

Different is better

Lenovo for the Data Centre

Portfolio Guide



Lenovo™



Intel® Xeon® Scalable processors

Last update: February 2018

ThinkSystem
ThinkAgile



Enabling the Future-Defined Data Centre

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 interoperate with any environment. And thanks to Lenovo Services expertise offered across every phase of the IT lifecycle, we can 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 4 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.
- **Highest satisfaction:** TBR's 2Q17 Corporate IT Buying & Customer Satisfaction Study reports Lenovo as Number 1 x86 vendor in customer satisfaction rating for the 8th consecutive study going back to January 2015.²
- **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 all new-portfolios, powered by the Intel® Xeon® processor Scalable family, with open, modular technologies designed to adapt easily and scale quickly, Lenovo's clients can excel now and accelerate into the future.

ThinkSystem

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



Intel® Xeon® Scalable processors

ThinkAgile

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



Different Innovates Better
Find out more.

¹ ITIC 2017-2018 Global Hardware, Server OS Reliability Report

² TBR Corporate IT Buying Behavior and Customer Satisfaction 2H2017 Study, December 2017

Contents

4 [Data Centre Infrastructure](#)

- 5 [Rack & Tower Servers](#)
- 11 [High-End](#)
- 14 [Beyond Blades](#)
- 17 [Dense-Optimised](#)
- 20 [Storage](#)
- 31 [Networking](#)
- 38 [Lenovo XClarity Administrator](#)

39 [Software-Defined Data Centre](#)

- 39 [Software-Defined Storage](#)
- 41 [Software-defined Infrastructure](#)
- 41 [ThinkAgile SX for Microsoft Azure Stack](#)
- 42 [ThinkAgile SX for Nutanix](#)

43 [Hyperconverged Infrastructure](#)

- 43 [ThinkAgile HX Series](#)
- 47 [ThinkAgile VX Series](#)

49 [Engineered Solutions](#)

- 50 [Lenovo DSS-G](#)
- 51 [Lenovo Services](#)

Lenovo™



ThinkSystem
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Intel® Xeon® Scalable processors

Data Centre Infrastructure

Continuing with its policy of designing exceptional products, Lenovo has recently announced ThinkSystem – the new brand for server, storage and networking platforms building solutions for the future-defined data centre.

Rack & Tower Servers

Flexible for even the most demanding workloads

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

Purpose-built for availability.

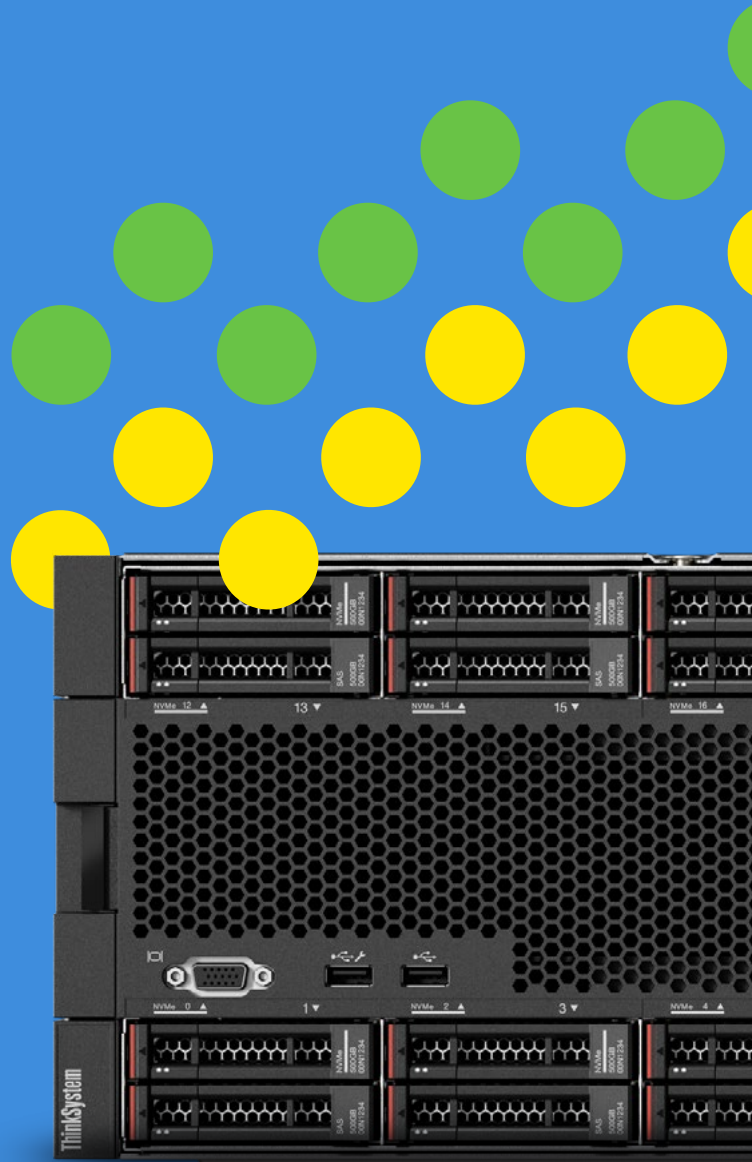
Consistently ranking #1 in ITIC's reliability survey and equipped with predictive failure alerts.

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 SR950



ThinkSystem

Intel® Xeon® Scalable processors

Rack Servers

Lenovo Models	ThinkSystem SR630	ThinkSystem SR650
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 Controller embedded management, XClarity Administrator centralised infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralised server power management	XClarity Controller embedded management, XClarity Administrator centralised infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralised server power Management
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 onsite service, next business day 9x5; opt. service upgrades	1-year and 3-year customer replaceable unit and onsite service, next business day 9x5; opt. service upgrades

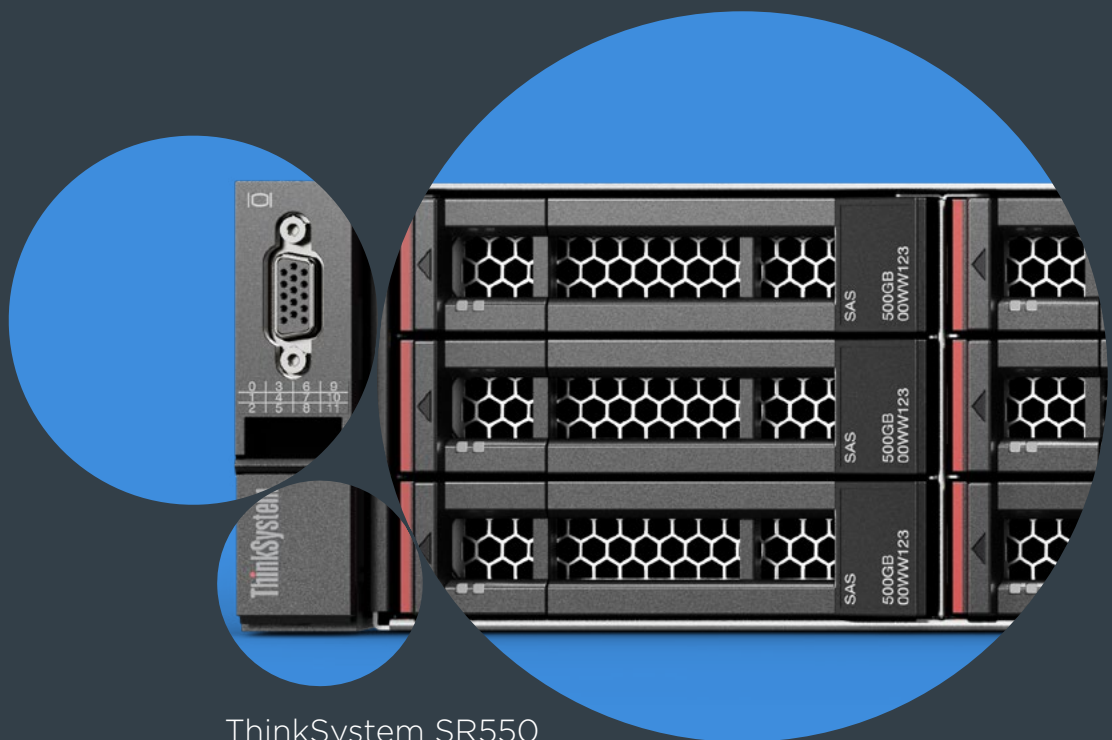


ThinkSystem

Intel® Xeon® Scalable processors

ThinkSystem SR650

Lenovo Models	ThinkSystem SR530	ThinkSystem SR550
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 Controller embedded management, XClarity Administrator centralised infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralised server power management	XClarity Controller embedded management, XClarity Administrator centralised infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralised server power management
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 onsite service, next business day 9x5, opt. service upgrades	1-year and 3-year customer replaceable unit and onsite service, next business day 9x5; opt. service upgrades



ThinkSystem SR550



ThinkSystem

Intel® Xeon® Scalable processors

Lenovo Models	ThinkSystem SR570	ThinkSystem SR590
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 onsite service, next business day 9x5, opt. service upgrades	1-year and 3-year customer replaceable unit and onsite service, next business day 9x5; opt. service upgrades



ThinkSystem SR570



ThinkSystem

Intel® Xeon® Scalable processors

Lenovo Models	System x3550 M5	System x3650 M5
Form Factor/Height	Rack/1U	Rack/2U
Processor	Up to 2x Intel® Xeon® processors E5-2600 v4 (22-core) up to 145W	Up to 2x Intel® Xeon® processors E5-2600 v4 (22-core) up to 145W
Memory	Up to 1.5TB in 24x slots, using 64GB DIMMs; 2400MHz	Up to 1.5TB in 24x slots, using 64GB DIMMs; 2400MHz
Expansion Slots	Up to 3x PCIe3.0 slots plus one dedicated RAID slot	Up to 8x PCIe 3.0 slots plus one dedicated RAID slot
Maximum Internal Storage	Up to 92TB with 7.68TB SAS SSDs	Up to 215TB with 10TB 3.5NL SAS or NL SATA and 7.68TB 2.5" SAS SSDs
RAID Support	12 Gb SAS/SATA RAID: RAID 0, 1, 10 with M1215 or M5210. Optional upgrade to RAID 5, 50 is available for 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/SATA non-RAID: N2215 HBA	12 Gb SAS/SATA RAID: RAID 0, 1, 10 with M1215 or M5210. Optional upgrade to RAID 5, 50 is available for 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/SATA non-RAID: N2215 HBA
Network Interface	Quad-port GbE with additional port GbE for dedicated remote management	Quad-port GbE with additional port GbE for dedicated remote management
Power Supply	Redundant 550W/750W/900W/1500W AC 80 PLUS® Platinum, or redundant 750W AC 80 PLUS® Titanium	Redundant 550W/750W/900W/1500W AC 80 PLUS® Platinum, or redundant 750W/1300W AC 80 PLUS® Titanium. 900W -48VDC option
OS Support	Microsoft Windows Server 2016 SUSE Linux Enterprise Server RedHat Enterprise Linux Server VMware ESXi Visit lenovopress.com/osig for more information.	Microsoft Windows Server 2016 SUSE Linux Enterprise Server RedHat Enterprise Linux Server VMware ESXi Visit lenovopress.com/osig for more information.
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5	3-year customer replaceable unit and onsite service, next business day 9x5

Lenovo Model	System x3250 M6
Form Factor/Height	Rack/1U
Processor	Intel® Xeon® processor E3-1220 v6 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 onsite service, next business day 9x5



