WANsform your enterprise with the leader in Managed SD-WAN

HughesON Managed SD-WAN

Powering the Connected Future of Enterprise Business

HughesON™

How Managed SD-WAN Improves Network Performance And Lowers IT Complexity for Distributed Enterprises

An Introduction to Managed SD-WAN

Distributed organizations face unique challenges when it comes to their networks. Chief among them is the need to achieve consistent application performance across all of their branches, even though branches can have vastly different broadband access types and infrastructures, which wreak havoc on overall network performance. Adding cloud-based applications, with their requirement for an always on, always available network, further compounds the problem.

Adding MPLS and IP circuit capacity often yield incremental improvements, but Managed SD-WAN, short for Software Defined Wide Area Network, transforms network performance and management across a distributed organization, addressing a host of challenges.

What Is Managed SD-WAN?

Managed SD-WAN is an end-to-end turn-key network that can be integrated into an existing network infrastructure quickly and easily. It operates as an overlay to the existing network, so it is agnostic to WAN transport – cable, fiber, DSL, LTE and satellite. A Managed SD-WAN enables the offload of Internet traffic at the edge of the network for improved network performance for cloud apps, while providing strong security to segment sensitive data and protect and filter Internet access. It simplifies network complexity through 24/7 WAN management, Zero Touch Provisioning for quick deployment, dual circuits with QoS to deal with broadband inconsistencies and web based network performance analytics to gain actionable insights.

Automation is at the core of Managed SD-WAN, ensuring apps are automatically identified and critical data is are prioritized in real-time even when encrypted. With this advanced functionality identifying and prioritizing applications automatically, new apps

can be rolled out without making network changes while ensuring existing apps are not impacted. Because Managed SD-WAN depends on broadband connectivity that has variable performance characteristics, Quality of Service (QoS) ensures mission critical apps get the bandwidth they need. Leveraging data compression, virtual bandwidth is added to those sites struggling to meet performance demands due to bandwidth constraints. Finally, Managed SD-WAN delivers highly available connectivity by leveraging multiple WAN connections at the branch and seamlessly routing applications to the best performing path to ensure the best user experience.

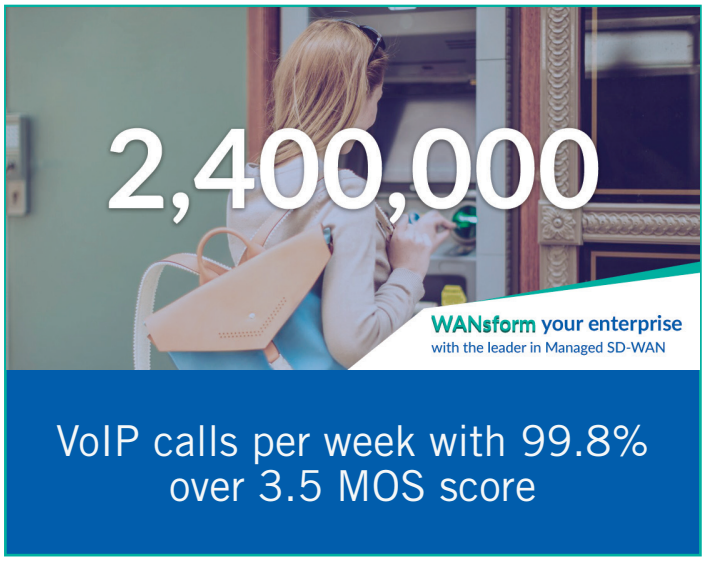
Managed SD-WAN in Action

The following summarizes four cases in which a HughesON Managed SD-WAN solution addresses challenges and relieves pain points in a variety of distributed enterprise businesses

Financial Services Bank on Hughes to Improve Efficiency

Customer

This long-time Hughes customer has been a cornerstone of communities across America for more than a century. Providing personal loans and financial advice, this institution also invests resources and employee time and energy in volunteer work, charitable endeavors and financial education.

