EGI-InSPIRE

HUC Contact Points and Support Model

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Abstract

Report establishing the HUC contact points, the support model and how user requirements will be gathered and prioritised for the supported software/services.



I. COPYRIGHT NOTICE

II. DELIVERY SLIP

	Name	Partner/Activity	Date
From	Kalle Happonen	CSC	18-03-2011
Reviewed by	**Moderator:** Richard McLennan **Reviewers:** Akos Balasko	EGI.eu/NA3 MTA-SZTAKI/NA3	06-06-2011
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III. DOCUMENT LOG

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IV. APPLICATION AREA

This document is a formal deliverable for the European Commission, applicable to all members of the EGI-InSPIRE project, beneficiaries and Joint Research Unit members, as well as its collaborating projects.

V. DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to the authors. The procedures documented in the EGI-InSPIRE "Document Management Procedure" will be followed: https://wiki.egi.eu/wiki/Procedures

VI. TERMINOLOGY

A complete project glossary is provided at the following page: http://www.egi.eu/about/glossary/.

VII. PROJECT SUMMARY

To support science and innovation, a lasting operational model for e-Science is needed – both for coordinating the infrastructure and for delivering integrated services that cross national borders.

The EGI-InSPIRE project will support the transition from a project-based system to a sustainable pan-European e-Infrastructure, by supporting 'grids' of high-performance computing (HPC) and high-throughput computing (HTC) resources. EGI-InSPIRE will also be ideally placed to integrate new Distributed Computing Infrastructures (DCIs) such as clouds, supercomputing networks and desktop grids, to benefit user communities within the European Research Area.

EGI-InSPIRE will collect user requirements and provide support for the current and potential new user communities, for example within the ESFRI projects. Additional support will also be given to the current heavy users of the infrastructure, such as high energy physics, computational chemistry and life sciences, as they move their critical services and tools from a centralised support model to one driven by their own individual communities.

The objectives of the project are:

1. The continued operation and expansion of today's production infrastructure by transitioning to a governance model and operational infrastructure that can be increasingly sustained outside of specific project funding.
2. The continued support of researchers within Europe and their international collaborators that are using the current production infrastructure.
3. The support for current heavy users of the infrastructure in earth science, astronomy and astrophysics, fusion, computational chemistry and materials science technology, life sciences and high energy physics as they move to sustainable support models for their own communities.
4. Interfaces that expand access to new user communities including new potential heavy users of the infrastructure from the ESFRI projects.
5. Mechanisms to integrate existing infrastructure providers in Europe and around the world into the production infrastructure, so as to provide transparent access to all authorised users.
6. Establish processes and procedures to allow the integration of new DCI technologies (e.g. clouds, volunteer desktop grids) and heterogeneous resources (e.g. HTC and HPC) into a seamless production infrastructure as they mature and demonstrate value to the EGI community.

The EGI community is a federation of independent national and community resource providers, whose resources support specific research communities and international collaborators both within Europe and worldwide. EGI.eu, coordinator of EGI-InSPIRE, brings together partner institutions established within the community to provide a set of essential human and technical services that enable secure integrated access to distributed resources on behalf of the community.

The production infrastructure supports Virtual Research Communities (VRCs) – structured international user communities – that are grouped into specific research domains. VRCs are formally represented within EGI at both a technical and strategic level.

VIII. EXECUTIVE SUMMARY

The purpose of this document is to provide contact points for the Heavy User Community (HUC) and to describe a support model for this community.

