

Task Force on European Middleware Co-ordination and Collaboration

Terms of Reference

Version 1.0

September 2010

1. The mandate of the Task Force on European Middleware Co-ordination and Collaboration is renewed under the auspices of the TERENA Technical Programme (<http://www.terena.org/about/tech/ToR.html>) to promote the development and deployment of open and interoperable middleware infrastructure for the members of national, regional and local research and education networking organisations for the benefit of academic and research institutions.

The Task Force will continue to be known as **TF-EMC2** (Task Force for European Middleware Co-ordination and Collaboration).

2. The aims of this Task Force will be:

2.1 To provide a forum for exchanging experiences and knowledge on the development and testing of innovative middleware technologies.

2.2 To promote the use of common standards and procedures in middleware infrastructure at international, national and campus levels.

2.3 To establish strategic services for the European academic community and to ensure their continued operation and enhancement.

2.4 To liaise with relevant middleware activities at international level, such as the International Grid Trust Federation (IGTF) and Internet2's Middleware Architecture Committee for Education (MACE) and the Research and Education Federations (REFEDs) group.

2.5 To provide a forum, to engage with a wider community, and support to joint middleware-related initiatives and projects, including GN3.

2.6 To co-ordinate and provide support to other TERENA activities and task forces and, more specifically, to continue close cooperation with TF-MNM on common goals concerning federated network resource access.

3. The Task Force will focus its activities predominantly in Europe. It will collaborate with organisations outside the European area or on a broader scope with other relevant initiatives worldwide whenever opportunities of collaboration arise that support the aims of the Task Force.

4. The Chair of the Task Force will be Diego Lopez (RedIRIS), who will be responsible for preparing the agenda of each meeting, and for co-ordinating the work of the Task Force. He will also be responsible that the agreed deliverables are produced. Additional work-item leaders will support the chair in ensuring the smooth operation of the Task Force and in preparing the agenda for specific or ad-hoc sub-group meetings, whenever they are deemed necessary.

5. The Task Force will co-ordinate its activities with TF-EMC2 and other middleware focused task forces through the European Committee for Academic Middleware (<http://www.terean.org/activities/ecam/>). Guests from other environments may be invited depending on the items to be discussed. At least once per year a joint meeting of these

middleware focused task forces will be organised to exchange information and disseminate results and experiences.

6. The secretary of the Task Force will be appointed by TERENA. He/she will be responsible for managing membership of the mailing list or lists, maintaining and publishing information on the web site, taking the minutes at each meeting and for making the necessary logistical arrangements.

7. The Task Force will operate with a two-year mandate, starting 1 September 2010. Progress of the Task Force and the results achieved will be disseminated at the TERENA Networking Conference and in the TERENA Annual Report. At the end of the two-year period, the TERENA Technical Committee (TTC) may renew the mandate of the Task Force. If the mandate is not renewed, the Task Force will be dissolved. The Task Force may also be dissolved if the TTC considers that it is making insufficient progress or that its activities are no longer useful or relevant, or if the Task Force chair resigns and no replacement can be found.

8. The Task Force is committed to assess middleware solutions proposed by other TERENA Task Forces or activities within other relevant projects and initiatives in the academic community. It will also collaborate with organisations outside Europe or with a different scope whenever such collaboration will assist in achieving the aims of the Task Force.

9. The Task Force will be open to any individual who can offer appropriate expertise, manpower, equipment or services. Participation will be on a voluntary basis.

10. The Task Force will meet at approximately four-monthly intervals (facilities for remote participation should be made available). Physical meetings will be held at various locations, taking care to reduce overall costs to participants.

11. Reports and other results of the Task Force shall be placed in the public domain, with the exception of information that is known to be commercial in confidence and subject to a Non-Disclosure Agreement.

12. The Task Force will have a mailing list (**tf-emc2@terena.org**) for communication between the participants. Separate mailing lists may exist for specific work items and sub-tasks. The mailing list archive will be publicly available.

List of Work Items

1. Services to the community – Licia Florio

Several services that have been developed within the successive mandates of TF-EMC2 are of great value to the community, specifically TACAR (<https://www.tacar.org/>), TCS (<https://www.terena.org/activities/tcs/>), the SCHAC schema and registries (<http://www.terena.org/activities/tf-emc2/schac.html>), and the international federations wiki (<https://refeds.terena.org/index.php/Federations>).

This work item will concentrate on:

- a. Analyzing the status of the services and promoting their usage.
- b. Proposing and validating service enhancements.
- c. Contributing to the maintenance and sustainability of the services.
- d. Exploring the feasibility of new services and assessing on their practical

implementation.

- e. Exploring their usage in additional application domains, especially those related to the Special Areas of Interest in the TERENA Technical Programme and wider project activities.
- f. The task force will be a forum where the results of the task force itself as well as the results of the GN3 project and other related networking middleware will be discussed and promoted if deemed appropriate.

