



NA4 ACTIVITIES AND PLANS

REPORT ON CONTRIBUTIONS TO E-IRG, EU GRIDPMA, AND STANDARDS EFFORTS

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Abstract: Final report of the NA4 Policies and Standards activity. The report covers meetings, activities and contributions at the time period: November 2005-April 2008, with more detailed reporting on the last period, November 2007 - April 2008, not covered in the pervious NA4 reports.





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1. SUMMARY

This document is a summary report on the progress made in activity NA4 during the BalticGrid project, November 2005 to the end of April 2008. One chapter is devoted to meeting reports from the latest period, November 2007 to the end of April 2008.

1.1. LIST OF PARTICIPATION IN E-IRG, EU GRIDPMA AND STANDARDS EFFORTS

During the project delegates from the BalticGrid have been actively participating in the standardization and collaboration efforts lead by e-IRG, EUGridPMA, OGF and EU concertations meetings. On a national level, activity leaders from the BalticGrid have also been part of the forming of EGI through the EGI-DS, either as invited experts or as national representatives.

Below is a listing of the meetings the delegates from BalticGrid have attended during the full project period. Detailed meeting reports are to be found in respective deliverable DNA4.1-DNA4.4.

DNA4.1 PM 1-6	<ul style="list-style-type: none">- e-IRG meeting, December 13-14, 2005, London, UK- EUGridPMA, January 25-27, 2006, Vienna, Austria- GGF-16, February 13-16, 2006, Athens, Greece- e-IRG workshop, April 10-11, 2006, Linz, Austria
DNA4.2 PM 7-12	<ul style="list-style-type: none">- e-IRG Meeting is hosted by the Austrian Grid Initiative, June 6th, 2006 Vienna- 7TH EuGridPMA Meeting, May 31 - June 27, 2006, Budapest, Hungary- OGF-18, September 11-14, 2006, Washington DC, USA- IST Grid Concertation Meeting, September 20-21, 2006, Brussels- e-IRG Delegates Meeting and Workshop hosted by CSC, October 4-5, 2006, Helsinki- 8th EUGridPMA Meeting, October 5-6, Karlsruhe, Germany
DNA4.3 PM 13-18	<ul style="list-style-type: none">- e-IRG workshop, 19-20 April 2007, Heidelberg, Germany- e-IRG Meeting, 4 October 2006, Keilaniemi, Finland<ul style="list-style-type: none">▪ 20 November 2006, Helsinki, Finland- 9th EUGridPMA meeting, January 15-17, 2007, Abbingdon, UK
DNA4.4 PM 19-24	<ul style="list-style-type: none">- eIRG meeting<ul style="list-style-type: none">▪ Delegates meeting of the e-Infrastructure Reflection Group during the German presidency, June 20 – 21, 2007, in Bonn▪ Workshop and delegates meeting, October 11-12, 2007, Lisbon, Portugal- 20th Open Grid Forum/ EGEE 2nd User Forum, May 7 - 11, 2007, Manchester, UK- 10th EUGridPMA meeting, May 30 - June 2, 2007, Istanbul, Turkey



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efforts

DNA4.5 PM 25-30	<ul style="list-style-type: none">- The 4th e-Infrastructure Concertation, 5-6 December, 2007, Sophia Antipolis, France- eIRG Meeting 30 November 2007, Lisbon, Portugal- EGEE UF, February 11-14, 2008, Clermont-Ferrand, France- OGF21, October 15-19, 2007, Seattle, WA, USA- OGF22 February 25-28, 2008, Cambridge, MA, USA- eIRG Workshop, 24 - 25 April 2008, Zürich, Switzerland
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2. CONCLUDING REMARKS, AND FUTURE DIRECTION

The BalticGrid delegates have been actively participating and contributing to the pan-European standardization and collaboration work. In addition the BalticGrid have been following the OGF standardization effort since the start of the project, as for the EUGridPMA.

BalticGrid is a production-level grid infrastructure, and not a research project, hence the not very active role in the standardization efforts, e.g. OGF. Originally the goal of NA4 was set to lead the security area of OGF, something the project had to revise since the loss of key personnel (Olle Mulmo, one of the two Area Directors of OGF Security, was part of the project in the start, but left at an early stage). The recommendation from the reviewers at the first review was to 'revise the scope of NA4' and as a response to this change the NA4 effort was distributed among the partners, with increased participation from SA1, NA1, NA3, JRA1 in the NA4 work, e.g. in participation in eIRG, OGF. Still the milestones where met with regards to participation.

