

Tiver Launches the Least Expensive Online Backup and Fastest Restores of Large Exchange Implementations



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Online Disaster Recovery and Business Continuity for Exchange

Tiver provides different systems for the online backup and recovery of Exchange. But we keep asking:

1. Can we reduce costs?
2. Can we improve Exchange protection?
3. Can we improve Exchange performance?
4. Can we make it simpler?
5. Can we guarantee faster restores of very large Exchange information stores?

The answer to the above question is "Yes". The reason is that our latest solution is not just backup for Exchange.

The Service

Tiver have launched a new, revolutionary service to store, manage and protect Exchange, at cost savings of 80% more than any solution we have offered in the past.

This solution is targeted at clients who have up to 700 Exchange users, and up to 4.5TB of Exchange and other data. Thousands of businesses within the M25 will take advantage of this new service.

The key to this new service is that we provide you with the disk storage arrays for both your onsite primary storage of Exchange, and the online hosted backup.

Costs

Typical costs are pence per GB per month for everything: primary storage and the online hosted backup data, software, implementation, connectivity, support, and even emergency restores. This is in contrast to pounds per gigabyte per month for our traditional online backup services.

Monthly costs are 100% tax-deductible and there are no large up-front capital expense costs. If your data requirements grow, you can upgrade to higher capacity storage arrays at no penalty, just slightly higher monthly costs. Please see the online calculator for exact costs.

Background

A little background information will help you understand why we can only now offer such a great deal.

Most UK businesses protect Microsoft Exchange data the way they did ten years ago, i.e., backup to tape every night and store the tapes offsite. The reason has been high costs compared to risk.

A good example is NetApp. For years, NetApp has been voted one of the best Microsoft partners for the ability of their storage arrays to replicate and snapshot Exchange. But a medium-sized business typically finds it difficult to cost-justify a figure approaching £20,000 for one 1TB NetApp disk array, let alone two arrays for offsite replication.

What has changed to make the situation better for you? NetApp has formed a new division called StoreVault. StoreVault provides world-class NetApp disk storage arrays and Exchange solutions, but not at NetApp costs. Learn more at:

<http://www.tiver.co.uk/onlinebackup/Exchange/index.asp>

Tiver has bundled in a number of valuable services with StoreVault for Exchange protection, and provides it all at a simple per GB per month price.

“The Catch”

What's “The Catch”? Certain applications, such as snapshots for Oracle, are not supported. For Oracle snapshots, you still need to shell

out tens of thousands of pounds to buy NetApp. Or spend more than three times the cost to use our online Oracle backup services.

But, if protecting Microsoft Exchange is your top priority, Tiver and StoreVault offer the best online storage deal in the UK. See the final section below for how to work around "The Catch".

Tiver Limited incorporates StoreVault into multiple levels of Exchange protection. We will tailor a solution to meet your requirements and budget. Ring us now on 0207 700 1429 to learn how we can make this service work for you.

Level One of Exchange Protection Primary Storage, Snapshots and Backup to Tape

Tiver provides you with one StoreVault S500 unit, with up to 4.5TB of usable disk capacity. The StoreVault unit is a 2U rack-mount unit with up to 12 SATA disks. Disk capacities are 250GB, 500GB or 750GB.

The StoreVault unit is a high performance system that can be configured as either iSCSI or Fibre Channel. The unit will easily handle up to 700 Exchange users and provide up to 4.5TB usable capacity using RAID-DP, i.e., up to two disks can fail with no data loss.

Tiver consultants will work with you to centralise your Exchange and other data to the StoreVault unit. Three days of on site consulting are included, but most clients are up and running in a day.

Level One introduces enterprise-class NetApp technology to protect Exchange, such as snapshots and NDMP backup. Over the years, NetApp has invested hundreds of millions of dollars to perfect this Exchange protection for the largest Exchange users on the planet.

It is almost magical how this new system let's you instantly restore an Exchange database from a snapshot made an hour or a day ago. The StoreVault unit is sized so that, at the least, you will have one week's worth of snapshots. From this point on, you will probably never restore Exchange from tape again.

