Versa Networks exits stealth mode, launches with focus on branch-office use cases

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While much of the NFV discussion centers on mobile operators, mobile infrastructure, and business and infrastructure agility broadly, Versa has chosen to emphasize specific network offerings for both enterprises and service providers for SD-WAN and branch infrastructure.
After three years of stealthy development, Versa Networks has formally launched, detailing the specific branch-office and WAN networking offerings it has developed. While much of the network-function virtualization (NFV) discussion centers on mobile operators, mobile infrastructure, and business and infrastructure agility broadly, Versa has chosen to emphasize specific network offerings for both enterprises and service providers for software-defined WAN (SD-WAN) and branch infrastructure.

THE 451 TAKE

Versa has built a broad platform and a set of high-level virtualized network functions (VNF) collectively architected to address the functionality, performance, scaling, multi-tenancy, and availability demands of modern carrier and mobile operator network systems. This approach conflicts with the early NFV dogma that said NFV systems should be open and interchangeable at every level. During its development and stealthy marketing phase, Versa evolved to focus on specific use cases rather than be a general NFV infrastructure provider, and specifically to offer SD-WAN and branch-office connectivity and security that leverage its architecture and functionality – a wise choice in our judgment, given how slowly the NFV commercial ecology has developed in the interim.

CONTEXT

Kumar and Apurva Mehta founded Versa Networks in 2012. Prior to Versa, the duo had a long track record of collaboration, having worked together in engineering leadership roles at Juniper Networks, Riverstone Networks (acquired by Alcatel-Lucent) and YAGO (acquired by Cabletron). The two conceived and developed the MX Series at Juniper, which today still accounts for a large segment of Juniper’s annual product revenue.

Sequoia Capital invested $14.4m in the company in late 2012, fueling speculation and rumor as to what the company was developing. In fall 2014, a $29m B round was closed, led by Mayfield and joined by Sequoia and Verizon Ventures. The company has roughly 90 employees distributed between its Santa Clara, California headquarters and a second development office in Bangalore, India, along with distributed sales teams.

Versa was founded as a mysterious and stealthy NFV startup during the period of initial NFV exuberance: NFV was envisioned as a broad industry and carrier collaborative effort that would enable network operators to rapidly transform their businesses away from dedicated network devices and toward the use of standardized software and commodity servers, thereby enabling much greater functional and business agility. The word at the time was that Versa was ‘NFV done right.’ While NFV advocates were touting the use of standards with the flexibility, openness and vendor choice that standardization brings, the Versa founders were building on their Juniper experience and attacking what they thought to be a fundamentally difficult technical problem: creating platform and software architecture that could deliver high-network-processing performance while operating predictably and securely in complex multi-tenant deployments. Rather than trying to build NFV technology based on existing software, Versa designed an architecture and platform from the ground up.

While Versa operated in stealth, the world of NFV evolved considerably. The business motivation to transform carrier and mobile infrastructure to achieve greater agility remained high, but the complexity and technical difficulty became more evident through a set of useful proof-of-concept exercises. Perhaps even more importantly, the organizational and cultural changes required by the carrier or mobile operator to take advantage of a more agile technical infrastructure have become clear, and are increasingly seen as the most difficult problem that stands in the way of the ultimate goal: an agile business.

In the face of all this, Versa reasonably chose to position itself as a provider focusing on specific SD-WAN and branch-office use cases with clear and immediate business value to the customer, rather than on providing technology for the restructuring of a carrier or mobile operator’s infrastructure. Versa has focused on how the remote deployment and management of virtual network functions to the branch office can be used to make an enterprise WAN more cost effective and manageable while increasing communications security, and has provided specific offerings that accomplish this.
PRODUCTS
Versa has created a complete solution to important enterprise branch and WAN communication challenges consisting of these elements: a broad set of VNFs with carrier-grade multi-tenancy, programmability, service chaining and service elasticity that can be cost-effectively deployed; the Versa OS platform on which the VNFs execute; the Versa Director, a multi-tenant architecture controller; and Versa Analytics. The solution architecture includes a system fabric that sequences sets of VNFs into service chains that are scaled elastically, according to demand. Versa says that these offer clear benefits over a traditional design using dedicated network devices, including up to 80% lower TCO, much faster time to service, simplified branch management and improved security.

Versa has identified three distinct use cases: SD-WAN, vCPE (virtual customer-premises equipment) and branch security. The SD-WAN application provides an overlay virtual WAN that adds agility and functionality. vCPE provides a general platform for the deployment of network and security functionality from a telco cloud. For branch security, it provides a centralized system for managing the security deployed at a branch office. With each application, the Versa architecture enables a range from ‘thin’ branch implementations (minimal functionality in the branch, more delivered by centralized services) to ‘thick’ architectures where more of the functionality resides within the branch, depending on where specific functions are deployed.

Although Versa is initially describing three distinct applications, the company believes that a larger opportunity for virtualized branch connectivity will emerge relatively quickly, blending all three of these applications and more. The Versa offering is priced based on a usage model that includes variables such as number of sites, tenants and bandwidth volume. The result is an opex-based cost model versus the capex model of traditional hardware-based CPE.

TECHNOLOGY
Rather than promoting an NFV architecture built around existing cloud-scale infrastructure, existing standards and software-defined networking (the common view at the time), Versa’s approach was to design a services platform (distributed software running on commodity servers) architected specifically to meet the needs of NFV applications, incorporating the elements that Versa believed were needed to implement a high-performance, scalable and available multi-tenant networking system. Versa’s approach isn’t as open a platform as some proposed alternatives – for example, the most highly used network functions must be designed to run on the platform. Versa is providing a comprehensive set of ‘out of the box’ functions, and claims that customers can chain any additional functions or services into their solutions (e.g., WAN optimization, a specific firewall, etc.). The Versa approach also embodies a strategy that requires less of the multi-service integration to be done by the carrier (or an integrator) and more to be provided by this central platform. Such an approach is either a ‘hidden vendor lock-in’ or the intelligent leveraging of purpose-built architecture and a large set of architecturally tailored functions from a single vendor, depending on how you look at it.

While Versa emphasizes the importance of its own architecture and technology, the Versa platform has a set of open RESTful APIs, full programmability using scripting, and integration with important third-party systems such as OpenStack and VMware for orchestration/automation.

COMPETITION
The SD-WAN space has a number of earlier market entrant competitors (VeloCloud, Viptela, CloudGenix), as well as participation by large market players (including Akamai, but particularly Cisco). The NFV space is full of would-be competitors if and when the commercial opportunity increases, including the large IT suppliers (e.g., Dell, HP Enterprise) and the major network suppliers (Cisco, Juniper, Huawei and Alcatel-Lucent).
SWOT ANALYSIS

**STRENGTHS**
In addition to its ‘NFV done right’ architecture and comprehensive branch solution, Versa sports a war chest of funding from top-tier VCs and a team of industry veterans with deep connections at carriers.

**WEAKNESSES**
Versa’s architecture and systemic approach to NFV can appear at odds with the ‘make it open’ and ‘use what you want’ theology of some of the more platform-oriented competitors. It remains to be seen whether Versa’s design and architecture choices will limit or enhance its success in the broader NFV market.

**OPPORTUNITIES**
The specific applications that Versa has brought to market represent immediate, high-value customer needs. Ultimately, the broader NFV market is a much larger opportunity, but it is still nascent from a commercial perspective.

**THREATS**
From an SD-WAN perspective, Versa is a relatively late entrant into an attractive but still small market, with diverse large and small competitors to worry about (less so on the service-provider side).