eGee

Enabling Grids for E-sciencE

Newsletter
July 2006

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EGEE WRAPS UP AS EGEE-II HITS ITS STRIDE

While the second phase, EGEE-II, is well underway, many members of the project continued to work on finishing up the business of EGEE, which culminated in the EGEE final review on 22-23 May 2006 at CERN, Switzerland. The event was held in the CERN council chambers and well received by all concerned. The review covered not only the final results of EGEE, but also touched on plans for EGEE-II and beyond.

The reviewers gave very positive comments on the work of EGEE, and accepted all deliverables and milestones submitted in the last period of the project. They were impressed by the scale of the project's work in many areas and felt EGEE had succeeded in providing a professionally run production Grid of impressive size and broad use.

The project's software was also complimented, and note was made of the successful merger of the gLite and LCG-2 middleware solutions. The reviewers felt this provided a strong basis for the further evolution of the EGEE middleware in the second phase of the project. They also remarked on the impressive training efforts and world-wide brand recognition achieved over the first two years of the EGEE programme.

The reviewers also noted the hard work the project had carried out in order to act as an incubator for the many related projects that rely on EGEE technology, ranging from health applications to extension into new geographical areas. Beyond these European considerations, EGEE was also praised for its work in the global sphere, both in terms of cooperation and contribution to global standards through bodies such as the Global Grid Forum.

Kyriakos Baxevanidis, EGEE Project Officer and Deputy Head of Research Infrastructures at the European Commission, also attended the review and spoke of his satisfaction with the project in the letter accompanying the review report.

"I would like to thank all members of the EGEE consortium for the project's remarkable achievements these two years, the structuring effect that the project is bringing to the European Grid-research area and for all your co-operation to my colleagues and me during the life-time of EGEE. I would also like to wish you success in the exploitation of the EGEE results and in EGEE-II."

Project Director Bob Jones echoed this sentiment, saying that "It's been a pleasure working with all of those involved in EGEE over the last two years. A great number of people dedicated themselves to the ambitious goals of the project, and it is a credit to them all that we have fulfilled our goals, and in many cases significantly exceeded them. We now operate the world's largest multi-disciplinary Grid infrastructure, processing in excess of 25,000 jobs per day, and with the continued hard work of the project members, EGEE-II should prove as successful as EGEE has been."

Owen Appleton
CERN, Switzerland

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METHODS OF SHARING: EGEE & ITU

Over the last two months, EGEE successfully supported a series of large-scale data processing activities being carried out by the International Telecommunications Union (ITU) as part of the ITU's Regional Radiocommunication Conference (RRC-06, 15 May – 16 June 2006).

The purpose of the data processing, carried out at regular intervals during the five week conference, was to rapidly map the consequences of different scenarios being negotiated between the participating countries to establish a new frequency plan for the introduction of digital broadcasting in Europe, Africa, Arab States and former USSR States. This was done using an advanced software suite developed by the European Broadcasting Union (EBU). As well as relying on the ITU's own computing system with 100 PCs, several sites of the EGEE infrastructure provided a computing Grid of over 400 PCs to work on each analysis in parallel. This simultaneous calculation on the Grid not only came up with the same results in a much shorter time than on the local system, but could also provide extra capacity and additional safeguards on the distributed infrastructure, if needed. The EGEE sites involved in supporting the Grid effort were CERN, several INFN sites in Italy (CNAF, Bologna, Bari and Pisa), PIC (Barcelona, Spain), CNB (Madrid, Spain), DESY (Hamburg and Zeuthen in Germany), ACC CYFRONET AGH (Krakow, Poland) and Moscow State University (Russia).

