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*Joint OSG and EGEE Operations Workshop
RAL, 27th-29th September 2005*

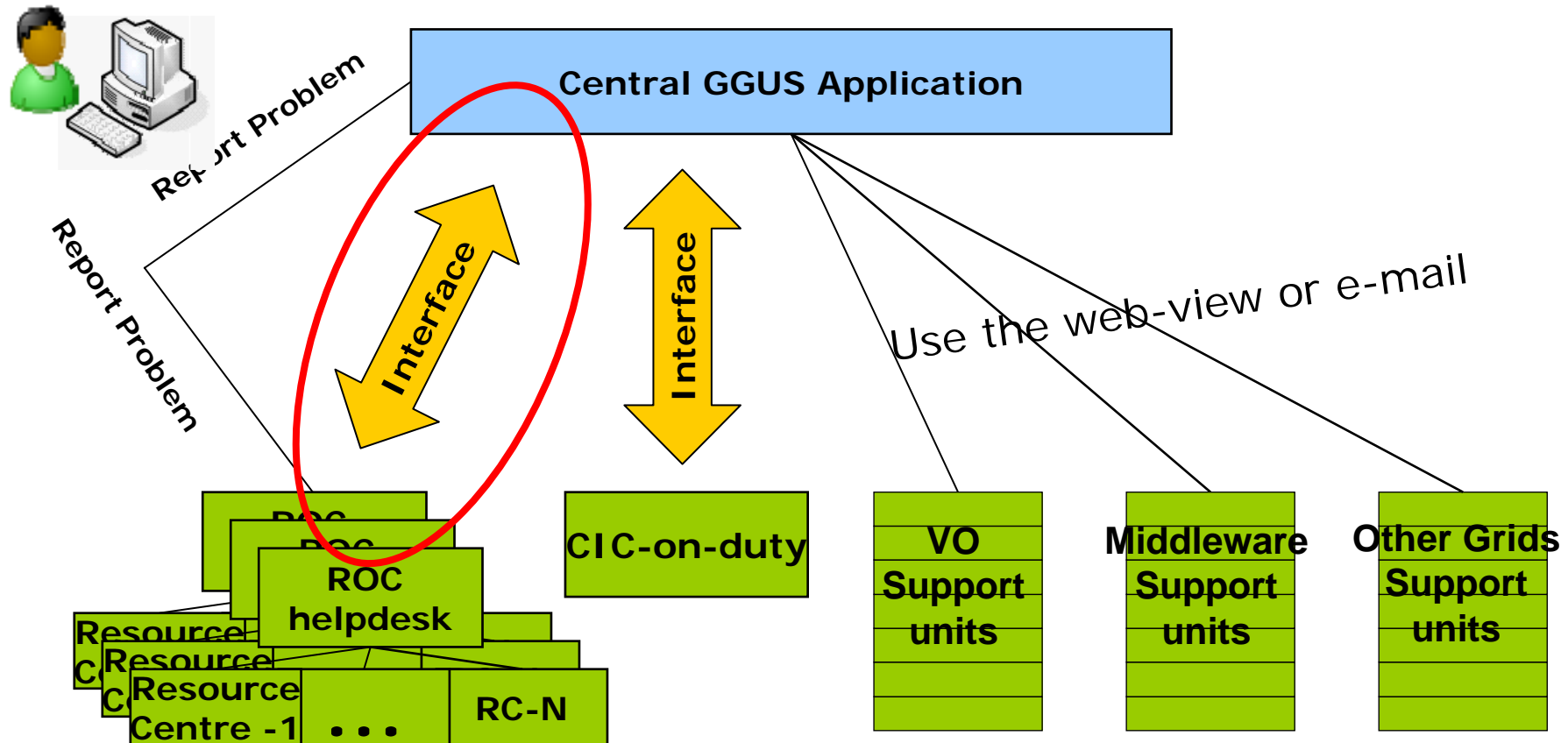
ROCs Interface and TPM partecipation

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EGEE User Support: interfaces



