

California Municipality Needs To Keep Video Surveillance Retention For One Year: On A Budget



The Challenge

California's state records management requirements dictate retaining certain government-created documents for a period of one year. And upon verification, video surveillance files are considered government records and certain entities are obligated to retain recorded video for a period of at least one year.

Retaining video surveillance recordings on multiple video surveillance cameras within a government agency could be a daunting task, both financially and technologically, over an entire year.

For the City of Oceanside and specifically the San Luis Rey Wastewater Treatment Plant –which has over a dozen video surveillance cameras around the facility– the importance of long-term video retention was not only regulatory but also necessary for the security of the facility.

Keeping a city's water treatment facility safe and secure is a serious matter to numerous stakeholders. Therefore, these surveillance cameras are 1080p high-def IP-cameras and are recording 24/7 with the City connecting another 14 surveillance cameras from another location for more than 30 camera feeds.

With the need for such long-term video retention on that many surveillance cameras, the City of Oceanside faced the challenge of having the ability to easily review all recorded video and being able to afford such retention.

Needing to work within the set City budget allotments, the City's I.T. team needed a solution that would deliver the best video recording and at the same time meet the appropriate state's record retentions requirements.

Reviewing the video storage requirement for those over 30 surveillance cameras, one year's worth of

retention would need approximately 548-terabytes of video storage. A traditional hard-drive only storage solution would be simply too expensive for the City's budget.

The physical security industry has tried numerous ways to find ways to store large amounts of video without taking up so much disk space. Concepts such as H.264, H.265, and H.265+ are the most popular. The introduction of H.264 and H.265/+ has significantly helped in reducing the amount of needed storage for video feeds. This video algorithm has the ability to maintain the level of quality video while saving a substantial percentage of storage space.

The challenge with H.264/H.265 is that as the number of actual cameras increases within any organization, the need for more and more storage space still arises and we are back to our vicious storage cycle.

Vendors also introduced the concept of "Record-on-Motion" through which the software would only store video "where there is activity." But then we had issues with trees moving in the background or birds flying through the scene, or lights flickering that cause "motion" but didn't have any "real" activity. So, the vendors allowed for "thresholds" of activity to be ignored. All this did was cause systems to NOT record and store video when something important DID happen. But at least it saved storage space.

Although overall helpful, these work-arounds have been focused on ways to save hard disk storage space to reduce the overall cost of the solution.

The City of Oceanside Water Treatment Plant needed a better, more cost-effective, affordable, solution that would provide them with the video (records) retention requirements and those guidelines as set forth by the City.



The Solution

askALICE from Cozaint.

The City learned about Cozaint's professional video surveillance management system with two-tier video storage.

"We needed to upgrade our Security Surveillance system at our water treatment plant and since we have worked with several different systems, we knew what we liked and what we didn't like. It is always difficult to find a system that fits within our budget and meets our long-term retention requirements. Cozaint's askALICE has been an ideal fit for our surveillance recording needs and our budget." Scott Prather, Senior IT Analyst, City of Oceanside, CA.

Linear Tape Open (LTO) Ultrium is a high-capacity, single-reel data tape storage solution developed and continually enhanced by Hewlett Packard Enterprise, IBM, and Quantum and promoted by the LTO Program.

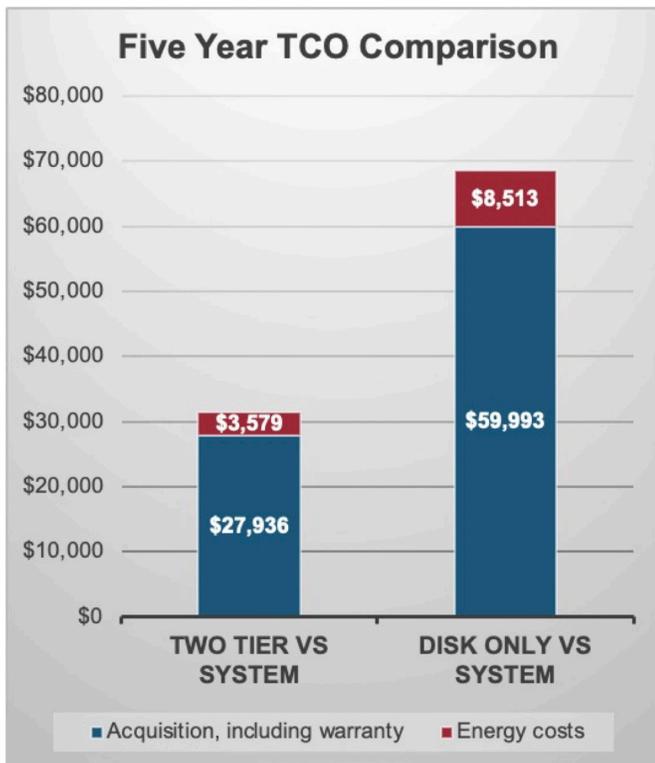
First introduced in 2000, LTO technology is currently in its 9th generation. *LTO-9 specifications support a cartridge with a capacity of 18-terabytes and data transfer rates of up to 400MB per second for over 1-Terabyte of storage performance an hour per drive.*