The treaty agreement signed as a result of these negotiations heralds the development of all-digital terrestrial broadcast services for sound and television. Conference Chairman Mr Kavouss Arasteh said that RRC-06 was a technically complex process, comprising voluminous computational and data processing tasks, electronic document handling and the use of five working languages. More than 1 000 delegates representing 104 countries met in Geneva to adopt the treaty agreement that will replace the analogue broadcasting plans existing since 1961 for Europe and since 1989 for Africa. A major challenge faced by the conference was to find ways for digital and analogue broadcasting to co-exist on the radio-frequency spectrum during the transition period without causing interference. A key ingredient for the success of the Conference was the unprecedented level of cooperation between ITU, the EBU and the local EGEE project representatives at CERN.

Speaking on behalf of EGEE and CERN during one of the plenary sessions at the ITU conference, Wolfgang von Rüden, Head of CERN's IT Department, described how Grids could provide dependable computing service on demand also for time-limited computational challenges like the one facing the ITU. The porting of the analysis program to the Grid proved relatively easy, and thanks to the very good collaboration between the participating institutions, Dr. von Rüden could demonstrate to delegates another powerful example of the benefits of Grid technology.

Massimo Lamanna & Francois Grey, CERN, Switzerland

EGEE sites involved in the collaboration with the International Telecommunications Union (ITU)

ACCELERATING CANCER RESEARCH IN THE US

Today's cancer researchers, whether they are combing through animal genomes or collecting medical histories from human patients, are in the midst of an information explosion. New techniques in biomedical research create huge amounts of data, greatly increasing the chance of scientific breakthroughs but making those advances difficult to achieve. The cancer Biomedical Informatics Grid project is developing a computing infrastructure to help scientists accelerate progress in cancer prevention and treatment by synthesizing, standardising and analysing all that data.

The caBIG pilot project, funded by the National Institutes of Health and coordinated by the National Cancer Institute, bridges people and institutions as well as technologies and tools.

"We've taken on all the major organisation and social challenges of getting a fairly large community of geographically separated people and institutions to work

together," says Chief Operating Officer Peter Covitz from the NCI Center for Bioinformatics. Since the beginning of the three-year caBIG pilot programme in February 2004, that community has swelled to about 500 researchers from institutions across the United States. Developers have focused on several areas of concern for cancer research, including standardization of data formats and tools, ontologies and semantics. Scientists' interactions with the healthcare community also create a unique set of security and privacy challenges for a Grid infrastructure.

"Maintaining privacy is a societal challenge, not just a technological one," explains Covitz. "Cancer is a disease of genes, and sharing genetic data is controversial because the right person with the right analysis technology could conceivably identify someone based on what would seem like a fairly arcane set of numbers."

While some caBIG community members have been working on the policy challenges of sharing medical data between institutions worldwide, others are focused on creating and adapting security technologies to solve the problem of sharing medical data on the caGrid, caBIG's Grid computing infrastructure.

The caGrid testbed has been operating since 2005, and now includes 10 nodes, each offering a different data or analytical service. While many of the applications that will be available through the Grid are in use today, Covitz's goal for the caGrid is to make it easy—even automatic—for researchers to discover those tools, data and services. In addition to planning for the first production release of caGrid, Covitz and other caBIG leaders are preparing for a transition from pilot project to production project in March 2007.

"Ultimately caBIG is about speeding the improvement of cancer diagnosis, treatment and prevention," says Covitz. "The benefits to cancer researchers will emerge gradually as more and more different kinds of software work together. We really want scientists to spend more time doing science, answering cutting-edge questions with computational tools right at their fingertips."

Learn more at the caBIG website
https://cabig.nci.nih.gov/

Katie Yurkewitz, Fermilab, USA
Reprinted courtesy of Science Grid This Week

THE GRID, FLYING HIGH WITH INDUSTRY AND THE KITE CLUB

Representatives from GridPP, EGEE and the UK's National Grid Service recently met members of the business community to discuss how the Grid might provide solutions to some of the problems facing industry. Organised by PPARC's KITE Club (Knowledge Innovation Technology Enterprise) and held at St John's Innovation Centre in Cambridge, the meeting brought experts from Grid projects and industry together for an open discussion of the opportunities for technology transfer.