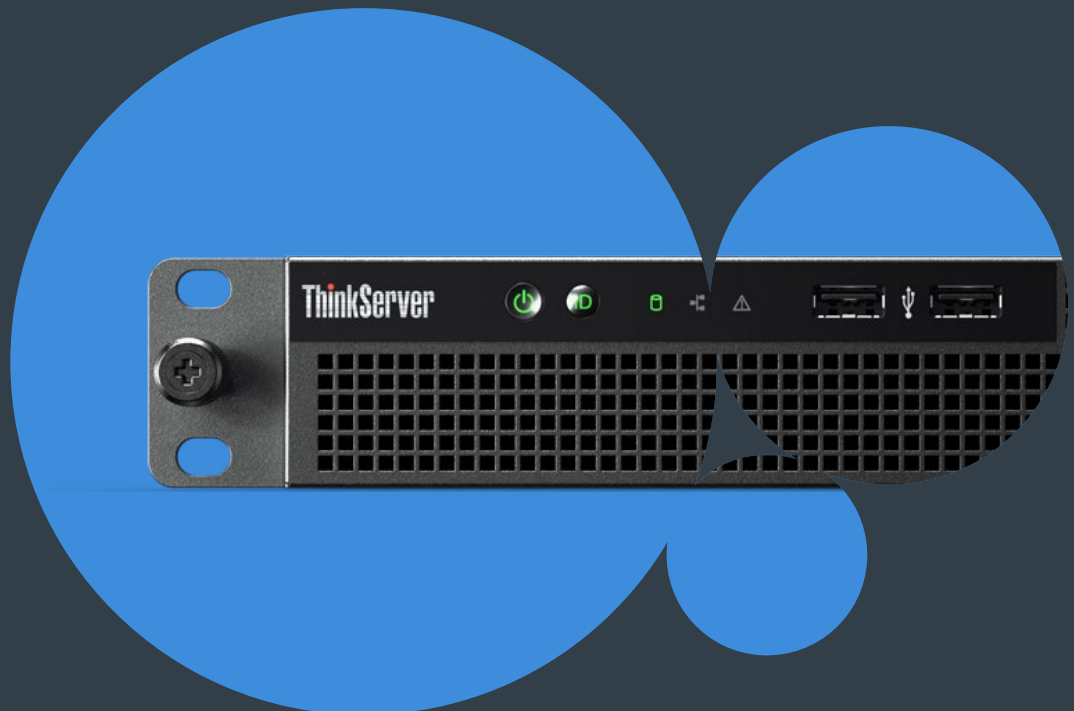
Intel® Xeon® processor

Lenovo Model	ThinkServer RS160
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, using 16GB DIMMs; 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 onsite service, next business day 9x5

Data Centre Portfolio at your fingertips



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



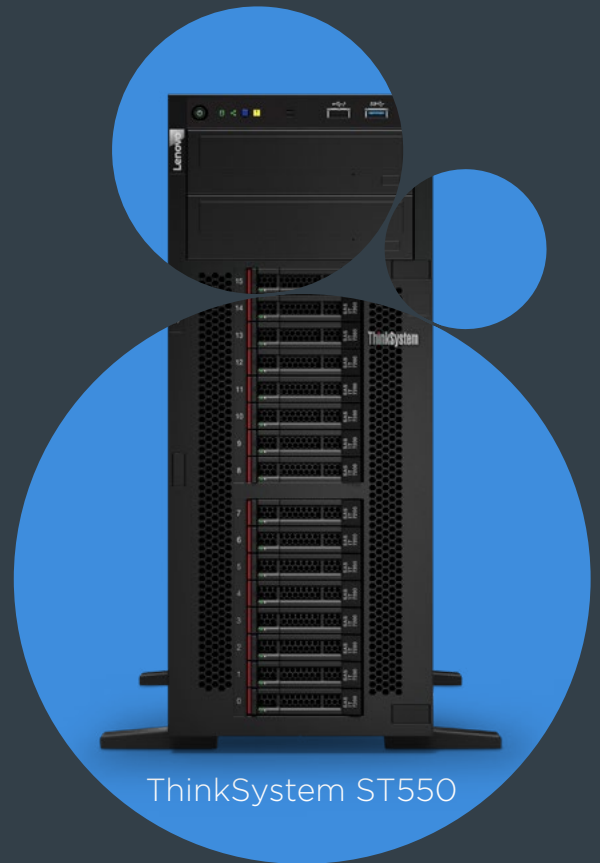
ThinkServer RS160



Intel® Xeon® processor

Tower Servers

Lenovo Models	ThinkSystem ST550
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 using 768GB DIMMs; 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 Controller embedded management, XClarity Administrator centralised infrastructure delivery, XClarity Integrator plugins, XClarity Energy Manager centralised server power management
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 onsite service, next business day 9x5



ThinkSystem ST550

Lenovo Models	ThinkServer TS150	ThinkServer TS460
Form Factor/Height	Tower/4U	Tower/4U
Processor	Intel® Xeon® processor E3-1220 v6 series or Core i3 or Pentium or Celeron (4-core), up to 2400MHz	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 12i SW RAID 0/1/10/5 std; opt. PCIe ThinkServer RAID 520i 12Gb HW RAID 0/1/10/5	ThinkServer RAID 12i 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 onboard 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 onsite service, next business day 9x5	1-year or 3-year (model dependent) customer replaceable unit and onsite service, next business day 9x5

High End

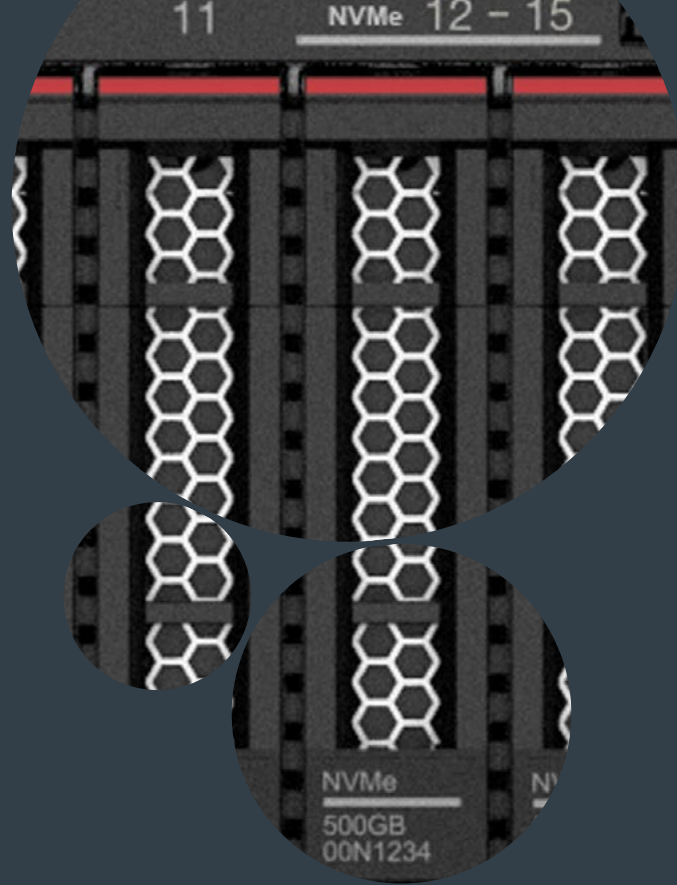
Designed with your mission-critical workloads in mind

Lenovo's high-end rack servers are suited for heavy vertical workloads, virtualisation and legacy system replacements. The newly announced 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 virtualised server workloads.

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

Real time insights for real time business. 31% better TCO than competitors for analytics, leadership benchmarks, massive onboard 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

Lenovo Model	ThinkSystem SR850
Form Factor/Height	Rack/2U
Processor	2x or 4x Intel® Xeon® Gold or Platinum processors, up to 28x cores per processor, up to 165W
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 onsite service, next business day 9x5; opt. service upgrades

¹ 2017-2018 Global Hardware, Server OS Reliability Report, ITIC; December 2017.



Intel® Xeon® Scalable processors

Lenovo Model	ThinkSystem SR860
Form Factor/Height	Rack/4U
Processor	2x or 4x Intel® Xeon® Gold or Platinum processors, up to 28x cores per processor, up to 165W
Memory	Up to 6TB in 48x slots, using 128GB DIMMS; 2666MHz TruDDR4
Expansion Slots	Up to 13x PCIe with multiple riser options
Maximum Internal Storage	Up to 16x 2.5" storage bays supporting SAS/SATA HDD and SSDs, or up to 8x 2.5" NVMe drives; plus up to 2x mirrored M.2 boot
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/2000W AC 80 PLUS® Platinum
OS Supported	Microsoft Red Hat SUSE VMware Visit lenovopress.com/osig for more information
Warranty	1- year and 3-year customer replaceable unit and onsite service, next business day 9x5; opt. service upgrades

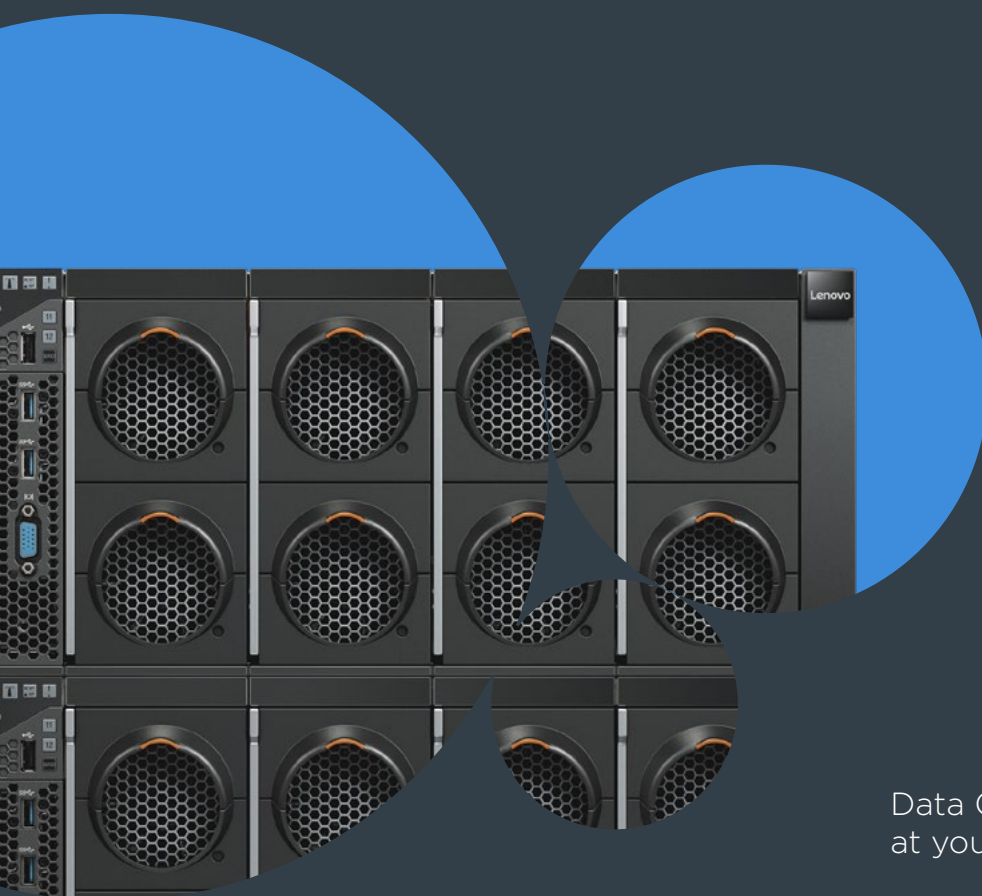
Lenovo Model	ThinkSystem SR950
Form Factor/Height	Rack/4U
Processor	2x, 4x or 8x Intel® Xeon® Platinum processors, up to 28x cores per processor, up to 205W, or 2x or 4x Intel® Gold processors
Memory	Up to 12TB in 96 slots, using 128GB DIMMS; 2666MHz TruDDR4
Expansion Slots	Up to 14x rear PCIe, (11x 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 onsite service, next business day 9x5; opt. service upgrade



