Software development, integration and coordination

Balázs Kónya, Lund University
Project Technical Director

5th EMI all-hands,
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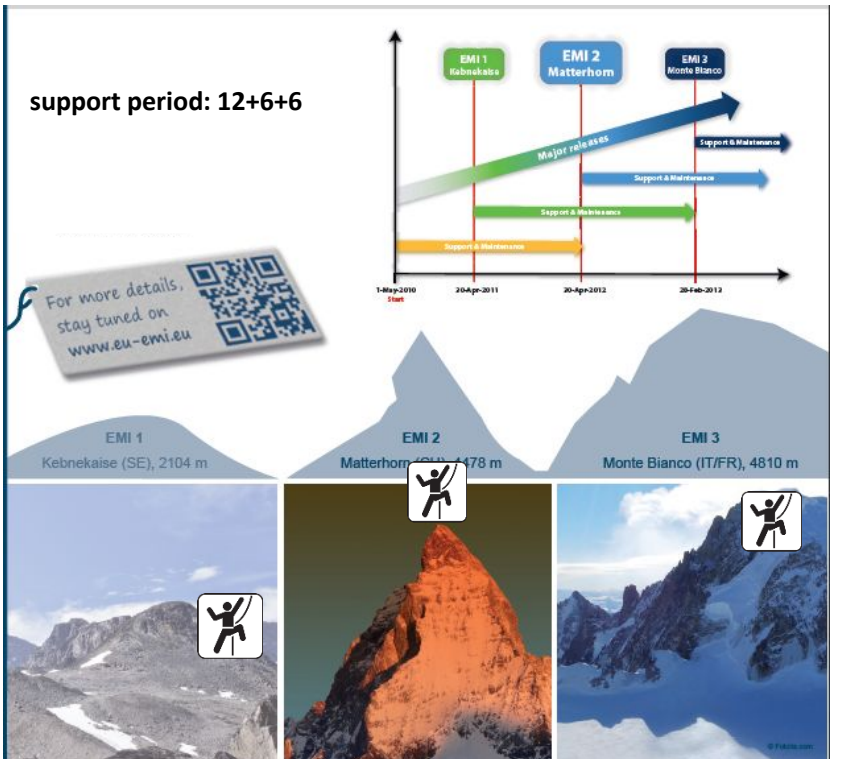
After climbing all those peaks



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Where do we go next?

"There is nothing really planned, I don't know where and how and when and who, but here's my phone number"
(an EMI developer fixing a Sunday evening getting together)

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outline

- Development status snapshot as of the feature freeze
- Future of development
  - EMI agreements
  - Common EMI products
  - Common ”EMI look”
- Future of Development Coordination
  - Organization: project, technical area, product team level
  - Requirement management
  - Development plans
  - Cross-product tasks
  - Harmonization
- Future of inter-product testing

