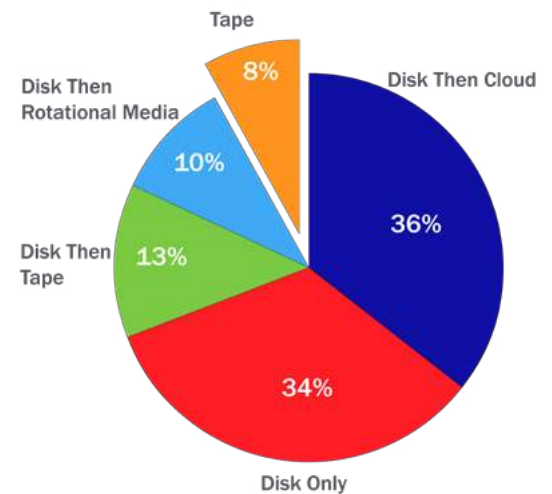


Top 3 Reasons IT Teams Are Still Using Tape For Their Primary Backup Target

And are they still true?

Al Hollaway, Information Executive at The Air Zoo, spent his days wrestling with backup tapes. His tape backups were inefficient and constantly failing. Hollaway had been using tape not 10 or 5 years ago –but well into 2017. He is not alone. A recent Gartner report shows 9% of all IT administrators still use tape as their primary backup storage¹. This finding is similar to the 2018 Unitrends DR survey where 8% of over 800 IT pros reported still using tape as their primary backup target. With all the well-published pains of tape, there have to be some advantages, otherwise why would usage continue at all? We did the research, and here are 3 reasons why he, and many IT teams, keep backup directly to tape as part of their backup practice.



IT Primary Backup Storage Type.
[Unitrends 2018 DR Survey Results](#)

REASON #1: TAPE IS LESS EXPENSIVE

True - When considering raw storage cost only.

In the past, tape was less expensive. There was a significant capitol expense savings using tape storage over disk and cloud storage especially if businesses left out the operational expenses of managing tapes movement and physical storage. However, the cost of hard drives have significantly decreased and new, more efficient technologies and labor-saving solutions have emerged over the last 10 years.

Compression:

The encoding of data to reduce its storage requirement.

Deduplication:

The replacement of multiple copies of data – at variable levels of granularity – with references to the shared copy in order to save storage space / bandwidth.

<https://www.snia.org>

As of 2018, it costs approximately 1 cent per GB to store data on an LTO-7 tape². Recent reports show the cost of disk storage is under 3 cents per GB, trending quickly down toward 2 cents per GB³. Public cloud storage can start as low as 2-3 cents annually, depending on volume, timeframe, and access rates⁴. The cost of storage using LTO-7 tape as your primary backup target, on the surface, is lower. Absolutely. However, this does not take into account basic **compression** and **deduplication** capabilities that are inherently different when using tape as your primary storage vs using a disk.

LTO-7, when a target for primary backup data, typically achieves a compression ratio of about 2.5:1, meaning a raw file of 2.5MB may be able to be reduced to 1MB after being compressed. Secondary in-line backup solutions can be acquired to deduplicate data on disk prior to writing to tape, achieving a higher data reduction ratio, but at a significant financial investment and at a detriment to recovery time. (Tapes are read back in a linear fashion, and data located on secondary tapes require retrieval of the data from all tapes where source data is located.).

Adaptive Deduplication, included in all Unitrends' appliances, software, and cloud solutions, typically provides 10:1 to 20:1 or higher real-world of combined data deduplication and compression. Using disk as a primary backup target significantly reduces the amount of storage required to protect your data. In this instance, LTO-7 can require up to 4 times MORE capacity than Unitrends-based backup disk or cloud storage. In many cases, disk-based backup may be less expensive than physical tape by utilizing space more efficiently and requiring less space to store the same amount of data. Again operational expenses (e.g. tape management and physical storage fees) still need to be applied for a total cost of ownership comparison. Note that some solutions, such as Unitrends White Glove cloud services can significantly reduce, and in some cases nearly eliminate, the need for any IT involvement in recovery management and even in the recovery process itself.

Recommendation: See for yourself how Unitrends Adaptive Deduplication handles your real-world data with a [free trial](#). As the compression and deduplication numbers are based on customer averages, the only way to know for sure how much disk or cloud storage would be required to support your data set is to try it out. With a free trial, you can see how simple it is to move away from using tape as your primary backup target.

REASON #2: TAPE WORKS WELL FOR LONG-TERM STORAGE

True – As long as you are willing to commit to testing the media.

One of the classic arguments in favor of tape as your primary backup target is that it is inexpensive and reasonably easy to store for long periods of time. The little plastic cartridges are small. Putting on the sticky labels is tedious, but fairly simple to do. However, what people often fail to recognize is that tape are not an indefinite or indestructible medium. Tape wears out. Tape is susceptible to environmental deterioration. Keep a tape in a location that is too dusty or dirty and you have issues. The data written to the tape can become unrecoverable.

