

Lenovo Hybrid AI Advantage with NVIDIA: Accelerating Smarter Networking at the Speed of Real-World AI Outcomes

Article

In today's AI-driven economy, enterprises are asking a critical question: *How do I get real value from AI?* The answer lies in a hybrid approach that combines powerful infrastructure, intelligent networking, and proven services. Lenovo Hybrid AI Advantage™ with NVIDIA delivers exactly that — a comprehensive foundation for deploying AI agents and use cases that drive measurable business outcomes that scale with the necessary performance for success.

With Lenovo Hybrid AI Advantage, you can leverage AI wherever your data and information resides and implement horizontal and vertical AI agents and use cases fast. Worried about scaling AI? Lenovo allows you to scale AI with confidence, accelerate adoption and stay compliant, secure, and in control of your AI

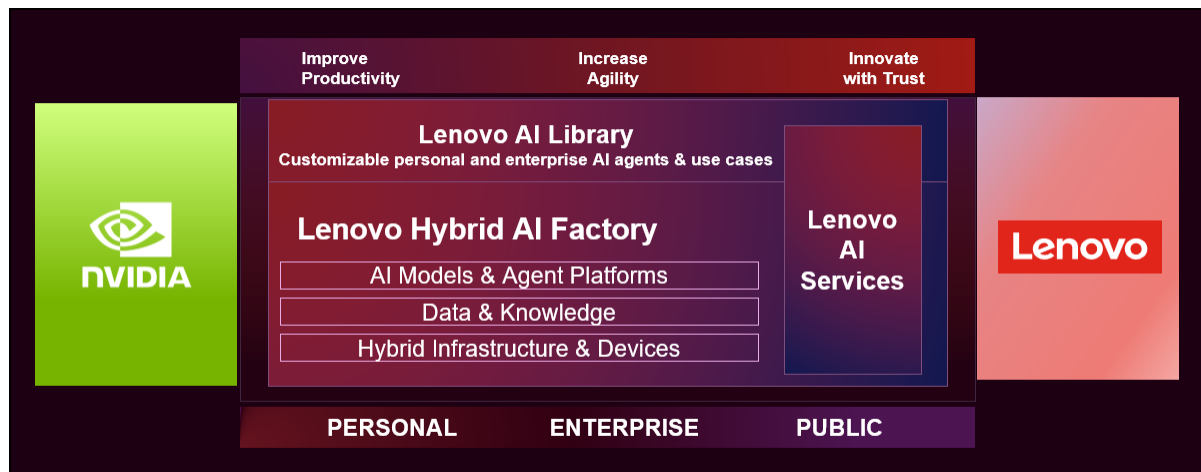


Figure 1. Lenovo Hybrid AI Advantage™ with NVIDIA

Artificial intelligence is redefining how enterprises innovate, compete, and grow. But scaling AI is not as simple as plugging in a model. It requires trusted outcomes, a hybrid-ready foundation, and the ability to manage cost, compliance, and complexity. Lenovo Hybrid AI Advantage™ empowers enterprises to move beyond pilots into production at scale.

With one of the broadest AI portfolios in the industry, Lenovo unites:

- **Validated, integrated platforms:** Compute, storage, networking, software and orchestration integrated into one cohesive system
- **Hybrid deployment flexibility:** On-premises, private, or multi-cloud environments – avoiding vendor lock-in
- **Elastic scaling:** From a single AI starter kit to full multi-rack GPU clusters

- **Performance optimized:** Support for different AI workloads including HPC, AI Inferencing, training, and analytics

Built for Speed, Tuned for Intelligence

At the heart of Lenovo Hybrid AI Advantage is a validated reference design that integrates the latest NVIDIA accelerated computing and networking technologies. This includes the groundbreaking [NVIDIA Blackwell](#) accelerated compute and [NVIDIA BlueField DPUs](#), which offload infrastructure tasks from CPUs, enabling faster data processing, enhanced security, and scalable AI deployment across cloud, edge, and on-prem environments. Complementing this is [NVIDIA Spectrum-X Ethernet](#), providing high-performance networking for AI.

