LENOVO FOR THE DATA CENTER

PORTFOLIO GUIDE

Lenovo
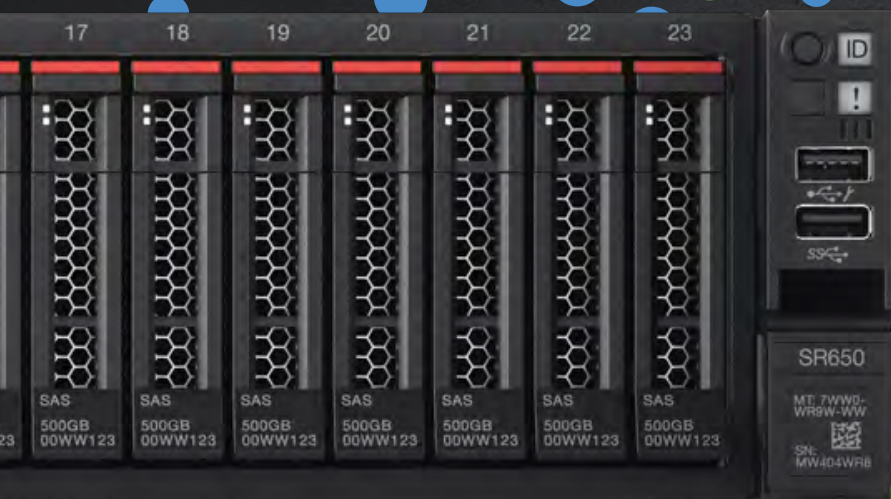
ThinkSystem

ThinkAgile

Intel® Xeon® processor Scalable family

ENABLING THE FUTURE-DEFINED DATA CENTER

By providing the strongest foundation of performance, reliability and security in the industry, Lenovo delivers an end-to-end portfolio of compute, storage and networking capabilities that seamlessly integrate and inter-operate with any environment. To accelerate deployment and reduce time-to-value, Lenovo offers a suite of pre-tested and pre-engineered solutions, ready-to-deploy clients' workloads. Every phase of the IT life cycle is taken care of by Lenovo Services, which help clients deliver the most from their technology investment.

• **Most reliable:** Lenovo servers ranked No.1 in uptime of any x86 systems for the past 5.5 years running, according to 2017-2018 ITIC reliability survey. [1]

• **Most secure:** Lenovo provides the best and most airtight platform security with our Trusted Platform Assurance. Even after adding options at additional cost, our competitors offer fewer security capabilities than come standard on Lenovo ThinkSystem.[2]

• **Highest satisfaction:** We currently rank first in 18 of 22 categories including performance, efficiency and support in TBR's Corporate IT Buying & Customer Satisfaction Study reports. Lenovo lists as top x86 vendor in customer satisfaction rating for the 10th consecutive study going back to January 2015. [3]

• **Strategic Relationships:** Unlike our major competitors, Lenovo does not have a proprietary software business and remains more open for industry leading partnerships. Because of this, Lenovo's customers can benefit from an open standards strategy that allows them to grow and change their IT systems as needed.

With our ever-growing portfolio, powered by the Intel® Xeon® processor Scalable family, with open, modular technologies designed to adapt easily and scale quickly, Lenovo's clients can excel and accelerate into the future.

ThinkSystem

ThinkSystem: Server, storage and networking solutions that deliver the industry's best combination of performance, flexibility, and reliability.

ThinkAgile

ThinkAgile: Next generation IT software-defined infrastructure that's easier to deploy and manage, and reduces costs and complexity.

Intel® Xeon® processor
Scalable family

Find out more

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DATA CENTER INFRASTRUCTURE

By providing the strongest foundation of performance, reliability and security in the industry, Lenovo delivers an end-to-end portfolio of compute, storage and networking capabilities that seamlessly integrate and inter-operate with any environment. Thanks to Lenovo Services expertise offered across every phase of the IT life cycle, we can help clients deliver the most out of their technology investment.

RACK & TOWER SERVERS

Flexible for even the most demanding workloads

Driving new levels of storage density and connectivity, Lenovo ThinkSystem servers powered by Intel® Xeon® Scalable processor family are the ideal platform to host private and public cloud, virtualization, VDI, web serving, analytics and big data solutions.

Purpose-built for availability.
Consistently ranking #1 in ITIC's reliability survey and equipped with predictive failure alerts.

Tools based on open standards for the real world.
Easy-to-use products with common parts across the portfolio to leverage open standards for bare metal deployments and firmware updates.
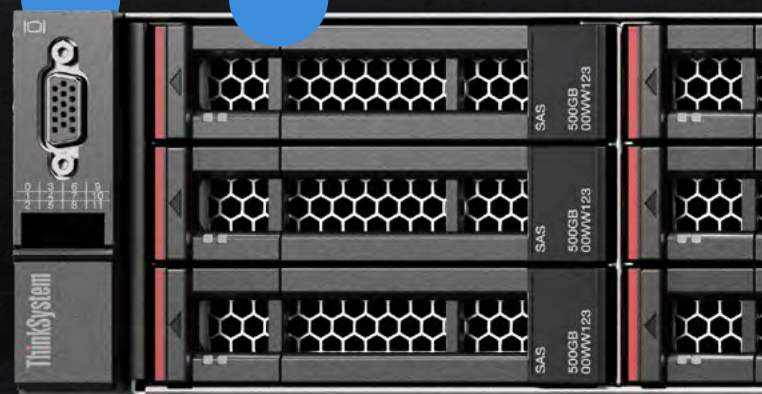
Trust Lenovo to be your expert.
Single point of contact for hardware, firmware and software support.

ThinkSystem SR550

ThinkSystem

Lenovo

Intel® Xeon® processor Scalable family

RACK SERVERS

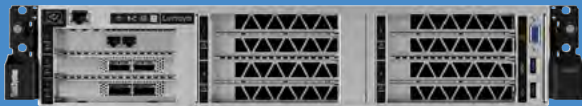| Lenovo Models	ThinkSystem SR630	ThinkSystem SR650
Target Workload	Private / Public Cloud, Virtualization, HPC, Analytics, Big Data, VDI, Email, File & Print, Web Serving, Database	
Form Factor/Height	Rack/ 1U	Rack/ 2U
Processor	1 or 2 Xeon® Bronze, Silver, Gold or Platinum processors, up to 205W	1 or 2 Xeon® Bronze, Silver, Gold or Platinum processors, up to 205W
Memory	Up to 3TB in 24x slots, using 128GB DIMMs; 2666MHz TruDDR4	Up to 3TB in 24x DIMM slots using 128GB DIMMs; 2666MHz TruDDR4
Expansion slots	Up to 4x PCIe 3.0 slots (with two CPUs), incl. 1x dedicated PCIe for RAID adapter	Up to 7x PCIe 3.0 via multiple riser options, including 1x dedicated PCIe slot for RAID adapter
Drive Bays	Up to 12 SFF bays (10 front, 2 rear) or up to 4 LFF bays - plus up to 2 mirrored M.2 boot drives	Up to 24 HS bays, or up to 14 LFF bays (12 front, 2 rear) plus up to 2x mirrored M.2 boot drives
RAID Support	Hardware RAID (up to 16 ports) with flash cache; up to 16-port HBAs	Hardware RAID (up to 24 ports) with flash cache; up to 16-port HBAs
Network Interface	2/4-port 1GbE LOM; 2/4-port 10GbE LOM with Base-T or SFP+; 1x dedicated 1GbE management port	2/4-port 1GbE LOM; 2/4-port 10GbE LOM (Base-T or SFP+); 1x dedicated 1GbE management port
Power Supply	2x hot-swap/redundant: 550W/750W/1100W AC 80 PLUS® Platinum; or 750W AC 80 PLUS® Titanium	2x hot swap/redundant: 550W/750W/1100W/1600W 80 PLUS® Platinum; or 750W 80 PLUS® Titanium
Systems Management	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)
OS Support	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise server VMware vSphere. Visit lenovopress.com/osig for more information	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware vSphere Visit lenovopress.com/osig for more details
Warranty	1-year and 3-year customer replaceable unit and on site service, next business day 9x5; opt. service upgrades	1-year and 3-year customer replaceable unit and on site service, next business day 9x5; opt. service upgrades

ThinkSystem SR650

ThinkSystem

Intel® Xeon® processor Scalable family

Lenovo Model	ThinkSystem SR670
Target Workload	Artifical Intelligence (AI) Training / Model Development Machine Learning Deep Learning Hybrid Cluster (HPC & AI)
Form Factor/Height	Full-width 2U enclosure
Processor	2x Intel® Xeon® processor Scalable family CPUs per node
Memory	Up to 768GB using 24x 2666MHz TruDDR4 DIMMs per node
Expansion Slots	7 PCIe slots for flexible configuration including: 2x PCIe x16 + 1x PCIe x4 I/O adapter slots and 4x PCIe x16 2SFHFL GPU only slots
Maximum Internal Storage	Up to 8x 2.5-inch hot-swap SSD or HDD SATA drives in rear bays Up to 2x non-hot-swap M.2 SSDs, 6Gbps SATA in internal bays
RAID Support	Direct PCH Access Intel RSTe RAID / SW RAID
Network interface	1x RJ-45 for dedicated 1GbE BMC Management; Additional high-speed network adapters can be installed in available front-accessible PCIe x16 adapter slot; Supports 2x 100GbE/EDR IB adapters, 2x 10GbE SFP+ adapters and 1Gb 2-Port RJ45 Ethernet adapters
Power Supply	Rack-level power capping and management via Extreme Cloud Administration Toolkit (xCAT)
OS Support	Red Hat Enterprise Linux 7.5; Visit lenovopress.com/osig for more information.
Warranty	3-year customer replaceable unit and on site limited warranty, next business day 9x5, service upgrades available

ThinkSystem SR670

Intel® Xeon® processor Scalable family

Lenovo Models	ThinkSystem SR570	ThinkSystem SR590
Target Workload	Email, File & Print Web Serving Private / Public Cloud Virtualization Big Data VDI HPC	Email, File & Print Web Serving Private / Public Cloud Virtualization Big Data VDI Database
Form Factor/Height	Rack/1U	Rack/2U
Processor	Up to 2x Xeon® Platinum processors, up to 150W	Up to 2x Xeon® Platinum processors, up to 150W
Memory	Up to 1TB in 16x slots, using 64GB DIMMs; 2666MHz TruDDR4	Up to 1TB in 16x slots, using 64GB DIMMs; 2666MHz TruDDR4
Expansion slots	Up to 3 PCIe 3.0 with multiple riser options	Up to 6 PCIe 3.0 with multiple riser options
Drive Bays	Up to 10 HS bays, or 4 LFF bays plus up to 2x mirrored M.2 boot drives	Up to 16 HS bays, or 14 LFF bays (12 front, 2 rear) plus up to 2x mirrored M.2 boot drives
RAID Support	Hardware RAID 0, 1, 5 standard on hot-swap models (optional Hardware RAID 0, 1, 5, 50, 6, 60 for 2.5"); Software RAID 0, 1, 5 on simple-swap 3.5" models (optional Hardware RAID 0, 1, 5)	Hardware RAID 0, 1, 5 standard on hot-swap models (optional hardware RAID 0, 1, 5, 50, 6, 60 for 2.5" models); Software RAID 0, 1, 5 on simple-swap 3.5" models (optional hardware RAID 0, 1, 5)
Network Interface	2x Integrated 1GbE ports standard; opt. 1x (2-port) 1GbE or 10GbE LOM card; 2x 10GBase-T, or 2x 10GBase SFP+	2x Integrated 1GbE ports standard; opt. 1x (2-port) 1GbE or 10GbE LOM card; 2x 10GBase-T, or 2x 10GBase SFP+
Power Supply	2x hot swap/redundant: 550W/750W 80 PLUS® Platinum; or 750W 80 PLUS® Titanium	2x hot swap/redundant: 550W/750W 80 PLUS® Platinum; or 750W 80 PLUS® Titanium
Systems Management	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)
OS Support	Microsoft SUSE Red Hat VMware Visit lenovopress.com/osig for more information	Microsoft SUSE Red Hat VMware Visit lenovopress.com/osig for more details
Warranty	1-year and 3-year customer replaceable unit and on site service, next business day 9x5, opt. service upgrades	1-year and 3-year customer replaceable unit and on site service, next business day 9x5; opt. service upgrades

ThinkSystem

Intel® Xeon® processor Scalable family

ThinkSystem SR570

Lenovo Models	ThinkSystem SR530	ThinkSystem SR550
Target Workload	Email, File & Print Private / Public Cloud Web Serving	Email, File & Print Private / Public Cloud Big Data Web Serving
Form Factor/Height	Rack/1U	Rack/2U
Processor	Up to 2x Xeon® Bronze, Silver, Gold or Platinum processors, up to 125W	Up to 2x Xeon® Bronze, Silver, Gold or Platinum processors, up to 125W
Memory	Up to 768GB in 12x slots, using 64GB DIMMs; 2666MHz TruDDR4	Up to 768GB in 12x slots, using 64GB DIMMs; 2666MHz TruDDR4
Expansion Slots	Up to 3x PCIe 3.0, via multiple riser options (either all-PCIe, or PCIe and ML2)	Up to 6x PCIe 3.0 (with 2x processors) via multiple riser options (PCIe-only or PCIe + ML2)
Drive Bays	Up to 8 bays. SFF: 8x HS SAS/SATA; or LFF: 4x HS SAS/SATA; or 4x simple-swap (SS) SATA; plus up to 2x mirrored M.2 boot (opt. RAID 1)	Up to 16x HS or 8x SS LFF; plus up to 2x mirrored M.2 boot (opt. RAID 1) SW RAID std. (up to 8 ports); up to 16-port HBAs/ or HW RAID with flash cache; plus up to 2x mirrored M.2 boot
RAID Support	Software RAID (up to 8 ports); optional hardware RAID (up to 8 ports) with flash cache; up to 8-port HBAs	Software RAID (up to 8 ports); up to 16-port HBAs/ or hardware RAID with flash cache
Network Interface	2x 1GbE ports + 1x dedicated 1GbE management port; optional modular LOM supports 2x 1GbE Base-T or 2x 10GbE with Base-T or SFP+	2x 1GbE ports + 1x dedicated 1GbE management port; optional modular LOM supports 2x 1GbE Base-T or 2x 10GbE with Base-T or SFP+
Power Supply	2x hot-swap/redundant (Energy Star 2.1): 550W/750W 80 PLUS® Platinum; or 750W 80 PLUS® Titanium	2x hot-swap/redundant (Energy Star 2.1): 550W/750W 80 PLUS® Platinum; or 750W 80 PLUS® Titanium
System Management	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)
OS Support	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise server VMware vSphere Visit lenovopress.com/osig for details	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise server VMware vSphere Visit lenovopress.com/osig for more information
Warranty	1-year and 3-year customer replaceable unit and on site service, next business day 9x5, opt. service upgrades	1-year and 3-year customer replaceable unit and on site service, next business day 9x5; opt. service upgrades

ThinkSystem

Intel® Xeon® processor Scalable family

ThinkSystem SR530

Lenovo Model	System x3250 M6
Target Workload	Email, File & Print Virtualization Private Cloud Web Serving
Form Factor/Height	Rack/1U
Processor	Intel® Xeon® processor E3-1200v6 series or Core i3 or Pentium or Celeron
Memory	Up to 64GB in 4x slots, using 16GB DIMMs; 2133/2400MHz
Expansion Slots	One PCIe 3.0 and one PCIe 3.0 slot dedicated for ServerRAID M1210
Maximum internal storage	Up to 40TB storage with 10TB 3.5" NL SAS or NL SATA HDDs
RAID Support	6 Gb SATA RAID: RAID 0, 1, 10, 5 with C110. 12 Gb SAS/6 Gb SATA RAID: RAID 0, 1, 10 with M1210, M1215, or M5210. Optional upgrade to RAID 5, 50 is available for M1210, M1215. Optional upgrade to RAID 5, 50 is available for M5210 (zero-cache; 1 GB non-backed cache; 1 GB, 2 GB, or 4 GB flash-backed cache). Optional upgrade to RAID 6, 60 is available for M5210 (requires a cache upgrade). Optional SSD Caching and Performance Accelerator upgrades are available for M5210. 12 Gb SAS/6 Gb SATA non-RAID: N2215 HBA
Network Interface	Two GbE ports with shared network/management or dedicated management on one port
Power Supply	Single 300W AC fixed 80 PLUS® Gold; or up to two redundant hot-swap 460W AC 80 PLUS® Gold
OS Support	Microsoft Windows Server 2016 Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware/ESXi Ubuntu (certified) Visit lenovopress.com/osig for more information.
Warranty	3-year customer replaceable unit and on site service, next business day 9x5

Data Center Portfolio at your fingertips

Take a 3D tour and get to know the broad portfolio of Lenovo's data center offering by visiting lenovofiles.com/3dtours

System x3250 M6

Intel® Xeon® processor Scalable family

Lenovo Model	ThinkSystem SR250
Target Workload	IT Infrastructure: Email/ File/ Print/ FTP server Basic web serving System management Small Storage/ Near-side data backup Edge Server (IoT)/ Entry Cloud Gateway Server Virtualization Data Analytics
Form Factor/Height	Rack: 1S1U MS Rack, 19.6" H: 43mm, W: 434.6mm, D: 497.8mm
# of Processors	Up to 1x Intel Xeon E processors, up to 6 cores @ 95W
Memory	Up to 64 GB in 4x UDIMM slots using 16GB UDIMMs; 2666MHz TruDDR4
Expansion Slots	1 x16-lane PCIe 3.0 slots or 2 x8 slots Plus one dedicated storage slot
Drive Bays	4x 3.5" Simple Swap SATA drives or 4x 3.5" Hotswap SAS/SATA drives Or 10x2.5" hot swap SAS/SATA drives, of which up to 2 can be NVMe.
HBA / RAID Support	Intel RSTe software RAID for simple swap & hot swap Multiple RAID configuration support (common with ThinkSystem) Option of Intel RSTe SW RAID or optional ThinkSystem 430/530/930 HBA and RAID Cards

