

ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System and Certified Node

Product Guide

The Lenovo ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes are 2-socket 1U systems that feature the 5th Generation Intel Xeon Scalable processors (formerly code named "Emerald Rapids) and 4th Generation Intel Xeon Scalable processors (formerly code named "Sapphire Rapids). ThinkAgile HX630 V3 models are designed for deploying industry-leading hyperconvergence software from Nutanix on Lenovo enterprise platforms. Nutanix brings the benefits of web-scale technologies to enterprise applications through enterprise storage, data protection, infrastructure resilience, management and analytics, and security.

The 1U systems are available either as an Integrated Systems or Certified Nodes:

- HX630 V3 Integrated Systems and Certified Nodes for entry systems, VDI, server virtualization, and private cloud.
- HX630 V3 ROBO Integrated Systems and Certified Nodes for remote office and branch office.
- HX630 V3 Integrated Systems and Certified Nodes for SAP HANA

HX Integrated Systems deliver fully validated and integrated Lenovo hardware and firmware, certified and preloaded with licensed Nutanix software. They also include ThinkAgile Premier support with one single point of contact for support of the hardware and software.

HX Certified Nodes deliver fully validated Lenovo hardware and firmware, certified and can be preloaded with Nutanix software. Certified Nodes do not include licenses to Nutanix software and enhanced software support.

The ThinkAgile HX Integrated Systems and Certified Nodes for SAP HANA are certified by SAP for deploying SAP HANA solutions on hyperconverged infrastructure (HCI) in production environments.



Figure 1. Lenovo ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes with 2.5-inch drive bays

Did you know?

The ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes are built on the Lenovo ThinkSystem SR630 V3 server that features enterprise-class reliability, management, and security.

The HX 630 V3 Integrated Systems offer ThinkAgile Premier Single Point of Support for quick 24/7 problem reporting and resolution.

Key features

Combining performance and flexibility, the HX630 V3 are a great choice for enterprises of all sizes. The systems offer a broad selection of processors, memory and drives, and offers high performance features that industries such as finance, healthcare and telco need. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design can improve your business environment and can help save operational costs.

Appliance features

The HX Series Integrate System Series, HX630 V3 IS , HX630 V3 ROBO IS and HX630 V3 IS for SAP HANA offer the following key features:

- Factory-integrated, pre-configured ready-to-go appliances built on proven and reliable Lenovo ThinkSystem servers that provide compute power for a variety of workloads and applications and powered by industry's most feature-rich hyperconverged infrastructure software from Nutanix.
- Provide quick and convenient path to implement a hyperconverged solution powered by Nutanix 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 (including all-NVMe) configurations.
- Deliver fully validated and integrated hardware and firmware that is certified with Nutanix software.
- Include Lenovo ThinkAgile Premier Single Point of Support for quick 24/7 problem reporting and resolution.
- Offer Lenovo deployment services to get customers up and running quickly.

Certified Node features

The HX Certified Nodes Series, HX630 V3 CN, HX630 V3 ROBO CN and HX630 V3 CN for SAP HANA offer the following key features:

- Built on proven and reliable Lenovo ThinkSystem servers that provide compute power for a variety of workloads and applications.
- Deliver fully validated and integrated hardware and firmware that is certified with Nutanix software.
- Preloaded with Nutanix software and ready for out-of-box deployment (Note: software licenses are not included).
- Provide flexibility in using the existing Nutanix term-based software licenses and active support contracts or purchasing new software licenses and support contracts from Nutanix.
- Offer optional Lenovo Professional Services to get customers up and running quickly

The Nutanix software running on the HX630 V3 delivers the following key features:

- A natively integrated solution for data protection and continuous availability at VM granularity that gives administrators an affordable range of options to meet the recovery point objectives (RPO) and recovery time objectives (RTO) for different applications.
- Certified to run SAP HANA in production on Lenovo hyperconverged infrastructure.
- A fault resistant platform, with no single point of failure and no bottlenecks with shared-nothing architecture, where all data, metadata and services are distributed to all nodes within the cluster, that is built to detect, isolate and recover from failures anywhere in the system.
- An intuitive user-centric management experience to simplify every aspect of the IT infrastructure lifecycle and provide a single pane of glass to monitor and control Nutanix clusters, with simplified workflows and rich automation for common administrative tasks.
- Powerful security features, such as two-factor authentication and data-at-rest encryption, with a

security development lifecycle that is integrated into product development to help customers meet the most stringent security requirements.

Hardware features

The ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes systems are based on the SR630 V3 and have the following hardware features:

Scalability and performance

The HX630 V3 offer numerous features to boost performance, improve scalability and reduce costs:

- Supports one or two Intel Xeon Processor Scalable processors
 - Fifth Generation
 - Up to 64 cores and 128 threads
 - Core speeds of up to 3.9 GHz
 - TDP ratings of up to 350 W
 - Fourth Generation
 - Up to 60 cores and 120 threads
 - Core speeds of up to 3.7 GHz
 - TDP ratings of up to 350 W
- Support for DDR5 memory DIMMs to maximize the performance of the memory subsystem:
 - Up to 32 DDR5 memory DIMMs, 16 DIMMs per processor
 - 8 memory channels per processor (2 DIMMs per channel)
 - Supports 1 DIMM per channel operating at 5600 MHz (5th Gen processors) or 4800 MHz (4th Gen processors)
 - Supports 2 DIMMs per channel operating at 4800 MHz (5th Gen processors) or 4400 MHz (4th Gen processors)
 - Using 256GB 3DS RDIMMs, the server supports up to 8TB 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 up to 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 and latency.
- Supports 12x SAS or SATA drives using 12Gb SAS/SATA HBAs.
- 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. Available M.2 adapters support either one M.2 drive or two M.2 drives in a RAID 1 configuration for performance and reliability.
- 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. A simple-swap mechanism with a thumbscrew and pull-tab enables tool-less installation and removal of the adapter. 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 Gen 5, compared to 16 GT/s with PCIe Gen 4 and 8 GT/s with PCIe Gen 3). A PCIe 5.0 x16 slot provides 128 GB/s bandwidth, enough to support a dual-port 200GbE network connection.
- The server offers up to three PCIe 5.0 slots, all with rear access, plus a slot dedicated to the OCP adapter.

Availability and serviceability

The HX630 V3 provide many features to simplify serviceability and increase system uptime:

- The server offers Single Device Data Correction (SDDC, also known as Chipkill), Adaptive Double-Device Data Correction (ADDDC, also known as Redundant Bit Steering or RBS), and memory mirroring for redundancy in the event of a non-correctable memory failure.
- The server offers hot-swap drives for greater system uptime.
- Available M.2 RAID Boot Adapters support RAID-1 which can enable two NVMe M.2 drives to be configured as a redundant pair. SATA is only supported for non-RAID boot.
- 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.
- The light path diagnostics feature 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 and performance 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), fans, power supplies, server ambient and subcomponent temperatures. Alerts can be surfaced through the XClarity Controller to managers such as Lenovo XClarity Administrator, Nutanix Prism or 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 or tablet and connected to the server through the service-enabled USB port, enables additional local systems management functions.
- Three-year customer-replaceable unit and onsite limited warranty (varies by geography), 9 x 5 next business day. Optional service upgrades are available.

Manageability and security

Systems management features simplify local and remote management of the HX630 V3:

- The server includes XClarity Controller 2 (XCC2) to monitor server availability. Included upgrade to XCC2 Platinum to provide remote control (keyboard video mouse) functions, support for the mounting of remote media files (ISO and IMG image files), boot capture, power capping and new XCC2 Platinum features. New XCC2 Platinum features include System Guard, new security modes including a CNSA-compliant mode, FIPS 140-3 and NIST 800-193 support, and a new Neighbor Group feature.
- Dedicated Ethernet port at the rear of the server for remote management (BMC management).
- 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 Secure Boot to ensure only a digitally signed operating system can be used. Supported with HDDs and SSDs, as well as 7mm and M.2 drives.
- Industry-standard Advanced Encryption Standard (AES) NI support for faster, stronger encryption.
- Intel Execute Disable Bit functionality can prevent certain classes of malicious buffer overflow attacks when combined with a supported operating system.
- Intel Trusted Execution Technology provides enhanced security through hardware-based resistance to malicious software attacks, allowing an application to run in its own isolated space, protected from all other software running on a system.
- Additional physical security features are an available chassis intrusion switch and available lockable front bezel.

Energy efficiency

The HX630 V3 offer the following energy-efficiency features to save energy, reduce operational costs, and increase energy availability:

- Energy-efficient system board 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
- 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, analysis, and policy-based management to help achieve lower heat output and reduced cooling needs.

Components and connectors

The ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes are based on the ThinkSystem SR630 V3 server.

The following figure shows the front of the HX630 V3 with 2.5-inch drives.

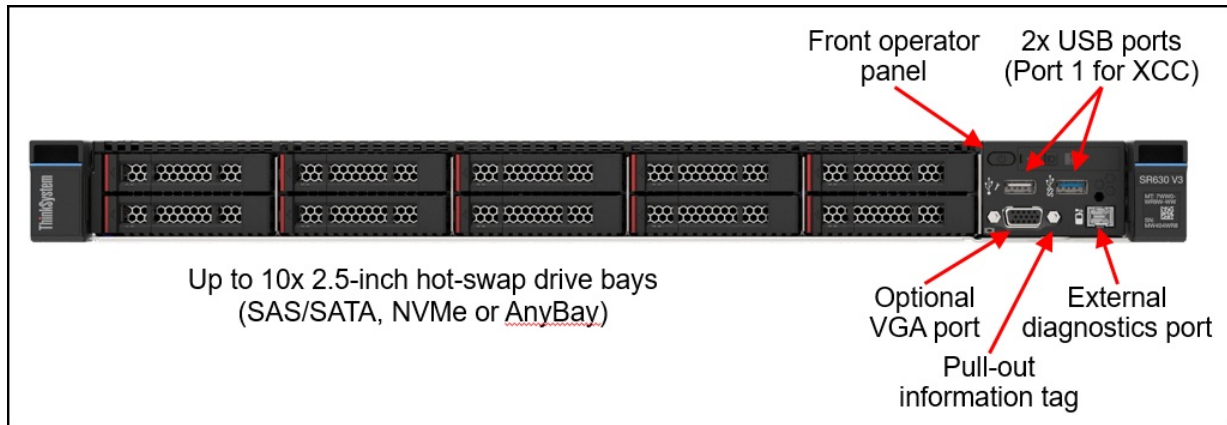


Figure 2. Front view of the HX630 V3 with 2.5-inch drives

The following figure shows the components visible from the rear of the server. As shown, there are three different configurations available, including one with two 2.5-inch hot-swap rear-mounted drive bays.

