Lenovo Storage DX8200N Unified Storage
Product Guide (withdrawn product)

The Lenovo Storage DX8200N powered by NexentaStor provides an affordable, highly efficient and durable storage platform to meet the massive data growth. It provides unified file (NFS and SMB) and block (Fibre Channel and iSCSI) services and can be used for generic NAS file services and home directory storage, VMware cloud backend storage, OpenStack and CloudStack backend storage, and near-line archive and large scale backup repositories.

NexentaStor unified block (Fibre Channel and iSCSI) and file (NFS and SMB) storage software delivers dramatically lower storage costs for cloud and enterprise workloads. It offers massive scalability, includes data management functionality, and supports inline data reduction for additional storage cost savings. NexentaStor incorporates security, manageability, availability, reliability, lower TCO, and scalability with the ability to run on all-flash, hybrid and spinning disk configurations to meet your workload needs.

The Lenovo Storage DX8200N is shown in the following figure.

Figure 1. Lenovo Storage DX8200N

Did you know?

The Lenovo Storage DX8200N is built on industry-leading Lenovo servers that feature enterprise-class reliability, management, and security.

The Lenovo Storage DX8200N allows scaling from tens to hundreds of Terabytes of storage.

The Lenovo Storage DX8200N is designed for always-on data storage with multiple levels of protection and availability, including end-to-end data integrity, multi-parity RAID, multipathing, and replication.

The Lenovo Storage DX8200N powered by NexentaStor solution provides quality, engineering expertise, and Lenovo's worldwide global services. You can quickly and confidently deploy new Software Defined Storage (SDS) technologies using preloaded appliances on proven Lenovo systems and with Lenovo as a single point of contact for assistance.

Key features

The Lenovo Storage DX8200N powered by NexentaStor provides an affordable, highly efficient and durable storage platform to meet the massive data growth.

The Lenovo Storage DX8200N offers the following features and benefits:

- Unified, scalable storage platform with a single node for entry-level solutions or two-node clustering for high availability and performance
- Flexible host connectivity to match diverse client needs for unified file and block storage with support for a mix of 1 GbE and 10 GbE interfaces for NFS, CIFS, and SMB NAS or iSCSI SAN storage connectivity, as well as optional 8 Gb or 16 Gb Fibre Channel interfaces for FC SAN storage connectivity
- Scalability of up to 192 SFF or 672 LFF drives per system with the attachment of up to eight directly-connected Lenovo Storage D1212, D1224, or D3284 external drive enclosures, or a combination of the enclosures, to satisfy growing needs for storage capacity and performance
- Flexibility in storing data on high performance SAS SSDs, performance-optimized enterprise SAS HDDs, or capacity-optimized enterprise NL SAS HDDs; mixing and matching drive types and form factors within a single system to perfectly meet performance and capacity requirements for various workloads
- Rich set of functions, including thin provisioning, tiering, clustering, compression, deduplication, replication, and multiprotocol support.
- Intuitive, web-based GUI for easy system set up and management.

The Lenovo Storage DX8200N is designed to support the complete range of data storage requirements, from highly utilized applications to high-capacity, low usage applications.

The following 3.5-inch SAS drives are supported:

- High performance solid-state drives: 400 GB
- Performance-optimized, enterprise class disk drives: 900 GB 10K rpm
- High-capacity, archival-class nearline disk drives: 2 TB, 4 TB, 6 TB, 8 TB, and 10 TB 7.2K rpm

The following 2.5-inch SAS drives are supported:

- High performance solid-state drives: 400 GB, 800 GB, and 1.6 TB
- Performance-optimized, enterprise class disk drives
    - 300 GB and 600 GB 15K rpm
    - 600 GB, 900 GB, 1.2 TB, and 1.8 TB 10K rpm
- High-capacity, archival-class nearline disk drives: 1 TB and 2 TB 7.2K rpm

The Lenovo Storage DX8200N is designed to offer high levels of system and data availability with the following technologies:

- Two-node active/active clustering for I/O load balancing and failover
- Dual-port drives (both HDDs and SSDs) with automatic drive failure detection
- Redundant hardware, including nodes, drive enclosure connections, power supplies and fans
- Hot-swappable and customer replaceable components
- Automated path failover support for the data path between the server and the drives

Components and connectors

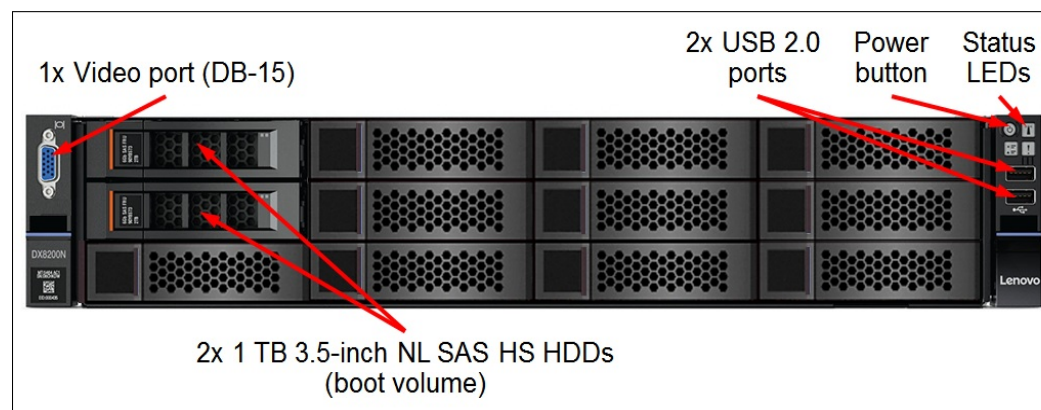The following figure shows the front view of the Lenovo Storage DX8200N.

Figure 2. Lenovo Storage DX8200N front view

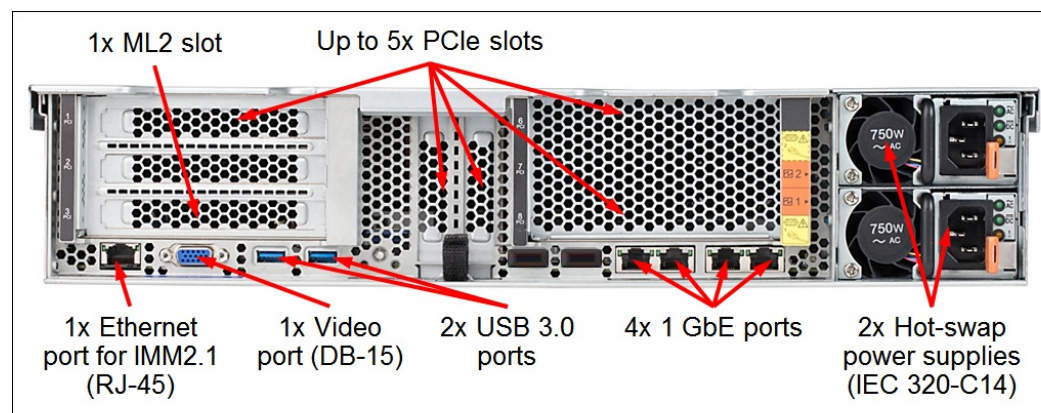The following figure shows the rear view of the Lenovo Storage DX8200N.

Figure 3. Lenovo Storage DX8200N rear view

System specifications

The following table lists the system specifications of the Lenovo Storage DX8200N appliances.

Table 1. System specifications

Components	Specification
Form factor	2U Rack-mount (Machine Type 5128).
Node configurations	Single node configurations or two-node high availability clustering.
Processor	Two Intel Xeon processor E5-2643 v4 CPUs, each with: • 6 cores (3.4 GHz core speeds) • Two QPI links up to 9.6 GT/s each • 20 MB cache • Up to 2400 MHz memory speed
Chipset	Intel C612.
Memory	16 DIMM sockets. Support for 16 GB and 32 GB RDIMMs. Memory speed up to 2400 MHz.

Components	Specification
Memory capacity	256 GB with 16x 16 GB or 8x 32 GB RDIMMs.
Memory protection	ECC and Chipkill.
Boot drive	2x 1 TB 3.5-in. NL SAS hot-swap HDDs connected to the N2215 controller.
Drive bays	Up to 672 LFF or 192 SFF hot-swap drive bays per system with external drive enclosures connected to one or two N2226 12 Gbps SAS HBAs (up to four enclosures per N2226): ● 12 LFF drive bays in the D1212 drive enclosure; up to 8 enclosures ● 24 SFF drive bays in the D1224 drive enclosure; up to 8 enclosures ● 84 LFF drive bays in the D3284 drive enclosure; up to 8 enclosures Intermix of SFF and LFF enclosures is supported.

