

Vertical Use Cases for SD-WAN

Overview

Enterprises of all shapes and sizes have historically benefited from outsourcing or managed services deals that have reduced the cost of noncore operations. IT and network infrastructure are just two of those areas. But they also happen to be two of the most prominent when it comes to delivering greater customer value at a lower operating cost. This means that enterprise CTOs are continually squeezing service providers to deliver efficiency savings and product innovation. For many, wide area networking (WAN) is one service that is coming under increased scrutiny. Why? Because there is a new game in town that is disrupting MPLS IP VPN revenues and the entire competitive landscape. Read on to discover why Software-Defined WAN (SD-WAN) is quickly becoming that change agent and what it means for your approach to key vertical markets.

The Vertical Backdrop

Logistics

Supply chain logistics has always been a competitive business with reliability, price, flexibility, and reach being critical factors in an organization's contracting decision. Even though supply chain complexity has increased, there is a resistance to reflect this in higher pricing. Consequently, logistics executives are putting pressure on people such as CTOs to extract greater value from suppliers and find ways of doing things differently. In their eyes, the WAN is ready for a new approach.

Telcos and other service providers have benefited from the first wave of the logistics revolution through their long established MPLS IP VPN services. But, can they continue to do so as logistics becomes even more network centric? In an industry where different distributed organizations must behave as a single virtual entity, agility and flexibility are key. The network underpins that requirement and ensures that information can be shared across multiple platforms securely and instantaneously.

Logistics companies can't be constrained by long lead times, locked into long contract terms, or hindered by national borders. When transactions must be fulfilled overnight, everything must work the first time, every time. Today, everything in the logistics

industry is connected—from the remote tracking of vehicles and consignments through to warehousing and inventory management. Real-time insights can be converted into business opportunity, and new business can be won or lost in seconds.

Reliable and ubiquitous communications with partners are the table stakes—even if that relationship is transient. Success is underpinned by an agile and flexible network that quickly adapts to what is needed now, rather than what is anticipated in three months' time. The traditional MPLS IP VPN network can no longer meet these requirements efficiently.

Retail

Retail executives are examining every part of their business to determine where efficiencies can be realized. They ask: How can we improve the customer experience? And what can we do to drive up sales and productivity? In an industry where executives have traditionally focused on physical footfall, technologists are fairly thin on the ground. CTOs are an exception, but they have a multifaceted role that takes in everything from operational improvement to omni-channel go-to-market strategies. It's no surprise, therefore, that CTOs are putting pressure on their service providers to deliver services faster and reduce network costs. To them, the delivery of a more agile WAN is long overdue.

Service providers benefited from the first wave of secure information sharing between retail outlets and their headquarters through their long established MPLS IP VPN services. But, can they continue to do so as the retail industry interacts with more devices in store? Can they do so during a time when retailers need more real-time data and analytics to influence consumer buying patterns? Is shopping about to become network centric?

Long gone are the days when a retail outlet would report sales at close of day and then place a stock replenishment order. Every transaction is now monitored instantaneously. In-store techniques such as video, audio, and mobile price comparisons all form a part of the customer's new retail experience. All of this, plus the influx of social networking and highly personalized advertising, gives retailers a prime opportunity to gain a competitive advantage and enjoy greater customer advocacy.



Click online, collect in store, process online purchased stock returns, “speak to an expert”—these are just some of the things that make retail a complex operation, designed to support an ever more complex consumer profile. When you add in business acquisitions, consolidation, and expansion of new outlets, it becomes a real challenge, including considerations such as merging platforms, systems, and processes.

Speed is of the essence and retailers need their supporting communications networks to keep pace. Retail is no longer constrained by either time or geography, and in a low margin industry, the need for agility and flexibility can't be solved by a traditional MPLS IP VPN network.

Business Services

Many business services—including legal, accounting, and travel planning—have benefited from outsourcing and managed services deals intended to reduce the operating costs of their customers' noncore business operations. But in a quest to offer increasing value, service providers' own operating costs have come under increased scrutiny.

Every department is examining its cost base, so it's no surprise that cross-functional operations—such as the network—are coming under pressure to deliver “more for less.” CTOs are looking squarely at service providers and their WAN services to come up with the goods. Service providers have profited from the first wave of business services through their long established MPLS IP VPN services. But can they continue to do so as the sector becomes even more network centric?

In an industry where an outsourced organization must behave as a single virtual entity to its many contracting customers, the network needs to be both agile and flexible. It must have access to, and add value to, information from multiple sources. It cannot be constrained by long lead times, locked into long contract terms, or hindered by national borders. Sensitive information needs to be treated accordingly and less important traffic routed at the least possible cost.

