

Iridis4 Enters Top 10 of UK Elite Supercomputers

University of Southampton



The University of Southampton has flicked the on-switch for the most powerful university-based supercomputer in England and the third largest academic supercomputing facility in the UK. 'Iridis4' also will enter the top 10 of the UK's elite supercomputers.

Dr. Oz Parchment, Director of Research Computing at the University, comments: "Southampton is a leader in High Performance Computing (HPC), and Iridis4 allows us to take another leap forward to keep pace with the needs of our world-class researchers. There is an ever increasing demand for the use of supercomputing power for research and this new machine will provide the opportunity for even more academics to work on a greater number of projects, at faster speeds."

In a deal worth £3.2 million, Southampton's new supercomputer is powered by IBM Intelligent Cluster solutions and designed, integrated and supported by HPC, data management, storage and analytics company OCF Plc. It is four times more powerful than its predecessor Iridis3 and has 12,200 Intel Xeon E5-2670 processor cores, a petabyte (or one-million gigabytes) of disc space, with 50 terabytes of memory.

The new machine is one of very few in the UK to include to Intel Xeon Phi coprocessors, which can take control of some of the most demanding mathematical calculations to significantly increase its processing power. The Intel Xeon Phi coprocessors are each capable of running at one teraflop, (one trillion calculations per second).

Iridis4 will mainly be used for research by University staff and students across a wide variety of disciplines, from engineering to archaeology — medicine to

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computer science. It is estimated around 350 projects are likely to run on the machine in the first year.

University of Southampton Pro Vice-Chancellor, Professor Philip Nelson says, "Staying ahead of the game in high performance computing is vital to help the University stay competitive. Simulation and computation enabled by HPC are recognized globally as the 'third pillar' of modern research, and this investment will ensure we remain world leaders in this field."

Steve Legg, IBM's University Programs Manager in the UK, says: "The University of Southampton occupies an enviable place in the ranks of leading research-led universities across the world, and the Iridis supercomputing facility is just one example of a long-term partnership with IBM across many areas of collaboration.

"The growth of Big Data and the availability of computing power like Iridis4 means that the range of research areas that are enabled by supercomputing continues to grow. We look forward to seeing its impact on the University's research, already recognized for the range and importance of the science conducted on the supercomputer's predecessor, Iridis3."

The University of Southampton's Iridis3, will remain in operation, providing an important resource for industrial research through the e-Infrastructure South Consortium. This group of research-intensive universities; Southampton, Bristol, Oxford and University College London, operate a 'Centre of Innovation for the Application of High Performance Computing' — set up in 2012 with £3.7 million from the Engineering and Physical Sciences Research Council (EPSRC) to upgrade Iridis3 and install resources at Rutherford Appleton Laboratories near Oxford.

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