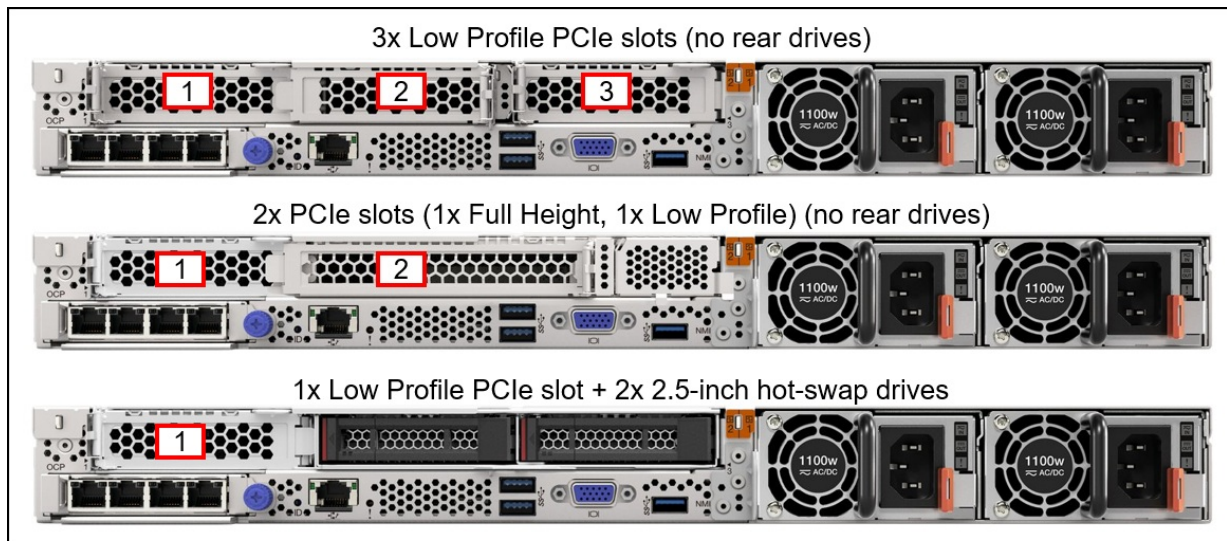


Figure 3. Rear views of the HX630 V3

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

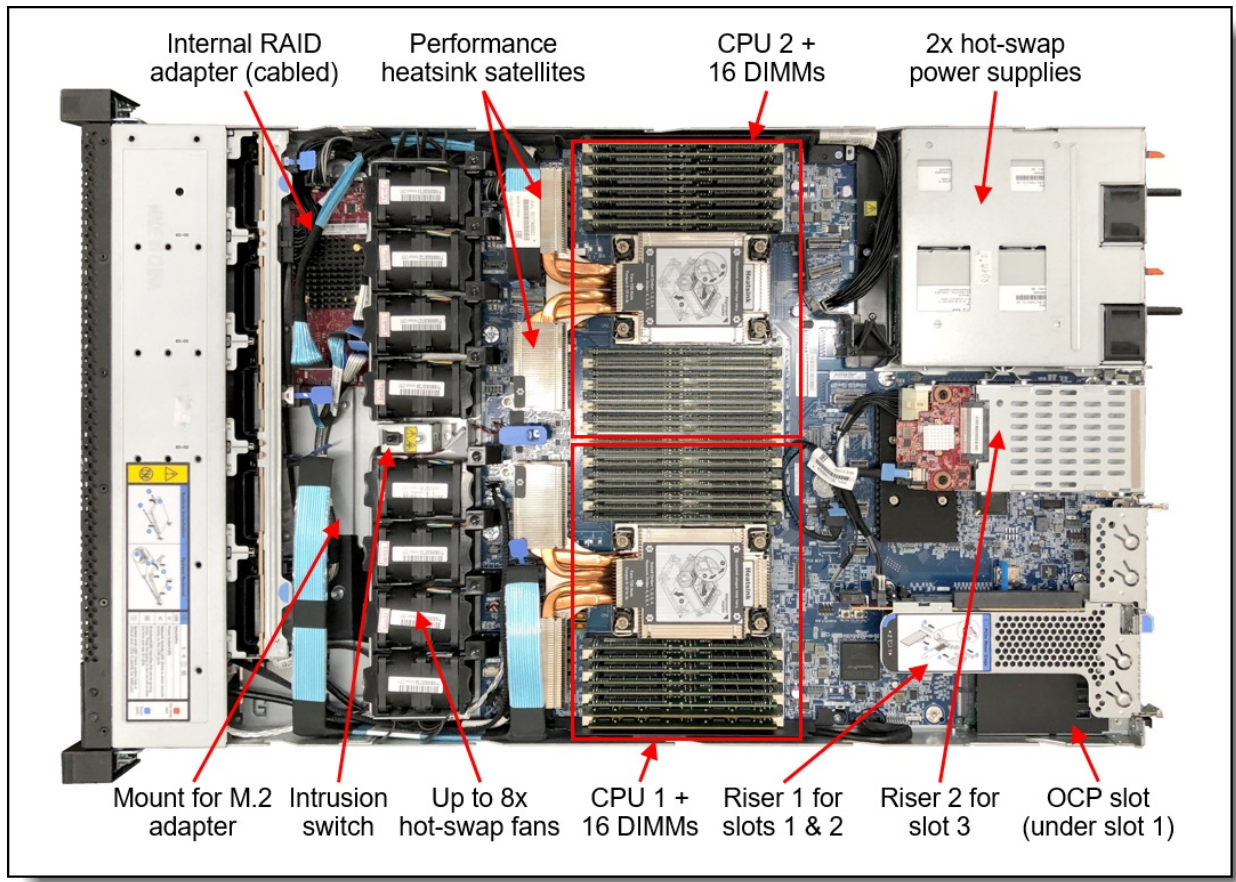


Figure 4. Internal view of the HX630 V3 systems

Standard specifications

The ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes are based on the ThinkSystem SR630 V3 server.

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

Table 1. Comparison of features

| | HX630 V3 ROBO Integrated System HX630 V3 ROBO Certified Node | HX630 V3 Integrated System HX630 V3 Certified Node | HX630 V3 IS for SAP HANA HX630 V3 CN for SAP HANA |
|-------------------------|--|--|--|
| HX offering type | Integrated System Certified Node | Integrated System Certified Node | Integrated System Certified Node |
| Target workloads | Entry, SMB, ROBO/Edge | VDI, server virtualization, private cloud, general compute | SAP HANA |
| Base MTM | IS: 7D6MCTO2WW CN: 7D6MCTO4WW | IS: 7D6MCTO1WW CN: 7D6MCTO3WW | IS: 7D6MCTO5WW CN: 7D6MCTO6WW |
| Form Factor | 1U | 1U | 1U |
| Base platform | SR630 V3 | SR630 V3 | SR630 V3 |
| Supported cluster sizes | 1*,2, 3+ nodes | 3+ nodes | 3+ nodes |
| CPU | 1x or2x Intel Xeon SP Gen 5 (Emerald Rapids) or Gen 4 (Sapphire Rapids) | 2x Intel Xeon SP Gen 5 (Emerald Rapids) or Gen 4 (Sapphire Rapids) | 2x Intel Xeon SP Gen 4 (Sapphire Rapids) |
| Memory | 32x DDR5 5600 MHz (8TB maximum) | 32x DDR5 5600 MHz (8TB maximum) | 32x DDR5 5600 MHz (8TB maximum) |
| Drive Bays | <ul style="list-style-type: none"> • 4x 3.5" SAS/SATA or • 4x 3.5" SAS/SATA + 2x 2.5" SAS/SATA | <ul style="list-style-type: none"> • 10x 2.5" AnyBay or NVME • 10x 2.5" AnyBay or NVME+ 2x 2.5" SAS/SATA or NVME | |
| Drive Configuration | All Flash Hybrid | All Flash | All Flash |
| HBA | 440-8i HBA | 440-16i HBA | 440-16i HBA |
| Boot drives | 2x M.2 | 2x M.2 | 2x M.2 |
| OCF networking | 1x OCP 3.0 adapter 10Gb, 25Gb | 1x OCP 3.0 adapter 10Gb, 25Gb | 1x OCP 3.0 adapter 10Gb, 25Gb |
| PCIe networking | 2x PCIe adapters 10Gb, 25Gb, 100Gb | 2x PCIe adapters 10Gb, 25Gb, 100 Gb | 2x PCIe adapters 10Gb, 25Gb, 100 Gb |
| GPUs | Up to 2x single-wide GPUs | Up to 2x single-wide GPUs | Up to 2x single-wide GPUs |
| Hypervisor | Nutanix AHV, VMware ESXi | Nutanix AHV, VMware ESXi | Nutanix AHV, VMware ESXi |

***Note:** 1-node cluster is supported with HX630 V3 ROBO models under limited workload conditions.

The following table lists the standard specifications.

Table 2. Standard specifications

| Components | Specification |
|--------------------|---|
| Machine types | 7D6M - 1U Integrated Systems 7D6M - 1U Certified Node |
| Form factor | 1U rack. |
| Processor | Supports one or two 5th generation Intel Xeon Scalable processor (formerly codenamed "Emerald Rapids") or 4th-generation Intel Xeon Scalable processor (formerly codenamed "Sapphire Rapids"). Supports up to 64 cores per 5th generation processor and up to 60 cores per 4th generation processor, core speeds of up to 3.9 GHz, and TDP ratings of up to 350 W. |
| Chipset | Intel C741 "Emmitsburg" chipset, part of the platform codenamed "Eagle Stream" |
| Memory | 32 DIMM slots with two processors (16 DIMM slots per processor). Each processor has 8 memory channels, with 2 DIMMs per channel (DPC). Lenovo TruDDR5 RDIMMs, 9x4 RDIMMs, and 3DS RDIMMs are supported. DIMM slots are shared between standard system memory and persistent memory. DIMMs operate at up to 5600 MHz at 1 DPC and up to 4400 MHz at 2 DPC. |
| Persistent memory | Not supported |
| Memory maximum | With RDIMMs: Up to 8TB by using 32x 256GB 3DS RDIMMs |
| Memory protection | ECC, SDDC (for x4-based memory DIMMs), ADDDC (for x4-based memory DIMMs excluding 9x4 RDIMMs, requires Platinum or Gold processors), and memory mirroring. |
| Drive bays | <ul style="list-style-type: none"> ● HX630 V3 ROBO Integrated System and HX630 V3 ROBO Certified Node: <ul style="list-style-type: none"> ○ Front drive bays: 4x 3.5-inch SAS/SATA ○ Rear drive bays: 2x 2.5-inch (optional) ● HX630 V3 Integrated System and HX630 V3 Certified Node <ul style="list-style-type: none"> ○ Front drive bays: 10x 2.5-inch AnyBay or 10x 2.5-inch NVMe ○ Rear drive bays: 2x 2.5-inch SAS/SATA or 2x2.5" NVME (optional) ● HX630 V3 Integrated System and Certified Node for SAP HANA <ul style="list-style-type: none"> ○ Front drive bays: 10x 2.5-inch AnyBay or 10x 2.5-inch NVMe ● Internal M.2 module supporting up to two M.2 drives, for OS boot support <p>Note: EDSFF drive bays are currently not supported.</p> |
| Storage controller | <ul style="list-style-type: none"> ● Onboard NVMe ports (RAID not supported) ● 12 Gb SAS/SATA HBA (non-RAID) <ul style="list-style-type: none"> ○ 8-port or 16-port ○ PCIe 5.0 or PCIe 4.0 host interface |
| Network interfaces | Dedicated OCP 3.0 SFF slot with PCIe 5.0 x16 host interface. Supports a variety of 2-port and 4-port adapters with 10GbE and 25GbE network connectivity. 1GbE port for XClarity Controller 2 (XCC2) management. |

