19th Workshop on high performance computing in meteorology



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MareNostrum 5

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In 2019, the EuroHPC selected the Barcelona Supercomputing Center as entity to host one of the largest European supercomputers, MareNostrum5; this new MareNostrum will be one of the pre-exascale machines, with a peak performance of 200 petaflops (200 x 1015 floating-point operations per second). It is expected to come into operation on 31 December 2020. Its peak power of 200 petaflops will be 17 times higher than its current supercomputer, MareNostrum 4, and 10,000 times higher than the supercomputer that began the saga in 2004, MareNostrum 1. It will also be much larger in size, so the new machine will be physically spread out between the Torre Girona Chapel -MareNostrum's current base- and the lower floors of BSC's new corporate building, just a few meters away from the chapel.

In addition to putting the BSC on the recently created European supercomputing map, MareNostrum 5 will imply a leap in scale over the current infrastructure at the Barcelona Supercomputing Center.

BSC was set up in 2004 by the Spanish Government, the Catalan Government and the Universitat Politècnica de Catalunya (UPC). It was based around a core group of UPC lecturers led by Mateo Valero and the first supercomputer, MareNostrum 1.

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