

# Is Tape Dead?

By CHRIS TAYLOR

Just recently, tape backup has received a lot of press in the technology community; much of it has not been so flattering. There have been stories of glitches, tapes, and data vanishing at some of the largest financial institutions, customer data that has been littered across the headlines, as well as other horror stories that have filled the walls of data centers.

With all of these incidents occurring and a more focused look at security, many organizations are wondering if other alternatives are better suited for backup.

There are quite a few situations where companies have to move physical storage devices from one location to another, such as the moving of a data center or part of their operations. In the event of a disaster, many of these organizations find it cheaper to buy new disks for data storage than restoring data from tape. The amount it would cost the company in delays due to the recovery process makes the cost of new disks seem like chickenfeed.

Anyone who has had to do a full restore, complete with incremental tapes, knows that the recovery process required for tapes can be complex and time-consuming. With downtime being public enemy No. 1 for IT staff and management, near-line storage solutions like disk-based backups are becoming more popular. This is a sweet spot for companies that are

truly 24x7x365 operations, and downtime results either in loss of revenue or major disruptions in their business.

One way to address both the need for faster restores and a solution for longer-term storage and archiving of data is to utilize both tape and disk. For example, critical back-up data is stored on disk for rapid restore. The user then decides how many versions of the data should reside on disk. For disaster recovery, a copy of the critical data can also be copied to tape and a second copy produced for off-site storage. Less critical data can be staged to disk and then written directly to tape. By using this method, the data that is less mission critical can be staged to tape over time. The mission critical data is available “near line on disk” for a much quicker restore. Such things as replication from disk-to-disk, either on-site or off-site, can also be introduced for even greater availability, shortened recovery time objectives (RTO), and recovery point objectives (RPO).

Tape does remain an important feature of the back-up solution. In most current IT operational strategic planning sessions, companies with significant business critical data are looking to typically stage first to disk and then to tape. This means they can centralize the backup to a single tape library which can store, depending on the size of the library and the retention policies, multiple versions of the data. Rapid restores can either be done

from disk for more recent back-up versions or off the data from the library without the need to load tapes. In this scenario, a single file recovery takes less than four minutes.

When considering a disk-based back-up solution, consider appliances that can reduce your disk-based back-up capacity by leveraging compression or data reduction techniques. Data reduction is not the same as data compression. Back-up applications and tape drives both support data compression and can achieve approximately a 2:1 compression of data. But data reduction appliances can detect common patterns or chunks of data within back-up files and inhibit identical chunks from taking up additional disk storage space, resulting in much greater disk space savings. It’s not uncommon for back-up data to be reduced by 20:1 with these appliances.

One of the goals of disk-based back-up systems should be to reduce the administration complexity of managing backups and restores. Once you’ve made your decision about which technology is right for you, ensure that both the back-up administration staff and management team incorporate the processes of this solution into their back-up processes and plan accordingly for both adequate testing of recovery and establishing a baseline for recovery points and objectives (RTO/RPO).

Marrying both disk-based backup and tape backup combines the strengths of these two solutions and allows organizations to match the right service levels to the appropriate costs associated with the value placed on the data. With this type of solution in place, organizations now have the flexibility to have the right data stored on the right media that allows the optimal restore capabilities that fit the needs of the business. Tape solutions will continue to be a vital component of data center storage solutions in the future. Through a lifecycle data management plan, corporations can reduce costs through a combination of storage practices dependent upon their corporate policies and compliance needs. Tape isn’t dead; it has just changed its positioning in the lifecycle of data storage.

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