

VANDERBILT UNIVERSITY

FAST FACTS

Industry-Solution:

Higher Education

Challenge:

Regain top notch performance

Solution:

Platform: Red Hat Enterprise Linux Academic Edition with Red Hat Network;
Hardware: HP DL-series servers; Software: Oracle 9i Enterprise Database Server,
Oracle 9i RAC, Oracle 10g RAC, Oracle 9i AS (J2EE), Blackboard Course Management
System 6.1, Several custom-developed applications

Benefits:

60% cost savings over comparable HP-UX solution. Higher performance to keep
pace with data storage needs increasing by 1000% annually. Easy transfer of strong Unix skills.

TECHNOLOGY AND THE HALLOWED HALLS

Ranked consistently in the top tier of U.S. colleges and universities, Vanderbilt University is internationally known for its cutting edge technology and research programs coupled with the Vanderbilt University Medical Center. Located in Nashville, Tennessee, Vanderbilt University is not only central to the city it calls home; it is also central to the economy and cultural development of the entire state. This independent, privately-supported university of just over 11,000 students is the second largest private employer based in the state.

For any world-class research institution, the need to stay at the leading edge of current technologies is paramount. At Vanderbilt, technology leadership permeates every business decision. Because open source technology is built with best practices of software development, it's appealing to the University. A central MIS staff supports the University and Medical Center, so high levels of performance and reliability are critical to their continued leadership and long term success. That's why Vanderbilt is migrating to Red Hat Enterprise Linux.

DEPARTING THE 20TH CENTURY

Historically an HP-UX and HP3000 shop, Vanderbilt's MIS department relied heavily on Unix and Oracle for its computing environment. Beginning in 2002, however, it became evident that their HP-UX systems were reaching the end of life in terms of maintenance and performance. The University's needs for data storage alone were increasing by 1,000 percent each year, and the HP mainframe environment wasn't keeping pace. In weighing the options, it was important that any new solution be compatible with the Oracle environment which had become a core competency of the MIS team. At the same time, Vanderbilt's loyalty to HP prompted them to ask HP for pricing on two potential solutions for replacing their aging infrastructure: a newer HP-UX solution, and an equivalent 32-bit platform. The proposal for an Intel and Linux solution came in at more than 60 percent less!

TESTING FOR SUCCESS

While Vanderbilt was looking to replace five HP-UX boxes, Oracle was making a big push toward Linux. "That was a factor," according to Kevin McDonald, Program Manager for System Administration, "that really opened our eyes." After attending a seminar with Oracle on their Linux-based offerings, "we

immediately got four test boxes: three for data warehousing, and one for On-line Transaction Processing (OLTP)," says McDonald. Assistant Director for Architecture and Operations Darryl Boone adds, "One of our OLTP applications is a Java-based product called People Finder, which is becoming integral to the duties of a significant population among our user base. We put the OLTP database on a dedicated Enterprise Linux box running Oracle9i RAC, because high availability was crucial. Our testing went very well, showing us that we could get three times the server power and performance for the dollar, plus greater system availability."

As McDonald puts it, "The cost advantages of Red Hat Enterprise Linux Academic Editions with Red Hat Network (RHN) are just too attractive to turn down. It's a huge bargain, and when we considered the added benefits of Red Hat's support assistance with patching, security, and the RHN GUI console, we felt we had everything to gain, and very little to lose."

BUILDING ON EXPERIENCE

As Vanderbilt researched alternate solutions, they found the skillsets of their IT staff securely entrenched in the Unix camp, another reason that a broad migration to Linux made perfect sense. "Following our successful tests, we made the decision to implement a broader migration. Looking back, it was a pretty simple task for our experienced Unix administrators," McDonald remarks. "We took the Red Hat Certified Engineer Rapid Track course, and as soon as we returned to campus, we were able to hit the ground running."

Since then, Vanderbilt has undergone a steady transition to Red Hat Enterprise Linux. They now have over 30 Red Hat Enterprise Linux AS v.2.1 servers supporting the University's Finance and Human Resources applications, student applications, and alumni development infrastructure. Recently, a plan was put in place to migrate the Medical Center, which sees 300,000 patients per year, to Red Hat Enterprise Linux too.

The first to make the migration was a data warehousing system in the Alumni Development area. Then, finding Red Hat Enterprise Linux particularly well suited to J2EE applications, they also moved some Web applications from proprietary Sun hardware. More recently, Vanderbilt began implementing Blackboard, an application used to encourage online collaboration in teaching and learning, into their Enterprise Linux environment. It had previously been powered by Windows servers. Looking ahead, Vanderbilt has solid plans to transition its "bread-and-butter" PeopleSoft ERP system from the legacy Unix system over to Enterprise Linux.

"Ultimately it's about performance and TCO. The performance is definitely there with Red Hat Enterprise Linux," explained McDonald. "We saw lower TCO in three areas: initial acquisition of hardware, software purchasing (which is usually priced according to platform), and system administration because our skills easily transferred. And with Red Hat's Academic offering, we see a big future for Linux at Vanderbilt."

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