The University of Melbourne's top tier of storage reached capacity, sparking an investigation into the best options to expand its environment to allow for continued growth of virtual machine provisioning. The organisation implemented two Pure Storage FlashArray™//M50s to provide a simple path for ongoing capacity expansion, consistent maintenance costs and simplify storage monitoring and management.

BUSINESS TRANSFORMATION

Pure Storage increased performance and improved customer satisfaction by providing a highly reliable system allowing them to deploy new services and applications faster.

GEO

Australia

INDUSTRY

Education

"Pure Storage has helped simplify our business not only from an IT perspective but from a financial perspective. We have ongoing support and consistent storage maintenance costs and can upgrade our storage without large capital spends."

Drew Poynton,
Manager of Storage, Servers and Backup

BUILDING A BEST-OF-BREED SYSTEM FOR THE FUTURE

The University of Melbourne is Australia's leading university, and ranks among the top 50 universities worldwide. Since its foundation in 1853 the University has grown to a current total of close to 6,500 staff and 47,000 students spanning seven campuses across Victoria. It offers a range of coursework and research programs, and is the country's second largest research organisation after the CSIRO.

In addition to its outstanding reputation, IT is a crucial factor in driving the University of Melbourne's engagement with current and potential customers. Storage is a core requirement for the organisation, underpinning everything from the speed of IT operations to providing an exceptional end user experience. Drew Poynton, Manager of Storage, Servers and Backup, has seen the University of Melbourne go from strength to strength in his eleven years with the institution. "Selecting the right storage solution is key to providing users with easy access to our online services at the front-end, as well as the simplification of back-end systems," said Poynton. "Customer satisfaction is the most important indicator of how we're tracking as a business. So, we need to ensure customers have a seamless experience with using our online platform as a service."

The University of Melbourne had a SAN-based storage system that was reliable and performing to expectations; however, the existing infrastructure had reached full capacity. This resulted in delays provisioning new Virtual Machines while space was reclaimed, and complex maintenance requirements were counterintuitive to the business. Looking to eliminate capacity constraints and provide fast, simple access to data for all parties, the University of Melbourne required a solution that would provide a simple path for ongoing capacity expansion, consistent maintenance costs, and simplified management from an administrative perspective.

SIMPLICITY AND SCALABILITY MAKE PURE STORAGE A PERFECT MATCH

To maintain its position as Australia's leading university, the University of Melbourne required new storage technology which would provide ongoing support for high workload requirements. "Virtualisation workloads spike during enrollment and results periods, so we were looking for a system with seamless scalability," said Poynton.

He investigated other all-flash and fibre channel solutions in the market, but having attended VMware vForums for many years, Poynton was well aware of the outstanding reputation of Pure Storage in flash storage. This made for a very straight-forward decision when it came to upgrading to an all flash solution. "When it comes to virtual machine

COMPANY:

University of Melbourne
www.unimelb.edu.au

USE CASE:

- VSI – VMware® vSphere®
- Database – Microsoft® SQL Server

CHALLENGES:

- Existing tier one SAN infrastructure was at full capacity.
- Costly expansion was required to enable growth of virtual machine usage over the next couple of years.
- Simply expanding would not provide space saving technologies such as deduplication and compression.
- The university required centralised storage with the capability to support spikes in virtualisation workloads during peak periods such as student enrollment and the release of student results.

IT TRANSFORMATION:

- Significantly increased capacity while providing faster access and lower latency for end users; some SQL queries running up to three times faster.
- Pure1 Cloud has simplified the physical monitoring of storage with zero management overhead; internal systems are easily maintained at an extremely high standard.
- Speed of implementation: it took only one morning to configure each FlashArray//M50.

> "Pure Storage is a very intelligent, space-saving technology. It has simplified the back-end for us and significantly improved customer access to our virtual environment."
>
> Drew Poynton,
> *Manager of Storage, Servers and Backup*

workloads, flash reduces any chance of storage being the bottleneck. On top of its simplicity, the Pure Storage price point was comparable to high-end spinning disk, so the decision was a no-brainer."

CONSOLIDATING THE MOST CRITICAL APPLICATIONS ON FLASH

Poynton said the Pure Storage deployment could not have been simpler. The Pure Storage engineering team configured each FlashArray//M50 over a morning and workloads were running off them later the same day.

The University of Melbourne's "gold tier" virtual server workloads, including Microsoft SQL, now sits on two Pure Storage FlashArray//M50s, while the "silver" and "bronze" tiers of storage are deployed on disk-based SANs. With Pure Storage in place, the IT department has been able to repurpose the legacy "gold tier" storage into other pools to improve the performance and capacity of lower tiers.

The benefits of the Pure Storage implementation were noticeable immediately. The most important was the increased usable capacity from the deduplication and compression technologies embedded into the Purity operating system. Moving to an all flash solution also resulted in faster data access and lower latency for the virtual workloads.

The Microsoft SQL environment is running up to three times faster than it was on the former system. While the legacy storage was performing consistently, Pure Storage has enabled the University of Melbourne to run higher performing VMware tier storage at a lower cost.

"We had solid infrastructure but Pure Storage gave us the ability to reuse existing storage," said Poynton. "So we can ensure that customers who use our student-facing systems, such as lecture capture and learning-management systems, are not going to experience slow query times resulting from the storage layer."

Poynton added, "Our Pure Storage purchase has been extremely cost effective. Smaller capacity fits larger workloads, which bodes well for reducing capacity overall. As a result, latencies are under a millisecond no matter what, and it has reduced the cost per terabyte of our highest tier storage by more than 50 per cent."

IMPROVED PERFORMANCE AND SCALABILITY, SIMPLIFIED MANAGEMENT

Poynton said the Pure Storage seamless scaling is another important benefit. While performance wasn't the key challenge, the University of Melbourne has experienced a clear improvement as an additional bonus of the Pure deployment. This has had a flow-on effect to end-users who have indirectly experienced increased performance.

"We now have the capacity to deploy new services and applications much faster than we could in the past," said Poynton. "We no longer need to worry that our storage environment will hit capacity and slow down the whole system."

Furthermore, the Pure Storage footprint is significantly smaller than the old system, which will enable better use of physical space. On top of this, the Pure1™ Cloud has simplified the physical monitoring of storage with zero management overhead. This enables Poynton's team to easily maintain internal systems at an extremely high standard.

"The Pure1 platform provides the UNIX and virtualisation teams with greater visibility into the storage layer, so they can work more collaboratively with the storage team and with each other. This also means less time is spent managing storage issues, so time and resources can be redeployed back into strategic business initiatives."

> "On top of simplicity being a deciding factor, the Pure Storage price point was comparable to high-end spinning disk; it was a no-brainer."
>
> Drew Poynton,
> *Manager of Storage, Servers and Backup*

As well as being a superior technical solution, Pure Storage has delivered key business advantages to the University of Melbourne. "Pure has helped simplify our business not only from an IT perspective but from a financial perspective," said Poynton. "With the Pure Evergreen™ Storage model, we have ongoing support and consistent storage maintenance costs and can upgrade our storage without large capital spends. This means we can budget accurately."

Based on his outstanding experience with Pure Storage, Poynton and his team have not looked back from the decision to implement a completely different solution to their legacy storage. "Pure Storage is a very intelligent, space-saving technology. It has simplified the back-end for us and significantly improved customer access to our virtual environment."

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