

Pavilion NVMe-oF Storage for StorNext

Accelerate media and entertainment projects

Save Space, Time and Money

Media and entertainment (M&E) organizations need to produce information and entertainment in a variety of different formats and delivery mediums. Developing and delivering content that reaches audiences whenever and wherever they are has increased in importance and complexity. In today's highly connected, entertainment-driven world, M&E companies need to stay competitive to succeed. Workflows grow in complexity daily and time-to-market windows continue to shrink. The underlying storage that powers video projects dictates how quickly employees can move on to their next project.

M&E projects need high performance and low latency. Traditionally, this was achieved by purchasing a large number of storage arrays and disks (HDDs or SSDs) from multiple vendors. The result was multiple storage silos with up to 75% excess capacity for the various media assets, increasing production cost. Pavilion consolidates media assets eliminating stranded capacity.

The last thing an M&E production house wants is to lose content, so the Pavilion HyperParallel Data Platform™ is fault-tolerant with built-in high availability and includes zero-footprint snapshots to make instant copies of a project. Move this copy along the production workflow without impacting network traffic generated by post-production workers.

Pavilion HyperParallel Data Platform

The Pavilion HyperParallel Data Platform delivers 120 GB/s throughput, 25µs of latency, 20M IOPS, and 2.2 PB of storage. Its hyperparallel architecture unlocks the power of NVMe to enhance the performance of latency-sensitive video workflows all in a compact 4U form factor.

Parallel file systems require high-performance and low-latency shared storage and the Pavilion HyperParallel Data Platform delivers this with orders of magnitude more throughput. The combined solution delivers exceptional video ingest, production, transformation, and delivery processes. The solution dramatically streamlines workflow and improves productivity by creating a shared repository that supports flexible, high-performance streaming, even with high-bit-rate media content.

If a project calls for 4K, 8K, multiple concurrent streams of HD 4444, 4K EXR or hours of uncompressed full aperture video, the Pavilion array harnesses the power of NVMe storage, to consolidate storage pools, reduce copy and render time, and enables multiple editors to work at full productivity.

Benefits

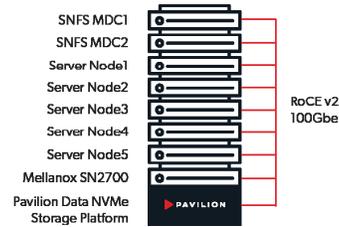
- Doubles rack density
- Consolidate racks into a single 4U system
- Faster video editing
- Consistent video playback
- Multiple 4K/8K streams
- Optimize the performance of mixed file sizes
- Hyperparallel NVMe architecture accelerates video operations
- Continuous operations with 24/7 proactive support
- Petabyte scalability, high-performance, and low-latency boosts video workflows

The Pavilion platform requires no proprietary software to be installed on a server farm and uses standard Ethernet, InfiniBand, and NVMe-oF drivers, freeing up host resources for processing and eliminating deployment complexity.

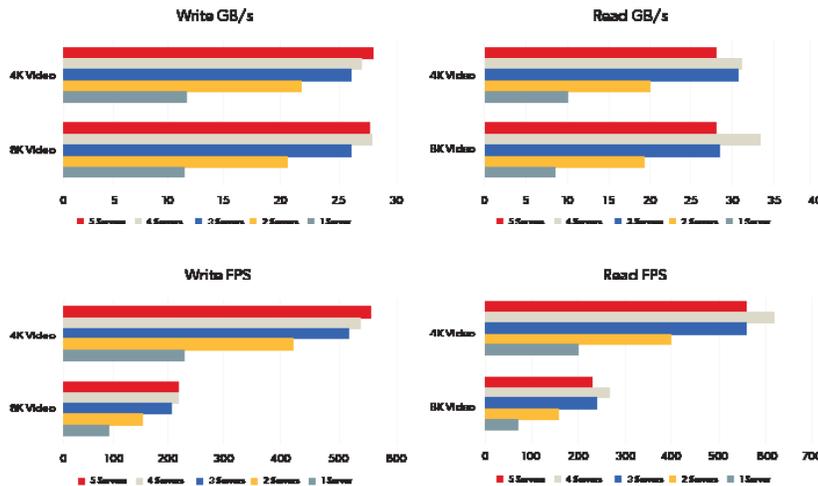
Proven High-Performance Media FPS and Throughput

Pavilion tested media frames per second and throughput using StorNext 6.1.0 Build 77524 with two SNFS meta-data controllers in high-availability mode using five server nodes with four 4K/8K streams per node.

To test performance, the Frametest utility was used, which simulates reads and writes. It was set to generate 10,000 frames at 4K and 8K resolutions. Frametest emulates raw still frames or frames generated by post-processing or 3D rendering software.



Through these tests, the Pavilion HyperParallel Data Platform delivered more frames and had higher throughput than any vendor's published results. During read testing, an I/O pattern similar to that of video playback, the Pavilion solution produced 549 & 219 4K/8K FPS and 27.9 & 28.1 GB/s 4K/8K throughput with 20 streams. During write testing, an I/O pattern similar to that of video capture or ingestion, the Pavilion HyperParallel Data Platform produced 532 & 220 4K/8K frames per second and 28.1 & 27.9 GB/s 4K/8K throughput with 20 streams.



Optimize Transcode, Versions and Delivery

Scale-out multi-threaded transcoding operations. With the Pavilion HyperParallel Data Platform transcoding operations can take place in parallel, boosting operations, significantly increasing transcode billable hours per server. Perform translations and closed-caption assets independent of the original uncompressed asset without moving large files across the network and impacting production workers. Stream in compressed and uncompressed resolution directly from media assets inside the same array. The Pavilion HyperParallel Data Platform provides plenty of space to edit, translate and stream from the same system.

Transition from legacy fibre channel SANs to standard Ethernet and NVMe-oF and get ultra-high performance with ultra-low latency and assure a consistent, low-cost growth path with a future-proof storage solution as 3D, VFX, and AR/VR requirements expand.

Find Out More

Pavilion shatters customer expectations and resulting organizational outcomes by revolutionizing data processing for modern AI/ML, HPC, Analytics, Enterprise Edge and other data-driven applications. The Pavilion HyperParallel Data Platform, powered by Pavilion HyperOS, delivers unmatched performance and density, ultra-low latency, unlimited scalability and flexibility, providing customers unprecedented choice and control. Learn why Fortune 500 companies and federal government agencies choose Pavilion. Visit www.pavilion.io or follow the company twitter at <https://twitter.com/PavilionData>