*CERN LCG Grid Deployment Board*
*8th September 2005*

# Global Grid User Support

www.cern.ch/lcg

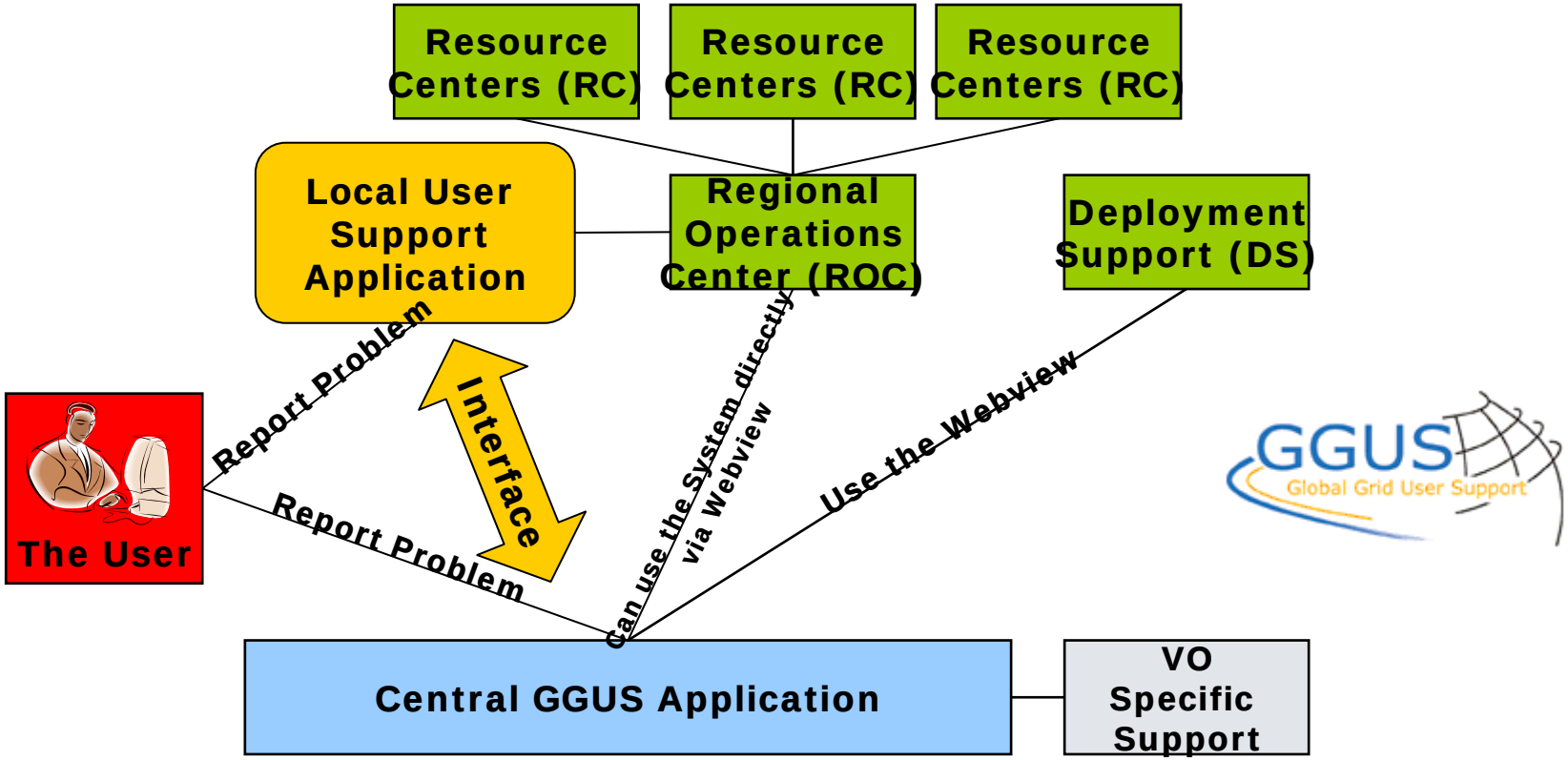
**Flavia Donno**
**for the LCG/GGUS Executive Support Committee (ESC)**
**INFN – Pisa**

# Outline

- The *GGUS* infrastructure
- How it works
- What *Services* are provided to users
- The GGUS Search engine
- Who are the supporters and what do they need to do ?
- Training: how are the users and supporters trained ?
- Who are our customers at the moment?
- Some statistics
- Major problems
- Interface to ROCs: current status
- The GGUS portal : resilience to failure
- Improvements introduced in July 2005
- What is going to be available in the next months [ 9/2005]
- Conclusions

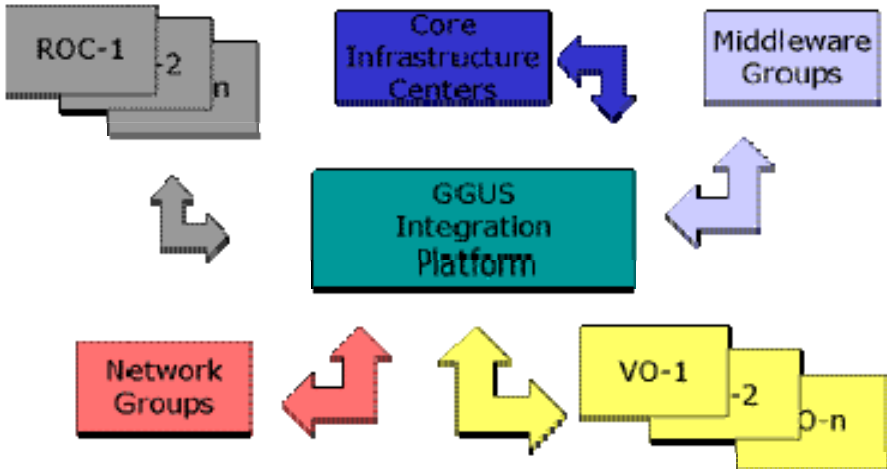
# LCG/EGEE User Support infrastructure

- The support model in EGEE can be captioned *"regional support with central coordination".* Users can make a support request via their Regional Operations' Center (ROC) or their Virtual Organisation (V0). Within GGUS there is an internal support structure for all support requests.



# LCG/EGEE User Support infrastructure

- The ROCs and VOs and the other project wide groups such as the Core Infrastructure Center (CIC), middleware groups (JRA), network groups (NA), service groups (SA) are connected via a central integration platform provided by GGUS.

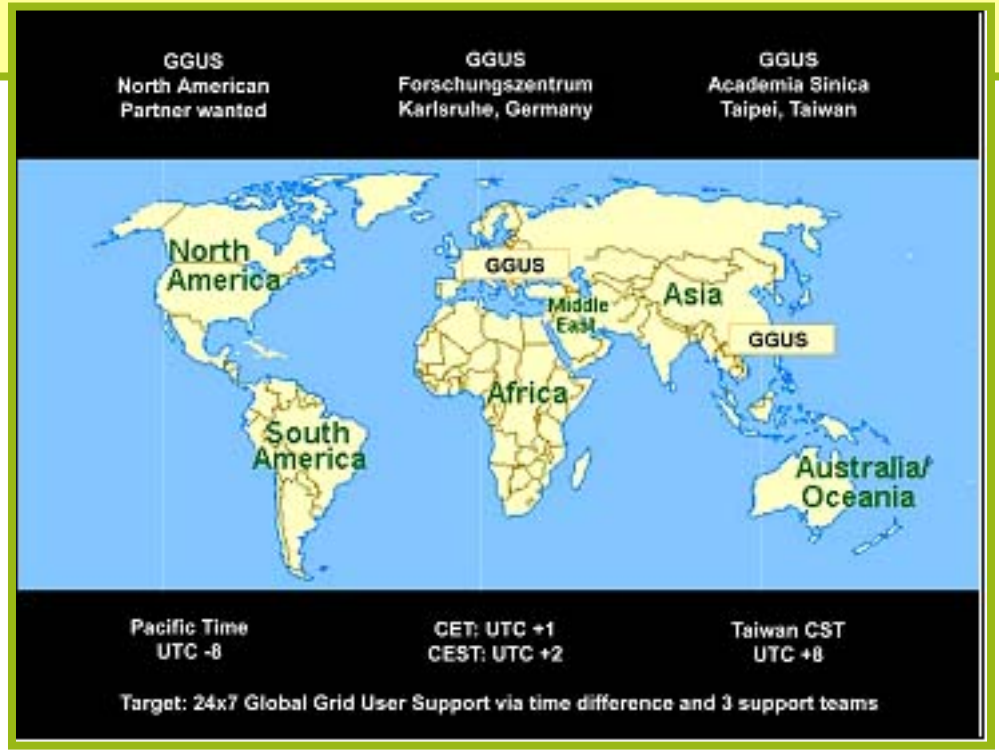



- This central helpdesk keeps track of all service requests and assigns them to the appropriate support groups. In this way, formal communication between all support groups is possible. To enable this, each group has built only one interface between its internal support structure and the central GGUS application.

# LCG/EGEE User Support infrastructure: a distributed center

- General idea: *3 main support centers* to guarantee coverage and provide a single point of contact to customers and to local Grid operations. Also for resilience to failure.

