

Change, monitor and manage your company's tape backups  
**REMOTELY. DAY OR NIGHT.**



According to HelpSystem's latest survey, over 50% of IBM Power System™ server users still use tape. With more people working remotely, remote management is easier than you think with hands-free tape backup and off-site replication.

Tom Huntington (6/10/19), [Virtual Tape Considerations for IBM i](#)

Virtual tape drives and libraries eliminate the need to physically handle tapes by virtualizing the tape backup process. Retain all of the security and features of physical tape while adding the speed and remote management of tape virtualization.



- Reduce or eliminate tape backup and the associated costs—tape consumption, media rotation and backup management.
- Replication, deduplication and many powerful features included—with no hidden fees.
- Increase backup performance to significantly reduce your nightly backup window (up to 28.8 TB/hr transfer rate).
- Reduce downtime and lost revenue in the event of an emergency with lightning fast restores.
- Instant hassle-free access to your data.
- Upgradeable architecture allows for increased performance without the need to migrate months/years worth of stored backups—and without expensive full hardware refresh.

Call Today! 1-800-438-4202

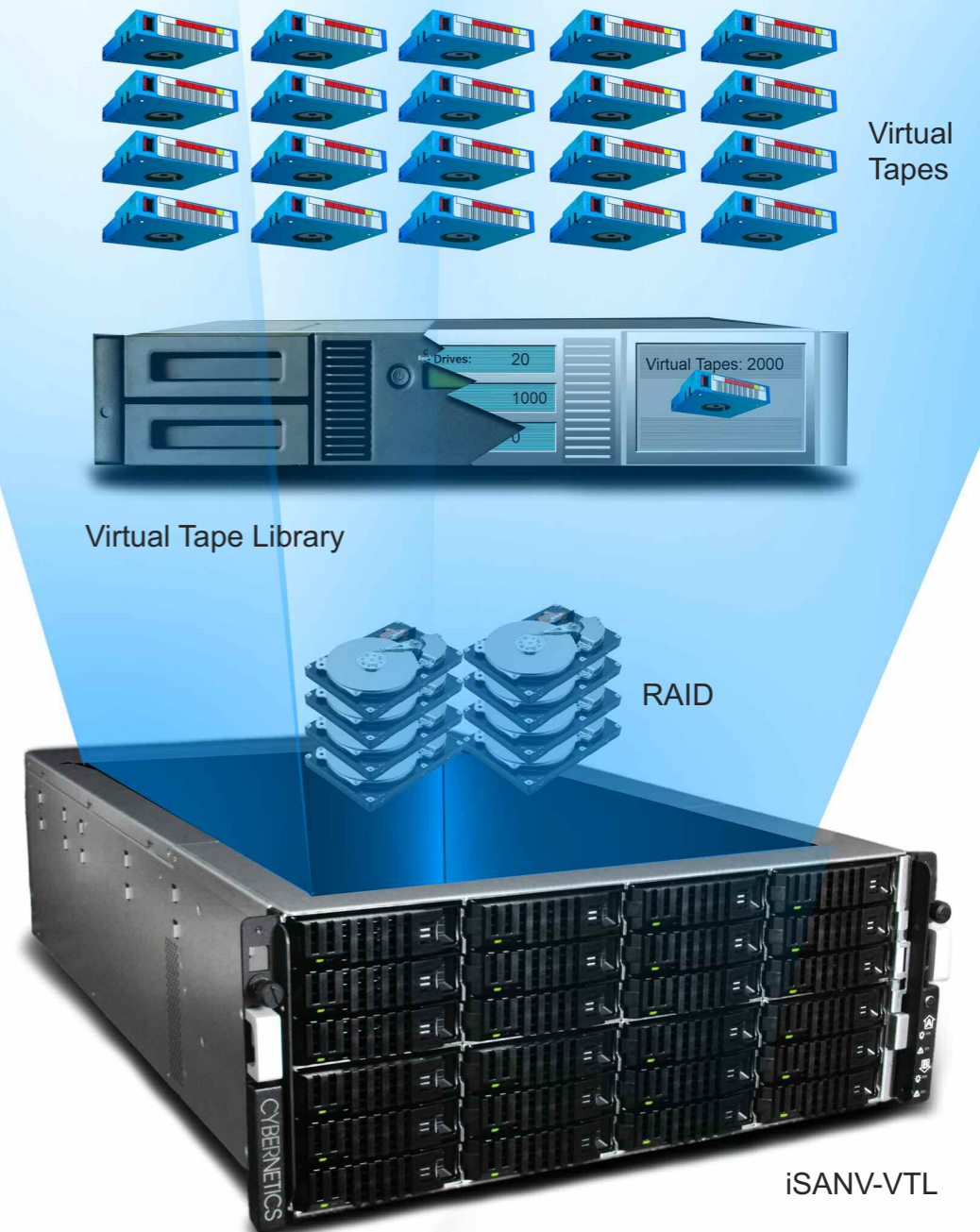
# Virtual Tape

Backing up your data using tape drives and libraries can take a toll on company resources. Backups and restores are not fast enough, the hardware is not redundant, and the handling of tapes and their off-site rotation can be time-consuming and expensive. Plus, keeping older units under maintenance contracts is costly. These issues have forced businesses to search for better alternatives.