As for the OGF participation, PSNC established an OGF research group RISGE (Remote Instrumentation Services in Grid Environment), which is supported from the beginning on by BalticGrid: http://www.ogf.org/gf/group_info/charter.php?review&group=risge-rg



3. MEETING REPORTS, NOVEMBER 2007 TO APRIL 2008

Meeting reports for the period November 2005 to October 2007 (except OGF21, see below), see DNA4.1-DNA4.4. During the course of the November 2007 to end of April 2008, members of the BalticGrid/NA4 have attended the following meetings:

3.1. E-INFRASTRUCTURE CONCERTATION MEETINGS

4th e-Infrastructure Concertation, 5-6 December, 2007, Sophia Antipolis, France

<http://www.etsi.org/WebSite/NewsandEvents/ECConcertation/ECConcertationDaysHome.aspx>

The role of Standards in the development and deployment of e-Infrastructures

Algimantas Juozapavicius, Norbert Meyer

Meeting objectives and expected output

Broaden scope of activities; define/reach common or complementary goals (e.g. create new standard, deploy in a project a technology that has been developed in another one, etc)

ICT Study recommendations

Rec-3.4: Promote high level strategy dialogue between EUMember States, technology providers, public interest organisations, SDOs, and specification providers.

Rec-5: To respond rapidly to standardisation needs, build upon synergies provided by a better integration of European Standardisation Organisations (ESO) and relevant consortia and for a activities in the domain.

Rec-6: Respond to growing “user” impact on the effective implementation of standards. In this respect, more emphasis should be given to the specific needs of each user category and differentiation should be made in general between:

Industrial users of ICT solutions

Other indirect users of ICT solutions and standards such as consumers and SMEs

Rec-7: Include a clear vision on desired impact of EU ICT standardization efforts on global level.

Rec-8: To promote implementation of European standards and to increase interoperability of applications and services,

Rec-9: Reinforce relation between R&D and standardisation.

Meeting objectives

- Address role of standards in the context of the development and deployment of e-Infrastructure (Cyber infrastructure, e-Infrastructure etc)
- Address specific role of the researcher in this context
- Identify priority areas of standardisation in relation to current status and evolution path of e-Infrastructure (Questionnaire)
- Provide input to broader European policies on standards
- Stimulate and facilitate creation of synergies among e-Infrastructure (and of other areas) projects with emphasis on standards development and impact



- Address international cooperation aspects emphasising on infrastructure interoperability and role of standards

There were a few parallel tracks, and one of them - Middleware track:

Chair: Enric Mitjana, Project Officer, European Commission

Projects: Chemomentum, DEGREE, EC-GIN, GridCC, KnowARC, QosCosGrid, SIMDAT, **BalticGrid**, BELIEF, BIOINFOGRID, CYCLOPS, DEISA, eDEISA, EELA, EGEE-II, e-IRGSP, ETICS, EUChinaGRID, EU-IndiaGRID, EUMEDGRID, EuroVO-DCA, ICEAGE, int.eu.grid, ISSeG, ITHANET, OMII-Europe, RINGrid, SEE-Grid-2, DIESIS, DORII, EDGeS, EGI_DS, e-NMR, ETSF, EUFORIA, neuGRID, PRACE, SEE-GRID-SCI.

Recommendations:

- Concrete synergistic actions between projects (joint technical developments, horizontal working groups on topics of common interest, common deliverables/papers, collective dissemination actions and material, sharing of training material, etc) - projects to report on above activities in their next progress-reports.
- Mechanism of identification of standards of broad interest; increased input to and interaction with standardisation for a Framework on regular reporting by projects on standardization aspects (following a common paper/web format to facilitate synergy with other projects?)
- Input to EU standardisation policies

3.2. E-IRG MEETINGS AND WORKSHOPS

The e-IRG open workshop was held in ETH Zürich (Swiss Federal Institute of Technology, Switzerland) on April 24-25th, 2008.

The series of open e-IRG workshops support the e-IRG activities by enabling and stimulating the discussion of e-infrastructure related topics with the community across thematic and country borders. Experts on various areas will get together to explore open issues and outstanding questions for enabling easy and cost-effective shared use of distributed electronic resources across Europe and beyond, based on sustainable e-infrastructures.