As hard disk-based storage solutions become very expensive in large capacities, what other storage technologies exist that could scale to such capacities?

Benefits of LTO:

LTO is a powerful, scalable, and adaptable data tape format that helps address the growing demands of long-term video retention. LTO Data Tape remains unrivaled in terms of cost for capacity, reliability, portability and security and it continues to play a crucial role in data protection. And LTO perfectly complements a more responsive disk-based storage system by providing a nearline storage offering.

Add LTFS. The Linear Tape File System (LTFS) makes viewing and accessing tape files easier than ever. LTFS works in conjunction with LTO technology for ease of use and portability for open systems data tape storage. With LTFS, one partition holds the content and the other holds the content's index, so the tape cartridge can be self-describing to improve archive management.



The costs were calculated based on data entered into the FujiFilm Total Cost of Ownership (TCO) website tool (<https://www.fujifilm.com/us/en/business/data-storage/resources/video-surveillance-retention-cost-calculator>) made from the City of Oceanside water treatment plant usage and needs.

Storing More Video For Less Costs:

Savings for using LTO tape as the 2nd-tier of storage and augmenting a smaller disk capacity for video surveillance storage came to 54%. Less than HALF the cost of a traditional hard-disk only solution.

Putting It All Together – *askALICE*

An ideal video storage infrastructure would provide medium- and long-term storage and:

- It should provide easy access to all stored video
- Video quality should never degrade over time
- There should be no 'extra' steps necessary to playback any/all recorded video
- It should easily scale as needed to support more surveillance cameras

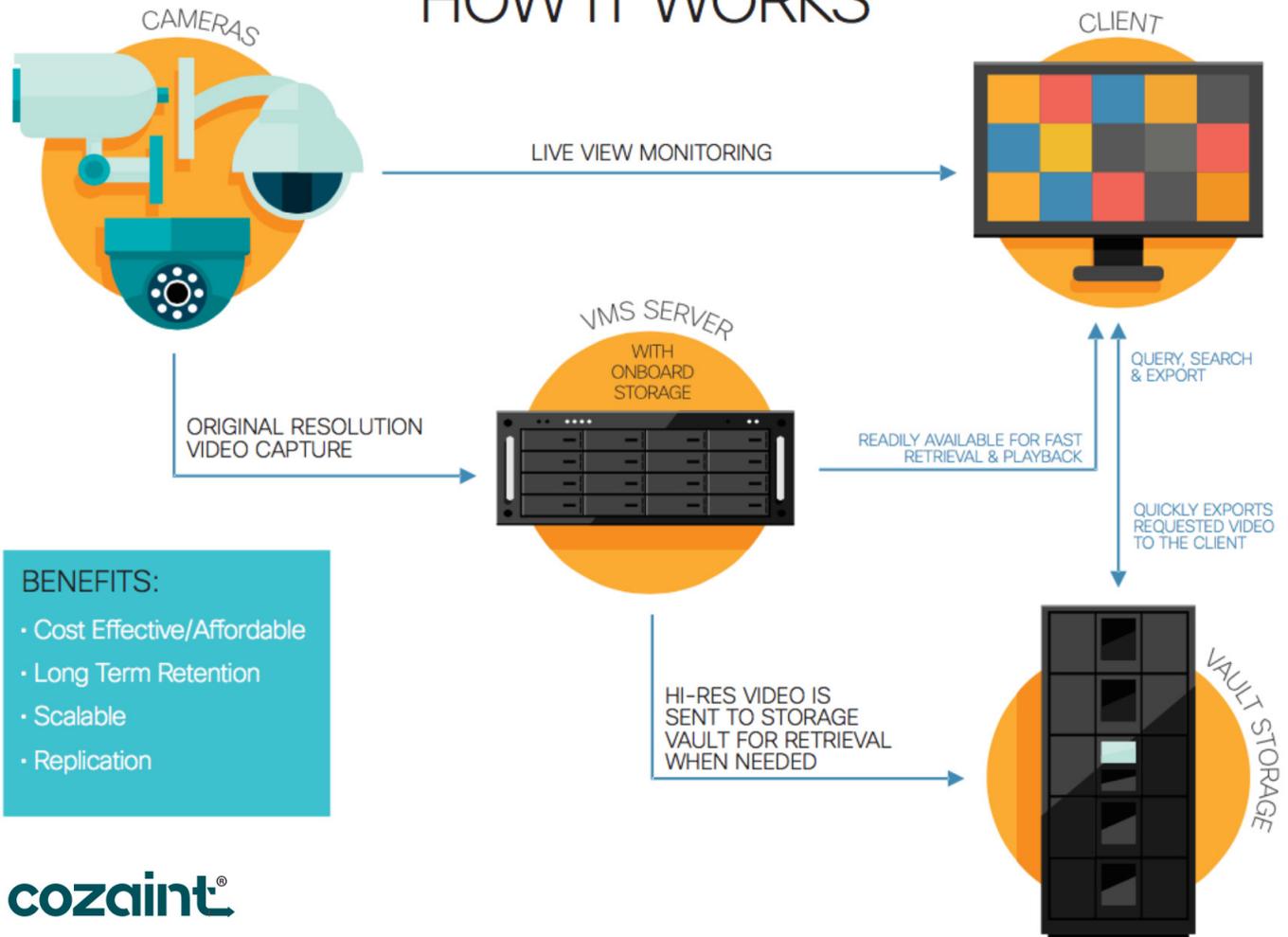
The ideal solution is a combination of disk-based storage and LTO-based storage in a two-tier solution. In such a multi-tiered storage infrastructure, a much smaller amount of hard disk storage is used as an initial, fast response, storage tier with the more cost effective LTO storage tier utilized for complete and long-term retention.