Intel® Xeon® Scalable processors

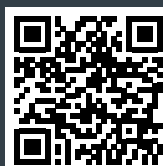
ThinkSystemSR950

Lenovo Models	System x3850 X6	System x3950 X6
Form Factor/Height	Rack/4U	Rack/8U
Processor	Up to 24 cores per processor	Up to 24 cores per processor
Memory	Up to 6TB in 96x slots, using 64GB DIMMs; 1866MHz TruDDR4 / 1600MHz TruDDR3	Up to 12TB in 192x slots, using 64GB DIMMs; 1866MHz Tru DDR4 / 1600 MHz DDR3
Expansion Slots	Up to 11 PCIe; Gen3 (up to 11), Gen2 (up to 2), up to five x16 slots; up to six full-length, full-height	Up to 22 PCIe; Gen3 (up to 22), Gen2 (up to 4), up to ten x16 slots; up to 12 full-length, full-height
Maximum Internal Storage	Up to 61.44TB with 8x 3.84TB 2.5" SAS SSDs, Up to 16TB with 8x 2TB 2.5" NL SAS HDDs, or Up to 8TB with 4x 2TB 2.5" PCIe NVMe SSDs	Up to 122.9TB with 16x 7.68TB 2.5" SAS SSDs, Up to 32TB with 16x 2TB 2.5" SAS HDDs, Up to 16TB with 8x 2TB 2.5" PCIe NVMe SSDs
RAID Support	12 Gb SAS/SATA RAID 0, 1, or 10 with ServeRAID M5210; optional upgrades to RAID 5 or 50 are available (zero-cache; 1 GB non-backed cache; 1 GB or 2 GB flash-backed cache). Upgrades to RAID 6 or 60 available for M5210 with 1 GB or 2 GB upgrades	12 Gb SAS/SATA RAID 0, 1, or 10 with ServeRAID M5210; optional upgrades to RAID 5 or 50 are available (zero-cache; 1 GB non-backed cache; 1 GB or 2 GB flash-backed cache). Upgrades to RAID 6 or 60 available for M5210 with 1 GB or 2 GB upgrades
Network Interface	One ML2 Socket; ML2 card choices include: 4 x 1GbE copper or 2 x 10GbE SFP+ or 2 x 10GbE 10BaseT; Dedicated 1GbE on-board management port	Two ML2 Sockets; ML2 card choices include: 4x 1GbE copper or 2 x 10GbE SFP+ or 2 x 10GbE 10BaseT; Two dedicated 1GbE onboard management ports
Power Supply	Up to four redundant hot swap 900W or 1400W AC 80 PLUS® Platinum or -48V 750W DC	Up to Eight redundant hot swap 900W or 1400W AC 80 PLUS® Platinum, or -48V 750W DC
OS Support	Microsoft Windows Server 2016 Red Hat Enterprise Linux Server SUSE Linux Enterprise Server VMware ESXi Visit lenovopress.com/osig for more information	Microsoft Windows Server 2016 SUSE Linux Enterprise Server Red Hat Enterprise Linux Server VMware vSphere Hypervisor Visit lenovopress.com/osig for more information
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5	3-year customer replaceable unit and onsite service, next business day 9x5



System x3950 X6

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ThinkSystem SN850

Lenovo

Beyond 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 virtualisation, cloud, database and analytics for clients across banking / finance, education, government, telecom and manufacturing.

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 centre 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

Intel® Xeon® Scalable processors

Lenovo XClarity

Lenovo Models	ThinkSystem SN550	Flex System x240 M5
Form Factor	Standard-width flex system compute node Up to 14 per chassis	Standard-width flex system compute node Up to 14 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 two Intel® Xeon® processor E5-2600 v4 product family CPUs: from 4 cores to 22 cores; core speeds from 1.7 GHz to 3.5 GHz; up to 55 MB L3 cache. Two QPI links up to 9.6 GT/s each. Up to 2400 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 1.5TB in 24 slots, using 64GB DIMMs; 2400MHz
Expansion Slots	Up to 2x PCIe x16 I/O Adapters	Up to 2 PCIe Gen 3 Flex Adapters Gen 2 with up to 2 x16 slots and 2 x8 slots and 2 I/O adapters
Maximum Internal Storage	Up to 2x 2.5" storage bays supporting SAS/SATA HDDs/SSDs, or NVMe/U.2 SSDs; plus 1x or 2x (mirrored) M.2 (SATA) fixed boot drives (opt. RAID 1)	Up to 7.68TB by using 3.84TB 2.5" SATA SSDs or up to 4TB by using 2 TB NL SATA HDD Up to 4TB by using 2 TB NVMe PCIe SSDs Up to 3.2TB by using 800 GB 1.8-inch SSDs
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)	RAID -0, -1, 1E optional -5
Network Interface	4x 10GbE LOM with fabric connector; or 2x 10GbE, 4x 10GbE or converged network I/O Adapters	LOMless, 2 PCIe I/O Adapter card slots supporting 1/10/40Gb Ethernet, Fibre Channel or Infiniband adapters
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 2016 Red Hat Enterprise Linux SUSE Linux Enterprise Server VMware ESXi Visit lenovopress.com/osig for more information
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5	3-year customer replaceable unit and onsite service, next business day 9x5



ThinkSystem SN550



Intel® Xeon® Scalable processors

Lenovo Model	ThinkSystem SN850
Form Factor	Double-width flex system compute node Up to 7 per chassis
Processor	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 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 4x PCIe x16 I/O Adapters
Maximum Internal Storage	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); opt. hardware basic RAID (12Gbps SAS/SATA); opt. hardware advanced RAID (12Gbps SAS/SATA 2GB flash-backed cache)
Network Interface	4x 10GbE LOM with fabric connector; or 2x 10GbE, 4x 10GbE or converged network I/O Adapters
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 onsite service, next business day 9x5

ThinkSystem SN850

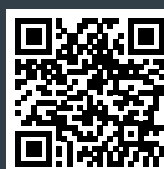


Data Centre Portfolio
at your fingertips



ThinkSystem

Intel® Xeon® Scalable processors



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Dense-Optimised

Ready to adapt when you are

Engineered to excel at a wide range of workloads and flexible architectures for evolving needs, Lenovo's high-density systems are powerful platforms for compute-intensive workloads. Ranging from technical computing, to grid deployments, to analytics workloads, to large-scale cloud and virtualisation infrastructures - all in more cost and energy-efficient ways than ever before.

More in less space. Innovative chassis enables greater density for hyperconverged workloads.

Ready to adapt. Stackable node design that supports GPUs and specialised 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

Lenovo

Data Centre Portfolio
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ThinkSystem

Intel® Xeon® Scalable processors

Lenovo Model	ThinkSystem SD650
Form Factor/Height	Full-wide 1U tray (6 per n1200 Enclosure)
Processor	2x Intel® Xeon® Bronze, Silver, Gold or Platinum processors, up to 245W
Memory	Up to 768GB in 12x slots, using 64GB LRDIMMs; 2667MHz 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	Onboard 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 onsite service, next business day 9x5, optional service upgrades

Lenovo Model	ThinkSystem SD530
Form Factor/Height	2U Enclosure; 4 nodes per enclosure
Processor	1x or 2x Intel® Xeon® Bronze, Silver, Gold or Platinum processors, up to 165W
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 24x (6x per node) HS SFF SAS/SATA HDDs/SSDs; up to 8x (2x per node) HS SFF NVMe SSDs
Network Interface	Opt. 8-port EIOM 10Gb SFP+ (two ports per node); Opt. 8-port EIOM 10GbBaseT 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 centralised infrastructure delivery XClarity Integrator plugins XClarity Energy Manager centralised 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 onsite service, next business day 9x5, optional service upgrades



Intel® Xeon® Scalable processors

Lenovo Model	NeXtScale nx360 M5
Form Factor/Height	Half-wide 1U compute node
Processor	2x Intel® Xeon® processors E5-2600 v4 series
Memory	Up to 512GB in 16x slots, using 32GB DIMMs; 2400MHz DDR4
Chassis Support	NeXtScale n1200 6U Enclosure 12 nodes per enclosure
Local Storage	Choice of one 3.5" hard disk drive (HDD), two 2.5" HDDs/solid-state drives (SSDs) (simple swap), or four 1.8" SSDs. Optional two front hot-swap 2.5" HDDs. Optional support for SD Media Adapter
Storage Native Expansion (NeX) Tray	7x 3.5-inch SAS/SATA HDDs
Internal RAID	Onboard SATA controller with RAID options
USB Ports	One internal USB port and two USB 1.1 ports for local console connectivity with KVM connector
Input/Output	One ML2 slot for Infiniband FDR, 10GbE, 25GbE, 40GbE, two 10GbE, one PCIe (x16 PCI Express 3.0)
Systems Management	1x shared port with 1GbE per 1/2 wide server
OS Support	SUSE Linux Enterprise Server Red Hat Enterprise Linux Microsoft Windows Server VMware ESXi Visit lenovopress.com/osig for more information
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5

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Intel® Xeon® processor

Storage

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

The Storage Portfolio
at your fingertips



Take a 3D tour and get to know the broad portfolio. Visit www.lenovofiles.com/3dtours



Lenovo ThinkSystem DS2200

SAN

Shared storage delivering high performance access to critical data

ThinkSystem DS-Series

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

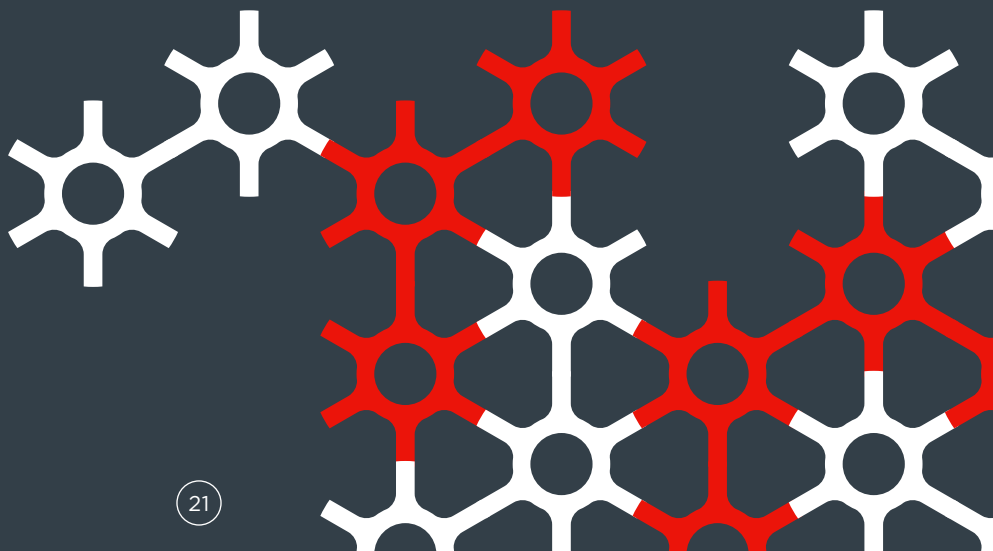
Affordable. Industry leading in both price/performance and cost/GB without compromise.

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

Fast. Up to 600k IOPS at less than 1 millisecond latency.

