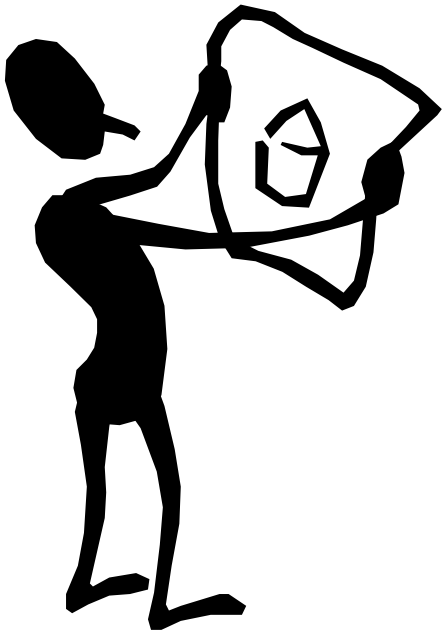


USER SUPPORT FOR EGEE

CONCEPTS

DRAFT

Version 0.1

01.07.2004

W. Thöne

GGUS
Global Grid User Support

Table of content

1 Introduction 3
1.1 Management Summary 3
1.2 Document history 3
1.3 Abbreviations 3
2 The EGEE Support 4
2.1 Possible Scenarios 4
2.2 Conclusion on Scenarios 5
3 Ideas for a central EGEE User Support 6
3.1 Basic procedures 6
3.2 Other services 7
3.3 Security issues 7
3.4 Communication GGUS ←→ Federations ←→ Users 8
3.5 Underlying support organisation 8
4 Implementation 9
4.1 Simple workflow 9
4.2 Categorisation 10
4.3 Interfaces to other systems 10
4.4 Operational tools 11
5 Staffing 11
APPENDIX A: Current implementation at LCG 12

1 Introduction

1.1 Management Summary

This document describes a model for an EGEE user support environment, using a central first line of support and a federative organisation for the second and third level support. As FZK is already running a central support (the Global Grid User Support Team) some parts will use this infrastructure, ideas and staff from GGUS.

Global Grid User Support (GGUS), sometimes also referred as Grid Call Centres (GCC) started June, 1st with its normal operation as a central first line of support for LCG users. GGUS in addition teamed up with ASCC to extend the support hours and is looking for a third partner in the US region to provide 24h support based on the time shifts.

1.2 Document history

Name	Date	Comment
W. Thöne	01-07-2004	Initial Version 0.1

1.3 Abbreviations

LHC → Large Hadron Collider

LCG → LHC Computing Grid

EGEE → Enabling Grids for e-science in Europe, Project name

ASCC → Academia Sinica Computing Centre

FZK → Forschungszentrum Karlsruhe

RAL → Rutherford Appleton Laboratory

GDB → Grid Deployment Board

GGUS → Global Grid User Support Team

CDS → Cern Deployment Support Team

ESUS → Experiment Specific User Support Team / Support for a special VO

GOC → Grid Operation Centre

ROC → Regional Operation Centre

RC → Resource Centre

ARS, AR Server, Remedy → Product name “Remedy Action Request System” from BMC

JRE → Java Runtime Environment

IE → Internet Explorer

VO → Virtual Organisation, Community

2 The EGEE Support

Based on the current definitions of the resource and user support within the EGEE documents:

> **Resource and user support:**
>
> To receive, respond to and coordinate the resolution of problems with grid operations from both resource centres and users; this role will filter and aggregate problems, providing solutions where known, and engaging core infrastructure or middleware engineering or other appropriate experts to resolve new problems.

There is the need to find a solution for the user support that will provide the best solution for the ROCs, the RCs, the users and the VOs as well as the central services.

It has been a common understanding that we must try to have a central database for all EGEE (and Grid) related support issues (i.e. Tickets, FAQ and Knowledge Base) and to be economical with staff resources.

