



Enabling Grids for E-science

NA4 Tasks for EGI

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- **Points from EGEE-NA4/EGI Workshop**
- **Tasks:**
 - Support Tasks
 - Scientific Cluster Tasks
 - Management Tasks
- **Proposed SSCs**
- **Conclusions**

- **Agenda:**

- <http://indico.cern.ch/conferenceDisplay.py?confId=45736>

- **Minutes:**

- <http://indico.cern.ch/materialDisplay.py?materialId=minutes&confId=45736>

- **Primary conclusion:**

- Accept general idea of SSCs to organize user community involvement.

- **Questions:**

- Scope of SSCs.
- Support of SSCs.
- Procedures/mechanisms for forming SSCs.

- **Rights:**

- Expect that EGI will provide resources to the SSCs. This is expected to be far from full funding of the SSC, but should still be significant. Types of resources that could potentially be provided are: seed resources, meeting support, and manpower.
- Expect that SSCs will have access to resources. This includes mechanisms for making their own resources available and potentially (priority) access to centralized services, for example, help desks, central grid services, etc. This includes access to "community services" that are made available to the full EGI user community such as operations help, middleware help, etc.
- Expect that the SSC will have representation in the EGI council, middleware coordination group, and the EGI.org directorate. The SSCs must have the ability to feed their technical and non-technical requirements into EGI.
- Expect to have access to training and documentation.
- Expect to have forums for SSC user communities and SSC managers to discuss with each other.

- **Responsibilities:**

- The SSC must have a cohesive community behind it that is able to take ownership of the SSC and to drive its evolution.
- The SSC must have a European-level existence. There will be national or regional communities, but those should be served by individual NGIs until the underlying community spans a couple European countries.
- The SSCs will have a fairly long lifetime (minimum 2-3 years).
- The SSCs will report facts and figures about their use of EGI in order to help EGI (and its funding agencies) understand the scope of the work accomplished with EGI.
- The SSCs are expected to be "good citizens" of EGI and to follow the defined EGI policies (both security and operational policies).
- The SSCs are expected to operate transparently allowing a clear view of the SSC's activities and making the list of provided services available to the full EGI community.

Task	Effort	FTE
VOS	70 PM	3 FTE
DUS	232 PM	10 FTE
APS	261 PM	11 FTE
Clusters	846 PM	35 FTE
Mgt.	92 PM	4 FTE
Reg.	262 PM	11 FTE
EGI: (11 + 1) FTE		

Task	Description	EGI.or g	SSC	NG I	VO
VOS	<i>VO Registration</i>	X			
VOS	<i>Site Validation Tests</i>	X		X	
?	Core VO Service Provision	X		X	
DUS	<i>Help Desk (Grid Usage)</i>	X		X	
DUS	<i>Documentation</i>	X	?	?	
APS	<i>Help Desk (App. Porting)</i>	X	?	?	
APS	Case Studies		?	?	
APS	Consulting		?	?	
APS	<i>Application DB</i>	X			
Clusters	Devel. of Services		X		
Clusters	Integration of Domain's Resources		X	X	
Clusters	<i>Feedback</i>	X	X		
Clusters	Dissemination		X		
Clusters	<i>Help Desk (Community Services)</i>		X		
Clusters	Valid. of Site Resources/Services		X		X
Clusters	Coordination		X		
Mgt.	<i>User Conference</i>	X			
Mgt.	<i>Tech. Coordination</i>	X	X		
Reg. Mgt.	Regional Coordination			X	

