

KNOWLEDGE BRIEF

**Quadrant Research Recognizes
Mushroom Network as 2016
Company of the Year in the Global
SD-WAN Market**

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BY



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A global increase in Internet usage, widespread adoption of cloud computing, and software-as-a-service applications has fueled enormous demand for reliable and faster WAN connections. In order to meet growing networking demands, enterprise WAN networks require agility, reliability, and uptime for optimum application performance. While hybrid-WAN architectures have helped enterprises to achieve agility and reliability; due to growing networking traffic, achieving uptime, traffic management, and cost reduction remains a challenge. Software-Defined Wide Area Network (SD-WAN) technology uses virtual WAN connections that are used to connect enterprise networks to achieve faster, reliable, and uninterrupted network connections at optimum costs. SD-WAN solutions provide network administrators the flexibility to pick and choose the appropriate network WAN technology to connect disparate enterprise LANs, including branch offices, remote offices, and cloud-based centers over large geographical distances. This architectural arrangement enables administrators to break free from being solely dependent on traditional Multi-Protocol Label Switching (MPLS) connections, thus providing relief on the traffic load in any specified path and creating better bandwidth economics for per-bit-transferred. SD-WAN solutions also help administrators in setting up automated policies to ensure data transmission is policed to meet technical and business targets in an optimum and effective manner.

Quadrant Knowledge Solutions' recent study of the "**Software-Defined Wide Area Network (SD-WAN) Global Market Outlook**" analyzes market dynamics, opportunities, and the vendor ecosystem of the market. This study provides strategic analysis of the global SD-WAN market in terms of short-term and long-term growth opportunities. The study also provides detailed market forecast analysis of the global SD-WAN market in various geographical regions, industry segments, revenue type, and customer segments. The SD-WAN market outlook research helps companies formulate growth strategies by identifying growth prospects, market trends, market drivers, and challenges in the global market.

The research also provides detailed competitive positioning and supplier landscape analysis of major SD-WAN vendors, including Mushroom Networks, Velocloud, Viptela, Talari Networks, Silver Peak, Riverbed Networks, Versa Networks, Fatpipe, CloudGenix, Aryaka Networks, Cisco, and others.

Mushroom Network Receives 2016 Company of the Year Recognition in the Global SD-WAN Market

As part of the research, Quadrant’s competitive landscape analysis of the SD-WAN market compares the vendors’ technological capabilities in providing different applications. Quadrant research analyzed vendors in terms of sophistication, depth and maturity of the technology, vision and innovation strategy, competitive strategy, growth strategy, and industry impact analysis. According to research findings, Quadrant Knowledge Solutions recognizes Mushroom Networks as the “Company of the Year in the global SD-WAN market”. Mushroom Networks’ leadership recognition is driven by its superior technology platform, comprehensive product portfolio, extensive know-how, growth strategy, impressive client-base, and high industry impact.