- The themes of the workshop were as following:
- Security, a framework for Information Infrastructure Protection.
- Cyberinfrastructures and e-Infrastructure initiatives.
- Virtualization: A new trend and its impact on research e-infrastructures.

The e- Infrastructures Reflection Group (e-IRG) defines and recommends best practices and policies for European e-Infrastructures. The purpose of the workshop is to encourage interaction between the scientific communities and the political, advisory and monitoring levels. Based on the presentations and discussions during the workshop the e-IRG will publish Recommendations to the European Commission and national governments. The results will also be included in future versions of the e-IRG White Paper and Roadmap.

Security is an extremely important issue in the frame of e-Infrastructure. Nevertheless security is not a well-defined term. Its interpretation depends on the context. The workshop presented different points of view of the main stakeholders of the e-infrastructure and through a panel discussion with the aim to find a common ground and to design a general framework, incorporating the different views. There were several points of view presented at the security session:



- Top 10 Security Trends, Dr. Thomas Dübendorfer, ISSS/Google
- The NREN view, Marko Bonac, ARNES and TERENA
- The Grid view, Dr. Christoph Witzig, EGEE-II
- The Supercomputer view, Dr. Hermann Lederer, DEISA
- The Data view, Dr. Rupert Lück, EMBL
- A framework for security, Christoph Graf, SWITCH

Cyberinfrastructures vs. e-Infrastructure initiatives.

While providing access to distributed resources controlled by different institutions, cyberinfrastructures are a key component for collaborative research and innovation. For achieving such high level goals, development of public policies and incentives for advancing knowledge across institutional boundaries are essential. Three initiatives originating from large geographical areas (Europe, Japan and the USA) and relying on different perspectives, were presented:

- Cyber Science Infrastructure and NAREGI Grid middleware Prof. Kento Aida, National Institute of Informatics
- Community Computing Consortium: supporting a bold agenda for computing research, Dr. Bill Feiereisen
- e-Infrastructure in FP7, Dr. Kyriakos Baxevanidis, EU/DG Information Society

Virtualization: and its impact on research e-infrastructures. Grid computing, cloud computing, utility computing are just few of the technological and service concepts that are optimally positioned to benefit from new virtualization technologies and tools. As a concept, the virtualization has many interpretations and implementations. The presentations, two from major commercial e-Infrastructure providers and one from a major forward-looking academic research project, will illustrate different aspects of the concept and its applications. This will help envisioning the possible impacts of virtualization on the research e-Infrastructure and its applications.

This session presented the meaning of virtualisation on hardware level given by IBM, software level proposed by Microsoft. Another example concerned virtualisation in networking (the FEDERICA project).

The topics discussed at the e-IRG workshop are of high importance for BalticGrid, which is an infrastructure related project and application driven. The issues concerning security, virtualization should be taken into account while continuing the development in BalticGrid-2. Security, especially authentication will be analysed while building a global secure infrastructure in Baltic countries and connecting it with the rest of European infrastructure. An example of that is the new CA approach, which trying to deploy a single authentication process all over the Europe (e.g. connecting EUGridPMA approach with TACAR, integration of AAA in EGEE and DEISA).

Norbert Meyer (PSNC) was representing the BalticGrid at the internal delegates meeting in November 2007 in Lisbon. The next e-IRG delegates meeting is planned in June 2008 in Lugano (University of Lugano).



3.3. RISGE RESEARCH GROUP MEETINGS

The RISGE (Remote Instrumentation Services in Grid Environment) research group (RG) was an additional aggregated activity lead by PSNC during the last months. The aim of the RG was to concentrate several EU projects which are interested in topics useful for remote instrumentation. The BOF in Manchester (May 2007) with significant EU presence coming from RINGrid, int.eu.grid, GRIDCC, g-Eclipse, DEGREE, Edutrain@Grid, BalticGrid, proved that the RG is necessary and can produce in future a real added value in standardisation process.

The RISGE RG was established before the OGF 21. We have organised since May 2007 3 additional meetings:

- OGF21 (Seattle, US)
- OGF22 (Cambridge, US)
- An open meeting at the INGRID 2008 conference in Italy (April 2008, <http://www.ingrid08.cnit.it/>)

3.4. OGF21

The 21st Open Grid Forum - OGF21 took place in Grand Hyatt Seattle, Seattle, Washington, October 15-19, 2007. http://www.ogf.org/gf/event_schedule/index.php?id=925

Note: OGF21 is outside the reporting period, but due to its late date in October it was not reported in the previous NA4 report, hence reported here.

