



SPIRENT

Exeter University

CASE STUDY

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Exeter University – A Study In Wise IT Selection

How Spirent's prior testing ensured optimal vendor and product choices

Exeter University is a rising star in the increasingly competitive world of higher education. Named 2007/08 University of the Year by the Times Higher Education Supplement, Exeter is also among the most popular, seeing an 84% rise in international student applications for the 2008/9 academic year, and a 22% rise in home applications compared with the national average of 8%. In the 2008 National Student Survey, Exeter scored in the top 10 in every category, including 5th for academic support, personal development, organisation and management.

A university's IT infrastructure is a key factor in ensuring student and staff satisfaction. Aware of its vital role of the educational process, the university decided to commission a £5.5 million upgrade of their enterprise network, to be spread over a three year period. The aim was to deliver next-generation services to its 14,000 students and 3,000 staff and enhance both the research/learning facilities, and the student experience.

Major upgrades are often times of extensive de-bugging, tuning and user frustration, however Exeter's continuing high placing in several student satisfaction surveys is evidence of how well the upgrade is performing. There is very good reason for this smooth roll-out, because Exeter's IT Services took no chances. They used Spirent Communications test solutions as part of their vendor selection process

Pre-testing the capacity and capability of next generation systems ensured, in a fair and transparent fashion, the following clear benefits:

- Educated vendor selection through independent testing
- Assurance that the selected system vendor would meet project specifications
- Ability to address potential network issues ahead of installation
- Added leverage when negotiating for final project; proof of concept before roll-out.



The Challenge

The University of Exeter planned its upgrade to deliver a 100Gbps next-generation network which would deliver up to 1Gbps bandwidth to student's computers, and over 200 channels of IPTV delivering content relevant to courses and the opportunity to catch up on lectures. There are also plans for social networking multimedia, such as an internal networking site and internal TV channels.

Exeter is ahead of the game, with very few comparable examples of cross-campus high-speed networks to learn from. The University had no previous model to follow in ensuring the project was structured correctly and was the best technical fit for the potentially demanding, and unpredictable, network traffic profile. Additionally, as a public body, it was imperative for Exeter to be seen as transparent and fair in the selection process, whilst negotiating the best possible return on investment.

The Solution

The University of Exeter contracted the leading test and measurement specialists, Spirent Communications, to be an independent evaluator in assessing potential vendors' integrated systems. Spirent also provided a consultancy service to steer the first phase of the project.



The evaluation relied on the Spirent TestCenter and Spirent Avalanche testing solutions to assess switching and routing capabilities of a range of vendors' network systems. This performance testing process enabled the University to gauge the vendors' equipment and its capacity to handle 'bursty' multimedia traffic particularly when applied to unicast/multicast traffic, layer 4-7 networking elements, and security and failover testing. Spirent also emulated a mix of real-world traffic patterns and a mix of applications to validate whether the systems could accommodate all the anticipated services and data throughputs.

"Spirent provided us with an invaluable independent evaluation and consultation process" said Roger Snelling, Head of Networks at the University of Exeter. "By testing the equipment literally to the point of destruction, Spirent has given us assurance that the vendors selected for the project will meet the very demanding specifications of this network."

The Result

Spirent completed the project within five weeks from start to finish, and installation of the new core infrastructure began immediately, with the first deployment on the University of Exeter's smaller St. Luke's campus. This initial deployment with edge devices, VoIP phones and wireless networking serves as a proof of concept for the main Streatham Campus. The system is also designed to share computing power across research networks DANTE and JANET.

In addition to ensuring the optimal integrated choice of systems and the best possible value, the evaluation delivered further benefits. The prior testing process flushed out issues that needed to be addressed before the system was installed, which gave the University added leverage when negotiating with vendors for the final project. Not only did its objective perspective provide peace of mind for the university, Spirent was able to ensure that Exeter's IT Services will be in full control of the roll-out process as the project develops.



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