

Simplify hybrid cloud for the age of AI

A practical guide to boost AI,
scale enterprise workloads,
and drive transformation

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The AI readiness challenge

Over the past year, organizations have shifted their priorities from AI experimentation to AI results. Expectations are higher for increased productivity, enhanced customer experience, and business growth.¹

C-suite leaders and line-of-business owners are turning to IT for guidance on how AI can deliver these outcomes. As pressure increases to produce tangible returns on AI investments, many IT leaders are concerned about the foundations of their organization's AI readiness.

- **Only 38%** of IT leaders say “most” of their organization’s data is readily available for AI.²
- **72%** of organizations say they lack data infrastructure skills.³
- **Nearly half** of employees feel they lack sufficient AI training.⁴

These are among the obstacles that have led many AI projects to suffer from slow rollouts and a lack of organizational impact. In fact, 95% of enterprise AI pilots fail to reach production at all.⁵



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Building a vision for AI success

Every IT leader plays a critical role in building a vision for AI and, by extension, the future of their business. But fulfilling that vision will require new approaches.

It won't be enough to do more of the same: hiring more subject-area experts and acquiring more infrastructure. In the end, the advantage will fall to companies willing to rethink their entire technology stack and how they manage it to achieve the velocity, scalability, and efficiency not just to launch transformative AI applications but also to quickly introduce new ones as the business demands it.

This eBook examines the opportunities and challenges AI presents to IT leaders and how Lenovo and Nutanix work together to fuel innovation and business transformation, simplifying and modernizing AI-ready enterprise hybrid cloud deployments with the Lenovo ThinkAgile HX Series.

Succeed with simplicity

AI initiatives can be complex and expensive and can stretch the capacity of your team. Infrastructure needs can be a barrier to innovation, both in terms of up-front cost and management resources.

A hybrid or private AI cloud benefits from having a single framework — a cloud operating system — with a single control interface and a single professional services partner. Hyperconverged infrastructure (HCI) removes the cost and complexity of managing separate solutions for compute, storage, and network. Each appliance added to the cloud can be a preloaded, fully validated building block for plug-and-play scalability.

For a successful, on-time, and economical deployment of AI infrastructure, **simplicity is everything.**

Architected for enterprise AI workloads

- Easily deploy AI across hybrid clouds with Lenovo ThinkAgile HX Series running Nutanix Enterprise AI (NAI) and Nutanix Kubernetes Platform (NKP).
- Maximize AI performance with Lenovo ThinkAgile HX650a V4.*
- Run demanding AI workloads more efficiently with Lenovo ThinkAgile HX650 V4 featuring Neptune® direct water cooling (DWC) — delivering up to 25% energy savings.**



