

IBM and Sirius help food service distributor Nicholas and Company deliver a world-class data center



Approaching its eighth decade as an independent food service distribution company, Salt Lake City-based Nicholas & Co. has surpassed the level of success achieved by many typical family-run businesses. Today the company has nearly 500 employees who are contributing to a business that is expected to exceed \$400 million in 2008. Nicholas & Co. delivers food to restaurants, hospitals, schools and a range of other customers across seven states.

Overview

■ Challenge

Build a world-class data center that can help ensure business continuity, provide scalability for continued growth, offer simplified administration of consolidated systems and maximize productivity by providing easy access to information for company workers and customers.

■ Solution

Deploy the IBM System i™ platform in a high-availability configuration to help ensure business continuity and facilitate growth; an IBM BladeCenter® to consolidate application servers; and a range of new IBM software solutions, including an IBM System i IP Telephony solution with the 3Com IP Telephony Suite, to improve worker productivity.

■ Key Benefits

Enhanced business continuity; easy scalability for continued growth; simpler administration of application servers; and a range of new services that will improve communications and information access for workers and customers.

Though the company continues to grow rapidly, Nicholas & Co. operates in a highly competitive field in which customers can easily switch distributors if one fails to meet expectations. "Every day our customers have numerous choices for food distribution," says Joe Wood, CIO of Nicholas & Co. "If we don't perform, we can lose business very quickly."



Nicholas & Co. relies on technology to maximize company efficiency and deliver the right products, on time, every day. “We use technology in every aspect of our business,” says Wood. “We use technology to check stock, deliver price quotes, take orders and fill them in the warehouse. Technology also helps us organize storage space in our warehouse and trucks, and optimize delivery routes. We also use technology to maximize worker productivity. We have systems that calculate performance-based rewards for warehouse workers and drivers who exceed productivity goals.”

Despite its reliance on IT, the company’s data center infrastructure had largely evolved without a cohesive plan. “For years we had added a new server for each new application,” says Wood. “We had separate servers for file and print services, remote sales force tools, inbound and outbound freight applications, communications, Web applications, SQL databases and video security. Maintaining the patches and upgrades for numerous versions of operating systems was a huge challenge for our relatively small staff.”

Wood and his team decided that it was time to redesign the data center. “We wanted to build a world-class data center that optimized our space and simplified administration by consolidating

those independent servers as well as our storage,” says Wood. “Our priorities were to enhance business continuity, prepare for business growth and maximize productivity with new applications and communications tools.”

Sirius helps Nicholas & Co. find the right hardware and software solutions

The Nicholas & Co. IT team chose to work with Sirius Computer Solutions to select the right combination of hardware and software products to meet the company’s current and future needs. “We had a strong relationship with Sirius, and we liked that Sirius had a local office and support team,” says Wood. “Throughout the bidding and solution evaluation process, the Sirius team was extremely responsive to our needs. They also helped educate us. The local Sirius team is incredibly knowledgeable, and they helped us connect with other members of the Sirius enterprise across the country when we needed specific information.”

The Sirius team arranged for Wood’s team to evaluate IBM technology and a variety of software solutions firsthand. “As part of the Sirius Executive Briefing Program, we traveled to IBM headquarters so we could meet the IBM team and see how IBM solutions worked in action—it was a very inspiring

educational experience,” says Wood. “The Sirius team also arranged demonstrations in our area so we could fully evaluate all the software solutions we were considering.”

Nicholas & Co. selects IBM System i for high availability

With help from Sirius, the Nicholas & Co. team selected an IBM System i 525 Express system with a System i 525 CBU (Capacity BackUp) for high availability. Each system is configured with dual IBM POWER5+™ processors and 8.6 TB of storage.

The company was already using an IBM System i environment for enterprise applications, and the IT team had every intention of staying with System i. “The IBM System i gives us the reliability, scalability and simplified administration that we need,” says Wood. “Its reliability is extremely important to us—we can’t afford downtime. We also know that we can scale the processing power and storage easily to preserve our investment. In addition, the System i gives us the software integration we need. The tight integration of the i5/OS® operating system, security features and database tools makes it simple for us to manage.”

