

Isilon IQ NL-Series Storage System

Redefining the Economics of Nearline Storage

Key Features

- 36, 72 or 108 TB per 4U chassis, scalable up to 15.5 PB
- Single file system and global namespace
- Over 80% capacity utilization rate
- 60-second on-the-fly scaling of capacity and performance
- Up to N+4 data protection, set at cluster, directory, or file level

Use Cases

Seamless Enterprise Integration.

The Isilon NL-Series compliments and improves existing tape backup, archiving, and data protection strategies, including:

- **Nearline Archiving:** For economical storage and rapid disk-based access to reference data to meet business and legal requirements.
- **Disaster Recovery:** When combined with the Isilon SyncIQ™ replication application, a proven solution for organizations whose multi-site replication strategy requires an economical, high-capacity storage device to be located remotely.
- **Disk-to-Disk Backup:** Can be combined with compression and de-duplication technology to deliver a highly scalable, reliable, easy-to-manage and economical disk-based backup target.

Isilon's Innovative Scale-Out NAS Technology for Nearline Storage

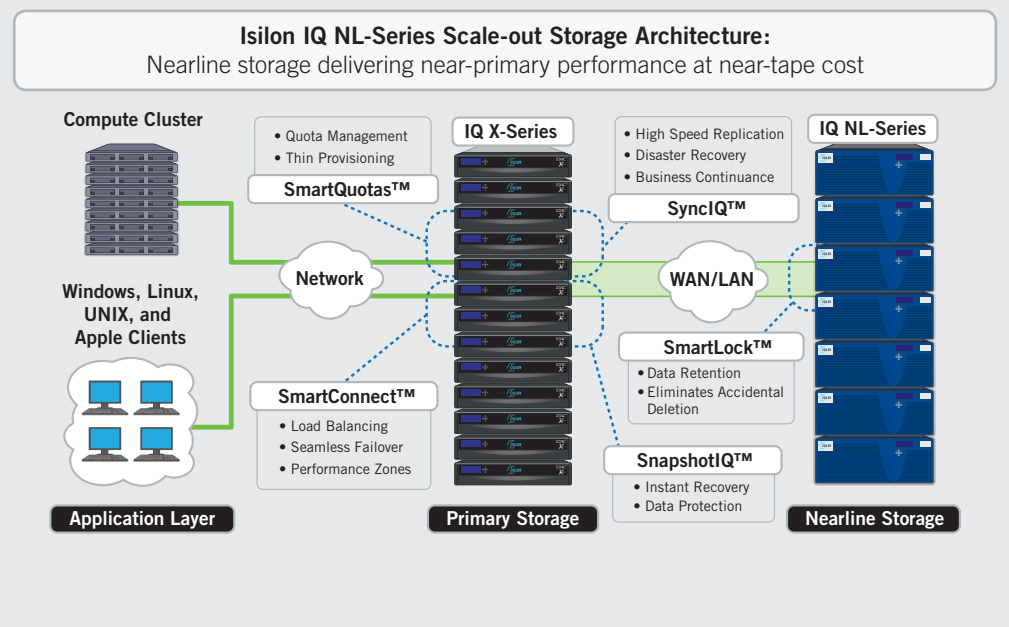
As the proliferation of file-based data continues to accelerate, the challenge of cost-effectively storing and managing data is an ever-growing concern. You also have to weigh the cost of storing certain aging data sets against the need for quick access. Meeting this challenge requires a solution that bridges the gap between high-performance, but costly, primary storage and inexpensive, but management-intensive, off-line storage solutions.

The Isilon IQ NL-Series scale-out storage solution redefines the economics of nearline storage by combining near-primary accessibility, near-tape value and ease of use.

High Value: The NL-Series is built for cost-effective, large-capacity storage. It offers the best dollar per terabyte (\$/TB) of any scale-out storage solution on the market. Each Isilon IQ NL node houses 36 SATA Hard Disk Drives (1TB, 2TB or 3TB) in a 4U chassis, allowing you to seamlessly scale up to 15.5 PB in a single file system.

Simplicity: You can configure and bring an Isilon NL-Series cluster online in as little as 10 minutes, without the need for time-consuming, expensive integration services. With a single pool of storage with a global namespace—the NL-Series eliminates the need for multiple volumes, making the NL-Series' massive capacity as easy to manage as a single terabyte.

Breakthrough Economics: The NL-Series offers the ultimate in storage economics with low acquisition costs and ultra-low overhead. Isilon's high utilization rates—over 80 percent versus 50 percent for traditional NAS or SAN storage—mean fewer spindles provide the same amount of usable storage. And Isilon's pay-as-you-grow modular approach and forward compatibility allow you to purchase only what your organization needs today, with the ability to easily expand tomorrow.



