

Global Recycler Provides Reliable, Centralized Services

Sims Hugo Neu ensured high availability for critical applications with the Sprint Global MPLS Service and Cisco routers.

EXECUTIVE SUMMARY
SIMS HUGO NEU CORPORATION <ul style="list-style-type: none"> • Metals recycling • 1300 employees
BUSINESS CHALLENGE <ul style="list-style-type: none"> • Consolidate separate networks • Ensure application availability • Reduce bandwidth costs
NETWORK SOLUTION <ul style="list-style-type: none"> • Out-tasked to a managed VPN service provider • Deployed routers that support classes of service • Built redundant wireless WAN
BUSINESS RESULTS <ul style="list-style-type: none"> • Achieved 99.9 percent network uptime • Reduced cost per unit of bandwidth by 62 percent • Trouble tickets for network service dropped substantially

Business Challenge

Sims Hugo Neu Corporation is the U.S. division of The Sims Group, a global metal recycler with 160 sites. The company maintains a network of equipment, facilities, transport, and communications that transform unwanted consumer items and industrial scrap into raw materials for manufacturing operations around the world.

When Sims USA and Hugo Neu merged in 2005, the consolidated company had two separate Frame Relay networks. “For all sites to take advantage of our centralized ERP [enterprise resource planning], HR, payroll, preventive maintenance, and other applications in our New Jersey data center, we needed a single, high-performance network with high availability and performance,” says David Gramblicka, IT director.

The availability of the new network would directly affect the company’s profitability. Sims Hugo Neu calculates how much to pay vendors who deliver scrap metal by weighing trucks as they enter and exit the yard. The scale readings are sent over the network to a centralized application that makes the calculation. “If a network outage forces us to calculate weight and payments manually, yard employees inevitably make errors that cost us money,” says Gramblicka.

Low network latency is also important, especially for the company’s California recycling centers, located across the continent from the data center. With the Frame Relay network, if the network ceased transmission for even one second, the scales stopped operating. Restoring operation required a server administrator in New Jersey to manually enter a command. Meanwhile, operations backed up at the recycling center and manual payment errors increased.

Sims Hugo Neu also wanted a network with the quality-of-service (QoS) capability needed for its IP telephony, video conferencing, and ERP system.

Network Solution

Sims Hugo Neu considered building a VPN to connect its U.S. sites, but, Gramblicka says, “Meeting our targets for availability and low latency would have required hiring highly trained personnel to manage complex routing tables for the 37 sites. We quickly realized it would be far more cost-effective to subscribe to a managed MPLS VPN service from a service provider.” The firm selected Sprint Global MPLS Service. Sprint is a member of the Cisco Powered Network

program and has received the QoS certification, indicating that it has built the service over an end-to-end Cisco infrastructure and has undergone a third-party assessment to determine that it meets Cisco best practices and standards for QoS (Figure 1). Core Technology, a Cisco Certified Gold Partner, deployed Cisco integrated services routers (ISRs) at each location, standardizing on two models to simplify maintenance.

Figure 1. QoS Certification: Validation of a Robust and Reliable VPN Service



The IT group migrated 17 of its 37 sites in five weeks. “We were able to meet this ambitious timeline thanks to careful collaboration, including biweekly meetings, and excellent preplanning by the Hugo Sims Neu IT team,” says Jana Trantow, Sprint account manager.

The cutover proceeded smoothly. “We preconfigured the Cisco ISRs before shipping them to our sites so that we did not need to send a technical person to perform the installation,” says Gramblicka. “At some locations, we simply explained to a secretary how to disconnect the cable from the old device and connect it to the new Cisco ISR. We experienced no downtime.”

Sprint set up four classes of service to give priority to the most important or latency-sensitive traffic: IP telephony, then video, then the weighing-scales application, then all other traffic. The routers apply tags to traffic that indicate its priority, and the Sprint network honors those tags as traffic enters and exits the network.

“Our cost per gigabyte of bandwidth has dropped from \$13,636 monthly to \$5143.”

– David Gramblicka, IT Director

To help ensure business continuity, Sprint provided each regional center with both a 6-Mbps connection to the MPLS VPN and a 3-Mbps Internet access line. For redundancy, Sims Hugo Neu deployed a wireless WAN designed by Elmer Flordeliza, the company’s network administrator. At each site, Flordeliza connected a Sprint wireless modem to the ISR and installed high-gain antennas. Then he built a secure IP Security (IPsec) VPN connecting the ISRs to three regional offices over the Sprint network. “We configured the Cisco ISR so that if the MPLS VPN connection is unavailable for 20 seconds, it automatically switches over to the wireless interface and establishes an IPsec VPN tunnel to one of the regional offices,” says Flordeliza. When the MPLS VPN connection becomes available again, the Cisco ISR switches back.

