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Support Model for SC4 Pilot WLCG Service

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www.eu-egee.org

Information Society

Enabling Grids for E-sciencE

- **Problems reporting**

  Deployment and configuration, middleware, external components, mass storage support, etc. (from site admins, experiments, users, etc.). <u>Unique entry point.</u>

- **Hot line for support**

- **Coordination with sites**

  For installation and configuration/operations.
  Establish FTS channels between Tiers, MyProxy servers to use when configuring a service, middleware releases, etc.

- **Coordination with experiments**

  Middleware services needed, special experiment requirements, special software installations, VO BOXes, etc.

- **Documentation, search engines, notification mechanisms, monitoring tools, statistics, etc.**

- **Not a single entry point for support**

Many e-mailing lists available with different format **(lcg-sc.support@cern.ch, fts-support@cern.ch, hep-service-lfc@cern.ch, hep-service-dpm@cern.ch, castor2.support@cern.ch, ...).**

Behind either single supporters or tracking systems. Sometime difficult to recognize the exact nature of a problem. No filtering of problems (novel users and experts users are addressed to the same set of supporters).

- **Hot line**

Available only via phone.

- **Coordination with sites**

Done with coordination meetings and messages sent via e-mailing lists.
Easy to loose track of important information. Central web page with a lot of mixed information: sometime difficult to find what is needed. Not up-to-date infos.

- **Coordination with experiments**

Done with coordination meetings and messages sent via e-mailing lists.
Easy to loose track of important information. Central web page with a lot of mixed information: sometime difficult to find what is needed. Not up-to-date infos.

- **Documentation, search engines, notification mechanisms, monitoring tools, statistics, etc.**

Documentation available even if not totally organized. Effort left to the developers and other volunteers. Search engine available with lookup in SC page.
Notification mechanisms available on SC web page changes. No dedicated monitoring and statistics tools.

The support model in EGEE can be captioned
"Regional Support with Central Coordination"

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

RC 1	...	RC X
RC 1	...	RC X
RC 1	...	RC X

ROC 1   ROC...   ROC 12

DS 1 / ... / DS 5

Operations Support

TPM

Network Support

Central Application (GGUS)

Deployment Support

Middleware Support

MS 1 / ... / MS 8

VO Support

ALICE   BIOMED   ESR   .....

— Interface (red)
— Webportal (blue)
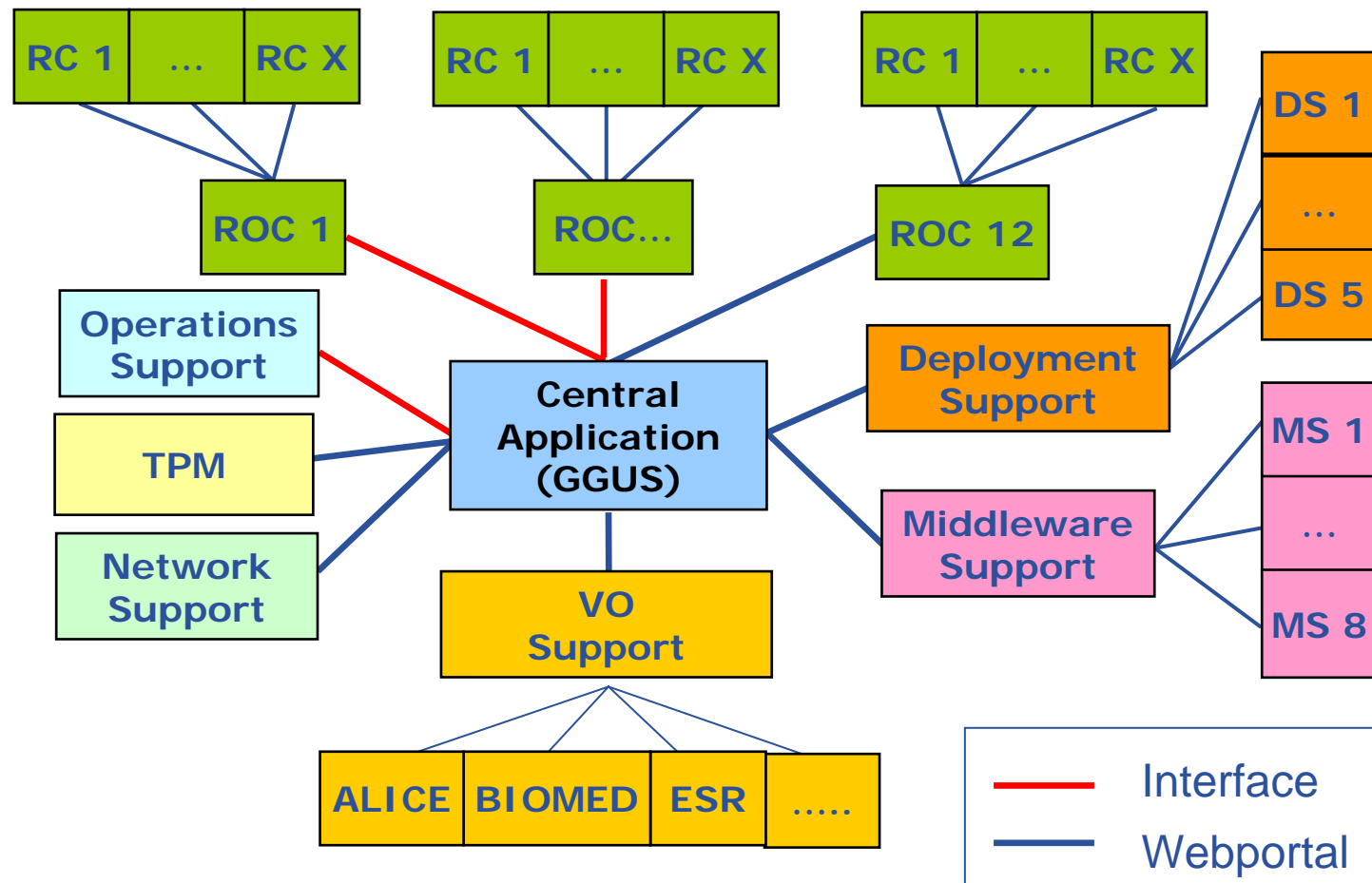
- **Chaired by Flavia Donno/Alistair Mills**

