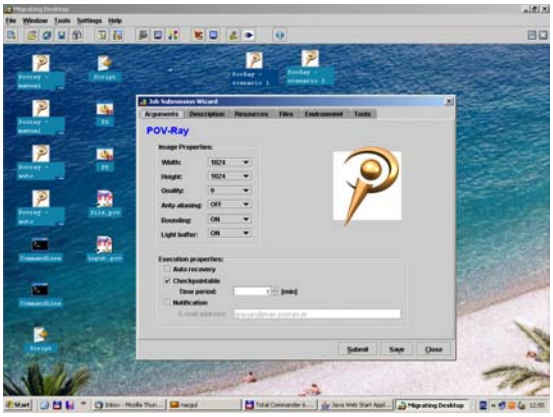
European research network on foundations, software infrastructures and applications for large-scale, distributed Grid and peer-to-peer technologies

CoreGRID Industrial Showcase, June 4-5, Barcelona

CoreGrid Demo Fact Sheet

Reliability in Production Grid Environments Achieved by multi-level Checkpointing



The presentation demonstrates the integration of the low-level checkpointing tool with the high-level grid environment. The checkpointing functionality provides the enhanced fault-tolerance capabilities while the utilized GUI-based front-end hides the checkpointing related complexity from the end-user. Additionally it is shown how the GUI significantly simplifies the chore of jobs' management and monitoring.

Watch the demo and you will see:

- How the low-level and not Grid-aware checkpointing tool can be utilized in Grid environment to checkpoint and recover the jobs that formely were not checkpointable.
- The prepared scenario clearly shows how the checkpointing functionality preserves the partial computing results and how after simulated job failure the computing is recovered to the last checkpoint.

More details:

Due to technical reasons, the development and utilization of low-level checkpointing tools are difficult even on individual, not distributed computing platforms. The integration with Grid is notably more difficult. Therefore, one of the CoreGRID Virtual Institutes works on the Grid Checkpointing Architecture (GCA) which defines the set of services, components and rules that allow for integrating the legacy and future low-level checkpointers with the Grids in possibly seamless way. To gather required information, during the work on the GCA we have built a number of experimental systems and one of them is to be presented on the Showcase.

Developed by: Poznan Supercomputing and Networking Center

Contacts: Radosław Januszewski (radekj@man.poznan.pl)
Gracjan Jankowski (gracjan@man.poznan.pl)