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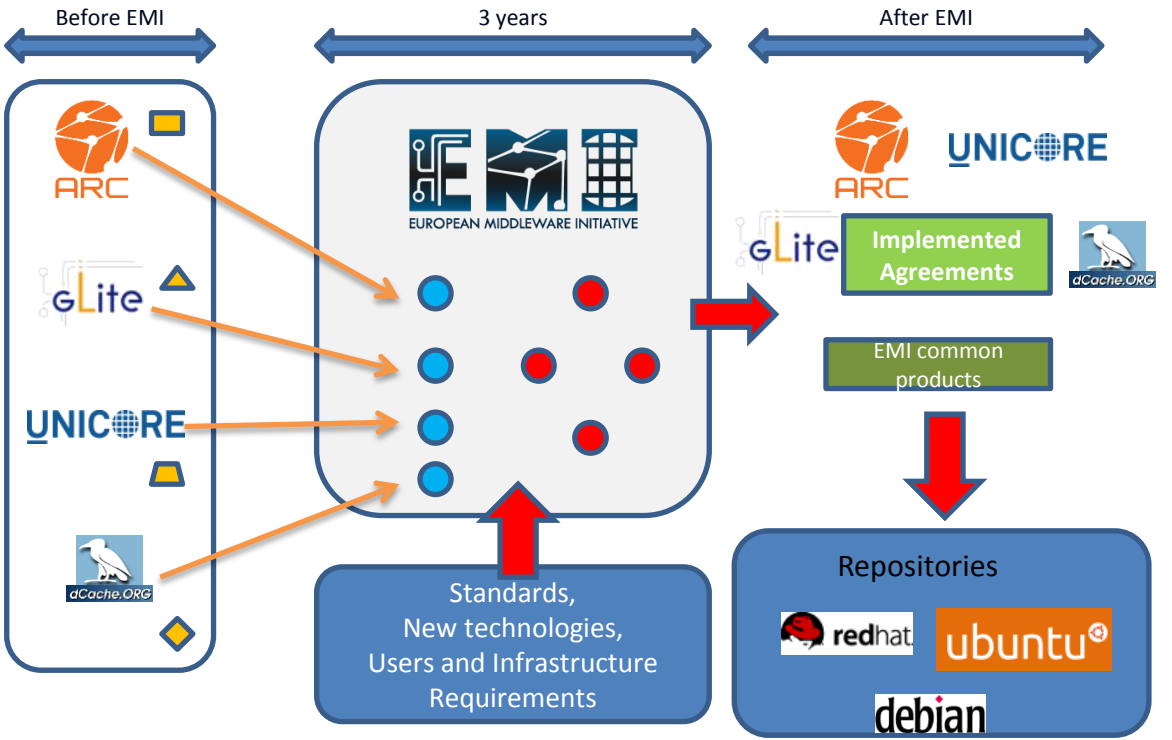
EMI vision



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Focus areas of Year 3 development

- Product hardening
- Product roll-out, take-up, migration to common solutions
  - Common libraries (CANL)
  - Common service (EMIR)
  - Common implemented interfaces (EMI-ES over CEs)
  - Agreements and adoption plans (CAR, STAR, delegation)
- And some new products
  - STS
  - FTS3
  - emi_datalib

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Last minute EMI 3 developments

Development status based on tracker info:

- 7 cancelled
- 82 done
- 68 ongoing
- 23 no response
- 42 not started
- 26 problematic
  - Accounting: CAR/StAR record generation
  - EMIR roll-out
  - CANL adoption
  - GLUE2 BDII

Last minute update:
Cancelled: 7
Done: 83
Ongoing: 75
No response: 19
Not started: 37
Problematic: 26

Feature freeze: 31 October

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Future of EMI agreements

- EMI-ES specification
- CAR, STAR records
- Information system consolidation
- XACML/SAML profile
- EMI delegation
- *GSI replacement*
- *Parallel execution framework*

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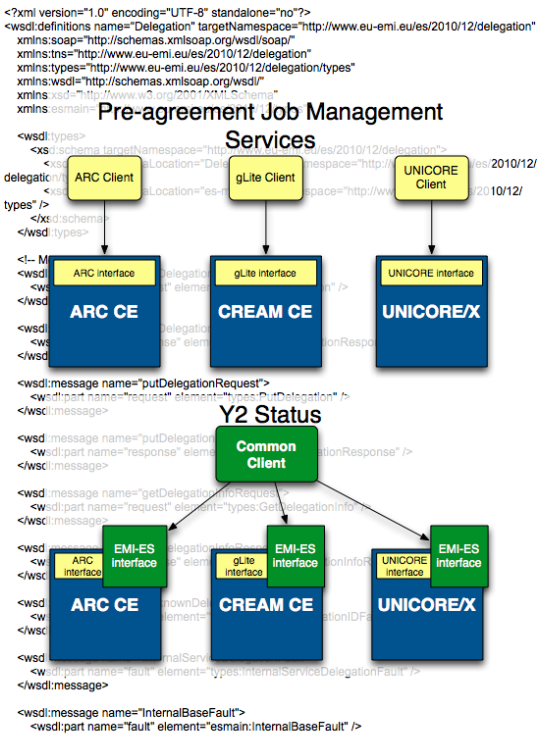
Agreements: EMI-ES specification