Drives	● LFF drives:
	  ○ 400 GB SAS SSD (hybrid tray - 2.5 in. drive in the 3.5-in. tray)
	  ○ 900 GB 10K rpm SAS HDD (hybrid tray)
	  ○ 2 TB, 4 TB, 6 TB, 8 TB, and 10 TB 7.2K rpm NL SAS HDDs
	
	● SFF drives:
	  ○ 400 GB, 800 GB, and 1.6 TB SAS SSDs
	  ○ 300 GB and 600 GB 15K rpm SAS HDDs
	  ○ 600 GB, 900 GB, 1.2 TB, and 1.8 TB 10K rpm SAS HDDs
	  ○ 1 TB and 2 TB 7.2K rpm NL SAS HDDs

Storage capacity	● With D3284: Up to 6.72 PB (672x 10 TB LFF NL SAS HDDs) ● With D1212: Up to 960 TB (96x 10 TB LFF NL SAS HDDs) ● With D1224: Up to 384 TB (192x 2 TB SFF NL SAS HDDs)
I/O expansion slots	Up to seven slots. The slots are as follows: ● Slot 1: PCIe 3.0 x16 (for the N2226, or a PCIe network adapter, or an FC HBA) ● Slot 3: ML2 (for an ML2 network adapter) ● Slot 4: PCIe 3.0 x8 (for a PCIe network adapter or FC HBA) ● Slot 5: PCIe 3.0 x8 (for a PCIe network adapter or FC HBA) ● Slot 6: PCIe 3.0 x16 (for the N2226, or a PCIe network adapter, or an FC HBA) ● Slot 8: PCIe 3.0 x8 (for a PCIe network adapter or FC HBA) ● Slot 9: PCIe 3.0 x8 (for the N2215)
Host connectivity	● Up to 8x 10 GbE SFP+ ports with up to 4x Intel X520 dual-port 10 GbE PCIe adapters ● Up to 8x 10 GbE RJ-45 ports with up to 4x Intel X540-T2 PCIe adapters ● Up to 12x 1 GbE RJ-45 ports with up to 4x Intel I350-T2 PCIe + 1x I350-T4 ML2 adapters ● Up to 8x 8 Gb or 16 Gb Fibre Channel ports with up to 4x Emulex or QLogic FC HBAs.
Storage protocols	Network File System (NFS) v3 and v4, Server Message Block (SMB) v2.1, iSCSI, optional Fibre Channel.
Software	Nexenta NexentaStor: RAID 10 and multi-parity software RAID (n+1, n+2, n+3), SSD and HDD hybrid pools, data integrity, multipathing, snapshots, thin provisioning, data compression and deduplication, and asynchronous replication.
Ports	● Front: 2x USB 2.0 and 1x DB-15 VGA. ● Rear: 2x USB 3.0, 1x DB-15 VGA, and 1x 10/100/1000 Mbps Ethernet (RJ-45) systems management.
Cooling	Calibrated Vectored Cooling with six redundant hot-swap fans.
Power supply	Up to two redundant hot-swap 750 W AC (100 - 240 V) High Efficiency Platinum AC power supplies.
Video	Matrox G200eR2 with 16 MB memory integrated into the IMM2.1. Maximum resolution is 1600x1200 at 75 Hz with 16 M colors.
Hot-swap parts	Drives, power supplies, and fans.

Components	Specification
Systems management	UEFI, Integrated Management Module II (IMM2.1) (Renesas SH7758) with Advanced Upgrade, Predictive Failure Analysis, light path diagnostics, Lenovo XClarity, Nexenta Management View.
Security features	Power-on password, administrator's password, Trusted Platform Module (TPM) 2.0-ready, Secure Sockets Layer (SSL), Secure Shell (SSH), LDAP user authentication.
Hardware warranty	Three-year customer-replaceable unit and onsite limited warranty with 9x5 next business day (NBD) parts delivery and remote technical support. Optional service upgrades are available: technician installed parts, 4-hour or 2-hour response time; 6-hour, 8-hour, or 24-hour committed repair; 1-year or 2-year warranty extension.
Software maintenance	Three-, four-, or five-year software license with support and subscription.
Dimensions	Height: 87 mm (3.4 in), width: 446 mm (17.5 in), depth: 800 mm (31.5 in)
Weight	Maximum configuration: 34 kg (75 lb)

Models

The Lenovo Storage DX8200N storage solution consists of one or two nodes connected to up to eight Lenovo Storage D1212, D1224, or D3284 external drive enclosures.

The following table lists the standard models of the Lenovo Storage DX8200N nodes. Custom factory-built models can also be used.

Product availability: The Lenovo Storage DX8200N is withdrawn and no longer available for ordering.

Note: Each model number represents one node. If clustering is required, a model must be ordered in a quantity of two.

Table 2. Lenovo Storage DX8200N standard models

Model number*	Intel Xeon processor	Memory	Storage controllers	Drives	NIC	I/O slots (available / total / max)	Power supply
5128C1x	2x E5-2643 v4	256 GB (16x 16 GB RDIMMs)	1x N2215 1x N2226	2x 1 TB 3.5" HS	2x 10 GbE 2x 1 GbE	1 / 5 / 7**	2x 750 W HS
5128C2x	2x E5-2643 v4	256 GB (16x 16 GB RDIMMs)	1x N2215 2x N2226	2x 1 TB 3.5" HS	2x 10 GbE 2x 1 GbE	2 / 7 / 7***	2x 750 W HS

* x in the Model number represents a region- or geo-specific letter (see the note below the table).
** One ML2 slot is available. Up to two additional PCIe slots are available with an optional Riser 2.
*** One ML2 slot and one PCIe 3.0 x8 slot are available.

Note: The following region- or geo-specific letters are used:

- A = Asia Pacific (US English documentation)
- M = Australia and New Zealand (US English documentation)
- C = China (Simplified Chinese documentation)
- G = Europe, Middle East, Africa (UK English documentation)
- B = Hong Kong (Traditional Chinese documentation)
- J = Japan (Japanese documentation)
- K = Korea (Korean documentation)
- U = North America, Latin America (US English documentation)
- V = Taiwan (Traditional Chinese documentation)

The Lenovo Storage DX8200N models ship with the following items:

- Documentation package
- Enterprise Slides Kit
- Enterprise 2U Cable Management Arm (CMA)
- Two 1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cables
- One 1.5 m Passive SFP+ DAC Cable
- One 1.5 m Cat5 Ethernet cable

Processors

The Lenovo Storage DX8200N ships with two Intel Xeon E5-2643 v4 processors. The processor specifications are listed in the following table.

Table 3. CPU specifications (HT = Hyper-Threading, TB = Turbo Boost, VT = Virtualization Technology)

Processor model	Core frequency (Base / TB Max)	Number of cores / threads	Cache	Max DDR4 frequency	QPI speed	TDP	HT	TB	VT-x	VT-d
E5-2643 v4	3.4 / 3.7 GHz	6 / 12	20 MB	2400 MHz	9.6 GT/s	135 W	Yes	Yes	Yes	Yes

Memory

The Lenovo Storage DX8200N supports Lenovo TruDDR4 memory. TruDDR memory is selected, tested and tuned to maximize performance and reliability, and it enables extended memory performance features to support memory speeds that exceed industry standards.

The appliance requires 256 GB of memory with support for up to 16 DIMMs with two processors (up to 8 DIMMs per processor). Each processor has four memory channels, and there are two DIMMs per channel.

Note: The appliance has 24 DIMM slots, however, it supports only up to 16 DIMMs.

The following memory protection technologies are supported:

- ECC
- Chipkill

Lenovo engineering tested and validated system designs that support memory speeds beyond Intel memory specifications, which provides benefits for workloads that require memory speed and density. Lenovo TruDDR4 memory is fully supported up to the rated speeds that are shown in the following table.

Table 4. Maximum memory speeds and capacities

DIMMs per channel	RDIMM	
	Memory bus speed	Capacity
1 DPC	2400 MHz	256 GB (8x 32 GB)
2 DPC	2400 MHz	256 GB (16x 16 GB)

The following table lists memory selection options available for the Lenovo Storage DX8200N factory-built custom models.

Note: 16 GB RDIMMs and 32 GB RDIMMs are mutually exclusive, that is, either 16x 16 GB or 8x 32 GB memory configurations are supported.

Table 5. Memory options

Description	Part number	Feature code	Quantity
RDIMMs - 2400 MHz			
16GB TruDDR4 Memory (2Rx4, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	46W0829	ATCA	16
32GB TruDDR4 Memory (2Rx4, 1.2V) PC4-19200 CL17 2400MHz LP RDIMM	46W0833	ATCB	8

Drive storage

The Lenovo Storage DX8200N ships with two 1TB 7.2K 12Gbps NL SAS 3.5" G2HS HDDs connected to the N2215 SAS HBA. These drives provide highly available bootable volume that contains the NexentaStor software preload.

