



Microsoft Infrastructure Optimization Customer Solution Case Study



Overview

Country or Region: United States
Industry: Manufacturing—Packaging

Customer Profile

Scholle Packaging designs and manufactures bag-in-box packaging for the food, beverage, and industrial markets. The company employs 1,800 people and has 20 manufacturing plants around the world.

Business Situation

Scholle had an older, decentralized Novell-based infrastructure that limited communications options, saddled the IT staff with excessive management chores, and frequently failed.

Solution

Scholle upgraded and consolidated its core infrastructure using Windows Server® 2008 with Hyper-V™, and deployed a suite of Microsoft® business productivity software to enhance collaboration.

Benefits

- More agile responsiveness
- Faster product design
- Hardware cost avoidance of U.S.\$250,000
- IT staff cost avoidance of \$75,000
- Downtime reduced by 60 percent

Manufacturer Ups Efficiency and Agility, Cuts IT Costs by \$325,000, with New Software

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Keith Anderson, Manager, Global Network Systems, Scholle Packaging

Scholle Packaging is the leader in bag-in-box packaging for the food, beverage, and industrial markets. When Scholle began producing products globally rather than regionally, employees around the world needed better ways to communicate, but the company's older, decentralized server infrastructure was a barrier to flexible communications and business agility. Scholle used its Microsoft® Enterprise Agreement to cost-effectively overhaul its business productivity and core IT infrastructures. It deployed modern communications and collaboration software to facilitate information sharing and problem solving across the company. Using Microsoft virtualization and management software, Scholle avoided U.S.\$325,000 in hardware and staffing costs while reducing server downtime by 60 percent. Employees are more productive, and the IT staff more responsive to business needs.



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Situation

Scholle Packaging, headquartered in Irvine, California, invented bag-in-box packaging (think boxed wine) more than 60 years ago and has since evolved into a world leader of flexible packaging solutions for the food, beverage, and industrial markets. Scholle has 1,800 employees, 20 manufacturing locations on five continents, and sells its products in more than 60 countries.

For years, Scholle was organized regionally, with each geographical region developing and marketing products for its market. This led to a great deal of duplicate effort and products. In 2006, management decided to restructure the business horizontally around strategic business units, each tasked with developing products for a global market.

E-Mail Messaging Insufficient

With this horizontal restructuring, teams were suddenly working with colleagues around the world rather than with people in their own region. It became apparent that the company’s older Novell-based messaging infrastructure provided limited communication and collaboration options. “Basically, all we had was e-mail and telephones,” says Keith Anderson, Manager of Global Network Systems for Scholle Packaging. “This wasn’t enough to communicate effectively between plants in different countries and time zones.”

Employees experienced huge time lags as they waited for e-mail message replies from colleagues on the other side of the globe. Engineers spent hours assimilating edits to large CAD files that coworkers sent as e-mail attachments. “E-mail messaging served its purpose, but we needed more than e-mail to succeed in fast-moving global markets,” Anderson says. “Teams wanted to use instant messaging, Skype, blogs, forums, wikis, video conferencing, and other innovative communication methods, but our Novell

infrastructure wouldn’t support them. Also, because we couldn’t give vendors and customers access to our file-shares for security reasons, we had to use e-mail as a collaboration method. Management issued a mandate to reduce time-to-market for new products, and our messaging infrastructure was slowing us down.”

A richer, more flexible communications infrastructure could also facilitate work on the company’s multiple LEAN initiatives, which required input from staff members all over the world. (LEAN is a manufacturing efficiency program that seeks to eliminate waste from business processes.) Scholle LEAN teams hold several weeklong events throughout the year where staff members focus on improving particular processes. Team members communicated through overseas conference calls, sending documents back and forth as e-mail attachments. Overseas calls were expensive and involved late-night meetings for many staff members. Communicating by e-mail was frustrating with so many parties involved, and it burdened the messaging system.

Server Downtime Interrupts Business

All of the company’s Novell servers were out of warranty, and its operating systems and Microsoft® Office productivity programs were out-of-date. The older servers failed frequently, for 24 hours or longer, which slowed or stalled production, delayed shipments, and sometimes upset customers. Returning servers to service was difficult, because Scholle had IT staff in only 5 of its 27 server locations.

