CESGA & CESCA JOIN THEIR SUPERCOMPUTING RESOURCES USING GLOBUS AND MPICH-G2

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The Supercomputing Center of Galicia (CESGA) at Santiago de Compostela and the Supercomputing Center of Catalunya (CESCA) at Barcelona have successfully joined the largest machines they manage in order to solve the needs of research groups that require access to large data sets and computing capacity. This grid will allow users from both centers to approach larger scale problems.

Following a week in which tests and trials were run, yesterday, July 22nd the first in-production experience was carried out. Two high performance HPC320 Alpha Servers from HP were joined to simultaneously work on the same problem. Each of these servers has 32 processors. As a result, a 64-processor grid with a 117.31 Gflops peak performance was achieved. This allowed the user to tackle in 9 hours a problem would have taken over a month to solve on his university department computer. To tackle his computation, over 64 gigabytes (GB) of memory were used and over 8 GB of data were exchanged through a distance of over 1,000 km using the newly operational 2.5 Gbit/s lines of RedIRIS, the Spanish Research Network.

Both supercomputers, located in Santiago de Compostela and in Barcelona, have worked together for 9 hours in tasks related to the automatic design of autonomous robot controllers. The Autonomous Systems Group (GSA), directed by Dr. Richard Duro Fernández, is conducting this research at the University of A Coruña. To this end, they have developed an application called SEVEN.

The successful set up and operation of this Grid is partially possible thanks to the high bandwidth research networks that interconnect both Centers, namely: the Anella Científica de Catalunya, the Rede de Ciencia e Tecnoloxía de Galicia (RECETGA) and the Spanish state wide network, RedIRIS.

CESCA's director, Miquel Huguet explains that "Collaboration between both Centers has tightened in the last years. In the year 2000, we signed an agreement to facilitate our users access to the resources of both Centers". CESGA's director, Javier García Tobío, adds that "through the use of Grid technologies, shared usage of resources is much user friendly and it will permit our users to further advance their research regardless of the location of the resources they need". In the set up and operation of the CESCA-CESGA computational Grid, both supercomputing Centers have had support from RedIRIS and HP-Europe.

About the Supercomputing Center of Galicia (CESGA) Created in 1993, CESGA is an Information Technology company providing services to the research and development community. CESGA's primary aims are: To provide high performance computing and communications resources and services to the scientific community of Galicia and CSIC. To promote the use of state-of-the-art, high performance information and communications technologies applied to research within the scientific community of Galicia.

CESGA provides high performance computing, storage and networking services to the scientific community. CESGA runs Galicia's high capacity research network and the Neutral Internet Exchange of Galicia (GALNIX). CESGA also hosts the RedIRIS node in Galicia (NW Spain) www.cesga.es

About the Centre de Supercomputació de Catalunya (CESCA) CESCA was created in 1991 and is a joint effort of the Generalitat de Catalunya, the Fundació Catalana per a la Recerca, Catalonian public universities and CSIC. Is aims are centered in three areas of activity: high performance computing services, the management of the network Anella Cientifica and the Catalonian Neutral Internet Exchange (CATNIX) and the node of RedIRIS in Catalunya, as well as the promotion of the use and benefits of these technologies. http://www.cesca.es/, www.catnix.net

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