

# EMC ISILON NL-SERIES



EMC Isilon NL400

The challenge of cost-effectively storing and managing data is an ever-growing concern. You 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) offline storage solutions.

EMC® Isilon® NL-Series scale-out storage solutions redefine the economics of nearline storage by combining near-primary accessibility, near-tape value, and ease of use.

**High value:** The EMC Isilon NL-Series is built for highly flexible, cost-effective, large-capacity storage. Each EMC Isilon NL node houses 36 SATA hard disk drives at various terabyte (TB) capacities (1 TB, 2 TB, 3 TB, or 4 TB) in a 4U chassis, allowing you to seamlessly scale up to 20.7 petabytes (PB) in a single file system.

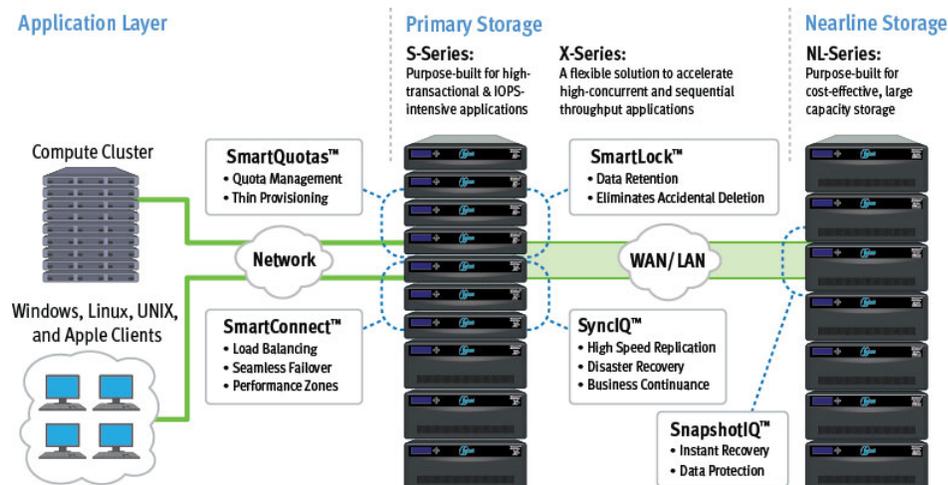
**Simplicity:** You can configure and bring an EMC Isilon NL-Series cluster online in as little as 10 minutes. With a single pool of storage with a global namespace, the NL-Series eliminates the need for multiple volumes, thereby greatly simplifying the management of your Big Data environment.

**Efficiency:** With Isilon, you can achieve highly efficient utilization rates—over 80 percent versus 50 percent for traditional NAS or SAN storage—and further reduce capacity requirements with the Isilon SmartDedupe™ data deduplication option. This translates into greater overall efficiency, resulting in lower acquisition, operating, and maintenance costs.

**Security:** With optional FIPS 140-2 level 2 self-encrypting drives, the NL-Series platform allows you to meet regulatory and compliance needs for securing data at rest. The Isilon NL-Series with SED nodes provides the security you need without sacrificing performance or usability.

## Specifications

### ARCHITECTURE



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## EMC ISILON NL-SERIES NODE SPECIFICATIONS

<b>ISILON NL400 NODE ATTRIBUTES &amp; OPTIONS</b>	<b>1 TB HDD</b>	<b>2 TB HDD</b>	<b>3 TB HDD</b>	<b>4 TB HDD</b>
Capacity	36 TB	72 TB	108 TB	144 TB
Hard drives (3.5" 7200 RPM)	36	36	36	36
Self-encrypting drive (SED) option (7200 RPM)	No	No	Yes	No
			FIPS 140-2 level 2 validated SEDs	
System ECC memory	12–48 GB	12–48 GB	12–48 GB	12–48 GB
Front-end networking	4 x Gigabit Ethernet or 2 x Gigabit Ethernet and 2 x 10GE (SFP+ or twin-ax copper)			
Drive controller	SATA-3, 6 Gb/s			
CPU type	Intel® Xeon® processor			
Infrastructure networking	2 InfiniBand connections with double data rate (DDR) links			
Non-volatile RAM (NVRAM)	512 MB			
Typical power consumption @ 100v	800 Watts			
Typical power consumption @ 240v	720 Watts			
Typical thermal rating	2,500 BTU/hr			

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## PRODUCT ATTRIBUTES

Scale-out architecture	Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with EMC Isilon data and storage management software
Modular design	Self-contained nodes include server, software, and disks in a 4U rack-mountable node
Operating system	EMC 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 back-end intra-cluster failover
Scalability	Initial cluster setup in less than 10 minutes; add performance and capacity in 60 seconds; scales to over 20 PB per cluster
Data protection	FlexProtect™ file-level striping with support for N+1 through N+4 and mirroring data protection schemes
Data replication	Replicate and distribute large, mission-critical data sets to multiple shared storage systems in multiple sites for reliable disaster recovery capability with EMC Isilon SyncIQ®
Data retention	Protect data against accidental, premature, or malicious alteration or deletion with EMC Isilon SmartLock®, our software-based approach to write once read many (WORM)
Data encryption option	FIPS 140-2 level 2 validated self-encrypting drives (SEDs) with unique AES-256 bit strength keys assigned to each drive
Security	File system audit capability to improve security and control of your storage infrastructure and address regulatory compliance requirements
Efficiency	SmartDedupe data deduplication option, which can reduce storage requirements by up to 35 percent
Protocol support	NFSv3, NFSv4, NFS Kerberized sessions (UDP or TCP), SMB1 (CIFS), SMB2, HTTP, FTP, NDMP, SNMP, LDAP, ADS, NIS reads/writes, HDFS
Client support	Microsoft® Windows®, Linux, UNIX®, Apple® Macintosh®
Isilon software compatibility	Compatible with all Isilon licensable software: SmartLock, SmartDedupe, Isilon for vCenter®, SyncIQ, SnapshotIQ™, SmartConnect™, SmartQuotas™, SmartPools®, InsightIQ™, and Aspera for Isilon

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## ENVIRONMENTAL SPECIFICATIONS

Power supply	Dual redundant, hot-swappable 1050W 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
Dimensions/ Weight	Height: 6.96" (17.7 cm), width: 18.9" (48 cm), depth: 31.25" (79.4 cm), weight: 127 lbs (57.7 kg)
Minimum service clearances	Front: 35" (88.9 cm), rear: 14" (35.6 cm)

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## INDUSTRY CERTIFICATIONS

<b>NORTH AMERICAN (NA) SAFETY</b>	UL/cUL Listing (UL 60950-1:2003, First Edition) CSA C22.2 No.60950-1-03
<b>INTERNATIONAL SAFETY CD SCHEME</b>	IEC 60950-1 (2001) First Edition with all national deviations
<b>EUROPEAN UNION (EU) SAFETY CE</b>	Low Voltage Directive
<b>NA EMC US FCC PART 15</b>	Canada IC ICES-03
<b>INTERNATIONAL EMC EU EMC DIRECTIVE (EN 55022 AND EN 55024)</b>	Japan (VCCI) South Korea (MIC)

## CONTACT US

To learn more about how EMC Isilon products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com/Isilon](http://www.EMC.com/Isilon).

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