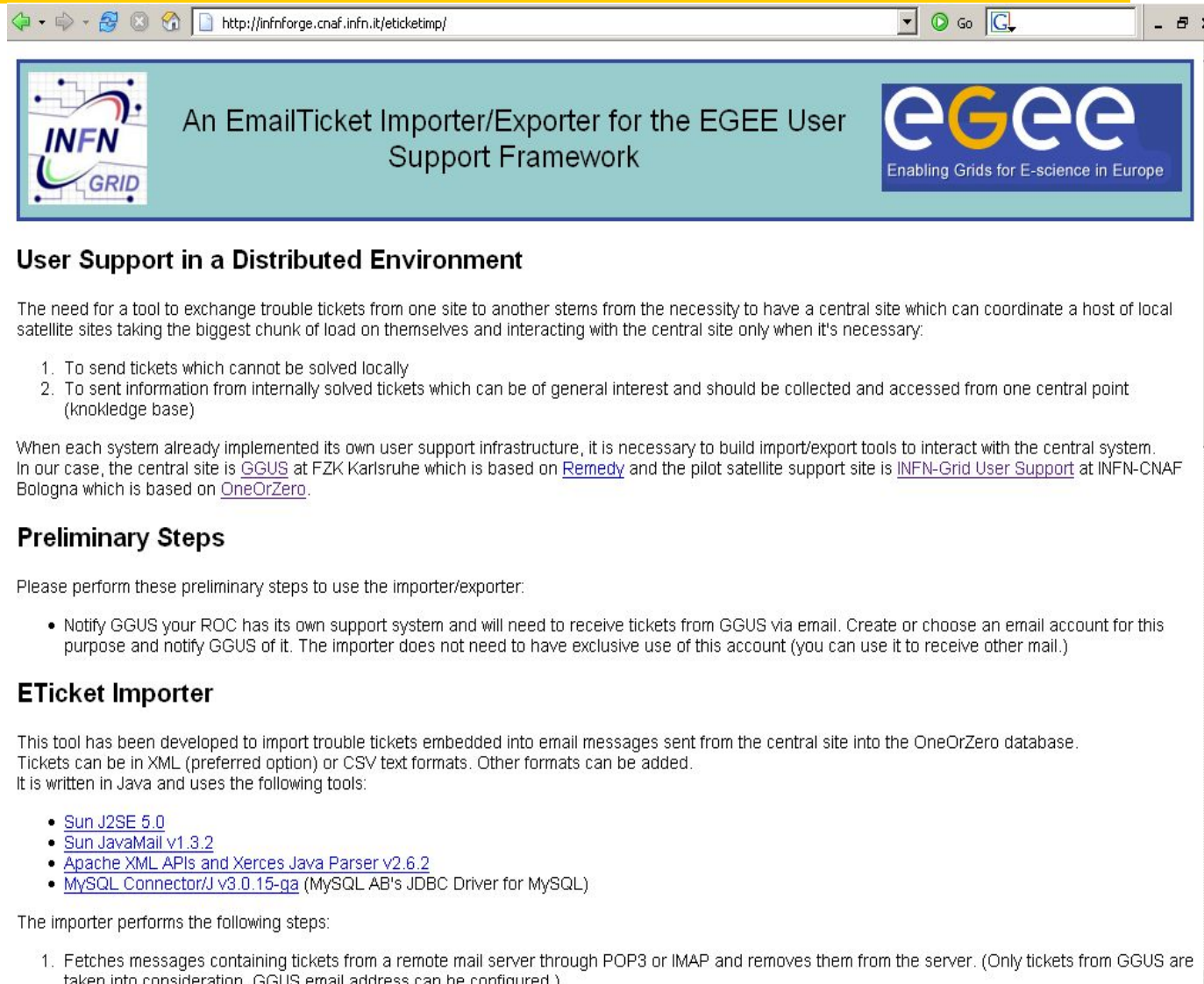
Using the local Helpdesk Systems
in conjunction with a central
integration platform at GGUS

ROCs Interface: how it works

- **First Interface** between ROC_Italy Helpdesk and GGUS ready since November '04, in 'production' since March '05
- Based on **Web Services** at GGUS side, several advantages:
 - sample code available for PHP/Perl/Python and other computing languages
 - very fast: 600-1000 service requests/sec on the GGUS Servers
 - easy to adapt
- Based on **e-mail** at local side (importing tool)
- **XML** exchange format
- Tickets **fields mapping** between the two systems

<http://infforge.cnaf.infn.it/eticketimp/>

Documentation



The screenshot shows a web browser window with the address bar containing `http://infnforge.cnaif.infn.it/eticketimp/`. The page header features the INFN GRID logo on the left, the title "An EmailTicket Importer/Exporter for the EGEE User Support Framework" in the center, and the EGEE logo on the right. The main content area includes a section titled "User Support in a Distributed Environment" with a paragraph explaining the need for a central site and a numbered list of two points. Below this is a paragraph about existing infrastructure and links to GGUS, Remedy, and OneOrZero. The next section is "Preliminary Steps" with a paragraph and a bullet point. This is followed by "ETicket Importer" with a paragraph and a list of dependencies. The final section is "The importer performs the following steps:" with a numbered list of one step.

An EmailTicket Importer/Exporter for the EGEE User Support Framework

User Support in a Distributed Environment

The need for a tool to exchange trouble tickets from one site to another stems from the necessity to have a central site which can coordinate a host of local satellite sites taking the biggest chunk of load on themselves and interacting with the central site only when it's necessary:

1. To send tickets which cannot be solved locally
2. To sent information from internally solved tickets which can be of general interest and should be collected and accessed from one central point (knowledge base)

When each system already implemented its own user support infrastructure, it is necessary to build import/export tools to interact with the central system. In our case, the central site is [GGUS](#) at FZK Karlsruhe which is based on [Remedy](#) and the pilot satellite support site is [INFN-Grid User Support](#) at INFN-CNAF Bologna which is based on [OneOrZero](#).

