

NCI: Using Cloud Computing for advancing new Science and Collaboration

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ABSTRACT

To complement the computational modeling environment for peak scientific computing, NCI has been using cloud computing environments for some time. These environments have been deployed on private cloud infrastructure using OpenStack and VMWare, and on the public clouds using Amazon and Microsoft Azure. More recently, NCI has augmented the cloud computing program under the NeCTAR project supported from DIISRTE. Some of the key objectives of this activity have been to explore data-intensive computation, the technologies by which data sources can be made more accessible (including those under the RDSI project), and provide a flexible environment for a mixture of compute, data analysis, data services and visualisation to be managed within an interoperable management framework.

In this talk, we will outline the resources that have been made available at NCI – the computational environments; computing and accelerator technologies; data storage and filesystems and data service hosting. We will also discuss some examples of new scientific collaboration and workflows that have now been made possible through the utilization of this infrastructure. These include NCI partner projects, collaboration with the research community and through NCRIS/EIF, international collaborations (particularly in climate science) and support through the Virtual Laboratory projects under NeCTAR.

REFERENCES

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4. RDSI Node: <http://www.rdsi.uq.edu.au/node/>

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Dr. Ben Evans is the Associate Director of NCI with a portfolio in Research Engagements and Initiatives focused on the increased potential of the NCI capability infrastructure.

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