2016 United States SD-WAN Solution
Entrepreneurial Company of the Year Award
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Background and Company Performance

Industry Challenges

The industry has long debated which technology is superior for global enterprise Wide Area Networks (WANs): multiprotocol label switching (MPLS) or Internet-based virtual private networks (VPNs). While some argue that Internet-based VPNs are preferable because of their flexibility, scalability and cost benefits, others swear by MPLS for its reliability and performance (albeit expensive) characteristics. The choice of MPLS versus Internet comes down to whether the CIO is comfortable with entrusting his/her company’s applications to the Internet or prefers to keep them on a private network that does not touch the Internet. However, the growing use of Internet-accessible, cloud-based applications and social media is forcing enterprises to re-evaluate their networking strategies. A MPLS-only approach is, for many, no longer suitable or even feasible. Rapid changes in the network dynamics and application usage require flexibility, dynamism and application awareness in overlay network to meet the demand.

Thanks to software-defined WAN, or SD-WAN, CIOs can confidently consider hybrid WAN deployments that make the best of Internet (inexpensive and widely available) and MPLS (private and reliable) links. A SD-WAN utilizes intelligent, application-aware software to route traffic over the optimal network technology, based on business policies. The ability to ensure optimal application performance along with security, irrespective of the underlying transport, and to control branch-site routing policies remotely, has attracted significant interest from enterprises, especially from verticals with highly distributed branch locations (e.g., retail, healthcare, banking and financial services, and education).

The growing interest from enterprises has compelled leading network service providers (NSPs) to incorporate SD-WAN capabilities into their existing hybrid WAN solutions. The SD-WAN vendor market is evolving too, and is highly fragmented with several pure-play startups, WAN optimization vendors and traditional networking companies, each of whom bring different approaches to SD-WAN.

Entrepreneurial Innovation and Customer Impact

Market Disruption

Versa Networks’ approach to SD-WAN is a Network Function Virtualization (NFV) based, multi-tenant architecture that delivers SD-WAN functionality as Virtual Network Functions (VNF) at significantly reduced cost compared to traditional WAN. NFV is a network architecture that supports virtualization in the WAN. NFV technology is disruptive in nature as it can replace proprietary network elements—hardware-based switches, routers and firewalls—with software running on industry standard, commodity servers and “white box” appliances. For example, using NFV, network functions such as routers, switches, firewalls, load balancers, and content delivery can be instantiated as software functions running on virtualized servers.
The Versa SD-WAN VNF can run on any commodity infrastructure, including bare-metal, VMs, or containers, and is open and fully programmable via industry standard APIs. Using VNFs, enterprises can achieve greater levels of agility in orchestrating networks functions and faster provisioning cycle times compared to single function, proprietary hardware, and introduce new applications and services in a matter of hours rather than weeks or months.

**Competitive Differentiation**

Versa’s NFV-based approach to SD-WAN is unique as it addresses market needs in a holistic manner by combining a large set of networking and security VNFS with an instantly scalable multi-tenant platform and big data analysis. The Versa VNF solution consists of three components:

- **Versa FlexVNF**: The core building block for Versa VNF solutions, which includes a broad set of virtualized network and security functions with carrier-grade multi-tenancy, programmability, service chaining, service elasticity, and cost-effective deployment choices

- **Versa Director**: Single point of centralized control and management for both connectivity and services

- **Versa Analytics**: A real-time analytics engine that provides control, visibility, predictability, and adaptability of networks

Most hybrid WAN deployments use MPLS to connect critical locations and IPsec VPNs or Dedicated Internet Access (DIA) links to connect less critical branch sites. DIA links open an attack surface on the branch that did not exist with MPLS. Versa's software-defined security (SD-Security) capabilities offer customers choices to deploy security as a VNF on the branch site CPE or hosted off-premises in a cloud environment, the NSP’s Point of Presence (PoP), or in one or many data centers.

