



# A Modern Approach to Data Protection with Lenovo ThinkSystem HS350X V3 Storage Server and Commvault Cloud HyperScale™ X Software

## Solution Brief

### Commvault Cloud Hyperscale X

Commvault, a global leader in cyber resilience solutions, offers a unified approach to data protection, recoverability, and security. HyperScale X is an intuitive and easy-to-deploy integrated solution with a distributed scale-out file system that provides unmatched scalability, security, and resilience. Its flexible architecture allows you to get up and running quickly and grow as your needs demand. Benefits include:

- Simple, flexible protection and accelerated recoverability for all workloads, on-premises or in the cloud, including containers, virtual, and databases.
- Enhanced, multi-layered ransomware protection with AI-driven anomaly detection to uncover threats faster and immutable storage to prevent critical data from being encrypted, modified, or deleted.
- Optimized scalability to easily grow capacity in single-node increments as needed.
- Advanced storage efficiency and resilience with intelligent load balancing of data across disks and nodes and the ability to support concurrent hardware failures.
- Cost-optimized cloud data mobility with native integration to move data to, from, and between clouds, avoiding vendor lock-in.

By shifting the secondary storage and data management infrastructure to a scale-out architecture, enterprises can help transform their data centers to be as operationally efficient, resilient, and scalable as public cloud infrastructure. HyperScale X allows organizations to replace limited and legacy backup tools with a modern hybrid-cloud-enabled data management solution that eliminates expensive forklift upgrades.

## Lenovo ThinkSystem HS350X V3 Storage Server - Optimized Density and Performance

The Lenovo ThinkSystem HS350X V3 storage server provides the right mix of storage density and performance to support a wide range of workloads in a simple, optimal solution.

- **Flexible:** Optimized for flexible storage configurations with multiple drive options and supporting up to 24x 3.5" drives in the front.
- **Efficient:** Supports one 5th or 4th generation Intel Xeon Scalable Processor and DDR5 memory DIMMs to maximize the performance of the memory subsystem.
- **Reliable:** Lenovo's reputation for reliability is embedded in the Lenovo ThinkSystem HS350X V3 storage server, providing continuous operations and minimizing downtime.
- **Innovative Design:** The three-tray design allows easy access to the hot swap drives without powering off the server.

The following figure shows the the Lenovo ThinkSystem HS350X V3 storage server.



Figure 1. Lenovo ThinkSystem Ready Node HS350X V3 with 3.5-inch front drive bays

## ThinkSystem HS350X V3 specifications

The following table lists the key specifications for the HS350X V3 . For a complete list of detailed specifications, please consult the [Lenovo ThinkSystem HS350X V3 storage server Product Guide](#) .

Table 1. ThinkSystem HS350X V3 specifications

Specification	HS350X V3 functionality
Form Factor/Height	2U rack server
Processors	One of the 4th generation Intel Xeon Scalable processor family or one of the 5th generation Intel Xeon Scalable processor family. Supports processors up to 64 cores, core speeds of up to 2.2 GHz, and TDP ratings of up to 350W
Drive Bays	<p>Up to 24x 3.5-inch and 2x 2.5-inch hot-swap drive bays:</p> <ul style="list-style-type: none"> <li>• Front bays can be 3.5-inch (24 bays)</li> <li>• Rear bays can be U.2 NVMe 2.5-inch (2 bays)</li> </ul> <p>Mix of SSD/NVME/SATA HDD into 2.5 HDD Tray, not supported            Mix of 2.5 HDD/3.5 HDD into 3.5 HDD Tray, not supported            Mix HDD with different capacity, not supported</p> <p>The server also supports these drives:</p> <ul style="list-style-type: none"> <li>• Onboard: 2x M.2 NVMe SSD as boot drives (Via CPU PCIe Lanes)</li> </ul>
Memory	Supports up to 16x DIMM slots with one processor
Expansion Slots	Supports a total of up to 3x PCIe slots, 3x at the rear, plus 1x OCP 3.0 SFF slot for networking
Network Interface	Dedicated OCP 3.0 SFF slot with PCIe 5.0 x16 host interface
Ports	Front: operator panel LEDs, 1x USB 3.2 G1 (5 Gb/s) port, power button with status LED. Rear: system status LEDs, 2x USB 3.2 G1 (5 Gb/s) ports, 1x VGA video port, 1x RJ-45 1GbE systems management port. No external serial ports
Power	Up to two hot-swap redundant AC power supplies, 80 PLUS Platinum certification. 1300W, 1600W AC options, and 1300W Titanium, supporting 220 V AC
OS Support	Rocky Linux. Visit <a href="https://lenovopress.com/osig">https://lenovopress.com/osig</a> for more information

