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The Migrating Desktop –Framework for Grid Applications

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The success of computing technologies depends heavily on ease of use experienced by users that are non-experts in the technology being used. It is also crucial, to attract new scientific and industrial user communities, to enable intuitive access to grid. Key aspects are also interoperations between infrastructures as well as support for applications development. To achieve this goal we propose The Migrating Desktop –an advanced GUI and a set of tools combined with a user-friendly outlook.

Impact

The Migrating Desktop offers a framework that can be easily extended on the basis of an idea of plug-ins used for: accessing data, job handling, and visualisation of job results.

The open architecture of the Migrating Desktop speeds up the application integration process and makes that product significantly more flexible than specialized tools designed only for a specific application or infrastructure.

The Migrating Desktop intermediates between infrastructures and gives to the user access to heterogeneous grid resources, making possible simultaneous work with production grids of different kind i.e. interoperations of various computing architectures in terms of data handling, job submission and monitoring.

It also enables user-friendly and intuitive access to grid environment, which is essential, to attract new scientific and industrial user communities to use the grid.

URL for further information

<http://desktop.psnc.pl>

Conclusions and Future Work

The intuitive interface, open architecture and possibility of interoperation between various middlewares makes the Migrating Desktop a valuable tool that could be used both by an inexperienced user or skilled application developer for their grid work. The Migrating Desktop is a still evolving environment - planned future works include: implementation of advanced services for grid management, developments of interoperation features and support for advanced job types (e.g. workflows).

Keywords

grid computing, graphical user interface, user-friendly environment, interoperation

Detailed analysis

The Migrating Desktop Platform is a powerful and flexible user interface, similar to a window-based operating system that hides the complexity of the grid middleware and makes access to the grid resources easy and transparent. Main product features include:

- + Simple integration with grid applications
- + Easy job defining, submission, monitoring and visualization of results
- + Support for batch and interactive jobs

- + Intuitive management of grid data
- + Easy extendable framework

Migrating Desktop was created in the CrossGrid project and developed in the int.eu.grid project, where functionality for handling interactive grid applications was implemented. It also proved its usefulness in everyday work of BalticGrid project users communities chosen as a common point for accessing and managing the project applications, tools, resources and services. Currently it is developed in the BalticGrid-II. It has been recently accepted for EGEE RESPECT program.

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