ThinkSystem

Lenovo Models	Lenovo ThinkSystem DS2200	Lenovo ThinkSystem DS4200	Lenovo ThinkSystem DS6200
Form Factor/Height	2U	2U	2U
Drive Bays	12x 3.5"; 24x 2.5"	12x 3.5"; 24x 2.5"	24x 2.5"
Maximum Internal Storage	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 Fibre 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 onsite service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades



Lenovo V Series

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

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

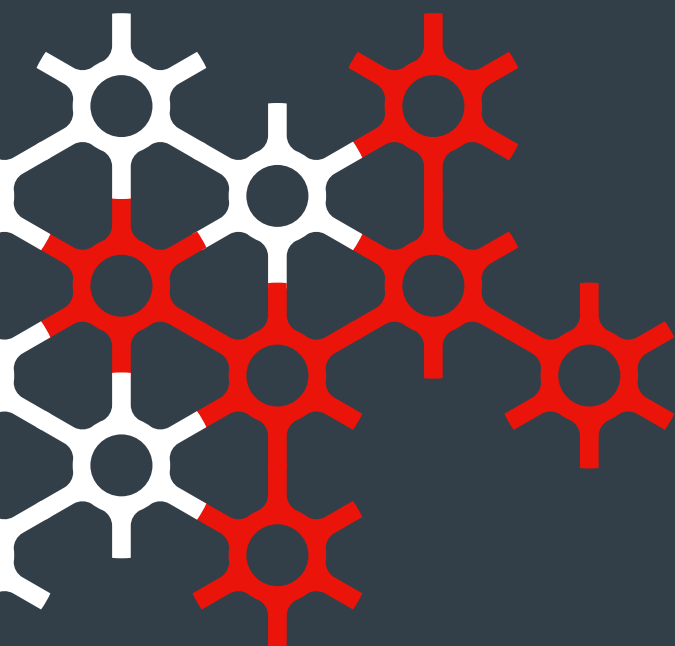
Lenovo Models	Lenovo Storage V3700 V2	Lenovo Storage V5030
Connectivity (Standard)	12Gb SAS 1Gb iSCSI	10 Gb iSCSI
Connectivity (Optional)	16GbFC 12Gb SAS 1Gb iSCSI 10Gb iSCSI / FCoE	16 Gb FC 12 Gb SAS 1 Gb iSCSI 10 Gb iSCSI
Cache (per controller)	16GB	32GB
Max. number of drives	240 drives (up to 9 expansions)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

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

IBM Storwize Storage Solutions

IBM Storwize V7000 Storage System is a virtualised, 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
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 Virtualisation	Yes
Thin Prov.	Yes
Data Migration	Yes
FlashCopy	Yes
Remote Mirroring	Yes
Easy Tier	Yes
Encryption	Yes
System Clustering	Yes
External Virtualisation	Yes
Warranty	3-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades



Lenovo Fibre Channel Switches & Directors

Combining Lenovo Servers and Lenovo Storage with Lenovo Fibre 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 maximises uptime. Designed for high availability and reliability.

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



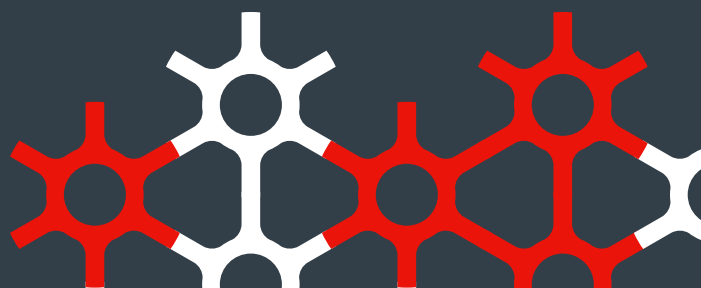
Lenovo ThinkSystem DB610S

Features	Lenovo ThinkSystem DB610S
Base Models*	6559HC3/D3C - 8ports with no transceivers 6559HC2/D2B - 8ports with 16Gbps SWL FC transceivers 6559HC1/D1A - 24ports with 16Gbps SWL FC transceivers, plus Enterprise SW Bundle
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
Fibre 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 Licence with no transceivers Part #01KP863 8-Port SW Licence with 8 x 16Gbps SWL FC transceivers Part #01KP862
Performance	Fibre 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/Fibre Operating System (upgrades available)

*Part of the Enterprise Bundle

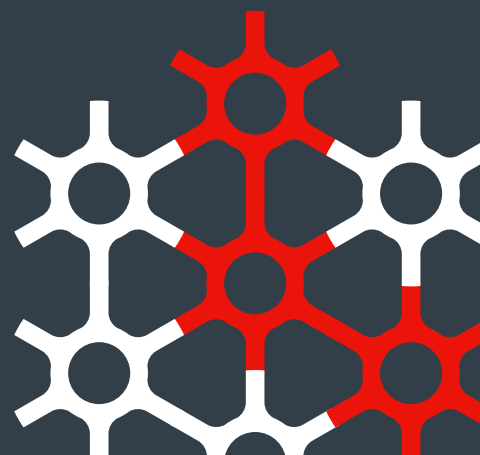
Features	Lenovo ThinkSystem DB620S
Base Models	6415HC1/G11- 24 ports with 32Gbps SWL FC transceivers 6415HC2/G2A- 48 ports with 32Gbps SWL FC transceivers, plus Enterprise Software Bundle
Fibre Channel Ports	Minimum of 24 ports and maximum of 64 ports configuration. Both models reach 64 ports through one 4-port QSFP PoD, providing 16-port increments through a Q-Flex licence . Also supports: E_Ports, F_Ports, D_Ports, EX_Ports
Port on Demand Options	12-Port Software Licence (12 transceivers 32Gbps) Part #01KN760 QSFP+ Port Software Licence (4 transceivers 128Gbps) Part #01KN762 QSFP+ Port Software Licence (no transceivers) Part # 01KN767
Performance	Fibre 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 licence 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, midmount 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/Fibre Operating System (upgrades available)

*Part of the Enterprise Bundle



Features	Lenovo ThinkSystem DB400D/DB800D
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.
Fibre 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 <ul style="list-style-type: none"> Part # 01KN845 includes 48-port licence , no optics Part # 01KN848 includes 48-port licence and 48 x 32Gbps SWL SFPs
Extension Blades	SX6 external blade provides FC extension (16x32Gbps FC ports) and IP extension over IP networks (16x1/10GbE and 2x40GbE ports). <900ns (including FEC) and 2.7 µs, cut-through routing <ul style="list-style-type: none"> 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. Autosensing 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 (32x128Gbps) DB400D: 6.1Tbps per chassis data rate + 2.048Tbps UltraScale ICL bandwidth (16x128Gbps)
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/Fibre Operating System (upgrades available)

Features	Lenovo B300	Lenovo B650S	Lenovo B6510
Total Bandwidth	192Gbps	384Gbps	768Gbps
Total Line-Rate Ports	24 Ports	24 Ports	48 Ports
Support Port Speed	8, 4, or 2 Gbps	16, 8, 4, or 2 Gbps	16, 10, 8, 4, or 2 Gbps
Full Fabric / Access Gateway (NPIV)	Optional / Included	Included / Included	Included / Included
Frame-Based ISL Trunking	64 Gbps frame-based	128 Gbps frame-based	128 Gbps frame-based
Diagnostic Ports	Not Available	Included	Included
In-Flight Encryption and Compression	Not Available	Not Available	2 ports @ 16 Gb 4 ports @ 8 Gb
10Gbps Native Fibre Channel	Not Available	Not Available	Optional
Forward Error Correction (FEC)	Not Available	-	Included
Buffer Credit Loss Recovery	Included	Included	Included
Integrated Routing	Not Available	Not Available	Optional
Virtual Fabrics	Not Available	Not Available	Included
Warranty	1-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	1-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades	1-year customer replaceable unit and onsite service, next business day 9x5, optional service upgrades



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)
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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> D1212: Up to 120 TB D1224: Up to 48 TB
Host adapters	RAID adapters: <ul style="list-style-type: none"> 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) <ul style="list-style-type: none"> 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
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	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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): <ul style="list-style-type: none"> 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 TS2260 Tape Drive	IBM TS2270 Tape Drive
Available Configurations	Model 6160 H6S—One LTO Ultrium 6 tape drive, 6Gbps SAS interface	Model 6160 H7S—One LTO Ultrium 7 tape drive, 6Gbps SAS interface
Tape Drive Type	LTO Ultrium 6	LTO Ultrium 7
Physical Capacity	2.5TB native; 6.25TB with 2.5:1 compression	6TB native; 165TB with 2.5:1 compression
Number of Tape Drives	1	1
Number of Tape Cartridges	1	1
Data Transfer Rate	Up to 160MBps native	Up to 300MBps native
Media Type	Read and write: LTO Ultrium 6 LTO Ultrium 5 Read only: LTO Ultrium 4 Also Available: LTO Ultrium cleaning cartridge	Read and write: LTO Ultrium 7 6TB data cartridge LTO Ultrium 6 2.5TB data cartridge Read only: LTO Ultrium 5 1.5TB data cartridge Also Available: LTO Ultrium cleaning cartridge
Power Requirements	Ranging 100 – 240V ac, 50 – 60Hz auto	Ranging 100 – 240V ac, 50 – 60Hz auto
Warranty	3-year limited warranty, customer replaceable unit and onsite, next-business-day 9x5, service upgrades available	3-year limited warranty, customer replaceable unit and onsite, next-business-day 9x5, service upgrades available

