

EMC ISILON NL-SERIES



EMC Isilon NL400



EMC Isilon NL410

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 up to 36 SATA hard disk drives at various terabyte (TB) capacities (1 TB, 2 TB, 3 TB, 4 TB, or 6 TB) in a 4U chassis, allowing you to seamlessly scale up to 30.2 petabytes (PB) in a single file system.

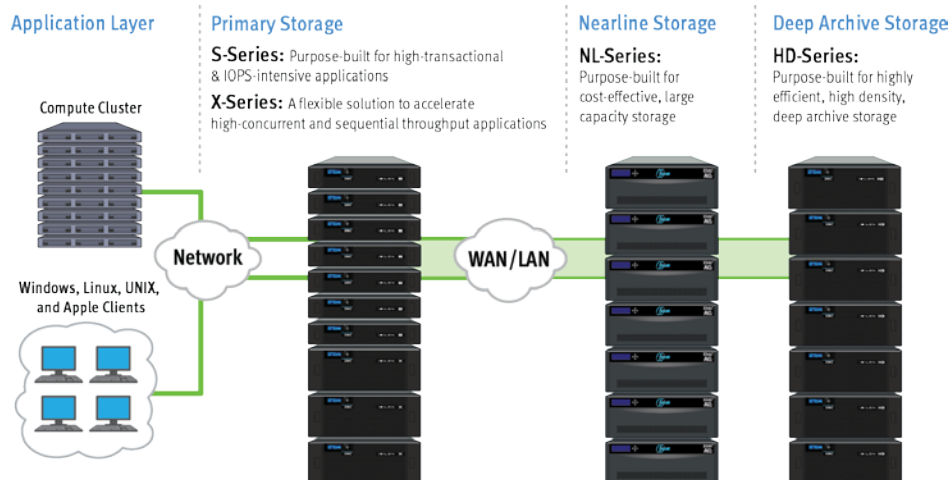
Simplicity: You can configure and bring an EMC Isilon NL-Series cluster online in as little as 10 minutes. With a single pool of storage with a global namespace, the NL-Series eliminates the need for multiple volumes, thereby greatly simplifying the management of your Big Data environment.

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



REDEFINE

SPECIFICATION SHEET

EMC²

EMC ISILON NL-SERIES NODE SPECIFICATIONS

ISILON NL400 NODE ATTRIBUTES & OPTIONS	1 TB HDD	2 TB HDD	3 TB HDD	4 TB HDD	6 TB HDD
CAPACITY	36 TB	72 TB	108 TB	140 TB to 144 TB	210 TB
HARD DRIVES (3.5" 7200 RPM)	35 or 36	35 or 36	35 or 36	35 or 36	35
SELF-ENCRYPTING DRIVE (SED) OPTION (7200 RPM)	No	No	Yes	Yes	No
SOLID-STATE DRIVE (SSD) (800 GB)	0 or 1 (optional)	0 or 1 (optional)	0 or 1 (optional)	0 or 1 (optional)	1 (required)
SELF-ENCRYPTING DRIVE (SED SSD) OPTION (800 GB)	No	No	No	Yes	No
ISILON ONEFS OPERATING SYSTEM VERSION REQUIRED	6.5.5.4 or higher	6.5.5.4 or higher	Without SED option: 6.5.5.4 or higher With SED option: 7.1 or higher	Without SED and SSD options: 6.5.5.4 or higher With SED option: 7.1 or higher With SSD option, the following versions or higher: 6.5.5.26, 7.0.1.10, 7.0.2.4, or 7.1	7.2 or higher
SYSTEM ECC MEMORY	12 GB, 24 GB or 48 GB				
FRONT-END NETWORKING	4 x 1 Gigabit Ethernet or 2 x 1 Gigabit Ethernet and 2 x 10GE (SFP+ or twin-ax copper)				
NETWORK INTERFACES	Isilon network interfaces support IEEE 802.3 standards for 10Gbps, 1Gbps, and 100Mbps network connectivity				
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				



