ThinkSystem DE Series

High-performance, scalable, and reliable enterprise-class storage



The challenge

Organizations depend on data-driven applications to accelerate innovation, improve customer experience, and maintain a competitive edge. As data volumes grow and workloads become more performance-sensitive, IT teams must keep critical applications responsive and available while operating within constrained budgets, space, power, and staffing.

They need storage that delivers predictable performance and availability, scales cost-effectively as requirements evolve, and simplifies day-to-day operations without adding infrastructure complexity.

The Solution

Lenovo ThinkSystem DE Series storage delivers the performance, availability, and efficiency organizations need to accelerate business outcomes from their most demanding data-driven applications.

From high-performance NVMe all-flash systems to cost-efficient SAS hybrid systems, the ThinkSystem DE Series is designed to support everything from high-performance databases and virtualization to analytics, AI, HPC, and bandwidth-intensive streaming workloads, while ensuring enterprise-class reliability with exceptional value.

Key Features and Benefits

- **Performance for critical workloads**. Deliver high IOPS, low latency, and extreme throughput to keep databases, analytics, AI, HPC, and virtualized environments responsive.
- **Predictable responsiveness under pressure**. Maintain consistent performance across demanding and mixed workloads, helping users and applications remain productive as utilization grows.
- **Flexible flash architecture for the right economics**. Choose all-flash or hybrid flash configurations that balance performance, capacity, and cost—supporting both latency-sensitive applications and high-capacity, data-intensive workloads.
- **Availability and data protection for business continuity**. Designed for high availability, with built-in reliability and data-integrity features that help keep critical data accessible and operations running.
- **Scale without disruption**. Expand storage capacity and performance as requirements evolve, helping organizations accommodate growth while avoiding unnecessary downtime or infrastructure replacement.
- **Simpler, more efficient storage operations**. Intuitive management tools and efficient use of rack space and power help streamline administration, optimize infrastructure utilization, and improve overall storage economics.

Available in both all-flash and hybrid flash configurations, ThinkSystem DE Series systems provide predictable performance, simplified management, and scalable capacity to help organizations extract greater value from their data while optimizing infrastructure investments. With purpose-built architecture engineered for consistent low latency and high availability, the ThinkSystem DE Series enables businesses to confidently run mission-critical workloads without compromise.

Protect Critical Data and Maintain Availability

The Lenovo ThinkSystem DE Series is engineered to protect business-critical data with a comprehensive set of security, availability, and data protection capabilities. Designed for organizations that require nonstop access to their applications and data, the ThinkSystem DE Series combines enterprise-class resilience with advanced security controls to help reduce risk, minimize downtime, and simplify administration. From protecting against drive failures to securing management access, the ThinkSystem DE Series helps ensure data remains available, protected, and accessible only to authorized users.

Key Security and Data Protection Features

- **Resilient drive-level data protection**. Dynamic Disk Pools (DDP) distribute data and spare capacity across drives to improve fault tolerance and accelerate rebuilds, helping reduce risk and restore protection more quickly after a drive failure.
- **Centralized, role-based access control**. User-level credentials, Role-Based Access Control (RBAC), and LDAP authentication help organizations centralize identity management, enforce least-privilege access, and apply consistent security policies.
- **Built-in hardware redundancy**. Redundant controllers, power supplies, and cooling components help eliminate single points of failure and support continuous access to critical applications and data.
- **Faster recovery and stronger continuity**. Snapshot and replication capabilities help protect data, accelerate recovery, and support business continuity and disaster recovery plans —reducing the potential business impact of outages or data loss.
- **Encrypted management and service access**. Secure Sockets Layer (SSL) and Secure Shell (SSH) encrypt administrative and authorized service communications to help prevent interception and unauthorized access.

Together, these capabilities make the Lenovo ThinkSystem DE Series a highly secure and resilient storage platform that helps organizations safeguard critical data, maintain continuous operations, and confidently support demanding business applications.

Simplified Monitoring and Management

ThinkSystem Intelligent Monitoring is a comprehensive, cloud-based digital advisor that simplifies managing and monitoring of performance, capacity, and health in Lenovo ThinkSystem DE, DG, DM, and DS Series systems through features like events, alerts, performance troubleshooting, capacity reporting, and more.

Like any good advisor, ThinkSystem Intelligent Monitoring keeps you informed and highly efficient. It provides constant visibility into the health of your environment, lets you know when attention is required, and gives you clear guidance for any actions. ThinkSystem Intelligent Monitoring alerts, insights, and guidance are available in the web UI for full-featured visibility into system health, best next actions, upgrades, and more.

XClarity One: AI-driven Intelligence

Lenovo XClarity One is a cloud-native unified Management-as-a-Service (MaaS) platform, engineered to modernize IT infrastructure. XClarity One is the next milestone in Lenovo's portfolio of systems management products. Now you can leverage the benefits of a true next-generation platform for the deployment, management, and maintenance of your infrastructure through a single, centralized platform that delivers consistent user experience across all Lenovo products.