- **Name: VO Registration**
- **EGI Entity: EGI.org (UCS?)**
- **Description:**
 - Running a central database and interface for VO registration. Maintaining and evolving the database and interface. Running the VO registration process, including providing support to VO managers and validating provided information.
- **Interfaces:**
 - Talks with VO managers for registration. Talks with developers of other services regarding extent, format, and access to registration information. Talks with operations to ensure comprehensive configuration information is provided.
- **Rights:**
 - Expect that financial and operational support (directly or indirectly) provided by EGI.org.
- **Responsibilities:**
 - Provide efficient registration process and useful database of configuration information.
- **Resource Allocation:**
 - Expect effort to be provided through the UCS. Not clear if this actually falls into any of the categories in Table 5 of blueprint.
- **Assumptions:**
 - Assume that there will be a centralized VO registration. Another option is distributing this within each NGI; however, this raises issues of coherency of information and the ability to get an overview of the VOs operating on the infrastructure.
- **Unknowns:**
 - Activity bridges operations, support, and development. Need to understand in detail which parts of EGI will contribute to ensure effective service.

- **Name: Site Validation Tests**
- **EGI Entity: EGI.org (UCS?), NGI(s)**
- **Description:**
 - Maintaining a battery of reusable site validation tests. Support to VO managers/VO members in using these tests effectively.
- **Interfaces:**
 - Talks with VO managers to understand what tests are necessary and to provide help on using the tests. Talks with middleware developers and operations to ensure that tests can be used in site selection.
- **Rights:**
 - Expect that financial and operational support (directly or indirectly) provided by EGI.org.
- **Responsibilities:**
 - Provide comprehensive set of site validation tests and information on how to use them effectively.
- **Resource Allocation:**
 - Expect effort to be provided through the UCS. Not clear if this actually falls into any of the categories in Table 5 of blueprint.
- **Assumptions:**
 - Assume that the SAM infrastructure (or equivalent) will be available in EGI. Also assume that there will be some mechanism (CVS, SVN, etc.) for versioning and maintaining code for the tests.
- **Unknowns:**
 - If/where does this task fit into UCS?

- **Name: Core VO Service Provision**
- **EGI Entity: EGI.org, NGIs**
- **Description:**
 - Access to the grid infrastructure requires a few core services to be deployed (VOMS, LFC, etc.). Provision of those services for all VOs running on the grid infrastructure should be guaranteed by EGI.org (but probably actually run by various NGIs).
- **Interfaces:**
 - Coordinator within EGI.org to handle requests for the deployment of core services.
- **Rights:**
 - Expect that core services will be guaranteed by EGI.org.
- **Responsibilities:**
- **Resource Allocation:**
 - Expect that coordination effort will be provided by EGI.org. Probably the services and the effort to run them will be provided by participating NGIs.
- **Assumptions:**
 - EGI.org will guarantee the provisioning of core services and will coordinate allocation process.
- **Unknowns:**
 - Whether EGI.org will actually take this on? If not, then how will this be organized.

- **Name: Help Desk (Grid Usage)**
- **EGI Entity: EGI.org (UCS), NGIs**
- **Description:**
 - Providing help desk support with an emphasis on documentation and utilization of the grid.
- **Interfaces:**
 - Direct interface to users of the grid infrastructure. Collaboration with other entities in project for specific support (i.e. help with detailed questions on middleware) or for the need for certain documentation.
- **Rights:**
 - Expect that the coordination effort will be covered by EGI.org (UCS).
- **Responsibilities:**
 - Treat tickets related to grid utilization; forward other tickets to appropriate support groups.
- **Resource Allocation:**
 - Expect that the coordination will be funded directly by EGI.org (UCS). Expect that majority of effort will come from NGIs.
- **Assumptions:**
 - Assume that there will be a global system for treating support tickets.
- **Unknowns:**
 - How teams coordinated by EGI.org will actually function? Will there be a specific requirement that NGIs provide a contact and effort for these types of teams?

