

Modernizing infrastructure on a virtualized foundation

A guide to building flexible, efficient, and future-ready infrastructure

Discover how open, secure, and high-performing virtualization solutions can accelerate workload performance and operational efficiency. Build a flexible, AI-ready foundation tailored to your organization's needs with Lenovo ThinkSystem V4 servers, powered by Intel® Xeon® 6 processors.



**Smarter
technology
for all**

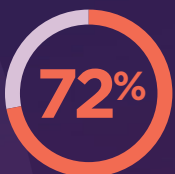
Lenovo

Why virtualization is an IT superpower

Virtualization transforms your IT infrastructure into an agile and resilient platform that keeps applications stable, unlocks your full performance capabilities, scales capacity, and moves workloads to their best-fit environment.



of organizations say virtualization is a key enabler of modern infrastructure.¹



Virtualization can dramatically improve your ability to recover quickly and safely when disruptions occur. 72% of organizations say virtualization has improved their disaster recovery capabilities.¹



Virtual machines (VMs) simplify workload isolation for security and compliance purposes, and move workloads between environments as cost, latency, or sovereignty requirements change.

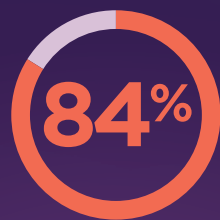


In AI-enabled virtualized environments, Intel® Xeon® 6 processors play a critical role in preparing, scheduling, and feeding data to accelerators — helping ensure GPUs are better utilized while maintaining efficiency across shared infrastructure.



Building a future-ready virtualization environment

Examining the cost, performance, and reliability of virtualized environments — and assessing future readiness for data-intensive applications — can be challenging. Yet maintaining the status quo introduces growing operational and financial risks as workloads expand.



of organizations struggle to manage their virtualization platforms.²

In fact, the top concern among IT professionals for their existing virtualization platforms is management complexity.¹



The majority of IT leaders have decided to make a change.



of organizations report they are likely to switch to a different hypervisor platform within the next few years.¹

When asked what they wanted in a new virtualization platform, organizations responded¹:

- 1 Automation and AI capabilities
- 2 Integration with existing infrastructure
- 3 Innovation and modernization opportunities
- 4 A unified environment for VM, container, and serverless workloads

Achieving this vision requires expertise and guidance from a proven partner capable of delivering modern, AI-ready infrastructure together with deep virtualization experience and full lifecycle services.

A proven foundation for virtualization

Lenovo virtualization solutions with Intel® Xeon® 6 processors enable organizations to modernize and streamline their IT environments, combining proven infrastructure, decades of expertise, comprehensive end-to-end services, and an expansive partner ecosystem.

Accelerate results with industry-leading performance and reliability

Lenovo's ThinkSystem V4 portfolio, powered by Intel® Xeon® 6 processors, is engineered to turn data centers into AI-ready infrastructure with exceptional performance, efficiency, and reliability. Lenovo sets the industry standard for reliability, **ranking #1 in x86 server reliability for 11 consecutive years.**³

Up to **7x** higher compute performance⁴

Up to **4x** more memory bandwidth⁴

Up to **11x** faster AI inferencing on large language models⁴



Lenovo ThinkSystem SR650 V4 server

Powered by the Intel® Xeon® 6 processor — Performance and Efficiency Without Compromise.



Maximize efficiency and sustainability for virtualized workloads

Lenovo ThinkSystem V4 Series servers, powered by Intel® Xeon® 6 processors, streamline your IT operations by consolidating multiple workloads onto fewer, more efficient systems. This consolidation maximizes resource efficiency, cutting down unnecessary hardware and energy costs.

