

Mellanox 200 Gigabit HDR InfiniBand to Accelerate a World-Leading Supercomputer at the High-Performance Computing Center of the University of Stuttgart (HLRS)

The New 5000-Node, 24 PetaFLOPs Performance Supercomputer Will Advance High-Performance Computing (HPC) and Artificial Intelligence (AI) Research and Development in the Areas of Energy, Climate, Health and More

Mellanox Technologies, Ltd. (NASDAQ: MLNX), a leading supplier of high-performance, end-to-end smart interconnect solutions for data center servers and storage systems, today announced that its 200 Gigabit HDR InfiniBand solutions were selected to accelerate a world-leading supercomputer at the High-Performance Computer Center of the University of Stuttgart (HLRS). The 5000-node supercomputer named "Hawk," will be built in 2019 and provide 24 petaFLOPs of compute performance. By utilizing the InfiniBand fast data throughput and the smart In-Network Computing acceleration engines, HLRS users will be able to achieve the highest HPC and AI application performance, scalability and efficiency.

The mission of the HLRS Hawk supercomputer is to advance engineering development and research in the fields of energy, climate, health and more, and if built today, the new system would be the world's fastest supercomputer for industrial production.

"HLRS serves a large community of researchers and industrial product developers across a variety of application domains," said Prof. Dr. Michael M. Resch, Director of HLRS. "Our new HDR InfiniBand-accelerated supercomputer will provide the performance levels needed to support new scientific investigations and innovative product designs. We are excited to collaborate with Mellanox on building a leading European and global supercomputer and look forward to witnessing the discoveries enabled by this cooperation."

200 Gigabit HDR InfiniBand provides leading performance, scalability, and network robustness advantages. Among them, the Mellanox Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)[™] technology enables the execution of data algorithms on the data as it is being transferred within the network, providing the highest application performance and scalability. The Mellanox SHIELD[™] technology enables self-healing interconnect capabilities to deliver highest network robustness and reliability. The higher HDR InfiniBand switch port count reduces total cost of ownership. These advantages, together with the high data throughput and the extremely low latency, make InfiniBand the preferred interconnect choice for both pre-Exascale and Exascale compute and storage platforms.

"HDR InfiniBand delivers the best performance and scalability for HPC and AI applications, providing our users with the capabilities to enhance research, discoveries and product development," said Gilad Shainer, vice president of marketing at Mellanox Technologies. "We are excited to work with HLRS on building the next generation of supercomputers on the path to Exascale, a platform that will serve the growing computing needs of their large community."

Supporting Resources:

- Learn more about [Mellanox 200G HDR InfiniBand Adapters](#) and [Switches](#)

About Mellanox

Mellanox Technologies (NASDAQ: [MLNX](#)) is a leading supplier of end-to-end Ethernet and InfiniBand smart interconnect solutions and services for servers and storage. Mellanox interconnect solutions increase data center efficiency by providing the highest throughput and lowest latency, delivering data faster to applications and unlocking system performance capability. Mellanox offers a choice of fast interconnect products: adapters, switches, software and silicon that accelerate application runtime and maximize business results for a wide range of markets including high performance computing, enterprise data centers, Web 2.0, cloud, storage and financial services. More information is available at: www.mellanox.com.

About the High-Performance Computing Center Stuttgart

The High-Performance Computing Center Stuttgart (HLRS) was established in 1996 as the first German national high-performance computing (HPC) center. As a research institution affiliated with the University of Stuttgart and a founding member of the Gauss Centre for Supercomputing, HLRS provides HPC services to academic users and industry. We operate leading-edge HPC systems, provide training in HPC programming and simulation, and conduct research to address key problems facing the future of supercomputing. Among our areas of expertise are parallel programming, numerical methods for HPC, visualization, grid and cloud computing concepts, and data analytics. In addition, our program in the Philosophy of Science and Technology of Computer Simulation investigates how high-performance computing is changing science,

technology development, society, and politics. More information is available at: www.hirs.de.

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