- *EMI-ES interface specification agreed as the **common job management interface***
  - Iterative schema definition (v1.5)
  - last minute changes still expected to spec.
  - First round of cross implementation tests just started
- Three EMI server-side implementation at 80-90% completion level
- Two EMI client side solution
- Third-party client-side implementation is on the way: Gridway
- **Missing:**
  - Compliance Test suits
  - Lots of testing
  - Production roll-out
  - Feeding the process back to OGF
- The real Challenge:
  - Find a group leader after April

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Agreements: Car & StAR

- EMI agreement on accounting records:
  - Compute accounting CAR (1.1)
  - Storage accounting StAR (1.2)
- Specs are almost done
- accounting sensors 90% ready
- Strong endorsement for deployment
- Good progress within OGF
- No problem with post-EMI coordination (APEL team)

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Agreement: infosys consolidation

- ERIS: Resource Level Infosys: LDAP + GLUE2
  - Important last minute changes missing
- Info cache: TOP-BDII
  - Important last minute changes missing
- Index level: EMIR
  - Service record publication not complete
  - Information consumption: unclear
- Challenges only for EMIR
  - Post-EMI coordination!
  - Post-EMI lobbying for deployment, roll-out!
  - Make sure the PT will not dissintegrate

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Agreements from security area

- EMI delegation
  - Agreement on Final specification was reached!
    - *Ongoing implementations*
  - Time to move/work within OGF
  - Post-EMI coordination is solved (DESY)
- XACML/SAML profiles
  - Final documents are almost there
  - Profiles already used by relevant products
  - No further plans

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Future of EMI common products

- EMIR
- CANL
- Emi_datalib

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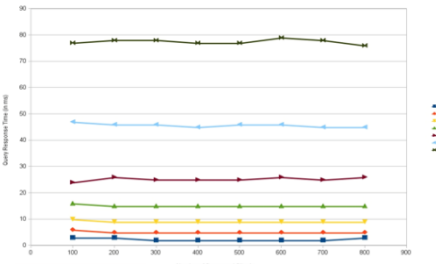
EMI Service Registry

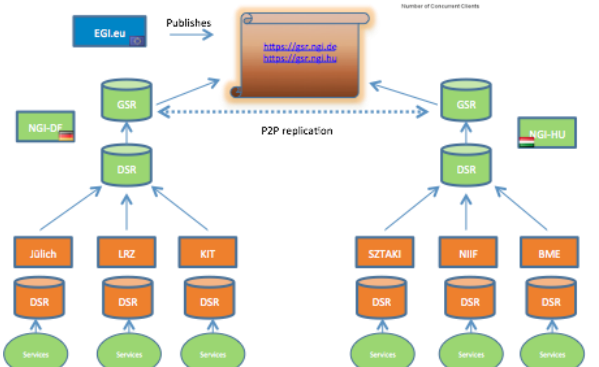
EMIR: One central registry where all services can be discovered

- All services to publish information in EMIR
- Clients to use EMIR for service discovery

Challenges:

- Deployment, Deployment, Deployment
  - It is NOT even used in EMI Testbed as the service catalogue!
- Competition: GOCDB





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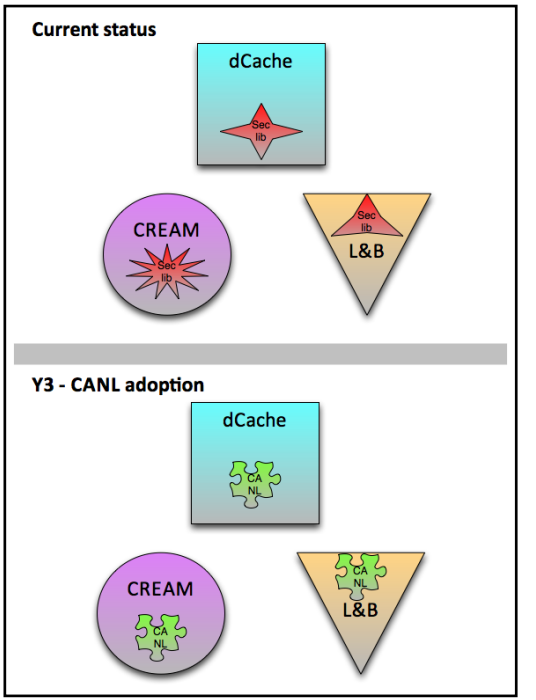
Common Authentication Library

