▶ PAVILION

Benefits

- Ideal NAS platform for Enterprise Data Lake Consolidation
- Superior scale and uptime for HPC and Media workflows
- Performance and ease of use for shared databases like MS SQL, Spark and KDB+
- Unmatched GPU virtualization and GPUDirect performance
- NAS performance of up to 75GB/sec Read and 50GB/sec Write in a 4 RU footprint

Features

- Hybrid cloud storage with simultaneous block, file, and object (S3) protocols
- Ultra-low latency for uninterrupted analytics, AI/ML pipelines and M&E workflows
- Capacity to handle multiple petabytes in a highly dense 4U footprint
- Scale with near-linear performance across chassis as demands increase
- Client connectivity for NFS v3, v4, NFS RDMA, pNFS, Gluster, Spark, Hadoop

Pavilion HyperParallel File System
Consolidate and share data at scale

Traditional Network Attached Storage (NAS) arrays provide easy-to-use functionality for enterprise work groups and even certain data center workloads where shared storage is required. Some offer scale up (expansion shelves for more capacity). Others can scale out (across chassis) to achieve higher throughput with more capacity. However, traditional NAS systems for Media & Entertainment, HPC, AI/ML, and enterprise data lakes just don't have the performance, density, scalability and flexibility to keep up with today's data deluge.

Pavilion's HyperParallel Data Platform, powered by HyperOS 3 redefines modern NAS technology with unrivaled capabilities for both internal and external file systems.
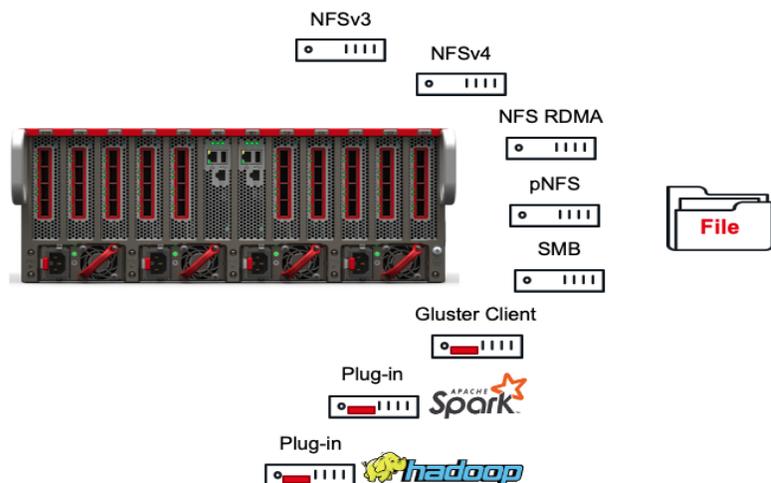
Internal File System
Pavilion's HyperParallel File System is orders of magnitude faster and more scalable than traditional NAS. With unmatched write performance of 56GB/sec, Pavilion can ingest data at rates 5 times faster than traditional NAS in a form factor that is 2-10 times smaller than leading brands. Shared databases run faster. Data Lakes scale with ease. HPC workloads with GPUs are never IO-bound.

Pavilion's file system features a global namespace that can scale up (up to 2.2PB in a single chassis) and scale out in a near linear fashion across multiple chassis. It offers an intuitive GUI to configure clients across Ethernet or InfiniBand networks. Supported clients include SMB, NFS v3, v4, NFS RDMA, pNFS, Gluster, Spark, and Hadoop.

Enterprise data lake customers can consolidate operations by accessing NAS with traditional file system clients as well as Spark or HDFS clients. The HyperParallel Data Platform offers up to 20 independent storage controllers that efficiently connect any client to the shared namespace. Unique to Pavilion is the ability to intermix clients in the same namespace with high availability and high performance.

For media and entertainment workflows, Pavilion offers seamless integration, extreme throughput and flexible storage protocols for on-premise and hybrid cloud deployments.

External File Systems

By unifying block, file and object storage protocols into a single platform, Pavilion offers universal storage for enterprise data consolidation at unmatched scale and performance supporting external file systems like IBM Spectrum Scale, Lustre and BeeGFS with industry-leading performance of up to 120GB/s Read and 90GB/s Write throughput in a 4U system packing up to 2.2PB of NVMe SSDs.

In the case of Spectrum Scale, customers may host the NSD server function directly on Pavilion's storage controllers, dramatically reducing network traffic and latency.

Of course, eliminating physical NSD Servers also reduces CapEx and OpEx expenses.