| Components | Specification |
|---------------------|---|
| PCI Expansion slots | <p>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. Slot 3 requires two processors.</p> <p>Four choices for rear-access slots:</p> <ul style="list-style-type: none"> • 3x PCIe 4.0 x16 low-profile slots • 1x PCIe 4.0 x16 full-height half-length slot + 1x PCIe 4.0 x16 low-profile slot • 1x PCIe 4.0 x16 low-profile slot (also supports 2x rear 2.5-inch drive bays) • 2x PCIe 4.0 x16 low-profile slot (also supports 2x rear 7mm 2.5-inch drive bays) <p>Customer has option to use with PCIe 5.0 instead of default PCIe 4.0. For 2.5-inch front drive configurations, the server supports the installation of a RAID adapter or HBA in a dedicated area that does not consume any of the PCIe slots.</p> <p>Note: See the I/O expansion for details.</p> |
| GPU support | Supports up to 2x single-wide GPUs |
| Ports | <p>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.</p> <p>Rear: 2x USB 3.1 G1 (5 Gb/s) ports and 1x USB 2.0 port, 1x VGA video port, 1x RJ-45 1GbE systems management port for XCC remote management. Optional DB-9 COM serial port (installs in slot 3). Optional second RJ-45 1GbE systems management port for XCC remote management (installed in OCP adapter slot).</p> <p>Internal: 1x USB 3.1 G1 connector for operating system or license key purposes</p> |
| 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. 750 W, 1100 W and 1800 W AC options, supporting 220 V AC. 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 graphics with 16 MB memory with 2D hardware accelerator, integrated into the XClarity Controller 2 management 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), XClarity Administrator centralized infrastructure delivery, XClarity Integrator plugins, and XClarity Energy Manager centralized server power management. Included 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 | <ul style="list-style-type: none"> ● Integrated Systems: Nutanix 2.0 PnP: Starter, Pro, and Ultimate editions - Nutanix Cloud Platform, Nutanix Cloud Infrastructure, Nutanix Cloud Manager, NCI-Data ● Certified Nodes: Licenses purchased separately from Nutanix or a Nutanix reseller. Nutanix Acropolis Starter, Pro and Ultimate editions . OEM 2.0: Starter, Pro, and Ultimate editions - Nutanix Cloud Platform, Nutanix Cloud Infrastructure, Nutanix Cloud Manager, NCI-Data |
| Hypervisor | Nutanix AHV or VMware ESXi. |
| Hardware warranty | <ul style="list-style-type: none"> ● Integrated Systems: Three-, four-, or five-year customer-replaceable unit and onsite limited hardware warranty with ThinkAgile Premier Support and selectable service levels: 9x5 next business day (NBD) parts delivered, 9x5 NBD onsite response, 24x7 coverage with 2-hour or 4-hour onsite response, or 6-hour or 24-hour committed repair (select areas). Also available are YourDrive YourData, Premier Support, and Enterprise Software Support. ● Certified Nodes: Three, four, or five-year customer-replaceable unit and onsite limited warranty with selectable service levels: 9x5 coverage with next business day (NBD) parts delivered (base warranty), 9x5 coverage with NBD onsite response (Foundation Service), 24x7 coverage with 4-hour onsite response or 24-hour committed repair (select areas) (Essential Service), or 24x7 coverage with 2-hour onsite response or 6-hour committed repair (select areas) (Advanced Service). Also available are 1-year and 2-year post-warranty extensions, YourDrive YourData, and Enterprise Software Support. |
| Software maintenance | Three-, four-, or five-year software support and subscription (matches the duration of the selected warranty period). |
| Dimensions | Width: 440 mm (17.3 in.), height: 43 mm (1.7 in.), depth: 773 mm (30.4 in.). |
| Weight | Maximum: 26.3 kg (58 lb) |

Models

Factory-integrated models of the integrated systems and certified nodes 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 base Configure-to-Order (CTO) models first, and then you are adding components (processors, memory, drives, and network adapters) to the selected model according to the output from the Nutanix Sizer tool, <http://services.nutanix.com/>

To ensure that the controlled GPUs and accelerators are only sold in the supported markets, the following configure-to-order base machine-type models (CTO MTMs) are selectable in DCSC:

- **Standard Open models** are available in all markets worldwide. Controlled GPUs cannot be configured using these models. These are CTO1WW models.
- **GPU Controlled models** are used to order any of the controlled GPUs and accelerators. Controlled models are not available in affected markets. If you start from a controlled model, your configuration must include a controlled GPUs.

Note:

- For all models listed in the GPU **Controlled models** column, one of the controlled GPUs *must* be selected in the DCSC configurator. DCSC will display an error if you configuration does not include one of the controlled GPUs.
- You are required to engage a Lenovo representative in the project that includes the ThinkAgile HX Series Integrated Systems. ThinkAgile HX Certified Nodes do not have this requirement.

The following table lists the base CTO models.

Table 3. CTO base models

| Server model | Standard Open models | GPU Controlled models |
|---|---|--|
| | These CTO models are available in all markets. Configurations based on these MTMs cannot include controlled GPUs. | These CTO models are not available in affected markets. Configurations based on these MTMs must include controlled GPUs. |
| ThinkAgile HX630 V3 Integrated System | 7D6MCTO1WW | 7D6MCTOAWW |
| ThinkAgile HX630 V3 ROBO Integrated System | 7D6MCTO2WW | 7D6MCTOBWW |
| ThinkAgile HX630 V3 Certified Node | 7D6MCTO3WW | 7D6MCTOCWW |
| ThinkAgile HX630 V3 ROBO Certified Node | 7D6MCTO4WW | 7D6MCTODWW |
| ThinkAgile HX630 V3 Integrated System for SAP HANA | 7D6MCTO5WW | None |
| ThinkAgile HX630 V3 Certified Node for SAP HANA | 7D6MCTO6WW | None |
| ThinkAgile HX630 V3 LOD Integrated System - China Only | 7D6MCTO7WW | None |
| ThinkAgile HX630 V3 ROBO LOD Integrated System - China Only | 7D6MCTO8WW | None |
| ThinkAgile HX630 V3 SAP HANA LOD Integrated System - China Only | 7D6MCTO9WW | None |

Comparison with the ThinkSystem SR630 V3

The ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes are based on the ThinkSystem SR630 V3 server, however there are key differences:

- No persistent memory support
- No onboard SATA controller support
- RAID adapter support for Boot only
- No VROC RAID support
- No EDSFF drive support
- Encryption not supported on SED drives
- Fibre Channel support for data migration only
- No InfiniBand support

For details about the ThinkSystem SR630 V3, see the SR630 V3 product guide:

<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server>

To verify what specific hardware components are supported with the HX630 V3, see the DCSC configurator:

<https://dcsc.lenovo.com>

Processors

The HX630 V3 supports processors in either the 5th Gen Intel Xeon Scalable Processor family or the 4th Gen Intel Xeon Scalable Processor family.

Topics in this section:

- [5th Gen Intel Xeon Scalable processors](#)
- [4th Gen Intel Xeon Scalable processors](#)

5th Gen Intel Xeon Scalable processors

The HX630 V3 support the following processors.

For details about these options, see the SR630 V3 product guide:
<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#processors>

Support for additional processors: The table below lists the processors supported across all configurations. Additional processors may also be supported. Please contact your Lenovo representative regarding the support of additional options through our Special Bid ordering process.

Configurations Notes:

- HX630 V3 Integrated System and Certified Node support 2 processors
- HX630 V3 ROBO Integrated System and Certified Node support 1 or 2 processors
- HX630 V3 Integrated System and Certified Node for SAP HANA support will be coming in approximately 2Q calendar year
- The platform is available for early orderability only. Delivery and support for these systems will be available in 2H of calendar year 2024. For more details please reach out to your local Lenovo representative.

Table 4. Processors

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| None | BYW3 | Intel Xeon Silver 4509Y 8C 125W 2.6GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYW4 | Intel Xeon Silver 4510 12C 150W 2.4GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVS | Intel Xeon Silver 4510T 12C 115W 2.0GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVP | Intel Xeon Silver 4514Y 16C 150W 2.0GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYW6 | Intel Xeon Silver 4516Y+ 24C 185W 2.2GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVU | Intel Xeon Gold 5512U 28C 185W 2.1GHz Processor | No | 1 | No | 1 | No | No |
| None | BYVW | Intel Xeon Gold 5515+ 8C 165W 3.2GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYW7 | Intel Xeon Gold 5520+ 28C 205W 2.2GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVX | Intel Xeon Gold 6526Y 16C 195W 2.8GHz Processor | 2 | 2 | 2 | 2 | No | No |

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| None | BYWK | Intel Xeon Gold 6530 32C 270W 2.1GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYW0 | Intel Xeon Gold 6534 8C 195W 3.9GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVQ | Intel Xeon Gold 6538N 32C 205W 2.1GHz Processor | No | 1 | No | 1 | No | No |
| None | BYW8 | Intel Xeon Gold 6538Y+ 32C 225W 2.2GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVY | Intel Xeon Gold 6542Y 24C 250W 2.9GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYW1 | Intel Xeon Gold 6544Y 16C 270W 3.6GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYVR | Intel Xeon Gold 6548N 32C 250W 2.8GHz Processor | No | 1 | No | 1 | No | No |
| None | BYVZ | Intel Xeon Gold 6548Y+ 32C 250W 2.5GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYW9 | Intel Xeon Gold 6554S 36C 270W 2.2GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYWE | Intel Xeon Platinum 8558U 48C 300W 2.0GHz Processor | No | 1 | No | 1 | No | No |
| None | BYW2 | Intel Xeon Platinum 8562Y+ 32C 300W 2.8GHz Processor | 2 | 2 | 2 | 2 | No | No |
| None | BYWD | Intel Xeon Platinum 8571N 52C 300W 2.4GHz Processor | No | 1 | No | 1 | No | No |
| None | BYWC | Intel Xeon Platinum 8581V 60C 270W 2.0GHz Processor | No | 1 | No | 1 | No | No |

4th Gen Intel Xeon Scalable processors

The HX630 V3 support the following processors.