Delivering Optimized Network Speed and Performance

[Lenovo's Hybrid AI Factory](#) brings together all elements of the AI stack — infrastructure, data, models, and agent platforms — into tested, validated AI solutions. These solutions are architected with NVIDIA and are designed to simplify deployment while maximizing control and security. Through this collaboration, Lenovo and NVIDIA are bringing the latest innovations in accelerated computing and AI to enterprises worldwide, enabling faster time to value and scalable AI adoption.

Upcoming enhancements include:

- Next generation [NVIDIA BlueField-4](#) DPUs that offload and accelerate infrastructure workloads, freeing up CPUs for application- This significantly boosts overall performance, efficiency, and scalability for AI and data-intensive environments. By accelerating networking, storage, and security services in hardware, BlueField-4 enables enterprises to maximize infrastructure utilization and speed AI deployments.
- [NVIDIA ConnectX-9 SuperNICs](#) are engineered for high-performance networking and supporting speeds up to 1.6Tb/s. get advanced offloading capabilities such as RDMA and encryption, reduced CPU load and improved throughput for AI workloads. With built-in security features and support for [NVIDIA Spectrum-X Ethernet](#) and [NVIDIA Quantum-X800-InfiniBand](#), ConnectX-9 SuperNICs are ideal for cloud computing, AI inferencing & model training, and hyperscale data centers to optimize network performance while reducing CPU overhead.
- The [NVIDIA AI Factory for Government reference design](#) enables new AI platforms and intelligent agents for the public sector and highly regulated industries with the guidance to deploy full-stack AI infrastructure— now designed to meet stringent security standards for FedRAMP-authorized clouds and high-assurance environments.

These powerful additions enable enterprises to access and use data to make decisions faster than ever—turning data into outcomes delivered in months. Now, in the most secure, highly regulated industries, with lightning-fast load optimization of networking speed and performance.

From Proof to Production: Services That Scale

Lenovo's full-lifecycle AI services meet customers wherever they are in their journey:

- **AI Discover:** Define and align use cases in just two days
- **AI Fast Start:** Validate an AI agent or use case with your data in under 90 days
- **AI Adoption & Change Management:** Upskill teams and boost engagement to maximize ROI

These services are backed by Lenovo's global leadership in infrastructure reliability, supercomputing, and business PCs, and supported by a growing ecosystem of AI Innovators and ISV's including Centific and Vaidio.

Why Lenovo Hybrid AI Advantage with NVIDIA

Lenovo Hybrid AI Advantage is built on the Hybrid AI Factory framework – a modular design that unifies infrastructure, data, and orchestration. Lenovo ThinkSystem is #1 in reliability, so you don't have to worry about keeping your business running and with the Lenovo AI Library and the full-lifecycle portfolio of Lenovo AI Services, the value is a shortcut to defining, deploying, and managing personal and enterprise AI agents and use cases that achieve productivity, agility and innovation outcomes from AI. The curated collection of AI agents and AI use cases in the Lenovo AI Library are real, repeatable, and ready to be customized to drive ROI.

AI models and agent platforms deliver tested and validated solutions that cut deployment complexity and maximize security and control. And, with our full-lifecycle portfolio of **Lenovo AI Services**, you get the expertise you need to deploy Hybrid AI Factory solutions to meet the unique needs of your business.

- **Breadth:** 80+ AI-ready platforms and validated ISV solutions
- **Sustainability:** 13+ years of Neptune liquid cooling innovation, saving 1M kWh annually
- **Vision:** Smarter AI for All — trusted, responsible, and enterprise-ready

With Lenovo Hybrid AI Advantage, your AI isn't just ready to run — it's ready to deliver outcomes.

Learn More

For more information, see these resources:

- Lenovo Hybrid AI Advantage™ with NVIDIA
<http://www.lenovo.com/hybridai>
- Lenovo Validated Design: Multimodal Agentic AI Solutions with Centific AI Data Foundry
<https://lenovopress.lenovo.com/lp2180-lenovo-validated-design-centific-ai-data-foundry>
- Lenovo Validated Design: Smart Cities AI for Public Safety with Vaidio
<https://lenovopress.lenovo.com/lp2303-lenovo-validated-design-smart-cities-ai-for-public-safety-with-vaidio>

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Related product families

Product families related to this document are the following:

- [Artificial Intelligence](#)
- [Hybrid AI Factory](#)

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This document, LP2323, was created or updated on October 28, 2025.

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