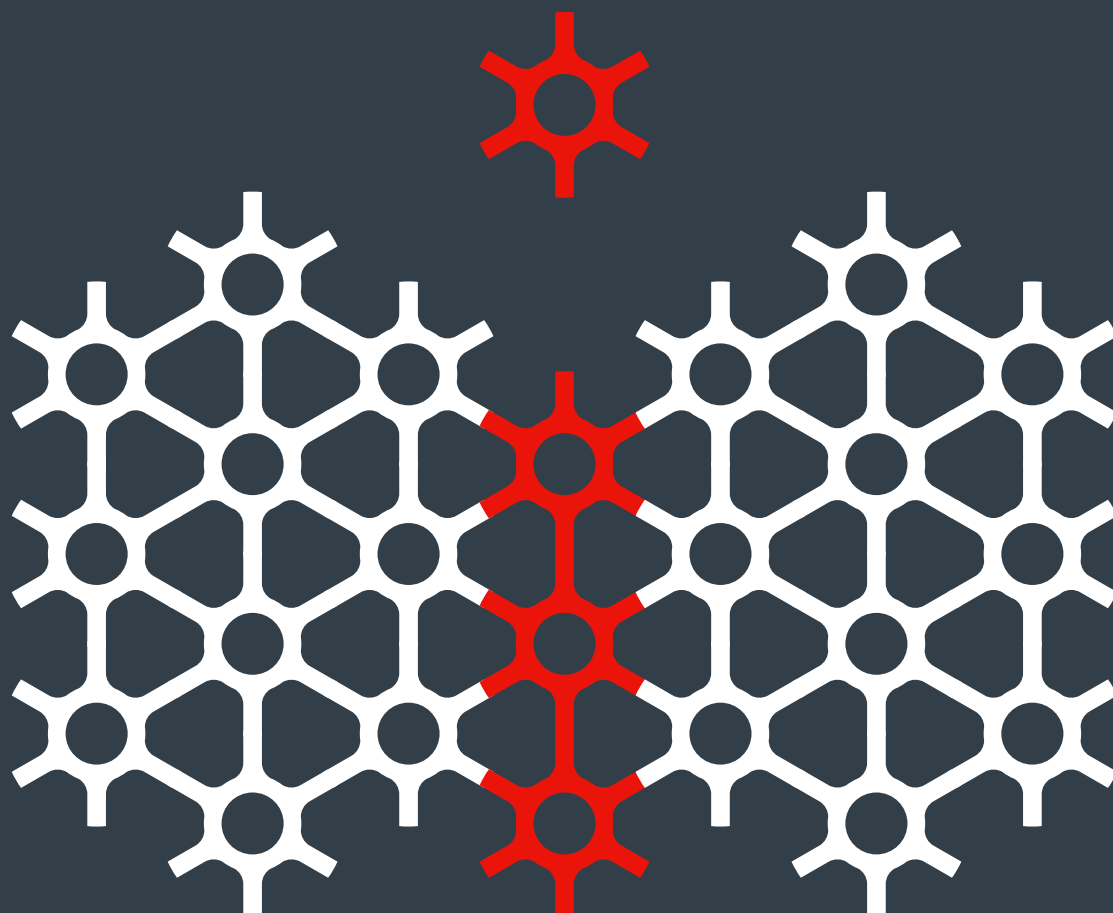
Features	IBM TS2900 Tape Autoloader
Available Models	<ul style="list-style-type: none">• LTO Ultrium 7 6171 S7H• LTO Ultrium 6 6171 S6H• LTO Ultrium 5 6171 S5H• LTO Ultrium 4 6171 S4H
Drive Options	<ul style="list-style-type: none">• Half-eight LTO Ultrium 7: 6Gbps SAS• Half-eight LTO Ultrium 6: 6Gbps SAS• Half-eight LTO Ultrium 5: 6Gbps SAS• Half-eight LTO Ultrium 4: 6Gbps SAS
Number of Tape Drives	1
Tape Cartridge Capacity	9
I/O Stations	1
Physical Capacity	<ul style="list-style-type: none">• 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)• LTO Ultrium 5: Up to 13.5TB (27TB with 2:1 compression)• LTO Ultrium 4: Up to 7.2TB (14.4TB with 2:1 compression)
Data Transfer Rate	<ul style="list-style-type: none">• LTO Ultrium 7: Up to 300 MBps• LTO Ultrium 6: Up to 160 MBps• LTO Ultrium 5: Up to 140 MBps• LTO Ultrium 4: Up to 120 MBps
Warranty	1-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available



Features	IBM TS3100 Tape Library
Available Models	TS3100 Tape Library Model L2U 6173 L2U
Drive Options	LTO 7: FH Fibre - ATP0/00WF765, HH SAS - ATP1/00WF767, HH Fibre-ATP2/00WF769; LTO 6: FH Fibre - AS1Y/00NA115, HH SAS - AS1Z/00NA117, HH Fibre - AS21/00NA119; LTO 5: FH Fibre - AS1S/00NA107, FH SAS - AS1T/00NA109, HH SAS - AS1U/00NA111, HH Fibre - AS1W/00NA113; LTO 4: FH Fibre-AS1M/ 00NA101, FH SAS - AS1N/00NA121, HH SAS - AS1Q/00NA105, HH Fibre - AS1P/00NA103
LTO Ultrium Tape Cartridges	LTO 7: ATNZ/00WF771 LTO 6: AS24/00NA025 LTO 5: AS23/00NA023 LTO 4: AS22/00NA021
LTO Ultrium Cleaning Cartridge	AS1E/00NA017
Number of Drives/Cartridges	1 -2 / 24
Number of Mail Slots	1
Physical Capacity (compressed/native) Compression assumes 2.5:1 for LTO 7 and LTO 6, 2:1 for LTO 5 and LTO 4	Cartridge capacity LTO 7: 15TB/6TB LTO 6: 6.25TB/2.5TB LTO 5: 3TB/1.5TB LTO 4: 1.6TB/800GB Library capacity LTO 7: 360TB/144TB LTO 6: 150TB/60TB LTO 5: 72TB/36TB LTO 4: 38TB/19TB
Data Transfer Rate	LTO7: up to 300MBps LTO6: up to 160MBps LTO5: up to 140MBps LTO4: up to 120MBps
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, customer-replaceable unit and onsite, next business day 9x5

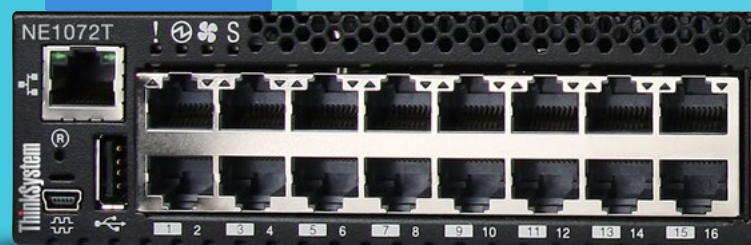
Features	IBM TS3200 Tape Library
Available Models	TS3200 Tape Library Model 6173 L4U
Drive Options	LTO7: FH Fibre - ATP0/00WF765, HH SAS - ATP1/00WF767, HH Fibre - ATP2/00WF769; LTO6: FH Fibre - AS1Y/00NA115, HH SAS - AS1Z/00NA117, HH Fibre - AS21/00NA119; LTO5: FH Fibre - AS1S/00NA107, FH SAS - AS1T/00NA109, HH SAS - AS1U/00NA111, HH Fibre - AS1W/00NA113; LTO4: FH Fibre -AS1M/00NA101, FH SAS - AS1N/00NA121, HH SAS - AS1Q/00NA105, HH Fibre - AS1P/00NA103
LTO Ultrium Tape Cartridges	LTO 7: ATNZ/00WF771 LTO 6: AS24/00NA025 LTO 5: AS23/00NA023 LTO 4: AS22/00NA021
LTO Ultrium Cleaning Cartridge	AS1E/00NA017
Number of Drives/Cartridges	1 -4 / 48
Number of Mail Slots	3
Physical Capacity (compressed/native) Compression assumes 2.5:1 for LTO 7 and LTO 6, 2:1 for LTO 5 and LTO 4	Cartridge capacity LTO 7: 15TB/6TB LTO 6: 6.25TB/2.5TB LTO 5: 3TB/1.5TB LTO 4: 1.6TB/800GB Library capacity LTO 7: 720TB/288TB LTO 6: 300TB/120TB LTO 5: 144TB/72TB LTO 4: 76.8TB/38.4TB
Data Transfer Rate	LTO7: up to 300MBps LTO6: up to 160MBps LTO5: up to 140MBps LTO4: up to 120MBps
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, customer-replaceable unit and onsite, next business day 9x5

Features	IBM TS4300 Tape Library
Available Models	TS4300 Tape Library Model L3U
Drive Options	LTO8: FH Fibre - B1ET/01KP954, HH SAS - B1ES/01KP953, HH Fibre - B1ER/01KP952 LTO7: FH Fibre - B16Y/01KP938, HH SAS - B16X/01KP937, HH Fibre - B16W/01KP936; LTO6: FH Fibre - B16V/01KP935, HH SAS - B16U/01KP934, HH Fibre - B16T/01KP933
LTO Ultrium 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



Networking

Lenovo has been specialising in data centre networking for over 15 years, offering products that are completely interoperable with other vendor's switches. This allows us to build customised solutions and integrate them into a client's infrastructure easily.



Networking Portfolio
at your fingertips

Lenovo ThinkSystem NE1072T RackSwitch



Take a 3D tour and get to know
the broad portfolio. Visit
lenovofiles.com/3dtours

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 1/10GE switches to 25/40/100 GE switch/routers, with all 10GE and faster switches supporting DCB/ROCE. The new Cloud NOS (CNOS) for the Lenovo Top of Rack (ToR) is based on open, industry Linux standards to enable support of the most common automation and orchestration applications for simple and tight integration into the data centre ecosystem.

Lenovo Models	G7028	G7052	G8052
Performance	100% line rate performance, 128Gbps nonblocking switching throughput	176Gbps nonblocking switching throughput	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+
Latency	3.3 μ s	3.3 μ s	1.8 μ s
Virtualisation / SDN			VMready, OpenFlow
Availability	Layer 2 Failover, Option Ext. redundant power	Layer 2 Failover, Option Ext. redundant power	vLAG, Hot-swap redundant power/fans
Other			Stacking
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 onsite, next business day 9x5, opt. service upgrade available

Lenovo Model	G8272
Performance	100% line rate performance, 1.44Tbps nonblocking switching throughput
Ports	48 x 10GbE SFP+ 6 x 40GbE QSFP+
Latency	0.6 µs
Virtualisation / SDN	VMready Virtual Fabric OpenFlow VXLAN
Availability	vLAG Hot-swap redundant power/fans
Other	DCB/CEE
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 Models	G8296	G8332
Performance	100% line rate performance, 2.56Tbps nonblocking switching throughput	100% line rate performance, 2.56Tbps nonblocking switching throughput
Ports	86 x 10GbE SFP+ 10 x 40GbE QSFP+	32 x 40GbE QSFP+
Max Bidirectional Throughput	2,560 Gbps	2,560 Gbps
Latency	0.6 µs	0.6 µs
Virtualisation / SDN	VMready Virtual Fabric OpenFlow VXLAN	VMready Virtual Fabric OpenFlow VXLAN
Availability	vLAG, Hot-swap redundant power/fans	vLAG, Hot-swap redundant power/fans
Other	DCB/CEE	DCB/CEE
Power	Dual load-sharing hot-swap internal power modules, 50 - 60 Hz, 100 - 240 V AC auto-switching per module	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	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

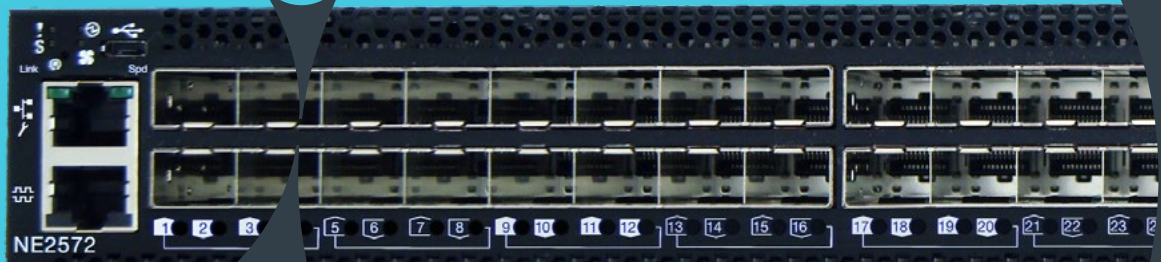


Lenovo ThinkSystem
NE10032 RackSwitch

Features	Lenovo ThinkSystem NE10032 RackSwitch
Performance	100% line rate performance, up to 6.4Tbps switching throughput
Ports	32x 40Gb QSFP+/100Gb QSFP28
Interface Configurations	<ul style="list-style-type: none"> • 32x 100Gb Ethernet ports supporting various combinations: <ul style="list-style-type: none"> - Up to 32x QSFP28 100GbE QSFP28 transceivers - Up to 32x QSFP 40GbE QSFP transceivers - Up to 32x QSFP28 100Gb DAC cable or AOC cable. (Various lengths: 1m, 3m, 5m, etc.) - Up to 128x SFP28 25GbE ports using special (QSFP28-to-4xQSFP28) break-out DAC cable or optics with break-out fibres. (Various lengths: 1m, 3m, 5m, etc.) - Up to 64x QSFP28 50GbE ports using special (QSFP28-to-2xQSFP28) break-out DAC cable or optics with break-out fibres. (Various lengths: 1m, 3m, 5m, etc.) - Up to 128x SFP+ 10GbE ports using special (QSFP-to-4xSFP+) break-out DAC cable or optics with break-out fibres. (Various lengths: 1m, 3m, 5m, etc.) • 1x 10/100/1000 MbE RJ-45 port for out-of-band management • Standard mini-USB RS232 port or Standard RJ-45 RS232 port • USB 2.0 interface type A connection (processor on CPU-board is host)
Latency	0.49 μ s
Virtualisation	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
Power	Dual load-sharing hot-swap internal power modules, 50 - 60Hz, 100 - 240V AC auto-switching per module
Management Software Supported	Lenovo XClarity VMware OpenStack
Automation / API	Ansible, Python, REST, Telemetry
Associated Options	For details on the NE10032, transceivers, cables, and other associated options, refer to the Lenovo ThinkSystem NE10032 RackSwitch Product Guide
Warranty	3-year warranty, customer replaceable unit and onsite, next business day 9x5, opt. service upgrade available

