“With disaster recovery being an important part of our ICT plans, the Hitachi Adaptable Modular Storage 2500 automatically replicates all of our data, from Sydney to our Brisbane data centre, without any manual labour required. We just know that it’s constantly working away in the background and we don’t have to worry about it.”

Amila Elcic  
Data Centre Services Manager  
SEMA

SEMA

INDUSTRY  Services: Direct Marketing, Consulting and IT Business Solutions

SOLUTION  Enterprise Platform, Modular Platform, Virtualization  
Hardware — Hitachi Adaptable Modular Storage 2100 and 2500, and Hitachi Universal Storage Platform® VM  
Services — Provided by Hitachi TrueNorth™ Partner Frontline Systems Australia
SEMA Deploys Hitachi Storage to Virtualise 3 Data Centres and Meet Stringent PCI Standards

SecurityMail started business in 1980 as a mail house helping clients get the best results from their marketing campaigns. Today, as SEMA, it is the leading direct marketing, consulting and IT business solutions group with the largest 100% privately owned direct mail operation in Australasia. Faced with rapidly growing storage demands and strict compliance due to handling sensitive customer information, SEMA deployed Hitachi Adaptable Modular Storage and Hitachi Universal Storage Platform® VM. These systems help SEMA to better manage its data growth and regulatory requirements.

Background
Specialising in providing outsourced solutions for sensitive data projects, SEMA receives and processes data from some of Australia’s largest organisations. The company hosts and manages onsite more than 100 database solutions, which contain over 200 million records of client data.

SEMA has multiple processing sites in Sydney, Melbourne, Brisbane and Adelaide, with more than 650 staff. Customers include government and blue chip corporate clients across all vertical markets. Annually, SEMA cares for millions of pieces of sensitive customer communications through its development and execution of sophisticated, data-driven multimedia campaigns.

In 2010, SEMA won 2 state awards at the Australian Information Industry Association’s (AIIA) prestigious iAwards for delivering the My School website. The awards recognised the organisation as 1 of the state’s leading information and communications technology (ICT) innovators. The solution required the development of a data collection store for the National Assessment Program – Literacy and Numeracy (NAPLAN) results. It also required a public interface to publish the results via the web.

The Challenge: Increase Data and Compliance
SEMA’s work on the My School website alone combines and references millions of data strings. This data offers comparisons of a single school against statistically similar schools as well as all other Australian schools. Data such as NAPLAN results, school census, parent-based information and other school outcome information is collated to present an overall profile of each school featured on the site. There are ever-increasing demands on the storage infrastructure for the organisation, and it must increase its storage capacity to accommodate this data growth.

Its work with financial institutions and sensitive customer information means that SEMA has to adhere to strict Payment Card Industry (PCI) compliance and be decision support system (DSS) compatible. DSS is an interactive software-based system used to compile information from a combination of raw data, documents, personal knowledge, or business models. With that information, it identifies and solves problems, and makes decisions.

According to Amila Elcic, data centre services manager at SEMA, the organisation had to address its need for increased storage capacity. It also required a more robust infrastructure to ensure that it was fully PCI and DSS compliant.

"Operating within the direct marketing industry brings a tremendous strain on the storage requirements for the organisation and we were experiencing data growth of approximately 50TB every year, meaning we were reaching maximum storage capacity," said Elcic.

“Our virtualised storage environment makes it far easier for us to move data from server to server, across our data centres. This [environment] gives us faster access to information, and given that information and intelligence drives our business, this [environment] makes it much easier for us to meet the service level agreements (SLAs) for our customers."

Amila Elcic
Data Centre Services Manager
SEMA
“Data security and privacy at SEMA is paramount. We have over 6,000 online client users accessing these systems on a daily basis. We work very closely with government agencies such as the Australian Electoral Commission and Australian Taxation Office where protection and privacy of data is not just expected but is a legal requirement.”

SEMA wanted to virtualise the network to centralise its entire storage infrastructure across its 3 data centres. The company also wanted to implement a more seamless disaster recovery solution to its Brisbane data centre. Its existing disaster recovery solution was a fully manual process of replicating data to the Brisbane data centre, which was time-consuming and hard to manage.

In addition, SEMA was having issues with network downtime on its existing network due to scheduled firmware and hardware upgrades. The company sought to reduce these outages to prevent any impact on customers.

“With data residing in our Brisbane, Sydney and Melbourne data centres, we needed to merge these sites into 1 interactive environment for easier data management and maintenance. Virtualisation was critical in achieving this single environment.