Specifications

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

**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.*

Specifications

	DE6600F	DE6600H	DE6400F	DE6400H
Form Factor (Controller Enclosure)	2U24 (NVMe)	2U24 (NVMe)	2U24 (NVMe)	2U24 (NVMe)
Maximum Raw Capacity (PB)	1.84PB	7.92PB	1.84PB	4.68PB
Maximum Drives	120 (24 NVMe + 96 SAS SSD)	444 (24 NVMe in Controller Enclosure + 420 NL-SAS HDDs)	120 (24 NVMe + 96 SAS SSD)	264 (24 NVMe in Controller Enclosure + 240 NL-SAS HDDs)
Maximum Expansion	2U24: Up to 4 expansions	2U12, 2U24, 4U60: Up to 7 expansions	2U24: Up to 4 expansions	2U12, 2U24, 4U60: Up to 4 expansions
IOPS	2,000,000 IOPS	2,000,000 IOPS	670,000 IOPS	670,000 IOPS
Sustained Throughput (GBps)	Up to 44GBps	Up to 44GBps	Up to 20GBps	Up to 20GBps
System Memory (GB)	64GB/256GB	64GB/256GB	32GB	32GB
Optional I/O Ports (per system)	4x 200Gb NVMe/IB, NVMe/RoCe, SRP/IB and iSER/IB 8x 100Gb NVMe/IB, NVMe/RoCe 8x 100Gb iSER/IB, SRP/IB 16x 32Gb NVMe/FC 16x 32Gb SCSI FC 16x 25Gb iSCSI	8x 100Gb NVMe/IB, NVMe/RoCe, SRP/IB and iSER/IB 16x 32Gb FC (supports FC SCSI and NVMe/FC) 16x 25Gb iSCSI	4x 100Gb NVMe/IB, NVMe/RoCE 4x 100Gb iSER/IB, SRP/IB 8x 32Gb NVMe/FC 8x 32Gb SCSI FC 8x 25Gb iSCSI	4x 100Gb NVMe/IB, NVMe/RoCe, SRP/IB and iSER/IB 8x 32Gb FC (supports FC SCSI and NVMe/FC) 8x 25Gb iSCSI
System Maximums	Max Hosts: 1024 Max Partitions: 512 Volumes: 2,048 Max DDP volume size: 2PiB Max RAID volume size: 30 drives Snapshot copies: 2,048	Max Hosts: 1024 Max Partitions: 512 Volumes: 2,048 Max DDP volume size: 2PiB Max RAID volume size: 30 drives Snapshot copies: 2,048	Max Hosts: 512 Max Partitions: 256 Volumes: 1,024 Max DDP volume size: 2PiB Max RAID volume size: 30 drives Snapshot copies: 1,024	Max Hosts: 512 Max Partitions: 256 Volumes: 1,024 Max DDP volume size: 2PiB Max RAID volume size: 30 drives Snapshot copies: 1,024

Specifications

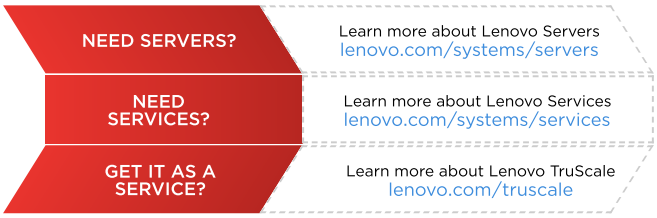
	DE4800F	DE4800H	DE4200H
Form Factor (Controller Enclosure)	2U24 (SAS)	2U12 (SAS) 2U24 (SAS) 4U60 (SAS)	2U12 (SAS) 2U24 (SAS)
Maximum Raw Capacity (PB)	1.84PB	7.2PB	2.1PB
Maximum Drives	120 SSDs	300 HDDs/120 SSDs	96 HDDs/24 SSDs
Maximum Expansion	2U24: Up to 4 expansions	2U12, 2U24: Up to 7 expansions 4U60: Up to 4 expansions	2U12, 2U24: Up to 3 expansions
IOPS	900,000 IOPS	900,000 IOPS	300,000 IOPS
Sustained Throughput (GBps)	Up to 12GBps	Up to 12GBps	Up to 4.8GBps
System Memory (GB)	128GB	64GB/128GB	64GB
Base ports	4x 10/25G iSCSI	4x 10/25G iSCSI	4x 10/25G iSCSI
Optional I/O Ports (per system)	8x 12Gb SAS 8x 1/10Gb iSCSI RJ-45 8x 16Gb/32Gb FC 8x 10/25Gb	8x 12Gb SAS 8x 1/10Gb iSCSI RJ-45 8x 16Gb/32Gb FC 8x 10/25Gb	8x 12Gb SAS 8x 1/10Gb iSCSI RJ-45 8x 16Gb/32Gb FC 8x 10/25Gb
System Maximums	Hosts/Partitions: 256 Volumes: 512 Max DDP Capacity per System: 12PB Max DDP Volume Size: 4PB Max RAID Volume Size: 4PB Snapshot Copies: 512 Async Mirror Pairs: 32	Hosts/Partitions: 256 Volumes: 512 Max DDP Capacity per System: 12PB Max DDP Volume Size: 4PB Max RAID Volume Size: 4PB Snapshot Copies: 512 Async Mirror Pairs: 32	Hosts/Partitions: 256 Volumes: 512 Max DDP Capacity per System: 12PB Max DDP Volume Size: 4PB Max RAID Volume Size: 4PB Snapshot Copies: 512 Async Mirror Pairs: 32

About Lenovo

Lenovo is a US$83 billion revenue global technology powerhouse, ranked #153 in the Fortune Global 500, and serving millions of customers every day in 180 markets. Guided by its **vision** of "Smarter Technology for All", Lenovo is executing a **Hybrid AI strategy** that spans Personal AI – one personal AI, multiple devices; and Enterprise AI – helping customers turn data into insights and value. This strategy is delivered through the Group's commitment to **world-class innovation** and a full-stack AI portfolio, including devices, infrastructure solutions, software, and services. Lenovo is widely recognized for its **operational excellence**, with a global footprint spanning more than 20 R&D locations and a supply chain that includes more than 30 manufacturing sites across 10 markets.

For More Information

To learn more about the ThinkSystem DE Series, contact your Lenovo representative or Business Partner or visit lenovo.com/storage.



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