PAVILION

Benefits

Expectation Shattering Performance

- Unrivaled performance, density, scalability, and flexibility
- Up to 120/90 GB/s R/W B/W, 20M IOPS, and 25µs latency
- 20 independent controllers per array

Data Protection and Availability

- Distributed DP RAID with rebuild of less than 5 min per TB
- Continuous Operations with Multi-Pathing
- Non-Disruptive Software Upgrades
- 24/7 Proactive Support

Performance with Availability

- Multi-controller failover
- Pavilion SwarmRAID™

Pavilion HyperParallel Data Platform™ Consistent High Availability and High Performance

Pavilion customers enjoy maximum uptime without having to choose between performance and availability

The unique architecture of the Pavilion HyperParallel Flash Array™, powered by Pavilion HyperOS™ enables customers to take advantage of consistent, predictable high performance and ultra low latency while enjoying continuous operations.

The ability to protect data while providing continuous operation is a requirement for any storage solution. Every storage platform offers some level data protection, usually in the form of redundancy. That redundancy does offer data protection, but it often comes at the cost of performance.

The Pavilion HyperParallel Data Platform™ breaks free from that paradigm with unique data protection features that maintain high performance, even during a fault situation.

Controller Availability

With up to 20 controllers per array, the Pavilion HyperParallel Flash Array delivers greater consistent throughput than can be achieved with legacy designs, with the ability to maintain that performance even in the unlikely event of a controller failure.

Active-Active and Active-Passive controller configurations maintain consistent performance in the event of a controller failure, but come with the inherent cost of 50% of array performance during normal operations. This forces organizations to choose between limiting storage performance to 50% of what the array is capable of (in either an active-active or active-passive configuration) to maintain performance when in a fault state, or to utilize the array at full capacity and run the risk of a major performance decrease when a fault occurs.

The Pavilion HyperParallel Flash Array solves this problem with the ability to utilize multiple controllers to provide extreme high performance during normal operations with an additional controller for failover. With up to 20 controllers per array, organizations never have to sacrifice up half their potential performance for high availability again.

No Single Point of Failure Design

The Pavilion HyperParallel Flash Array is designed with a no single point of failure (NSPOF) design to maintain availability, even in the unlikely event of a component failure. Hot-swappable components enable parts to be replaced without interruption to users.

Pavilion SwarmController™

The Pavilion HyperParallel Data Platform leverages the power of the multiple controllers to deliver unprecedented fast rebuild times for drives in RAID arrays. With Pavilion SwarmController technology, in the event of a drive failure, multiple controllers work in concert to "swarm" the failed drive, dramatically reducing rebuild times. With Pavilion SwarmController, drives can be rebuilt at the rate of less than 5 minutes per TB.

RAID technology has long provided data protection in the event of a drive failure with low capacity overhead. The drawback of RAID is the significant and prolonged performance impact experienced during a drive rebuild. When a drive fails in a legacy array, the controller managing that array is responsible for recovering the data from parity while also providing data to applications. The result is that drive rebuilds can take hours, or in some cases, days to complete. Pavilion SwarmController eliminates these challenges by uniquely delivering RAID data protection and low capacity overhead, while simultaneously providing ultra fast rebuilds, so data is safe and available.

Data Versioning

As drive capacities continue to increase, the potential for an error to occur on any given drive increases. Pavilion protects against errors in multiple ways. First, the Pavilion HyperParallel Data Platform supports the use of a T10 dif cyclic redundancy check (CRC) on drives that support it.

Pavilion also offers a patent-pending versioning technology that adds a version number to every write. This protects against the rare, but occasional and significant, issue of a drive reporting a completed write function when one has not occurred. While not common, this issue can and does occur on some larger drives. The data version is checked on read, and if the number is not correct, data is rebuilt from parity. This technology eliminates a potential for data corruption and is only available on the Pavilion HyperParallel Data Platform.

Non-Disruptive Software Updates

Enjoy maximum uptime while meeting government compliance requirements. All Pavilion HyperOS updates can be applied without disruption to ongoing I/O operations.

Proactive Support Telemetry

Pavilion offers the ability to proactively monitor the functionality of each Pavilion HyperParallel Data Platform. For customers that opt-in, Pavilion will proactively monitor customer arrays to ensure that they are always operating at peak performance. Often, Pavilion support professionals can identify and solve an issue long before it becomes a problem.