## Solution Overview

Commvault Cloud Hyperscale X software represents a breakthrough in scale-out cyber resilience, providing a turnkey, high performance solution to meet the security and recoverability needs of the modern hybrid cloud. Built on the Lenovo ThinkSystem HS350X V3 storage server, HyperScale X offers an integrated solution for cyber recovery and ransomware protection. Combining the Lenovo ThinkSystem HS350X V3 and Commvault Hyperscale X software creates a powerful data protection solution that delivers exceptional performance, scalability, and efficiency.

- **Optimized Performance:** The computing power of the Lenovo ThinkSystem HS350X V3 combined with Hyperscale X's intelligence and efficiency ensures optimal performance during backups and restores.
- **Flexibility:** Commvault Cloud HyperScale X on Lenovo ThinkSystem HS350X V3 enables organizations to scale their infrastructure and data protection capabilities granularly to match their growth and business needs.
- **Reliability and Data Integrity:** Lenovo's server reliability complements Hyperscale X's built-in resiliency, ensuring data integrity and availability.
- **Unified Management Interface:** Integrated management interfaces allow administrators to oversee both hardware and software components seamlessly, reducing complexity in daily operations.
- **Cost-Effective Solution:** with HyperScale X on Lenovo ThinkSystem, organizations can achieve significant cost savings through simplified deployment and management, optimized resource utilization, and reduced downtime.

## Bill of Materials

The following table lists the bill of materials (BOM) for the Lenovo ThinkSystem HS350X V3 Ready Node and Commvault Cloud Hyperscale X solution.

Table 2. Bill of Materials

Component	Feature Code	Description	Qty
MTM	7DE3CTO2WW	ThinkSystem HS350X V3 - 3yr warranty	1
Select One, Quantity: 2			
Processors	BPQD	Intel Xeon Gold 6448Y 32C 225W 2.1GHz Processor	1
Processors	BPPM	Intel Xeon Gold 6454S 32C 270W 2.2GHz Processor	1
Processors	BPPQ	Intel Xeon Platinum 8460Y+ 40C 300W 2.0GHz Processor	1
Processors	BPPK	Intel Xeon Platinum 8461V 48C 300W 2.2GHz Processor	1
Processors	BN0M	Intel Xeon Platinum 8480+ 56C 350W 2.0GHz Processor	1
Processors	BYWK	Intel Xeon Gold 6530 32C 270W 2.1GHz Processor	1
Processors	BYW9	Intel Xeon Gold 6554S 36C 270W 2.2GHz Processor	1
Processors	BYWB	Intel Xeon Platinum 8592V 64C 330W 2.0GHz Processor	1
Quantity Required Based on Choice			
Memory	C0Y0	ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 10x4 RDIMM	8 (8 x 64 = 512GB)
Memory	C0Y0	ThinkSystem 64GB TruDDR5 4800MHz (2Rx4) 10x4 RDIMM	12 (12 x 64 = 768GB)
Select one			
Drive Controller	C0YM	ThinkSystem Broadcom 9600-24i SAS HBA RAID	1
Select one, Quantity: 24			
Drive	C0Z1	ThinkSystem 3.5" 12TB 7.2K SATA 6Gb Hot Swap 512e HDD	24
Drive	C0YZ	ThinkSystem 3.5" 16TB 7.2K SATA 6Gb Hot Swap 512e HDD	24