2.1 Possible Scenarios

Scenario 1

All ROC will setup a 24x7 helpdesk

Pro:

- good user integration and no language problems
- good integration for small, local VOs
- Maybe the staff can do operational support / hands on as well

Contra:

- high amount of staff needed (at least 8 in each centre for 24x7 or 4 for 12x5)
- Centralised tool or database need to be setup and maintained between all ROC
- High amount of coordination between all ROCs
- interfaces and processes to all other groups need to be defined within the centralised Database or for all ROCs
- The experiment / VO support must be integrated by central tools but will not have a central point of contact
- High amount of monitoring tools and other tools needed due to the grid approach in order to be accessible from all ROCs

Scenario 2

All ROC will setup a daytime helpdesk on working days

Night and/or weekend support needs to be setup in one or two ROCs

Pro:

- good user integration and no language problems
- good integration for small, local VOs
- Maybe the nights can be covered by using ROCs in different time zones.

- Maybe the staff can do operational support / hands on as well

Contra:

- Need to have 2-3 FTE for each ROC to do user support plus staff for the weekends
- High amount of coordination between all ROCs
- Centralised tool need to be setup and maintained between all ROCs
- interfaces and processes to all other groups need to be defined within the centralised tool or for all ROCs
- The experiment/VO support must be integrated by the central tools but will not have a central point of contact
- High amount of monitoring tools and other tools needed due to the grid approach to be accessible from all ROCs

Scenario 3

Up to three Central ROC provide 24x7 Support using different time zones

Pro:

- Only central staff is needed (about 12FTE - 4 per shift) even can be shared with the GGUS LCG activities
- Only centralised tool need to be setup and not to be maintained between 9 ROCs
- Interfaces and processes to all other groups need only to be defined once
- Central monitoring and other tools could be used more easily
- The experiment/VO support can be integrated by the central tools and will have a central point of contact

Contra:

- Still need to have 24x7 for operational support
- Doesn't fit to the EGEE project plan
- Local users call local people → Not possible here
- Language problems

2.2 Conclusion on Scenarios

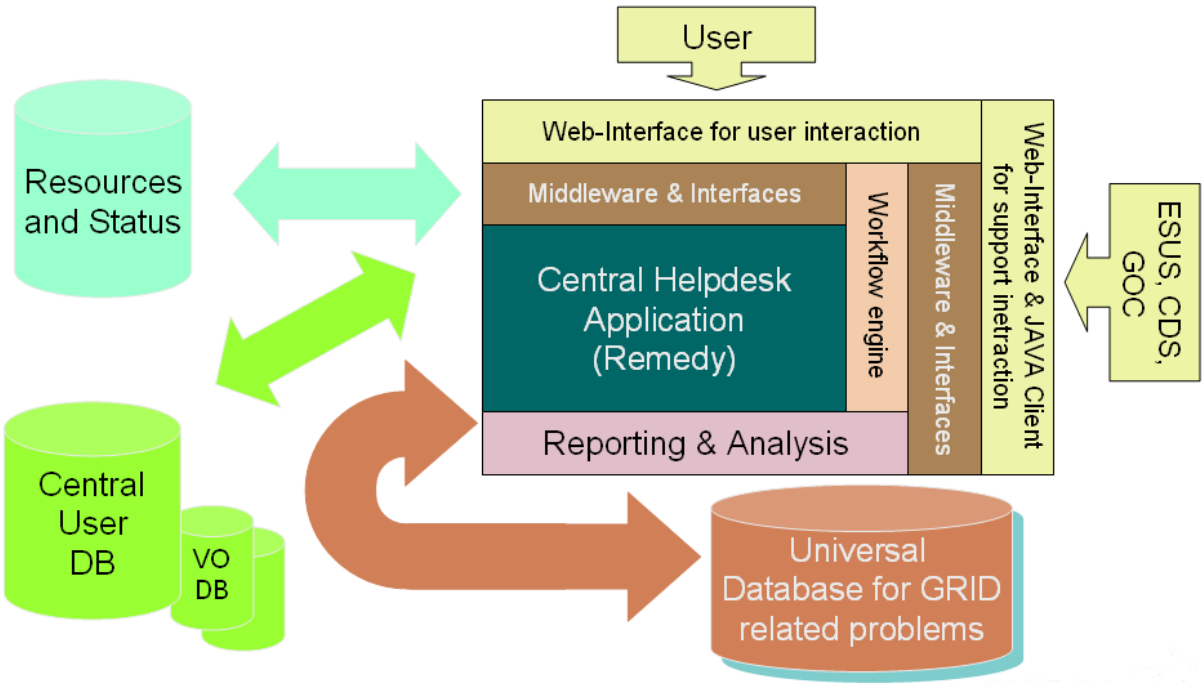
The User Support Task Force, which has been established by the ROC managers, has voted for the scenario number three, as this makes it easy to have a central database and will have advantages, as FZK can share the resources for a central helpdesk between LCG and EGEE support. Also some of the tools needed for a central helpdesk application are already in place and only need to be adapted to the EGEE needs.