- **Name: Documentation**
- **EGI Entity: EGI.org (UCS), NGI?, SSCs?**
- **Description:**
 - Systematic review of documentation produced by entities within the project. Organization (indexing) of the available documents along with some information about their quality and whether they are current. Creation of high-level documentation (e.g. Users Guide) and short HowTos.
- **Interfaces:**
 - Need to talk with those producing “low-level” documentation of services and APIs. Need to discuss with operations about how services are deployed and how they can be used in practice. Need to discuss with user communities (through SSCs?) about what documentation is missing and what forms the documentation should take.
- **Rights:**
 - Expect that this effort will be financially supported 100% by EGI.org and/or the NGIs. Expect that the project will provide the tools necessary to create and manage the documentation. Expect that middleware developers will provide accurate and complete low-level documentation of services, including how the services are deployed and used.
- **Responsibilities:**
 - Provide a “clearing house” for documentation, ensuring the quality of documentation produced by others. Provide high-level documentation that provides information on how to use the grid as a full system.
- **Resource Allocation:**
 - Direct funding of this effort through EGI.org UCS (Coordination of Technical Information and Documentation). Also expect that additional funded effort will be required at NGI-level.
- **Assumptions:**
 - Low-level service and API documentation is provided by developers. Assume that hired effort will be people with explicit experience with writing/maintaining technical documentation.
- **Unknowns:**
 - No major unknowns.

- **Name: Help Desk (Application Porting)**
- **EGI Entity: EGI.org (UCS), NGI?, SSC?**
- **Description:**
 - Provide information concerning the porting of applications to the EGI infrastructure and on the integration of grid services with the application.
- **Interfaces:**
 - Direct interaction with application developers, either via GGUS or other forums (mailing lists, chat rooms, etc.). Interactions with core middleware developers and with RESPECT software developers to understand how the software can be used effectively.
- **Rights:**
 - Coordination of activities through EGI.org. Team effort supplied either through NGIs or SSC.
- **Responsibilities:**
 - Provide application porting information to application developers.
- **Resource Allocation:**
 - Expect coordination from EGI.org. Not clear exactly what category this falls into (UCS Coordination of Training Efforts?).
- **Assumptions:**
 - Desire for having an identified (and well-funded) team dedicated to application porting.
- **Unknowns:**
 - Whether the bulk of the team will be funded through NGIs or whether an SSC is more appropriate.

- **Name: Case Studies**
- **EGI Entity: NGI?, SSC?**
- **Description:**
 - Providing written case studies of applications that have been successfully ported to the grid infrastructure. These serve as guidelines for future (similar) applications.
- **Interfaces:**
 - Works with application developers to port their applications to the grid. From this case studies are written. Expect these studies to be made available through the EGI documentation tasks.
- **Rights:**
 - Funded effort may come from NGIs or from SSC.
- **Responsibilities:**
 - Provide written case studies as a mechanism to document application porting techniques and to provide a guide for future applications. Expect this to be done for each application receiving “consulting”.
- **Resource Allocation:**
 - Expect only minimal coordination through EGI.org.
- **Assumptions:**
 - Desire to have dedicated team for application porting support.
- **Unknowns:**
 - It is not clear whether the bulk of the team will be funded through the NGIs or through an SSC.

- **Name: Consulting**
- **EGI Entity: NGLs?, SSC?**
- **Description:**
 - Intensive consulting with application developers to get their applications running on the grid infrastructure.
- **Interfaces:**
 - Direct interaction with application developers. Interaction with middleware (and RESPECT software) developers to understand the best ways to use their services/APIs. Interaction with other support activity personnel and with SSC leaders to identify “clients”.
- **Rights:**
 - Significant number of team members for reasonable service. Access to funds to subsidize travel for “clients” and for the team members.
- **Responsibilities:**
 - Provide porting plan for “clients” and help with implementing that plan.
- **Resource Allocation:**
 - Expect that funding for bulk of team will come through NGLs or SSC. Travel funding may also be provided in the same way or through separate grants.
- **Assumptions:**
 - Desire to have centralized application porting team.
- **Unknowns:**
 - Not clear what the eventual funding source will be (NGLs or SSC). This will affect strongly whether this is a “centralized” or “distributed” team.

