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London universities host datacentres at Infinity in Slough

Cliff Saran
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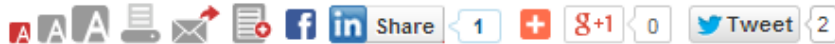
The Joint Information Systems Committee (Jisc) has begun offering a shared service to universities and academic institutes to help them free up valuable floor space and support high-performance computing (HPC) research programmes.

With £900,000 of funding through the government's University Modernisation Fund (UMF), the hosted datacentre in Slough represents the start of a sharing journey for research and common HPC requirements.

The shared datacente, provided by Infinity, will initially support University College London (UCL), King's College London, The Sanger Institute, The Francis Crick Institute, The London School of Economics & Political Science (LSE) and Queen Mary University of London (QMUL).

A number of factors have driven the migration of university server rooms and datacentres out of London.

London-based educational institutions face high estate costs and power supply issues. In addition, UCL, which operates major datacentre sites, has been affected by a compulsory purchase order for the building due to HS2.

Jeremy Sharp, director of strategic technologies at Jisc, said: "We are seeing requirements from both from the business side and research. Three institutes are running biomedical research, which requires HPC."

The UK-Med-Bio medical informatics initiative is one of the HPC projects that will be hosted at Infinity.

A 100Gbps resilient network is used to connect the offsite datacentre to the core of Janet, the joint academic network. Connectivity is over IP, but Janet is also providing dedicated virtual circuits for individual universities, thereby extending their local area network.

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Sharp said the shared infrastructure reduces cost. It also provides the infrastructure underpinning training and skills in computational algorithms.

Unlike traditional enterprise server hosting, HPC requires high density in terms of packing in servers into racks, which means its takes up less space but consumes more power. While a standard enterprise rack consumes 4kW, an HPC for academia uses 10kW per rack, and can support up to 30kW.

Jisc required the option of different levels of resilience to match the varying types of application that would go through the centre, from enterprise IT to managing important research projects. Jisc specified resilience levels from a Tier 1 single power feed platform, both with and without an uninterruptible power supply (UPS), to a traditional concurrently maintainable Tier 3 platform.

The other consideration was location, as the academic institutes using the shared service required the datacentre facility to be based in the UK and within four hours' travel from their home site.

While this has so far limited the extent of the shared datacentre to hosting academic institutes in the South and Midlands, Infinity is also seeing interest from Leeds and Manchester universities, to house HPC, connected via the Janet backbone.

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