Preliminary Steps

Please perform these preliminary steps to use the importer/exporter:

- Notify GGUS your ROC has its own support system and will need to receive tickets from GGUS via email. Create or choose an email account for this purpose and notify GGUS of it. The importer does not need to have exclusive use of this account (you can use it to receive other mail.)

ETicket Importer

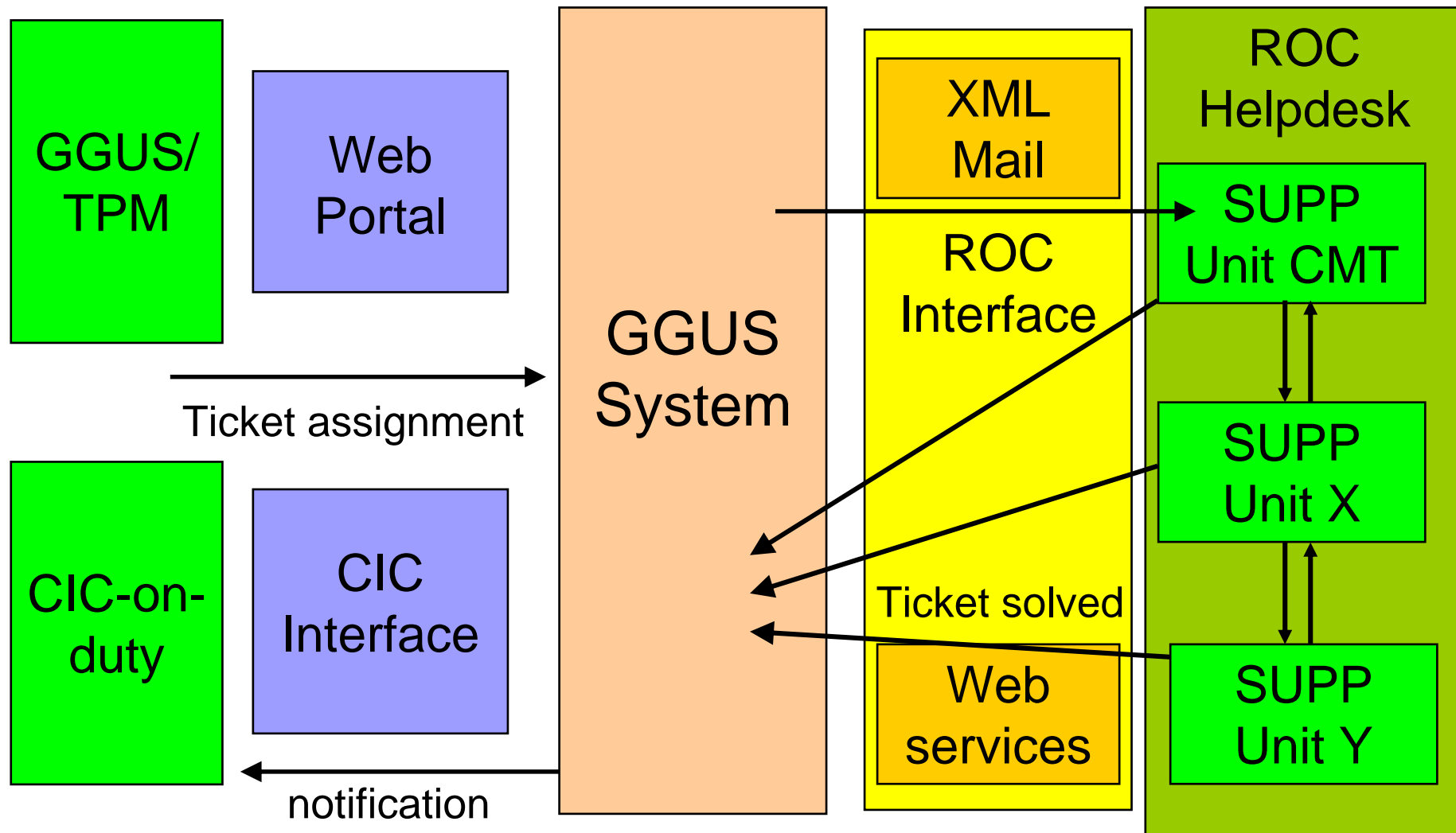
This tool has been developed to import trouble tickets embedded into email messages sent from the central site into the OneOrZero database. Tickets can be in XML (preferred option) or CSV text formats. Other formats can be added. It is written in Java and uses the following tools:

- [Sun J2SE 5.0](#)
- [Sun JavaMail v1.3.2](#)
- [Apache XML APIs and Xerces Java Parser v2.6.2](#)
- [MySQL Connector/J v3.0.15-ga](#) (MySQL AB's JDBC Driver for MySQL)

The importer performs the following steps:

1. Fetches messages containing tickets from a remote mail server through POP3 or IMAP and removes them from the server. (Only tickets from GGUS are taken into consideration. GGUS email address can be configured.)

