



## **Atos awarded MareNostrum5 supercomputer contract by EuroHPC JU for Barcelona Supercomputing Center**

**Paris, France – June 23, 2022** – Atos, leading a consortium of technology suppliers, today announces that it has been chosen to provide the pre-exascale system to be hosted by the **Barcelona Supercomputing Center, in Spain**, as part of the [EuroHPC JU](#) (European High Performance Computing Joint Undertaking). MareNostrum5 will rank amongst the world's top supercomputers and will pave the way toward exascale capabilities: the next supercomputing era.

This new system will support the EU's mission to provide European scientists and industry with access to cutting-edge HPC infrastructures and services, with the main objective to strengthen medical research capabilities across Europe. Atos is already supporting Europe's HPC capabilities by providing pre-exascale systems for five other EuroHPC projects out of eight.

With a power capacity up to 314 Petaflops, or at least 314 million billion calculations per second, the system called MareNostrum5 is tailored to boost European medical research through drug research, the development of vaccines, virus spread simulations as well as artificial intelligence and big data processing applications. The system will also unlock computing performance for HPC specific complex applications, such as climate research, engineering, material science and earth sciences, which require to be managed out of the cloud.

As the prime contractor, Atos will manage the delivery of the entire MareNostrum5 supercomputer in close cooperation with European technology specialist ParTec AG, who will provide core parts of the solution and support Atos in the technical coordination of the project. A large accelerator partition will be based on Atos' recently announced [BullSequana XH3000](#) next-gen hybrid architecture – the largest installation worldwide – integrating GPU nodes using NVIDIA's H100 Tensor Core GPU, based on the new Hopper™ architecture and with 4<sup>th</sup> Gen Intel Xeon Scalable processors (codenamed Sapphire Rapids). Atos will also deliver nodes with NVIDIA's Grace™ CPU Superchip for the next-generation general purpose technology evaluation partition.

The Lenovo general purpose compute partition, provided through ParTec AG, will be based on Lenovo ThinkSystem SD650 V3 Neptune™ nodes with 4<sup>th</sup> Gen Intel Xeon Scalable processors – to build one of the largest general purpose scientific supercomputer worldwide. The storage part of the system, also provided through ParTec AG, will use IBM Spectrum Scale global data platform on IBM Elastic Storage Server (ESS) providing more than 200PB of high-performance storage. IBM will also supply more than 400PB of archiving solution. Both the accelerator and general purpose compute partitions will benefit from advanced Direct Liquid Cooling solutions to provide an extremely energy-efficient system. MareNostrum5 will be interconnected with the NVIDIA Quantum-2 400Gb/s InfiniBand networking platform.

*"The EuroHPC Joint Undertaking continues to lead the way in European supercomputing. MareNostrum 5 will provide European scientists and industry with access to cutting-edge HPC infrastructures and services. It will power medical innovation but also climate research, engineering and earth sciences while supporting our objective to promote green and sustainable technologies."* **Anders Dam Jensen, the Executive Director of the EuroHPC Joint Undertaking**

*"The acquisition of MareNostrum 5 will enable world-changing scientific breakthroughs such as the creation of digital twins to help solve global challenges like climate change and the advancement of precision medicine. In addition, BSC-CNS is committed to developing European hardware to be used in future generations of supercomputers and helping to achieve technological sovereignty for the EU's member states."* said **Director of BSC-CNS Mateo Valero**

*"As Europe's leading supercomputing manufacturer, we are proud to be supporting Europe's commitment towards technological excellence and sovereignty with the MareNostrum5 pre-exascale system. With this solution fully manufactured in Europe, we will support researchers to accelerate scientific discovery and to develop solutions for current and future challenges."* commented **Emmanuel Le Roux, Group SVP, Global Head of HPC, AI & Quantum at Atos.**

Atos' BullSequana range is and will be used in six EuroHPC supercomputing centres; Sofia Tech Park in Bulgaria ([Discoverer](#)), CINECA in Italy ([Leonardo](#)), IZUM in Slovenia ([Vega](#)), LuxProvide in Luxembourg ([MeluXina](#)), Minho Advanced Computing Centre in Portugal (Deucalion), and now in Barcelona Supercomputing Center thereby reinforcing Atos' position as a European leader in high-performance computing.

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#### **Note to editors**

Data is now at the heart of the digital economy. While artificial intelligence and machine learning can help unleash its value, data also needs to be secured, computed and processed at the right location. With key expertise in high-performance computing, edge computing, cybersecurity and critical systems, Atos is a trusted data intelligence partner for large organizations around the world.

#### **About Atos**

Atos is a global leader in digital transformation with 111,000 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), listed on Euronext Paris and included in the CAC 40 ESG and Next 20 indexes.

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.

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