For details about these options, see the SR630 V3 product guide:

<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#processors>

Support for additional processors: The table below lists the processors supported across all configurations. Additional processors may also be supported. Please contact your Lenovo representative regarding the support of additional options through our Special Bid ordering process.

Configurations rules regarding processor quantities:

- HX630 V3 Integrated System and Certified Node support 2 processors
- HX630 V3 ROBO Integrated System and Certified Node support 1 or 2 processors
- HX630 V3 Integrated System and Certified Node for SAP HANA supports 2 processors

Table 5. Processors

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| None | BQ64 | Intel Xeon Silver 4410T 10C 150W 2.7GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ67 | Intel Xeon Silver 4410Y 12C 150W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ69 | Intel Xeon Silver 4416+ 20C 165W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6J | Intel Xeon Gold 5411N 24C 165W 1.9GHz Processor | No | 1 | No | 1 | No | No |
| None | BQ63 | Intel Xeon Gold 5415+ 8C 150W 2.9GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6L | Intel Xeon Gold 5416S 16C 150W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6H | Intel Xeon Gold 5418N 24C 165W 1.8GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ66 | Intel Xeon Gold 5418Y 24C 185W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ65 | Intel Xeon Gold 5420+ 28C 205W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPD | Intel Xeon Gold 6414U 32C 250W 2.0GHz Processor | No | 1 | No | 1 | No | No |
| None | BQ6C | Intel Xeon Gold 6416H 18C 165W 2.2GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6B | Intel Xeon Gold 6418H 24C 185W 2.1GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6G | Intel Xeon Gold 6421N 32C 185W 1.8GHz Processor | No | 1 | No | 1 | No | No |
| None | BPQF | Intel Xeon Gold 6426Y 16C 185W 2.5GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6F | Intel Xeon Gold 6428N 32C 185W 1.8GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPC | Intel Xeon Gold 6430 32C 270W 2.1GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPQC | Intel Xeon Gold 6434 8C 195W 3.7GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6E | Intel Xeon Gold 6434H 8C 195W 3.7GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6K | Intel Xeon Gold 6438M 32C 205W 2.2GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6D | Intel Xeon Gold 6438N 32C 205W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ62 | Intel Xeon Gold 6438Y+ 32C 205W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPQE | Intel Xeon Gold 6442Y 24C 225W 2.6GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPQB | Intel Xeon Gold 6444Y 16C 270W 3.6GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BQ6A | Intel Xeon Gold 6448H 32C 250W 2.4GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPQD | Intel Xeon Gold 6448Y 32C 225W 2.1GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPM | Intel Xeon Gold 6454S 32C 270W 2.2GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPH | Intel Xeon Platinum 8444H 16C 270W 2.9GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPG | Intel Xeon Platinum 8450H 28C 250W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPB | Intel Xeon Platinum 8452Y 36C 300W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPF | Intel Xeon Platinum 8454H 32C 270W 2.1GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPQ | Intel Xeon Platinum 8460Y+ 40C 300W 2.0GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPK | Intel Xeon Platinum 8461V 48C 300W 2.2GHz Processor | No | 1 | No | 1 | No | No |

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| None | BPQA | Intel Xeon Platinum 8462Y+ 32C 300W 2.8GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPJ | Intel Xeon Platinum 8470N 52C 300W 1.7GHz Processor | 2 | 2 | 2 | 2 | 2 | 2 |
| None | BPPR | Intel Xeon Platinum 8471N 52C 300W 1.8GHz Processor | No | 1 | No | 1 | No | No |

Memory

5th Generation Memory options

The HX630 V3 support the following memory options.

For details about these options, see the SR630 V3 product guide:

<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#memory-options>

Table 6. Emerald Rapids Memory

| Part number | Feature | Description | Maximum supported | | | | | |
|------------------------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| RDIMMs - 5600 MHz | | | | | | | | |
| 4X77A88049 | BHW | ThinkSystem 32GB TruDDR5 5600MHz (1Rx4) 10x4 RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88639 | BX8Y | ThinkSystem 48GB TruDDR5 5600MHz (1Rx4) 10x4 RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88052 | BWHS | ThinkSystem 64GB TruDDR5 5600MHz (2Rx4) 10x4 RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88058 | BWHV | ThinkSystem 96GB TruDDR5 5600MHz (2Rx4) RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88087 | BWJE | ThinkSystem 16GB TruDDR5 5600MHz (1Rx8) RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88051 | BWJC | ThinkSystem 32GB TruDDR5 5600MHz (2Rx8) RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88056 | BWSL | ThinkSystem 24GB TruDDR5 5600MHz (1Rx8) RDIMM | 32 | 32 | 32 | 32 | No | No |
| 4X77A88057 | BWJD | ThinkSystem 48GB TruDDR5 5600MHz (2Rx8) RDIMM | 32 | 32 | 32 | 32 | No | No |
| 3DS RDIMMs - 5600 MHz | | | | | | | | |
| 4X77A88054 | BWHU | ThinkSystem 128GB TruDDR5 5600MHz (4Rx4) 3DS RDIMM | 32 | 32 | 32 | 32 | No | No |

4th Generation Memory options

The HX630 V3 support the following memory options.

For details about these options, see the SR630 V3 product guide:

<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#memory-options>

Table 7. Sapphire Rapids Memory

| Part number | Feature | Description | Maximum supported | | | | | |
|------------------------------|---------|---|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| RDIMMs - 5600 MHz | | | | | | | | |
| 4X77A77029 | BKTL | ThinkSystem 16GB TruDDR5 4800MHz (1Rx8) RDIMM | 32 | 32 | 32 | 32 | 32 | 32 |
| 4X77A77031 | BKTM | ThinkSystem 32GB TruDDR5 4800MHz (2Rx8) RDIMM | 32 | 32 | 32 | 32 | 32 | 32 |
| 4X77A77030 | BNF6 | ThinkSystem 32GB TruDDR5 4800MHz (1Rx4) 10x4 RDIMM | 32 | 32 | 32 | 32 | 32 | 32 |
| 4X77A77033 | BKTN | ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 9x4 RDIMM | 32 | 32 | 32 | 32 | 32 | 32 |
| 4X77A77032 | BNF9 | ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 10x4 RDIMM | 32 | 32 | 32 | 32 | 32 | 32 |
| 3DS RDIMMs - 5600 MHz | | | | | | | | |
| 4X77A77034 | BNFC | ThinkSystem 128GB TruDDR5 4800MHz (4Rx4) 3DS RDIMM v2 | 32 | 32 | 32 | 32 | 32 | 32 |
| 4X77A77035 | BNF8 | ThinkSystem 256GB TruDDR5 4800MHz (8Rx4) 3DS RDIMM v2 | 32 | 32 | 32 | 32 | 32 | 32 |

Internal storage

Internal storage configurations of the HX630 V3 are as follows. All drives are hot-swap and are accessible from the front or rear of the system:

- HX630 V3 Integrated System and Certified Node:
 - Front: 10x 2.5" AnyBay or NVME + optional 2x 2.5" SAS/SATA or NVME
 - Rear: 2x 2.5-inch SAS/SATA or NVME
- HX630 V3 ROBO Integrated System and Certified Node:
 - Front: 4x 3.5" SAS/SATA
 - Rear: 2x 2.5-inch hot-swap bays
- HX630 V3 Integrated System and Certified Node for SAP HANA:
 - Front: 10x 2.5" AnyBay or NVME + optional 2x 2.5" SAS/SATA or NVME
- The systems also support the following boot drive alternatives:
- M.2 drives in an M.2 adapter that is internal to the server

Note: EDSFF drives are not supported in HX630 V3.

Configuration rules

Configuration rules are as follows:

- Nutanix does not use the concept of "cache" drives but rather uses tiers. There are three tiers currently supported
 - NVMe
 - SAS/SATA SSD
 - HDD tier - requires the SAS/SATA SSD
 - Currently, HX doesn't support mixed NVMe+HDD.
- HX Systems can be configured as:
 - NVMe only
 - NVMe+SAS/SATA SSD
 - SAS/SATA SSD only
 - SAS/SATA SSD+HDD
- All drives in a tier must be of the same capacity.
- If using NVMe for boot, 2 drives are required and are used in RAID 1. When using SATA for boot only a single drive is required.

Backplanes

The choice of backplanes supported varies by system, as listed in the following table.

For details about these options, including configuration rules, see the SR630 V3 product guide: <https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#internal-storage>

Table 8. Drive backplanes

| Part number | Feature | Description | Maximum supported | | | | | |
|--|---------|---|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| Front 2.5-inch drive backplanes | | | | | | | | |
| None | BB3T | ThinkSystem 1U 10x2.5" AnyBay Backplane | 1 | No | 1 | No | 1 | 1 |
| None | BCQQ | ThinkSystem 1U 10x2.5" NVMe Backplane | 1 | No | 1 | No | 1 | 1 |
| Front 3.5-inch drive backplanes | | | | | | | | |
| None | B8L3 | ThinkSystem 1U/2U 4x3.5" SAS/SATA Backplane | No | 1 | No | 1 | No | No |
| Rear 2.5-inch drive backplanes | | | | | | | | |
| None | B8MY | ThinkSystem 1U 2x2.5" SAS/SATA Rear Backplane | No | 1 | No | 1 | No | No |
| None | BDY6 | ThinkSystem 1U 2x2.5" NVMe Rear Backplane | 1 | No | 1 | No | 1 | 1 |

Boot drive enablement

For OS boot functions, the systems also support either two 7mm hot-swap drive bays installed at the rear of the server (mutually exclusive with the 2.5-inch hot-swap rear drive bays), or two M.2 drives installed on an adapter internal to the server. The following table lists the supported controllers/enablement kits for boot drives.

For details about these options, including configuration rules, see the SR630 V3 product guide:
<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#internal-storage>

Table 9. Boot drive enablement

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 4Y37A09750 | B8P9 | ThinkSystem M.2 NVMe 2-Bay RAID Adapter | 1 | 1 | 1 | 1 | 1 | 1 |
| 4Y37A79663 | BM8X | ThinkSystem M.2 SATA/x4 NVMe 2-Bay Adapter | 1 | No | 1 | No | 1 | 1 |

Controllers for internal storage

The HX630 V3 support the following internal storage controllers.

