MLPerf Training v2.1 Showcases Lenovo's Commitment to Growth and Enhancement of AI

Article

Lenovo AI continues to perform

MLPerf™ is the industry's leading AI benchmark and gives quantitative results to the consistent improvements from Lenovo round after round. Through this commitment to consistent competitive testing, Lenovo can provide baseline delivered performance for artificial intelligence (AI), rather than pure marketing claims. MLPerf benchmarks were developed with the intent to "build fair and useful standards", that provide evaluations of training and inference performance for hardware, software, and services. These measurements allow Lenovo to consistently provide best-in-class solutions to their customers.

With customers in mind, Lenovo will continue to take part in these rounds of metrics and provide transparent viewership to all results. This allows all parties to formulate informed decisions and judgements based on factual third-party data points.

MLPerf Training v2.1 highlights

Understanding this round's attempts and discoveries on MLPerf benchmarking:

- Lenovo won 2 benchmarks and remained competitive in 4 others, using the same GPUs and Infrastructure as Lenovo Inference testing, demonstrating the versatility of the platform

Continued advancements in performance

For our third run with the same servers, we continue to showcase improvements by improving and enhancing our software/drivers. This is used to showcase to existing clients that they too can obtain such improvements with existing technology. These advancements include:

- Lenovo ThinkSystem SR670 V2 NVIDIA-Certified Server with 4x NVIDIA A100 80GB SXM4 Tensor Core GPUs
    - Won ResNet50 at 61.99min
    - Won DLRM at 3.58min
    - Competitive BERT, MaskRCNN
- Lenovo ThinkSystem SR670 V2 NVIDIA-Certified Server with 8x NVIDIA A100 80GB PCIe -Tensor Core GPUs
    - Competitive MaskRCNN, ResNet

Progress is about improvement; Lenovo sees improvement as a basis for customer satisfaction. As technology progresses, Lenovo will continue to benchmark itself against all competition using MLPerf benchmarks. We will continue to provide transparent results, allowing customers to focus on the success of their deployments around the globe.

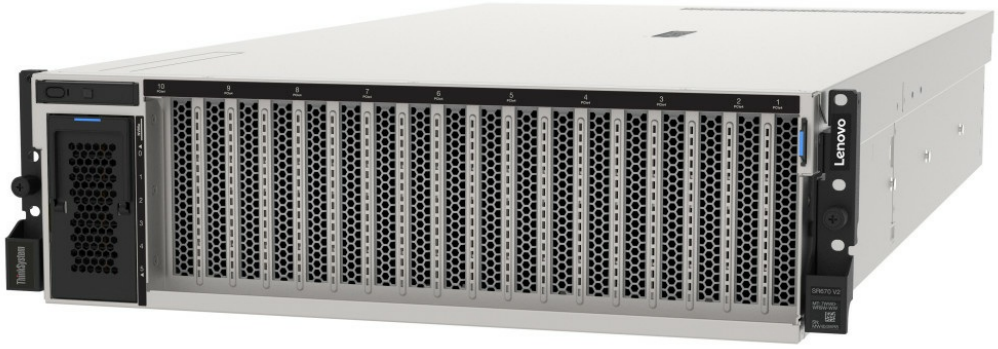

Figure 1. Lenovo ThinkSystem SR670 V2 configured to support eight double-wide GPUs

Lenovo and NVIDIA collaboration

Lenovo utilizes NVIDIA accelerated computing to demonstrate AI performance across various infrastructure configurations, running on Lenovo NVIDIA-Certified ThinkSystem platforms. We showcased the efficiency and performance of our air-cooled systems, providing both PCIe and HGX deployment options in a standard data center platform that enterprises of all sizes can quickly deploy.

Lenovo collaborates extensively with NVIDIA on the advancement of AI systems. Through our Lenovo AI Innovation Centers, we're working with NVIDIA to ensure the success of our customers AI initiatives, providing access to Lenovo and NVIDIA AI experts to aid with consulting on projects, the proper infrastructure to run a proof of concept, and proof of ROI before deployment. As the AI world continues to evolve, collaborations make coming to market an easier and more effective process.

For more information

For more information, see the following resources:

Explore Lenovo AI solutions:
https://www.lenovo.com/us/en/servers-storage/solutions/analytics-ai/

Engage the Lenovo AI Center of Excellence:
https://lenovoaicodelab.atlassian.net/servicedesk/customer/portal/3

MLCommons®, the open engineering consortium and leading force behind MLPerf, has now released new results for MLPerf benchmark suites:

- Benchmark results: https://mlcommons.org/en/inference-datacenter-21/
- Latest news about MLCommons: https://mlcommons.org/en/news/mlperf-inference-v21/

Related product families

Product families related to this document are the following:

- Artificial Intelligence
- MLPerf Benchmark
- ThinkSystem SR670 V2 Server

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