By using the 525 Express in conjunction with a similarly configured 525 CBU, the IT team can help ensure system availability. “In the event of a failure, we can switch from one system

to the other in a matter of seconds without losing enterprise transactions, disrupting the flow of orders, or interrupting the business in any way,” says Wood. “With our previous System i, we never experienced unplanned downtime. Now even if we plan maintenance, we know we can continue to run applications without interruption.”

Wood’s team uses Vision iTera HA software to maintain a complete backup of data and applications on the 525 CBU system. “We evaluated several high-availability solutions, even one that is used by a number of other food service companies, but it was clear to us that Vision iTera HA was the right solution,” says Wood. “We found Vision iTera the most efficient and easiest to use.”

Moving up to the latest IBM System i technology, with POWER5+ processors, has helped Nicholas & Co. workers enhance productivity. “Our users now receive even faster responses than before, especially on batch jobs,” says Wood. “Tasks that might have taken a few minutes are now done in seconds. We’re measured every day by how quickly we find and process information. So these improvements are extremely important to us.”

Meanwhile, the ability to partition the System i is helping to facilitate more accurate and safer development of new services. “With the System i we can run development and production

environments in the same physical machine while keeping those environments completely separate. We know that our development environment will not intrude on production services in any way,” says Wood. “We can also test applications very thoroughly to ensure a high level of quality control. As a result, we have the confidence to add more core features and take on larger development projects.”

IBM System i and IBM BladeCenter consolidate IT and help enhance reliability

The Nicholas & Co. IT group selected the IBM BladeCenter H with seven blades to consolidate 17 Microsoft® Windows®-based servers into a centralized, easy-to-manage system. All blades feature Dual-Core Intel® Xeon® processors.

The diskless BladeCenter offers fewer points of possible failure compared with stand-alone servers, helping to enhance the reliability that Wood’s team requires. “We have very capable Windows server administrators, but the downtime we were experiencing with our stand-alone Windows servers was unacceptable,” says Wood. “Without the moving parts of hard drives, our IBM BladeCenter can help us minimize the downtime of our Windows applications. In the unlikely event we do have a failure, it’s simple for us to swap in a new blade quickly.”

The Nicholas & Co. IT team has already experienced a reduction in the time required to manage the BladeCenter environment compared with the individual Windows servers. “Our administrators spend 25 percent less time managing the BladeCenter than the individual servers,” says Wood. “Over the next three years, this implementation could allow us to reassign at least one full-time Windows administrator to other tasks.”

The IBM BladeCenter is connected to IBM System i storage through an iSCSI connection, which offers a cost-effective way to consolidate storage and simplify IT. “With the iSCSI protocol, we can use standard Ethernet components and existing skill sets to manage our storage,” says Wood. “Now we have a way to capitalize on the simplified management of centralized storage without the potential costs of buying and managing a Fibre Channel storage area network.”

Storing application and file data in a centralized location can help Wood’s team ensure business continuity. “If a stand-alone server failed, it might take us four to six hours to restore file and application data from tape,” says Wood. “Because the IBM BladeCenter boots from the System i, we can quickly replace the blade in the event of a failure, with minimal disruption to users. We could restore an application in 15 minutes.”

The new configuration will also enhance the scalability and flexibility of IT. "Using the BladeCenter with the System i will help us grow in a much more controlled way compared with the haphazard method of adding new physical servers for each new application," says Wood. "If one application needs more storage on the System i, we can easily re-provision storage or simply add more hard drives. If we need an additional Windows server, we just add a blade. The speed at which we can add disks or entire servers is very impressive—we no longer have to go through an elaborate ordering process or wait weeks for new hardware to arrive."

