



NEWCASTLE UNIVERSITY SELECTS A10 NETWORKS APPLICATION DELIVERY CONTROLLERS FOR CRITICAL INTERNATIONAL LEARNING ENVIRONMENT

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David Clark | Infrastructure Systems Specialist, Newcastle University



CASE STUDY

COMPANY:

Newcastle University

INDUSTRY:

Education

NETWORK SOLUTION

A10 Application Delivery
Controller

CRITICAL ISSUES:

- Needed an advanced Application Delivery Controller with features to support infrastructure and application needs
- Globally expanding network infrastructure
- High performance ADC with enhanced security features

RESULTS:

- Reduced bandwidth by around 50%
- Easy-to-deploy with transparent reporting
- Highly considering future SoftAX deployment for global campuses



THE CUSTOMER

From its origins as a School of Medicine and Surgery in 1834, Newcastle University today offers a first-class student experience in one of the UK's most vibrant, student-friendly cities. Newcastle is a member of the prestigious Russell Group of research-intensive universities. Ranked among the best in the world by the most recent Times Higher Education World University Rankings, Newcastle University is in its global top 200, while ranking in the top 20 UK universities in The Sunday Times University Guide 2013.

Other high rankings for its employability and student satisfaction, coupled with the vast array of opportunities on offer for students, show that Newcastle's student experience is amongst the best in the UK. Newcastle University is one of the top 20 UK universities targeted by graduate employers and is a top 15 university for graduate employability.

THE CHALLENGE

Other first-class facilities at Newcastle University include over fourteen hundred networked PCs, 24-hour computer clusters, social learning spaces, a lecture recording system, an award-winning Language Resource Centre and a recently-refurbished Students' Union. With the opening of Newcastle University Medicine Malaysia (NUMed) in 2011, Newcastle became the first UK University to establish a medical campus overseas. NUMed now has 220 students and in time will train upwards of a thousand medics to support Malaysia's health service.

Newcastle University also has a presence in Singapore (Newcastle University International Singapore [NUIS]), in partnership with the Singapore Institute of Technology, which also has experienced tremendous growth over the last few years.

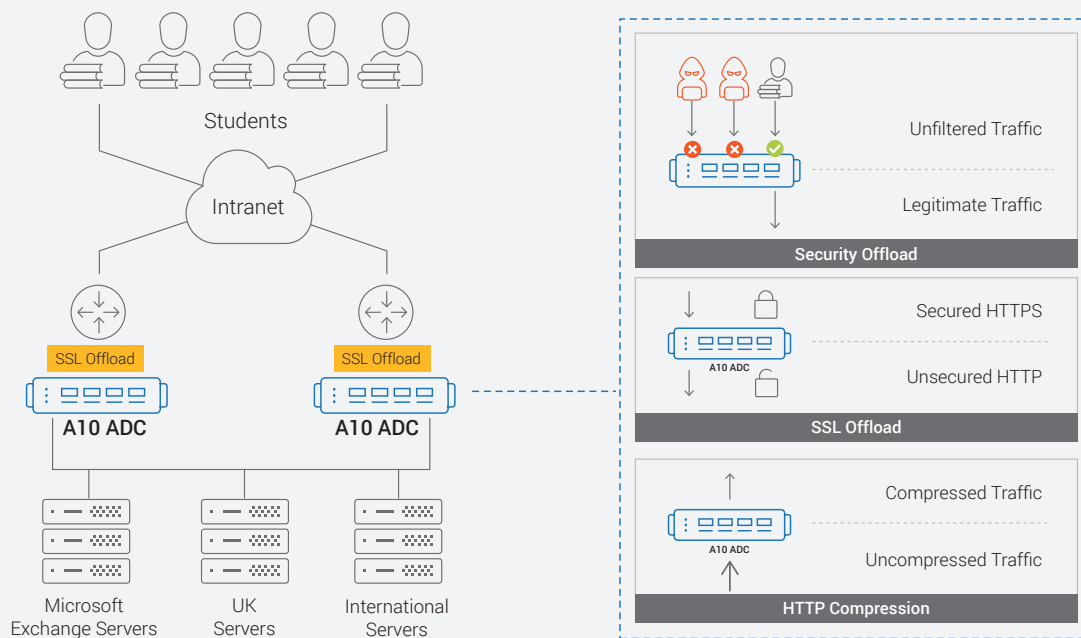


Figure 1: Newcastle's application delivery landscape

In fact, beginning with a modest 3 degree programme, 67 students, and 4 academic staff in 2009, NUIS has grown to well over 500 undergraduates, and 6 degree programmes ranging from Marine, Offshore, Mechanical and Chemical Engineering to Naval Architecture and Food and Human Nutrition. With the addition of a seventh programme, in Electrical Power Engineering, in September 2013, undergraduate student numbers are set to increase to more than 600, together with a 32-strong team of academic and support staff.