- **Name: Application Database**
- **EGI Entity: EGI.org (UCS)**
- **Description:**
 - A database containing information about the applications running on the grid infrastructure. Serves as dissemination tool and a support resource. Requires funding for running the database and for maintaining and evolving the software.
- **Interfaces:**
 - Expect end users and funding agencies to access the database. Team should interact with various user communities to understand what information is relevant and how to make database easily accessible and easy to use.
- **Rights:**
 - Effort for supporting the database. Contributions from user community to provide information.
- **Responsibilities:**
 - Making the database and interface accessible and easy to use.
- **Resource Allocation:**
 - Expect funding to come (directly or indirectly) through EGI.org. Not clear where in UCS this task would be found.
- **Assumptions:**
 - Assume that a central database is desired for dissemination and support reasons. Don't expect distributed database to be effective.
- **Unknowns:**
 - Where exactly the funding for this activity will come from? If EGI.org, what UCS task. If elsewhere, how will database be handled?

- **Name: Development of Services**
- **EGI Entity: SSC(s)**
- **Description:**
 - The development of high-level grid services and APIs. These may be generic or highly-customized.
- **Interfaces:**
 - Direct interactions with middleware developers when interfacing these high-level services to the grid, alternatively with the application porting group if it exists.
- **Rights:**
 - Access to appropriate documentation and support for interfacing new services to the core grid services. Reasonable documentation and examples for common tasks (e.g. authentication and authorization).
- **Responsibilities:**
 - Provide software to their user community. If the services are generic, dissemination (and support) of services to other communities.
- **Resource Allocation:**
 - Expect this to be fully funded through SSC. There should be some coordination at EGI.org level to prevent duplicated development and to encourage sharing.
- **Assumptions:**
 - That there will be no development of high-level services by middleware providers.
- **Unknowns:**
 - Who will be the contact for reporting developments and coordinating information.

- **Name: Integration of Domain's Resources**
- **EGI Entity: SSC(s), NGI(s)**
- **Description:**
 - The integration of a user community's computing resources with the grid infrastructure. This includes community data sources, standard computing services, and/or instruments.
- **Interfaces:**
 - Expect interaction with middleware developers or with application porting group if it exists. Direct interaction with their user community to understand what resources need to be interfaced to/made accessible from the grid. Interaction with NGIs regarding integration of hardware resources; expect EGI.org to provide contacts for NGIs.
- **Rights:**
 - Access to reasonable documentation and support to interface resource to the grid infrastructure.
- **Responsibilities:**
 - Provide information to community on how to access the user community's resources via the grid. If these are generic resources, then this information should be shared with other communities.
- **Resource Allocation:**
 - Expect that this will be fully funded through the SSC.
- **Assumptions:**
 - None.
- **Unknowns:**
 - Who will be the contact to ensure coordination between SSCs if the techniques are potentially interesting for other communities? This goes through the application porting group or the EGI.org itself?

- **Name: Feedback**
- **EGI Entity: SSC(s), EGI.org (UCS)**
- **Description:**
 - Providing feedback to EGI with respect to the middleware requirements, the utility of the services, operational problems, and administrative processes.
- **Interfaces:**
 - Expect that the SSCs will interact with their user communities and then provide collected information/experiences with the relevant coordinator in EGI.org.
- **Rights:**
 - Right to be represented (directly or indirectly) on boards dealing with middleware evolution, operations, and administrative processes.
- **Responsibilities:**
 - Ensure that relevant feedback is provided to EGI.
- **Resource Allocation:**
 - Expect coordination effort to be fully funded through EGI.org (UCS).
- **Assumptions:**
 - Assume that most of the user community will be covered via SSCs.
- **Unknowns:**
 - There is still a need for those “outside” of SSCs to report their needs and experiences. It is unclear how this feedback will be collected and forwarded to the correct people.

