

CASE STUDY



Building success: NEC equips St Michael's for the future

St Michael's Grammar School, St Kilda, Victoria

When St Michael's Grammar School needed to implement an IT solution which was **flexible** enough to meet school needs, **secure** enough to ensure the privacy of student records and work, and **reliable** enough to provide maximum network uptime, they turned to NEC Business Solutions.

The Customer

As a leading co-educational independent school, St Michael's strives to be innovative and creative, to challenge young minds, and equip approximately 1200 students (from kindergarten to Year 12) with the skills and knowledge needed for success in future life. And a critical component of the curriculum is technology that's reliable, secure and resistant to failure.

In an environment where technology is becoming ubiquitous, expectations of high reliability and continuous availability are the norm, not the exception. And it's not just businesses catching onto the need to have effective, reliable storage and an IT network that's always on and always available. Now, more than ever, every organisation that relies on technology has the expectation that it will not fail, there will be no downtime and that storage will cater for organisational needs and growth. And St Michael's is no different.

IT Manager, John Toulantas explains: "Faculties across the curriculum are using technology and applications to enhance teaching and learning," he says. "Students now have the flexibility to present their tasks and projects in a number of ways – designing websites, multimedia presentations and flash movies. As a student's skills with computer applications develop, the complexity of their outcomes increase and therefore more storage space is required for files."

The Challenge

For St Michael's 1200 hundred students and 300+ staff, technology underpins the teaching program. Mobile computing, digital curriculum resources, flexible learning modules and extensive on-site and remote access to the school's high-speed network are integral components.

Students develop computer skills as they progress through the school, utilising networked classrooms which provide access to people and information far beyond the confines of the school.

St Michael's commitment to enhancing business and academic functions through the use of technology required a rigorous and robust system that had the scope to meet the projected needs of the school over the next three years.

Specifically, their key requirements were to implement an online, highly reliable and available student administration system (including online reporting of student results with specific parental access), a central "pool" to support a range of applications, and for the technology to be highly scalable to cater to specific needs. Most significantly, they needed one central, consolidated network for all data and the confidence of knowing the system wouldn't fail.

"Faculties across the curriculum are using technology and applications to enhance teaching and learning,"

John Toulantas
Director, Learning Communications
Technologies
St Michael's Grammar School



"Our existing network cluster failed miserably," Toulantas says, **"it was laborious and unreliable."**

Storage was the other significant issue for Toulantas and the school. "In 1996, students were allocated 15Mb of disk space. Today, they need allocations of 200Mb and more."

To cater for the current and anticipated growth in storage and network requirements, St Michael's needed to implement a solution which was flexible enough to meet their needs, secure enough to ensure the privacy of student records and work, and reliable enough to provide maximum network uptime.

The Solution

After originally planning to implement a high-availability network cluster, based on Microsoft software, St Michael's opted for NEC FT (Fault Tolerant) servers running standard Windows 2000. The FT servers offer the same capabilities as the cluster but in a hardware platform. Significantly, the servers also deliver 99.999 percent uptime, averaging less than five minutes of unplanned downtime per year – including time spent repairing failures, installing upgrades and performing general maintenance. In addition, memory and disk data are protected, installation and maintenance are simple, and any servicing can be undertaken by IT staff on the St Michael's campus and with no specific FT server experience.

NEC Business Solutions also installed a SAN S1200, centralising storage and sharing it across the school campus. This has effectively doubled storage capacity to cater for the needs of staff and students. To protect the data stored on the SAN, a dual path runs into the SAN from the servers ensuring if one cable is split or damaged, there is still access. With the centralised storage, backup only occurs at the SAN, eliminating the need for multiple backup points.

The solution was implemented during school holidays minimising disruption to students and staff. All equipment was tested and configured in advance at NEC's Research and Development facility (Mulgrave, VIC) prior to implementation. This ensured a "clean" install with no issues.



John Toulantas (left) with NEC's Rodney Nirens: **"For St Michael's, the beauty of this solution is its manageability,"** says Nirens.

The Benefits

According to Rodney Nirens, NEC Business Solution's National Manager, Server and Storage Division, it all adds up to a highly available and affordable server that's simple to install and easy to manage and upgrade.

"For St Michael's, the beauty of this solution is its manageability," says Nirens.

"Implementing a cluster solution would have greatly increased administration time and required extensive training to manage the system. With this solution, the St Michael's on-campus IT team can easily undertake any maintenance as there's little change to the existing school IT configuration."

John Toulantas agrees.

"The biggest difference in our IT department since the installation of the NEC solution is our confidence in the system. It's more reliable and available to users than ever before," he says.

"We all expect the hardware to fail at one time or another, but with the NEC FT server, if and when a component does fail, the system is still available to users. "



And 12 months on, according to Toulantas, the system has not failed.

"The NEC FT server and SAN are now the very heart of our system, adding an extra layer of uptime and reliability. **This has realised our goal of ensuring there is no single point of failure on the network.**"

Problem

Limited storage capacity; regular network downtime; no central consolidated network for all data.

Process

NEC FT (Fault Tolerant) servers running standard Windows 2000. The FT servers offer the same capabilities as a cluster but in a hardware platform. The servers also deliver 99.999 percent uptime, averaging less than five minutes of unplanned downtime per year. An NEC SAN S1200, centralising storage and sharing it across the school campus, effectively doubling storage capacity to cater for the long-term needs of staff and students.

Solution

No changes to existing IT configuration resulting in less administration time and requiring limited training. Greatly enhanced reliability and usability with no downtime.

About NEC Business Solutions

NEC Business Solutions Ltd is a leading provider of end-to-end voice, data and video solutions for business and government. The company utilises its expertise in IP Telephony, Contact Centres and Managed Services, and strong partnerships with other leading companies to provide innovative and affordable business solutions.

A wholly owned subsidiary of NEC Australia, NEC Business Solutions employs 750 staff nationally.