Building the Smart Retail Store
of the Future with Versa Secure SD-WAN

Retailers are on an arduous journey to create an unmatched customer experience. Here is how Versa's SD-WAN solution can help them improve their agility and responsiveness to business needs and align closely with what customers want.

Introduction

Fuelled by digital transformation and changing customer demands, the retail industry is amidst one of the largest overhauls of all times.

An average consumer today expects seamless services across multiple platforms – they walk into a physical store and expect a secure in-store Wi-Fi to connect to social media or mobile payment gateway, quick checkouts, and interaction with rich media (for instance, use of virtual reality in the trial rooms). Consumers have set incredibly high standards for instant gratification and superfast yet personalized shopping experience.

For the retailer, it means that the need for integration between online and offline services has never been higher. Retailers now need to ensure that their business-critical applications perform reliably, 24/7, across a varied set of channels, devices, and platforms. Cloud-based applications for business and consumers, big data analytics, IoT devices (RFID, sensors, CCTV cameras), mobility and social media have all added new dimensions to the way retailers are approaching the shopping experience.

Networks can Make or Break Retail Transformation

Retail customers are demanding more digital and media-rich services as well as increased security and data privacy but legacy retail WAN and branch offices are often ill-equipped to effectively provide and manage these new customer requirements.

On one end, retail companies are under the immense pressure of delivering unparalleled customer experience through multiple channels – from physical stores to websites, mobile applications, and social media. On the other, they need to do so while keeping cost and operating complexities low, all the while increasing their global footprints and reducing the time to go-to-market.

Conventional connectivity like MPLS are proving to be too expensive and rigid for dynamic retail demands. The increased use of cloud-based applications, rich media, VoIP and cloud-based productivity and collaboration tools can skyrocket bandwidth demands, and solely relying on MPLS can become increasingly expensive. The public Internet, on the other hand, provides flexibility and easy access to the cloud, is easily available at remote locations and is cost effective. But the public Internet is plagued with inherent challenges like latency and packet-loss (especially over long-distances and overseas connectivity) and brings with it concerns about security, network stability, and performance.

The cost, complexity, and ineffectiveness of wide area network (WAN) and branch networks architectures over the last 20 years have reached a tipping point in the retail sector. Let's take a look at some of the biggest challenges faced by the retail industry today and how networks play a pivotal role in addressing them:

Cloud-computing

With the advent of cloud, the retail industry found a solution to some of its most pressing challenges. Cloud provides the on-demand scalability that retailers need during the peak/holiday seasons. With cloud's plug-and-play model, getting a new branch location/retail outlet up and running became faster and easier, even in some of the remote locations.

However, connecting to the cloud brought forward the inability of the legacy WAN edge to cater to the workloads of the cloud-first, digital enterprise of today. As highlighted earlier, MPLS can be challenging to increase bandwidth capacity on-demand cost-effectively to address the increased needs of cloud-applications. Retailers should look to Secure SD-WAN to quickly increased bandwidth with a transport agnostic solution, increase reliability, simplify WAN operations improve business applications with an application intelligent WAN edge.

Seamless Application Experience

Have you ever wondered how long would it take for your long-time customer to change loyalty? In the present day context, the answer is pretty simple-as long as it takes for your web page to load.

Business-critical applications like POS and inventory management need to run without interruption throughout a business day. Even more challenging is the fact that the entire infrastructure needs to be built and provisioned to be able to handle seasonal peak workloads. When retail locations are also increasingly relying on real-time applications like VoIP and unified communications, then jitter, lag, and downtime are concepts that are even more difficult to accept.

Whether it is applications that enable day-to-day business activities or consumer-facing mobile and web applications, hosted on-premises or in the cloud, it is essential that application delivery is unremitting without compromising on quality and user experience.

SD-WAN provides retail IT with greater control over WAN operations, promising more efficiency and effective application management across the entire corporate WAN infrastructure as compared to legacy solutions or conventional WAN edge architectures.

Omnichannel Retail

Omnichannel retail focuses on designing a cohesive user experience for customers at various touchpoints spread across multiple channels and platforms. Omnichannel fulfillment requirements depend on flexible, high performing networks on both the consumer and store operations sides of the transaction. The consumer expects a high-quality digital shopping experience, even when they're inside the store. Store personnel need fast, reliable access to applications, some of which are likely cloud-based.

