

J&B Group freezes runaway server sprawl with virtual servers on IBM @server xSeries.

Overview

■ Application

Server consolidation using IBM @server® xSeries® virtual servers with centralized storage

■ Business Benefits

Smaller server footprint; projected ROI in less than a year; savings in maintenance costs and reduced capital investment in new servers; enhanced business continuity

■ Servers

IBM @server xSeries 440 and 445; IBM TotalStorage® FASiT900 Storage Server

■ Software

IBM FlashCopy®; VMware ESX; Linux Kernel 2.6

■ IBM Business Partners

Citrix Systems, Inc.
TSG Server and Storage
VMware, Inc.



J&B Group operates a wholesale food distribution business with its own fleet of trucks, in addition to supplying restaurants and institutional food facilities.

Refrigerators and offices are not comparable in most respects, yet they do share a common dilemma: always running out of space. This is a fact that J&B Group (J&B) knows only too well. With its 380 employees, Minnesota-based J&B processes and distributes fresh and frozen meats, deli and other food products in an 11-state area. It even offers a public cold storage facility for wholesale customers who don't have enough space in their own freezers

“The IBM and VMware virtualization solution will begin to earn an ROI in less than a year because we’re using the x440 instead of making capital investments in new servers.”

–Kurt Anderson, Vice President of IT, J&B Group

Earning fast ROI with high-performance virtual servers



Virtual servers on rack-dense IBM xSeries systems can take the place of a room full of physical machines.

and refrigerators. However, with its burgeoning business spawning new IT applications continually to keep its operations efficient, J&B wasn't happy about the growing number of servers on its data-center floor. Not only did it confound human traffic and consume power, it was driving up costs and quickly proving to be an inefficient model for growth.

Twenty Dell servers ran the company's business processes, such as connectivity solutions from IBM Business Partner Citrix Systems, Inc., payroll systems, e-mail applications and databases that support logistics, help desk and costing solutions. Two IBM UNIX® processor-based systems ran the company's enterprise resource planning (ERP) systems.

"Server sprawl created a number of problems for us," says Kurt Anderson, vice president of IT, J&B. "The space issue was of course visible to anyone who came through the data center.

Less obvious was the manageability problem. All our servers had to be maintained individually, which meant a lot of repetitive, manual tasks for IT technicians who could have been doing more value-added work."

Also of concern were the availability and recoverability of data and applications. To upgrade a server, a technician had to power it down. With no redundant servers to take over the workload and no centralized storage to automatically restore operating systems, applications and data, downtime was a very serious problem. "We lost a whole day of shipping once when a server went down," says Anderson. "That was a wake-up call. We needed to find a more efficient, dependable infrastructure for our business systems."

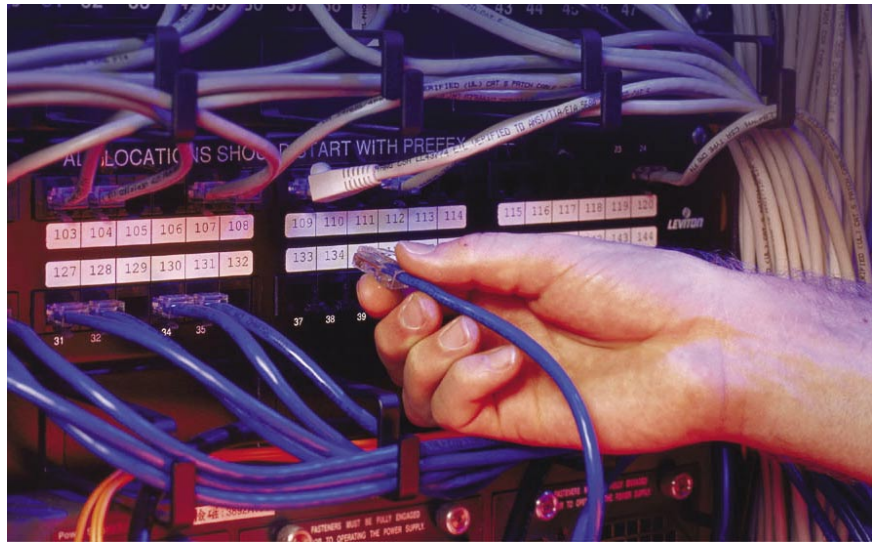
"Quality starts at the manufacturing end, and IBM is a computer manufacturer, whereas its competitors are computer assemblers. There's quite a bit of difference."

