

UniSIM cuts costs by using Storage-as-a-Service solution

Established in 2005, SIM University (UniSIM) is Singapore's first privately-funded university dedicated to working adults, offering working professionals an array of undergraduate and postgraduate studies in a wide range of disciplines.

Offering over 40 academic programmes, UniSIM focuses on providing working professionals with the opportunity to enhance their skills and acquire higher educational qualifications while balancing their careers and personal commitments.

In 2009, UniSIM decided to archive its Blackboard Learning Management System (LMS) application data – used by both students and faculty for online discussions – on a remote site instead of buying new servers for its data centre to handle the additional load as the university grew.

The project, which saw its applications archived remotely via a fast SingAREN (Singapore Advanced Research and Education Network) link, not only frees up space on its existing servers but is extremely effective in securing its data.

The business challenge

Like many organisations that grow over time, the amount of data that UniSIM accumulates increases substantially each year as it takes in more students and offers more courses.

The original infocomm solution adopted was to simply buy more servers to handle the additional load. It was a costly exercise as old servers were replaced or decommissioned when applications were no longer in use.

By backing up to tapes, the university also had to get people to collect the media and store them somewhere safe. If a recovery is needed, there was a need to locate the right tape and plug the tape into the storage system to find the required data.

Facing such a challenge, the university decided in April 2009 to find a permanent solution that could simply scale up according to demand, and would also be cost-effective in the long run.

Mr Gary Teo, Director of UniSIM's Campus IT Services department, recalled that cost and manpower savings were topmost in mind.

Reducing administrative work, ease of use and lower operating cost – no longer requiring the use of tapes for backup – were the main considerations, he said.

Solution

UniSIM started working with PTC System in May 2009 on a proof of concept (POC) for a remote archival system operated on a utility price model. This would tap on SingAREN, Singapore's high-speed network used by academic and research institutes.

For efficiency - with an average throughput of 30Mbps - backup jobs would be batched and run during off-peak hours. Fully automated, this system would require minimum intervention by any UniSIM staff.

"Initially, there was concern regarding the throughput over the network, but the POC showed that this was adequate," said Mr Yee Rok Seng, account manager at PTC System. His company has over 10TB of storage for customers to scale up usage dynamically.

After testing the system for two months, UniSIM was satisfied with the results and decided to subscribe to PTC System's Storage-as-a-Service solution.

ORGANISATION

SIM University (UniSIM)

INDUSTRY

Education and Learning

CHALLENGE

UniSIM needed to optimise its archival storage capacity, given the growing number of disciplines offered and students it admitted.

SOLUTION

UniSIM decided to use Storage-as-a-Service solutions delivered over the fast SingAREN network

BENEFITS

- Savings in manpower and cost.
- Ability to scale up storage needs on the fly



Benefits

By using Storage-as-a-Service solutions, instead of buying and running its own hardware, an organisation such as UniSIM can save significant costs over three years.

There is also the benefit of being able to scale up storage fast – a crucial factor for a growing university such as UniSIM.

Through using Storage-as-a-Service for data archival, UniSIM can increase its data usage on the fly instead of worrying about an endless cycle of sourcing for hardware, making sure there is space in the data centre and ensuring everything runs well together.

This way, the time and dollars saved on manpower can be put to better use. Reflecting on the decision, UniSIM's Mr Teo said: "The initial setup may require some effort, however, when the processes have been established, the backup services are reliable and efficient."

Indeed, the storage utility model has been so successful that UniSIM has plans for putting future applications on the Net.

Said Mr Teo: "As UniSIM progresses into the e-learning arena, there will be a need to provide more online services. One of these could be the deployment of customized software applications over the Internet to our students."

"Such software could be hosted somewhere in the Net for easy access to authorised users," he added.



Cost comparison

Cost components	Cost (S\$)		Remarks
	Purchase Own Infocomm Resources	Purchase Cloud Services	
Hardware cost	12,000	—	Purchase of two servers including operating system and maintenance
Software cost	70,000	—	Purchase of software
Storage cost	14,000	—	Storage and maintenance fee
Co-location & Power	7,200	—	Co-location and power cost for 2 servers
Manpower expenses (technical support)	43,200	—	Manpower effort required for technical setup and support
Cloud Services (Storage-as-a-Service)	—	7,200	Pricing for storage resources includes usage of SINGAREN shared bandwidth
Total	146,400	7,200	Saving of S\$139,200

*Based on estimates by National Grid Office, with inputs from UniSIM and PTC System.

About the National Grid

The National Grid is a national effort that draws together commercial cloud service providers to offer pay-per-use access to compute, storage and software facilities. The three consortia who have been appointed National Cloud Service Providers are Alatum led by Singapore Computer Systems Ltd (now part of SingTel), nGrid led by New Media Express Pte Ltd and PTC System (S) Pte Ltd.

For more information, email ida_grid@ida.gov.sg

Notice: This document is protected by copyright, trade mark and other forms of intellectual property rights. No part of this document may be reproduced, distributed or adapted with the express permission of IDA and/or its suppliers. The information contained in this document is presented in good faith and is provided on an "AS IS" basis. IDA and/or its suppliers do not make any representation or warranty, express or implied, or accept any liability for the completeness, relevancy, accuracy, reliability and/or adequacy of the information contained herein. IDA and/or its suppliers do not accept responsibility for any direct, indirect, incidental or consequential loss or damage that may arise from any manner of use of this document.