Session time: Oct 18th, 2007, 1.30 pm-3.00pm

Session name: Remote Instrumentation Services in Grid Environment (RISGE-RG)

Session leader: Marcin Plociennik <marcinp@man.poznan.pl>, PSNC, Poland

Attendance: 14 participants

Presentations:

- Ocean Observing System Instrument Network Infrastructure (SENSORS), Observatory Middleware Framework (OMF), Ocean Observing Initiative: Network for Ocean Research, Interaction and Application (NORIA) projects - Duane Edgington
- Service Oriented Architectures for Remote Instrumentation – Michael Sutter
- RINGrid: Evaluation of Remote Instrumentation Infrastructures - Thomas Prokosch
- Grid enabled Remote Instrumentation with Distributed Control and Computation - Roberto Pugliese

Additionally there was related presentation during general sessions:

- Real-time Web 2.0: Evolution of Middleware for Grid based Instruments and Sensors, by Donald F. (Rick) McMullen

All presentations can be found in GridForge system:

http://forge.ogf.org/sf/docman/do/listDocuments/projects.risge-rg/docman.root.meeting_materials.ogf21



The following aspects were agreed during the session:

- Building a detailed roadmap as a first step,
- Collecting in parallel from each project or institution involved in the RISGE group short abstract about research, contacts to be provided on GridForge webspace and wiki
- Starting with soliciting use cases from group participants and other groups of interest
- Building a common use case, i.e. the least common denominator of all use cases, or a superset of them,
- Describing common use case ala OGSA document, identify requirements and necessary capabilities in the same style,
- Proceed by establishing WG to standardize the relevant capabilities
- Proposition of group logo and common template for the presentations

3.5. OGF22

The 22nd Open Grid Forum - OGF22 took place Cambridge, USA, Feb 27th, 2008,
http://www.ogf.org/gf/event_schedule/index.php?id=925

Session name: Remote Instrumentation Services in Grid Environment - Use Cases session leader:
Marcin Plociennik <marcinp@man.poznan.pl>, PSNC, Poland

Agenda

a) "Session introduction, goals & who we are" - Marcin Plociennik

https://forge.gridforum.org/sf/docman/do/downloadDocument/projects.risge-rg/docman.root.meeting_materials.ogf22/doc15141

https://forge.gridforum.org/sf/docman/do/downloadDocument/projects.risge-rg/docman.root.meeting_materials.ogf22/doc15123

There are descriptions coming from following projects:

GRIDCC, RINGRID, int.eu.grid, g-Eclipse, BalticGrid, AUGERACCESS, VLab, Edutain@Grid, Integrated e-Infrastructure for Facilities, An Open Network for Robotic Telescopes, NORIA Network for Ocean Research, Interaction and Application, Observatory Middleware Framework, SENSORS: Ocean Observing Network Infrastructure

b) "The EGEE Infrastructure and Remote Instruments" - Erwin Laure

https://forge.gridforum.org/sf/docman/do/downloadDocument/projects.risge-rg/docman.root.meeting_materials.ogf22/doc15142

After presentation there was short discussion about how some of the requirements coming from Remote Instrumentation related projects could be taken into consideration by EGEE infrastructure

c) The discussion on the RISGE use cases document structure - Costas Kotsokalis

https://forge.gridforum.org/sf/docman/do/downloadDocument/projects.risge-rg/docman.root.meeting_materials.ogf22/doc15124



Besides the general presentations participated in presentations especially focusing on interoperability work, especially "OMII-Europe: Using open standards to deliver interoperability", Ake Edlund is member of the OMII-Europe Programme Management Committee, and following closely the interoperability work produced by OMII-Europe and its use for BalticGrid. participated in "OGSA-RUS Specification Update, Adoption and WS-RF Profile Discussions" and specific success cases in grids, e.g. the Encyclopedia of Life. During the meeting there was plenty of informal meetings with technical and operational managers from EGEE, OMII-Europe, UNICORE, Teragrid and OSG.

Lauri Anton participated in CAOPS workgroup and demonstrated Grid Certification Authority Management Software Camager. Camager is a result of incremental enhancements made to Baltic Grid CA management software, which was packaged and made available for general grid CA community It is freely available from <http://grid.eenet.ee/camager>.