The communities identified as Heavy Users Communities (HUCs) within this proposal are:

- High Energy Physics (HEP)
- Life Sciences (LS)
- Astronomy and Astrophysics (A&A)
- Computational Chemistry and Materials Sciences and Technologies (CCMST)
- Earth Sciences (ES)
- Fusion (F)



TABLE OF CONTENTS



1 USER SUPPORT CONTACTS

TSA3.2.1:	Dashboards	Jamie Shiers (Jamie.Shiers@cern.ch)
TSA3.2.2:	Applications	Andrej Filipcic (andrej.filipcic@ijs.si)
TSA3.2.3:	Services	Giovanni Aloisio, deputy: Sandro Fiore (sandro.fiore@unisalento.it) for GrelC (SPACI)
TSA3.2.4:	Workflows and Schedulers	Francisco Castejon (francisco.castejon@ciemat.es), Antonio Gomez (antonio.gomez@ciemat.es) (CSIC), Tapani Kinnunen (tapani.kinnunen@csc.fi) (CSC), Marcin Plociennik (marcinp@man.poznan.pl) (PSNC)
TSA3.2.5:	MPI	Enol Fernandez (enolfc@ifca.unican.es), John Walsh, (John.Walsh@cs.tcd.ie) (TCD), David O'Callaghan (david.ocallaghan@cs.tcd.ie), Antonio Lagana' (CCMST) (INFN)

2 DESCRIPTION OF TOOLS

- **TSA3.2.1 Dashboards:** Dashboards provide a generic framework to monitor sites and their services within a VO using tests specific to that community. Dashboards have emerged from within the HEP community, and are now being adopted by the LS community, to monitor their resources.
- **TSA3.2.2 Applications:** GANGA and DIANE are tools which were both part of the EGEE RESPECT (Recommended External Software for EGEE Communities) programme which recognized software that builds on top of the gLite platform. Although initially developed for the HEP community, these tools have now gained traction in other communities, as they provide simple environments to manage large collections of tasks. The requirements of these tools will be integrated into the work plan.
- **TSA3.2.3 Services:** HYDRA and GReIC are services that have emerged from a single community and which show potential for adoption in other communities. HYRDA is an encrypted file storage service. An encryption key for the files in HYDRA is securely stored on distributed servers in order that storage elements can be used to store confidential data. Secure data management is a critical service for the medical community. The GReIC service provides uniform relational and non-relational access to heterogeneous data sources and is currently being used to support bioinformatics and Earth Observation Systems.
- **TSA3.2.4 Workflow and Schedulers:** These tools are critical in integrating complex processes, generally involving multiple data sources and different computational resources, as needed within many disciplines. SOMA2 is a web-based workflow tool used for computational drug design and general molecular modelling. TAVERNA is used extensively by the bioinformatics community. The combination of the Kepler workflow engine and the Migrating Desktop platform are used by the Fusion community to run workflows requiring visualisation and interactive access on gLite and UNICORE-enabled resources. For simpler workflows and meta-scheduling scenarios the GridWay system is used by the Fusion community. Effort is provided to maintain the integration of these tools with the different systems.
- **TSA3.2.5 MPI:** Support for parallel computing (MPI) applications are critical for many user communities but the integration of this capability into the general infrastructure has been difficult. This task will focus on the improvement of the core services and software needed to support MPI, while engaging with two representative user communities (CCMST & Fusion) to ensure that the offered support meets their requirements.

3 SUPPORT MODEL

The HUC support model relies heavily on the VOs which are part of each HUC. User support is primarily offered by the concerned VOs and software support by the development team responsible for the software. In addition to supporting their own users, it is recommended that the VOs and software developers provide best-effort support for other user groups using their tools. The main problem tracking tool used in user-support is the GGUS ticket system. For software support developers may use the issue and bug tracking system of choice. One popular tracker is the CERN hosted Savannah system.

All HUCs should have their basic information available in the EGI wiki. Each HUC must have their own page in the wiki, with either relevant information or links to relevant information. This provides a centralised place where the users can start looking for support, and HUC information in general. At the time of writing this document, the HUCs own wiki pages should be linked to from here: https://wiki.egi.eu/wiki/Hucs

3.1 Using Existing Tools

The user support for HUCs is generally handled using the GGUS ticketing system. The tickets are submitted by users, and acted upon by the responsible VO manager.

The advantage of using GGUS as a communication method for alerting the VO to a problem is that the problem can be allocated and tracked appropriately. The end user communicates with the VO manager via the GGUS ticket, who then has the responsibility of forwarding the issue to the correct site or administrator. If necessary, the VO manager could also forward it to the appropriate tools support unit.