The Lenovo Storage DX8200N nodes support one or two N2226 SAS HBAs that are used for connecting up to eight D1212, D1224, or D3284 JBOD drive enclosures (up to four enclosures per N2226) for data volumes. The following connectivity topologies are supported:

- Up to 4x D1212, D1224, or D3284 drive enclosures, or a combination of the enclosures connected to one or two DX8200N nodes by using dual redundant host-to-ESM connections:
  - Each node has two N2226 HBAs.
  - Each port on the first N2226 HBA in the first node is connected to the Port A on the first ESM in separate drive enclosures.
  - Each port on the first N2226 HBA in the second node is connected to the Port B on the first ESM in separate drive enclosures.
  - Each port on the second N2226 HBA in the first node is connected to the Port A on the second ESM in separate drive enclosures.
  - Each port on the second N2226 HBA in the second node is connected to the Port B on the second ESM in separate drive enclosures.
  - No daisy chaining of the enclosures is allowed.
- Up to 8x D1212, D1224, or D3284 drive enclosures, or a combination of the enclosures connected to one or two DX8200N nodes by using single host-to-ESM connections:
  - Each node has one (up to four drive enclsoures) or two (up to eight drive enclsoures) N2226 HBAs.
  - Each port on the N2226 HBAs in the first node is connected to the Port A on the first ESM in separate drive enclosures.
  - Each port on the N2226 HBAs in the second node is connected to the Port A on the second ESM in separate drive enclosures.
  - No daisy chaining of the enclosures is allowed.

Note: Each model of the Lenovo Storage DX8200N includes one or two N2226 HBAs.

The following figures show the connectivity topology for the two-node high availability cluster with single or dual redundant ESM connections to the D1212, D1224, or D3284 drive enclosures. With one node, only Port A on each ESM is used.
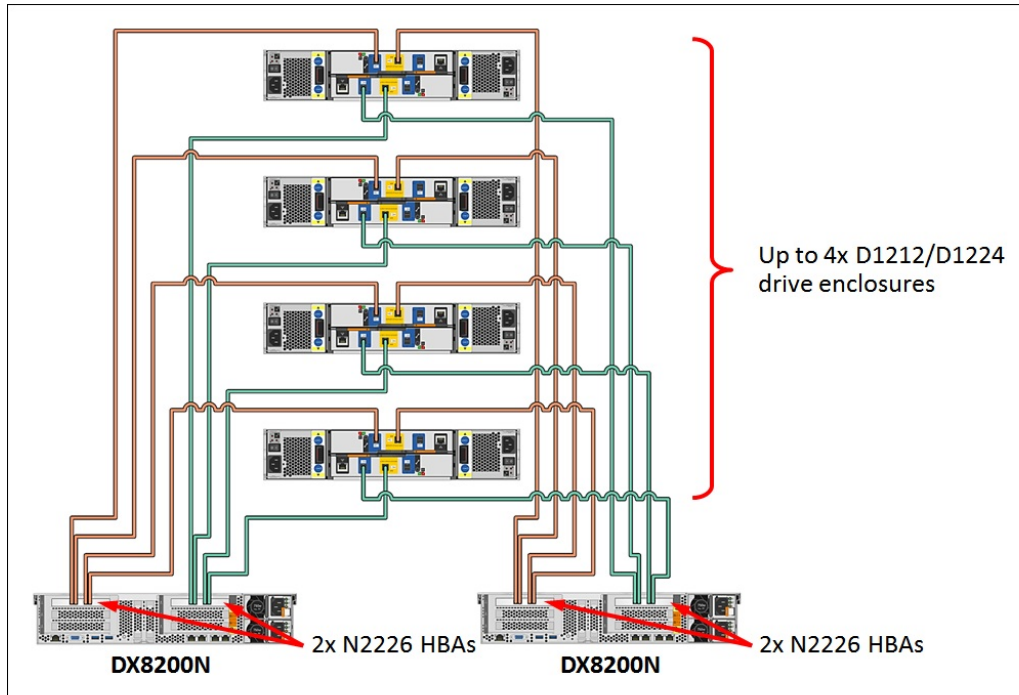
Figure 4. Lenovo Storage DX8200N: D1212 or D1224 dual redundant ESM connections
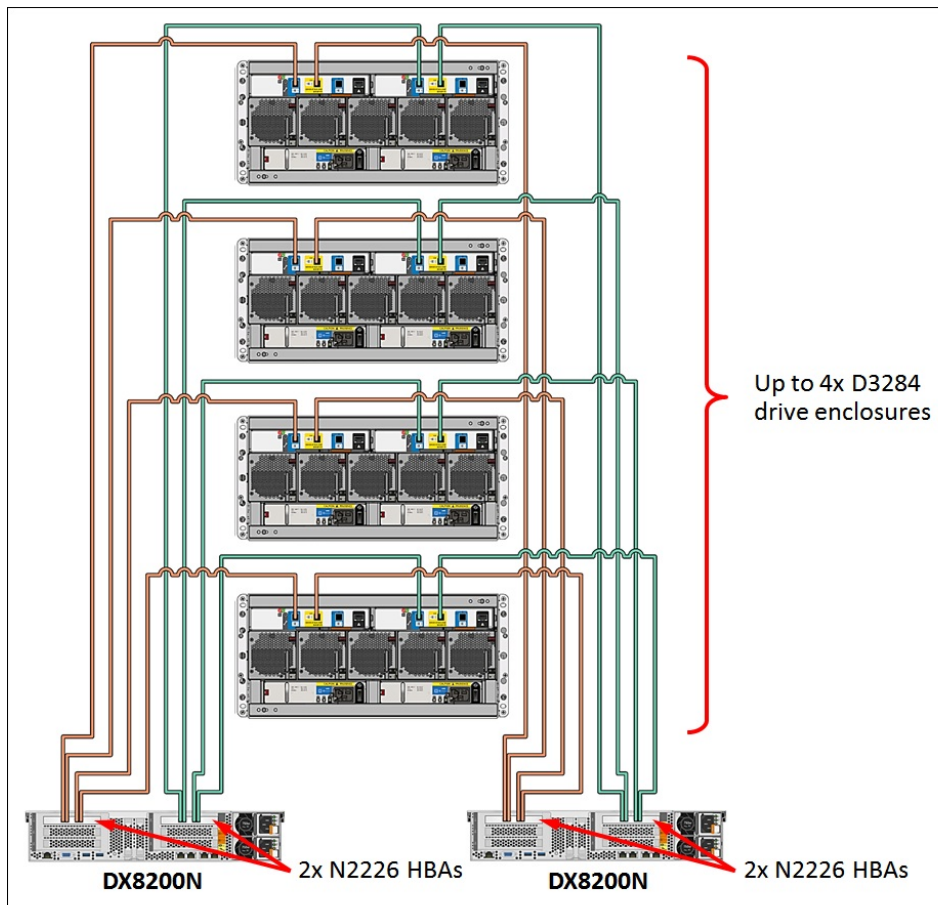

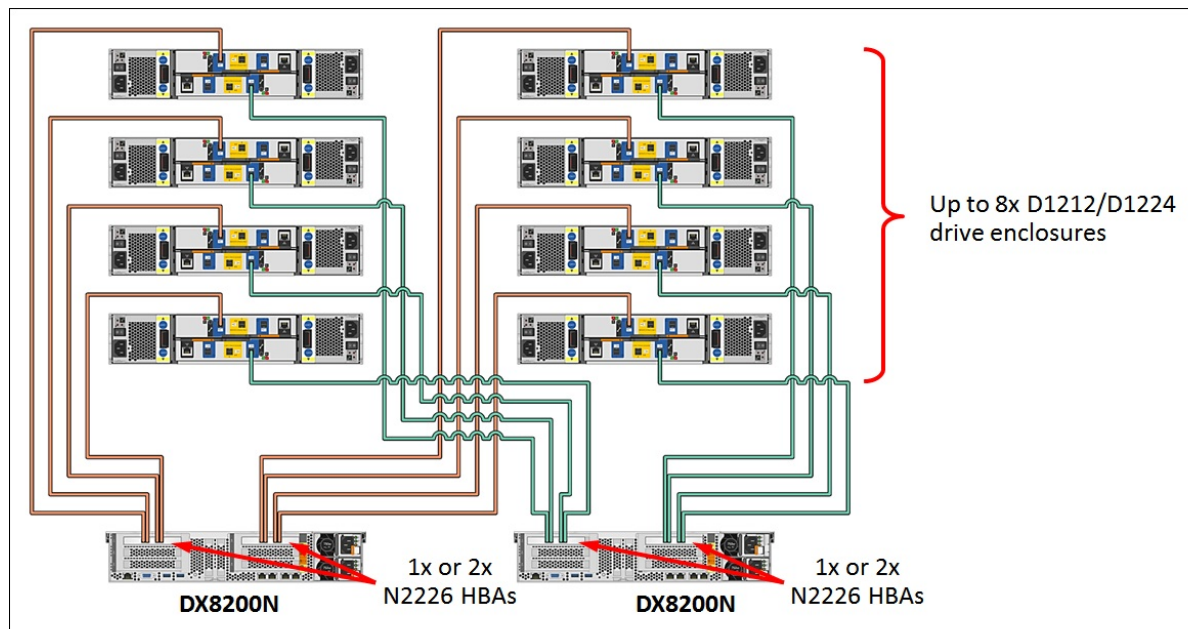Figure 5. Lenovo Storage DX8200N: D3284 dual redundant ESM connections

