axians

Case Study

LONDON SCHOOL OF ECONOMICS AND POLITCAL SCIENCE

Location
London, England

Industry Type
Research and Education

Web Site
www.lse.ac.uk

LSE USE IT TO HELP SECURE THE HIGHEST CALIBRE OF RESEARCHERS

"We can't know what our academies will need from the IT infrastructure in a few years' time so we built a future-proof network from day one. The solution anticipates future capacity, topologies and technologies like SDN, because we believe we can do more or less anything we need to on the Juniper equipment."

Matt Bernstein Senior Network Architect,
The London School of Economics and Political Science (LSE)

THE CUSTOMER

The London School of Economics was founded in 1895 and has grown to become one of the foremost social science universities in the world, ranked alongside Harvard, UC Berkeley and Stanford.

LSE is a specialist university with an international intake and a global reach. Its research and teaching span the full breadth of the social sciences, from economics, politics and law to sociology, anthropology, accounting and finance.

Founded in 1895, the School has an outstanding reputation for academic excellence. 16 Nobel prize winners have been LSE staff or alumni.

THE OBJECTIVE

Ensure secure connectivity and data transmission between campus and off-site data centres.

THE BENEFITS

- LSE enhances its capability to support researchers needing strong IT to progress their work
- The network is an asset that facilitates high quality data driven research
- Staff, students and researchers feel confident in data security
- More agile IT environment able to meet rapidly changing end-user demand

FOCUS AND CHALLENGES

LSE competes against top education institutions around the world to attract the most promising students and researchers. The School's strategy states that it should 'be prepared to innovate', such as it did when establishing connectivity between its campus and a new data centre. This helped securely manage growing data volumes, at high speed, supporting the current application delivery architecture.

"Now we are running bigger better and faster. We have 10GB wherever we need it. We can support more applications and the whole system is more robust.

We are able to give the systems team direct access to the switching fabric, but at the same time this is protected from changes to the ports we use to build the actual network. This is a great operational win which allows us to support a highly agile research environment"

AN INNOVATIVE SOLUTION TO SECURE DATA TRANSFER BETWEEN CAMPUS AND OFF-SITE DATA CENTRES.

The Axians team worked with LSE to design a tailor-made solution – referred to as 'Protocol Hamburger' – that involves layering multiple network protocols to create a reliable and scalable network delivering secure data traffic between campus and off-site data centres. Next, the Axians Professional Services lab helped with design and testing including Proof of Concept (PoC), suitability performance testing, interoperability/integration and regression testing.

CORE ELEMENTS OF THE SOLUTION

Layering protocols to create a "Protocol Hamburger" to create a high speed, low latency solution. This consisted of using a Data Centre Interconnect (EVPN) over an encapsulated (GRE) and encrypted (IPSec) tunnel, for privacy, using IPv6.

High speed connections (10Gb Janet connections) between campus and data centre.

Resilient components and Juniper Network Systems.

THE RESULTS

ENHANCED CAPABILITY

- Robust, flexible network that supports automation, management and orchestration
- Low latency and high speed connectivity
- Supports 200+ applications used across timetable scheduling, student services and finance systems

INCREASED SECURITY

- Compliance with complex business continuity and disaster recovery requirements
- End-to-end encrypted data traffic is secure between campus and off-site data centres

BUILDING FUTURE CAPABILITY

- Reliable, scalable future-proof network
- Platform for taking the next steps to SDN/NFV technologies

Axians delivered a secure and resilient solution that is supporting LSE on its strategic journey to offering even better IT services that will attract the highest calibre researchers and students from around the world.

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Tel. 01256 312350
axians.co.uk