Lenovo ThinkAgile VX635 V3 1U Integrated Systems and Certified Nodes (AMD EPYC 9004)

Product Guide

The Lenovo ThinkAgile VX635 V3 Integrated Systems and Certified Node are 1-socket 1U systems that feature the AMD EPYC 9004 "Genoa" family of processors. With up to 96 cores per processor and support for the new PCIe 5.0 standard for I/O, the VX635 V3 system systems offer the ultimate in one-socket performance in a 1U form factor. VMware offers a unique, software-defined approach to hyper convergence, leveraging the hypervisor to deliver compute, storage and management in a tightly integrated software stack.

The 1U systems are available either as an Integrated System (VX635-IS) or Certified Node (VX635-CN) and suitable for:

- SMB, remote office and branch office
- Desktop Virtualization, Data Analytics, Backup

Tip: ThinkAgile *Integrated System* is the new name for ThinkAgile Appliance.

Figure 1. Lenovo ThinkAgile VX with 2.5-inch drive bays

Did you know?

The ThinkAgile VX635 V3 Integrated Systems and Certified Node are built on the Lenovo ThinkSystem SR635 V3 server that features enterprise-class reliability, management, and security.

The ThinkAgile VX635 V3 Integrated Systems comes preinstalled with VMware software. The deployer tool provides for faster day 0 and day 1 operations. XClarity Integrator acting as the Hardware Support manager (HSM) for the vSphere Life Cycle Manager (vLCM), handles lifecycle management of both software and firmware updates via a single pane of glass that fully integrates VMware tools. The VX Integrated System offers ThinkAgile Advantage Single Point of Support for quick 24/7 problem reporting and resolution.

The systems have been designed to take advantage of the features of the AMD EPYC 9004 Series "Genoa" family of processors, such as the full performance of 96-core processors, support for 4800 MHz memory and PCIe Gen 5.0 support.

The systems are available as an Integrated System or a Certified Node delivering greater virtualized workload consolidation with higher core count, GPU support and easy-to-use lifecycle management console.

Key features

ThinkAgile features

The ThinkAgile VX635 V3 Integrated Systems and Certified Node offer the following key features:

- Factory-integrated, pre-configured ready-to-go integrated systems built on proven and reliable Lenovo ThinkSystem servers that provide compute power for a variety of workloads and applications and powered by industry-leading hyperconverged infrastructure software from VMware.
- Provide quick and convenient path to implement a hyperconverged solution powered by VMware vSAN with "one stop shop" and a single point of contact provided by Lenovo for purchasing, deploying, and supporting the solution.
- Meet various workload demands with cost-efficient hybrid or performance-optimized all-flash storage configurations.
- Deliver fully validated and integrated hardware and firmware that is certified with VMware software.
- Integrated Systems include Lenovo ThinkAgile Advantage Single Point of Support for quick 24/7 problem reporting and resolution.
- Offer Lenovo deployment services to get customers up and running quickly.

The VMware software running on ThinkAgile VX635 V3 Integrated Systems and Certified Node delivers the following key features:

- Distributed architecture that allows "pay-as-you-grow", non-disruptive scaling by adding new nodes to the cluster (scale-out) to increase capacity and performance.
- Advanced capacity management, including deduplication, compression, and erasure coding (RAID 5/6), which helps deliver greater storage utilization with dramatically lower storage capacity and costs.
- Automation of VM storage provisioning and control of storage service levels (capacity, performance, availability) with VM-centric policies to load balance storage resources.
- Native HCI security solution with two-factor authentication (SecurID and CAC) and data-at-rest encryption that does not require self-encrypting drives (SEDs).
- Stretched cluster with local and site failure protection between two geographically dispersed sites for higher level of availability with near zero downtime.
- Centralized management with provisioning, administering, and monitoring virtual resources across multiple hosts and clusters from a centralized interface.
- Rapid workload provisioning, simplified data center operations, increased business efficiency, and decreased CAPEX and OPEX costs.
- VM and data protection with agent-less, image-level virtual machine backups and application-aware protection for business-critical Microsoft applications (Exchange, SQL Server, SharePoint) along with WAN-efficient, encrypted backup data replication.
- Reduced unplanned downtime and virtually eliminated planned downtime for server and storage maintenance with live workload migration, high availability, and fault tolerance.
- Enhanced application performance and availability with resource management, load balancing, and access prioritization.
- Intelligent operations management and automation to proactively monitor and manage compute, storage, and networking resources, identify performance bottlenecks, and re-balance workloads by leveraging predictive analytics.
- Capacity planning and optimization guidance to address future needs with performance trends, projections and extended forecasts.

- Managing remote offices and branch offices with rapid provisioning of servers through virtualization, minimization of host configuration drift, and enhanced visibility into regulatory compliance, across multiple sites.

Hardware features

The VX635 V3 system are based on the SR635 V3 and have the following hardware features:

Scalability and performance

The VX635 V3 system offer numerous features to boost performance, improve scalability and reduce costs:

- Supports the AMD EPYC 9004 family of processors
- Supports a processor with up to 96 cores and 192 threads, core speeds of up to 3.6 GHz, and TDP ratings of up to 360W.
- Support for up to 12 TruDDR5 memory DIMMs with one processor (12 DIMMs per processor). With 1 DIMM installed per channel (12 DIMMs total), memory operates at 4800 MHz.
- Using 128GB 3DS RDIMMs, the server supports up to 1.5TB of system memory.
- Supports up to three single-width GPUs, each up to 75W for substantial processing power in a 1U system.
- Supports up to 12x 2.5-inch hot-swap drive bays, by using combinations of front-accessible (up to 10 bays) and rear-accessible (2 bays).
- Supports 12x NVMe drives without oversubscription of PCIe lanes (1:1 connectivity) and without the need for additional NVMe adapters. The use of NVMe drives maximizes drive I/O performance, in terms of throughput, bandwidth, and latency.
- Supports up to two externally accessible 7mm hot-swap drives with RAID functionality for operating system boot functions
- Supports M.2 drives for convenient operating system boot functions or data storage.
- The server has a dedicated industry-standard OCP 3.0 small form factor (SFF) slot, with a PCIe 5.0 x16 interface, supporting a variety of Ethernet network adapters. Simple-swap mechanism with thumbscrews and pull-tab enables tool-less installation and removal of the adapter. Supports shared BMC network sideband connectivity to enable out-of-band systems management.
- The server offers PCI Express 5.0 I/O expansion capabilities that doubles the theoretical maximum bandwidth of PCIe 4.0 (32GT/s in each direction for PCIe 5.0, compared to 16 GT/s with PCIe 4.0). A PCIe 5.0 x16 slot provides 128 GB/s bandwidth, enough to support a 400GbE network connection.
- Up to three PCIe 5.0 slots, all with rear access, plus an internal bay for a cabled HBA, plus a slot dedicated to the OCP adapter.

Availability and serviceability

The VX635 V3 system provide many features to simplify serviceability and increase system uptime:

- The server uses ECC memory and supports memory RAS features including Single Device Data Correction (SDDC, also known as Chipkill), Patrol/Demand Scrubbing, Bounded Fault, DRAM Address Command Parity with Replay, DRAM Uncorrected ECC Error Retry, On-die ECC, ECC Error Check and Scrub (ECS), and Post Package Repair.
- The server offers hot-swap drives for greater system uptime.
- The server has up to two hot-swap redundant power supplies and up to eight hot-swap redundant fans to provide availability for business-critical applications.
- Optional front-accessible slots and drives so that most major components and cables (except power) are located at the front of the server.
- The power-source-independent light path diagnostics uses LEDs to lead the technician to failed (or failing) components, which simplifies servicing, speeds up problem resolution, and helps improve system availability.
- Solid-state drives (SSDs) offer more reliability than traditional mechanical HDDs for greater uptime.
- Proactive Platform Alerts (including PFA and SMART alerts): Processors, voltage regulators, memory, internal storage (SAS/SATA HDDs and SSDs, NVMe SSDs, M.2 storage, flash storage adapters), fans, power supplies, RAID controllers, server ambient and subcomponent temperatures. Alerts can be surfaced through the XClarity Controller to managers such as Lenovo XClarity Administrator and VMware vCenter. These proactive alerts let you take appropriate actions in advance of possible failure, thereby increasing server uptime and application availability.
- The built-in XClarity Controller 2 continuously monitors system parameters, triggers alerts, and performs recovery actions in case of failures to minimize downtime.
- Built-in diagnostics in UEFI, using Lenovo XClarity Provisioning Manager, speed up troubleshooting tasks to reduce service time.
- Lenovo XClarity Provisioning Manager supports diagnostics and can save service data to a USB key drive or remote CIFS share folder for troubleshooting and reduce service time.
- Auto restart in the event of a momentary loss of AC power (based on power policy setting in the XClarity Controller service processor)
- Offers a diagnostics port on the front of the server to allow you to attach an external diagnostics handset for enhanced systems management capabilities.
- Support for the XClarity Administrator Mobile app running on a supported smartphone and connected to the server through the service-enabled USB port, enables additional local systems management functions.
- Three-year or one-year customer-replaceable unit and onsite limited warranty, 9 x 5 next business day. Optional service upgrades are available.