  (Kick off meeting of ESC at Karlsruhe - *27 January 2005*)

- **Goal:**

  To ensure an effective, efficient, scalable Grid User Support Service.
  It coordinates operations, follows/cures infrastructure problems, takes
  users/supporters input.

- **Members:**

  people from CERN, UK, France, Italy, Germany, Czech, ROCs,
  representatives from VOs, NA3, other Grids (OSG and NorduGrid),
  Taiwan, ROC_US, Operations Support members.

- ESC meets monthly to discuss organization issues and problems.

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Users can make a support request via their Regional Operations' Center (ROC) or their Virtual Organisation (VO).
Within GGUS there is an internal support structure for all support requests.

RC 1 | ... | RC X

ROC 1

Local Helpdesk

Problem

www.ggus.org

Central Application (GGUS)

vo-user-support@ggus.org

helpdesk@ggus.org

For Service Coordination
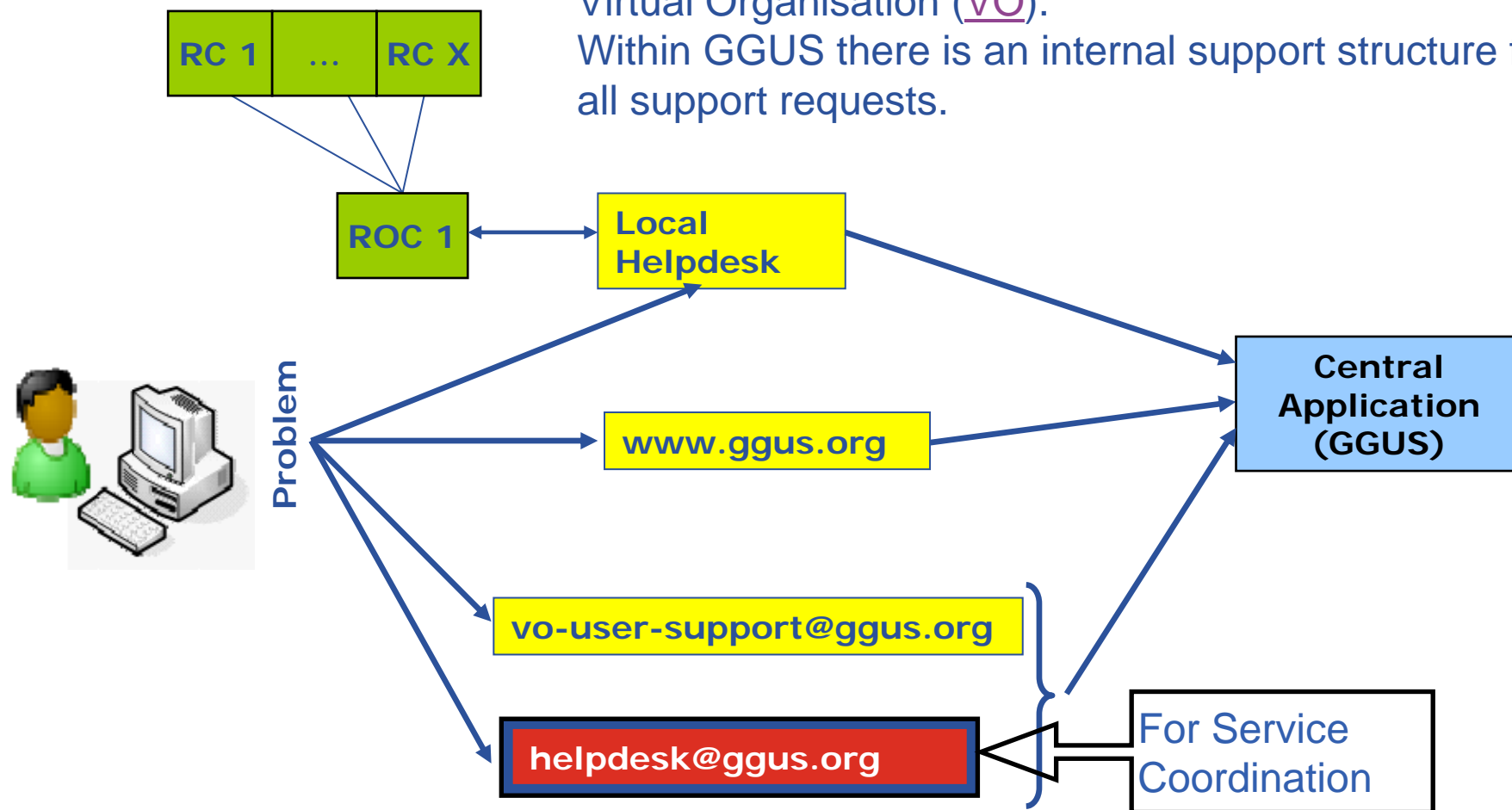
For VO users and VO specific problems

Mail to <VO>-user-support@ggus.org

- Solves
- Classifies
- Monitors

TPM Grid+VO experts

Automatic Ticket Creation

VO-specific

Central Application (GGUS)

VO Support Units

ROC Support Units

Operations Support

Middleware Support Units

Deployment Support Units

Network Support

Service Coordination

Service Coordination

Service Coordination

Service Coordination

Service Coordination