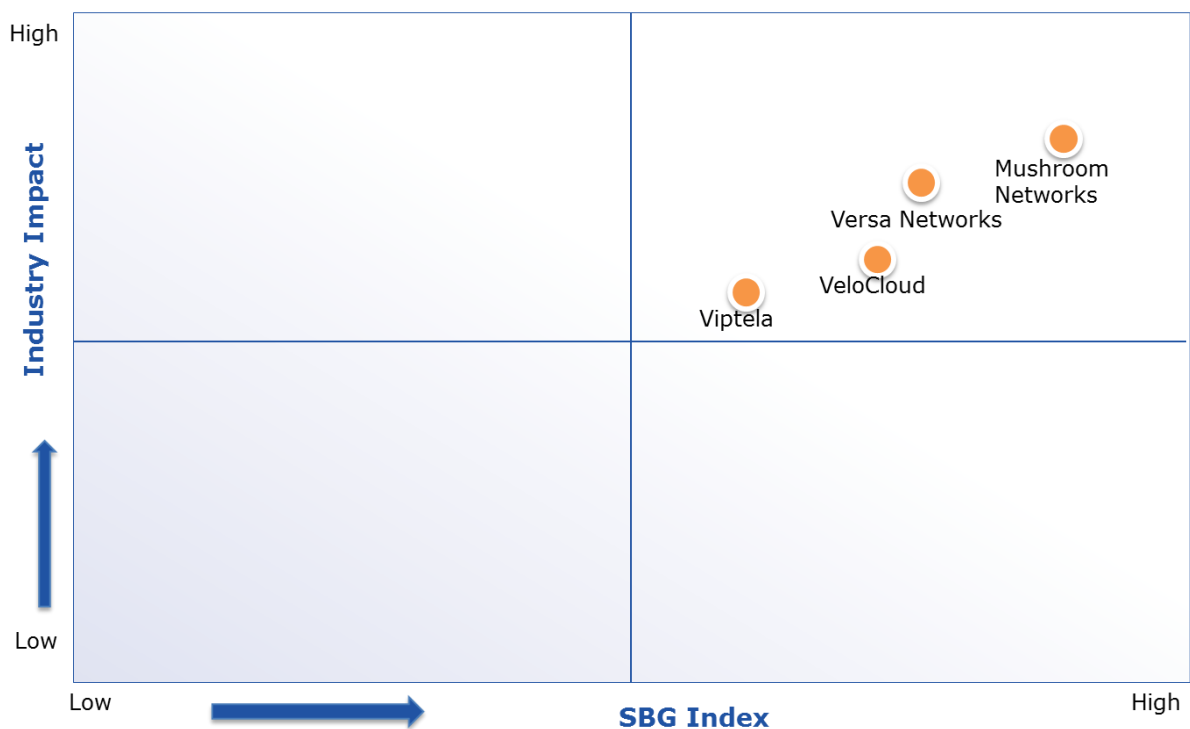
While organizations have invested in building robust network infrastructure, they often face challenges in achieving optimum WAN performance in terms of speed, agility, and uptime. SD-WAN is a software-defined solution that helps to create a network overlay in order to decouple network software-defined services from the enterprise underlying hardware systems. SD-WAN’s software-centric approach helps in simplifying branch office networking, improves branch agility, optimizes application performance, and provides significant cost reduction both in CAPEX and OPEX. Mushroom Networks’ SD-WAN solutions use a unique and user-friendly graphical tool called the Virtual Network Function (VNF) Design Studio. VNF Design Studio enables an easy way to build sophisticated virtual overlay tunnels between SD-WAN virtual and physical appliances. VNF design studio can also be used to implement advanced flow algorithms that optimize the IP packet flows, application performance, and end-user experience.

Mushroom Networks’ advanced VNF Design Studio solution enables service providers and large enterprises easily build their own VNFs, custom made for their WAN and traffic profile via its user friendly graphical tool. This helps admins in optimizing WAN and performance of their private, public and hybrid cloud services according to the organization’s specific SLA needs and application traffic profile. VNF, with its advanced telemetry capabilities, can measure various characteristics of WAN connectivity that can be leveraged to optimize a specific VNF. These parameters along with a time-series recent history can be used as a trigger for algorithmic actions within the overlay tunnel. For example, a redundancy driven algorithm, such as network coding, can be triggered on a specific traffic flow auto-adjusting its parameters in real-time as a function of network conditions. Similarly, enabling/disabling compression, dynamic flow steering, activating in-band or out-of-band measurements on live flows, as a function of network demand, cross traffic and/or any other telemetry measurements is possible with VNF Design Studio.

VNF Design Studio is compatible with all Mushroom Networks appliances and provides an easy drag-and-drop design language for building tunnels with advanced capabilities. Once designed, the VNF tunnel can be pushed onto the appliances and become immediately available without requiring a reboot of the appliance. VNFs enables connectivity between sites with star or mesh topologies.

Founded in 2004, and incorporated in San Diego, California, USA, Mushroom Networks is amongst the most innovative provider of advanced SD-WAN solution. The company, with its unique technology platform is emerging to become a key vendor in the SD-WAN market.

Software Defined Wide Area Network (SD-WAN) Global Market Outlook



Mushroom Network’s Capability in Global SD-WAN Market

Mushroom Networks’ products are based on the unique and patented Broadband Bonding® technology developed by their research and development team. Mushroom Networks’ product portfolio includes Truffle, Truffle Lite, Truffle V, PortaBella, Virtual Leased Line, Broadband Bonding Service, TelePorter, Streamer, ThirdEye, and VOIP Armor. These products are designed to solve reliability and up-time related networking pain-points. Some of the specific application-centric solutions also focus on providing 100% uptime to specific applications such as VOIP, video, EHS, chatty applications and private/public/hybrid cloud based applications.