The NFV-based architecture also enables customers to choose the level of functionality they want to retain at a branch site versus in the service provider cloud or data center. For example, a retail outlet location could have most of its IT and security functions hosted in the cloud, and use a security VNF to ensure traffic isolation when the traffic runs through the Internet. A larger branch site could host both SD-WAN and security functionality at the branch CPE with remote SD-WAN control administered from the cloud. Versa’s NFV-based architecture also provides flexibility for customers in choosing deployment form factors, including low-cost x86 based servers and white box appliances, virtual machines and containers. The Versa solution also supports full-blown routing, both application- and network-aware, so it can be used alongside or in place of a traditional router.

**Market Gaps**

Leading NSPs are at different stages in deploying software-defined networking (SDN) and NFV technologies into their networks. Versa’s solutions complement the varied pace of NFV
NSPs can deploy Versa’s solution to not just address their SD-WAN functionality needs, but also include SD-Security and virtual CPE with their customer-facing solution. Since not all SD-WAN deployment will be green field, Versa provides an integrated mechanism to interoperate with traditional WAN solutions like MPLS and DMVPN.

From a market adoption perspective, SD-WAN is gaining traction in the enterprise market but not all enterprises are comfortable with buying the solution directly from the vendor. Additionally, WAN management is a complex process and requires expertise on the enterprise end for network managers to run and operate a global WAN. The process can be daunting when it involves multiple transport and access providers from across the globe. NSP-provided managed SD-WAN services can help fill this gap, as NSPs have the expertise and technology to integrate disparate operations and management systems across various access providers, presenting a unified view for enterprise network teams.

Versa’s NFV-based SD-WAN solution enables NSPs to address the demand for a managed SD-WAN solution in an agile and scalable manner, and incorporates big data analytics to continually optimize their services. Multi-tenancy support on every node of the Versa SD-WAN solution reduces CAPEX and OPEX for NSPs while also providing the capability to optimally utilize the underlying resources across various tenants.

**Price/Performance Value**

SDN and NFV technologies are transforming the traditional hardware-centric, static WAN into an agile and flexible WAN through a software-centric approach. In the traditional network approach, every network function runs on proprietary hardware appliances, which are physically deployed and maintained separately. With Versa’s NFV-based approach, VNFs can be deployed on a single white box or VM in the Cloud, reducing the proprietary hardware in enterprise WAN, which means fewer moving parts, fewer pieces of hardware that could fail, and less maintenance for the IT team due to reduced overall operational complexity.

Versa’s NFV-based SD-WAN solution improves the price-performance value of network services. Its solution has attracted the attention of leading NSPs (CenturyLink, Orange Business, Colt and many more Tier 1 providers) and large enterprises (banking, retail and government verticals, particularly), and the company currently has more than 50 deployments spanning North America, Europe, Asia and Central America, ranging from proof-of-concepts to field trials and production.

**Passionate Persistence**

Versa Networks was founded in 2012, and the company has attracted funding from Sequoia, Verizon Ventures, and Mayfield. The company’s founders have decades of experience designing complex communication solutions for leading vendors in the market.
company has more than 35 patents in process around its unique system-level approach for creating VNF.

**Conclusion**

Frost & Sullivan research clearly shows that Versa Networks SD-WAN solution excels in meeting the market gaps better than any other competitor, and hence is our selection for the 2016 Entrepreneurial Company of the Year Award in the SD-WAN market.
Significance of Entrepreneurial Leadership

Ultimately, growth in any organization depends upon customers purchasing from your company, and then making the decision to return time and again. In a sense, then, everything is truly about the customer—and making those customers happy is the cornerstone of any long-term successful innovation or growth strategy. To achieve these dual goals (customer engagement and growth), an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.

Understanding Entrepreneurial Leadership

Demand forecasting, branding, and differentiation are part of an entrepreneurial company’s larger journey toward forming deep relationships with customers and permanently altering the market with their actions. These two concepts—entrepreneurial innovation and customer impact—are therefore the cornerstones of this award, as discussed further in the next section.
Key Benchmarking Criteria

For the Entrepreneurial Company of the Year Award, Frost & Sullivan analysts independently evaluated two key factors—Entrepreneurial Innovation and Customer Impact—according to the criteria identified below.