The Cybernetics Virtual Tape Library (VTL) is a RAID-based disk appliance that appears just like one or more physical tape libraries that eradicate the issues created by physical tape drives. It can eliminate the need for tape drives completely. VTLs are easy to operate, better equipped at protecting important data and they enhance recovery and backup speeds. Plus, they save you money with unparalleled support and scalability for a system that grows with your business.

Cybernetics began shipping their VTLs in 1992—years before competitors—and has been manufacturing VTLs for nearly 30 years! Cybernetics' VTLs have the best backup speed capability and deduplication ratios of any VTL. Plus, the simple-to-use hardware leaves absolutely no learning curve—giving our customers a value that is impossible to beat.

Ultimately, virtual tape libraries are designed to eliminate the challenges you face in archiving and protecting your valuable data. Here are four ways Cybernetics can help with this goal:



# 1

## Convenience

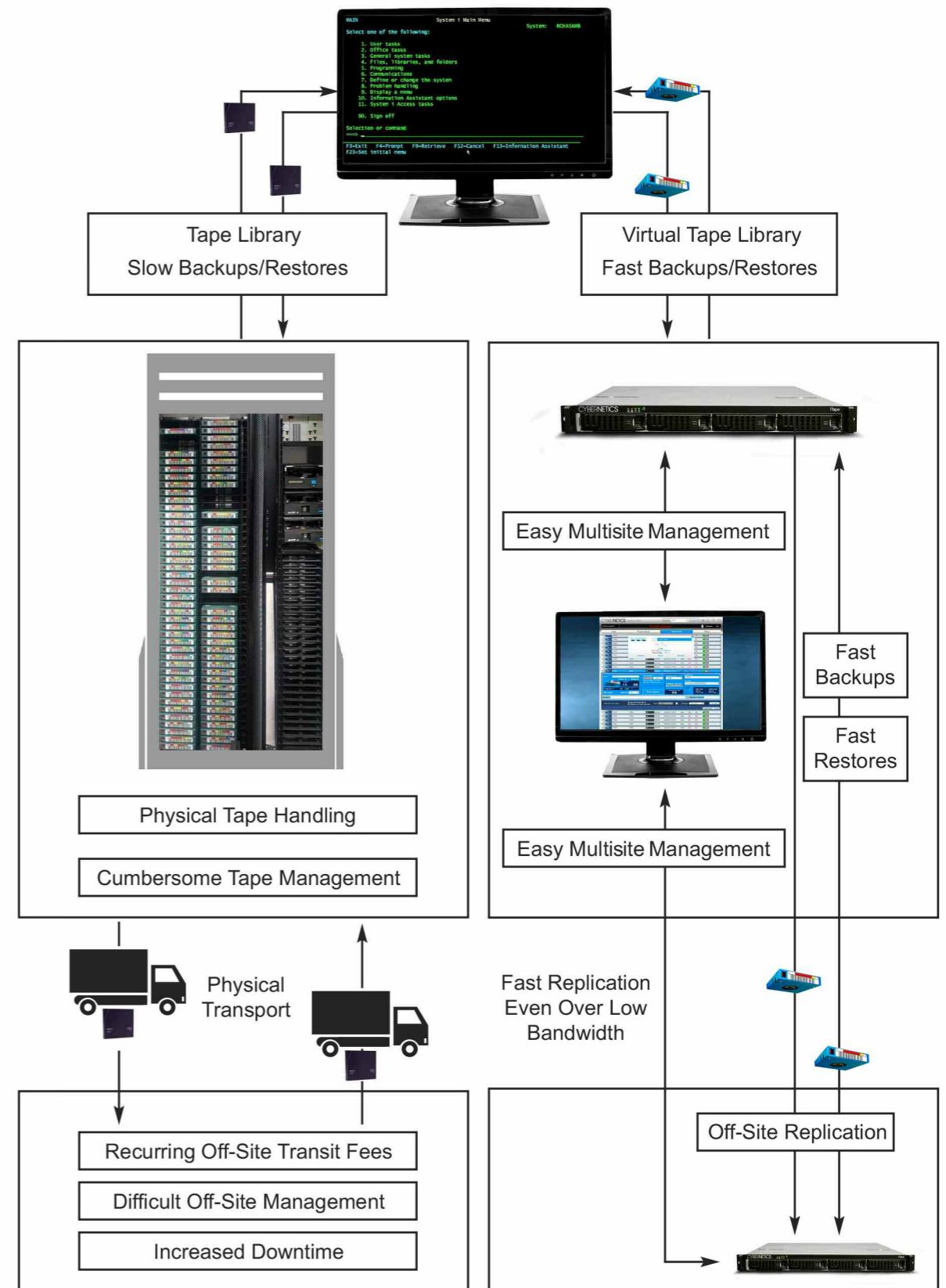
A Cybernetics VTL is easy to install and is 100% compatible with any backup software that you already use for your physical tape system (e.g., SAVE commands, IPL, BRMS and even third-party applications like Help Systems Robot/SAVE). You can consolidate your backup across any mix of operating systems with support for iSCSI, FC, SAS and legacy SCSI host systems.