NDMP (Network Data Management Protocol) means that tape backups can be made from the StoreVault unit to a directly attached tape drive, without the need to transmit data over the network. An NDMP Option may be needed for your backup software, and we can include this for a slightly higher monthly cost. NDMP is the equivalent of the Holy Grail of backup for IT administrators, because there is no impact on the network for backup.

Level One includes 7 x 24 x 4 hour on site response for service of any hardware faults of the first StoreVault unit.

Level One is the first step up in improved Exchange protection, and key to: higher performance, quicker restores of Exchange, and the fastest possible backups. If the budget is tight, you can start with just Level One, at a lower per GB cost, and add Level Two later.

Level Two of Exchange Protection Replication & Disaster Recovery

Tiver provides you with a second StoreVault unit. Exchange and other data will be replicated to the second unit, at high speed, at your offices. The second unit is then placed offsite in the secure Tiver data centre, where data continues to replicate, up to once an hour.

You are provided with a dedicated ADSL circuit and firewall. The standard circuit at Tiver, which is included in the price, is 8Mb backup speed, and 448Kb restore speed. This is the most secure environment possible as there are no other internal or external connections to your dedicated StoreVault unit and circuit.

All data that is transmitted to or from the StoreVault unit is encrypted. The StoreVault unit itself cannot be accessed without your personal password. Tiver does not keep a copy of your password, so if you lose it, you will not be able to recover data from the second StoreVault unit

The included NetApp replication software is clever and transmits only delta-block changes, so large Exchange information stores of thousands of gigabytes are typically supported with the basic circuit speed. If a higher speed connection is required, on either Tiver's or your side, it can be upgraded at a slightly higher monthly cost.

What happens if you need to restore a few files, emails, or attachments, and they are not available on the first StoreVault unit? Simply point and click as normal to the online volume, and restore your files over the wire.

What happens if you lose hundreds or thousands of gigabytes of data? We have about half of London's backup tapes in our vaults, and a fleet of vans and drivers that will return the second StoreVault unit anywhere within the M25 within two hours, 7 x 24.

We have proven this 7 x 24 capability for over 20 years. What happens if you need us at 4:00 AM on Christmas morning? Not a problem. We know, because it happened last year. Our emergency staff live within

walking distance of our data centre, which is less than one mile from The Bank of England.

Level Two protection includes the costs of up to one emergency delivery of the second StoreVault unit per quarter, 7 x 24.

High-speed disaster recovery of large amounts of data is where this new service really shines. As far as we are aware, every other online backup solution on the market uses delta-block technology in such a way that it makes it painfully slow (typically 10GB per hour) to restore large amounts of data. The StoreVault delta-block backup is the actual replication of entire files, and is the best way we know to guarantee line-speed restoration of very large Exchange information stores.

Level Two is the most cost-effective, business-class online backup and disaster recovery solution for Exchange in the UK. We know, because we have been providing four other types of online backup for Exchange for the past three years.

Level Two is also the simplest and easiest to use system that we offer. Setting up a replication policy with StoreVault is about as complicated as setting an appointment in Outlook.

For those who pay high costs for offsite tape storage, Level Two also introduces a compelling new service called Managed Media. A tape drive or library can be connected directly to the second StoreVault unit located in the Tiver data centre. NDMP means that tape backups can be made directly to the attached tape drive, without the need to transmit data over the network.

Our team of Managed Media operators are trained with military precision to insert and remove tape cartridges, both at regular intervals, and for emergency deliveries. We will document and execute your precise tape rotation schedules.

The Managed Media service will massively reduce your offsite tape storage costs, typically by 80%, because the lion's share of cost is for our van and driver to visit your offices. These savings alone can justify about half the cost of a typical Level Two installation, reduce your carbon footprint, and keep our vans from blocking traffic by being double-parked in front of your offices. We will even give you credit for reducing the £40,000 per year we currently pay in parking fines.

Level Two includes 7 x 24 x 4 hour on site response for service of any hardware faults of the second StoreVault unit, including expert service by Tiver staff to address and resolve any hardware failures.

Level Three of Exchange Protection Business Continuity

Tiver provides you with a third StoreVault unit at an additional monthly cost. The second and third units are stored in the Tiver data centre. You can be selective and create online backup policies for the third StoreVault unit that will decrease tape backup requirements even further.

