



Boundless storage capacity and performance for media applications

Competitive edge comes with being first to market. Content developers gain that edge by shortening the time required to create or ingest media content files, edit and modify them, and then distribute them to paying customers. Seamless file access is the key. That's because when generating content, developers lose time waiting for large media files to be located, retrieved, or transferred among the various stages in the content workflow via the local area network (LAN).

The penetration of high-definition television and video, along with demand for multiple delivery formats and other bandwidth-intensive technologies already strains legacy storage systems, which were never designed for the special demands of media applications. High performance with consistent bandwidth in streaming environments has typically required creating duplicate files on multiple servers, but maintaining the redundant data drains human and financial resources.

Content creation and aggregation companies need a solution that cost-effectively stores and protects digital assets while ensuring easy and reliable access to files

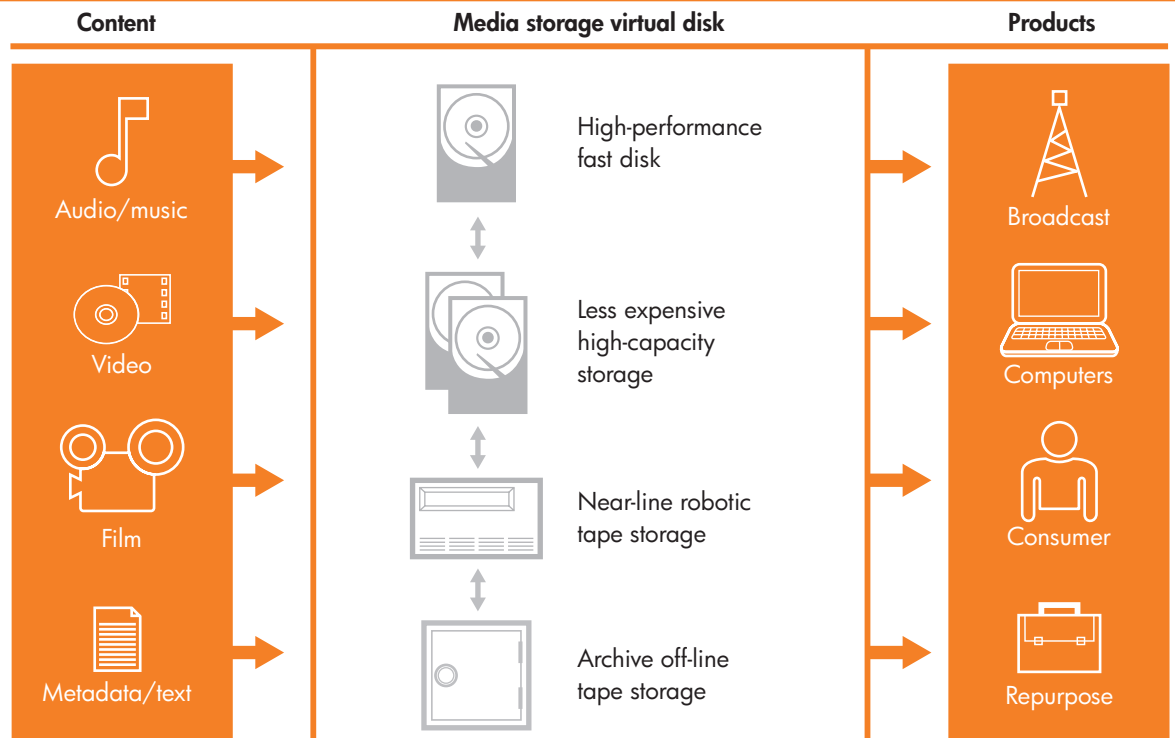
for future reuse, as well as the ability to scale primary and archival storage as growth warrants; it should combine high-performance data access in workflow processes with the ability to transparently move data to cheaper tiers of storage as the assets age and need to be archived.

An integrated, automated storage solution

The HP Media Storage solution combines HP servers and storage infrastructure with StorNext data management software from Quantum Corporation, and is delivered by HP's consulting services. The solution reduces storage duplication costs and speeds project completion among media content creation, post-production companies, content broadband service providers and telecommunications companies.

The value of media assets change over time. The solution uses flexible, customizable automated policies to place data on the type of storage most compatible and cost-effective for the defined performance requirements. Newly ingested content can be stored on the fastest disks, while reference data can be stored in near-line storage, and archived content is transferred to tape libraries and vaulted offsite.

Figure 1. HP Media Storage solution



This comprehensive data lifecycle planning ensures that short-term and long-term data performance needs are balanced against storage capacity requirements. HP Media Storage delivers high-performance data access in highly collaborative environments and provides the ability to scale primary storage, backup storage and archival storage on demand.

Innovative storage technology

Underlying HP Media Storage is Quantum’s StorNext software—which includes a storage area network (SAN) file system that provides high performance, shared access to centralized storage. StorNext enables the consolidation of data on multiple types of storage (high-speed disk, high-capacity disk and tape) and represents these as a single virtual storage pool. That consolidated data can be shared by multiple computers running different operating systems—Linux, Windows®, UNIX® and even Apple—eliminating the need to manage multiple file copies and move large files over the LAN. Plus, through consolidating heterogeneous data, StorNext software eliminates the need for storage provisioning. Two key components comprise the heart of the StorNext:

- **StorNext File System**

The StorNext File System (StorNext FS) provides high speed, shared access to files across heterogeneous IT environments and disparate server platforms and operating systems. Data files are consolidated on disk

storage, eliminating the need for separate storage partitions on a per-server basis. The result is greater storage efficiency, rapid and uninterrupted data access, and optimized productivity all along the workflow, along with the elimination of slow data transfers which delay asset creation and revenue generation.

