

Dell PowerVault ME5 for Safety and Security

Seamless storage for smarter surveillance

The need for advanced video surveillance solutions continues to grow as organizations expand their security systems to protect assets, ensure safety, and comply with regulatory requirements. However, managing the immense influx of surveillance data presents unique challenges in terms of performance, scalability, reliability, and ease of management.

Dell PowerVault ME5 storage array provides an efficient, reliable, and scalable solution designed to support the rigorous demands of video surveillance (CCTV) applications. With features that ensure high performance, ample capacity, and simple integration, PowerVault ME5 enables organizations to address their current and future security needs with confidence. Whether you're managing a small business or a large enterprise, PowerVault ME5 can help you achieve optimal surveillance performance while reducing operational complexity.

Dell PowerVault



Simple

- PowerVault ME5 simplifies your operations with an intuitive interface and effortless management, making data storage and administration easier than ever. Its straightforward design eliminates complexity, freeing up time and resources so you can focus on achieving your business goals without disruptions.

Fast

- Designed for 99.999% availability, PowerVault ME5 delivers fast, efficient, and dependable performance, accelerating data access and optimizing storage to reduce costs. Its reliable design safeguards your data while simplifying management, so you can focus on growth with confidence.

Affordable

- PowerVault ME5 offers high-performance storage with a low acquisition cost, cost-effective TCO, and a flexible pay-as-you-grow model. It empowers businesses to scale seamlessly, optimize budgets, and focus on success without compromise.

CHALLENGES

Modern surveillance systems face significant technical and operational challenges, particularly as they scale to meet new demands. Some of the key issues include:

1. Massive data generation

With the increasing adoption of high-definition (HD) and 4K cameras, even a small network of video surveillance devices can generate hundreds of terabytes of data over time. Each camera records continuously, creating significant data storage challenges, particularly in environments with hundreds or thousands of cameras.

2. Performance demands

Surveillance systems rely on uninterrupted video feeds. High-definition footage must undergo smooth and seamless real-time capture, storage, and retrieval. Dropped frames, latency, or performance slowdowns can compromise security operations.

3. Scalability and future growth

Expanding surveillance networks by adding more cameras or increasing storage capacity often introduces friction. Systems need the ability to scale rapidly without significant downtime or performance degradation.

4. Data retention requirements

Many industries, including healthcare, finance, and critical infrastructure, must comply with strict regulations governing how long video footage must be retained. Long-term retention drastically increases storage requirements while demanding reliable archiving solutions.

5. System complexity

Managing video surveillance storage environments often requires IT resources to oversee complex configurations, troubleshoot issues, and sustain uptime—even during a hardware failure.

WHAT POWERVAULT ME5 BRINGS TO THE SURVEILLANCE MARKET

Dell PowerVault ME5 addresses these challenges with features and capabilities specifically designed for modern surveillance needs.

1. Performance tailored for video workloads

PowerVault ME5 leverages advanced storage technologies to handle high-throughput, write-intensive applications. Scalable configurations using hard disk drives (HDDs) or solid-state drives (SSDs) ensure that even large video streams (HD or higher) run smoothly without dropped frames. Its balanced workload optimization ensures an uninterrupted recording process.

2. Seamless scalability

Whether supporting ten cameras or thousands, PowerVault ME5 is designed to grow with you. With up to 8PB of raw capacity per array, PowerVault ME5 provides ample storage for expanding camera networks and evolving resolutions. Its modular design allows for hardware expansion without interrupting critical operations.

3. Data Integrity and protection

Advanced features like snapshots, encryption, and replication safeguard critical surveillance footage. For example, replication ensures that footage is securely stored at secondary locations, keeping data accessible in case of hardware issues or localized failures.

4. Streamlined management

With an innovative, easy-to-use interface, the PowerVault ME5 simplifies storage management. Built-in automation features reduce the burden of manual processes, enabling IT teams to focus on high-priority initiatives. Additionally, its seamless integration with leading Video Management Systems (VMS) platforms ensures compatibility with your existing software ecosystem.

5. Reduced total cost of ownership (TCO)

By combining energy-efficient components, reliable hardware, and flexible scaling options, PowerVault ME5 minimizes both upfront investment and ongoing maintenance costs. Organizations can implement high-performing solutions without sacrificing cost efficiency.

