ISILON® SYSTEMS

How breakthroughs begin.™

Isilon X-Series Clustered Storage System

Isilon Clustered Storage System—The Power to Transform Data Into Breakthroughs.

Key Features

- 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-1.6PB in a single file system – up to 100X more scalable than traditional storage
- Unmatched aggregate throughput with up to 10 GB/second – up to 20X faster than traditional storage
- TrueScale™ enables linear and independent scaling of both capacity and performance
- 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)
- Isilon Data Protection/Management and IQ Software: SyncIQ™, SnapshotIQ™, MigrationIQ™, SmartConnect™, SmartQuotas™ and Aspera for Isilon IQ

An Ideal Solution for Deriving Business Value From the Exploding Growth of Digital Content and Unstructured Data

The world of enterprise data storage has evolved from one grounded in words and text-based information to one built on a higher-value foundation of images, digital content, and unstructured data. As more businesses and people create and use these new types of data, the need for innovative ways to store, manage and access it continues to grow—exponentially. Isilon® System's award-winning clustered storage products are designed specifically to meet the needs of today's data intensive enterprises. Isilon IQ clustered storage systems speed access to critical data, while dramatically reducing the cost and complexity of storing and managing it—giving enterprises the power to transform data into information and information into breakthroughs.

Isilon IQ combines Isilon's OneFS® operating system software with best-of-breed, industry-standard hardware to create a single file system that's up to 100X more scalable and 20X faster than traditional SAN and NAS systems. Isilon IQ is the first clustered storage system that can be seamlessly grown from 4 terabytes to 1.6 petabytes in a single file system and can scale up to 10 GB/second of throughput. Powered by OneFS, the Isilon IQ family of products creates a single pool of expandable storage that is easy to install and grow—once racked, a 10, 50 or 100+ terabyte cluster takes less than 10 minutes to configure and set up, and capacity can be added on the fly in less than 60 seconds with no downtime.

The Isilon product line is comprised of the IQ 200, 1920, 3000, 6000, 9000 and 12000 platform nodes, the EX 6000, EX 9000, EX 12000 and IQ Accelerator extension nodes, and licensable software applications such as SyncIQ, SnapShotIQ, MigrationIQ, SmartConnect, SmartQuotas and Aspera for Isilon IQ. This flexible product line satisfies customers' varying capacity and performance needs for all digital content and file-based information. In addition, Isilon's unique TrueScale™ technology enables 1920, 3000, 6000, 9000 and 12000 nodes to scale both performance and capacity linearly or independently based on application or workflow needs.

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OneFS Operating System Software

The Isilon IQ family of products is the first intelligent clustered storage solution to pack a powerful storage server and automated software features into self-contained nodes that combine to work together in a single global namespace. Intelligent software automates previously manual tasks, providing unprecedented simplicity for scaling performance and capacity for rapidly growing data stores. Comprised of platform and extension nodes, the Isilon IQ product line enables data-intensive customers to maximize their budgets by easily expanding storage on a modular pay-as-you-grow basis.

Truly Distributed, Single Global Namespace

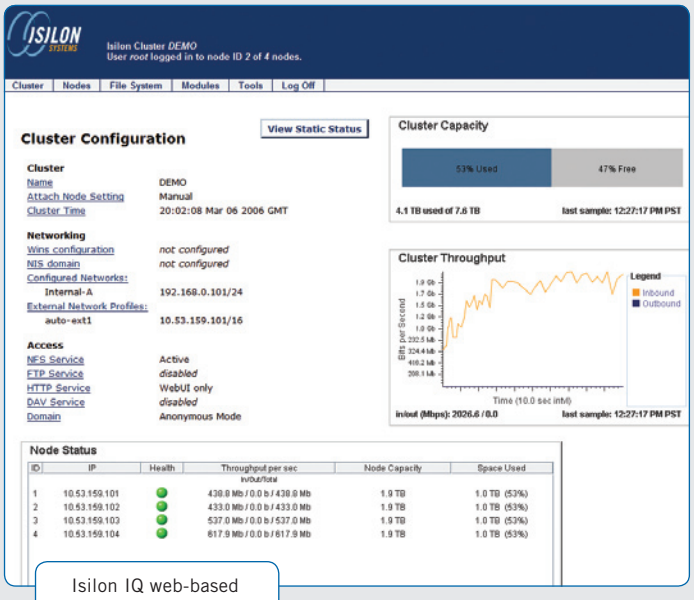
Unlike simple namespace aggregation, Isilon's OneFS operating system software intelligently stripes data across nodes in a cluster to create a single, shared pool of storage that can be used across a wide range of applications, including the production, analysis, delivery and archiving of digital content.

