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Success Stories

Australian Catholic University increases performance and protects investment by centralising storage on NetApp solution



KEY HIGHLIGHTS

Industry
Education

The Challenge

The university had a decentralised storage model across six campuses, with a complex and time-consuming management process. It needed to consolidate data storage and have a disaster recovery site due to a dramatic increase in storage requirements

The Solution

Consolidated storage systems across the various campuses, using two NetApp® FAS3020 storage systems, four NetApp FAS250 storage systems, and SnapManager® for Oracle® and Microsoft® SQL Server™

Benefits

- Processes and results processed
- A centralised platform
- On-demand capacity for virtual environment gained
- Fast, automated backups achieved
- Reduced backup admin by over 50%

CUSTOMER PROFILE

Australian Catholic University is a public university founded in 1991 as the result of the amalgamation of several Catholic colleges of higher education. The university has six campuses across four states and territories, including almost 14,000 students and more than 3,000 staff. The university's Information Technology (IT) department is responsible for all technology services to the university, its staff, and students.

The IT department is structured into four major groups, which provide the following IT services:

- **Infrastructure:** Telecommunication, network, systems, and server management and support
- **Client Support Services:** Help desk, customer IT, and desktop service support
- **Management Information Systems:** Corporate application development and support
- **Web Portal Management:** Web-based application development and support
- **Project Services:** Supports and coordinates IT project programs across the University

THE CHALLENGE

Until recently, the university's application, file, and database server infrastructure was

decentralised across six campuses. There was no centralised storage or archiving of university data, which meant that services such as staff e-mail, staff and student file/print, proxy, DHCP, and DNS were duplicated on every campus.

In addition, file storage and data archiving for campus-based IT services were maintained locally on the campuses. This created a huge amount of duplicated information, made it difficult to share information, and created the significant challenge of ensuring all campus data was accurately stored and available as needed.

The university had 9,252GB of data storage capacity spread across its entire database and file servers. Of this capacity, only 1,756GB (around 20%) were being used. Based on projected data storage growth over the coming year and the next few years, the university concluded it would require 4.75TB of storage capacity within 12 months, then up to 10TB by 2009. This is due in part to projected demand on storage space from staff and students as well as the adoption and implementation of document management and other IT strategies.

The university therefore immediately required a 5TB SAN or NAS system to meet its centralised storage requirements.

“There is a long list of benefits the University is reaping as a result of the NetApp installation – primarily, the University now has a high-performance, resilient, secure and reliable data storage facility.”

Wil Daniels

Infrastructure Manager, Information Technology,
Australian Catholic University



THE SOLUTION

ACU engaged XSI Data Solutions, a NetApp Platinum partner, to design, supply, and implement a network storage solution that encompassed equipment and services for consolidated data storage, backup, archiving, and disaster recovery.

Specifically, the university was seeking a solution that would provide the following:

- Centralised storage resulting in more cost-effective storage utilisation
- Nondisruptive, scalable storage expansion with storage on demand
- Reduced server room centre rack/floor space as a result of fewer servers
- Reduced inventory of tape backup consumables
- Disaster recovery (DR) capabilities
- Reduction in the number of general purpose servers
- Reduction of backup servers
- Improved protection of critical corporate data
- Increased server performance
- Reduced cost of storage maintenance
- Catalyst for a corporate document management system
- Leverage to adopt the use of thin client PC technology to reduce costs of ownership of computer lab and staff computers
- Long-term archiving of corporate

data to meet future legislative and compliance requirements

XSI provided the university with two NetApp FAS3020 storage systems, one of which was installed at the North Sydney campus, to be used as the main data centre. The second was installed as a disaster recovery site at the Melbourne campus.

The FAS3020 is part of the NetApp midrange enterprise storage range, which can be used for SAN-based or NAS-based systems, for primary or secondary storage, and can be upgraded easily as an organisation's needs change.

These units provide NAS-based file sharing capability for the university's CIFS and NFS requirements, in addition to Fibre Channel connectivity for critical Oracle and SQL applications. The FAS3020 arrays were also configured with NetApp SnapMirror® software, which provided bandwidth-efficient replication between ACU's production and disaster recovery centres.

Both of the FAS3020 storage systems were initially configured with identical storage and connectivity: 14 300GB Fibre Channel disks, 14 500GB SATA disks, 4 FC SAN ports, and 4 Gigabit Ethernet ports.

Each FAS3020 system supports up to 84TB of disk storage and up to 20 FC

SAN ports and 24 Ethernet ports, catering to all of ACU's projected storage needs.