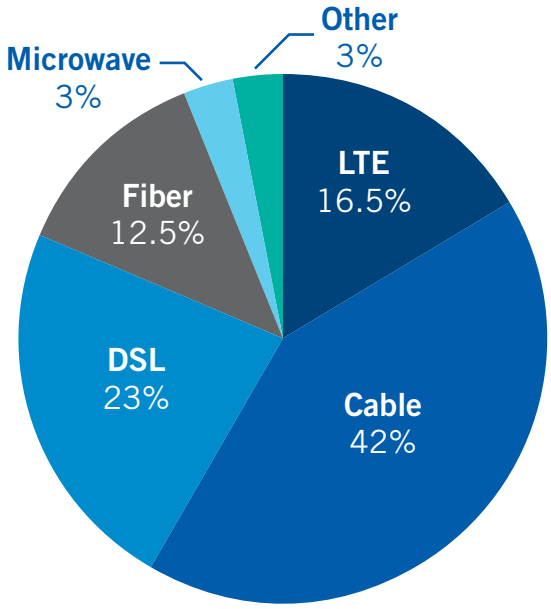


Challenge

- Need for significantly higher bandwidths and more network availability than MPLS network could deliver to meet customer demands
- Addition and integration of new branch locations as a result of a merger
- 98 different NAP/ISP providers required to provide transport diversity to branches
- Anticipated business initiatives such as guest Wi-Fi, Office365 and loyalty apps require network scalability

Customer expectations for Quality of Experience (QoE) whether by phone, in person or over the internet, are at all all-time high. For financial services providers to stay competitive, they must meet the demand for fast, informative interactions. There is little room for error in network availability and application resiliency. And research shows that for instant answers, complex problem-solving or just a personal touch – critical in any customer-service business – customers still want to talk to a human being.

Transport Types Deployed



Solution

A comprehensive, Managed SD-WAN solution for 1,600 sites and 3,200 devices across 44 states including dual HR Branch Gateways for secure and redundant SD-WAN functionality, and dual-broadband with varying transport types for path diversity.

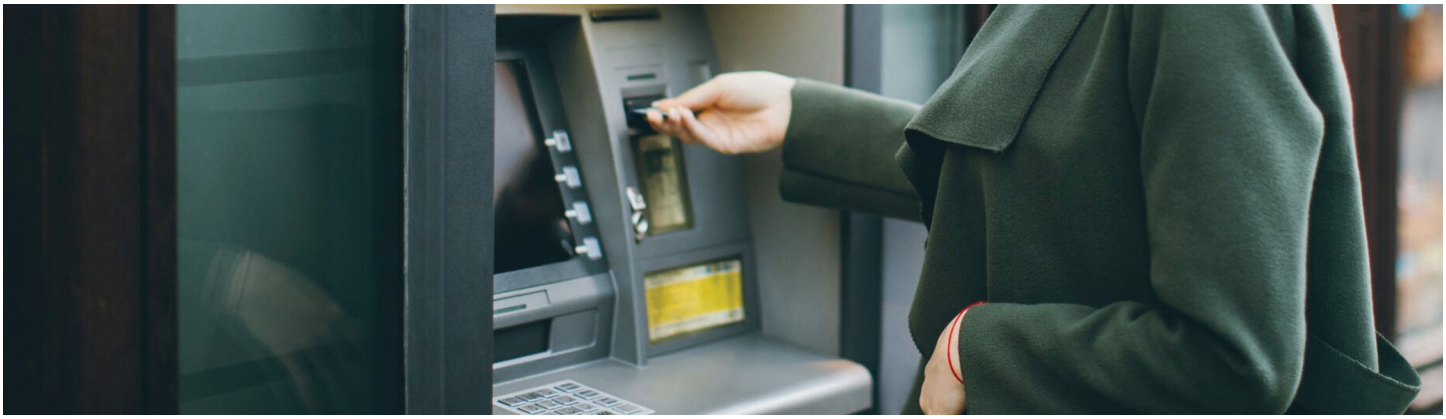
The Hughes Managed SD-WAN solution leverages ActiveTechnologies™ for efficient, data transport. In consideration of the unique needs of the financial services business, Hughes established Adaptive Multipath FEC for critical apps such as VoIP and Loan Assessment, allowing apps to use both WAN paths simultaneously to inherit the quality of the best performing path. Branch apps are carried to the customer's data center, with a Hughes NOC acting as a backup data center.

