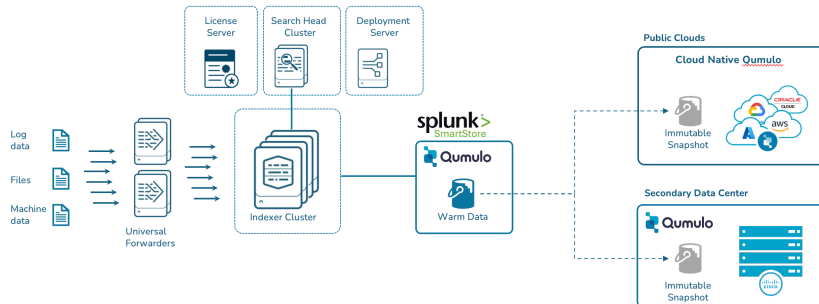




Qumulo for Splunk SmartStore: Accelerating Observability and Reducing TCO for Large-Scale Log Analytics

ANY DATA
ANY LOCATION
TOTAL CONTROL

The ability to ingest, analyze, and store high volumes of structured and unstructured machine data in real time is increasingly critical for day-to-day business operations across regulated industries. Splunk is a comprehensive software platform for collecting, searching, monitoring, and analyzing data, quickly transforming it into powerful insights and actionable intelligence. To feed these insights, many organizations index an ever-growing amount of data. However, as this data expands, so do the demands on Splunk indexer resources to compute and store machine-generated data logs and files.



THE CHALLENGE: THE SPLUNK DATA EXPLOSION

Traditional “Direct-Attached Storage” (DAS) models for Splunk often lead to several operational inefficiencies:

- **Resource Underutilization:** As data volumes increase, storing older data may require adding Indexer nodes, leading to overprovisioned, idle CPU resources.
- If an indexer fails, the Cluster Manager must perform bucket fixups to restore data integrity, often requiring large data replication across nodes, which can consume significant network bandwidth and take hours or even days to stabilize.
- To ensure fault tolerance, traditional clusters rely on a high replication factor, often needing three or more identical data copies on Indexer local disks. This significantly increases hardware requirements as data ingest volumes grow.
- **Upgrading Complications:** Hardware upgrades and storage expansions frequently demand extensive data migrations and lengthy rebalancing cycles.

KEY BENEFITS

Elastic Scaling: Organizations can optimize Indexer storage resources while accommodating petabyte-scale datasets and beyond without needing to rebalance indexers.

Real-Time Analytics: Leverage Qumulo’s built-in analytics for instant visibility into storage performance, ingestion rates, and overall system behavior.

Multi-Protocol Compatibility: Support modern S3-based SmartStore workflows, as well as SMB and NFS pipelines, within a unified namespace.

Predictive Performance: NeuralCache anticipates access patterns to prefetch data, significantly reducing search latency on warm data.

Data Resilience: Supports immutable snapshots to local and remote storage, including all major public clouds, enabling organizations to implement tiered data resilience strategies to support their business continuity mandates.

Infrastructure Flexibility: Qumulo can be deployed on any hardware platform, including curated Cisco UCS C-series platforms, offering organizations flexibility and choice with the ability to mitigate supply-chain risks.

THE SOLUTION: SPLUNK SMARTSTORE AND QUMULO

Splunk SmartStore on Qumulo represents a significant advancement for organizations aiming to enhance their observability infrastructure. It allows them to strategically manage data retention by keeping hot data directly on Splunk indexers while migrating warm data to the Qumulo Data Platform. This approach ensures that frequently accessed information is readily available for quick search and analysis, while warm data can still be accessed, thereby improving operational efficiency and decision-making.

As the volume of data grows, it becomes essential to handle warm and archive data effectively. With this integration, organizations can seamlessly migrate these less-frequently accessed data types to Qumulo's storage system via the S3 protocol, optimizing storage costs while still ensuring that data remains accessible when needed.

Qumulo's innovative NeuralCache technology plays a critical role in this ecosystem, providing near-flash performance and low-latency access to warm data, which can be particularly beneficial for organizations using cost-effective HDD drives. This means that even when data is stored on traditional hard drives, read latency remains low, supporting efficient querying and analysis.

Overall, this integrated approach optimizes Indexer-tier storage, enabling organizations to maintain a dynamic balance between performance and cost while improving data management and operational agility.

FLEXIBILITY AND CUSTOMIZATION

Every Splunk SmartStore deployment is distinct. Qumulo facilitates tailoring deployments to specific operational requirements, supporting All-Flash, Dual-Flash (NVMe+QLC), and Hybrid (NVMe+HDD) configurations that deliver cost-effective solutions to meet an organization's specific performance and cost objectives.

In addition, curated Cisco UCS C-series platforms can help organizations to accelerate the planning and deployment of their Splunk environment. In every instance, the process of designing and deploying Qumulo is efficient and cost-effective, enabling rapid setup of petabytes of storage.

BUSINESS IMPACT

Splunk SmartStore on Qumulo delivers:

- **A Splunk SmartStore validated platform**, ensuring seamless deployment and protection against performance bottlenecks.
- **Lower Total Cost of Ownership (TCO)** – Optimize expenses by using high-density storage for warm data rather than relying on costly direct-attached storage for each indexer.
- **Accelerated Time-to-Insight** – Quickly ingest terabytes of data daily and execute forensic searches across exabytes of data without experiencing performance issues.
- **Streamlined Operations** – Manage a single, coherent cluster as opposed to numerous fragmented storage silos.
- **Regulatory Compliance** – Retain years of searchable historical data to satisfy regulatory standards and meet local compliance requirements.
- **Zero-latency Support** – With an industry-leading 95+ NPS, Qumulo customer success redefines support with direct communication channels to engineers. No tickets, no phone calls.

ABOUT QUMULO

Qumulo is the leading provider of cloud file data platforms, offering unrivaled performance, scale, and data management solutions. Qumulo's platform is trusted by Fortune 500 companies and global enterprises to manage petabytes of data, enabling them to unlock the value of their data and drive innovation. For more information, visit www.qumulo.com.