Manageability and security

Systems management features simplify local and remote management of the VX635 V3 system:

- The server includes an XClarity Controller 2 (XCC2) to monitor server availability. Optional upgrade to XCC Platinum to provide remote control (keyboard video mouse) functions, support for the mounting of remote media files, FIPS 140-3 security, enhanced NIST 800-193 support, boot capture, power capping, and other management and security features.
- Lenovo XClarity Administrator offers comprehensive hardware management tools that help to increase uptime, reduce costs and improve productivity through advanced server management capabilities.
- UEFI-based Lenovo XClarity Provisioning Manager, accessible from F1 during boot, provides system inventory information, graphical UEFI Setup, platform update function, RAID Setup wizard, operating

system installation function, and diagnostic functions.

- Support for Lenovo XClarity Energy Manager which captures real-time power and temperature data from the server and provides automated controls to lower energy costs.
- An integrated industry-standard Unified Extensible Firmware Interface (UEFI) enables improved setup, configuration, and updates, and simplifies error handling.
- Support for industry standard management protocols, IPMI 2.0, SNMP 3.0, Redfish REST API, serial console via IPMI
- An integrated hardware Trusted Platform Module (TPM) supporting TPM 2.0 enables advanced cryptographic functionality, such as digital signatures and remote attestation.
- Administrator and power-on passwords help protect from unauthorized access to the server.
- Supports AMD Secure Root-of-Trust, Secure Run and Secure Move features to minimize potential attacks and protect data as the OS is booted, as applications are run and as applications are migrated from server to server.
- Supports Secure Boot to ensure only a digitally signed operating system can be used.
- Industry-standard Advanced Encryption Standard (AES) NI support for faster, stronger encryption.
- Additional physical security features are a chassis intrusion switch (standard in all models) and a lockable front bezel (optional).

Energy efficiency

The VX635 V3 system offer the following energy-efficiency features to save energy, reduce operational costs, and increase energy availability:

- Energy-efficient planar components help lower operational costs.
- Carbon offset is available at click of button. You can project the carbon emissions per device for an average lifecycle (up to 5 years). That information is available **here**
- High-efficiency power supplies with 80 PLUS Platinum and Titanium certifications
- Low-voltage 1.1 V DDR5 memory offers energy savings compared to 1.2 V DDR4 DIMMs, an approximately 20% decrease in power consumption
- Solid-state drives (SSDs) consume as much as 80% less power than traditional spinning 2.5-inch HDDs.
- The server uses hexagonal ventilation holes, which can be grouped more densely than round holes, providing more efficient airflow through the system and thus keeping your system cooler.
- Optional Lenovo XClarity Energy Manager provides advanced data center power notification and analysis to help achieve lower heat output and reduced cooling needs.

Components and connectors

The ThinkAgile VX635 V3 Integrated Systems and Certified Node are based on the ThinkSystem SR635 V3 server.

The following figure shows the front of the ThinkAgile VX635 V3 system with 2.5-inch drives.

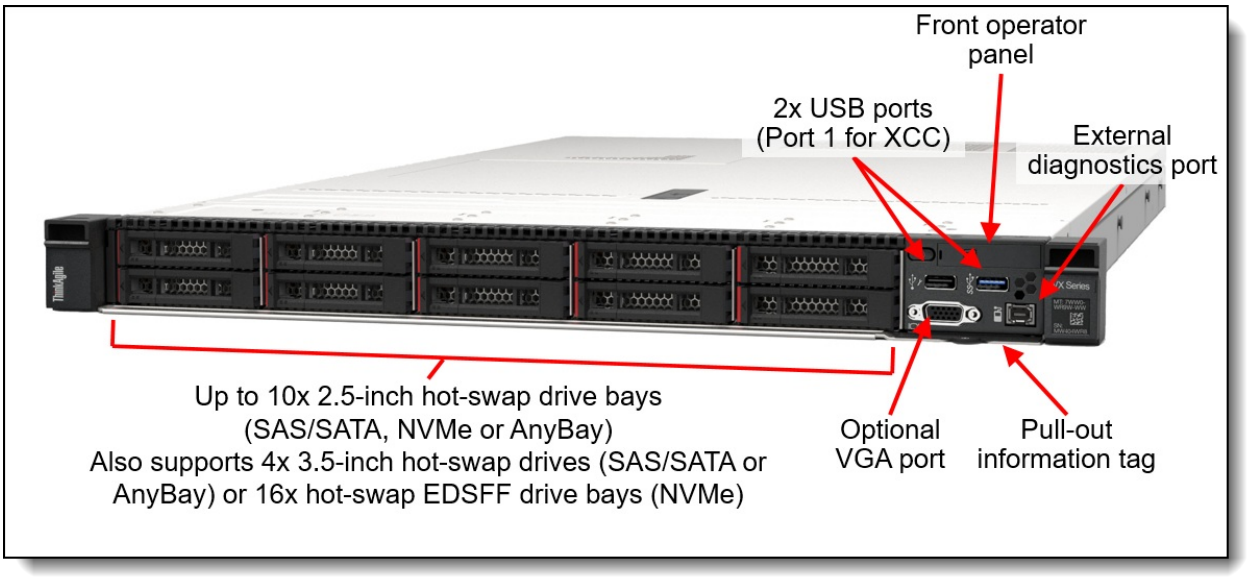

Figure 2. Front view of the ThinkAgile VX635 V3 system with 2.5-inch drives

The following figure shows the components visible from the rear of the server. As shown, there are four different configurations available, including two with rear-mounted drive bays: two 2.5-inch hot-swap drive bays (SAS, SATA or NVMe) or new 7mm thickness hot-swap drives (SATA or NVMe).

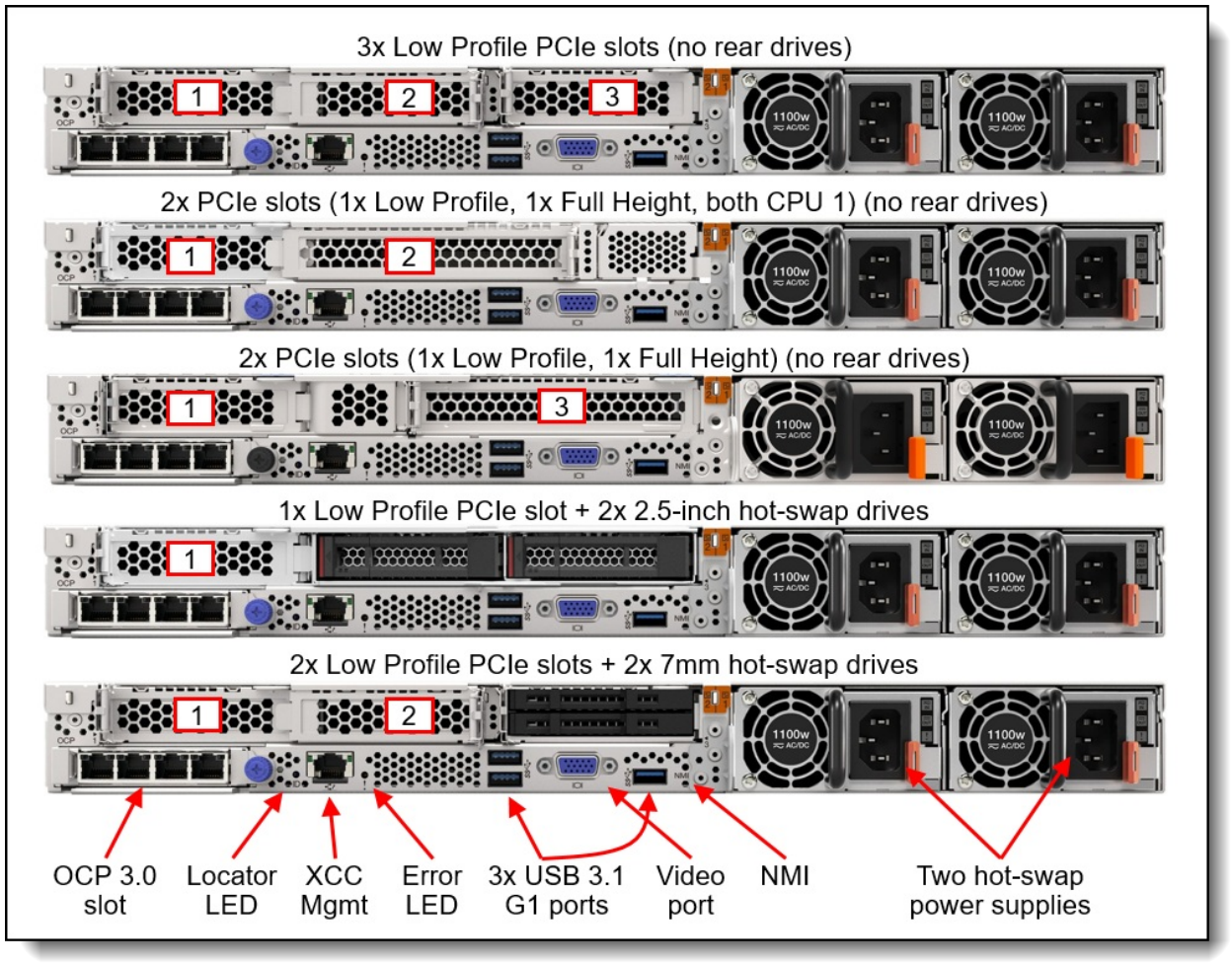

Figure 3. Rear views of the VX635 V3 system

The following figure shows the locations of key components inside the systems.

