

Bartlett & Co. invests in storage performance

Resolves disk contention, and delays storage purchase for 18 months

As one of the nation's oldest Registered Investment Advisors (RIA), Bartlett & Co. has a busy IT department supporting the company's investment advisors, financial planners, administrative support, and operations team. Based in Cincinnati, OH, Bartlett's IT systems are centralized in their main office, with a colocation facility for QA, business continuity and disaster recovery a few miles outside the city.

Several applications are key to Bartlett's environment. The line-of-business applications (portfolio management, trade order management, and billing) are running on a vSphere cluster alongside other critical applications such as Windows databases and email servers. All users at Bartlett have virtual desktops for their daily tasks.

This virtual environment runs on a set of HP DL380 servers, separated into one cluster for server VMs and one for virtual desktops. These two clusters share a set of EqualLogic arrays for storage. The EqualLogic has both spinning and flash drives, and Bartlett is using approximately 25TB of the 40TB of capacity they own.

Disk contention on the storage system

Bartlett's network administrator, Rob, manages this infrastructure as well as the corresponding network. His users began to notice latency in their applications. He traced the issue to disk contention between the two vSphere clusters. Because the server environment and the virtual desktops were sharing storage resources, the disk arrays were sometimes overloaded.

"When the users double-click and it takes 1 second or 2 seconds - or worse to open Excel instead of milliseconds," says Rob, "They notice that." He attributed this latency to multiple virtual machines reading and writing to disk simultaneously, as is common in virtual environments. Rob started to research solutions, but with a limited budget, his options were scant.

BARTLETT

COMPANY

Bartlett & Co.
<http://bartlett1898.com>

INDUSTRY

Financial

BENEFITS

- Resolved disk contention between virtual server and desktop workloads
- Delayed storage purchase for 18 months by offloading I/O from storage
- Eliminated performance-based helpdesk tickets from users

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ROB, BARTLETT,
NETWORK ADMINISTRATOR





Discovering a solution

Adding a new array was too expensive, but one option Bartlett had was to add local storage, such as SSDs, to the hosts. “The problem with that,” said Rob, “was that you lose your redundancy. And figuring out what to offload on the SSDs becomes really tricky.” He learned about server-side caching but many of the solutions seemed complex and expensive.

Then he met Infinio at a local VMware Users Group (VMUG) meeting. After talking with the team, he decided to evaluate the software with a free 30-day trial of Infinio. Initially, Rob installed Infinio on the virtual desktop cluster. “It was incredible,” he said, “We did the install, and came back to our desks, and you could immediately notice a difference.” Even more important, users stopped submitting helpdesk tickets around performance, proving Infinio’s value. Today, Infinio offloads over 14,000 IOPS in the VDI environment.

After purchasing Infinio for the virtual desktop environment, the Bartlett team turned to the server environment. The evaluation there went equally smoothly. Latencies dropped for applications, and Rob says, “There’s no doubt in my mind it’s because of the offload provided by Infinio.” Infinio was deployed into production for all the main line of business applications. In particular, performance issues that were common in the morning on the accounting system had dropped considerably. Even the Director of Operations had noticed.

Planning for the future

Rob and the rest of Bartlett’s IT team are very happy with Infinio. They see the most valuable thing Infinio offered was to “allow us to put off a storage purchase for about 18 months.” And when that purchase comes up, they have faith that Infinio will “make whatever product we choose even better.”

Several big projects are coming up for Rob. There is an initiative to move to a “paperless office” that will involve implementing new applications and hardware. The line-of-business applications will go through a major upgrade this year, and the team will upgrade to vSphere 6 and Horizon View 7. Even with the increased requirements driven by these new applications and upgrades, the team is confident that performance won’t be an issue. “It’s comforting to know that there’s no problem keeping up with these new applications. Infinio bought us time, and now it will continue to buy us performance.”

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At peak times, over 14,000 IOPS from the VDI environment are being offloaded from Bartlett’s EqualLogic arrays.

