Table 1: User Support (SA1)

Work package number	SA1	Start date or starting event:		M01		
Work package title	User Support					
Activity Type[1]	SVC					
Participant number						
Participant short name						
Person-months per participant:						

Objectives
- Create and maintain targeted documentation
- Provide support concerning use of the grid infrastructure
- Provide user support for domain-specific services and applications
- Provide intensive debugging support for operational problems
- Contribute to the treatment of user support tickets
- Investigate novel mechanisms for providing user support
- Support for the evaluation and testing of pre-production services

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Description of work (possibly broken down into tasks) and role of participants

The grid remains a complex, distributed system and its effective use requires dedicated user support at many levels.

Where appropriate the VRC will maintain documentation targeted to its user community, concentrating on domain-specific applications, techniques, and data repositories. Often documentation by itself it insufficient so the user support teams will provide help with using the grid services to accomplish scientific analyses.

Operational problems on the grid can be difficult to trace especially for those scientific disciplines that have extensive analysis frameworks built over the grid middleware. In this case, the user support teams will help with the detailed debugging of operational problems to determine where the problem lies and to follow up with site managers or middleware providers to ensure a fix. The intensive debugging also builds expertise within the community to help it become for self-sufficient.

The VRCs will use the standard EGI ticketing system to track problems and the user support teams will appear as support teams within that system. As contributors to that system the user support teams will solve tickets when possible or route tickets to other appropriate support teams.

Often ticketing systems and email are too limiting to provide effective, quick user support. The user support teams within ROSCOE will collectively investigate providing user support through novel interfaces such as chat, VoIP, or videoconference. Similarly alternate types of documentation such as podcasts, webcast, video will be tried to see if they can improve the user experience.

The description of testing of pre-production services is missing.

Phases

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[1] Please indicate one activity per work package:
RTD: Research and technological development; COORD: Co-ordination; MGT: Management of the consortium;
SVC: Service activities

Phases: setup, provision of support.

Common Tasks
The common activity for this work package will be the development and maintenance of a knowledge base. There will be common meetings to ensure that a plan is developed for new content, that existing content is reviewed, and that a logical organization is maintained.

Each VRC coordinator must rewrite their contribution keeping in mind the objectives of the activity as well as the overall strategy.

High Energy Physics
Operational support for all of the tasks below for the LHC experiments will be provided by CERN (2 FTEs, co-funded), INFN (2 FTEs, co-funded) and UIO (0.5 FTEs, co-funded).
GSI will provide operational support for all of the above tasks for the FAIR community (2 FTE co-funded)
DESY will provide operational support for all of the above tasks for the ILC community (1 FTE co-funded)
CESNET will investigate generic and sustainable implementation of LHC data analysis (Tier3) support (1 FTE, co-funded)

This work explicitly covers support for the WLCG, FAIR and ILC applications communities. Other HEP experiments will intrinsically benefit from the activities given the general nature of many of the tasks described below and the fact that the HEP community is highly cohesive – many people being involved in more than one experiment, often at different host laboratories.

The work will be organised around a number of tasks that are fully consistent with the overall goals of this work-package and include: (stress) testing of new middleware features and functionality in pre-production environments according to the supported VOs' requirements; providing general and specialised grid expertise for the rapid resolution of problems; development of experiment-specific add-ins/plug-ins to operational tools; support for the integration of experiment-specific critical services into the overall grid infrastructure; investigation and deployment of solutions to enable an effective user-to-user and user-to-expert support model.

Life Sciences
Users in the biomedical community range from technology experts developing applications to scientific researchers purely using the tools.
The objective of this task is to guide, ease and assist users on efficiently exploiting the infrastructure, in order to achieve a large adoption of scientific gateways both from users and service providers in the life sciences user community and promoting and encouraging the use of grid-enabled bioinformatics and medical informatics web services in the research community
This task will focus on collecting and structuring information and providing first line user support for the access to VO core services in collaboration with EGI user support teams

Users developing and deploying Grid applications for health will surely meet doubts, problems and unsolved needs that might be solved by other experts in the field. There are different ways of providing support:
- Knowledge base. This will contain references to other general-purpose docu-

mentation sources about Grid programming and deploying, but it will also develop new use cases based on the specific scenario and requirements of LS. This subtask will also generate a list of requirements coordinated with other VRCs for driving developers on new generation components.

- Ticket-based support request. Tickets on unexpected behaviour, failures or usage doubts are a very powerful tool to help particular users and to contribute to the knowledge base. However, this approach has been inefficient in many past experiences, mainly due to the lack of organisation and reward. This task proposes reducing those barriers by means of creating an explicit list of expertises and people, the creation of the figure of the ticket dispatcher, according to this expertise, and the implementation of a rewarding mechanism for the most active ticket-solvers with, for example, covering the registration to conferences in the field (such as Healthgrid).

Computational Chemistry and Material Science Technology

Front Desk (FD) is the technical unit responsible for several activities concerning consulting (for example direct interaction with application developers to get their application(s) running on the grid infrastructure), integration of CMST community resources with the grid infrastructure or assistance for application porting including integration of grid services necessarily to utilize the application in grid environment. Front Desk can also be used to spread information about the VRC among its members, to offer information about the membership to NGIs or consortia taking care of aspects relevant to the VRC.