For details about these options, see the SR630 V3 product guide:
<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#controllers-for-internal-storage>

Table 10. Controllers for internal storage

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------|---------|---|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 4Y37A78602 | BM50 | ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA | 1 | No | 1 | No | 1 | 1 |
| 4Y37A78601 | BM51 | ThinkSystem 440-8i SAS/SATA PCIe Gen4 12Gb HBA | No | 1 | No | 1 | No | No |

Internal drive options

The following table lists the supported drive options for the HX630 V3.

Table 11. Internal drive options

| Part number | Feature | Description | Maximum supported | | | | | |
|---|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 2.5-inch hot-swap 24Gb SAS SSDs | | | | | | | | |
| 4XB7A80320 | BNWF | ThinkSystem 2.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A80321 | BP3E | ThinkSystem 2.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A80340 | BNW8 | ThinkSystem 2.5" PM1655 800GB Mixed Use SAS 24Gb HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A80341 | BNW9 | ThinkSystem 2.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 2.5-inch hot-swap 6 Gb SATA SSDs | | | | | | | | |
| 4XB7A72441 | BM88 | ThinkSystem 2.5" PM893 3.84TB Read Intensive SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A87526 | BWKL | ThinkSystem 2.5" PM893a 1.92TB Read Intensive SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A87527 | BWKK | ThinkSystem 2.5" PM893a 3.84TB Read Intensive SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A17103 | BA7J | ThinkSystem 2.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A17104 | BK77 | ThinkSystem 2.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A17126 | BA4T | ThinkSystem 2.5" S4620 960GB Mixed Use SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A17127 | BA4U | ThinkSystem 2.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 4XB7A17128 | BK7L | ThinkSystem 2.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD | 12 | 2 | 12 | 2 | 12 | 12 |
| 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 | 12 | No | 12 | No | 12 | 12 |
| 4XB7A13942 | BMGE | ThinkSystem 2.5" U.2 P5520 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A13943 | BNEF | ThinkSystem 2.5" U.2 P5520 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |

| Part number | Feature | Description | Maximum supported | | | | | |
|---|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 4XB7A13631 | BNEQ | ThinkSystem 2.5" U.2 P5520 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A17129 | BNEG | ThinkSystem 2.5" U.2 P5620 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A17130 | BNEH | ThinkSystem 2.5" U.2 P5620 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A17133 | BNEZ | ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A79647 | BNF2 | ThinkSystem 2.5" U.3 7450 PRO 1.92TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A79648 | BNF5 | ThinkSystem 2.5" U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A79649 | BNF4 | ThinkSystem 2.5" U.3 7450 PRO 7.68TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A83097 | BQAV | ThinkSystem 2.5" U.3 7450 PRO 15.36TB Read Intensive NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A13967 | BNEJ | ThinkSystem 2.5" U.3 7450 MAX 1.6TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A13970 | BNEY | ThinkSystem 2.5" U.3 7450 MAX 3.2TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 4XB7A13971 | BNEL | ThinkSystem 2.5" U.3 7450 MAX 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD | 12 | No | 12 | No | 12 | 12 |
| 3.5-inch hot-swap 12 Gb SAS HDDs | | | | | | | | |
| 7XB7A00046 | AUUG | ThinkSystem 3.5" 10TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 7XB7A00067 | B117 | ThinkSystem 3.5" 12TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 4XB7A80353 | BPKU | ThinkSystem 3.5" 20TB 7.2K SAS 12Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 3.5-inch hot-swap 6 Gb SATA HDDs | | | | | | | | |
| 7XB7A00051 | AUU8 | ThinkSystem 3.5" 4TB 7.2K SATA 6Gb Hot Swap 512n HDD | No | 4 | No | 4 | No | No |
| 7XB7A00052 | AUUA | ThinkSystem 3.5" 6TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 7XB7A00053 | AUU9 | ThinkSystem 3.5" 8TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 7XB7A00054 | AUUB | ThinkSystem 3.5" 10TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |

| Part number | Feature | Description | Maximum supported | | | | | |
|---|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 7XB7A00068 | B118 | ThinkSystem 3.5" 12TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 4XB7A13914 | B7F0 | ThinkSystem 3.5" 16TB 7.2K SATA 6Gb Hot Swap 512e HDD | No | 4 | No | 4 | No | No |
| 3.5-inch hot-swap 24 Gb SAS SSDs | | | | | | | | |
| 4XB7A80345 | BNWA | ThinkSystem 3.5" PM1655 1.6TB Mixed Use SAS 24Gb HS SSD | No | 4 | No | 4 | No | No |
| 4XB7A80326 | BNWH | ThinkSystem 3.5" PM1653 3.84TB Read Intensive SAS 24Gb HS SSD | No | 4 | No | 4 | No | No |
| 4XB7A80327 | BP3F | ThinkSystem 3.5" PM1653 7.68TB Read Intensive SAS 24Gb HS SSD | No | 4 | No | 4 | No | No |
| 3.5-inch hot-swap 6 Gb SATA SSDs | | | | | | | | |
| 4XB7A17121 | BA7N | ThinkSystem 3.5" S4520 1.92TB Read Intensive SATA 6Gb HS SSD | No | 4 | No | 4 | No | No |
| 4XB7A17122 | BK7F | ThinkSystem 3.5" S4520 3.84TB Read Intensive SATA 6Gb HS SSD | No | 4 | No | 4 | No | No |
| 4XB7A17138 | BA4X | ThinkSystem 3.5" S4620 960GB Mixed Use SATA 6Gb HS SSD | No | 4 | No | 4 | No | No |
| 4XB7A17139 | BA4Y | ThinkSystem 3.5" S4620 1.92TB Mixed Use SATA 6Gb HS SSD | No | 4 | No | 4 | No | No |
| 4XB7A17140 | BK7P | ThinkSystem 3.5" S4620 3.84TB Mixed Use SATA 6Gb HS SSD | No | 4 | No | 4 | No | No |
| M.2- 6 Gb SATA SSDs | | | | | | | | |
| 4XB7A82286 | BQ1Z | ThinkSystem M.2 5400 PRO 240GB Read Intensive SATA 6Gb NHS SSD | 2 | No | 2 | No | 2 | 2 |
| 4XB7A82287 | BQ1Y | ThinkSystem M.2 5400 PRO 480GB Read Intensive SATA 6Gb NHS SSD | 2 | No | 2 | No | 2 | 2 |
| M.2- NVMe PCIe 4.0 x4 NHS SSD | | | | | | | | |
| 4XB7A13999 | BKSR | ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD | 2 | 2 | 2 | 2 | 2 | 2 |
| 4XB7A90102 | BXMH | ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 NHS SSD | 2 | 2 | 2 | 2 | 2 | 2 |

Network adapters

The HX630 V3 support the following networking options.

For details about the implementation of these networking options, see the SR630 V3 product guide:
<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#i-o-expansion>
<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#network-adapters>

Mixing vendors is not supported : HX configurations only support network adapters from one vendor. For example, if you select a Broadcom OCP adapter, you cannot select a Mellanox PCIe network adapter.

Table 12. OCP network adapters

| Part number | Feature | Description | Maximum supported | | | | | |
|---------------------------|---------|---|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 10GBASE-T Ethernet | | | | | | | | |
| 4XC7A08236 | B5ST | ThinkSystem Broadcom 57416 10GBASE-T 2-port OCP Ethernet Adapter | 1 | 1 | 1 | 1 | 1 | 1 |
| 4XC7A08240 | B5T4 | ThinkSystem Broadcom 57454 10GBASE-T 4-port OCP Ethernet Adapter | 1 | 1 | 1 | 1 | 1 | 1 |
| 25 Gb Ethernet | | | | | | | | |
| 4XC7A08237 | BN2T | ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP Ethernet Adapter | 1 | 1 | 1 | 1 | 1 | 1 |
| 4XC7A62582 | BE4T | ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port OCP Ethernet Adapter | 1 | 1 | 1 | 1 | 1 | 1 |

Table 13. PCIe network adapters

| Part number | Feature | Description | Maximum supported | | | | | |
|---------------------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| 10GBASE-T Ethernet | | | | | | | | |
| 7ZT7A00496 | AUKP | ThinkSystem Broadcom 57416 10GBASE-T 2-Port PCIe Ethernet Adapter | 2 | 1 | 2 | 1 | 2 | 2 |
| 4XC7A08245 | B5SU | ThinkSystem Broadcom 57454 10GBASE-T 4-port PCIe Ethernet Adapter | 2 | 1 | 2 | 1 | 2 | 2 |
| 25 Gb Ethernet | | | | | | | | |
| 4XC7A08238 | BK1H | ThinkSystem Broadcom 57414 10/25GbE SFP28 2-port PCIe Ethernet Adapter | 2 | 1 | 2 | 1 | 2 | 2 |
| 4XC7A62580 | BE4U | ThinkSystem Mellanox ConnectX-6 Lx 10/25GbE SFP28 2-Port PCIe Ethernet Adapter | 2 | 1 | 2 | 1 | 2 | 2 |
| 100 Gb Ethernet | | | | | | | | |
| 4XC7A08248 | B8PP | ThinkSystem Mellanox ConnectX-6 Dx 100GbE QSFP56 2-port PCIe Ethernet Adapter | 2 | 1 | 2 | 1 | 2 | 2 |

Note: ThinkSystem Mellanox ConnectX-6 is the only adapter enabled for RDMA, minimum required quantity is two.

GPU adapters

The HX630 V3 support the following GPU options.

Configuration Note:

- Some GPUs are only available with VMware ESXi selected as the hypervisor
- Some GPUs are unavailable because of government restriction in certain markets.
- A2 support in AHV is planned for AOS 6.9

For details about these options, see the SR630 V3 product guide:

<https://lenovopress.com/lp1600-thinksystem-sr630-v3-server#gpu-adapters>

Table 14. GPU adapters

| Part number | Feature | Description | Maximum supported | | | | | |
|-------------------------|---------|--|-------------------|------------------|-------------|------------------|----------------------|----------------------|
| | | | HX630 V3 IS | HX630 V3 ROBO IS | HX630 V3 CN | HX630 V3 ROBO CN | HX630 V3 SAP HANA IS | HX630 V3 SAP HANA CN |
| Single-wide GPUs | | | | | | | | |
| 4X67A81547 | BQZT | ThinkSystem NVIDIA A2 16GB PCIe Gen4 Passive GPU w/o CEC | 3 | 2 | 3 | 2 | No | No |
| 4X67A84824 | BS2C | ThinkSystem NVIDIA L4 24GB PCIe Gen4 Passive GPU | 3 | 2 | 3 | 2 | No | No |

Software

The systems support the hypervisors listed in the following table. Hypervisors are installed on the 2x M.2 SSDs configured in a RAID-1 drive group.

