XENON Powers Australia's First National Research Cloud

Supplies hardware for the first node of the NeCTAR Research Cloud at The University of Melbourne

XENON, the Australian provider of high-performance computing solutions, has helped The University of Melbourne to build the first node of a national research cloud designed for Australian researchers.

The National eResearch Collaboration Tools and Resources (NeCTAR) research cloud, which is an Australian first, went live on February 1, 2012.

NeCTAR's new research cloud enables Australian researchers of all disciplines to easily put their ideas, tools, research applications and data online instantly. In equipping researchers with new self-service abilities to share, compute and publish data, it fosters innovation in research software applications and services by reducing barriers to rapid deployment and sharing of applications.

The University of Melbourne was commissioned by the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) to host and install the first node of the NeCTAR research cloud. Additional nodes of the cloud will be built by other universities and research institutions throughout 2012. The University of Melbourne went to tender for a supplier of suitable compute servers and awarded the deal to Melbourne-headquartered XENON Systems on account of its ability to deliver the best performing and largest high-performance server installation within the required project budget.

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The University uses two data centres for the NeCTAR project, which currently operates 3840 cores and is expected to reach 25,000 cores nationally during the next 18 months.

"The research cloud project delivered a complex, sophisticated national cloud computing platform within four months showing just how collaboratively the internal teams, external partners, researchers and stakeholders worked. It's an incredible project to be part of, and XENON's expertise and responsiveness formed a strong part of that," said Tom Fifield, Technology Team Lead of the NeCTAR Research Cloud Node at the University of Melbourne.
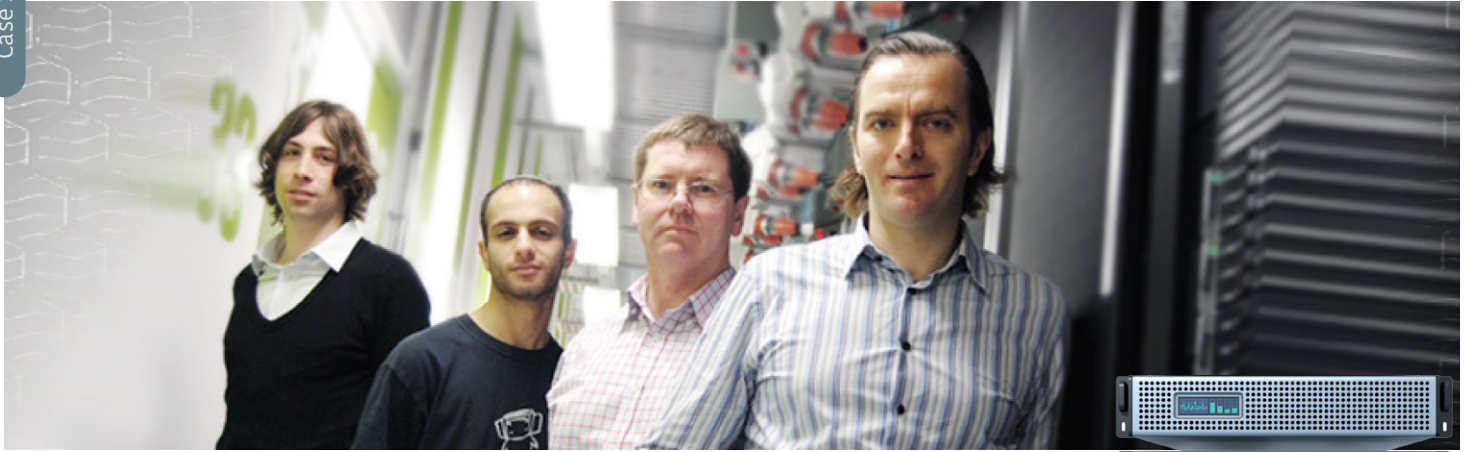
"The right technology gives users flexibility, it drives innovation and breaks down barriers in what people thought could be achieved," said Dragan Dimitrovici, Managing Director at XENONSystems. "This project is not only beneficial at a research level, but it will encourage an inviting cluster of innovation around each node and grow local expertise and opportunity. We're delighted to work with the University of Melbourne and NeCTAR team."

