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At the Core

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Martin-Brower improves performance by transitioning to a new System i platform 1

There's much talk about server upgrades these days - and for good reason. With the IBM* System i* platform, users can put more applications on fewer boxes, allowing them to compute with the system's renowned reliability and stability all day without worrying about multibox maintenance headaches.

But for some companies, server upgrades aren't so much a matter of desire, but more of necessity. For many reasons, older systems may lack the capabilities to run more applications and host additional business units.

Such was the case with Reyes Holdings, LLC, which owns and operates a number of smaller businesses. When Reyes attempted to consolidate the distribution centers for Martin-Brower, one of its fast-food distribution companies, on an aging iSeries* 840, it found that performance was taking a huge hit, with response times at some of its distribution centers in the minutes.

Although the notion behind the company's consolidation effort was sound, the reality was much different. After having moved six of its 14 U.S. Martin-Brower distribution centers to the 840, operations became unbearable, and the Reyes' CIO approached Reyes' senior (and only) iSeries administrator, Scott Arnsten. "He tapped me on the shoulder and said, 'You have to get this fixed,' " Arnsten says.

Thankfully, Arnsten had - and continues to maintain - close ties to the folks at IBM Rochester, Minn. Through those channels, he heard talk of the new System i platform, which would not only be more powerful than the company's existing iSeries server, but also more flexible. After debating an upgrade to a more powerful iSeries server, Arnsten instead signed up to be an early adopter, taking possession of a System i5* 570 in early 2004.

Since then, Martin-Brower has migrated all of its distribution centers to the box and overcome its earlier performance issues. Now, not only has it beefed up its computing horsepower, but significantly reduced its maintenance needs, allowing the organization's one-man System i team to focus on other, more pressing matters.

Totally Unacceptable

The Rosemont, Ill.-based Reyes is the parent of several different companies, including Harbor Distributing, Chicago Beverage System, Premium Distributing of DC, Premium Distributing of Virginia, Reinhart FoodService and Martin-Brower, the latter of which is the largest U.S. distributor to the McDonald's fast-food chain. From dry goods to refrigerated

foods to cleaning products to salt and pepper shakers, Martin-Brower provides it all, distributing these goods from distribution centers scattered across the United States.

Orders are placed by individual stores and received either at the Martin-Brower headquarters electronically or, via EDI and fax, or at the distribution centers. Orders are then fulfilled by the appropriate distribution centers, which pick, pack and deliver on trucks to the restaurants. "Everything," says Arnsten, "is centralized here, with the core being the System i5 (platform)." That System i hardware handles all of the company's computing activities. "There are no servers at all in our distribution centers, just switches - networking."

Of course, this wasn't always the case. In the past, each distribution center had its own AS/400* server running a green-screen distribution application. A corporate box located in Lombard, Ill., where Martin-Brower was headquartered before Reyes purchased the company seven years ago, would then poll these boxes. Both corporate onsite programmers and developers would support these distributed servers, which Arnsten says was very costly. "Each distribution center would have its own jack-of-all-trades person who knew how to do backups and how to fix the network if it went down - just enough to be dangerous. And then we had separate software and hardware maintenance agreements for each of those boxes."

When a new CIO with an AS/400-iSeries background joined the company, Martin-Brower began undertaking a consolidation effort, including migrating from its former green-screen distribution application to JD Edwards ERP software. By the time Arnsten came on board at Martin-Brower in December 2001 (he now works directly for Reyes), several distribution centers had already been consolidated to the company's iSeries 840, and two larger ones followed. That 12-way 840 had 12 GB of main storage and 98 GB disk arms.

"That was the largest iSeries (system) I had seen," remarks Arnsten, who had owned and operated an IT consulting firm before joining Martin-Brower. "Most of my clients didn't have IT departments or, if they did, they were small ones. So it took me awhile to get acclimated to the size and performance of the system. It didn't take long for me to realize, however, that we were having some performance issues, especially after one of our larger distribution centers went online.

These performance issues were most apparent on Monday mornings, when the company was processing most of its orders. In some cases, response times at the distribution centers were sometimes in the minutes, which, adds, Arnsten, "was totally unacceptable." That's when Arnsten began to break down the system to determine where the performance problems might lie.

The Stars Align

After establishing some of the problems were related to the disk arms, with disk-arm activity rising above 40 percent (above IBM's recommended threshold), the company began a massive performance-tuning effort, including adding 180 disk arms and more DASD and memory. "We finally got to the point over the course of a couple years where we had a pretty well-rounded system, and it was as optimized as optimized could be," Arnsten recalls, "but we were still having major performance problems." Which meant that

the company had to take a deliberate approach to consolidating the remaining distribution centers onto the 840.

Initially, IBM recommended an upgrade to an iSeries 890, but because the company's ERP software was single threaded, "it didn't matter how many processors we threw at it. We weren't going to get any better performance." Fortunately, Arnsten had already cultivated some relationships with IBM in Rochester, and knew about the next-generation system that was under development and was soon to hit the streets: the System i family.

In 2004, Reyes was the first company in the United States to receive a System i5 570. The company expected to go live with this new system in July 2004, but because of many issues, including some related to software, Reyes couldn't hit the go switch until January 2005. Once it did, however, everything changed. "Within 24 hours we had a complete turnaround. The stars had finally aligned," Arnsten says.

This alignment, however, wasn't merely the result of good and just living. Arnsten had taken extra steps to ensure that everything would work, most significantly by beginning with a clean slate. As he explains, "I started everything from scratch, and the only thing I restored was the database from my high-availability system. As a result of this and other efforts, the cutover took a mere five minutes."

With this new system up and running - and running well - Martin-Brower brought its last two, and largest, distribution centers online. It's now working on migrating its seven Canadian distribution centers to the 570. Its Brazilian and Puerto Rican distribution centers have recently been upgraded to run in System i environments, with no plans, because of communications issues, to consolidate them onto the production 570.

Based on this success, the company has since introduced two System i5 520s into its environment, one of which is meant to play a disaster-recovery (DR) role. Currently, however, it's being used for further consolidation efforts for Reyes' other companies. That role may be assumed by an existing iSeries 830, which currently runs the beverage-distribution side of Reyes' business. "It already has three partitions, but I'll be upping that to five, one for each of our beverage businesses," Arnsten says. Once that happens, the DR 520 will be moved to an offsite location. The other 520 - "a small one," Arnsten says - acts as an EDI server.

Some Shared Advice

Some companies - and even consumer users - upgrade their systems because they want to, whether for increased horsepower or simply to keep current with the latest technological trends. And there's nothing wrong with that. But other organizations do so out of necessity, as Reyes and Martin-Brower did. Without doing so, the company would still be mired in a performance quagmire, with slow response times potentially crippling the company.

Thanks to some hard work and insider contacts, however, Martin-Brower is poised to take on the future, consolidating not only its U.S. distributors onto its new box, but also now its Canadian distributors.

UP CLOSE

CUSTOMER: Martin-Brower

HEADQUARTERS: Rosemont, Ill.

BUSINESS: Distributor of supplies for fast-food restaurants

HARDWARE: An IBM System i5 570 and two System i5 520s

CHALLENGE: Consolidating its distribution centers onto an aging iSeries server

SOLUTION: Becoming an early adopter of the System i platform and realizing significantly improved server performance

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