



ACCOUNTING FOR THE FUTURE

By consolidating its aging infrastructure onto Dell™ PowerEdge™ blade servers and Dell/EMC storage, the American Institute of Certified Public Accountants improved online services, reduced its server footprint by 98 percent, and saved over US\$3 million.

CHALLENGE

In conjunction with a data center move, the American Institute of Certified Public Accountants (AICPA) sought to consolidate 250 Web and application servers onto a scalable server and storage infrastructure and improve online service availability.

SOLUTION

By combining Dell PowerEdge servers, Dell/EMC storage, and VMware® virtualization software, the AICPA reduced its hardware footprint and energy needs while increasing application availability.

BENEFITS

- Consolidating to a virtualized infrastructure helped reduce hardware footprint by 98 percent and save over US\$3 million.
- VMware vMotion™ technology helps provide 99.999 percent uptime for online member services.
- Simplified management helps reduce systems administration time by approximately 60 percent.

Related Categories:

American Institute of CPAs, blade servers, case study, Dell PowerEdge blade servers, Dell/EMC storage, virtualization, VMware

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While IT organizations often struggle to do more with less, finance departments are traditionally wary of new technology investments. This is not the case, however, at the American Institute of Certified Public Accountants (AICPA), a nonprofit organization of more than 330,000 members. “We have IT-savvy accountants who understand the benefits of keeping up with technology,” says Stan Noel, systems engineer at the AICPA. “So it’s not hard to sell them on a great idea.”

CONSOLIDATING IT INFRASTRUCTURE

One of those great ideas was migrating an aging infrastructure of 250 stand-alone HP servers to just five Dell PowerEdge 6850 servers with Intel® Xeon® processors running VMware virtualization software purchased through Dell. “When we moved our headquarters from Jersey City to Durham, North Carolina, it didn’t make sense to move the old hardware and have the same problems here,” says Noel. “I’ve been a Dell advocate for years, so I was very happy that the organization decided to standardize on Dell.”

The AICPA also deployed a Dell/EMC CX300 storage area network (SAN) as well as Dell OptiPlex™ 745 desktops and Dell Latitude™ D610, Latitude D620, and Latitude D630 laptops. “We are now completely a Dell organization,” says Noel. “Having one point of contact for our PCs, servers, storage, and VMware is very helpful.”

Noel led the migration from physical servers to virtualized servers, using PlateSpin® software from Novell to accelerate the process. “PlateSpin allows for a live transfer, where both the source and the target servers are up and running during the migration,” says Noel. “We were able to migrate 20 servers every two weeks without any downtime.” As a result of the project, the AICPA transformed an 800-square-foot data center into just 16 square feet—reducing the server footprint by 98 percent and cabling by about 99 percent.

The consolidation has helped the AICPA save money in other ways as well. “Consolidating our infrastructure onto Dell servers running VMware saved us over US\$2 million in extended warranties on our old servers,” says Noel. “In

addition, virtualization has saved us US\$1.6 million on new physical hardware, and we're saving around US\$200,000 a year in energy costs."

The infrastructure has also reduced systems administration time by approximately 60 percent, according to Noel. "I know it has saved me about 75 percent of my time," he says. "And it has saved our other two engineers around 25 to 30 percent of their time, because we centralized a lot of the services that used to be hosted in each of our remote offices and virtualized most of the applications."

ACCELERATING SERVER DEPLOYMENT

To support new initiatives, the AICPA added a Dell PowerEdge M1000e modular blade enclosure with PowerEdge M600 and PowerEdge M605 blade servers. Noel appreciated the consistency between the blades' management interface and the Dell OpenManage™ systems management tools he was already familiar with. "I was so impressed with how easy the 10th-generation Dell blades were to set up," says Noel. "The interface is very intuitive, and it was easy to get the blades talking to the SAN. The documentation was easy to read and follow. I literally had the book open for 15 minutes and we were off and running. Dell Deployment Services came out later and checked that everything was properly configured, but we were able to do pretty much the entire installation ourselves."

The first task for the new Dell blades was hosting the back-end Microsoft® SQL Server® database for the organization's Microsoft SharePoint® implementation. "We were doing the SharePoint upgrade migration, and we had a Friday night set at midnight to start the SQL database move from one of our old HP servers to the M600 blade," says Noel. "We had the blade up and running and

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—Stan Noel
Systems engineer at the AICPA
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ready for the SQL migration two hours before it was due." The fact that Dell was able to ship the blades quickly was also a big help. "Our Dell rep was able to get the enclosure and blades here fast," says Noel. "We were able to stay on track with our SharePoint project completion deadline thanks to Dell."


SUPPORTING HIGH AVAILABILITY

The AICPA can now provide 99.999 percent uptime for its Web sites and accounting certification services—another benefit of the virtualized infrastructure. Using VMware vMotion technology for load balancing and failover enables the AICPA to offer its members the best possible service. "We didn't keep metrics on uptime before the server consolidation, but availability for online services was sometimes a problem," says Noel. "With the Dell infrastructure, we're truly running at five-nines availability for our online member services. If we need to take a physical server offline for any reason, we can just vMotion the virtual servers over to another physical server with no downtime."

With the new infrastructure in place, the AICPA also decided to implement a disaster recovery plan. The organization purchased a Dell/EMC CX3-10c SAN for its New York office to support this plan and help ensure smooth recovery of data if disaster strikes its Durham data center.

ENABLING NEW PROJECTS

Thanks to its powerful, scalable, and compact Dell infrastructure, the AICPA can now take on new IT projects that it couldn't have considered before. "A lot of projects that had been waiting for hardware acquisitions are suddenly possible," says Noel. "Instead of buying a dedicated server for new applications, I can just add new virtual servers. So there were about a dozen projects that came to the table just after we virtualized everything, including revising current applications that were limited by the old hardware and establishing true development, staging, and test production areas."

Noel concludes, "Dell has a very good reputation and very reliable hardware, and everybody has been extremely happy with what we have done so far. By working with Dell, we are in prime position to continue to enhance the services we deliver to our members." 

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