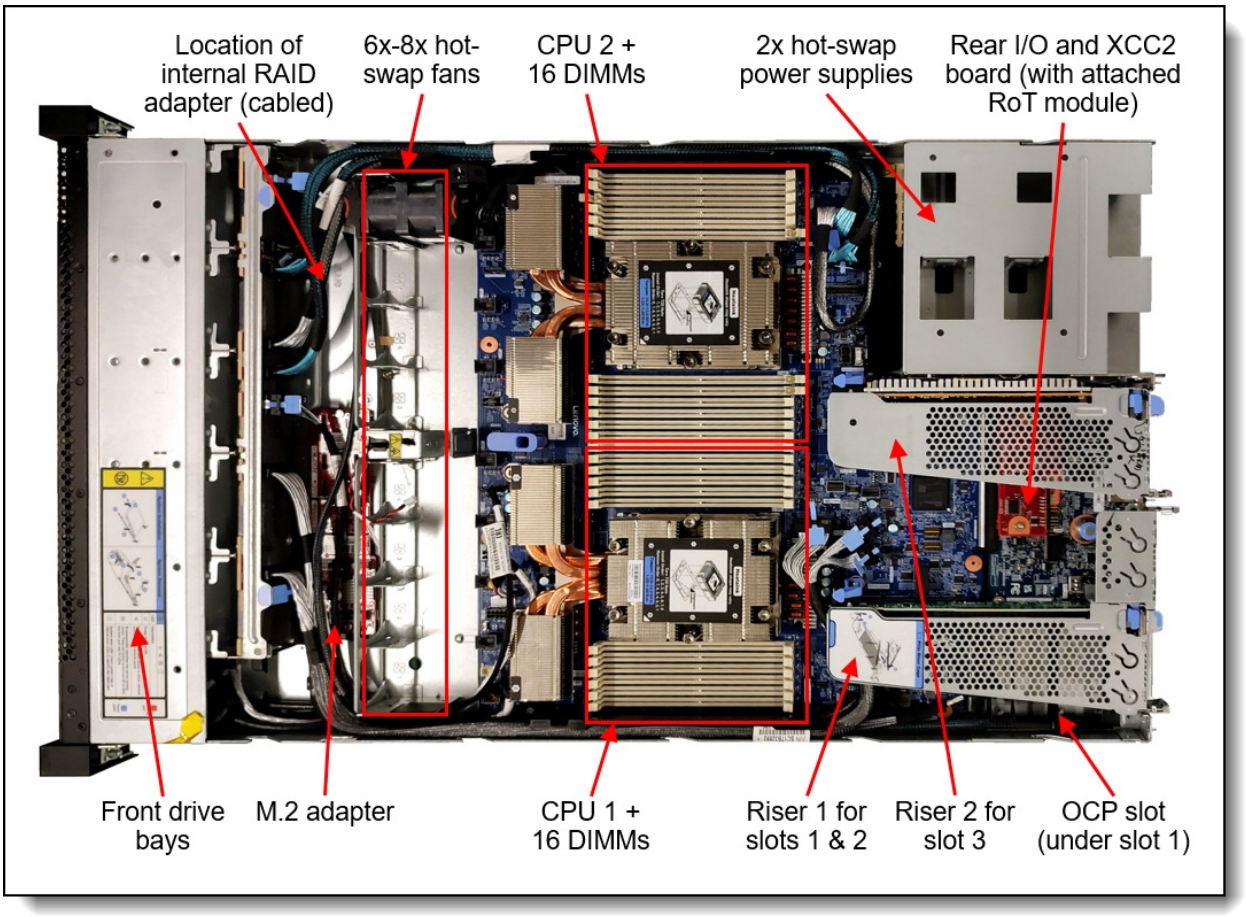

Figure 4. Internal view of VX635 V3 system

Standard specifications

The ThinkAgile VX635 V3 Integrated Systems and Certified Node are based on the ThinkSystem SR635 V3 server.

The following table provides an overview comparison between the VX systems.

Table 1. Comparison of features

Feature	VX635 V3 IS	VX635 V3 CN
VX offering type	Integrated System	Certified Node
Base model	7D9VCTO1WW	7D9VCTO2WW
Form factor	1U	1U
Base platform	SR635 V3	SR635 V3
CPU	1x EPYC 9004	1x EPYC 9004
Memory	12x DDR5 4800 MHz (1.5TB maximum)	12x DDR5 4800 MHz (1.5TB maximum)
Drive bays	• Front: Up to 8x SAS/SATA hot-swap drives bays • Front: 10x 2.5” SAS/SATA/NVMe (up to 4 AnyBay or 10x NVMe) • Front: 4x 2.5" SAS/SATA + 3x PCIe slots (LP, FH, OCP) • Rear: Up to 2x 2.5’” SAS/SATA or NVMe hot-swap drive bays • Rear: 2x 7mm SATA or NVMe hot-swap drive bays • 2x Internal M.2 (Hardware RAID Adapter needed for RAID Support)	• Front: Up to 8x SAS/SATA hot-swap drives bays • Front: 10x 2.5” SAS/SATA/NVMe (up to 4 AnyBay or 10x NVMe) • Front: 4x 2.5" SAS/SATA + 3x PCIe slots (LP, FH, OCP) • Rear: Up to 2x 2.5’” SAS/SATA or NVMe hot-swap drive bays • Rear: 2x 7mm SATA or NVMe hot-swap drive bays • 2x Internal M.2 (Hardware RAID Adapter needed for RAID Support)
Drive Configuration	All Flash or Hybrid	All Flash or Hybrid
Disk groups	Up to 4 groups	Up to 4 groups
HBA	440-8i SAS/SATA HBA 440-16i SAS/SATA HBA 440-16i SAS/SATA INTR HBA 4350-8i SAS/SATA HBA 4350-16i SAS/SATA HBA	440-8i SAS/SATA HBA 440-16i SAS/SATA HBA 440-16i SAS/SATA INTR HBA 4350-8i SAS/SATA HBA 4350-16i SAS/SATA HBA
Boot drives	2x 7mm hot-swap SATA 2x 7mm hot-swap NVMe 2x M.2 SATA 2x M.2 NVME	2x 7mm hot-swap SATA 2x 7mm hot-swap NVMe 2x M.2 SATA 2x M.2 NVME
OCP networking	1x OCP 3.0 adapter 1Gb, 10Gb, 25Gb,100Gb	1x OCP 3.0 adapter 1Gb, 10Gb, 25Gb,100Gb
PCIe networking	Up to 3x adapters 1Gb, 10Gb, 25Gb, 100Gb,	Up to 3x adapters 1Gb, 10Gb, 25Gb, 100Gb,
GPUs	Up to 3x single-wide GPUs	Up to 3x single-wide GPUs
Hypervisor	VMware ESXi	VMware ESXi

The following table lists the standard specifications.

Table 2. Standard specifications

Components	Specification
Machine types	7D9V
Form factor	1U rack
Processor	One AMD EPYC 9004 Series processor (formerly codenamed "Genoa"). Supported processors up to 96 cores, core speeds of up to 3.6 GHz, and TDP ratings of up to 360W.
Chipset	Not applicable (platform controller hub functions are integrated into the processor)
Memory	12 DIMM slots. The processor has 12 memory channels, with 1 DIMM per channel (DPC). Lenovo TruDDR5 RDIMMs, 3DS RDIMMs, and Value RDIMMs are supported, up to 4800 MHz
Memory maximum	Up to 1.5TB with 12x 128GB 3DS RDIMMs
Persistent memory	Not supported
Memory protection	ECC, SDDC, Patrol/Demand Scrubbing, Bounded Fault, DRAM Address Command Parity with Replay, DRAM Uncorrected ECC Error Retry, On-die ECC, ECC Error Check and Scrub (ECS), Post Package Repair

Disk drive bays	Up to 12x 2.5-inch hot-swap drive bays:
	• Front bays can be one of the following:
	  ◦ 10x 2.5-inch hot-swap SAS/SATA, AnyBay or NVMe, or combinations
	• Rear can be one of the following:
	  ◦ 2x 2.5-inch hot-swap SAS/SATA bays
	  ◦ 2x 2.5-inch hot-swap NVMe bays
	  ◦ 2x 7mm 2.5-inch hot-swap SATA bays
	  ◦ 2x 7mm 2.5-inch hot-swap NVMe bays
	• Internal M.2 module supporting up to two M.2 drives, for OS boot
	See Supported drive bay combinations for details. AnyBay bays support SAS, SATA or NVMe drives. NVMe bays only support NVMe drives. Rear drive bays can be used in conjunction with 2.5-inch front drive bays. The server supports up to 12x NVMe drives all with direct connections (no oversubscription).

Storage controller	• Onboard NVMe (no RAID) - 12 drives
	• NVMe Retimer Adapter (PCIe 4.0 or PCIe 5.0)
	• 12 Gb SAS/SATA HBA (non-RAID)
	  ◦ 8-port and 16-port
	  ◦ PCIe 4.0 or PCIe 3.0 host interface

Network interfaces	Dedicated OCP 3.0 SFF slot with PCIe 5.0 x16 host interface, either at the rear of the server (rear-accessible) . Supports a variety of 2-port and 4-port adapters with 1GbE, 10GbE, 25GbE and 100GbE network connectivity. One port can optionally be shared with the XClarity Controller 2 (XCC2) management processor for Wake-on-LAN and NC-SI support. Additional PCIe network adapters supported in PCIe slots.