Cybernetics' powerful GUI will simplify your virtual tape backup management with secure access to settings, features and monitoring of your virtual system from any IP address you allow. Configure backup settings, virtual tapes, and users conveniently and quickly through easy-to-navigate options. Monitor backup performance, virtual tape capacities, and initiate local and remote restores without leaving your desk.

You'll gain features that you just can't get with physical tape: remote replication, deduplication, and the elimination of physical tape management and the associated cost. With Off-Site Replication, you ensure the continuous availability and security of your data. You'll require less physical space to store backups too. Site-to-site replication can be enabled with a few clicks of your mouse, allowing you to enjoy the benefits of data geographic redundancy. This is a built-in feature that comes with WAN acceleration and encryption—increasing the speed and providing better security between units.

With some of the the industry's best deduplication ratios, it takes much less bandwidth to replicate your nightly backups. It's common to see 10X better dedupe ratios using Cybernetics VTLs. Setup is easy, takes just minutes, and requires no training. After that, nightly local backups will automatically replicate off-site. With such high dedupe ratios, you can provide multitenant replication as a service or rely on our network of partners that provide cloud storage.

## Both the Physical and Virtual Tape Library Use the Same Backup Software, Procedures and Commands



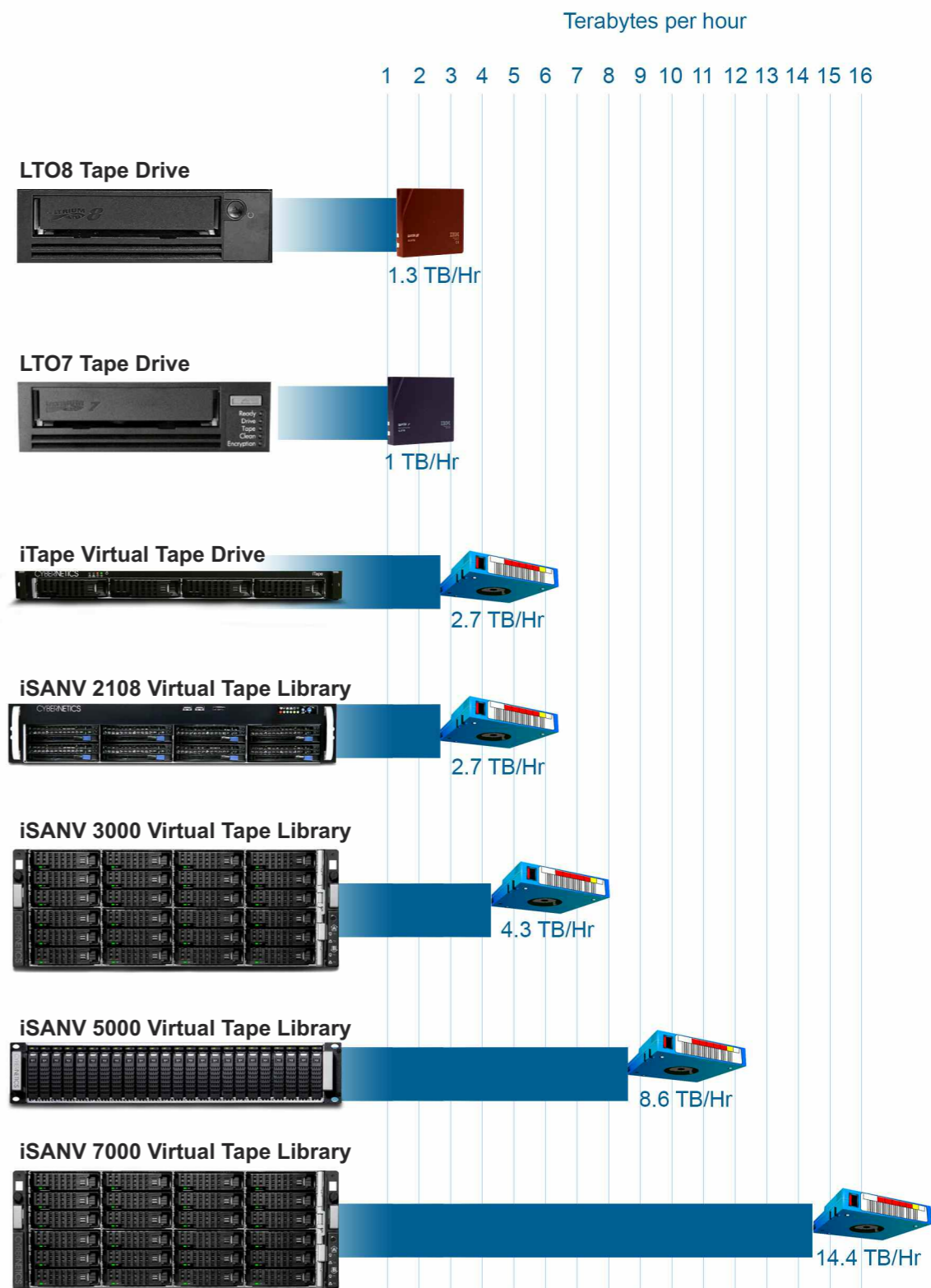
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# 2 Speed

Disk is faster than physical tape and the added speed of multiple disks in a RAID allow the libraries to take advantage of the Cybernetics-exclusive advanced intelligent caching layer, increasing efficiency and speed of handling multiple backup and restore threads at a time. Cybernetics' VTL does not require a file system format, defragmenting, virus protection or file/block permission updating. With a VTL, it is easy to configure one or more tape drives for parallel operations—reducing the time for backups. In fact, there is absolutely no loss of performance trying to dedupe and backup data at the same time.