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Mail to helpdesk@ggus.org

For general Grid problems: beginners, Operations, Deployment, Service Coordination, etc.

Automatic Ticket Creation

TPM

- Solves
- Classifies
- Monitors

Central GGUS Application

VO Support Units

ROC Support Units

Operations Support

Middleware Support Units

Deployment Support Units

Network Support

| Service Coordination | Service Coordination | Service Coordination | Service Coordination | Service Coordination |

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www.ggus.org

TPM

- **Solves**
- **Classifies**
- **Monitors**

Central GGUS Application

VO Support Units

ROC Support Units

Operations Support

Middleware Support Units

Deployment Support Units

Network Support

Service Coordination

Service Coordination

Service Coordination

Service Coordination

Service Coordination

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Local Helpdesk

Local Helpdesk

Local Problem?

Automatic Ticket Creation

TPM

- Solves
- Classifies
- Monitors

RC

Central Application (GGUS)

VO Support Units

ROC Support Units

Operations Support

Middleware Support Units

Deployment Support Units

Network Support

Service Coordination

Service Coordination

Service Coordination

Service Coordination

Service Coordination

Browseable tickets

Search through solved tickets

Useful links (Wiki FAQ)

Latest News

GGUS Search Engine

Updated documentation (Wiki FAQ)