Components	Specification
PCI Expansion slots	Up to 3x PCIe 5.0 slots, all with rear access, plus a slot dedicated to the OCP adapter. Slot availability is based on riser selection and rear drive bay selection. Four choices for rear-access slots: • 3x PCIe x16 low-profile slots • 1x PCIe x16 full-height half-length slot + 1x PCIe x16 low-profile slot • 1x PCIe x16 low-profile slot (also supports 2x rear 2.5-inch drive bays) • 2x PCIe x16 low-profile slot (also supports 2x rear 7mm 2.5-inch drive bays) For 2.5-inch front drive configurations, the server supports the installation of a HBA in a dedicated area that does not consume any of the PCIe slots. The server alternatively supports slots at the front of the server: • OCP slot • 1x PCIe x16 full-height half-length slot + 1x PCIe x16 low-profile slot **Note**: Not all slots are available in a 1-processor configuration. See thel/O expansion for details.
Ports	Front: 1x USB 3.1 G1 (5 Gb/s) port, 1x USB 2.0 port (also for XCC local management), External diagnostics port, optional VGA port. Rear: 3x USB 3.1 G1 (5 Gb/s) ports, 1x VGA video port, 1x RJ-45 1GbE systems management port for XCC remote management. Optional 2nd XCC remote management port (installs in OCP slot). Optional DB-9 COM serial port (installs in slot 3). Internal: 1x USB 3.1 G1 (5 Gb/s) connector for operating system or license key purposes.
Cooling	Up to 8x N+1 redundant hot swap 40 mm fans, configuration dependent. One fan integrated in each power supply.
Power supply	Up to two hot-swap redundant AC power supplies, 80 PLUS Platinum or 80 PLUS Titanium certification. 500 W, 750 W, 1100 W and 1800 W AC options, supporting 220 V AC. 500 W, 750 W and 1100 W options also support 110V input supply. In China only, all power supply options support 240 V DC. Also available is a 1100W power supply with a -48V DC input.
Video	Embedded video graphics with 16 MB memory with 2D hardware accelerator, integrated into the XClarity Controller. Maximum resolution is 1920x1200 32bpp at 60Hz.
Hot-swap parts	Drives, power supplies, and fans.
Systems management	Operator panel with status LEDs. Optional External Diagnostics Handset with LCD display. Models with 8x 2.5-inch front drive bays can optionally support an Integrated Diagnostics Panel. XClarity Controller 2 (XCC2) embedded management based on the ASPEED AST2600 baseboard management controller (BMC). Dedicated rear Ethernet port for XCC2 remote access for management. Optional 2nd redundant XCC2 remote port supported, installs in the OCP slot. XClarity Administrator for centralized infrastructure management, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management. Optional XCC Platinum to enable remote control functions and other features.
Security features	Chassis intrusion switch, Power-on password, administrator's password, Root of Trust module supporting TPM 2.0 and Platform Firmware Resiliency (PFR). Optional lockable front security bezel.

Components	Specification
Software	Software licenses that can be purchased from Lenovo or provided by the customer: • VMware vSAN: Standard, Advanced, Enterprise, Enterprise Plus, ROBO or Desktop • VMware vSphere: Standard, Enterprise Plus or ROBO • HCI Kit: Essentials, Standard, Advanced, Enterprise or ROBO • VMware Horizon: Standard, Advanced or Enterprise • VMware Cloud Foundation (VCF): Basic, Standard, Advanced, Enterprise or for VDI • VMware vCenter Server: Foundation or Standard
Hypervisors supported	VMware ESXi 7.0 U3 (factory install), ESXi 8.0 (Factory Install) See the Operating system support section for specifics.
Limited warranty	Three-year customer-replaceable unit and onsite limited warranty with 9x5 next business day (NBD).
Service and support	Optional service upgrades are available through Lenovo Services: 4-hour or 2-hour response time, 6-hour fix time, 1-year or 2-year warranty extension, software support for Lenovo hardware and some third-party applications.
Software maintenance	One-, three-, or five-year software support and subscription is included with the VMware software licenses available from Lenovo (optional).
Dimensions	Width: 440 mm (17.3 in.), height: 43 mm (1.7 in.), depth: 773 mm (30.4 in.)
Weight	Maximum: 20.2 kg (44.6 lb)

Models

Factory-integrated models of the ThinkAgile VX Series Integrated Systems are configured by using the Lenovo Data Center Solution Configurator (DCSC), http://dcsc.lenovo.com.

During the configuration process, you are selecting one of the Configure-to-Order (CTO) base models first, and then you are adding components (processors, memory, drives, and network adapters) to the selected model.

Note: You are required to engage a Lenovo representative in the project that includes the ThinkAgile VX Series Integrated Systems. ThinkAgile VX certified nodes do not have this requirement.

The following table lists the CTO base models.

Table 3. CTO base models

Machine Type/Model	Description
7D9VCTO1WW	ThinkAgile VX635 V3 Integrated System
7D9VCTO2WW	ThinkAgile VX635 V3 Certified Node

Models of the VX systems are defined based on the 2.5-inch drive bays at the front (called the 2.5-inch chassis). For models, the feature codes for these chassis bases are as listed in the following table.

Table 4. Chassis base feature codes

Feature code	Description
BRYA	ThinkAgile VX V3 1U 10x2.5" Chassis
BRYB	ThinkAgile VX V3 1U 4x2.5" Chassis

Comparison with the ThinkSystem SR635 V3

The ThinkAgile VX635 V3 Integrated Systems and Certified Node are based on the ThinkSystem SR635 V3 server, however there are key differences between the base model and the Integrated System\Certified Node:

- No onboard SATA controller support
- No SATA HDDs
- Fibre Channel support for data migration only
- InfiniBand adapters only supports the Ethernet function
- Drives are categorized as Cache or Capacity drives and are formed as disk groups for OSA (Original Storage Architecture) configurations.

For details about the ThinkSystem SR635 V3, see the SR635 V3 product guide:
https://lenovopress.com/lp1609-thinksystem-sr635-v3-server

To verify what specific hardware components are supported with the VX635 V3 system, see the DCSC configurator:
https://dcsc.lenovo.com

Processor options

The VX635 V3 system systems support the following third-generation AMD EPYC processors.

For details about these processors, see the SR635 V3 product guide:
https://lenovopress.lenovo.com/lp1609-thinksystem-sr635-v3-server#processor-options

Table 5. Processors

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
None	BREE	ThinkSystem AMD EPYC 9124 16C 200W 3.0GHz Processor	1	1
None	BREJ	ThinkSystem AMD EPYC 9174F 16C 320W 4.1GHz Processor	1	1
None	BREH	ThinkSystem AMD EPYC 9224 24C 200W 2.5GHz Processor	1	1
None	BRED	ThinkSystem AMD EPYC 9254 24C 200W 2.9GHz Processor	1	1
None	BREF	ThinkSystem AMD EPYC 9274F 24C 320W 4.05GHz Processor	1	1
None	BREC	ThinkSystem AMD EPYC 9334 32C 210W 2.7GHz Processor	1	1
None	BR30	ThinkSystem AMD EPYC 9354 32C 280W 3.25GHz Processor	1	1
None	BREG	ThinkSystem AMD EPYC 9354P 32C 280W 3.25GHz Processor	1	1
None	BR32	ThinkSystem AMD EPYC 9374F 32C 320W 3.85GHz Processor	1	1
None	BREB	ThinkSystem AMD EPYC 9454 48C 290W 2.75GHz Processor	1	1
None	BREM	ThinkSystem AMD EPYC 9454P 48C 290W 2.75GHz Processor	1	1
None	BR31	ThinkSystem AMD EPYC 9474F 48C 360W 3.6GHz Processor	1	1
None	BREA	ThinkSystem AMD EPYC 9534 64C 280W 2.45GHz Processor	1	1
None	BPVJ	ThinkSystem AMD EPYC 9554 64C 360W 3.1GHz Processor	1	1
None	BREL	ThinkSystem AMD EPYC 9554P 64C 360W 3.1GHz Processor	1	1
None	BR2Z	ThinkSystem AMD EPYC 9634 84C 290W 2.25GHz Processor	1	1
None	BPVK	ThinkSystem AMD EPYC 9654 96C 360W 2.4GHz Processor	1	1
None	BREK	ThinkSystem AMD EPYC 9654P 96C 360W 2.4GHz Processor	1	1

Memory options

The VX635 V3 system systems support the following memory options.

For details about these options, see the SR635 V3 product guide:
https://lenovopress.lenovo.com/lp1609-thinksystem-sr635-v3-server#memory-options

Table 6. Memory

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
4X77A81437	BQ3C	ThinkSystem 16GB TruDDR5 4800MHz (1Rx8) RDIMM-A	12	12
4X77A81438	BQ39	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM-A	12	12
4X77A81439	BQ3E	ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 9x4 RDIMM-A	12	12
4X77A81440	BQ37	ThinkSystem 32GB TruDDR5 4800MHz (2Rx8) RDIMM-A	12	12
4X77A81441	BQ3D	ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 10x4 RDIMM-A	12	12
4X77A81442	BQ36	ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 9x4 RDIMM-A	12	12
4X77A81443	BQ3A	ThinkSystem 128GB TruDDR5 4800MHz (4Rx4) 3DS RDIMM-A	12	12

Internal storage

Internal storage configurations of the VX635 V3 system are as follows. All drives are hot-swap and are accessible from the front or rear of the system.