Cozaint has taken the requirements of such an affordable network video recording system and put together the appropriate software and hardware pieces to fulfill the needs of most medium to large scale video surveillance installations.

Combining specialized off-the-shelf PC hardware running the innovative BOBBYvms surveillance software and LTO libraries, Cozaint has come up with one of the most economical, flexible, scalable long-term video retention solutions on the market.

The BOBBYvms software comes with modules to add cameras, set up and modify user defined rules to direct the flow of video data, observe and control any camera in the system, maintain the video storage, and track the flow of video to the LTO library. In addition, the video for specific cameras is kept on the same LTO tape meaning that recall of the video for a particular camera is very efficient and effortless.

HOW IT WORKS



Cozaint's **askALICE** solution affordably scales from hundreds of terabytes to petabytes of video retention. Let us show you how we can deliver the long-term video storage you need at costs significantly lower than any other disk-only solution.

Total Cost Of Ownership (TCO) Results

	Two Tier VS System	Disk Only VS System
Tape Drives, Library, Media	\$20,618	\$0
Disk Cache	\$7,318	\$59,993
Energy	\$3,579	\$8,513
Cloud service fees + bandwidth	\$0	\$0
Solution 5 Year TCO	\$31,515	\$68,506

The Results

Cozaint's askALICE solution has been able to deliver the video surveillance long-term retention needs within the budget of a City government. askALICE is able to easily meet records retention policy needed by the City, while supplying the City's IT and Security team with the ability to quickly and easily review all recorded video.

The ability for the video surveillance operator to easily playback any recorded video from any time period, without any extra steps or individuals, is what delivers the overall value of this two-tiered video storage solution.

The reliability of the askALICE solution has proven itself with being operational for over one-year already at the San Luis Rey Wastewater Treatment Plant. Cozaint was able to deliver a technical solution –where the IT team is unfamiliar with the daily operations of the security team and their need to quickly access and review video– can be challenging at best. With askALICE, the security team can interact with all recorded and stored video with no interaction from the IT team. And this saves operational costs.

The City of Oceanside understood how the traditionally high-cost of video storage retention would typically reduce the length of time -or even the quality of the recorded video- the City could afford to save. And to keep the quality of video for the longest period of time desired, the City needed the flexible, cost effective, askALICE solution.

“The askALICE solution has provided the features and functionality our team needs from a video surveillance solution together with the long-term retention needs required by our City policies,” added Prather.

About Cozaint Corp

Founded in 2018, Cozaint Corporation is a service-disabled veteran owned business that manufactures and develops 'smart' physical security solutions. Learn more at www.Cozaint.com

Cozaint: Safer Because Of Us^(tm)



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