RDSI: changing the face of research data storage in Australia

The Research Data Storage Infrastructure (RDSI) project has facilitated the creation of a robust, innovative and collaborative network of data storage facilities (Nodes) to support better-managed and more accessible world-class research data in Australia. This is evident by not only Node reporting, but by individual accounts from researchers using this infrastructure. Dr VanDerWal from James Cook University said:

"Previously my thinking was limited by the small amount of storage and computing that was available to me. I always had to summarise down and minimise the data I don’t have to do that now. I don’t have to worry about the live disk limitation or the compute resources. Now I can focus on how I can make the sites more effective for people to use. I can keep doing the research as I’d like to see it be done."

Further stories and researcher accounts can be found at https://www.rdsi.edu.au/latest-news.

As the project draws to its conclusion, the RDSI Project outcomes are set to be preserved moving into the future. RDSI’s funded legacy will continue through the Nodes, AARNet, CAUDIT and the AAF.

This presentation will take delegates through the lessons learned while developing a pioneering robust data storage infrastructure; it will cover the RDSI legacy to the Australian research community through the Node Operators that will continue the next steps in its evolution. The presentation will also discuss how the project enabled a healthier cultural shift in the way research is stored and shared in Australia.

Audience: IT professionals, managers and leaders in the HE & Research sector.

Background

The Research Data Storage Infrastructure (RDSI) project, an initiative of the National...
Collaborative Research Infrastructure Strategy, was funded from the Education Investment Fund under the Super Science (Future Industries) initiative funded with $50m with the University of Queensland as the lead agent [1].

The benefits from better-managed and more accessible research data are being sought everywhere across the research sector. At the same time, data is being generated at a rate that far exceeds the growth of data storage capacities. The RDSI Project therefore represents a timely investment that is aimed at strengthening Australia’s capabilities in data intensive research and collaboration.

The aim of the RDSI project was for researchers to be able to use and manipulate significant collections of data that were previously either unavailable or difficult to access, doing so through consistent means of accessing this data. This has been successfully achieved through the development of a national network of data stores, or ‘nodes’. Data held in these stores are allocated capacity through a priority and merit process, currently with over 50PB of allocated storage.

An important component of the RDSI project is the Data Sharing Network (DaShNet). It is a reliable high speed network service built over the new AARNet4 backbone network and it connects RDSI funded Nodes to each other and researchers around Australia.

The RDSI Project developed a national research infrastructure that supports a wide range of disciplines within a wide institutional and geographic coverage accessible by end user researchers.

Economies of scale for procurement for Nodes and the Higher Education sector where enabled by the creation of a vendor panel in partnership with CAUDIT.

The Project has achieved or will achieve all its objectives by the end of 2014 and is delivering the anticipated outcomes to the research sector which benefits the community as a whole. Funding storage for medical collections for example, not only benefits new research discoveries but potentially results in positive impacts for the health of the wider community. Nodes will continue to ingest data collection in 2015 and the RDSI project will be monitoring and reporting on its results.

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