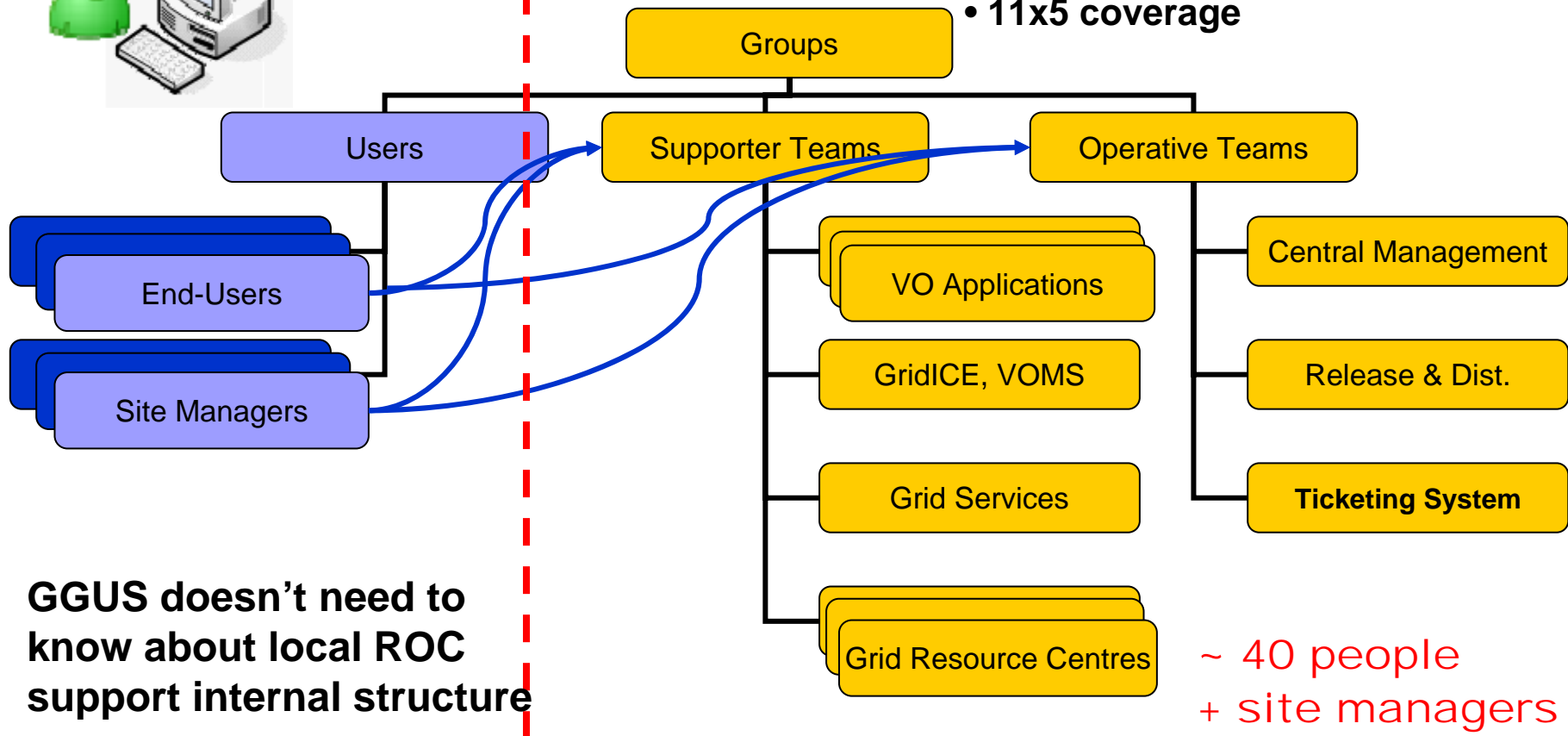
GGUS→ROC Basic Workflow



ROC_Italy Support Units example



- 4 people a day weekly rotating
- 8.30-19.30 working hours
- 11x5 coverage



XML e-mail interface

XML e-mail sent from GGUS

```
<Ticket>
  <Request-ID>762</Request-ID>
  <Loginname>grein</Loginname>
  <Name>Guenter Grein</Name>
  <E-mail>guenter.grein@iwr.fzk.de</E-mail>
  <Phone></Phone>
  <Experiment>none</Experiment>
  <Responsible_Unit>ROC_Italy</Responsible_Unit>
  <Status>assigned</Status>
  <Priority>very urgent</Priority>
  <Short_description>escal test #3</Short_description>
  <Description>escal test #3</Description>
  <Experiment_specific_problem>No</Experiment_specific_problem>
  <Type_of_Problem>Other</Type_of_Problem>
  <Date_Time_of_problem>2005-08-11 10:36</Date_Time_of_problem>
  <attachment_attachmentData></Attachment_attachmentData>
  <Diary_of_steps></Diary_of_steps>
  <Solution_short_form></Solution_short_form>
  <Solution_long_form></Solution_long_form>
  <Internal_Diary></Internal_Diary>
  <Origin_ID></Origin_ID>
  <Last_Modifier>AR_ESCALATOR</Last_Modifier>
</Ticket>
```

**Ticket creation/update
in the ROC helpdesk**

ROC helpdesk importer

It is written in Java and uses the following tools:

Sun J2SE 5.0

Sun JavaMail v1.3.2

Apache XML APIs and Xerces Java Parser v2.6.2

MySQL Connector/J v3.0.15-ga

- Fetches messages containing tickets from a remote mail server through POP3 or IMAP and removes them from the server
- For each message: copies the ticket email into its own file and removes it from the mail file.
- Parses the message (using Xerces DOM parser if its format is XML) and finally creates an EmailTicket object.
- Saves the ticket into the OneOrZero database creating a new ticket if this is a new ticket from GGUS or updating an existing local ticket.
- Notifies via email all members of the supporter group assigned to the ticket.