It is important that users give sufficient information when submitting GGUS tickets. Without proper information, the problems can't be identified and corrected, thus this ends up wasting both the user's and the support team's time. Users should refer to the GGUS User Guide available on the GGUS home page, it contains descriptions of what fields are recommended to be filled, and their contents.

3.2 The Contact Points for VOs

In Appendix A the most relevant VOs for each HUC are listed. It is not guaranteed that this is an exhaustive list of the VOs. The most up to date list should be available on the HUC wiki page.

3.3 Training for Support Model

As many end users are already familiar with GGUS as a system, it is anticipated that training in the use of GGUS would be minimal. There will be a need to train new users, and training can often be done by an experienced user, via online help and tutorials. The EGI User and Community Support

Team (UCST) promotes a “Training Marketplace” via its website and through this, users can identify many available services, for example training, documentation, and consultation for new user communities. They aim to direct new users to the training opportunities (grid schools, online, national sessions). There should also be a possibility to hold training events at EGI Technical Forums and EGI User Forums.

Training of the VO managers for their duties is the responsibility of the task manager of that VO.

3.4 Developer Support

Developers may use the bug and issue tracking system of their choice for handling issues related to their software. If the GGUS tickets received by a VO manager reveal bugs or missing features in a supported tool, the VO manager should submit this request to the developers' bug tracking tool. Prioritization of development requests need to be done together with VO managers and service developers.

4 CONCLUSIONS

This is a living document to describe the Heavy User Community (HUC) services and contact points. This document will be updated constantly and new versions will be available for each project year (PM1, PM 13, PM 25). This document lists the HUC services and contact information after the first year of EGI Inspire project, more up to date information will be always available in the EGI wiki at https://wiki.egi.eu/wiki/WP6:_Services_for_the_Heavy_User_Community

5 REFERENCES

R 1	GGUS: https://gus.fzk.de/pages/home.php
R 2	Savannah: https://savannah.cern.ch/
R 3	ESFRI: http://ec.europa.eu/research/esfri/

6 APPENDIX A - VIRTUAL ORGANISATIONS

6.1 High Energy Physics

6.1.1 ATLAS

VO manager: Yan Benhammou (Yan.Benhammou@cern.ch)
Home page: http://grid.racf.bnl.gov/siteAAA/VOservices/USATLASVO.html

6.1.2 ALICE

VO manager: Latchezar Betev (Latchezar.Betev@cern.ch)
Home page: http://aliceinfo.cern.ch

6.1.3 CMS

VO manager: Martti Pimiä (Martti.Pimia@cern.ch)
Home page: http://cms.cern.ch/iCMS/

6.1.4 LHC-B

VO manager: Joel Closier (joel.closier@cern.ch)
Home page: http://lhcb.web.cern.ch/lhcb/

6.1.5 ILC Linear Collider Community

VO managers: Andreas Gellrich (Andreas.Gellrich@desy.de), Frank Gaede (Frank.Gaede@desy.de), Roberto Santinell (Roberto.Santinelli@cern.chi), Steve Aplin (steven.aplin@desy.de)
Home page: http://www-flc.desy.de/flc/

6.2 Life Sciences

6.2.1 Biomed

VO manager: Yannick Legre (yannick.legre@healthgrid.org)
Home page: http://wiki.healthgrid.org/LSVRC:Biomed

6.2.2 PneumoGrid

VO manager: Dagmar Krefting (dagmar.krefting@charite.de)
Home page: http://www.pneumogrid.de/web/guest

6.2.3 lsgrid

VO managers: Jeroen Engelberts (jeroene@sara.nl), Coen Schrijvers (coen@sara.nl)
Home page: http://www.sara.nl/innov_projects/innov_projects_11.html

6.2.4 vlemed

VO manager: Jan Just Keijser (janjust@nikhef.nl)
Home page: http://www.ebioscience.amc.nl/

6.3 Astronomy and Astrophysics

6.3.1 ams02.cern.ch

VO manager: Roberto Battiston (roberto.battiston@pg.infn.it)
Home Page: http://ams.cern.ch