Operations Portal and GOC

GGUS Portal: user services

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Browseable tickets

Search through solved tickets

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

Broadcast tool
with history saving

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

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GGUS Search Engine Ongoing work to make it faster and to search through a wide set of docs and DBs
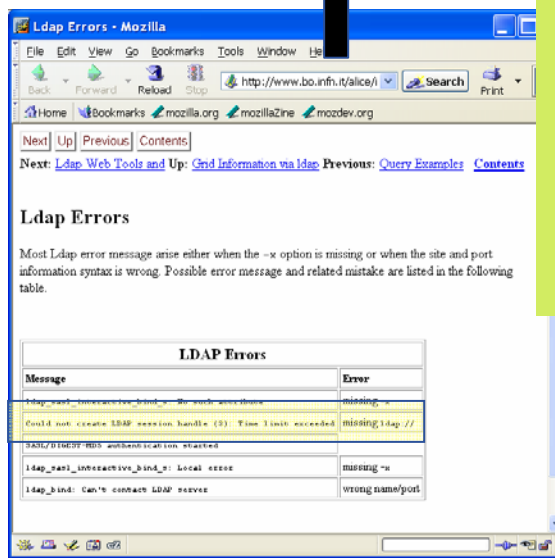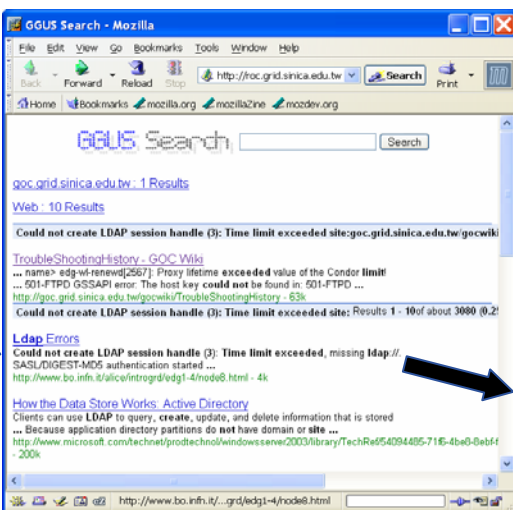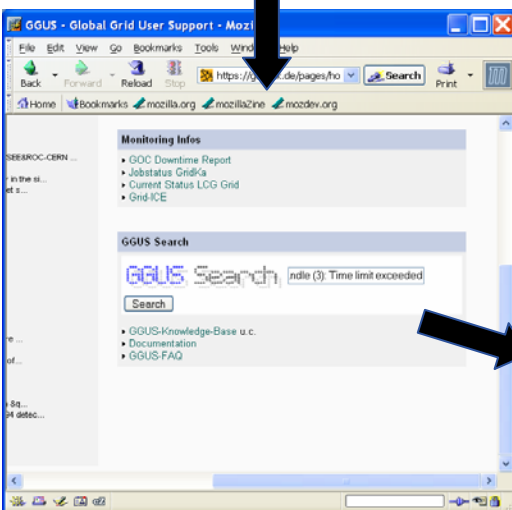
- ***Support for all VOs***:

  global (recognized throughout EGEE)

  and regional (support provided

  by specific ROCs)

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Enabling Grids for E-sciencE

- ***Ticket Processing Managers (TPM)*** :

  Generic grid experts

- ***VO TPMs***:

  First line supporters for VOs

- ***Specialized Support***:

  Middleware, Deployment, Services,

  specialized VO Support

- ***ROCs***:

  local support and services

- ***ENOC***:

  network support

VO Support

TPM Support

- You need to ***register*** in order to be able to use the GGUS portal (***GSI*** or password based)
- Documentation available describing the duties of a supporter: docs 1300, 1200, 1100, 8600.
- ***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

There are *two kinds* of Ticket Processing Managers:

- *The Generic TPM*:
    - Generic Grid middleware experts
    - Experience in Grid installation and configuration
    - First line support
    - Provide answers to tickets whenever possible
    - Assign the ticket to one of the second level support units or to a ROC
    - Follow all tickets and make sure they receive a timely and correct answer
    - Can be contacted via support@ggus.org
    - Can contact themselves using the e-mailing list tpm-grid-support@cern.ch

- *The VO TPM*:
    - People with experience in both generic Grid problems and VO specific software
    - Receive VO specific tickets at the same time or after the generic TPM depending on VO
    - They have the same duties as a generic TPM
    - If a problem is really due to VO software they use the VO support structures to solve the problem

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There are **two kinds** of Ticket Processing Managers:

• **The Generic TPM**: they are generic Grid middleware experts with some experience in Grid installation and configuration. They are the first line support and provide answers to tickets whenever possible => they look into the tickets details and try to understand the nature of the problem providing a solution. If the problem goes behind the expertise of a generic TPM, then the TPM assigns the ticket to one of the second level specialized support units or to a ROC. Their responsibilities are described in the document 8600. They keep users updated with the status of the ticket (will be made automatic with the next portal release – however this responsibility will stay for TPMs). They follow all tickets (beside CIC-on-Duty) and make sure they receive a timely and correct answer. They can be contacted by support@ggus.org and they can contact themselves using the e-mailing list tpm-grid-support@cern.ch.