Bob Jones presented EGEE and spoke about the role of EGEE's Industry Forum and its experience interacting with business, while Tony Doyle (GridPP project leader) introduced GridPP's work and plans for industrial liaison. Presentations by researchers, PPARC and small businesses, such as companies working on genomic products and digital image retrieval, showed business applications that could benefit from using Grid technology.

PPARC provides a number of funding opportunities for joint work with industry, and at least two companies present already submitted project proposals. A joint technology market evaluation of EGEE and Qi3 will also be supported by PPARC. "Our event highlighted where Grid computing can create new industrial solutions and how organisations can benefit from the Grid," said Alexander Efimov from the KITE Club. "The meeting showed that smaller enterprises could use Grid computing to achieve their business objectives."

EGEE has been active in this area for some time, as Bob Jones explains: "Some companies are already working with EGEE, either as users or providing sites connected to the infrastructure. Technology transfer is a major goal for us as an EU-funded project and we are increasing our efforts in liaising with Industry for the second phase of EGEE."

The next EGEE industry days are planned for 12 July in Ischia, in conjunction with the International Summer School on Grid computing, and 27/26 October in Catania, Italy.

Neasan O'Neil, GridPP, UK
Reprinted courtesy of GridPP

E-IRG MEETING IN VIENNA

The e-Infrastructures Reflection Group (e-IRG) held its seventh meeting at the beginning of June, when the Austrian Grid Initiative together with the Federal Ministry of Education, Science and Culture (BM-BWK) hosted the e-IRG delegates in the beautiful setting of Palais Hardegg in the centre of Vienna. EGEE project director, Bob Jones, was there as an invited observer and member of the e-IRG task force on Sustainable e-Infrastructures. Several other members of EGEE were also present as national delegates, and our collaborators and partner institutes were well represented.

The topics up for discussion included the e-IRG's relationship with the European Strategy Forum on Research Infrastructures (ESFRI) and the e-IRG agreed to express their support for ESFRI's roadmap, specifically the recommendations about e-Infrastructures. Looking ahead to Framework Programme 7, the e-IRG submitted a paper to the EC at the end of April containing recommendations for achieving sustainability of e-Infrastructures. Kyriakos Baxevanidis (EC), a familiar figure to EGEE members, informed the delegates that the paper had been warmly received. The delegates decided that they would now also provide this latest version to the national decision makers and funding agencies.

Another success of the Austrian e-IRG leadership is the agreement on changes in the e-IRG structure. The delegates felt that the e-IRG has matured to a state where a more permanent chairperson would be beneficial; at present the chair rotates every six months with the EU presidency. The next six months will see the election of a chairperson who will stay in post for a period of 2 years, alongside a co-chairperson from the EU presidential country and with support from vice-chairs from the past and future EU presidential countries.

One of the main outputs of the e-IRG is the e-IRG White Paper, which presents an overview of the status quo in many areas of e-Infrastructures and recommendations for future policy developments. The current version of the White Paper was discussed at the meeting and will appear in July, pending approval from the delegates. EGEE members have been very active in working on the current version, both as editors of individual chapters and contributors and we would like to thank all of you for taking the time to share the experiences we've gained in our project with the e-Infrastructures community.

Joanne Lawson, CERN, Switzerland

NEWS IN BRIEF

EGEE GOES TO EUSEA2006

EGEE has long had close ties to major Grid efforts in Asia, and in the second phase these colleagues are part of the project consortium. Building on these strong links to Asia, the project was present at the recent Euro-Southeast Asia ICT forum for international cooperation, held in Singapore 19-23 June, which was attended by over 600 delegates. Viviane Reding, European Commissioner for Information Society and Media, opened the conference and stressed the importance of TEIN2 (Trans-Eurasia Information Network), a major network connection between Southeast Asia and Europe. Bob Jones attended for EGEE, giving a talk on the project and its efforts to pave the way for sustainable e-Infrastructures.