HughesON Managed Services ensured the entire network consolidation process and ongoing network management did not cause undue stress on our customer's resources. Hughes handled provisioning and installation of the new network and, on an ongoing basis, provides network management, monitoring, security, maintenance, program management and Helpdesk services.

Results

The customer continues to meet and surpass its own exceptional customer service standards.

- The new VoIP system, which was added to the network without needing to adjust complex router or QoS rules, has satisfied customers with a high-quality voice experience
- More than 2.4 million VoIP calls per work week have earned an average MOS of 4.3 – with more than 99.8% of calls scoring over 3.5
- Updating the network has optimized in-branch, real-time app performance and prepared the customer to meet future business needs – like guest Wi-Fi, loyalty apps requiring Internet access and the roll-out of Office 365
- Through Zero Touch Provisioning (ZTP), the customer has the ability to deploy across multiple broadband providers and service plans through automatic configuration
- The customer has recognized significant cost savings in migrating from MPLS



Powering the Retail Environment of the Future

Customer

A department store with 860 locations and 98,000 employees needing to differentiate the customer experience.

Challenge

- Support in-store marketing, smartphone-enabled strategies and enhanced app functionality
- Provide in-store pick-up of online orders
- Enable re-vamped mobile rewards system that requires application resiliency and an always-available network
- Grow store bandwidth and capability, while fighting to manage WAN costs for its legacy MPLS
- Manage the multiple NAP/ISP providers required to get broadband transport diversity at its hundreds of locations

In retail today, personalization of the shopper experience, increasing fluidity between shopping channels (including in-store, mobile, online and virtual), in-store digital rewards programs and more are driving the demand for bandwidth and network agility. High shopper expectations for engagement and in-store experiences demand robust and reliable networks.

Solution

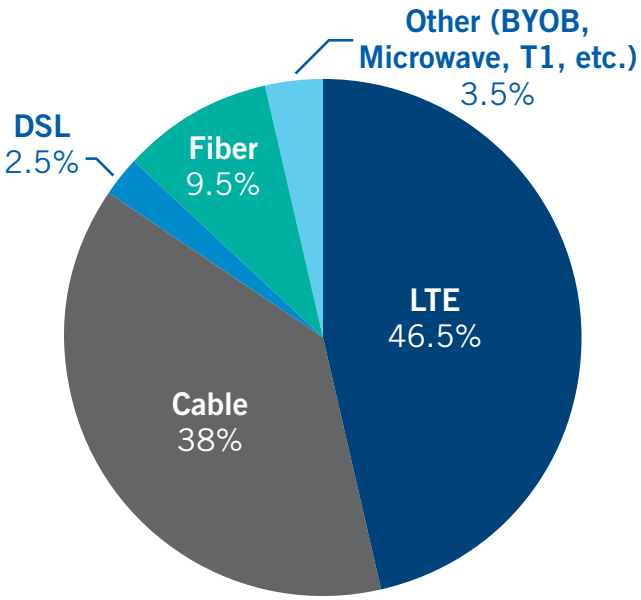
An 860-branch deployment of a Managed SD-WAN solution, servicing 46 NAPs in 47 states utilizing the HR Branch Gateway for Secure SD-WAN functionality and dual-broadband to support path diversity.

Branches connected for a single retailer with HughesON Managed SD-WAN

Helping Brick-and-Mortar Keep Pace

The Hughes Managed SD-WAN helps brick-and-mortar retailers differentiate themselves by engaging with customers in innovative ways. This century-old department store sought to position itself for the future of retail by partnering with Hughes.

Transport Types Deployed



Result

The customer enjoys higher application performance, stability and resilience, enabling the introduction of new initiatives like digital signage for customer engagement, video-on-demand employee training, cloud-based inventory management, omnichannel ordering and in-store pickup.