“We were reactive in server management,” Anderson says. “If a server broke at a location with no IT staff, we had to work with the local staff to identify and install needed parts. We also flew IT staff around the world to perform server upgrades.” Also, because there were no IT staff members in most plant locations,

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Scholle could not securely place domain controllers there, which forced local users to authenticate over the wide-area network, a slow and often frustrating process.

In addition, many newer business applications that Scholle added needed to connect to the enterprise e-mail system for sending alerts and providing other e-mail integration services. However, it was time-consuming, and sometimes impossible, to integrate the applications with Novell GroupWise messaging software; once integrated, the new applications were often unreliable.

When the company restructured, the IT staff was asked to do more but not given more resources; in fact, IT headcount was cut. Yet two full-time staff members were dedicated to managing the 18 GroupWise messaging servers. “I wanted my people to work on new solutions that impacted the business, not on messaging services, which I consider a utility,” Anderson says.

Solution

Anderson knew that Scholle needed to modernize its communications and collaboration infrastructure, consolidate and centralize servers, and simplify IT management tasks if the company was to continue to grow. He envisioned a centralized, flexible messaging and collaboration infrastructure that would give global employees plenty of options for sharing information. He wanted the core infrastructure to be consistent and easy to manage, and to offer common functionality—such as user account information, workflows, and search—that could be centrally maintained and reused across multiple applications.

Integrated Productivity Suite

In 2008, Scholle sought the help of Project Leadership Associates (PLA), a Microsoft Gold Certified Partner in Chicago, Illinois, to better

understand how the Microsoft Infrastructure Optimization model could help Scholle employees be more productive and IT staff be more effective and efficient.

“We looked at communications and collaboration solutions from Novell, Oracle, and Microsoft, but the Microsoft solution set offered the centralized, integrated management solutions we were looking for,” Anderson says. “Novell’s solutions seemed like a forced fit and based on old protocols, and Oracle’s products solved some issues but not all.”

Rapid, Economical Infrastructure Replacement

Scholle decided to deploy an integrated suite of Microsoft business productivity infrastructure products:

- Microsoft Exchange Server 2007—messaging and calendaring software
- Microsoft Office SharePoint® Server 2007—collaboration software
- Microsoft Office Professional 2007—productivity programs
- Microsoft Office Communications Server 2007—software that integrates instant messaging, presence, Web conferencing, and software-powered voice over Internet Protocol (VoIP)
- Microsoft Office Communicator 2007—a unified communications client that people use to move seamlessly between e-mail messaging, instant messaging, voice, and video communications from within any Microsoft Office application

Modernizing its business productivity infrastructure and replacing the older Novell servers would require about 25 new servers, however, which was a significant expense. At that point, PLA introduced Scholle to the Windows Server® 2008 operating system with Hyper-V™ virtualization technology, which would enable Scholle to move forward

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with its business productivity enhancement with about one-third the expected server expenses. Scholle was able to replace 40 Novell servers in 27 locations with 13 new Windows Server 2008-based servers in 4 locations.

PLA also helped Scholle get the maximum benefit from its investment in the Microsoft Enterprise Client Access License (CAL) Suite, which gives organizations an easy way to license 11 popular Microsoft business productivity infrastructure programs. Until then, Scholle had only taken advantage of the Windows Server 2003 operating system to run custom and third-party business applications and Microsoft SQL Server® 2005 data management software. “It was far more cost-effective to license these new programs through the Enterprise CAL, since we were rolling out so many Microsoft solutions,” Anderson says. “It also helps us to stay current with the latest releases, which has always been a struggle.”

PLA provided overall project management, best-practices guidance, help with setting up virtual machines, assistance in deploying Exchange Server 2007 and migrating mailboxes from GroupWise, help migrating the company’s directory structure from Novell eDirectory to Active Directory® Domain Services, and more. “There’s no way that we could have tackled this ambitious project ourselves,” Anderson says.