53% lower TCO

for AI and data modernization workloads**

Using AI to diagnose cancer up to 10x faster

Ministry of Healthcare of the Republic of Kazakhstan

Hardware

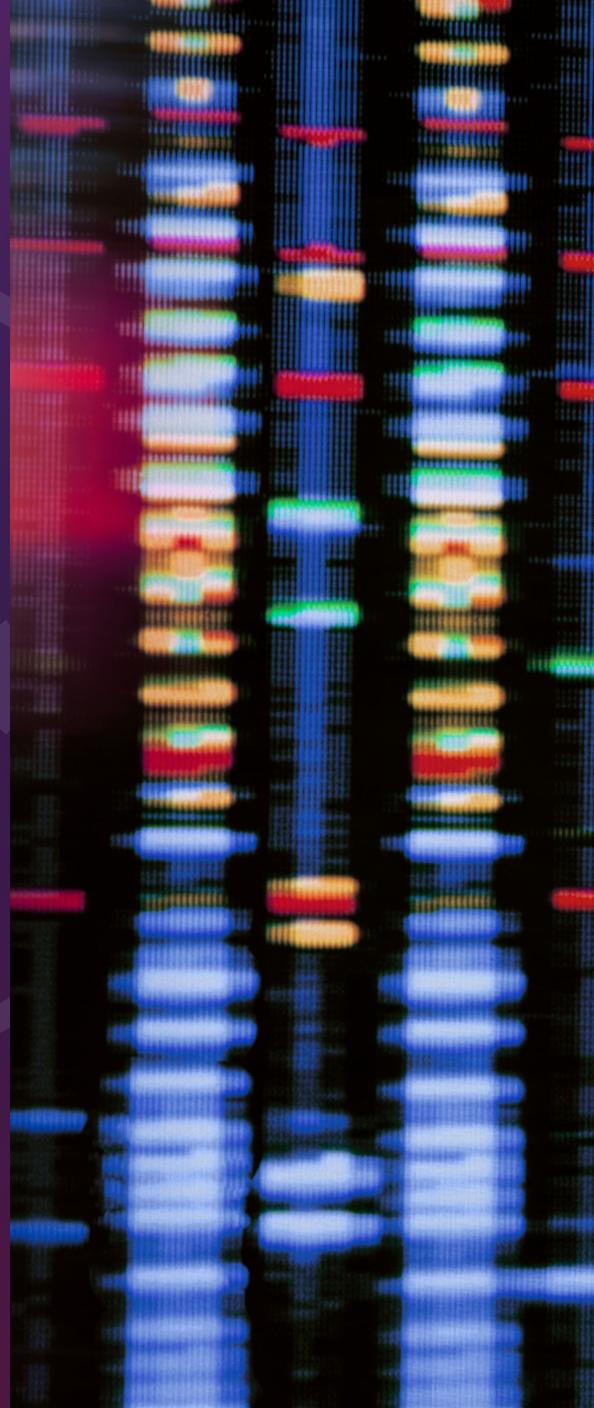
Lenovo ThinkAgile HX Series
Lenovo ThinkStation workstations

Software

Nutanix AHV

“Thanks to the solution, over three million radiological studies have been conducted with the highest efficiency. Our achievements include a **375% increase in early detection** of pathologies and a **35% increase in early detection of cancer**, resulting in improved quality of life for patients and increased treatment effectiveness. The project has also provided economic benefits through the transition to filmless medical imaging technology, reducing costs and enhancing the continuity of medical data.”

Spokesperson for the Ministry of Healthcare of the Republic of Kazakhstan



The challenge

Cancer is one of the leading causes of mortality in Kazakhstan, but a shortage of radiologists made it difficult for hospitals to screen for the disease effectively.

Solution

The Ministry of Health of the Republic of Kazakhstan deployed an HCI solution powered by Lenovo ThinkAgile HX5520 nodes, enabling it to create a central repository to store and analyze radiological images.

Results

The new solution accelerates screening programs by a factor of three, enabling a 10x faster breast cancer diagnosis and a 35% increase in early detection.

[Read the full story >>](#)



Streamline enterprise data management

As organizations grow, they face increasing pressure to support modern data workloads and enterprise applications with infrastructure that can scale, perform reliably, and stay secure.

Across all data environments, IT leaders expect their workloads to increase by at least 20% in the next 12 months.⁶ These growth demands require streamlined solutions that adapt quickly without compromising efficiency, availability, security, or sovereignty.

For example, organizations that scaled to include efficiencies like AI and automation in their data management also shortened their security breach times by an average of 80 days and lowered the cost of an average breach by USD \$1.9 million.⁷

Engineered for enterprise workloads

Lenovo ThinkAgile HX Series, powered by Nutanix Cloud Platform, delivers a powerful, secure, and scalable platform for enterprise workloads — from industry-standard databases (including Microsoft SQL Server and Oracle) to analytics, Kubernetes, and containerized apps.

- ThinkAgile HX and Nutanix Database Service (NDB)
- ThinkAgile HX Series with Nutanix Kubernetes Platform (NKP)

Dedicating more time to data solutions

Evodian

Hardware

Lenovo ThinkAgile HX appliances
Lenovo ThinkPad® X1 Carbon laptops
Lenovo ThinkVision monitors