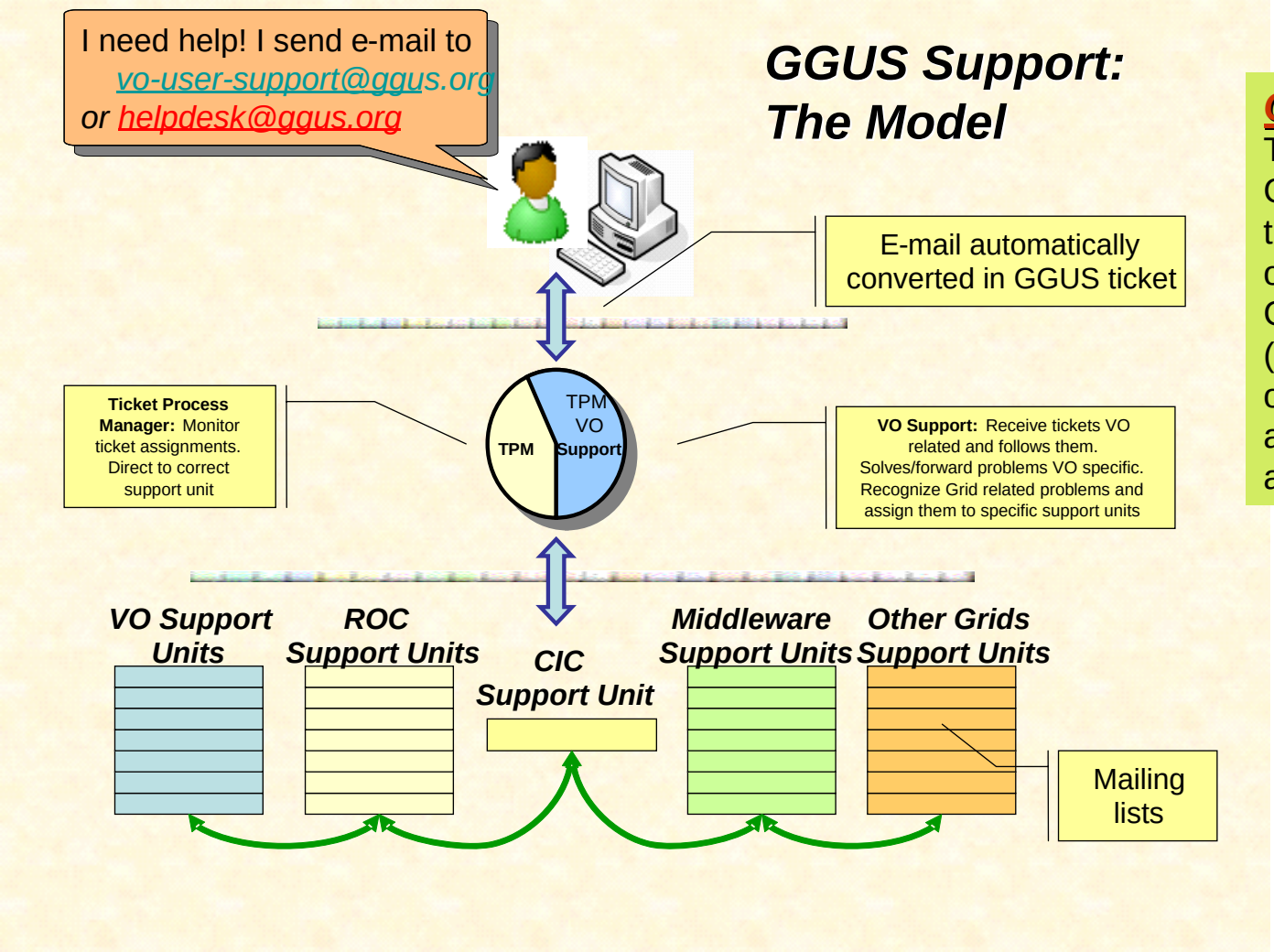
It was decided to have 3 GGUS teams in different time zones. GGUS started off at Forschungszentrum Karlsruhe in ***Germany*** in 2003 and has had a partner group at Academia Sinica in ***Taiwan*** since April 2004. A third partner in ***North America*** would be desirable.



# LCG/EGEE User Support infrastructure: ESC

- **Lead by GGUS/Chaired by A. Mills/Flavia Donno** (Kick off meeting of ESC at Karlsruhe - ***27 January 2005***)
- **Goal:** *To ensure an effective and efficient Grid User Support Service*. The ESC organisation has a limited life. It has been formed for a period of 24 week from 28 January 2005 until **14 July 2005**. Its life has been extended.
- **Members: initially 12 people from CERN, UK, France, Italy, Germany, Czech.** Now many more. We have representatives from VOs, NA3, other Grids (OSG and NorduGrid), Taiwan, ROC_US, other ROCs, etc.
- We meet monthly to discuss organization issues and problems.

# How it works



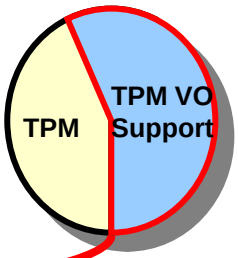

**CIC-on-Duty**
They use GGUS for their daily operations.
GGUS support (TPM)
only informed and not active.

# GGUS Support: The Model

I need help! I send e-mail to *vo-user-support@ggus.org*

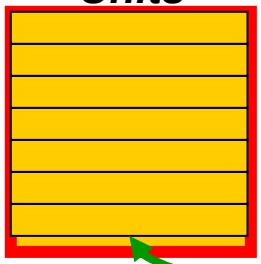
E-mail automatically converted in GGUS ticket.
*Can be addressed to TPM VO only, or TPM only, or to both*

**Ticket Process Manager:** Monitor ticket assignments. Direct to correct support unit. Notify users of specific actions and ticket status




**TPM VO Support: People from VOs.** Receive tickets VO related and follow them. Solve/forward VO specific problems. Recognize Grid related problems and assign them to specific support units or back to TPM

***VO Support Units***



***ROC Support Units***

***CIC Support Unit***

***Middleware Support Units***

***Other Grids Support Units***

Mailing lists

# GGUS Support: The Model

I need help! I send e-mail to *helpdesk@ggus.org*

E-mail automatically converted in GGUS ticket

**Ticket Process Manager: Grid Experts.** Monitor ticket assignments. Direct to correct support unit. Notify users of specific actions and ticket status

**TPM**

**VO Support: People from VOs.** Receive tickets VO related and follow them. Solve/forward VO specific problems. Recognize Grid related problems and assign them to specific support units or back to TPM

