

Slash Your Storage Costs and Get Longer Retention

Using hard disk only systems —the traditional approach— for all of your video surveillance storage means you're paying too much, you're sacrificing retention, and you're probably missing out on the highest quality recording you can afford. Sans Digital Video Surveillance Appliance (SD VSA) provides an extremely scalable solution for storing the highest quality video footage for months or even years at a fraction of the cost of using a traditional hard disk only system.

Q: How can SD VSA provide such affordable long-term retention?

A: SD VSA does this by combining the management of online, near-line, and offline storage devices. SD VSA can initially capture video onto a smaller capacity traditional hard drive and then migrate it efficiently to less expensive storage such as hard drive arrays, Blu-ray disc, or data tape libraries. The video remains under complete management and readily available for fast search and playback.

Q: How does SD VSA provide readily available video for fast search and playback?

A: SD VSA has a unique ability to create efficient **low-resolution companion files** for recording to primary storage. The companion files are typically less than a tenth of the size of the originals, so you can retain **significantly more video** on the primary hard disk storage device. The quality of these preview videos allows you to easily review and identify the scenes of interest and designate clips for original video export.

Because these companion files are so much smaller, they require much less storage space and bandwidth to recall and review. This gives the user a quick and easy way to search for required video and review it for needed scenes.

Q: How is this more affordable than traditional solutions?

A: A key feature of SD VSA is its ability to manage less expensive tiers of storage resources. When integrating multiple storage tiers, you can expand your capacity and retention periods by purchasing only additional *offline media*, such as Blu-ray discs, or digital computer data tapes (LTO-5 tape). This lets you realize **significant savings from the traditional approach**, where you must spend thousands of dollars on additional hard disk storage units.

When you compare the cost of the actual storage media, you see that the per-gigabyte costs of media options vary dramatically. Data tape, such as **LTO**, costs about four cents per gigabyte based on current market prices, while enterprise class hard disk systems typically cost 20 cents per gigabyte.

Not only is offline media less expensive, it is also more durable and can be kept for **decades**. With a 15 to 30 year archival storage life for data tape, these media are durable and reliable. LTO5 provides 1.5 TB of capacity on a single data tape cartridge, with LTO6 provides 3.0TB of capacity in development.

Q: How does SD VSA provide the most relevant video search results?

A: SD VSA has the most extensive list of metadata fields of any video surveillance management application. This user-customizable metadata allows for the most relevant search results by allowing users to quickly find “the needle in the haystack.”

When more and more video is retained for longer periods of time, it becomes critical to provide a quick and easy way to search and play back video. By delivering search results against relevant metadata matches –and utilizing the smaller low-resolution companion files– users can quickly review video recorded over a long period.

Q: How does SD VSA retrieve the video from offline storage?

A: After the user has searched for video using the associated relevant metadata and selected video of interest by reviewing the low resolution companion files, SD VSA retrieves the original resolution video. If that video is located on offline media that is still in the storage unit, no human intervention is needed. If that required piece of media is completely offline, SD VSA instructs the user as to which offline media to re-insert. SD VSA then immediately locates the specific original video segment and places a forensic copy of the original back on the user's hard drive or other desired destination.

This feature, in concert with the low-resolution companion files, enables the original high resolution videos to be stored on offline media, unaltered and untouched, always under full management. The offline original video is not needed nor called upon until the user wants to export it for further review or inspection.

Q: Can you explain the Total Cost of Ownership (TCO) advantage?

A: The per-gigabyte cost of available media is only part of the story: after all, the media can't do much until it is inside a hardware device (disk array, data tape library, optical jukebox, etc.).

The Total Cost of Ownership —the cost of the media **plus** the storage device and the associated electricity costs of operating the devices— varies widely. The Total Cost of Ownership graph above shows the dramatic differences in the cost profiles of LTO5 data tape, and hard disk systems when increasing retention. With SD VSA, you can mitigate the cost of a traditional hard disk only storage system that rises steeply and steadily for each incremental retention period. By integrating various storage devices in a multi-tiered storage repository, you achieve significant cost savings. A Blu-ray based architecture, while initially more expensive due to the relative cost of Blu-ray optical jukeboxes, rises at a much slower rate than an enterprise hard disk only solution, since you need only buy additional discs to expand your capacity. The data tape based architecture is by far the most economical, with a modest initial acquisition cost and then only the cost of purchasing additional data tape cartridges.

Users can integrate a primary hard disk storage tier coupled with an additional tier of the newer removable hard disks storage device. A solution could also incorporate removable hard disks as offline media. Digital computer data tape, such as LTO4 and LTO5, provide excellent cost savings.

We encourage organizations to find the best use of one or all of the various storage mediums available and let SD VSA manage the overall storage repository for the longest term retention possible and the most affordable cost structure.

The Most Affordable, Scalable Solution for Long-Term Retention

SD VSA provides you with multiple storage resource options, the ability to utilize low-resolution companion files, and metadata searches that return relevant video, all managed for optimal performance.

With SD VSA you can “pay as you grow” by simply purchasing additional offline media as you need to expand. In contrast, the traditional hard disk only solution requires that you buy additional disk-based storage units as well as the media. As soon as you've filled a previous unit, you need to purchase an entire system each time you need to expand your retention, requiring substantial periodic outlays of money.

A Sans Digital VSA positioned solution is by far the least expensive option when it comes to video lifecycle management. At just a **fraction** of the cost of traditional hard disk only solutions, Sans Digital VSA systems utilizing a combination of storage resources deliver the best Total Cost of Ownership. They provide the most affordable solutions on the market today, scaling from a few gigabytes to petabytes for the longest retention, while providing ultra-fast video retrieval and playback and complete video surveillance asset management.