- **Truffle, Truffle V, and Truffle Lite:** Mushroom Networks' Truffle SD-WAN Orchestration and Broadband Bonding appliance offers cost effective and self-healing internet access for businesses, branch offices, and other multi-tenant buildings. Truffle load balancing and intelligent orchestration helps improve internet performance, improve up-time of applications and services. Mushroom's Truffle appliances supports aggregation of up to 4, 8, or 16 internet access lines and additional 2 cellular data cards to provide increased bandwidth. These Internet access lines can be from a DSL modem, cable model, T1, MPLS, satellite modem, DS3, fiber, cellular, or any other broadband connection. In addition to SD-WAN aggregation, Truffle appliances also work as a firewall, router, bandwidth manager, Internet failover, traffic monitoring, and traffic shaping appliance. Truffle Lite is the company's entry level and cost-effective Internet load balancer, suitable for small offices. Truffle V is WAN orchestration software that can be installed and run on a standard virtual machine hypervisor. Truffle V can be installed in data center and peered with remote Truffle and Truffle Lite appliances to connect branch offices and data center by forming overlay tunnels leveraging bonded WAN lines.
- **VOIP Armor:** VOIP Armor is a VOIP gateway that improves the reliability of VOIP and SIPS traffic and boost call quality. It is a compact appliance that can create a bonded tunnel connecting office to the cloud that is optimized for reliable VOIP services. Directing VOIP and SIP traffic via VOIP Armor protects phone calls from packet loss, disconnection, jitter or latency spikes in the Internet lines, resulting in higher call quality even midst of network problems. **VOIP Armor is also available as a software module for the Truffle product line.**
- **PortaBella:** Powered by Broadband Bonding technology, PortaBella is a 3G/4G/LTE-bonding device that provides faster and cost effective Internet access for mobile and portable deployments. PortaBella, peered with Portabella Master unit, provides uplink and downlink for any protocol between the mobile location and the host offices by enabling bonding of multiple cellular wireless Internet access connections. Portabella has capacity to connect up to four or eight cellular data modems (external or embedded modems) to provide increased access bandwidth in both uplink and downlink directions for the communication link to the host office.
- **Virtual Leased Line:** Virtual Leased Line (VLL) creates an IP tunnel using bonded Internet access lines, to provide secure, fast and reliable VPN connectivity between multiple locations. VLL can bond multiple Internet access lines together from various service providers, without requiring any external support or coordination with the service providers.

- **Broadband Bonding Service:** Broadband Bonding Service is a cloud-based managed service offering that enables BBNA (Broadband Bonding™ Network Appliance) device with the uplink bonding capability for a faster and more reliable Internet connectivity. Broadband Bonding Service can be used in conjunction with Truffle Lite, Truffle, and Portabella as an Internet-bonding service and has a worldwide footprint.
- **TelePorter/Streamer:** TelePorter is a live video transmission solution that transmits live high-quality video and audio signal from a remote location to the headquarter location, websites, or any CDN (Content Distribution Network) for remote video streaming applications. It is an ideal solution for TV broadcasting and online video streaming applications for high quality video distribution that is very reliable and has very low glass-to-glass latency. Teleporter streams videos over bonded 3G/4G/LTE wireless cards and hence eliminates the need for costly ENG satellite trucks.
- **ThirdEye:** It is an Internet bonding device optimized for PTZ camera application used for remote video surveillance. ThirdEye is suitable for portable and remote video surveillance applications. ThirdEye field unit can be peered with ThirdEye server in order to establish bonding both in uplink and downlink directions enabling higher throughput and higher reliability of video feeds from PTZ cameras.

Last Word

Ever changing business dynamics and the need for secure and reliable connections around the clock has raised the demand for flexible, reliable, and cost-effective networking solutions. Enterprises are already moving from traditional WAN to hybrid WAN architectures, as more traffic is flowing from branch offices to the cloud instead of private data centers. SD-WAN solutions are a step up from the hybrid WAN approach. Driven by increased usage of the Internet and widespread adoption of cloud services over distributed geographical locations, enterprises are increasingly focusing on ensuring optimum performance of these applications. SD-WAN technology is the most cost-effective solution to improve network performance, reliability, and uptime. SD-WAN solutions enable network managers to aggregate several connections to work as single virtual overlay network with path selection and traffic engineering to optimize the link.

Mushroom Networks, with its unique and innovative SD-WAN solution and Broadband Bonding technology, is well positioned to continue to help enterprises in improving WAN performance. Driven by strong overall performance in terms of sophistication, depth and maturity of the technology, visionary innovation, and industry impact, Quadrant Knowledge Solutions recognizes Mushroom Networks as the 2016 Company of the Year in the global SD-WAN market.