Web services interface

GGUS WSDL layer: http://gusiwr.fzk.de/arsys/WSDL/gusiwr/Grid_HelpDesk

```
<xsd:element name="TicketModify" type="s:SetInputMap"/>
<xsd:complexType name="SetInputMap">
  <xsd:sequence>
    <xsd:element minOccurs="0" name="Date_Time_of_problem" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Description" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Diary_of_steps" type="xsd:string"/>
    <xsd:element minOccurs="0" name="E-mail" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Experiment" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Internal_Diary" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Loginname" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Name" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Origin_ID" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Phone" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Priority" type="s:PriorityType"/>
    <xsd:element minOccurs="0" name="Responsible_Unit" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Short_description" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Solution__long_form" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Solution__short_form" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Status" type="xsd:string"/>
    <xsd:element minOccurs="0" name="Type_of_Problem" type="xsd:string"/>
    <xsd:element name="Request-ID" type="xsd:string"/>
  </xsd:sequence>
</xsd:complexType>
```

ROC helpdesk application
php/perl/python libs availables

```
require_once "../nusoaplib/nusoap.php";
global $lang_missing_info, $status, $mysql_tickets_table, $db;
$wsdl_url='http://gusiwr.fzk.de/arsys/WSDL/gusiwr/Grid_HelpDesk';
$soapclient=new soapclient($wsdl_url,"wsdl");
auth="<AuthenticationInfo><userName>rocitaly</userName>
<password>xxxxxx</password></AuthenticationInfo>";
$soapclient->setHeaders($auth);
$client = $soapclient->getProxy();
$params = array( 'Date_Time_of_problem' => '01-01-2004
08:00','Last_Modifier' => 'supporter', 'Request-ID' => 'ggus_id',
'Loginname' => 'rocitaly', 'Last_login' => 'rocitaly', 'Experiment' => null,
'Diary_of_steps' => 'update_log', 'Priority' => 'urgent', 'Status' => 'in
progress' );
$temp = $client->TicketModify($param);
```

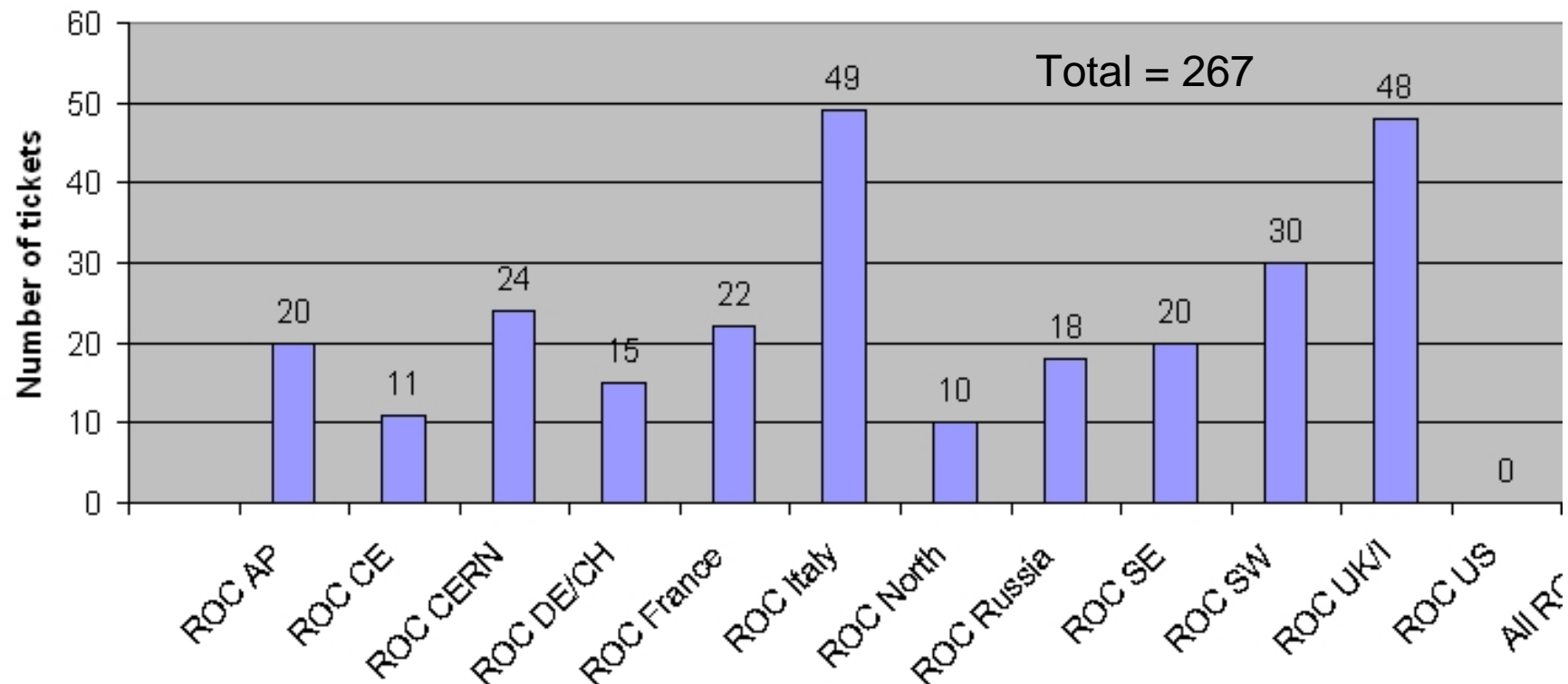
**GGUS ticket update from
a ROC helpdesk**