• **The VO TPM**: they are people with experience in both generic Grid problems and VO specific software. Depending on the VO, they can receive VO specific tickets at the same time a generic TPM receives them or after the generic TPM has process the ticket and decided to hand it over to VO TPM. Their responsibilities are documented in 8600 and VO specific FAQs docs. They have the same duties as a generic TPM. If they recognize that the problem is really due to VO software and does not concern the Grid, then they use the internal VO specialized mailing lists to contact experts and have the problem solved. Once they receive the answer from the VO experts, they fill the answer in the "Solution" field of the ticket and set the ticket status to "solved", so that the user gets notified.

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• At present the *ROCs contributing to the TPM effort* are the following:

ROC-CERN, ROC-CE, ROC-SE, ROC-SW, ROC-Russia

for a total of 20 people. Other ROCs will join soon.

• The *CERN Helpdesk* is at the moment able to process between 1000 and 1400 tickets per week, having about 30 TPM equivalent on shift in groups of 5 to 7 people.

•The current TPMs normally take *weekly shift of one or 2 people* (CERN is always present). Normally a TPM does not spend more than 2 hours to process the tickets assigned.

• The people contributing to TPM are now quite sufficient for the task. With the available people the same person takes shift every 8-9 weeks.

• A *TPM can always ask for* the *help* of other TPMs with experience for solving a problem sending e-mail to tpm-grid-support@cern.ch. That's how a TPM gets trained as well, beside the documentation and the training courses organized by NA3.

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• 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 user event was the Biomed training in Clermont-Ferrand

http://agenda.cern.ch/fullAgenda.php?ida=a053765

Event for supporters at FZK **10-11 November 2005**

http://agenda.cern.ch/fullAgenda.php?ida=a056547

• 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.

VO Support

TPM Support
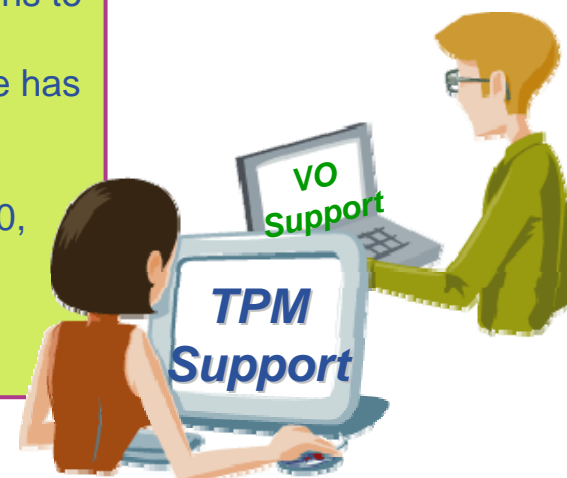
Next Training Event:

Supporters training at CERN **1-2 February 05**

Presentations about the Support System for Supporters, TPM and VO TPM

Hands on GGUS

To be announced

Registration page:

To be announced

VO Support

TPM Support

Registered users and supporters

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Tickets 2005-09

110 tickets first 15 days in October

Average processing times for cms

September

140:01:52

Average time from ticket creation to ticket assignment
Average time from ticket assignment to ticket solution

Average processing times for cms tickets

21:03:45

Average time from ticket submit to ticket assignment
Average time from ticket assignment to ticket solution

0:18:35

October

Tickets per Submitter

GGUS user; 137   CIC; 144

Average processing times for TPM

2:38:37

Average time from ticket creation to ticket assignment
Average time from ticket assignment to ticket solution

0:01:34

October

Average processing times for all ROCs

41:59:13

Average time from ticket creation to ticket assignment
Average time from ticket assignment to ticket solution

1:35:16

October

- Ensure the availability of the GGUS System with Remedy Server Groups option: two identical systems can access the same DB-tables at the same time + enables load balancing

