

Entity Solutions' exploding server proves the value of Tandberg Data's Data Protection solutions

It took just three months for Entity Solutions, an Australian leader in the professional engagement services industry, to prove the value of a continuous data protection solution based on Tandberg Data technology. The crunch came on Australia Day this year, January 26. While the temperature outside in Melbourne soared past 40C°, one of the company's data center servers was also overheating and eventually blew up and caught fire.



Thanks to a multi-tier networked backup and recovery solution designed and implemented by Computer One Pty Ltd three months earlier, the company was up and running again within 1½ hours. With the previous setup, the head office system would have been down for at least three days.

Founded in 1999 and servicing Australia nationally with offices in Melbourne, Sydney and Brisbane, Entity Solutions combines consulting, management, engagement and migration services to eliminate the burden of concern and time outlays between Independent Professionals (IPros) and the organizations engaging them.

Entity Solutions maximizes financial reward for stakeholders, ensuring them a compliant, risk free and fully optimized relationship, enabling them to enjoy the freedom and control needed to focus on what they do best.

Backup Challenges Highlight Changing System Requirements

In recent years, Entity Solutions' achievements have been recognized by range of national industry awards and accolades from corporate Australia. Since the company was founded in 1999, business has grown steadily to the point where its servers at head office hold critical data on more than 3,000 customers and internal staff and consultants.

"We were relying on a very small infrastructure, basically a centralized computer which had been serving all the company's terminals on a single network," says Network Administrator, Vinayak Sharma. "It had design problems which left us without a reliable backup solution." The company needed to support off-site replication, but was unable to do so. When the main server failed and backup system broke down at Christmas 2003, disks had to be sent to a forensics specialist before data could be retrieved.

After this experience, Entity Solutions began upgrading its technology, initially moving from a single server to additional machines. But Vinayak Sharma recognized that the company still needed to backup all its data and applications offline.

Solution Overview



-  **2 x Viking FS-1610 NAS**
-  **1 x StorageLibrary T40**
-  **Falconstor Replication Agent**



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**Vinayak Sharma, Network Administrator
Entity Solutions Pty Ltd**



The company called in Tandberg Data reseller Computer One, which designed and implemented a multi-tier solution comprising two wide area networks (WANs), one at head office and the other serving a second data center in the company's Brisbane office. The solution incorporated real-time data replication. Existing virtual private networks (VPNs) were able to give unlimited data transfers.

Two Tandberg Data Viking FS-1610 NAS (network-attached storage) servers, each with 4TB capacity, hold data for each WAN, while backup and restore technology in the form of Tandberg's CDP – Continuous Data Protection—solution supported by FalconStor's Replication Agent provides the offline safeguard. Computer One also installed WAN acceleration and compression devices in combination with a Wide Area File System.

According to James Walker, CEO of Computer One, his technical team approached the solution from a needs point of view and Tandberg Data products fitted the bill perfectly on the basis of reliability, flexibility, pricing and support.

"Too many people talk about one product being the perfect solution for all IT needs. In reality virtualization may not tick all the boxes, or thin client application delivery doesn't do what you need it to do in all areas," said James Walker. "Sometimes you need to fit the technology to the company, as well as the company to the technology, and the foundation of any IT system is the storage and archive platform. We worked closely with our distribution partner Datastor Australia Pty Ltd to customize and design a solution specifically to suit their business case. Datastor has a like-minded ambition to deliver solutions and exceptional customer service. For this solution we combined the benefits and features of physical hosts, virtualization, thin client, client/server, WAN acceleration and wide area file systems to build an infrastructure that made Entity Solutions productive, and to keep them that way. The foundation of this system is solid reliable storage"

Flexible Solution to Protect all Areas

Entity Solutions' Vinayak Sharma recalls: "We needed a flexible solution to protect all areas—not just applications and customer systems. As well as our main Oracle database server, we had to backup our Exchange servers, file servers and terminal servers."

The new solution takes regular snapshots of Oracle volumes at head office, and replicates these at the Brisbane site. Similarly it handles the Exchange environment and file servers with the help of VMWare for virtual backup. This way, all systems data is protected at customer-defined intervals, with agreed recovery point objectives and time objectives. Variables considered by Entity Solutions included how far back to go to recover data, and how quickly a redundant system would be back online. The company agreed to backup all its data every 40 minutes.

