



INDUSTRY

Retail

HEADQUARTERS

New York, NY

CHALLENGES

- Retail stores required faster Internet and business application access with no downtime
- Lack of streamlined deployment processes and visibility placed a heavy burden on small, in-house IT staff
- High-cost network infrastructure

RESULTS

- Dynamic Multipath Optimization™ (DMPO) allows for all retail locations to be transaction-ready at all times
- Fast, efficient, and consistent onboarding of new retail locations
- High-bandwidth availability supports in-store online browsing
- Increased network performance and visibility
- Enable migration to new VoIP phone system without switches

Rethinking the Retail Experience: A Historic Retailer Becomes the Store of the Future

To remain competitive and retain its reputation as the premier clothing line in the U.S. and increasingly so worldwide, Brooks Brothers knew it needed to undergo a network transformation that would allow it to become dynamic, responsive, efficient and simplified.

Problem situation

Brooks Brothers began as a small family owned business in 1818, but in the nearly two centuries since it opened, it has grown to be an international organization with a global footprint. A worldwide network includes corporate offices in New York, garment factories and warehouses in Massachusetts, New York, North Carolina, and Connecticut, international business offices in Milan, Hong Kong, Japan, and Australia and nearly 500 store locations worldwide.

The Brooks Brothers network varied by geography. In the U.S. and Canada, Brooks Brothers has its enterprise resource planning (ERP) system and business applications housed in both a physical data center and a data center with Amazon. All global corporate offices were connected via Multiprotocol Label Switching (MPLS). Retail stores and some offices (based on size and criticality) used bonded T1 or DS3. Outside of North America, all offices were connected via MPLS and retail branches were using primarily digital subscriber line (DSL). Hong Kong and Milan were hosting business applications locally. All offices and store locations in the Asia Pacific region were connected to the Hong Kong data center. Finally, Japan also housed a data center in which business application access was routed.

As a retail organization focused on delivering white glove service to its customers, maintaining network wide connectivity with continuous uptime to support transactions in-store and online, Brooks Brothers had reached a critical point where it needed to reassess whether its existing infrastructure would be able to support its increasing network demands and future growth. The dependence on an MPLS infrastructure that required both corporate offices and store locations to backhaul all transactional and Internet traffic to regionally based data centers before reaching their final destinations was reducing Brooks Brothers' ability to facilitate sales and process orders efficiently. Brooks Brothers was also finding that its store locations increasingly needed to access business applications directly and the existing network T1s were not providing enough bandwidth to support the trend.

“Brooks Brothers prides itself on being far more than just a store to our customers, in line with its long and storied history and heritage. With VMware SD-WAN, we’re able to take our legacy traditions and values and enable them for the future by delivering a superior experience.”

MANNY STERGAKIS
TECHNICAL ARCHITECT, BROOKS BROTHERS

To remain competitive and retain its reputation as the premier clothing line in the U.S. and increasingly so worldwide, Brooks Brothers conducted extensive research into alternatives to its existing infrastructure and ultimately decided to undergo a network transformation that would allow it to become dynamic, responsive, efficient and simplified.

The chosen solution would need to fit a list of criteria:

- Ease of deployment
- Ease of management
- Enables a fast turn-up time
- Simple structure
- Reduced configuration times
- Could be implemented and managed with a small, in-house IT staff

Brooks Brothers’ IT staff of six people was relatively small for an organization with over 5,300 employees. Solution simplicity in terms of deployment and management was hugely important due to the small size of this team and because the long-term management of the solution would be handled in-house with third party contractors utilized for in-store, on-site installations.

VMware SD-WAN solution selection and implementation

Brooks Brothers made the strategic decision to migrate to a software-defined wide area network (SD-WAN) solution and evaluated many carriers and their SD-WAN offerings. Repeatedly and consistently, they found that VMware SD-WAN™ by VeloCloud® was powering many of these solutions, and research showed that it was easy to deploy, easy to manage, and simple, satisfying the goals that Brooks Brothers originally set forth for a new network infrastructure.

VMware SD-WAN includes the VMware SD-WAN Orchestrator, a single pane of glass for centralized network visibility and management, utilization of VMware SD-WAN Gateways to gain global access to cloud-based applications, and VMware SD-WAN Edges at each retail location.

To confirm its research, Brooks Brothers chose to run a pilot in one of its U.S.-based retail stores. The store was converted to a broadband/DSL environment in terms of connections and then a VMware SD-WAN Edge was installed on-premises. The implementation was very successful, with the circuit drop at the store taking the longest amount of time. Installers found it to be a very quick process, the VMware SD-WAN Edges were easy to configure and deploy, and following the install, were simple to manage and monitor.

Following this initial pilot, Brooks Brothers began migrating its other retail locations to VMware SD-WAN. Each VMware SD-WAN Edge would be pre-configured at the Brooks Brothers’ main offices by its IT staff and then shipped to the destination store for deployment. Working with AT&T as its broadband and DSL provider, Brooks Brothers used a third party to install and bandwidth test new circuits at each store location and also install the VMware SD-WAN Edges. A typical installation would take an hour and would include testing the newly installed circuit, removing the existing Cisco router and modem, and connecting the VMware SD-WAN Edge to the network along with a Cradlepoint LTE solution for backup.

