

SOLUTION BRIEF

Video Storage: Less Cost, More Reliability

MSO shifts video data from public cloud to data centers, reducing cost and delivering a more reliable and secure service.

A leading North American multiple system operator (MSO) and Tier 1 provider of phone, cable TV, and home security services faced a significant challenge: managing and securing vast volumes of customer data, particularly the feeds generated by home security cameras. With over 750,000 active camera feeds, ensuring the integrity, accessibility, and privacy of this data is paramount. To meet these critical demands, the MSO has strategically partnered with Pure Storage®, leveraging our advanced storage solutions to ensure robust data management and security.

The Challenge: Managing High-Volume, Sensitive Data in a Cost-effective Manner

The nature of home security camera feeds presents unique challenges:

- **Volume:** Hundreds of thousands of feeds generate petabytes of data daily, requiring immense storage capacity.
- **Velocity:** Continuous recording means data is constantly being written, demanding high-speed ingest capabilities of over 4GBps per site.
- **Quality:** The video feeds must be of sufficient quality to allow machine vision inspection for scene, object, and movement detection. By default, the cameras record in HD 1080P format.
- **Security:** The sensitive nature of home security footage necessitates stringent security protocols to prevent unauthorized access and data breaches.
- **Accessibility:** Customers expect instant access to their live and recorded feeds, requiring low-latency retrieval.
- **Retention:** Regulatory and customer requirements dictate 30-day retention periods for video data. Massive erase cycles have to be scheduled in advance to reduce any impact on service quality.
- **Cost:** The data was initially stored in a public cloud environment, with costs rapidly rising in proportion to traffic and customer base, cutting into margins. The public cloud solution charged over \$1.26 per usable gigabyte for a five-year period.



Lowered Costs

Overall video storage costs were reduced by 87% compared to public cloud.



Greater Reliability

Customer playback success improved, increasing customer satisfaction.



Ease of Use

Simple storage management took pressure off the IT team.

The Solution: Pure Storage FlashBlade

This MSO solved its storage challenge by moving data to Pure Storage [FlashBlade](#)[®].

FlashBlade offers scalable, high-performance file and object storage, making it ideally suited for handling the large volumes of unstructured video data generated by the security cameras. The FlashBlade architecture allows for massive parallel processing and efficient data ingestion. FlashBlade is available in a range of performance and capacity levels to handle everything from massive graphics processing unit (GPU) farms for AI to petabyte-sized data repositories for video, archives, and more.

Key Benefits of the Partnership

The adoption of Pure Storage solutions has yielded several significant benefits:

- **Enhanced data security:** Pure Storage solutions incorporate advanced data encryption, immutability features, and robust access controls, ensuring the security and integrity of sensitive camera feeds. This helps protect customer privacy and comply with data protection regulations.
- **Superior performance:** The all-flash nature of Pure Storage arrays provides the necessary speed for real-time video ingestion, playback, and analysis. This minimizes latency and ensures a seamless experience for the MSO's customers. The observed end-to-end latency was down to a consistent 5ms per site. Additionally, periodic data erasure no longer needs to be scheduled, as it does not impact performance in the Pure Storage solution.
- **Scalability:** As the number of home security camera feeds continues to grow, the scalable FlashBlade architecture allows the MSO to expand its storage infrastructure effortlessly without disrupting services. The platform delivers over 7.7PB of scalable storage. This future-proofs its operations.
- **Reliability and redundancy:** Pure Storage systems are designed for high availability and data durability, significantly reducing the risk of data loss and ensuring continuous service uptime for critical security monitoring.
- **Simplified management:** The intuitive management interfaces and automated features of Pure Storage solutions simplify the administration of the complex storage environment, reducing operational overhead for the MSO's IT teams.
- **Cost:** The solution from Pure Storage has reduced cost by over 87% compared to cloud storage.

Impact on Home Security Services

By leveraging Pure Storage, the MSO has been able to:

- **Improve customer satisfaction:** Faster access to video feeds and reliable service delivery enhance the overall customer experience.
- **Strengthen security posture:** The robust security features of Pure Storage contribute to a more secure and resilient infrastructure for managing sensitive customer data.
- **Support growth:** The scalable nature of the storage solutions enables the MSO to confidently expand its home security services and accommodate a growing customer base while maintaining a cost-effective service.
- **Improve availability:** Playback success rates show significant improvement over the MSO's public cloud solution (from 99.99% to 99.999%).



The MSO's partnership with Pure Storage exemplifies a successful collaboration in securing and managing large-scale, sensitive data. This strategic alliance ensures that over 750,000 home security camera feeds are not only stored efficiently but secured with the highest standards, all while significantly reducing the MSO's operating costs compared to the previous public cloud implementation.

Additional Resources

- Learn more about Pure Storage solutions for [telecom providers](#).
- Explore [FlashBlade//E™](#) for high-capacity, all-flash data storage at the cost of disk.
- Discover the Pure Storage [Enterprise Data Cloud](#).