paviliondata

NVME-oF STORAGE FOR MEDIA AND ENTERTAINMENT

Unprecedented Scalability for Media Workflows

Features

M&E Benefits
- No wasted space – match capacity to edit streams
- Single 4U system for raw 4K/8K render, color, VFX and distribution
- >10 seats and 6 streams @ 60fps uncompressed shared NVMe
- Use your preferred Storage Management tool – StorNext™, Spectrum Scale™ Pixit PixStor™
- Choose any NVMe SSD. Mix NVMe drives from preferred suppliers.
- Use standard Ethernet and NVMe-oF drivers
- Use with nearline storage as a complete solution to existing legacy fibre channel systems

Pavilion Benefits
- Up to 920TB in 4U fully shared or partitioned
- 120GB/sec bandwidth @ 40µsec latency
- Create independent zones for post processing, color, rendering, VFX
- Use zero-space snapshots and clones minimize network traffic and maximize productivity
- OPENCHOICE Storage lowers procurement costs and future-proofs investment

Save Space, Time and Money
Full uncompressed editing with multiple collaborators requires massive storage bandwidth and low-latency. Traditionally, this is achieved by purchasing a large number of storage arrays and disks (HDDs or SSDs). The result is excess capacity stranded for a single media asset. This can be as much as four times the amount of actual storage required. Pavilion Data can deliver 120GB/sec of throughput, enabling up to 10 seats with 6 streams of 60fps uncomressed 4K against an exact size of media asset.

With zero-footprint snapshots, making copies and clones is instantaneous. Clone the snapshot inside the system to another shared volume and move it along the production workflow without slowing down network traffic that should be dedicated to post-production workers.

Choose high-bandwidth, high-capacity or high-endurance NVMe SSDs and purchase them as needed, separate from the Pavilion platform. Deploy a mix of drives from different manufacturers in separate zones to optimize performance and utilization.

Replace legacy fibre channel SANs with standard Ethernet and NVMe-oF to avoid hidden costs. Move to Ethernet and assure a consistent, low-cost growth path with a future-proof storage solution as 3D, VFX and AR/VR requirements expand.

Pavilion's NVMe-oF Storage Array
The Pavilion Array 4U appliance delivers performance and density at a level that allows shared storage in conjunction with your favorite shared storage management tool. With up to 920TB in a single array, use it all as a single shared namespace, partition it to your requirements and leverage existing investments in StorNext, Spectrum Scale or PixitStor.

Besides performance and capacity, the Pavilion Array offers several important data management and enterprise availability features, including thin provisioning, instant

zero-space snapshots and clones, and no single point of failure in an enterprise class chassis and platform. Active-Active controllers and support for multi-path IO ensures no single point of failure out to the host. Finally, the Pavilion Array requires no proprietary software to be installed on server farms, freeing up host resources for processing and eliminating deployment complexity.

Caveat Emptor – The NVMe Hype-Cycle
Most vendors are now promoting "All-NVMe" as the answer for uncompressed 4K and 8K editing and delivery. But beware. Many of these systems are traditional All-Flash Arrays or Just A Bunch of Flash (JBOF) designed for legacy SAS and SATA SSDs. They have limited numbers of storage controllers, limited PCIe lanes to backend NVMe SSDs and require multiple chassis' to achieve your performance goals. Only Pavilion delivers 20 active-active controllers across dual redundant 6Tb/sec PCIe fabrics and requires no DRAM for write caching. With more than a dozen patents, and more pending we are designed to optimize NVMe investments.

Disaggregated, Shared, Tier-Optimized

Nothing compares to NVMe shared storage performance. But it is the most expensive SSD you can buy. Use it wisely.

Pavilion Data believes in a tiered approach for rich media workflows. Auto-tiering is an option, but seasoned veterens prefer a structured, managed hierarchy where file sets are pinned to storage tiers and moved across tiers throughout the creation and processing lifecycle.

