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 Co-ordinator of Information Systems
 Southern Grampians Shire Council*



The Southern Grampians Shire Council

INDUSTRY Government

SOLUTIONS *Modular Platform, Green Solutions*
Hardware — Hitachi Adaptable Modular Storage
Services — Provided by Hitachi TrueNorth Channel Partner and Technology Solutions Provider Sykes Data Storage Pty Ltd

The Southern Grampians Shire Council Landscapes Greener IT Environment with Hitachi Storage

The ten towns of the Southern Grampians Shire Council in Victoria, Australia, enjoy a breathtaking landscape — ancient volcanoes, meandering rivers, waterfalls and rolling pastoral lands — surrounded by the Grampians mountain range. But despite this tranquil setting, the IT operations for this region have experienced serious pressures to keep up with new online access requirements and accelerated growth of data. To smooth operations, the Southern Grampians Shire Council chose to centralise its storage environment on Hitachi modular storage.

The Southern Grampians Shire Council is made up of the towns Hamilton, Balmoral, Branxholme, Byaduk, Cavendish, Coleraine, Dunkeld, Glenthompson, Peshurst and Tarrington spread over an area of 6,810 square kilometres. While the outdoor setting is beautiful, Co-ordinator of Information Systems Peter Barras confirms that managing the local council's storage needs is no walk in the park.

A push to increase resident access to online council data and the greater mobility of the workforce impacted the availability of planned downtime to undertake necessary capacity upgrades and nightly backups. System availability became compromised due to data backup procedures that required the IT department to shut down servers for three to four hours daily, downtime that greatly impacted user satisfaction levels.

Another pressure was growth: the growth in

the amount of data that needs to be stored and the growth in applications that the business requires IT to deploy and support. This, in turn, drove growth in the server and storage infrastructure. With a decentralised server environment composed of direct attached storage, the council was continually struggling with a lack of storage capacity to meet its growing demands.

These elements also impacted collaboration within the council; sharing information was becoming a challenge due to the lack of storage space for business critical information.

Barras was keen to implement a solution that would consolidate the council's business critical data assets, including email, databases and proprietary local government applications, bringing them under control from one central location. This data includes databases for town planning, building application, information on community

events, waste management, street and road maintenance and environmental control.

Getting Started on a Centralised Infrastructure

The Southern Grampians Shire was faced with the problem of having no room for growth on its existing decentralised server infrastructure and realised a significant change needed to occur before the growth spiralled out of control.

Barras went in search of a new approach to their data management requirements. In May 2007, Barras started work on a project to centralise The Southern Grampians Shires' storage infrastructure. He was keen to overhaul the way the council accessed, shared and used its databases in order to better support employees and residents.

Barras first involved a specialist storage partner to assist the council with the selection process. Sykes Data Storage (SDS), a Hitachi TrueNorth Channel Partner, was involved based on their expertise and specialisation within the storage backup and recovery arena, as well as their thorough knowledge of the local government IT department requirements. SDS focuses on functionality versus cost and a high level of support and delivery services. This provided The Southern Grampians Shire peace of mind in knowing they were being delivered a long term solution.

After assessing different hardware solutions, Hitachi was selected for its best-in-class technology platform and strong reputation for partnerships in the storage industry with a VMware server virtualisation layer.



With Hitachi Adaptable Modular Storage...

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SDS recommended this solution based on an enterprise grade, scalable, high performance solution with a clear upgrade path to account for future growth.

“We were looking for a small storage area network (SAN) at around US\$50,000. At that price, iSCSI seemed like the best option,” explains Barras. SDS a storage specialist company recommended a Hitachi modular storage system, which is Fibre Channel rather than IP based. “Hitachi offered a much faster, high performance solution than competitive iSCSI systems, and within the same price range, so the decision to select Hitachi was a ‘no-brainer,’” Barras recalls.

The Hitachi Adaptable Modular Storage is a scalable, high-performance and high availability system from Hitachi Data Systems. Hitachi engineering heritage delivers a highly available and redundant architecture that guarantees the data is safe and accessible at all times.

The first phase in the implementation was to centralise the storage to create a robust and highly flexible storage infrastructure. The implementation and migration of business critical data for the council to the new SAN was completed in only two days and was overseen by Barras and SDS.

The second phase focused on high availability, redundancy and disaster recovery. This involved creating a redundant infrastructure and eliminating single points of failure. VMware was also implemented to consolidate the multiple operating systems on one server.

Seeing the Financial Benefits of Centralisation

By May 2008 the full project was complete. Since implementing the centralised storage and virtual server environment Barras has seen several areas of financial benefit.

Management costs associated with their server and storage environment were reduced. Fewer physical servers and centralised storage have decreased management complexity and cut operational costs for the organisation, freeing up time for the IT department to focus on new projects.

The consolidated environment is more environmentally friendly and cheaper to run, consuming less power and requiring less cooling. This is important as the government department knows that it holds a responsibility to meet impending greenhouse targets.

Finally, since the implementation, The Southern Grampians Shire has achieved higher utilisation rates in its storage environment. Sharing a common pool of storage dramatically improves storage utilisation. This, in turn, lowers capital expenditure, as less capacity is required to be purchased as the organisation grows.

Improved Service Levels for the Council

When conversations began with Sykes Data Storage, the council was storing a terabyte of data and struggling for space within their existing environment. In the past 12 months the council’s capacity requirements have doubled; however, the new infrastructure has easily allowed Barras to accommodate this growth by simply extending the partitions for increased disk space without impacting application availability and still providing additional room to grow.

In addition to the council’s ability to seamlessly manage growth, now, when it wants to back up its data, there is no downtime at all. The simplicity of a single backup and restore platform has also enabled rapid recovery of the server environment; if one of the servers fail, the IT department can simply reassign the partition to another server, making it available again in minutes instead of the hours previously required to recover the data from tape.

Based on the strong Hitachi Adaptable Modular Storage foundation, the new SAN alleviates storage management workload from the servers, helping to provide better performance for the applications that drive the council’s operations. In addition, high end features such as cache partitioning and RAID-6 help maintain maximum availability and fault tolerance so the council can meet application requirements for availability and performance in a small footprint, regardless of how quickly

its data grows. The Southern Grampians Shire has seen immediate performance improvements in the access times to residential information and planning files.

“We have seen the performance of the councils’ applications greatly increase and this has alleviated previous IT backup issues. This in turn has meant the services delivered to the public by the council have improved, creating a win-win situation for all parties,” Barras explains.

Looking Forward

Looking beyond the implementation, Barras feels he has the perfect solution in place to ensure the flexibility he needs to be prepared for future changes and the requirements of the council. Barras intends to use the current infrastructure for the next five years before reassessing the landscape.

“We have been particularly pleased with the level of support and assistance from the SDS and Hitachi Data Systems team,” he said.

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