A smarter way to modernize your server infrastructure

IT modernization is more than an investment in updated infrastructure. It's an opportunity to optimize your data center for long-term TCO gains, greater operational efficiency, and improved security. Learn how with Lenovo and Intel®.

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Building IT infrastructure for long-term success

Infrastructure modernization is a critical **long-term IT investment** — one whose impact is felt for years. Executed successfully, infrastructure transformation delivers greater business agility, faster time to value, and real business outcomes. This is a guide to a comprehensive strategy to transform your server infrastructure with a partner you can trust.

In this guide you will explore:

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Aging infrastructure leads to challenges at every turn

As advancements in technology and data center infrastructure continue to emerge, there is an increasing incentive to modernize infrastructure. AI is a significant driver of the rapid demand for a future-focused hybrid data center, but it is not the only factor stretching the limits of aging infrastructure.

Efficiently deploying and running enterprise applications and workloads is increasingly complex and resource intensive. Aging IT infrastructure adds to maintenance time and energy consumption — increasing costs, reducing reliability and uptime, and introducing security risks.

IT decision-makers say "infrastructure constraints" are the single greatest barrier to expanding their AI initiatives.[1]

Organizations are seeking solutions to accelerate growth, support AI, increase efficiency, and securely manage their server infrastructure now and in the future.

Nearly 60%

of IT professionals say their organization's IT infrastructure currently requires major transformation.[2]

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A smarter way to modernize your server infrastructure

Lenovo and Intel have partnered to deliver a smarter way to modernize — within an ecosystem you already know and trust. How can Lenovo and Intel make your IT modernization project a success? Hover over each answer to see more detail.

Right-size your data infrastructure for greater efficiency and lower TCO

Improve data security

Choose an end-to-end partner

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An immediate performance boost for aging systems

Compared to previous generations, **Lenovo ThinkSystem V4 series** servers, powered by **Intel® Xeon® 6 processors,** deliver up to:

7x higher compute performance[3]

11x faster AI inferencing on large language models[3]

4x more memory bandwidth[3]

4:1 server consolidation[4]

Up to **40%** lower energy consumption[4]

Up to **75%** reduction in server count[4]

Up to **53%** lower TCO[4]

Lenovo ThinkSystem SR650 V4

ROI in as little as 11 months[5]
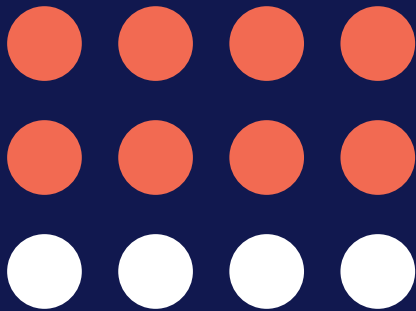
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Intel® Xeon® 6 leads the industry with exceptional performance for the widest range of workloads. Intel® Xeon® 6 offers power-efficient performance and sustainability features to help lower total cost of ownership.

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Infrastructure that is easier to manage and more secure

Robust and simplified system management with Lenovo XClarity

Lenovo XClarity One helps to keep your systems running smoothly with predictive maintenance and intelligent analytics to enhance the performance, reliability, and overall efficiency of your infrastructure.

Lenovo XClarity Administrator is a centralized resource-management solution designed to reduce complexity, improve response time, and enhance the availability of Lenovo ThinkSystem solutions. The embedded management engine in ThinkSystem servers, Lenovo XClarity Controller, is designed to standardize, simplify, and automate foundational server management tasks.

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Lenovo offers the most secure and reliable x86 servers.

#1 in x86 server reliability for 11 consecutive years[6]

#1 in x86 security for 6 consecutive years[6]

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Step up to Windows Server 2025

Upgrading to Windows Server 2025 on the latest Lenovo servers with Intel® Xeon® 6 processors means you're taking a big step toward being future-ready: ready to power the next phase of IT transformation, more ready for AI, and more prepared in the event of a cyberattack.

Lenovo and Intel make it easy to step up to Windows Server 2025 for maximum workload efficiency.

- ⊘ Update server estates in hours, not weeks.

- ⊘ Significantly reduce server downtime and speed up the update process with hotpatching for Windows Server and SQL Server.

- ⊘ Deploy advanced, multilayered security.

- ⊘ Scale with ease while reducing dependence on GPUs.

- ⊘ Greatly increase storage and database performance with significantly more IOPs for NVMe SSDs.

Stay up-to-date with the latest version of Windows Server to avoid performance, security, and reliability issues.

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Achieve efficiency and sustainability goals

Modernizing to meet data demands and AI-driven productivity objectives also means modernizing for responsible energy usage and sustainability — a mainstream, and sometimes mandated, expectation from executives, investors, and customers. The Lenovo ThinkSystem V4 series, powered by Intel® Xeon® 6 processors, is engineered for increased efficiency and sustainability, **with up to 40% lower energy consumption[4]** than previous series.