It is not foreseen to share all applications between LCG and EGEE but to have as much synergies as possible.

This vote from the User Support Task Force must be approved by the ROC managers as soon as possible. If this is not approved, we need to implement the described processes and tools in each ROC and must think of possible solutions for a central database of all problem or if we can not even agree on a central database we must find a solution for ticket exchange between all ROCs.

3 Ideas for a central EGEE User Support

The main idea was to have a central entry point for all **USER** problems and a central database for all support related issues. Based on this idea all current development is based on a central database with open interfaces to all participating groups and parties. The second important idea is to build and maintain a central knowledgebase for all Grid related problems, which is useable by all parts of the project, not only the users and the support team, but also for development, design teams, deployment, training and operations to optimise software, processes and total quality of service.



3.1 Basic procedures

One major target of a central user support is, to have a single entry point for all user support requests in order to build up a database of problems and solutions.

When a user enters a support request, this request is taken into a workflow, based on several attributes of the support request like VO, priority or type of problem or if these fields do not match a workflow, the Support staff will have a look at this support request and assign the workflow manually if necessary.

If the support request is solvable by the GGUS support staff the solution is documented in the support request ticket and sent back to the user.

If the service request is not solvable by GGUS, the GGUS team decides where to send the support request ticket next. Currently we need to implement processes for the following groups and with the following structures:

- Regional Operation Centres (ROC) → need a single point of contact in each centre
- Resource Centre (RC) → Will be contacted via the ROC, but may report problems
- Central Infrastructure Centres (CIC) → need a single point of contact in each CIC
- Experiment specific user Support (ESUS), VO support → One group per experiment / VO
- Deployment team (DT) → Need to have a central / single point of contact

3.2 Other services

In addition the central portal can provide a platform for news, documentation and FAQ. The news platform can be used to advertise know outages, current problems and other important news to the users and the resource centres.

All ROC can maintain a page to enter planned outages and other news, as well as the central support team can announce current problems.

The FAQ will be build-up by the central support team and will focus on the user. We want to use an open and community supported FAQ system and try to leverage knowledge of community experts. The system should provide the following features:

- Multiple administrators
- Add/delete/modify FAQ data/metadata
- End-user support
    - Search functions
    - Provide comments and feedback
    - Future Development
- Admin: customize categories
- User: Add/modify FAQ

The central support team will implement this using web services so other applications can contribute to FAQ database and leverage FAQ database.

3.3 Security issues

In order to provide a maximum of security to the application, the portal and the stored data, all systems will use a secure communication, e.g. we must use https for the web based applications.

