

## **Recommended Backup Practices for Small Business Server.**

If your business currently runs on the Microsoft Small Business Server platform and you have no idea when someone asks you, “what is your backup regime” then your server and data infrastructure is not complete!

This paper examines the requirements and recommended practices for companies looking to backup all manner of data while running their main server on the Microsoft Small Business Server platform.

This newsletter provides best practices if you:

1. Host an email server internally using Microsoft Exchange.
2. Host substantial data internally on your corporate server, with users who cannot be relied upon to logoff or shutdown their workstations when they go home (this is usually the case).
3. Use an application that utilizes Microsoft SQL Server.
4. Store data on another file server that also needs to be backed up.

## **Hardware – Tape Drives and Tape Cartridges.**

First of all, you will need backup hardware. There are a number of options available, depending on size and complexity of your operation.

The simplest and cheapest option for backup hardware is a USB external drive. This type of hardware can suffice for a home office or a small office of 2 to 3 people running Windows XP/VISTA as a basic server and email provided through the Internet Service Provider.

Once you have a more complex operation with 5 or more users and you are using domain based server software such as Microsoft’s Small Business Server with Exchange as the email Server, you need hardware that is robust – and that is tape media.

Tape media can survive G-shocks that hard drives cannot. Additionally, the magnetic tape is far more reliable than disk for archiving data beyond even a human life-span. Disk Drives eventually develop bad sectors usually within a decade if used extensively and eventually fail.

Tape backup provides the best durability and reliability for offline data backups. It is also a common and important practice to send your weekly tapes offsite for safe-keeping, (whether via an agency or via your staff’s routine)

In our experience, the best bang for your buck today in terms of dollar per Gigabyte storage is LTO also known as ULTRIUM drives – LTO tape stands for Linear Tape Open – There are several good brands for these tape drives and media, for example:

1. HP – Hewlett Packard.
2. Quantum

### 3. Certance (Seagate).

The Tape drive can be external or internal. Generally, the External unit is usually more expensive but is recommended due to easier serviceability without the need to bring down the server hosting it. Additionally, due to it being external, heat problems are eliminated.

Additionally, you will have to factor in the cost of:

- Tape Media (cartridges). (see below for tape rotation regime, as to how many ).
- Cleaning Tape.

### **Backup Manager Software.**

In our experience, the most reliable Backup Manager Software that you can buy for your Microsoft Small Business Server environment is Symantec Backup Exec v12.5. This software also has menus and graphics user interface (GUI) making it more user friendly.

It comes with numerous options and flavors, but for the Small business Server environment we recommend

1. Symantec Backup Exec 12.5 for Windows Small Business Server Standard Edition  
( If you are running SBS Standard Edition – i.e. no production SQL databases running on your SBS server ).
2. Symantec Backup Exec 12.5 for Windows Small Business Server Premium Edition  
( If you are running SBS Premium Edition – i.e. production SQL databases **are** running on your SBS server ).

The Premium edition allows you to backup your SQL database whilst the databases are online by taking Highly Reliable High Integrity Snap Shots of the data without the need to shut the databases down.

Both flavours (Standard and Premium) allow you to backup your Email Exchange databases as well (while it is running online) without the need to shutdown Exchange.

Backup Exec is recommended especially for Exchange email backup because it has Granular Restore Technology – the ability for you to restore lost email data down to individual mailboxes as well as individual messages.

When you are scoping to buy your Backup Exec licenses, please also note that for every additional file server you need to backup (e.g. if you have another business unit that must have their own file server), you will also need to purchase a Remote Agent for Windows Servers

Additionally, if you want to further protect your Active Directory (Your LOGIN account information), you will need to purchase the Agent for Active Directory.

For further information, you can contact your local software vendor or alternatively call us for a discussion and quotation.

### **Backup Tape Rotation Regimes.**

For a small business, we understand that the cost of purchasing backup tapes can be significant, especially if one has to buy multiples of them to have some sort of trail based recovery scheme.

This is the regime we recommend:

1. For a 5 user to 15 user office on a tight budget, the 6-tape small business rotation scheme fits best:  
You have 4 daily tapes: Monday, Tuesday, Wednesday, Thursday  
You have 2 weekly tapes rotated every fortnight: Friday 1 and Friday 2.
2. For a 15 plus to 30 user office on a moderate budget, you may have a Week-Limited Grandfather-Father-Son ( G-F-S ) rotation scheme, making up 9 tapes.  
You have 4 daily tapes: Monday, Tuesday, Wednesday, Thursday  
You have 5 weekly tapes rotated every month: Friday 1, Friday 2, Friday 3, Friday 4, Friday 5.
3. For a 30 plus seat office or if money is no object, a full G-F-S scheme can be the order of the day, making 21 tapes.  
You have 4 daily tapes: Monday, Tuesday, Wednesday, Thursday  
You have 5 weekly tapes rotated every month: Friday 1, Friday 2, Friday 3, Friday 4, Friday 5.  
You have 12 End of Month Tapes rotating annually: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec.

We also recommend that a Full Backup be done daily, as it simplifies restore and maximizes data availability in the event of tape media failure which would be worrying in the case of incremental backups, though the disadvantages of course, is more head wear on the backup drive device.

### **Design, Quotation, Procurement and Configuration & Post-Config Maintenance.**

Hannan IT's SME infrastructure unit is available for a no-obligations pre-sales consultation, if you are interested in pursuing improving or even having a proper backup subsystem to backup your data in your SBS environment.

We are available to guide you in every stage of the process.