



New ThinkSystem DE6500 and DE6800 Storage Arrays

Article

Lenovo ThinkSystem DE6500 and DE6800 are industry-leading end-to-end NVMe Storage solutions designed to provide high performance, simplicity, capacity, security, and high availability for midrange to high-end block NVMe large segment.



Figure 1. Lenovo ThinkSystem DE6500 Storage Array

The DE6500 and DE6800 deliver enterprise-class storage management capabilities in performance-optimized systems with a wide choice of host connectivity options, flexible drive configurations, and enhanced data management features.

- The DE6500 is a perfect fit as a primary growth platform for a wide range of entry enterprise workloads, including database and analytics, backup and recovery, general SMB, low latency, video surveillance, technical computing, and other storage I/O-intensive applications.
- The DE6800 delivers superior price for performance for enterprise applications. Target markets include Artificial Intelligence, Big Data Analysts, Oracle/SQL databases, high-performance computing (HPC) and real-time analytics.



Figure 2. Lenovo ThinkSystem DE6800 Storage Array

DE6500 and DE6800 models have a 2U rack design with 24 small form-factor (2.5-inch SFF) NVMe drives and two controllers:

- Each DE6500 controller has 32 GB of memory for a system total of 64 GB. Host interface cards provide 64Gb FC, 10/25Gb GbE, and 100GbE for host connections and 12Gb SAS expansions.

- Each DE6800 controller has 64 GB of memory for a system total of 128 GB. Host interface cards provide 64Gb FC, 100GbE, and 200GbE for host connections and 12Gb SAS expansions.

Specifications comparison

The following table shows the key specifications of the DE6500 and DE6800 storage arrays.

Table 1. Specifications (bolding indicates differences)

	DE6500	DE6800
Form Factor (Controller Enclosure)	2U24 (NVMe)	2U24 (NVMe)
Maximum Raw Capacity	7.2PB	7.2PB
Maximum Drives	• 24 NVMe SSDs (TLC, QLC, or mix) • 96 SAS SSDs • 240 HDDs	• 24 NVMe SSDs (TLC, QLC, or mix) • 96 SAS SSDs • 240 HDDs
Maximum Expansion	• 2U12: Up to 8 expansions • 2U24, 4U60: Up to 4 expansions	• 2U12: Up to 8 expansions • 2U24: Up to 4 expansions • 4U60: Up to 7 expansions
IOPS	1,700,000 IOPS	5,000,000 IOPS
Sustained Throughput	Up to 41GBps	Up to 110GBps
System Memory	64GB	128GB
Optional I/O Ports (per system)	• 8x 100Gb NVMe RoCE • 16x 32Gb/64Gb FC • 16x 10/25Gb iSCSI	• 12x 200Gb NVMe IB/RoCE/TCP • 12x 100GbE RoCE • 24x 32Gb/64Gb FC
Max hosts per partition	512 hosts	1024 hosts
Max volumes per partition	256 volumes	256 volumes
Max volume size	4PB volume size	4PB volume size
Max volumes per storage array	1024 volumes	2048 volumes
Max total disk pool capacity per storage array	12PB disk pool capacity	12PB disk pool capacity
Max disk pools per storage array	20 disk pools*	20 disk pools*
Max drives per volume group	24 drives	24 drives
Max volumes per RAID volume group	256 volumes	256 volumes

* Array limit. Dynamic Disk Pools (DDP) requires a minimum of 11 drives, and the ThinkSystem DE6800 only supports up to 24 drives. There is a physical limitation of only two DDPs. Mixed drive configurations require a minimum of 12 QLC & 2 TLC. TLC and QLC deployed in separate DDP pools/volume groups.

Learn more

To learn more about these new storage arrays, see the following resources:

- Lenovo ThinkSystem DE6500
 - [Product Guide](#)
 - [Datasheet](#)
 - [Product web page](#)
- Lenovo ThinkSystem DE6800
 - [Product Guide](#)
 - [Datasheet](#)
 - [Product web page](#)

Related product families

Product families related to this document are the following:

- [DE Series Storage](#)

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