***VO Support Units***

***ROC Support Units***

***CIC Support Unit***

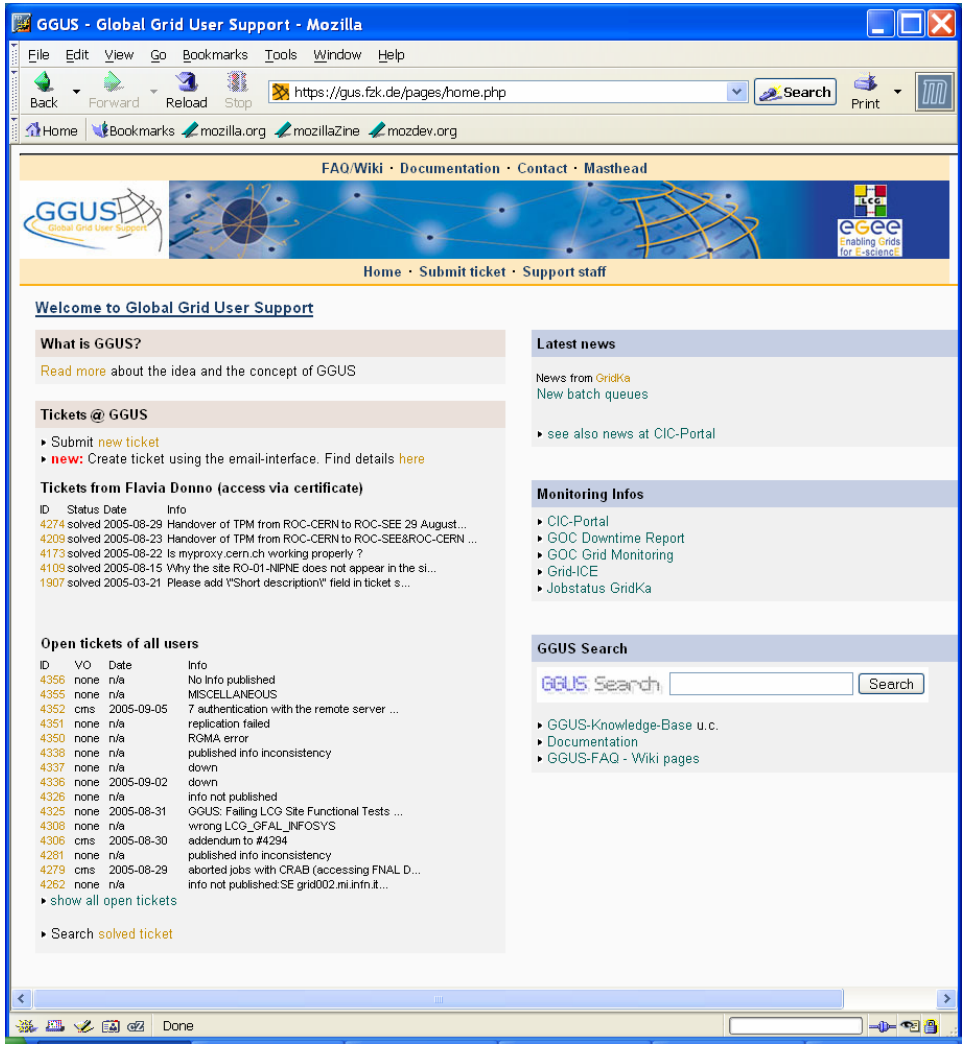
***Middleware Support Units***

***Other Grids Support Units***

Mailing lists

# What Services are provided to users

http://www.ggus.org




***Updated documentation***

***Browseable tickets***

***Search through solved tickets***

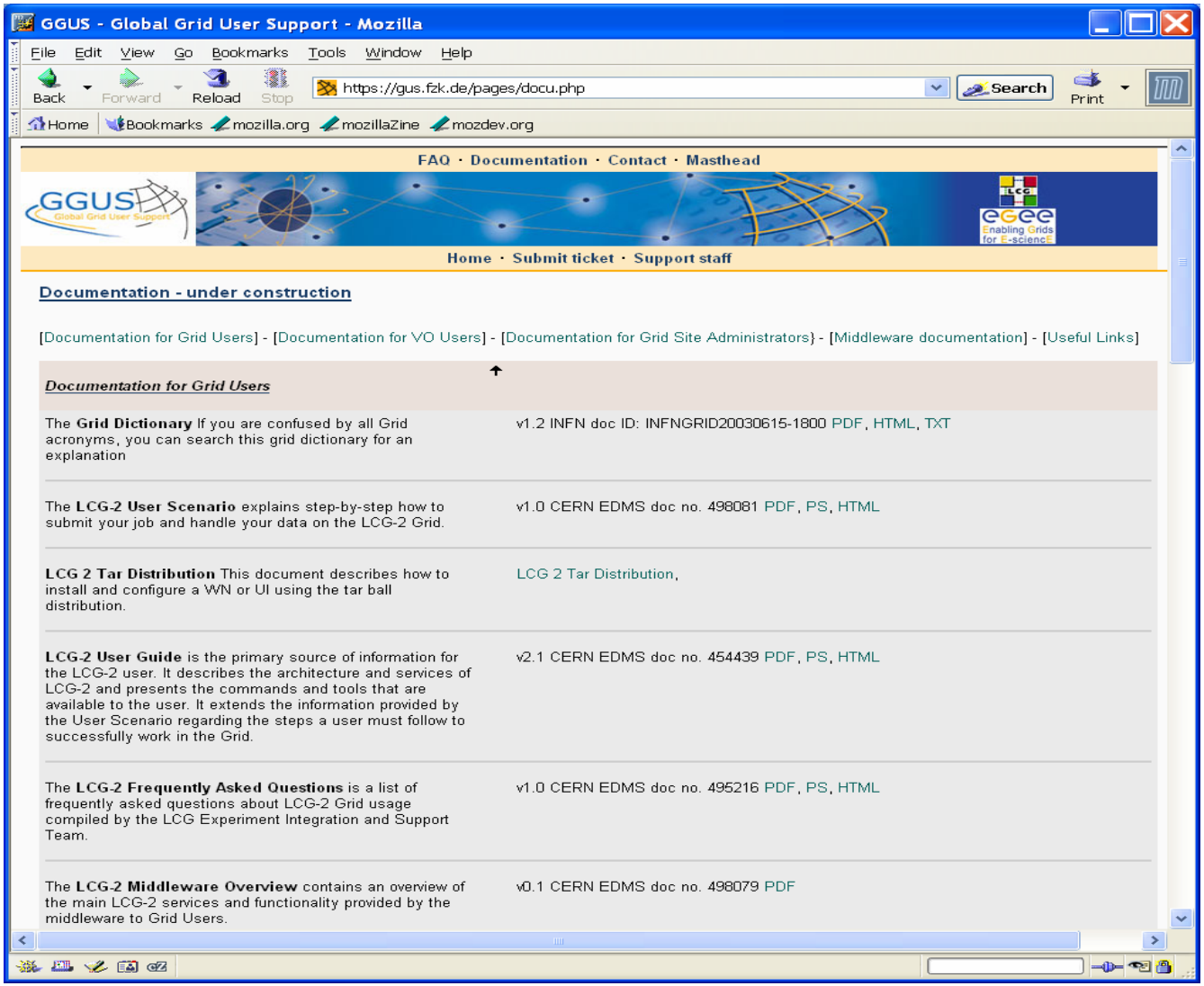
***Useful links (Wiki FAQ)***

***Latest News***

***Problem submission via Web Portal and e-mail***

***GGUS Search Engine***

# What Services are provided to users

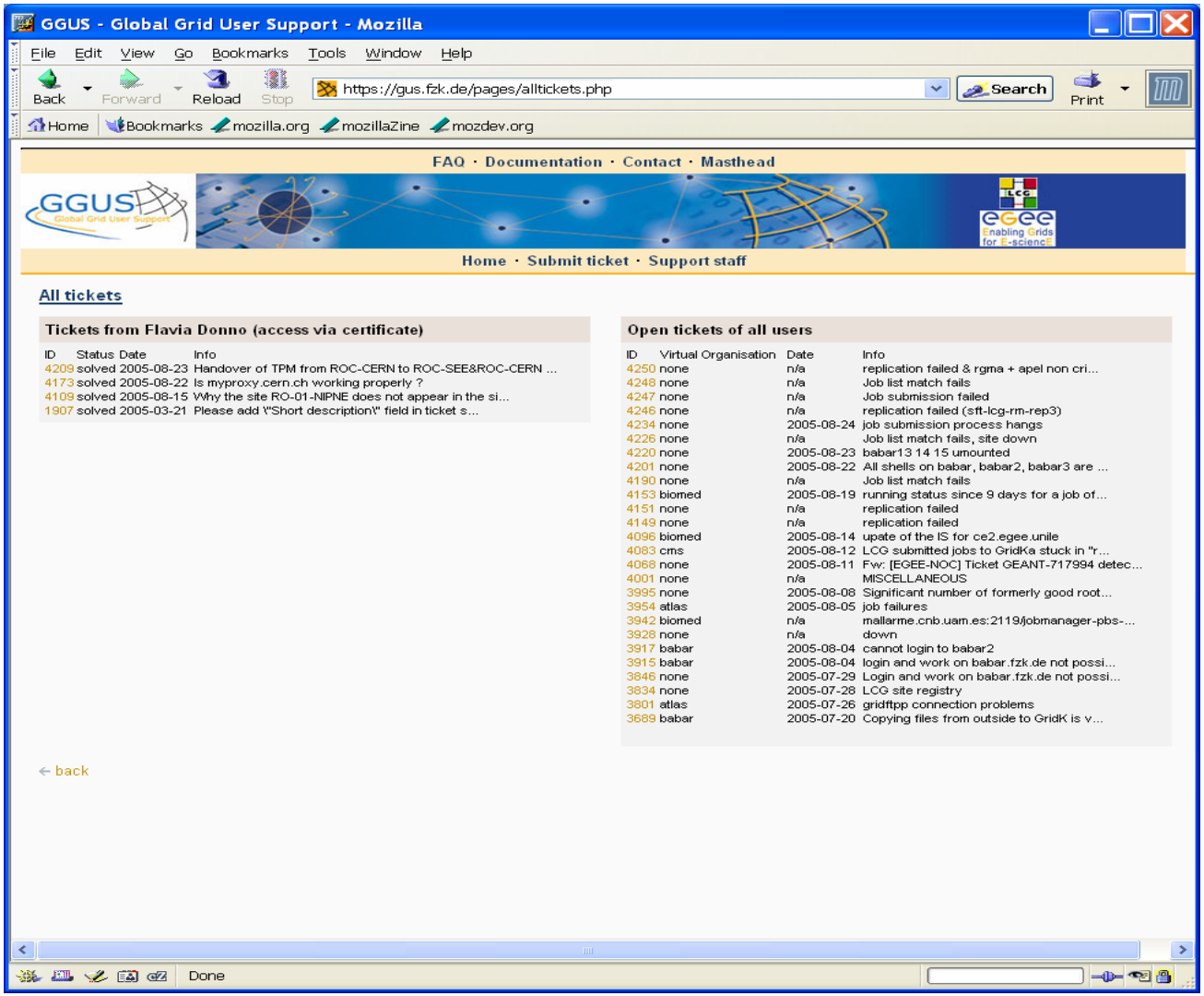



***Updated Documentation***

We try to keep this page as updated as possible. However GGUS is normally not notified of new available documents.