Software

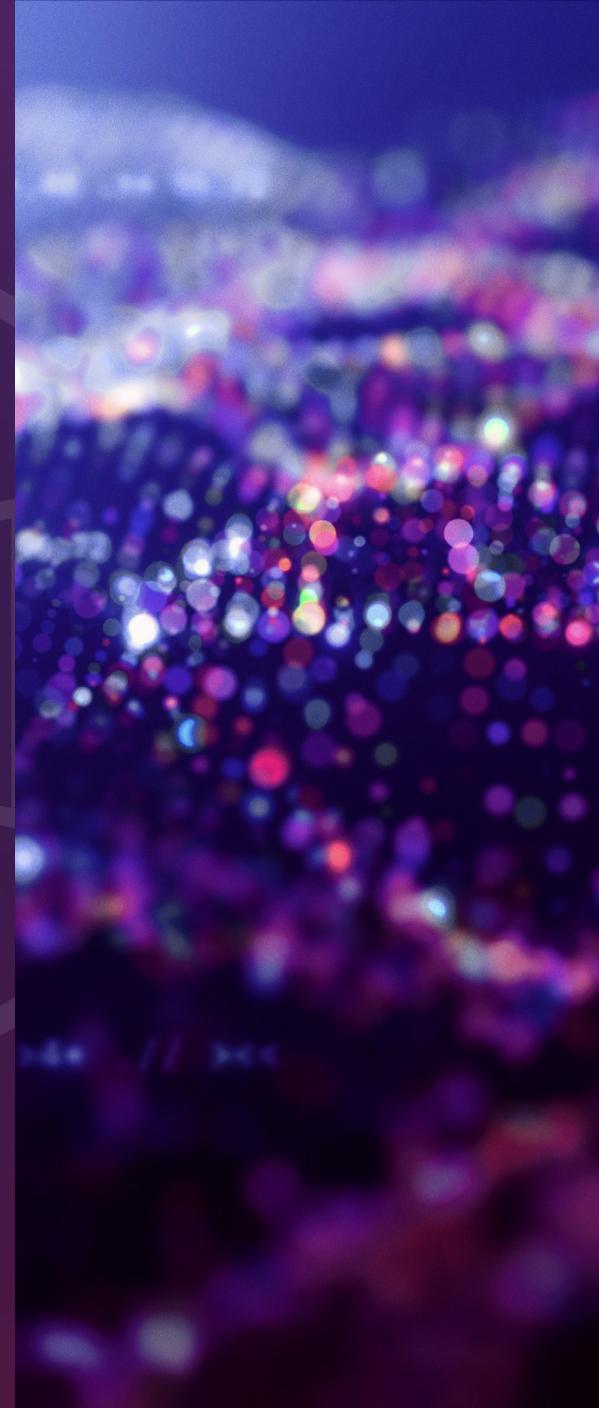
Nutanix Cloud Platform

Services

Lenovo TruScale Everything as a Service (SaaS)

“Lenovo ThinkAgile HX Series is incredibly reliable. And when I think of how many days a year that I would have to be actively engaged in managing our infrastructure, working with Lenovo TruScale represents a phenomenal time saving.”

Matthew Day
CEO, Evodian



The challenge

Evodian wanted to ensure that its talented engineers could focus on delivering effective data solutions, rather than managing infrastructure.

Solution

Evodian selected a Lenovo TruScale hyperconverged infrastructure (HCI) solution based on Lenovo ThinkAgile HX Series and Nutanix Cloud Platform.

Results

Lenovo TruScale gives Evodian a robust platform for data analytics, freeing up time for engineers to focus on what really matters: building data solutions for customers.

[Read the full story >>](#)

Simplify virtual environments, reduce TCO, and boost efficiency

Organizations are shifting their virtualization strategies to help meet increasing demands from AI workloads. This includes moving away from legacy virtualization platforms and addressing the complex challenges of data migration.

IT leaders are searching for easier-to-deploy, reduced-TCO solutions they can optimize across environments, unifying virtualization workloads on a single platform and modernizing traditional workloads.

Simplify VDI and virtualization environments

- Unify storage and simplify hybrid cloud management with Nutanix Unified Storage (NUS) on ThinkAgile HX.
- Combine Lenovo ThinkAgile HX and Lenovo ThinkSystem servers with Nutanix Cloud Platform (NCP) into a single logical pool to simplify operations.
- Manage device images centrally with Omnissa Horizon VDI on ThinkAgile HX for secure, scalable performance.
- Simplify HX Cluster Monitoring with Lenovo XClarity One and Nutanix Cloud Manager.