ROC Integration status at September '05

- **Some ROCs set up an helpdesk system interfaced to GGUS following the ROC_Italy 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:** in production since early September
- **Some ROCs had different helpdesks inside their federation:**
 - **DE-CH:** helpdesk based on Remedy, interface to GGUS in production since September 15th
 - **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, work in progress...
 - **UK-I:** helpdesk based on Footprint, planned to be interfaced to GGUS but no manpower available...
- **For ROCs outside EGEE effort started after last OW:**
 - **Asia/Pacific:** helpdesk based on OTRS, tickets automatically created in OTRS from GGUS notifications mails, interface towards GGUS in progress
 - **OSG:** iGOC helpdesk based on Footprints, other Support Centers on Remedy, to be decided at this OW how/what to interface
- **GOAL of ESC is to have all ROC interfaced by the end of the year**

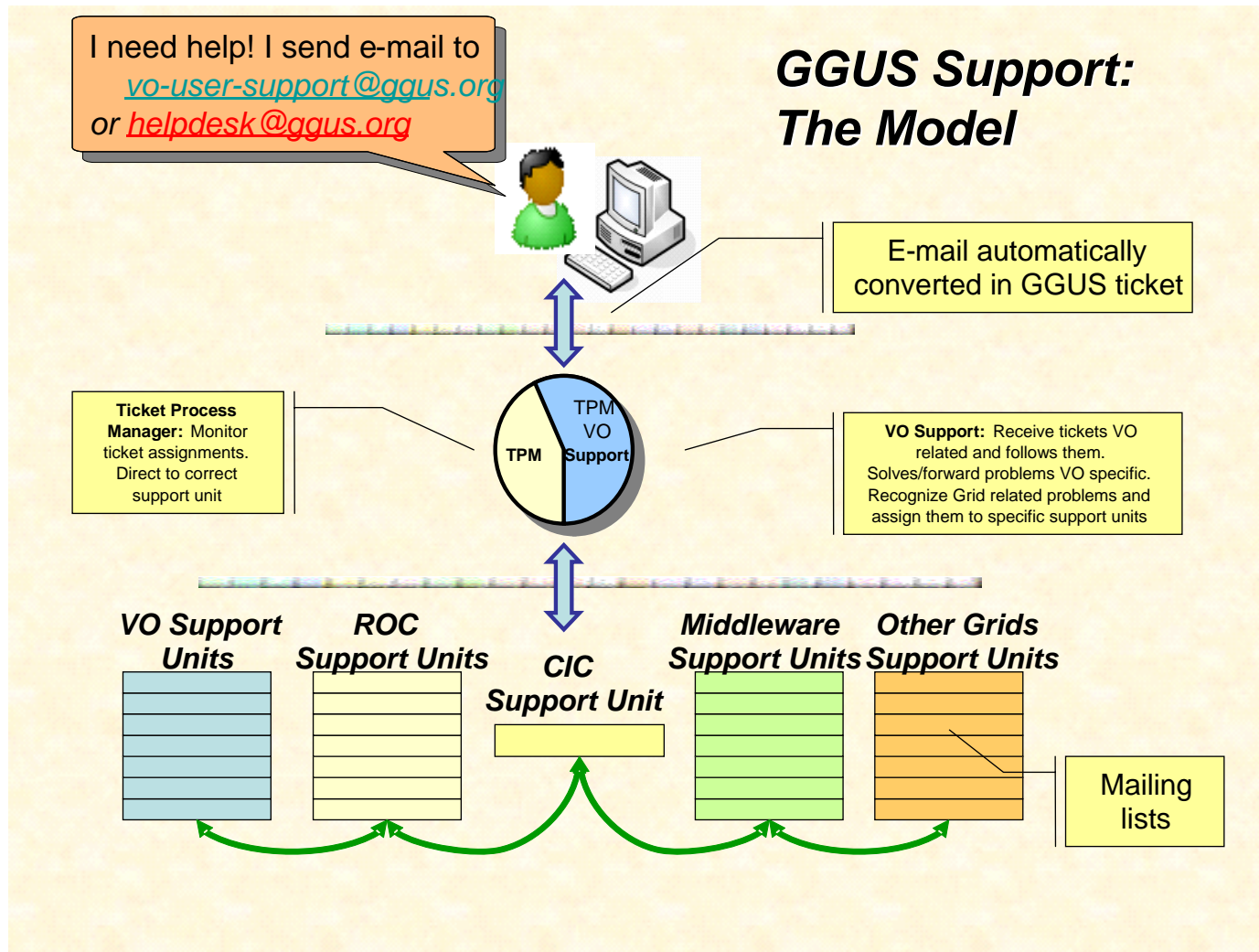
Some statistics: Tickets per ROC

Tickets 2005-07-20 until 2005-09-20

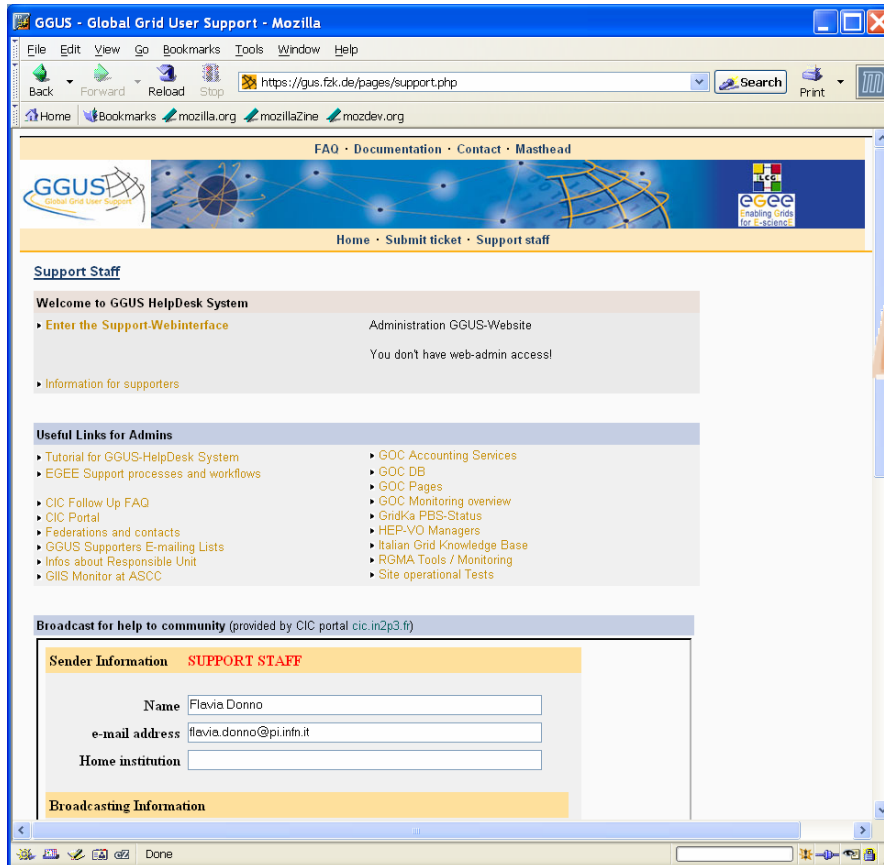


Ticket Process Management

(slides from Flavia Donno)



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 4 people from ROC-SE, 3 people from ROC-SW, 1 from ROC-CE, 1 from ROC-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:

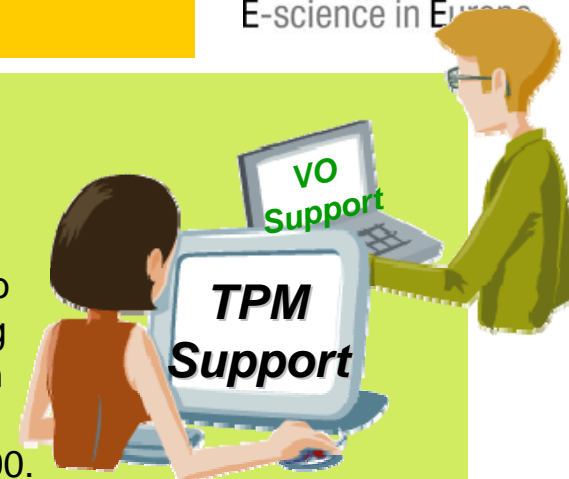
To apply as a supporter:
<https://gus.fzk.de/admin/apply4staff.php>

