High-Performance Data Management for Exabyte-Scale Archives

Intended Audience

This solution brief is intended for IT architects, storage engineers, system administrators, and technical decision-makers responsible for designing, implementing, and maintaining large-scale archival and data management infrastructures. These readers are evaluating integrated hardware and software solutions for modernizing legacy archives, optimizing storage workflows, and ensuring long-term data preservation at petabyte to exabyte scale.

Versity & Spectra Solution Overview

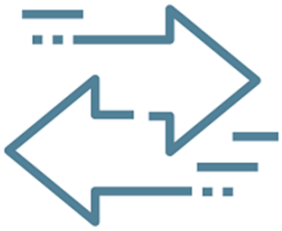
Spectra Logic and Versity have partnered to deliver a modern, scalable, cost-effective, and energy-efficient cold storage solution. By combining Versity's advanced software-defined data management platform with Spectra Logic industry-leading tape libraries, organizations gain a flexible and efficient solution for long-term data preservation. This solution is ideal for institutions seeking to modernize legacy archives, reduce total cost of ownership, and ensure sustained access to petabyte-to-exabyte-scale data.

High-Performance Data Management at Scale with Versity

Modern archive platform architected for exabyte scale

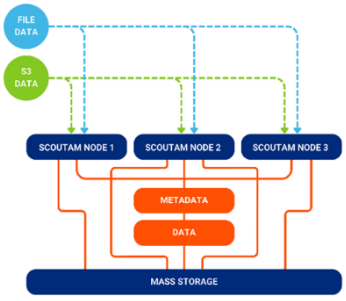
Versity offers a modern, software-defined platform purpose-built for managing and archiving unstructured data on a massive scale. Its architecture combines scalable metadata management, policy-driven archiving, and parallel data movement across disk, tape, and cloud, enabling efficient, cost-effective, and adaptable long-term storage.

Seamless Migration from Legacy Archive Software



Versity's Zero Data Migration capability allows organizations to transition from legacy archive software, such as IBM HPSS, Oracle OHSM, HPE DMF, and IBM Storage Protect for Space Management, without the need to move or reformat existing data on tape. By leveraging compatible metadata and data formats between systems, Versity enables migration, preserving the existing namespace and metadata. This approach ensures seamless data access through standard interfaces and APIs, allowing users, applications, and workflows to continue interacting with the archive without interruption. The result is a smooth, low-risk transition that avoids costly and time-consuming data movement while preserving data integrity.

Versity Product Overview



ScoutAM is a hardware-agnostic, scale-out software platform designed to run on high-performance servers. It features a powerful policy engine and scheduling system, enabling intelligent, automated data movement across multiple storage tiers. The ScoutAM deployment model is flexible and easily expandable. The solution begins with a single server and scales to multi-node, high-availability clusters.

Exabyte-Scale Cold Storage with Spectra Tape Libraries

With a 40-year track record of continuous innovation in protecting and preserving data for the world's largest organizations, Spectra Logic tape libraries deliver exabyte-scale capacity, low power consumption, and true air-gap security, making them ideal for integrating with Versity's intelligent, policy-based data management platform.

Spectra Logic Tape Libraries Overview

Spectra TFinity library is the world's largest capacity data storage library

- Capacity: Up to 56,400 slots & 1.6EB native with LTO-10 media
- Performance: 168 full-height (FH) LTO tape drives & 241.9 TB native per hour
- Partitions: 1 to 16 partitions for shared or multi-tenant environments
- Dual robotic infrastructure
- LumOS tape library management software

Spectra Cube library is easy to deploy, simple to manage

- Capacity: Up to 1,670 slots & 50.1PB native with LTO-10 media
- Performance: Intermix 1 to 16 full-height (FH) and 30 half-height (HH) LTO tape drives & 1.08TB to 32.4TB native per hour
- Partitions: 1 to 16 partitions for shared or multi-tenant environments
- All components are designed for replacement in under 5 minutes
- LumOS tape management software

Spectra Stack library is designed for growing enterprises and growing data

- Capacity: Up to 560 slots &16.8 PB native with LTO-10 media
- Performance: Intermix 1 to 21 full-height (FH) and 42 half-height (HH) LTO tape drives & 1.08TB to 45.4TB native per hour
- Partitions: 1 to 16 partitions for shared or multi-tenant environments
- 100% duty cycle
- BlueVision tape management software

Modern, Scalable Archiving with Versity and Spectra Logic

The Versity and Spectra Logic joint solutions deliver modern, scalable archive architecture built for high-performance, exabyte-scale environments. It combines intelligent data management, seamless migration from legacy platforms, and cost-effective, long-term storage using an open and flexible infrastructure.

Ten Key Capabilities

1. Massive Scale
   Supports 50PBs to exabyte-scale archives and 10+ billion object namespaces.
2. High-Performance Ingest
   Parallel tape writes ensure fast data capture at scale.
3. Unified Access
   Amazon S3 and file workloads are accessed through a single, searchable namespace.
4. Smart Data Management
   The policy engine enables automated lifecycle, placement, and tape aggregation.
5. Resilient Architecture
   Metadata stored on tape for full recovery across tape, disk, or cloud.
6. Open & Flexible
   Linux-based, open-source design with GUI and REST API control.
7. Hardware-Agnostic
   Vendor-neutral platform enables customer-controlled patching and expansion.
8. No Lock-In
   Read-only access remains after license expiration; migration can occur without data movement.
9. Enterprise Reliability
   Multi-site replication with failover and unlimited data copies for durability.
10. Exceptional Support
    Backed by responsive experts with deep archive and storage experience.

