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*LHCC Comprehensive Review November 22-23, 2004*

## “The ARDA project”

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**EGEE is a project funded by the European Union under contract IST-2003-508833**

# Other activities and conclusions



- The ARDA workshops
- The 3<sup>rd</sup> ARDA workshop (20-22 October 2004)
- The recommendations of the workshop
  - Discussed in the LCG PEB and in the EGEE PEB
- ARDA/OSG
- ARDA in NA4
- ARDA in GAG

## ARDA workshops and related activities



- ARDA workshop (January 2004 at CERN; open)
- ARDA workshop (June 21-23 at CERN; by invitation)
  - “The first 30 days of EGEE middleware”
- NA4 meeting (15 July 2004 in Catania; EGEE open event)
- ARDA workshop (October 20-22 at CERN; open)
  - “LCG ARDA Prototypes”
- NA4 meeting 24 November (EGEE conference in Den Haag)
- ARDA workshop (Early 2005; open)

## 3<sup>rd</sup> ARDA workshop



- 20-22 October 2004 at CERN
- Over 60 persons (+over 15 people sitting a FNAL during the joint ARDA/OSG session)
- These workshops are held on a regular basis (2/3 per year) and their organisation is a central part of the ARDA activity
  - No formal milestone on this (avoid to have too many milestones)
- The last one was organised together with the gLite team with the idea to use the workshop as a sort of internal review (also in preparation of the LHCC Comprehensive Review)

# 3<sup>rd</sup> ARDA workshop



- ***Original title: “The LCG ARDA prototypes”***
- ***Open participation***
  - ***Good moment to get feedback from a wider audience***
- ***~50% of the time allocated to ARDA and the LHC experiments***
  - ***Expose and discuss status and plans***
  - ***Feedback to gLite***
- ***~50% of the time allocated to gLite***
  - ***Present in detail key components***
  - ***Expose status and plans***
  - ***Use the feedback***
- ***Virtual connection with OSG (Workshop at FNAL)***
  - ***Learn more on OSG itself***
  - ***Broaden the technical discussions***
  - ***Create a link inside our community***

*From the workshop  
introduction*

# Format of the workshop



	<i>Wednesday the 20<sup>th</sup></i>	<i>Thursday the 21<sup>st</sup></i>	<i>Friday the 22<sup>nd</sup></i>
9:00 – 12:30	<b>ARDA prototypes</b>	<b>LHC experiments distributed analysis</b>	<b>Discussion and summary session</b>
14:00 – 17:30	<b>gLite middleware</b>	<b>gLite middleware  OSG from FNAL</b>	<i>From the workshop introduction</i>

# What we would like to achieve



- ARDA point of view:
  - Discuss the status and next steps of the project (next 6-12 months)
    - Suggestions and feedback
  - Expose the HEP community to the gLite middleware (experience, architecture and design, future steps) to gather suggestions and contributions
  - Expose the gLite team to the experiments' plans

*From the workshop  
introduction*

## Recommendation from the ARDA workshop (PEB Nov 9)



- The LCG PEB recommended (after the ARDA workshop) to provide a larger infrastructure running gLite extending the current prototype
  - Massimo and the ARDA group are discussing with Tier1 centres and found very good perspectives with FZK (Karlsruhe)
- The concern of the increasing load on the gLite team is being addressed by ARDA
  - Two candidates selected (one to focus more on integration, the other on operational issues); good perspective to have them here before Christmas (One person will be at CERN as November 29<sup>th</sup> for a minimum 6 month period)
- The LCG PEB welcomes ALICE offer (to deploy gLite on experiments centres to run the part 3 of DC04)
  - ARDA will keep some access to see the gLite middleware on an even larger system. This possibility is interesting **for all four experiments.**



## Recommendation from the ARDA workshop (PEB Nov 9)



- In the last EGEE PEB, the recommendations of the ARDA workshop, of the LCG PEB and the ALICE proposal have been discussed. The idea to have more users on a larger infrastructure is welcome, but the problem of possible divergence between the middleware on the infrastructure used by ALICE for their DC04 and the regular prototype and deployment chain has been discussed. It has been stressed that
  1. the interest of the experiments for the middleware on the larger infrastructure (as stated in the ARDA workshop)
  2. the possibility to have access to the whole system (via ARDA)
  3. the specific effort on integrationshould avoid the abovementioned risks
- Eventually the Pre Production Service will take over (emphasis on sustainable scalable infrastructure) and ARDA will use it (together with the prototype – emphasis on new functionality)

- During the CHEP04 Ruth Pordes and myself agreed to have a joint session during the October ARDA workshop
- One session of the ARDA workshop was actually done in common with the OSG meeting (at FNAL)
  - Interesting technical discussion (exploratory level)
  - Decision to start regular meetings (one per month?)
  - Next meeting probably mid December



- EGEE NA4: Application Identification and Support
  - Pilot applications: HEP (LHC) and Biomed
  - New application and testing group
- ARDA gets 4 FTEs from EGEE (+matching FTEs)
- Benefit of the collaboration with EGEE
  - FTEs!
  - Interesting contacts with other sciences
    - Joint sessions between the whole NA4 and gLite organised by Massimo
    - Joint sessions between the whole NA4 and Grid deployment organised by Frank Harris
  - Further opportunity to be in the loop with the gLite evolution (→ next slide)
- Drawbacks
  - Moderate increase of meetings and bureaucratic load

# Joint sessions between the whole NA4 and gLite



- Catania Mid July 2004
- Den Haag Nov 2004
- Scope
  - Used as “interim” ARDA workshop
  - In the ARDA workshop is 100% on the LHC experiments application needs, related experience, etc... and NA4 people are invited to attend (a few individuals)
  - In this joint sessions, the relative weight of the applications among HEP, BioMed, NewApplications is more 1:1:1
  - In general very useful to discuss with gLite team anyway (and security experts) and to compare different use cases and field experience.

# EGEE NA4: Further opportunity to be in the loop with the gLite evolution



- Exposure critical gLite documents/milestones
- Create multiple occasion to give feedback (and facilitate the experiments feedback)
  - Discussion (in ARDA and in the first workshop) of the architecture document
  - Massimo formal reviewer of the gLite design document
  - Julia formal reviewers of the network requirements document
  - Massimo formal reviewer of the first gLite release
  - Massimo is a member of the EGEE PTF (Project Technical Forum)
    - Massimo proposed to invite the ARDA “experiment interface” (and experiment experts) to discuss the design document (accepts; actually extremely useful)

# ARDA and GAG



- Frank Harris is a member from the beginning (Now in EGEE NA4)
- Massimo invited to join in April
- ARDA finds the role of GAG essential:
  - Offloads ARDA of some heavy tasks in the EGEE NA4 (requirements gathering → usage of the HEPCAL documents)
  - Appropriate place to discuss high level technical issues like metadata
  - Appropriate place to iterate on strategic issues (like discussion on the gLite design)

# Conclusions and outlook



- Larger infrastructure needed to
  - Attract real users
  - Continue the validation problem on a credible scale
    - Incremental process on the prototype (functionality) and its extension (scale)
- ARDA created multiple channels of communication
  - The most important being experiments  $\leftrightarrow$  gLite
  - Assume some natural selection/bootstrap will happen
    - Continue with the ARDA workshops + regular meetings (every fortnight) to start (recommendation of the last workshop)
    - Other opportunities will be exploited
- ARDA produced a large feedback from the experiments to gLite
  - ARDA acts as a user finding out the feature of gLite within the experiments environment
  - ARDA would like to improve on the effectiveness
    - Prototype/Preproduction service will be enough?