I/O Interface	Front:
	    1x USB 2.0
	    1x USB 3.1 Gen1
	    Support XCC mobile
	Rear:
	    2x USB 3.1 Gen2
	    1x Serial COM
	    1x VGA

Network Interface	2x 1 GbE embedded port 1x dedicated management port
Power (Energy Star 2.1 Compliant)	Fixed PSU 300W Platinum Dual Redundant AC PSUs 450W Platinum
Systems Management	Lenovo ThinkSystem XClarity Controller; TPM 1.2/2.0 Standard
Supported OS	Microsoft Windows Server 2016, SLES, RHEL, VMware ESXi (visit LenovoPress for more information)
Limited Warranty	1-year or 3-year base warranty

Intel® Xeon® processor Scalable family

Lenovo Model	ThinkServer RS160
Target Workload	Email, File & Print Web Serving General purpose applications
Form Factor/Height	Rack/1U
Processor	Intel® Xeon® processor E3-1200 v6 product family with four cores up to 3.7 GHz, 8 MB cache, and up to 2133 MHz memory speed; or Intel® Core i3 processor 6100/6300 product families with two cores up to 3.9 GHz, up to 4 MB cache, and 2133 MHz memory speed; or Intel® Pentium processor G4400/G4500 product families with two cores up to 3.6 GHz, 3 MB cache, and up to 2133 MHz memory speed
Memory	Up to 64GB in 4x DIMM slots; 2400MHz
Expansion Slots	Up to one PCIe 3.0 x16 (x16 wired) low-profile slot with an optional riser card
Maximum Internal Storage	Up to 20TB with 2x10TB 3.5" SATA HDDs
RAID Support	RAID 0, 1, 10, 5, and 50 with RAID 720i or 720ix Optional (for 720i) or mandatory (for 720ix) cache memory upgrades are available: 1 GB non-backed; 1 GB, 2 GB, or 4 GB flash-backed. Cache upgrades include RAID 6 and 60 support. Flash backup upgrades include FastPath and Cache Cade Pro 2.0 features
Network interface	Two integrated GbE (10/100/1000 Mbps) RJ-45 ports (Intel I210) One GbE (10/100/1000 Mbps) RJ-45 port for systems management
Power Supply	One fixed 300W AC (100 - 240 V) power supply (80 PLUS® Gold)
OS Support	Windows Server 2012/2012 R2/2016 Red Hat Enterprise Linux (RHEL) Server 6 SUSE Linux Enterprise Server (SLES) 11 VMware vSphere (ESXi) 6.0 Visit lenovopress.com/osig for more information
Warranty	1-year or 3-year (model dependent) customer replaceable unit and on site service, next business day 9x5

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Intel® Xeon® processor Scalable family

ThinkSystem SR250

TOWER SERVERS

Lenovo Models	ThinkSystem ST550
Target Workload	Email, File & Print Private Cloud Virtualization VDI Web Serving
Form Factor/Height	Tower/4U
Processor	Up to 2x Xeon® Bronze, Silver, Gold or Platinum processors, up to 125W
Memory	Up to 1.5TB in 12x DIMM slots; 2666MHz TruDDR4
Expansion Slots	Up to 6x PCIe 3.0 (with 2x processors)
Drive Bays	Up to 16 SFF (including 4 NVMe) or 8 LFF bays; plus up to 4 SFF (in optical bay) and 2x internal M.2 boot
RAID Support	Software RAID (4x ports) std; opt. hardware RAID (up to 24x ports); up to 16-port HBAs
Network Interface	2x 1GbE ports std; optional 1GbE, 10GBASE-T, and 10Gb SFP+; 1x dedicated 1GbE management port
Power(Energy Star 2.1 compliant)	1x 450W 80 PLUS® Gold (fixed); or 2x 550W/750W/1100W 80 PLUS® Platinum (hot-swap/redundant N+1); or 2x 750W 80 PLUS® Titanium (hot-swap/redundant)
Systems Management	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)
OS Supported	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise server VMware vSphere Visit lenovopress.com/osig for more information
Warranty	1-year or 3-year (model dependent) customer replaceable unit and on site service, next business day 9x5

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Get Ready for the Future-Defined Data Center

ThinkSystem ST550

intel XEON PLATINUM inside™

Intel® Xeon® processor Scalable family

ThinkSystem

Lenovo Models	ThinkSystem ST250	ThinkSystem ST50
Target Workload	IT Infrastructure: Email/ File/ Print/ FTP server Basic web serving General IT infrastructure & system management Near side data backup General business applications Retail Point-of-Sale	IT Infrastructure: Email/ File/ Print Basic web serving General IT infrastructure & system management Near side data backup Collaboration Retail Point-of-Sale
Form Factor/Height	Tower, 4U Chassis H: 430mm, W: 175mm, D: 565.7mm Optional ST250 / ST50 Rack Mount Kit	Tower, 28-liter H: 375mm, W: 175mm, D: 431mm Optional rack mount kit
# of Processors	1x Intel Xeon E-21XX processor family	1x Intel Xeon E-21XX processor family
Memory	Up to 64GB in 4x UDIMM slots using 16GB UDIMMs; 2666MHz TruDDR4	Up to 64GB in 4x UDIMM slots using 16GB UDIMMs; 2666MHz TruDDR4

Expansion Slots	Up to 4x PCIe Gen3 slots:
	    x1 lane PCI-E Gen3 in x1 slot
	    x16 lane PCI-E Gen3 in x16 slot
	    x4 PCI-E Gen3 in x4 slot
	    x4 PCI-E Gen3 in x8 slot
		Up to 3 x PCIe Gen3 slots:
		    x16 PCI-E Gen3 in x16 slot
		    x1 PCI-E Gen3 in x1 slot
		    x4 PCI-E Gen3 in x16 slot

Drive Bays	Up to 8x 3.5" simple swap & hot swap SATA / SAS bays Up to 16x 2.5" hot swap SATA / SAS 2x 5.25" media bay (for ODD or tape) 1x M.2 support	Up to 4 x 3.5-inch non-HS HDD bays (4th by 5.25" to 2.5" ODD conversion kit), support hybrid configuration with 3.5" HHDs & 2.5" SSDs, 1x 5.25" media bay (for ODD or tape), 2x SD card (32GB / 64GB), 1x SD card module
HBA / RAID Support	Intel RSTe software Raid for simple swap & hot swap Multiple RAID configuration support (common with ThinkSystem)	Software RAID support, multiple RAID configurations
I/O Interface	1x front USB 3.1 G1 port & USB 2.0 port for XCC Mobile 2x rear USB 3.1 G2 ports & 2x rear USB 3.1 G1 ports 1x serial com port 1x VGA port	2x front USB 3.1 G1 ports 2x rear USB 3.1 G1 ports & 2x rear USB 2.0 ports 1x serial com port 2x display ports (DP) Option for DP to VGA or DP to HDMI dongles 1x audio line out (for Microsoft Client OS only)
Network Interface	2x 1 GbE embedded port 1x dedicated management port	1x 1GbE port standard
Power (Energy Star 2.1 Compliant)	Dual-redundant 80+ PSU 550W Fixed PSU 250W Power efficiency up to Platinum	Fixed 80 plus PSU options, 250W & 400W Power efficiency up to Platinum
Systems Management	XClarity Administrator XClarity Controller (embedded hardware) XClarity Pro (optional)	Intel AMT12.0 server management, TPM 1.2 embedded (optional to TPM 2.0) Lenovo XClarity Provisioning Manager (USB version)
Supported OS	Microsoft Windows Server, SLES, RHEL, VMware ESXi (visit LenovoPress for more information)	Microsoft Windows Server, SLES, RHEL, VMware vSphere (visit LenovoPress for more information), Microsoft Windows Client OS - Windows 10 tested
Limited Warranty	1-year & 3-year customer replaceable unit & on site service, next business day 9x5, optional service upgrades	1-year or 3-year base warranty

ThinkSystem

Intel® Xeon® processor Scalable family

Lenovo Models	ThinkServer TS150	ThinkServer TS460
Target Workload	Email, File & Print Web Serving	
Form Factor/Height	Tower/4U	Tower/4U
Processor	Intel® Xeon® processor E3-1200 v6 series or Core i3 or Pentium or Celeron (4-core),	Intel® Xeon® processor E3-1200 v6 series; Core i3 and Pentium; up to 8MB cache maximum
Memory	Up to 64GB in 4x slots, using 16GB DIMMs; 2400MHz ECC TruDDR4	Up to 64GB in 4x slots, using 16GB DIMMs; 2400MHz ECC TruDDR4
Expansion Slots	4x PCIe 3.0 slots	4x PCIe 3.0 slots: x4/x4, x16/x16 (x8 when slot 4 is used), x1/x1, x8/x8
Maximum Internal Storage	Up to 40TB with 4x 10TB 3.5" SATA HDD	Up to 80TB with 8x 10TB SAS HDDs
RAID Support	ThinkServer RAID 121i SW RAID 0/1/10/5 std; opt. PCIe ThinkServer RAID 520i 12Gb HW RAID 0/1/10/5	ThinkServer RAID 121i software RAID; optional hardware PCIe RAID: ThinkServer RAID 520i 12Gb, ThinkServer RAID 720i 12Gb (optional cache and BBU), LSI 9300-8e 12Gb SAS (JBOD)
Network Interface	Up to 9 ports: 1x on board 1Gbps Ethernet std; 2 optional 2/4-port 1Gb Ethernet adapters	2x on-board 1Gb Ethernet standard; 2 optional 2/4-port 1Gb and 1/2-port 10Gb Ethernet adapters
Power Supply	One fixed 250W AC (100 - 240 V) power supply 80 PLUS® Bronze or one fixed 400 W AC (100 - 240 V) power supply 80 PLUS® Platinum	1/1; 300W 80 PLUS® Bronze (non-hot-swap); 1/2 450W 80 PLUS® Gold (hot-swap/redundant)
OS Support	Microsoft Windows Server 2016 and 2012R2 VMware Vsphere (ESXi) Red Hat Enterprise Linux Server Client (Microsoft Windows 10) Visit lenovopress.com/osig for more information	Microsoft Windows Server & Hypervisor 2012 R2 and 2016 Microsoft Windows Storage 2012R2 and 2016 Client OS Windows 10 supported VMware Vsphere (ESXi) Red Hat Enterprise Linux Server SUSE Visit lenovopress.com/osig for more information
Warranty	1-year or 3-year (model dependent) customer replaceable unit and on site service, next business day 9x5	1-year or 3-year (model dependent) customer replaceable unit and on site service, next business day 9x5

Get ready for the Future-Defined Data Center

Data Center Portfolio at your finger tips

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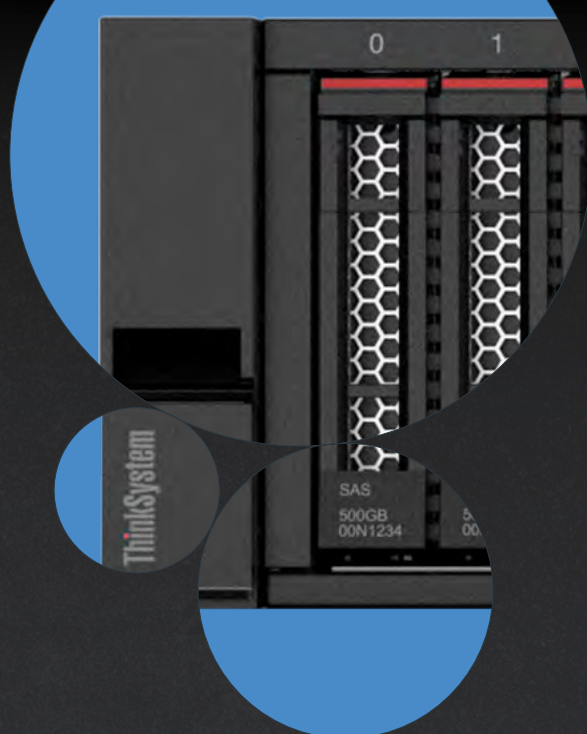Intel® Xeon® processor Scalable family

HIGH END

Designed with your mission-critical workloads in mind

Lenovo's high-end rack servers are suited for heavy vertical workloads, virtualization and legacy system replacements. The ThinkSystem portfolio brings new models designed for your most demanding, mission-critical workloads, such as in-memory databases, large transactional databases, batch and real time analytics, ERP, CRM, and visualized server workloads.

Always on reliability on x86. Self-monitoring, error detection, and self-healing. Consistently ranked number 1 in reliability.[4]

Real time insights for real time business. 31% better TCO than competitors for analytics, leadership benchmarks, massive on board storage, direct NVMe.

Everything within reach. Unmatched scalability with 4S & 8S in one 4U platform, modular drive tray, highest drive density, front and rear access for 12% faster serviceability.

ThinkSystem SR850

Intel® Xeon® processor
Scalable family

Lenovo Model	ThinkSystem SR850
Target Workload	Virtualization Analytics Databases Big Data Server and VM Consolidation Large Memory VMs
Form Factor/Height	Rack/2U
Processor	2x or 4x Intel® Xeon® Gold or Platinum processors, up to 28x cores per processor, up to 205W CPUs
Memory	Up to 6TB in 48x slots using 128GB[1] DIMMS; 2666MHz TruDDR4
Expansion Slots	Up to 9x PCIe plus 1x LOM; optional 1x ML2 slot
Maximum Internal Storage	Up to 16x 2.5" storage bays supporting SAS/SATA HDD and SSDs or up to 8x 2.5" NVMe SSD; plus up to 2x mirrored M.2 boot
RAID Support	Hardware RAID (up to 16 ports) with flash cache; up to 16-port HBAs
Power Supply	2x hot-swap/redundant: 750W/1100W/1600W AC 80 PLUS Platinum
RAID support	Hardware RAID (up to 16 ports) with flash cache; up to 16-port HBAs
Network Interface	One (2-/4-port) 1GbE or 10GbE LOM card; Multiple options with 1GbE, 10GbE, 25GbE, 40GbE or InfiniBand PCIe adapters; 1x dedicated 1GbE management port
Power Supply	2x hot-swap/redundant: 750W/1100W/1600W AC 80 PLUS® Platinum
OS Supported	Microsoft Windows Server Red Hat Enterprise Linux Server SUSE Linux Enterprise Server VMware vSphere Visit lenovopress.com/osig for more information
Warranty	1- year and 3-year customer replaceable unit and on site service, next business day 9x5; opt. service upgrades

[4] ITIC 2017-2018 Global Hardware, Server OS Reliability Report

Lenovo Model	ThinkSystem SR950
Target Workload	Virtualization Real-time Analytics ERP CRM Large Databases OLTP Decision Support Server and VM Consolidation Large Memory VMs
Form Factor/Height	Rack/4U
Processor	2x, 3x, 4x, 6x or 8x Intel® Xeon® Platinum processors, up to 28x cores per processor, up to 205W, or 2x, 3x or 4x Intel® Gold processors
Memory	Up to 12TB in 96 slots, using 128GB DIMMs; 2666MHz TruDDR4
Expansion Slots	Up to 14x rear PCIe, (11x x16 +, 3x x8), 2x shared ML2 and PCIe (x16) and 1x LOM; plus 2x front dedicated RAID
Maximum Internal Storage	Up to 24x SFF bays supporting SAS/SATA HDDs/SSDs, including 12x SFF NVMe SSDs
RAID Support	Optional hardware RAID; M.2 boot support with optional RAID.
Network Interface	One (2-/4-port) 1GbE or 10GbE LOM card; Multiple options with 1GbE, 10GbE, 25GbE, 40GbE, 100GbE and InfiniBand FDR PCIe adapters; 1x dedicated 1GbE management port
Power Supply	Up to 4x shared 1100W or 1600W AC 80 PLUS® Platinum
OS Supported	Microsoft Windows Server Red Hat Enterprise Linux Server SUSE Linux Enterprise Server VMware vSphere Visit lenovopress.com/osig for more information
Warranty	1-year or 3-year customer replaceable unit and on site service, next business day 9x5; opt. service upgrade

ThinkSystem SR950

Data Center Portfolio at your fingertips

Intel® Xeon® processor Scalable family

Take a 3D tour and get to know the broad portfolio of Lenovo's data center offering by visiting lenovofiles.com/3dtours

BLADES

The orchestration platform for conducting tomorrow's business

This integrated infrastructure platform supports a mix of compute, storage, systems management and networking resources to meet the demands of your applications. This robust enterprise chassis is designed to deploy simply now and scale to meet your needs in the future. Designed for major enterprise applications like virtualization, cloud, database and analytics for clients across banking / finance, education, government, telecom and manufacturing, as well as SMB.

Flexible infrastructure for ever-changing workloads. Resource management that leverages both hardware and systems management.

Efficient on multiple levels. XClarity reduces time management; the modular, integrated design and zone adaptive cooling reduces data center costs.