Level Three takes you higher up the ladder of business continuity. If the first StoreVault unit fails, a wizard switches your Exchange users over to the second StoreVault in the Tiver data centre, and business carries on as normal, albeit at a potentially slower speed, depending on whether you have opted for basic or high-speed connectivity.

Simultaneously, an emergency procedure kicks in to pack up the third array in a military-grade padded container, and deliver it back to anywhere within the M25 within two hours, 7 x 24.

Naturally, even if you are only using two StoreVault units with the Level Two service, you can still take advantage of this business continuity functionality.

Level Three includes 7 x 24 x 4 hour on site response for service of any hardware faults of the third StoreVault unit, including expert service by Tiver staff to address and resolve any hardware failures.

Level Three provides an amazingly high level of availability and recoverability for Exchange, previously only affordable to a tiny elite of UK businesses, for a fraction of the cost specified only weeks ago.

This functionality and cost is entirely due to NetApp making the marketing decision to enable Exchange support for StoreVault, which has historically been available only on high-cost NetApp units. This is the same Exchange support that has been available on high-cost NetApp units for years, and is used by the largest mission-critical Exchange users on the planet.

Level Four of Exchange Protection Storage Management & Archiving

Tiver storage consultants will work with you to determine a full lifecycle for management of Exchange and other data, either using your existing backup software, or by recommending something new.

The way you use your onsite and online StoreVault units is totally up to you, and we can help you implement a hybrid of: replication, disk-to-disk-to-tape backup, and archiving solutions.

We have special offers for combining StoreVault hardware with CommVault software, to achieve a very high level of business agility and protection. An archived Exchange system is more easily managed, and far quicker to restore, than a non-archived system.

You are not forced to use StoreVault for Exchange replication. On its own, StoreVault from Tiver is a generic online disk solution, and you can implement any type of online solution that suits your requirements.

We are simply making a lot of noise about StoreVault and NetApp replication software, because it is the only business-class solution we know of, for online backup of Exchange, that you don't have to be the equivalent of an investment banker to be able to cost-justify the service. If you are an investment banker, we are going to save you loads of money compared to your existing service.

Variations on a Theme Hosted Server Option

We are promoting the Tiver/StoreVault Exchange solution because it is simple and cost-effective. However, you may require an even higher level of Exchange availability.

We can host backup servers as well as StoreVault units in our secure data centre. Arrangements can be made for virtually any type of power and connectivity requirements.

We can help you to be as sophisticated as necessary, with high-end solutions such as VMWare to consolidate many production servers to a smaller number of VMWare-enabled backup servers.

We also offer fail-over/fail-back Exchange solutions using Double-Take and NeverFail. These types of solutions are much more complex and costly than the StoreVault online solution.

Our secure data centre has everything you would normally expect, and one aspect you might find surprising. For example:

- Multi-Level Swipe Card Access Protection
- 7 x 24 CCTV and Guard
- Innogen Fire Suppression
- Backup Generator
- UPS

Dual Mains Connections 25 Years in Business and Security Never Compromised

What makes us a little bit different is that we have taken a page out of the book by British Telecom and Google. These organisations, which operate some of the largest data centres in world, do not always use air-conditioning. They have proven that, in the UK climate, with judicious use of fresh air and rack spacing, and spacing within racks, that a non-air conditioned data centre is as good or better than a Tier-4 data centre.

BT and Google have the luxury of very large, well-vented facilities in order to support this practice. So do we. This helps us reduce your carbon footprint and make significant cost savings.

SQL and How to Work Around “The Catch”

StoreVault has announced support for snapshots and replication of Microsoft SQL for S500 units, due for release in Q1 2008. Until then, you can use built-in functions in SQL, or for example, Oracle, to back up to a flat file, then replicate the flat file for online backup.

Online Backup vs. Replication vs. Tape Backup

Online backup compared to replication, when including replicated snapshots, both provide similar levels of functionality. You will be able to restore all data if needed, and you will also have a set of older files to select for restore.

One key difference though is data format. Online backup keeps changes to Exchange and other files in a proprietary database format. For Exchange, these are your main information stores, and many smaller files, which are the changes made to Exchange over time. This can make very efficient use of online backup capacity, but at the cost of slow restore speeds.

Replication maintains a copy of Exchange and other files in their native format. Snapshots contain the file changes. Depending on the vendor, this can also be quite efficient for online backup applications. NetApp is extremely efficient in snapshot disk usage.

