GRID today

The Leading Source for Global News and Information from the evolving Grid ecosystem,
including Grid, SOA, Virtualization, Storage, Networking and Service-Oriented IT

Email This Story

July 16, 2007

Home Page

Software/Middleware:

GRID Superscalar Released as Open Source

The GRID superscalar (GRIDs) project at the Barcelona Supercomputing Center (BSC-UPC, Spain) announced the distribution as open source of the different components in the GRIDSs programming environment, both for Globus Toolkit 4 (GT4) and SSH/SCP. GRIDs is distributed under the terms of the Apache License, Version 2.0.

GRIDs is a grid-unaware programming environment that allows to program applications in a simple way. These applications will be efficiently run on a computational grid, as GRIDs is able to parallelize them, at runtime and at task level. Applications that can specially benefit from GRIDs are those composed of coarse-grained tasks. The environment is composed of a code-generation tool (gsstubgen), the Deployment Center (which is a graphical tool for grid configuration setting and application deployment), a powerful runtime library and a monitor. Two versions are currently under distribution: one for GT4 and another for SSH/SCP. While the first one is very well suited for grids in general, the second one is specially good for grids of clusters or for single clusters, in particular.

Main features of GRID superscalar:

- Grid-unaware programming model (grid keeps transparent to the application).
- Bindings for C/C++, Java, Perl and shell script.
- Automatic deployment and grid configuration maintenance and test (through the Deployment Center).
- Automatic parallelization at task level through dynamic data-dependence analysis.
- Dynamic scheduling and assignment of grid resources.
- Data-locality awareness.
- Automatic file renaming and file transfer handling.
- Checkpointing.
- Fault-tolerance.

Grids is available at www.bsc.es/plantillaH.php?cat_id=373, and more information can be found at the GRID superscalar Web site, where you can find papers and manuals: www.bsc.es/grid/gridsuperscalar.

Source: Barcelona Supercomputing Center