BSC and Intel extend research collaboration on systems behavior analysis and prediction at Exascale R&D Lab

The Intel-BSC Exascale Laboratory includes Big Data application analysis among its objectives.

Barcelona Supercomputing Center (BSC) and Intel have renewed their collaboration research agreement at the Intel and BSC Exascale Laboratory in Barcelona until September 2017. The Intel and BSC Exascale Lab is located at the BSC and focuses on software and extraordinary levels of parallelism which will be needed to utilize future Intel-architecture based supercomputers. The Intel and BSC Exascale Lab is a member of Intel's European research network -- Intel Labs Europe.

The exascale R&D lab will continue to develop tools for the analysis and prediction of systems behavior on real applications. The HPC performance tools Paraver and Dimemas and the prediction methodologies developed at the Barcelona Supercomputing Center are being evaluated for use on new Intel-based hardware architectures.

In the new phase of the collaboration, the Intel and BSC Exascale Lab will continue to work with BSC programming models within a single node, with an emphasis on their application on Intel® Xeon Phi™ processorbased architectures as well as in field-programmable gate array (FPGA) architectures. In the area of programming, one of the objectives that BSC and Intel have adopted is to use the BSC parallel Python development (PyCOMPSs) to improve the efficiency of Big Data applications.

The Intel-BSC Lab was started in November 2011 with a focus on scalability issues in the programming and runtime systems of exascale supercomputers. "We appreciate the excellent collaboration with BSC", said Karl Solchenbach, European director of Intel's Innovation, Pathfinding and Architecture Group. "BSC tools help to analyze and understand data center system behavior, and to achieve higher scalability on node and system level". "We are really enjoying the dynamic and cooperative interaction with Intel teams that helps promote and improve our R&D activities", added Jesús Labarta, Director of the Computer Sciences Department at BSC.

About Intel Labs Europe

Intel R&D / Innovation in Europe is driven by a network of research labs, product development labs and innovation labs spanning the region as well as a variety of Intel business units. Intel Labs Europe (ILE) was formally established in early 2009 as the central means of coordinating activities across this diverse and extensive network, and to strengthen and improve Intel's alignment with European R&D. Today ILE consists of more than 50 locations employing more than 4500 R&D professionals.

About Barcelona Supercomputing Center

Barcelona Supercomputing Center (BSC) is the national supercomputing center in Spain. BSC specializes in high performance computing (HPC) and its mission is two-fold: to provide infrastructure and supercomputing services to European scientists, and to generate knowledge and technology to transfer to business and society.

BSC is a Severo Ochoa Center of Excellence and a first level hosting member of the European research infrastructure PRACE (Partnership for Advanced Computing in Europe). BSC also manages the Spanish Supercomputing Network (RES).

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