GGUS hopes in the help of EGEE/User Information Group

# What Services are provided to users




***Browseable tickets***

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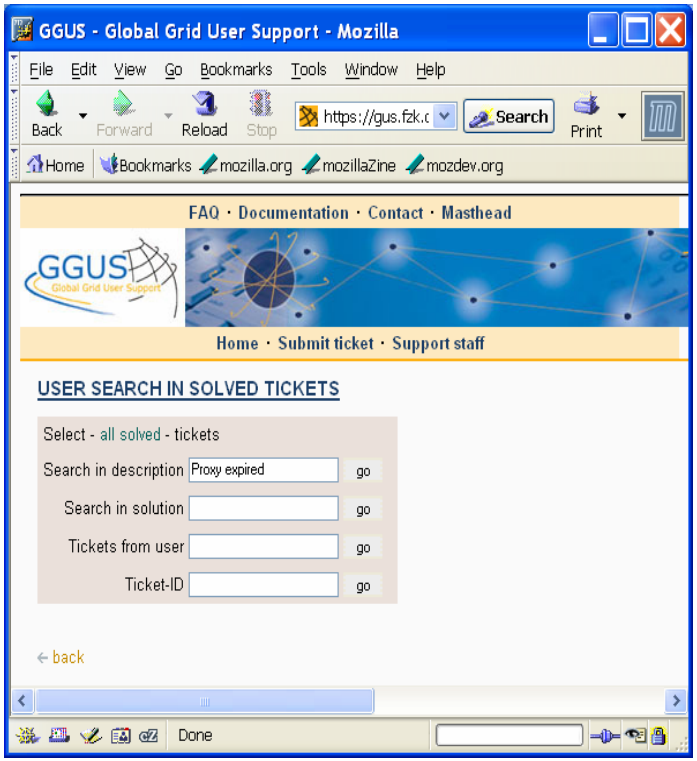
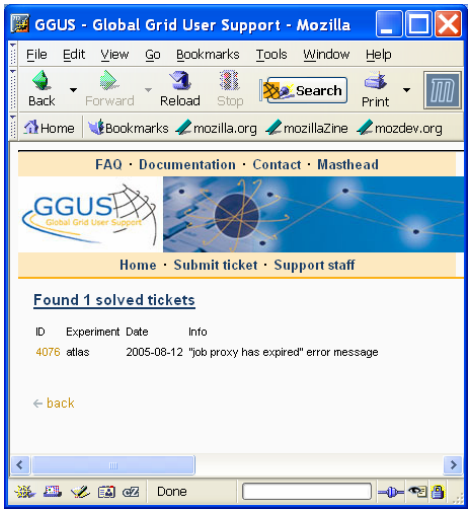
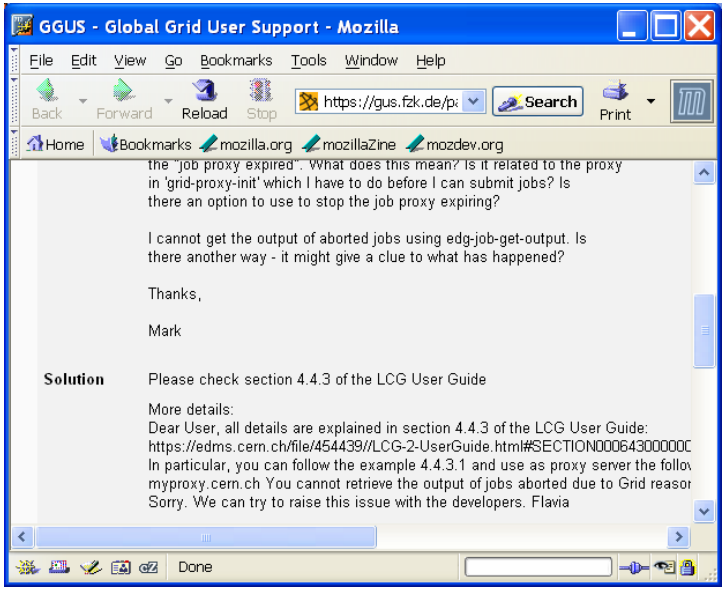
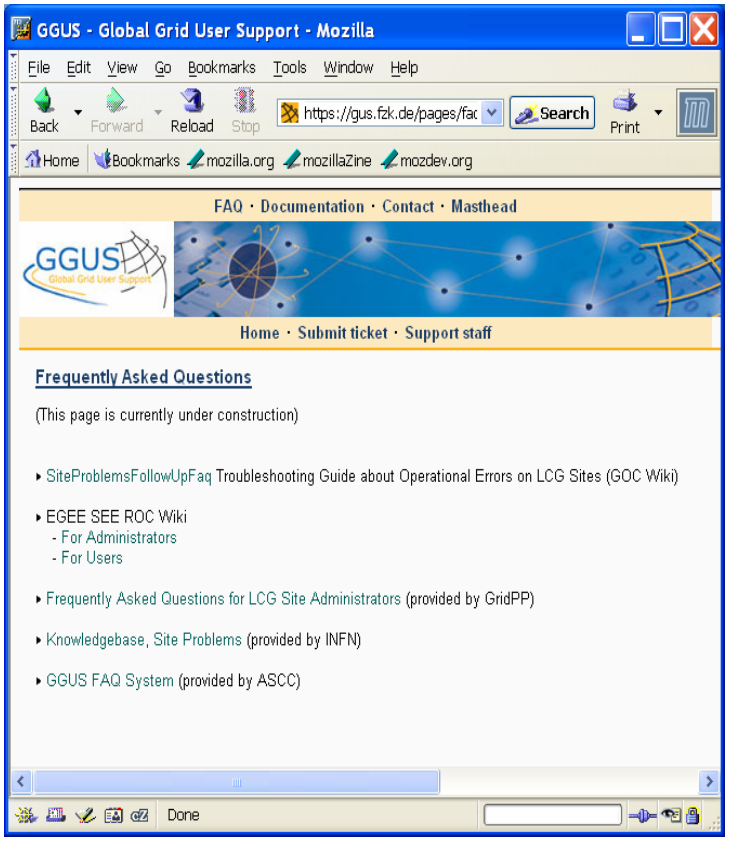



***Search through solved tickets***

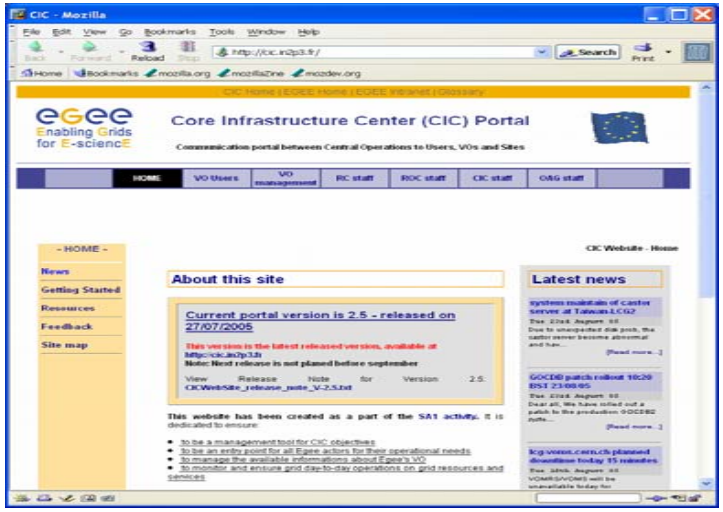


# What Services are provided to users



***Useful links***

Actively working with CIC portal developers to provide also VO specific help pages



