

Construction Company Builds Virtual IT Infrastructure

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When Shawn Partridge arrived at Rockford Construction last year, he found a collection of aged servers, each with its own access to storage. He knew that the first thing on his agenda was to update his IT environment. As the vice president of information technology at the Rockford Construction Company in Grand Rapids, Mich., he was in a position to take action to bring the massive company up to current standards. And Partridge knew that virtualization would have to be part of the picture.

“We looked at the cost of bringing in new servers and bringing in a virtual environment,” Partridge said. “We looked at the cost from the outlay, the storage, and the power and cooling. The outlay was much lower by purchasing a virtual system than by going with dedicated systems.”

Rockford is a Microsoft Corp. (Nasdaq: MSFT) shop, and Partridge plans to virtualize all of his servers. “We’re virtualizing our domain, Exchange, SQL, Sharepoint, and our Citrix servers,” he said. The ability to add technology from Citrix Systems Inc. (Nasdaq: CTXS) is critical to Rockford’s operations. The company builds major projects throughout the U.S., specializing in hotels, medical, education, and multi-tenant buildings. This means that Rockford always has crews connecting remotely from construction sites, and, for that, performance and capacity is critical.

Partridge said that his company settled on a suite of Hewlett-Packard Co. (NYSE: HPQ) DL-580 G5 servers that connect over an iSCSI SAN to Hifn Inc. (Nasdaq: HIFN) Swarm 3200 storage appliance. He chose a server virtualization system from Virtual Iron Software Inc. . . . “We went with Virtual Iron instead of VMware because of the features like live migration, server failover, and management of storage,” he said. He also needed the power-down functionality: “As your needs go down, it will power down servers and move virtual servers over.”

Partridge also likes the way Virtual Iron handles the Hifn storage. “The SAN has two boxes with 15 drives each. Those are the 500-gig drives with iSCSI,” he said. “Virtual Iron supports iSCSI natively. You get to retain the cost savings.” Partridge noted that the iSCSI drives are on a dedicated Ethernet network that’s reserved for storage.

Partridge said that Rockford’s virtualization project allowed him to consolidate his data center to a pair of the HP servers supporting a total of 16 virtual servers, plus an HP DL380 that runs the Virtual Iron

software. He had 24 GB of memory installed in each server. “We run in the area of 25 percent utilization, but we see that peak at about 70 percent,” he said.

The two DL 580 servers are actually redundant machines, and if one of them fails, the Virtual Iron software will automatically move the load to the other server. “You’re no longer purchasing for peak demand on a per system basis,” Partridge said. “You’re purchasing for peak demand on a system-wide basis. We get a higher utilization than we would have had on ordinary servers. We have servers that would have been on low-end systems that are part of higher performance systems.”

Getting the company to go along with the need for virtualization wasn’t free from obstacles, however. For example, Partridge had to sell the idea to the board. “The biggest struggle with going into a virtual environment was getting an understanding of what a virtual server was, and why you’d buy something that doesn’t exist,” he said. “You have to show the hard costs.”

Once the company’s board realized that the cost savings were significant, Partridge found that most other obstacles simply went away. “We did not run across resistance from the departments,” Partridge said. “We provide this as a service. They don’t care about how this happens.”

So far, virtualization is living up to its promise, and that’s just in the initial figures. While he wouldn’t talk about specific dollars, Partridge said: “Overall we’re getting about a 50 percent savings counting purchase, maintenance, and time as far as maintenance of the systems.” But he knows the savings are even greater. “We haven’t figured in power and cooling. We didn’t have records from before the conversion.”

So far, things seem to be working well for Rockford and its virtualized data center. “We love it. It has been better than I’d hoped,” Partridge said. He noted that one of the features that has been important to the company is the ability to perform upgrades while the system stays up. “We’ve been through a couple of upgrades on it, and the upgrades were flawless. The upgrade takes place offline,” he said. “You do the upgrade, and when the upgrade is good, it migrates back into the environment.”

Partridge isn’t done yet. “What I see us doing is expanding to another location, probably a collocation site for a redundant system,” he said. Even with features, such as automatic server failover, that his virtualization software provides, Partridge wants even more security. “We’ll be doing a business continuity site” at the second location, he said.