An omnichannel retail strategy demands a more agile approach to network operations. Retailers need an efficient networking and security that can virtually follow the customer and deliver seamless application performance across all platforms as they transition from online to offline or switch devices. Automation is key for network and security operations to simplify and rapidly deploy the necessary contextual network and security policies to enable omni-channel connectivity for retail consumers.

Customer Data Security and Compliance

Most retailers today have multiple sites, applications and platforms for the business and customers, each of which is a potential point of vulnerability for malicious attacks. Increased use of public Internet or broadband to connect to the cloud or interconnect devices opens up the retail network to malicious activity and threat actors. Point-of-sale, IoT, mobile devices connecting over in-store Wi-Fi are also potential targets. Segmentation is critical to provide secure separation between guest and corporate network services. Integrated security with networking is a necessity to ensure that retail IT can control, mitigate, protect and analyze network risks and leverage simpler methods of enforcement of policies across the corporate network.

Time-to-Market

Though e-commerce has changed the world of retail by moving events to a digital platform, physical stores remain a significant part of any retail business. The ability to reduce the time to set up shop in untapped geographies before a competitor does can be a huge game-changer for any retailer. Cloud made it easier for companies to launch into new markets without having to worry about getting the infrastructure in place; however, the speed to enter new geographies or markets is somewhat stilted by how long it can take MPLS connectivity to be established. Add to that the costs for sending workers out to sites each time changes need to be made or a new location needs to be brought online, and the costs to manage a WAN goes through the roof.

Flexibility

The seasonal ebb and flow of shoppers have always been a point of concern for retailers. Enterprises who overprovision resources to accommodate the spike in workload during the festive seasons end up paying for unused capacity for the rest of the year. Companies who don't, end up straining existing resources during the peak season and risking the breaking down of the system altogether.

Legacy connectivity solutions like MPLS do not offer the flexibility on demand to support cloud-based applications. Enterprises need a solution that can sustain a hybrid approach and leverage the flexibility of the public Internet when bandwidth needs to scale up and down on demand.

Challenges of the Retail Industry
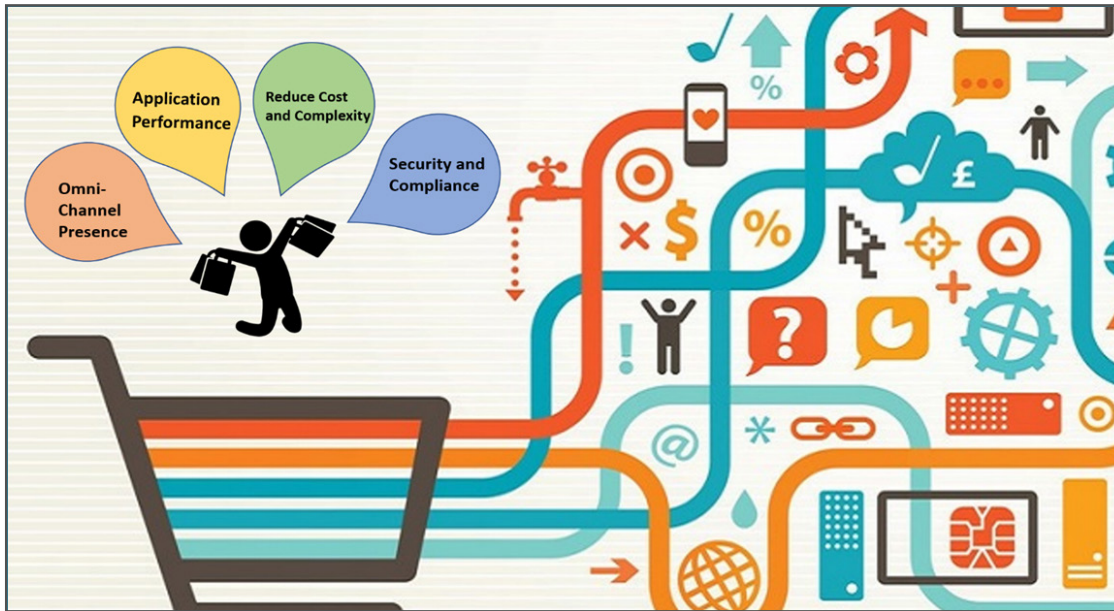
For brick and mortar merchants, increased costs from legacy WAN architectures have impacted profitability and the ability to deploy new in-store services, while network complexity has increased the risk for PCI compliance violations. Insufficient bandwidth for the cloud, Internet, and media access has caused guest Wi-Fi to consume critical bandwidth or significantly increase recurring costs by implementing silo infrastructure for guest digital services. With the use of direct Internet, mobile devices and increased guest digital services the attack surface has widened straining retail IT.

