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A backup routine is more than simply ensuring the tape ejects daily.

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To discuss how protected your business data really is?

Data Backups

Common sense steps for SMB

Focus on Your Business - Not Your Technology

Introduction

Several studies have been conducted on data backup reliability. Here is just a sample of the findings;

- According to The Gartner Group, 71% of all tape restores fail
- According to Microsoft, 42% of attempted recoveries from tape backups in the past year have failed. In addition, Ben Matheson, group product manager for Microsoft Data Protection Manager, said, "More than 50 percent of customers we've surveyed said their current backup solutions do not fill their needs."
- "Restoring from tape fails 50% of the time in distributed organizations and mid-sized companies." – Baroudi Bloor (Now Hurwitz & Associates)
- Over 34% of companies do not test their backups and of those that tested, 77% found their tape backups failed to restore." – Storage Magazine
- A survey by the Yankee Group found that 40% of IT managers had been unable to recover data from a tape when they needed it.

As can be seen, tape backup is problematic. The failure can be caused by a host of reasons; the media must contain recoverable data, the media hardware must be available and function properly, and the restore software must operate properly.

In some cases, the recovery fails completely; in other cases, data can be restored, in whole or in part, from previous

tapes. However, even if data is finally restored using a previous tape, several days worth of data can be lost, jeopardising the recovery of the process.

Automated data backup systems are preferred because it eliminates human error, tape medium failure and other hardware and software failure, however there are still critical steps that must be undertaken to ensure that your data is safe.

If your business is currently using a traditional tape backup system the following set of procedures helps to minimise the possibility and consequence of tape backup system failure.

Tape Backup System and Software

The best tape backup system and software that meets the specific needs of your business can vary.

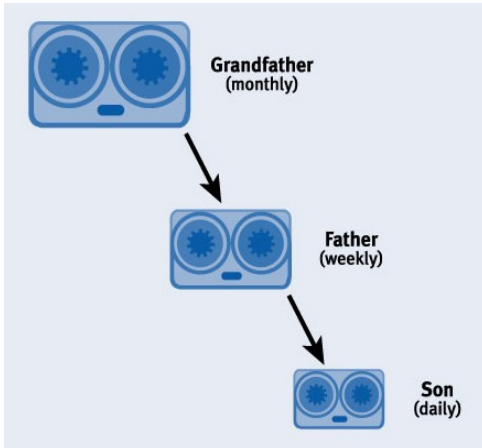
The critical consideration should be "how long can your business operate without the data?"

Tape Rotation

We recommend using complete backups rather than incremental backups.

The tape rotation system depends upon the specific needs of your business. An example tape rotation system, which has the benefits of having daily backups for the last three weeks would require 15 tapes;

- Tape 1. Monday – week 1
- Tape 2. Tuesday – week 1
- Tape 3. Wednesday – week 1
- Tape 4. Thursday – week 1
- Tape 5. Friday – week 1



- Tape 6. Monday – week 2
- Tape 7. Tuesday – week 2
- Tape 8. Wednesday – week 2
- Tape 9. Thursday – week 2
- Tape 10. Friday – week 2
- Tape 11. Monday – week 3
- Tape 12. Tuesday – week 3
- Tape 13. Wednesday – week 3
- Tape 14. Thursday – week 3
- Tape 15. Friday – week 3

Tasks

The following should be undertaken;

Daily (Monday to Friday)

- a) Each day, remove the last tape
- b) Send the tape to the off-site storage facility as soon as possible, and retrieve from remote location the next daily tape to be used
- c) Place the next tape in the drive for that night’s backup.

Monthly (last day of month)

- a) Check that all backup tapes are in their correct locations (safe, remote location)
- b) Tape drives should be cleaned periodically to help eliminate errors.

Quarterly (last day of quarter)

- a) Tapes should be periodically tested to ensure that they are still readable. Tapes repeatedly used or subjected to extreme variations in temperature or humidity may become unreadable, in whole or part, over time.

Off-site Storage

Choosing the optimal off-site storage location is essential and should be environmentally controlled, fire-resistant, and secure, with procedures for restricting physical access to authorised personnel.

Management should remember that using a time-locked vault may not be a good

idea, due to emergencies occurring during non-business hours.

Additionally, storage of back up data at employee residences should be discouraged due to potential security concerns.

Moreover, the off-site premises should be an adequate distance from the computer operations location so that both locations will not be affected by the same incident.

Testing

Based on the type of tape backup system being used, a testing plan needs to be developed. This should include periodic comprehensive testing including simulation of complete server failure. This can be accomplished by attempting to restore to a completely different server.

Checklist

The following should be used to verify your backup routine is working correctly;

Daily (Monday to Friday)

- a) Check backup notifications
- b) Did the backup job complete successfully?
- c) Was the tape sent to the offsite location?
- d) Place the next tape in the rotation cycle into the drive

Monthly (Last day of month)

- a) Are there 14 daily tapes in remote storage?
- b) Run the cleaning tape, remember to replace after as per manufacturers recommendations
- c) Do you have a months worth of audit logs?

Monthly (Last day of month)

- a) Run a test restore on at least one tape to ensure you can restore files



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"We'll either find a way, or make one" - General Hannibal

Next Steps

Many companies experiencing a disaster struggle to re-open or to continue trading after re-opening. Reasons that business don't recover can include "loss of reputation" and "customers going elsewhere".

Business should look past a "backup plan" to a "Business Continuity Plan", refer to our website whitepapers section for a complimentary "10 Steps" guide.