- Real-time bandwidth adaptability and link quality deliver effective QoS for critical applications
- Stores and critical applications successfully connect to multiple data centers with specific application performance requirements, simplifying a previously highly complex system of primary and backup data centers
- A cost-neutral switch from T1-MPLS yields significantly more bandwidth across the enterprise

Satistying Customer & Employee Appetite for Digital Services

Customer

National operator of company- and franchise-owned fast food and casual dining brands seeking to support customer in-store expectations while training and retaining employees.

Challenge

- Bandwidth to support mobile-based loyalty programs and in-house Wi-Fi as well as employee engagement applications such as guest Wi-Fi, self-service kiosks, tableside or curb-side ordering and third-party delivery services.
- Consistent network security across locations and PCI-compliance in light of changing standards

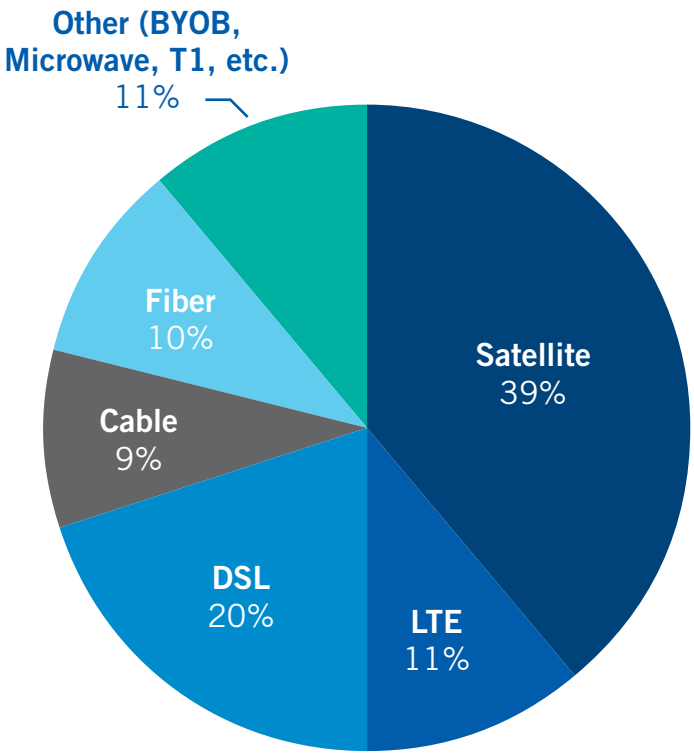
More than ever, technology contributes to a better guest experience at our nation's restaurants. Text notifications for table availability, table-top ordering systems, guest Wi-Fi, smart signage and back-of-house data analytics and applications are just a few examples of innovation shaping the restaurant market. To stay competitive, even fast-casual chains must have sufficient bandwidth on the menu.

Solution

A Managed SD-WAN deployment to 2,980 sites providing increased bandwidth and diverse transports at every location, including a single HR Branch Gateway for secure SD-WAN functionality.

This customer tapped HughesON Managed Services for provisioning and installation of both the WAN,

Transport Types Deployed



the enterprise Wi-Fi network, and the guest Wi-Fi service. And, on an ongoing basis, Hughes skilled technical professionals manage and support network connectivity, security and application 24/7, so our customer's IT staff can focus on pressing business concerns instead of day-to-day network issues.

Hughes' unique performance optimization technology suite, ActiveTechnologies™ provides world-class application prioritization using affordable broadband services. This enables restaurant owners/operators to guarantee priority to business-critical apps like POS transactions by using flow control to queue less critical apps while maximizing the use of available broadband bandwidth.

Result

- Customers and employees enjoy faster Internet speeds, faster transaction times, and improved application performance
- Customers easily access the Internet and SaaS applications over their mobile devices using guest Wi-Fi

- Each location has either high-speed LTE or a satellite link backing up the primary landline connection in the event of an outage
- No more network brownouts or blackouts due to dual broadband circuits at each site
- World-class security with business and customer data segregated and protected with Next-Generation Firewall features such as Data Leak Prevention (DLP), Intrusion Detection and Prevention (IDS/IPS), Web Content Filtering, and Antivirus and Antimalware.
- Near 100% up-time and Next Generation Firewall security functionality.