Versity Data Management with Spectra Tape Solutions

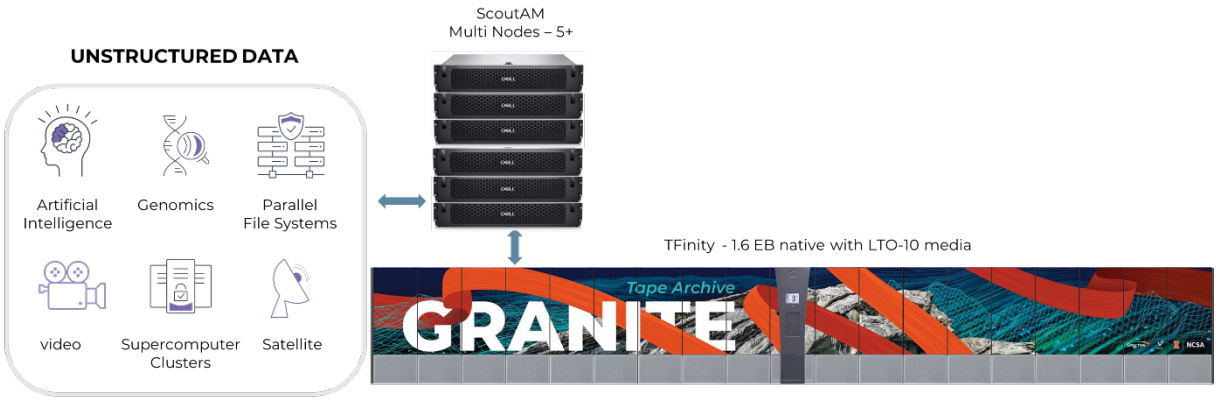
With Versity ScoutAM and Spectra Logic Tape Libraries, you can archive files using standard tools like rsync, Secure Copy Protocol (SCP), or simple drag-and-drop. No special steps required, your archive storage behaves just like a familiar file system.

- Versity ScoutAM
- Spectra Logic Tape Libraries

Architecture & Workflow Diagrams

Versity + Spectra TFinity

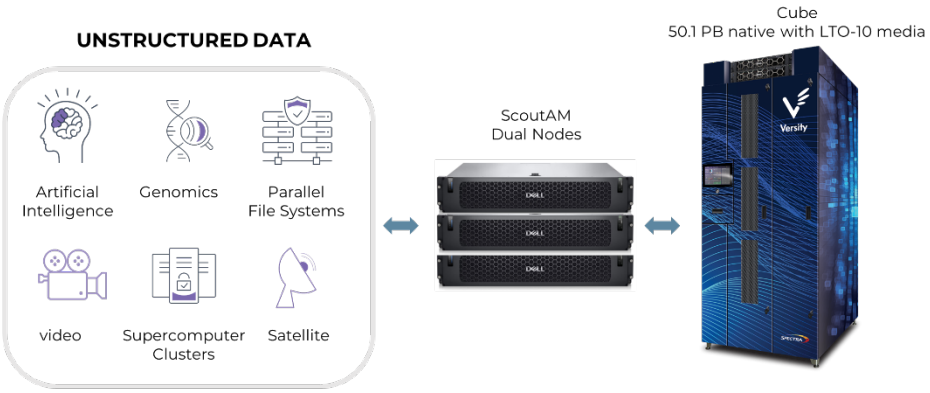
Ideal for national labs, climate modeling, genomics, or AI training archives



- ScoutAM simultaneously ingests data from multiple high-performance applications
- ScoutAM uses a powerful policy engine and parallel data movement to optimize data organization and retrieval
- Data is distributed across multiple tape drives to optimize performance
- Data is preserved in a scalable, cost-efficient manner for long-term sustainability
- Metadata is always online and available

Versity + Spectra Cube

Ideal for institutions archiving modest data volume with plans for future expansion



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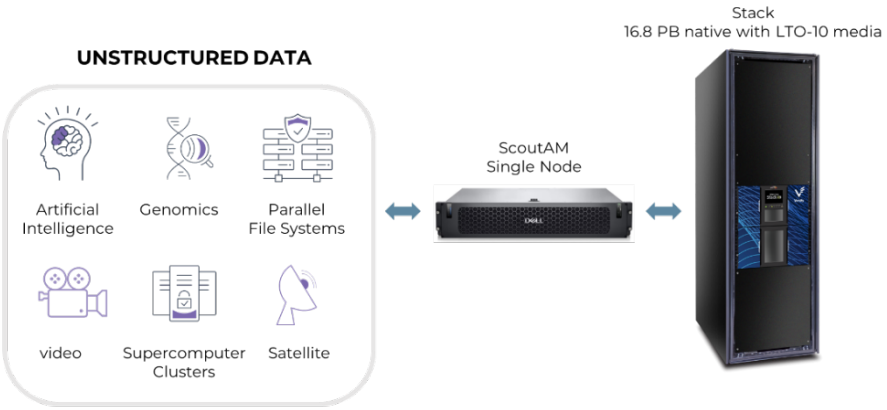
Versity + Spectra Stack

Ideal for environments with low-volume archives



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Conclusion

The combination of Versity's high-performance, software-defined data management and Spectra Logic scalable, cost-effective tape storage delivers a modern archive solution purpose-built for exabyte-scale environments. Together, they provide seamless migration from legacy systems, intelligent policy-driven data movement, and long-term data preservation with low total cost of ownership. This joint solution empowers organizations to future-proof their data archives with a flexible, open, and durable infrastructure that meets the growing demands of research, media, government, and other data-intensive sectors.