NVMe-oF Storage for Pixit Media

Accelerate media and entertainment projects

Save Space, Time and Money with No-Compromises

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 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. The Pavilion Hyperparallel Flash Array (HFA) consolidates media assets, eliminating stranded capacity, reducing costs. It harnesses the power of NVMe storage, to consolidate storage pools, reducing copy and rendering time, enabling multiple editors to work at full productivity.

The last thing an M&E production house wants is to lose content, so the Pavilion HFA is fault-tolerant with built-in high availability and encryption. It also includes instantaneous 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.

Meet evolving enterprise storage needs with Pavilion's all-inclusive, cloud-like subscription storage model. The user chooses the NVMe drives they need based on the performance, capacity, and endurance, avoiding lock-in. Improve purchasing power by sourcing drives from a preferred manufacturer, an existing distributor, or Pavilion instead of paying up to four times the $/GB to a vendor.

The Pavilion HFA With PixStor

The Pavilion HFA delivers 90 GB/s throughput, 40µs of latency, 1.1 PB of storage, and 40µs of latency all in a compact 4U form factor to PixStor based video workflows. Its hyperparallel architecture unlocks the power of NVMe to enhance the performance of latency-sensitive workflows big and small.

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.

The array 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.

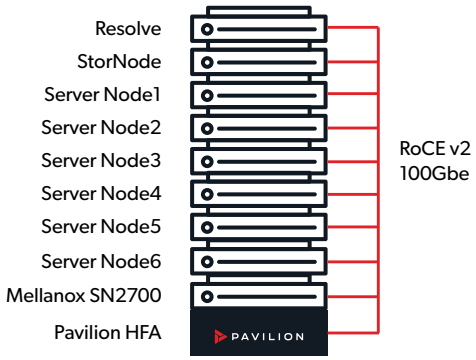
Benefits

- PixStor™ compatible
- Consolidate racks into a single 4U system
- Petabyte scalability, high-performance, and low-latency
- Hyperparallel NVMe architecture accelerates video operations
- Turbocharge searching and retrieval of media assets
- Supports PixStor fast flash tier for their auto-tiering
- Consistent video playback
- Multiple 4K/8K streams
- Global collaboration with faster video editing
- Enhance media asset integrity and security
- Optimize the performance of mixed file sizes
- Continuous operations

Proven High-Performance Media FPS and Throughput

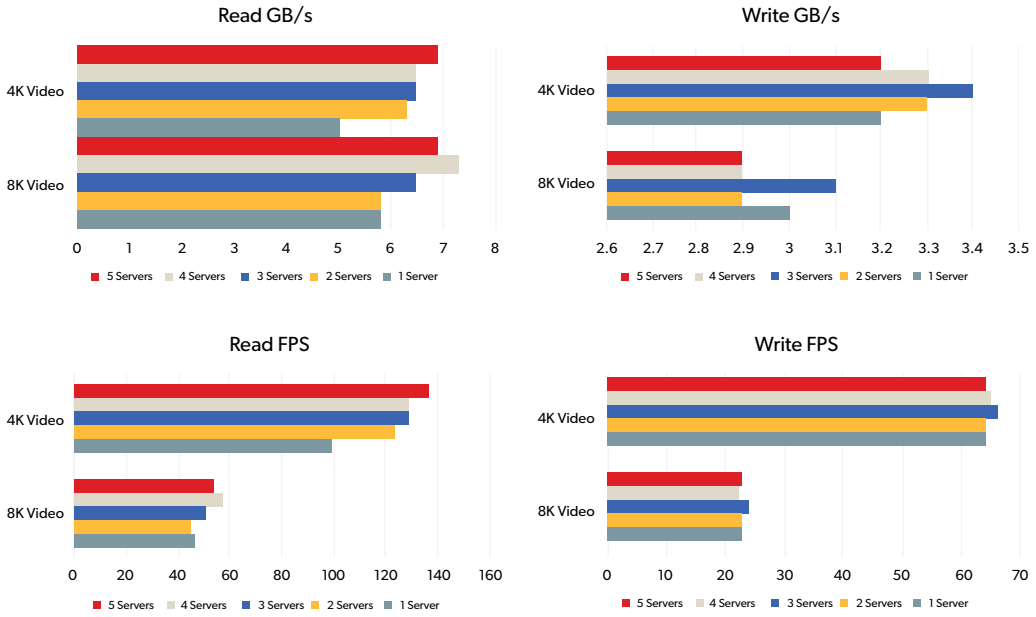
Pavilion tested media frames per second and throughput using PixStor version 19.01 with two meta-data controllers in high-availability mode and six server nodes with four 4K/8K streams per server node.

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.



Pixit Media PixStor with Pavilion HFA

Through these tests, the Pavilion HFA delivered more frames with a higher throughput than any vendor's published results. During read testing, an I/O pattern similar to that of video playback, the Pavilion HFA produced 124 4K FPS, 327 8K FPS, 29.6 GB/sec. 4K frame throughput, 27.8 GB/sec. 8K frame throughput, and 24 4K/8K streams on the six servers. During write testing, an I/O pattern similar to that of video capture or ingestion, it delivered 137 4K FPS, 386 8K FPS, 25.9 GB/sec. of 4K frame throughput, 23 GB/sec. of 8K frame throughput, and 24 4K/8K streams on the six servers.



Optimize Transcode, Versions and Delivery

Scale-out multi-threaded transcoding operations. With the Pavilion HFA, 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.

Find Out More

Pavilion is defining the future of disaggregated NVMe-oF. Our system is an ideal part of a complete Media and Entertainment workflow. Our expertise is in simplifying and optimizing NVMe to make the impossible, possible. When storage is business-critical, there's no substitute for the guaranteed performance, functionality, high availability, and OpenChoice software support of a Pavilion Data NVMe-based enterprise storage array.