- ✓ **4:1 server consolidation⁴**
- ✓ **Up to 40% lower energy consumption⁴**
- ✓ **Up to 75% reduction in server count⁴**
- ✓ **Up to 53% lower total cost of ownership (TCO)⁴**
- ✓ **Return on investment (ROI) in as little as 11 months⁵**

Implement robust system management and security

Lenovo XClarity One helps maintain performance and operational continuity with AI-powered predictive maintenance and intelligent analytics to enhance the performance, efficiency, and security of your infrastructure. Built on a Zero Trust Architecture with one-time password (OTP) application authentication and role-based access controls, XClarity One mitigates risk and proactively protects your data with AI threat detection. Lenovo has ranked #1 in x86 server security for six consecutive years.³

Explore an ecosystem of trusted partner solutions

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Lenovo supports a broad ecosystem of trusted virtualization partners, enabling customers to choose the right platform for their workloads while maintaining performance, reliability, and flexibility.



Canonical Ubuntu Pro

Canonical Ubuntu Pro provides a lightweight, KVM-based virtualization platform optimized for cloud-native, developer-centric, and emerging AI use cases. On the Lenovo ThinkSystem SR650 V4 server, Ubuntu delivers strong CPU efficiency, broad hardware compatibility, and first-class support for modern Linux virtualization stacks, including KVM, OpenStack, MAAS, and MicroK8s.

Lenovo Hybrid AI Inferencing with Canonical Ubuntu Pro is a cost-effective, streamlined solution for rapid AI deployment and experimentation, combining ease of use and essential security features for an accessible entry point into AI inferencing and deployment with the scalability of the Lenovo ThinkSystem SR650 V4 server.

[!\[\]\(830769b31eeeaca920791081939ff8ba_img.jpg\) Learn more about our partnership with Canonical.](#)

Microsoft Hyper-V

Hyper-V enables users to create, deploy, and manage multiple VMs on a single physical machine. Through hardware virtualization, Hyper-V shares physical resources across multiple isolated VMs, enabling consistent performance, simplified operations, and strong workload isolation.

Hyper-V is built into Windows Server, making it a natural and seamless choice for organizations running Microsoft-based environments — with no additional hypervisor licensing required. Windows Server 2025 introduced performance and scalability improvements for Hyper-V. Workgroup clusters provide AD-free Hyper-V clustering, making them ideal for edge deployments on Lenovo ThinkSystem V4 servers.

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Nutanix

Lenovo ThinkAgile HX V4 Series, powered by Intel® Xeon® 6 processors, with Nutanix Cloud Platform is a comprehensive, enterprise-ready virtualization platform designed to accelerate deployment, reduce operational overhead, and scale efficiently across hybrid environments.

With Lenovo XClarity One integrated into Nutanix Cloud Manager, infrastructure monitoring for HX clusters becomes easier than ever.

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Red Hat

Red Hat OpenShift Virtualization on Lenovo ThinkSystem V4 Series servers, powered by Intel® Xeon® 6 processors, delivers a modern, high-performance, and future-ready platform for virtualization and AI workloads.

Lenovo and Red Hat offer a full, open, hybrid cloud portfolio that provides organizations with faster time-to-market, lower operating costs, reduced risk from vendor lock-in, and improved developer productivity. From automation and cloud-native development platforms to infrastructure software, remote visualization and SAP workloads, together, Lenovo and Red Hat are helping organizations reduce data center costs while accelerating the shift to open, cloud-native infrastructure.

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SUSE

SUSE Virtualization combines the high-performance, energy-efficient capabilities of Lenovo's ThinkSystem servers with SUSE's Kubernetes-based virtualization platform. Unify virtual machines and containerized workloads smoothly across hybrid cloud, AI, and edge environments. Enhance scalability, security, and operational efficiency while extending on-premises capabilities into the cloud with ease.

Lenovo, Intel, and SUSE bring together the best of enterprise hardware and open-source software to help customers modernize infrastructure, scale SAP workloads, embrace containers, and build edge-ready solutions.

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VMware

Lenovo and VMware have been developing solutions together for more than twenty years, helping customers modernize their IT infrastructure to take advantage of virtualization, containers, and as-a-service capabilities. Our innovative portfolio of fully tested and validated infrastructure, software, services, and solutions is designed from the ground up for virtualization, hyperconvergence, and hybrid cloud.