Features	Lenovo ThinkSystem NE1032 RackSwitch	Lenovo ThinkSystem NE1032T RackSwitch
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
Interface Configurations	32x 10Gb Ethernet SFP+ ports	24x 10GBase-T + 8x 10Gb SFP+ Ethernet ports
Latency	<1.0 μ s	0.76 μ s (SFP+) or 2.3 μ s (10GBASE-T)
Virtualisation	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 OpenStack	Lenovo XClarity VMware OpenStack
Automation / API	Ansible, Python, REST, Telemetry	Ansible, Python, REST, Telemetry
Associated Options	For details on the NE1032, transceivers, cables, and other associated options, refer to the Lenovo ThinkSystem NE1032 RackSwitch Product Guide	For details on the NE1032T, transceivers, cables, and other associated options, refer to the Lenovo ThinkSystem NE1032T RackSwitch Product Guide
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
Performance	100% line rate performance, 3.66Tbps nonblocking switching throughput (full duplex), 1Bpps	100% line rate performance, 1.44Tbps nonblocking switching throughput (full duplex), 1Bpps
Interface Configurations	48x 10Gb Ethernet SFP + 6x 40Gb QSFP + Ethernet ports	48x 10GBASE-T + 6x 40Gb QSFP+ Ethernet ports
Latency	0.48 μ s (QSFP28) or 0.535 μ s (SFP28)	0.7 μ s (QSFP+) or 2.4 μ s (10GBASE-T)
Virtualisation	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 OpenStack Prism	Lenovo XClarity VMware OpenStack
Automation / API	Ansible, Python, REST, Telemetry	Ansible, Python, REST, Telemetry
Associated Options	For details on the NE2572, transceivers, cables, and other associated options, refer to the Lenovo ThinkSystem NE2572 RackSwitch Product Guide	For details on the NE1072T, transceivers, cables, and other associated options, refer to the Lenovo ThinkSystem NE1072T RackSwitch Product Guide
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



Lenovo ThinkSystem
NE2572 RackSwitch

Ethernet Switches for Flex System

Provide on-demand scalability and flexible port mapping, which offers simple interoperability with existing networks. With Lenovo you can reduce CAPEX, OPEX, while you increase performance with low latency products.

Lenovo Models	EN4093R 10GbE Scalable Switch	CN4093 10GbE Converged Switch	EN4091 10Gb Ethernet Pass-thru
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	
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	
Max bidirectional throughput	1,280Gbps	1,280Gbps	N/A
Cloud Ready	VMready Switch Partitioning UFP OpenFlow	VMready Switch Partitioning UFP	
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, Virtualisation	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 InterconnectModule
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, Virtualisation	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
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
Virtualisation	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
Recommended for:	High Performance Applications	Cisco-Flex System Connectivity
Warranty	1-year customer replaceable unit	1-year customer replaceable unit

Lenovo Models	FC5022 16Gb SAN Scalable Switches
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 Optimisation*
Recommended for:	Storage-Intensive Enterprise workloads
Warranty	1-year customer replaceable unit

+Requires separate licence or ESB switch

*Requires ESB switch

Juniper Products from Lenovo

Extend Lenovo's networking with Juniper products to build the next generation of data centre infrastructure solutions.

The Juniper EX2300-C-12P and EX2300-24P Ethernet switches for Lenovo with Power over Ethernet (PoE) deliver a compact, high-density, cost-effective solution for small network environments where space and power are at a premium. Featuring a small, 1U footprint, these switches are ideal for access-layer deployments in micro branches, retail and workgroup environments, and converged network access in larger networks.



Networking Portfolio at
your fingertips



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

Multi Products	Juniper EX2300-C Compact Ethernet Switch	Juniper EX2300-24P Ethernet Switch
GbE Port Density per System	14 (12 access ports + 2 uplink ports)	28 (24 access ports + 4 -port SFP/SFP+)
Backplane	40Gbps Virtual Chassis interconnect to link up to 4 x switches as a single logical device	40Gbps Virtual Chassis interconnect to link up to 4 x switches as a single logical device
Port Speed	12x10/100/1000BASE-T	24 x 10/100/1000BASE-T
Max. System Power Consumption	24W AC	24W AC
Total PoE Power Budget	124W	-
Cooling	Fanless operation	-
Switching Engine Model	Store and forward	-
CPU	125GHz ARM CPU	-
Selected L2 Features	<ul style="list-style-type: none">Maximum MAC addresses in hardware: 16,000Jumbo frames: 9216 bytesNumber of VLANs supported: 4093Range of possible VLAN IDs: 1-4094Port-based VLANMAC-based VLANVoice VLANPrivate VLAN (P-VLAN)	<ul style="list-style-type: none">Maximum MAC addresses in hardware: 16,000Jumbo frames: 9216 bytesNumber of VLANs supported: 4093Range of possible VLAN IDs: 1-4094
Warranty	Enhanced limited lifetime hardware warranty with shipping of spares within one business day; 5 year coverage for power supplies and fans	Enhanced limited lifetime hardware warranty with shipping of spares within one business day; 5 year coverage for power supplies and fans

Lenovo XClarity Administrator

Lenovo XClarity Administrator is a centralised resource management solution that is aimed at reducing complexity, speeding response and enhancing the availability of Lenovo server systems and solutions. Lenovo XClarity Administrator provides agent-free hardware management for our servers, storage, network switches and HX Series appliances.

Lenovo XClarity Administrator delivers Lenovo resources faster. With a simplified administration dashboard, the following functions can be easily achieved:

- **Discovery** of existing or new Lenovo System x rack servers and Flex System infrastructure.
- **Inventory** of the discovered endpoints is gathered, so the managed hardware inventory and its status can be viewed-at-a-glance.
- **Monitoring** - alerts and events are visible via the XClarity Administrator Dashboard, the Status bar, and the Alerts and Events detail for the specific systems.
- **Firmware updates** can be applied and activated for all managed endpoints.
- **Firmware compliance** can be started to flag managed endpoints that do not comply with the defined firmware rules.
- **Configuration management** uses pattern-based configurations to quickly provision and re-provision a single server or multiple servers and compute nodes, all with a single set of configuration settings.
- **Deployment of operating systems and hypervisors to bare metal servers.** VMwareESXi, Windows Server, SUSE Linux Enterprise Server (SLES) and Red Hat Linux images can be imported and held in a repository for images. Up to 28 OS images can be deployed concurrently.

Lenovo XClarity can be integrated into external, higher level management, automation, and orchestration platforms through open REST application programming interfaces (APIs) with Lenovo XClarity Integrators.



[Download](#) the free
Lenovo XClarity
trial version

Lenovo[™]

XClarity[™]

Software-Defined Data Centre

Engineered to simplify the user experience, software-defined infrastructure is designed to adapt to changing IT needs while reducing complexity and cost created by silos in traditional IT. Pre-integrated, pre-built and pre-tested offerings accelerate application deployment and add robust capabilities to your data centre faster.



Lenovo Storage DX8200C
powered by Cloudian

Software-Defined Storage



(SDS) DX8200 portfolio delivers flexible, easy to scale, and simple to manage data centre storage solutions for Object storage, unified File and Block, Storage Virtualisation and Application Acceleration. It offers a full suite of storage services, including dynamic allocation of storage data on underlying x86 servers. Whether you need to manage small chunks of data, in a hierarchy or as objects, SDS appliances offer a full range of data management storage systems across a variety of applications, from database, email, through large data file storing and sharing, all the way to medical and educational records, or online collaboration services.

Features	Lenovo Storage DX8200C powered by Cloudian
Form Factor/Height	Rack/2U
Processor	1x Intel® Xeon® processor E5-2630 v4
Cache	25MB
Memory	64GB or 96GB
Disk Bays	12 x 3.5" and 2 rear 3.5" (rear) HDDs + 2 x 2.5" (rear) HDDs/SSDs
Maximum Internal Storage	Up to 168TB
Power Supply	Up to 2 redundant 750W AC, 80 PLUS® Platinum
Hot-Swap Components	Power supplies, fan modules and HDDs/SSDs
Network Interface	2 x 1GbE + 2 x 10Gb (base), optional SFP+, Base-T
Storage Management Software	Cloudian HyperStore 6.0
Storage Scalability	Starts with three nodes and scales to hundreds (scale out only)
Configurable Data Protection	Erasure Coding, Replication, Configurable Consistency
Multi-Tenancy Controls	Role based Group/User level Access Controls QoS services to control usage Configurable cost accounting and chargeback
Data Encryption	AES256 bit encryption support
Systems Management	UEFI Integrated Management Module II (IMM2.1) (Renesas SH7758) with Advanced Upgrade Predictive Failure Analysis light path diagnostics Lenovo XClarity Cloudian Management Console
Support	Lenovo single point of contact for 24/7 assistance
Recommended for	On-premise Amazon S3-compliant storage, File Distribution & Sharing, Backup & Archive, Media Content Store, SaaS/Cloud Storage, Object storage (medical or educational records)
Warranty	3-year customer replaceable unit and onsite limited warranty, next business day 9x5; upgrades available



Intel® Xeon® processor

Features	Lenovo Storage DX8200D powered by DataCore	Lenovo Storage DX8200N powered by Nexenta
Form Factor/Height	Rack/2U	Rack/2U
Processor	2x Intel® Xeon® processor E5-2620 v4	2x Intel® Xeon® processor E5-2643 v4
Cache	40MB	20MB
Memory	128GB (4 x 32GB) to 512GB (16 x 32GB)	256GB (16 x 16GB)
Disk Bays	24 x 2.5" and 2 x 2.5" (rear) HDDs/SSDs	12x 3.5" + 2x 2.5" (rear) HDDs/SSDs
JBODs	-	Up to 8 x Lenovo Storage D1212, or Lenovo Storage D1224, or Lenovo Storage D3284 - up to 6.72PB
Power Supply	Up to 2 redundant 750W AC, 80 PLUS® Platinum	Up to 2 redundant 750W AC, 80 PLUS® Platinum
Hot-Swap Components	Power supplies, fan modules and HDDs/SSDs	Power supplies, fan modules and HDDs/SSDs
Network Interface	3 x 10GbE Dual port BaseT adapter (base), optional SFP+, Base-T, or FC	3 x 10GbE Dual port BaseT adapter (base), optional SFP+, Base-T, or FC (all configurable)
Storage Management Software	DataCore SANsymphony 10	NexentaStor 5.1
Scale Out Storage	Two nodes for synchronous mirroring then scale out with more nodes or external storage (JBOD supported)	Two nodes, scale up to 8 JBODs
Supported Networking Protocols	10GbE NFSv3, NFSv4, 10GbE, CIFS, SMB 3.0, 10GbE iSCSI, 8Gbps Fibre Channel, 16Gbps Fibre Channel	10GbE NFSv3, NFSv4, 10GbE CIFS, SMB 2.1, 10GbE iSCSI, 8Gbps Fibre Channel, 16Gbps Fibre Channel
Data Availability and Integrity	Synchronous Mirroring, Asynchronous Replication, CDP, Snapshot/Backup	Active/Active controllers, ZFS 256-bit block level checksums, RAID 10 and multi-parity software RAID (n+1, n+2, n+3), Asynchronous replication
Data Acceleration	High-speed caching, Auto-tiering, Random Write Accelerator, QoS	High-speed caching, Auto-tiering, Random Write Accelerator, QoS
Systems Management	UEFI Integrated Management Module II (IMM2.1) (Renesas SH7758) with Advanced Upgrade Predictive Alerts Light Path Diagnostics Lenovo XClarity DataCore Management Console Windows PowerShell cmdlets	UEFI Integrated Management Module II (IMM2.1) (Renesas SH7758) with Advanced Upgrade Predictive Failure Analysis light path diagnostics Lenovo XClarity Nexenta Management View
Support	Lenovo single point of Contact for 24/7 assistance	Lenovo single point of contact for 24/7 assistance
Recommended for:	Accelerate Applications, Business Continuity/Disaster Recovery, Storage Consolidation, Storage Expansion/Refresh, Storage virtualisation	Generic File Share, Home Directories, Near Line Archive, Transactional Databases, Email, Backup & Archive Block Storage
Warranty	3-year customer replaceable unit and onsite limited warranty, next business day 9x5; upgrades available	3-year customer replaceable unit and onsite limited warranty, next business day 9x5; upgrades available

