

Case Study



Backup System – Medium/Large Site

Scenario

We were approached by a company with 100GB of data to backup. This included a Microsoft Exchange store of around 30GB.

As they are a dynamic and fast growing company they needed a backup system that would meet their needs now and accommodate anticipated growth in the future.

Furthermore, they wanted a full [Grandfather-Father-Son \(GFS\) Backup](#) with the ability to restore data up to 12 months previously.

Of course, they also wanted the ability to restore their e-mail system and preferably on an individual mailbox basis.

Solution

Our recommendation to the client was to use inexpensive Removable Hard Disk (RHD) technology. In this instance we used removable hard disks which are readily available and have capacity up to 750GB.



It was necessary to use two RHD's to provide sufficient capacity for a full GFS backup scheme for 100GB over 12 months. Two RHD's also provides redundancy should one RHD fail.

As their data usage increases over time, more RHD's can be added inexpensively to provide virtually unlimited backup capacity.

The second component of the solution was the provision of an automatic Off-site Backup to ensure that the latest copy of the company's data is always available off-site even in the event of a major disaster caused by the destruction or loss of both the file server and all RHD's. (e.g. fire or theft). The additional benefit of the automated Off-site Backup is that it means that no user intervention is required at any stage of the backup process (e.g. no media needs to be taken off-site). That is, the entire backup process is automatic; the computer does all the work.¹

The third part of the solution was our customised backup software which provides the following:

- Secure authentication and communication to one of our Off-site Backup Servers using the [SSL](#) protocol to ensure that passwords are not stolen and that the [FTP](#) commands are encrypted;
- [AES](#) encryption of all data on our off-site server with a [pass-phrase](#) known only to the client. This ensures that only the client can view or restore the off-site copy of their data. Backups to the RHD's are likewise encrypted to provide complete protection of the data in the event of an RHD being stolen or lost;

¹ Note that it is possible to setup the system without using our off-site backup services. We are happy to discuss these alternatives.



- File-matching technology to ensure that only changed files are transferred to both the off-site server and the RHD thereby minimising bandwidth usage and time involved in the backup process;
- Ability to backup files to different locations thereby enabling the use of many RHD's.

The final part of the solution involves full monitoring of the backup process by our engineers. Daily, you and our support team are sent an e-mail reporting which files have changed in your backed up data. Also in the event of a backup failure or error, an exception report is produced highlighting the error. Finally if no reports are received from the backup system, then an exception report is produced for investigation by our support team.

If necessary our support team can then either contact the client to advise of a problem, and/or connect in remotely to resolve the problem. Remote connections need to be instigated by the client.

Price

The above solution is available in two options:

Fully Maintained Option

The first option is a fully maintained solution with advance replacement hardware and on-site warranty for three years.

Any Backup System is only as good as the storage media that it uses: tapes, RHD, DVD; all media has a finite life and over time some media will fail at some point.

If there is a problem with an RHD unit, the Fully Maintained option includes Advance Replacement, which means that we shall immediately supply a replacement RHD unit so that you will rarely be without your full complement of RHD's.

Our staff then liase with the hardware vendor and take care of all maintenance and repairs necessary to the RHD's in a quick and professional manner.

We also provide unlimited phone support for questions about the backup and assistance via Remote Support for changes to the backup schedule and restores if necessary.

This is truly a peace of mind solution.

Self-Supported Option

Alternatively a cheaper solution is available whereby the client is responsible for handling any necessary warranty repairs on the RHD's. This will necessitate the unit being returned to either us or the hardware vendor.

In this instance the standard 1 year warranty is applicable to the RHD unit. With this option if there is a problem with an RHD unit, while the RHD unit is being repaired by the hardware vendor, you will not have a replacement RHD unit unless you decide to purchase a replacement unit.

As with the Fully Maintained Option, monitoring of all Backup's is included, as is notification of any issues that arise with a Backup job. Any non-warranty support is charged on a per-incident basis as are changes to the backup schedule and assistance with restoration of files.



Comparison

Option	Initial payment	Weekly payments
Fully Maintained – standard	\$1,700	\$11
Fully Maintained – financed	\$nil	\$24
Self Supported	\$1,700	\$6

Note that there is a 3 year contract for the Fully Maintained Option and a 1 year contract for the Self-supported Option.

The Weekly payments for the Self Supported Option represent data transfer costs for the Off-site Backup, which are on-going for the life of the Backup System.