Proven platform, investment protection. An architecture that supports newly announced ThinkSystem blades powered by Intel® Xeon® processors and future server generations for leading investment protection.
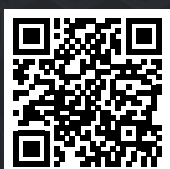
ThinkSystem SN850

ThinkSystem

Intel® Xeon® processor Scalable family

Lenovo XClarity™

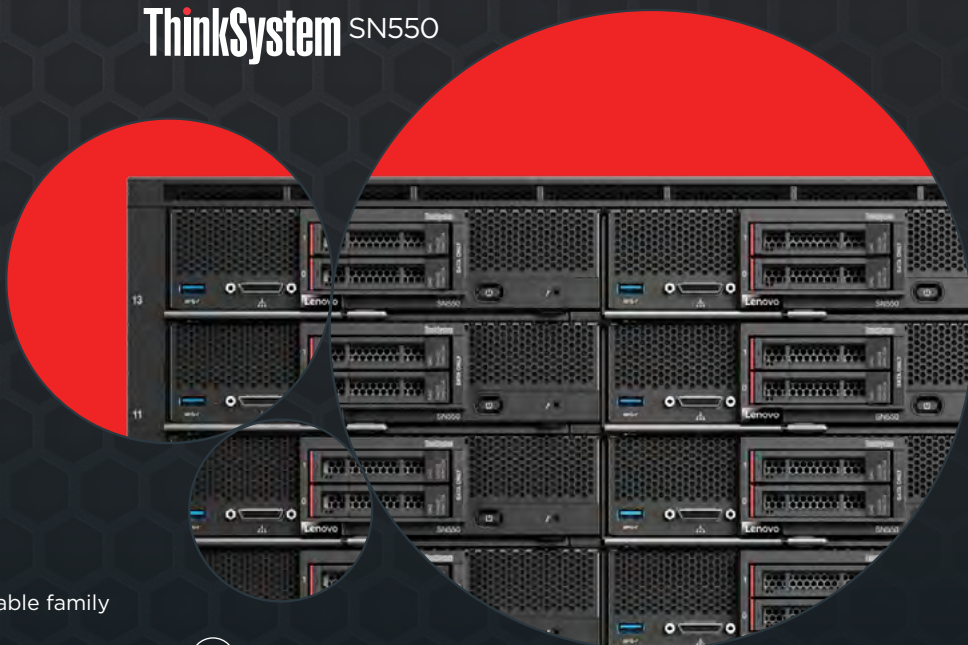| Lenovo Models	ThinkSystem SN550	ThinkSystem SN850
Target Workload	Private Cloud Virtualization VDI Service Provider Hosting	Private Cloud Virtualization VDI Service Provider Hosting Database
Form Factor	Standard-width flex system compute node Up to 14 per chassis	Double-width flex system compute node Up to 7 per chassis
Processor	Up to two Intel Xeon processor Scalable family CPUs, Bronze, Silver, Gold or Platinum up to 165W: from 4 cores to 28 cores; core speeds from 1.7 GHz to 3.6 GHz; up to 38.5 MB L3 cache. Two UPI links up to 10.4 GT/s each. Up to 2666 MHz memory speed	Up to four Intel Xeon processor Scalable product family CPUs, Gold or Platinum, from 4 cores to 28 cores; core speeds from 1.7 GHz to 3.6 GHz; up to 38.5 MB L3 cache. Up to 3 UPI links with up to 10.4 GT/s each (processor dependent). Up to 2666 MHz memory speed.
Memory	Up to 3TB in 24x slots, using 128GB DIMMs (requires M-suffix processors that support greater than 786GB memory per processor); 2666MHz TruDDR4	Up to 6TB in 48x slots, using 128GB DIMMs (requires M-suffix processors that support greater than 786GB memory per processor); 2666MHz TruDDR4
Expansion Slots	Up to 2x PCIe 3.0 x16 I/O Adapters	Up to 4x PCIe 3.0 x16 I/O Adapters
Maximum Internal Storage	Up to 2x 2.5-inch storage bays supporting SAS/SATA HDDs/SSDs or U.2 NVMe SSDs; plus up to 2x mirrored M.2 boot drives (opt. RAID 1)	Up to 4x 2.5-inch storage bays supporting SAS/SATA HDDs/SSDs or U.2 NVMe SSDs; plus up to 2x mirrored M.2 boot drives (opt. RAID 1)
RAID Support	Software RAID std. (6Gbps SATA); optional hardware basic RAID (12Gbps SAS/SATA); optional hardware advanced RAID (12Gbps SAS/SATA 2GB flash-backed cache)	Software RAID std. (6Gbps SATA); opt. hardware basic RAID (12Gbps SAS/SATA); opt. hardware advanced RAID (12Gbps SAS/SATA 2GB flash-backed cache)
Network Interface	4x 10GbE LOM, 10/25/40/50Gb Ethernet Adapters or FDR Infiniband adapters	4x 10GbE LOM, 10/25/40/50Gb Ethernet Adapters or FDR Infiniband adapters
System Management	XClarity Controller embedded management, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, XClarity Energy Manager centralized server power management. Chassis level management using CMM (2nd redundant CMM optional)	XClarity Controller embedded management, XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, XClarity Energy Manager centralized server power management. Chassis level management using CMM (2nd redundant CMM optional)
OS Support	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware vSphere Visit lenovopress.com/osig for more information	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware vSphere Visit lenovopress.com/osig for more information
Warranty	3-year customer replaceable unit and on site service, next business day 9x5	3-year customer replaceable unit and on site service, next business day 9x5

ThinkSystem SN550

See more of the Blades offering including chassis

Intel® Xeon® processor Scalable family

Features	ThinkSystem NE2552E Flex Switch
Target Workload	High Bandwidth Switching to compliment SN550/SN850 25G/50G Adapters
Maximum Port Configuration	Internal: 28x 10/25 Gb Ethernet ports or 14x 50 Gb Ethernet ports supporting 2 and 4 port 10G, 25G and 50G adapters External: 8x SFP+/SFP28 ports and 4x QSFP+/QSFP28 ports supporting 10GbE, 25GbE, 50GbE and 100GbE port speeds
Base Configuration Ports	All ports turned on
Key Features	CEE, RoCE, NAS, ISCI, FCOE Switch Partition, SPAR ENOS Easy Connect transparent network capability Virtualization, Unified Fabric Port Fault Tolerance
Management	XClarity, vRealize Log Insight, vRealize Network Orchestrator, OpenStack, Ansible

Data Center Portfolio at your fingertips

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ThinkSystem

Intel® Xeon® processor Scalable family

Lenovo Models	FC5022 16Gb SAN Scalable Switch
Target Workload	Storage-Intensive Enterprise workloads
Maximum Port Configuration	28 internal full-duplex 16/8 Gb FC ports supporting 2 and 4 port adapters 20 external ports for 16 Gb or 8 Gb SFP+ transceivers supporting 4 Gb, 8 Gb, and 16 Gb port speeds
Base Configuration Ports	12 or 24 dynamic ports depending on model
Switch Upgrade 1 Ports	12 additional dynamic ports
Switch Upgrade 2 Ports	24 additional dynamic ports
Key Features	Full fabric Access Gateway Advanced zoning Enhanced Group Management Adaptive Networking ISL Trunking+ Fabric Vision* Advanced Performance Monitoring* Fabric Watch* Extended Fabrics* Server Application Optimization*
Recommended for:	Storage-Intensive Enterprise workloads
Warranty	1-year customer replaceable unit

+Requires separate license or ESB switch
*Requires ESB switch

Lenovo Models	EN4093R 10GbE Scalable Switch	CN4093 10GbE Converged Switch	EN4091 10Gb Ethernet Pass-thru
Target Workload	Performance Virtualization	Direct FCoE connectivity FC to external F SAN or in-chassis storage	Low-cost end host mode Simple management 10/40GbE scalability, performance
Base Configuration Ports	14 x 10GbE internal 10 x 10GbE SFP+ external	14 x 10GbE internal 2 x 10GbE SFP+ external 6 x Omni Port external	14 x full duplex 1/10GbE internal ports 10 x 1/10GbE SFP + external transceivers
Switch Upgrade 1 Ports	28 x 10GbE internal 10 x 1GbE SFP+ external 2 x 40GbE QSFP+ external	14 x 10GbE internal 2 x 40GbE external	N/A
Switch Upgrade 2 Ports	42 x 10GbE internal 14 x 10GbE external 2 x 40GbE QFSP+ external	14 x 10GbE internal 6 x Omni Port external	N/A
Max bidirectional throughput	1,280Gbps	1,280Gbps	N/A
Cloud Ready	VMready Switch Partitioning UFP OpenFlow	VMready Switch Partitioning UFP	N/A
Flexibility & Scalability	FPM FoD Stacking	FPM FoD Stacking	FPM FoD FSIF
Converged	DCB, CEE, FCoE transit	DCB, CEE, FCoE break out 8Gb FC	DCB, CEE, FCoE transit
Recommended for:	Performance, Virtualization	Direct FCoE connectivity, FC to external F SAN or in-chassis storage	Low-cost end host mode, simple management, 10/40GbE scalability, performance
Warranty	1-year customer replaceable unit	1-year customer replaceable unit	1-year customer replaceable unit

Lenovo Models	EN2092 1GbE Scalable Switch	SI4091 System Interconnect Module	SI4093 System Interconnect Module
Target Workload	Performance Virtualization	Lowest cost end host mode Simple management	Low-cost end host mode simple management 10/40GbE scalability, performance
Base Configuration Ports	14 x 1GbE internal 10 x 1GbE RJ-45 external	14 x 10GbE internal 10 x 10GbE SFP+ external	13 x 10GbE internal 10 x 10GbE SFP + external
Switch Upgrade 1 Ports	28 x 1GbE internal 20 x 1GbE RJ-45 external	N/A	28 x 10GbE internal 10 x 10GbE SFP + external 2 x 40GbE QSFP + external
Switch Upgrade 2 Ports	4 x 10GbE SFP+ external	N/A	42 x 10GbE internal 14 x 10GbE external 2x 40GbE QSFP + external
Max bidirectional throughput	176 Gbps	480 Gbps	1,280 Gbps
Cloud Ready	VMready Switch Partitioning	N/A	VMready Switch Partitioning UFP
Flexibility & Scalability	FPM FoD	N/A	FPM FoD FSIF
Converged	N/A	DCB, CEE, FCoE transit	DCB, CEE, FCoE transit
Recommended for:	Performance, Virtualization	Lowest cost end host mode, simple management	Low-cost end host mode, simple management, 10/40GbE scalability, performance
Warranty	1-year customer replaceable unit	1-year customer replaceable unit	1-year customer replaceable unit

Features	EN6131 40Gb Ethernet Switch	Cisco Nexus B22 Fabric Extender
Target Workload	High Performance Applications	Cisco-Flex System Connectivity
Base Configuration Ports	14 x internal full-duplex 40Gb ports 18 x external ports for 40Gb QSFP+ transceivers for QSFP+ DAC cables	14 x internal full-duplex auto-serving 1/10G ports 8 x external ports for 10Gb SFP+ transceivers
Max bidirectional throughput	1.44Tbps aggregated	400Gbps aggregated
Scalability & Performance	Non-blocking architecture with wire-speed forwarding of traffic Up to 48,000 unicast and up to 16,000 multicast MAC addresses per subnet Static & LACP (IEEE 802.3ad) link aggregation Up to 720 Gb total uplink bandwidth per switch Up to 36 link aggregation groups (LAGs) Support for jumbo frames Broadcast/multicast storm control IGMP v1 and v2 snooping	Wire-speed forwarding of traffic Static and EtherChannel link aggregation Up to 80 Gb (160 Gb full-duplex) total fabric uplink bandwidth per module Support for jumbo frames PortChannel on server ports
Availability & Redundancy	IEEE 802.1D STP for L2 redundancy IEEE 802.1w Rapid STP (RSTP)	Redundant uplinks through Cisco EtherChannel hashing or static port pinning vPCs for dual-homed connectivity
Virtualization	Up to 4094 VLANs per switch 802.1Q VLAN tagging support	802.1Q VLAN tagging support Switch Independent Virtual NIC (vNIC2): Ethernet, iSCSI, or FCoE traffic
Warranty	1-year customer replaceable unit	1-year customer replaceable unit

DENSE-OPTIMIZED

Ready to adapt when you are

Lenovo's high-density systems were engineered to excel at a wide range of workloads and flexible architectures, to meet evolving needs. These are powerful platforms for compute-intensive workloads, ranging from technical computing, to grid deployments, to analytics workloads, to large-scale cloud and virtualization infrastructures. They do it more cost and energy-efficiently than ever before.

More in less space. Innovative chassis enables greater density for hyper-converged workloads.

Ready to adapt. Stackable node design that supports GPUs and specialized IO adapters.

Modularity to transform. Disaggregated IO design which allows for multiple fabrics, and the scalable management design simplifies infrastructure costs. Front and rear access for easy serviceability.

ThinkSystem SD530

ThinkSystem

Intel® Xeon® processor Scalable family

Data Center Portfolio at your fingertips

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Lenovo Model	ThinkSystem SD650
Target Workload	Private / Public Cloud HPC Virtualization Analytics
Form Factor/Height	Full-wide 1U tray (6 Tray's / 12 nodes per n1200 enclosure)
Processor	2x Intel® Xeon® water-cooled Bronze, Silver, Gold or Platinum processors, up to 245W
Memory	Up to 768GB in 12x slots, using 64GB LRDIMMs; 2666MHz TruDDR4
Expansion Slots	1x 50mm width ML2 slot, 1x PCIe x16 slot for EDR InfiniBand, or Intel Omni Path (per node)
Drive Bays	Up to 2x 2.5" SATA SSDs or 1x 2.5" NVMe SSD (per node); optional M.2 adapter, supporting 1x or 2x M.2 drives (per node)
Network Interface	1x 1GbE BaseT NIC (per node); additional high-speed network adapters (InfiniBand or Omni Path) can be installed in the available front-accessible PCIe x16 adapter slot
Power Supply	Rack-level power capping and management via Extreme Cloud Administration Toolkit (xCAT)
RAID Support	On board SATA controller with Software RAID; optional M.2 SSD adapter with HW RAID 1
Systems Management	Remote management using Lenovo XClarity Controller 1Gb dedicated management NIC plus 1Gb share management NIC per node
OS Support	Red Hat Enterprise Linux SUSE Linux Enterprise Server CentOS (with LeSi support) Visit lenovopress.com/osig for details.
Warranty	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades

Intel® Xeon® processor Scalable family

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Lenovo Model	ThinkSystem SD530
Target Workload	HPC VDI Web Serving Private / Public Cloud Virtualization
Form Factor/Height	2U Enclosure; 4 nodes per enclosure
Processor	1x or 2x Intel® Xeon® Bronze, Silver, Gold or Platinum processors, up to 205W CPUs
Memory	Up to 1TB in 16x slots, using 64GB LRDIMMs; 2666MHz TruDDR4
Expansion Slots	1x shuttle per D2 enclosure: either x8 PCIe Shuttle with 8x PCIe 3.0 x8 slots (2 per node); or x16 PCIe Shuttle with 4x PCIe 3.0 x16 slots (1 per node). Up to 2x external GPU trays per chassis (with up to 2 GPUs in each tray); one tray per node
Drive Bays	Up to 16x (4x per node) HS NVMe SSDs
Network Interface	Opt. 8-port EIOM 10Gb SFP+ (two ports per node); Opt. 8-port EIOM 10GbaseT RJ45 (two ports per node)
Power Supply	1x or 2x hot-swap, redundant power supplies 2000W, 1600W or 1100W
RAID Support	SW RAID supports JBOD; Entry RAID; opt. HW RAID 12Gb supports JBOD; plus M.2 boot support with optional RAID
Systems Management	XClarity Controller embedded management XClarity Administrator centralized infrastructure delivery XClarity Integrator plugins XClarity Energy Manager centralized server power
OS Support	Microsoft Windows Server Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware vSphere Visit lenovopress.com/osig for more information
Warranty	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades

Data Center Portfolio at your fingertips

Take a 3D tour and get to know the broad portfolio of Lenovo's data center offering by visiting lenovofiles.com/3dtours

Intel® Xeon® processor Scalable family

STORAGE

Thanks to a 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 that range from storage tiering to thin provisioning and 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 by visiting www.lenovofiles.com/3dtours

ThinkSystem DM 5000H

SAN

Shared storage delivering high performance access to critical data

THINKSYSTEM DM SERIES

The ThinkSystem DM Series is a portfolio of enterprise class all-flash and hybrid-flash arrays. Set apart by industry-leading performance, unified architecture and data management powered by ONTAP.

Accelerate data: Deploy workloads in under 10 minutes, quicken response times with NVMe over Fabric and reach 4M IOPS and up to 57PB of storage.

Scale to cloud and back: Easily consolidate legacy storage, scale without disruption, tier and manage data with major cloud vendors.

Protect your business: On-board encryption, multi-factor authentication and synchronous replication headline a host of leading defense features.