The business productivity optimization project began in January 2008 and ended in August 2008. In just seven months, Scholle was able to completely replace its companywide business productivity infrastructure and consolidate servers for easier management and more flexible response to business needs.

Unified Communications

Scholle runs Microsoft Exchange Server 2007 on a cluster of four physical servers in the Scholle data center, which provides nonstop reliability and easy IT oversight. Scholle employees now have conveniences such as shared calendars, which they did not have in GroupWise, and a far more intuitive e-mail client (the Microsoft Office Outlook® 2007 messaging and collaboration client). “Training takes no time, because most employees have used Office Outlook at home, in school, or in previous jobs,” Anderson says. “In contrast, it took a month or more for employees to learn GroupWise.” Employees similarly embraced Office Communications Server 2007 with no formal training.

With this integrated suite of communications technologies, Scholle employees now have access to security-enhanced instant messaging, presence, computer-based Web conferencing, and software-powered VoIP. This abundance of flexible communications options helps project teams collaborate faster and more easily. For example, international design teams can use the presence indicator to see if colleagues are online any time of the day or night, to get fast answers to questions over instant messaging. With just a few mouse clicks, they can add new people to the conversation and even escalate the conversation to an audio or Web conference.

“Presence, Web conferencing, and instant messaging are big home runs with Office Communications Server 2007,” Anderson says. “If I get an e-mail message from someone and see from the presence indicator that they are online, I can send them an instant message and get an answer without waiting on, or burdening, our e-mail system. Communication across the company is much faster now. Also, we had no chat capability before, because we didn’t want our intellectual property being discussed across

our firewall. With Office Communications Server 2007, we have secure instant messaging that can be monitored.”

Scholle is interested in pursuing additional communications enhancements: replacing its branch-office PBX systems with Office Communications Server 2007 VoIP; integrating e-mail, voice-mail, and fax inboxes through Exchange Server 2007 unified communications; and implementing Microsoft RoundTable™ conferencing and collaboration devices in branch offices. RoundTable is a video conferencing phone that captures and broadcasts a 360-degree view of everyone in a meeting room. RoundTable follows the conversation and broadcasts a close-up of the speaker.

Online Collaboration

Teams across Scholle have also embraced Office SharePoint Server 2007 for posting and sharing documents, creating blogs and collaborative Web sites (wikis), sharing project calendars, hosting discussion groups, providing contact lists, and more. To date, about 120 teams have created their own SharePoint team sites, and Anderson has moved the corporate intranet to Office SharePoint Server 2007. All information across all the SharePoint sites is searchable, and business users have the ability to control document-access rights without going through the IT staff. Scholle uses SQL Server 2005 to store its SharePoint site documents and data.

Scholle Corporate, for example, has created a SharePoint site where the chief financial officer posts monthly financial reports and announcements for Scholle executives. Previously, this information was sent in e-mail messages or shared in conference calls that were tricky to organize because of multiple schedules and time zones. Now, the information is always online and up-to-date,

so executives can access it anytime, from any Web browser.

The packaging group created a SharePoint site where executives and upper-level management can collaborate on daily, weekly, and monthly financial, marketing, and market-assessment information. Participants are able to post information in real time for rapid consumption and feedback, rather than waiting to discuss it in monthly meetings.

Another SharePoint site provides a forum in which the 27 Scholle manufacturing facilities can report quality issues as they arise, rather than sharing them through lengthy e-mail trails and waiting for replies.

Virtualization, Centralized Management

The company's business productivity infrastructure now relies on 13 physical servers running Windows Server 2008 Datacenter with Hyper-V. To date, Anderson has created 143 virtual machines on these 13 servers, which host the company's messaging, collaboration, and file-server workloads. Guest servers (virtual machines running on a host server) run the Windows Server 2008 Standard and Windows Server 2003 Standard operating systems.

Scholle still has about 20 stand-alone application servers that will eventually be moved to virtual machines. In the meantime, Scholle has connected them to its Active Directory Domain Services directory structure, which has made them much easier to manage. Scholle also found it easy to integrate third-party applications such as the Baan enterprise resource planning system with Active Directory and Exchange Server 2007. Anderson was able to use Active Directory Domain Services to create a single sign-on to all key applications, which simplifies logon procedures for employees.