—Kurt Anderson

The incredible shrinking server solution

Seeking a manageable, recoverable solution, Anderson took the suggestion of J&B's IBM representative and visited an IBM Executive Briefing Center in Raleigh, North Carolina—a resource center for customers who are evaluating server and storage solutions. There he encountered the solution he'd been looking for—IBM @server xSeries systems running server virtualization software from IBM Business Partner VMware. With virtual servers taking the place of boxes on the floor, J&B's data center would be safer for human traffic, and for business data as well.

As a result, six virtual servers on one IBM xSeries 440 machine are now processing the workload of five Dell machines, and more machines will be replaced in the near future. With centralized storage in the form of an IBM TotalStorage FAST900 storage server, data is backed up routinely and is recoverable to all six virtual servers in a single, fast process.



The scalable design of the xSeries provides customers such as J&B with a building-block approach that enables future expansion in low-cost increments.

In addition to saving money and floor space, the virtualization solution was easy to install and requires little maintenance. With the help of IBM Business Partner TSG Server and Storage, J&B implemented its server and storage solution in two months. "The IBM and VMware virtualization solution will begin to earn an ROI in less than a year because we're using the x440 instead of making capital investments in new servers," says Anderson.

Perhaps the most welcome feature of the new solution is the assurance it brings that data and applications will be available when they are needed. Citrix Metaframe XPA with NFuse, for instance, provides remote employees with access to the company's business systems. "Many of our employees use this service to check their e-mails and enter orders when they are away from the office, and our remote offices use this service exclusively to perform their daily duties. We would be lost without this application, and now we can ensure its availability," says Anderson.

Enterprise architecture times six

With its new xSeries solution, J&B runs its Citrix applications; three third-party databases; e-mail, file and print systems; and a MITS business intelligence application on a single xSeries 8-way 440 system with 2.0 GHz Intel Xeon processors. VMware ESX software running on Linux Kernel 2.6 partitions the xSeries into six virtual servers with no degradation in the performance of the applications that had run on individual, physical machines.

J&B leverages IBM FlashCopy software with its IBM TotalStorage FAST900 storage server to take flash and volume copies of the data on all its servers several times a day. This way, the business has a backup of its data should it need to take down any of its servers or experience an accidental outage.

The next step for J&B is to create redundancy at the server level to enable the business continuity it has been seeking. For this, the company plans to purchase an xSeries 445 system along with VMware ESX software, and it will split its workload in half so that each of the two machines is both a production server and a hot standby.

"The ability to host so many applications on the xSeries with redundancy and storage is a powerful offering," says Anderson. "But what really struck me at the IBM Executive Briefing Center was the xSeries itself. You see a side-by-side comparison with competing machines such

as Dell because they take both machines apart and show you what you're getting. That was when we decided to make the switch to IBM servers. We saw that IBM technology is really designed for the enterprise with autonomic features to help ensure availability, such as Light Path Diagnostics and Predictive Failure Analysis. Also, there's IBM Director for efficient system management and the Enterprise X-Architecture™, which is based on the standard computing platform for the enterprise, the IBM mainframe. We also saw the way IBM manufactures its equipment. Quality starts at the manufacturing end, and IBM is a computer manufacturer, whereas its competitors are computer assemblers. There's quite a bit of difference."

Creating efficiency through IBM technology

As it counts the many benefits of its IBM solution, J&B is contemplating extending its virtualization strategy still further. Eventually, the company would like to implement storage area network (SAN) virtualization with IBM TotalStorage SAN Volume Controller and IBM TotalStorage SAN File System. These software products greatly simplify storage management and facilitate the utilization of data resources from multiple operating systems.

"When we made the decision to switch to IBM," says Anderson, "we enhanced our technology tool chest with a new set of tools that we can use to grow our business profitably. We also got some elbow room to expand and time to focus on strategies for the future."

For more information

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To find out more about Citrix, VMware and TSG Server and Storage, visit:
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