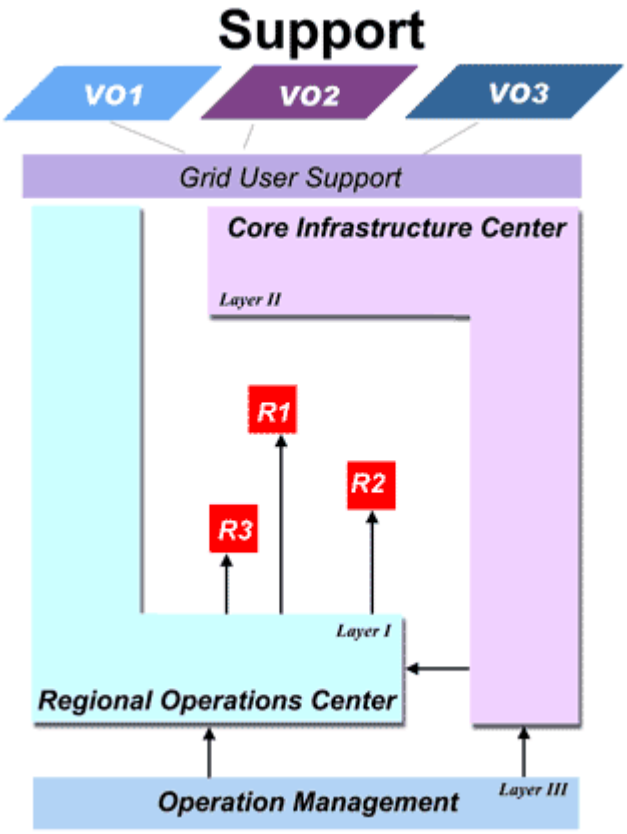
For user authentication it is necessary to grant access to the service request oriented portions of the user support portal only to those users, who are members of a VO that is part of the EGEE project. This can be achieved when all VO issue own browser certificates, so the user can be identified.

For the service requests it would be good to have some more information about the user: So we suggest to have based on the users VO and the DN of his certificate, an LDAP server we can query for Email, Name, given Name and telephone number for the user. This can be a central LDAP server or a LDAP server per VO.

To access the helpdesk application, we recommend a separate directory of users, in which have the possibility to add some more and complex rules. This is currently already in place for the current GGUS application as this is also necessary because of the current GGUS structures. If this needs to be changes, it must be based on LDAP.

3.4 Communication GGUS ←→ Federations ←→ Users

As suggested by some of the User Support Taskforce members we propose the following structures to communicate from GGUS to the federations:



So all problems from the users will first be taken by the GGUS team and enter into the central helpdesk system. This is important, as we need to document as much as possible into the helpdesk system for reference, further analyses and as basis for our knowledge base.

The GGUS team will then use the ticketing system to assign the problems to the appropriate support team.

Also all RC are able to call the central support desk and report problems.

3.5 Underlying support organisation

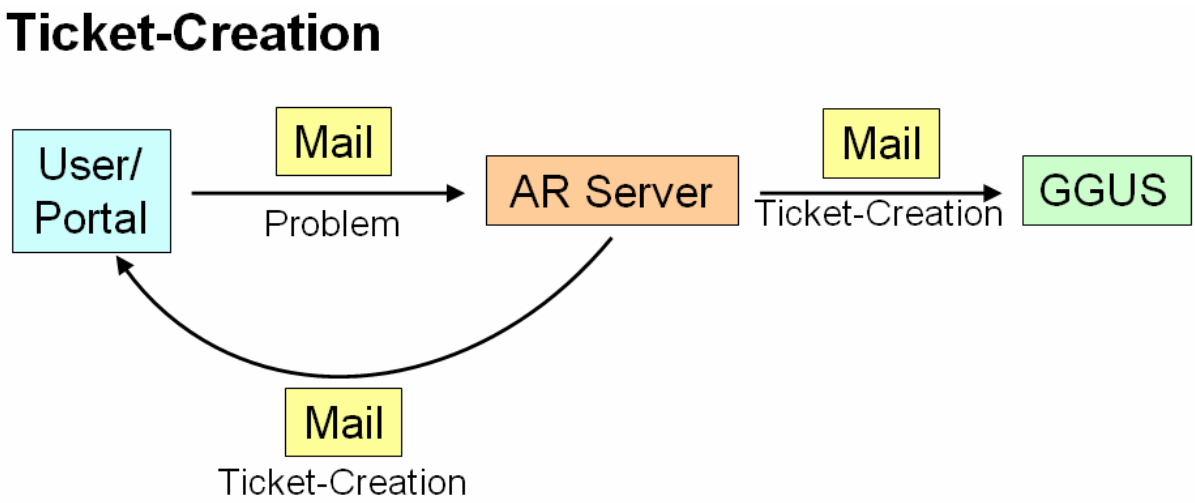
Here we must describe how we want to organise our second levels. I have received several ideas from some federations, but no common idea.

So probably someone else can write something on this subject.

