

Accelerating Splunk Enterprise

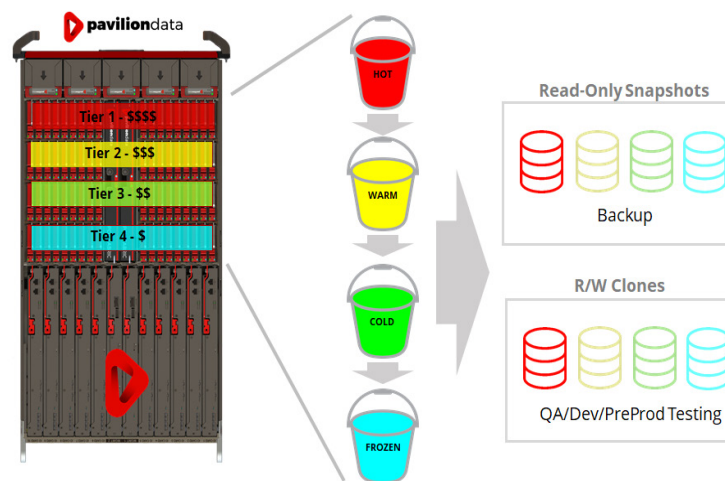
Solution Overview

Key Benefits

- Increase search times up to 2x for faster analysis and real-time decision making
- Leverage standard Ethernet networking for both servers and storage
- Reduce indexer footprint, and associated power and cooling costs, up to 4x
- Disaggregate compute and storage using Pavilion Data's Rack-scale Flash Array as the centralized storage for Splunk indexers and data.
- Rack-scale shared storage pool with the same or better latency as direct-attached SSDs
- Deploy additional indexers instantly without deploying any additional storage hardware to handle additional traffic.
- Store hot, warm, cold storage on the same storage platform and eliminate the need for multiple tiers of storage in the solution, while hosting all data on a consolidated platform.

Pavilion Overview

- Fastest block storage for Splunk indexers hot and warm tiers
- Latency of direct-attached SSDs
- Up to 920 TB in 4U
- Frictionless deployment
- Data resiliency & high availability
- Space-efficient instant snapshots and clones
- Thin provisioning
- Pay As You Grow scalability
- Expand for capacity or performance, independently
- Increase storage utilization up to 10X or more
- Storage capacity can be independently increased to expand size of hot and warm tiers. Different classes of media can be used for tiering within the same chassis.
- A single Pavilion array can provide up to 920 TB of high-speed storage, at up to 120 GB/s of bandwidth, providing superb performance for Splunk Enterprise
- 40% fewer indexers will be required to provide the same ingest volumes needed by the organization.
- Thin Provisioning support allows for a large storage volume to be presented to any host, but the Pavilion array will allocate the amount of physical storage needed at a specific time
- Multiple indexers can be configured to access different volumes on the Pavilion Storage Array



Consolidate All Splunk Data on One High-Speed Storage Platform, Simplify Backup and Copy Management

Infrastructure Benefits

- Simplify the environment by leveraging a single storage platform for all Splunk data including Hot, Warm and Cold Tiers
- Leverage different cost media for different tiers in the same platform
- Use 1U servers without direct-attached SSDs, which will simplify the infrastructure
- Save cost in several areas including hardware acquisition, rack space, power and cooling

Operational Benefits

- Disaggregate compute and storage using Pavilion array as centralized rack scale storage for Splunk indexers
- Reduce management complexity by moving storage to a shared appliance where the storage pool can be centrally managed
- Isolate data backup and snapshot management
- Manage the Pavilion Array through a UI interface, and/or supported by REST API, including an OpenStack plugin
- Use Pavilion Array Rest API for management automation

Splunk Solution Design Considerations



Insufficient disk I/O is the most common limitation in Splunk infrastructure

Pavilion delivers over 100 GB/s of bandwidth, and 20 Million IOPS from a compact, 4U Chassis, which can power even the largest Splunk deployments

Review the disk subsystem requirements before provisioning your hardware

Pavilion's scalable platform allows you to focus on the needs on the compute infrastructure instead of storage

More disks (specifically, more spindles) are better for indexing performance

Pavilion's low latency storage platform eliminates storage as the indexing bottleneck

Total throughput of the entire system is important.

Pavilion delivers significant improvements in performance and improves decision times.

The ratio of disks to disk controllers in a particular system should be higher, similar to how you provision a database host

Pavilion's performance and capacity allows for easy storage configuration.

Hot Bucket - Cannot Backup

Take backup of any volume any time without performance overhead on indexing nodes by using the Pavilion Snapshot feature

*Splunk Design Reference: <http://docs.splunk.com/Documentation/Splunk/7.0.3/Capacity/Referencehardware>



Pavilion Data Systems, Inc.
2560 N First St., Suite 220, San Jose, CA 95131
E-mail: sales@paviliondata.com