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In plant sites where there is no IT staff, Scholle uses read-only domain controller (RODC) technology in Windows Server 2008 to deploy a Server Core installation of the operating system that hosts read-only partitions of the Active Directory Domain Services database. An RODC provides a security-enhanced way to deploy a domain controller in locations that require fast and reliable authentication services but cannot ensure physical security for a writeable domain controller.

Scholle is deploying several Microsoft System Center data-center solutions to centralize and further simplify the management of its server and client computers:

- **Microsoft System Center Configuration Manager 2007** is used to automate the deployment of operating systems, applications, and security updates to computers in any location, and to easily report on the company's technology assets.
- **Microsoft System Center Operations Manager 2007** is used to proactively monitor the company's distributed servers.
- **Microsoft System Center Virtual Machine Manager 2008**, planned for mid-2009, provides easy physical-to-virtual server migration, virtual-machine performance optimization, and easier management of both physical and virtual servers.
- **Microsoft System Center Data Protection Manager 2007**, also to be deployed in mid-2009, will be used to automate the backup of data on servers in all locations and store that data on both disk and tape.

Benefits

With its new business productivity infrastructure, Scholle Packaging can quickly respond to global market demands by enabling employees to communicate and collaborate faster. Ultimately, these efficiencies will translate into faster time-to-market with new products.

Using server virtualization, Scholle was able to avoid a U.S.\$250,000 hardware expense and a \$75,000 IT salary. The more reliable infrastructure has led to a 60 percent reduction in downtime, which further increases companywide productivity.

More Agile Responsiveness

With its integrated business productivity infrastructure, Scholle employees are able to distribute and share information much faster, which increases productivity, speeds problem resolution, and increases overall business agility. Management has access to fresh financial and operational data throughout the day, rather than waiting for conference calls to be organized. Employees throughout the company can contact one another over instant messaging and Web conferencing to resolve issues the very same day, or hour, rather than waiting for meetings or wading through lengthy e-mail threads. Using the designated SharePoint site, for example, the manufacturing facilities can react to quality issues in minutes or hours rather than days.

The enhanced productivity infrastructure has also positively affected the efficiency of the company's LEAN events. Scholle created a SharePoint site for each LEAN initiative, and a sub-site for each event under those initiatives, where all information related to an event is stored. “I can see from Office Communicator that a colleague in Brazil is online, tell him or her what I need, and get an immediate response,” Anderson says. “Just as important as the communication time savings is the fact that all documentation is posted on a SharePoint site for later reference.” Although LEAN events still last a week, participants save two to three hours every day during the LEAN event. Instead of working late into the night, they finish by 5:00 P.M. or earlier.

Use of presence, instant messaging, and audio and Web conferencing across the

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company similarly accelerate reaction times and enrich phone and e-mail conversations. “We can accomplish in a five-minute Web conference what previously might have taken hours,” Anderson says.

Scholle also has a technology foundation that can accommodate new productivity-boosting innovations without extensive development work. “With the Microsoft business productivity infrastructure, we have the flexibility to integrate the latest Microsoft solutions, third-party software, hosted solutions, and custom applications,” Anderson says. “This enables the business to embrace innovation without technology being a barrier. This is a real competitive advantage for us.”

Faster Product Design

Improved productivity is expected to have a long-term positive impact on product development. “With a more flexible communications and collaboration infrastructure, we’ll be able to get products to market faster in our new global business structure by connecting team members around the world,” Anderson says.

Scholle also is already communicating and collaborating more closely with customers and the suppliers with whom it works to develop custom products for specific customer needs. Scholle implemented federation in Office Communications Server 2007 so that employees can extend the efficiencies of presence, group conferencing, and instant messaging to these external users. Anderson’s team is now using Office SharePoint Server 2007 to build an extranet that will enable Scholle staff to share documents, online discussions, and development schedules with customers and vendors with optimized security. Sharing drawings and other project documentation on SharePoint sites will eliminate the need to send large documents as e-mail attachments,

reduce miscommunication, and accelerate overall time-to-market.