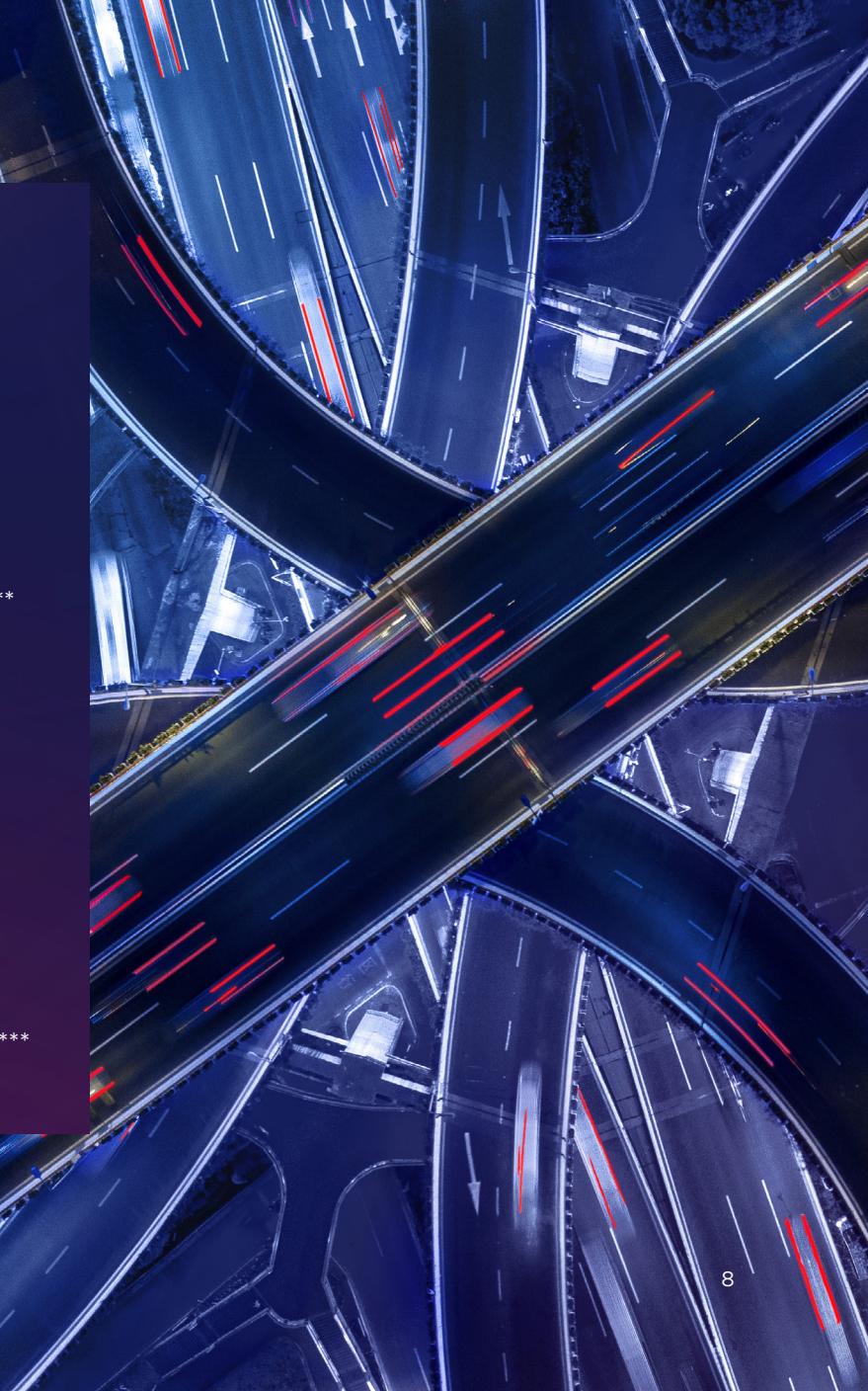
63%

lower TCO for virtualization workloads****



2X

cost savings migrating virtualization environments***



Building better experiences for citizens in the cloud

Jalisco State Government

Hardware

Lenovo ThinkAgile HX appliances

Software

Lenovo XClarity

Nutanix Cloud Platform

Services

Lenovo Managed Services

Lenovo Premier Support

“We absolutely recommend Lenovo and Nutanix technology. The HCI solution has worked very well for us so far, and we see it as an optimal platform for driving future innovation and effective service delivery across the state of Jalisco.”

Octavio González Loza

Director General of Information Technologies

Jalisco State Government



The challenge

Jalisco State Government is working to develop and widen access to information and communication technologies (ICT) to improve citizens' quality of life and provide new opportunities for education, investment, and work, as well as optimize essential government services.