Operational Efficiency for Convenience Stores

Customer

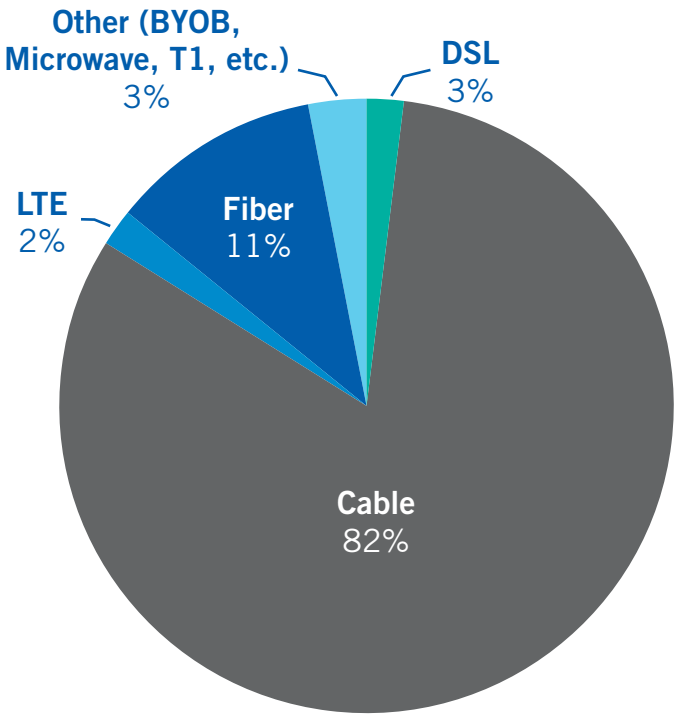
Nationwide operator of urban 24x7 convenience stores looking to accelerate its ability to turn on new technologies.

Challenge

- Enable the bandwidth necessary to utilize connected devices like digital display screens at gas pumps and self-service kiosks
- Offer customers smartphone-based online ordering via a proprietary app, supported with in-store Wi-Fi
- Maintain robust security 24x7 and receive and act upon any security events in real time
- Improve inventory tracking
- Gather consumer data for marketing and customer service
- Achieve all of this – and 24-x7 network management – without IT staff on location and without additional cost

Convenience stores are there for their customers every hour, every day. They need a network, and a services provider, to be there for them, especially as they introduce new cloud-based technologies to improve the customer experience and optimize operations. With everything from in-store device charging stations to online inventory management, the convenience store of today needs a network that will help them compete tomorrow.

Transport Types Deployed



Solution

A Managed SD-WAN network deployment across 163 sites, with 12 underlying NAPS including 100% LTE back-up circuits, utilizing a single HR Branch Gateway for Secure SD-WAN functionality.

Result

- Higher network availability, with a significant increase in bandwidth resulting from a move to dual broadband options with a mix of wireline and 4G LTE broadband with high throughputs to support growing application needs
- Dual transports and more bandwidth for less cost with high QoS across VoIP, point-of-service, guest Wi-Fi, and in-store kiosk and app-based ordering
- 24/7 call center support and in store field maintenance as needed to ensure 'round-the-clock operations

Hughes. Powering a Connected Future.

Hughes is an innovator and leader in SD-WAN, managed networks, VoIP, Wi-Fi, and network security for enterprise businesses and franchisees, with a comprehensive suite of cloud-ready network and digital media solutions (including media signage, media training and stable networking platforms) and dedicated specialists who understand each business' unique needs.

Hughes drives the power of connectivity. As the global market leader in broadband networks and managed services, we deliver innovative solutions that enable a more productive and engaged society.

HughesON Managed SD-WAN delivers turnkey solutions to enterprise organizations, paving the way for superior and seamless customer experience, operational efficiency, growth and profitability. Our solutions reduce the complexity and operational overhead of managing key IT infrastructure components, leveraging our specialized people, processes, and technologies to take on these high-touch tasks so valuable IT resources can be focused on higher value and more differentiating company tasks.

Learn more at: hughes.com/wansform | linkedin.com/showcase/hugheson