



NVIDIA's New Ethernet Networking Platform for AI Available Soon From Dell Technologies, Hewlett Packard Enterprise, Lenovo

End-to-End Platform Features Latest NVIDIA Spectrum-X Networking, Provides Foundation for Customers to Transform Business With AI

NVIDIA today announced that [Dell Technologies](#), Hewlett Packard Enterprise and [Lenovo](#) will be the first to integrate [NVIDIA Spectrum-X™](#) Ethernet [networking technologies](#) for AI into their server lineups to help enterprise customers speed up generative AI workloads.

Purpose-built for generative AI, Spectrum-X offers enterprises a new class of Ethernet networking that can achieve 1.6x higher networking performance for AI communication versus traditional Ethernet offerings.

The new systems coming from three of the top system makers bring together Spectrum-X with NVIDIA Tensor Core GPUs, [NVIDIA AI Enterprise](#) software and [NVIDIA AI Workbench](#) software to provide enterprises the building blocks to transform their businesses with generative AI.

“Generative AI and accelerated computing are driving a generational transition as enterprises upgrade their data centers to serve these workloads,” said Jensen Huang, founder and CEO of NVIDIA. “Accelerated networking is the catalyst for a new wave of systems from NVIDIA’s leading server manufacturer partners to speed the shift to the era of generative AI.”

“Accelerated computing and networking are key to building systems to meet the demands of large language models and generative AI applications,” said Michael Dell, chairman and CEO of Dell Technologies. “Through our collaboration, Dell Technologies and NVIDIA are providing customers with the infrastructure and software needed to quickly and securely extract intelligence from their data.”

“Generative AI will undoubtedly drive innovation across multiple industries,” said Antonio Neri, president and CEO of HPE. “These powerful new applications will require a fundamentally different architecture to support a variety of dynamic workloads. To enable customers to realize the full potential of generative AI, HPE is partnering with NVIDIA to build systems with the required power, efficiency and scalability to support these applications.”

“Generative AI can power unprecedented transformation but places unprecedented demands on enterprise infrastructure,” said Yuanqing Yang, chairman and CEO of Lenovo. “Working closely with NVIDIA, Lenovo is building efficient, accelerated systems with the networking, computing and software needed to power modern AI applications.”

Networking Purpose-Built to Accelerate AI

For peak AI workload efficiency, Spectrum-X combines the extreme performance of the [Spectrum-4](#) Ethernet switch; the [NVIDIA BlueField@-3 SuperNIC](#), a new class of network accelerators for supercharging hyperscale AI workloads; as well as [acceleration software](#). Spectrum-X complements BlueField-3 DPUs, the world’s most advanced infrastructure computing platform.

Spectrum-4 is the world’s first 51 Tb/sec Ethernet switch for AI, providing highly effective data throughput at scale and under load while minimizing network congestion for multi-tenant, AI cloud workloads. Its intelligent, fine-tuned routing technology enables maximum utilization of network infrastructure at all times.

BlueField-3 SuperNICs are designed for network-intensive, massively parallel computing, offering up to 400Gb/s RDMA over Converged Ethernet (RoCE) network connectivity between GPU servers and boosting performance for AI training and inference traffic on the east-west network inside the cluster. They also enable secure, multi-tenant data center environments, ensuring deterministic and isolated performance between tenant jobs. Boasting a power-efficient, half-height, half-length PCIe form factor, BlueField-3 SuperNICs are ideal for enterprise-class servers.

Acceleration software powering Spectrum-X features NVIDIA software development kits such as [Cumulus Linux](#), Pure [SONiC](#) and [NetQ](#) — which together drive the platform’s breakthrough performance — and the [NVIDIA DOCA™ software framework](#), which is at the heart of BlueField.

NVIDIA AI Enterprise provides frameworks, pretrained models and development tools for secure, stable and supported production AI. NVIDIA AI Workbench allows developers to quickly create, test and customize pretrained generative AI models on a PC or workstation — then scale them to virtually any data center or cloud.

NVIDIA Israel-1 Supercomputer Powered by Spectrum-X

Spectrum-X also enables the NVIDIA Israel-1 supercomputer, a reference architecture for next-generation AI systems. Israel-1 is a collaboration with Dell Technologies, using Dell PowerEdge XE9680 servers powered by the NVIDIA HGX™ H100 eight-GPU platform and BlueField-3 DPUs and SuperNICs with Spectrum-4 switches.

Availability

New systems from Dell, HPE and Lenovo featuring the complete NVIDIA AI stack are expected in the first quarter of next year.

About NVIDIA

Since its founding in 1993, [NVIDIA](https://nvidianews.nvidia.com/) (NASDAQ: NVDA) has been a pioneer in accelerated computing. The company's invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined computer graphics, ignited the era of modern AI and is fueling industrial digitalization across markets. NVIDIA is now a full-stack computing company with data-center-scale offerings that are reshaping industry. More information at <https://nvidianews.nvidia.com/>.

Certain statements in this press release including, but not limited to, statements as to: the benefits, impact, performance, features and availability of our products and technologies, including NVIDIA Spectrum-X, NVIDIA Tensor Core GPUs, NVIDIA AI Enterprise, NVIDIA AI Workbench, Spectrum-4, NVIDIA BlueField-3 SuperNIC, BlueField-3 DPUs, Cumulus Linux, Pure SONiC, NetQ, NVIDIA DOCA, and NVIDIA HGX H100; generative AI and accelerated computing driving a generational transition as enterprises upgrade their data centers to serve these workloads; accelerated networking being the catalyst for a new wave of systems from NVIDIA's leading server manufacturer partners to speed the shift to the era of generative AI; generative AI driving innovation across multiple industries, and these powerful new applications requiring a fundamentally different architecture to support a variety of dynamic workloads; generative AI powering unprecedented transformation but placing unprecedented demands on enterprise infrastructure; and the benefits and impact of NVIDIA's partnerships with Dell Technologies, Hewlett Packard Enterprise and Lenovo are forward-looking statements that are subject to risks and uncertainties that could cause results to be materially different than expectations. Important factors that could cause actual results to differ materially include: global economic conditions; our reliance on third parties to manufacture, assemble, package and test our products; the impact of technological development and competition; development of new products and technologies or enhancements to our existing product and technologies; market acceptance of our products or our partners' products; design, manufacturing or software defects; changes in consumer preferences or demands; changes in industry standards and interfaces; unexpected loss of performance of our products or technologies when integrated into systems; as well as other factors detailed from time to time in the most recent reports NVIDIA files with the Securities and Exchange Commission, or SEC, including, but not limited to, its annual report on Form 10-K and quarterly reports on Form 10-Q. Copies of reports filed with the SEC are posted on the company's website and are available from NVIDIA without charge. These forward-looking statements are not guarantees of future performance and speak only as of the date hereof, and, except as required by law, NVIDIA disclaims any obligation to update these forward-looking statements to reflect future events or circumstances.

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