THE UNIVERSITY of EDINBURGH

News Release

Issued: Tuesday 18 March 2014

WORDS AND IMAGES EMBARGOED T0 0001 GMT TUESDAY, 25 MARCH 2014

PRESS CALL

10.00AM THURSDAY, 20 MARCH 2014
ADVANCED COMPUTING FACILITY,
UNIVERSITY OF EDINBURGH,
EASTER BUSH, EDINBURGH EH26 0QA

ARCHER supercomputer targets research solutions on epic scale

A new generation supercomputer, capable of more than one million billion calculations a second, is to be launched today (25 March) at the University of Edinburgh.

The £43 million ARCHER (Academic Research Computing High End Resource) system will provide high performance computing support for research and industry projects in the UK.

ARCHER will help researchers carry out sophisticated, complex calculations in diverse areas such as simulating the Earth's climate, calculating the airflow around aircraft, and designing novel materials.

Its magnitude and design will enable scientists to tackle problems on a scale that was previously thought impossible.

The system, at the University's Advanced Computing Facility at Easter Bush, has up to three and a half times the speed of the HECTOR supercomputer system, which it replaces.

ARCHER's twin rows of sleek black cabinets are supported by the newly installed UK Research Data Facility.

The system brings together the UK's most powerful computer with one of its largest data centres. This creates a facility to support Big Data applications, which has been identified by the UK Government as one of its Eight Great Technologies.

The building housing the ARCHER system is among the greenest computer centres in the world, with cooling costs of only eight pence for every pound spent on power.

ARCHER was supplied by US computing experts Cray and is funded and owned by the Engineering and Physical Sciences Research Council (EPSRC). The Massively Parallel

Processor uses Cray's XC30 hardware. Intel's Xeon E5-2600v2 processor series enables ground-breaking performance, scalability, and maximises energy efficiency.

Professor Sir Timothy O'Shea, Principal of the University of Edinburgh, said: "The University of Edinburgh has for many decades been a pioneer in High Performance Computing. Now that Big Data is reaching into an even greater range of areas we are delighted to have the ARCHER facility and its support at Edinburgh. Together with the UK Research Data Facility, we and the Research Councils have a facility unique in the UK, combining some of the world's most powerful computers with a vast datastore and analysis facilities. We will work with the Research Councils and UK researchers to generate world-leading research and business impact."

Professor David Delpy, CEO of the Engineering and Physical Sciences Research Council, said: "EPSRC is proud to unveil this new ARCHER service. It will enable researchers in engineering and the physical sciences to continue to be at the forefront of computational science developments and make significant contributions in the use of Big Data to improve understanding across many fields and develop solutions to global challenges."

Stephan Gillich, Director Technical Computing EMEA, Intel, said: "ARCHER is the highest ranked UK supercomputer on the Top 500 list of November 2013. Based on Intel Xeon E5 v2 processors, the system is designed to deliver sustained performance and scalability, providing researchers and scientists with a powerful, reliable and productive tool."

Systems support for the machine will be provided by the University's EPCC and Daresbury Laboratory. Science, user and engineering support will also be provided by EPCC. ARCHER is being inaugurated at an event at the National Museum of Scotland today (25 March). Taking part are representatives from the University, Cray, the Natural Environment Research Council and the Engineering and Physical Sciences Research Council.

Reporters and photographers who wish to visit the Advanced Computing Facility to see ARCHER are asked to RSVP. Members of the University's EPCC team will be on hand, together with researchers making use of the supercomputer, to discuss its capabilities and applications. The ACF is a high-security environment and some filming restrictions apply, which will be explained in full on the day.

For further information, please contact:
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