LANCASTER UNIVERSITY

"The Sun Blade workstations allow us to deliver the science faster and leap ahead of our competitors."

COLIN LAMBERT, PROFESSOR, LANCASTER UNIVERSITY

LINUX FAILS THE TEST

EDUCATION

ISV
CUSTOM

EMEA

AREA OF FOCUS
COLLABORATIVE ENGINEERING

KEY FEATURES

Customer
- Lancaster University

Industry
- Education—scientific research

Application
- Mathematical and modeling programs

ISV Solution Set
- Custom

Area of Focus
- Collaborative engineering—HPC

Sun Products
- Sun Blade 1000 workstation
- Sun Grid Engine software
- Myrinet interconnect

Geography
- EMEA (United Kingdom)

Sun Blade 1000
www.sun.com/desktop
www.sun.com/gridware

www.lancs.ac.uk

The research race is big business for academic institutions around the globe. To ensure it stays ahead of its competitors, Lancaster University needs access to a reliable resource of computing power to process its varied research.

Lancaster University is home to more than 10,000 students. It offers more than 300 undergraduate and 200 postgraduate degree courses in a variety of disciplines, from criminology and computer science to Spanish and statistics.

Professor Colin Lambert notes that, "As computational models become more complex and we extend our experiments and data structures, ever more computer processing power is needed to run the code." The university is particularly respected for its research surrounding nanotechnology, applied statistics, and environmental science.

With so much research to process, the university needs a massive source of computing power, which is where the Sun Blade™ workstations from Sun Microsystems, Inc. come into the equation.

The Power to Succeed

After carrying out extensive benchmarking on the options available, the university opted for a cluster of 86 Sun Blade 1000 workstations. As Professor Lambert explains, "There were two big advantages of the Sun solution. It was cost-effective and gave us access to a large source of memory. We did look at a Linux-based Pentium IV option, but as it is only 32-bit, it couldn't compete with the 64-bit architecture of the Sun Blade 1000 workstation. Plus we did not feel Linux would be as reliable as the Solaris™ Operating Environment."

The Sun Blade workstations are linked both with Ethernet and Myrinet. Grahame Jones, a systems integrator with Streamline, who clustered the Sun Blade workstation with the help of Sun™ Grid Engine software, explains the benefits of using Myrinet. "Myrinet enables applications to scale across more machines, so more processors can be used to solve a problem in a shorter time frame," Jones says. "Not only does it deliver low latency, it can also deal with a high data rate, so it is perfect for connecting servers in clusters used for parallel processing."

The system has been a resounding success, as Lambert explains: "The Sun Blade 1000 workstations allow us to deliver the science faster, and leap ahead of our competitors. By just setting one compiler switch, we can double the speed of the CPUs."