6.3.2 astro.vo.eu-egee.org

VO manger: Taffoni Giuliano (taffoni@oats.inaf.it)

6.3.3 astron

VO manager: Hanno Holties (holties@astron.nl)
Home page: http://www.astron.nl

6.3.4 Auger

VO manager: Jiri Chudoba (Jiri.Chudoba@cern.ch)
Home Page: http://www.auger.org/

6.3.5 glast.org

VO manager: Michael Kuss (Michael.Kuss@pi.infn.it)
Home page: http://glast.gsfc.nasa.gov/

6.3.6 icecube

VO manager: Damian Pieloth (dpieloth@physik.uni-dortmund.de)
Home page: http://www.icecube.wisc.edu/

6.3.7 inaf

VO manager: Serena Pastore (serena.pastore@oapd.inaf.it)
Home Page: http://www.inaf.it

6.3.8 lofar

VO manager: Coen Schrijvers
Home page: coen@sara.nl

6.3.9 magic

VO managers: Adolfo Vazquez (avazquez@gae.ucm.es), Jose Luis Contreras (contrera@gae.ucm.es)
Home page: http://magic.mppmu.mpg.de/

6.3.10 planc

VO manager: Giuliano Taffoni (taffoni@oats.inaf.it)
Home page: http://wwwas.oat.ts.astro.it/planck-egee

6.3.11 Virgo

VO manager: Cristiano Palomba (cristiano.palomba@roma1.infn.it)
Home page: http://wwwcascina.virgo.infn.it/

6.3.12 vo.cta.in2p3.fr

VO manager: Giovanni Lamanna (lamanna@lapp.in2p3.fr)
Home page: http://www.mpi-hd.mpg.de/hfm/CTA/

6.4 Computational Chemistry

6.4.1 CompChem

VO manager: Osvaldo Gervasi (osvaldo@unipg.it)
Home page: http://compchem.unipg.it/

6.5 Earth Sciences

6.5.1 Earth Science Research

VO manager: Andre Gemuend (andre.gemuend@scai.fraunhofer.de), David Weissenbach (weissenb@ccr.jussieu.fr)
Home page: http://www.euearthsciencegrid.org/content/esr-vo-introduction

6.5.2 climate-g.vo.eu-egee.org

VO manager: Sandro Fiore (sandro.fiore@unisalento.it)
Home page: http://grelc.unile.it:8080/ClimateG-DDC/

6.5.3 Eearth

VO manager: Diego Carvalho

Home page: http://www.e-earth.ru

6.5.4 earth.vo.ibergrid.eu

VO manager: Goncalo Borges (grid.admin@lip.pt)

Home page: https://web.lip.pt/wiki-IBERGRID/index.php?title=IBERGRID%20Wiki&lang=en

6.5.5 env.see-grid-sci.eu

VO manager: Emanouil Atanassov (emanouil@parallel.bas.bg)

Home page: http://wiki.egee-see.org/index.php/SG_Environmental_VO

6.5.6 seismo.see-grid-sci.eu

VO manager: Can Ozturan (ozturaca@boun.edu.tr)

Home page: http://wiki.egee-see.org/index.php/SG_Seismology_VO

6.5.7 eo-grid.ikd.kiev.ua

VO manager: Sergiy Lavrenyuk (lsi@bigmir.net)

Home page: http://inform.ikd.kiev.ua/eo-grid/

6.5.8 trgridc

VO manager: Asli Zengin (asli@ulakbim.gov.tr)

Home page: https://voms.ulakbim.gov.tr:8443/voms/trgridc/

6.5.9 envirogrids.vo.eu-egee.org

VO manager: Lukasz Kokoszkiewicz (Lukasz.Kokoszkiewicz@cern.ch)

Home page: http://www.envirogrids.net/

6.5.10 meteo.see-grid-sci.eu

VO managers: Vassiliki Kotroni(kotroni@meteo.noa.gr), Evangelos Floros (efloros@grnet.gr)

