# Status of EGEE → EGI transition

WLCG LHCC
Referees' meeting
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Ian Bird
LCG Project Leader

# CERN's roles in EGI

From July

- CERN will participate in all aspects of the EGI:
  - EGI.eu

    Now council member: 10 votes (vs 70 for large NGI)
    - Hopefully as a full member with voting rights (but still some doubts)
  - Specialised Support Centres (SSC)
    - CERN will lead the formation of an SSC for HEP (+astroparticle?) together with other partners
      - Will be of direct benefit to WLCG
  - Middleware
    - The gLite consortium must urgently be put in place – Letters of Intent have been signed by (almost) all key partners
      - This is a minimum solution for ongoing support of software in production
    - Hopefully a collaboration between gLite and ARC can eventually participate in a project proposal

gLite collaboration agreement ready;
EMI project will be collaboration gLite/ARC

# FP7 Calls

1.2.1.1: EGI itself: including generic operations & services required by WLCG (e.g. GGUS, etc.)

1.2.1.2: Service Deployment for existing large multi-national heavy user communities

- Expected to be part of the EGI proposal (currently as a separate Service Activity – SA4)

1.2.1.3: Middleware related

1.2.3: Virtual Research Communities

- E.g. The Specialised Support Centres (SSC) as discussed in the EGI_DS blueprint

- Funding:
  - 1.2.1.1 + 1.2.1.2 = 25 M€ of which maybe 5 M€ could be for 1.2.1.2 with >1 user community ... (Only EGI proposal expected)
  - 1.2.1.3 = 25 M€ total (but a competitive call)
  - 1.2.3 = 23 M€ with aim for 10 M€ for HEP SSC (competitive call)

- Deadline: calls close November 24.

# EGI-era projects for WLCG

- EGI:
  - Tier 1 and Tier 2 sites, via their NGIs should be involved in the core EGI tasks
  - SA4 (service deployment for heavy users) directly beneficial to WLCG and the experiments
    - This is a transition task – expected to last for the first project phase only
- SSC:
  - 3 proposals
  - P2: combining Astronomy & Astrophysics, Earth Science, and Fusion;
  - P1: combining the training, dissemination, business outreach;
  - P0: combining the other scientific SSCs (high-energy physics, life science, computational chemistry & material science, grid observatory, and complex systems).
    - Our stated plan for the "HEP SSC" is for a EUR10M project over 3 years, 50% of funding coming from EU (dependant on details such as exact scope, partners etc.)
- EMI (middleware)
  - Collaboration between gLite, ARC, UNICORE
  - Middleware support/maintenance/development/harmonisation

# CERN involvement

- EGI:
  - CERN offers to lead SA4; but otherwise very little involvement in the EGI core functions
- SSC:
  - CERN will lead the HEP SSC (as part of a proposal – not leading the overall proposal)
- EMI:
  - CERN has been asked to provide the project director for EMI

# EGI – SA4 tasks

- Communities labelled as heavy user communities:
  - HEP, Life Sciences, Astronomy+astrophysics, Computational Chemistry and Materials Science, Earth Science, Fusion.
  - NB: HEP is >> 10x than others (usage + users)!
- Common tasks:
  - Dashboards: mainly for HEP (users+sites+infrastructure)
  - Ganga: ATLAS + LHCb + few other communities
  - Greic: db access
  - Taverna complex workflows
  - Diane task management
- Science gateways (no HEP involvement)

# EGI – SA4 - cont

- Community-specific tasks – experiment support for HEP:
  - ALICE (2 FTE): Alien services, integration with WLCG, Vobox services & support
  - ATLAS (3.5 FTE): Distributed data management on topof FTS, LFC, dashboards, etc.
  - CMS (3.5 FTE): Phedex, CRAB & related DM and WM services
  - LHCB (2 FTE): DIRAC WM + DM services

# HEP SSC tasks

- Support for WLCG and FAIR and general HEP; includes a few other communities using same tools (UNOSat, ITU, Envirogrids)
  - "Networking" tasks relevant to WLCG:
    - Coordination with EGI operations and user support
    - Coordination with middleware in EGI and EMI
    - Overall WLCG service coordination
      - Including Tier 2 and network coordination
  - Service tasks:
    - Integration support
      - Testing new middleware
      - Integration of experiments into high level monitoring, experiment plugins to frameworks (SAM etc)
      - Integration of middleware and experiment apps
    - Operations support
      - Expertise for debugging, problem solving of m/w, sites, config etc.
      - Experiment-specific ops tools (e.g. Mining monitoring data)
      - Support for integration of experiment-specific services with WLCG infrastructure
      - Tools for end-end testing of analysis workflows
    - Distributed analysis support
      - Development and deployment of tools
      - Coordination of support and training