CANL

- Defined and documented API for common security library
- Implementation available in C, C++ and Java (developed by different teams)
- Migration of EMI products has just started

Challenges:

- Three products
- Maintain coordination of implementations and adoptions after April
- Continue with adoption after EMI-3



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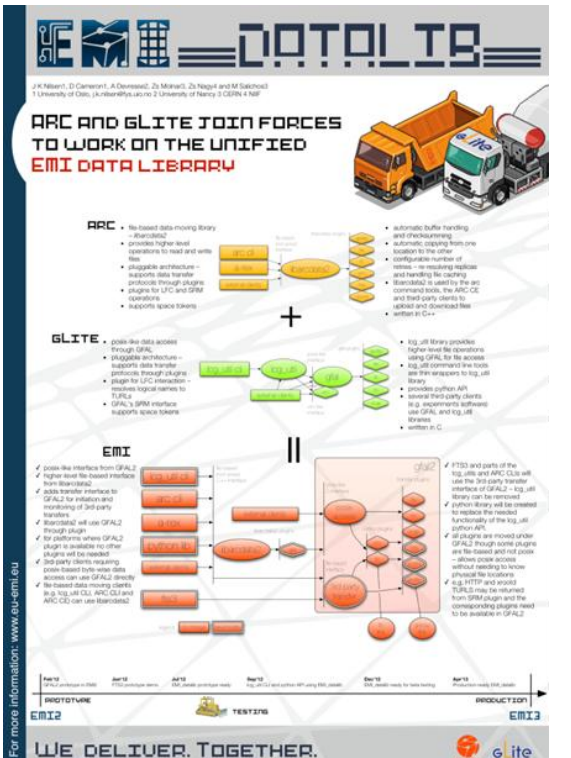
EMI_datalib

- Shared ARC-gLite client-side data library
  - Built around GFAL2
  - Already used in libarcdata and FTS3
  - No problem with post-EMI support/coordination
- Missing:
  - Adoption in lcg_utils
  - Third-party pick up



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Coordination

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Coordination as of EMI

Project Technical Board and the Technical Areas

- **Mandate:**
  - Manages requirements
  - Defines the overall technical plan (prioritized objectives)
  - Defines the composition of EMI software portfolio
  - Drives the area consolidation
  - Decides on specific technical matters (e.g. platforms)
  - Monitors the development tasks

Product Teams

- Autonomous units
- Some of them artificially created for EMI
  - Too fine grained (UNICORE and ARC PTs)
  - Too coarse grained (glite security)

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Future coordination?

- Understand what needs to be coordinated
  - Requirement management?
  - Development plans?
  - Cross-product tasks?
  - Harmonization? Howto avoid de-harmonization?
  - Common ”EMI look”?
- Identify the groups to be coordinated:
  - Streamlined, redefined, restructured PTs
- Find the proper format, of coordination
  - Per specific topic? Per ”areas”?
- Find respected volunteers to take the effort intensive job

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Software integration

- Aka. Inter-product testing
  - It was very problematic already in EMI
  - Would require dedicated ”integration team” composed of mw experts
  - Requires strong coordination of teams AND testbed resources
- Possible future:
  - Plug tests, interop campaigns?
  - Off-load the problem to EGI early adopters, CESGA testbed?

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Conclusion

- Agreements:
  - Almost all the agreements still need last minute finalization
  - Future of SAML/XACML profiles, CAR-StAR and EMI Delegation are OK
  - Future of EMI-ES and Infosys consolidation around EMIR is challenging
- Common Products:
  - EMIR and CANL is looking for a challenging future
  - EMI_datalib most probably will survive
- Coordination:
  - New structure, new players, new motivation is needed
- Interproduct Testing:
  - Very unlikely to work unless EGI puts serious resources behind ☺

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