Many business service organizations pursue a mergers and acquisitions strategy to grow. Many do so to form alliances between complementary services to deliver a more complete portfolio to their customers. In all scenarios, they're mandated to deliver services seamlessly across different platforms. Again, we find that flexibility, agility, and reliability are key to the network that connects them.

Banking

Retail banking is one of the most competitive on the planet and has become one of the most heavily disrupted by technology. Naturally, senior executives are single-minded in their pursuit of business efficiencies and service innovation, not least because there is little room for growth in traditional deposit and withdrawal operations.

With the advent of cloud-based services, the natural inclination for many is to put the emphasis on service providers to do things differently. That means reducing network costs, and it also means overhauling the way in which WAN services are priced and delivered. The first wave of electronic and remote banking gave service providers lucrative MPLS IP VPN services to sell. These are now long established, but the question is whether that can continue as banking becomes even more network centric.

In a world where online banking, mobile banking, and electronic payments are growing at a pace driven by consumers, the banking industry needs to rethink the purpose of the local branch office. As banks evolve from a traditional payment processing and enquiry-based business to embrace growth areas such as wealth management, the composition of the branch network will also be critical. The volume, geographical reach, and accessibility of those retail environments is vital. It becomes obvious, when you add acquisitions and divestments to the mix, that this complexity can only be overcome by being agile, flexible, and quick to market with imaginative new services.

Clearly there is an urgent need to reinvent retail banking. Traditional establishments must maintain their relevance to existing customers and also tap into a millennial market that has no loyalty and is increasingly attracted to emerging point solution players. And if that were not enough, the current macroeconomic climate—with its extended period of low interest rates—is exerting sustained pressure on margins and an obsessive focus on cost reduction.

Oil and Gas

In a sector that has witnessed its fair share of volatility, even marginal operational improvements can add up to enormous business savings or lucrative revenue opportunities. So it's no surprise that senior stakeholders across the oil and gas industry are constantly striving for efficiencies in every corner of their business.

With an increasingly network-centric approach to both upstream and downstream operations, CTOs are challenging service providers to do things differently in the quest for lower network infrastructure costs. To them, the WAN is one area that has much to give in terms of adding value and lowering overhead.

This all stems from service providers' long-standing provision of MPLS IP VPN products to an industry that operates across the globe in some pretty inaccessible locations. Alternatives to the traditional WAN model are emerging. How service providers respond to this threat—or opportunity—is now the central question.

The past eighteen months have seen the geopolitical nature of the oil and gas industry come to the fore. Despite our seemingly insatiable desire to consume more oil and gas, new extraction techniques and competing economies have combined to drive the spot price to new lows that have only partially rebounded. Downstream, this is hurting revenues, while upstream, the cost of extraction and exploration as a proportion of revenue has increased significantly.

Prices will always fluctuate, but most experts predict it will be a significant time before they return to their previous highs. Consequently, energy companies are developing strategies that will do more than help them simply “weather the storm.” Short-term cost containment is critical, but so is developing a model that maximizes efficiencies for the longer term. Reliable information access is critical in an industry that often operates beyond normal infrastructure support and simplification of day-to-day operations. In this world, a more effective way to manage risk is vital to sustained success.

Top Business Challenges

Downward cost pressure across all of these industries is being transferred to service providers, and it is becoming apparent that a new approach incorporating SD-WAN offers a more cost-effective way to move network traffic than MPLS IP VPN alone.

- WAN is starting to be seen as a barrier to innovation due to high costs and slow deployment.
- Integration of new and legacy networks as a result of M&A activity is a growing headache for sectors like retail.
- Enterprises need to offer the same agile service as start-ups to stem the tide of declining loyalty.

Top Technical Challenges

- Nearly half of all business applications are accessed via the Internet, increasing data demands on the network.
- MPLS is an over-engineered and costly solution for all branch traffic.
- Greater flexibility is required to cost effectively route traffic in line with business priorities.

