Data#3

VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

Modern All Flash Storage Environment Accelerates Application Delivery for Victoria University

A Data#3 Customer Story

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ABOUT VICTORIA UNIVERSITY

For over one hundred years, Victoria University has provided quality, accessible higher education to the West of Melbourne and beyond, attaining University status in 1991. Ranked in the Times Educational Supplements top 2% of universities worldwide, Victoria University is recognised by Times Higher Education[1] for their dedication to quality education, justice, health, and sustainability.

OBJECTIVE

Although Victoria University's old storage systems had reliably operated for many years, it was clear that risk and maintenance costs had risen. Victoria University required high performing all-flash storage, to bring new opportunities for staff and students.

FUN FACT

Gartner predicts that by 2021, over 75% of midsize and large organizations will have adopted a multicloud or hybrid IT strategy.

Gartner (2019), 5 Approaches to Cloud Application Integration. [Online] https://www.gartner.com/smarterwithgartner/5-approaches-cloud-applications-integration/

COMMENTS

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Manuel Bervanakis,
Infrastructure Services Manager,
Victoria University.

APPROACH

Victoria University issued a request for proposal (RFP) outlining its requirements, and Data#3's recommendation of an all-flash Pure Storage solution scored highly against the requirements in regards to cost, performance and budget.

BENEFITS

- Fast all-flash storage
- A cloud-ready solution
- Easy, cloud-based analytics and management
- Seamless private cloud integration
- Faster application delivery
- Improved student and staff experience
- Able to commence new digital projects

TECHNOLOGY

- ☑ Pure Storage Flash Array
- ☑ VMware Integration Support
- ☑ Cloud Migration

The Background

For over one hundred years, Victoria University has provided quality, accessible higher education to the West of Melbourne and beyond, attaining University status in 1991. Ranked in the Times Educational Supplements top 2% of universities worldwide, Victoria University is recognised by Times Higher Education[1] for their dedication to quality education, justice, health, and sustainability.

Victoria University is a public research facility that provides students with a pathway from vocational education such as TAFE courses and diplomas, through to higher education degrees. Offering the unique VU Block Model method of study[2], the university enables over 43,000 students to focus on one unit at a time over a four-week period, resulting in students performing better than ever with an impressive pass rate of 86.5%.

In an increasingly competitive market, the University strives to equip students to flourish in a fast-changing world. Its outstanding, modern education delivery depends increasingly on cutting-edge digital programs, so ensuring strong technology foundations and a sustainable approach to technology is a must[1]. The University's digital storage system is at the heart of this core environment.

The Challenge

From high-level research projects and online classes to operational capabilities, most activities in a modern university rely on its technology foundations. With many competing priorities, it would be easy to overlook the importance of storage. However, this would be a huge mistake, said Infrastructure Services Manager Manuel Bervanakis.

"Our storage had served us well for over a decade, but it was aging, we had capacity issues, so we took the opportunity to review it, and to look at new capabilities going forward. We needed something easier to manage and maintain," said Bervanakis.

"Managing it internally wasn't easy – you almost needed to be a rocket scientist."

The capacity issues had increasingly led to a juggling act for the University's IT department, and in addition to becoming increasingly time-consuming, the limitations of the existing system represented a potential roadblock for new projects involving demanding applications. The impacts to digital transformation initiatives were going to become highly problematic if the existing storage environment was not addressed. Application performance had been impacted, and users were beginning to notice. With legacy systems straining the budget, Bervanakis identified maintenance costs as another consideration. It was agreed that the time was right for an upgrade.

"We defined our requirements, then we visited other universities and saw what they were doing in this space. Next, we went to the market and worked out what met our requirements. The response from Pure Storage and Data#3 was favoured," explained Bervanakis.

"We pushed forward with them because their tender response met our needs the most, and they were within our price point."

IT Outcome

Data#3's recommendation to replace all four existing Hitachi Storage Arrays with two Pure Storage All-Flash Arrays was adopted. One array was located at the University's main data centre in the Sunshine campus, Victoria, with the other at a data centre in the Footscray Park campus. Pure Storage is a recognised Gartner Magic Quadrant leader in the all flash array market, and are known for their reliability and agility. The Pure Storage arrays also offered the ease of management and fast scalability the University sought, at the right price point.

"Everyone thinks storage is a given, but we must make sure it is reliable: Pure offers 99.9999 percent reliability, and with Data#3's help we made sure we had a platform we could have faith in. We know we can trust it," commented Bervanakis.

As a student of Victoria University and IT employee for over two decades, Bervanakis has a unique perspective on its inner workings. Recalling previous generations of storage technology, he knew how disruptive past storage updates had been.