ISILON NL410 NODE ATTRIBUTES & OPTIONS	1 TB HDD	2 TB HDD	3 TB HDD	4 TB HDD	6 TB HDD
CAPACITY	36 TB	72 TB	108 TB	140 TB to 144 TB	210 TB
HARD DRIVES (3.5" 7200 RPM)	35 or 36	35 or 36	35 or 36	35 or 36	35
SELF-ENCRYPTING DRIVE (SED) OPTION (7200 RPM)	No	No	Yes	Yes	No
SOLID-STATE DRIVE (SSD) (200 GB OR 800 GB)	0 or 1 (optional)	0 or 1 (optional)	0 or 1 (optional)	0 or 1 (optional)	1 (required)
SELF-ENCRYPTING DRIVE (SED SSD) OPTION (800 GB)	No	No	No	Yes	No
ISILON ONEFS OPERATING SYSTEM VERSION REQUIRED	7.2.1 or higher				
SYSTEM ECC MEMORY	24 GB or 48 GB				
FRONT-END NETWORKING	2 x 1 Gigabit Ethernet and 2 x 10GbE (SFP+ or twin-ax copper)				
NETWORK INTERFACES	Isilon network interfaces support IEEE 802.3 standards for 10Gbps, 1Gbps, and 100Mbps network connectivity				
DRIVE CONTROLLER	SATA-3, 6 Gb/s				
CPU TYPE	Single Intel® Xeon® Processor E5-2407 @ 2.4 GHz, 4 Core				
INFRASTRUCTURE NETWORKING	2 InfiniBand connections supporting DDR and QDR links				
NON-VOLATILE RAM (NVRAM)	2 GB				
TYPICAL POWER CONSUMPTION @ 100V	800 Watts				
TYPICAL POWER CONSUMPTION @ 240V	720 Watts				
TYPICAL THERMAL RATING	2,500 BTU/hr				

CLUSTER ATTRIBUTES	NL400	NL410
NUMBER OF NODES	3–144	3–144
CLUSTER CAPACITY	108 TB to 30.2 PB	108 TB to 30.2 PB
MEMORY	36 GB to 6.9 TB	36 GB to 6.9 TB
RACK UNITS	12–576	12-576

PRODUCT ATTRIBUTES

SCALE-OUT ARCHITECTURE	Truly distributed, fully symmetric clustered architecture that combines modular storage nodes with EMC Isilon intelligent 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	Scales from 3 to 144 nodes in a single cluster with over 30 PB capacity; add a node to scale performance and capacity in 60 seconds
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
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, SMB3 Multichannel, HTTP, FTP, NDMP, SNMP, LDAP, HDFS, ADS, NIS reads/writes

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	NL400: Height: 6.96" (17.7 cm), width: 18.9" (48 cm), depth: 31.25" (79.4 cm), weight: 127 lbs (57.7 kg) NL410: Height: 6.96" (17.7 cm), width: 18.9" (48 cm), depth: 31.25" (79.4 cm), weight: 114 lbs (51.7 kg)
MINIMUM SERVICE CLEARANCES	Front: 35" (88.9 cm), rear: 14" (35.6 cm)

SAFETY AND EMI COMPLIANCE

STATEMENT OF COMPLIANCE

This Information Technology Equipment is compliant with the electromagnetic compatibility (EMC) and product safety regulations/standards required by the countries in which the product is sold. EMC compliance is based on FCC part 15, CISPR22/CISPR24 and EN55022/EN55024 standards, including applicable international variations. EMC compliant Class A products are marketed for use in business, industrial, and commercial environments. Product Safety compliance is based on IEC 60950-1 and EN 60951-1 standards, including applicable national deviations.

This Information Technology Equipment is in compliance with EU RoHS Directive 2011/65/EU.

The individual devices used in this product are approved under a unique regulatory model identifier that is affixed to each individual device rating label, which may differ from any marketing or product family name in this datasheet.

For additional information see <https://support.emc.com> under the Safety & EMI Compliance Information tab.

TAKE THE NEXT STEP

Contact your EMC sales representative or authorized reseller to learn more about how the EMC Isilon NL-Series can benefit your organization.

Also see our solutions in the EMC Store at <https://store.emc.com/isilon>.



CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller, visit www.emc.com, or explore and compare products in the [EMC Store](#).

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