

# IS YOUR INFORMATION STORED SECURELY?

It's time to get creative in the way we store, backup, restore, and archive our information, argues Guus Leeuw jr, President and CEO of ITPassion Ltd

**DEAR READER,** last month I wrote about data security and touched briefly on the backup and restore capabilities within one of IT Passion's products. Now it's time to discuss another important aspect of IT infrastructure: data storage, backup and restore, and archiving.

Every piece of electronic information needs to be safely stored to guarantee future access. You'd also like that data backed-up in case disaster strikes, so you can quickly restore and access it again. And, in some cases, you may need to keep information secure for up to seven years.

## BACK UP AND RESTORE

Let's focus on backup and restore for a moment. Most often, data (or even a complete system) is backed up for disaster recovery purposes. The backup tapes may be sent off-site for safe storage and, if required, quickly returned to restore lost data. But what may happen during the storage period is often uncertain.

Most tapes sent for off-site storage contain some form of catalogue to identify the tape and its contents. In extreme cases of original data loss, the catalogue must hold enough information to retrieve all the stored data properly, especially if you have to install a complete new IT environment following a major disaster.

For example, backup solutions conforming to the Network Data Management Protocol (NDMP) standard might utilise a pre-described method to store data on tapes in the form of well-quantified storage records. Anybody with an appropriate reader might potentially retrieve the data off the tape and then attempt to inspect it.

Stored tapes are therefore an unrecognised security risk, especially given the public's concern about recent incidents involving lost data. It would be best to encrypt the backups so that even a determined hacker was unable to read a tape's contents. That seems an important consideration given many government agencies deal with so much private data these days.

## SHIPPING DATA TO FAR-OFF LOCATIONS

Equally important is the fraud often mentioned in the news: discarded computers shipped to some far-away location for recycling. Their hard disks may be trawled for private data such as credit card and other useful information. This may then be used to take money from credit cards or bank accounts. It would be very useful to have a little programme to wipe all the data securely off a PC's hard disk before disposal.

Governments around the world have taken

action to support this kind of security: US Air Force System Security Instructions 5020, GCHQ's CESG, Germany's VSITR, and others. Good security tools aren't hard to find although, generally, they're not free. In my opinion, governments should do much more to promote their wider availability.

## DATA STORAGE INFRASTRUCTURE

Now let's think about a part of the data storage infrastructure which is mostly forgotten (but is very critical): the fibre optic network between servers and storage.

Virtualisation breaks the links between IT components – like servers and storage – so they can be re-purposed in a more logical or efficient way. But with current trends to reduce the carbon footprint and save the planet, there's another aspect of virtualisation even more critical to business. It's cost savings. Did you know that you can slash your annual IT costs by at least 40 percent when opting for a virtualised server environment? You need less hardware (always the biggest cost) and you'll spend less



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on power and cooling too.

While virtualised environments support much more work as the underlying physical layer gets more powerful, a faster and better access to back-end storage systems is also required.

Speeds of up to 8 Gbps are not unheard of within a storage network and even storage devices themselves may support 8 Gbps connections. Do you need that bandwidth? Not always. But if you're supporting several I/O-intensive guest servers, you might be surprised how much more throughput you can achieve with 8 Gbps compared to 4 Gbps.

Running at these speeds, implementing Microsoft Exchange environments on virtualised hardware is very possible. That's especially so if you can achieve end-to-end, virtual server to storage guaranteed data paths – as if the virtual environment was a physical environment.

## SHARING KNOWLEDGE AND SPACE

Providing hosting for multiple government agencies starts to become feasible too. If all agencies within, for example, a county, put their IT together, great things happen to the overall running costs. Sharing knowledge and space seems a good strategy, especially as the public's attention is on reducing government expenditure and increasing the success of IT projects. Lastly, there's the reduction of carbon footprint which is strongly supported by government itself.

Overall, there are many good ways of improving storage, backup and restore, and archiving. It's time the IT industry became creative.

## FOR MORE INFORMATION

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