



Success Story

SUSE Enterprise Storage

Swinburne University of Technology

As researchers push the boundaries of scientific knowledge, how can IT teams keep up with the constantly growing need for storage resources without breaking the bank? Swinburne University of Technology uses SUSE Enterprise Storage™ to underpin a high-performing, ultra-scalable and secure storage infrastructure at a fraction of the cost of traditional enterprise storage—helping support groundbreaking research.



Overview

Swinburne University of Technology is a public university based in Melbourne, Australia. Swinburne fosters close ties with industry, business and governmental organisations to help ensure that its degree programmes and research find practical applications.

Challenge

Scientists at Swinburne lead research that is transforming industries, broadening our understanding of the world, and improving lives. Advances in technology have vastly expanded the scope of the university's research work, which now demands greater compute and storage resources.

The challenge for the IT team at Swinburne is how to accommodate this ever-growing need for performance and capacity while sticking to a tight budget.

“SUSE Enterprise Storage helps IT be a better partner to research teams. We can deliver rapid, reliable storage, and guarantee the security and integrity of the data we store.”

SIMON NAUGHTON

Director of Infrastructure and Operations
Swinburne University of Technology

“We are always looking for ways to help our researchers work more effectively, which means giving them access to powerful and flexible IT resources,” said Simon Naughton, Director of Infrastructure and Operations at Swinburne. “One such example is the National eResearch Collaboration Tools and Resources (NeCTAR) Cloud—a cloud platform for Australian researchers, built on OpenStack. NeCTAR Cloud would provide much-needed computing power to our scientists, without the need for us to operate our own servers. However, we had to deploy supporting storage infrastructure on-premises, as latency concerns and data-sharing restrictions prevented us from using a public cloud.”

Swinburne recognised that a software-defined approach to storage offered an ideal fit for its needs, as it could deliver high performance and scalability at significantly lower cost than a traditional storage infrastructure.

Naughton said, “We wanted to leverage Ceph, as it is the most commonly used storage for OpenStack. However, we didn't have the in-house resources to support a Community Ceph platform, and most of the vendor-supported distributions we looked at were licensed on a capacity basis—meaning that as our data volumes grow, so too would the cost of our storage, which was unsustainable.”



Swinburne University of Technology at a Glance:

Australian public university with a reputation for preparing graduates for life in the working world, as well as for its research in science and technology.

■ Industry and Location

Higher Education, Melbourne, Australia

■ Products and Services

SUSE Enterprise Storage

■ Results

- + Offers a powerful, flexible storage platform to support cutting-edge scientific research
- + Delivers on-premises storage at approximately half the cost of an equivalent public cloud service
- + Extreme scalability makes it easy for Swinburne to keep pace with rising volumes of research data

“With SUSE Enterprise Storage, we have built a very high-performing and scalable storage landscape at a fraction of the cost than we would have been able to with traditional storage systems.”

SIMON NAUGHTON

*Director of Infrastructure and Operations
Swinburne University of Technology*

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Solution

To solve the challenge, Swinburne selected SUSE Enterprise Storage, a software-defined storage solution powered by Ceph technology.

“SUSE Enterprise Storage offered us the best of both worlds—an enterprise-supported solution that is licensed per node, instead of on a capacity basis,” said Naughton. “This was a differentiator that made the product commercially viable for us. We completed a short trial, comparing the SUSE® offering against other vendor products and Community Ceph software. The results confirmed that SUSE aligned perfectly with our goals.”

To guide a smooth deployment of SUSE Enterprise Storage, Swinburne teamed up with SUSE Partner Aptira.

Naughton said, “I can’t speak highly enough of Aptira and the value they brought to this project. Not only do they have great knowledge of SUSE technology, they went over and above to understand our requirements and existing architecture, and fine-tune their approach to deliver exactly what we needed.”

Swinburne has deployed two clusters running SUSE Enterprise Storage—supporting storage requirements for its research cloud as part of NeCTAR, a data protection initiative and research data storage.

The university has set up the storage environment in a high-availability configuration, continuously replicating data between its main data centre and its secondary site. Swinburne uses Commvault software to provide enterprise backup and recovery, using SUSE Enterprise Storage as its cloud-based target storage.

Results

A distributed storage cluster, SUSE Enterprise Storage provides virtually unlimited scalability—giving Swinburne the ability to easily expand storage resources as required. As SUSE Enterprise Storage runs on commodity server and storage hardware, it keeps Swinburne’s initial capital expenditure (CAPEX) and ongoing infrastructure costs low.

“With SUSE Enterprise Storage, we have built a very high-performing and scalable storage landscape at a fraction of the cost than we would have been able to with traditional storage systems,” said Naughton. “We avoid CAPEX-heavy hardware spending and a rigid cycle of hardware upgrades every few years; now, we can add capacity and performance at low cost, as and when needed. The project is able to deliver on-premises storage at approximately half the cost of the equivalent public cloud providers’ service.”

With a fast, flexible storage platform in place, the IT team at Swinburne can support the needs of researchers more effectively.

“SUSE Enterprise Storage helps IT be a better partner to research teams,” said Naughton. “We can deliver rapid, reliable storage, and guarantee the security and integrity of the data we store. With SUSE, we have found a compelling and affordable solution for supporting Swinburne’s storage needs, and we look forward to harnessing this platform to drive groundbreaking research for years to come.”



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