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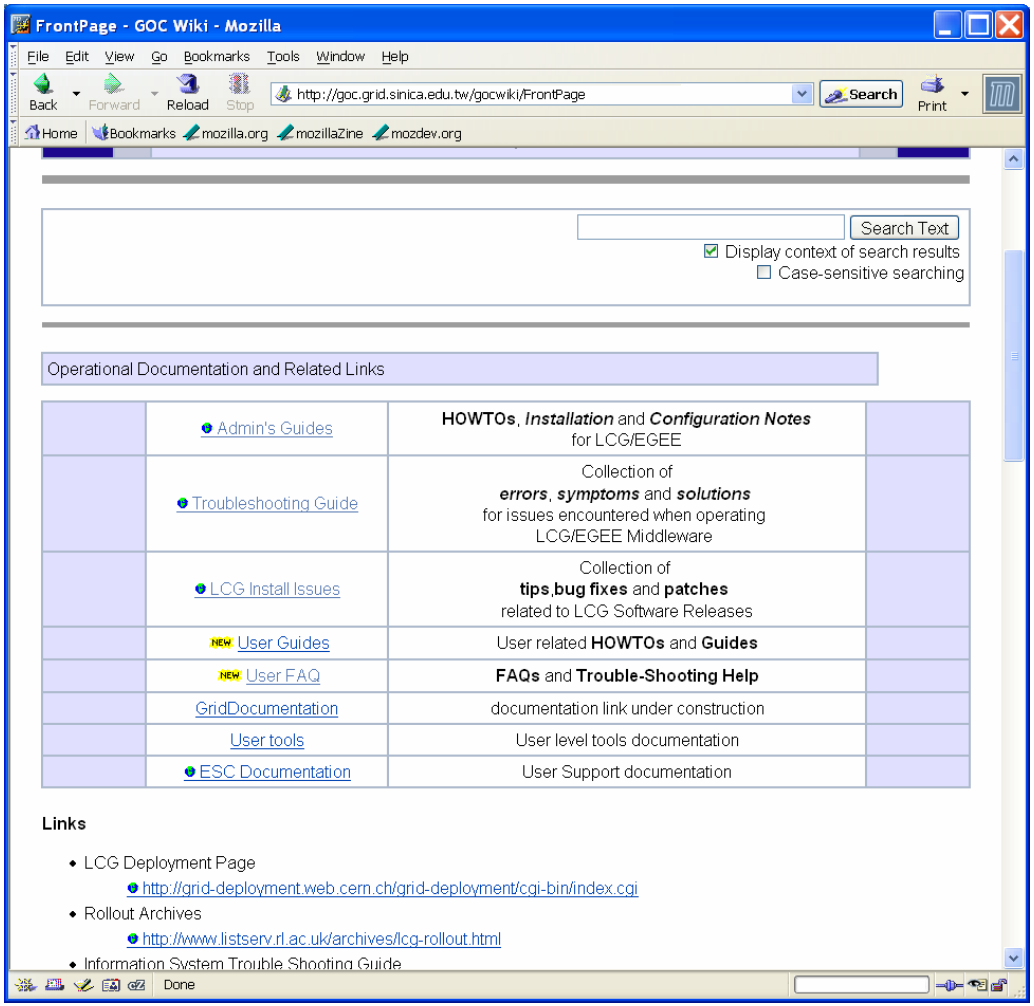
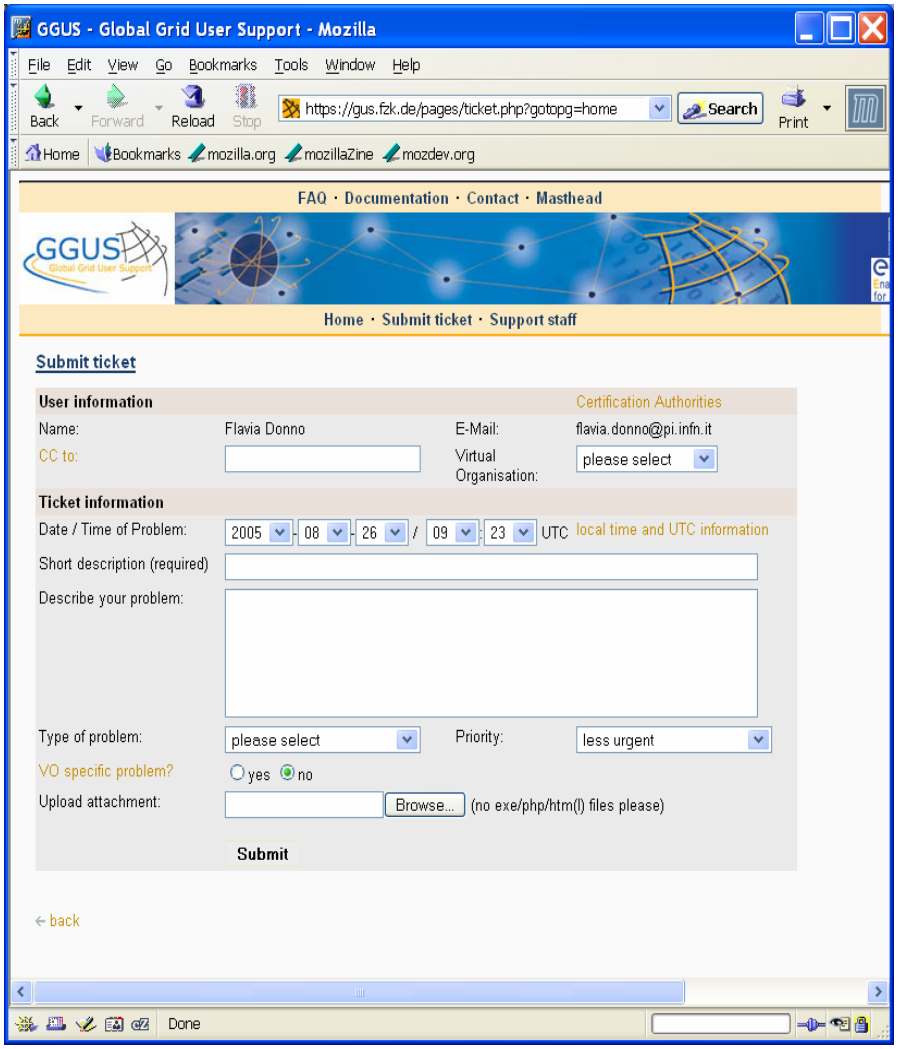


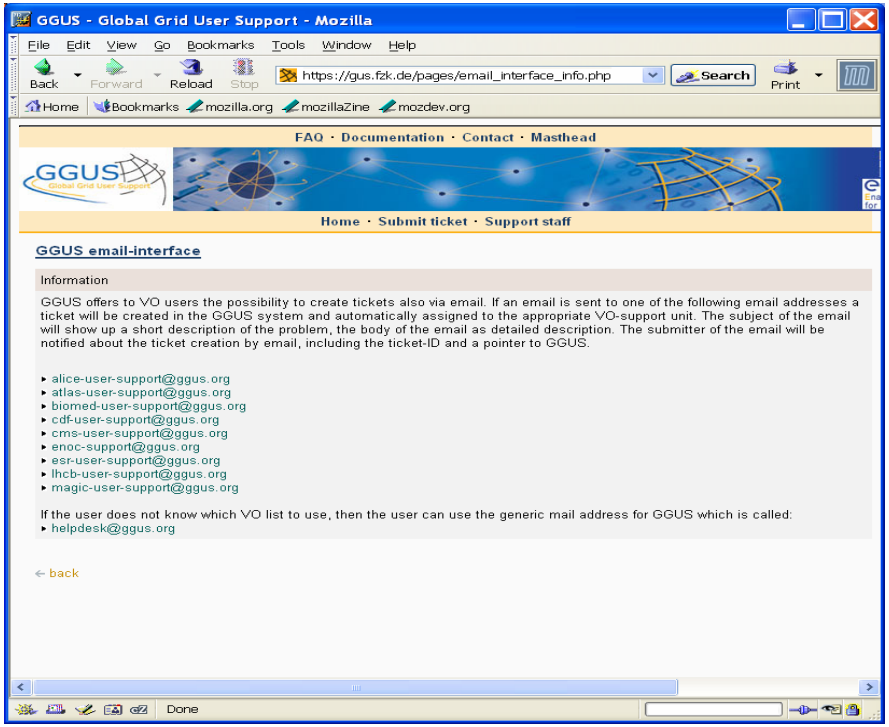

***Wiki Pages***

When a ticket has been solved, but the supporter believes that the solution contains information which is worth keeping for general reference, then the supporter adds a comment in the diary to this effect and assign the ticket to GGUS. GGUS takes care of compiling the ***User FAQ Wiki pages***: http://goc.grid.sinica.edu.tw/gocwiki/FrontPage