Hardware Cost Avoidance of \$250,000, Staff-Time Reduction of \$75,000

With its use of Windows Server 2008 with Hyper-V, Scholle was able to consolidate 40 physical servers to 13 physical servers, and still increase capacity. “Our investment in 13 servers running Hyper-V gave us the processing equivalent of 143 servers, a hardware cost avoidance of \$250,000,” Anderson says.

Scholle now has a consistent technology infrastructure that is easier to manage and more flexible, making it possible for the IT staff to keep headcount stable as it expands its IT role. “The IT staff was being asked to perform more duties with fewer resources, and we now have an infrastructure that enables us to do that,” Anderson says. “The System Center solutions will give us additional efficiencies that will enable us to proactively manage our infrastructure, avoid problems that used to eat up huge amounts of time, and automate many routine tasks. We will eliminate the work of one full-time staff person, valued at \$75,000, by consolidating our servers with Hyper-V and managing our entire infrastructure with Microsoft software.”

Scholle has not only reduced IT management time and costs, but opened up more possibilities for creating innovative business solutions that weren’t possible, or were cost-prohibitive, in a Novell environment. For example, Anderson’s staff recently implemented two new hosted solutions and was able to use single sign-on created with Active Directory to enable access to those solutions. “This would not have been easy to do with Novell,” Anderson says.

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Downtime Reduced by 60 Percent

Scholle now has a highly available messaging and collaboration infrastructure that employees around the world use to communicate without interruptions. “Unscheduled Novell downtime averaged 50 hours annually. In the nine months that we have been on the Microsoft infrastructure, we’ve had 15 hours of unscheduled downtime,” Anderson says. “We’re on track to reduce unscheduled downtime by 30 hours annually.”

When there is a problem, it’s far easier to take remedial action. “I’m definitely sleeping better at night,” Anderson says of his new infrastructure’s stability. “I have a very high comfort level from the fact that all servers are in locations where we have IT personnel, so if something happens, we can reduce recovery time from 24 to 4 hours. Or, using virtualization, we can transfer workloads to new virtual machines in minutes. It used to take 6 hours to set up a physical server; now it takes 10 minutes to create a virtual machine.”

Future Improvements

Next, Scholle wants to use its intranet as an integration point for line-of-business applications and create workflows inside and around those applications. For example, different departments could use SharePoint sites as a central place for completing and routing forms or spreadsheets. Other business groups are very interested in using wikis, blogs, and social networking features on their SharePoint sites.

When RoundTable is deployed companywide, Anderson estimates that Scholle will be able to reduce travel costs by \$8,000 in the first year, with savings increasing by 10 percent annually.

“IT always seemed to be a roadblock to the business in our old Novell environment,”

Anderson says in conclusion. “Business users would request a new capability or application, but it was either not possible or would take months to implement. That is no longer the case. We can now give business users the power to drive the business. Technology is now a help rather than a hindrance.”

For More Information

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For more information about Project Leadership Associates products and services, call (312) 441-0077 or visit the Web site at: www.projectleadership.net

For more information about Scholle Packaging products and services, call (888) BAG-N-BOX or visit the Web site at: www.scholle.com

Microsoft Infrastructure Optimization

With infrastructure optimization, you can build a secure, well-managed, and dynamic core IT infrastructure that can reduce overall IT costs, make better use of resources, and become a strategic asset for the business. The Infrastructure Optimization model—with basic, standardized, rationalized, and dynamic levels—was developed by Microsoft using industry best practices and Microsoft's own experiences with enterprise customers. The Infrastructure Optimization model provides a maturity framework that is flexible and easily used as a benchmark for technical capability and business value.

For more information about Microsoft infrastructure optimization, go to: www.microsoft.com/io

Software and Services

- Microsoft Server Product Portfolio
 - Windows Server 2008 Datacenter
 - Windows Server 2008 Enterprise
 - Windows Server 2008 Standard
 - Microsoft Exchange Server 2007
 - Microsoft SQL Server 2005
 - Microsoft System Center Configuration Manager 2007
 - Microsoft System Center Operations Manager 2007
 - Microsoft Office
 - Microsoft Office Communications Server 2007
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