"When people need something, they usually need it now."

Knowing restore speed is just as important as backup performance. Most IT professionals are justifiably focused on their backup speed because backups happen every single night and have high visibility with managers, staff and customers. However, in an emergency situation, you need a solution that offers rapid restores because downtime is expensive. Many competing VTLs on the market are very slow at restoring because of the hydration overhead reassembling the deduplicated blocks. They are even slower than a modern tape drive (LTO7/LTO8). This can take 20+ hours to finish a restore. Consider the revenue loss that would be experienced because the IT team didn't factor in how long a restore would take. With a Cybernetics VTL, there is no latency loading a tape and locating the files to restore, so valuable company time is saved. The VTL comes with no hydration penalty and provides the best restore speed of any VTL. Backups from up to 20 hours of time on tape can be reduced down to a single hour with a Cybernetics Virtual Tape Library.



# 3

## Security

SMB/CIFS is the No. 1 reason for disk backup corruption as reported by Veeam. Any mountable disk is considered on-line and subject to attack by malware and ransomware. Cybernetics can take your data protection to the next level.

Cybernetics VTLs are disk-based, RAID-protected devices that provide true tape emulation. By emulating only tape, your backups remain off-line and secure. We do not provide any file-sharing capability which prevents our storage from being attacked. You get all of the benefits of disk (i.e., speed, redundancy, scalability) without the problems associated with disk file systems.