- VX635 V3 Integrated System and Certified Node:
  - Front drive bays:
    - Up to 10 x 2.5-inch SAS/SATA or NVMe or 8x 2.5-inch Anybay
  - Rear drive bays:
    - Up to 2x 2.5-inch SAS/SATA
    - Up to 2x 2.5-inch Anybay
    - Up to 2x (7mm) SATA/NVME

Specific choices of drive backplane are listed in the table below.

For details about these options, including configuration rules, see the SR635 V3 product guide:
https://lenovopress.com/lp1609-thinksystem-sr635-v3-server#internal-storage

Table 7. Drive backplanes

Feature	Description	Maximum supported	
		VX635 V3 IS	VX635 V3 CN
Front 2.5-inch drive backplanes			
BCQP	ThinkSystem 1U 10x2.5" (6x SAS/SATA 2x AnyBay 2x NVMe) Backplane	1	1
B8MX	ThinkSystem 1U 10x2.5" (6x SAS/SATA 4x AnyBay) Backplane	1	1
BB3T	ThinkSystem 1U 10x2.5" AnyBay Backplane	1	1
BCQQ	ThinkSystem 1U 10x2.5" NVMe Backplane	1	1
BHU8	ThinkSystem 1U 10x2.5" SAS/SATA Backplane	1	1
Rear - 2.5-inch drive backplanes			
BDY6	ThinkSystem 1U 2x2.5" NVMe Rear Backplane	1	1
B8MY	ThinkSystem 1U 2x2.5" SAS/SATA Rear Backplane	1	1

For OS boot functions, the systems also supports two 7mm hot-swap drives at the rear, or one or two M.2 drives installed on an adapter internal to the server. The following table lists the supported controllers/enablement kits for M.2 and 7mm boot drives.

Table 8. Boot drive enablement

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
M.2 enablement kits				
4Y37A79663	BM8X	ThinkSystem M.2 SATA/x4 NVMe 2-Bay Enablement Kit	1	1
7MM enablement kits				
None	BU0N	ThinkSystem 7mm SATA/NVMe 2-Bay Rear Enablement Kit v2	1	1
RAID adapters M.2/7MM - Boot Only				
None	BT7N	ThinkSystem Raid 5350-8i for M.2/7MM SATA boot Enablement	1	1
None	BT7P	ThinkSystem Raid 540-8i for M.2/7MM NVMe boot Enablement	1	1

For details about these options, including configuration rules, see the SR635 V3 product guide: https://lenovopress.com/lp1609-thinksystem-sr635-v3-server#internal-storage

Configuration notes:

- The support of RAID-1 with the M.2 drives requires an additional RAID adapter that is installed in PCIe slot 2:
  - RAID support for 7MM/M.2 SATA drives requires a RAID 5350-8i adapter (feature BT7N) for Boot only
  - RAID support for 7MM/M.2 NVMe or SATA drives requires a RAID 540-8i adapter (feature BT7P) for Boot Only
- The RAID adapter used for M.2 drive support cannot be configured for use with other drive bays for VSAN data

Disk Groups

The following table lists the supported Disk Groups for each VX system.

Table 9. Disk Groups

Drive Selection Rules	**VX635 V3 -IS**	**VX635 - CN**
Model type	Hybrid (HY) or All Flash (AF)	Hybrid (HY) or All Flash (AF)
Maximum number of drives	12	12
Number of Disk Groups	1-4	1 - 4
Number of Cache Drives per Disk Group	1	1
Number of Capacity Drives per Disk Group	2 - 7	2 - 7
Allowed Capacity Drive Quantities		
1 Disk Group (1 Cache Drive)	2, 3, 4, 5, 6 or 7	2, 3, 4, 5, 6 or 7
2 Disk Groups (2 Cache Drives)	4, 6, 8 or 10	4, 6, 8 or 10
3 Disk Groups (3 Cache Drives)	6 or 9	6 or 9
4 Disk Groups (4 Cache Drives)	8	8

Controllers for internal storage

The VX635 V3 system support the following internal storage controllers.

For details about these options, see the SR635 V3 product guide:
https://lenovopress.com/lp1609-thinksystem-sr635-v3-server#controllers-for-internal-storage

Table 10. Controllers for internal storage

Part number	**Feature**	**Description**	**Maximum supported**	
			VX635 V3 IS	**VX635 V3 CN**
Onboard Controllers				
CTO Only	BC4V	Non RAID NVMe	1	1
SAS/SATA HBA - PCIe 3.0 adapters				
4Y37A72480	BJHH	ThinkSystem 4350-8i SAS/SATA 12Gb HBA	1	1
4Y37A72481	BJHJ	ThinkSystem 4350-16i SAS/SATA 12Gb HBA	1	1
SAS/SATA HBA - PCIe 4.0 adapters				
4Y37A78601	BM51	ThinkSystem 440-8i SAS/SATA PCIe Gen4 12Gb HBA	1	1
4Y37A78602	BM50	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA	1	1
4Y37A09725	B8P1	ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb Internal HBA	1	1

Internal drive options

This section lists the supported drives:

- Boot drives
- Internal drives for VX635 V3 IS
- Internal drives for VX635 V3 CN

Boot drives

The following table lists the supported 7mm and M.2 drives suitable for OS boot functions.

Table 11. Boot drives

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
7mm 2.5-inch hot-swap 6 Gb SATA SSDs				
4XB7A82264	BQ1U	ThinkSystem 7mm 5400 PRO 240GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A82265	BQ1V	ThinkSystem 7mm 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A82266	BQ1W	ThinkSystem 7mm 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A17106	BK79	ThinkSystem 7mm S4520 240GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A17107	BK7A	ThinkSystem 7mm S4520 480GB Read Intensive SATA 6Gb HS SSD	2	2
4XB7A17108	BK7B	ThinkSystem 7mm S4520 960GB Read Intensive SATA 6Gb HS SSD	2	2
M.2 SATA drives				
4XB7A82286	BQ1Z	ThinkSystem M.2 5400 PRO 240GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A82287	BQ1Y	ThinkSystem M.2 5400 PRO 480GB Read Intensive SATA 6Gb NHS SSD	2	2
4XB7A82288	BQ20	ThinkSystem M.2 5400 PRO 960GB Read Intensive SATA 6Gb NHS SSD	2	2
M.2 NVMe drives				
4XB7A13999	BKSR	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD	2	2

7mm Configuration notes:

The use of the 7mm rear drive bays has the following rules:

- The 7mm drive bays support either SATA drives or NVMe drives but not both. You specify SATA or NVMe in the configurator using feature codes BTTV (SATA) or BTTW (NVMe).
- 7mm rear drive bays occupy slot 3; slots 1 and 2 are available and slot 2 is a low profile slot. Slot 3 is not available.
- Select feature code BS7A in the configurator to enable RAID
- The support of RAID-1 with the 7mm drives requires an additional RAID adapter that is installed in PCIe slot 2:
  - RAID support for 7mm SATA drives requires a RAID 5350-8i adapter (feature BT7N)
  - RAID support for 7mm NVMe drives requires a RAID 540-8i adapter operating in Tri-Mode (feature BT7P)
- The RAID adapter used for 7mm drive support cannot be configured for use with other drive bays (not even with M.2)
- M.2 RAID and 7mm RAID are mutually exclusive: they are not supported together in the same configuration

M.2 Configuration notes:

- The support of RAID-1 with the M.2 drives requires an additional RAID adapter that is installed in PCIe slot 2:
  - RAID support for M.2 SATA drives requires a RAID 5350-8i adapter (feature BT7N)
  - RAID support for M.2 NVMe drives requires a RAID 540-8i adapter operating in Tri-Mode (feature BT7P)
- The RAID adapter used for M.2 drive support cannot be configured for use with other drive bays (not even with 7mm)
- M.2 RAID and 7mm RAID are mutually exclusive: they are not supported together in the same configuration

Internal drives for VX635 V3 IS

The following table lists the drives supported in the VX635 V3 IS. For both All Flash Storage and Hybrid Storage configurations, drives are classified as either Cache drives, Capacity drives, or both.

Configuration Note:

- Maximum drive quantities depend on Disk Group configurations.

