University of Exeter
United Kingdom
Education Enterprise

UNIVERSITY OF
EXETER

Customer Story

Exeter Applies Carrier-Class Traffic Management to University Network

About University of Exeter

University of Exeter is one of the most popular and successful institutions of higher learning in the United Kingdom, with campuses in Exeter, Devon, and near Falmouth in Cornwall. The University also has Project Offices in Shanghai, Beijing and Bangalore. Exeter is ranked among the top ten UK universities in the Times league table; and has been named University of the Year several times. The high regard enjoyed by the university stems from its outstanding completion rates and students graduating with honors. The growing student body now numbers more than 18,000 of which approximately 4,000 are graduate students. Pen and paper has been replaced by individual laptops and collaboration over the Internet. The University provides network service and Internet access to employees, faculty and students and as such, it shares many of the same challenges as any broadband service provider.

Customer Challenge

The ever-growing student body and demand for Internet services prompted the university's IT department to upgrade to a 10Gbps connection and to replace their existing bandwidth management system which was already unable to support the traffic volume. Currently, the university network supports nearly 10,000 users with active directory, database services, web services, research data transfer and storage, Internet access, remote access, WiFi access and server farm access.

Their Internet connection is provided via JANET (Joint Academic Network) – a private UK network serving academic and research communities in the United Kingdom. With so many different users vying for bandwidth, the University wanted to offer different tiers of service based on location (Resnet, Campus, VPN, wireless and remote site in Cornwall), time of day, and the application in use. They were especially sensitive to P2P downloads due to the growing number of copyright complaints they were receiving from the entertainment industry. To do all this, they needed in-depth traffic visibility, reporting and policy enforcement

Allot Solution

Initially, Allot NetEnforcer AC-3000 bandwidth management device was deployed in the same location as their old traffic-shaping device – on the residential network uplink. From this vantage point the Allot device provided a wealth of detailed reporting on the traffic going over that link and demonstrated all the required capabilities. However, its view of the traffic was limited to residential users. Ultimately, the university deployed Allot Service Gateway Sigma E6 with 10Gbps fiber interfaces on the JANET Internet link. This "higher-level" deployment allows them to see all the University traffic both on and off campus.

As a dedicated traffic management system, Allot Service Gateway Sigma E6 provides a highly scalable solution that includes frequent updates to Allot's expansive signature library, which is used to detect the applications and protocols associated with each traffic flow.

> *"Allot provided expert advice on setting up our traffic policy. Their hands-on assistance helped us get the solution up and running very quickly.*
>
> **Roger Snelling**
> *Head of Networks*

Challenge
Deliver adequate bandwidth and QoS to different user populations applications, based on peak usage hours and applications in use. Prevent illegal downloads via the university network.

Solution
Deploy Allot Service Gateway Sigma E6 on Internet connection and centrally management all traffic on the network.
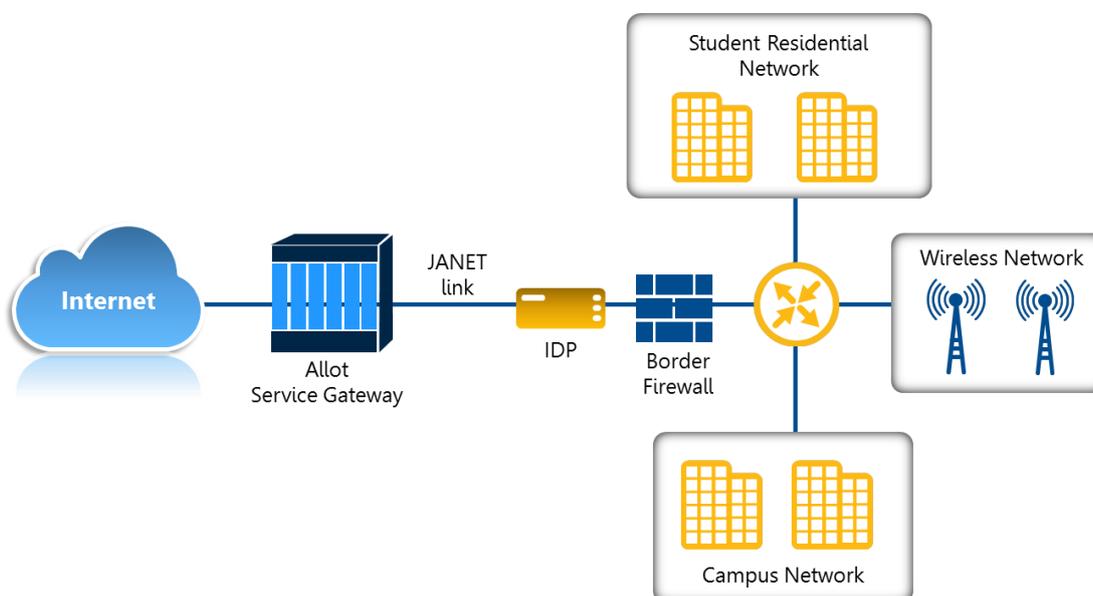
Benefits
- Ensure delivery of business-critical applications and fair use for student residents
- Increase efficiency through a central policy for all users
- Save money by reducing staff-hours on complaint resolution

Allot
communications

With Allot Service Gateway, Exeter is able to control P2P traffic from all areas of the University. They also implemented time-of-day bandwidth controls on residential network traffic. Bandwidth to student residences is limited during core office hours to ensure that business-critical traffic of the University runs smoothly. Residential bandwidth is increased during the evening and on weekends. In addition to tiered bandwidth allotments, the University also throttles known P2P traffic from specific areas of the University, and blocks it completely from others. "We know that BitTorrent and Thunder applications are being used extensively across the residential network," said Roger Snelling, Head of Networks at the University. "Allot allows us to identify P2P traffic with extreme accuracy and to enforce usage policy with the same granularity. As a result, the number of illegal download complaints we receive has fallen off dramatically," noted Snelling.

"Allot assisted with installation of the Allot Service Gateway system and provided expert advice on setting up our traffic policy," added Snelling. "Their hands-on assistance helped us get the solution up and running very quickly."

Deployment

Allot Service Gateway on the JANET Internet link monitors and controls all University traffic both on and off campus

Benefits

With Allot Service Gateway in the network, University of Exeter is able to:

- Reduce illegal download complaints by 97-98%

- Reduce staff hours spent on illegal download complaints from a minimum of 60 hours/month, to a mere 2-3 hours per month.

- Save approximately 800 staff-hours in first year after installation

- Ensure adequate bandwidth to both business-critical and residential service according to their peak hours of use

- Receive automated reports and analysis of network status, application usage, volumes, etc.

Conclusion

Allot's scalable solution allows University of Exeter to assure application performance and quality of experience (QOE) for both on-campus and off-campus communities, while minimizing investment in new bandwidth capacity, and improving compliance with copyright regulations.