Lenovo

ThinkSystem

Sub-Series	DM Hybrid			DM All-Flash	
Attribute / Model	DM7000H	DM5000H	DM3000H	DM7000F	DM5000F
Target Market / Workloads	Hybrid Cloud Artificial Intelligence Big Data Analytics Engineering and Design	Artificial Intelligence Data Analytics Enterprise Applications Engineering and Design	Virtualization Microsoft Solutions Backup & Recovery File Services	Virtualization Microsoft Solutions Backup & Recovery File Services	Virtualization Microsoft Solutions Backup & Recovery File Services
Controller Form Factor	3U / 480 Drives	2U / 144 drives	2U / 144 drives	3U (2 HA Controllers)	180k
IOPS	350k	100k	100K	350k	6 Gb/s(Read)/ 2.5 Gb/s (write)
NAS Scale-Out Capacity	12 Arrays			12 Arrays	12 Arrays
Maximum HDDs/SSDs	5760	1728		4608 SSDs	1728 SSDs
Maximum Raw Capacity	57PB	15PB	17PB	70.5PB/62.6PiB	24.1PB / 21.5PiB
Effective Capacity	228 PB	60PB	68PB	281PB / 249.6PiB	96.7PB / 85.8PiB
Maximum On board NVMe Flash Cache	48TB	24TB		N/A	N/A
Maximum Flash Pool	576TB	288TB		N/A	N/A
Maximum Memory	3072TB	768TB		3072TB	768GB
SAN Scale-Out Capacity	6 Arrays			6 Arrays	6 Arrays
Maximum HDDs/SSDs	2880 / 1440	864		2304 SSDs only	864 SSDs only
Maximum Raw Capacity	28PB	7.5PB	8.6PB	35.3PB/31.3PiB	12.1PB/10.7PiB
Effective Capacity	112PB	30PB	34.4PB	140.5PB/124.8PiB	48.4PB/42.8PiB
Maximum On board NVMe Flash Cache	24TB	6TB		N/A	N/A
Maximum Flash Pool	288TB	144TB		N/A	N/A
Maximum Memory	1536TB	384TB		1536TB	256TB
Cluster Interconnect	Four 10GbE			Two 10GbE	
Per High Availability Pair Specs	Active / Active Dual Controller			Active / Active Controller	
Maximum Drives (HDDs/SSDs)	480 /480	144 / 144		384 SSDs only	144 SSDs only
Maximum Raw Capacity	4.8PB	1.2PB	1.4PB	5.9PB / 5.2PiB	2.0PB / 1.8PiB
Effective Capacity	19.2PB	4.8PB	5.6PB	23.5PB / 20.9PiB	8.4PB / 7.2PiB
Maximum On board NVMe Flash Cache	4TB	2TB		N/A	N/A
Maximum Flash Pool	48TB	24TB		N/A	N/A
ECC Memory	256TB	64TB		256TB	64TB
NVRAM	16TB	8TB		16GB	8GB
PCIe Expansion Slots	4	0		4	0
On board UTA2 (8Gb/16Gb FC, 1GbE/10GbE, or FCVI ports-MetroCluster only)	8			8	8
On board 32GB FC(max)	8	N/A		8	N/A

Continued

Sub-Series	DM Hybrid			DM All-Flash	
Attribute / Model	DM7000H	DM5000H	DM3000H	DM7000F	DM5000F
On board 40GbE (max.)	8	N/A	N/A	8	N/A
On board 10GbE (max.)	4			32	8
On board 10GbE Base-T (max.)	4	8		12 (1GbE autoranging)	N/A
On board 12GB SAS (max.	24	4		24	N/A
On board 12Gb SAS ports	8	4		8	4
Cluster Interconnect	Four 10GbE	Four 10GbE		Four 10GbE	
OS	ONTAP 9.4 or later			ONTAP 9.4 or later	
Host/Client Oses Supported	Microsoft Windows, Linux, Sun Solaris, AIX, HP-UX, Mac OS, VMware, ESX			Microsoft Windows, Linux, Sun Solaris, AIX, HP-UX, Mac OS, VMware, ESX	
Storage Protocols Supported	FC, iSCSI, NFS, pNFS, CIFS/SMB			FC, iSCSI, NFS, pNFS, SMB	
Shelves and Media	Shelves and Media See Shelves and Media page on www.lenovo.com for most current information			DM240S (2U; 24 drives, 2.5-inch SFF)	
Open Management	Web Services embedded REST API, PowerShell Toolkit Secure CLI			Web Services embedded REST API, PowerShell Toolkit Secure CLI	
System Maximums	Hosts/partitions: 512; Volumes:2048; Snapshot copies: 2048; Mirrors:128	Hosts/partitions: 256; Volumes:512; Snapshot copies: 512; Mirrors:32		Hosts/partitions: 512; Volumes:2048; Snapshot copies: 2048; Mirrors:128	Hosts/partitions: 256; Volumes:512; Snapshot copies: 512; Mirrors:32
Limited Warranty	3-year limited warranty, 9x5 next business day, on site			3-year limited warranty, 9x5 next business day, on site	
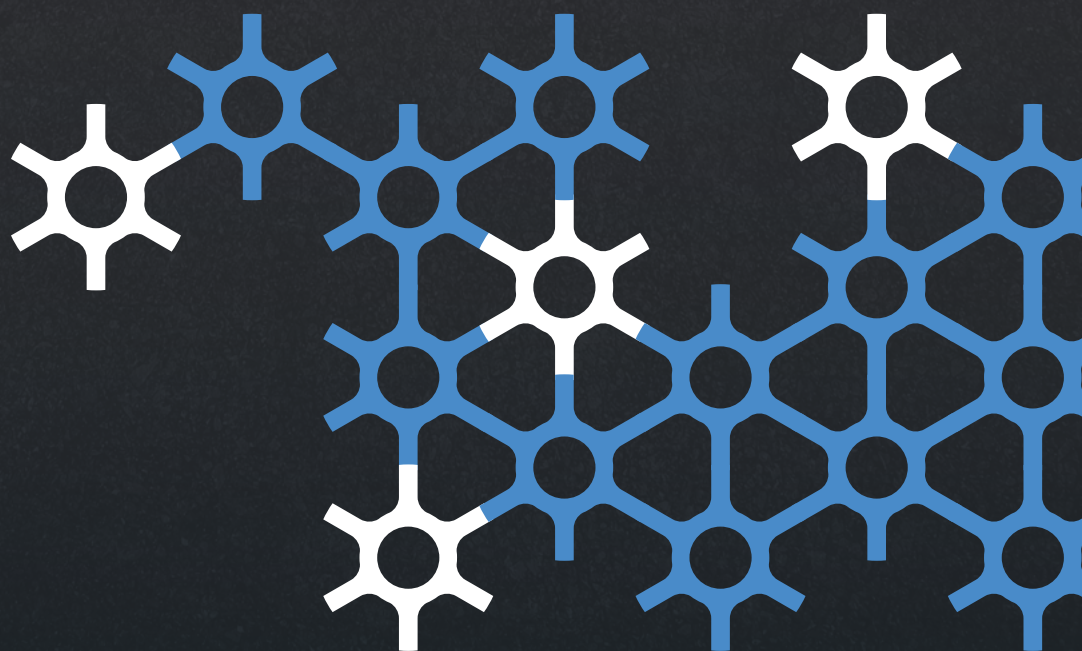
THINKSYSTEM DE SERIES

The ThinkSystem DE Series all-flash and hybrid-flash portfolio offers leadership price-performance and scale at unmatched value.

Optimize price-performance: With performance up to 1M IOPS and sub-millisecond latency, the DE Series leads the industry in SAN value.

Flex and scale: Easily integrate the DE Series within existing environments and meet changing business needs with extensive performance and expansion options.

Achieve always-on reliability: Maximize uptime with 99.9999% availability, synchronous replication and data encryption.

Sub-Series	DE Hybrid		
Attribute / Model	DE6000H	DE4000H	DE2000H
Target Market / Workloads	High-performance databases Web and security applications Data analytics	Video Surveillance Backup & Recovery Technical Computing Big Data Analytics	Video Surveillance Backup & Recovery Technical Computing Big Data Analytics
Form Factor	4U / 60 drives (mixed 2.5" and 3.5") or 2U / 24 drives (2.5" only)	4U / 60 drives (mixed 2.5" and 3.5"); or 2U / 24 drives (2.5" only); or 2U / 12 drives (mixed 2.5" and 3.5")	2U / 24 drives (2.5" only); or 2U / 12 drives (mixed 2.5" and 3.5")
IOPS	1000000	300000	100000
Sustained Throughput	21Gbps	10GBps	3GBps
Maximum Drives	4U, 60 drives: 240* HDDs / 120 SSDs 2U, 24 drives: 192 HDDs / 120 SSDs	4U, 60 drives: 192 HDDs / 120 SSDs 2U, 24 drives: 192 HDDs / 120 SSDs 2U, 12 drives: 96 HDDs/SSDs	2U, 24 drives: 96 HDDs/SSDs 2U, 12 drives: 48 HDDs/SSDs
Maximum Capacity	4U, 60 drives: 2.88PB 2U, 24 drives: 345.6TB	4U, 60 drives: 2.3PB 2U, 12 drives: 1.15PB 2U 24 drives: 345.6TB	2U, 24 drives: 1.47PB 2U, 12 drives: 576TB
Maximum Enclosures	2U12 / 2U24: up to 7 expansions 4U60: up to 3 expansions	2U12 / 2U24: up to 7 expansions 4U60: up to 3 expansions	2U12 / 2U24: up to 7 expansions 4U60: up to 3 expansions
System memory	32GB	16GB	
Base IO Port (Per System)	4 x 10Gb iSCSI (optical) 4 x 16Gb FC	4 x 10Gb iSCSI (optical) 4 x 16Gb FC	4 x 10Gb iSCSI (optical) 4 x 16Gb FC
Optional IO Port (Per System)	8 x 16GB/32GB FC 8 x 10GB/25GB iSCSI optical 8 x 12GB SAS	8 x 16GB/32GB FC 8 x 10GB/25GB iSCSI optical 8 x 12GB SAS	4 x 10GB iSCSI Base-T 4 x 12GB SAS
Optional Software Feature	Snapshot upgrade Asynchronous mirroring Synchronous mirroring Drive Encryption	Snapshot upgrade Asynchronous mirroring Drive Encryption	Snapshot upgrade Asynchronous mirroring Drive Encryption
System Maximums	Hosts/partitions: 512 Volumes:2,048 Snapshot copies: 2,048 (1,024 base) Mirrors:128	Hosts: 256 Volumes: 512 Snapshot copies: 512 (128 base) Mirrors: 32	
Limited Warranty	3-year limited warranty, 9x5 next business day, on site		

Sub-Series	DE All-Flash	
Attribute / Model	DE6000F	DE4000F
Target Market / Workloads	High-performance databases Web and security applications Data analytics	Video Surveillance Backup & Recovery Technical Computing Big Data Analytics
Form Factor	2U / 24 drives (2.5" SSD only)	2U / 24 drives (2.5" SSD only)
IOPS	1000000	300000
Sustained Throughput	21Gbps	10GBps
Maximum Drives	192 SSDs	192 SSDs
Maximum Capacity	2.95PB	2.95PB
Maximum Enclosures	Up to 7 DE240S expansions	Up to 7 DE240S expansions
System memory	128GB	16GB
Base IO Port (Per System)	4 x 10Gb iSCSI (optical) 4 x 16Gb FC	4 x 10Gb iSCSI (optical) 4 x 16Gb F
Optional IO Port (Per System)	8 x 16GB/32GB FC 8 x 10GB/25GB iSCSI optical 8 x 12GB SAS	8 x 16GB/32GB FC 8 x 10GB/25GB iSCSI optical 8 x 12GB SAS
Optional Software Feature	Drive Encryption	Synchronous Mirroring Drive Encryption
System Maximums	Hosts/partitions: 512; Volumes:2,048; Snapshot copies: 2,048; Mirrors:128	Hosts/partitions: 256; Volumes 512; Snapshot copies: 512; Mirrors:32
Limited Warranty	3-year limited warranty, 9x5 next business day, on site	
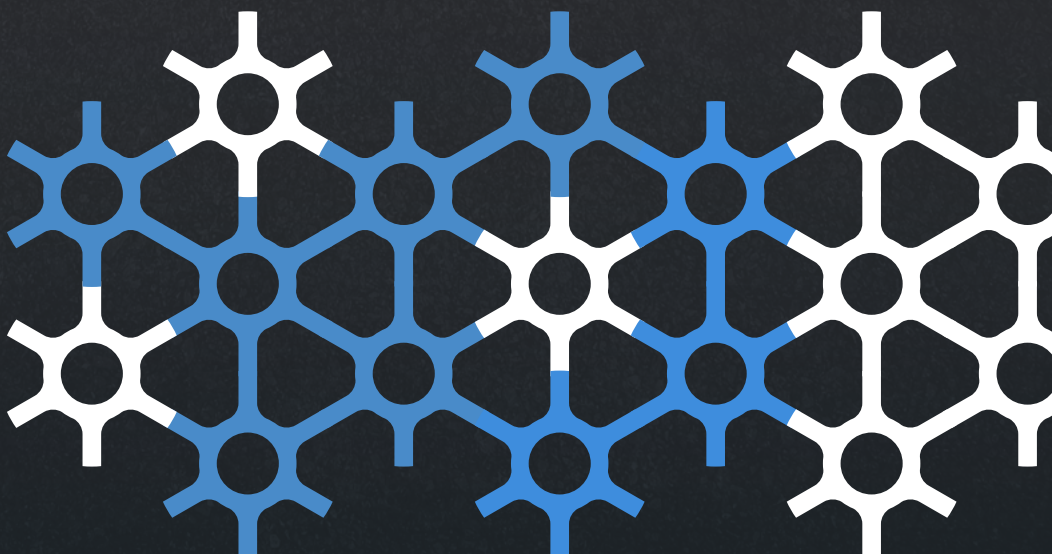
THINKSYSTEM DS-SERIES

Lenovo developed the ThinkSystem DS-Series offering, all-flash & hybrid SAN arrays, to revolutionize 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. Up to 600k IOPS at less than 1 millisecond latency.

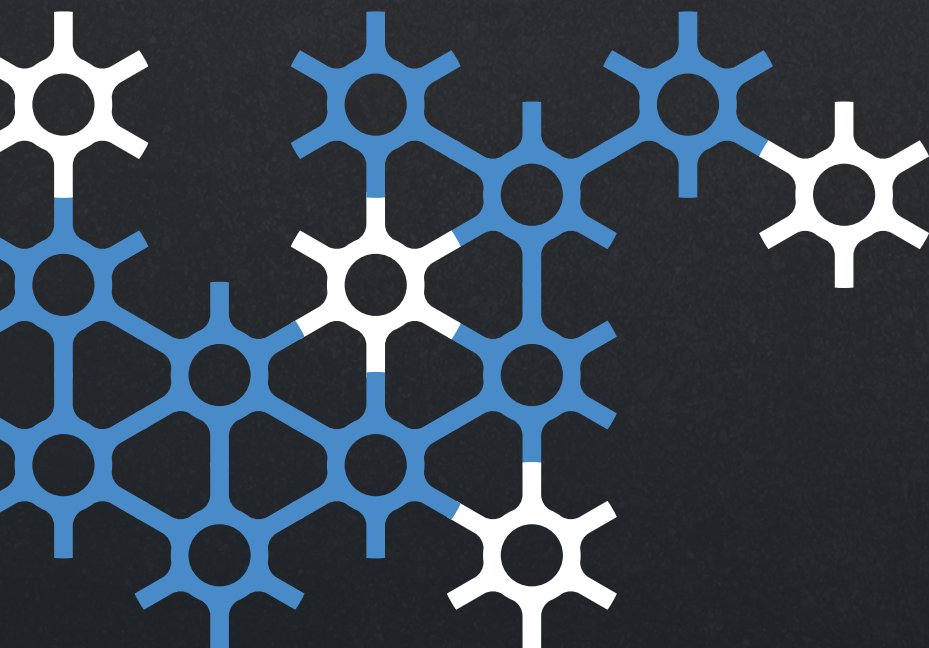| Lenovo Models	Lenovo ThinkSystem DS2200	Lenovo ThinkSystem DS4200	Lenovo ThinkSystem DS6200
Target Workload	Entry Shared Storage Remote & Branch Office (ROBO)	Primary Storage Remote & Branch Office (ROBO) Virtualization Backup	Enterprise Storage Transaction & I/O Intensive OLTP Database
Form Factor/Height	2U	2U	2U
Drive Bays	12x 3.5"; 24x 2.5"	12x 3.5"; 24x 2.5"	24x 2.5"
Maximum Internal Storage	1PB (3.5"); 659TB (2.5")	3PB (3.5" and 2.5")	3PB (2.5")
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 or 1 node + three D3284 expansion units	1 node + 9 expansion units (2U12/2U24); mix-and-match expansion units in an array or 1 node + three D3284 expansion units
Maximum Drives	96 (using 2.5" drives and 3 expansion units)	276 (three D3284 expansion units) or 240 (using 2.5" drives and 9 expansion units)	276 (three D3284 expansion units) or 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 (mixed per chassis)
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 325,000 random-read IOPS; up to 7.0GBps read throughput; up to 5.5GBps write throughput	Up to 600,000 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 or Fiber Channel)
Intelligent Real-Time Tiering	Base HDD; optional HDD+SSD	Base HDD; optional HDD+SSD	Base HDD; optional HDD+SSD
Rapid Tier	-	HDD Tiering included; SSD Tiering requires optional license	HDD Tiering included; SSD Tiering requires optional license
Warranty	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and on site 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 centers thanks to;

- Real-time compression
- Data virtualization
- Hyper-swap
- Extreme scalability

Lenovo Models	Lenovo Storage V3700 V2	Lenovo Storage V5030
Target Workload	Shared Storage Remote & Branch Office (ROBO)	Enterprise Storage I/O Intensive Virtualization Database
Connectivity (Standard)	12Gb SAS 1Gb iSCSI	10 Gb iSCSI
Connectivity (Optional)	16GbFC 12Gb SAS 1Gb iSCSI 10Gb iSCSI / FCoE	16 Gb FC 12 Gb SAS 1 Gb iSCSI 10 Gb iSCSI
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 Virtualization	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 Virtualization	--	Yes
Warranty	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades

Lenovo Models	Lenovo Storage V3700 V2 XP	Lenovo Storage V5030F
Target Workload	Primary Storage Remote & Branch Office (ROBO) Virtualization Backup	Enterprise Storage I/O Intensive Virtualization Database
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 Virtualization	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 Virtualization	--	Yes
Warranty	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades

IBM STORWIZE STORAGE SOLUTIONS

IBM Storwize V7000 Storage System is a visualized, enterprise-class storage system that provides the foundation for implementing an effective storage infrastructure and transforming the economics of data storage. Designed to complement virtual server environments, this modular storage system delivers the flexibility and responsiveness required for changing business needs.

Lenovo Model	IBM Storwize V7000
Target Workload	Virtualization Backup
Connectivity (Standard)	1 Gb iSCSI 8 Gb FC 16 Gb FC
Connectivity (Optional)	10 Gb iSCSI
Cache (per controller)	64 GB (upgradable to 128 or 256GB)
Max. number of drives	504 drives (up to 20 expansions)
Capacity (per clustered system)	Up to 1056 drives
Internal Virtualization	Yes
Thin Prov.	Yes
Data Migration	Yes
FlashCopy	Yes
Remote Mirroring	Yes
Easy Tier	Yes
Encryption	Yes
System Clustering	Yes
External Virtualization	Yes
Warranty	3-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades

LENOVO FIBER CHANNEL SWITCHES & DIRECTORS

Combining Lenovo Servers and Lenovo Storage with Lenovo Fiber Channel SAN switches and directors provides customers a complete, innovative and affordable end-to-end solution to address dynamic business needs.

Affordable innovation without boundaries. Faster data transfer, fewer links and devices reduce overall footprint and cost.

Implement with confidence. 99.999% reliability with non-disruptive, hot-pluggable components maximizes uptime. Designed for high availability and reliability.

Management without complexity. Simply manage your network through integrated dashboards and easy-to-use GUI.