Figure 6. Lenovo Storage DX8200N: D1212 or D1224 single ESM connections
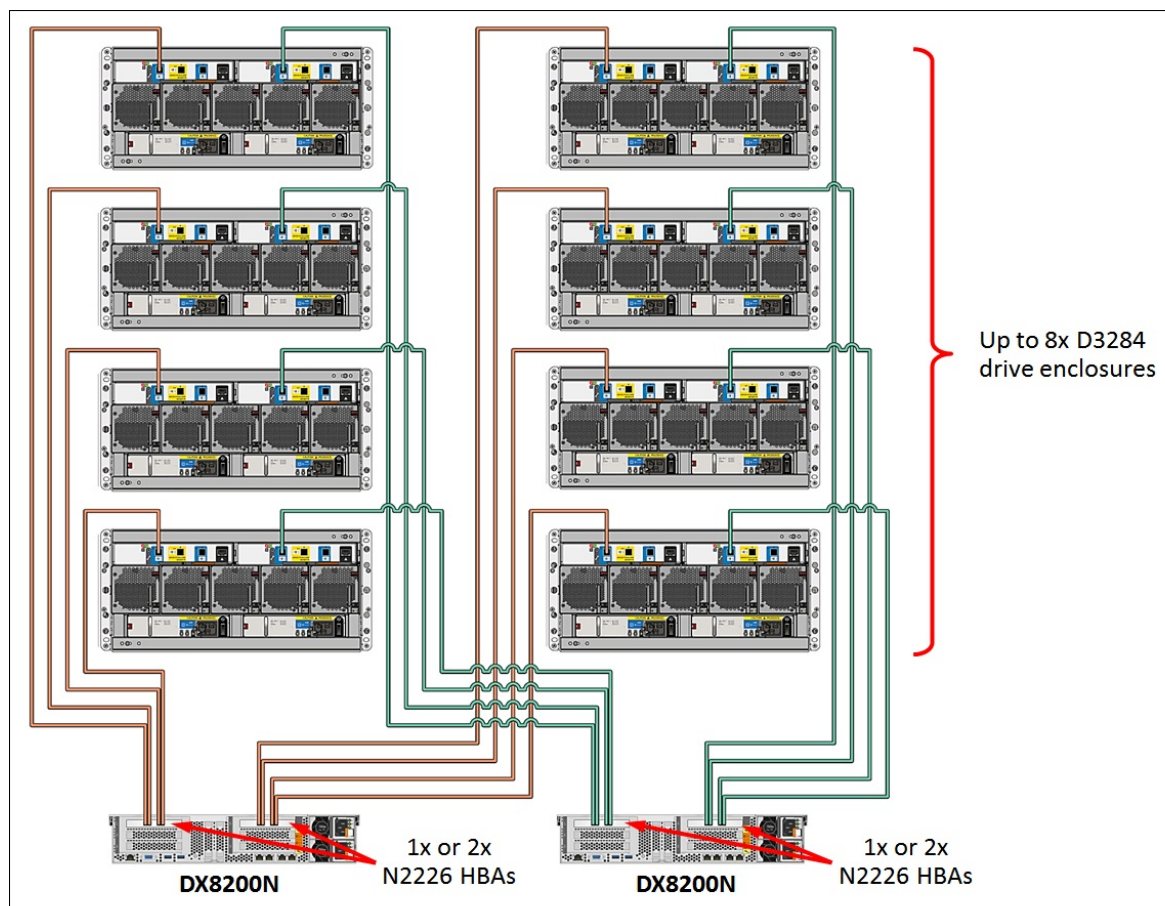

Figure 7. Lenovo Storage DX8200N: D3284 single ESM connections

Lenovo Storage D1212, D1224, or D3284 drive enclosures must be ordered for the Lenovo Storage DX8200N. For drive enclosure models and additional options for them, refer to the following Lenovo Press product guides:

- Lenovo Storage D1212 and D1224 Drive Enclosures
  http://lenovopress.com/lp0512
- Lenovo Storage D3284 External High Density Drive Expansion Enclosure
  http://lenovopress.com/lp0513

I/O expansion

The Lenovo Storage DX8200N supports Ethernet and Fibre Channel connectivity interfaces that are provided by the network adapters and FC HBAs installed in the I/O expansion slots.

The Lenovo Storage DX8200N supports up to seven I/O slots: one PCIe slot on the system planar that is dedicated for the N2215 internal SAS HBA, two regular PCIe slots on the system planar, and up to four PCIe slots with different riser cards installed into two riser sockets on the system planar (one riser socket supports installation of one riser card). Riser Card 1 supplies slots 1 and 3, and Riser Card 2 supplies slots 6 and 8. Slots 4, 5, and 9 are onboard slots on the system board.

The slots are as follows:

- Slot 1: PCIe 3.0 x16 (for the N2226, or a PCIe network adapter, or an FC HBA)
- Slot 3: ML2 (for an ML2 network adapter)
- Slot 4: PCIe 3.0 x8 (for a PCIe network adapter or FC HBA)
- Slot 5: PCIe 3.0 x8 (for a PCIe network adapter or FC HBA)
- Slot 6: PCIe 3.0 x16 (for the N2226, or a PCIe network adapter, or an FC HBA)
- Slot 8: PCIe 3.0 x8 (for a PCIe network adapter or FC HBA)
- Slot 9: PCIe 3.0 x8 (for the N2215)

The locations of the PCIe slots are shown in the following figure.
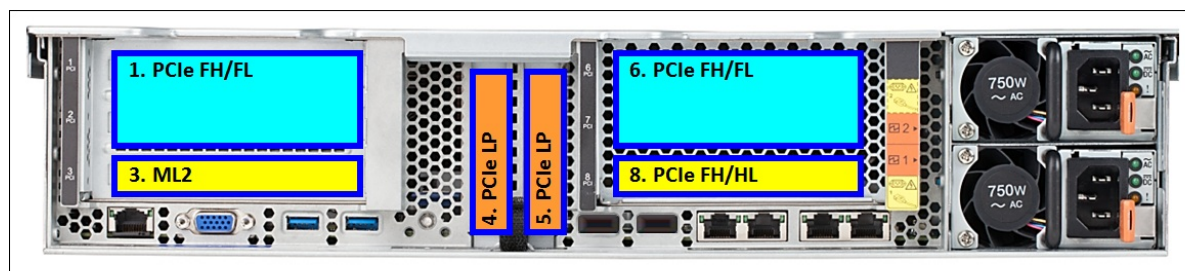
Figure 8. Slot locations

The following table lists available PCIe riser card selection options.

Table 6. PCIe riser card selection options

Description	Part number	Feature code	Maximum supported
Riser 1 option (Supplies slots 1 and 3)			
System x3650 M5 PCIe Riser 1 (1 x16 FH/FL + 1 x8 ML2 Slots)	00KA504	A5FR	1
Riser 2 option (Supplies slots 6 and 8)			
System x3650 M5 PCIe Riser (1 x16 FH/FL + 1 x8 FH/HL Slots)	00KA489	A5R5	1

Ethernet connectivity

The Lenovo Storage DX8200N supports 1 GbE and 10 GbE interfaces for NAS (NFS v3, NFS v4, CIFS, SMB 2.1) and iSCSI SAN host connectivity. With an optional software license, the Lenovo Storage DX8200N also supports 8 Gb or 16 Gb Fibre Channel host connectivity.

Note: Each DX8200N model listed in Models includes two 1 GbE RJ-45 ports provided by the Intel I350-T2 2xGbE BaseT Adapter and two 10 GbE SFP+ ports provided by the Intel X520 Dual Port 10GbE SFP+ Adapter.

The following table lists supported network adapters.

Table 7. Network adapters

Description	Part number	Feature code	Quantity (min / max)
10 Gb Ethernet - PCIe			
Intel X520 Dual Port 10GbE SFP+ Adapter	49Y7960	A2EC	0 / 4
Intel X540-T2 Dual Port 10GBaseT Adapter	49Y7970	A2ED	0 / 4
1 Gb Ethernet - ML2			
Intel I350-T4 ML2 Quad Port GbE Adapter	00D1998	A40R	0 / 1
1 Gb Ethernet - PCIe			
Intel I350-T2 2xGbE BaseT Adapter	00AG510	A56L	0 / 4

Configuration note: At least one 10 GbE PCIe adapter (X520 SFP+ or X540-T2 is required).