EGEE at the EUSEA2006 conference in Singapore. From Left: Enric Mitjana (EC), Simon Lin (ASGC Taipei), EGEE project director Bob Jones and C C Chang (ASGC Taipei)

The EUSEA2006 Exhibition held within the international IT trade fair, CommunicAsia-EnterpriseIT2006, was attended by over 40 000 professional IT visitors and also featured an EGEE stand at the European ICT Pavilion. There our Asian partners from Academica Sinica in Taipei presented project activities and objectives as well as WISDOM, the first biomedical data challenge.

EGEE'06 CONFERENCE

The EGEE'06 conference, 25-29 September 2006 in Geneva, will be a high profile event for a wide range of audiences and will include a special industry track. Topics ranging from application examples to infrastructure and data management will allow the audience an opportunity to understand how Grid technology may be adopted in their organisation.

The Tuesday of the conference will feature a special demo and poster session intended to highlight the many uses of the EGEE infrastructure. A prize of 1000 CHF is being offered for the best demo by Siemens AG. Details will shortly be posted on the EGEE'06 website.

Please note that the **early bird registration** to the conference will be **extended to 17 July**! Please register at http://www.eu-egee.org/egee06 .

TRAINING AND EDUCATION MATERIAL REPOSITORIES

Training and education material repositories have recently been released by EGEE and ICEAGE. Both are based on digital library technologies and have web services APIs available, making the generation of locally customised clients simple. The EGEE repository features material to support users, developers and operators in acquiring the skills to make best use of the EGEE Grid. It also acts as a resource for trainers to develop new courses, create customised local courses and courses for new communities. To facilitate this, the repository also features a collection of courses selected by EGEE as the best exemplars for particular types of course.

The ICEAGE repository targets at a different audience, providing educational materials for incorporating Grid concepts into mainstream academic courses.

- The EGEE repository is available at:
  http://egee.lib.ed.ac.uk/
- The ICEAGE repository is available at:
  http://www.iceage-eu.org/eLearning.htm
- A wiki for discussing e-Learning issues can be found at:
  http://wiki.nesc.ac.uk/read/egee-elearning

Further services can be found on the EGEE NA3 pages (http://www.egee.nesc.ac.uk/) for registering events as well as quality assurance procedures. These services are being developed into a comprehensive framework to support Grid training and education.

David Fergusson, NESC, UK

EGEE AWARDS PAGE

The EGEE project is made up of many individuals from a very large number of institutions around the world, many of who are leaders in their fields. As a result, they win a number of awards for their EGEE related efforts. The project has recently put up a page to keep track of these awards, with images of the award where possible. These can be found online at http://cern.ch/egee-NA2/awards.html. If you know of any other awards not listed, please contact owen.appleton@cern.ch with details.

TECHNICAL REPORTS AND PUBLICATIONS

Below please find a selection of papers added to the EGEE Publications & Technical Report Series since the last newsletter. All publications released during EGEE have now been added to the database, and project members are encouraged to submit new papers via their activity leaders. The full repository can be found at http://cdsweb.cern.ch/?c=EGEE

- EGEE user forum (CERN, March 1-3 2006) : Book of Abstracts / Harris, F; Lamanna, M

- Bandwidth Allocation and Reservation - End-to-End Specification / Kavoussanakis, K; Buchli, M; Palansuriya, C; Patil, A; Scharinger, F; Tziouvaras, C; Phipps, A; Vuagnin, G; Trew, A

- ARDA experience in collaborating with the LHC experiments / Lamanna, M et al

- The AMGA Metadata Service in gLite / Koblitz, B et al

- CMS/ARDA activity within the CMS distributed computing system / Andreeva, J et al

- Services for Tracking and Archival of Grid Job Information / Dvorak, F et al

- CREAM : A simple, Grid-accessible, Job Management System for local Computational Resources / Andreetto, P

