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CASE STUDY

De Montfort University picks Novell

In an effort to integrate disparate systems, De Montfort University is deploying Linux. Lindsay Clark learns more

KEY POINTS

- University wanted to improve efficiency of data storage through virtualisation
- With new system, data is moved from San to Sata array if it is unused for a set period
- Virtualisation will enable faster data recovery in the event of a disaster

De Montfort University has chosen Novell Open Enterprise Server 2 as the foundation for its IT infrastructure for students and staff. The Novell system, built on the SUSE Linux Enterprise Server SP1 operating system, is designed to reduce storage costs, and using Novell's Xen virtualisation technology, improve resilience and flexibility.

The university is one of the largest in the UK, with more than 20,000 students and 3,000 staff across two campuses in Leicester, and offers 400 undergraduate and postgraduate courses.

Fragmented infrastructure

Because the IT infrastructure at De Montfort had been managed by individual departments, a number of different systems had developed independently of one another with poor integration.

Novell's network management software, together with the Linux operating system, created a single point of access to applications and information for all staff and students.

Following the successful implementation of Novell Open Enterprise Server, Novell eDirectory and Novell Identity Manager a few years ago, the university had a stable platform that permitted users to access all relevant resources from any computer. As the next step, the university wanted to improve the flexibility, efficiency and scalability of the infrastructure, with tiered data storage and to begin to exploit server virtualisation technologies.

Last year, De Montfort finished implementing a three-node Linux cluster with Novell Cluster Services on Intel-based servers. The cluster will provide file and print services to a growing number of students and academics as the university migrates from NetWare. The university worked with NDS8, an IT services firm, to implement the new system.

"The main driver for upgrading to the new version of Novell Open Enterprise Server was to push the adop-



De Montfort University: integrated its systems with Novell network management

tion of Linux at the core of our infrastructure," says Chris Semmens, IT team leader at the university.

Storage efficiency

The university is improving storage capacity and performance by automating the movement of inactive data from high-performance discs to lower-cost discs based on preset policies. After a set period, the Novell system archives inactive data from the fibre-channel discs on the university's Hitachi San to the Sata discs on a newly implemented IBM System Storage DS3300 storage array with iSCSI connections.

"Dynamic Storage Technology in Novell Open Enterprise Server has given us a transparent second tier of storage, enabling us to reduce the cost of storing inactive data in a way that is transparent to the users," says Semmens.

Stored data could be from any of the university's activities. Administrative staff use the system for their work, students use it to produce coursework and lecturers use it to develop course materials.

De Montfort University is now testing Xen virtualisation on SUSE Linux Enterprise, and hopes to create a Novell iPrint system to improve

printing speed. "Virtualisation will allow us to abstract services from the hardware on which they run, enabling non-disruptive infrastructure upgrades," says Semmens.

"The Novell system has improved the resilience of core services and enabled us to adopt Linux at the centre of our infrastructure."

By using open source Xen virtualisation technology integrated in SUSE Linux, De Montfort was able to upgrade its infrastructure with minimal impact on users, Semmens says. In addition, virtualisation enables faster recovery in the event of a disaster, as well as allowing more efficient use of hardware, power and floor space.

Novell says virtualisation of the Linux operating system lowers hardware, maintenance and electrical costs. It also helps IT departments use excess storage capacity and improve response times by balancing computing loads across server system resources at peak times. Meanwhile, applications could be moved between hardware systems without altering them, according to the software firm. ●

Semmens:
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Virtualisation improves efficiency
computerweekly.com/221516.htm

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