ThinkSystem DB610S

ThinkSystem

Features	Lenovo ThinkSystem DB610S
Target Workload	Cloud Database Analytics Virtualization
Base Models*	6415H11 Lenovo ThinkSystem DB620S Gen6 FC Switch 24x32Gb SWL SFP (1yr) 6415H2A Lenovo ThinkSystem DB620S Gen6 FC Switch 48x32Gb SWL SFP (E.Bundle) (1yr)
Scalability	Full-fabric architecture with a maximum of 239 switches
Certified Maximum	9,000 active nodes; 56 switches, 19 hops in Brocade Fabric OS® fabrics; larger fabrics certified as required
Fiber Channel Ports	Maximum of 24 ports configuration Switch mode (default): 8-, 16-, and 24-port configs. can be an E, F, M and D ports Brocade Access Gateway default port mapping: 16 F Ports, 8 N Ports
Port on Demand (PoD)	8-Port SW License with no transceivers Part #01KP863
Performance	Fiber Channel: 4.25Gbps line speed, full duplex; 8.5Gbps line speed, full duplex; 14.025 Gbps line speed, full duplex; auto-sensing of 4, 8, 16 and 32Gbps port speeds
Aggregate Bandwidth	768Gbps end-to-end full duplex
Maximum Fabric Latency	Latency for locally switch ports is 900 µs (including FEC)
Port Types	F_Port, E_Port, M_Port, D_Port (ClearLink Diagnostic Port) on 24 SFP+ ports Brocade Access Gateway mode: F_Port and NPIV-enabled N_Port
Media Types	Support any combination of 16/32Gbps Short Wavelength (SWL) and 16/32Gbps Long Wavelength (LWL) or 16Gbps Extended Long Wavelength (ELWL) hot-pluggable transceivers.
Rack-mount Rail Kits	Fixed rail kit is included standard, Mid-mount rack kit (Part # 01KP864) – optional
Software Offerings	Enterprise Software Bundle includes Trunking, Fabric Vision, Extended Fabric: included standard or optional depending on model
Power & Cooling	Base switch includes a single, fixed power supply with four integrated system cooling fans.
Power Consumption	76.52W with all 24 ports populated with 32Gbps SWL optics 55.83W for idle configuration (all optics loaded but not initialized)
Warranty	1-year hardware and 3-year firmware/Fiber Operating System (upgrades available)

*Part of the Enterprise Bundle

ThinkSystem

| Features	Lenovo ThinkSystem DB620S
Target Workload	Cloud Database Analytics Virtualization
Base Models	6415H11 Lenovo ThinkSystem DB620S Gen6 FC Switch 24x32Gb SWL SFP (1yr) 6415H2A Lenovo ThinkSystem DB620S Gen6 FC Switch 48x32Gb SWL SFP (E.Bundle) (1yr)
Fiber Channel Ports	Minimum of 24 ports and maximum of 64 ports configuration. Both models reach 64 ports through one 4-port QSFP PoD, providing 16-port increments through a Q-Flex license . Also supports: E_Ports, F_Ports, D_Ports, EX_Ports
Port on Demand Options	7S0C000FWW Lenovo DB620S QSFP+ Port License (No Transceivers) 7S0C000EWW Lenovo DB620S 12-Port License (No Transceivers)
Performance	Fiber Channel: 4.25Gbps line speed, full duplex; 8.5Gbps line speed, full duplex; 10.53Gbps line speed, full duplex; 14.025Gbps line speed, full duplex; 28.05Gbps, full duplex; 112.2Gbps, full duplex; auto-sensing of 4, 8, 16, 32Gbps port speeds and capable of supporting 128Gbps speeds; 10Gbps optionally programmable to fixed port speed
ISL Trunking*	Frame-based trunking with up to eight 32Gbps SFP+ ports per ISL trunk or up to two 128Gbps QSFP ports per ISL trunk. Exchange-based load balancing across ISLs with DPS included in Brocade Fabric OS
Aggregate Bandwidth	2Tbps
Maximum Fabric Latency	Latency for locally switched ports is 900 ns; compression is 1 µs per node
Media Types	32Gbps SWL SFP Transceivers come standard with each switch or with ports on demand software license packs. Optional transceivers are also supported for longer distances. Optional hot-pluggable QSFP+ options are also available for the 128Gbps Q-Flex ports
Rack-Mount Rail Kits	Fixed rail kit is included standard, mid mount rack kit (Part # 01KN770) – optional
Software Offerings	Enterprise Software Bundle includes Trunking, Fabric Vision, Extended Fabric: included standard or optional depending on model Optional: Mainframe Enterprise Bundle Software (Trunking, Fabric Vision, Extended Fabric and Control Unit Port) Optional: Integrated Routing Software
Power Supply	Dual, hot-swappable redundant power supplies standard with integrated cooling fans
Warranty	1-year hardware and 3-year firmware/Fiber Operating System (upgrades available)

*Part of the Enterprise Bundle

ThinkSystem

Features	Lenovo ThinkSystem DB400D/DB800D
Target Workload	Cloud Database Analytics Virtualization
Base Models	DB400D (6684-HC1/B2A) and DB800D (6682-HC1/B1A) include: 2 core routing blades, 2 control processor modules and enterprise software bundle (Fabric Vision, Trunking, Extended Fabrics and CUP)
Chassis	The DB400D has 4 open blade slots, while the DB800D has 8 open blade slots
Fiber Channel Blades	FC32-48-port blade provides 48 ports of 32Gbps Generation 6 FC <900 ns (including FEC); any-port-to any-port local switching and 2.7 μs blade to blade at 32Gbps, cut-through routing • Part # 01KN845 includes 48-port license , no optics • Part # 01KN848 includes 48-port license and 48 x 32Gbps SWL SFPs
Extension Blades	SX6 external blade provides FC extension (16×32Gbps FC ports) and IP extension over IP networks (16×1/10GbE and 2×40GbE ports). <900ns (including FEC) and 2.7 μs, cut-through routing • Part # 01KN850 includes 16 x 32Gb SWL FC SFPs standard and no 1/10/40GbE SFPs • Part # 01KN854 includes 16 x 32Gb LWL FC SFPs standard and no 1/10/40GbE SFPs
Performance	4/8/10/16/32Gbps line speed, full duplex. Auto-sensing of 4/8/16/32Gbps port speeds depending on SFPs used, support for speed matching. 10Gbps port speeds with dedicated SFPs
Multi-chassis with UltraScale ICL ports	Up to 4,608 nonblocking 32Gbps FC ports; UltraScale ICL ports (32 for 8-slot or 16 per 4-slot chassis, optical QSFP). Up to 9 chassis in a full-mesh topology or 12 chassis in a core-edge topology
Chassis Bandwidth	DB800D: 12.2Tbps per chassis data rate + 4.096Tbps UltraScale ICL bandwidth (32×128Gbps) DB400D: 6.1Tbps per chassis data rate + 2.048Tbps UltraScale ICL bandwidth (16×128Gbps)
Chassis Power	DB800D: Minimum: requires 3 PSUs for 2+1 redundancy. Maximum 4 PSUs for 2+2 redundancy DB400D: Minimum: requires 2 PSUs for 1+1 redundancy
Cooling	DB800D: Requires 3 fan tray assemblies; DB400D: Requires 2 fan tray assemblies A fan assembly can be hot-swapped and should be replaced immediately in the event of a failure
Airflow	Non-port-side intake to port-side exhaust
Solution Availability	Designed to provide 99.999% uptime capabilities; hot-pluggable redundant power supplies, fans, WWN cards, processors, core switching, port blades, and optics; online diagnostics; nondisruptive firmware download and activation
Dimensions/Weight	DB400D: Height: 34.45cm (13.56in.); Width: 43.74cm (17.23in.); Depth: 61.05cm (24.04in.)/Weight: 68.95kg (152lbs) fully loaded; DB800D: Height: 61.23cm (24.11in.); Width: 43.74cm (17.23in.); Depth: 61.05cm (24.04in.)/Weight: 145.83kg (321.5lbs) fully loaded
Warranty	1-year hardware and 3-year firmware/Fiber Operating System (upgrades available)

ThinkSystem

Features	Lenovo B300
Target Workload	End-To-End IT Infrastructure
Total Bandwidth	192Gbps
Total Line-Rate Ports	24 Ports
Support Port Speed	8, 4, or 2 Gbps
Full Fabric / Access Gateway (NPIV)	Optional / Included
Frame-Based ISL Trunking	64 Gbps frame-based
Diagnostic Ports	Not Available
In-Flight Encryption and Compression	Not Available
10Gbps Native Fiber Channel	Not Available
Forward Error Correction (FEC)	Not Available
Buffer Credit Loss Recovery	Included
Integrated Routing	Not Available
Virtual Fabrics	Not Available
Warranty	1-year customer replaceable unit and on site service, next business day 9x5, optional service upgrades

ThinkSystem
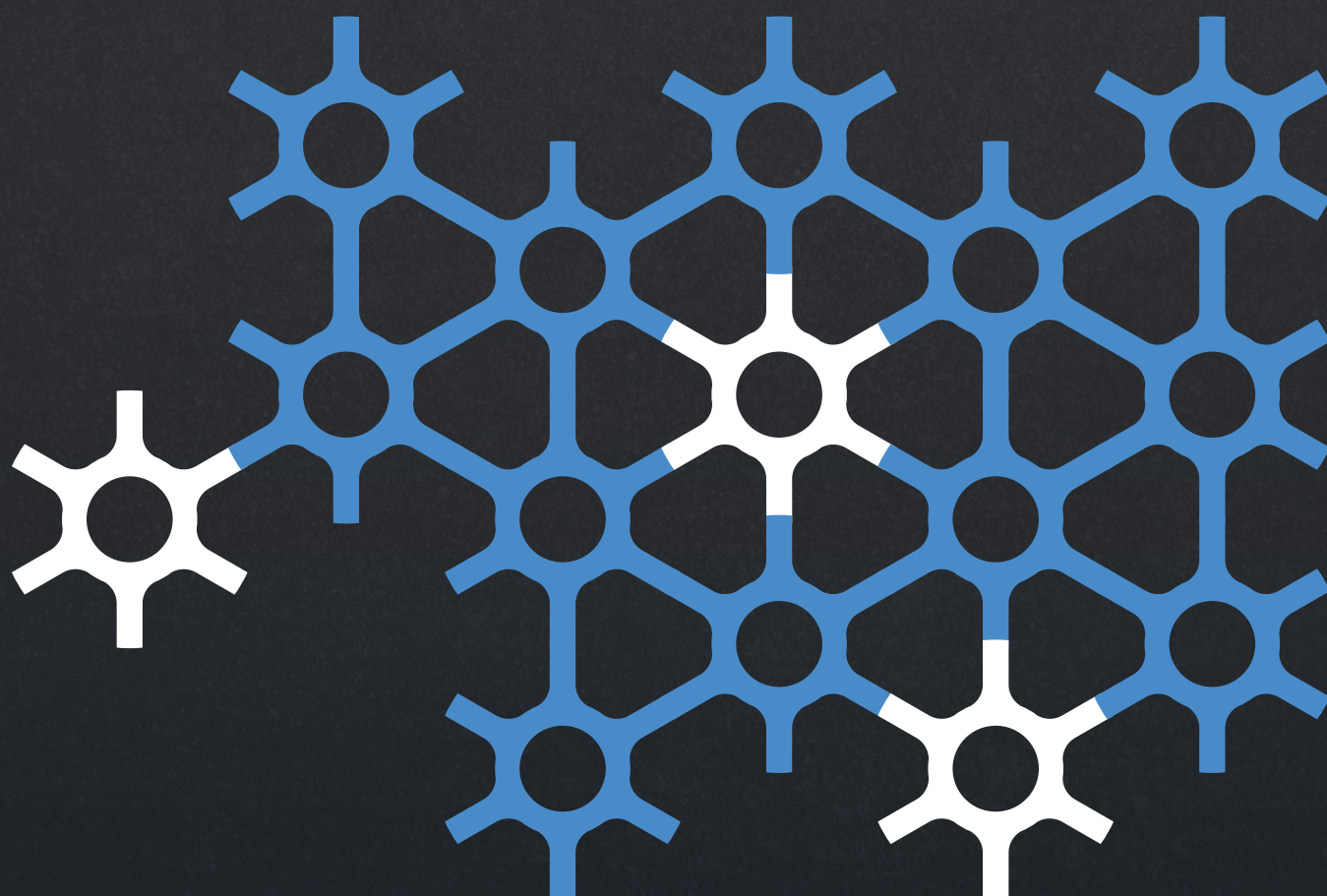
DAS

Capacity expansion for servers or Software Defined Storage

The Lenovo DAS portfolio provides traditional, D1212/D1224, as well as high density, D3284, storage for high capacity applications, such as digital media, big data, HPC and video surveillance, at an affordable price. At near limitless scalability with disruptive levels of performance, the DAS portfolio easily satisfies your ever-growing storage needs.

Components	Lenovo D12 Series (D1212 / D1224)
Target Workload	Big Data Business Analytics Video Surveillance Media Streaming Private Clouds File and Print Serving E-mail and Collaboration Databases SAP HANA Software-defined Storage Windows Storage Spaces
Form factor	Rack/2U
Number of controllers	2
Connectivity	3x 12 Gb SAS x4 (Mini-SAS HD SFF-8644) ports (A, B, C) per ESM
Drive bays	• D1212: 12 LFF hot-swap drive bays • D1224: 24 SFF hot-swap drive bays Intermix of SFF and LFF enclosures is supported
Drive technologies	SAS and NL SAS HDDs and SEDs; SAS SSDs. Intermix of HDDs, SEDs, and SSDs is supported within an enclosure, but not within a RAID array
Drive connectivity	Dual-ported 12 Gb SAS drive attachment infrastructure.
Storage capacity	• D1212: Up to 120 TB • D1224: Up to 48 TB
Host adapters	RAID adapters: • ThinkSystem RAID 930-8e (2-port 12 Gb SAS; RAID 0, 1, 10, 5, 50, 6, 60) • ServeRAID M5225 (2-port 12 Gb SAS; RAID 0, 1, 10, 5, 50; optional RAID 6, 60) Host bus adapters (non-RAID) • ThinkSystem 430-8e HBA (2-port 12 Gb SAS) • ThinkSystem 430-16e HBA (4-port 12 Gb SAS) • ThinkServer 9300-8e (2-port 12 Gb SAS) • ThinkServer 8885e (2-port 12 Gb SAS)
Cooling	Redundant cooling with two fans built into power and cooling modules (PCMs)
Power supply	Two redundant hot-swap 580 W AC power supplies built into PCMs
Warranty	3-year customer-replaceable unit, parts delivered limited warranty, next business day 9x5

Components	Lenovo High-Density D3284
Target Workload	Big Data Business Analytics Video Surveillance Private and Hybrid Clouds File and Print Serving Backup and Archiving Software-defined Storage Windows Storage Spaces
Form Factor	Rack/5U
Number of controllers	2
Connectivity	3x 12 Gb SAS x4 (Mini-SAS HD SFF-8644) ports (A, B, C) per controller
Drive Bays	2 drawers, 3 rows per drawer, 14 drives per row, for a total of 84 drives per enclosure
Drive Technologies	NL SAS HDDs and SAS SSDs. Intermix of HDDs and SSDs is supported within an enclosure/drawer, but not within a row
Drive Connectivity	Dual-ported 12 Gb SAS drive attachment infrastructure
Drives	• 4TB, 6TB, 8TB, 10TB and 12TB 7.2K rpm NL SAS HDDs • 400GB, 3.84TB and 7.68TB SSDs
Storage Capacity	Up to 1PB
Host Adapters	RAID controllers: • M5120 (8-port 6 Gbps SAS, 2x SFF-8088 connectors) • M5225 (8-port 12 Gbps SAS, 2x SFF-8644 connectors) • 9286CV-8e (8-port 6 Gbps SAS, 2x SFF-8088 connectors) • 9380-8e (8-port 12 Gbps SAS, 2x SFF-8644 connectors) Host bus adapters (non-RAID): • ThinkSystem 430-8e HBA (2-port 12 Gb SAS) • ThinkSystem 430-16e HBA (4-port 12 Gb SAS) • N2226 (16-port 12 Gbps SAS, 2x SFF-8644 connectors) • 9300-8e (8-port 12 Gbps SAS, 2x SFF-8644 connectors)
Host Operating Systems	Microsoft Windows Server 2012 R2 and 2016 Red Hat Enterprise Linux (RHEL) 6 and 7 SUSE Linux Enterprise Server (SLES) 11 and 12 VMware vSphere ESXi 5.5 and 6.0
Cooling	N+1 redundant cooling with five hot-swap fans
Power Supply	Two redundant hot-swap 2214 W AC power supplies
Hot-Swap Parts	Controllers, drives, sideplanes, power supplies, and fans
Warranty	3-year customer-replaceable unit, parts delivered limited warranty, next business day 9x5

ARCHIVE

Cost-effective long-term retention or infrequent access

IBM Tape Series stores digital information on tape. Tape is the perfect choice for storing long term data, such as system back-up, disaster recovery or archive. Using less energy and space, infinitely scalable and media life of up to 30 years all speak in favour of the IBM TS Series portfolio.