The 10 GbE SFP+ ports require SFP+ transceivers or direct-attach copper (DAC) cables that should be ordered together with the appliance (up to two SFP+ transceivers or DAC cables per dual-port SFP+ adapter). The following table lists supported SFP+ transceiver and cable options.

Note: The Lenovo Storage DX8200N ships with one 1.5 m SFP+ Passive DAC Cable (00AY764).

Table 8. SFP+ transceivers and cable options

Description	Part number	Feature code
SFP+ transceivers - 10 GbE		
Lenovo 10GBASE-SR SFP+ Transceiver	46C3447	5053
QLogic 10Gb SFP+ SR Optical Transceiver	49Y4218	0064
Optical cables for 10 GbE SFP+ SR transceivers		
Lenovo 0.5m LC-LC OM3 MMF Cable	00MN499	ASR5
Lenovo 1m LC-LC OM3 MMF Cable	00MN502	ASR6
Lenovo 3m LC-LC OM3 MMF Cable	00MN505	ASR7
Lenovo 5m LC-LC OM3 MMF Cable	00MN508	ASR8
Lenovo 10m LC-LC OM3 MMF Cable	00MN511	ASR9
Lenovo 15m LC-LC OM3 MMF Cable	00MN514	ASRA
Lenovo 25m LC-LC OM3 MMF Cable	00MN517	ASRB
Lenovo 30m LC-LC OM3 MMF Cable	00MN520	ASRC
SFP+ passive direct-attach cables - 10 GbE		
Lenovo 0.5m Passive SFP+ DAC Cable	00D6288	A3RG

Description	Part number	Feature code
Lenovo 1m Passive SFP+ DAC Cable	90Y9427	A1PH
Lenovo 1.5m Passive SFP+ DAC Cable	00AY764	A51N
Lenovo 2m Passive SFP+ DAC Cable	00AY765	A51P
Lenovo 3m Passive SFP+ DAC Cable	90Y9430	A1PJ
Lenovo 5m Passive SFP+ DAC Cable	90Y9433	A1PK
Lenovo 7m Passive SFP+ DAC Cable	00D6151	A3RH

Fibre Channel connectivity

With an optional software license, the Lenovo Storage DX8200N supports 8 Gb or 16 Gb Fibre Channel host connectivity. FC interfaces can be configured by selecting the FC HBAs options that are listed in the following table.

Table 9. Fibre Channel HBAs

Description	Part number	Feature code	Quantity (min / max)
16 Gb Fibre Channel - PCIe			
Emulex 16Gb FC Single-port HBA	81Y1655	A2W5	0 / 4
Emulex 16Gb FC Dual-port HBA	81Y1662	A2W6	0 / 4
QLogic 16Gb FC Single-port HBA	00Y3337	A3KW	0 / 4
QLogic 16Gb FC Dual-port HBA	00Y3341	A3KX	0 / 4
8 Gb Fibre Channel - PCIe			
Emulex 8Gb FC Single-port HBA	42D0485	3580	0 / 4
Emulex 8Gb FC Dual-port HBA	42D0494	3581	0 / 4
QLogic 8Gb FC Single-port HBA	42D0501	3578	0 / 4
QLogic 8Gb FC Dual-port HBA	42D0510	3579	0 / 4

Power supplies and cables

The Lenovo Storage DX8200N supports up to two redundant power supplies, and is capable of N+N redundancy. If a model comes with one power supply, the second power supply can be ordered as an option.

The following table lists the power supply options.

Table 10. Power supplies

Description	Part number	Feature code	Maximum supported
System x 750W High Efficiency Platinum AC Power Supply	00FK932	A5EU	2

The Lenovo Storage DX8200N models listed in Models ship with two 1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cables. A hot-swap power supply option comes with one 2.8m, 10A/100-250V, IEC 320-C13 to C14 rack power cable.

Line cords or rack power cables can be ordered with the Lenovo Storage DX8200N, if needed (see the following table).

Table 11. Power cables

Description	Part number	Feature code
Rack power cables		
1.5m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7937	6201
2.8m, 10A/100-250V, C13 to IEC 320-C20 Rack Power Cable	39Y7938	6204
4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	39Y7932	6263
Line cords		
Argentina 10A/250V C13 to IRAM 2073 2.8m line cord	39Y7930	6222
Australia/NZ 10A/250V C13 to AS/NZ 3112 2.8m line cord	39Y7924	6211
Brazil 10A/125V C13 to NBR 6147 2.8m line cord	39Y7929	6223
China 10A/250V C13 to GB 2099.1 2.8m line cord	39Y7928	6210
Denmark 10A/250V C13 to DK2-5a 2.8m line cord	39Y7918	6213
European 10A/230V C13 to CEE7-VII 2.8m line cord	39Y7917	6212
India 10A/250V C13 to IS 6538 2.8m line cord	39Y7927	6269
Israel 10A/250V C13 to SI 32 2.8m line cord	39Y7920	6218
Italy 10A/250V C13 to CEI 23-16 2.8m line cord	39Y7921	6217
Japan 12A/125V C13 to JIS C-8303 2.8m line cord	46M2593	A1RE
Korea 12A/250V C13 to KETI 2.8m line cord	39Y7925	6219
South Africa 10A/250V C13 to SABS 164 2.8m line cord	39Y7922	6214
Switzerland 10A/250V C13 to SEV 1011-S24507 2.8m line cord	39Y7919	6216
Taiwan 10A/250V C13 to CNS 10917-3 2.8m line cord	00CG265	6317
Taiwan 15A/125V C13 to CNS 10917-3 2.8m line cord	00CG267	6386
United Kingdom 10A/250V C13 to BS 1363/A 2.8m line cord	39Y7923	6215
United States 10A/125V C13 to NEMA 5-15P 4.3m line cord	39Y7931	6207
United States 10A/250V C13 to NEMA 6-15P 2.8m line cord	46M2592	A1RF

Software

The Lenovo Storage DX8200N runs preloaded NexentaStor software that offers the following features:

- Storage protocols
    - 1/10 GbE NFS v3, NFS v4
    - 1/10 GbE CIFS, SMB 2.1
    - 1/10 GbE iSCSI
    - 8/16 Gbps Fibre Channel (requires an optional software license)
- Data availability and integrity
    - Active/active nodes in a high availability pair (requires an optional software license)
    - ZFS powered end-to-end data integrity with block level checksums
    - RAID 10 and multi-parity software RAID (n+1, n+2, n+3)
    - Multipathing support
    - Ethernet link aggregation
    - Asynchronous replication

- Data services and optimization
  - Flash and HDD hybrid pools
  - ZFS Copy On Write
  - Unlimited writable snapshots
  - Thin provisioning
  - Inline data reduction (compression and deduplication)
- Management
  - Nexenta Management View (NMV) Web GUI
  - Nexenta Management Console (NMC) CLI
  - SNMP
  - REST API

The Lenovo Storage DX8200N requires base software licenses that must be purchased together with the appliances. The number of licenses required is based on the total storage capacity of the entire solution.

The following optional software licenses are available:

- NexentaStor HA Cluster Plug-in license (one per cluster) enables two-node high availability clustering. Two identically configured Lenovo Storage DX8200N nodes are required.

- NexentaStor Target FC Plug-in 2 Pack Plug-in license (one per cluster) enables Fibre Channel host connections to the Lenovo Storage DX8200N.

- NexentaStor MetroHA Cluster Plug-in license (one per cluster) enables synchronous mirroring over FC links between two Lenovo Storage DX8200N systems on distances up to 80 km.

The software license options are listed in the following table.