Within two months, the NeCTAR National Research Cloud had 500 users, each with a free, single signon, two-core allocation for three months which gives enough resource to trial projects and establish what processing, networking and storage requirements they might have in future, and budget accordingly. NeCTAR partners with the Research Data Storage Initiative and the Australian National Data Service to provide cloud users with access to significant Australian research data holdings. The Australian Access Federation provides the national single sign-on authentication services for the cloud. "Cloud technology and NeCTAR's new research cloud allows Australian researchers a place where they can easily put their top ideas, software applications, tools and data online, instantly, without the burden and cost of having to build and run their own computer," Dr Steven Manos head of Information Technology Services Research Services at the University of Melbourne.

Computing and computer power have long been an important part of an Australian researcher's way of working. While there have been many significant eResearch infrastructure initiatives in Australia, cloud computing at a national scale had yet to be addressed.

For more information, please visit www.xenon.com.au and www.nectar.org.au.

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WHAT IS NECTAR?

NeCTAR is an Australian Government project conducted as part of the Super Science initiative and financed through the Education Investment Fund. The University of Melbourne has been appointed the lead agent by the Commonwealth of Australia, Department of Industry, Innovation, Science, Research and Tertiary Education.

In this era of digital connectivity, NeCTAR is using existing and new information and communications technologies to create new digital efficiencies specifically for the needs of Australian researchers. Australian researchers and their technical partners will drive the design of what NeCTAR will look like.

NECTAR HAS FOUR PROGRAM AREAS

New Virtual Laboratories NeCTAR's Virtual Laboratories are creating a new era of digital connectivity for Australian researchers, supporting collaborative research workflows which span research institutions and facilities, and supporting the "connected researcher" who at the desktop or benchtop has access to digitally enabled data, analytic and modeling resources, specifically relevant to their research.

A Research Cloud

NeCTAR's Research Cloud is an Australian first and a place where researchers can gain instant access to scalable computational power, research applications and storage, empowering them to easily share knowledge across institutional and international boundaries. The University of Melbourne is building the first node of this research cloud which was commissioned on January 31, 2012.

New eResearch Tools

NeCTAR's eResearch Tools enhance research applications and tools to make them more collaborative, accessible and to support research workflows. eResearch Tools projects are encouraged to deploy their applications on the NeCTAR Research Cloud to achieve wide access and scalability.

A secure and robust hosting service.

The National Servers Program provides a robust hosting service for applications and services supporting the Australian research community on a national scale. The initial service has been built by the University of Melbourne and is available to be used now.

For more information: http://its.unimelb.edu.au/research/nsp. Uniquely Australian, the NSP provides a robust national network of virtual servers and platforms. www.nectar.org.au

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Tom Fifield, Technology Team Lead of the NeCTAR Research Cloud Node at the University of Melbourne

Dragan Dimitrovici, Managing Director at XENON Systems

About The University of Melbourne
The University of Melbourne is an international research and teaching university. Founded in 1853, the University commenced teaching its first students in 1855. The University is one of Australia's leading research based universities, with an international profile through its reputation for scholarship and teaching.
www.unimelb.edu.au

About XENON Systems
XENON is an Australian leader in HPC solutions. It focuses on providing tailored and innovative IT solutions to our clients that will enhance their business activities by delivering superior: high performance computing, server, storage and visual workstation technology. Its product portfolio is embraced by scientific, technical and creative communities to solve challenging data intensive computing and visualisation problems.

XENON partners with NVIDIA, Intel, Microsoft, DDN and Panasas among others. Further information about XENON can be found at http://www.xenon.com.au/

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