Features	IBM TS22XX Tape drives
Target Workload	Backup
Available Models	• LTO Ultrium 8 6160S8E • LTO Ultrium 7 6160S7E • LTO Ultrium 6 6160S6E
Number of Tape Drives	1
Tape Cartridge Capacity	1
I/O Stations	1
Physical Capacity	• LTO Ultrium 8: Up to 12TB (30TB with 2.5:1 compression) • LTO Ultrium 7: Up to 6TB (15TB with 2.5:1 compression) • LTO Ultrium 6: Up to 2.5TB (6.25TB with 2.5:1 compression)
Data Transfer Rate	• LTO Ultrium 8: Up to 300MBps • LTO Ultrium 7: Up to 300MBps • LTO Ultrium 6: Up to 160 MBps
Warranty	3-year limited warranty, customer replaceable unit and on site service, next-business-day 9x5, service upgrades available

Features	TS2900 Tape Autoloader
Target Workload	Backup
Available Models	• LTO Ultrium 8 6171S8R • LTO Ultrium 7 • LTO Ultrium 6
Drive Options	• Half-height LTO Ultrium 8: 6Gbps SAS • Half-height LTO Ultrium 7: 6Gbps SAS • Half-height LTO Ultrium 7: 6Gbps SAS • Half-height LTO Ultrium 6: 6Gbps SAS
Number of Tape Drives	1
Tape Cartridge Capacity	9
I/O Stations	1
Physical Capacity	• LTO Ultrium 8: Up to 135TB (270TB with 2.5:1 compression) • LTO Ultrium 7: Up to 54TB (135TB with 2.5:1 compression) • LTO Ultrium 6: Up to 22.5TB (56.25TB with 2.5:1 compression)
Data Transfer Rate	• LTO Ultrium 8: Up to 300MBps • LTO Ultrium 7: Up to 300MBps • LTO Ultrium 6: Up to 160 MBps
Warranty	1-year warranty, customer replaceable unit and on site, next business day 9x5, opt. service upgrade available

Features	IBM TS4300 Tape Library
Target Workload	Tape automation
Available Models	TS4300 Tape Library Model L3U
Drive Options	**LTO8:** FH Fiber – B1ET/01KP954, HH SAS – B1ES/01KP953, HH Fiber - B1ER/01KP952 **LTO7:** FH Fiber – B16Y/01KP938, HH SAS – B16X/01KP937, HH Fiber – B16W/01KP936 **LTO6:** FH Fiber – B16V/01KP935, HH SAS – B16U/01KP934, HH Fiber - B16T/01KP933
LTO Ulltrium Tape Cartridges	**LTO 8:** B1EW/01KP955 **LTO 7:** AS24/00NA025 **LTO 6:** ATNZ/00WF771
LTO Ultrium Cleaning Cartridge	AS1E/00NA017
Number of Drives/Cartridges	3 / 32
Number of Mail Slots	32
Physical Capacity (compressed/native)	**Cartridge capacity** **LTO 8:** 30TB/12TB **LTO 7:** 15TB/6TB **LTO 6:** 6.25TB/2.5TB
Data Transfer Rate	**LTO 8:** up to 360MBps **LTO 7:** up to 300MBps **LTO 6:** up to 160MBps
Operating Systems Support	Native device driver support is available for selected Lenovo servers and other Linux and Microsoft Windows open-system servers.
Warranty	3-year in-warranty coverage of select parts

IBM TS4300 Tape Library

NETWORKING

Lenovo has specialized in data center networking for more than 15 years. Our products are completely inter-operable with other vendor's switches. This allows us to build customized solutions and integrate them into a client's infrastructure easily.

Networking Portfolio at your fingertips

Take a 3D tour and get to know the broad portfolio by visiting lenovofiles.com/3dtours
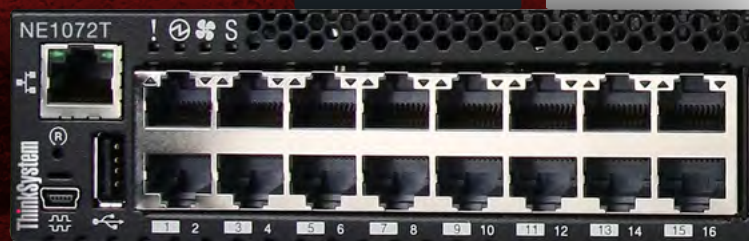
ThinkSystem NE1072T RackSwitch

ETHERNET RACKSWITCH (Top of Rack)

Deliver speed and intelligence to the edge of your network, where it's closer to your business and your users. The product line ranges from low-cost 1/10 GbE Layer 2 switches to 100 GbE Layer 3 switches, with all 10 GbE and faster switches supporting DCB/ROCE. The Cloud NOS (CNOS) for the Lenovo Top of Rack (ToR) switches is based on open, industry standards to enable support of the most common automation and orchestration applications for simple and tight integration into the data center ecosystem.

ThinkSystem NE10032 RackSwitch

Lenovo

Lenovo Models	G7028	G7052	NE0152T
Recommended for	Low Cost Management with Redundant Power Option; Small/Medium Business Access		Management with hot swap power/fans With Layer 3 Support; Small/Medium Business Access with Cloud Features
Performance	100% line rate performance, 128Gbps nonblocking switching throughput	100% line rate performance, 176Gbps nonblocking switching throughput	100% line rate performance, 176Gbps nonblocking switching throughput
Ports	24 x 1GbE RJ-45 4 x 10GbE SFP+	48 x 1GbE RJ-45 4 x 10GbE SFP+	48 x 1GbE RJ-45 4 x 10GbE SFP+
Virtualization	vLAG		vLAG VM-aware network automation and integration
Management Software Supported	Lenovo XClarity		vLenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism
Automation / API	-		Ansible, Chef, Puppet, Python, REST, Telemetry
Cooling	Three fixed fans. Rear (non-port side) to front (port side) airflow.	Three fixed fans. Rear (non-port side) to front (port side) airflow.	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed
Power	Single power, 50 - 60 Hz, 100 - 240 V AC, optional external Lenovo RackSwitch G7000 Redundant Power Supply with support for up to four RackSwitch G7028 switches	Single power, 50 - 60 Hz, 100 - 240 V AC, optional external Lenovo RackSwitch G7000 Redundant Power Supply with support for up to four RackSwitch G7052 switches	Redundant load-sharing hot-swap power modules, 50 - 60 Hz, 100 - 240 V AC auto switching per module
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available	3-year warranty, customer replaceable unit and on site, next business day 9x5, opt. service upgrade available

Lenovo Model	G8272
Recommended for	Rack leaf aggregation Low cost
Performance	100% line rate performance, 1.44Tbps nonblocking switching throughput
Ports	48 x 10GbE SFP+ 6 x 40GbE QSFP+
Virtualization	vLAG VM-aware network automation and integration
Management Software Supported	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism
Automation / API	Ansible, Chef, Puppet, Python, REST, Telemetry
Cooling	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed
Power	Dual load-sharing hot-swap internal power modules, 50 - 60 Hz, 100 - 240 V ac auto-switching per module
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

Lenovo Model	G8296
Recommended for	High density leaf aggregation
Performance	100% line rate performance, 2.56Tbps nonblocking switching throughput
Ports	86 x 10GbE SFP+ 10 x 40GbE QSFP+
Virtualization	vLAG VM-aware network automation and integration
Management Software Supported	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism
Automation / API	Ansible, Chef, Puppet, Python, REST, Telemetry
Cooling	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed to reduce power draw
Power	Dual load-sharing hot-swap internal power modules, 50 - 60 Hz, 100 - 240 V AC auto-switching per module
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

Features	Lenovo ThinkSystem NE10032 RackSwitch
Recommended for	High Speed Leaf / Spine Aggregation
Performance	100% line rate performance, up to 6.4Tbps switching throughput
Ports	32x QSFP+/QSFP28 ports
Virtualization	vLAG VM-aware network automation and integration
Management Software Supported	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism
Virtualization	vLAG VM-aware network automation and integration
Automation / API	Ansible, Chef, Puppet, Python, REST, Telemetry
Cooling	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed to reduce power draw
Power	Dual load-sharing hot-swap internal power modules, 50 - 60Hz, 100 - 240V AC auto-switching per module
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

ThinkSystem NE10032 RackSwitch

Features	Lenovo ThinkSystem NE1032 RackSwitch	Lenovo ThinkSystem NE1032T RackSwitch
Recommended for	Low price aggregation for cloud	RJ45 server connectivity
Performance	100% line rate performance, 1.44Tbps nonblocking switching throughput (full duplex), 1Bpps	100% line rate performance, 1.44Tbps nonblocking switching throughput (full duplex), 1Bpps
Ports	32x 10Gb Ethernet SFP+ ports	24x 10GBase-T + 8x 10Gb SFP+ Ethernet ports
Virtualization	vLAG VM-aware network automation and integration	vLAG VM-aware network automation and integration
Cooling	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed to reduce power draw	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed to reduce power draw
Power	Dual load-sharing hot-swap internal power modules, 50 - 60Hz, 100 - 240V AC auto-switching per module	Dual load-sharing hot-swap internal power modules, 50 - 60Hz, 100 - 240V AC auto-switching per module
Management Software Supported	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism
Automation / API	Ansible, Chef, Puppet, Python, REST, Telemetry	Ansible, Chef, Puppet, Python, REST, Telemetry
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

Features	Lenovo ThinkSystem NE2572 RackSwitch	Lenovo ThinkSystem NE1072T RackSwitch
Target Workload	High Speed Leaf Aggregation	RJ45 server connectivity
Performance	100% line rate performance, 3.66Tbps nonblocking switching throughput	100% line rate performance, 1.44Tbps nonblocking switching throughput
Ports	48x 10Gb Ethernet SFP + 6x 40Gb QSFP + Ethernet ports	48x 10GBase-T + 6x 40Gb QSFP+ Ethernet ports
Virtualization	vLAG VM-aware network automation and integration	vLAG VM-aware network automation and integration
Cooling	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed to reduce power draw	Front-to-rear or rear-to-front cooling, redundant hot-swappable field-replaceable fans with variable speed to reduce power draw
Power	Dual load-sharing hot-swap internal power modules, 50 - 60Hz, 100 - 240V AC auto-switching per module	Dual load-sharing hot-swap internal power modules, 50 - 60Hz, 100 - 240V AC auto-switching per module
Management Software Supported	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism	Lenovo XClarity VMware vCenter, vRealize OpenStack Nutanix Prism
Automation / API	Ansible, Chef, Puppet, Python, REST, Telemetry	Ansible, Chef, Puppet, Python, REST, Telemetry
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

SOFTWARE-DEFINED INFRASTRUCTURE

ThinkAgile CP Series

Deploying and maintaining traditional IT infrastructure requires significant skilled resources and complex coordination across multiple operational silos. With the ThinkAgile CP Series, a private cloud can be quickly deployed and will provide business users a premium cloud experience using on-premise hardware that resides securely within their company's own firewall.

ThinkAgile CP Series consists of an all-in-one turnkey composable private cloud platform with built-in end-to-end automation and resource orchestration. It provides a pool of virtualized compute, storage, and networking resources that automatically assemble to deliver what is needed for a specific application. ThinkAgile CP enables IT to accelerate service delivery, streamline operations, and improve overall execution, all with a lower total cost of ownership than public cloud.

ThinkAgile CP Series

Lenovo

Easy to Deploy

- Operational in one day at customer location
- Skills transfer delivered during onsite deployment visit

Easy to Use

- Self service deployment of app servers in just minutes
- Application Marketplace provides templates for OSes and apps

Easy to Grow

- Add compute and storage independently as needed
- Added capacity is auto discovered

ThinkAgile CP Website

How It Works

Lenovo & Cloudistics Partnership Video

FOCUS ON YOUR BUSINESS INSTEAD OF YOUR INFRASTRUCTURE

Lenovo ThinkAgile CP Series provides a new way to deliver applications and IT with a fully integrated, all-in-one composable cloud solution. It delivers the simplicity and automation of cloud infrastructure with enhanced security, high performance and efficient scalability, along with increased productivity and a lower TCO.

Simplicity of The Cloud
A Turnkey Solution

- Includes compute, storage, networking, software and a single point of contact for support via phone or chat session, with nothing else to buy, integrate, or troubleshoot
- Deploy applications and infrastructure from a single interface, with just a few mouse clicks
- Use IT generalists to configure, operate, and manage, freeing up valuable specialists
- Fully automate updates of the entire software and firmware stack (zero-touch)

Enhanced Security
Resides Behind Your Firewall

- Intelligently automate compliance and security best practices
- Apply micro segmentation via easy-to-use interface with no additional cost or expertise
- Incorporate integrated encryption-at-rest
- Isolate applications and networks with automated policies

High Performance and Efficient Scalability
Scale By Buying Only What You Need With A Resource Efficient Cluster-less Design

- Eliminate the overhead and complexity of clusters and file systems with a cluster-less design
- Delivers excellent performance even as the system scales up in size
- Group and fence off specific resources as required by business units
- Scale compute and storage independently

Enhanced Efficiency and Productivity
Uses A Single Interface For All Configuration And Management Tasks

- Use one portal to manage everything on multiple systems and multiple sites
- Deploy new applications and IT services on-demand in minutes with automated self-service
- Create a remote disaster recovery policy in five mouse clicks
- Leverage a repository of certified, hardened, vendor provided OS and application templates

Learn more at: www.Lenovo.com/data-center

Own your cloud experience with ThinkAgile CP Series

https://youtube/dwZuP0QTY9w

ThinkAgile CP Series

ThinkAgile SX for Microsoft Azure Stack

ThinkAgile SX for Microsoft Azure Stack is a turnkey, rack scale hybrid cloud solution optimized with resilient, high performing, and secure software-defined infrastructure. It's the perfect platform to:

- Deliver Azure cloud services from the security of your own data center.
- Enable rapid development and iteration of apps with on-premises deployment tools to help transform your organization.
- Unify app development across the hybrid cloud environment.
- Easily move apps and data across private and public clouds.

Lenovo and Microsoft have worked closely together to co-engineer the solution components – Azure Stack software and Lenovo software-defined infrastructure - so you can be confident the solution components will perform seamlessly.

Lenovo Models	ThinkAgile Entry SXM4400	ThinkAgile Enterprise Starter SXM4400	ThinkAgile Enterprise Full SXM6400
Target workloads	Virtualized workloads DevOps - Dev/Test/QA SQL as a service Enterprise backup IOT BigData/Analytics Containers		
Rack	9565-RCH (25U)	9565-RCJ (42U)	9565-RCK (42U)
Compute Nodes	4-8 – SR650 servers 2x – Intel Xeon (12C-28C) CPUs 384GB, 576GB, 768GB or 1,536GB RAM/node Mellanox CX-4 Dual Port 10/25GbE	4-16 - SR650 servers 2x – Intel Xeon (12C-28C) CPUs 384GB, 576GB, 768GB or 1,536GB RAM/node Mellanox CX-4 Dual Port 10/25GbE	16x - SR650 servers 2x – Intel Xeon (12C-28C) CPUs 384GB, 576GB, 768GB or 1,536GB RAM/node Mellanox CX-4 Dual Port 10/25GbE
Expandability	Per Microsoft - Node Expansion will be available in 3Q18. Then: Field upgradable to the Microsoft maximum of 12 servers All Servers in a Scale Unit (rack) must have identical configurations		
Management	XClarity Pro / 1x – SR630 2- Intel 3106 (8C) CPUs, 64GB Memory 1x 1Gbps Lenovo RackSwitch G8052		
Hyper-converged Storage	Hybrid – 14x 3.5" Storage Bays – 10x HDDs and 4x Cache Tier (SSD or NVMe) HDDs = 4TB, 6TB, 8TB, 10TB or 12TB Cache Tier = 4x 800GB or 1.6TB SSD or 3.2TB NVMe U.2 (hot plug) All Flash – 24x 2.5" Storage Bays – up to 20x SSDs and 4x NVMe Cache Tier SSDs = 10x, 15x or 20x 3.84TB Cache Tier = 4x 1.6TB NVMe or 4x 3.2TB NVMe U.2 (hot plug)		
Network	2x 25GbE Lenovo RackSwitch NE2572 (Compute/Storage traffic)c) Mellanox ConnectX-4 Dual Port 10/25GbE Network Controller		
Integrated Solution Software	Azure Stack - Integrated Solution Core technology includes: Windows Server 2016, Hyper-V, Storage Spaces Direct (S2D)		

ThinkAgile SX for Microsoft Azure Stack

ThinkAgile SX for MS Azure Stack

Intel® Xeon® processor Scalable family

HYPER-CONVERGED INFRASTRUCTURE

Lenovo's hyper-converged solutions leverage virtualization and software-defined storage to natively collapse core storage, compute, and networking functions into a single pool of resources that are deployed as a scale-out cluster.

ThinkAgile MX Certified Node

Microsoft WSSD solutions provide pre-engineered, validated Storage Spaces Direct solutions. ThinkAgile MX Certified Nodes take this a step further, packaging WSSD solutions into easy-to-use machine types. ThinkAgile MX Certified Node is an SR650 with a unique part number and its own configurator page to make ordering, firmware control, support and optional services easier and more convenient. ThinkAgile MX Certified Node includes:

- Fully validated and integrated hardware and firmware.
- Pre-loaded with Windows Server 2016 Datacenter edition, with Storage Spaces Direct enabled.
- ThinkAgile Advantage and Single Point of Support.
- Enterprise Support Services.
- Optional deployment services.

Lenovo Models	ThinkAgile MX Certified Node
Form Factor	2U (SR650)
Number of Nodes	2 - 16
Segment	Hyper-converged infrastructure - Microsoft WSSD solutions for Storage Spaces Direct
Processor	2x Intel Xeon Scalable family processors, 8-28 cores
Memory	192GB to 1,536GB in 24x slots (8, 16, 32 or 64GB – 24x or 12x+12x)
Network	Mellanox (RoCE) or Cavium (iWARP) 10/25GbE adapters, 25GbE recommended Lenovo recommends the ThinkSystem NE2572 RackSwitch
Drive bays	14x 3.5-inch (Hybrid) 24x 2.5-inch (All Flash)
Storage options - Capacity Tier	4x – 10x HDDs: 4TB, 6TB, 8TB, 10TB, 12TB (Hybrid) 4x – 20x SSDs: 3.84TB (All Flash)
Cache Tier	2x – 4x SSDs or NVMes – 800GB, 1.6TB or 3.2TB (Hybrid) 2x – 4x NVMes (U.2 – Hot Pluggable) – 1.6TB or 3.2TB (All Flash)
Systems management	Optional hardware management via Lenovo XClarity and resource management through Microsoft Windows Admin Center
License options	Included in Microsoft Windows Server 2016 and 2019 - Datacenter version
Support	Lenovo ThinkAgile Advantage support, where available. Standard hardware support elsewhere Lenovo Enterprise Software Support (ESS)

ThinkAgile

Discover the HX Series in high definition, from any angle with the Lenovo 3D Tour

intel XEON PLATINUM inside™

Intel® Xeon® processor Scalable family

Microsoft

ThinkAgile HX Series

Lenovo's ThinkAgile HX Series is an hyper-converged solution that fully integrates Lenovo x86 servers with core Nutanix software to provide:

- Application mobility.
- Distributed storage fabric and a hypervisor (all part of Nutanix Acropolis).
- System management software (Nutanix Prism to manage the cluster and virtual machines and Lenovo XClarity to manage the hardware resources).