Home page: http://wiki.egee-see.org/index.php/SG_Meteo_VO

6.5.11 EGEODE

VO manager: Gerald Vetois (gerald.vetois@cggveritas.com), Jean-Bernard Favreau jean-(bernard.favreau@cggveritas.com), Laure Scheinin (laure.schenini@geoazur.obs-vlfr.fr)

Home page: http://www.egeode.org/egeode/

6.6 Fusion research

6.6.1 Fusion

VO Managers: Isabel Campos (iscampos@ifca.unican.es), Plasencia Ruben Valles (rvalles@bifi.es)
Home page: http://grid.bifi.unizar.es/egee/fusion-vo/

7 APPENDIX B - SOFTWARE TOOLS

The following provides some extra information about the Tools used by the HUC.

7.1 Training Database

Training material and events are listed within the EGI User Community Support section of the EGI website (http://egi.eu/user-support/technical_services/). Eventually the training database should contain material for developers as well as end users. It should be suitably categorised.

7.2 Dashboards

http://dashboard.cern.ch/

HUC: HEP

7.2.1 Description

The Dashboard system provides multiple applications for monitoring EGI connected sites and applications running on them. Depending on the information source, some of these are shared by several virtual organizations (VOs) whereas others are VO-specific.

7.2.2 Support

The dashboard site has documentation and information for users and developers. Bugs and feature requests for the system are tracked through Savannah. In addition to the Savannah system there is a dashboard support list where users can ask their questions or request help.

7.2.3 Training

The dashboard team organizes regular tutorials for users of the dashboard applications and takes part in the VO tutorials for Grid users. The link to the material of the user tutorial sessions can be found at http://dashboard.cern.ch/tutorials

7.3 GANGA

http://ganga.web.cern.ch/ganga/

HUC: HEP

7.3.1 Description

Ganga is a frontend for job definition and management, implemented in Python. Ganga allows trivial switching between testing on a local batch system and large-scale processing on Grid resources.

7.3.2 Support

New feature and development requests for Ganga are tracked via Savannah (via items called "Feature Requests"). This is also used to do a basic prioritization of new features and follow up of the evolution of the tool. The priorities are discussed during the weekly Ganga meetings

7.4 DIANE

http://cern.ch/diane

HUC: HEP

7.4.1 Description

DIANE provides an execution tool for a distributed simulation in a master-worker style. It uses Ganga as an execution backend.

7.4.2 Support

There is a quick tutorial at

https://twiki.cern.ch/twiki/bin/view/ArdaGrid/DIANETutorial

Other documents, including an installation guide and technical details, are also available at the DIANE main page. Bugs and feature requests are tracked through Savannah

https://savannah.cern.ch/bugs/?group=diane

7.5 Hydra

https://twiki.cern.ch/twiki/bin/view/EGEE/DMEDS

HUC: LS

7.5.1 Description

Hydra is a file encryption/decryption tool developed as part of the gLite middleware. Hydra is a special secure metadata catalogue designed to hold encryption keys. The Hydra functionality is accessible in the regular gLite UI through the command line interface. Hydra may be deployed as a single key store or as a distributed key store, implementing the Shamir's secret key sharing algorithm, for improved availability and higher robustness against attacks.

7.5.2 Support

The Hydra web page contains basic set up and usage instructions. Support for the Hydra software is available through the GGUS.

7.6 GreIC

www.grelc.unisalento.it

HUC: A&A,ES

7.6.1 Description

The GRelC service is a grid database management service which aims at providing access and management functionalities related to relational and non-relational databases in a grid environment.

7.6.2 Support

The GreIC project web site has documentation and support information for this service. The project also provides a mailing list (grelc-user@sara.unisalento.it) where people can request for support in terms of new features, use cases, gridification of existing databases, tutorial material, etc.

Support is also provided through some tutorials available on the GILDA website where people can learn more about the GRelC service, the GRelC Portal, the Command Line Interface, etc. Tutorials can be found at the following link:

https://grid.ct.infn.it/twiki/bin/view/GILDA/GRelCProject

7.6.3 Training

Over the last few years the GRelC Team has regularly organized several tutorials to disseminate information about the GRelC service and attract people and communities.