- **Name: Dissemination**
- **EGI Entity: SSC(s)**
- **Description:**
 - Dissemination of grid activities/technologies within a particular (scientific) community. This typically happens through direct interactions between scientists and through the domain's conferences. Additionally, the EGI should sponsor/organize meetings for specific scientific disciplines.
- **Interfaces:**
 - Direct interaction between SSC and it's user community. Interaction with EGI to obtain funding for grid-focused meetings.
- **Rights:**
 - Access to funds for organizing meetings. Logistical support for those meetings.
- **Responsibilities:**
 - Make dissemination efforts and their results available to EGI.
- **Resource Allocation:**
 - Expect that EGI.org will provide logistical and tool support for meetings. Expect also that specific funding will be available to support meetings.
- **Assumptions:**
 - Most efficient dissemination comes through others in the same field. Probably also need general dissemination for general public or for new communities.
- **Unknowns:**
 - Unsure if such direct funding and support from EGI is possible.

- **Name: Help Desk (Community-Specific Services)**
- **EGI Entity: SSC(s), EGI.org (UCS)**
- **Description:**
 - Providing help desk support focused on using community-specific software, services, data sources, etc. (how to use and problems).
- **Interfaces:**
 - Expect to use common ticketing system to interact with users and other supporters.
- **Rights:**
 - Access to common ticketing system.
- **Responsibilities:**
 - Provide relevant support to their user community.
- **Resource Allocation:**
 - Expect all of this effort to be funded through SSC. Expect ticketing system and coordination to be provided by EGI.org.
- **Assumptions:**
 - Assume that user communities will want to use common ticketing system.
- **Unknowns:**
 - How will various support teams will interact effectively?

- **Name: Validation of Site Resources/Services**
- **EGI Entity: SSC(s), VO(s)**
- **Description:**
 - Detailed testing of site resources and services to ensure that they meet the requirements of the given user community. Many actors do some level of testing, but it is the clusters that do detailed testing in close collaboration with middleware providers. This also includes regular testing like currently with the SAM tests.
- **Interfaces:**
 - Close collaboration with middleware providers, service providers, and the concerned user community (both end-users and application developers).
- **Rights:**
 - Expected support from operations for infrastructure to perform detailed testing. This includes some testing framework for the production infrastructure; it may include a separate testing infrastructure. Expect a SAM-like infrastructure that can be customized by SSCs and VOs.
- **Responsibilities:**
 - Provide results to the affected user community and to the affected middleware or service providers as necessary.
- **Resource Allocation:**
 - Expect that the effort will be provided by the SSC and/or VO funding. Testing infrastructure must be provided either directly or indirectly by EGI.org.
- **Assumptions:**
 - As there is no development or operations within EGI.org, we expect that the testing will also not occur directly within EGI.org.
- **Unknowns:**
 - Need to know who within EGI.org will coordinate these types of activities.

- **Name: Coordination**
- **EGI Entity: SSC(s)**
- **Description:**
 - Coordination of all of the activities that concern a given user community. This includes common problems with the middleware, development of high-level services, political issues concerning SSC, funding, etc.
- **Interfaces:**
 - Expect that the coordinators will interact “externally” with EGI council, EGI.org administration, middleware coordinators, and other SSC coordinators. They must also interact with all of the actors within their own SSC (users, resource providers, etc.).
- **Rights:**
 - Expect that these activities will be heavily (if not entirely) supported by EGI.
- **Responsibilities:**
 - Provide information about the activities within the SSC to external parties. Disseminate information from the external parties within the SSC’s user community.
- **Resource Allocation:**
 - The coordination activity should be financially supported by EGI. There must be a recognition that these activities normally do not help someone’s academic career and are difficult to support via academic institutes.
- **Assumptions:**
 - The person coordinating is likely to be a researcher for scientific SSCs. As technical competence in the field is usually necessary to understand how grid technologies can advance the scientific research.
- **Unknowns:**
 - Unknown how the coordination aspects will actually be supported. Will this come from a direct “payment” from EGI.org or will each SSC have to find funding to support this activity?

