Middleware in EGI-InSPIRE

Aleš Křenek, CESNET
EGI Blueprint mentions:

- **Middleware Coordination Board (MCB)**
  - representatives of users, operations, and middleware providers
  - advisory body to EGI director (formally)
  - assumed to make most strategic decisions on middleware (in practice)

- **Middleware Unit (MU)**
  - part of EGI.eu, fulfilling the central middleware tasks
  - lead by EGI CTO
  - perform the everyday work (8 FTE)

- **expected middleware effort 70 FTE**
  - maintenance and convergence towards interoperability
  - no “brand new” development
Middleware workpackages

- **SA2: Software infrastructure provision** – 9 FTE
  - define and maintain UMD roadmap and criteria
  - verify contributed middleware components
  - provide necessary services and tools
  - implements Middleware unit

- **SA3: Support of Deployed Middleware** – 8 FTE
  - investigate and resolve middleware issues in collaboration with providers
  - provide emergency fixes if path via provider fails

- remaining MW effort “outsourced” to external providers

- merge of SA2 and SA3 considered
  - avoid overlap and/or tight interaction
  - reduce bureaucracy and effort
  - solve managerial problems (CTO vs. two WP leaders)
Middleware workpackages

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UMD roadmap

- principal evolving specification of UMD content and releases
- source of information for
  - operations and users to be aware of new functionality and phase-outs
  - software providers to know about desired functionality
- each entry contains
  - functionality description
  - acceptance criteria
  - expected release date
  - required level of maintenance
- possible conflicts resolved through repeated analysis
- updates submitted to MCB for approval and published twice a year
- complemented with generic criteria
  - e.g. interoperability, platform support, SDK availability, ...
Acceptance of components

- new components and major/minor releases of existing ones
  - SA2 works with providers, users, and operation in pre-release testing
  - final tests by SA2 are lightweight, based on results of previous ones
  - result summarized in acceptance report
  - if tests fail, provider is requested to provide fixed version
  - support SLA (contract) is negotiated

- revision releases
  - no specific tests done by SA2
  - provider’s QA process is trusted
  - repeatedly failing provider may not get support contract next time
Acceptance of components

Software Provider

New Certified ‘major’ or ‘minor’ release

Verify Criteria

New Certified ‘revision’ release

Ready for Staged rollout

EGI Middleware Unit & Software Repository

Release Rejected

FAIL

FEEDBACK

PASS

FEEDBACK

Trial deployments in production

Released to production

PASS

FAIL

NGI Operations
Component integration

- software element – set of components required to deliver given functionality
  - “node types” in EGEE: Worker node, UI, WMS, ...
- components from multiple providers required typically
- SA2 involved in software element definition
  - what components of what versions are taken
  - follows UMD roadmap
- actual assembly of software element delegated to one provider
- non-trivial problems to resolve
  - which versions to build against
  - what to test when
Software repository

- provided and maintained by SA2
  - EGI.eu, replicas considered
- physical location of components
  - links to established repositories (SF) possible
- component categories
  - fully supported (EGI responsibility)
  - community supported
  - associated (RESPECT-like)
- state of component
  - contributed, released, in-production
Summary

- User wishes and provider offers meet at MCB
- EGI SA2 defines and follows UMD roadmap
- Software repository and tools provided by EGI
- Most development and support work on external providers