



University of Bath
Bath, The United Kingdom
Education

University of Bath Ensures Equitable Bandwidth Using Allot NetEnforcer Solution

About The University of Bath

The University of Bath is rated in the top dozen universities in the UK. Its research is internationally-respected, and its students are in high demand. The University's buildings are set in an attractive campus about a mile from the centre of Bath, a World Heritage City. The University has 3200 bedrooms for students in Bath, of which two-thirds are located on campus. Its 12,000 students enjoy a particularly advanced IT environment to match the University's international, teaching and research reputation. Students and staff alike benefit from a unique IT environment with a network carrying the triple play of IPTV, IP telephony and broadband access.

Bandwidth Management to Optimize Services

The University of Bath's computing network is high-speed and extends to all university buildings, including student residences. Residential students can connect to the network from their rooms and anyone (staff, students, or visitors) can plug in their laptop at one of the docking points around campus, or use the wireless network.

Although the university network was designed to support mainly the delivery of its educational applications, it also carries a wide range of IP-based entertainment services. University network operators wanted to be capable of offering equal facilities to all network users, regardless of where they were living. Student residences are all connected to the University network via a fibre optic infrastructure recently installed by the University in conjunction with a provider throughout the city. This enables the delivery of both educational and entertainment services to off-campus students at a comparative level to those residing on site.

Once the baseline bandwidth had been established, the University's network operators wished to manage the bandwidth so that network performance and service levels were optimized. They were also concerned with the legality of the file-sharing activity occurring on the University network. Being a highly tech-savvy environment, the University's bandwidth was quickly being consumed and network performance was at risk. When network operators realised that adding bandwidth was a high-cost solution of only short-term value, they began searching for a bandwidth management solution that would see them into the future. They needed to gain network visibility as well as the ability to make changes dynamically. The main goal of the project was two-fold – to guarantee network users equitable bandwidth at all times, yet allow users the freedom to access the network for any legal purpose they desired.

IP Performance Ltd, Optimizing Performance

The University of Bath's network operators turned to their technology vendor IP Performance Ltd for advice on the purchase and installation of a bandwidth management solution and were recommended the Allot NetEnforcer. After a brief and successful trial deployment, The University opted for the Allot DPI-based bandwidth management solution, composed of two NetEnforcer AC-402's (100Mbps). They have since upgraded to the NetEnforcer AC-2500 (1G) and the NetExplorer centralized management system, used to optimize the performance of the entire network and provide scalability into the future.

"We were one of the first universities to go live with a 24/7 library service of 500 PCs available any time. There are wireless networks, e-lounges, PC labs, and we're now putting in access points in sitting areas."

*Kris Shah,
Network Manager,
University of Bath*

Challenge

To create an optimal network environment for University faculty staff and students by understanding network usage and upholding University policies.

Solution

The Allot NetEnforcer provided full visibility and control, per application and per user.

Benefits

- A smooth-running network environment
- Compliance with copyright protection regulations
- Enhanced services and user-experience

a mind for networks



University of Bath The United Kingdom

Prioritising Applications to Ensure Fair and Legal Use

Using the NetEnforcer, University network operators were able to identify the source of network congestion in real-time and to create and enforce QoS policies to ensure fair use. "The NetEnforcer enabled us to gain an in-depth understanding of who was using the network and for what purpose, and we soon discovered that the congestion was being caused by a relatively small group of individuals who were affecting a large user base," commented Kris Shah, University of Bath Network Manager.

Using the Allot solution, The University of Bath can prioritise the applications traversing the network and prevent one user from harming another's experience. "As long as the bandwidth usage by one individual isn't affecting anyone else, they can use as much as they want. If and when the fairness ratio comes into play, we apply per-application QoS policies using the NetEnforcer, whereby we grant the standard services much higher priority. A student is never disabled from being able to access their email or resources on the campus network, such as their file store. The traffic generated by educational applications will always take priority over entertainment," says Shah.

The Allot solution also makes it possible for students and staff to access the network from any location and still enjoy the same level of service. "The biggest benefit of the solution was that no single user is tied to a particular port. So wherever they were in the resident network they would get equal share at low usage and at peak times. We were able to offer that without having to employ someone who was constantly watching and adjusting our parameters etc."

The Advantages

Allot's IP service optimization solution offered the University network operations centre a series of business and technical advantages:

- **Application Prioritisation**

Policy-based QoS gave the University full control over network traffic by using bandwidth allocation for different applications, IP addresses and protocols.

- **Enhanced Services**

The University IT staff were able to continue to expand their offering to include a broader range of services throughout the campus and wider geographical reach.

- **Guaranteed High Quality of Experience**

The network operators can immediately identify and solve any issues that may hinder network performance and degrade services.

Conclusion

Looking into the future, the University is planning to enable students to benefit from the launch of an e-learning service that will let them attend online classes. "When we move to e-learning, a student who is not well or cannot attend a lecture, will have it streamed directly to their bedroom, rather than them having to go to the lecturer or borrow notes. The Allot solution will be instrumental in being able to achieve those kinds of targets," concludes Shah.

www.allot.com info@allot.com

Americas

7664 Golden Triangle Drive,
Eden Prairie, MN 55344 USA
Tel: (952) 944-3100
Toll Free: (877) 255-6826 Fax: (952) 944-3555

Europe

NCI-Les Centres d'Affaires Village d'Entreprises
'Green Side' 400 Avenue Roumanille
BP309 06906 Sophia Antipolis, Cedex France
Tel: 33 (0) 4-93-001167
Fax: 33 (0) 4-93-001165

Asia Pacific

6 Ubi Road 1, Wintech Centre 6-12
Singapore 408726
Tel: 65 6841-3020 Fax: 65 6747-9137

Japan

Puri-zaido Ochanomizu 301
Kanda Surugadai 4-2-3
Chiyoda-ku, Tokyo 101-0062
Tel: 81 (3) 5297 7668 Fax: 81 (3) 5297 7669
www.allot.jp

Israel

22 Hanagar Street, Industrial Zone B
Hod Hasharon, 45240 Israel
Tel: 972 (9) 761-9200 Fax: 972 (9) 744-3626

©Allot Communications, 2006. All rights reserved. Allot Communications and the Allot logo are registered trademarks of Allot Communications. All other brand or product names are trademarks of their respective holders.

a mind for networks