Entrepreneurial Innovation
- Criterion 1: Market Disruption
- Criterion 2: Competitive Differentiation
- Criterion 3: Market Gaps
- Criterion 4: Blue Ocean Strategy
- Criterion 5: Passionate Persistence

Customer Impact
- Criterion 1: Price/Performance Value
- Criterion 2: Customer Purchase Experience
- Criterion 3: Customer Ownership Experience
- Criterion 4: Customer Service Experience
- Criterion 5: Brand Equity

Best Practice Award Analysis for Versa Networks

Decision Support Scorecard

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Scorecard. This tool allows our research and consulting teams to objectively analyze performance, according to the key benchmarking criteria listed in the previous section, and to assign ratings on that basis. The tool follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are illustrated below.

RATINGS GUIDELINES

The Decision Support Scorecard is organized by Entrepreneurial Innovation and Customer Impact (i.e., the overarching categories for all 10 benchmarking criteria; the definitions for each criteria are provided beneath the scorecard). The research team confirms the veracity of this weighted scorecard through sensitivity analysis, which confirms that small
changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

The results of this analysis are shown below. To remain unbiased and to protect the interests of all organizations reviewed, Frost & Sullivan chooses to refer to the other key players as Competitor 2 and Competitor 3.

**DECISION SUPPORT SCORECARD: ENTREPRENEURIAL COMPANY OF THE YEAR AWARD**

<table>
<thead>
<tr>
<th>Measurement of 1–10 (1 = poor; 10 = excellent)</th>
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<tbody>
<tr>
<td><strong>Entrepreneurial Company of the Year</strong></td>
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<tr>
<td>Versa Networks</td>
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<tr>
<td>Competitor 2</td>
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<tr>
<td>Competitor 3</td>
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**Entrepreneurial Innovation**

**Criterion 1: Market Disruption**
Requirement: Innovative new solutions that have a genuine potential to disrupt the market, obsoleting current solutions and shaking up competition

**Criterion 2: Competitive Differentiation**
Requirement: Deep understanding of both current and emerging competition to create and communicate strong competitive differentiators in the market

**Criterion 3: Market Gaps**
Requirement: A clear understanding of customers’ desired outcomes, the products that currently help them achieve those outcomes, and where key gaps may exist

**Criterion 4: Blue Ocean Strategy**
Requirement: Strategic focus in creating a leadership position in a potentially "uncontested" market space, manifested by stiff barriers to entry for competitors

**Criterion 5: Passionate Persistence**
Requirement: A deep belief in the "rightness" of an idea, and a commitment to pursuing it despite seemingly insurmountable obstacles

**Customer Impact**

**Criterion 1: Price/Performance Value**
Requirement: Products or services offer the best value for the price, compared to similar offerings in the market

**Criterion 2: Customer Purchase Experience**
Requirement: Customers feel like they are buying the most optimal solution that addresses both their unique needs and their unique constraints
Criterion 3: Customer Ownership Experience
Requirement: Customers are proud to own the company’s product or service, and have a positive experience throughout the life of the product or service

Criterion 4: Customer Service Experience
Requirement: Customer service is accessible, fast, stress-free, and of high quality

Criterion 5: Brand Equity
Requirement: Customers have a positive view of the brand and exhibit high brand loyalty

Decision Support Matrix
Once all companies have been evaluated according to the Decision Support Scorecard, analysts can then position the candidates on the matrix shown below, enabling them to visualize which companies are truly breakthrough and which ones are not yet operating at best-in-class levels.

DECISION SUPPORT MATRIX: ENTREPRENEURIAL COMPANY OF THE YEAR AWARD

<table>
<thead>
<tr>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Impact</td>
<td>Entrepreneurial Innovation</td>
</tr>
</tbody>
</table>

- Versa Networks
- Competitor 3
- Competitor 2

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The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan’s 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often, companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry players and for identifying those performing at best-in-class levels.

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best in class positions in growth, innovation and leadership. The company’s Growth Partnership Service provides the CEO and the CEO’s Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages over 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from 40 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.