

Lenovo Distributed Storage Solution for IBM Spectrum Scale

Take the complexity out of complex solutions



Solutions Made Simple

Deploying solutions for Technical Computing, high performance computing (HPC), Analytics and Cloud environments can place a significant burden on IT. The Lenovo Distributed Storage Solution for IBM® Spectrum Scale™ (DSS-G) fulfilled through

Lenovo Scalable Infrastructure (LeSI), leverages decades of experience to reduce the complexity of deployment with integrated, delivered and fully-supported solutions that match best-in-industry components with optimized solution design. With Lenovo DSS-G, clients can focus their efforts on maximizing business value, instead of consuming valuable resources to design, optimize, install and support the infrastructure required to meet business demands. DSS will be a family of solutions that address the high-performance technical computing storage needs of customers. DSS-G is the first in this family of products to come to market.

Great Combination

Lenovo DSS-G combines the performance of Lenovo servers and Lenovo disk enclosures with industry-leading Spectrum Scale software to offer a high-performance, scalable building-block approach to modern storage needs. Lenovo DSS-G allows organizations to start small and build via incremental additions, providing expanded capacity and bandwidth with each additional DSS-G building-block. Clients now have the ability to handle small to very large capacity storage workloads with high performance in HPC environments.

Optimized Design

The Lenovo DSS-G features industry-leading Lenovo servers with powerful Intel® Xeon® processors, Lenovo 12Gbps SAS storage enclosures and drives, software and networking components that allow for a wide choice of technology within an integrated, delivered solution. Each solution is tested and optimized for reliability,

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interoperability and maximum performance, so clients can quickly deploy the system and get to work achieving their business goals. With DSS-G, high storage density and I/O performance, you gain all the reliability, integration and interoperability of a high-capacity, Spectrum Scale-based storage architecture.

Clients are expanding the use of Technical Computing and HPC to solve complex problems with a need for high-capacity storage and low-latency data access with quick rebuild times in the event of disk failure. Clients are looking for a low per-terabyte price. As an integral part of the Lenovo Scalable Infrastructure (LeSI) portfolio, the Declustered RAID capability of the Lenovo DSS-G provides extreme data integrity, reliability and flexibility. The Declustered RAID technology of the Lenovo DSS-G delivers rebuild times up to 8x faster than previous controller based storage. These features let clients quickly put the system to work and increase productivity.

Lenovo DSS-G is built, tested, delivered and supported as part of an overall LeSI deployment. You receive single point-of-contact, solution-level support that includes components to

Lenovo DSS-G Features Include:

- Scalable building block approach to Technical Computing storage
- Configurations with two, four or six disk storage enclosures
- Powerful Intel® Xeon® processors
- Lenovo D3284 high-density storage enclosures with 84x 4, 6, 8 and 10TB NL SAS drives (3.5-inch form factor)
- Lenovo D1224 storage enclosures (2.5-inch form factor) with 24x SAS drives (300GB - 1.8TB) or SSDs (400GB - 3.8TB).
- Choice of 10GbE/25GbE/40GbE/100GbE, FDR /EDR InfiniBand, OmniPath 100 interconnects
- Declustered RAID for sustained, predictable performance and rapid rebuilds
- No hardware controllers—Disk management and RAID performed by the Spectrum Scale RAID feature
- Outstanding capacity and performance

Distributed Storage Solution Configurations for IBM Spectrum Scale



Distributed Storage Solution - Storage Capacity Examples

	Servers	JBODs	Disk Size	Disk Quantity	Raw Capacity (TB)	Raw Capacity Tebibyte (TiB)	Usable Capacity (2Parity, TB)	Usable Capacity (3Parity, TB)
DSS G220	2	2	4TB	166	664	604	531	465
DSS G220	2	2	6TB	166	996	906	797	697
DSS G220	2	2	8TB	166	1,328	1,208	1,062	930
DSS G220	2	2	10TB	166	1,660	1,510	1,328	1,162
DSS G240	2	4	4TB	334	1,336	1,215	1,069	935
DSS G240	2	4	6TB	334	2,004	1,823	1,603	1,403
DSS G240	2	4	8TB	334	2,672	2,430	2,138	1,870
DSS G240	2	4	10TB	334	3,340	3,038	2,672	2,338
DSS G260	2	6	4TB	502	2,008	1,826	1,606	1,406
DSS G260	2	6	6TB	502	3,012	2,739	2,410	2,108
DSS G260	2	6	8TB	502	4,016	3,653	3,213	2,811
DSS G260	2	6	10TB	502	5,020	4,566	4,016	3,514

Distributed Storage Solution - 3.5-inch Drives Support

Speed	Capacity	Interface	Format	Option P/N	FRU
7,200rpm	10TB	12Gb NL SAS	512E	00GT913	01CX798
	8TB	12Gb NL SAS	512E	00GT912	01CX797
	6TB	12Gb NL SAS	512E	00GT911	01CX796
	4TB	12Gb NL SAS	512E	00GT910	01CX795
3DWD	400GB	12Gb SAS	512E	01CX780	01CX799



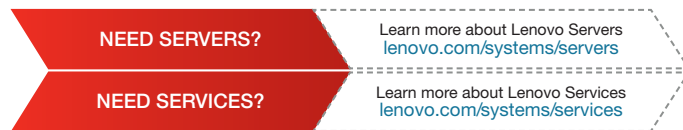
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Why Lenovo

Lenovo is a \$46 billion global Fortune 500 company and a leader in providing innovative consumer, commercial, and enterprise technology. Lenovo enterprise systems deliver industry-leading performance, reliability, and security in virtualized and cloud environments for analytics, database, virtual desktop, infrastructure, and web workloads. Lenovo also offers simplified and extensible systems management tools so you can manage your infrastructure on your own terms. Consistently ranked #1 in reliability and customer satisfaction, the Lenovo enterprise server, storage, and networking portfolio provides the hardware for businesses that never stand still.

For More Information

About Lenovo, the Lenovo Distributed Storage Solution for IBM Spectrum Scale, or to contact your Lenovo representative or Business Partner, visit: lenovo.com/systems/servers



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LYD12384-USEN-00