Contribution ID: **28**   Type: **Demonstration**

Interactive European Grid: Advanced Applications Support Demo

Tuesday 12 February 2008 16:00 (1 minute)

The package includes an enhanced version of fusion application that won the last User Forum Best Demo award in Manchester. In environmental sciences we will show the integration of an open source Geographical Information Systems on the Grid, GRASS, which is used for environmental analysis of water in reservoirs. Also in the environment sector we will show the application to analyze the evolution of pollution clouds.

In medical science we will show how to optimize radiotherapy plans by computing the amount of radiation absorbed by the human body organs in cancer treatments. The total computing time goes down from a few days to few minutes when MPI job submission to several sites is used. In particular we will show the submission of MPI jobs distributed between different clusters using PACX-MPI. A second application of the field of medical science will be shown. It presents a prototype of running Matlab Applications for Ultrasound Computer Tomography (USCT) on interactive grids.

1. Short overview

The purpose of the demonstration is to show the capabilities of the int.eu.grid middleware and services deployed on top of glite. We have prepared an I2G on-line Demo Package, consisting of a set of applications targeting different research areas: Physics, Environment and Medical Science.

If demonstration is requested please explain what visual or interactive aspects of the contribution necessitate a demonstration rather than a presentation or poster?

Visualization and interactive steering of the ongoing simulation in real time is achieved using Gvid and i2glogin. The user platform and visualization capabilities embedded in the Migrating Desktop make it an ideal demonstration from the point of view of visualization. The point about the presentation is precisely to show graphical output and steering capabilities coming in on real time from the grid.

3. Impact

The purpose of the demonstration is to show to the researchers that the grid can be used as an everyday working tool also for advanced applications, meaning MPI parallel applications or those requiring from graphical or interactive capabilities, and in general, going beyond the serial batch job submission supported already by glite middleware.

4. Conclusions / Future plans

This demonstration and the oral presentation we have submitted will help us to stablish a discussion framework with the users present in the meeting. The idea is to have a well defined document for what are the requirements for Quality of Service from the user point of view.

We will translate the results of our discussions into the exploitation path of the project.

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

Generic applications; visualization on the grid; MPI applications

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