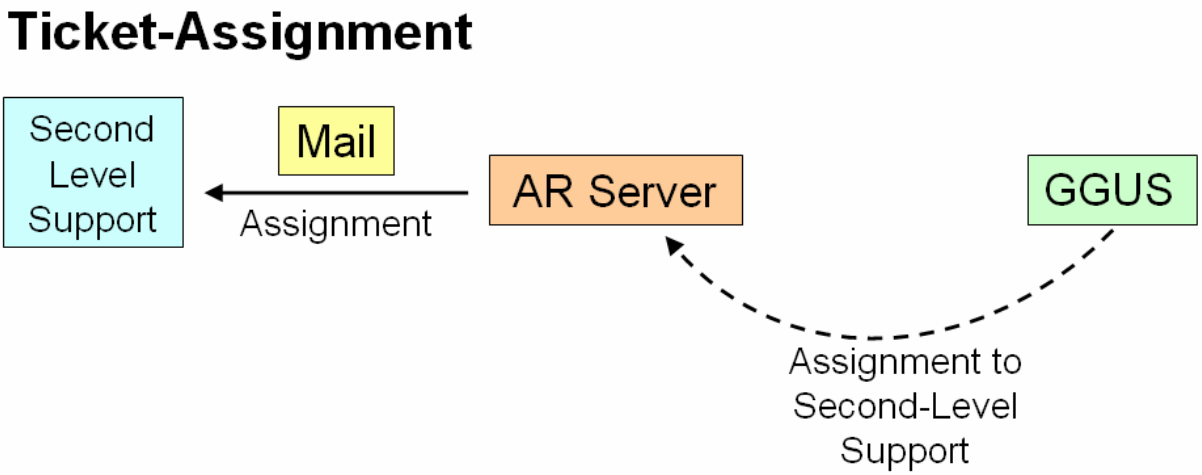
4 Implementation

4.1 Simple workflow

The following figures show the workflow of a “normal” and “easy” user support request from the creation of the request by the user, to the “close” of the service request by the GGUS support staff:



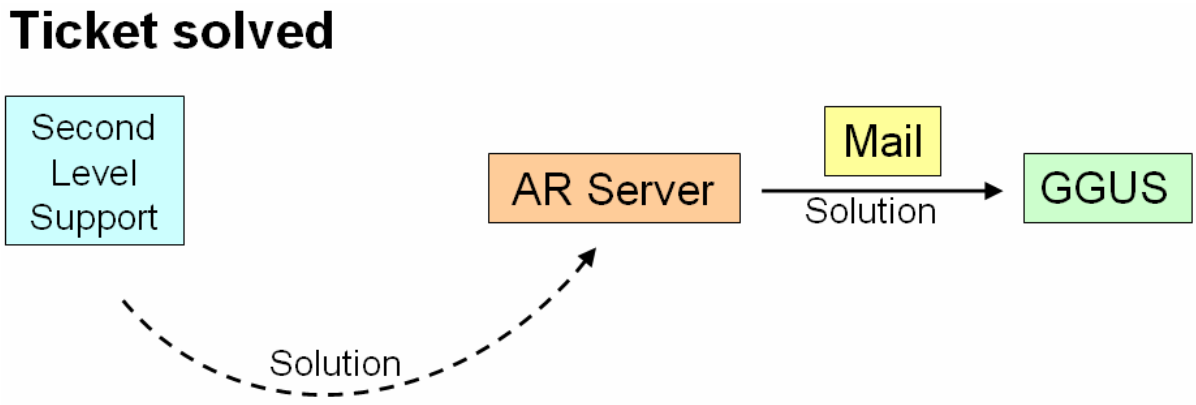
The user enters his problem into the EGEE-GGUS support web portal. After he submitted the service request, the user will receive an email with ticket number and a link to the portal where he can track and modify the service request.



As the service request is created, the GGUS team will be notified. Based on e.g. the type of problem, the location or other classification criteria the service request will be assigned to a second level team.

