**PRACE/EGI/MAPPER meeting**

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# People

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T. Ferrari , P. Solagna/EGI.eu operations; T. Antoni/EGI Helpdesk, E. Imamagic/coordination of EGI operations integration.

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# Overview of MAPPER requirements of EGI/PRACE integration and discussion

* **Resource allocation**:
  + *Requirements:* need for streamlined access to e-infrastructure services and resources and common mechanisms for resource allocation.
  + *Discussion***:** Mechanisms for PRACE and EGI differ largely with respect to application for and granting of computing resources.
  + *Action:* no action identified.
* **Resource access**:
  + *Requirements: advance reservation and co-allocation mechanisms should be enabled on EGI and PRACE sites to support novel use-cases (see MAPPER user communities and their requirements defined in D4.1). Example: In-stent Restenosis 3D requires co-allocated resources to run at three sites concurrently (demonstrated during the first MAPPER review, Nov 2011).*
  + *Discussion*: PRACE currently does only support advanced reservation at some sites (i.e. SARA, EPCC) manually. No automatic advanced reservation middleware is available. Not only technical barrier, also policy barrier (interferes with current allocation and priority policies, is relative expensive use of resources). See if there is subset of PRACE sites that would support advanced reservation. EGI has never been supporting advanced reservation as EGI service (no user requirement before MAPPER), it is a policy of the sites themselves to decide if its support is possible (e.g. through QosCosGrid middleware for a limited fraction of the resources at PSNC). PL-Grid is the NGI that already adopts QCG software across all the production sites and supports advance reservation.
  + *Action*:
    - **ACTION 1: MAPPER/EGI to discuss with EGI possibility to support advance reservation in some resource centres.**
    - **ACTION 2: MAPPER/PRACE to discuss advance reservation policy with a subset of interested PRACE sites**
* **Monitoring**:
  + *Requirements*: Statistics concerning resources availability, storage and network parameters (bandwidth and latency) should be provided to users. The middleware should offer live monitoring of simulation progress and application performance. Users should be able to define custom test probes, as what they need may not be covered by existing monitoring test suites.
  + *Discussion*: 3 points where monitoring info is needed: (1) before a workload is submitted for resource and service discovery, (2) during workload execution for status of the running workload and (3) after execution of the workload for analysis of running of the workload (job statistics). EGI monitoring is based on public interface testing and relies on Service Availability Monitoring (based on Nagios). Fabric monitoring is a choice of the site. PRACE monitoring is based on INCA, it has built-in mechanisms for X.509 access, a central DB for collecting results, performs service validation and computes availability. It provides an API. Need to clarify specific monitoring requirements for MAPPER jobs. Plan: first identify all ‘must have’ MAPPER requirements, second validate if requirements are met by PRACE and EGI and third identity if they are required for all users or specific for distributed multiscale MAPPER workloads
  + *Action*:
    - **ACTION 3 (MAPPER): define metrics for monitoring and organize them by priority, once the main metrics have been identified, perform a gap analysis with EGI and PRACE III and discuss 1. How results can be collected from EGI and PRACE for aggregation and 2. Discuss the presentation layer**
* **Accounting**:
  + *Requirements*: User should be able to monitor their allocation usage in a single federated portal. The resources usage information should be updated on daily basis. "To reduce the bureaucratic overhead of EU projects in general, and MAPPER in particular, the procedure of requesting compute time and storage must be greatly streamlined. This can be accomplished by including requests for compute time and storage space in EU project proposals." [D3.1]
  + *Discussion*: Only computing usage information is available, not on storage. Both EGI and PRACE use GridSafe, EGI for integration of accounting from sites deploying GLOBUS, PRACE only as an presentation/publishing interface in parallel to its own accounting tool DART. GridSafe is being extended to be able to publish through messaging (APEL SSM). Because of this, through GridSafe it is should be relatively easy to develop joint accounting information portal.
  + *Action*:
    - **ACTION 4 (EGI/PRACE): to discuss further the technical details of accounting integration. Relevant people to be involved in the meeting: PRACE: Giuseppe, Jules, S. Booth. EGI: J. Gordon, T. Ferrari. T. Ferrari will call a meeting**.
* **Security**:
  + *Requirements*: Every site should be capable of authenticating any EUgridPMA certificate (actually done). The process of acquiring X.509 credentials should be more automated and simplified. Tools that may help in certificate management: Audited Credential Delegation (UCL) and KeyFS (PL-Grid).
  + *Discussion*: no real issue, there seem no specific requirements with respect to security for MAPPER users other than for every other user of the infrastructures. Ease of use of certificates is mainly determined at country level
  + *Action*: no technical issue identified.
* **User support**:
  + *Requirements*: End users should have a single point of contact for both EGI and PRACE infrastructures, as contacting each site independently is far too inconvenient. Need for a common knowledge base and set of good practices for both end users and 1-st line support. Need for help with optimization of applications for multi-cluster/site simulations (e.g. distributed multi-scale simulations)
  + *Discussion*: main discussion on whether to deploy a ‘MAPPER’ specific user interface for the helpdesk, or even on the long term a common interface for all users. From a PRACE point of view this seems not realistic today, since in PRACE just a common interface among sites is introduced which requires experience first. First step is making operational procedures between EGI and PRACE for rerouting of tickets. EGI deploys a central helpdesk system (GGUS) interface to national helpdesk systems where available. GGUS is already interfaced with RT.
  + *Action*:
    - **ACTION 5 (EGI/PRACE): discuss of technical solution to be able to re-route tickets between EGI and PRACE helpdesk systems. T. Ferrari to call a meeting with the relevant experts. PRACE: Liz. EGI: T. Antoni and GGUS team, E. Imamagic.**
    - **ACTION 6 (EGI/MAPPER): to provide MAPPER a helpdesk interface for MAPPER internal support activities**.

A EGI/PRACE hub for combined information, tutorials, training is desirable to provide unified support to users. This action will be tackled after technical integration actions defined in this meeting have been satisfactorily addressed.

* **Relevant MAPPER references** (at http://www.mapper-project.eu/web/guest/documents/)
  + D3.1 "Report on the policy framework resource providers need to adopt to support the MAPPER Project",
  + D4.1 "Review on applications, users, software and e-Infrastructures",
  + D6.3 "Support Process Definition".

# Plan

1. MAPPER to address the issue of advance reservation separately with EGI and PRACE to demonstrate its feasibility.
2. EGI and PRACE to internally discuss integration of accounting and helpdesk systems.
3. MAPPER to identify high-priority monitoring metrics.