For maximum energy efficiency, **Lenovo Neptune®** cooling technology offers liquid-assisted cooling and direct water-cooled heat removal. The winner of CRN's Best Green Energy Product of the Year for 2024, Lenovo Neptune® Liquid Cooling, improves thermal efficiency and system performance while helping to align with carbon reduction initiatives.[7]

79%

of ITDMs say there's increased pressure to make their infrastructure more sustainable.[1]

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Hover over the ! to learn more

Efficient cooling and power

Energy optimization

Industry-leading technology

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Partnering with Lenovo means buying responsibly

Lenovo was awarded the Platinum Medal by EcoVadis, the leading global provider of business sustainability ratings, placing in the top 1% of all rated companies worldwide.[10]

We are committed to making it easier for you to achieve your sustainability goals through our services.

Low Carbon Transport Service

Our low carbon transport service delivers IT equipment via air freight by using sustainable aviation fuel.

Lenovo Asset Recovery Service

Mitigate the environmental impact and data security risks associated with end-of-life IT asset disposal. Lenovo Asset Recovery Service promotes the reuse, refurbishment, and recycling of IT hardware while maintaining data security — adhering to NIST SP 800-88 standards for data sanitization — and with potential financial returns from decommissioned equipment to help with technology refreshes.

Lenovo CO_2 Offset Service

Manage your technology carbon footprint, make tangible contributions to the environment, and support verified climate action projects with easy-to-purchase offsets. Lenovo CO_2 Offset Services estimates the carbon emissions across the device lifecycle through a seamless, transparent process.

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Enabling round-the-clock manufacturing

To avoid pausing its production lines when carrying out IT maintenance, **Artec Pneumatic** moved to a hyperconverged infrastructure solution using Lenovo ThinkSystem servers powered by Intel® Xeon® Scalable processors, boosting availability and performance for key workloads.

> "We were delighted with how quick and easy it was to deploy the new HCI solution. Within a couple of hours, we had everything up and running."
>
> **Claudio Gallerani, CEO, Artec Pneumatic**

The challenge

As Artec Pneumatic's IT infrastructure neared end of life, the company saw a significant drop in performance for key business systems. To enable continued growth, the company decided to refresh its aging server and storage hardware.

The Lenovo solution

Artec Pneumatic decided to replace its existing on-premises environment with a new, more cost-effective hyperconverged infrastructure (HCI) solution. Deployed on high-performance Lenovo ThinkSystem servers, the new solution offered flexibility, scalability, and availability for long-term growth.

The impact

By moving to a modern HCI platform built with Lenovo and Intel®, Artec Pneumatic has made lengthy maintenance windows a thing of the past. At the same time, the organization is seeing a substantial improvement in application performance.

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Scale your technology investment with Infrastructure as a Service (IaaS)

Lenovo TruScale provides access to the industry's broadest technology portfolio in a flexible, pay-as-you-go model that delivers scalability in a way traditional procurement methods cannot. Devices, services, and support can all be added, changed, or removed easily through a single point of contact so that your data center infrastructure is always scaled to your present needs, without straining your internal resources.

TruScale's end-to-end services include initial consultation, analysis, and configuration through ongoing assessment, maintenance, and remote monitoring. Pricing structures are simple and include all associated services in a single monthly bill.

Optimizing your data center with Lenovo ThinkSystem servers, powered by Intel® Xeon® 6 processors — along with Lenovo TruScale IaaS — **can help reduce** carbon dioxide equivalent (CO_2e) and power consumption **by up to 20%.***

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Modernize your IT infrastructure with proven partners

Trusted, modern, AI-ready infrastructure can help grow your business today, and keep it prepared for tomorrow. Intel® Xeon® processors — **that's the power of Lenovo with Intel Inside®.**

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

Sources

1 Flexential, "2025 State of AI Infrastructure Report," May 2025
2 IDC, "Ten Trends That Shaped the Cloud Market in 2024," February 2025
3 Compared to previous generations: Lenovo, "Lenovo Hybrid AI Advantage Accelerates Enterprise AI Transformation with New Services, Solutions and Platforms," June 2025
4 Lenovo, "Modernize your infrastructure for the radical future," April 2025
5 Lenovo internal research
6 ITIC, "ITIC 2024 Global Server Hardware, Server OS Reliability Report," November 2024
7 CRN, "Sustainability in Tech Awards 2024," March 2024
8 Lenovo data based on internal Lenovo ISG research
9 Based on Lenovo internal testing against similar air-cooled systems in a typical data center
10 Lenovo, "Lenovo awarded Platinum Medal by EcoVadis — placed in the top 1% of all companies rated globally," December 2024

Disclaimer

* TruScale IaaS accurately reports on power and CO_2 emissions allowing managed infrastructures to be designed, implemented, and tuned not only for performance and capacity but also for CO_2 emissions. Ongoing monitoring of the system using Lenovo XClarity Power Monitor and systems performance figures are used to optimize power consumption by the infrastructure. CO_2 emissions will be calculated based on the localized carbon footprint of the power source used.

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