Regardless of whether you use tape, disk, or cloud, the only way to know if data is capable of being recovered is to test recovering it. This is one area, among many, where the operational cost of owning tape instead of using disk or cloud storage becomes an enormous burden. If tapes are hosted at an off-site service, the process is even longer and more expensive as it can take up to 24 hours for your storage agent to find and deliver the right tape to your location.

Whether as part of a test or an actual file recovery, the time to mount and search for the data on tape is significantly longer than retrieval from disk. If you are looking for a single email, Word document, or Excel spreadsheet, tape may require that you load and mount the entire repository before you can search and recover the single targeted element. Disk-based Unitrends Instant Recovery allows administrators to search for files in folders just as if they were looking in a Windows directory. The single email or document can be recovered in minutes – from logon to the system to full file restoration.

Testing is so critical it should be performed monthly or whenever there is a change to the architecture. When researching solutions for disk or cloud, be sure you choose a backup solution with tools to automate testing. With the right solution, you will know exactly how fast and to what point your data and applications are protected without requiring much manual work or extra expense. With the right solution, recovery testing can be completed near-instantly and your compliance reports can be automatically generated for you.

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- Al Hollaway
The Air Zoo

Recommendation: Eliminate the time and costs required with tape-based testing. Look into the Unitrends solution for managing your primary backup to disk. Unitrends Recovery Assurance delivers fully automated recovery testing. Running either locally on the backup appliance or in the cloud, Recovery Assurance will automatically test and certify full business service recovery. Using backups, the entire infrastructure is recreated and booted up to ensure that all data and application dependencies are correct. Unitrends includes built-in analytics that assess the impact of an outage in terms of its projected downtime and data loss. It also reports the results of recovery testing to business stakeholders (no setup required) in the form of actual RTO and RPO achieved and flags warnings against their goals. For more details on how Unitrends simplified testing and recovery, please read the [Testing White Paper](#).

If you must keep tape for long-term retention, implement a backup-to-disk, archival-to-tape strategy by migrating quarterly backups to tape only after 90 days. This can achieve the archival requirements while minimizing the recovery overhead of tape.

REASON #3: TAPE BACKUP MANAGEMENT IS GOOD FOR MY CAREER.

No. It isn't.

Unitrends will bring your organization, and resume, to the cutting edge with advanced backup and disaster recovery technology. With the ease-of-use, free training, and customer support team with a 98% customer satisfaction rating, you will become a marketable, certified administrator and thought leader in data protection in no time at all.

Recommendation: Attend a [live tech demo](#), meet a Unitrends engineer, see for yourself how easy and affordable it is to implement a best-in-class disk or cloud based backup and disaster recovery solution.

CONCLUSION

Tape used to have its place but its advantages are being superseded by disk and cloud-based data protection and disaster recovery solutions. If you are like Al Hollaway of The Air Zoo, and had all you can take with using tape as your primary backup target, there are affordable disk- and cloud-based solutions for you.

Hollaway switched to a Unitrends Recovery Series hardware appliance. The Recovery Series offered best-in-class price/performance and total cost of ownership for on- and off-premises backup and disaster recovery. Hollaway looked into competitors such as Sun and HP, but Unitrends won him over with its “ease of deployment, easy-to-use software and outstanding on-site installation support.”

“Once everything was set up, the backups just happened by themselves,” Hollaway said. “It was amazing how much relief I experienced.” Hollaway also found Unitrends’ software went beyond just giving him security that his systems are protected. “I have been pleased with the ability to recover individual files quickly and easily, which was something that was difficult with the old tape system,” he said. “Unitrends’ system is so far advanced over the old tapes that we are now far more secure.”

**READY TO MOVE TO DISK OR CLOUD?
WATCH A UNITRENDS DEMO NOW.**

Unitrends increases uptime and confidence in a world in which IT professionals must do more with less. Unitrends leverages high-availability hardware and software engineering, cloud economics, enterprise power with consumer-grade design, and customer-obsessed support to natively provide all-in-one enterprise backup and continuity. The result is a “one throat to choke” set of offerings that allow customers to focus on their business rather than backup. Learn more by visiting unitrends.com or follow us on LinkedIn and Twitter @Unitrends.

1 Robert Rhame, Dave Russell “Discover the Truth About the Use of Disk, Tape and Cloud Backup in 2017” Published 27 March 2017 - ID G00326382

2 <https://www.lto.org/2017/03/tape-and-disk-storage-what-do-they-really-cost/>

3 <https://www.backblaze.com/blog/hard-drive-cost-per-gigabyte/>

4 <http://www.enterprisestorageforum.com/storage-management/cloud-storage-pricing.html>