Table 12. Drives supported in the VX635 V3 IS

Part number	Feature	Description	All Flash Storage		Hybrid Storage	
			Cache	Capacity	Cache	Capacity
2.5-inch hot-swap 12 Gb SAS HDDs						
7XB7A00027	AUM1	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD	No	No	No	12
7XB7A00033	B0YX	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD SED	No	No	No	12
7XB7A00028	AUM2	ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD	No	No	No	12
2.5-inch hot-swap 24 Gb SAS SSDs						
4XB7A80318	BNWC	ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80319	BNWE	ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80320	BNWF	ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80321	BP3E	ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80322	BP3J	ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80340	BNW8	ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	12	12	12	No
4XB7A80341	BNW9	ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	12	12	12	No
4XB7A80342	BNW6	ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	12	12	12	No
4XB7A80343	BP3K	ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	12	12	12	No

Part number	Feature	Description	All Flash Storage		Hybrid Storage	
			Cache	Capacity	Cache	Capacity
2.5-inch hot-swap 6 Gb SATA SSDs						
4XB7A72438	BM8B	ThinkSystem 2.5" PM893 480GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72439	BM8A	ThinkSystem 2.5" PM893 960GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72440	BM89	ThinkSystem 2.5" PM893 1.92TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72441	BM88	ThinkSystem 2.5" PM893 3.84TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72442	BM87	ThinkSystem 2.5" PM893 7.68TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17101	BA7G	ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17102	BA7H	ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17103	BA7J	ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17104	BK77	ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17105	BK78	ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82259	BQ1P	ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82260	BQ1R	ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82261	BQ1X	ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82262	BQ1S	ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82263	BQ1T	ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17125	BA7Q	ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A17126	BA4T	ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A17127	BA4U	ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A17128	BK7L	ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82289	BQ21	ThinkSystem 2.5" 5400 MAX 480GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82290	BQ24	ThinkSystem 2.5" 5400 MAX 960GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82291	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	12	12	12	No

Part number	Feature	Description	All Flash Storage		Hybrid Storage	
			Cache	Capacity	Cache	Capacity
4XB7A82292	BQ23	ThinkSystem 2.5" 5400 MAX 3.84TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
2.5-inch hot-swap PCIe 4.0 NVMe SSDs						
4XB7A13941	BMGD	ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A13942	BMGE	ThinkSystem 2.5" U.2 P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A13943	BNEF	ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A13631	BNEQ	ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79646	BNF3	ThinkSystem 2.5" U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79647	BNF2	ThinkSystem 2.5" U.3 7450 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79648	BNF5	ThinkSystem 2.5" U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79649	BNF4	ThinkSystem 2.5" U.3 7450 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A17129	BNEG	ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17130	BNEH	ThinkSystem 2.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17133	BNEZ	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17136	BA4V	ThinkSystem 2.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A79639	BNF1	ThinkSystem 2.5" U.3 7450 MAX 800GB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A13967	BNEJ	ThinkSystem 2.5" U.3 7450 MAX 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A13970	BNEY	ThinkSystem 2.5" U.3 7450 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A13971	BNEL	ThinkSystem 2.5" U.3 7450 MAX 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17158	BKKY	ThinkSystem 2.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17159	BKKZ	ThinkSystem 2.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17160	BMM8	ThinkSystem 2.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	12	12	No	No

Note: VX servers utilize generic drives and Firmware. VCG support will be listed under the drive vendor instead of Lenovo. Please check Lenovo Press for the Drive family to obtain Supplier PN if checking the VCG for compliance

Internal drives for VX635 V3 CN

The following table lists the drives supported in the VX635 V3 CN. For both All Flash Storage and Hybrid Storage configurations, drives are classified as either Cache drives, Capacity drives, or both.

Configuration Note:

- Maximum drive quantities depend on Disk Group configurations.

Table 13. Drives supported in the VX635 V3 CN

Part number	Feature	Description	All Flash Storage		Hybrid Storage	
			Cache	Capacity	Cache	Capacity
2.5-inch hot-swap 12 Gb SAS HDDs						
7XB7A00027	AUM1	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD	No	No	No	12
7XB7A00033	B0YX	ThinkSystem 2.5" 1.2TB 10K SAS 12Gb Hot Swap 512n HDD SED	No	No	No	12
7XB7A00028	AUM2	ThinkSystem 2.5" 1.8TB 10K SAS 12Gb Hot Swap 512e HDD	No	No	No	12
2.5-inch hot-swap 24 Gb SAS SSDs						
4XB7A80318	BNWC	ThinkSystem 2.5" PM1653 960GB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80319	BNWE	ThinkSystem 2.5" PM1653 1.92TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80320	BNWF	ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80321	BP3E	ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80322	BP3J	ThinkSystem 2.5" PM1653 15.36TB Read Intensive SAS 24Gb HS SSD	No	12	No	No
4XB7A80340	BNW8	ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD	12	12	12	No
4XB7A80341	BNW9	ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD	12	12	12	No
4XB7A80342	BNW6	ThinkSystem 2.5" PM1655 3.2TB Mixed Use SAS 24Gb HS SSD	12	12	12	No
4XB7A80343	BP3K	ThinkSystem 2.5" PM1655 6.4TB Mixed Use SAS 24Gb HS SSD	12	12	12	No
2.5-inch hot-swap 6 Gb SATA SSDs						
4XB7A72438	BM8B	ThinkSystem 2.5" PM893 480GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72439	BM8A	ThinkSystem 2.5" PM893 960GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72440	BM89	ThinkSystem 2.5" PM893 1.92TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A72441	BM88	ThinkSystem 2.5" PM893 3.84TB Read Intensive SATA 6Gb HS SSD	No	12	No	No

Part number	Feature	Description	All Flash Storage		Hybrid Storage	
			Cache	Capacity	Cache	Capacity
4XB7A72442	BM87	ThinkSystem 2.5" PM893 7.68TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17101	BA7G	ThinkSystem 2.5" S4520 480GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17102	BA7H	ThinkSystem 2.5" S4520 960GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17103	BA7J	ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17104	BK77	ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17105	BK78	ThinkSystem 2.5" S4520 7.68TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82259	BQ1P	ThinkSystem 2.5" 5400 PRO 480GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82260	BQ1R	ThinkSystem 2.5" 5400 PRO 960GB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82261	BQ1X	ThinkSystem 2.5" 5400 PRO 1.92TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82262	BQ1S	ThinkSystem 2.5" 5400 PRO 3.84TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A82263	BQ1T	ThinkSystem 2.5" 5400 PRO 7.68TB Read Intensive SATA 6Gb HS SSD	No	12	No	No
4XB7A17125	BA7Q	ThinkSystem 2.5" S4620 480GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A17126	BA4T	ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A17127	BA4U	ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A17128	BK7L	ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82289	BQ21	ThinkSystem 2.5" 5400 MAX 480GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82290	BQ24	ThinkSystem 2.5" 5400 MAX 960GB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82291	BQ22	ThinkSystem 2.5" 5400 MAX 1.92TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
4XB7A82292	BQ23	ThinkSystem 2.5" 5400 MAX 3.84TB Mixed Use SATA 6Gb HS SSD	12	12	12	No
2.5-inch hot-swap PCIe 4.0 NVMe SSDs						
4XB7A13941	BMGD	ThinkSystem 2.5" U.2 P5520 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A13942	BMGE	ThinkSystem 2.5" U.2 P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A13943	BNEF	ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No

Part number	Feature	Description	All Flash Storage		Hybrid Storage	
			Cache	Capacity	Cache	Capacity
4XB7A13631	BNEQ	ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79646	BNF3	ThinkSystem 2.5" U.3 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79647	BNF2	ThinkSystem 2.5" U.3 7450 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79648	BNF5	ThinkSystem 2.5" U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A79649	BNF4	ThinkSystem 2.5" U.3 7450 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	No	12	No	No
4XB7A17129	BNEG	ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17130	BNEH	ThinkSystem 2.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17133	BNEZ	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17136	BA4V	ThinkSystem 2.5" U.2 P5620 12.8TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A79639	BNF1	ThinkSystem 2.5" U.3 7450 MAX 800GB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A13967	BNEJ	ThinkSystem 2.5" U.3 7450 MAX 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A13970	BNEY	ThinkSystem 2.5" U.3 7450 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A13971	BNEL	ThinkSystem 2.5" U.3 7450 MAX 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17158	BKKY	ThinkSystem 2.5" U.2 P5800X 400GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17159	BKKZ	ThinkSystem 2.5" U.2 P5800X 800GB Write Intensive NVMe PCIe 4.0 x4 HS SSD	12	12	No	No
4XB7A17160	BMM8	ThinkSystem 2.5" U.2 P5800X 1.6TB Write Intensive NVMe PCIe 4.0 x4 HS SSD	12	12	No	No

Note: VX servers utilize generic drives and Firmware. VCG support will be listed under the drive vendor instead of Lenovo. Please check Lenovo Press for the Drive family to obtain Supplier PN if checking the VCG for compliance

Network adapters

The VX635 V3 system systems support the following networking options.