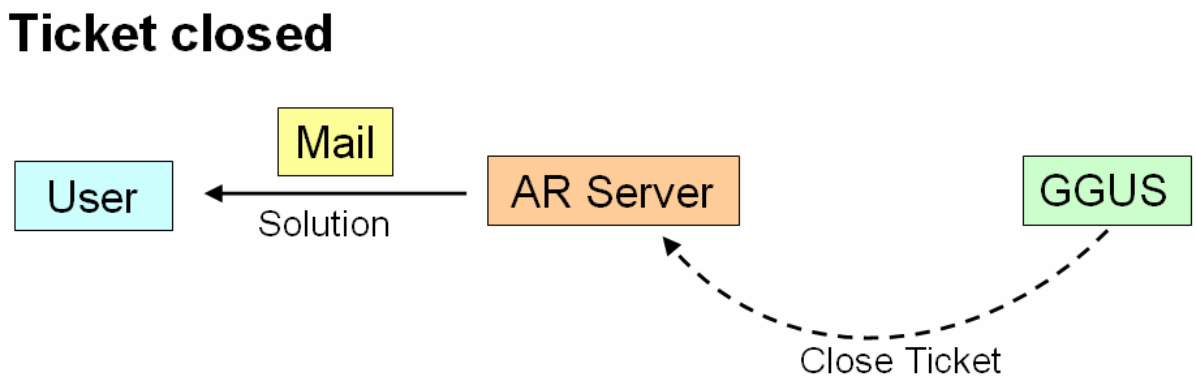
This can be done automatically based on the criteria or manually by the GGUS team. The GGUS experience is to be careful with automatically assignments. → This must be decided.

In addition, if the second level support group could not solve the problem they can reassign the ticket, either to the central support group with some additional notes or to the third level or to another second level support team.



After second level support has solved the problem, the solution is documented within the helpdesk application and the service request is sent back to the central support team.

We need to decide whether the user is informed directly after the second level solves the ticket or if the user is informed after the next step “Ticket closed”



After the ticket is closed (or solved) the user will receive a mail containing the solution and a link back to the web portal to look at his service request and if necessary reopen the ticket if the solution does not succeed.

4.2 Categorisation

Here we must define our categories for the helpdesk system like:

- Type of Problem
- Etc.

4.3 Interfaces to other systems

Currently the GGUS application is accessible over the web and used by most of the involved parties at LCG. GGUS is currently implementing an open interface to their Helpdesk System, to provide a common interface for other Help Desk Systems to communicate and exchange tickets. This will be a web services interface. But the interface will not be available before Q1/2005.

Each ROC may decide whether they want to use the GGUS System via the Web or they want to deploy their own helpdesk system. For all ROC who want to use the application via web, there will be no extra charges. All ROC who already have their own ticketing or helpdesk system where asked to provide their communication needs.

4.4 Operational tools

As far as I see, we need to have tools for the second level, but we need to define what a central support should do before sending a service request ticket to the second level. Based on the first and second level requirements we need additional tools.

Here I need also the support from others ☺

5 Staffing

Here we need to provide a list of people that are responsible for the central support and the support within the federations and teams for:

Team / ROC	Name	Deputy	Email
GGUS	Wolfgang Thöne	Torsten Antoni	wolfgang.thoene@iwr.fzk.de
GGUS	Helmut Dres	Günter Grein	

APPENDIX A: Current implementation at LCG

Currently GGUS has setup and deployed a central web portal at ***http://www.ggus.org***. This portal provides the following functionality for the Grid User:

- Submit a problem report / service request
- Track problem reports / service requests
- Show current service requests → is my problem already known
- Show an overview of the current Grid status (taken from the GOC status pages)
- A news section, showing information about planned outages, know problems etc.
- A FAQ Section

In addition this portal is the central entry point for all support groups to use the ticketing system and use other tools. The support groups which currently use the portal are:

- Experiment specific user support (ESUS)
- CERN Deployment Team (CDS)
- Grid operation centre (GOC)
- Global grid user support Team (GGUS)

They can currently use the following tools:

- Use the GGUS Remedy web ticketing application
    - View, modify, assign, reassign a ticket
    - Initiate a workflow by manually forward a ticket
    - View all tickets (history and current)
- Add a new ticket
- Use the news section