Data Centre Portfolio
at your fingertips



Intel® Xeon® processor



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

Software-defined Infrastructure

ThinkAgile SX for Microsoft Azure Stack

ThinkAgile SX for Microsoft Azure Stack is a turnkey, rack scale hybrid cloud solution optimised 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 centre
- Enable rapid development and iteration of apps with on-premises deployment tools to help transform your organisation
- 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	Entry SXM4400	Enterprise Starter SXM4400	Enterprise Full SXM6400
Rack	9565-RCH (25U)	9565-RCJ (42U)	9565-RCK (42U)
Compute Nodes	4-8x SR650 2x Intel® Xeon® Scalable 610, 6148, 6150, 6152, 8160, 8170 or 8176 CPUs (18-28 cores) 384GB, 768GB or 1,536GB memory per node	4-12x SR650 2x Intel® Xeon® Scalable 6140, 6148, 6150, 6152, 8160, 8170 or 8176 CPUs (18-28 cores) 384GB, 768GB or 1,536GB memory per node	12x SR650 2x Intel® Xeon® Scalable 6140, 6148, 6150, 6152, 8160, 8170 or 8176 CPUs (18-28 cores) 384GB, 768GB or 1,536GB memory per node
Management Node	1x SR630 ; 2x Intel® Xeon® Scalable 3106 CPUs (8 cores); 64GB memory		
Hyperconverged Storage	10x 4TB Capacity Tier (40TB raw) + 4x 800GB SSD Cache Tier Or 10x 6TB Capacity Tier (60TB raw) + 4x 1.6GB SSD Cache Tier		
Network	1x 1Gbps Lenovo RackSwitch G8052 (management) 2x 25Gbps ThinkSystem NE2572 RackSwitch (compute/storage traffic) Mellanox ConnectX-4 Dual Port 10/25GbE Network Controller		
Integrated Solution Software	Microsoft Azure Stack; Lenovo XClarity		

ThinkAgile



[ThinkAgile SX for
MS Azure Stack](#)

ThinkAgile SX for Nutanix

ThinkAgile SX for Nutanix is a best-in-class hyperconverged turnkey rack scale system optimised for deployments that are intended to scale across multiple data centre racks. Built by Lenovo as a single pre-configured system, shipped with ThinkAgile Network Orchestrator and management by Lenovo XClarity Integrator for Prism, the ThinkAgile SX for Nutanix leverages proven hardware with innovative software in one single virtualisation-ready system.

Lenovo and Nutanix deliver leadership hyperconverged offerings that natively integrate compute, storage and virtualisation into a single x86-based appliance deployed in scale-out clusters to dramatically reduce complexity and cost in data centres of all sizes.

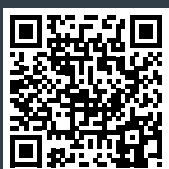
ThinkAgile
SXN3000 Series
with 42U Rack



Features	ThinkAgile SXN3000 Series with 42U Rack	ThinkAgile SXN3000 Series with 25U Rack
Compute Nodes (Lenovo ThinkAgile HX Series Appliance)	4-32 nodes of HX1320, HX1520-R, HX3320, HX3520-G, HX5520, HX5520-C, HX7520, HX3720 for total 36U rack space	4-16 nodes of HX1320, HX1520-R, HX3320, HX3520-G, HX5520, HX5520-C, HX7520, for total 16U rack space
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 205W, per ThinkAgile HX	
Memory (TruDDR4 2666MHz)	Up to 3TB* in 24x slots, using 128GB* DIMMs; per ThinkAgile HX	
Networking	1x1Gbps Lenovo G8052 RackSwitch (Management) Choice of 2x 10Gbps Lenovo G8272 RackSwitch (SFP+) (data + storage) or 2x 10Gbps Lenovo NE1072T (10Base-T) (data + storage) Industry-unique Lenovo ThinkAgile Network Orchestrator for automated, on-the-fly switch configuration	
Storage Capacity	4-24 bays; 3-20x HDDs, up to 24x SSDs, per ThinkAgile HX	
Hypervisors Supported	Nutanix Acropolis VMware ESXi Microsoft Hyper-V	
Systems Management	Nutanix Acropolis OS Lenovo XClarity Integrator for Prism Nutanix Prism	
License Options	Lenovo XClarity Pro (included by default), Nutanix Pro and Ultimate	

ThinkAgile

NUTANIX™



[ThinkAgile SX
for Nutanix](#)



[Explore the data
centre of tomorrow](#)

Hyperconverged Infrastructure

ThinkAgile HX Series

Lenovo's ThinkAgile HX Series is an appliance-based hyperconverged 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),
- and system management software (Nutanix Prism to manage the cluster and virtual machines and Lenovo XClarity to manage the hardware resources).

Lenovo's hyperconverged solutions leverage virtualisation 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.

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
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 2400MHz)	128GB, 256GB, 384GB, 512GB, 768GB	192GB, 384GB
Drive Bays	8x 2.5"	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 preloaded VMware ESXi (preloaded)*** Microsoft Hyper-V 2016	
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)	
License Options	Nutanix Starter, Pro or Ultimate	

***VMware ESXi hypervisor preload and Microsoft Hyper-V 2012 R2 hypervisor support available at a later date.

ThinkAgile

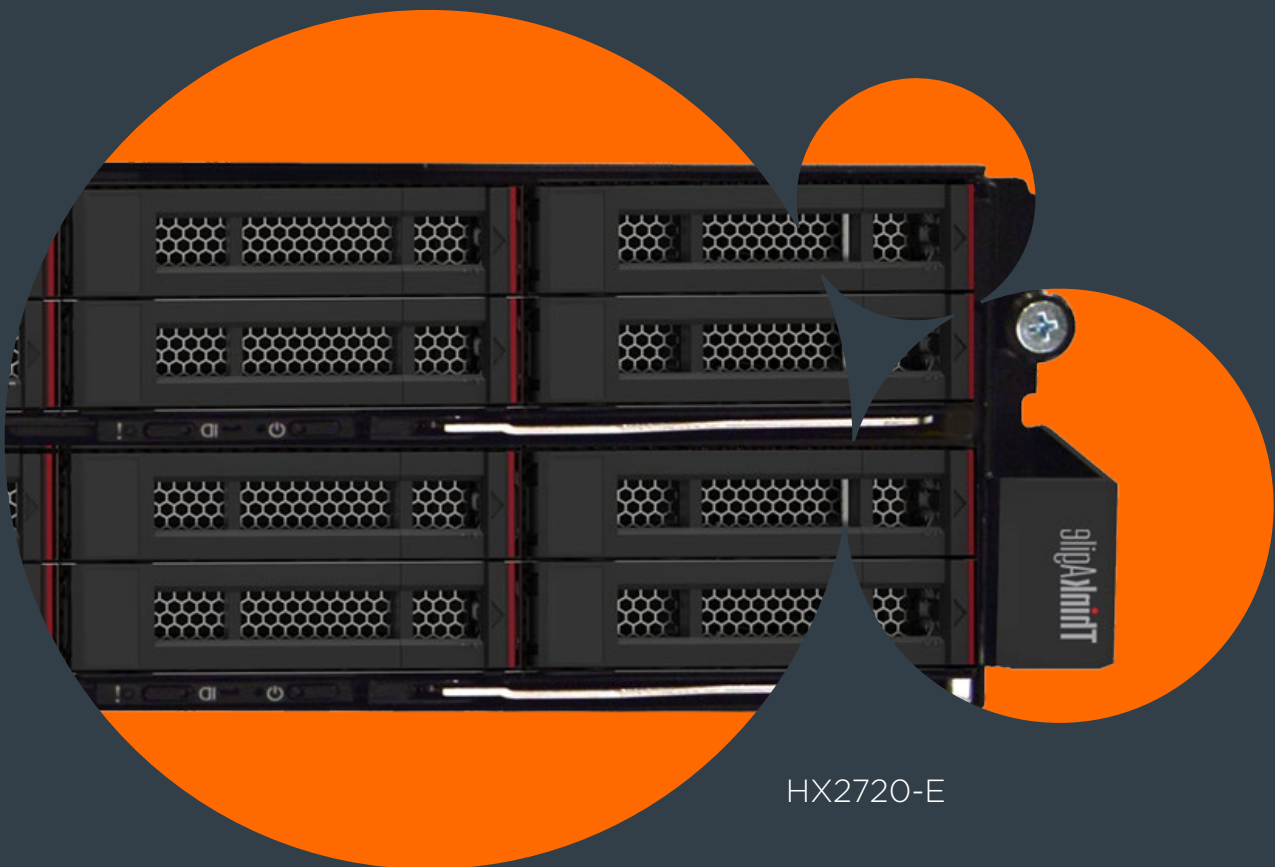
HX1520-R



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

Lenovo Models	HX2320-E	HX2720-E
Form Factor	1U	2U 4-node
Processor	Up to 2 x Intel® Xeon® Gold processors, up to 125W	
Memory (TruDDR4 2400MHz)	96GB, 192GB, 382GB	
Drive Bays	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 preloaded VMware ESXi preloaded (optional)*** Microsoft Hyper-V 2016***	
Systems Management	Lenovo XClarity (hardware) Nutanix Prism (software)	
License Options	Nutanix Express	
Warranty	Lenovo 3-year or 5-year limited hardware warranty	
Target Workloads	Small and Medium Businesses	

***VMware ESXi hypervisor preload and Microsoft Hyper-V 2012 R2 hypervisor support available at a later date.



HX2720-E



[Explore the
data centre of
tomorrow](#)

Lenovo Models	HX3320	HX3520-G
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 2400MHz)	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 (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 2TB	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 preloaded VMware ESXi preloaded (optional)*** Microsoft Hyper-V 2016***	
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	
Target Workloads	General Virtualization and VDI	

Lenovo Models	HX3720
Form Factor	2U 4-node
Processor	2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2400MHz)	192GB, 384GB, 768GB
Drive Bays	6x 2.5"
SSD Options (Hybrid)	2x 480GB, 2x 960GB, 2x 1920GB, 2x 3840GB
SSD Options (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 preloaded VMware ESXi preloaded (optional)*** Microsoft Hyper-V 2016***
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
Target Workloads	General virtualisation and VDI