Another key difference is restore speed. Only replication can provide line-speed restore of large Exchange files. Unless, of course, you were to make a full, new backup of your entire Exchange every hour/day, and that is typically not feasible.

There is one other non-intuitive difference between online backup of Exchange, and replication of Exchange. Software for online backup of Exchange, such as Asigra and EVault, will make two copies of Exchange data if you need to restore both the information stores and individual Exchange emails. The first copy is the Exchange information store, and the second copy uses MAPI to copy all individual emails.

Using MAPI to back up Exchange is extremely slow (the speed of copying an Exchange mailbox) and loses the Exchange Single Instance Storage functionality for attachments. This can make online backup costs skyrocket. In comparison, replication of Exchange maintains only the original information store sizes, and allows you to mount the online volume and Exchange information store to restore individual emails. Hence, for single email restores from Exchange, replication is much more efficient at using online disk capacity than online backup.

Another difference is dedicated hardware. An online backup system using Asigra or EVault will have one primary backup server, a shared internet connection, and many clients will share space in the database, or "vault". This has proven over the years to be very secure. However, there is the minute possibility that an infection or corruption within one part of the vault could spread to other clients. There is also the possibility of contention over the shared connection. In contrast, the Tiver/StoreVault solution uses dedicated hardware and a dedicated circuit per client.

Online backup applications, such as Evault and Asigra, are fairly hefty enterprise-class storage management applications. Consequently, they require an equivalent amount of study and training in order to be used most effectively. In comparison, using StoreVault replication software is a doddle.

The final difference is encryption of data. When using Asigra or EVault, when data is backed up online, it is encrypted on disk when at rest. When replicating data to a StoreVault unit, after data has been backed up (replicated), it is not encrypted. The security is that the StoreVault unit is password protected. Tiver does not keep a copy of the password, so if you lose it, you absolutely cannot retrieve your data. Nor can anyone else.

Theoretically, a forensic scientist with the knowledge of someone who wrote the NetApp operating system could obtain information from data replicated to raw disks, but the risks are fairly slim. This risk is predicated on someone actually getting their hands on your StoreVault unit or disks. We have securely stored backup tapes and legal documents for 25 years and have never lost anything.

Some clients think that when they implement online backup that they can throw away their tape drives. For Exchange, if you have a strictly enforced archiving policy that saves everything, theoretically you can take this step.

As always though, it is the exception that rules. If a disgruntled administrator has the authority to delete items in the archive, it is unusual to guarantee that online backups, or replicated files and snapshots, will store those files forever. Of course, that person runs the risk of being found out in the archive log file, unless he knows how to delete that too.

Tape backups tend to have a rich history of static snapshots of data at a particular point in time that will be archived for a number of years. In contrast, most clients do not keep a replica of deleted files forever on their online backups, or replicated snapshots, owing to cost and disk capacity considerations. We expect that most of our clients will keep making tape backups of some type for the foreseeable future.

However, by judicious use of snapshots or online backups, you can drastically reduce the number of tape copies made. For example, make an archive tape only once a week or month, thus achieving huge savings in tape media, and reducing wear and tear of tape drive mechanics. By combining this with archiving, where you no longer make regular tape copies of archived files, savings are even greater.

For the Budget Conscious Exchange Administrator

The pricing noted here is predicated on using StoreVault S500 units, which hold up 12 disks. At this time, only the S500 unit supports snapshots for Exchange.

If you are on a tight budget, it is not too difficult to cobble together an Exchange solution using the StoreVault S300 unit. The S300 unit holds up to eight disks, and costs are about one third less. The S300 is also an option if you do not require Exchange backup.

By using native Exchange functions to back up to disk, you can then use two S300 units to replicate the flat files. This is not as elegant a solution as snapshots, but we don't all have the luxury of larger budgets, and this is incredibly cost-effective for online Exchange backup.

StoreVault has announced support for snapshots and replication of Microsoft Exchange and SQL for S300 units, due for release later in 2008.

Finally, the basic service we offer for StoreVault systems includes 7 x 24 x 4 hour hardware fault response time. You can select Next Business Day advanced replacement service as a less costly option.

Tiver Limited

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