“With VMware SD-WAN, we’re now able to extend the Brooks Brothers footprint to all geographies and allow all sites to have the same seamless network access regardless of location and do so quickly and seamlessly.”

MANNY STERGAKIS
TECHNICAL ARCHITECT, BROOKS BROTHERS

The deployment of VMware SD-WAN in each of its retail stores was the highest priority for Brooks Brothers. It then switched direction and deployed VMware SD-WAN at each business office, removing MPLS connectivity as contracts expired. Installations resulted in no downtime to the organization and was completely transparent to network users.

Transaction-ready at all times

Prior to installing VMware SD-WAN, Brooks Brothers would face periodic network outages, resulting in the inability for a retail location to process transactions, thereby losing sales. Outages resulted from downed circuits and although each location was equipped with a modem for failover, the existing routers would often fail to shift traffic to the modem or the modem would fail to activate. This would result in either a manual rebooting of the modem and if that did not work, a technician would need to be deployed to troubleshoot and remedy the situation.

Today, with VMware SD-WAN, should the primary broadband connection fail, the VMware SD-WAN Edge is immediately able to detect the outage and re-route traffic over the LTE backup with a sub-second reaction time. VMware SD-WAN enables non-disruptive business continuity, resulting in continuous uptime and significant reduction in lost sales due to the inability to transact.

Fast and efficient onboarding of new retail locations

Each new Brooks Brothers retail location requires network connectivity in order to process transactions. Before deploying VMware SD-WAN, Brooks Brothers had to plan and coordinate well in advance for the deployment of circuits to the physical store location and spend significant time configuring and installing routers and modems on-site. Any issue could result in a delay in launching the new retail branch.

Using VMware SD-WAN, onboarding of new store locations is greatly simplified. In instances where a carrier could take several days to install a new circuit, the IT team can simply deploy a Cradepoint LTE solution as the primary transport and connect it to a VMware SD-WAN Edge. Within the VMware SD-WAN Orchestrator, Brooks Brothers created store profiles that, once the VMware SD-WAN Edge comes online, can have the VMware SD-WAN Edge up and operational within minutes. This allows the store to immediately process transactions as it would be connected to the main Brooks Brothers’ business applications. When the new circuit is installed, it is simply connected to the VMware SD-WAN Edge, configured as the new primary, and the LTE connection becomes the backup solution.

In-store online browsing and non-disrupted transactions

Brooks Brothers’ brick and mortar retail locations offer a wide inventory of the chains’ proprietary clothing line, but for those customers that have a special clothing requirement that is not available in-store, Brooks Brothers’ offers on-site online ordering. Because online shopping is extremely visual and requires the display of many high-resolution images of each clothing item on a single page, the serving of these images to the end-point must be fast and seamless. With its legacy infrastructure, lack of bandwidth resulted in slow loading times and timeouts.

VMware SD-WAN enabled each branch to directly and securely access the cloud-based corporate Internet page rather than backhauling that traffic through the data center before presenting the content in-store. This new traffic path enabled accessibility to higher levels of bandwidth and efficient throughput that allowed page and image rendering to be instantaneous, offering the customer and employees assisting the customers, an optimized buying experience.

“Our migration to VMware SD-WAN has made life much easier for the IT staff, allowing us to implement best practices across all retail sites and reducing network error.”

MANNY STERGAKIS
TECHNICAL ARCHITECT, BROOKS BROTHERS



COMPANY PROFILE

Brooks Brothers is the United States' oldest clothing retailer, with a history of dressing corporate Americans since 1818. Evolving from a small family owned business to a global, privately owned enterprise, Brooks Brothers continues the tradition instilled by its founders in creating high-quality and high-end garments. It has been a chosen brand for 40 of the 45 American presidents, multiple celebrities, the official clothier for many organizations, and featured in numerous films and on television.

Increased network performance and visibility

Prior to deploying VMware SD-WAN, all network traffic was backhauled to the regional data center before reaching its target destination and back again to the end-user. Coupling this with the bandwidth limitations that MPLS posed, increasing network usage by additional retail locations, and a shift to cloud-based applications created significant network burden that would eventually pose business and transactional issues.

Following the deployment of VMware SD-WAN, the IT team was able to segment network traffic based on intent, allowing website browsing traffic to access the Internet directly and all business application-specific traffic to be routed back to the data centers. IT managers could easily design and centrally manage each network traffic path with complete visibility, greatly improving the network performance at each retail store by reducing latency and increasing bandwidth.

Enable migration to VoIP without additional switches

An additional initiative for Brooks Brothers was to convert its legacy phone system at each business office and retail store to a VoIP phone system. With VMware SD-WAN, Brooks Brothers was able to modify each retail store profile to support VoIP traffic, and then installed VoIP phones at each location, leveraging the VMware SD-WAN Edge as a phone switch and eliminating the need for traditional phone switches. This further reduced its hardware footprint at each location.

For more information on VMware SD-WAN, please visit <https://www.velocloud.com/> or contact your VMware representative.