Secure SD-WAN: Unlocking New Capabilities

The new age networks that power the underlying infrastructure for digital, cloud-first enterprises need to be intelligent and built to deliver uninterrupted secure connectivity to cloud-based applications. Superlative application performance, reducing deployment times and minimizing the cost and complexity of running the networks are some of the features that every retailer should aim to incorporate when building a future-ready WAN.

Versa Secure SD-WAN solution leverages a unique cloud-native, multi-tenant, multi-service architecture, secure cloud IP, for a software-defined network that enables network teams to remove the barriers that legacy WAN and branch architectures have increasingly placed on the conventional IT landscape. It enables IT to rapidly provision new branch offices, dynamically add new network and security functions, and seamlessly scale capacity as required.

Versa Secure SD-WAN is a versatile platform with architecture that enables Versa Operating System (VOS™) to deliver the following capabilities to the enterprise networks:

Unmatched Application Performance

Be it online or offline, mobile or cloud-based, business-critical or customer facing, VOS can optimize existing bandwidth resources and enhance application performance. Through an intelligent combination of priority-based traffic routing, balancing between multiple links for data transmission and application connectivity and outcome-based networking, Versa SD-WAN carefully maps different applications across MPLS and Internet/broadband connections based on business policy and app-specific SLAs. It can dynamically route traffic across the best connection depending on real-time availability and performance or other custom policies, which enables high-bandwidth availability, interactive rich-media and enhances application performance and user experience.

Reduce Cost and Complexity

VOS integrates low-cost Internet and broadband alongside MPLS to reduce the cost associated with increasing bandwidth demand. Retailers can now rely on a secure public Internet to connect to cloud-based applications and switch over to the more reliable MPLS for mission-critical traffic.

Versa SD-WAN also helps enterprises cut down on the cost of resources (hardware and human) required to manage and run the network. All of these factors simultaneously bring down the hardware-oriented Capex model significantly. A cloud-based subscription model means enterprises can avoid capital expenditures and manage to shift capacity demands with ease. A centralized software-defined approach to network management also gives IT greater visibility and control over the corporate network with lower administrative costs

More Flexibility for the Holiday Season

SD-WAN enables IT to define application traffic SLA policies to automate the efficient use of bandwidth and network resources dynamically, pro-actively coping with increases in data traffic and congestion. By leveraging low-cost broadband and making it more secure and enterprise-ready, Versa SD-WAN can help enterprises accommodate the seasonal cycles of peak bandwidth demand with ease and in a cost-effective way.

Integrated Security and Compliance

Versa provides a software-defined security solution that is tightly integrated into VOS. It offers a broad set of software-based security functions, including next-generation firewalls, malware protection, URL and content filtering, IPS and anti-virus, DDoS and VPN/next-generation VPN. VOS is ICSA Labs certified and carries a Recommended Rating by NSS Labs.

Versa's SD-WAN consolidates all enterprise circuits (broadband, LTE, MPLS) into one single virtualized network, making it easier for security operations teams to monitor and manage user, device, application and network policies and landscape through a single pane of management. IT teams can dynamically apply for role-based access and enforce security policies and configurations per application and centrally manage security configurations around its applications and networks through one centrally managed console.

Faster Deployment

Versa Secure SD-WAN centralizes provisioning, management, configuration and monitoring into a single console for networking, SD-WAN and security. This approach simplifies the provisioning of services, new sites and adjust network and security policies in real-times. By unifying management into a single-pane-of-glass and enabling a zero-touch provisioning perimeter, change management is faster, simpler and more cost effective.

Conclusion

Versa Networks delivers a unique solution to enable the retail industry to truly software-defined the WAN and branch with a unified cloud-native software platform approach. This solution delivers integrated networking and multi-layer security services while simplifying and unifying visibility and analytics under a single-pane-of-glass framework. Versa Secure SD-WAN enables faster service delivery, improved application performance and simpler branch and compliance management. The foundation for the future of the in-store retail experience begins with software-defining your WAN, branch and security. The result is solving your WAN problems today and preparing for the future of more cloud and digital services.

Need information on how we can support you on your retail transformation journey? Reach out to us at info@versa-networks.com or request for a demo.