For details about these options, see the SR635 V3 product guide:
https://lenovopress.com/lp1609-thinksystem-sr635-v3-server#i-o-expansion
https://lenovopress.com/lp1609-thinksystem-sr635-v3-server#network-adapters

Table 14. OCP networking options

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
Gigabit Ethernet				
4XC7A08235	B5T1	ThinkSystem Broadcom 5719 1GbE RJ45 4-port OCP Ethernet Adapter	1	1
4XC7A08277	B93E	ThinkSystem Intel I350 1GbE RJ45 4-port OCP Ethernet Adapter	1	1
10 GbE				
4XC7A08236	B5ST	ThinkSystem Broadcom 57416 10GBASE-T 2-port OCP Ethernet Adapter	1	1
4XC7A08240	B5T4	ThinkSystem Broadcom 57454 10GBASE-T 4-port OCP Ethernet Adapter	1	1
4XC7A08278	BCD5	ThinkSystem Intel X710-T2L 10GBASE-T 2-port OCP Ethernet Adapter	1	1
4XC7A80268	BPPY	ThinkSystem Intel X710-T4L 10GBase-T 4-Port OCP Ethernet Adapter	1	1
25 GbE				
4XC7A08237	BN2T	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1
4XC7A80567	BPPW	ThinkSystem Broadcom 57504 10/25GbE SFP28 4-Port OCP Ethernet Adapter	1	1
4XC7A08294	BCD4	ThinkSystem Intel E810-DA2 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1
4XC7A80269	BP8L	ThinkSystem Intel E810-DA4 10/25GbE SFP28 4-Port OCP Ethernet Adapter	1	1
4XC7A62582	BE4T	ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port OCP Ethernet Adapter	1	1
100 GbE				
4XC7A08243	BPPX	ThinkSystem Broadcom 57508 100GbE QSFP56 2-Port OCP Ethernet Adapter	1	1

Table 15. PCIe networking options

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
Gigabit Ethernet				
7ZT7A00535	AUZW	ThinkSystem I350-T4 PCIe 1Gb 4-Port RJ45 Ethernet Adapter	3	3
7ZT7A00484	AUZV	ThinkSystem Broadcom 5719 1GbE RJ45 4-Port PCIe Ethernet Adapter	3	3
10 GbE				
7ZT7A00496	AUKP	ThinkSystem Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter	3	3
4XC7A08245	B5SU	ThinkSystem Broadcom 57454 10GBASE-T 4-port PCIe Ethernet Adapter	3	3
4XC7A08236	BNWL	ThinkSystem Intel X710-T2L 10GBase-T 2-Port PCIe Ethernet Adapter	3	3
4XC7A79699	BMXB	ThinkSystem Intel X710-T4L 10GBase-T 4-Port PCIe Ethernet Adapter	3	3
25 GbE				
4XC7A08237	BK1H	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter	3	3
4XC7A80566	BNWM	ThinkSystem Broadcom 57504 10/25GbE SFP28 4-Port PCIe Ethernet Adapter	1	1
4XC7A08295	BCD6	ThinkSystem Intel E810-DA2 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	3	3
4XC7A80267	BP8M	ThinkSystem Intel E810-DA4 10/25GbE SFP28 4-Port PCIe Ethernet Adapter	3	3
4XC7A62580	BE4U	ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	3	3
100 GbE				
4XC7A08297	BK1J	ThinkSystem Broadcom 57508 100GbE QSFP56 2-port PCIe 4 Ethernet Adapter	3	3
4XC7A08248	B8PP	ThinkSystem Mellanox ConnectX-6 Dx 100GbE QSFP56 2-port PCIe Ethernet Adapter	3	3
200 GbE				
4C57A15326	B4RC	ThinkSystem Mellanox ConnectX-6 HDR/200GbE QSFP56 1-port PCIe 4 VPI Adapter	3	3
400 Gb				
4XC7A80289	BQ1N	ThinkSystem NVIDIA ConnectX-7 NDR400 OSFP 1-Port PCIe Gen5 Adapter	2	No

Table 16. Fibre Channel adapters

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
32 Gb Fibre Channel HBAs				
4XC7A08279	BA1G	ThinkSystem QLogic QLE2770 32Gb 1-Port PCIe Fibre Channel Adapter	3	3
4XC7A08276	BA1F	ThinkSystem QLogic QLE2772 32Gb 2-Port PCIe Fibre Channel Adapter	3	3

GPU adapters

The VX635 V3 system systems support the following GPU options.

For details about these options, see the SR635 V3 product guide:
https://lenovopress.com/lp1609-thinksystem-sr635-v3-server#gpu-adapters

Table 17. GPU options

Part number	Feature	Description	Maximum supported	
			VX635 V3 IS	VX635 V3 CN
Single-wide GPUs				
4X67A81547	BP05	ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU	3	3
CTO Only	BQZT	ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC	3	3

Operating system support

The ThinkAgile VX635 V3 IS supports the following operating systems:

Server: ThinkAgile VX635 V3 IS (7D9K, EPYC 9004)

- VMware ESXi 7.0 U3
- VMware ESXi 8

The ThinkAgile VX635 V3 CN supports the following operating systems:

Server: ThinkAgile VX635 V3 CN (7D9K, EPYC 9004)

- VMware ESXi 7.0 U3
- VMware ESXi 8

For further details, including any restrictions, see the OS Interoperability Guide:
https://lenovopress.com/osig#term=vx%2520amd%25201u%25202s&support=all

Software

VMware vSAN, vSphere, and vCenter Server software are required for ThinkAgile VX Series Integrated Systems and Certified Nodes. For Integrated Systems, you are required to purchase VMware vSAN licenses for VX Series from Lenovo. Customers have the option to transfer the license after it has initially landed on Lenovo VX Integrated System. For Certified Nodes, you can purchase the vSAN licenses from Lenovo or from VMware, or you can use your existing licenses. For vSphere and vCenter Server, you can use the existing VMware software licenses and active support contracts, or you can purchase software licenses and support from Lenovo or VMware.

Lenovo offers the following VMware software license and support options for ThinkAgile VX Series systems:

- VMware vSAN License and Subscription
- VMware vSphere License and Subscription
- VMware HCI Kit License and Subscription
- VMware Horizon License and Subscription
- VMware Cloud Foundation License and Subscription
- VMware vCenter Server License and Subscription

For details and ordering information, see the VMware Software Solution Product Guide: https://lenovopress.com/lp1265-vmware-software-solution-product-guide

Configuration notes:

- The selection of vSAN licenses is required: Standalone licenses, HCI bundle licenses, VDI solution licenses, or VCF licenses.
- VMware software licenses that are available for selection include 1-year, 3-year, or 5-year software support (matches the duration of the selected solution-level warranty period).
- The quantity of processor-based licenses is derived by the configuration tool based on the number of processors selected.
- The quantity of VM-based licenses is specified based on VM requirements.
- The quantity of CCU-based licenses is specified based on the concurrent user requirements.

ThinkAgile VX Deployer Tool

The ThinkAgile VX Deployer tool is a web-based UI used to simplify and automate the deployment of Lenovo ThinkAgile VX systems within VMware vSAN clusters. The ThinkAgile VX Deployer tool can install and configure the following software:

VMware ESXi

VMware ESXi is a bare-metal hypervisor that the ThinkAgile VX Deployer tool installs on the hardware of each host in the cluster. ESXi translates requests between the physical and virtual resources, making virtualization possible.

VMware vCenter Server

VMware vCenter Server is a management console that provides a centralized platform for controlling VMware vSphere environments. One service that runs in VMware vCenter Server is VMware vLCM, which provides centralized and simplified management to install software, maintain that software through updates and upgrades, and decommission it.

Lenovo® XClarity Integrator

Lenovo XClarity Integrator is the hardware support manager (HSM) used by vCenter for firmware upgrades. Lenovo XClarity Integrator fully integrates with VMware vLCM to give the VMware vCenter Server software visibility into Lenovo hardware. The interface for the ThinkAgile VX Deployer tool is a straightforward web-based installation wizard with three top-level options:

- Install a new cluster (using the wizard).
- Add nodes to an existing cluster (using the wizard).
- Use a configuration file to install a new cluster or add nodes to an existing cluster.

Prowess testing included all three of these options, plus some key lifecycle-management features in VMware vCenter Server. To view the results of our testing please use the link https://www.lenovo.com/content/dam/lenovo/dcg/global/en/products/software-defined-infrastructure/Prowess_Measuring_the_Ease_of_Deployment_of_ThinkAgile_VX.pdf

Warranty and Support

The VX635 V3 system have a 3-year warranty based on the machine type:

- 7D9V - 3 year warranty

The ThinkAgile VX Series Integrated Systems can be configured with a three- or five-year hardware warranty with 24x7 ThinkAgile Advantage Single Point of Support (Lenovo server hardware and VMware software; requires an active software support contract purchased either from VMware or Lenovo) and various levels of coverage with a well-defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

The Lenovo local support centers perform problem determination and resolution for hardware-related issues and escalate to VMware, on behalf of the customer, for software-related problem determination. VMware will contact the customer and will own the software-related problem resolution until closure.

The standard warranty terms are customer-replaceable unit (CRU) and onsite (for field-replaceable units FRUs only) with standard call center support during normal business hours and 9x5 Next Business Day Parts Delivered.

Lenovo's additional support services provide a sophisticated, unified support structure for your data center, with an experience consistently ranked number one in customer satisfaction worldwide. Available offerings include:

- **Premier Support**

  Premier Support provides a Lenovo-owned customer experience and delivers direct access to technicians skilled in hardware, software, and advanced troubleshooting, in addition to the following:

  - Direct technician-to-technician access through a dedicated phone line
  - 24x7x365 remote support
  - Single point of contact service
  - End to end case management
  - Third-party collaborative software support
  - Online case tools and live chat support
  - On-demand remote system analysis

- **Warranty Upgrade (Preconfigured Support)**

  Services are available to meet the on-site response time targets that match the criticality of your systems.

  - 3, 4, or 5 years of service coverage
  - 1-year or 2-year post-warranty extensions
  - **Foundation Service**: 9x5 service coverage with next business day onsite response. YourDrive YourData is an optional extra (see below).
  - **Essential Service:** 24x7 service coverage with 4-hour onsite response or 24-hour committed repair (available only in select markets). Bundled with YourDrive YourData.
  - **Advanced Service:** 24x7 service coverage with 2-hour onsite response or 6-hour committed repair (available only in select markets). Bundled with YourDrive YourData.