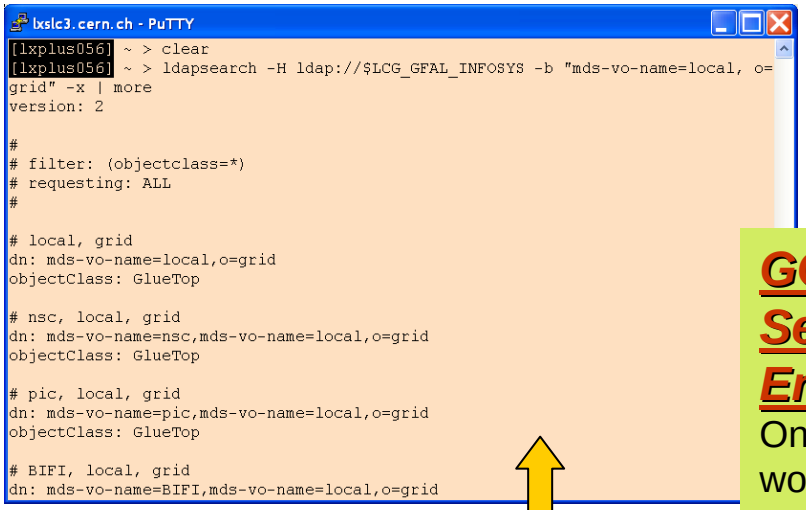
# What Services are provided to users

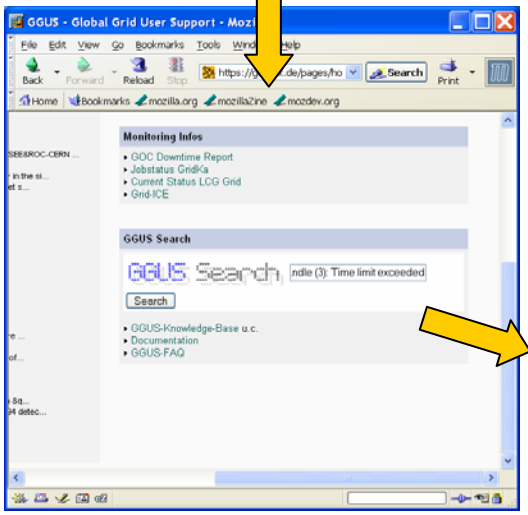


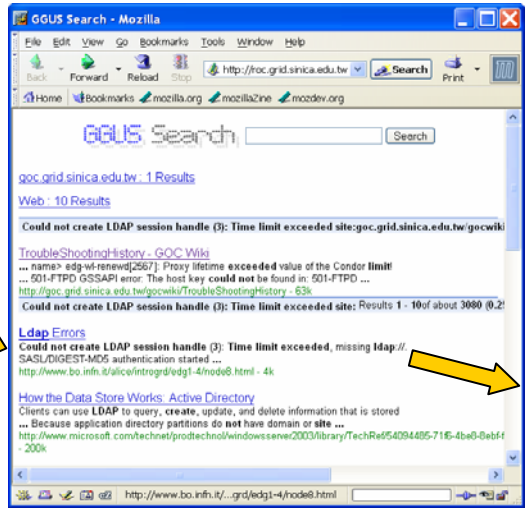

**Problem submission via Web Portal and e-mail**

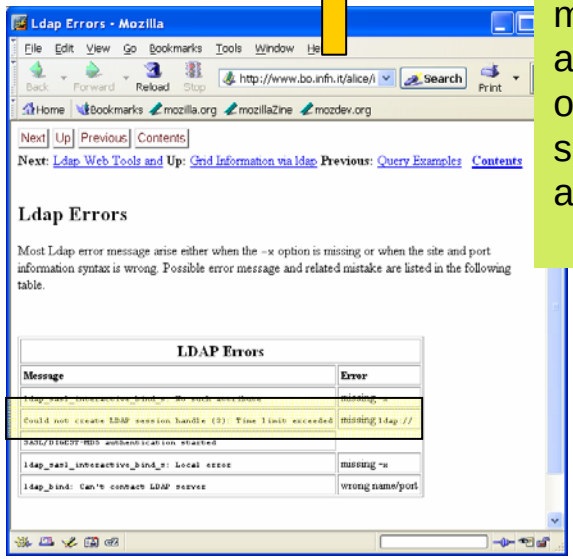


# The GGUS Search Engine



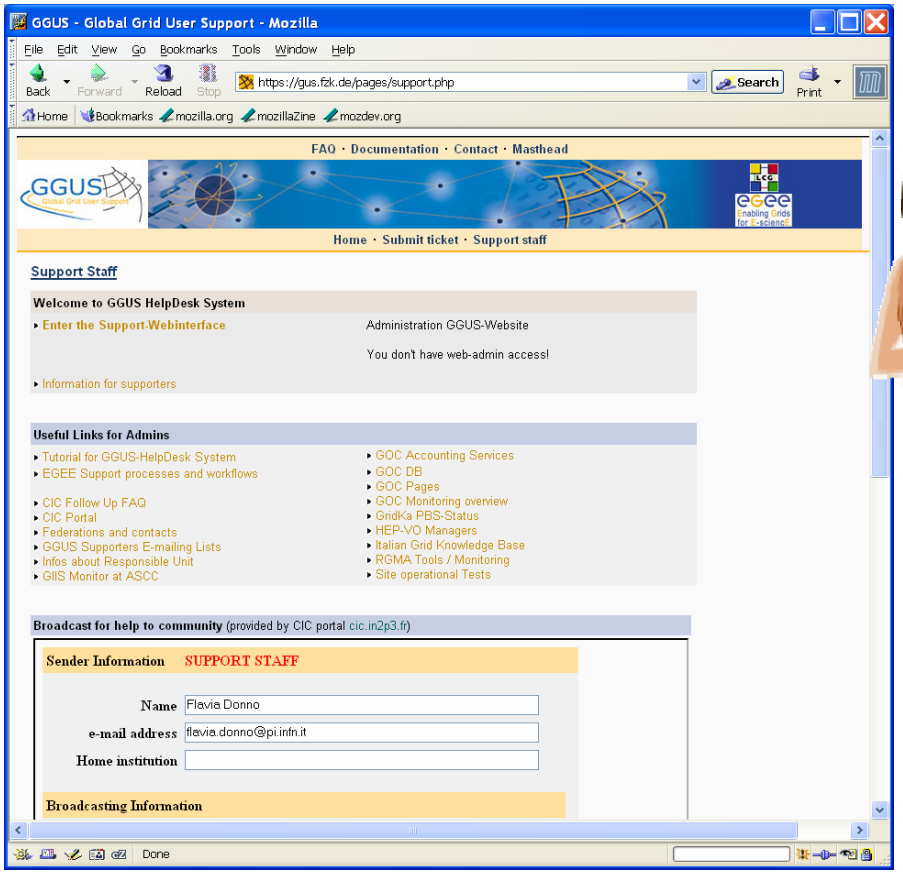




***GGUS Search Engine***

On going work to make it faster and to look over a wider set of docs and DBs

# Who are the supporters and what do they need to do ?

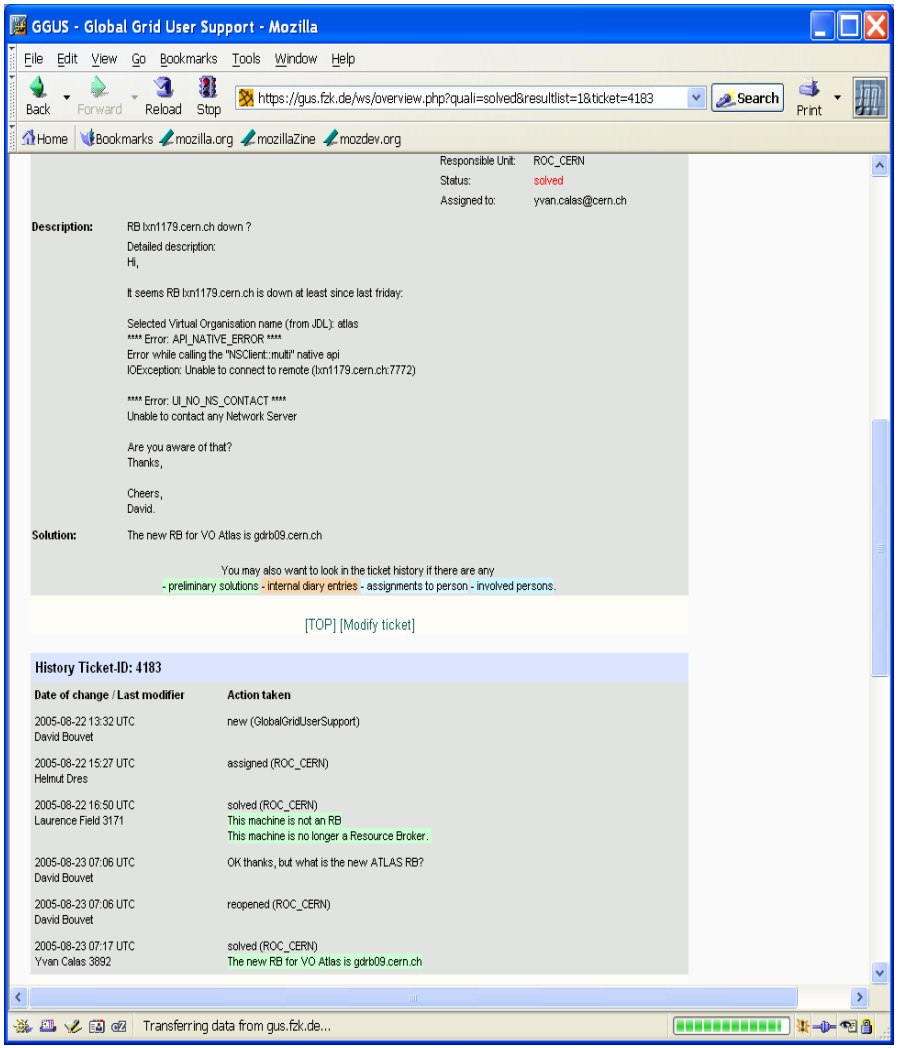


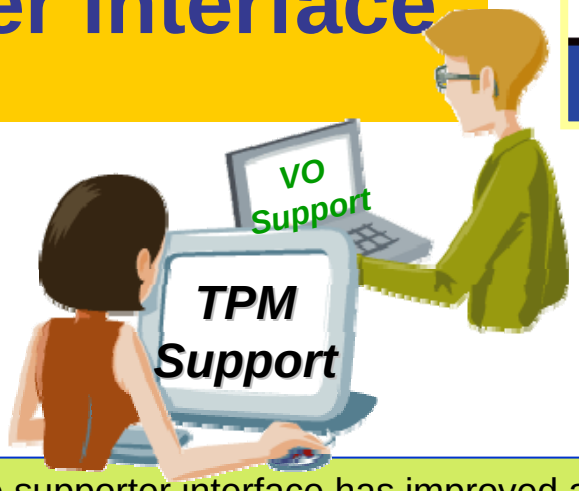
- TPM, TPM VO, VO Support, Specialized Support, ROC, ENOC
- You need to ***register*** in order to be able to use the GGUS portal (***GSI*** or password based)
- Documentation available documenting the duties of a supporter: docs 1300, 1200, 1100, 8600.
- TPMs perform shift. Now 2 people from ROC-SE, 3 people from ROC-SW, 1 from ROC-CE, 1 from INFN/CERN
- ***Supporter ?*** If you think you have a good knowledge in Grid and have time to provide support, please contact your ROC or directly ESC at:

To apply as a supporter:
https://gus.fzk.de/admin/apply4staff.php

***project-eu-egee-sa1-esc@cern.ch***

# The supporter interface




- The supporter interface has improved a lot.
- It is still accessible via a web portal (no reply to e-mails sent to <vo>-user-support@ggus.org from supporters)
- The ticket history is now clear: it is possible to track down actions and know the supporter who has taken them
- Escalation tickets are automatically issued in case the supporter or the user has not reacted to the ticket.
- TPMs are always informed about every ticket and action so that they can intervene.
- It is also possible to browse through tickets (open, solved, …) per support unit, keyword, Ticket ID, etc.
- It is still not possible to see the tickets assigned to a specific supporter. However supporters are notified via e-mail.