Isilon NL-Series Product Specifications

Product Attributes

Scale-out Architecture	Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with Isilon's intelligent software.
Modular Design	Self-contained nodes include server, software, and disks in a 4U rack-mountable node.
Operating System	Sixth generation Isilon® OneFS® distributed file system. Creates a cluster with a single file system and single global namespace. Fully journaled, fully distributed globally coherent write/read cache.
High Availability	No single point of failure. Self-healing design protects against disk or node failure. Includes backend intra-cluster failover.
Scalability	Initial cluster setup in under 10 minutes. Add performance and capacity in 60 seconds, up to 15.5 PB.
Data Protection	FlexProtect file-level striping with support for N+1 through N+4 and mirroring data protection schemes.
Data Replication	SyncIQ fast and flexible file-based asynchronous replication
Data Retention	SmartLock policy-based retention and protection against accidental deletion
Network Protocol Support	NFSv3, NFSv4, NFS Kerberized Sessions (UDP or TCP), iSCSI, SMB1 (CIFS), SMB2, HTTP, FTP, NDMP, SNMP, LDAP, ADS, NIS reads/writes.
Client Support	Microsoft® Windows®, Linux, UNIX, Apple® Macintosh.
Isilon Software Compatibility	Compatible with all Isilon licensable software: SmartLock™, Isilon for vCenter™, SyncIQ™, SnapshotIQ™, SmartConnect™, SmartQuotas™, SmartPools™, InsightIQ™ and Aspera for Isilon IQ.

Environmental Specifications

Power Supply	Dual redundant, hot-swappable 1200W power supplies with Power Factor Correction (PFC)
Operating Environment	50° F to 95° F (10° C to 35° C), 5% to 95% relative humidity, non-condensing
Dimension/Weight	Height: 6.96" (17.7 cm), Width: 18.9" (48 cm), Depth: 31.25" (79.4 cm), Weight: 130 lbs / 59 kg
Minimum Service Clearances	Front: 35" (88.9 cm), Rear: 14" (35.6 cm)

Node Attributes:	Isilon IQ 36NL	Isilon IQ 72NL	Isilon IQ 108NL
Capacity	36 TB	72 TB	108 TB
Hard Drives (3.5" SATA)	36 (Thirty-six) 1 TB	36 (Thirty-six) 2 TB	36 (Thirty-six) 3 TB
ECC Memory (FBDiMM Cache)	4 GB		16 GB
CPU Type	2.33 GHz Intel Xeon (quad core) processor		Dual 2.33 GHz Intel Xeon (quad core) processors
Front-end Networking	2 x GigE (Copper) OR 2 x GigE & 2 x 10GE (SFP+ or Twin-ax Copper)		4 x GigE (Copper) OR 2 x GigE & 2 x 10GE (SFP+ or Twin-ax Copper)
Infrastructure Networking	2 InfiniBand connections per node		
Typical Power Consumption @ 100v	800W		
Typical Power Consumption @ 240v	720W		
Typical Thermal Rating	2,500 BTU/hr		
Non-volatile RAM (NVRAM)	512 MB		
External Indicators	Cluster status and alert (LED) and front-panel LCD		

Cluster Scalability: Isilon IQ 36NL					
Cluster Size (Number of Nodes)	3	10	50	96	144
Capacity	108 TB	360 TB	1.8 PB	3.45 PB	5.18 PB
Rack Units	12	40	200	384	576

Cluster Scalability: Isilon IQ 72NL					
Cluster Size (Number of Nodes)	3	10	50	96	144
Capacity	216 TB	720 TB	3.6 PB	6.9 PB	10.4 PB
Rack Units	12	40	200	384	576

Cluster Scalability: Isilon IQ 108NL					
Cluster Size (Number of Nodes)	3	10	50	96	144
Capacity	324 TB	1080 TB	5.4 PB	10.4 PB	15.5 PB
Rack Units	12	40	200	384	576

Isilon's Comprehensive Storage Solutions... Powerful, Yet Simple

The Isilon IQ NL-Series, along with the Isilon IQ X-Series and S-Series product lines, provide a complete portfolio of innovative solutions that drive business value for customers by optimizing their mission-critical applications, workflows, and processes. Isilon enables enterprises and research organizations worldwide to manage large and rapidly growing amounts of data in a highly scalable, easy-to-manage, and cost-effective way.

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