Press release

Atos to build Max Planck Society's new BullSequana XH3000-based supercomputer

Munich, February 9th, 2023 - Atos today announces a contract to build and install a new high-performance computer for the Max Planck Society, a world-leading science and technology research organization. The new system will be based on Atos' latest BullSequana XH3000 platform, which is powered by AMD EPYC™ CPUs and Instinct™ accelerators. In its final configuration, the application performance will be three times higher than the current "Cobra" system, which is also based on Atos technologies.

The new supercomputer, with a total order value of over 20 million euros, will be operated by the Max Planck Computing and Data Facility (MPCDF) in Garching near Munich and will provide high-performance computing (HPC) capacity for many institutes of the Max Planck Society. Particularly demanding scientific projects, such as those in astrophysics, life science research, materials research, plasma physics, and AI will benefit from the high-performance capabilities of the new system.

The system will run without fans thanks to its unmatched hot water cooling (Direct Liquid Cooling) and thus have a significantly improved energy efficiency. The efficiency gained from this Atos' cooling system matched with the latest in silicon architecture innovations from AMD, designed with energy efficiency in mind, brings the Power Usage Effectiveness (PUE) value to less than 1.05 (1 being the ideal ratio), far below the average of other HPC installations.

The installation will feature 4th Gen AMD EPYC processors and for the first time in an Atos-based European system, the upcoming AMD Instinct MI300A accelerator. The system will consist of ten BullSequana XH3000 racks with a total of 768 processor nodes of and 192 accelerator nodes and will be complemented with an IBM SpectrumScale storage solution. The CPU nodes will be delivered in the third quarter of 2023, with full installation of the GPU nodes expected in the first half of 2024.

> **Prof. Erwin Laure, Director of the Max Planck Computing and Data Facility** said "*The computing power required by scientific research is ever increasing and we see an unabated need for high-performance computing capacity. We want to provide the best possible support to our researchers in their work and have therefore decided to modernize our high-performance computing complex. With Atos and AMD, we have the right partners for this. The new solution will certainly meet our demands and once again advance science in leaps and bounds.*"
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> **Emmanuel Le Roux, Group SVP, Global Head of HPC, AI & Quantum at Atos**, highlighted, "*We are very proud to have been awarded this contract and to have been trusted with our extensive HPC expertise. We are convinced that the combination of our newly developed, powerful and energy-efficient BullSequana XH3000 system with the high-performance AMD Instinct MI300A processors will provide the Max Planck Society with a future-proof system and the computing power required to further continue its ground-breaking research.*"

Brad McCredie, corporate vice president, Data Center Acceleration Business, AMD said *"AMD, with the MI300A APU, continues to deliver breakthrough performance for researchers and the high performance computing industry. AMD is excited by the strong market validation of the performance, power and simplified programming advantages unlocked by the MI300A APU architecture and we are looking forward to working with Atos to advance the specific science and research needs of the Max Planck Society."*

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About Atos

Atos is a global leader in digital transformation with 112,000 employees and annual revenue of c. € 11 billion. European number one in cybersecurity, cloud and high performance computing, the Group provides tailored end-to-end solutions for all industries in 71 countries. A pioneer in decarbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos is a SE (Societas Europaea) and listed on Euronext Paris.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.

About MPG

The Max Planck Society is Germany's most successful research organization. With 30 Nobel Laureates among the ranks of its scientists, it is on equal footing with the best and most prestigious research institutions worldwide. The more than 15,000 publications each year in internationally renowned scientific journals are proof of the outstanding research work conducted at Max Planck Institutes – and many of those articles are among the most-cited publications in the relevant field.

Currently there are 86 Max Planck Institutes and facilities that conduct basic research in the service of the general public in the natural sciences, life sciences, social sciences, and the humanities. Max Planck Institutes focus on research fields that are particularly innovative, or that are especially demanding in terms of funding or time requirements. And their research spectrum is continually evolving: new institutes are established to find answers to seminal, forward-looking scientific questions, while others are closed when, for example, their research field has been widely established at universities. This continuous renewal preserves the scope the Max Planck Society needs to react quickly to pioneering scientific developments.

The Max Planck Computing and Data Facility (MPCDF) is a cross-institutional competence centre of the Max Planck Society to support computational and data sciences. In close collaboration with domain scientists from the Max Planck Institutes the MPCDF is engaged in the development and optimization of algorithms and applications for high performance computing and data analytics as well as in the design and implementation of solutions for data-intensive projects. The MPCDF operates state-of-the-art supercomputers, several mid-range compute systems and data repositories for various Max Planck Institutes and provides an up-to-date infrastructure for data management including long-term archive services.

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