# Storage

Thanks to our storage portfolio growing relentlessly stronger, Lenovo offers a wide range of enterprise grade storage solutions that address the ever-growing needs of businesses, fit into existing budget and ensure data is ready when it is needed. The offering includes key features from storage tiering and thin provisioning to data encryption, all through a user-friendly interface.

# The Storage Portfolio at your fingertips



Take a 3D tour and get to know the broad portfolio. Visit <a href="https://www.lenovofiles.com/3dtours">www.lenovofiles.com/3dtours</a>



Lenovo ThinkSystem DS2200

## SAN

Shared storage delivering high performance access to critical data

### Lenovo ThinkSystem DS-Series

Lenovo developed the ThinkSystem DS-Series offering, all-flash & hybrid SAN arrays, to revolutionise storage economics – enterprise-class functionality at entry level price point.

Affordable. Industry leading in both price/performance and cost/GB without compromise.

**Intuitive.** Setup in less than 15 minutes, manage all storage arrays from common GUI, XClarity integrated hardware management.

Fast. More than 375K IOPS at less than 1 millisecond latency.



**ThinkSystem** 

Lenovo Models	Lenovo ThinkSystem DS2200	Lenovo ThinkSystem DS4200	Lenovo ThinkSystem DS6200
Form Factor/Height	2U	2U	2U
Drive Bays	12x 3.5"; 24x 2.5"	12x 3.5"; 24x 2.5"	24x 2.5"
Maximum Internal Storage	480TB (3.5"); 737.28TB (2.5")	1.2PB (3.5"); 737.28TB (2.5")	1.26PB (2.5" and 3.5")
Controllers	Dual (active/active)	Dual (active/active)	Dual (active/active)
Maximum Enclosures	1 node + 3 expansion units (2U12/2U24); mix-and-match expansion units in an array	1 node + 9 expansion units (2U12/2U24); mix-and-match expansion units in an array	1 node + 9 expansion units (2U12/2U24); mix-and-match expansion units in an array
Maximum Drives	96 (using 2.5" drives and 3 expansion units)	240 (using 2.5" drives and 9 expansion units)	240 (using 2.5" drives and 9 SFF expansion units)
Drive Types Supported	All drives 12Gb SAS: 7,200rpm, 10,000rpm, and 15,000 rpm HDDs; MLC SSDs; SED HDDs and SSDs	All drives 12Gb SAS: 7,200rpm, 10,000rpm, and 15,000rpm HDDs; MLC SSDs; SED HDDs and SSDs	All drives 12Gb SAS: 7,200rpm, 10,000rpm, and 15,000rpm HDDs; MLC SSDs; SED HDDs and SSDs
Host Ports	2-port SAS, 2-port FC, 2-port iSCSI; single connectivity	4-port SAS, 4-port FC, 4-port iSCSI, hybrid connectivity	4-port SAS, 4-port FC, 4-port iSCSI, hybrid connectivity (FC/iSCSI)
Performance	Up to 100,000 random-read IOPS; up to 3.5GBps read throughput; up to 3GBps write throughput	Up to 235,000 random-read IOPS; up to 7.0GBps read throughput; up to 5.5GBps write throughput	Up to 375,000 random-read IOPS; up to 7GBps read throughput; up to 5.5GBps write throughput
RAID Support	RAID 0, 1, 10, 5, 6	RAID 0, 1, 10, 5, 6	RAID 0, 1, 10, 5, 6
Fans and Power Supplies	Hot-swap/redundant	Hot-swap/redundant	Hot-swap/redundant
Total Dual Controller Memory	16GB	16GB	32GB
Max Volumes per System	1024 (up to 128TB each)	1024 (up to 128TB each)	1024 (up to 128TB each)
Energy Star Certified	Yes	Yes	Yes
Snapshots	Base 128; optional 512 or 1024	Base 128; optional 512 or 1024	Base 128; optional 512 or 1024
SSD Support/Read Caching	Included	Included	Included
Asynchronous Replication	Optional (iSCSI)	Optional (iSCSI)	Optional (iSCSI)
Intelligent Real-Time Tiering	Base HDD; optional HDD+SSD	Base HDD; optional HDD+SSD	Base HDD; optional HDD+SSD
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades

### Lenovo V Series

Lenovo V Series is a hybrid storage system designed with sophisticated capabilities, efficiency and flexibility through built-in thin provisioning and non-disruptive migration of data from existing storage. These enterprise-class SAN appliances provide excellent management for all types of data centres thanks to;

- Real-time compression
- Data virtualisation
- Hyper-Swap
- Extreme scalability

Lenovo Models	Lenovo Storage V3700 V2	Lenovo Storage V5030
Connectivity (Standard)	12Gb SAS 1Gb iSCSI	12Gb SAS 1Gb iSCSI
Connectivity (Optional)	16GbFC 12Gb SAS 1Gb iSCSI 10Gb iSCSI / FCoE	16Gb FC 12Gb SAS 10Gb iSCSI / FCoE
Cache (per controller)	16GB	32GB
Max. number of drives	240 drives (up to 9 expansions)	504 drives (up to 20 expansions)
Capacity (per clustered system)		Up to 1008 drives
Internal Virtualisation	Yes	Yes
Thin Prov.	Yes	Yes
Data Migration	Yes	Yes
FlashCopy	Yes	Yes
Remote Mirroring	Yes	Yes
Easy Tier	Yes	Yes
Encryption		Yes
System Clustering		Yes (2-way)
External Virtualisation		Yes
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades

Lenovo Models	Lenovo Storage V3700 V2 XP	Lenovo Storage V5030F
Connectivity (Standard)	12 Gb SAS 1 Gb iSCSI	10 Gb iSCSI
Connectivity (Optional)	16 Gb FC 12 Gb SAS 1 Gb iSCSI 10 Gb iSCSI / FCoE	16 Gb FC 12 Gb SAS 1 Gb iSCSI 10 Gb iSCSI
Cache (per controller)	32 Gb	64 GB
Max. number of drives	240 drives (up to 9 expansions)	504 drives (up to 20 expansions)
Capacity (per clustered system)		Up to 1008 drives
Internal Virtualisation	Yes	Yes
Thin Prov.	Yes	Yes
Data Migration	Yes	Yes
FlashCopy	Yes	Yes
Remote Mirroring	Yes	Yes
Easy Tier	Yes	Yes
Encryption		Yes
System Clustering		Yes
External Virtualisation		Yes
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades