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Critical business networks

SANs frontières

Data storage is no longer the expensive telecom answer to the cupboard under the stairs. SANs are becoming more accessible.

written by Ouida Taaffe

The cluttered stair cupboard is, of course, not a very good analogy for data storage networks. Firstly, data stored by companies is not there simply because no-one has gotten round to sorting through it — at least, that's the theory. Secondly, companies need to be able to access that data through more than one route, safeguard it, and meet increasingly stringent legislative requirements. Many companies are, increasingly, little more than the sum of their data.

Legislative developments without an obvious data storage requirement, such as the Basel II accord, which comes into force at the end of 2006, are also expected to have an impact on how data storage develops. Basel II increases the capital requirements on banks — that is the amount of capital backing exposure to risk. This, in turn, puts pressure on them to reduce the amount of capital they keep tied-up in back-office processes, such as IT and data storage.

Traditionally, financial institutions and very big corporates have done data storage in style with fibre channels into a dedicated storage area network where the information sits in splendid — and secure — isolation. Costing — which was prohibitive — was per port. Telcos, for obvious reasons, are also big users of storage solutions. SMEs were hardly present in the market for the high end storage offer.

Not just cheap

"This is just starting to change," argues Brian Garrett, a technical director with analysts Enterprise Strategy Group, based in Milford MA. "In the next 3-5 years, all big enterprise networks will be connected to SANs." They will not, however, necessarily be connected by fibre channel. By using iSCSI (pronounced I-scuzzy), an ethernet protocol, companies can connect to SANs using Ethernet switches that "get you in for under US\$100 per port", says Garrett. This is around a quarter of the cost of a fibre channel port. Using iSCSI is also less complex than using fibre channel, though vendors are working on making fibre channel SANs more accessible. Hewlett Packard, Microsoft and Qlogic, for example, recently introduced a 'SAN in a box', which was not only significantly cheaper than previous SAN solutions — at around US\$10,000 for the whole thing (some big implementations can start at US\$200,000) — but also much simpler.

Complexity is a key issue for many customers, not just the little guys. "Organisations can sometimes believe that they will buy a technological solution and that this will encompass a complete deal for their environment," says Grant Goodman, principal consultant at Equant. "When it comes down to it, they may not have the processes in place, or be able to contact all the vendors to get it in place."

Equant aims to help its enterprise customers with disaster recovery, not just storage per se. It can, if necessary, switch its customers onto an entirely different network while primary infrastructure is being restored. Data is mirrored in geographically distinct locations. "What Equant offers is the ability to use the network to put disaster recovery within the cloud,"

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says Goodman. This means that, instead of having local storage that is not accessible across the organisation, the stored data becomes centralised.

A long-standing problem with SANs is that "they are really most useful within a small area like a data centre", points out Graham Titterington, an analyst with Ovum. This is because fibre channel connections are limited to a range of around 10-15km. The use of IP protocols like iSCSI is expected to change this, as IP can be used across the WAN. "SANs are really a technology for large companies," says Titterington, who argues that the use of IP protocols make it easy for service providers not only to extend the SAN, but to offer lower volume storage products. "Theoretically, it could right down to the retail level — via ISPs," says Titterington. Of course, these storage solutions would not be quite so exclusive as those taken by big corporates, who tend not to share storage space. This is partly because security on a disk is not watertight, but also because corporates can physically move disks they wholly own in a disaster recovery scenario.

"Multinationals are far more fixed and focused on dedicated storage infrastructure," says Mike Newman, director of global applications services at AT&T, which focuses on the multinational market. "Particularly for their primary storage solution." However, asAs things stand, even big corporates watch the pennies when it comes to SANs and disaster recovery. "It is not until companies are actually hit that they recognise the value of disaster recovery," says Goodman. "The day before a disaster, they are not willing to spend [on disaster recovery] at all. The day after, they would hand over the entire IT budget."

AT&T addresses cost-consciousness by having a variety of storage packages, and offering them as part of an enterprise solution. "For customers running a small data centre is incredibly expensive, what our customers benefit from is scale," argues Newman, who says that AT&T is to make an announcement on connectivity between client data centres and AT&T data centres in the New Year.

All of the operators stress that they do not, as Goodman puts it, try to "work on fear". The main selling point is greater value for money — a recurring theme. Companies still back up on tape because it is the cheapest option, particularly for data that is non-volatile. "People will still be using tapes for the next few years," says Goodman. However, he also points out that "for some, email is the corporate memory, and they don't want to develop corporate amnesia".

Corporates, of course, though an important segment of the market, are not the main consumers of high-end storage. Telcos and financial institutions are — and they deal with truly heroic quantities of data — some of which must be kept for many years. Much of it, however, is of high value to the organisation for a relatively short period of time, which means that they also fall back on non-network storage for less critical data.

However, "the price points for disk compared to tape are getting very, very close," says Chris Johnson, director of telco global sales, EMEA, at EMC, the information storage and management specialist. Also, the market is shifting towards a new type of large-scale data consumer — the media companies that will be providing content to telcos. "For a lot of content providers, the telcos will be custodians of that content," points out Johnson. "We have not done a specific study of this particular vertical; however industry analysts are predicting the iSCSI/IP SAN market opportunity to grow to some US\$2.8 bn in the next 24 months. We expect an increasing share of this will be in the media vertical," says Paul Silver at Intransa, a producer of IP SAN software that runs over ethernet.

Silver points to Intransa's ability to find investors as proof of just how promising the IP SAN market is. Intransa, which was founded in September 2000, has raised US\$74 m and is fully funded. "We have a bit of a war chest," says Silver. The company expects to go public, though no time-frame has been given.

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