

# Japan's Kyoto Sangyo University creates "intelligent space" with IBM servers



### **Overview**

The Challenge

Create a reliable, manageable, multiplatform server environment for classrooms that is open and easily shared by all academic departments

The Solution

IBM @server xSeries and Netfinity<sup>®</sup> servers, running multiple operating systems including Turbolinux<sup>®</sup> and Microsoft<sup>®</sup> Windows NT.<sup>®</sup> Additional management tools include, NetCube Manager and IBM Wake on LAN<sup>™</sup>

The Benefit

Maximized efficiency of new classroom space, saved maintenance costs by minimizing server-network management requirements, and reduced virus risks on the network

## Top Japanese network site

Founded in 1965, Kyoto Sangyo University has been a leader in establishing sites in Japan for furthering research on high-powered computer networks. Recognized for its careful attention to emerging trends in the computing world, the University has been a magnet to students and faculty who are attracted to its cutting-edge applications of new technology -- including, most recently, clusters of IBM Netfinity systems running both LINUX® and Microsoft Windows NT operating systems. "Linux is becoming mainstream, and we wanted to host both systems on a

single server platform to maximize the use of classroom space," says Nobuo Tsubouchi, head of operations at the University's Computer Center.

#### The need to create "intelligent space"

Initially, the step behind adopting a full-scale, dual-boot Linux-Windows NT operating system in classroom computers was to make the use of a new, six-story building on campus more efficient. Open to all academic departments, the new building houses classrooms for information processing,

"The IBM @server xSeries and Netfinity servers provided us with a maintenance friendly, scalable and reliable server platform for computer use in our classrooms."

> Nobuo Tsubouchi Head of Operations Kyoto Sangyo University's Computer Center

multimedia and computer learning, as well as a sophisticated Computer Center with network backbone servers, mainframes and switches.

The University wanted to create "intelligent space" — that would host a wide range of applications. Terminals would need to run in a multiplatform environment of Windows, Mac OS, UNIX<sup>®</sup> and Linux. The University's new system needed maintenance-friendly, reliable, scalable and manageable Intel-based servers — and they chose IBM.

#### **IBM servers of choice**

After consulting with an IBM team, the University installed 600 IBM Netfinity 3000 and 5000 servers and 40 IBM @server xSeries 330 servers in its new classrooms. The new x330 packs power into its small package, setting the standard for rack-dense servers. Though only 1U high, it delivers a powerful, scalable platform along with ease-of-use technologies for simple installation and systems management to reduce overall costs.

The University is using the IBM Wake on LAN tool, which provides remote activation of PCs, for virtual parallel computing and unmanned nighttime maintenance. Other tools such as IBM Netfinity Manager and NetCube Manager allow the University to centralize client management and monitor all event logs from only one console.

#### Why Linux?

Tsubouchi explains that the major reason to make Linux available to students is the widespread migration of real-world development teams to this open-source operating system. "We believe that the OS used by educational institutions must be in the technological mainstream, and we see that Linux has the potential to be just that," observes Tsubouchi. "From our point of view, it's also valuable just to show students the existence of the culture and community that supports Linux."

### **Reduced maintenance costs**

The IBM server and software management solution has paid off handsomely, Tsubouchi says. On the operations side, server maintenance costs have dropped since fewer people are now required to maintain the system. Plus, all 600 clients can be refreshed every night with just a few mouse clicks. "This will minimize security and virus problems as well," Tsubouchi points out. "In all, IBM has provided a highly flexible, intelligent and manageable solution that's ideal for an educational environment."

#### For more information

Please visit the following Web sites: **ibm.com**/eserver/xseries **ibm.com**/linux www.kyoto-su.ac.jp



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