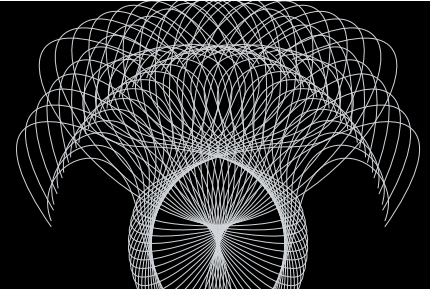


Tiered Storage & Nearline Archiving Solutions



Challenge

Rapid data growth, slow performance, unreliability, poor resource utilization, and the high cost of managing primary data are just some of the operational issues enterprises face today. And as businesses archive e-mail, databases, or file-based data, increasingly they're looking to move this inactive data to a secondary, nearline archiving storage environment to improve service levels and intelligently manage storage costs.

To help customers maximize the long-term value of their critical business data while reducing IT costs and complexity, Isilon offers a robust set of nearline archive clustered storage products and the industry's first tiered clustered storage solution. By combining the scalability, performance, and ease of use of the Isilon IQ® clustered storage platform with the built-in automation and simplicity of its software applications, Isilon extends the value of its clustered storage solutions to the tiered storage environment.

Solution

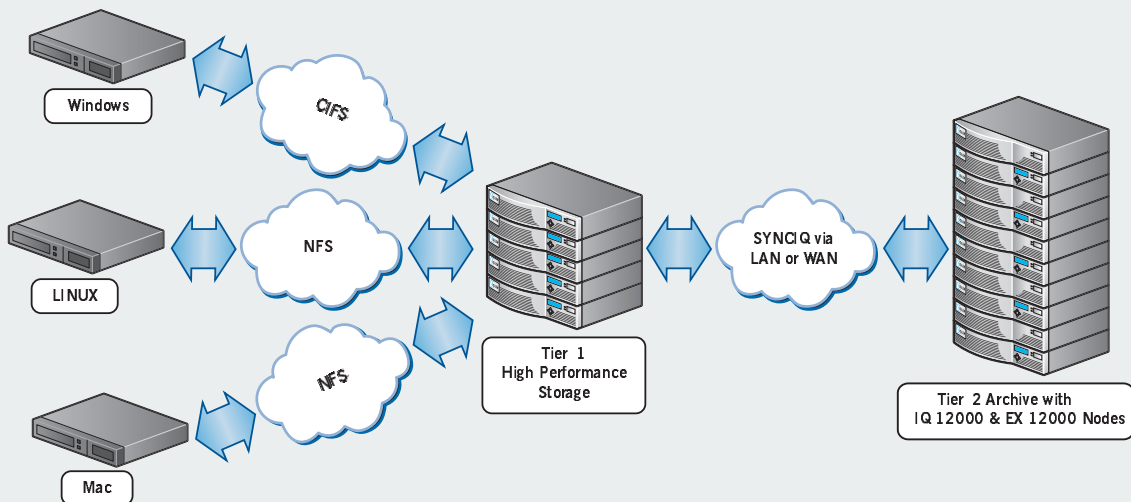
Isilon IQ clustered storage delivers a lower total cost of ownership and simplifies data management without sacrificing performance. Utilizing an open-standards approach, Isilon IQ eliminates the need to write to proprietary APIs, thereby reducing integration costs and enabling customers to aggregate all archive data enterprise-wide, to a single file system and a single volume.

The concept of tiered storage—allocating different types of storage based on data performance, availability and cost requirements—has three fundamental principles:

- Data and storage requirements change over time
- The lifecycle of data and storage is based on business value
- Performance, availability, and cost requirements change as data ages

Tiered storage enables customers to match the value of their digital content to the appropriate class of storage. The value placed on digital content and the projects associated with it, often depend on its place within its digital lifecycle. That is, active, online data and projects require high-performance storage while less active, nearline projects and data benefit from higher capacity, lower cost storage.

The Isilon IQ clustered storage platform provides a uniquely flexible and robust solution for these various tiered storage requirements. With an unmatched ability to independently scale performance and capacity, Isilon clustered storage delivers the best of both worlds: high-performance, online Tier-1 storage and high-capacity, nearline Tier-2 or archive storage that easily adapts to changing enterprise storage challenges.



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Key Benefits

Highly Scalable, Highly Flexible Nearline Archive Storage

Coupling Isilon IQ storage nodes with one or more Isilon IQ Accelerator-x extension nodes ensures maximum Tier-1 performance and availability for most mission-critical applications. Similarly, coupling a number of higher-capacity Isilon IQ 6000, 9000 or 12000 platform nodes with Isilon EX 6000, EX 9000 or EX 12000 capacity extension nodes creates highly-scalable, lower-cost Tier-2 storage, giving enterprises an optimal near line or archive solution.

Lower Cost of Ownership

By leveraging the same infrastructure and operating system (the fifth generation of Isilon IQ OneFS®) for primary and secondary nearline archive storage, customers greatly lower their TCO total while delivering consistent performance. And thanks to the high density clustered architecture Isilon provides, customers gain a highly flexible storage platform that allows instant data access on a standard network over standard protocols.

Optimized Storage and Management

Isilon enterprise-ready software makes it easy to quickly move data between storage tiers with automated, policy-based migration tools that overcome the complex, labor-intensive challenges traditionally associated with the migration process. Because the software is designed specifically for Isilon clustered storage, the reliability, performance, scalability, and simplicity characteristics of clustered storage are continually maintained.