Formal announcements

- Duane Edgington representing MBARI got final endorsement from his institution to be co-chair of our group.
- During the meeting Costas Kotsokalis representing GRNET agreed to become a secretary

There was a RISGE-RG presentation during the session "Grid Visualization and Steering: Status and collaboration with RISGE-RG (BoF)". We have discussed the commonalties and cooperation possibilities between our groups.

There are plans to be active in RISGE with visualization topics (developed in JRA) of BalticGrid-II. The next meeting of RISGE RG is planned at OGF 23 in Barcelona (June 4-5th, 2008).

3.6. EUGRIDPMA

12th EUGridPMA meeting

Dates: January 14 - 16, 2008

Place: Amsterdam, Netherlands

Web page: <https://www.eugridpma.org/meetings/2008-01>

Participants: Hardi Teder

Description:

The EUGridPMA is the international organization to coordinate the trust fabric for e-Science grid authentication in Europe. Hardi Teder was representing Baltic Grid Certification Authority (CA) at the meeting. Baltic Grid CA is accredited by EUGridPMA and EENet is a member of the organization. For keeping our CA up to date it is important to attend these meetings.

During the meeting:

- A new CA accredited: U-GRID (Ukraine)
- Accreditation continued: MARGI CA (Morocco), IR-GRID (Iran)
- Grid CA self-audit reports: BeGrid CA, DoEGrid CA, HellasGrid CA, CyGrid CA, SlovakGrid CA, ArmeSFo CA
- Presentations about updates TAGPMA and APGridPMA
- There was an OGF CA-OPS research group session
- IGTF and OGF document drafts development sessions



3.7. OTHER STANDARDISATION ACTIVITIES IN EUGRIDPMA AND NATIONAL CA

The activity within EUGridPMA in PSNC was focusing on providing a unified Certificate Authority, which is able to serve various groups of users, including the grid community. It was started a project aiming to unify all Polish CA into one general purpose CA for all e-science communities. The idea is to prepare one network of CA/RA that can be used by all users without the need to trust many CAs. PSNC is one of the founders of this national programme (together with Torun University and Wrocław Supercomputing Centre). The time period (November 2007 – April 2008) was used to continue the work we initiated in September 2007. This aim complies with the objectives described at the last e-IRG workshop in Zurich (April 2008). The results of the work will be directly transferred to the BalticGrid community.

In addition PSNC was continuing the work on preparing the registration of Polish CA (recognised by EUGridPMA) within TACAR (TERENA Academic CA Repository, <http://www.tacar.org/>), which was foreseen for January 2008. TACAR hosts most of the EUGridPMA root CAs as well as those managed by the National Research and Education Network. BalticGrid CA is in TACAR repository since the beginning of 2006.

Paweł Wolniewicz from PSNC is the representative from Poland in EUGridPMA. The next meeting of EUGridPMA is planned in May 6-8, 2008 (Copenhagen).

3.8. EGEE USER FORUM

BalticGrid project stand during the 3rd EGEE UF, Clermont-Ferrand, France, 11-14 February 2008

Zofia Mosurska and Robert Pajak (IFJPAN), Bartek Palak (PSNC) and Jelena Tamuliene (ITPA) were managing the BalticGrid booth during the 3rd EGEE UF.

The following materials were presented: BG movie - presenting the project's two-year work and results, demos showing examples of the BG applications running in the framework of the Migrating Desktop, the set of technical brochures, posters as well as pens. Many persons visited the BG stand asking about the Project in general as well as looking for the answers to some more technical questions, e.g. concerning the BG infrastructure, applications and Migrating Desktop. The presence of the Project at such a big and important event increased well its visibility among other Grid projects and national initiatives.



4. ABBREVIATIONS

AUP	Acceptable Use Policy
e-IRG	e-Infrastructure Reflection Group - an e-Infrastructure Reflection Group that aims to coordinate on a high European level the introduction of an (Grid based) infrastructure for e-Science.
NGI	National Grid Initiative
NREN	National Research and Education Network
TWG	Technical Working Group
OGF	Open Grid Forum - a community of users, developers, and vendors leading the global standardization effort for grid computing.
EUGridPMA	European Policy Management Authority for Grid Authentication - defines itself in its charter as “a body to establish requirements and best practices for grid identity providers to enable a common trust domain applicable to authentication of end-entities in inter-organisational access to distributed resources”.