7.7 SOMA2

http://www.csc.fi/soma

HUC: LS

7.7.1 Description

SOMA2 is a web browser-based workflow environment for computational drug design and general molecular modeling. The purpose of the SOMA2 environment is to provide users with easy access to computational tools. SOMA2 hides all technicalities related to execution of scientific applications in complex computing facilities allowing users to focus on their actual scientific tasks.

7.7.2 Support

The SOMA2 website provided by CSC, gives users access to a variety of SOMA2 information. There is a detailed user manual with several screenshots and tutorials, and for developers, the SOMA2 website provides source code and technical documentation. The website also provides access to the SOMA2 mailing lists (soma2discussion@postit.csc.fi, soma2updates@postit.csc.fi) which are aimed for general SOMA2 related discussions, including support requests for end users and developers, bug reports and feature requests.

7.8 Taverna

http://www.taverna.org.uk/

HUC: LS

7.8.1 Description

Taverna is an open source and domain-independent Workflow Management System - a suite of tools used to design and execute scientific workflows and aid in silico experimentation.

Taverna allows for the automation of experimental methods through the use of a number of different (local or remote) services from a very diverse set of domains.

7.8.2 Support

Taverna has comprehensive documentation on their web pages. There are also links to their bug tracking tools, and contact information for other support requests.

7.9 GridWay

http://www.gridway.org

HUC: F

7.9.1 Description

GridWay is a workload manager that performs job execution management and resource brokering on a Grid consisting of distinct computing platforms that could be dynamically extended with Cloud resources. GridWay allows unattended, reliable, and efficient execution of single, array, or complex jobs on heterogeneous and dynamic Grids. GridWay performs all the job scheduling and submission steps transparently to the end user and adapts job execution to changing grid conditions by providing fault recovery mechanisms, dynamic scheduling, migration on-request and opportunistic migration. GridWay provides decoupling between applications and the underlying local management systems.

7.9.2 Support

User support for GridWay has three main parts: the support for the GridWay platform, the support for the developments using GridWay and the support to the developments using the DRMAA API.

The GridWay website contains documentation for both administrators and users. Additionally there are contact points for support and bug tacking tools.

7.10 Kepler

Link: https://kepler-project.org/ (Kepler), http://serpens.psnc.pl (Serpens suit for Kepler), http://desktop.psnc.pl (Migrating Desktop)

HUC: F

7.10.1 Description

Kepler is a scientific workflow application. Using Kepler's graphical interface and components, scientists can create executable scientific workflows, which are flexible tools for accessing scientific data (streaming sensor data, medical and satellite images, simulation output, observational data, etc.) and executing complex analysis on the retrieved data. Serpens is so called suite that extends Kepler with the actors, workflows enabling the Grid execution. It has modules that enables work with gLite and Unicore middleware.

The Migrating Desktop project has made an interface that uses Kepler for running Fusion calculations.

7.10.2 Support

The Kepler project web site provides documentation and tutorials for both developers and users. The site also has contact points for further support and bug submission. Also Serpens suit and the Migrating Desktop site has documentation, instructions and support for their grid interface for Kepler.

7.11 Support for Parallel Computing (MPI)

As part of the MPI related tasks of user support, the recommendation document from the EGEE MPI Working Group has been updated following the middleware developers suggestions. The new recommendation maintains the existing user requirements for executing parallel applications without creating clashes in the job description attributes that could lead to confusion or misinterpretation by the developers. This recommendation is now final and is available at

http://grid.ie/mpi/wiki/WorkingGroup/

7.12 Support Model - Services for High Energy Physics

The four large HEP VOs have a large set of VO specific tools to support their data management and the analysis of their experiment data. All these VOs have their own tools for the tasks, created to serve the specific requirements of each VO. A description of these tools can be found in the document MS603 - Services for High Energy Physics. The document also describes how the underlying middleware is used, and in some cases, modified for the VOs.