HP customer case study: Indiana University School of Medicine
Industry: Higher Education

Medical school formulates virtual backbone with HP Bladesystem

Indiana University School of Medicine delivers research efficiencies, makes IT budgets go farther with end-to-end virtualization solution

SCHOOL OF MEDICINE
INDIANA UNIVERSITY

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Objective:
Indiana University's School of Medicine needed to reduce the total cost of ownership, administration and management of its IT systems, while achieving faster time-to-delivery of new services for its academic community

Approach:
The Information Systems & Technology Management department opted for server virtualization, and standardized on HP ProLiant BladeSystem server blades running VMware software, HP StorageWorks Continuous Access for real-time data replication, and HP Integrated Lights-Out (iLO2) for remote management

IT improvements:
- 40% reduction in server administration time
- 75% reduction in server deployment time
- 97% reduction in time to launch services
- 66% reduction in server footprint

Business benefits:
- Improved responsiveness to users' requests, enabling researchers to better track project status
- Lower total cost of ownership (TCO)
- Better utilization of IT assets and resources

Support for a dynamic research environment
A problem familiar to all universities is balancing an ever-growing list of technology requests, from a wide range of users, against limited funding and equipment. That was the case with the Information Systems & Technology Management (ISTM) department at the Indiana University School of Medicine in Indianapolis. ISTM provides tech support for the medical school's administrative, teaching and research facilities.

The Indiana University School of Medicine is the second-largest medical school in the United States, and one of the most innovative. Ongoing research makes ISTM's charter particularly challenging. It manages about 800 workstations running a wide range of software, from Microsoft Office and departmental Web pages to specialized scientific and medical applications.

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Doing more, with room to grow

To reduce total cost of ownership (TCO), the ISTM group decided to undertake a consolidation project that would replace legacy servers with standardized hardware. Scott Hemmerlein, systems administrator with ISTM, remembers, "We started looking at the HP BladeSystem because it would give us a lot of room to grow and provide consistency in the type of server that we would be deploying."

The ISTM team standardized the infrastructure on the HP ProLiant BL465c BladeSystem, and implemented HP Integrated Lights-Out (iLO2) for remote management. In virtualizing its servers, ISTM selected VMware ESX server. Signing up for Hewlett-Packard implementation services to install the BladeSystem proved a wise decision. "That was great. I knew it would be done correctly," Hemmerlein recalls. "When they left, everything was up and running, just waiting for me to drop the OSes onto the server blades."

Better service in less time

The best thing about the BladeSystem, according to Hemmerlein, is the speed at which they can now make infrastructure changes. Physically putting in new servers with the BladeSystem takes just minutes with remote configuration and little upfront preparation. "It's easy to click and deploy from the template and have a new server available within hours, instead of days," he says.

Being able to quickly create servers has eliminated the process of buying new hardware whenever a user needs a new application. Recently ISTM was asked to add a server, but the requestor underestimated the required RAM. With the BladeSystem, this was not a problem. "It needed more hard drive space, and we were able to just carve off more and add it in minutes," says Hemmerlein.

The BladeSystem also lets ISTM conduct testing without putting availability at risk. This was helpful with a key application called Study Manager, which receives upgrades about four times a year. "Study Manager needs these critical updates, but they were impacting other applications sharing the server," Hemmerlein says. "Now we can easily update it because it's on its own server."

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>
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HP Servers power the new infrastructure

When critical medical research is in progress, server outages can be particularly disruptive. Re-booting after a server failure used to mean hours of work getting the system back up. With the BladeSystem, says Hemmerlein, "If the server dies and we boot from the SAN, we just go in, slide in the replacement blade and turn it on. At that point, the machine is back at the state it was when it went down."

VMware with ESX server has also enabled ISTM to virtualize print and Web servers, with file servers soon to follow. Says Hemmerlein, "Virtualization makes upgrades so much easier–we take a snapshot to back up the database, and if something should go awry with the upgrade, it's really easy to revert to the backup without any drama."

Healthy benefits

The benefits yielded by this virtualized BladeSystem architecture are significant. Deployment time has been reduced by 75%, administration requirements have been cut by 40%, and the server footprint is 66% lower. ISTM also found that they could launch services 97% faster, their total cost of ownership dropped, and they were much better able to allocate resources as needed.

There are also logistical benefits. Using iLO2 with the BladeSystem enables Hemmerlein to manage his system remotely—a huge benefit, as the technology building is on the opposite side of campus from his office. He says, "If I have a bunch of ISO image files, I can sit in my office, put the virtual media in, and start the distribution process. It really beats sitting in the freezing basement of the technology building!"

And Hemmerlein anticipates even more economies as soon as the medical school adopts HP Virtual Connect, which pre-configures network connections including IP addresses for all blades in the BladeSystem rack. It reduces cabling without adding switches, and allows servers to be switched in minutes. "You bring your feeds into the back, and Virtual Connect will automatically get all new blades up and running," he says. "It's great to be able to do everything once, and then not have to touch it again."

Customer at a glance

The Indiana University School of Medicine is the second-largest medical school in the United States, and one of the most innovative.

Its Information Systems & Technology Management (ISTM) department provides tech support for the medical school's administrative, teaching and research facilities and manages about 800 workstations running a wide range of software.

To reduce total cost of ownership (TCO), ISTM decided to undertake a consolidation project to replace legacy servers with a standardized HP BladeSystem infrastructure.

At the end of the day, the greatest satisfaction for Hemmerlein is the level of service he can offer his users with the HP BladeSystem solution. "Today when somebody comes to me and asks for a new server to do XYZ, I can guarantee that we can we can give them that server very quickly. We just slide that server in, go back to the office, configure it, and they're up and running. That is invaluable."

Solution at a glance

Hardware
- HP BladeSystem with ProLiant BL465c server blades
- HP StorageWorks Continuous Access (CA)
- HP ProCurve 4108gl Series switches
- HP Integrated Lights-Out (iLO2)

Software
- VMware ESX Server
- Microsoft Windows Server 2003
- TCP/IP

HP Services
- HP Implementation Services

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