Table 12. NexentaStor software license options

Description	Part number
3-Year support and subscription licenses	
NexentaStor Gold - up to 8 TB of Storage with 3 Years S&S	00YC253
NexentaStor Gold - up to 16 TB of Storage with 3 Years S&S	00YC254
NexentaStor Gold - up to 32 TB of Storage with 3 Years S&S	00YC255
NexentaStor Gold - up to 64 TB of Storage with 3 Years S&S	00YC256
NexentaStor Gold - up to 128 TB of Storage with 3 Years S&S	00YC257
NexentaStor Gold - up to 256 TB of Storage with 3 Years S&S	00YC258
NexentaStor Gold - up to 512 TB of Storage with 3 Years S&S	00YC259
NexentaStor Gold - up to 1024 TB of Storage with 3 Years S&S	00YC260
NexentaStor HA Cluster Plug-in with 3 Years S&S	00YC261
NexentaStor Target FC Plug-in 2 Pack with 3 Years S&S	00YC262
NexentaStor MetroHA Cluster Plug-in with 3 Years S&S	00YC263
4-Year support and subscription licenses	
NexentaStor Gold - up to 8 TB of Storage with 4 Years S&S	00YC264
NexentaStor Gold - up to 16 TB of Storage with 4 Years S&S	00YC265
NexentaStor Gold - up to 32 TB of Storage with 4 Years S&S	00YC266
NexentaStor Gold - up to 64 TB of Storage with 4 Years S&S	00YC267
NexentaStor Gold - up to 128 TB of Storage with 4 Years S&S	00YC268
NexentaStor Gold - up to 256 TB of Storage with 4 Years S&S	00YC269
NexentaStor Gold - up to 512 TB of Storage with 4 Years S&S	00YC270

Description	Part number
NexentaStor Gold - up to 1024 TB of Storage with 4 Years S&S	00YC271
NexentaStor HA Cluster Plug-in with 4 Years S&S	00YC272
NexentaStor Target FC Plug-in 2 Pack with 4 Years S&S	00YC273
NexentaStor MetroHA Cluster Plug-in with 4 Years S&S	00YC274
5-Year support and subscription licenses	
NexentaStor Gold - up to 8 TB of Storage with 5 Years S&S	00YC275
NexentaStor Gold - up to 16 TB of Storage with 5 Years S&S	00YC276
NexentaStor Gold - up to 32 TB of Storage with 5 Years S&S	00YC277
NexentaStor Gold - up to 64 TB of Storage with 5 Years S&S	00YC278
NexentaStor Gold - up to 128 TB of Storage with 5 Years S&S	00YC279
NexentaStor Gold - up to 256 TB of Storage with 5 Years S&S	00YC280
NexentaStor Gold - up to 512 TB of Storage with 5 Years S&S	00YC281
NexentaStor Gold - up to 1024 TB of Storage with 5 Years S&S	00YC282
NexentaStor HA Cluster Plug-in with 5 Years S&S	00YC283
NexentaStor Target FC Plug-in 2 Pack with 5 Years S&S	00YC284
NexentaStor MetroHA Cluster Plug-in with 5 Years S&S	00YC285

Systems management

The Lenovo Storage DX8200N supports the following systems management tools:

- Integrated Management Module 2.1
- Light path diagnostics
- Lenovo XClarity
- Nexenta Management View
- Lenovo XClarity Energy Manager

Integrated Management Module 2.1

The Lenovo Storage DX8200N contains Integrated Management Module II (IMM2.1), which provides advanced service-processor control, monitoring, and an alerting function.

The Integrated Management Module Advanced Upgrade comes standard with the appliances, and it provides a virtual presence for remote management capabilities of the appliances.

The IMM provides remote appliance management through industry-standard interfaces:

- Intelligent Platform Management Interface (IPMI) Version 2.0
- Simple Network Management Protocol (SNMP) Version 3
- Common Information Model (CIM)
- Web browser

The remote presence feature provides the following functions:

- Remotely viewing video with graphics resolutions up to 1600x1200 at 75 Hz with up to 23 bits per pixel colors, regardless of the system state

- Remotely accessing the appliance using the keyboard and mouse from a remote client

- Mapping the CD or DVD drive, diskette drive, and USB flash drive on a remote client, and mapping ISO and diskette image files as virtual drives that are available for use by the appliance

- Uploading a diskette image to the IMM memory and mapping it to the appliance as a virtual drive

Light path diagnostics

The Lenovo Storage DX8200N includes basic light path diagnostics, which includes system LEDs on the front of the appliance and LEDs near the monitored components (for example, the DIMM error LED on the system board).

Lenovo XClarity

Lenovo XClarity is a centralized systems management solution that helps administrators deliver infrastructure faster. This solution integrates easily with Lenovo System x M5 and X6 rack servers, Lenovo Storage DX Series, Converged HX Series appliances, and Flex System, providing automated agent-less discovery, monitoring, firmware updates, configuration management, and bare metal deployment of operating systems and hypervisors across multiple systems.

Lenovo XClarity Administrator is an optional software component for the Lenovo Storage DX8200N which can be downloaded and used at no charge to discover and monitor Lenovo Storage DX Series and manage firmware upgrades for them.

If software support and subscription is required for Lenovo XClarity Administrator, Lenovo XClarity Pro software subscription must be ordered. Lenovo XClarity Pro is licensed on a per managed system basis, that is, each managed Lenovo Storage DX8200N node requires a license.

The following table lists the geo-specific Lenovo XClarity Pro software license options.

Table 13. Lenovo XClarity Pro software options

Description	Part number (NA, AP, Japan)*	Part number (EMEA, LA)**
Lenovo XClarity Pro, per Mngd Server w/1 Yr SW S&S	00MT201	00MT207
Lenovo XClarity Pro, per Mngd Server w/3 Yr SW S&S	00MT202	00MT208
Lenovo XClarity Pro, per Mngd Server w/5 Yr SW S&S	00MT203	00MT209

* NA = North America; AP = Asia Pacific
** EMEA = Europe, Middle East, Africa; LA = Latin America

Lenovo XClarity Administrator offers the following features:

- Auto-discovery and monitoring of Lenovo Storage DX Series
- Firmware updates and compliance enforcement
- External alerts and notifications via SNMP traps, syslog remote logging, and e-mail
- Secure connections to managed endpoints
- NIST 800-131A or FIPS 140-2 compliant cryptographic standards between the management solution and managed endpoints
- Integration into existing higher level management systems such as cloud automation and orchestration tools through REST APIs, providing extensive external visibility and control over hardware resources
- An intuitive, easy-to-use GUI
- Scripting support with Windows PowerShell, providing command-line visibility and control over hardware resources

Nexenta Management View

Nexenta Management View (NMV) is a graphical user interface that enables customers to manage NexentaStor in a user-friendly environment.

Using the NMV, NexentaStor administrators can perform the following tasks:

- Manage volumes
- Manage disks and JBODs
- Manage folders
- Manage users
- Manage storage targets
- Manage snapshots and checkpoints
- Manage background services
- Monitor performance
- Configure networking parameters
- Perform diagnostics and troubleshooting

Lenovo XClarity Energy Manager

Lenovo XClarity Energy Manager offers the following capabilities:

- Reports vital server information, such as power, temperature and resource utilization
- Monitors inlet temperature to locate hot spots, reducing the risk of data or device damage
- Provides finely-grained controls to limit platform power in compliance with IT policy
- Generates alerts when a user-defined threshold is reached

Lenovo XClarity Energy Manager is an optional, separately orderable software component for the Lenovo Storage DX8200N that is licensed on a per managed node basis; that is, each managed Lenovo Storage DX8200N appliance requires a license.

The following table lists the geo-specific Lenovo XClarity Energy Manager software license options.

Table 14. Lenovo XClarity Energy Manager software options

Description	Part number (NA, AP, Japan)*	Part number (EMEA, LA)**
Lenovo XClarity Energy Manager, 1 Node w/ 1 Yr S&S	01DA225	01DA228
Lenovo XClarity Energy Manager, 5 Nodes w/ 1 Yr S&S	01DA226	01DA229
Lenovo XClarity Energy Manager, 50 Nodes w/ 1 Yr S&S	01DA227	01DA230

* NA = North America; AP = Asia Pacific
** EMEA = Europe, Middle East, Africa; LA = Latin America

Physical specifications

The Lenovo Storage DX8200N has the following dimensions and weight (approximate):

- Height: 87 mm (3.4 in.)
- Width: 446 mm (17.5 in.)
- Depth: 800 mm (31.5 in.)
- Weight (maximum): 34 kg (75 lb)

Operating environment

The Lenovo Storage DX8200N is supported in the following environment:

- Air temperature:
  - System on: 5 °C to 40 °C (41 °F to 104 °F); altitude: 0 to 950 m (3,117 ft); decrease the maximum system temperature by 1 °C for every 175-m increase in altitude above 950 m.
  - System off: 5 °C to 45 °C (41 °F to 113 °F)
  - Shipment: -40 °C to +60 °C (-40 °F to 140 °F) at up to 10,700 m (35,105 ft)
- Maximum altitude: 3,050 m (10,000 ft) at 5 °C to 28 °C (41 °F to 82 °F)
- Humidity:
  - System on: 8% to 85%, maximum dew point 24 °C, maximum rate of change 5 °C/hr
  - System off: 8% to 85%, maximum dew point 27 °C
- Design to ASHRAE Class A3, ambient of 36 °C to 40 °C (96.8 °F to 104 °F), with relaxed support:
  - Supports cloud-like workload with no performance degradation acceptable (Turbo-Off).
  - Under no circumstance can any combination of worst-case workload and configuration result in system shutdown or design exposure at 40 °C.
  - The worst-case workload (like Linpack, Turbo-On) might have performance degradation.
- Electrical:
  - 100 to 127 (nominal) V AC; 50 Hz or 60 Hz; 8.6 A
  - 200 to 240 (nominal) V AC; 50 Hz or 60 Hz; 4.2 A
  - Input kilovolt-amperes (kVA) (approximately): 1.047 kVA
- BTU output (maximum): 3572 Btu/hr (1047 watts)
- Noise level:
  - 6.6 bels (operating)
  - 6.4 bels (idle)