2. Community outreach – *Torbjorn Wiberg*

The very nature of middleware requires it to be pervasive, and therefore the efforts in reaching the potential (both user and contributor) communities are a key aspect for the success of middleware infrastructure service.

This work item will continue the support to previous initiatives already initiated in this respect within previous mandates, such as:

- a. The organisation of EuroCAMP workshops.
- b. The collaboration with EUNIS and other national and international IT practitioners associations.
- c. The support and promotion of the REFEDs interest group.
- d. The liaisons with the Grid community, through EGI, IGTF, OGF, EMI and the NREN-and-Grids workshops.
- e. Initiating and fostering the development of other outreach activities as the Task Force sees fit.

3. Diagnostic-related Activities – *Miroslav Milinovic*

The growing complexity of network services (and of the network as a service) has led to a situation where the response to a single user request typically involves services of several infrastructural components. This means that it is becoming increasingly difficult to both offer accurate data to users about the status of a given request, and to provide information suitable for assessing service usage and for spotting possible areas and means of enhancement. It is therefore necessary to harmonise diagnostic procedures, to be able to present a coherent view of operational results to both user and administrators. This work item will tightly collaborate with the service and research activities in GN3 related to user and community services.

4. Reputation Systems – *Jaime Perez*

Trust is one of the key issues when dealing with distributed and federated services and a cornerstone of identity management. This work item intends to address the propagation of trust in highly distributed and/or data-intensive environments, such as publication environments, social networks, and data repositories. The level of trust required and assigned to a system can be defined through many mechanisms. The systems that assess reputation information can range from well-established systems, like anti-spam tools, to new environments like data provenance (<http://www.w3.org/2005/Incubator/prov/>) or social networks.

This work item will follow-up on the Email Quality (EQUAL) workshop, facilitating the usage and evolution of the reputation systems and information that utilise both DNS and other sources of reputation data for e-mail quality enhancement architectures.

5. Identity Services beyond Web Single Sign-On – *Josh Howlett*

The European academic community has identified many use cases for applications, other than those accessible via a web browser, which would benefit from federated identity. Going beyond the browser limits constitutes a fundamental requirement to fulfill

the promise of Identity Management in simplifying service administrator's tasks and enhancing user's experience.

This work item will focus on enabling community contributions to initiatives such as Project Moonshot (<http://project-moonshot.org/>)

6. Academic Data Mobility – Victoriano Giralt

The "Bologna Process" has been one of the main drivers of middleware cooperation in the European academic networking space since its signing in 1999. The promise of a seamless IT infrastructure to facilitate faculty and student mobility across European higher-education institutions has been behind many of these efforts, from data schema harmonization (like SCHAC) to identity federation interoperability (such as eduGAIN). The maturity of identity federations, middleware and campus IT infrastructures makes this promise achievable in production environments. This work-item will track the evolution of homegrown, consortia and vendor systems for campus management information systems (MIS), focusing on data aggregation and mobility between compatible and competing MIS systems.

The goal of this work-item will be to strengthen the already existing technical liaisons with initiatives like RS3G (in EUNIS) and DSDP (in EAIE), assessing the application of TF-EMC2 results in their efforts, as well as making these results adapt to requirements from this application area.

7. Service-oriented Collaboration Infrastructures – Niels van Dijk

Collaboration across institutional borders is at the heart of current scientific and educational processes. These processes often include the collaborative use of online applications, services and instruments. The applications used by a collaboration effort are in many cases distributed between multiple domains, both organizational and technical.

Identity federations offer opportunities for securely accessing such services, but federated identity alone is not enough to support smooth collaboration. To meet the challenges of these collaborations, a number of initiatives are required to provide better support for the use cases.

This work-item will monitor, track and disseminate activities and progress in this field. Furthermore the work item will foster:

- Harmonizing (open standards) interfaces between emerging collaboration (VO) platforms, virtual research environments (VREs), Grids, identity federations, services and instruments.
- Reuse and sharing of service deployments for common collaboration services and components.
- Shared development of new services in the field of online collaboration.

The work-item will collaborate in related outreach efforts and will help in bringing the needs and requirements of the VOs to our task force.

8. Alternative Forms of Expressing Identity – Diego Lopez

Academic federations have traditionally relied on SAML-based protocols to exchange identity data. This model has proven successful and has been able to interoperate with similar infrastructures, such as X.509-based Grid identities. Identity data exchange is attracting the interest of many other sectors (from social networks to governmental services), which translates in new formats, protocols, architectures and procedures. The most relevant in this respect are user-centric identity systems. Academic infrastructures must explore ways for interoperating with these systems, while maintaining the basic

principles in the identity federation design: distributed architecture, trust assessment, and privacy preservation.

Deliverables

New deliverables and work items may be added as the Task Force sees fit. Work item activity plans will be maintained and revised by each work item leader to ensure its continued relevance with respect to changes in community participation, technology and standards.