- **Name: User Conference (current User Forum)**
- **EGI Entity: EGI.org**
- **Description:**
 - Organization of a large conference for users of the grid infrastructure.
- **Interfaces:**
 - Talks with the user community (probably through the SSCs and VOs) to arrange a program/format of interest. Arranges with NGIs and EGI.org the “internal” funding for the event. Discusses with outside entities for sponsoring of the event.
- **Rights:**
 - Expect full support from those benefiting from the User Forum. (E.g. members from the SSCs should participate on the program committees.)
- **Responsibilities:**
 - Responsible for all aspects (logistical, financial, and scientific) for the event. Provide funds for inviting representatives of new and/or strategic communities to the event (i.e. community building funds).
- **Resource Allocation:**
 - Expect that basic costs and logistical infrastructure for the event will come directly from EGI.org. Expect that a full-time person will be dedicated to this within EGI.org. Sponsorships for the event should be arranged via EGI.org staff.
- **Assumptions:**
 - Assume that the unique character of the User Forum events (focused on the frontier between grid technology and scientific use of it) will still be needed.
- **Unknowns:**
 - How the evolution from the current User Forum events to the EGI User Forum can happen. Willingness to expand current program? Having EGI.org staff in place to take over responsibilities?

- **Name: Technical Coordination**
- **EGI Entity: EGI.org (UCS?), SSC(s)**
- **Description:**
 - Much of the technical coordination between different disciplines now happens within the NA4 Steering Committee or through TMB working groups with strong NA4 participation. To avoid duplication and ensure a coherent evolution, this technical coordination must continue in the EGI era.
- **Interfaces:**
 - Expect that EGI.org will provide a forum where the SSC coordinators can discuss common technical issues and work on a prioritization of those issues. Expect SSC coordinators to interface to their user communities.
- **Rights:**
 - Expect to be able to raise issues with the infrastructure and to be able to influence the priority for resolving them. Expect that EGI.org will provide the coordination/tracking of raised issues.
- **Responsibilities:**
 - SSC coordinators should develop a consensus within their communities regarding issues and their priority. Provide funds for sponsoring these meetings and for inviting strategic people to attend.
- **Resource Allocation:**
 - Costs of the coordination at both EGI.org and SSC levels should be entirely funded by EGI.
- **Assumptions:**
- **Unknowns:**
 - Exact composition of coordinating body. Whether this will just include the users or whether middleware, operations, etc. will also be directly involved.

- **Name: Regional Coordination**
- **EGI Entity: NGIs**
- **Description:**
 - Currently the regional coordinators are responsible for interfacing between regional support and corresponding EGEE-NA4 centralized support teams. They also provide overviews of user activities within their region and act as first-line support.
- **Interfaces:**
 - Expect interfacing between users within a region and centralized support structures to continue. Expect that regional coordinators will also continue to report about use of the grid within the region.
- **Rights:**
 - Tools and information to effectively make use of centralized services.
- **Responsibilities:**
 - To report on activities within the region and to provide an efficient liaison between EGI.org and the regional user community.
- **Resource Allocation:**
 - Funded entirely by the NGIs.
- **Assumptions:**
 - Assume that not all users will be covered by an SSC and that in that case regional coordinators can pick up the slack.
- **Unknowns:**
 - Exactly how the regional coordinators will plug into the EGI.org hierarchy.

- **Expect at zeroth order that EGEE clusters will become SSCs. Have responses from:**
 - Life Sciences
 - Grid Observatory
 - Earth Sciences
 - Fusion
 - Comp. Chemistry
 - Astronomy & Astrophysics

- **SSC model can work for user communities, but...**
 - Scope (Who? What size? What communities?)
 - Funding (Who pays? Short and long terms?)
 - Procedures (Who approves? Who's eligible? How?)
- **Not clear if NA4 support functions will become SSCs.**
 - Direct User Support
 - VO Support
 - Application Porting Support
- **How will users and VOs not covered by an SSC interact with EGI?**