ThinkAgile HX Appliances

Ideal for all virtual applications, HX Series appliances deliver extreme reliability, dependable security, extensive and predictable scalability, simplified management, and faster time-to-value. At the same time, it reduces total cost of ownership (TCO), which enables your IT to focus on innovation and deliver value to your business.

Lenovo Models	HX1320	HX1520-R
Target Workload	Remote Office/Branch Office (ROBO) Replication Target	
Form Factor	1U	2U
Processor	Up to 2x Intel® Xeon® Gold processors, up to 125W	2x Intel® Xeon® Platinum processors, up to 150W
Memory (TruDDR4 2666MHz)	128GB, 256GB, 384GB, 512GB, 768GB	192GB, 384GB
Drive Bays	4x 3.5"	12 or 14x 3.5"
SSD Options (Cache)	1-2x 480GB, 960GB, 1.92TB, 3.84TB	2x 900GB, 1.92TB
HDD Options	2-3x 4TB, 6TB, 8TB	10-12x 4TB, 6TB, 8TB
Network Interface	2-4x dual-port NIC 10Base-T 2-6x dual-port NIC 10GbE 0-2x dual-port NIC 25GbE	2-4x dual-port NIC 10Base-T 2-8x dual-port NIC 10GbE 0-2x dual-port NIC 25GbE
Hypervisor Supported	Nutanix Acropolis pre-loaded VMware ESXi (pre-loaded)	
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)	
License Options	Nutanix Starter, Pro or Ultimate	
Warranty	Lenovo 3-year or 5-year limited hardware warranty	

Discover the HX Series in high definition, from any angle with the
[Lenovo 3D Tour](#)

ThinkAgile

Intel® Xeon® processor Scalable family

intel **XEON** PLATINUM inside™

Lenovo Models	HX2320-E	HX2720-E
Target Workloads	Small and Medium Businesses	
Form Factor	1U	2U 4-node
Processor	Up to 2 x Intel® Xeon® Gold processors, up to 125W	
Memory (TruDDR4 2666MHz)	96GB, 192GB, 384GB	
Drive Bays per node	8x 2.5"	6x 2.5"
SSD Options	1-2x 480GB, 1-2x 960GB, 1-2x 1920GB	
HDD Options	6-7x 1TB, 6-7x 2TB	4-5x 1TB, 4-5x 2TB
Network Interface	2 x dual-port NIC standard 10GbE/10Base-T 2 x dual-port NIC optional 10GbE/10Base-T 0-2x dual-port NIC 25GbE	
Hypervisor Supported	Nutanix Acropolis pre-loaded VMware ESXi pre-loaded (optional)	
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)	
License Options	Nutanix Express	
Warranty	Lenovo 3-year or 5-year limited hardware warranty	

ThinkAgile HX2720-E

Intel® Xeon® processor Scalable family

Lenovo Models	HX3320	HX3520-G
Target Workloads	General Virtualization and VDI	
Form Factor	1U	2U
Processor	2 x Intel® Xeon® Platinum processors, up to 165W	2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2666MHz)	192GB, 384GB, 768GB, 1532GB	
Drive Bays	10-12x 2.5"	8-16x 2.5"
SSD Options (Hybrid)	2-4x 480GB, 2-4x 960GB, 2-4x 1920GB, 2-4x 3840GB	
SSD Options (All Flash)	12-14x 480GB, 12-14x 960GB, 12-14x 1920GB, 12-14x 3840GB	8-16x 480GB, 8-16x 960GB, 8-16x 1920GB, 8-16x 3840GB
HDD Options (Hybrid)	6-10x 1TB, 6-10x 2.4TB	6-14x 1TB, 6-14x 2TB
Network Interface	2 x dual-port NIC standard 10GbE/10Base-T 6 x dual-port NIC optional 10GbE/10Base-T	
	0-4x dual-port NIC 25GbE	0-2x dual-port NIC 25GbE
Hypervisor Supported	Nutanix Acropolis pre-loaded VMware ESXi pre-loaded (optional)	
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)	
License Options	Nutanix Starter, Pro and Ultimate	
Warranty	Lenovo 3-year or 5-year limited hardware warranty	

Lenovo Models	HX3720
Target Workloads	General Virtualization and VDI
Form Factor	2U 4-node
Processor	2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2666MHz)	192GB, 384GB, 768GB
Drive Bays	6x 2.5"
SSD Options (Hybrid)	2x 480GB, 2x 960GB, 2x 1920GB, 2x 3840GB
SSD Options (All Flash)	6x 480GB, 6x 960GB, 6x 1920GB, 6x 3840GB
HDD Options (Hybrid)	4x 1TB, 4x 2TB
Network Interface	2 x dual-port NIC standard 10GbE/10Base-T 2 x dual-port NIC optional 10GbE/10Base-T 0-4x dual-port NIC 25GbE
Hypervisor Supported	Nutanix Acropolis pre-loaded VMware ESXi pre-loaded (optional)
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)
License Options	Nutanix Starter, Pro and Ultimate
Warranty	Lenovo 3-year or 5-year limited hardware warranty

Intel® Xeon® processor Scalable family

ThinkAgile

Lenovo Models	HX5520	HX5520-C
Target Workloads	Big Data and High Capacity	
Form Factor	2U	2U
Processor	2 x Intel® Xeon® Platinum processors, up to 165W	1 x Intel® Xeon® Gold processor, up to 130W
Memory (TruDDR4 2666MHz)	192GB, 384GB, 768GB, 1532GB	64GB, 96GB
Drive Bays	12-14x 3.5"	
SSD Options (Hybrid)	2-4x 480GB, 2-4x 960GB, 2-4x 1920GB, 2-4x 3840GB	2x 480GB, 2x 960GB, 2x 1920GB, 2x 3840GB
SSD Options (All Flash)	-	2x 480GB, 2x 960GB
HDD Options	8-12x 2TB, 8-12x 4TB, 8-12x 6TB, 8-12x 8TB	10-12x 4TB, 10-12x 6TB, 10-12x 8TB
Network Interface	2 x dual-port NIC standard 10GbE/10Base-T 6 x dual-port NIC optional 10GbE/10Base-T	
	0-4x dual-port NIC 25GbE	0-2x dual-port NIC 25GbE
Hypervisor Supported	Nutanix Acropolis pre-loaded VMware ESXi pre-loaded (optional)	
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)	
License Options	Nutanix Starter, Pro and Ultimate	
Warranty	Lenovo 3-year or 5-year limited hardware warranty	

Lenovo Models	HX7520
Target Workloads	Databases and High Performance
Form Factor	2U
Processor	2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2400MHz)	192GB, 384GB, 768GB, 1532GB
Drive Bays	24x 2.5"
SSD Options (Hybrid)	4-8x 480GB, 4-8x 960GB, 16-24x 1920GB, 16-24x 3840GB
SSD Options (Flash)	16-24x 480GB, 16-24x 960GB, 16-24x 1920GB, 16-24x 3840GB
HDD Options	16-20x 1TB, 16-20x 2TB
Network Interface	2 x dual-port NIC standard 10GbE/10Base-T 6 x dual-port NIC optional 10GbE/10Base-T 0-4x dual-port NIC 25GbE
Hypervisor Supported	Nutanix Acropolis pre-loaded VMware ESXi pre-loaded (optional)
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)
License Options	Nutanix Starter, Pro and Ultimate
Warranty	Lenovo 3-year or 5-year limited hardware warranty

Intel® Xeon® processor Scalable family

Lenovo Models	HX7820 and HX7820 for SAP HANA*
Target Workloads	Databases and High Performance
Form Factor	4U
Processor	4 x Intel® Xeon® Gold or Platinum processors
Memory (TruDDR4 2666MHz)	Up to 48 DIMMs and up to 128 GB TruDDR.
Drive Bays	16x 2.5" and 8x AnyBay 2.5"
SSD Options (Hybrid)	-
SSD Options (Flash)	2 cache drives (NVMe PCIe SSDs) and from 4 to 10 capacity drives (SAS SSDs) in increments of 2 drives; or 4 cache drives (NVMe PCIe SSDs) and from 4 to 20 capacity drives (SAS SSDs) in increments of 2 drives.
HDD Options	-
Network Interface	2-8
Network Interface	2x or 4x 1/10 GbE RJ-45 or 10 GbE SFP+ network ports. 4x 10/25 GbE SFP28 network ports.
Hypervisor Supported	Nutanix Acropolis Hypervisor (factory pre-load).
Systems Management	XClarity Controller (XCC) Enterprise (Pilot 4 chip), proactive platform alerts, light path diagnostics, XClarity Provisioning Manager, XClarity Administrator and XClarity Pro, XClarity Integrators for Nutanix and vCenter Server (optional). XClarity Energy Manager (optional).
License Options	Nutanix Acropolis: Starter, Pro, and Ultimate editions. Nutanix Prism, Nutanix Calm (optional), Nutanix Flow (optional). *SAP HANA (licenses are purchased separately from SAP)
Warranty	Lenovo 3-year or 5-year limited hardware warranty

ThinkAgile HX7820

Intel® Xeon® processor Scalable family

ThinkAgile HX Solution for SAP HANA

For decades, customers have trusted their mission-critical workloads to run on Lenovo's ultra-reliable, high-performing platforms. Now Lenovo offers businesses with SAP deployments an opportunity to reap the efficiencies and cost savings of hyper-converged clusters. By migrating HANA workloads from complex, three-tiered legacy architectures to hyper-converged clusters, customers can enjoy the simplicity, scalability, and cost savings of hyper-converged infrastructure, which consolidates storage and compute into a single virtual pool with a single, simple management interface. The result is a streamlined data center with reduced overhead and maintenance. Customers with hyper-converged architectures who require real-time analytics to guide their business decisions also have the option to leverage their existing IT to deploy SAP HANA.

The new Lenovo ThinkAgile HX Series, optimized for SAP HANA workloads, delivers world record HANA speed in hyper-converged clusters. Developed in close collaboration with Lenovo's long-standing partners SAP and Nutanix, the ThinkAgile HX Solution for SAP HANA series offers customers the mission-critical performance and uptime of SAP HANA workloads on Lenovo's blazing-fast, ultra-reliable platforms, plus the data center efficiencies of Nutanix's industry-leading hyper-converged software.

ThinkAgile HX7820 for SAP HANA as appliance & ThinkAgile HX7821 for SAP Hana as certified node;

• Built on 4-socket HX7820 platform, optimized for SAP HANA.
• Best recipe firmware, plus pre-loaded Nutanix software, integrated and validated in Lenovo factory; SAP HANA software loaded on site.
• Lenovo ThinkAgile Advantage Single Point of Support and SAP solutions support.

ThinkAgile HX Certified Nodes

For customers who do not require pre-bundled Nutanix software licenses or deployment services, Lenovo offers another fully validated and certified choice: the ThinkAgile HX Certified Node, which includes:
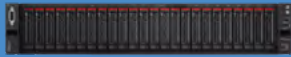
- Fully validated and integrated hardware and firmware, certified with Nutanix software.
- Pre-loaded Nutanix software for ready deployment, Nutanix software license obtained separately.
- ThinkAgile Advantage Single Point of Support for quick 24/7 problem reporting and resolution.
- Optional deployment services.

| Lenovo Models	ThinkAgile HX1321	ThinkAgile HX1521-R
Target Workloads	Remote Office/Branch Office (ROBO) Replication Target	
Form Factor	1U	2U
Processor	2 x Intel® Xeon® Gold processors, up to 85W	2 x Intel® Xeon® Platinum processors, up to 125W
Memory (TruDDR4 2666MHz)	64GB, 96GB, 128GB, 192GB, 256GB, 384GB	128GB, 192GB, 256GB, 384GB, 512GB, 768GB
Drive Bays	4x 3.5-inch	12 or 14 x 3.5-inch
SSD Options (Cache)	2x 480GB, 960GB, 1.92TB, 3.84TB	2x 480GB, 960GB, 1.92TB, 3.84TB
HDD Options	2x 4TB, 6TB, 8TB	6-12x 4TB, 6TB 6-10x 8TB
Network Interface	2-6x 10BASE-T/10GbE SFP+ 0-2x 25GbE SFP28 Ports	2-6x 10BASE-T/10GbE SFP+ 0-2x 25GbE SFP28 Ports
Hypervisor Supported	Nutanix Acropolis Hypervisor VMware ESXI	Nutanix Acropolis Hypervisor
Systems Management	Hardware Management via Lenovo XClarity or ThinkAgile XClarity Integrator for Nutanix Software Management via Nutanix Prism	
ThinkAgile Advantage*	Lenovo 3-year limited hardware warranty with Single Point of Support 24/7	

Intel® Xeon® processor Scalable family

Lenovo Models	ThinkAgile HX3321	ThinkAgile HX3521-G	ThinkAgile HX3721
Target Workloads	General Virtualization VDI		
Form Factor	1U	2U	2U 4-node
Processor	2 x Intel® Xeon® Platinum processors, up to 165W	2 x Intel® Xeon® Platinum processors, up to 125W	2 x Intel® Xeon® Platinum processors, up to 140W
Memory (TruDDR4 2666MHz)	128GB, 192GB, 256GB, 384GB, 512GB, 768GB, 1.536TB	128GB, 192GB, 256GB, 384GB, 512GB, 768GB, 1.536TB	192GB, 384GB, 768GB
Drive Bays	10-12x 2.5-inch	8-16x 2.5-inch	6x 2.5-inch
SSD Options (Hybrid)	2-4x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB	2-4x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB	2x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB
SSD Options (Flash)	6-12x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB	8-16x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB	4-6x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB 960GB, 1.6TB, 1.92TB, 3.84TB
HDD Options (Hybrid)	4-10x 1TB, 2TB	6-14x 1TB, 2TB	4x 1TB, 2TB
GPU Options	None	1-2x NVIDIA M60 1-2x NVIDIA M10	None
Network Interface	2-8x 10BASE-T/10GbE SFP+ 0-4x 25GbE SFP28 Ports	2-8x 10BASE-T/10GbE SFP+ 0-4x 25GbE SFP28 Ports	2-4x 10BASE-T/10GbE SFP+ 0-2x 25GbE SFP28 Ports
Hypervisor Supported	Nutanix Acropolis Hypervisor VMware ESXI		
Systems Management	Hardware Management via Lenovo XClarity or ThinkAgile XClarity Integrator for Nutanix Software Management via Nutanix Prism		
ThinkAgile Advantage*	Lenovo 3-year limited hardware warranty with Single Point of Support 24/7		

Lenovo Models	ThinkAgile HX5521	ThinkAgile HX5521-G	ThinkAgile HX7521
Target Workloads	Big Data High Capacity	Database HPC	
Form Factor	1U	2U	2U
Processor	2 x Intel® Xeon® Platinum processors, up to 165W	2 x Intel® Xeon® Gold processors, up to 125W	2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2666MHz)	128GB, 192GB, 256GB, 384GB, 512GB, 768GB, 1.5TB	64GB, 96GB	256GB, 384GB, 512GB, 768GB, 1.5TB
Drive Bays	12-14x 3.5-inch	12 or 14x 3.5-inch	24x 2.5-inch
SSD Options (Hybrid)	2-6x 480GB, 960GB, 1.92TB, 3.84TB	2x 480GB, 960GB, 1.92TB, 3.84TB	4-8x 480GB, 800GB, 960GB, 1.6TB, 1.92TB, 3.84TB
SSD Options (Flash)	6-14x 480GB, 960GB, 1.92TB, 3.84TB	6-14x 480GB, 960GB, 1.92TB, 3.84TB	12-24x 480GB, 800GB, 960GB, 1.92TB, 3.84TB
HDD Options	6-12x 4TB, 6TB 6-10x 8TB	6-12x 4TB, 6TB 6-10x 8TB	12-20x 1TB, 2TB
Network Interface	2-8x 10BASE-T/10GbE SFP+ 0-4x 25GbE SFP28 Ports	2-6x 10BASE-T/10GbE SFP+ 0-2x 25GbE SFP28 Ports	2-8x 10BASE-T/10GbE SFP+ 0-4x 25GbE SFP28 Ports
Hypervisor Supported	Nutanix Acropolis Hypervisor VMware ESXI		
Systems Management	Hardware Management via Lenovo XClarity or ThinkAgile XClarity Integrator for Nutanix Software Management via Nutanix Prism		
ThinkAgile Advantage*	Lenovo 3-year limited hardware warranty with Single Point of Support 24/7		