# EMI and middleware

- EMI goals:
  - support EGI and other major European infrastructures
  - Maintain, standardise, evolve existing production middleware (mainly gLite, ARC, UNICORE)
  - Choice of components driven by requests of user communities
- Activities:
  - Reactive maintenance (bugs, defects): 35%
  - Proactive maintenance (reliability, scalability, performance), standardization, new developments: 45%
  - Maintain reference implementations (matrix of compatibility) of supported software and repositories, etc.
  - Should be an open process to allow external contributions (more normal open source community)
- Tasks:
  - User support – 3rd level behind NGIs, EGI
  - Development processes – but responsibility is with the product teams
  - QA
  - Repositories
- Distributions:
  - UMD – EGI maintained and recommended set: EMI will be a major (but not exclusive) source

| Service | EGEE provider | EGI task | EGI provider (or for WLCG) |
|---|---|---|---|
| **Grid Topology - GOCDB** | STFC | O-E-1<br>O-N-1 | STFC |
| **Accounting repository – APEL** | STFC + CESGA | O-E-2<br>O-N-2 | STFC+CESGA |
| **Monitoring data repositories – SAM etc** | CERN | O-E-3<br>O-N-3 | CERN |
| **Operations portal –CIC portal** | IN2P3 | O-E-4<br>O-N-4 | IN2P3 |
| **Ops oversight – OCC, COD** | CERN, IN2P3 | O-E-5<br>O-N-5 | Coord CERN and Tier 1s |
| **Gstat** | ASGC | O-E-3<br>O-E-17<br>O-N-3 | ASGC |
| **Nagios + sensors** | CERN, SRCE | | CERN ?? |
| **Messaging** | CERN | | CERN |
| **Dashboards** | CERN | | CERN |
| **Regional ops dashboard** | IN2P3 | | IN2P3 |

| Service | EGEE provider | EGI task | EGI provider (or for WLCG) |
|---|---|---|---|
| **Ticketing system – GGUS** | FZK | O-E-6<br>O-E-8 | FZK |
| **Ticket triage etc – TPM** | ROCs | O-N-6<br>O-N-7 | All NGIs |
| **Middleware deployment coord** | CERN | O-E-9 | CERN |
| **Interoperation coord** | CERN | O-E-11 | CERN |
| **Network coord - ENOC** | IN2P3 | O-E-12 | France |
| **Ops procedures** | CERN | O-E-13 | CERN |
| **Policy development – JSPG** | STFC | O-E-15 | STFC |
| **Ops security coord** | CERN | O-E-16 | CERN |
| **Coord & maint of ops tools** | CERN | O-E-17 | CERN |
| **Apps support – EIS** | CERN/INFN | ➔ SSC | CERN/INFN |

# Services required for WLCG

| Component | Developer/ Maint | Component | Developer/ Maint |
|---|---|---|---|
| **Data Management** | | **Operations Tools** | |
| FTS | CERN | APEL | STFC |
| DPM | CERN | Accounting portal | CESGA |
| Castor | CERN | GOCDB | STFC |
| dCache | DESY/FNAL/NDGF | SAM | CERN |
| GFAL/lcg-utils | CERN | GridView | CERN/India |
| LFC | CERN | GridMap | CERN |
| Storm | INFN | Dashboards | CERN |
| **Workload Management** | | Nagios sensors | CERN + SRCE +? |
| WMS | INFN, ElsagDatamat | MSG | CERN |
| LB | Czech Rep. | Gstat | ASGC |
| CREAM/BLAH | INFN | CIC Portal | IN2P3 |
| LCG-CE | CERN | DGAS | INFN |
| VOBox container | CERN | | |
| **AAA** | | | |
| VOMS | INFN | | |
| VOMRS | FNAL | | |
| MyProxy | VDT | | |
| Proxy renewal | CESNET | | |
| LCAS/LCMAPS/SCAS | Nikhef | | |
| gLexec | Nikhef | | |
| Delegation framework | CERN, HIP, STFC | | |
| Trustmanager | HIP | | |
| GridSite | STFC | | |
| **General** | | | |
| Information system | CERN | | |
| YAIM framework | CERN | | |

✓ In EMI

✓ In EGI

✓ In SA4

**Middleware required for WLCG**