



Press release

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New Grid cluster at Interdisciplinary Centre for Mathematical and Computational Modelling of Warsaw University

A new cluster based on SUN Fire V20z servers has just been setup at Interdisciplinary Centre for Mathematical and Computational Modelling (ICM) of Warsaw University. It consists of 180 AMD Opteron 250 processors and 9.6 TB disk storage. Its overall floating point performance amounts to 295 900 SPECfp2000. The cluster is dedicated to work in the largest european computing Grid, just set up in the framework of a project EGEE, *Enabling Grids for E-scienceE*. ICM is one of 70 partners in EGEE.

Currently, scientists of particle physics, quantum chemistry, biomedicine, biophysics, astrophysics, geology and meteorology are ready to use Grid computing at their research. But users of new fields are joining and in the near future Grid's huge capabilities will be accessible for business and industry, for example the aviation and car industries, the economics of transport or finances.

Grid resources will be allocated to so called Virtual Organisations, consisting of groups of users working on common subjects. The Warsaw cluster will be accessible for nine VOs containing, among others, also Polish members, viz.: four particle physics experiments, CMS, LHC-b, ATLAS, COMPASS, and quantum chemistry, biophysics, astrophysics, complex systems. Developers Team represents a separate VO, present at all sites of EGEE Grid. It creates, tests and manages Grid software.

The ICM cluster consists of 90 SUN Fire V20z servers, each equipped with two AMD Opteron 250, 2,4 GHz processors. These are 64-bit processors, appeared to be very efficient with 32-bit compiled software either. SUN Fire V20z servers (both 32 and 64 bit flavors) are checked to be very efficient with the Scientific Linux 3 – EGEE Grid computing operational system. Each server has 4 GB RAM and 72 GB SCSI disc. Operational system and local software needs ca 32 GB of it, remaining 40 GB allocated to users.

In addition, the cluster contains the SUN Fire V40z disc storage server with the StorEdge 3511 RAID matrix, currently serving 9.6 TB SATA discs. The data are stored in the RAID 5 system with Hot Swap, ensuring data security and disc exchange without shutdown. Internal data transfer is controlled by five 48-port Nortel Baystack 5510 switches on Gigabit Ethernet, and four 24-port Nortel Baystack 425 switches on Fast Ethernet.

The cluster can be managed using IPMI mechanism, ensuring remote control of power supply, equipment diagnostics, monitoring of temperature and the state of mechanical elements, e.g. ventilators. IPMI enables also remote access to the complete booting and shutdown sequences.

The ICM cluster is connected to the EGEE Grid. Project EGEE started 1st of April 2004. By the end of April 2005 EGEE Grid has consisted of 14 000 CPU's at over 130 sites all over Europe. This is more than expected by the end of the project in March 2006. The second phase of EGEE, planned from 2006 to 2008, is in preparation now.

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Note to Editors:

1. Contact person at ICM UW: Dorota Stojda, dorotas@icm.edu.pl, 0 509 510 338
2. Information about ICM UW at the EGEE project, and detailed information about new EGEE cluster: <http://spin.fuw.edu.pl/>
3. Information about the EGEE project:
<http://egee-intranet.web.cern.ch/egee-intranet/gateway.html>