Table 15. Hypervisors

| Feature code | Description | Quantity |
|--------------|-------------------------------------|----------|
| B15S | Nutanix SW Stack on Nutanix AHV | 1 |
| BFT6 | Nutanix SW Stack on VMware ESXi 7.0 | 1 |

Configuration notes:

- In ESXi-based environments, HX Series Appliances require VMware vCenter Server.
- The HX systems support firmware updates from Nutanix with the ThinkAgile HX Lifecycle Manager (UEFI, XCC2, drives, network adapters, and SAS HBAs)

Nutanix licenses on certified nodes : The certified node ships with the Nutanix software preloaded, however Nutanix software licenses and software support are not included. Customers can use the existing Nutanix term-based software licenses and active support contracts, or they can purchase term-based software licenses and support contracts from Nutanix.

For the information on appliance firmware levels, hypervisor versions, and software versions that have been tested for interoperability, refer to the Lenovo ThinkAgile HX Series Best Recipes:

<http://datacentersupport.lenovo.com/us/en/solutions/ht505413>

Nutanix Portfolio 2.0 (PnP) Licensing Model

Nutanix is introducing an enterprise-ready unified cloud platform with our HCI solution as the foundation. The new, simplified product portfolio includes: Nutanix Cloud Platform (NCP), Nutanix Cloud Infrastructure (NCI) and Nutanix Cloud Manager (NCM), NCI-Data with 3 license tiers for each software edition. There are additional packages, Nutanix Unified Storage, Nutanix Database Service (NDB), and Nutanix Desktop Services (NDS), Virtual Desktop Infrastructure (VDI) & Nutanix Frame that are available.

The Nutanix software is available for all base CTO models.

The editions have the following characteristics:

Table 16. Software Editions

| License Tier | Nutanix Cloud Platform (NCP) | Nutanix Cloud Infrastructure (NCI) | Nutanix Cloud Manager (NCM) | NCI-Data |
|--------------|--|--|--|--|
| Ultimate | <ul style="list-style-type: none"> • NCI Ultimate • NCM Ultimate | <ul style="list-style-type: none"> • Advanced DR: Sync, Near-Sync, • Runbook Security: Micro-segmentation, Encryption • Cloud Native: Kubernetes Services | <ul style="list-style-type: none"> • Application Automation • Security General | <ul style="list-style-type: none"> • No Mseg • No Karbon |
| Pro | <ul style="list-style-type: none"> • NCI Ultimate • NCM Pro | <ul style="list-style-type: none"> • Multisite Async DR • Overlay Networking | <ul style="list-style-type: none"> • Self Service Cost Governance | <ul style="list-style-type: none"> • No Flow Networking |
| Starter | <ul style="list-style-type: none"> • NCI Pro • NCM Pro | <ul style="list-style-type: none"> • AOS Storage + Compression + Dedup | <ul style="list-style-type: none"> • AI Operations | <ul style="list-style-type: none"> • No AHV Support |

Nutanix Cloud Platform (NCP)

Nutanix Cloud Platform is the complete software edition package that includes both Nutanix Cloud Infrastructure (NCI) and Nutanix Cloud Manager (NCM). It is available in several editions to meet your infrastructure needs with the right set of capabilities.

Nutanix Cloud Infrastructure (NCI)

Nutanix Cloud Infrastructure (NCI) is a complete software stack to unify your hybrid cloud infrastructure including compute, storage and network, hypervisors and containers, in public or enterprise clouds; all with built-in resilience, self-healing, disaster recovery capabilities, and security. It includes enterprise data services and consolidated storage, data protection and disaster recovery, native virtualization and container management, networking and security.

For details on software editions see <https://www.nutanix.com/products/cloud-platform/software-options#nci>

Nutanix Cloud Manager (NCM)

Nutanix Cloud Manager (NCM) offers our customers simplicity and ease of use to build and grow their cloud deployments faster and realize rapid ROI, by providing intelligent operations, self service and orchestration, visibility and governance of spend, security and teams, all through a unified Multi-cloud management solution.

For details on software editions see <https://www.nutanix.com/products/cloud-platform/software-options#ncm>

Nutanix Unified Storage

Nutanix Unified Storage provides software-defined, scale-out storage solutions for enterprise NAS and object workloads for unstructured data, block storage for structured data, and backup storage. Nutanix Unified Storage replaces traditional independent storage services and brings NAS, object, and block workloads into a consolidated unified storage platform with all its benefits, including a unified control plane.

Nutanix Data Lens delivers cloud-based data governance for unstructured data stored in the Nutanix Unified Storage platform, including data lifecycle management, data security, ransomware protection, and audit compliance.

Nutanix Unified Storage and Data Lens are purchased and licensed on a per TiB usable basis.

For details on software editions see <https://www.nutanix.com/products/cloud-platform/software-options#nus>

Nutanix Database Service

Nutanix Database Service (NDB) is a Hybrid Multicloud DBaaS that enables small, nimble teams of DBAs to easily manage large fleets of databases using a single console and API, while enabling developers to self-service their database requests. NDB is purchased and licensed on a per core basis and is available either as a standalone or as an add-on to NCI. In the standalone version, NDB includes NCI Ultimate functionality in addition to database-specific capabilities and is licensed on a per-core basis.

For details on software editions see <https://www.nutanix.com/products/cloud-platform/software-options#database>

Nutanix Virtual Desktop Infrastructure (VDI) & Nutanix Frame

The Nutanix VDI per user model offers hybrid cloud infrastructure capabilities appropriate for on-prem virtual desktop infrastructure (VDI) and Desktop as a Service (DaaS) use cases with pricing based on a Maximum Concurrent User basis (maximum number of provisioned end-user VMs). VDI per user is an alternative to the core-based NCI licensing option and is designed to provide simple, transparent licensing for all VDI users, regardless of the underlying hardware, hypervisor, or cloud.

- Agnostic: Works with any EUC management platform including Citrix Virtual Apps & Desktops and VMware Horizon
- Term license: 1-year through 5-year options
 - Term license must run on a dedicated software licensed VDI cluster with no core-based licensing. Mixing of non-VDI workloads is not supported.
- Unified Storage: Built-in and also available as a per TiB base add-on
- No additional license cost for DR site
- Portable across on-premises and public cloud, public cloud use requires Ultimate edition
- Available in Starter, Pro, and Ultimate editions
- Cloud Native and Database Service Add-ons not available with NCI VDI. Advanced Replication and Security Add-on features require NCI Ultimate edition

For details on software editions see <https://www.nutanix.com/products/cloud-platform/software-options#vdi>

License Options

ThinkAgile HX can be configured with one of the latest Nutanix software editions that are listed in the following table.

Table 17. Nutanix license options

| Feature code | Description | Quantity Required |
|--------------|---|----------------------------------|
| BVKU | Nutanix Cloud Platform Starter Edition | 1 per node |
| BVKW | Nutanix Cloud Platform Pro Edition | 1 per node |
| BVKY | Nutanix Cloud Platform Ultimate Edition | 1 per node |
| BSPJ | Nutanix Cloud Infrastructure Starter Edition | 1 per node |
| BSPG | Nutanix Cloud Infrastructure Pro Edition | 1 per node |
| BSPL | Nutanix Cloud Infrastructure Ultimate Edition | 1 per node |
| BSQ0 | Nutanix Cloud Manager Starter Edition | 1 per node |
| BSPY | Nutanix Cloud Manager Pro Edition | 1 per node |
| BSQ2 | Nutanix Cloud Manager Ultimate Edition | 1 per node |
| BSPQ | NCI-Data Starter Edition | 1 per node |
| BSPN | NCI-Data Pro Edition | 1 per node |
| BSPS | NCI-Data Ultimate Edition | 1 per node |
| BSQH | Nutanix Database Service (NDB) Platform | 1 per node |
| BSQ7 | End User Computing (EUC) Starter | 1 for every 200 concurrent users |
| BSQ5 | End User Computing (EUC) Pro | 1 for every 200 concurrent users |
| BSQ9 | End User Computing (EUC) Ultimate | 1 for every 200 concurrent users |
| BSQD | Nutanix Unified Storage (NUS) Starter | 1 per Tib |
| BSQB | Nutanix Unified Storage (NUS) Pro | 1 per Tib |

Warranty and Support

The ThinkAgile HX Series Integrated Systems can be configured with a three-, four-, or five-year hardware warranty with 24x7 ThinkAgile Premier Single Point of Support (Lenovo appliance hardware and Nutanix software) 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 Nutanix, on behalf of the customer, for software-related problem determination. Nutanix will contact the customer and will own the software-related problem resolution until closure.

For more information refer to the Lenovo Support Plan - ThinkAgile HX Integrated Systems and Lenovo Converged HX Series

<https://datacentersupport.lenovo.com/us/en/solutions/ht505404>

The ThinkAgile HX Certified Nodes can be configured with three-, four-, or five-year hardware warranty and various levels of service coverage with a well-defined scope of services, including service hours, response time, term of service, and service agreement terms and conditions.

The base warranty provides 9x5 Next Business Day response with parts delivered. Lenovo's additional support services provide a sophisticated, unified support structure for a customer's data center, with an experience consistently ranked number one in customer satisfaction worldwide.

For more information refer to the Lenovo Support Plan - ThinkAgile HX Certified Nodes

<https://support.lenovo.com/us/en/solutions/HT510301>

Hardware warranty

The ThinkAgile HX630 V3 and HX630 V3 ROBO 1U Integrated System & Certified Nodes have a 3-year warranty:

- 7D6M - 1U Integrated System - 3 year warranty
- 7D6M - 1U Certified Node - 3 year warranty

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://dsc.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>

Deployment services

The following optional Lenovo Professional Services are available to get customers up and running quickly.

- Basic Hardware Installation Services
 - Unpacking and inspecting the systems
 - Installing options and 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)
- Nutanix deployment services - Base (per node)
 - Conducting remote preparation and planning
 - Verifying firmware versions and performing firmware updates, if needed
 - Installing and configuring hypervisor and Nutanix controller VM
 - Creating Nutanix cluster
 - Configuring storage
 - Configuring administrative features
- Nutanix deployment services - Advanced (per cluster)
 - Configuring and integrating a virtualized environment
 - Nutanix containers and Acropolis (AHV) cluster
 - VMware vCenter Server and vSphere cluster (for VMware installations)
 - Transferring knowledge
- Nutanix deployment services - Advanced with XClarity (per cluster)
 - Nutanix deployment services - Advanced
 - Installing Lenovo XClarity
 - Configuring Lenovo XClarity network settings and performing discovery and inventory
 - Installing system updates

The following table lists ThinkAgile Health Check & Deployment offerings are available for ThinkAgile HX 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.