Intel® Xeon® processor Scalable family

Lenovo Models	HX7821 Certified Nodes and HX7821 Certified Nodes for SAP HANA*
Target Workloads	SAP HANA
Form Factor	4U
Processor	4x Intel Xeon Gold and Platinum processors, up to 205W
Memory	384GB, 768GB, 1.2TB, 1.5TB, 2.3TB, 3TB (TruDDR4 2400MHz)
Drive Bays	Up to 24 2.5-inch
SAS SSD Options	12-24x 1.6TB, 1.92TB, 3.84TB SAS SSDs
NVMe Options	2-4x 1.6TB or 3.2TB§ NVMe drives
10GBASE-T Ports	2-8
10GbE SFP+ Ports	2-8
P25GbE SFP28 Ports	2-4
Hypervisors Pre-loaded and Supported	Nutanix Acropolis Hypervisor
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)
Software Licenses	Nutanix Pro or Ultimate license obtained separately SAP HANA license obtained separately
Lenovo Deployment Services	Optional Lenovo Professional Services deployment of Nutanix software Optional Lenovo Professional Services of SAP HANA on site
Warranty	24/7 Lenovo ThinkAgile Advantage Single Point of Support in available countries Lenovo SAP Solution Support Lenovo 3-year, 4-year, or 5-year limited hardware warranty
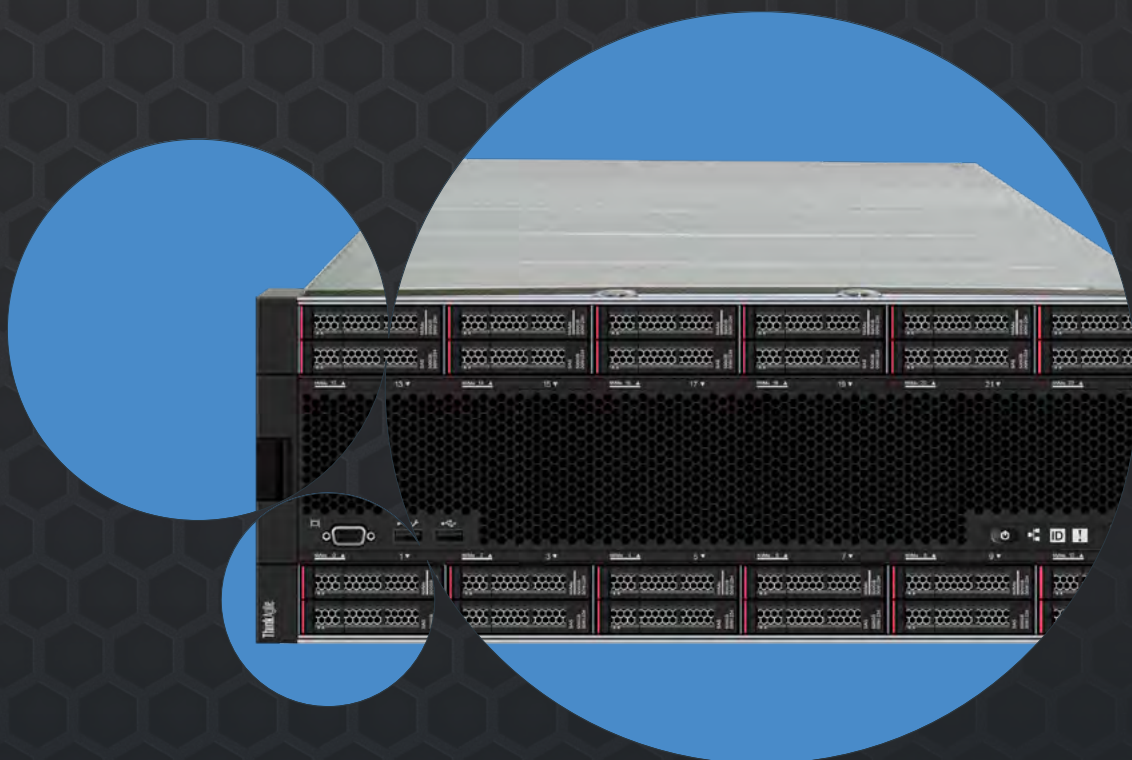
Discover the HX Series hot-spots in high definition, from any angle with the Lenovo 3D Tour

ThinkAgile HX7821

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THINKAGILE VX SERIES

The Lenovo ThinkAgile VX Series, powered by VMware and built on Lenovo ThinkSystem hardware, is a hyper-converged solution, optimized to provide the simplest way to bring a new VMware hyper-converged environment online.

ThinkAgile VX Series comes in pre-validated models targeting different workload scenarios and offers full configure-to-order (CTO) flexibility to meet any use-case. All systems are available in either all-flash or hybrid configurations.

ThinkAgile VX Appliance

The appliance comes pre-configured and pretested, ready to deploy with ease and speed. Versatile in its positioning, the VX appliance can be used as infrastructure for remote office/branch office (ROBO) and retail stores as well as virtual desktop infrastructure (VDI) and enterprise applications.
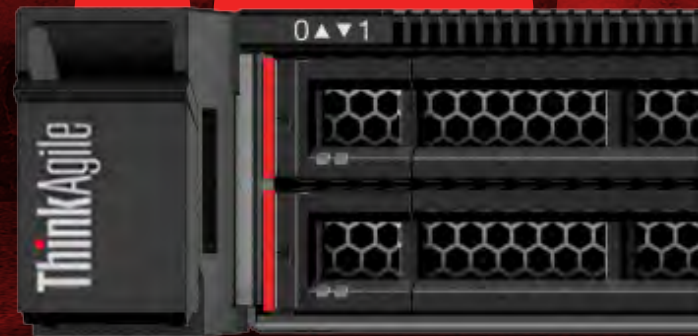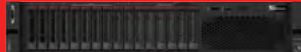
ThinkAgile VX3320

Lenovo Models	ThinkAgile VX2320
Target Workloads	Small and medium-sized business
Form Factor	1U
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2666MHz)	Up to 3TB in 24x slots, using 128GB DIMMs
GPU	None
Drive Bays	4x 2.5"
Cache Drive Options	1 or 2x 400GB, 800GB, 1600GB, 1.92TB
Number of Disk Groups	1
HDD Options	3 x 8TB, 10TB, 12 TB
Hypervisor Supported	VMware ESXi, vSAN pre-loaded
Systems Management	Lenovo XClarity (hardware) Lenovo XClarity Integrator for VMware Center (software)
License Options	VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; HCI Kit Advanced, HCI Kit Enterprise; 3- or 5-year support subscription
Warranty	3-year or 5-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades
Support	ThinkAgile Advantage*

*Check for availability in your country

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Lenovo Models	ThinkAgile VX3320	ThinkAgile VX3720	ThinkAgile VX5320-G
Target Workloads	Compute-Heavy, High-Performance Virtualization, and VDI		
Form Factor	1U	2U 4-Node	2U
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 165W	Up to 2 x Intel® Xeon® Platinum processors, up to 165W	Up to 2 x Intel® Xeon® Platinum processors, up to 125W with GPU
Memory (TruDDR4 2666MHz)	Up to 3TB in 24x slots, using 1.5TB max DIMMs	Up to 1TB in 16xc slots, using 1.5TB max DIMMs	Up to 3TB in 24x slots, using 1.5TB max DIMMs
GPU	None	None	1 or 2 Nvidia M10 or M60
Drive Bays	10x 2.5"	6x 2.5"	16x 2.5"
Cache Drive Options	1 or 2x 400GB, 800GB, 1600GB	1 or 2x 400GB, 800GB, 1600GB	1 or 2x 400GB, 800GB, 1600GB
Number of Disk Groups	1 or 2	1 to 3	1 to 4
SSD Options per group	900GB, 1.6TB, 3.84TB, 7.68TB 1.92TB, performance Optane 357GB and 750GB	900GB, 1.6TB, 3.84TB, 7.68TB	up to 7.68TB (SSD) or (2.4TB (HDD)
HDD Options per group	900GB, 1.2TB, 1.8TB, 2.4TB	900GB, 1.2TB, 1.8TB, 2.4TB	900GB, 1.2TB, 1.8TB, 2.4TB
Hypervisor Supported	VMware ESXi pre-loaded		
Systems Management	Lenovo XClarity (hardware) Lenovo XClarity Integrator for VMware Center (software)		
License Options	VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; 3- or 5-year support subscription		
Warranty	Lenovo 3-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades		
Support	ThinkAgile Advantage*		

*Check for availability in your country

Simplify IT Infrastructure with the Lenovo ThinkAgile VX Series

ThinkAgile VX3720

Intel® Xeon® processor Scalable family

Lenovo Models	ThinkAgile VX5520
Target Workloads	Big Data/Analytics, Email, Large Databases and other high-capacity storage needs
Form Factor	2U
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2666MHz)	Up to 3TB in 24x slots, using 128GB DIMMs
Drive Bays	12x 3.5"
Number of Disk Groups	1 or 2
Cache Drive Options	1 or 2x 400GB, 800GB, 1600GB SSDs
Capacity HDD Options (per drive group)	6x, 8TB, 10TB, 12TB
Hypervisor Supported	VMware ESXi pre-loaded
Systems Management	Lenovo XClarity (hardware) Lenovo XClarity Integrator for VMWare Center (software)
License Options	VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; 3- or 5-year support subscription
Warranty	Lenovo 3-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades
Support	ThinkAgile Advantage*

*Check for availability in your country

Lenovo Models	ThinkAgile VX7320-N	ThinkAgile VX7520
Target Workloads	Optimized for high-performance workloads, such as databases, e-mail and collaboration, and load-balancing clusters.	In-Memory Databases and other high-performance storage
Form Factor	1U	2U
Processor	Up to 2 x Intel Xeon Platinum processors, up to 165W	Up to 2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2666MHz)	Up to 1.5TB in 24x slots, using 64GB DIMMs	Up to 3TB in 24x slots, using 128GB DIMMs
Drive Bays	10x 2.5"	24x 2.5"
Cache and NVMe Drive Options	Up to 2x 375GB, 750GB SSD (NVMe only)	Up to 4x 400GB, 800GB, 1600GB SSDs
Number of Disk Groups	1 or 2	1 to 4
SSD Options per group	up to 1.5TB in 24 slots, using 64GB DIMM	5x 1.6TB, 3.84TB, 7.68TB
Capacity HDD Options per group	Not supported (All NVMe model)	5x 1.2TB, 1.8TB, 2.4TB
Hypervisor Supported	VMware ESXi pre-loaded	VMware ESXi pre-loaded
Systems Management	Lenovo XClarity (hardware) Lenovo XClarity Integrator for VMWare Center (software)	Lenovo XClarity (hardware) Lenovo XClarity Integrator for VMWare Center (software)
License Options	VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; 3-year or 5-year support subscription	VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; 3- year or 5-year support subscription
Warranty	Lenovo 3-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades	Lenovo 3-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades
Support	ThinkAgile Advantage (where eligible)	ThinkAgile Advantage*

*Check for availability in your country

Simplify IT Infrastructure with the Lenovo ThinkAgile VX Series

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ThinkAgile VX Certified Nodes

For customers who do not require VMware software licenses or deployment services, Lenovo offers another fully validated and certified choice: the ThinkAgile VX Certified Node, which includes:

- Integrated hardware and firmware, that is fully validated and certified with VMware vSAN.
- ThinkAgile Advantage Single Point of Support for quick 24/7 problem reporting and resolution.
- Optional vSphere and vSAN Licenses.
- Optional deployment services.

The ThinkAgile VX Certified Nodes provide customers with a simple and easy to order way, to obtain a fully certified VMware vSAN Solution with the additional flexibility of being able to use their existing licenses, while leveraging outstanding Lenovo platform reliability, performance, and ThinkAgile Advantage Single Point of Support.

Lenovo Models	ThinkAgile VX 1U Certified Node	ThinkAgile VX 2U Certified Node	ThinkAgile VX 2U4N Certified Node
Target Workloads	Ideal for small businesses up to large enterprises that need industry-leading reliability, management, and security, as well as maximizing performance and flexibility for future growth	For medium to large enterprises, and managed and cloud service providers, engineered to deliver high performance with 205W CPUs, low latency NVMe drives, and high-powered GPUs.	The innovative design of the D2 Enclosure provides the flexibility to meet varied needs in the modern data center.
Form Factor	1U	2U	2U, 4 nodes
Processor	Up to 2x Intel® Xeon® Platinum processors, up to 205W	Up to 2x Intel® Xeon® Platinum processors, up to 205W	Up to 2x Intel® Xeon® Platinum processors, up to 165W
Memory (2666MHz TruDDR4)	Up to 3TB in 24x slots, using 128GB DIMMs	Up to 3TB in 24x slots, using 128GB DIMMs	Up to 1TB in 16x slots, using 64GB DIMMs
Drive Bays	Up to 12 bays (including 4x AnyBay): LFF: 4x hot-swap SAS/SATA; SFF: 4x hot-swap AnyBay + 6x hot-swap SAS/SATA + 2x rear; or 8x hot-swap SAS/SATA or 10x U2.2 NVMe; plus up to 2x mirrored M.2 boot	Up to 24 hot-swap bays (including 4 or 8 AnyBay): LFF: 12x hot-swap SAS/SATA + 2x rear:; SFF: 8, 16 or 24 hot-swap SAS/SATA (up to 8x AnyBay): plus up to 2x mirrored M.2 boot (optional RAID 1)	Up to 24x (6x per node) hot-swap SFF SAS/SATA HDDs/SSDs; up to 8x (2x per node) hot-swap SFF NVMe SSDs
GPU	None	Up to 2 Nvidia M10 or M60	None
Hypervisor Supported	VMware ESXi	VMware ESXi	VMware ESXi
Systems Management	Lenovo XClarity (hardware) VMware vCenter and Lenovo XClarity Integrator for VMWare Center (software)	Lenovo XClarity (hardware) VMware vCenter and Lenovo XClarity Integrator for VMWare Center (software)	Hardware management via Lenovo XClarity and software management through VMware vCenter and Lenovo XClarity Integrator for VMware vCenter
License Options	Optional VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; HCI Kit Advanced, HCI Kit Enterprise; 3- or 5-year support subscription Deployment Services	Optional VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; HCI Kit Advanced, HCI Kit Enterprise; 3- or 5-year support subscription Deployment Services	Optional VMware vSphere 6 Standard, Enterprise or Enterprise Plus with Operations Management; VMware vSAN Standard, Advanced, Enterprise; HCI Kit Advanced, HCI Kit Enterprise; 3- or 5-year support subscription Deployment Services
Warranty	3-year or 5-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades	3-year or 5-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades	3-year or 5-year customer replaceable unit and on site service, next business day 9x5; optional service upgrades
Support	ThinkAgile Advantage*	ThinkAgile Advantage*	ThinkAgile Advantage*

*Check for availability in your country

Intel® Xeon® processor Scalable family

ENGINEERED SOLUTIONS

Accelerate cloud service delivery, extract insights from your data, and improve business outcomes with Lenovo Engineered Solutions. Developed to simplify configuration and deployment, Lenovo Engineered Solutions are designed, tested and certified to provide faster time-to-value and lower TCO. To meet your desired business outcomes, Lenovo partners with market leaders and technology leaders worked to develop high-performance, scalable offerings based on foundational ThinkSystem platforms and tested for enterprise applications matching your needs.

Cloud Solutions
to provide on-demand access to resources when you need it utilizing Microsoft-, VMware-, Red Hat- or SUSE-based offerings.

Big Data & Analytics
to make sure information and analysis flow seamlessly to support real-time insight and facilitate better decision making. Utilizing Apache Hadoop and Spark platforms from Cloudera, IBM, Hortonworks and MapR.

Business Applications
including SAP and Microsoft can benefit from improved productivity with Lenovo high-performance, scalable, extremely reliable hardware for business critical workloads.

Database Solutions
to take advantage of optimized data management built on top-tier software from Microsoft, Oracle and MongoDB.

High-Performance Computing & AI Solutions
powered by Lenovo platforms with Intel® technology can help you put your business at the forefront of tomorrow. Lenovo's high-performance, high-density infrastructure has made it a leader in HPC and provides an ideal platform for AI solutions with ANSYS, CONSOL and MPI.

Client Virtualization
with Citrix or VMware to help IT managers easily deploy, secure and manage their technology. Allows mobile and remote workers access to corporate resources from a variety of devices.

LENOVO DSS-G

Lenovo Distributed Storage Solution for IBM Spectrum Scale (DSS-G) is a software-defined storage (SDS) solution for dense scalable file and object storage suitable for high-performance and data-intensive environments. Enterprises or organizations running HPC, BigData or cloud workloads will benefit the most from the DSS-G implementation. DSS-G combines the performance of Lenovo latest generation servers, Lenovo D1224 and D3284 storage enclosures and industry leading IBM Spectrum Scale software to offer a high performance, scalable building block approach to modern storage needs.

Lenovo

Lenovo DSS-G

Project	DSS-G for IBM Spectrum Scale

Solution Definition	• 2 ThinkSystem SR650 Servers
	• Software: RedHat Enterprise Linux, IBM Spectrum Scale for DSS Standard or Data Management Edition
	• 2, 4 or 6 Storage Enclosures
	  • Lenovo D3284 12Gb JBOD (5U84) or 4TB, 6TB, 8TB, 10TB, 12TB NL-SAS
	• 1, 2, 4 or 6 Storage Enclosures
	  • Lenovo D1224 12Gb JBOD (2U24) or 0.3TB – 1.8TB SAS, 0.4TB – 3.8TB SSD
	• Connectivity: 10GbE/25GbE/40GbE/100GbE/FDR IB/EDR IB/OPA

Target Market	HPC, Big Data, Cloud, Media & Entertainment, Digital Surveillance
Target Workloads	HPC and Distributed File Systems
Value Proposition	High storage density and I/O performance with superior availability, reliability and resiliency

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LENOVO SERVICES

Maximize your ROI with award-winning services that ensure you have the best solution for every stage of your IT life-cycle

Lenovo offers a comprehensive portfolio of services that support the full life-cycle of a customer's Lenovo IT assets. Lenovo offers support at every stage; plan, fulfil, deploy, support, optimize, and end of life. Lenovo offer the expertise and services clients need to more accurately budget for IT expenses, deliver better service-level agreements and generate greater end-user satisfaction. With Lenovo Professional Services expertise we can help clients gain the most from their technology investment.

Solution Services

From the simple to the complex, our experts work with you to find the right solution for your one-of-a-kind strategic and business needs.

- Assessment Services.
- Design Services.

Implementation Services

Accelerate your time to productivity so you can focus on taking care of your customers and growing your business.

- Hardware Installation.
- Deployment Service.
- Factory Integrated Service.

Support Services

Around the world and around the clock, our experts are standing by 24x7 to safeguard your IT investment.

- Premier Support.
- Pre-configured Support.
- Managed Services.
- Technical Account Manager.
- Enterprise Server Software Support.

For more information on Lenovo Services please visit www.lenovo.com

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To learn more about Lenovo server, storage and enterprise services portfolio, contact your Lenovo representative or Business Partner, or visit lenovo.com/datacenter and lenovopress.com

Lenovo

ThinkSystem

ThinkAgile

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