



Oxford University Computing Services Benefits from Using VMware Virtual Infrastructure

VMware ESX Server, VMotion and VirtualCenter Provide Flexibility and Resilience



KEY HIGHLIGHTS

INDUSTRY: **EDUCATION**

RESULTS

- More flexibility to expand services portfolio
- Increased hardware utilization
- Decreased server downtime
- Faster patch testing and application process

“We are constantly looking for ways to improve the flexibility and resilience of our infrastructure and have found that a VMware virtual infrastructure is the best way of achieving this. Not only does it mean we operate our core services more efficiently on fewer servers with higher utilization, but it also opens up more opportunities for the provision of specialist, revenue-generating services.”

David Rischmiller, Head of the Technical Support Services Group
OUCS

Oxford University Computing Services Seeks High-Quality Infrastructure

Oxford University Computing Services (OUCS) provides high-quality, cost-effective IT services to Oxford University, supporting more than 25,000 users in total. In addition to providing IT training services and resources, the department is responsible for driving innovation and best practices in the use of IT for teaching, learning and research purposes.

David Rischmiller, head of the Technical Support Services Group at OUCS, manages the Network Systems Management Services (NSMS) team. NSMS provides a wide range of chargeable, cost-effective IT support services to university departments, colleges and associated institutions. Typical services on offer include server management, workstation configuration, automatic antivirus software upgrades and Web site customization.

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Prompted by a project to broaden the range of services on offer and a requirement to refresh legacy platforms, Rischmiller and his team identified the need to make a substantial investment in hardware. This presented an opportunity to introduce an additional level of flexibility to the infrastructure and solve a number of challenges, including:

- Optimizing routine systems administration tasks
- Maximizing existing hardware utilization (some servers were operating at less than 10 percent utilization)
- Simplifying software and security patch testing and implementation
- Making the infrastructure more flexible to enable faster deployment of new services

VMware Virtual Infrastructure Meets Tough Demands

Rischmiller considered many options in his search for a more flexible, robust infrastructure, including Microsoft Virtual Server. Working with IBM and Repton, a VMware Enterprise Partner, Rischmiller and his team took advantage of close consultation that enabled them to architect a solution. The results showed that VMware® ESX Server, VMotion and VirtualCenter running on an IBM eServer™ BladeCenter offered tangible benefits and a wide set of features.

“We are constantly looking for ways to improve the flexibility and resilience of our infrastructure and have found that VMware virtual infrastructure is the best way of achieving this,” said Rischmiller. “Not only does it mean we operate our core services more efficiently on fewer servers with higher utilization, but it also opens up more opportunities for the provision of specialist, revenue-generating services when we need to.”

OUCS has seen the following benefits from its rollout of VMware virtual infrastructure:

- **New business opportunities.** Extra capacity gained from the consolidation of hardware means the department can offer a server-on-demand service and provide new services that will recoup the cost of the initial investment.
- **Increased system resilience and availability.** VirtualCenter’s load-balancing functionality means that if a particular service is compromised it can be moved to free up more resources. Coupled with robust IBM hardware, this has resulted in higher utilization and is expected to reduce downtime.
- **Streamlined system administration and reduced routine tasks.** Using the templates feature in ESX Server, OUCS has created a set of standard virtual machines that enable the setup and configuration of computing environments in a matter of minutes. As a result of this time savings, Rischmiller can deliver more services without increasing headcount.
- **Improved patch and upgrade testing.** The installation of patches and software upgrades is a frequent task that risks application conflicts and requires significant resources. Now OUCS can quickly and easily test patches in a virtual environment before applying them, thus reducing risk and increasing resilience.

VMWARE VIRTUAL INFRASTRUCTURE AT WORK

- ESX Server, VirtualCenter and VMotion on IBM eServer™ BladeCenter with seven blades and capacity for 14
- 20 virtual machines across six blades
- IBM FASTT storage server
- 10 GB network
- Guest OSes: Microsoft® Windows® 2003, Red Hat Enterprise Linux
- Applications: Apache, Tomcat, IIS, file and print services, calendaring services, specialist telecom applications

Planning for The Future

Having made the investment in VMware software and IBM hardware, OUCS has created a future-proof infrastructure that reduces the need to purchase additional servers moving forward.

“We’ve already moved file and print, Web and specialist application servers into our virtual infrastructure to achieve server consolidation,” said Rischmiller. “VMware manages the hardware utilization, which means we can guarantee the high levels of performance our users expect. Such has been the success that I anticipate us to realize as we move to an increasing use of virtual infrastructure.”

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