



Reduce Complexity

Improve Flexibility

Service Catalogue

Enable Automation

## Trowers & Hamblins selects Tectrade for its innovative IBM SAN solution

### Challenge

Accelerate backup of business-critical data; enable near-real-time replication of data to disaster recovery site; enable a single point of control for backup and recovery of data; significantly increase scalability of data storage infrastructure.

### Solution

Trowers & Hamblins worked with Tectrade to implement two SANs based on IBM hardware and software, one for production systems and the other at the company's disaster recovery site. IBM SAN Volume Controller provides asynchronous data replication between the two sites.

### Benefits

Virtualised storage capacity can be moved and expanded on the fly, with no interruption to the business; more efficient use of existing and new capacity will reduce long-term costs; new SANs offer significant increase in data read/write performance; backups can be completed outside office hours; data replication ensures faster recovery in the event of disaster.

**Infrastructure Objectives**

**Storage Consolidation**

- Centralised Storage
- Mid-Range Disk
- Replication
- Storage Virtualisation

**Data Protection**

- Enterprise Backup & Recovery

**Key Deliverables**

- Storage moved & expanded on the fly
- Improved utilisation
- Rapid failover to second site
- Improved flexibility and scalability
- Faster and more reliable backup & recovery

**Trowers & Hamblins is a major law firm based in the City of London, with further UK offices in Exeter and Manchester, and offices in Abu Dhabi, Bahrain, Cairo, Dubai and Oman. With a client base that spans the private and public sectors, Trowers & Hamblins offers services covering virtually every aspect of commercial law.**

Aiming to accelerate data backups, improve data recoverability, and enhance the availability of core business systems, Trowers & Hamblins worked with Tectrade to deploy a mirrored SAN infrastructure. The solution uses asynchronous replication with IBM System Storage SAN Volume Controller storage virtualisation software, enabling the Trowers & Hamblins backup site to track the production site almost in real time through a relatively low bandwidth connection.

Bob Greenwood, IT Manager at Trowers & Hamblins, comments: "The Tectrade and IBM solution has given Trowers & Hamblins a more scalable storage infrastructure that offers better performance and more reliable backup."

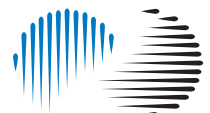
### Growing pains

Data volumes at Trowers & Hamblins were already increasing rapidly when the organisation took the decision to migrate its email from Novell GroupWise to Microsoft Exchange. The aim was to take advantage of better integration between the MS Outlook mail client and the company's content management system, but the side-effect was a sudden massive increase in the volume of mail and attachments.

"We had outgrown our direct-attached storage model, which lacked the capacity, performance and reliability to support the growing business requirements," recalls Bob Greenwood. "Our overnight backups were already running well into the following working day, and there was no easy or accurate way to plan our future storage capacity."

**"This solution has given a more scalable storage infrastructure that offers better performance and more reliable backup."**

*Bob Greenwood, IT Manager, Trowers & Hamblins*



**TECTRADE**

Trowers & Hamblins was fighting the rising tide of data by adding more and more disks to individual servers in its data centre, and as a result the processes for backup and restore were becoming more unwieldy, time-consuming and unreliable.

Says Bob Greenwood, "We wanted to replicate our business-critical data from the London headquarters to our disaster recovery site, and it was clear that a storage area network [SAN] solution was the best option."

## Selecting the new solution

Trowers & Hamblins approached IBM for advice and was directed to Tectrade, an IBM Premier Business Partner and storage expert. Following a competitive tendering process with two other providers, Trowers & Hamblins selected the proposed Tectrade solution as offering the highest quality and the closest fit to the business requirements.

"Tectrade's proposal showed an excellent appreciation of the need to mitigate risk during the crucial data migration stages," says Bob Greenwood. "Another factor in our choice was Tectrade's specialist focus on backup and recovery – the other vendors had a broader, and potentially shallower, range of skills."

Working with Tectrade, Trowers & Hamblins implemented two SANs. The IBM System x servers in the production SAN are connected to an IBM System Storage DS4700 with Fibre Channel disks via dual IBM System Storage SAN Volume Controller (SVC) nodes. The SAN includes an IBM System Storage TS3310 Tape Library, and a multi-protocol router that converts the Fibre Channel traffic to IP for transmission to the remote backup site. At the backup site, Trowers & Hamblins runs virtualised servers under vmware, dual SVC nodes, an IBM DS4200 Express with SATA disks, and an IBM 3582 Tape Library.

Says Bob Greenwood, "Tectrade helped us to migrate all the data without the end users even noticing. The planning was excellent, so we knew exactly what to expect, and the migration was surprisingly quick and easy."

## Asynchronous replication with SVC

Tectrade set up asynchronous replication between the two sites via SVC, the first time this approach has been taken in the UK.

"The ease and reliability of the SVC replication is astonishing," says Bob Greenwood. "The replication technology is built into SVC, and it gives us a single point of control for management, regardless of how many servers are actually being replicated. The second SAN tracks about five minutes behind the production environment, and since we were expecting a delay of more like 30 or 40 minutes, there is plenty of headroom for the data volumes to grow without requiring us to upgrade the existing 100Mbit/s line."

SVC will also offer significant advantages in the future, providing a shared pool of storage that can be expanded at low cost and non-disruptively. Furthermore, the large SVC disk cache increases the speed of access to data, enabling better service to end users and faster backups.

## Faster backup and recovery with Tivoli

With the introduction of the IBM SAN technologies, Trowers & Hamblins has established a future-proof infrastructure and enabled remote replication of business-critical data. The organisation has also dramatically increased the speed and reliability of its backup procedures.

The overnight backup that previously ran until 2pm the following day can now be completed by 9:30am. The use of IBM Tivoli Storage Manager has reduced the total backup set from eight to three tapes, saving time and reducing media costs. The speed has also improved on the recovery side: in many cases, small recovery jobs can be handled from the disk storage on the TSM server, without the need to go back to the tapes.

In addition to designing and configuring the Tivoli solution, Tectrade ran training courses for Trowers & Hamblins staff, and now provides ongoing support for both hardware and software in the SAN environments.

## Virtualised benefits

With direct-attached storage, Trowers & Hamblins could not easily predict where growth would occur on the network, and could not accurately plan the storage capacity on any given server. "One server could easily run out of capacity at a critical moment, while another might have spare capacity going to waste," says Bob Greenwood. "With storage virtualisation, any storage capacity added to the pool can be shared across all systems, and re-shared whenever the business requirements change."

He concludes, "The likely cost savings in the future are significant, but the main benefits of the IBM and Tectrade solution are the scalability and reliability. We now have a firm basis on which the business can grow."

## Vendor Alliances on this project

Cisco  
IBM  
Tivoli

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