FZK - Redundant Internet Connection

GGUS Application	PHP Mail-Tool
Webpages	
SSL	
Apache Webserver	
Tomcat connector	PHP
Remedy Server	MySQL
Tomcat JSP Server	Oracle Runtime
Java Runtime und SDK!	
Linux fetchmail, qmail, procmail, Firewall	
Linux OS RedHat Enterprice-Server 3	

GGUS Application	PHP Mail-Tool
Webpages	
SSL	
Apache Webserver	
Tomcat connector	PHP
Remedy Server	MySQL
Tomcat JSP Server	Oracle Runtime
Java Runtime und SDK!	
Linux fetchmail, qmail, procmail, Firewall	
Linux OS RedHat Enterprice-Server 3	

FZK - Redundant Oracle Cluster

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

GGUS/FZK is working on a redundant system consisting of two identical systems at two different locations within the FZK-campus. They share the load. If one fails the other can take over the whole work.

GGUS/FZK is not resilient to network failures. A plan is being put in place to create a clone of the infrastructure somewhere else (Taiwan). This was an explicit request coming from Grid Operations to make the infrastructure more robust.

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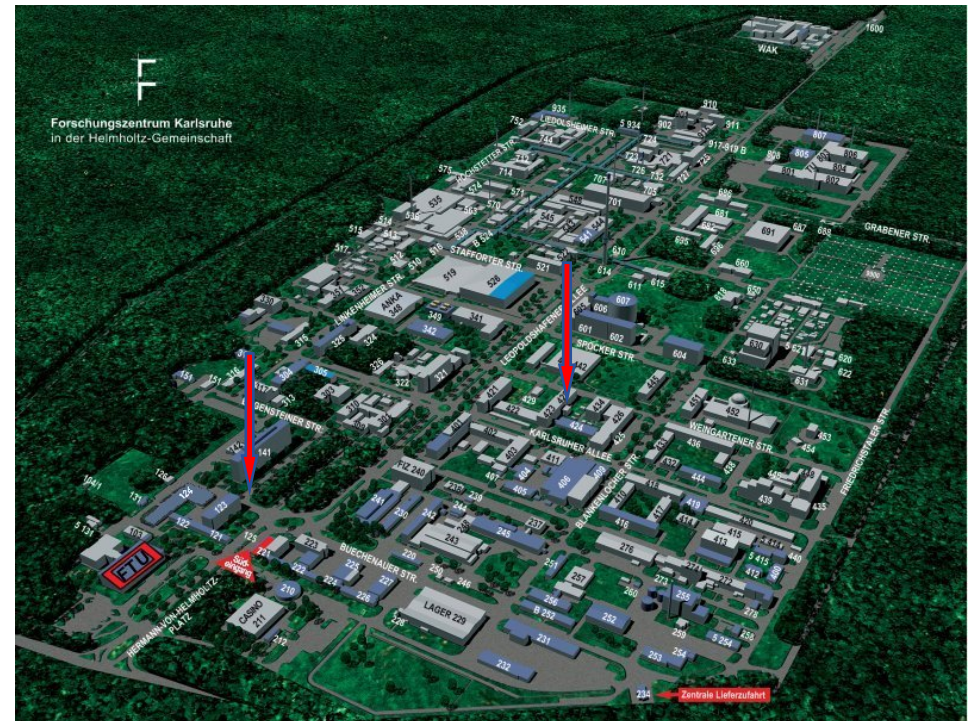
- The functionality and usability of the *GGUS* system *has improved* in the last months, thanks to the help of the ROCs (more tickets submitted, more customers and general appreciation of the service).
- *GGUS/ESC* coordinates the effort and operations: key body.
- The existent *interfaces with the ROCs* are quite practical and make the system function as one. Most ROCs have established functional interfaces with GGUS, the others are working on it. Same with existent specific support track systems.
- The ticket traffic is increasing. We still *do not know* what a *realistic figure* would be for the number of ticket to be expected. The system can be dimensioned appropriately with more TPMs and support units.
- A lot of *metrics established* to measure the performance of the system (performance of a supporter/support unit, tickets solved/week/VOs, # of tickets filed in Wiki pages, etc.). The measures refer only to the central system. Each ROC processes and solves also local requests. Measures for each ROC are also available.
- GGUS is working on a *plan to offer resilience to system and network failures*.
- *We need more specialized supporters* in order to help the supporters at CERN who now are the main source of knowledge and help also for **Service Coordination**