multilink architectures. Including hybrid WAN and link quality based routing.

Automation & Monitoring

Allow for multitenant management and monitoring as well as plug & play configuration for worry free onboarding.

Service Integration & Chaining

Interface for 3rd party application integration and service provider service chaining.

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Software Architecture

The SD-WAN open source is architectured as an open system that allows for 3rd party logic and value added services integration through performance optimized integration points (green circles) as depicted below.
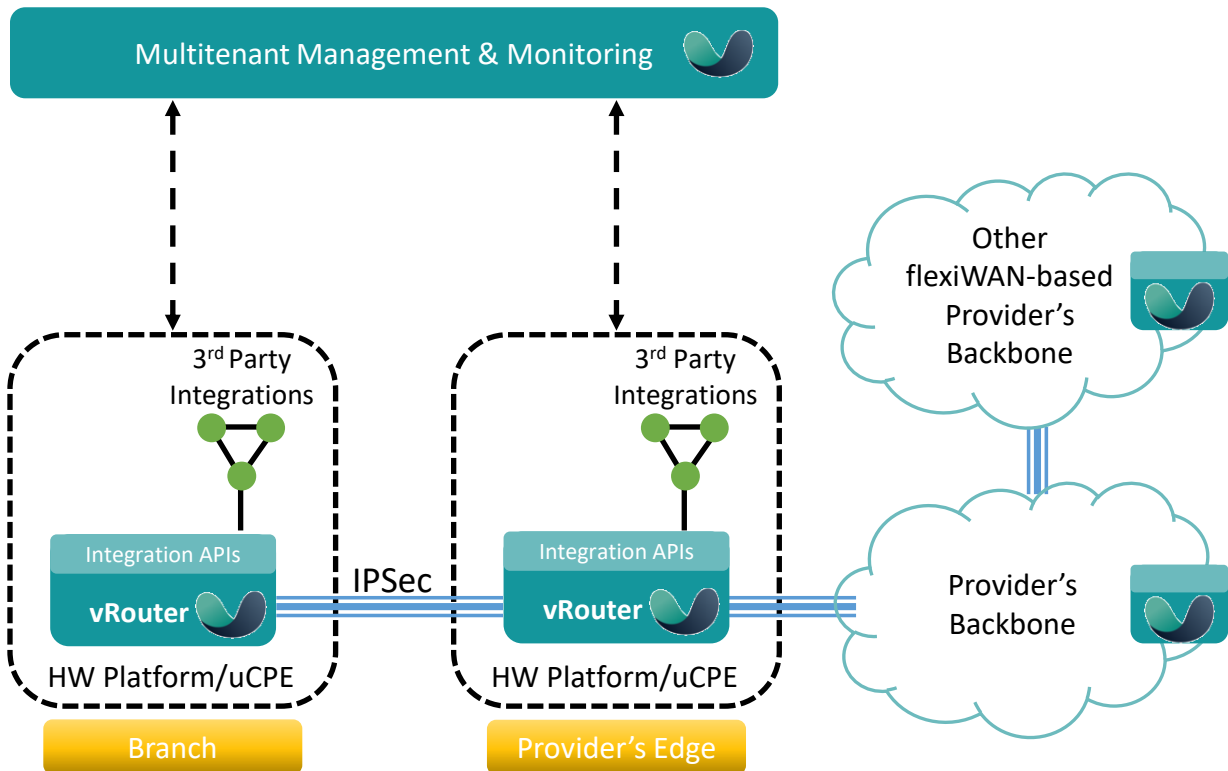
The architecture above shows virtual routers located at the branch and provider's edge. Traffic is tunneled between them or sent over the best route to the cloud.

3rd party integrations

There are 3 types of 3rd party integrations that can be created:

- **Domain experts** – these are integrations provided by technology expert companies that enhance the functionality of flexiWAN, examples can be DPI, security and VoIP optimization
- **Application/service providers** – companies offering SaaS applications, MSPs, service providers and IaaS providers can offer integrations for proprietary management of their services thus, add their differentiation to SD-WAN
- **Enterprises/users** – for specific management of enterprise traffic, enterprises can add their logic for how the traffic they generate is being handled

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