The university also purchased four NetApp FAS250 systems, each configured with 1TB of storage, to locate on its smaller, remote campuses. The FAS250 is an enterprise-class, scalable storage system designed for large, distributed enterprises with remote and branch office storage requirements. These units are used for application and file sharing and provide the capability for each campus to continue operating in the event of a WAN outage. These smaller branch-level systems are also configured with the SnapMirror software, which is used to replicate data back to the DR facility.

In addition to the FAS3020 hardware, the university also purchased SnapManager for Oracle, SnapManager for Microsoft SQL Server, and Fibre Channel support. The SnapManager software allows ACU staff to recover lost or corrupted Oracle and SQL databases in minutes, regardless of the size of any database.

Wil Daniels, Infrastructure manager, IT for Australian Catholic University, says, "We went with the NetApp solution for several reasons. The main one was that it offered us a hybrid storage solution, which meant we weren't committed to an environment that was solely SAN based.

“Our experience with the NetApp product has been very positive. Our NetApp storage solution allows us to centrally manage our production and disaster recovery storage.”

Paul Campbell

Director, Information Technology, Australian Catholic University



“We needed a high-speed link between our main data centre and our disaster recovery site, which would be active and reliable over lower bandwidth, which is something the NetApp solution offered.

“The solution we chose allows us to have centralised storage across all six campuses of the university, plus a disaster recovery site which mirrors the main site, all of which integrates easily with our existing systems and services.”

Craig Humphreys, NSW Sales Manager of XSI Data Solutions says, “We recommended the NetApp solution for ACU because it provided a single vendor and a single architecture with a single point of support, to address all of the university’s requirements.”

BUSINESS BENEFITS

Australian Catholic University benefits in several areas as a result of the NetApp installation.

Performance

Daniels says, “There is a long list of benefits the university is reaping as a result of the NetApp installation from XSI. Primarily, the university now has a high-performance, resilient, secure, and reliable data storage facility. Overall, we have experienced increased productivity due to the fact that we’ve been able to consolidate the administration of

six systems into one. This has had a significant impact on our network with a reduction in data stored, as well as reducing the cost of six IT teams with specialist skills to one central team. We no longer require six different disaster recovery strategies either.”

Daniels continues, “We no longer experience duplication of services, which previously made it very difficult to gain effective business intelligence and, hence, plan for the future.”

A Centralised Platform

NetApp’s unified architecture allows organisations to scale their application environments through innovative offerings such as application specific management of storage via SnapManager for Oracle and SnapManager for SQL. “NetApp are a well regarded provider of storage solutions. Our experience with the NetApp product has been very positive. Both the pre sales and after sales support have been excellent. Our NetApp storage solution allows us to centrally manage our production and disaster recovery storage”, says Paul Campbell.

Investment Protection

By deploying the NetApp solution university wide, ACU is able to address its archiving and compliance requirements. This is due to the fact that the university now has the ability to mix and match

SATA and Fibre Channel drives, as well as applying SnapLock® WORM software to selected data, which means data can’t be deleted until it meets certain criteria.

“Our storage solution now ensures us that we are meeting university and legislative requirements as far as maintaining and storing our data are concerned. We have a scalable storage architecture, which offers us an almost limitless supply of storage should we need it. This goes hand in hand with the fact that the system is physically compact, which is key, as space in our server room is at a premium. The combination of these factors means our investment is protected and allows us to move forward with confidence,” says Daniels.

Ease of Management

Daniels continues, “Because all of our six campus systems now use the same software and user interface, the system is much easier to manage than our previous infrastructure. We’ve reduced our backup and recovery time, plus everything now integrates effectively and, as a result, is much simpler to manage.”

The university has a planned upgrade to Microsoft Exchange and Microsoft SharePoint® in the near future, both of which are easy to manage using NetApp solutions.

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Wil Daniels

Infrastructure Manager, Information Technology,
Australian Catholic University



Daniels says, “It’s now much easier to manage documents, thanks to a centralised data facility, which means we can move ahead on implementing tools such as SharePoint and Exchange without hassle.”

Business Continuity and Disaster Recovery

By deploying NetApp FAS250 storage systems configured with SnapMirror at satellite campuses, the university gains the ability to back up and recover all data across all campuses. This negates the need for local backup at remote campuses as well as provides a disaster recovery solution for each campus.

SOLUTION COMPONENTS

Two NetApp FAS3020 storage systems

Four NetApp FAS250 storage systems

SnapManager for Oracle

SnapManager for Microsoft SQL Server

“The NetApp system means that our core applications and data at both our production and backup sites are always available and transparently accessible. If we have any issues with network failures between campuses, our storage isn’t impacted, and we have a strong disaster recovery strategy in place,” concludes Daniels.



NetApp creates innovative storage and data management solutions that help you accelerate business breakthroughs and achieve outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at NetApp.com.

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