HPC NEWS

Barcelona launches prototype supercomputer

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The Barcelona Supercomputing Center (BSC) has launched a new prototype supercomputer, based on Cell and Power6 processors, to be used as part of the PRACE (Partnership for Advanced Computing in Europe) project, of which BSC is one of the main partners.

The work done with this prototype, called MariCel (which means sea and sky in Catalan), will help to define the hardware components and the software stack of a future machine. The future system will have a minimum capacity of 10 Petaflops and will be at the service of the European scientific community. This represents a calculation capacity of 10 times more than the current most powerful in the world, according to the last Top500 list.

'MariCel is part of an initiative to create a common supercomputing structure for Europe,' said Francesc Subirada, associate director of the BSC. 'On this prototype, similar to the architecture of the American Roadrunner, we will test the latest software technologies, some of them developed at the BSC. We think that in Spain we will be able to install supercomputers 100 times more powerful than the current MareNostrum in 2011 or 2012.'.

The Kaleidoscope project code will be run on this new prototype. Kaleidoscope is carried out by BSC and Repsol and its focus is to optimise and execute in MareNostrum, as well as in Cell processors, the Reverse Time Migration (RTM) codes used in next generation seismic imaging technology. It is expected that these codes will accelerate and streamline oil and gas exploration by several orders of magnitude compared to current industry standards.

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