Note: For custom Hardware Installation and Deployment Services, please contact the Lenovo Professional Services team for sizing and pricing.

Table 18. Deployment offerings

| Part number | Description |
|-----------------------------------|--|
| Onsite deployment services | |
| 5MS7B00043 | ThinkAgile HX Onsite Deployment (up to 3 nodes) |
| 5MS7B00044 | ThinkAgile HX Onsite Deployment (additional node) |
| Remote deployment services | |
| 5MS7B00045 | ThinkAgile HX Remote Deployment (up to 3 nodes) |
| 5MS7B00046 | ThinkAgile HX Remote Deployment (additional node) |
| 5MS7A27430 | ThinkAgile HX SAP HANA Deployment - Custom |
| Remote Health Check | |
| 5MS7B00065 | ThinkAgile HX 1X Remote Health Check (up to 3 node cluster) |
| 5MS7B00066 | ThinkAgile HX 1X Remote Health Check (additional node) |
| 5MS7B00067 | ThinkAgile HX 1X Remote Health Check & Update (up to 3 node cluster) |
| 5MS7B00068 | ThinkAgile HX 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/>

Seller training courses

The following sales training courses are offered for employees and partners (login required). Courses are listed in date order.

1. **VTT Cloud and Edge Architecture: Principal Consultant Overview**
2024-04-10 | 50 minutes | Employees Only

Join Ruth Miller, Lenovo Principal Consultant, SSG Services for a data-led discussions to examine in detail customer IT environments, highlighting pain points, performance issues, edge and hybrid cloud strategy and carbon reduction capability. Examples of workshop deliverables and outcomes will be discussed to illustrate the value of early engagement and discovery.

Published: 2024-04-10
Length: 50 minutes
Employee link: Grow@Lenovo
Course code: DVCLD211

2. **VTT Data Management How to sell storage - April 2024**
2024-04-10 | 60 minutes | Employees Only

In this course, you will know:

- Why do we sell storage?
- What are the basics you need to get an opportunity rolling?
- Why Lenovo for Storage?
- What is happening in the market today?
- How to determine traction?

Published: 2024-04-10
Length: 60 minutes
Employee link: Grow@Lenovo
Course code: DVDAT209

3. **Data management Overview**
2024-03-14 | 25 minutes | Employees and Partners

After completing this course you will be able to:

1. Know more about the data management trends and challenges
2. Understand the data management portfolio
3. Find out how data drives business value

Published: 2024-03-14
Length: 25 minutes
Employee link: Grow@Lenovo
Partner link: [Lenovo Partner Learning](#)
Course code: DSTOO201

4. **Technical Overview: ThinkAgile HCI and Cloud Platforms**

2024-03-07 | 35 minutes | Employees and Partners

This course is designed to give Lenovo sales and partner representatives a technical overview of Lenovo's ThinkAgile hyperconverged infrastructure and cloud platforms. Turnkey cloud platforms along with their architectural makeup, and container and data protection solutions are also covered.

Learning Objectives:

- Describe Lenovo's ThinkAgile hyperconverged infrastructure and cloud platforms
- Explain do-it-yourself and turnkey cloud platforms along with their architectural makeup
- Describe container and data protection solutions

Published: 2024-03-07

Length: 35 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DCLDT2001r3

5. **Lenovo HX Business Conversations**

2024-03-06 | 20 minutes | Employees and Partners

This course covers business conversations for Lenovo HX Hyperconverged solutions.

Course objectives:

- Identify a potential Lenovo HX opportunity
- Conduct effective discovery to reveal the customer's data center needs
- Probe the customer
- Ensure the customer knows you understand their issue(s)

Published: 2024-03-06

Length: 20 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DCGHXB001

6. **Whats new with ThinkAgile HX AI-Ready solutions and enabling edge to cloud**

2024-02-15 | 70 minutes | Employees Only

Join Scott Ellis, Nutanix Solution Architect, Ritu Jain, Lenovo Product Manager and Adam Mandelbloom, Lenovo Technical Product Manager for a discussion on why many customers are looking for VMware alternatives these days, ThinkAgile HX is a compelling choice, learn how easy it is to migrate from VMWare to Nutanix and some of the benefits it can provide. Another hot topic these days is Artificial intelligence, and many times this takes place at the edge. Learn how Lenovo and Nutanix solve these challenges with compelling edge to cloud solutions.

Published: 2024-02-15

Length: 70 minutes

Employee link: [Grow@Lenovo](#)

Course code: DVCLD209

7. **Family Introduction: Converged and Hyperconverged**

2024-01-25 | 15 minutes | Employees and Partners

This course is designed to give Lenovo sales a foundation on the characteristics of the Converged and Hyperconverged family. As an introduction to each family, this course also includes positioning, when to use a family and product, and keywords a client may use when discussing a converged or hyperconverged product.

Objectives:

- Family characteristics
- Priority positioning
- Product usage
- Key words and phrases

Published: 2024-01-25

Length: 15 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: SXSU1101r2

8. **FY24Q3 Hybrid Cloud Update**

2023-12-11 | 15 minutes | Employees and Partners

This update is designed to help you discuss the features and customer benefits of Lenovo ThinkAgile systems that use the 5th Gen Intel® Xeon® processors. Lenovo has also introduced a new service, Lenovo TruScale Hybrid Cloud for Edge, which provides agile and reliable infrastructure as a service where you need it, when you need it. New Professional Services for AI with NVIDIA provides customers with expert guidance for designing and implementing tailored AI solutions. Reasons to call your customer and talk about refreshing their infrastructure are also included as a guideline.

Published: 2023-12-11

Length: 15 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: SXXW2523a

9. **VEEAM Solutions Sales Training**

2023-09-27 | 20 minutes | Employees and Partners

In this course you will learn about Hyper-availability for the Always-On Enterprise.

By the end of this training, you should be able to:

Identify and explain the core products and solutions offered by Veeam.

Explain the key benefits and value propositions of integrating Veeam solutions with Lenovo products.

Published: 2023-09-27

Length: 20 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DSTOO100

10. **A Seller's Guide to Nutanix OEM 2.0**

2023-08-24 | 90 minutes | Employees Only

In this Sales Team webinar, Mike Tilt, Ritu Jain and Brandon Saxton will cover the new Nutanix 2.0 pricing and packaging options to guide sellers on what the different types of offers, sales process and how to sell Nutanix 2.0. You will get an overview of OEM 2.0, Sales Process, PNP Pricing and Zone Information, and additional resources on Upgrade & Renewal SKUs and process.

Course Objectives

- Defining Nutanix 2.0 Pricing and Packaging
- Describing OEM 2.0 Sales Process
- Identifying resources and support

Published: 2023-08-24

Length: 90 minutes

Employee link: Grow@Lenovo

Course code: DSXNS101

11. **Empowering Technical Sellers: Excelling In Transactional Workloads**

2023-08-18 | 60 minutes | Employees and Partners

This training abstract outlines a comprehensive program designed to equip technical sellers with the knowledge and expertise required to effectively promote and sell Lenovo and Nutanix solutions for transactional workloads. By focusing on the unique capabilities and advantages of Lenovo and Nutanix infrastructure in handling high-performance transactional applications, this training program empowers technical sellers to engage with customers, understand their specific workload requirements, and articulate the value proposition of Lenovo and Nutanix offerings in this domain.

The training program encompasses the following key areas:

1. Transactional Workloads Overview:
2. Lenovo and Nutanix Solutions for Transactional Workloads:
3. Product Portfolio Deep Dive:
4. Addressing Customer Requirements:
5. Solution Positioning and Sales Techniques:
6. Competitor Analysis:

Through this training, technical sellers will acquire the expertise necessary to engage with customers, understand their transactional workload requirements, and effectively position Lenovo and Nutanix solutions as the ideal choice for high-performance, mission-critical applications. By understanding the intricacies of Lenovo and Nutanix offerings in the transactional workload space, technical sellers will be empowered to drive successful sales engagements, build strong customer relationships, and contribute to the growth and success of their organization.

Published: 2023-08-18

Length: 60 minutes

Employee link: Grow@Lenovo

Partner link: [Lenovo Partner Learning](#)

Course code: DHXD201

12. Empowering Technical Sellers: Accelerating Lenovo and Nutanix Cloud Native-Container Application Solutions

2023-08-18 | 60 minutes | Employees and Partners

This training abstract outlines a comprehensive program specifically designed to equip technical sellers with the knowledge and expertise needed to effectively promote and sell Lenovo and Nutanix cloud native/container application solutions. By focusing on the integration of Lenovo and Nutanix technologies with modern application development practices, this training enables tech sellers to engage with customers, understand their requirements, and articulate the unique value proposition of Lenovo and Nutanix offerings in the cloud native and containerization landscape.

The training encompasses the following key areas:

1. Cloud Native and Containerization Fundamentals:
2. Lenovo and Nutanix Solutions Overview:
3. Product Portfolio Deep Dive:
4. Addressing Customer Needs:
5. Solution Positioning and Sales Techniques:
6. Competitor Analysis:
7. Technical Demonstration and Proof-of-Concept:

Throughout the training, tech sellers will gain the expertise necessary to engage with customers, understand their unique requirements, and effectively position Lenovo and Nutanix solutions as the go-to choice for cloud native and containerized application needs. By learning the intricacies of Lenovo and Nutanix offerings, technical sellers will be equipped to drive successful sales engagements, strengthen customer relationships, and contribute to the overall growth and success of the organization.

Published: 2023-08-18

Length: 60 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DHXC201

13. ThinkAgile Accelerating Cloud Agility: HX Series Technical Presentation

2023-07-28 | 40 minutes | Employees and Partners

Amalu Santhosh, Lenovo Technical Product Manager, reviews the ThinkAgile HX product portfolio. She will walk you through a technical deep dive into HX workloads and discuss technical details and performance of the latest ThinkAgile HX solutions.

Published: 2023-07-28

Length: 40 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DHXT201

14. Lenovo Data Center Product Portfolio

2023-07-21 | 15 minutes | Employees and Partners

This course introduces the Lenovo data center portfolio, and covers servers, storage, storage networking, and software-defined infrastructure products. After completing this course about Lenovo data center products, you will be able to identify product types within each data center family, describe Lenovo innovations that this product family or category uses, and recognize when a specific product should be selected.

Published: 2023-07-21

Length: 15 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: SXXW1110r6

15. **Cloud and HCI or Somewhere in Between**
2023-07-11 | 40 minutes | Employees and Partners

Provides a brief overview of Lenovo Portfolio for HCI and Cloud including ThinkAgile HX, VX, MX Certified Nodes and Appliances, Azure, and Engineered Cloud Solutions. Review Scenarios and complete questions "choose your own adventure" to identify and qualify an opportunity as HCI or Cloud and which portfolio solution would be the best option.