# How are users and supporters trained ?

• NA3 participates to GGUS/ESC discussions. Using material partially produced by members of ESC in various occasions they have prepared training sessions for users. One of the event was the Biomed training in Clermont-Ferrand
http://agenda.cern.ch/fullAgenda.php?ida=a053765

• The next training event for supporters (TPM, VO TPM and second level support) will be held in Karlsruhe on November 4-5. NA3 at FZK volunteered to help GGUS with the organization and with the training material

• The CERN Help Desk has been trained to direct users to GGUS.

• Supporters are also trained while doing their support job. They are assisted by more experienced supporters. They can always ask questions to tpm-grid-support@cern.ch for technical support. They can contact support@ggus.org for procedural questions. A GGUS telephone hot line has been put in place.

• Documentation available for the duties of a supporter: docs 1300, 1200, 1100, 8600, 9100
(https://gus.fzk.de/pages/info_for_supporters.php). It is constantly updated.

# Who are our customers at the moment ?

- Our main customers at the moment are:
  - **Grid Operations**
  - **VO Users**
  - **Generic Users**

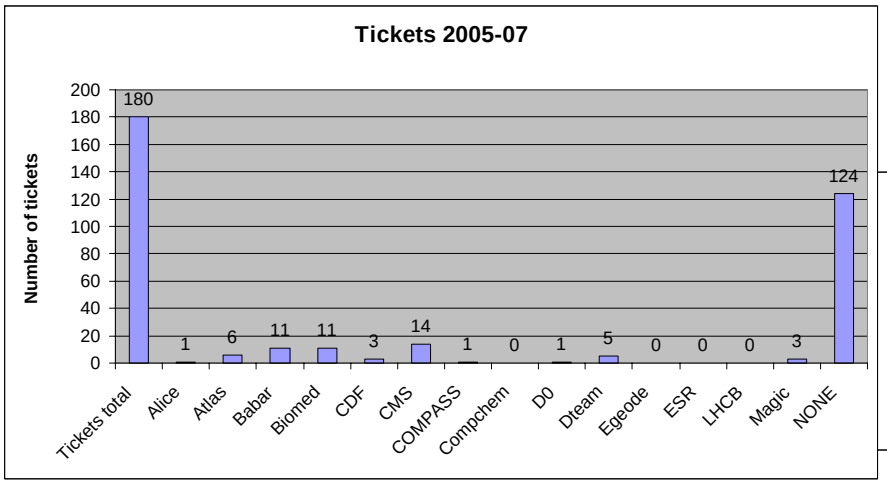
- Grid Operations follow their own procedures for taking care of tickets. Only ROCs are involved in the solutions of these tickets.

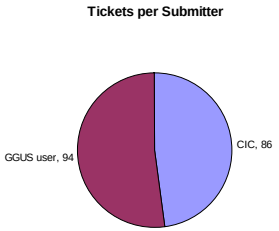
- VO Users receive answers from TPMs normally. If the problems are too specific to the VO in question, TPM VO takes over. They might solve the ticket or address it to a specialist in the VO. Tickets can come back to TPMs with more details and eventually addressed to the middleware developers.

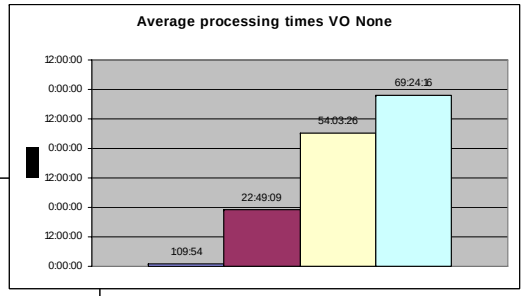
- Production VO Users. They normally report site related problems. These problems are then assigned by the TPM to the ROC in charge of the specific site. Sometimes problems with the middleware arise. The problem is then followed by the specific developer and eventually a bug or a task in Savannah is open. There is still no mechanism in place to connect a ticket to a Savannah bug or task.

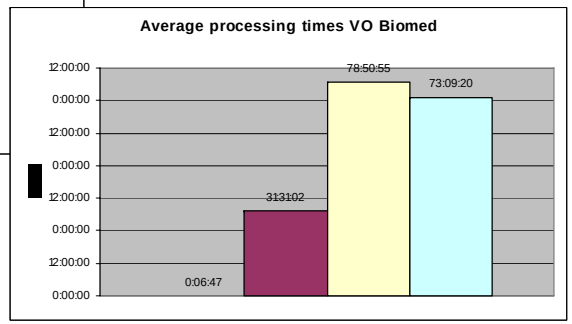
- Generic Users/Beginners. These tickets are normally addressed by the TPM. The solution is many times found using the GGUS search engine or explained clearly in the LCG-2 User Guide. In the solution the user is then addressed to the right source.

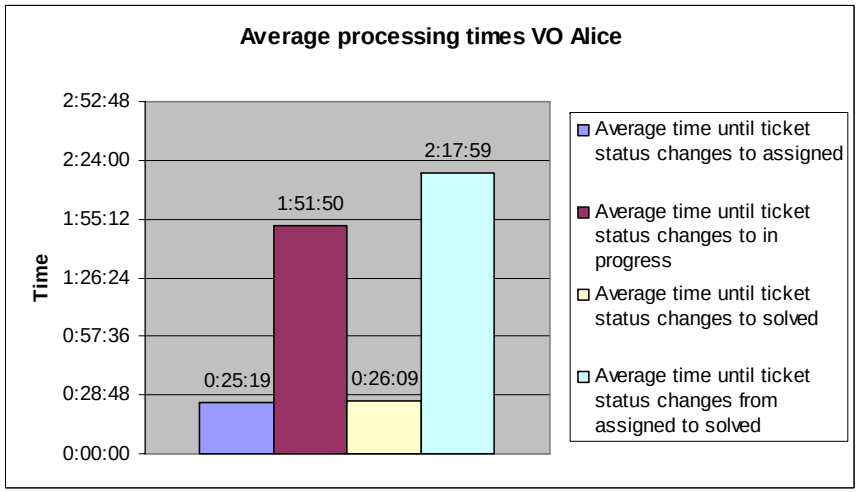
# Some statistics

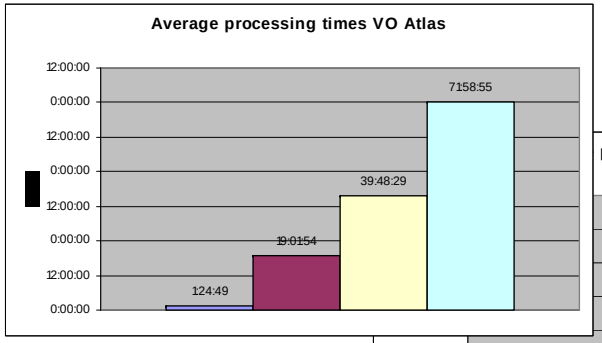


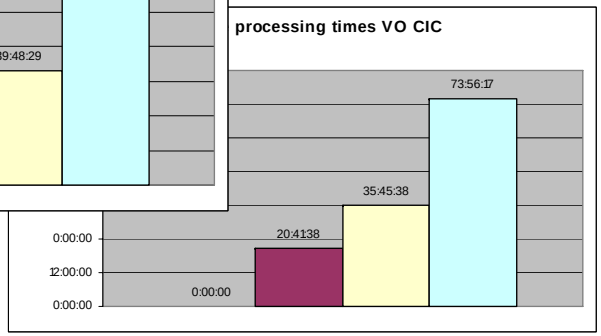



# Major problems

***A list non exhaustive of the major problems is the following:***

1. ***Sites are sometime very slow to solve problems***
2. ***Second level Supporters are mainly concentrated at CERN (middleware, deployment, storage, etc.) and overwhelmed with work***
3. ***There is no dedicated support. Everything works on a voluntary base: TPMs and Specialized Support.***
4. ***Supporters training can be effective only if supporters are active. This is not the case for VO TPMs, for most of the time. VOs have not always answered to the request of providing a list of people for the TPM VO. Existent TPM VO needs to be much more active and provide answers.***
5. ***VO Users need to be encouraged to use the GGUS system (I have tried that through mailing lists). We can only improve with feedback and effective usage. Fortunately we are seeing an increase of GGUS usage at the end of August/beginning of September.***
6. ***The interfaces between GGUS and ROCs have not yet been completed, for example the interface to ROC UK. Procedures are being established to forward tickets to ROC US but more active involvement is needed. A channel with NorduGrid has yet to be not established.***
7. ***The ticketing interface can be still improved, for instance to automatically change the status of tickets to "in progress" or "solved". Sometime a ticket stay open because the specific supporter has forgotten to close it. Fortunately the TPMs do a good monitoring. There is a long plan of actions on the ticketing interface. However, most supporters feel that the interface is workable.***
8. ***Still far from having a real distributed support. Taiwan and US need to be more involved.***