***VMware ESXi hypervisor preload and Microsoft Hyper-V 2016 hypervisor support available at a later date.

HX3520-G



ThinkAgile

Intel® Xeon® Scalable processors



Lenovo Models	HX5520	HX5520-C
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 2400MHz)	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 (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 preloaded VMware ESXi preloaded (optional)*** Microsoft Hyper-V 2016***	
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	
Target Workloads	Big Data and High Capacity	

***VMware ESXi hypervisor preload and Microsoft Hyper-V 2016 hypervisor support available at a later date.

Lenovo Models	HX7520
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 preloaded VMware ESXi preloaded (optional)*** Microsoft Hyper-V 2016***
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
Target Workloads	Databases and High Performance

***VMware ESXi hypervisor preload and Microsoft Hyper-V 2016 hypervisor support available at a later date.



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

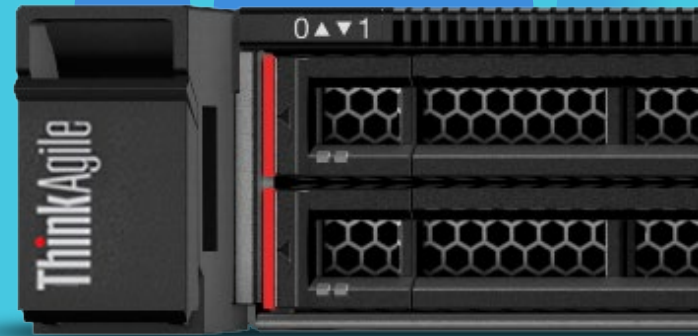
HX7520



ThinkAgile VX Series

The Lenovo ThinkAgile VX Series, powered by VMware vSAN and built on Lenovo ThinkSystem hardware, is a hyperconverged appliance, optimised to provide the simplest way to bring a new VMware hyperconverged environment online. The appliance comes preconfigured and pretested, ready to deploy with ease and speed. Versatile in its positioning, the VX series 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 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.



VX3320

Lenovo Models	VX3320
Form Factor	1U
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 165W
Memory (TruDDR4 2400MHz)	Up to 1536TB in 24x slots, using 64GB DIMMs
Drive Bays	10x 2.5"
Cache Drive Options	1 or 2x 400GB, 800GB, 1600GB
Number of Disk Groups	1 or 2
SSD Options per group	4x 1.6TB, 3.84TB, 7.68TB
HDD Options per group	4x 1.2TB, 1.8TB, 2.4TB
Hypervisor Supported	VMware ESXi preloaded
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 onsite service, next business day 9x5; optional service upgrades
Support	ThinkAgile Advantage*
Target Workloads	Compute-Heavy, High-Performance Virtualisation, and VDI

*Check for availability in your country



Intel® Xeon® Scalable processors



[Simplify IT Infrastructure with the Lenovo ThinkAgile VX Series](#)

Lenovo Models	VX5520
Form Factor	2U
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 205W
Memory (TruDDR4 2400MHz)	Up to 1536TB in 24x slots, using 64GB DIMMs
Drive Bays	12x 3.5"
Cache	1 or 2x 400GB, 800GB, 1600GB
Number of Disk Groups	1 or 2
HDD Options per group	6x 2TB, 4TB, 6TB, 8TB, 10TB, 12TB
Hypervisor Supported	VMware ESXi preloaded
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
Support	ThinkAgile Advantage*
Warranty	Lenovo 3-year customer replaceable unit and onsite service, next business day 9x5; optional service upgrades
Target Workloads	Big Data/Analytics, Email, Large Databases and other high-capacity storage needs

*Check for availability in your country

Lenovo Models	VX7520
Form Factor	2U
Processor	Up to 2 x Intel® Xeon® Platinum processors, up to 205W
Memory (TruDDR4 2400MHz)	Up to 1536GB in 24x slots, using 64GB DIMMs
Drive Bays	24x 2.5"
Cache and NVMe Drive Options	Up to 4x 400GB, 800GB, 1600GB
Number of Disk Groups	1 or 4
SSD Options per group	5x 1.6TB, 3.84TB, 7.68TB, 15.36TB
HDD Options per group	5x 1.2TB, 1.8TB, 2.4TB
Hypervisor Supported	VMware ESXi preloaded
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
Support	ThinkAgile Advantage*
Warranty	Lenovo 3-year customer replaceable unit and onsite service, next business day 9x5; optional service upgrades
Target Workloads	In-Memory Databases and other high-performance storage

*Check for availability in your country



[Simplify IT Infrastructure with the Lenovo ThinkAgile VX Series](#)



[10 key considerations for selecting hyper-converged infrastructure](#)



Engineered Solutions

A typical IT department's goals are complex, increasingly costly, and always changing. With Lenovo solutions engineered to optimise resiliency, performance, and TCO, customers can deploy comprehensive, proven solutions that meet requirements from scaling the systems quickly to getting more from their IT budget.

Partnership is in Lenovo's DNA. Collaborating with proven industry partners, Lenovo provides solutions using the best infrastructure and applications to address your workload needs.



Cloud Solutions

for the next step from virtualisation. Improve resource utilisation and business process efficiency.



Big data & Analytics

to make sure information and analysis flow seamlessly to support real-time insight and facilitate better decision-making.



Business Applications

can benefit from improved productivity with Lenovo's high-performance, scalable, extremely reliable hardware for business critical workloads.



Database Solutions

to take advantage of optimised solution offering built on top-tier technology, whether for a small department or a data warehouse.



High-Performance Computing & AI Solutions

powered by Lenovo platforms with Intel® technology can help you put your business at the forefront of tomorrow. On top of our high-density data centre infrastructure, we bring customised solutions for the high-performance technical computing storage needs in our new DSS family of products.



Client Virtualisation and Infrastructure

are battle-tested to help IT managers easily deploy, secure and manage their technology.

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 organisations running HPC, BigData or cloud workloads will benefit the most from the DSS-G implementation. DSS-G combines the performance of Lenovo latest generation x3650 M5 (ThinkSystem SR650 per March 2018) 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.



Project	DSS-G for IBM Spectrum Scale
Solution Definition	<ul style="list-style-type: none">• 2 ThinkSystem SR650 Servers• Software: RedHat Enterprise Linux, IBM Spectrum Scale for DSS Standard or Data Management Edition• 2, 4 or 6 Storage Enclosures<ul style="list-style-type: none">• Lenovo D3284 12Gb JBOD (5U84) or 4TB, 6TB, 8TB, 10TB, 12TB NL-SAS• 1, 2, 4 or 6 Storage Enclosures<ul style="list-style-type: none">• 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, BigData, 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

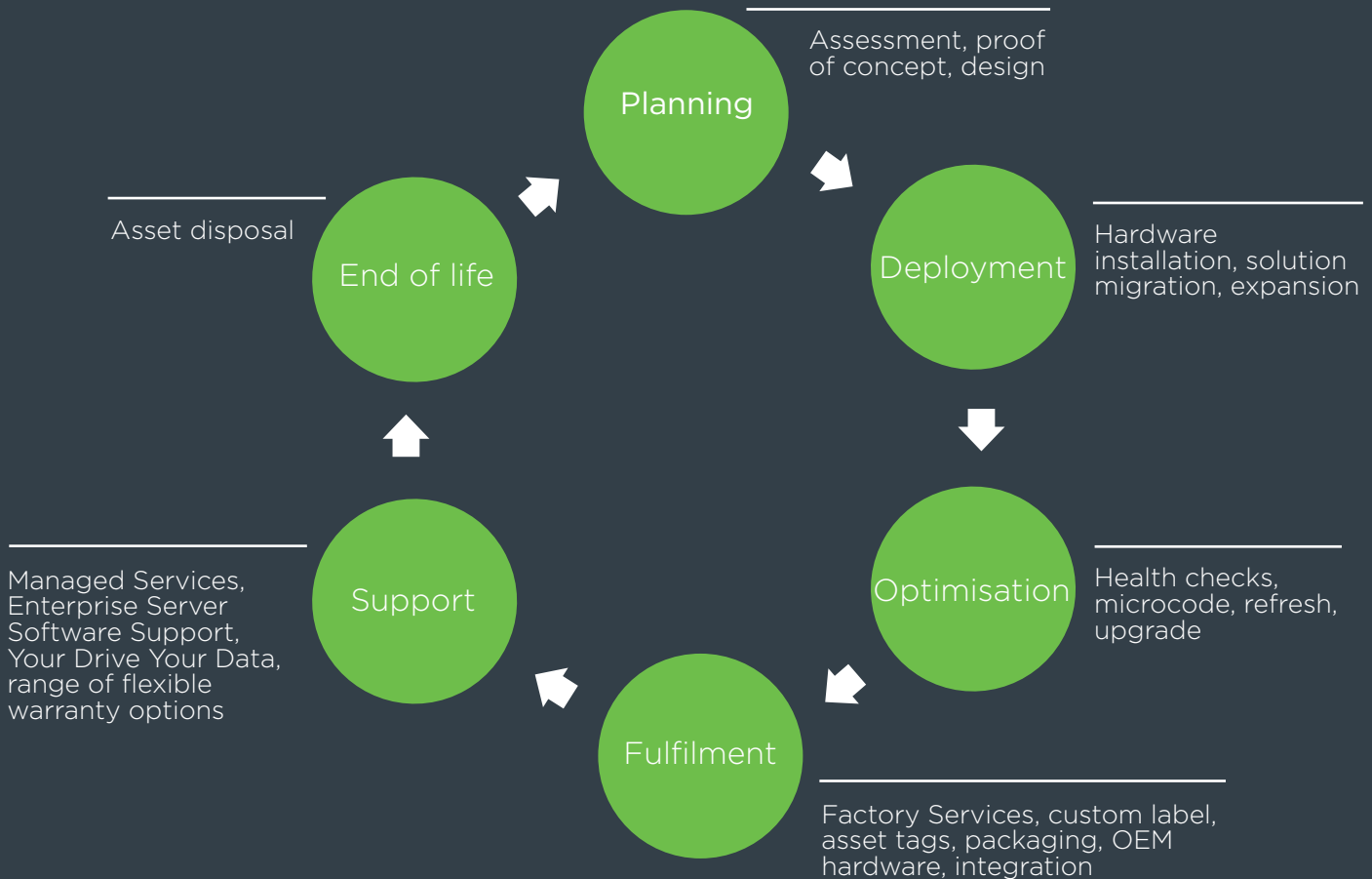
Lenovo DSS-G



Intel® Xeon® Scalable processors

Lenovo Services

Lenovo offers a comprehensive portfolio of services that support the full lifecycle of a customer's Lenovo IT assets. At every stage—plan, fulfil, deploy, support, optimise, 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.



Tackle your most complex challenges

Lenovo Services consultants, with deep experience in delivering technology solutions, can help you overcome complicated business challenges with innovative design, architecture, application & integration solutions

Making business easier

Clients can focus on their core business with a comprehensive portfolio of deployment, support and managed services that cover the entire suite of enterprise products

Peace of mind

Lenovo Services consultants have specialised, understand the latest technology inside out

and employ industry best practices to deliver solutions consistently and reliably

Flexible

A range of services to complement your internal team, capabilities and business demands at a global and local level

Improved Service

Experienced Lenovo Professional Services consultants help maintain and ensure optimal performance and efficiency in the data centre through health checks and preventative maintenance

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

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™



Intel® Xeon® Scalable processors
Intel Inside®. New Possibilities Outside.

ThinkSystem
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