

MURPA Seminar Thursday 9th April: Introduction to the PRAGMA eScience grid

Presenter: **Cindy Zheng, Grid Engineer, San Diego Supercomputer Centre** (via HD Video)

Place: Seminar Room 135, Building 26 Clayton

Time: 10-11am

Abstract: This talk will introduce PRAGMA grid, describe its coordination, design and implementation. Applications in genomics, quantum mechanics, climate simulation, organic chemistry and molecular simulation have driven the middleware requirements, and the PRAGMA Grid provides a mechanism for science and technology teams to collaborate, for grids to interoperate and for international users to share software beyond the essential, de facto standard Globus core. Several middleware tools developed by researchers within PRAGMA have been deployed in the PRAGMA grid and this has enabled significant insights, improvements and new collaborations to flourish. In this talk, we describe how human factors, resource availability and performance issues have affected the middleware, applications and the grid design. We also describe how middleware components in grid monitoring, grid accounting and grid file systems have dealt with some of the major characteristics of our grid. We also briefly describe a number of mechanisms that we have employed to make software easily available to PRAGMA and global grid communities. We hope scientists and students will learn and take advantage of this collaborative framework, engage with PRAGMA community and advance their research goals.

Bio

Cindy Zheng graduated from University of California, San Diego, with BA degree in computer science, worked as a systems Analyst then grid engineer with San Diego Supercomputer Center and University of California, San Diego since 1986. She has been the PRAGMA Grid coordinator since 2004.

Grid-related Publications

Zheng, C., Abramson, D., Arzberger, P., Ayyub, S., Enticott, C., Garic, S., Katz, M. J., Kwak, J., Lee, B. S., Papadopoulos, P. M., Phatanapherom, S., Sriprayoosakul, S., Tanaka, Y., Tanimura, Y., Tatebe, O., and Uthayopas, P. 2006. The PRAGMA Testbed - Building a Multi-Application International Grid. In Proceedings of the Sixth IEEE international Symposium on Cluster Computing and the Grid (Ccgird'06) - Volume 00 (May 16 - 19, 2006). CCGRID. IEEE Computer Society, Washington, DC, 57.

Lee, B., Tang, M., Zhang, J., Soon, O. Y., Zheng, C., Arzberger, P., and Abramson, D. 2006. Analysis of Jobs in a Multi-Organizational Grid Test-bed. In Proceedings of the Sixth IEEE international Symposium on Cluster Computing and the Grid (Ccgird'06) - Volume 00 (May 16 - 19, 2006). CCGRID. IEEE Computer Society, Washington, DC, 59.

Sriprayoosakul, S. Uthayopas, P. Jysoo Lee Zheng, C. Livny, M. Frey, J. Interfacing SCMSWeb with Condor-G – A Joint PRAGMA-Condor Effort. In Proceedings of eScience,'08, IEEE Fourth International Conference – pages 570-575 (December 7-12, 2008). eScience 2008. IEEE Computer Society, Indianapolis, In.

Further Information

PRAGMA community, see <http://www.pragma-grid.net> .

Open Science Grid community, see <http://www.opensciencegrid.org> .

Open Grid Forum community, see <http://www.ogf.org> .

Swiss National Grid, see <http://www.swing-grid.ch> .

European Grid Initiative, see <http://web.eu-egi.org> .

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