# ROC Integration status at July 05

- **Some ROCs set up an helpdesk system interfaced to GGUS following the Grid.it example using OneOrZero:**
  - IT: in production since March 14th ➔ OneOrZero replaced by xoops/xhelp in August
  - SE: in production since April 25th
  - RU: in production since May 23th
  - SW: in production since July 18th
  - CE: almost ready
- **Some ROCs had different helpdesks inside their federation:**
  - GER-CH: helpdesk based on Remedy, interface to GGUS ready but not yet announced
  - FR: home developed helpdesk, interface to GGUS ready by September
  - NE: helpdesk based on RT open to local users since April, plan to be interfaced to GGUS asap
  - UK-I: helpdesk based on Footprint, planned to be interfaced to GGUS but no manpower available
- **For ROCs outside EGEE effort started after last Operation Workshop:**
  - Asia/Pacific: helpdesk based on OTRS, documentation provided to developers, interface to GGUS in progress
  - OSG: iGOC helpdesk based on Footprints, but not yet clear if an interface to GGUS for each OSG Support Center is required, or just one for OSG-iGOC is enough.

# The GGUS portal : resilience to failure

***GGUS/ESC is now taking part to the Grid Operations meeting.***

***GGUS/FZK has been unstable.*** ***Grid Operations were disturbed by the portal being unstable for more than a week and unavailable for few days. The instability of the system some weeks ago was caused by a process running on the REMEDY server that was conflicting with REMEDY. This has been understood and sorted out.***

***In the middle of September there will be a backup system that can become operational within an hour in case the main system has problems.***

***Furthermore, GGUS/FZK is working on a redundant system consisting of two servers sharing the load. If one fails the other can take over the whole work. This will take a little bit longer to set up. GGUS will inform this meeting when the system is operational.***

***GGUS/FZK is not resilient to network failures.*** ***A plan needs to be put in place to create a clone of the infrastructure somewhere else (for instance in Taiwan). This was an explicit request coming from Grid Operations to make the infrastructure more robust. This is going to take some time.***

# Improvements introduced in July 2005

1. *Implementing an Email to ticket interface to be used by 9 VOs*
2. *Implementing an Email to ticket interface for helpdesk@ggus.org*
3. *New labels in top navigation and ggus start page*
4. *Addition of new documentation and wiki pages*
5. *Implementing a mechanism that guarantees going links to the newest version of documents within the egee-docs-section*
6. *Improvement of the user search in solved tickets, which is now more fault-tolerant and not case sensitive.*
7. *Presentation of the ticket information/modification/history in a better viewable form*
8. *Adding some more javascripts that help user/staff using webforms correctly*
9. *Introducing TPM as displacement/substitute for SOD*
10. *Help from ROCs to do shift for TPMs*
11. *New Search Engine*
12. *Reviewed all TPM VO Support lists. Contact with experiments*
13. *...*

# What is going to be available in the next months [~end of September] ?

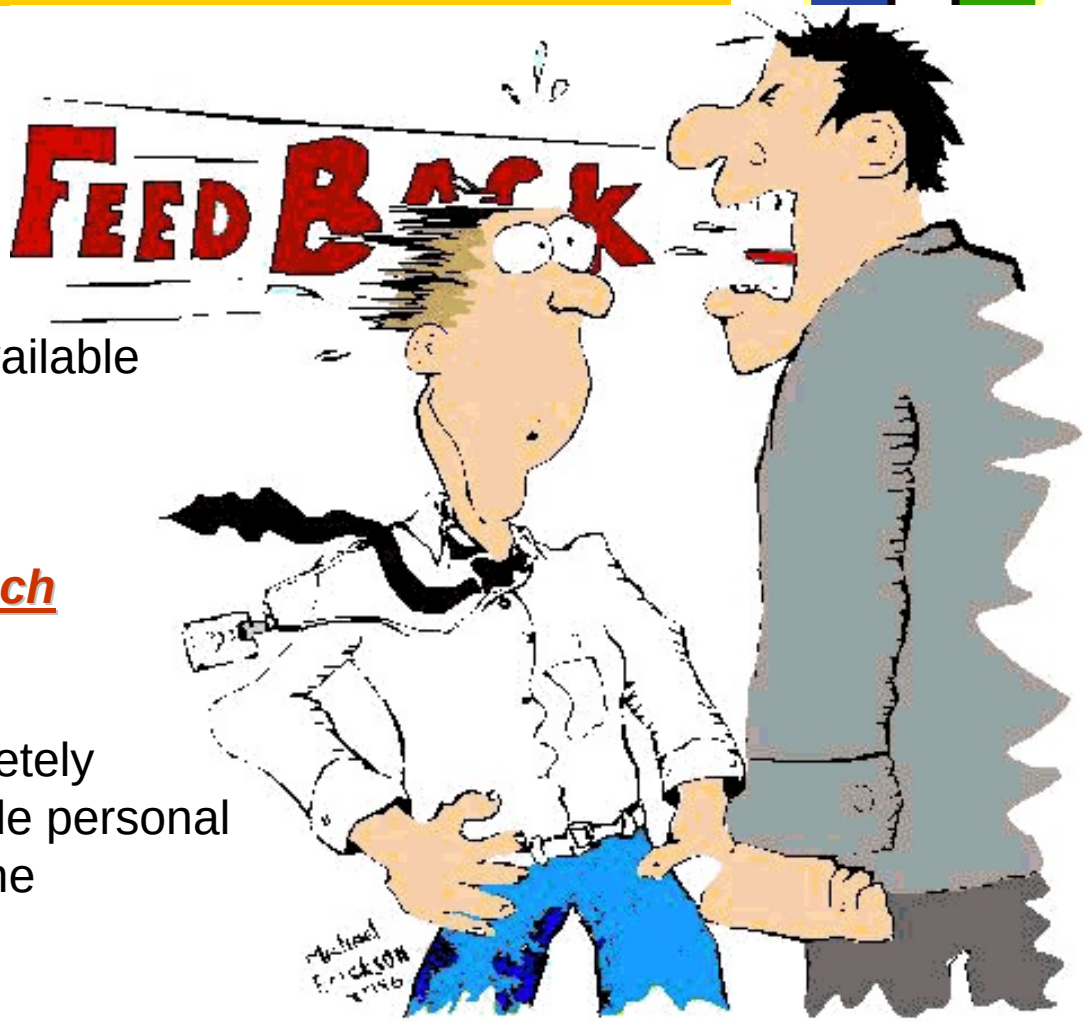
1. *Automatize the supporter process of filling in ticket forms via pop-up help windows (if solution filled in – "would you like to close this ticket?", change automatically ticket status to "in progress" if action taken by supporter, etc.)*
2. *Reconsider the handling of attachments within the email to ticket interface.*
3. *Improvement of the mail templates.*
4. *Prepapation of a new concept for GGUS-News*
5. *Defining different ticket end states (won't fix, open bug in Savannah, etc.)*
6. *Ensure the availability of GGUS through backup and fail-safe systems*
7. *Interfaces to other grids (NORDU/OSG)*
8. *Prepapation of a new concept for metrics*
9. *Prepare to support the Service Challenge (to be discussed at the next LCG Operation Workshop).*

# Feedback

- It is very important for us to get feedback

- An electronic feedback form is available on the GGUS portal.
  You can always send e-mail to support@ggus.org or ***project-eu-egee-sa1-esc@cern.ch***

- The electronic feedback is completely anonymous. If you want to provide personal information you have to do it in the feedback field.



# Conclusions

- We think the functionality and usability of the GGUS system has improved a lot in the last months (it does not introduce delays beside the supporters response time – we are trying to provide an accurate metric for this).
- GGUS/ESC is functioning quite well. Now we have representatives from ROCs, NA3, VOs, GGUS/FZK, CERN.
- The existent interfaces with the ROCs are very handy and work well. The ones that are not there are really missed (ROC_UK, OSG, NorduGrid, etc.). However we are moving forward also on this.
- The ticket traffic is increasing (we have many more CMS and ATLAS customers – still very few from Alice and LHCb). We still do not know what a real figure would be for the number of ticket one should expect. At the moment the GGUS infrastructure is well dimensioned, especially after getting the help of the ROCs for the TPMs.
- We would like to have more involvement from the VOs.
- People in France have done a good job with the CIC portal. VO specific views need to be put in place with the help of the VOs. Please, give feedback.
- We need more supporters in order to help the supporters at CERN who now are the main source of knowledge and help.

# And ….

Thank you!
CERN LCG Grid Deployment Board
Global Grid User Support
Flavia Donno
for LCG/GGUS Executive Support Committee (ESC
INFN – Pisa and CERN