Cybernetics employs powerful AES 256-bit encryption to protect customers backups even when moved off-site. Encryption can be applied as: encryption-in-flight, encryption-at-rest and tape/removable disk encryption. Our encryption design ensures your data is safe when stored off-site—protecting it from unauthorized access. Tape emulation protects it from remote viruses that may impact your cloud's file systems.

Additionally, Cybernetics offers a unique approach incorporating the cloud into the 3-2-1 method. Our VTL also has the ability to replicate all of your backup copies to the cloud, public or private. This keeps your data safe from localized disaster. Advanced technologies like deduplication can greatly reduce how much bandwidth is necessary for replication. With two VTLs, you can be your own cloud—saving yourself the costs of third-party assistance.

## The 3-2-1 Backup Plan

The 3-2-1 rule is the bare minimum requirement for a comprehensive backup and disaster recovery plan. Having additional copies enhances your protection and archiving provides historical access to your data during your desired retention period.



### Three Copies Of Your Data

By having three independent copies of your data, you greatly improve your chances for a successful full system recovery in case of equipment failure, ransomware, human error, fire, water damage, theft and many other potential threats.



### Two Media Types

To properly safeguard your data, you must have it available on two independent types of media. That can include a physically separate storage array, virtual tape library or physical tapes. Because ransomware and viruses attack file systems, the second copy should be off-line and would naturally be protected from attack.



### One Off-Site Copy

To protect against localized threats, one full copy of the data should be stored off-site, preferably far enough away for geographic redundancy (eg., flood, earthquake, fire, long-term power outages, etc.).

# 4 Cost

Owning a Cybernetics VTL will drastically reduce the expense of protecting your data. Not only is our acquisition cost less expensive, so are the expansion and maintenance costs over the life of your system. You immediately see cost reduction by no longer needing to purchase tapes. You won't need to consider the cost of maintaining and storing those tapes either. Each unit comes with two years of hardware and software maintenance. You'll also get free technical support as long as you own the unit. As data grows, ensuring a path forward for capacity and performance becomes vital. Cybernetics VTLs scale up and out easily adding additional capacity and upgradeable controller options.

"Cybernetics has improved the efficiency of our backup, and has been able to grow with our infrastructure."

Call our knowledgeable Technical Sales staff today to learn how their unique engineering and design lower your costs while increasing performance, capacity, reliability, and availability. Protecting your data is faster and easier when you choose Cybernetics.