Pavilion enables external file systems by exposing block storage via NVMe-oF. Unlike alternatives, Pavilion supports NVMe-oF with RoCE, TCP, RDMA and iSCSI. This gives customers complete choice and control over the most desired method for access. Typically, in high-performance scenarios, RoCE is the preferred choice. HPC customers may also consider InfiniBand NVMe/RDMA to leverage existing investments.
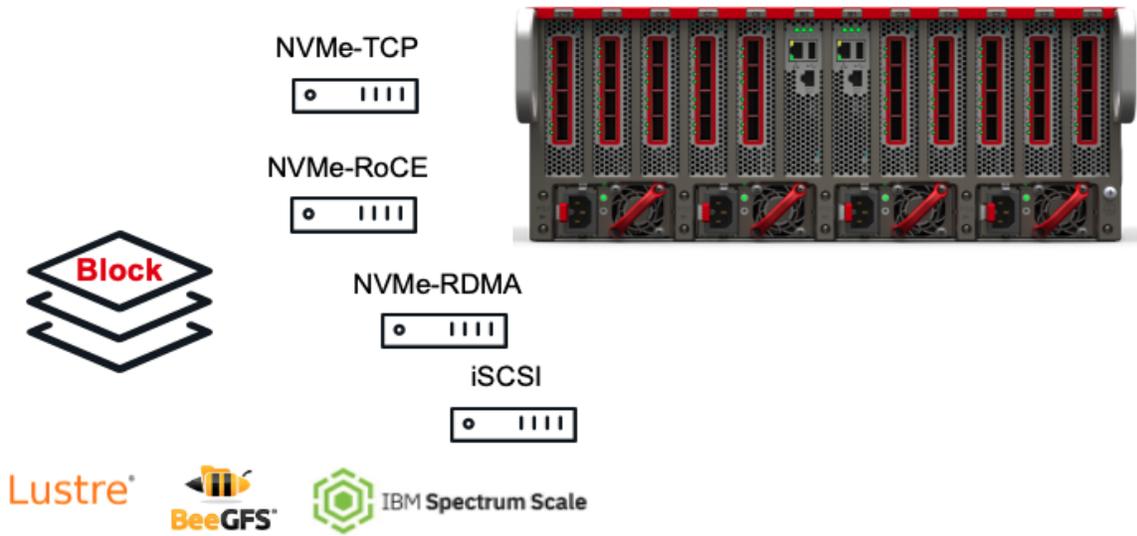
Hybrid Clouds

Object storage represents the most widely deployed hybrid cloud connectivity. Pavilion adds fast S3 with Reads of up to 50GB/sec and Writes of up to 30GB/sec. This is more than 5X leading NAS alternatives.

S3 object storage, block storage and file system storage can be deployed in the same chassis. With the Pavilion architecture, storage controllers can be dedicated to each protocol and to unique clients on the network providing the ultimate flexibility and scale.
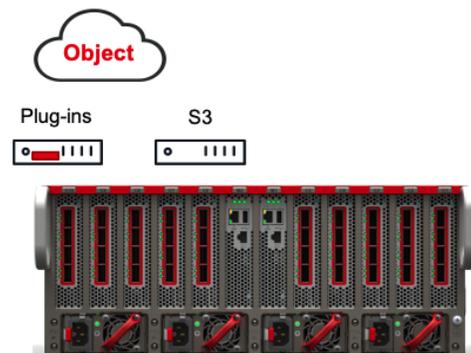
Universal NAS, S3 & NVMe-oF

Leveraging the power of 20 storage controllers, dense NVMe storage (72 drives in 4RU) and patented technology to deliver unmatched performance and flexibility, Pavilion brings together block, file and object storage into a single unified data platform that linearly scales up and out for shared databases, data lakes and many industry-specific workflows with a data platform proven by the largest organizations in the world.

NAS customers can rest assured that Pavilion's NFS & SMB support is compatible with all leading applications, while Gluster customers will find the fastest data streaming in the market. Data Lake admins need never worry about sharing of structured and unstructured data being accessed and shared from a single namespace. Pavilion brings it all together.
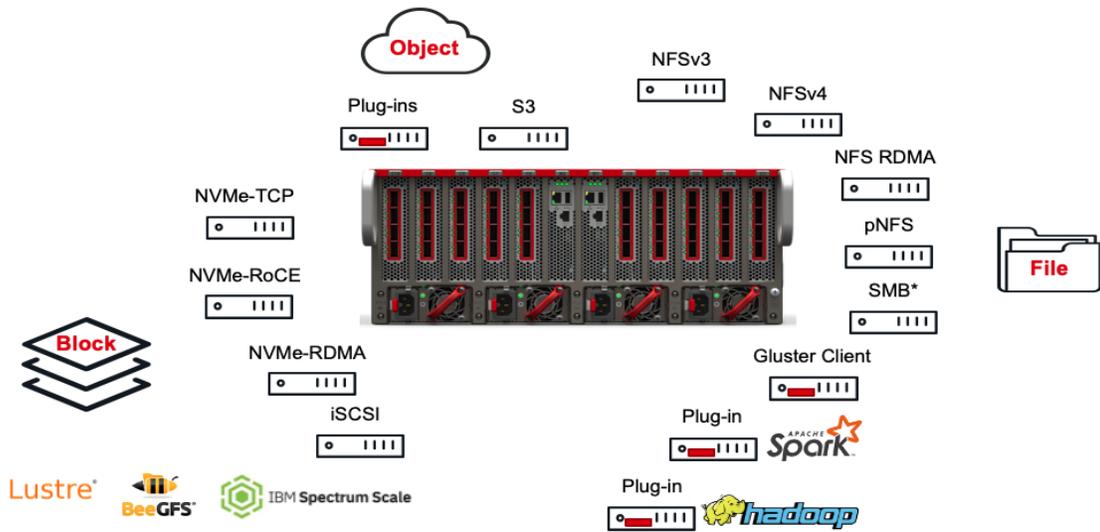
About Pavilion
Pavilion shatters customer expectations and resulting organizational outcomes by revolutionizing data processing for modern AI/ML, HPC, Analytics, Enterprise Edge and other data-driven applications. The Pavilion HyperParallel Data Platform™ powered by Pavilion HyperOS™ delivers unmatched performance and density, ultra-low latency, unlimited scale and flexibility, providing customers unmatched choice and control. Learn why Fortune 500 companies and federal government agencies choose Pavilion. Visit www.pavilion.io or follow the company on LinkedIn.