- **StorNext Storage Manager**

Automated, user-definable policies within the StorNext Storage Manager (StorNext SM) allows content managers to use the business value of various data assets to determine appropriate levels of access, protection and retention. By automating these decisions, including the need for such extra business protection measures as protective replication or offsite vaulting, companies save time, control operating expenses, and maximize the value of their media assets throughout the complete data lifecycle.

Deployed on HP servers and storage

The HP Media Storage solution features the StorNext software deployed on HP’s industry-leading ProLiant and Integrity servers, and within Linux, Windows and HP-UX operating environments. The solution is tuned for use with high-performance, award-winning HP StorageWorks SAN arrays (Enterprise Virtual Array, Modular Smart Array, and XP Disk Array systems) and tape libraries (MSL and ESL), and also integrates seamlessly with other standards-based industry storage options.

HP servers are scalable and manageable systems that meet the needs of the most demanding rich media environment. As the industry leader in storage technology and sales, HP offers a comprehensive suite of solutions that offer the right combination of price, performance and data security for the media and entertainment industry's storage needs.

Delivered by HP Consulting & Integration experts

The solution is implemented by HP Consulting & Integration (HP C&I) personnel in more than 100 countries worldwide. These seasoned experts support the complete deployment process from evaluation to solution design and delivery, to ongoing service and support. HP has a matchless record for innovation, and proven experience with multi-vendor systems, including building, integrating, and managing complex global environments for media companies, content creators and distributors, and service providers worldwide.

Key features

- High-performance data access
 - Provides direct connection to shared Storage Area Network (SAN) devices
 - Supports greater than 100MB/sec to over 15GB/sec throughput as customer needs grow
 - Supports heterogeneous clients and allows access to SAN files and devices simultaneously
 - Enables deep control over media, drive and library functions, improving data movement by choosing the optimal resource across shared libraries/drives
 - Reserves bandwidth for top priority applications
 - Capably handles hundreds of millions of unique files
- Long-term management and protection
 - Provides user-definable automated data management policies for appropriate storage depending on data age and value
 - Combines disk and tape resources into an efficient consolidated storage pool, eliminating the need for storage provisioning based on workgroup or operating system
 - Offers the capability to make four replicate copies for each file written to tape libraries
 - Allows media-to-media direct copy for data duplication without disk staging
 - Enables seamless data transition to new tape drive formats

- Data storage time and cost reduction
 - Provides automated policies for moving data to the most cost-effective and secure location
 - Based on standard HP IT SAN, not proprietary, black-box SAN
 - Integrates with legacy high-capacity tape devices and platforms, enabling simplified data management within a SAN and automated data protection policies

Solution benefits

Whether for enhanced workflow for the near-line editing or post-production process, or long-term storage of precious digital assets, HP Media Storage solution provides excellent benefits for managing the diverse media assets of media, entertainment and telecommunications companies. Media Storage is a key component of HP's Digital Media Solution, which provides a content workflow framework for comprehensive digital content supply chain automation.

• Dramatically optimizes data use

HP Media Storage creates a single shared pool of storage, making provisioning unnecessary and allows content distributors to deliver standard and HD aggregated media content without creating redundant copies on multiple servers.

• Shortens timeframes for content editing and reviewing workflows

Media Storage enables concurrent file sharing at SAN speed across heterogeneous systems, so video editors and reviewers needn't wait for a copy of a file to be delivered to their computers.

• Provides scalable storage for content management applications

Content management applications won't outgrow their primary or backup storage configuration, and backup windows remain manageable since data can be backed up and archived when it arrives in the system.

• Reduces resource demands

Fewer IT resources are needed to maintain consistent, redundant data, while IT receives a system that is dramatically easier to operate and less resource-intensive than either legacy or competitive systems.

• Simplifies storage management with intelligent archive features

The StorNext software provides automated data management and protection policies, which when combined with data consolidation, decrease the storage management burden by integrating replication and data retention within the storage environment.

Solution partner

Quantum is a leading provider of Intelligent Storage solutions to the open systems marketplace. The company's data management software, StorNext, enables companies to finish projects faster and confidently store more data at a lower cost. Broadcast, entertainment and ISP industry leaders use StorNext in high speed, shared workflow operations and multi-tier archives to speed products to market and generate revenue faster while controlling capital and operational expenditures. StorNext data management software preserves provides the industry's highest level of platform independence, allowing users to choose and mix server platforms, disk, tape, and network appliances to meet their specific business requirements.

The HP advantage

Increasingly complex and rapidly evolving communications solutions force service providers to deliver even more innovative services to the market while keeping customers loyal and insulated from the complexities behind the services. To achieve this, communications and media service providers need strategic partners who can do more. HP offers targeted and seamless solutions, integrated with partners and delivered quickly and efficiently. HP systems and solutions are open and flexible, empowering customers to customize or create value-added services. Our service capabilities provide the expertise to develop, integrate, test, install and support the most complex service launches. This one-stop shopping approach allows providers to focus on customers—not suppliers.

HP focuses more than 30 years of expertise into a powerful integrated team, the Communications, Media & Entertainment (CME) organization, who along with 500 valued solutions partners, assists the world's top service and equipment providers, as well as media, entertainment and cable operators, in meeting their subscriber needs.

That experience is embodied in the HP Services group, a dedicated team of professionals on the ground in 170 countries worldwide. Building upon a foundation of people, processes and technology, HP Services can manage the complete design, delivery and deployment of critical adaptive infrastructure solutions for today's communications and media services marketplace.

HP delivers solutions, technologies, and services arrayed across network infrastructure, network services, operations and business support, mobile and rich media solutions, and end user access. These innovative capabilities, including the class-leading HP OpenCall and HP OpenView software product suites, have made HP a major player that is leading change in the communications, media and entertainment industries.

For more information go to www.hp.com/go/mediastorage

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