The Lenovo ThinkSystem SR650 V4 server, powered by Intel® Xeon® 6 processors, achieved the highest VMmark 4 result for servers with Intel processors in a 2-socket matched pair configuration.⁶ This revealed 35.6% better performance than a previous generation.⁶

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Lenovo services designed around your business needs

Lenovo services help organizations modernize virtualization with confidence — reducing risk, accelerating time-to-value, and supporting long-term scalability.



Migrate VMs seamlessly

Lenovo VM Migration Services bring together Lenovo's certified migration experts, automated tooling, and best-practice methodologies to assess the existing environment, map dependencies, plan migration waves, and execute workload moves with minimal disruption and downtime. Lenovo VM Migration Services helps your organization reduce operational complexity, accelerate time to value, and deliver a smooth transition.



Discover a practical path to high-value AI

As AI evolves, Lenovo Hybrid AI Factory Services provides inferencing advisory, deployment, and managed services expertise to stand up and optimize high-performance inferencing environments tailored to business- and industry-specific use cases. These services give organizations the ability to innovate confidently and manage mission-critical AI operations with reliability, scalability, and strong governance.



Rapidly define, deploy, and drive value with AI

Lenovo AI Services covers the full application lifecycle, meeting you wherever you are to rapidly define use cases, deploy solutions, and drive value from AI. Lenovo experts guide you to create maximum business impact and build a solid foundation to support future AI innovations.



Maximize value as you scale

Lenovo TruScale Infrastructure as a Service (IaaS) wraps hardware, software, and professional services into a pay-as-you-grow package for scaling virtualization in your organization. Accelerate launch timelines; keep your infrastructure footprint consistently right-sized; and remove the stresses of deployment, maintenance, and technology refreshes so that your internal team can focus on your company's core business.



Lenovo is a trusted partner behind modern, virtualized infrastructure

For over 40 years, Lenovo has been a trusted partner to IT leaders all over the world.

Trust your virtualization process to proven partners

Modernizing virtualization environments is a complex undertaking with long-term implications. It's no longer about reaching an end state — it's about staying ready for evolving workloads like AI inferencing and dev/test. Lenovo and Intel deliver the secure, high-performance foundation needed to modernize virtualization and accelerate your organization's transformation.

That's the power of Lenovo with Intel Inside®.



180+
countries served

1B+
customers

2000+
suppliers

18
research and development centers

10K
IT professionals and engineers in
AI, cloud, and security

IDC
Recognized as a Major Player in the IDC
MarketScape for hybrid IT infrastructure
consulting and integration⁷

Lenovo's leadership in hardware reliability, security, and availability

#1 in x86 server reliability
for 11 consecutive years⁶

#1 in x86 security for
6 consecutive years⁶

#8 global supply chain as
ranked by Gartner⁸

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Talk to your Lenovo representative or **learn more about Lenovo and Intel IT infrastructure modernization.**

Sources

- 1 Red Hat, "The state of virtualization," June 2025
- 2 Forrester, "Modernize or Fall Behind: Rethinking IT Infrastructure for a Competitive Edge," October 2025
- 3 ITIC, "ITIC 2024 Global Server Hardware, Server OS Reliability Report," November 2024
- 4 Compared to previous generations: Lenovo, "Lenovo Hybrid AI Advantage Accelerates Enterprise AI Transformation with New Services, Solutions and Platforms," June 2025
- 5 Lenovo internal research
- 6 Lenovo, "ThinkSystem SR650 V4 Sets World Record with New VMmark4 Benchmark Result," April 2025
- 7 Lenovo, "Lenovo Named a Major Player in IDC MarketScape for Hybrid IT Infrastructure Consulting and Integration Services," June 2025
- 8 Gartner, "Gartner Announces 2025 Rankings of the Global Supply Chain Top 25," June 2025

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