Component	Feature Code	Description	Qty
Drive	C0Z0	ThinkSystem 3.5" 18TB 7.2K SATA 6Gb Hot Swap 512e HDD	24
Drive	C0YV	ThinkSystem 3.5" 20TB 7.2K SATA 6Gb Hot Swap 512e HDD	24 (Requires 768GB; 64GB x 12 DIMM)
Select One, Quantity: 1			
Drive	C0YX	ThinkSystem M.2 7450 PRO 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	1
Drive	C0YS	ThinkSystem M.2 PM9A3 960GB Read Intensive NVMe PCIe 4.0 x4 HS SSD	1
Select One, Quantity: 1			
Drive	C0YE	ThinkSystem 2.5" U.2 P5620 6.4TB Mixed Use NVMe PCIe 4.0 x4 HS SSD	1
Select One, Quantity: 1			
Drive	C0YR	ThinkSystem 2.5" U.3 7450 PRO 3.84TB Read Intensive NVMe PCIe 4.0 x4 HS SSD	1
Select One, Quantity: 1			
NIC	C0YL	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port OCP3.0 Ethernet Adapter	1
Select One, Quantity: 1			
NIC	C0YH	ThinkSystem Broadcom 57414 10/25GbE SFP28 2-Port PCIe Ethernet Adapter	1
HBA (Optional), Quantity: 1			
Fibre Channel HBA	C0YJ	ThinkSystem Emulex LPe35002 32Gb 2-Port PCIe Fibre Channel Adapter V2	1
Select One, Quantity: 2			
Power Supply	C0Y6	ThinkSystem HS350X V3 AsPower 1300W PT PSU	2
Power Supply	C0Y7	ThinkSystem HS350X V3 GW 1300W PT PSU	2
Power Supply	COY8	ThinkSystem CRPS GW-CRPS 1300W TT PSU	2
Power Supply	COY9	ThinkSystem CRPS 1600W PT PSU	2

## Conclusion

The integration of Lenovo ThinkSystem HS350X V3 storage server and Commvault Hyperscale X software offers a powerful solution for organizations aiming to elevate their cyber resilience and data security capabilities. This collaboration empowers enterprises to navigate the complexities of modern hybrid data environments with confidence, ensuring data protection, high performance, and adaptability to meet the challenges of today and tomorrow.

## For more information

For more information, see these resources:

- Interactive 3D Tour of the ThinkSystem HS350X V3:  
<https://lenovopress.lenovo.com/3dtours/thinksystem/servers/rack-servers/hs350x-v3>
- ThinkSystem HS350X V3 product page:  
<https://www.lenovo.com/us/en/p/servers-storage/servers/racks/thinksystem-hs350x-v3-rack-server/len21ts0029>
- ThinkSystem HS350X V3 datasheet  
<https://lenovopress.lenovo.com/datasheet/ds0173-lenovo-thinksystem-hs350x-v3>
- ThinkSystem HS350X V3 drivers and support  
<https://datacentersupport.lenovo.com/us/en/products/servers/thinksystem/hs350xv3/7de3/downloads/driver-list/>
- Lenovo ThinkSystem HS350X V3 product publications:  
<https://pubs.lenovo.com/hs350x-v3/>
- ServerProven hardware compatibility  
<http://serverproven.lenovo.com>
- User Guides for options:  
<https://serveroption.lenovo.com>
  - System Configuration Guide
  - Hardware Maintenance Guide
    - Messages and Codes Reference
    - UEFI Manual for ThinkSystem Servers

## Author

**Ben Blomberg** is an experienced Product Marketing professional with over 20 years of experience in the IT industry. He has Bachelor's of Business Administration (BBA) in Marketing from the University of Wisconsin-Eau Claire.

## Related product families

Product families related to this document are the following:

- [ThinkSystem HS350X V3 Storage Server](#)

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