Course objectives:

- Where in the Sales Cycle we are
- What is Cloud
- What is Hyperconverged Infrastructure (HCI)
- Review Lenovo Offerings in Cloud and HCI
- Scenarios

Published: 2023-07-11

Length: 40 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DCLDS104r2

16. **What's New with Nutanix 2.0? Portfolio and Licensing**
2023-06-08 | 15 minutes | Employees and Partners

Nutanix has updated and simplified their licensing for our joint customers. This course is created to give sales and partners representatives an overview for the recent Nutanix licensing changes and their current options.

Course Objectives:

After completing this course, you should be able to:

- Describe the new Nutanix licensing rollout
- List the new pricing and packaging options

Published: 2023-06-08

Length: 15 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DHXL001

17. **Partner Technical Webinar - HX vs VX vs MX Panelist Discussion**
2023-04-11 | 60 minutes | Employees and Partners

In this 60-minute replay, Joe Murphy moderated a panelist discussion on ThinkAgile SHI. Baker Hull, VMware represented VX; Mike Tilt, Lenovo Technical Sales Manager presented HX; Phil Searles, Lenovo Solution Architect represented MX; and Brandon Saxton Lenovo NA Product Manager for ThinkAgile made up the panelist. The focus was less on the differences but how to elevate the conversation to get to the best solution. No slides were presented.

Published: 2023-04-11

Length: 60 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: 033123

18. Partner Technical Webinar - ThinkAgile V3 Overview and SMB Express

2023-02-13 | 60 minutes | Employees and Partners

In this 60-minute replay, Joe Murphy and Dave Brown, Lenovo Solution Architects reviewed the new ThinkAgile V3 solutions. In addition, Dave did a lengthy demo and explanation of the new SMB Express feature of DCSC.

Published: 2023-02-13

Length: 60 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: 021023

19. Family Portfolio: ThinkAgile HX

2022-12-13 | 20 minutes | Employees and Partners

This course is designed to give Lenovo sales an introduction to Lenovo ThinkAgile HX appliances. This course also includes why a customer should choose Lenovo for their hyperconverged products.

Course objectives:

- Learn to identify products and features within the ThinkAgile HX family
- Describe Lenovo innovations that the ThinkAgile HX family uses
- Recognize when a specific product or products should be selected

Published: 2022-12-13

Length: 20 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: SXS2109r3

20. ThinkAgile HX Seller Presentation

2022-11-01 | 25 minutes | Employees Only

Join Ritu Jain, Worldwide Product Manager for ThinkAgile, as she shares how ThinkAgile HX unique values, routes to market, how to position HX, and competitive landscape.

By the end of this training, you should be able to:

- Describe the ThinkAgile HX advantages
- Discover the routes to market & models available to sell
- Explain the HX solution positioning

Published: 2022-11-01

Length: 25 minutes

Employee link: [Grow@Lenovo](#)

Course code: DHXSP101

21. ThinkAgile HX Customer Presentation
2022-10-31 | 25 minutes | Employees Only

Join Ritu Jain, Worldwide ThinkAgile Product Manager for ThinkAgile, as she shares trends shaping cloud deployment models, customer Hybrid cloud strategy and how ThinkAgile HX is helping customers in their journey.

By the end of this training, you should be able to:

- Describe the ThinkAgile HX Solution
- Discover the trends in the cloud industry
- Explain how HX is helping customers with evolving trends

Published: 2022-10-31

Length: 25 minutes

Employee link: Grow@Lenovo

Course code: DHXCP101

22. Data Infrastructure Management - DM Series Storage
2022-10-28 | 25 minutes | Employees Only

This course provides a technical overview of the ThinkSystem DM series products. Course DDMO101 – Lenovo ThinkSystem DM & DE Series Overview is recommended prior to this course.

By the end of this course, you should be able to:

- Recognize the components of the Lenovo Data Management portfolio
- Discuss the features of the Lenovo Data Management components
- Describe the features of the SnapCenter software components

Published: 2022-10-28

Length: 25 minutes

Employee link: Grow@Lenovo

Course code: DDM200

23. Lenovo ThinkAgile HX VDI Solution
2022-08-26 | 10 minutes | Employees Only

In this lightboard video, Eric Kern whiteboards Lenovo's ThinkAgile HX VDI Solution. Sellers will learn how it works and customer benefits. Updated August 26th, 2022.

Objectives for this course:

- Understand how the VDI solution leverages the ThinkAgile HX platform with Citrix.
- Describe what actions a system administrator can perform in the Citrix portal.
- Explain how to manage the system remotely from a cloud infrastructure with Citrix.

Published: 2022-08-26

Length: 10 minutes

Employee link: Grow@Lenovo

Course code: DSVC129

24. **Lenovo's value-added Solutions Software and SDI -ThinkAgile HX - Best practices for Selling Software/ SDI Process**

2022-08-23 | 60 minutes | Employees Only

ThinkAgile HX is one of the most important parts of the ThinkAgile Lenovo Portfolio of SDI, Software Defined Infrastructure but it can be challenging to manage the deal registration and quoting for ThinkAgile HX. Listen in on Part 1 of this recent North America webinar where Mike Tilt, Sales Engineer Director, discusses the overview of ThinkAgile HX sales process and how to obtain Deal protection. He also discusses best practices for interactions with Nutanix sellers and shares personal experiences as a former SDI focused seller.

Published: 2022-08-23

Length: 60 minutes

Employee link: Grow@Lenovo

Course code: DCLDO121

25. **Lenovo's value-added Solutions Software and SDI -ThinkAgile HX - Best practices for Selling Software/ SDI Process**

2022-08-23 | 60 minutes | Employees Only

In this Part 2, a continuation of a recent North American Webinar, Mike Tilt, Sales Engineer Director, continues discussion of ThinkAgile HX sales process and dives into VLS. He also discusses best practices for interactions with Nutanix sellers and shares personal experiences as a former SDI focused seller.

Published: 2022-08-23

Length: 60 minutes

Employee link: Grow@Lenovo

Course code: DCLDO122

26. **Lenovo TruScale for Hosted Desktops with Nutanix**

2022-08-22 | 15 minutes | Employees and Partners

By exemplifying the case of a customer who wants to move to a remote desktop public cloud solution, this 15-minute course offers an overview of the Lenovo TruScale for Hosted Desktops with Nutanix solution, including benefits, architecture, and value proposition.

Published: 2022-08-22

Length: 15 minutes

Employee link: Grow@Lenovo

Partner link: [Lenovo Partner Learning](#)

Course code: DSOLO109

27. **Lenovo's value-added Solutions Software and SDI - ThinkAgile HX Licensing Update from Nutanix**

2022-08-22 | 60 minutes | Employees Only

In this continuous series of recorded webinar for ThinkAgile, Ed Stickney, Nutanix Worldwide OEM Sales Strategy and Enablement Leader, reviews with the North American region the recent changes made to the Nutanix simplified licensing model and how it benefits your customers. He also discusses how the new licensing maps to the current licensing and how you can migrate your customers to the new licensing. Ed also provides you valuable feedback from audience questions.

Published: 2022-08-22

Length: 60 minutes

Employee link: Grow@Lenovo

Course code: DCLDO120

28. **Partner Technical Webinar - sizing ThinkAgile HX & VX**

2022-08-01 | 60 minutes | Partners Only

In this 60-minute replay, we demonstrated how to size ThinkAgile VX and ThinkAgile HX. First Lenovo Solution Architect Joe Murphy reviewed the sizing methodology. Next, Lenovo Solution Architect Richard Smutzer demonstrated how to size ThinkAgile HX using Nutanix's sizing tool. Lenovo Solution Architect David Cianchetta closed the webinar by demonstrating ThinkAgile VX sizing using the VSAN sizer from VMware.

Published: 2022-08-01

Length: 60 minutes

Partner link: [Lenovo Partner Learning](#)

Course code: 072922

29. **Partner Technical Webinar - Nutanix and ThinkAgile HX**

2022-07-20 | 60 minutes | Partners Only

In this 60-minute replay, Brandon Saxton, Lenovo NA Product Manager, and Brendan McDermott, Senior Sales Engineer, reviewed the Nutanix Lenovo Partnership, the technology and the ThinkAgile HX offerings including both Integrated Systems and Certified Nodes. Based on some questions, a few slides were added at the end to compare ThinkAgile HX with the other ThinkAgile offerings.

Published: 2022-07-20

Length: 60 minutes

Partner link: [Lenovo Partner Learning](#)

Course code: 071522

30. **ThinkAgile Advantage Services**

2022-07-20 | 15 minutes | Employees and Partners

The goal of this training is to go through the details of ThinkAgile Advantage, and to provide everything you need to have customer conversations and to order ThinkAgile Advantage and recommended services.

Course objectives:

1. Learn about the customer challenges and benefits of ThinkAgile Advantage
2. Discover what it includes
3. Understand how to make the most of ThinkAgile products and solutions with the elevator pitch for customer conversations.

Published: 2022-07-20

Length: 15 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DSVC121r2

31. **Start the Conversation - Lenovo Cloud Strategy**

2021-10-25 | 25 minutes | Employees and Partners

The purpose of this course is to help sellers use the Lenovo cloud strategy as a foundation to start the customer cloud conversation. Topics include:

- Why customers choose the cloud
- The Lenovo Cloud Strategy
- Starting the customer cloud conversation

Published: 2021-10-25

Length: 25 minutes

Employee link: [Grow@Lenovo](#)

Partner link: [Lenovo Partner Learning](#)

Course code: DCLDS103r2

Related publications and links

For more information, see these resources:

- Lenovo ThinkAgile HX Series
<https://www.lenovo.com/us/en/data-center/software-defined-infrastructure/ThinkAgile-HX-Series/p/WMD00000326>
- ThinkAgile HX Series Comparison reference
<https://lenovopress.com/lp1336-thinkagile-hx-series-comparison>
- Interactive 3D Tour of ThinkAgile HX Series offerings:
<https://lenovopress.com/lp0454-lenovo-thinkagile-hx-series-interactive-3d-tour>
- Lenovo Data Center Solution Configurator (DCSC):
<http://dcsc.lenovo.com>
- Lenovo ThinkAgile product publications (user manuals):
<https://thinkagile.lenovofiles.com/help/index.jsp>
- Nutanix documentation
<https://my.nutanix.com/>
- Lenovo ThinkAgile HX Series Best Recipes
<http://datacentersupport.lenovo.com/us/en/solutions/ht505413>
- Lenovo Data Center Support
<http://datacentersupport.lenovo.com>

Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)
- [Hyperconverged Infrastructure](#)
- [Hyperconverged Infrastructure](#)
- [ThinkAgile HX Series for Nutanix](#)

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This document, LP1667, was created or updated on April 2, 2024.

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