“Any changes to our storage environment, whether firmware upgrades or new disks, meant that the network would have to go down for a period of time,” explains Elcic. “This would happen at least 5 to 6 times a year, which had a big impact on our business.”

The Solution: A Virtual Storage Environment

SEMA engaged specialist managed services provider and Hitachi TrueNorth Partner Frontline Systems to put out a tender with a number of vendors to find a solution that met its storage requirements. In an extensive evaluation process, Frontline looked at the cost benefit analysis, total cost of ownership over the next 5 years, utilisation of existing assets, a seamless transition from previous hardware, and upgradability. The result? Hitachi Data Systems came out on top.

Frontline’s expertise and knowledge of Hitachi Data Systems solutions delivered unprecedented business benefits based on this unique partnership. Frontline’s detailed design and planning workshops with Hitachi Data Systems produced customised implementation and validation test plans. The workshops enabled Frontline engineers to successfully deploy and validate the implementation services aligned with SEMA’s environment.

SEMA deployed Hitachi Adaptable Modular Storage (AMS) 2500 in both its main data centre in Sydney and its Brisbane data centre. The installations provide the organisation with up to 300TB storage capacity and the ability to expand capacity easily in line with future data growth requirements. The AMS 2500 handles SEMA’s disaster recovery replication and archiving.

Hitachi AMS 2500 is a highly reliable, flexible and scalable storage system for Microsoft Exchange Server, VMware, databases and other business applications. It provides an optimal choice for tiered and standalone storage, consolidation, business continuity, data replication, backup and archiving.

“With disaster recovery being an important part of our ICT plans, the AMS 2500 automatically replicates all of our data from Sydney to our Brisbane data centre without any manual labour required. We just know that it’s constantly working away in the back-ground and we don’t have to worry about it,” says Elcic.

SEMA deployed the Hitachi Universal Storage Platform VM (USP VM) in the Sydney and Brisbane data centres to virtualise SEMA’s entire storage infrastructure. The system also provides encryption for all customer data through AMS 2500 and AMS 2100. PCI compliance also requires all financial and credit information to be stored on USP VM, due to the advanced encryption and security that it provides.

The USP VM is regarded as the industry’s highest reliability and availability storage solution, delivering proven controller-based virtualisation, logical partitioning and universal replication.

According to Elcic, Hitachi Data Systems was the only vendor that could provide virtualisation across multiple technology platforms. Also, HDS could provide data encryption at disk level, another requirement for PCI and DSS compliance.

“The Hitachi Data Systems deployment has completely changed the way we manage our data within the organisation. Because we use hardware from multiple vendors, it was crucial that our storage was cross-compatible and Hitachi was the only vendor to bring this to the table.

“Our virtualised storage environment makes it far easier for us to move data from server to server, across our data centres. This [environment] gives us faster access to information, and given that information and intelligence drives our business, this [environment] makes it much easier for us to meet the service level agreements (SLAs) for our customers,” says Elcic.

SEMA is now able to provide its customers with the confidence that their data has 99.999% availability. Since deploying the Hitachi solution, SEMA has not experienced any downtime or outages.

“Our performance has been fantastic across all our systems, and all upgrades can now be conducted in a live environment,” explains Elcic. "In the event that 1 of our disks is expected to fail, a Hitachi technician is already onsite replacing the disks, which is the best possible support we could hope for."

“We have also been really impressed with the level of support we have received from Frontline Systems,” adds Elcic. "From all the hard work involved in the initial tender phase to the implementation of the hardware and training of our staff to use the solution efficiently, they have been a great partner for us in this roll-out.”

As part of being PCI-compliant, SEMA has video cameras located in all areas where credit information is stored. All captured footage must be stored for at least 3 months, which has a significant impact on
storage demands. A Hitachi AMS 2100 was deployed in the Melbourne and Adelaide offices to handle the data produced by the video recording component.

SEMA Looks Forward

With the new Hitachi solutions in place, SEMA has a clear storage strategy in place. It can now move forward with plans to implement its virtual computing environment with VMware View, which is VMware’s desktop virtualisation and desktop management software. VMware View provides all staff with faster access to information from any of its sites in Australia.

“We now have the scalability and flexibility to accommodate our current and future storage requirements, said Elcic. “Of greater importance is that we are able to meet our strict PCI compliance on all levels to help us provide our customers with unrivalled data availability and performance.”