Regulatory compliance

The Lenovo Storage DX8200N conforms to the following regulations:

- AS/NZS CISPR 22, Class A (Australia/New Zealand)
- BSMI CNS 13438, Class A; CNS 14336 (Taiwan)
- CCC GB 4943.1, GB 17625.1, GB 9254 Class A (China)
- CE Mark (European Union)
- CISPR 22, Class A
- EAC (Russia)
- EN 55022, Class A
- EN 55024
- EN/IEC 61000-3-2
- EN/IEC 61000-3-3
- EN/IEC/CSA/UL 60950-1
- Energy Star 2.0
- FCC Part 15, Class A (United States)
- GS/TUV (Germany)
- ICES-003/NMB-03, Class A (Canada)
- MSIP (Korea)
- NOM-019 (Mexico)
- Reduction of Hazardous Substances (ROHS)
- TUV S (Argentina)
- VCCI, Class A (Japan)

Hardware warranty

The Lenovo Storage DX8200N has a three-year customer-replaceable unit (CRU) and onsite (for field-replaceable units [FRUs] only) limited warranty with standard call center support during normal business hours, 9x5 Next Business Day replacement parts delivery, and Remote Technical Support (RTS) services. Also available are Lenovo Services warranty maintenance upgrades and post-warranty maintenance agreements, with a well-defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

The Lenovo local support centers perform problem determination and resolution for hardware-related issues and escalate to Nexenta, on behalf of the customer, for software-related problem determination. Nexenta will contact the customer and will own the software-related problem resolution until closure.

Lenovo warranty service upgrade offerings are region-specific. Not all warranty service upgrades are available in every region. For more information about Lenovo warranty service upgrade offerings that are available in your region, visit the Lenovo Quick Pick website:
http://lenovoquickpick.com

The following table explains warranty service definitions in more detail.

Table 15. Warranty service definitions

Term	Description
On-site service	A service technician will arrive at the customer's location for equipment service.
Parts delivered	A CRU will be delivered at the customer's location for replacement by the customer, or a service technician will arrive at the customer's location to replace a FRU.
Technician installed parts	A service technician will arrive at the customer's location to replace a CRU or FRU.
24x7x2 hour	A replacement part is scheduled for delivery or a service technician is scheduled to arrive at the customer's location within two hours after remote problem determination is completed. Lenovo provides service around the clock, every day, including Lenovo holidays.
24x7x4 hour	A replacement part is scheduled for delivery or a service technician is scheduled to arrive at the customer's location within four hours after remote problem determination is completed. Lenovo provides service around the clock, every day, including Lenovo holidays.
9x5x4 hour	A replacement part is scheduled for delivery or a service technician is scheduled to arrive at the customer's location within four business hours after remote problem determination is completed. Lenovo provides service 8:00 am - 5:00 pm in the customer's local time zone, Monday-Friday, excluding Lenovo holidays. For example, if a customer reports an incident at 3:00 pm on Friday, the technician will arrive by 10:00 am the following Monday.
9x5 next business day	A replacement part is scheduled for delivery or a service technician is scheduled to arrive at the customer's location on the business day after remote problem determination is completed. Lenovo provides service 8:00 am - 5:00 pm in the client's local time zone, Monday - Friday, excluding Lenovo holidays. Calls received after 4:00 pm local time require an extra business day for service dispatch. Next business day service is not guaranteed.
Committed Repair	Problems receive priority handling so that repairs are completed within the committed time of 6, 8, or 24 hours. Lenovo provides service 24 hours/day, every day, including Lenovo holidays.

The following Lenovo warranty service upgrades are available:

- Warranty and maintenance service upgrades:
    - Three, four, or five years of 9x5 or 24x7 service coverage
    - Parts delivered or technician installed parts from next business day to 4 or 2 hours
    - Committed repair service from 24 to 8 or 6 hours
    - Warranty extension of up to 5 years
    - Post warranty extensions

- Committed Repair Service (CSR)
  Committed Repair Services enhances the level of Warranty Service Upgrade or Post
  Warranty/Maintenance Service offering associated with the selected systems. Offerings vary and are
  available in select regions.

    - Priority handling to meet defined time frames to restore the failing machine to good working
      condition
    - Service performed 24 hours per day, 7 days per week, and within 6 hours, 8 hours, or 24
      hours

- YourDrive YourData
  Lenovo's YourDrive YourData service is a multi-drive retention offering that ensures your data is
  always under your control, regardless of the number of drives that are installed in your Lenovo
  server. In the unlikely event of a drive failure, you retain possession of your drive while Lenovo
  replaces the failed drive part. Your data stays safely on your premises, in your hands. The
  YourDrive YourData service can be purchased in convenient bundles with Lenovo warranty
  upgrades and extensions.

- Hardware Installation Services
  Lenovo experts can seamlessly manage the physical installation of your server, storage, or
  networking hardware. Working at a time convenient for you (business hours or off shift), the
  technician will unpack and inspect the systems on your site, install options, mount in a rack
  cabinet, connect to power and network, check and update firmware to the latest levels, verify
  operation, and dispose of the packaging, allowing your team to focus on other priorities. Your new
  systems will be configured and ready for your software installation.

Software maintenance

The Lenovo Storage DX8200N includes three-year, four-year, or five-year software support and
subscription (depending on the selected warranty service upgrade and software license) that entitles you to
submit service requests to troubleshoot NexentaStor software issues and receive code updates, including
fixes, patches, and new software releases.

The Lenovo local support centers perform problem determination and resolution for hardware-related issues
and escalate to Nexenta, on behalf of the customer, for software-related problem determination.
Nexenta will contact the customer and will own the software-related problem resolution until closure.

Software support that is provided by Nexenta for Lenovo Storage DX8200N appliances includes Gold 24x7
phone and web coverage with the following initial target response times (severity levels are determined by
Nexenta based on the impact on productivity):

- Severity 1 (Critical Service Outage: Data loss, system down): 4 hours
- Severity 2 (Degraded Service: Loss of any major functionality, no data loss): 4 hours
- Severity 3 (Non-Service Effecting: Service request, system alert): 6 hours
- Severity 4 (Informational Request or Comment: Feature requests, general questions): 8 hours

Ethernet LAN switches

The following table lists the Ethernet LAN switches that are offered by Lenovo that can be used in Lenovo Storage DX8200N solutions.

Table 16. Top-of-rack Ethernet switches

Description	Part number	Feature code
1 Gb Ethernet top-of-rack switches (Management and 1 GbE host port connectivity)		
Lenovo RackSwitch G7028 (Rear to Front)	7159BAX	AT09
Lenovo RackSwitch G7052 (Rear to Front)	7159CAX	AT0A
Lenovo RackSwitch G8052 (Rear to Front)	7159G52	ASY2
10 Gb Ethernet top-of-rack switches (10 GbE host port connectivity)		
Lenovo RackSwitch G8124E (Rear to Front)	7159BR6	AT0B
Lenovo RackSwitch G8272 (Rear to Front)	7159CRW	ASRD
Lenovo RackSwitch G8296 (Rear to Front)	7159GR6	ASVM
40 Gb Ethernet top-of-rack switches (40 GbE aggregation layer)		
Lenovo RackSwitch G8332 (Rear to Front)	7159BRX	ASY4

For more information, see the list of Product Guides in the Top-of-rack Switches category:
http://lenovopress.com/servers/options/switches

Fibre Channel SAN switches

The following table lists the Fibre Channel SAN switches that are offered by Lenovo that can be used with the Lenovo Storage DX8200N in FC SAN storage connectivity solutions.

Table 17. Fibre Channel SAN switches

Description	Part number	Feature code
8 Gb Fibre Channel		
Lenovo B300, 8 ports activated w/ 8Gb SWL SFPs, 1 PS, Rail Kit	3873AR3	ATSM
Lenovo B6505, 12 ports activated w/ 8Gb SWL SFPs, 1 PS, Rail Kit	3873AR4	ATSN
Lenovo B6510, 24 ports activated w/ 8Gb SWL SFPs, 2 PS, Rail Kit	3873BR2	ATSQ
16 Gb Fibre Channel		
Lenovo B6505, 12 ports activated w/ 16Gb SWL SFPs, 1 PS, Rail Kit	3873AR5	ATSP
Lenovo B6510, 24 ports activated w/ 16Gb SWL SFPs, 2 PS, Rail Kit	3873BR3	ATSR

For more information, see the list of Product Guides in the Rack SAN Switches category:
http://lenovopress.com/storage/switches/rack

Rack cabinets

The following table lists the rack cabinets that are offered by Lenovo that can be used in Lenovo Storage DX8200N solutions.

