Technical group report
(November 2003 - June 2004)

7th Nordugrid Workshop, Copenhagen,
June 17, 2004

Balázs Kónya, Lund University, Sweden
NorduGrid Team
outline

- The group
- Chronological overview
- Daily work
- Issues
The technical group

The group is devoted to develop, maintain and support the ARC middleware

- Group members with different level of involvement:
  - Core group, daily work (6 persons)
  - Students (Haakon Riiser, Aalborg group, Henrik Karlsen, Johan Tordsson)
  - Technical personel of our 'customers':
    - Swegrid, DCGC, NDGF, Estonian, Slovakian, Slovenien, German, Australian, etc grid deployments
  - Developers from 'Related projects'
    - SweGrid Accounting, Globus, EGEE?
  - People on the “discuss”
chronology

- **November 2003**, 6th NorduGrid workshop in Lund
- **January 2004**, NorduGrid is acknowledged as one of the major production Grid deployments in Ian Foster's talk
- **January 2004**, technical meeting in Tallinn, Seminar at the Estonian Academy of Sciences:
  - Estonian participation is accelerated, CMS on Nordugrid
- **February**, added support for SUSE linux platform
- **March 18**, SweGrid came alive
- **March 29**, technical meeting and Tutorial in Helsinki
  - Record number of participants
  - “Unofficial” Unicore & ARC comparison
chronology, cont.

- 1\textsuperscript{st} April, official start of the Atlas DC2 production
- \textit{April 13}, first official ARC Release (version 0.4), GPL licence
- ARC is deployed and used outside the Nordic Region
  - Slovakia, Slovenia, Australia, Germany
  - We are very proud of it but it creates some confusion
- \textit{May}, DCGC clusters (Horseshoe) deploy ARC
- \textit{May}, intensive work with NorGrid sites
- \textit{June 16}, Workshop in Copenhagen

\textit{Meanwhile the continuous daily work was going on (see next slides)}
Daily work:
develop the middleware

- Release 0.4

- Some of the current developments:
  - Executor, smart SE, configuration & packaging (reducing dependencies), extended LRMS support, interface to the usage database, “ever better monitor”, etc

- Read the minutes of the technical meetings
Daily work: support the software
Daily work:
“nordugrid-discuss@nordugrid.org”

- Our main forum to discuss grid trends, new developments, urgent software or infrastructure related issues, help to get new people involved and sometimes crazy ideas
Daily work: support the grid users

- Tutorials
- nordugrid-support@nordugrid.org
  - SweGrid provides a big help by taking care most of the Swedish users
- Still managing the NorduGrid User database
- Documentation: FAQ, Guides, manuals, etc
Daily work: manage the largest grid of the world

- Without the work and enthusiasm of the technical group the ARC-based Grid, one of the largest grid deployments of the world, would disintegrate into smaller regional or national Grids
- Support and “Accept” new ARC deployments
  - Within and outside Scandinavia

footnote: The ARC-grid is built from bottom to top, it is operated and kept together by the goodwill of the participants
Daily work: be a sysadmin

- Even the members of the core group directly or indirectly administrate resources: we are sysadmins
  - SweGrid clusters and Ses
  - DCGC clusters
  - Norwegian deployments
  - Departmental clusters and SEs
  - Machines hosting core grid services, used in daily build process
Daily work: 'supervise' student projects

www.nordugrid.org/middleware/research.html

- Automatic Job Resubmission
  - Henrik Jensen, Jesper Leth (Aalborg University)
- VCRRecord
  - Henrik Høy Karlsen (SDU)
- Survey of Grid banking tools
  - Kristian Frogner, Stein E. Wethal, Tarjei Mandt (HIG)
- Benchmark-based scheduling
  - Johan Tordsson, Erik Elmroth (UmU)
- Condor backend
  - Haakon Riiser (UiO)
Daily work: “be visible”

- Publish scientific papers
- Present ARC and Nordugrid on Grid conferences, workshops
- Be an active player in Forums, meetings, committees, follow (maybe influence) grid developments outside NorduGrid
Daily work: evaluate grid technologies

- There are a lot of development happening outside Nordugrid ...
  - Try to follow the trends, “standards”
  - Evaluate the new solutions
  - Cooperate with “competitors”, interact with the other Grid projects
issues

- Very limited core team with huge tasklist
  - Would like to see new people joining
  - Closer link to NDGF, NSC, PDC, etc..

- Integration of software components needs extra manpower
  - Developed in Nordic region
  - Outside Scandinavia

- Visibility
  - Not present on GGF meetings, etc...
  - (deliberately?) not recognized by European Projects

- We keep running things which we would like to pass over