



Managed Services and Network Support

A Case Study in Network Growth and Evolution

Background: Tekra Corporation is a leading worldwide supplier of top-quality plastic films and adhesives, and a manufacturer of proprietary and custom coated plastic substrates. Tekra's customers come from a multitude of industries with diverse applications, and are continually searching for value-added solutions that drive out cost while increasing flexibility. In order to meet the changing needs of its customers, Tekra relies on a technology infrastructure that provides a flexible, extensible foundation for business solutions.

Network Beginning: Tekra has always made use of information technology to provide quality customer service, manage inventory and production, and conduct critical aspects of business. In early 2000, the Tekra network consisted of a Unix-based ERP system, a Windows NT file server, a Windows-based Internet firewall server, an Exchange 5.5 e-mail server, and a dial-in modem server to support remote users. An e-commerce capability existed via the ERP system. A frame-relay network provided connectivity to regional offices on both coasts, each of which included its own Windows NT domain controller/Exchange 5.5 server.

Network support at this time included a full time, contract network administrator and a full time helpdesk technician. ERP application support was provided by two full time, non-technical associates and one part time, contract programmer. A full time IT Director was responsible for all aspects of technology as well as the corporate Quality Assurance department.

Network Directions began providing project-specific support in May 2000 with the installation of Microsoft Proxy Server 2.0. Proxy Server was added in parallel with the existing firewall to support outbound user restrictions on Internet usage. With this modest beginning, a long term relationship was founded that continues today.

A Network in Transition: At the time Network Directions began providing project support, Tekra was rethinking its support structure. It had become obvious that while the network continued to grow and change, it did not require 40 hours per week of dedicated support. Most day-to-day issues originated from the end users, and addressing these issues in a timely and professional manner was identified as a critical element in Tekra's commitment to customer service and value-added solutions to its customers. Without reliable access to network applications and resources, the customer service representatives, salespeople, and other customer-facing positions could not respond to customer needs. With this new paradigm of less network support and more end-user support, Tekra



and Network Directions began negotiations for an ongoing support approach that would provide the proper mix of administration, support, emergency break/fix, and strategic planning.

The result was a partnership in which Network Directions became the sole provider of network support, assigning a dedicated network engineer onsite for 15 hours per week. Tekra committed to filling the existing helpdesk position with a more experienced technician with proven customer service skills. The helpdesk would be the single point of contact with all end users, while the network engineer would perform administration tasks as well as Level 2 problem escalation for issues the helpdesk could not resolve in a timely manner.

Network Growth: The Network Directions/Tekra partnership provided immediate results for the Tekra network. Bringing extensive experience with corporate networks across many industries, Network Directions was able to quickly improve the efficiency of network administration by adding remote access utilities to each server, removing unneeded services and applications, and tuning network services such as DHCP, DNS, and WINS.

As the network stabilized and end user support improved, planning began for additional network functionality. Hardware and software upgrades for existing servers, additional file and print capacity, added modem lines for dial-in users, Internet content filtering, and an Intranet site were completed in the first year.

At the start of 2000, the Tekra network included 5 local servers. By the end of 2001, 4 existing servers had been upgraded, and 3 new servers were installed. A new Intranet server provided users with corporate information, links to important data, and a customized, network-wide search engine. The modem server was increased from 2 to 8 lines, and the domain controllers were upgraded from Windows NT to Windows 2000 Active Directory. In addition, the Exchange 5.5 server was upgraded to Exchange 2000.

As the network matured, the professional administration processes put in place by Network Directions allowed the total network support time to be decreased from 15 hours to 9 hours per week!

Network Evolution: Tekra has always recognized that technology is not a cost center to be minimized but an asset to be utilized as effectively and efficiently as possible to provide a real competitive advantage. As the network capabilities improved and the cost of administration decreased, strategic applications were planned to add even more functionality and reliability. Production was running 3 shifts, and the remote user base continued to expand in all time zones.

Network Directions realized that ensuring 24x7x365 reliability required more than a reactive, break/fix approach to Tekra's network. In 2004 Network Directions began monitoring the most critical elements of the network using a state-of-the-art remote monitoring system. Monitoring included servers,



routers, and circuits in order to provide a proactive response to network issues. This proactive posture allows the Network Directions' Network Operations Center (NOC) to receive alerts 24x7 and to respond to issues before problems occur that affect the reliability of the network.

The Tekra network has continued to grow during the partnership with Network Directions. Since 2001 the Windows-based software firewall has been replaced with an enterprise class firewall appliance. The frame relay network has been replaced by a virtual private network (VPN) that connects the headquarters office to four remote sites. The dial-in connections for remote users have been replaced with high-speed Internet VPN connections. Wireless access points have been installed to improve access in conference rooms and remote areas of the buildings. The removal of the frame relay network alone resulted in a savings of over \$5,000 per month! Migration from 800 dial-in services to VPN connections for remote users saved an additional \$1,000 per month!

With a new commitment to network availability and disaster recovery, new Windows 'core services' servers have been installed, and RADIUS authentication is in place for all VPN and wireless connections. A disaster recovery cold site has been established, and Windows Distributed File System provides high availability access to files and printers. Critical systems such as anti-virus, Windows Update, and workstation security have been consolidated with centralized administration systems. System backup and restore capabilities have been improved with the addition of 1.2 terabytes of network attached storage.

A new voice over IP (VOIP) telephone system was installed in 2005, providing vastly improved call routing and flexibility as well as call accounting. An advanced customer relationship management (CRM) system will be completed in 2006, as will upgrades to several existing servers.

Going Forward: The Tekra/Network Directions partnership remains strong, with Network Directions continuing as the sole provider of network support services. New services are planned for the near future, including website and DNS hosting, application hosting, and others. With the Tekra network standing at 175 users, 18 servers, 3 T1 circuits, 4 DSL circuits, and 7 firewalls, *network administration has been reduced to 7.5 hours per week!* A far cry from the 40 hours per week in place before the partnership began.

This ongoing partnership shows in detail the success of a Managed Service approach to network support. By focusing resources in the most effective manner, and by offering continued flexibility in staffing, Network Directions' Managed Services offer businesses a proven system for reducing cost, improving reliability, and increasing the effectiveness of the technology investment.

For more information on our Managed Service success stories, or to find out how you can benefit from a partnership with Network Directions, contact us directly at 414-963-8759 or at info@net-directions.com.