

Global Grid and eResearch Expo @ The University of Melbourne

Open To All

Date Sep. 23 (Thursday), 2004
Time 10am-5.30pm
Venue Room. 4.04
Dept. of Computer Science and Software Engineering
University of Melbourne
111 Barry Street
Carlton

Introduction

As we move towards the knowledge-based society and economy, the amount of information we produce as well as consume continues to grow. In this advance we find the need for more sophisticated technology, faster computation, large-scale storage capacity, and sophisticated interactions to handle our demand for real-time information. Recently we have seen the utilisation of disparate resources such as computers, storage, databases, application software components, scientific instruments, sensors, and people that are separated geographically and distributed across multiple organizations to support an emerging new class of interactions and applications. This new paradigm is enabled by the ubiquitous Internet and Web, and is popularly known as Grid computing. The utilisation of the Grid as a cyber-infrastructure to carry out science and business at a global scale involving multiple organisations and enterprises is commonly referred to as eScience and (new generation) eBusiness.

To harness the potential of Grids, several nations around the world have invested hundreds of millions of dollars in the last 2-3 years. In Australia, the Department of Education, Science and Training (DEST) has already committed \$29 million towards the construction of a national Grid infrastructure. Recently, the Australian Research Council (ARC) has proposed to create a special research initiative called eResearch to promote the development of both Grids and their applications in science, engineering, and business.

GRIDS Lab @ Melbourne and the Expo

The Grid Computing and Distributed Systems (GRIDS) Laboratory within the Department of Computer Science and Software Engineering at the University of Melbourne, as part of its flagship Gridbus Project, has developed "open source" enterprise and global Grid technologies (Gridbus Toolkit). Support for this has come from the ARC, Storage Technology Corporation, Sun Microsystems, VPAC, IBM, and Singapore Computer Systems. The Gridbus Toolkit has been used in Grid-enabling several applications in science, engineering, and commerce. This has been achieved in collaboration with researchers within the University (School of Physics, WEHI, and Language Technology Group) and internationally (Technical University of Madrid, Spain and Osaka University, Japan)

The aim of this Grid and eResearch Expo is to:

- serve as a platform that brings together researchers, developers and users of Grid and eResearch applications,
- demonstrate our Grid technologies and applications developed by Melbourne Grid researchers in collaboration with our partners,
- share our and our collaborator's experience in exploring Grid world,
- learn more about your efforts and applications,
- explore ways in which we can assist you in Grid-enabling your applications, and
- explore ways in which we can collaborate and work together.

Grid Technologies @ Expo

At the Expo, we will demonstrate Grid tools and technologies that assist in:

- the construction of grids that scale from enterprise to global level,
- grid-enabling your resources and the publication of their services,
- resource management,
- workflow and process management,
- application development or grid-enabling legacy applications, and
- on demand deployment of applications on enterprise and global grids.

The Gridbus technologies to be demonstrated include the following:

- Alchemi - .NET based Enterprise Grid
- Excel-Grid – A plug in for Spreadsheet Processing on Global Grids
- Grid Workflow Management System
- Gridscape
- Grid Service Broker

eResearch Grid Applications @ Expo

At the Expo, we will demonstrate how eResearch applications developed by our collaborators harnesses enterprise and global Grid resources located within the University, distributed across Australia connected via GrangeNet, and part of the World-Wide Grid. The application demonstrations include:

- High Energy Physics (School of Physics, UoM)
- Portfolio Analysis (Technical University of Madrid, Spain)
- Natural Language Processing (Language Technology Group, UoM)
- Brain Activity Analysis (Osaka University, Japan)
- Molecular Docking for Drug Discovery (WEHI and CSIRO)
- Basic Local Alignment Search Tool
- Medical Imaging (Howard Florey Institute, UoM)

Contact

If you have any specific enquires and want to meet or discuss with us in advance or later, please contact:

Dr. Rajkumar Buyya
Grid Computing and Distributed Systems (GRIDS) Laboratory
Dept. of Computer Science and Software Engineering
The University of Melbourne
ICT Building, 111, Barry Street
Carlton, Melbourne, VIC 3053.
Ph: 83441344 Email: raj@csse.unimelb.edu.au