Policy Control

Within Isilon's software applications, customers can easily create policies based on file type, file name, or an explicit characteristic such as last access time or file age. Entire directories or sub-directories can be included or excluded from the migration job. This makes it easy to migrate and control specific portions of the file system from online to nearline storage. In addition, the software also has a robust scheduling capability — migration jobs can be scheduled to run during off-peak usage hours, recur at various intervals, or be initiated on-demand.

Better Storage Efficiencies

Flexible policies allow enterprises to move or copy content based on a customizable schedule. When the “move” option is selected, content is reliably copied to a secondary tier of storage. Once the automatic operation is verified as complete, content is deleted from the primary storage, freeing up space. When the “copy” option is selected, content is also migrated to a secondary tier of Isilon IQ storage. Once the copy operation is complete, intelligent policies can be given thresholds—such as available free space—to remove data from the primary storage only when a given threshold has been reached. This maximizes the efficiency of online high-performance storage.

Total Insight

Isilon also features a Pre-migration Assessment utility to project storage savings before running migration jobs. That way, IT managers understand exactly what content will be moved—and how much space will be saved—prior to performing the actual migration. Ultimately, this helps IT managers maximize the value of their critical business data while reducing the complexity and cost of migrating and storing it.

Isilon Clustered Storage

- Reduces storage costs
- Increases IT operating leverage
- Speeds workflows
- Unlocks new revenues
- Complementary

Related Products

Isilon IQ Platform Nodes

The Isilon IQ 1920, 3000, 6000, 9000 and 12000 platform nodes use standard Gigabit Ethernet for front-end connections and offer the option of Gigabit Ethernet or high-performance, low-latency InfiniBand® for intracluster communication at no additional charge.

Operating System—OneFS®

OneFS® is Isilon's patent-pending operating system software that provides the intelligence behind all Isilon® clustered storage systems. It combines the three layers of traditional storage architectures—file system, volume manager and RAID—into one unified software layer, creating a single intelligent file system that spans all nodes within a cluster.

EX 6000 / EX 9000 / EX 12000

Designed as an extremely low cost, high capacity clustered storage product, each Isilon EX 6000 contains 6 terabytes of SATA-II disk capacity (9 terabytes for the EX 9000 and 12 terabytes for the EX 12000) in a 2U form factor and utilizes state-of-the-art Serial Attached SCSI (SAS) technology to connect to an Isilon IQ 6000, IQ 9000 or IQ 12000 platform node. By leveraging Isilon's OneFS operating system software with TrueScale technology, the combined products create a high density storage solution that can modularly scale to hundreds of terabytes of capacity in a single unified cluster and single file system.

Customer Success



Experience Music Project (EMP), the world's premier popular music museum, founded by investor and philanthropist Paul G. Allen and designed by architect Frank O. Gehry, has installed more than 15 TB of Isilon IQ storage for the production and editing of music-related audio, video and images for multimedia exhibits and for the streaming of audio and video for playout throughout the museum.

"Isilon IQ will save us both in upfront acquisition costs and ongoing operating costs which means we can use those dollars to expose hundreds of thousands of visitors and tens of thousands of school kids to the study of creativity, inspiration and innovation in the form of music. That's my bottom line."

*Brian Beaumont, Director of Technology,
Experience Music Project*



The Incorporated Research Institution for Seismology (IRIS) made an initial 60 terabyte purchase of the Isilon IQ 6000 to accelerate the collection and delivery of its seismology data stores. IRIS, supported by the National Science Foundation, other federal agencies, universities and private foundations, is dedicated to exploring the Earth's interior through the collection and distribution of seismographic data.

"The IRIS Data Management Center receives several tens of terabytes of new seismic data annually on a continuous and uninterrupted basis from more than 1000 seismic stations around the globe. We needed a storage solution that would minimize the administrative burden and allow us to expand the system capacity with a minimum amount of interruption. The intelligence built into the Isilon IQ 6000 product allows us to do exactly that and we will be able to reduce our operating costs and greatly simplify our storage management. Most of our future storage growth will be directed toward the Isilon storage solution."

Tim Ahern, IRIS Data Management System

Isilon IQ Clustered Storage

The Isilon IQ family of clustered storage systems was designed from the ground up to meet the needs of data-intensive enterprises and high-performance computing environments. By combining Isilon's OneFS® operating system software with the latest advances in industry-standard hardware, Isilon delivers modular, pay-as-you-grow, enterprise-class clustered storage systems.

- Powered by OneFS operating system software, distributed file system creates a single, shared global namespace
- First and only truly symmetrical clustered storage architecture
- System can scale from 4TB–2.3PB in a single file system
- Unmatched aggregate throughput from a single file system with up to 20 GB/second
- Single stream performance of more than 400 MB/second, concurrent performance of 700 MB/second and over 26,000 transaction I/Ops
- Industry leading, high availability for clustered storage systems
- Powerful, easy-to-use Web-based management
- 60-second scaling of both capacity and performance
- Built-in, automatic application/client connection load balancing
- Industry-standard protocol support (NFS, CIFS, HTTP, FTP, NDMP, SNMP, LDAP, ADS, NIS)



About Isilon Systems

Isilon Systems is the worldwide leader in clustered storage systems and software for file-based data, enabling enterprises to transform data into information—and information into breakthroughs. Isilon's award-winning family of IQ clustered storage systems combines Isilon's OneFS operating system software with the latest advances in industry-standard hardware to deliver modular, pay-as-you-grow, enterprise-class storage systems. Isilon's clustered storage solutions speed access to critical business information while dramatically reducing the cost and complexity of storing it.

The evolution of storage is clustered storage built on a powerful, open operating system with unique software that lets you pay-as-you-grow. Visit www.isilon.com/contact to get started—and see why clustered storage is paying off for some of the biggest and most respected names in the world.

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