1-800-438-4202  
<https://wp.cpsts.com>

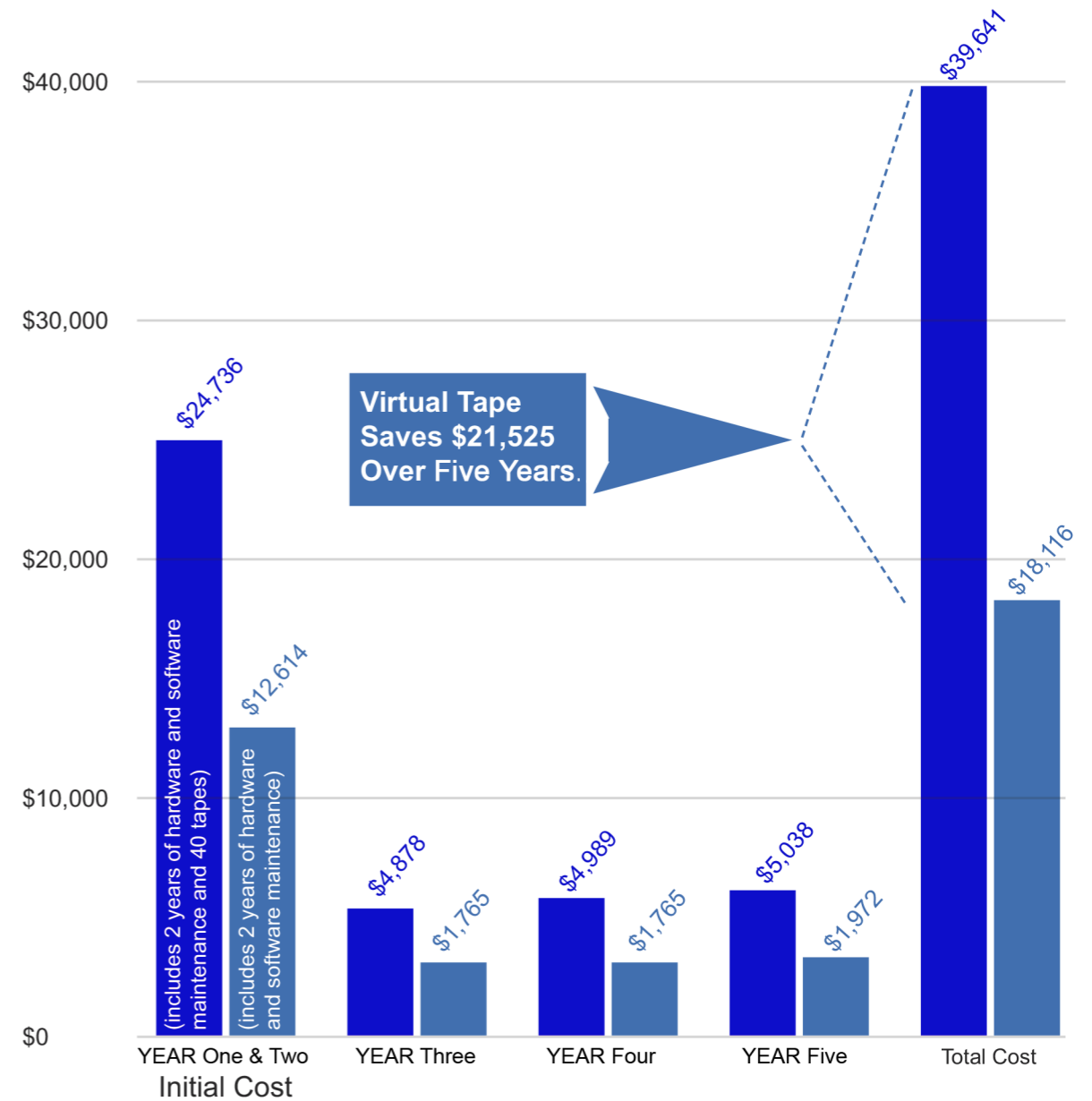
## Total Cost Of Ownership Over Five Years.



Costs include annual hardware and software maintenance plus 10 tapes for each year following the initial two years.



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# Tape Backup: Costs To Consider Above and beyond hardware cost

Hours spent daily handling/waiting for tapes: \_\_\_\_\_  
 Cost of employee per hour: \_\_\_\_\_ x \_\_\_\_\_  
 Total annual management cost \_\_\_\_\_ = \_\_\_\_\_

Easy management dashboard automates your backup process and minimizes the time and costs associated with tape handling.

Monthly transport fees: \_\_\_\_\_ x12 = \_\_\_\_\_  
 Monthly facility fees: \_\_\_\_\_ x12 = \_\_\_\_\_

Replicate virtual tapes to eliminate monthly transport and facility fees.

Number of tapes purchased annually: \_\_\_\_\_  
 Cost per tape: \_\_\_\_\_ x \_\_\_\_\_  
 Total annual tape cost: \_\_\_\_\_ = \_\_\_\_\_

Cybernetics virtual tape libraries are outfitted with a minimum of 500 virtual tapes, enough to backup years worth of data without any additional fee.

Times per year a role swap is performed: \_\_\_\_\_  
 Hours adjusting tape drives/libraries: \_\_\_\_\_ x \_\_\_\_\_  
 Hourly employee cost: \_\_\_\_\_ x \_\_\_\_\_  
 Total annual role swap cost: \_\_\_\_\_ = \_\_\_\_\_

Mirrored replica Virtual Tape Libraries at different sites allow for immediate role swapping with the click of a button from the management dashboard. Same slots, same tapes, same drives, no adjusting needing, no time wasted.

Annual hardware maintenance contract: \_\_\_\_\_  
 Annual software maintenance contract: \_\_\_\_\_ + \_\_\_\_\_  
 Total annual maintenance cost: \_\_\_\_\_ = \_\_\_\_\_

Annual hardware maintenance fees for Cybernetics virtual tape libraries are less than physical tape drive maintenance fees, and there are no annual software fees.

Total annual tape cost: \_\_\_\_\_  
 Number of years to project: \_\_\_\_\_ x \_\_\_\_\_

Projected savings with a Cybernetics VTL: \_\_\_\_\_ = \_\_\_\_\_

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