



<http://cern.ch/arda>

CERN, 21-23 June 2004

“The first 30 days of the EGEE middleware”

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EGEE
Enabling Grids for
E-science in Europe
www.eu-egee.org

LCG
cern.ch/lcg



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Summary



- Summary →
- ARDA workshop #3
 - When? *September/October?*
 - How long? *Couple of days*
 - Format? *Open to the whole community (but this closed event proved to be useful)*
- Other announcement
 - use **project-lcg-ardainfo** (contains the old arda workshop)
 - atlas-sw-arda@cern.ch
 - cms-arda-developers@cern.ch
 - cms-arda-web@cern.ch
 - cms-arda@cern.ch
 - project-arda-middleware-contributors@cern.ch ← Keep it? Merge it?
 - project-lcg-arda@cern.ch ← ARDA + all experiments
 - project-lcg-ardadev@cern.ch ← internal (CERN section)
 - project-lcg-ardainfo@cern.ch ← “new”
 - workshop-arda@cern.ch ← remove!

More workshop activity



- 1st ARDA workshop (January 2004 at CERN; open)
- **2nd ARDA workshop (June 21-23 at CERN; by invitation)**
 - “The first 30 days of EGEE middleware”
 - **Main focus on LHC experiments and EGEE JRA1 (Glite)**
- NA4 meeting mid July
 - NA4/JRA1 and NA4/SA1 sessions organised by M. Lamanna and F. Harris
 - EGEE/LCG operation new ingredient!
- **3rd ARDA workshop (September 2004; open)**
 - “The ARDA end-to-end prototypes”

Infrastructure/prototype issues



- First contact with Glite positive
- Prototype approach positive
 - Incremental changes, fast feedback cycle
 - Workshop useful to start iterating on priorities
 - See Derek's presentation
- Wish list on the current prototype installation:
 - More resources!
 - More sites!
 - Improve on infrastructure
 - Procedures should be improved
 - Service stability
 - *Move to a pre-production service as soon as possible*

GAS and shell



- Useful concepts/tools
- GAS as “Template” service for the experiments to provide their orchestration layer
 - Individual services accessible as such
 - They should expose “atomic” operations
 - Custom GAS can be provided by the experiment
 - API needed
- Shell extension preferred to dedicated shell emulation
 - Cfr. ALICE/ARDA demo presentation

General/Architectural concerns



- Next month home work:
 - List of LHC experiments priorities put together by ARDA
- Connections with the architecture team
 - Strong need to see and interact at the architectural level
 - *At least agree on a mailing list...*
- Priority is on developing the new system functionality
 - Whenever possible backward compatibility is a nice feature
 - Investment on the experiment side
- Long standing issues:
 - Outbound connectivity
 - Functionality needed
 - Mechanism to provided needed (not necessarily direct connectivity)
 - Identity of user jobs running in a remote site
 - “gridmapfile / setuid” is an implementation
 - What is really needed is traceability

Database related



- Pervasive infrastructure and/or functionality
 - File catalogue →
 - Metadata catalogue →
 - Other catalogues (cfr. ATLAS talk)
- Plan for the infrastructure
 - Probably we are already late... hopefully not too late
- Different views on how to achieve
 - Load balance // remote access // replication
 - Disconnected operations
 - Level of consistency
 - Uniform “access”
 - GSI authentication
 - VO role mapping (authorisation)

File catalog related



- Experimenting in ARDA has started
- Looks realistic that the File Catalog interface “validated” via independent experience
 - Cfr. Andrei Tsaregorodtsev’s LHCb talk
- LFN vs (GU)ID discussion
 - Not conclusive but interesting
 - Bulk of the experiment data store might be built with files with a GUID (and metadata) but without LFN
 - POOL/ROOT compatible (GUID used in navigation, not LFN)
 - Need further exploration!!!
 - **Bulk of the experiment files: WORM**
 - Working decision
 - Other experiment-dependent mechanisms to cover modifiable files needed
 - N.B. modifiable file = same GUID but different content

Metadata database related



- Very many parallel initiatives!
 - in the LHC experiments
 - across the experiments (gridPP MDC)
 - in the MW providers community (LCG, OGSA-DAI, Glite, ...)
 - Experiments interested in having input on technology
 - No clear plan of convergence
- Web services is the way to go?
 - Or is it just a data base problem?
 - “any” GUID-Value pair system could do it
 - Maybe GUID-GUID pairs
- Anatomy vs. physiology
 - The client API does not map 1:1 onto WSDL
 - Access method != data transfer protocol
 - This could trigger requests for specific client bindings

Data management related



- Experimenting in ARDA has started
 - Not all components
- Data management services needed
 - Data management transfer services
 - Needed!
 - ML: Can Glite provide the TM(DB) service?
 - Reliable file transfer is a key ingredient
 - This functionality was implemented to fill a gap in DC04
 - CMS is entering a “continuous” production mode: room for constructive collaboration
 - Misuse protection (cfr. ALICE talk)

Application software “installation” (package management)



- All experiments have/use one or more solutions
- Interest is high for a common solution, but the priority is not very clear
 - Service to manage local installation
- Some features:
 - Lazy installation
 - The job expresses what it needs, the missing part is installed
 - Triggered for all resources
 - Overwrite the default installation for one experiment
 - Installed software is a resource
 - To be advertised: could be used in the matchmaking process

End of the workshop



- Look forward the next 30 days (and more) of useful work
 - With the Glite development
 - Within the experiments
 - With the service providers
- Next checkpoint in Fall
 - But EGEE-NA4 as an important intermediate step
 - Hopefully with a lot of direct users experience on the prototype!
- ... back to work! 😊