Between its UK and overseas campuses, the University maintains around a thousand servers which deliver productivity, virtual learning and specialist applications for the various schools across the world. In the past, the IT department had used Microsoft ISA Load Balancing technologies to ensure availability and enhance the fault tolerance of its service delivery. However, given the discontinuation of Microsoft's load balancing platforms and a planned upgrade to a new version of Exchange, the University decided that it needed an alternative solution that offers the raw performance and features to match its continued growth.

THE SOLUTION

As David Clark, Infrastructure Systems Specialist within the Information Systems and Services team at Newcastle University explains; although the start might have been load balancing, the upgrade potentially offered more benefits around enhancing performance and providing a key resource to support other ITC initiatives within the university. Clark explains that its three key criteria centered around performance, scalability and value for money.

"We looked at a number of solutions," says Clark, "We quickly realised that we needed a hardware solution to support our Blackboard VLE and Microsoft servers and looked at several suppliers."

According to Clark, the balance between performance and features offered by the A10 Networks Application Delivery Controller (ADC) made it an early shortlist candidate, "A10 was also the only vendor we looked at that really wanted to engage with us and they took the time to run a PoC and understand both what we needed and where we are heading."

A key factor that swayed Clark and his team toward A10 Networks was cost: "We liked the pricing model which included all the features within a single cost," explained Clark, "especially as we were considering other features such as SSL Offload, compression and security enhancements for future deployment."

Newcastle University deployed two A10 ADCs in an active/passive failover scenario. The deployment offered a seamless migration from its existing Microsoft ISA load balancing solution with a system that could also load balance non-HTTP protocols such as Messaging Application Programming Interface (MAPI) traffic. The installation also allowed a more robust platform for load balancing its Blackboard virtual learning environment.

"The implementation was smooth and we were up and running within a few weeks of selecting A10," explained Clark. "We did have a minor configuration issue but we contacted A10 and there was an engineer connecting into the platform, and the issue was resolved within 30 minutes; this level of responsiveness is vital for what is an essential element of our IT delivery infrastructure." Since the configuration change, the A10 appliances have delivered 100 percent uptime.

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THE SUCCESS

With the core load balancing requirement satisfied, Newcastle University began to look at how the additional features could be utilised to improve its application and service delivery. The A10 ADC appliances are also used to deliver additional web-based applications for the University, including its Citrix XenApp and SAP Supplier Portal. The platforms also provide SSL Offload to reduce the processing workload on its application servers. “We are also using the data compression features, which has reduced the bandwidth associated with certain tasks by around 50 percent,” said Clark. “However, what we appreciate most is that it just sits there and does the job without requiring additional management; and during failover tests, it has proven transparent to users.”

Newcastle University also has purchased A10’s SoftAX, a software-based ADC that it is using for testing and development, and Clark now is considering deploying this software to Newcastle’s Asian campuses to unify its delivery platform under a common management and technology standard. “For such critical elements of our environment, we don’t want excitement—we just want it to work,” said Clark, and our decision to go with A10 Networks has been a great example of a product that has performed even better than we expected; and, as we start looking at other areas such as VDI and additional security elements—the hardware has enough headroom to allow us to grow into the future.”

ABOUT A10 APPLICATION DELIVERY CONTROLLERS

A10 ADC is a scalable, high-performance application networking platform that delivers enterprises, web properties and Internet Service Providers (ISPs) with superior reliability and an energy-efficient footprint for low total cost of ownership (TCO). With A10 ADC, customers of all sizes benefit from application availability, scalability and performance, increased infrastructure efficiency and a faster end user experience. The A10 ADC has a comprehensive Layer 4-7 feature set and flexible virtualization technologies such as A10 Networks aVCS™ Virtual Chassis System, multi-tenancy and more for public, private and hybrid cloud environments. In addition, A10 ADC leads in IPv6 migration technologies with many large-scale deployments worldwide.

A10 ADC delivers an industry-leading return on investment (ROI) by leveraging A10’s 64-bit Advanced Core Operating System (ACOS), with a scalable shared-memory parallelism architecture that surpasses the competition in scalability and flexibility.

For more information, visit: a10networks.com/adc

ABOUT A10 NETWORKS

A10 Networks (NYSE: ATEN) is a Secure Application Services™ company, providing a range of high-performance application networking solutions that help organizations ensure that their data center applications and networks remain highly available, accelerated and secure. Founded in 2004, A10 Networks is based in San Jose, Calif., and serves customers globally with offices worldwide.

For more information, visit: a10networks.com or tweet [@A10Networks](https://twitter.com/A10Networks).



A10 THUNDER ADC

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