



Customer Profile:
Hulcher Services Inc.
Denton, TX

Hulcher Services is an emergency and environmental disaster response contractor for the railroad systems of North America. They supply the equipment, logistics and emergency personnel that fix derailments, switch and track problems, and chemical and hazardous materials disasters. Hulcher divisions across the United States, Canada and Mexico are strategically positioned to assist private industry, municipalities and federal agencies. They are on alert 24 hours a day, seven days a week, 365 days a year.

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Hulcher Services Easily Migrates Mission-Critical Communications Systems With A D-Link Power over Ethernet Switching Infrastructure

New LAN Switching Infrastructure Meets Their High Standards for Reliability, Performance and Enables 60% Cuts to Long Distance Costs

The Challenge

Hulcher Services is in the emergency response business. They are the first responders that race to the scene of railroad, natural disaster, and environmental accidents at a moment's notice. "We're considered the 9-1-1 service for the rail transportation industry, and we work very closely with fire and police departments as well as other emergency response organizations," said Chris Snyder, IT Director at Hulcher.

Communications is a critical component to the first responder business. The reliability and performance of the communications systems are crucial to Hulcher's operations. So, when Hulcher decided to make upgrades to their phone system, they considered the advanced features and benefits of a Voice over IP (VoIP) system that would run over a data network infrastructure.

Hulcher initially considered purchasing a new PBX-based digital phone system, but they soon learned about how VoIP could match those systems in reliability while offering stunning cost savings. They were attracted by the promise of lower long distance rates and the prospect of setting up a private wide area network (WAN) that could handle their internal calls as if every location in the country were part of a localized extension network.

In order to design and overlay a cost-effective, high performance VoIP solution, Hulcher first needed to ensure a robust and reliable LAN switching infrastructure that could easily handle the performance requirements needed for their new VoIP solution. A key requirement for their infrastructure also included the ability of the LAN switches to supply power to the VoIP phones using Power over Ethernet (PoE) technology. This would help them avoid the costs of excessive power rewiring and minimize the clutter of power supplies and adapters in awkward places such as ceilings, desks, or walls.

The right LAN switching infrastructure, which would include PoE enabled switches at 35 North American locations to power VoIP phones for the companywide VoIP installation, would have to be highly reliable, perform with minimum latency and be easily manageable through a centralized interface.



IT Director Chris Snyder is pictured with Hulcher's VoIP solution in their Toledo, Ohio office.

"After some initial vendor testing, I was extremely skeptical that it would work," said Snyder. "We had seen some very high-end switches fail our extensive testing thresholds."

The Solution

When Hulcher decided to go with PoE switches and VoIP phones, they started researching options and became interested in D-Link. Their sales representative from CDW recommended D-Link, because of D-Link's reputation for reliability and performance, and because many of the other vendors do not offer the affordable, feature rich PoE options found in the D-Link gear.

Hulcher had considered and tested Cisco switches, but at four times the price per switch, the Cisco gear was beyond their budget. Reliability was an issue with the Cisco switches, as well. "One of our first tests was to reboot the phone server, essentially forcing all the phones to simultaneously reset. This caused a large power draw on the PoE switches as all the VoIP phones were cycling and coming back on line," explained Snyder. "That little exercise brought down the very expensive Cisco gear a number of times, whereas the D-Link switches passed with flying colors."

After deciding on vendors, Hulcher put the system through rigorous testing throughout 2005. They were about to trust their mission-critical communications system with a new technology, so the testing phase was serious business.

Business Class Switching

WEB SMART POE SWITCH



DES-1526

PRODUCT FEATURES:

- All ports support Power Over Ethernet as per IEEE 802.3af
- SNMP, VLAN, QoS, Port Trunking, Port Mirroring, and more
- Two Combo Ports support fiber or copper Gigabit
- Easy to use Web-based Management Interface

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-Chris Snyder, IT Director

After alpha and beta testing, they moved through to the installation phase. They tested for reliability, then for latency, "and we didn't have one single problem," said Snyder. Finally, they tested the Web interface for manageability and were equally pleased.

Snyder and team ended up purchasing 35 D-Link DES-1526 PoE switches for their nationwide rollout. Each switch featured 24 IEEE 802.3af compliant PoE ports integrated into a Web-Smart switch. The Web-Smart feature enables the system to be easily managed from a Web browser interface. The DES-1526 provides 2 combination 1000Base-T/SFP ports for high speed connections to servers and other switches. Hulcher purchased IP phones from Avaya (model 4620 SW). They replaced their 20-year-old Merlin phone systems.

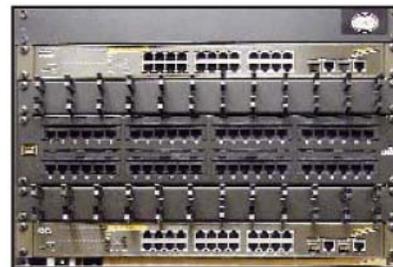
Hulcher also built a private wide area network to facilitate the site-to-site traffic of their VoIP system. A virtual private network (VPN) link delivered through Qwest connects all the divisions to the corporate headquarters in Denton, Texas.

The new VoIP system running over the D-Link switches has eliminated site-to-site long distance costs between company facilities. In addition, call routing has been programmed to also facilitate calls to any customers or vendors in any local city as well. For instance an employee in the California office could make an external call to a customer in Miami for the price of a local call. Since Hulcher has an office in Miami, the call out to the public switched telephone network will originate from the Miami office to the customer also located in Miami. The long distance costs are eliminated.

The new D-Link based network infrastructure has delivered big savings and a considerable return on investment in a very short timeframe. "The savings have been tremendous," said Snyder. "The VoIP system that we were able to overlay on the D-Link infrastructure allowed us to cut long distance costs by 60%. The performance, low latency, and reliability of the D-Link switches has exceeded our expectations by outperforming other switches costing at least 4 times as much."

To top it all off, Hulcher went out of their way to comment on D-Link's technical support. "Our

experience with D-Link was completely opposite to the kind of support we're used to receiving from IT vendors," said Snyder. "D-Link called us to check up more than we called them for help. That's rare."



D-Link's Web Smart PoE Switches anchor Hulcher's VoIP solution.

Conclusion

The D-Link switching infrastructure to support the VoIP solution provided the reliability, performance, manageability and cost advantages that Hulcher Services needed. "We put the system under heavy stress - experimental and real world stress - and it passed both," said Snyder. "If it didn't pass, we would not be having this conversation. And what really surprised us was the switches that cost five times more didn't pass."

The ultimate test is usability. Hulcher's employees across North America found the system as easy to use and reliable as their old telephone system. The employees noticed no difference in the quality of their calls as Snyder and team used the web-based monitoring and quality of service features of the D-Link switches to ensure appropriate bandwidth and eliminate latency as much as possible.

Hulcher Services was so pleased with the network rollout that they are considering D-Link wireless networks for employees that roam from location to location. The other peripheral benefit of the project was that the new D-Link network switches also provide the infrastructure to support a company wide Intranet. For the first time Hulcher has been able to place large portions of their HR, payroll and job reporting data online, and they are enjoying productivity benefits across the company from direct employee access to shared data