An additional Tandberg StorageLibrary T40 tape library installed at head office allows Entity Solutions' staff to backup their data to tape. The CDP solution achieves this without accessing the local server disks, thus increasing the backup speed without impacting physical server performance (Zero Impact Backup). In the event of data corruption, a snapshot can be mounted and its data made available to the system within seconds.

The new Continuous Protection Solution went live in October 2007, just before Entity Solutions' (non-TD) NAS server blew up in January 2008, compromising all virtual servers and data. "The data replication process worked well, and our investment paid off big time when our server blew up and caught fire," said Vinayak Sharma.

Delivering Absolute Peace of Mind

"The Tandberg Data system had us up and running again in 1½ hours and we lost only 40 minutes' worth of data," said Vinayak Sharma. "The restore would have been faster, but for communication issues unrelated to the data protection solution. With our previous setup, our head office system would have been down for at least three days, severely impacting on our business and damaging our reputation for exceptional customer service. The episode certainly vindicated our management's investment decision."

Since then, the data replication process has been error-free. The system ensures that Entity Solutions can never lose more than 40 minutes' worth of data, and management, staff and clients are comfortable with that outcome.



Sharma says he has 100 per cent confidence in Computer One's capabilities, and they in turn expressed 100 per cent confidence in Tandberg Data's technology. He comments: "Initially I asked Computer One if there was a second data storage vendor whose offering we could compare, but they insisted that Tandberg Data's products were rock solid and backed by exceptional support and service. So we took their word for it and the choice has been a good one. Now if I ever have to recommend storage gear to someone, the vendor will be Tandberg Data."

How Computer One Evolved a Complete Solution

Computer One CEO James Walker says the company assesses the needs of each customer individually, since each has different requirements and expectations for recovery points and recovery time. A consultant needs to flesh out core business needs and combine those with the optimum point for building a cost-effective solution that delivers productivity and peace of mind.

In this case, peace of mind lies in the ability test the CDP and DR regularly. Our consultant works with specialists at Datastor and the vendors to deliver the outcome. We value that relationship, and see it as essential to delivering a tested and productive solution."

Entity Solutions presented a number of requirements to Computer One. Top of the list was protection of the main application server on an Oracle Database. They wanted CDP, and WAN replication with built-in local redundant hosts and a host in the remote data center. Apart from a similar DR and CDP solution for the other servers, they wanted to move from thin client to a traditional client/server model over a 2Mb WAN. It was challenging, but Entity's people were prepared to work with Computer One to design, implement and test the solution from start to finish.

The Tandberg Data Viking FS-1610 NAS unit is being used as a RAID array storage unit on an iSCSI SAN. The end result is a totally flexible storage platform able to mount, replicate and snapshot the raw disk LUNs no matter what the platform or operating system. Computer One used the onboard Windows 2003 Storage Server operating system for Windows file store operations and volume shadow copy, then combined this with the Falconstor CDP Products to produce a system capable of near instant volume restores.

The Tandberg StorageLibrary T40 was the final piece in the puzzle—a high capacity tape library with high throughput to backup the volume of data, including point-in-time snapshots. The T40 represents both the final line of defence in the recovery strategy, and the long-term data archive. It is a flexible and scalable tape library offering features normally associated with more costly devices. It allows Entity Solutions to add slots and tape drives as required in future while easily meeting their network objectives today.

Clearly the Tandberg Data Continuous Protection Solution is playing a key role in supporting Entity Solutions' key branding message: "We deliver absolute peace of mind."



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Vinayak Sharma, Network Administrator
Entity Solutions Pty Ltd

www.entitysolutions.com.au
www.computerone.com.au
www.datastor.com.au
www.tandbergdata.com/apac

About Tandberg Data

Tandberg Data is a leading global supplier of backup and archiving technologies. Tandberg Data offers a complete range of tape libraries, tape autoloaders and tape drives (based on the LTO™, SLR™, VXA® tape technology platforms), storage software, data media and disk-based storage such as the RDX™ QuikStor. These solutions are marketed exclusively through a channel of qualified resellers and distributors. These solutions are underpinned by OEM agreements with major server manufacturers including IBM, Hitachi, Fujitsu, Fujitsu-Siemens, Apple and Dell and supported by all major operating systems and storage software applications to operate in heterogeneous network environments. All solutions are designed to meet the growing storage requirements of small and medium-sized organizations with scalability, reliability and backward compatibility features that ensure cost effective operation and long-term investment protection.

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