Automatic Data Migration

As new nodes and capacity are added to a cluster, Isilon IQ's exclusive AutoBalance feature automatically balances data across all nodes in a cluster in real time, removing throughput bottlenecks, maximizing performance and storage utilization, and eliminating downtime. With Isilon IQ it is no longer necessary to manually migrate data or change application logic as you scale.

Industry Leading Performance

Linearly or independently scale the total throughput and performance of your Isilon IQ storage cluster by adding Isilon IQ platform or IQ Accelerator nodes to achieve up to 10 GB/second of total throughput from a single file system.



Isilon IQ web-based management interface

High Throughput and High Concurrency

Isilon IQ supports high-performance InfiniBand® for intracluster communication and is ideal for high throughput, highly concurrent environments where clusters of Windows®, Unix, Linux and/or Mac OS X clients require fast read and write access to a large, shared pool of data. The unique SmartCache capability leverages OneFS features including its fully distributed file system, file striping and large globally coherent memory cache to deliver unmatched total aggregate throughput from a single file system.

Unmatched Reliability, Self-Healing and Advanced Data Protection

With state of the art FlexProtect-AP, administrators can set data protection policies on the fly at the cluster, directory or file levels. With Isilon IQ, data is automatically protected across the entire cluster using all available resources. In the event of multiple drive or node malfunctions—up to four simultaneous node failures—N+4 protection ensures that all data remains 100% available and is rebuilt to any free space throughout the cluster—capacity is not lost to "recovery drives" and failed drives can be rebuilt in less than one hour.

Largest Digital Archives

Coupled with an Isilon IQ clustered storage node, the Isilon EX 6000, EX 9000 or EX 12000 storage extension nodes provide an unmatched solution for digital archiving, nearline storage, disk-to-disk backup and disaster recovery.

Powerful Suite of Data Protection and Management Software Applications

- SyncIQ: Robust and flexible asynchronous replication software solution
- SnapshotIQ: Breakthrough snapshot technology for simple, scalable and flexible data protection of large storage environments
- SmartConnect: Maximize performance and availability of client connections that are automatically load balanced across all Isilon IQ nodes within the cluster
- MigrationIQ: Enables automatic and simple migration of digital content between storage tiers
- SmartQuotas: Delivers quotas and thin provisioning for clustered storage
- Aspera for Isilon IQ: High performance wide area file and content delivery

Powerful, Simple Web-Based Management

Isilon IQ makes managing large data stores simple with its web-based management interface for configuring, monitoring and managing an Isilon IQ cluster. From a central web-based console, Isilon IQ provides a real-time, single level of management for cluster performance, capacity utilization, quotas, monitoring, diagnostics and management of replication jobs. Using the web interface, nodes can be added or removed from the cluster with a click of the mouse.

Intelligent Inside and Out

Today's IT organizations face numerous challenges, including the ongoing struggle to efficiently manage, grow and optimize storage infrastructures. With its Isilon IQ family of clustered storage systems, Isilon is delivering highly scalable and flexible clustered solutions where most administrative tasks are handled by an intelligent software layer.

Fully Symmetric, Modular System

Each modular, self-contained Isilon IQ platform node contains disk capacity along with a powerful storage server, CPU, memory and network connectivity. As additional Isilon IQ platform nodes are added to a cluster, all aspects of the cluster scale linearly, including capacity, throughput, memory and CPU processing power. Isilon IQ nodes automatically work together, harnessing their collective power into a single unified storage system.

Scale in Under 60 Seconds

Isilon IQ 1920, 3000, 6000, 9000 and 12000 nodes deliver the unparalleled ability to add storage capacity, performance or both in less than 60 seconds without downtime or application changes. Newly added nodes joining a cluster automatically inherit existing policies and configuration settings and Isilon's AutoBalance feature automatically stripes data across the newly expanded cluster, eliminating the downtime traditional storage systems require when adding capacity.

Built for Massive Growth

Leveraging Isilon's OneFS operating system software with TrueScale™, the Isilon IQ and EX storage extension nodes deliver modular pay-as-you-grow scaling of capacity up to 1.6 petabytes in a single file system and single volume, providing data-intensive environments with maximum flexibility and IT value to streamline operations and achieve new business breakthroughs.