PURCHASE AND IMPLEMENTATION CONSIDERATIONS

To deploy PowerVault ME5 successfully within your video surveillance environment, consider the following parameters to guide your investment and ensure optimal results:

1. Surveillance requirements analysis

Start with a detailed assessment of your video surveillance needs. Identify the number of cameras, the resolution (e.g., 1080p, 4K), and frame rates required. High workloads, such as 24/7 monitoring of dense urban areas, call for high-performance configurations with SSDs and dual controllers for redundancy.

2. Capacity planning

Factor in not only current demands but also future growth projections. For example, an initial setup for 50 cameras may require 300TB of storage; adding 50 more cameras over the next 12 months could double storage needs. PowerVault ME5's scaling options make room for growth without costly upgrades.

3. Data retention compliance

For organizations required to retain footage for months or years, choose high-capacity HDD arrays to archive video affordably. You may also consider implementing an automated tiering system to offload older footage to cooler, cost-efficient storage.

4. RAID configurations

Choose RAID levels, such as RAID 6, to ensure maximum reliability for mission-critical environments where uptime is a top priority.

5. VMS compatibility and integration

Ensure seamless integration by verifying that PowerVault ME5 can work with your current Video Management System (VMS). Popular VMS software such as Milestone, Genetec, and other industry leaders are supported by Dell PowerVault systems.

SPECIFYING THE RIGHT POWERVAULT ME5 CONFIGURATION

Here are some recommendations for tailoring the PowerVault ME5 to meet your specific surveillance needs:

- **Storage mix**

Use tiered storage with high-capacity HDDs for archival footage and SSDs for recording and playback of active footage. This flexible approach ensures the ideal balance of performance and cost efficiency.

- **Connectivity and throughput**

Integrate high-speed connectivity options such as 10Gb Ethernet (10GbE) or Fibre Channel. This is critical for environments with high workloads or a large volume of concurrent video streams.

- **Redundancy design**

Use dual-controller configurations to ensure the system can deliver seamless uptime even during a hardware failure.

IMPLEMENTATION STEPS

Deploying PowerVault ME5 for video surveillance is straightforward when following these steps:

1. Pre-deployment assessment

Conduct a thorough review of your video surveillance infrastructure, including camera placements, VMS platform specifications, network bandwidth, and power requirements.

2. System configuration

Work with a Dell expert to configure the PowerVault ME5 storage array according to your operational needs. Assign volumes, define RAID levels, and set up automated data protection features.

3. VMS integration and testing

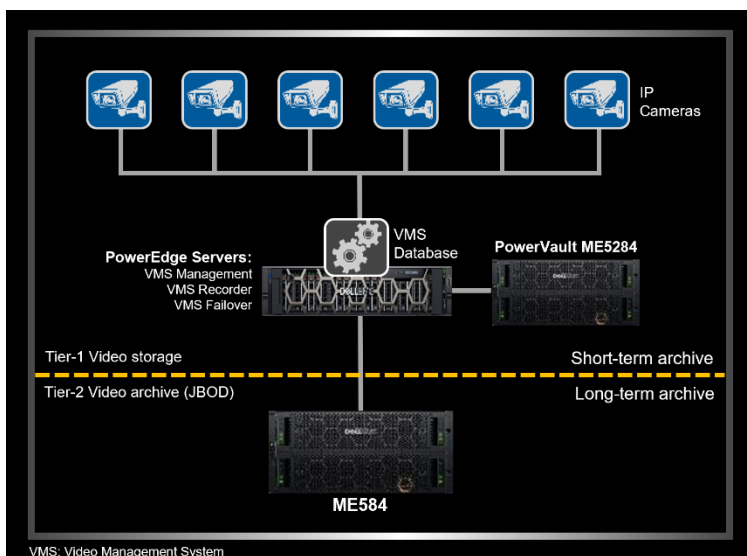
Connect the PowerVault ME5 array to your chosen VMS platform. Run live tests to confirm that video feeds are being correctly recorded, stored, and retrieved for playback without any dropped frames or latency.

4. Performance optimization

Fine-tune storage settings and network configurations to optimize throughput. Ensure adequate bandwidth to support peak video workloads.

5. Monitoring and management

Deploy monitoring tools such as Dell AIOps to proactively track array performance and ensure long-term health. Set up automated alerts for capacity thresholds or potential hardware issues.



TAKE THE NEXT STEP

Dell PowerVault ME5 makes robust, scalable, and cost-effective video surveillance solutions a reality.

Take the next step toward improving your surveillance system performance and reliability.

Contact a Dell Technologies expert today to discuss your specific needs and build a tailored solution for your organization. Together, we can empower your mission of security and progress.



[Learn more](#) about Dell PowerVault Storage



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