Four of Sims Hugo Neu’s five regional offices have adopted IP telephony. A central Cisco Unified CallManager server in the New Jersey data center provides telephony and Cisco Unity® voice mail over the network to the other sites. If the network link from a small office to the main data center becomes unavailable, the Cisco router automatically routes voice traffic to the public switched telephone network (PSTN) so that staff and callers experience no interruption – a capability called Cisco Unified Survivable Remote Site Telephony.

Sims Hugo Neu deployed indoor wireless networks based on Cisco Aironet® Wireless Access Points in some of its warehouses. Employees can place and receive calls anywhere in the building, take inventory using wireless barcode readers, and enter material-inspection grades on personal digital assistants. The wireless networks enable process efficiencies and save the cost of trenching and cabling.

Business Results

Based on a Cisco Powered Network, the Sprint Global MPLS Service provides very high availability. If any node in the network becomes unavailable, the traffic is automatically routed around the outage. This is especially valuable for Sims Hugo Neu, whose recycling yards tend to be in remote areas where more outages occur than in densely populated areas. “The Sprint Global MPLS Service is far more reliable than our previous Frame Relay networks,” says Gramblicka. “The number of trouble tickets each month has dropped from dozens with Frame Relay to just a few with MPLS VPN.”

Bandwidth costs have decreased. The 17 sites on the MPLS VPN now enjoy triple the bandwidth: 3.5 Gbps compared to 1.1 Gbps with the Frame Relay network. At the same time, costs have increased only 20 percent, from US\$15,000 to \$18,000 monthly. “That means our cost per gigabyte of bandwidth has dropped from \$13,636 monthly to \$5143,” says Gramblicka.

PRODUCT LIST	
Routers	<ul style="list-style-type: none"> • Cisco 3825 Integrated Services Routers • Cisco 2811 Integrated Services Routers
Switches	<ul style="list-style-type: none"> • Cisco Catalyst® 3750 Series • Cisco Catalyst 2950 Series
Voice and Unified Communications	<ul style="list-style-type: none"> • Cisco Unified CallManager • Cisco Unity Voicemail • Cisco Unified IP Phones 7960, 7940, 7930, 7910, and 7902
Security and VPN	<ul style="list-style-type: none"> • Cisco PIX® 515 Firewalls
Wireless	<ul style="list-style-type: none"> • Cisco 1300 Series Bridges • Cisco 1231 Wireless Access Points

Sims Hugo Neu uses its MPLS VPN service for video as well. Company executives in the U.S., Australia, and the United Kingdom use video conferencing for board meetings, executive meetings, and staff meetings, improving collaboration and reducing travel costs. The IP standards-based network with QoS made it unnecessary for the company to build and maintain a separate network for video.

“The availability, high bandwidth, and low latency of our MPLS VPN service has improved corporate efficiency by enabling us to share resources and centralize our ERP, preventive maintenance, HR, payroll, and other critical applications,” says Gramblicka. “The Cisco ISRs and Sprint Global

MPLS Service make us more competitive by improving our service levels and avoiding the costs of downtime.”

Next Steps

Sims Hugo Neu will soon add an E1 link to its Australian and United Kingdom hub sites using the Sprint Global MPLS network. The company is also establishing disaster recovery centers outside New Jersey.

All U.S. sites will adopt IP telephony and an IP-based time-and-attendance application. Employees will use IP-based biometric hand scanners to accurately sign in and out. This promises to avoid the administrative hassle and costs when employees forget to sign in and out, or when they sign in for other employees.

Get the Right Service from the Right Provider

Choosing the right service provider for managed MPLS VPN services can be vital to the business. Selecting a service provider that uses Cisco equipment in its network greatly simplifies the process of out-tasking and helps ensure consistently excellent network performance. Companies can have confidence that service providers that display the Cisco Powered logo in their promotional materials use Cisco networking equipment and technology in their networks and meet Cisco standards for network support.

For More Information

For more information on managed services: www.cisco.com/go/ms4ent.

To find a recommended service provider: www.cisco.com/cpn.



Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

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