Ethernet NVMe-oF

Tiered Shared Namespace

Tier 2 10 RPM

Tier 3 7.2 RPM

20% **30%** **50%**
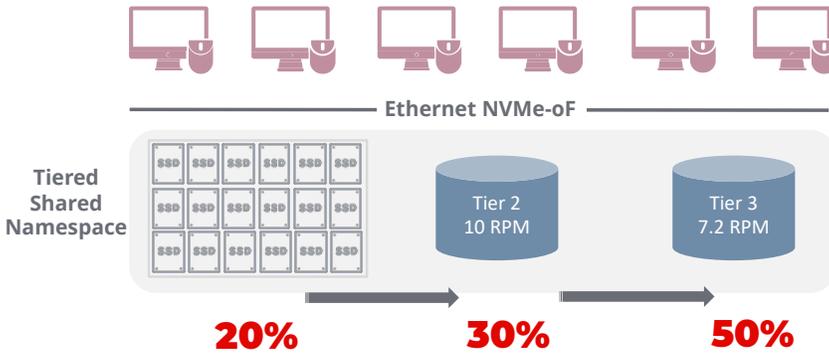
This approach, in conjunction with Pavilion's extreme bandwidth and low-latency, it is possible to allocate the precise asset size (4K or 8K uncompressed) along with number and size of edit streams per user to optimize your investment. In many cases, this can be less expensive than all-in-one solutions from Big Storage manufacturers.

A Colorist Dream

With unprecedented throughput and the lowest latency of any shared NVMe-oF solution, Pavilion Data lets you avoid the "conforming step" in your workflows so you can work in the native resolution of your source media. If your project calls for 8K 12 bit DPX, multiple concurrent streams of HD 4444, 4K EXR or hours of original camera RAW files, we allow you to harness the power of a shared NVMe volume, consolidating storage pools, reducing copy and render time and allowing multiple artists to work at full 3.6GB/sec to maximize productivity.

Optimize Transcode, Versions and Delivery

Space-efficient instant snapshots and clones allow an entire asset to be copied inside the Pavilion array. You can scale out multi-threaded transcoding operations. Since our platform is designed for NVMe, we do not require complex caching algorithms to stand in the way of dynamic bandwidth management. This boosts transcoding service performance, significantly increasing transcode billable hours per server.

Perform translations and closed-caption assets independently of the original uncompressed asset without moving large files across the network and impacting production workers. Stream in compressed or uncompressed resolution directly from media assets inside the same array. With up to 12GB/sec of bandwidth in 4U and an NVMe capacity of nearly 1PB, there is plenty of space to edit, translate and stream from the same system.

SINGLE PAVILION PLATFORM

PRIMARY ASSET

SNAPSHOTS/CLONES

VERSION 1 — VERSION 2 — VERSION 2

TRANSCODE

STREAM
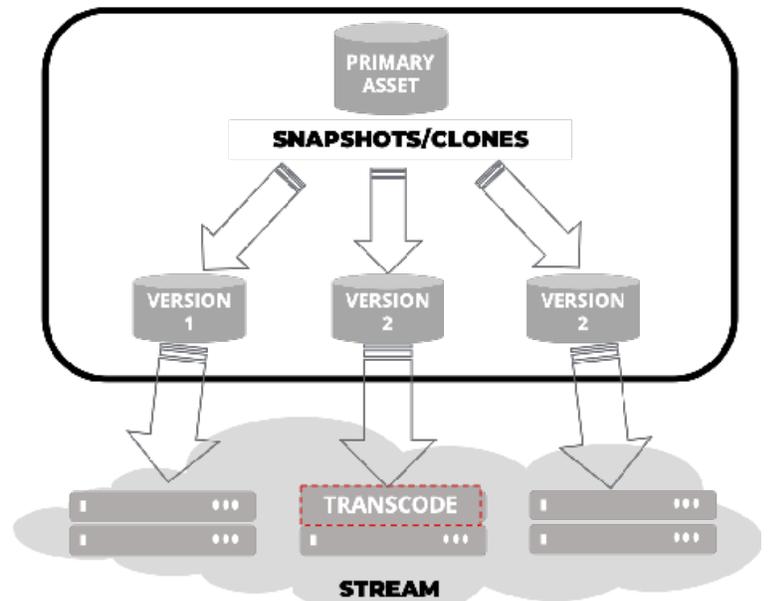
Partnered with M&E Workflow Experts

Pavilion Data is defining the future of composable 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. To take your infrastructure to the next level, you need the "midas touch" of local, proven experts. We partner with leading organizations to design, implement and deliver a complete solution tailored for your environment. Contact us today to get in touch with our talented extended teams of professional.