



On-Premises Versus Cloud Storage for Enterprise Video Surveillance

Scale limitlessly without the threat of security risks to your video infrastructure

BACKGROUND

Video is rapidly becoming one of the most valuable sources of data for organizations of every size, in every industry. Video surveillance deployments are growing as more cameras are added. And with more cameras comes more data. Higher-resolution cameras deliver vastly improved detail that you can use to keep people and infrastructure safe—but that data has to be available at the right time. More than ever, organizations rely on security teams to become stewards of data.

CHALLENGE

If your video data isn't effortlessly and affordably available when you need it, it's losing value. Dropped frames or incomplete video means the loss of critical evidence. To provide maximum security with video surveillance, video data must always be on and be easily accessible. But traditional video surveillance infrastructure has often depended on commodity digital video recorders (DVRs) that can be prone to failure and expensive to maintain and that can't scale with growth. Consolidating all those disparate data sources into a cloud storage solution might seem like an easy way to get rid of unreliable physical storage boxes while improving scalability. But it's not always that simple.

Cloud is well-suited for a variety of workloads, but you still need reliable, secure, on-premises storage systems. When it comes to video surveillance, you need to be confident that your data is protected and accessible at all times. High-resolution cameras demand fast storage that can ingest and serve up data at high speed. In the cloud, such speed could be costly to achieve and relies on a bandwidth-limited connection for access. If the internet connection is slow or if a disaster affects your bandwidth, you could risk dropping video during critical times when you really need it. For secure, fast, reliable video surveillance storage, you need an enterprise-grade, on-premises storage solution.

THE SOLUTION

The NetApp® E-Series storage solution delivers the scalability, performance, and availability that your video surveillance requires, without ballooning costs. With this on-premises, unified storage solution, you can be confident that your data is secure and available, whether the E-Series system is on-site in your security facility or in your data center. E-Series delivers the enterprise-grade reliability and security that commodity DVRs and cloud solutions can't provide for your video surveillance data.

With an on-premises storage solution, you don't need to worry about escalating, recurring costs to get additional performance or storage space or to retrieve your video. With E-Series, you can scale on demand as you add more cameras or increase resolution or retention time. It is simple to use and to maintain, without the worry and expense of training security staff to be IT experts.

SCALE WITHOUT LIMITS

Unexpected management overhead can potentially derail your security team. When it's time to add more storage, your security team doesn't want to be stuck managing storage; they would rather be out doing their job. And with security budgets already tight, you don't want to be saddled with additional cost due to storage expansion.

As video surveillance deployments expand, you must be able to ingest and to store increasing amounts of high-definition video from every angle. That means having a storage architecture that can rapidly and seamlessly scale to support hundreds or thousands of cameras and months to years of retention. Although the cloud can provide that scalability, it's not without its costs or management overhead. And any outage in video due to running out of capacity could be disastrous.

The modular scalability of E-Series storage offers maximum density, performance, and reliability in an on-premises system that stays on budget. You can add capacity in any increment, so you can scale up as your needs demand without adding compute or disrupting video recording.

DEPLOY AND SUPPORT YOUR STORAGE EASILY

Data is growing exponentially, especially when it comes to video. Added cameras and increased resolution or retention mean that more and more data is coming in that needs to be stored and analyzed in real time. You could easily find yourself managing terabytes or even petabytes of video data. This volume can be especially daunting if you're responsible for your own infrastructure and don't want to invest significant resources in a dedicated IT team. A cloud solution might seem like a quick fix and a way to gain limitless storage, but it's not necessarily that simple. Cloud costs can quickly spiral out of control, network issues can cause unexpected downtime, and data ownership can become problematic.

With an on-premises storage solution like E-Series, you don't need to worry about managing complex architectures, capacity tiers, or performance levels. You can divide and customize storage to fit your individual requirements, which optimizes performance and gives you the capacity that you need now and in the future.

KEY ADVANTAGES OF E-SERIES ON-PREMISES STORAGE

- Seamless, modular scalability for cost-efficient capacity growth
- Simple infrastructure management without the need for dedicated IT personnel
- Compartmentalized storage for functional isolation to improve data security
- Market-leading design with outstanding reliability and greater than 99.999% availability
- High-density, high-capacity storage, for lower TCO
- Enterprise-grade, secure storage to maintain chain of evidence with no retrieval issues

PROTECT YOUR DATA

Threats to your data are more prevalent now than ever before. By storing your video surveillance data in the cloud, you could unknowingly expose yourself to security risks. Getting data out of the cloud also presents issues around chain of custody that can cause problems with providing usable evidence. Citywide power failure or network outages due to natural disasters can mean that you lose access to critical video data. A bad actor could also access your video data through an open internet connection, putting your video at risk to intrusion or theft.

The E-Series video surveillance storage solution gives you an ironclad, on-premises repository for your video data in a dedicated system that is entirely yours. You don't need to worry about unauthorized access. By using a compartmentalized, building-block approach, E-Series provides enterprise-grade security for your most valuable business asset—your data. This compartmentalization offers functional isolation, providing an extra layer of protection for video surveillance environments where safety and security are paramount. E-Series is connected through storage protocols, not network protocols, which makes it more secure from general IT applications.

KNOW THAT YOUR VIDEO DATA IS THERE WHEN YOU NEED IT

Internet connections fail. What happens when they do? If your video data is stored in the cloud, you might lose access to valuable data for minutes or even hours. If a security situation or a disaster occurs, you need access to your video immediately. If that video isn't there when you need it, it's worthless, and you could be introducing risk to people or to property. Your video surveillance is business-critical security, you can't afford to gamble with your storage.

NetApp's on-premises video surveillance storage solution does not require an external connection with the internet to provide access to data. With E-Series, you can be confident that your data will be at your fingertips when you need it most. E-Series offers 99.999% availability and built-in redundancy at the node level. And NetApp's patented Dynamic Disk Pools technology means that you don't lose data, even under drive failure or rebuild. You can perform management tasks while the storage remains online, with complete read and write data access. Make configuration changes, perform maintenance, or expand storage capacity without disrupting video recording.

LOWER YOUR TCO

Today's high-definition cameras and longer data retention requirements result in more data needing to be stored, which can easily drive up data storage costs. In many cases, storage alone accounts for a significant portion of the cost of a typical surveillance environment.

Video takes up a lot more storage than the data from most other business applications, a challenge that is becoming only more apparent as resolution increases and retention requirements expand. Although cloud-based video storage enables easy scalability, the recurring cost of adding storage as you grow can quickly add up. In addition to mounting storage fees, cloud-based architectures can have greater operational costs because of their management complexity. This complexity often results in the need for dedicated IT personnel, driving up TCO even further.

E-Series storage typically has lower acquisition costs than alternative systems do, with straightforward invoicing that includes the initial configuration and support with no licensing overhead. Efficiencies in cabling and storage density help lower your operational costs for maintenance, power, cooling, and space.

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. #DataDriven