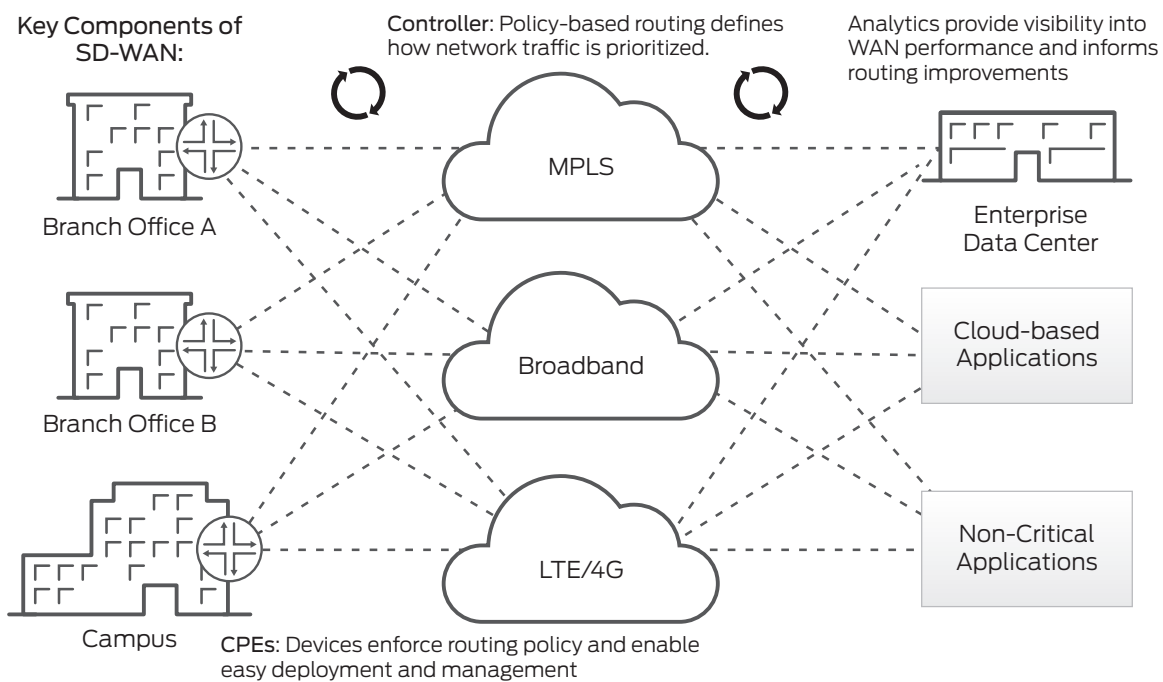
Why SD-WAN?

- SD-WAN is a key enabler of the next-generation network:
 - Overall SD-WAN revenues are predicted to grow to \$6 billion by 2020.
 - SD-WAN, as a virtual service on an open platform enables service providers to sell other virtual services as a value add.
 - An IDC survey reveals that over 60% of enterprises intend to adopt a hybrid WAN approach within 18 months.
 - A hybrid WAN simultaneously leverages multiple connection types (MPLS, broadband, and wireless) to deliver optimal routing.

The Juniper Solution

SD-WAN is an ecosystem of hardware, software, and services that enables enterprise-grade WAN performance, reliability, and security via:

1. Dynamic and efficient policy based routing of traffic, across multiple WAN connections e.g. MPLS, Internet, LTE, in order to optimize bandwidth usage at the least possible cost.
2. Automation enabling addition/removal and management of network services.
3. Simplified configuration and management of WAN



- Open for business:
 - Integrating your current MPLS with SD-WAN on an open platform is the most profitable go-to-market route.
 - Openness in the platform ecosystem will facilitate innovation with other OTT services (including third parties).
 - This potentially extends your reach to new customer segments such as SMB, and opens up new geographies.

The Juniper Customer-Centric SD-WAN Solution

Juniper Networks understands that you need to make a fair return on your investment. We also understand your customers' desire to drive cost out of their networks and provide an agile platform for business transformation. That's why the Juniper approach to SD-WAN keeps you relevant in the WAN services market and yet enables you to develop new services that can be rapidly deployed to grow incremental revenues.

Adopting the right approach to SD-WAN enables you to tick all the boxes:

- It's not SD-WAN or MPLS: Make MPLS a key component of your SD-WAN strategy.
- Complete SD-WAN/MPLS integration to provide quality of service (QoS) and lower the cost of additional capacity.

- Offset declining MPLS income with revenue from new services and new market segments.
- Extend the geographical reach of your WAN network.
- Differentiate through new services to increase customer stickiness .
- Use an open platform for service delivery and creation that enables you to introduce third-party services.

As you seek to grow your footprint in the enterprise marketplace, Juniper Networks will work with you to develop solutions that keep you top of mind for WAN services.

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

About Juniper Networks

Juniper Networks challenges the status quo with products, solutions and services that transform the economics of networking. Our team co-innovates with customers and partners to deliver automated, scalable and secure networks with agility, performance and value. Additional information can be found at Juniper Networks or connect with Juniper on [Twitter](https://twitter.com/juniper) and [Facebook](https://www.facebook.com/juniper).

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