



## Solution Brief

# NetApp Video Surveillance Total Cost of Ownership

NetApp E-Series consolidated storage compared with nonconsolidated storage in video surveillance solutions

### Key Business Benefits

- Easy deployment and administration of a customer's data center
- Building-block approach to growth
- Grow storage and compute separately
- Protect against data loss with drive and component failure protection
- Support high-end data analytics workloads

### The Challenge

Video surveillance is in a phase of rapid technology evolution. Ultra-high-resolution camera technology is now quite cost effective, enabling security teams to monitor a wider field of vision with extreme detail. Beyond cameras, analytics technology is benefiting from advances in artificial intelligence, helping security teams to do more with less, cost effectively improving their security posture.

But with these new capabilities, the data storage element faces new demands, both from the tsunami of data being generated and the demanding workloads to support analytics functionality. Management must deliver the most capable protection for people, property, and assets at the lowest total expense. Clearly, the system must cost effectively meet the needs of the application. But how can a manager choose the most cost-effective and robust solution available from the sea of hardware and software options?

### The Solution

To enable the most informed decision, a total cost of ownership (TCO) comparison should be made considering all the elements of the cost of operations, such as increased risk, limited capabilities, employee costs, complexity, and inconvenience. Considering the total cost makes it much easier to decide how to modernize your surveillance storage infrastructure with enterprise-grade storage systems.

To compare NetApp® E-Series consolidated storage against the alternatives, a group of competitor solutions was organized. For each of the competitors evaluated, this comparison used the most accurate pricing information available and attempted to optimize costs based on recommendations for each product and the most logical deployment methods. RAID levels and additional features were evaluated and included only if it made sense for the use case being considered. When supported, Milestone was used as the video management system (VMS) provider. Drive costs were determined using the most economical options available. A list of use case scenarios was established to compare the TCO across various deployment scales.

The cost of the video surveillance solution can be dominated by several factors, depending on the architecture. In our comparison, as capacity requirements increased, drive costs had a significant impact on the total cost. Network video recorder (NVR) proliferation for larger systems also resulted in high costs for rack space and maintenance. As the camera counts grew, VMS licensing costs became a dominant factor in the total cost.

The result: In most cases, consolidated enterprise storage had a lower TCO than other solutions. Only in scenarios with less than 200 cameras and less than 370 TB of required storage was the TCO of consolidated storage higher than in the low-end NVR and white-box solutions. Yet still far from the most expensive option. When considering the cost of the cameras in the total solution, the price difference in these cases became even less significant; and as seen in the larger scenarios, these low-cost solutions don't

remain inexpensive when the installation grows. The cost and maintenance of scaling a solution based on NVRs with fixed capacity is a significant pain point that many video surveillance customers are facing today.

With a comparable or lower total cost, enterprise-grade storage offers better performance and more capabilities while allowing you to spend more time on improving security operations, not on managing your infrastructure.

### Enterprise-Grade Storage

The NetApp E-Series consolidated, enterprise-grade storage for video surveillance offers a more robust and performant solution compared to NVR stacks or white box server local storage, protecting against data loss while supporting high-end video analytics.

**Increase performance.** NetApp E-Series storage read/write overhead far exceeds the demands of a typical recording and playback workload.

Add advanced analytics workloads such as motion detection, license plate reading, facial recognition, object recognition, people counting, and machine learning to increase the value of your surveillance system.

**Data protection.** Unlike white-box NVR setups, NetApp E-Series products support RAID protection and hot spare for drive loss. Also, most white-box solutions don't offer any hardware redundancy. Failure in any of these areas can result in data loss or recovery time costs. Your data is valuable—protect it.

### Simplify your space

Simplify your IT architecture by using NetApp E-Series storage for your video surveillance and business operations storage requirements. Save rack space and prevent underused hardware.

**Consolidation.** By consolidating hardware, the number of failure points is also minimized, reducing the number of hours spent on equipment maintenance.

A lower rack space requirement means lower cooling and electrical costs.

**Simplicity.** Limiting your storage hardware to a single platform can make life easier for your system administrator. Configure and monitor all storage from a single pane of glass. Simplify your space.

### Summary

Choosing the right storage solution for your video surveillance system can be tricky. Determining the TCO of each solution is a complex problem that requires you to consider all the elements of the cost of operations, like increased risk, limited capabilities, employee costs, complexity, and inconvenience.

TCO analysis for several video surveillance storage options at several scales shows that consolidated enterprise storage has a lower TCO in most cases, especially as scale increases. Considering lower TCO, superior performance, and loss protection, NetApp E-Series is the clear choice to support your VSS storage needs.

### Read the TCO Whitepaper

See where the numbers come from and how we compare to the competition in [Whitepaper 7317: How Consolidated Storage Lowers Total Cost of Ownership for Video Surveillance](#) (Login required).



### About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation, and optimize their operations. For more information, visit [www.netapp.com](http://www.netapp.com). #DataDriven