- Performance Comparison of the LCG2 and gLite File Catalogues / Munro, C

RECENT DELIVERABLES

All public deliverables are available at https://edms.cern.ch/ under the EGEE and EGEE-II sections. The deliverables produced so far in EGEE-II are

DNA2.1 Production of Project Presentation
DNA2.2 Production of project Overview paper
DNA2.3.1 Dissemination, Outreach & Communication Plan
DSA1.1 Global Grid User Support (GGUS) implementation plan
DSA1.2 Operations Advisory Group (OAG) Procedures and Policy Report
DNA1.3.1 Gender Action Plan
DNA2.4 Plan for industrial involvement
DNA4.1 Application Deployment Plan
DJRA2.1.1 Quality Plan and Measurement Plan
DNA1.1.1 Quarterly Report

FORTHCOMING EVENTS

10-12 July 2006, Rio de Janiero, Brazil
VECPAR'06
http://vecpar.fe.up.pt/2006/

4-7 September 2006, Santiago, Chile
EELA 1st Conference
http://www.eu-eela.org/private/eela_chile_conference.php

13-15 September 2006, Munich, Germany
HPCC-06
http://hpcc06.lrr.in.tum.de/

15 September 2006, Rome, Italy
EUMEDGRID 1st Conference
http://www.eumedgrid.org/Conf-Roma06/

18 September 2006, Rome, Italy
EUCHINAGRID 1st Conference
http://www.euchinagrid.org/Conf-Roma06/

19-21 September 2006, Brussels, Belgium
European Grid Technology Days
http://www.cordis.lu/ist/grids/agenda_15_09_04.htm

21-23 September 2006, Innsbruck, Austria
Austrian Grid Symposium
http://www.austriangrid.at/austriangrid/

25-29 September 2006, Geneva, Switzerland
EGEE'06 conference
http://www.eu-egee.org/egee06

CALLS FOR PAPERS AND PARTICIPATION

Super Computing 06 call for posters
Deadline 31 July 2006
http://sc06.supercomp.org/techprogram/posters.php

TRAINING EVENTS

3 - 7 July 2006, Istanbul, Turkey
EUMedGrid Tutorial for Users and Site Manager
http://grid.ct.infn.it/tutorial_eumedgrid/index.php

3 - 8 July 2006, Budapest, Hungary
Joint Regional CE EGEE and SEEGRID-2 Summer School on Grid Application Support
http://www.egee.hu/grid06/

4 - 8 July 2006, Tartu, Estonia
Baltic Grid Summer School
http://agenda.cern.ch/fullAgenda.php?ida=a061960

9-21 July 2006, Ischia, near Naples, Italy
Fourth International Summer School on Grid Computing
http://www.dma.unina.it/~murli/ISSGC06/

10 - 12 July 2006, Rio de Janeiro, Brazil
Grid Computing School in Conjunction with VECPAR 06
http://agenda.cern.ch/fullAgenda.php?ida=a062428

17 July - 1 August 2006, Bucharest, Romania
UPB Grid Initiative 2006 - Summer School
http://agenda.cern.ch/fullAgenda.php?ida=a061764

21 July 2006, Naples, Italy
EGEE Industry Day
http://www.eu-egee.org/egee_events/industryday/Industry-Day_Ischia/

21 August - 1 September 2006, Helsinki, Finland
CERN School of Computing
http://csc.web.cern.ch/CSC/

11-15 September, 2006, Karlsruhe, Germany
GridKa School 2006
http://www.fzk.de/gks06

15 September, 2006, Rome, Italy
Grid training at the EUMEDGRID 1st Conference
http://www.eumedgrid.org/Conf-Roma06/

Thanks for reading this newsletter, which will keep you up to date on events within the project and the European Grid community in general.

You are receiving this newsletter as you have expressed an interest in the EGEE project. If you have any questions, comments or suggestions for the next issue, please feel free to contact owen.appleton@cern.ch .

http://www.eu-egee.org   EGEE-II INFSO-RI-031688