Contribution ID: **120** Type: **Oral**

Partnership for Advanced Computing in Europe (PRACE)

Wednesday 13 February 2008 16:40 (20 minutes)

The objectives of PRACE are to:
• Create and implement by 2009/2010, a persistent, sustainable pan-European HPC service with several HPC leadership systems of petaflop/s performance.
• Define and establish a legal and organizational structure involving HPC centers, national funding agencies, and scientific user communities.
• Prepare for the deployment of petaflop/s systems in 2009/2010 under the responsibility of European supercomputing centers having the expertise, competency, and required infrastructure to provide a comprehensive service to industry and academia user groups.
• Collect requirements and demands from the user community about future challenging applications.

The infrastructure will be complemented with network and grid access, and the services required to enable applications. These include development of parallel application software expertise, packages, and data handling. It will use concepts and services from EC-funded projects,such as EGEE, GÉANT2 and DEISA.

3. Impact

Utilizing high-end computing centers necessitates the development of the whole European HPC ecosystem. Close collaboration with other European flagship e-Infrastructure projects, such as EGEE and DEISA, IT industry and potential users in order to deploy technical and user-level interoperability within all levels of the performance pyramid. Technical interoperability (middleware work together, etc.) depends on user needs and obviously the same middleware may not be suitable for all types of usage. However, technical interoperability will be taken into account and maximized during the implementation phase. User-level interoperability (the same user groups can use different resources depending on their needs) between research infrastructures will benefit the whole ecosystem.

URL for further information:

http://www.prace-project.eu

4. Conclusions / Future plans

The PRACE project starts in January 2008 and continues until the end of 2009. The first petaflops center should be in production in 2009/10. In addition, aims at defining and setting up a legal and organisational structure involving HPC centres, national funding agencies, and scientific user communities to ensure: adequate funding for the continued operation and periodic renewal of leadership systems.

Provide a set of generic keywords that define your contribution (e.g. Data Management, Workflows, High Energy Physics)

Supercomputing, HPC ecosystem, petascale, interoperability, European competitiveness

1. Short overview

The Partnership for Advanced Computing in Europe (PRACE) prepares the creation of a persistent pan-European HPC service, consisting of several tier-0 centres providing European researchers with access to capability computers and forming the top level of the European HPC ecosystem. PRACE will start on 1st January 2008 and is funded by the EC's 7th Framework Program.

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Session Classification: Interoperability and Resource Utilisation

Track Classification: Existing or Prospective Grid Services