"Previously, migrations could be a tedious, complex process with a higher level of risk. With newer technologies now available, migration is much easier – all credit to Data#3 and Pure Storage, who gave us the skills needed to perform the rest of the migration."

Accelerating application delivery was a priority for Victoria University and that aim was achieved by allowing the applications to be provisioned in a shorter amount of time. The solution resulted in a number of other deliverables, including operational costs and space, which were also highlights for Bervanakis.

"We decided to take the flash storage path so that we could take advantage of not only the performance gains, but also the cost savings. We can buy any amount of storage, but compression and deduplication with the new arrays means we get a three or four to one compression ratio, so it has given us all those improvements," outlined Bervanakis.

"This means we are also reducing our footprint and consolidating our gear – our new storage is in a portion of a rack, not using 3.5 racks. We are saving a lot of power, and there is less heat generated, so the cost to cool is also lower."

Business Outcome

Working within the University's timetable meant that the solution had to be installed, tested, and a subset of user case migrations performed, within a four-week window. Data#3's project management methodology enabled the skilled team from Pure, Data#3 and the University to work seamlessly together and get the job done. An important element was the skills transfer that enabled the University's IT team to confidently manage the new storage environment.

"Data#3, along with Pure, helped with getting the new arrays configured, and with some knowledge transfer, we picked up new skills to use it. They also decommissioned the previous technology and showed us the best way to do this in the future. Data#3 went out of their way to disconnect the old arrays and put in a favourable trade-in offer for the old arrays," said Bervanakis.

"Most of it happened without people noticing – Data#3 showed us how to use VMware to get data moved from one array to the other without any outages or impact to staff or students. However, some legacy arrays running certain configurations required brief, planned outages. We tackled this through a change process agreed with the business."

What users did notice, though, was that key applications ran faster, without the frustrating delays they had experienced before.

"We had good, positive comments from a number of staff about the performance gains," stated Bervanakis.

Aside from the acceleration of existing applications, this important building block in Victoria University's digital transformation has paved the way for numerous other projects. Not only is the right technology now in place to facilitate the services and applications that keep the University among the world's educational leaders; the IT team has also been freed from the time-consuming processes of managing legacy storage systems.

"It is so much easier already to maintain this now. Simple things like reporting are better, we have a nice graphical user interface dashboard that we can see from anywhere. It wasn't easy to look before at our storage situation, but now we can see our investment, we can see it is giving us in one case, a six to one compression ratio," said Bervanakis.

Conclusion

Victoria University's storage upgrade was one part of an ongoing process of digital transformation, where technology is used to support its status as a top tier tertiary educator. When the world was struck by the COVID-19 pandemic, the agility that the University's IT team had introduced meant that staff and students could be quickly supported to adopt new ways of working.

"Increased use of our online education capabilities had been planned to take place, but we accelerated changes due to COVID-19. Work from home capability was not fully used in the past, and uptake wasn't always the greatest. We are delivering services and education at home now, and we are able to deliver all content – this is a big thing for us, all classes are running, and students are still working," described Bervanakis, who believes that the way the University community works will be changed permanently for the better.

Working with a trusted partner was necessary to get the best from the storage project. Bervanakis cited the expertise and processes of the Data#3 and Pure Storage team and the knowledge of the University's in-house IT professionals as critical elements of their success.

"Data#3 and Pure were extremely professional. They had the skills required to take on the work - not only commissioning but decommissioning equipment – and they went out of their way to make sure we were satisfied. The Data#3 presales team made sure things were going well, they were on standby if we needed extra help: they were skilled, knowledgeable, and great to deal with," said Bervanakis.

The highlights of the storage upgrade were clear for Bervanakis, who said that he finds himself in the unusual situation of looking forward to seeing the next power bill arrive.

"Firstly, we're in a scenario where we can save costs, because our old arrays cost more run and maintain – the maintenance on those was quite high, and we make savings on annual maintenance costs by having new arrays in place. With a four-year maintenance deal built into the new equipment, we make upfront savings.

Secondly, we are removing the risks of older equipment, which was coming close to end of life, so we are glad to see it gone - the new equipment is so much more user friendly, with more capability that has made us run more efficiently. It has made life easier moving forward," explained Bervanakis.

"Thirdly, the typical benefits will see power savings and cooling savings as new bills come through."

[1] https://www.vu.edu.au/about-vu university-profile/our-focus-on-un-sustainability-goals

[2] https://www.vu.edu.au/study-at-vu/why-choose-vu/vu-block-model

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