Solution

The organization has centralized core government services on two Lenovo ThinkAgile HX Series clusters supporting 295 virtual machines virtualized with Nutanix.

Results

Today, the Lenovo and Nutanix HCI platform hosts more than 70% of Jalisco State Government's workloads. With operations from 25 government agencies now united on a single hybrid cloud platform, the organization has been able to cut considerable cost and complexity from its statewide infrastructure.

[Read the full story >>](#)



To achieve your vision, build it on a reliable platform

Lenovo ThinkAgile HX Series consolidates compute, storage, and virtualization into ultra-reliable HCI appliances, bundled with the Nutanix Cloud Platform and leading open-source AI frameworks.

Nodes can be easily added to scale-out clusters through a single interface that simplifies management and facilitates large-scale deployments anywhere. For organizations seeking to accelerate AI rollouts, this is a turnkey solution with a single point of support for hardware and software.

Lenovo expands Nutanix Prism server management capabilities by integrating Lenovo hardware management functionality — providing affordable, basic management of physical and virtual environments to reduce the time and effort of routine system administration.

When internal resources and budget are in short supply to address growing AI requirements and the business needs near-term results, the ThinkAgile HX Series provides an easy-to-manage, dependable platform for growth.



11 years in a row

Lenovo servers have ranked as the industry's most reliable x86 platforms 11 years running.⁸

Lenovo services designed around your business needs

Lenovo services help you support efficient workload management across hybrid environments and are tailored to meet evolving business needs. Get results fast with expert discovery, advisory, deployment, and optimization services.



Lenovo AI Services meets you wherever you are in your AI journey, to rapidly define, deploy, and drive value. Lenovo's experts guide you to measurable impact and help you build a solid foundation to support current and future AI innovations.



Lenovo VM Migration Services helps organizations plan and execute virtual machine migrations, including platform assessments, VM setup, data configuration, validation, backups, and data protection for a smooth transition.



Lenovo TruScale Infrastructure as a Service with Nutanix wraps hardware, software, and professional services from Lenovo — and partners, including Nutanix — into a package that accelerates launch timelines and removes the stresses of deployment, maintenance, and hardware refreshes so your internal team can focus on your company's core business.



Lenovo Asset Recovery Services makes IT asset recovery seamless, from asset collection to secure data handling and responsible recycling.



Lenovo Premier Support gives your organization access to our highest level of service, with a single point of contact for simplified end-to-end management.





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A partner in ROI acceleration

In this next phase of AI, results are sharply in focus and IT leaders have a greater responsibility to prove the tangible results of their organization's AI investments.

For over 40 years, Lenovo has been a trusted partner to IT leaders all over the world. Our consultants have a finger on the pulse of emerging trends and best practices across the AI landscape, helping you achieve ROI faster and more efficiently.

No matter where your organization is in its AI journey, Lenovo can help you drive tangible results.

As AI remakes the tech landscape — and redefines what is possible — IT will play a central role in creating innovative solutions that accelerate the business and drive results.

The vision is yours. Get there with Lenovo.

Contact your Lenovo sales representative, or visit www.lenovo.com/Nutanix.

Sources

- 1 IDC, "CIO Playbook 2025 Survey," February 2025
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- 3 Randy Bean and dataIQ, "2025 AI & Data Leadership Executive Benchmark Survey," December 2024
- 4 McKinsey & Company, "Superagency in the Workplace," January 2025
- 5 MIT, "State of AI in Business 2025," July 2025
- 6 Deloitte, "AI workloads are surging. What does that mean for computing?" August 2025
- 7 IBM, "Cost of a Data Breach Report 2025," August 2025
- 8 ITIC, "ITIC 2024 Global Server Hardware, Server OS Reliability Report," November 2024

Disclaimers

*The ThinkAgile HX650a V4 will be available in Q1 of CY2026

**25% energy savings calculation based on using Lenovo Neptune Liquid Cooling on ThinkAgile HX V4 compared to previous generation

***Comparison based on a customer modernizing infrastructure from ThinkAgile HX V1 to ThinkAgile HX V4

****Comparison based on a customer migrating from a Dell VxRail V1 to a ThinkAgile HX V4