Inherent High-Availability

Isilon IQ's modular design eliminates the need to make trade-offs between availability and performance. All data in an Isilon IQ cluster remains fully available for applications even in the unlikely event of multiple disk or node failures. Unlike traditional systems which require the purchase of expensive components such as redundant file servers, volume manager(s) and failover software, these features are inherent in Isilon IQ's clustered architecture and OneFS distributed file system. Additionally, using the most advanced predictive software intelligence, OneFS automatically detects at-risk components and preemptively rebuilds data to ensure 100 percent data and cluster reliability.

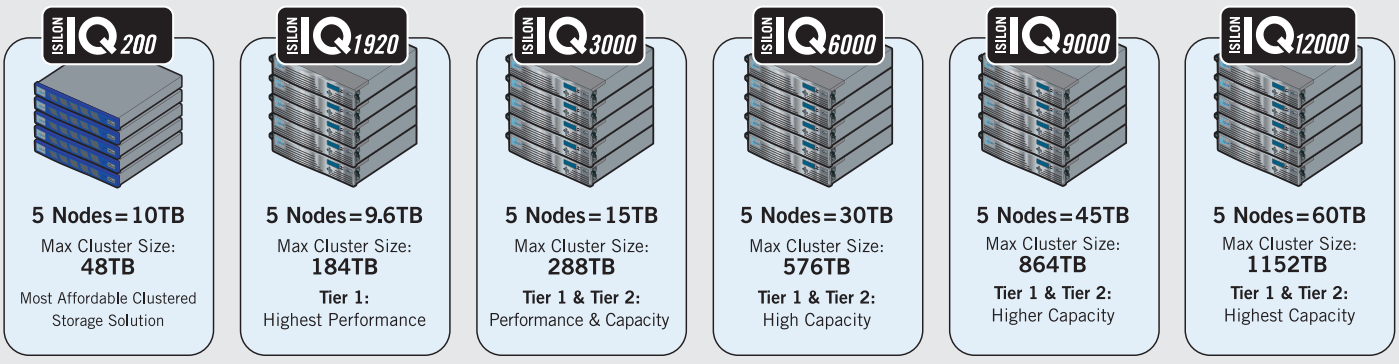
Plug and Store

Once racked, an Isilon IQ cluster can be installed, configured and online in less than 10 minutes. Industry standard protocols, such as NFS, CIFS, HTTP and FTP allow customers to easily store and access data using Windows, Linux, UNIX or Mac OS X systems. Customers may also easily backup and restore cluster data using the Network Data Management Protocol (NDMP), monitor cluster activity using SNMP, and authenticate file access using LDAP, ADS, and NIS.

IQ 200 - The Power of Clustered Storage at a Breakthrough Price

The Isilon IQ 200 delivers the key benefits of Isilon's enterprise-class clustered storage solutions – unmatched scalability, performance and ease of use – at a price optimized for a broad spectrum of businesses. The IQ 200 is an ideal solution for budget or space constrained businesses that need to protect and manage their critical data and maximize their IT budgets with a truly modular, pay-as-you-grow approach.

Each Isilon IQ 200 platform node contains 2 terabytes of disk capacity along with CPU, memory and network connectivity, all in a compact 1U rack-mountable system. As additional Isilon IQ 200 platform nodes are added to a cluster, all aspects of the cluster scale linearly. The system can scale from a minimum configuration of 3 nodes (6 terabytes) up to 24 nodes for a total of 48 terabytes in a single file system and single volume.



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Isilon Platform Overview

Isilon. Enabling breakthroughs and creating value.

The explosion in digital content and unstructured data is driving leading companies to seek storage solutions that enable them to transform their information into powerful business breakthroughs. Isilon IQ combines Isilon's intelligent, operating system software—OneFS—with best-of-breed, industry-standard hardware to deliver unsurpassed reliability, scalability, performance and value. Isilon IQ offers decreased complexity, reduced risks and a simplified management interface that significantly lowers total cost of ownership. Isilon's intelligent technology and single expandable global namespace enable customers to directly manage one thousand terabytes as easily as one terabyte, and greatly reduces risk by eliminating unnecessary complexity. As both the sheer volume and the strategic business value of enterprise data and archive information continue to rise, clustered storage solutions from Isilon are increasingly recognized as the cornerstone of a robust and effective data management and protection strategy.

For more information about how Isilon IQ can help transform your data into information—and your information into breakthroughs—contact an Isilon sales representative or Isilon Smart Partner reseller.

Isilon Systems, Inc. | **www.isilon.com**
3101 Western Ave, Seattle, WA 98121

Toll-Free: 877-2-ISILON • **Phone:** +1-206-315-7602
Fax: +1-206-315-7501 • **Email:** sales@isilon.com

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