Table 18. Rack cabinets

Description	Part number	Feature code
25U S2 Standard Rack (1000 mm deep; 2 sidewall compartments)	93072RX	1042
25U Static S2 Standard Rack (1000 mm deep; 2 sidewall compartments)	93072PX	6690
42U S2 Standard Rack (1000 mm deep; 6 sidewall compartments)	93074RX	1043
42U 1100mm Enterprise V2 Dynamic Rack (6 sidewall compartments)	93634PX	A1RC
42U 1100mm Enterprise V2 Dynamic Expansion Rack (6 sidewall compartments)	93634EX	A1RD
42U 1200mm Deep Dynamic Rack (6 sidewall compartments)	93604PX	7649
42U 1200mm Deep Static Rack (6 sidewall compartments)	93614PX	7651
42U Enterprise Rack (1105 mm deep; 4 sidewall compartments)	93084PX	5621
42U Enterprise Expansion Rack (1105 mm deep; 4 sidewall compartments)	93084EX	5622

For more information, see the list of Product Guides in the Rack Cabinets category:
http://lenovopress.com/servers/options/racks

Power distribution units

The following table lists the power distribution units (PDUs) that are offered by Lenovo that can be used in Lenovo Storage DX8200N solutions.

Table 19. Power distribution units

Description	Part number	Feature code
0U Basic PDUs		
0U 36 C13/6 C19 24A/200-240V 1 Phase PDU with NEMA L6-30P line cord	00YJ776	ATZY
0U 36 C13/6 C19 32A/200-240V 1 Phase PDU with IEC60309 332P6 line cord	00YJ777	ATZZ
0U 21 C13/12 C19 32A/200-240V/346-415V 3 Phase PDU with IEC60309 532P6 cord	00YJ778	AU00
0U 21 C13/12 C19 48A/200-240V 3 Phase PDU with IEC60309 460P9 line cord	00YJ779	ATZX
Switched and Monitored PDUs		
0U 20 C13/4 C19 Switched and Monitored 24A/200-240V/1Ph PDU w/ NEMA L6-30P cord	00YJ781	AU03
0U 20 C13/4 C19 Switched / Monitored 32A/200-240V/1Ph PDU w/ IEC60309 332P6 cord	00YJ780	AU01
0U 18 C13/6 C19 Sw. / Mon. 32A/200-240/346-415V/3Ph PDU w/ IEC60309 532P6 cord	00YJ782	AU02
0U 12 C13/12 C19 Switched / Monitored 48A/200-240V/3Ph PDU w/ IEC60309 460P9 cord	00YJ783	AU04
1U 9 C19/3 C13 Switched and Monitored DPI PDU (without line cord)	46M4002	5896
1U 9 C19/3 C13 Switched and Monitored 60A 3Ph PDU with IEC 309 3P+Gnd cord	46M4003	5897
1U 12 C13 Switched and Monitored DPI PDU (without line cord)	46M4004	5894
1U 12 C13 Switched and Monitored 60A 3 Phase PDU with IEC 309 3P+Gnd line cord	46M4005	5895
Ultra Density Enterprise PDUs (9x IEC 320 C13 + 3x IEC 320 C19 outlets)		
Ultra Density Enterprise C19/C13 PDU Module (without line cord)	71762NX	6050
Ultra Density Enterprise C19/C13 PDU 60A/208V/3ph with IEC 309 3P+Gnd line cord	71763NU	6051

Description	Part number	Feature code
C13 Enterprise PDUs (12x IEC 320 C13 outlets)		
DPI C13 Enterprise PDU+ (without line cord)	39M2816	6030
DPI Single Phase C13 Enterprise PDU (without line cord)	39Y8941	6010
C19 Enterprise PDUs (6x IEC 320 C19 outlets)		
DPI Single Phase C19 Enterprise PDU (without line cord)	39Y8948	6060
DPI 60A 3 Phase C19 Enterprise PDU with IEC 309 3P+G (208 V) fixed line cord	39Y8923	6061
Front-end PDUs (3x IEC 320 C19 outlets)		
DPI 30amp/125V Front-end PDU with NEMA L5-30P line cord	39Y8938	6002
DPI 30amp/250V Front-end PDU with NEMA L6-30P line cord	39Y8939	6003
DPI 32amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8934	6005
DPI 60amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8940	6004
DPI 63amp/250V Front-end PDU with IEC 309 2P+Gnd line cord	39Y8935	6006
Universal PDUs (7x IEC 320 C13 outlets)		
DPI Universal 7 C13 PDU (with 2 m IEC 320-C19 to C20 rack power cord)	00YE443	5950
NEMA PDUs (6x NEMA 5-15R outlets)		
DPI 100-127V PDU with fixed NEMA L5-15P line cord	39Y8905	5900
Line cords for PDUs that ship without a line cord		
DPI 30a Line Cord (NEMA L6-30P)	40K9614	6500
DPI 32a Line Cord (IEC 309 P+N+G)	40K9612	6502
DPI 32a Line Cord (IEC 309 3P+N+G)	40K9611	6504
DPI 60a Cord (IEC 309 2P+G)	40K9615	6501
DPI 63a Cord (IEC 309 P+N+G)	40K9613	6503
DPI Australian/NZ 3112 Line Cord (32A)	40K9617	6505
DPI Korean 8305 Line Cord (30A)	40K9618	6506

For more information, see the list of Product Guides in the Power Distribution Units category:
http://lenovopress.com/servers/options/pdu

Uninterruptible power supply units

The following table lists the uninterruptible power supply (UPS) units that are offered by Lenovo that can be used in Lenovo Storage DX8200N solutions.

Table 20. Uninterruptible power supply units

Description	Part number	Feature code
RT1.5kVA 2U Rack or Tower UPS (100-125VAC)	55941AX	A53S
RT1.5kVA 2U Rack or Tower UPS (200-240VAC)	55941KX	A53T
RT2.2kVA 2U Rack or Tower UPS (100-125VAC)	55942AX	A53U
RT2.2kVA 2U Rack or Tower UPS (200-240VAC)	55942KX	A53V
RT3kVA 2U Rack or Tower UPS (100-125VAC)	55943AX	A53W
RT3kVA 2U Rack or Tower UPS (200-240VAC)	55943KX	A53X
RT5kVA 3U Rack or Tower UPS (200-240VAC)	55945KX	A540
RT6kVA 3U Rack or Tower UPS (200-240VAC)	55946KX	A541
RT8kVA 6U Rack or Tower UPS (200-240VAC)	55948KX	A543
RT11kVA 6U Rack or Tower UPS (200-240VAC)	55949KX	A544
RT8kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC)	55948PX	A546
RT11kVA 6U 3:1 Phase Rack or Tower UPS (380-415VAC)	55949PX	A547

For more information, see the list of Product Guides in the Uninterruptible Power Supply Units category:
http://lenovopress.com/servers/options/ups

Lenovo Financial Services

Lenovo Financial Services reinforces Lenovo's commitment to deliver pioneering products and services that are recognized for their quality, excellence, and trustworthiness. Lenovo Financial Services offers financing solutions and services that complement your technology solution anywhere in the world.

We are dedicated to delivering a positive finance experience for customers like you who want to maximize your purchase power by obtaining the technology you need today, protect against technology obsolescence, and preserve your capital for other uses.

We work with businesses, non-profit organizations, governments and educational institutions to finance their entire technology solution. We focus on making it easy to do business with us. Our highly experienced team of finance professionals operates in a work culture that emphasizes the importance of providing outstanding customer service. Our systems, processes and flexible policies support our goal of providing customers with a positive experience.

We finance your entire solution. Unlike others, we allow you to bundle everything you need from hardware and software to service contracts, installation costs, training fees, and sales tax. If you decide weeks or months later to add to your solution, we can consolidate everything into a single invoice.

Our Premier Client services provide large accounts with special handling services to ensure these complex transactions are serviced properly. As a premier client, you have a dedicated finance specialist who manages your account through its life, from first invoice through asset return or purchase. This specialist develops an in-depth understanding of your invoice and payment requirements. For you, this dedication provides a high-quality, easy, and positive financing experience.

For your region specific offers please ask your Lenovo sales representative or your technology provider about the use of Lenovo Financial Services. For more information, see the following Lenovo website:
http://www.lenovofs.com

Related publications and links

For more information, see these resources:

- Lenovo Storage DX8200N product page
  https://www3.lenovo.com/us/en/data-center/storage/software-defined-storage/Lenovo-Storage-DX8200N-powered-by-NexentaStor/p/77X2SHESH07

- Standalone Solution Configuration Tool:
  http://lesc.lenovo.com/ssct

- System x and Cluster Solutions Configurator (x-config)
  http://lesc.lenovo.com/products/hardware/configurator/worldwide/bhui/asit/

- Support Portal - Lenovo Storage DX8200N
  http://support.lenovo.com

Related product families

Product families related to this document are the following:

- Lenovo SAN Storage
- Software-Defined Storage

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