User's Support (US) is the technical unit responsible for User support. We can distinguish two main areas that User's Support will have to deal with, namely Direct Users Support and Technical Support – responsible for all the services and tools needed to keep the infrastructure ready for utilization by users. The first one will be responsible for direct interactions with users including disseminations, trainings and first line support for users. VRC members involved in this task will also provide new and review existing documentation. Technical Support role is Operations related. Duties of Technical support will include VO registration, site validation tests, provision of core services as well as services specific to software needed by CMST community. Coordinators oft these tasks will closely cooperate with EGI User Technical Support Group as well as with middleware developers.

Grid Observatory

User support for the grid observatory has two faces. The first one is related to the usage of the gateway, and will be assured by HG. Given the fact that the target community is experienced in computer technology, this activity will be limited to the interaction with the overall support system (ticketing and possibly more advanced tools) for issues related to the gateway interface with EGI. The second aspect is documentation, and will be assured by LRI. Documenting both the data organization and the analysis facilities is essential for facilitating expert usage of the gateway.

Complexity Science

The Complexity Science VRC will set up a specialized support team that will provide user support services to the wider Complex Science community. The support team will take advantage of the helpdesk infrastructure provided by the EGI and will create a support unit specific to this VRC. The main task of the support team will be handle trouble tickets coming from the complex science users, to provide answers and fixes to user questions and problems and to escalate requests to the other appropriate units within the helpdesk service whenever such an action is needed (problem or query is too generic to be considered CS VRC specific or is out of the scope of the CS VRC Support

Team). The Support Team will also provide answers to applications related queries so that best practices in the porting of applications are met. For advanced user questions related specifically to the porting of Applications to the Grid infrastructure the Application Support VRC will be contacted and assistance will be asked for.

In addition to providing answers and fixes to CS VRC specific user problems the Support Team will also maintain the Projects Knowledge Base making sure that related material is up-to-date and that new CS VRC services are properly documented. Answers to application related queries that will be specific to the CS VRC community will also be archived in the project knowledge base.

AUTH will supervise the Support Team Operation (6 PM)
BIU and UA will participate in the CS VRC Support team (6PM each)

On top of the CS VRC Scientific Gateway we plan to implement a plug-in that will allow users to directly communicate with the GGUS helpdesk and through it with the CS VRC Support Team. This interface will ease the CS users in that they will not have to go through the GGUS helpdesk directly in order to submit a trouble ticket but instead use a more attractive and much simpler interface to ask for support.

AUTH will be focused on the implementation of the Support Team plug-in on top of the CS VRC Scientific Gateway and its further operation (3 PM)

Photon Science

End-User support for PS communities
The PS user communities are extremely volatile users. A large fraction of the researchers performing experiments at light source facilities are first time user, being novices to the instrument as well as the Grid. User support is hence an essential and ongoing effort. Planned tasks involve

- Investigation and deployment of tools which enable effective interaction between facilities, users and experts.
- Most facilities have an in-house support infrastructure like an issue tracking system and most communities have their own bulletin boards to post issues specific to the community. There is however no way to exchange between facilities and/or communities and no direct integration of the GGUS system. Interfacing between the systems will improve the user experience and is essential for users performing analysis in a Grid environment.
- Coordination of support providers, namely experts from the VO taking responsibilities for specific user communities.
- Coordination of general and VO-specific training for end-users and support providers.

Humanities
User support for the Humainists VRC proposal will need to be carefully targeted. The VRC will responsively map the 'engaged' communities needs by identifying key 'themes' of interest to the humanities that e-Infrastructure has significant potential to support via Virtual Research Communities, and focus on these. These include, but are not limited to, Geographic Information Systems and geo-temporal computing; mining and information retrieval across huge text corpora, simulation and predictive (or postdictive) modelling of past societies, and the management and storage of very large collections of image and multimedia objects. Support and outreach activities will be developed around these themes. Where appropriate, these themes will be further mapped onto disciplines beyond the humanities (e.g. predictive modelling is a methodology originating in the Social Sciences: obviously we would wish to have close liaison with this community in this par-

ticular area).

Text is still the dominant research data type in the Humanities; and the H-VRC's user support activities will reflect this. Texts are used and produced in ever growing amounts and are increasingly available in a digital format. No researcher alone will be able to cope with the plethora of new daily published material. Furthermore, text analysis in the humanities can be a tedious and time-consuming task. But advanced computer-enabled methods make the process easier for digital or digitised works. Researchers can search large texts rapidly, conduct complex searches and have the results presented in context. The ease brought to the analysis process allows the researcher to engage with texts more thoroughly and can then lead to the development of insightful, well-crafted interpretations. We will look into mapping the landscape of text mining services and how they might fit into a European infrastructure not only for Humanities. Next to text various other mining technologies such as geo-mining have proven their value for Humanities.

Deliverables (brief description and month of delivery)