- **Managed Services**

  Lenovo Managed Services provides continuous 24x7 remote monitoring (plus 24x7 call center availability) and proactive management of your data center using state-of-the-art tools, systems, and practices by a team of highly skilled and experienced Lenovo services professionals.

  Quarterly reviews check error logs, verify firmware & OS device driver levels, and software as needed. We'll also maintain records of latest patches, critical updates, and firmware levels, to ensure you systems are providing business value through optimized performance.

- **Technical Account Management (TAM)**

  A Lenovo Technical Account Manager helps you optimize the operation of your data center based on a deep understanding of your business. You gain direct access to your Lenovo TAM, who serves as your single point of contact to expedite service requests, provide status updates, and furnish reports to track incidents over time. In addition, your TAM will help proactively make service recommendations and manage your service relationship with Lenovo to make certain your needs are met.

- **Enterprise Server Software Support**

  Enterprise Software Support is an additional support service providing customers with software support on Microsoft, Red Hat, SUSE, and VMware applications and systems. Around the clock availability for critical problems plus unlimited calls and incidents helps customers address challenges fast, without incremental costs. Support staff can answer troubleshooting and diagnostic questions, address product comparability and interoperability issues, isolate causes of problems, report defects to software vendors, and more.

- **YourDrive YourData**

  Lenovo's YourDrive YourData is a multi-drive retention offering that ensures your data is always under your control, regardless of the number of drives that are installed in your Lenovo server. In the unlikely event of a drive failure, you retain possession of your drive while Lenovo replaces the failed drive part. Your data stays safely on your premises, in your hands. The YourDrive YourData service can be purchased in convenient bundles and is optional with Foundation Service. It is bundled with Essential Service and Advanced Service.

- **Health Check**

  Having a trusted partner who can perform regular and detailed health checks is central to maintaining efficiency and ensuring that your systems and business are always running at their best. Health Check supports Lenovo-branded server, storage, and networking devices, as well as select Lenovo-supported products from other vendors that are sold by Lenovo or a Lenovo-Authorized Reseller.

Examples of region-specific warranty terms are second or longer business day parts delivery or parts-only base warranty.

If warranty terms and conditions include onsite labor for repair or replacement of parts, Lenovo will dispatch a service technician to the customer site to perform the replacement. Onsite labor under base warranty is limited to labor for replacement of parts that have been determined to be field-replaceable units (FRUs). Parts that are determined to be customer-replaceable units (CRUs) do not include onsite labor under base warranty.

If warranty terms include parts-only base warranty, Lenovo is responsible for delivering only replacement parts that are under base warranty (including FRUs) that will be sent to a requested location for self-service. Parts-only service does not include a service technician being dispatched onsite. Parts must be changed at customer's own cost and labor and defective parts must be returned following the instructions supplied with the spare parts.

Lenovo Service offerings are region-specific. Not all preconfigured support and upgrade options are available in every region. For information about Lenovo service upgrade offerings that are available in your region, refer to the following resources:

- Service part numbers in Lenovo Data Center Solution Configurator (DCSC):
  http://dcsc.lenovo.com/#/services
- Lenovo Services Availability Locator
  http://lenovolocator.com/

For service definitions, region-specific details, and service limitations, please refer to the following documents:

- Lenovo Statement of Limited Warranty for Infrastructure Solutions Group (ISG) Servers and System Storage
  http://pcsupport.lenovo.com/us/en/solutions/ht503310
- Lenovo Data Center Services Agreement
  http://support.lenovo.com/us/en/solutions/ht116628

Software maintenance

The ThinkAgile VX Series Integrated Systems (appliances) include one- (PRC only), three-, or five-year software support and subscription (matches the duration of the selected warranty period) that entitles customers to submit service requests to troubleshoot VMware software issues and receive code updates, including fixes, patches, and new software releases.

The Lenovo local support centers perform problem determination and resolution for hardware-related issues and escalate to VMware, on behalf of the customer, for software-related problem determination. VMware will contact the customer and will own the software-related problem resolution until closure.

For the VMware vSphere, vSAN, and vCenter Server software and subscription licenses purchased from Lenovo together with the ThinkAgile VX Series Integrated Systems, software support that is provided by VMware includes Production-level support with 24x7 phone and web coverage with the following target response times (priorities are defined by VMware based on the impact on productivity):

- Severity 1 (Critical: Substantial loss or disruption of service, significant risk of data loss): 30 minutes
- Severity 2 (Major: Operations are severely constrained, significant impact): 4 business hours
- Severity 3 (Minor: Non-critical loss of functionality, minimal impact): 8 business hours
- Severity 4 (Cosmetic: General questions): 12 business hours

For the VMware software and subscription licenses provided by the customer, software support that is provided by VMware is based on the support level included with these licenses.

Deployment services

The following optional Lenovo basic installation services are available for the ThinkAgile VX Series Integrated Systems (appliances):

- Unpacking and inspecting the systems
- Mounting the systems in a rack cabinet
- Connecting the systems to electrical power and network
- Checking and updating firmware to the latest levels
- Verifying operations
- Disposal of the packaging materials (within the customer site)

The following Lenovo deployment services are available for the ThinkAgile VX Series Integrated Systems to get customers up and running quickly:

- Conducting remote preparation and planning
- Verifying firmware versions and performing firmware updates, if needed
- Configuring XCC management settings
- Configuring hypervisor settings
- Configuring vSAN
- Configuring VMware vCenter Server and discovering hosts and storage
- Configuring Lenovo XClarity network settings and performing discovery and inventory
- Transferring knowledge
- Developing post-installation documentation

The following table lists ThinkAgile Health Check & Deployment offerings are available for ThinkAgile VX customers. These offerings are performed by Lenovo Professional Services.

- **Onsite Deployment**: Install, configure, and validate solution on-site, and conduct knowledge transfer.
- **Remote Deployment**: Install, configure, and validate solution remotely, and conduct knowledge transfer.
- **Remote Health Check**: Report & remediation of hardware and cluster health issues, including firmware and software updates.

Table 18. ThinkAgile Deployment offerings

Part number	Description
Onsite deployment services	
5MS7B00082	ThinkAgile VX Onsite Deployment (up to 4 nodes)
5MS7B00083	ThinkAgile VX Onsite Deployment (additional node)
Remote deployment services	
5MS7A87711	ThinkAgile VX Remote Deployment (up to 4 nodes)
5MS7A87712	ThinkAgile VX Remote Deployment (additional node)
Remote Health Check	
5MS7B00178	ThinkAgile VX 1X Remote Health Check (up to 4 node cluster)
5MS7B00179	ThinkAgile VX 1X Remote Health Check (additional node)
5MS7B00059	ThinkAgile VX 1X Remote Health Check & Update (up to 4 node cluster)
5MS7B00060	ThinkAgile VX 1X Remote Health Check & Update (additional node)

For more information, refer to the Data Center Implementation Services web page:
https://www.lenovo.com/us/en/data-center/services/implementation-services/

Lenovo Financial Services

Lenovo Financial Services reinforces Lenovo's commitment to deliver pioneering products and services that are recognized for their quality, excellence, and trustworthiness. Lenovo Financial Services offers financing solutions and services that complement your technology solution anywhere in the world.

We are dedicated to delivering a positive finance experience for customers like you who want to maximize your purchase power by obtaining the technology you need today, protect against technology obsolescence, and preserve your capital for other uses.

We work with businesses, non-profit organizations, governments and educational institutions to finance their entire technology solution. We focus on making it easy to do business with us. Our highly experienced team of finance professionals operates in a work culture that emphasizes the importance of providing outstanding customer service. Our systems, processes and flexible policies support our goal of providing customers with a positive experience.

We finance your entire solution. Unlike others, we allow you to bundle everything you need from hardware and software to service contracts, installation costs, training fees, and sales tax. If you decide weeks or months later to add to your solution, we can consolidate everything into a single invoice.

Our Premier Client services provide large accounts with special handling services to ensure these complex transactions are serviced properly. As a premier client, you have a dedicated finance specialist who manages your account through its life, from first invoice through asset return or purchase. This specialist develops an in-depth understanding of your invoice and payment requirements. For you, this dedication provides a high-quality, easy, and positive financing experience.

For your region-specific offers, please ask your Lenovo sales representative or your technology provider about the use of Lenovo Financial Services. For more information, see the following Lenovo website:

https://www.lenovo.com/us/en/landingpage/lenovo-financial-services/

Related publications and links

For more information, see these resources:

- Lenovo ThinkAgile VX Series
  https://www.lenovo.com/us/en/data-center/software-defined-infrastructure/ThinkAgile-VX-Series/p/WMD00000340
- ThinkAgile VX - Best Recipes
  http://datacentersupport.lenovo.com/us/en/solutions/HT505302
- VMware documentation
  https://docs.vmware.com/
- ThinkSystem SR635 V3 product guide:
  https://lenovopress.com/lp1609-thinksystem-sr635-v3-server

Related product families

Product families related to this document are the following:

- 2-Socket Rack Servers
- ThinkAgile VX Series for VMware vSAN

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