

The death of tapes

Regardless of the size of your organisation, data backup is an essential function of your business operations. However, many organisations fail to backup properly or rely on inefficient and outdated backup systems, running the risk of losing critical data.

For example, some small businesses rely solely on USB hard drives. Medium and large-sized enterprises tend to be more disciplined with their business continuity solutions, yet still spend a lot of time and effort backing up to traditional magnetic tapes.

In fact, backing up to tape has been the standard for around 50 years. There are many perceived reasons as to why tapes are the best backup solution...they're reliable, cheap, re-usable and easy to store.

However, these benefits are now being challenged in the face of modern cloud-based and de-duplication backup solutions.

5 limitations of tape

1. Risk of failure

Tape is prone to magnetic failure and damage, plus you may only discover a restoration error after you've spent hours retrieving, loading and running the tape. And as we know, one error on a tape can render it useless.

2. Escalating costs

Backing up to tape may appear inexpensive at face value, but if your organisation is storing large amounts of data, the cost can quickly escalate over a 12-month period. Additionally, DLT tape drives and tape libraries for large enterprise environments involve significant capital investment.

3. Limited lifespan

All tapes have a maximum number of times they can be re-used. Additionally, the more a tape is re-used, the higher the chance of degradation and unreliability. Tapes are also subject to data loss through environmental exposure.

4. Physical storage costs and restrictions

Backup tapes need to be stored off-site for security reasons, which adds to your overall cost. What's more, this method of storage takes up physical space that could be used for other, more efficient purposes.

5. Inefficient and time consuming

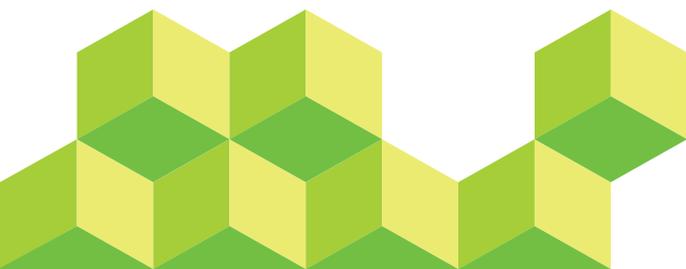
Compared with modern backup methods, backing up to tape involves a lengthy process. Many organisations use a large tape library with multi-drive units to back up multiple streams of data simultaneously, which can be an inefficient use of IT resources.

Tape restoration can often take twice as long as the original backup. Restoration of data may require several hours or even days – well beyond the recovery time objectives of most businesses.

So what's the alternative to tape backup?

For some time now, there have not been creditable alternatives to tape backups. Backup to a near-line disk storage array meant your duplicated data was stored at the same physical location as your source data, posing a significant risk to disaster recovery and business continuity plans.

High-end SANs enable you to implement SAN-to-SAN replication technologies. However, this is an extremely costly solution. Not only do you need the capital investment in a secondary SAN and replication software, but also the cost of hosting the secondary SAN in an off-site Data Centre.



Cloud-based solutions

The obvious alternative to tape backups is now cloud-based data storage. Cloud-based solutions enable reliable and efficient data storage for businesses of any size, plus they're extremely cost effective.

Cloud-based solutions range from specialist offers for small businesses, to online disk storage systems for larger organisations, which offer a reliable and secure virtual environment to store your critical business data.

Hybrid solutions

A number of hybrid technologies have also emerged, where mature storage solutions are combined with cloud-based services. For example, you can back up your data to Network Attached Storage (NAS) disk arrays, and then use software that replicates the data to a cloud-based service. This achieves two important objectives; backups are completed efficiently within defined time windows, plus the data is stored securely off-site to ensure business continuity in the event of any downtime.

De-duplication

After an initial full source data backup, it's preferable that only data changes are backed up on a daily basis. This will drastically reduce your backup times and bandwidth requirements, saving your business time and money.

De-duplication is a process that ensures only one copy of a piece of data is stored. Until recently, this type of technology has only been available to large organisations with high-end SANs, however it is now within the reach of most businesses.

Consider this scenario: an email is sent to 1,000 employees in a company. Without de-duplication, that email will be backed up 1,000 times from 1,000 separate mailboxes. De-duplication technology identifies the duplication and backs up the source data once only and provides pointers from the other locations to a single store backup data point. Microsoft has used this technology for attachments in their MS Exchange email system for some time now.

Local NAS storage

Operating a local NAS-based backup and off-site data storage solution also has many advantages. Recovery of lost files and day-to-day data retrieval is fast and efficient for end users and IT staff, plus your data is securely stored off-site in case your business needs to enact its business continuity plan.

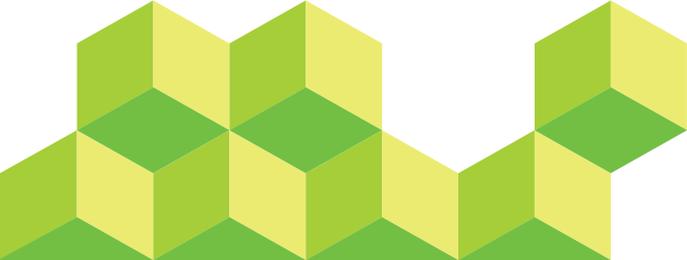
Conclusion

It's clear that backing up to tape is fast becoming an outdated way of protecting your critical business data. Although a trusted storage source for many years, tape backups have many limitations, including a high risk of failure, limited life span, ongoing physical costs, and an increasingly inefficient and time consuming method of data backup.

What's more, tapes are subject to human error, theft and damage throughout the backup lifecycle.

In comparison, cloud-based and hybrid services with advanced de-duplication are inherently more secure, reliable, efficient and cost effective. The technology stripes data across multiple disks to deliver hack-proof security, as well as full failover capabilities within a disaster recovery strategy.

Ultimately, backing up to tape will soon be a thing of the past, which is why your business needs to consider modern alternatives to protect your essential data.



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