The Nicholas & Co. team also uses an IBM System Storage™ TS3200 tape library for archival backups, managed with IBM Backup Recovery and Media Services (BRMS) software. "The automated tape library makes it simple to archive the large amount of data that we handle," says Wood. "We evaluated a number of third-party backup solutions, but we found that the IBM BRMS software offered a simple way to conduct fully automated backups and rapid recovery."

IBM System i IP Telephony solution helps extend the range of phone services

While building a new IT infrastructure, the Nicholas & Co. IT team saw an opportunity to capitalize on new data networks to extend the geographic

range and functions of its phone system. "We realized that we could easily and cost-effectively use the new wired and wireless data networks that we were deploying to bring telephony to the warehouse floor and branch offices without the expense of implementing a new phone structure," says Wood.

The IT team selected the IBM System i IP Telephony solution with the 3Com IP Telephony Suite running in a Linux® partition on the IBM System i5™ platform. "When the Sirius team introduced us to the IBM System i IP Telephony solution, it seemed like a perfect way to extend the reach and capabilities of our existing phone system while taking advantage of the reliability and scalability of System i," says Wood. "By implementing the 3Com solution on System i, we don't have to purchase another server or find an administrator with another skill set. We can deploy the solution quickly and take advantage of a single point of management."

Wood plans to deploy IBM Lotus® Sametime® for i5/OS software in the near future to capitalize on some of the advantages of combining voice and data in a single network. "For our company, the presence-awareness functions of Sametime will be a great benefit," says Wood.

"Our sales people can use Sametime to quickly find other members of our organization in order to provide customers with information fast."

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— Joe Wood, Chief Information Officer, Nicholas & Co.

IBM DB2 Web Query facilitates access to information

The IT team is also deploying IBM DB2® Web Query software to help a wide range of Nicholas & Co. managers access essential database information easily, from a Web interface. "In the past, querying a database was a task for the IT department," says Wood. "IBM Web Query gives more members of our company direct access to the information they need. We can put information in the hands of sales managers, department managers and margin managers—the people who really need to drill into the data to find information."

Nicholas & Co. plans for the future with IBM WebSphere Host Access Transformation Services

With a new scalable, flexible IT infrastructure in place, the IT team is already considering additional ways to enhance company efficiency and deliver new services to customers. For example, the team selected IBM WebSphere® Host Access Transformation Services (HATS) to develop Web-based versions of essential applications. “Over the next two years we plan to port more applications to the Web to make it even easier for customers and internal personnel to interact with our systems,” says Wood. “With IBM WebSphere HATS we can use System i and BladeCenter to create new applications efficiently and then help ensure that those applications will be available around the clock.”

New IBM infrastructure provides a foundation for business continuity and growth

The Nicholas & Co. IT team expects that the new IBM infrastructure will help enhance business continuity and reduce downtime. “Now we have the confidence that we can continue to take orders and deliver products on

time, even in the event of a disaster,” says Wood. “In our competitive market, ensuring business continuity is essential for survival.”

The implementation of a high-availability System i solution has also delivered some unexpected benefits. “The high-availability configuration is helping us to migrate our enterprise systems from the previous System i to the new one,” says Wood. “We are using Vision iTera HA to replicate the production system. As a result, we can minimize the downtime and disruption of the migration. We are able to fully test every single application before we actually cut over to the new system.”

The IT team is now better prepared for company growth. “Nicholas & Co. has been growing significantly over the last 15 years, and we don’t expect that the growth to stop any time soon,” says Wood. “Our data center is now in a much better position to accommodate growth. If we need more processing power or storage, we can easily scale the IBM System i and the IBM BladeCenter, without a major overhaul. As a result, we can continue to create more IT services that benefit the business.”

The new IBM infrastructure is also helping to simplify management of the data center, enabling the IT group to focus on innovation. “By helping us consolidate systems and achieve tight integration of software and hardware, the IBM infrastructure will help us reduce the costs and burdens of IT administration,” says Wood. “We’re a small IT shop. We would much rather invest our resources in innovation than in keeping systems running. With our new IBM infrastructure, we can do just that.”

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— Joe Wood, Chief Information Officer, Nicholas & Co.

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