project-eu-egEE-sa1-esc@cern.ch

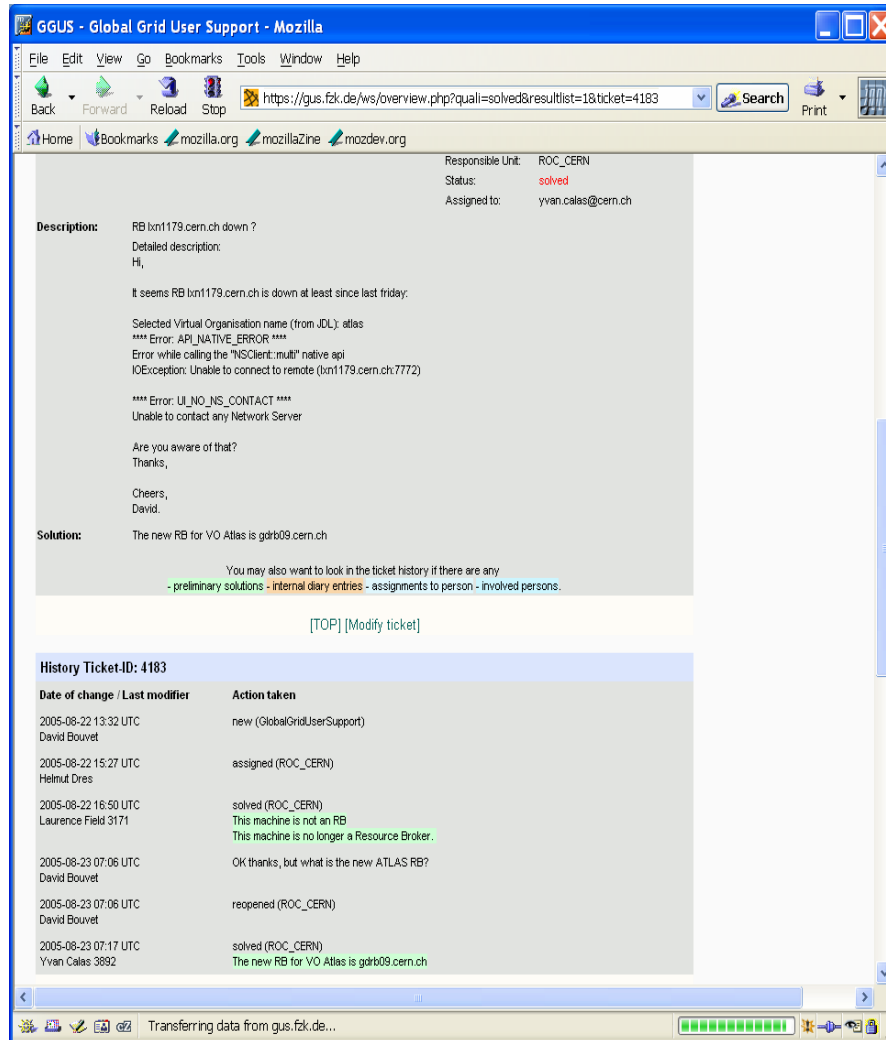
The Ticket Processing Managers

There are **two kind** 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.



The supporter interface



The screenshot shows a Mozilla browser window titled "GGUS - Global Grid User Support - Mozilla". The address bar contains the URL <https://gus.fzk.de/ws/overview.php?quali=solved&resultlist=1&ticket=4183>. The page content includes:

- Responsible Unit:** ROC_CERN
- Status:** solved
- Assigned to:** yvan.calas@cern.ch
- Description:** RB km1179.cern.ch down ?
Detailed description:
Hi,

It seems RB km1179.cern.ch is down at least since last Friday.

Selected Virtual Organisation name (from JDL): atlas
**** Error: APL_NATIVE_ERROR ****
Error: while calling the "NISClient:multi" native api
IOException: Unable to connect to remote (km1179.cern.ch:7772)

**** Error: UI_NO_NS_CONTACT ****
Unable to contact any Network Server

Are you aware of that?
Thanks,

Cheers,
David.
- Solution:** The new RB for VO Atlas is g4rb09.cern.ch

Below the description, there are links: "[TOP] [Modify ticket]".

History Ticket-ID: 4183

Date of change / Last modifier	Action taken
2005-08-22 13:32 UTC David Bouvet	new (GlobalGridUserSupport)
2005-08-22 15:27 UTC Helmut Dres	assigned (ROC_CERN)
2005-08-22 16:50 UTC Laurence Field 3171	solved (ROC_CERN) This machine is not an RB This machine is no longer a Resource Broker.
2005-08-23 07:06 UTC David Bouvet	OK thanks, but what is the new ATLAS RB?
2005-08-23 07:06 UTC David Bouvet	reopened (ROC_CERN)
2005-08-23 07:17 UTC Yvan Calas 3892	solved (ROC_CERN) The new RB for VO Atlas is g4rb09.cern.ch



- 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 via e-mail 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.

The TPM effort

- At present the ROCs contributing to the TPM efforts are the following:
 - ROC-CERN: 1 person
 - ROC-CE: 2 people
 - ROC-SE: 4 people
 - ROC-SW: 3 people
- The situation with the other ROCs is as follows:
 - ROC-UK needs first to interface their ticketing system with GGUS before thinking to contribute to TPM.
 - ROC-North same situation as ROC-UK
 - ROC-France will contribute surely with the start of EGEE-II, maybe even earlier
 - ROC-DE/CH will contribute soon
 - ROC-Italy is contributing to VO TPM
 - ROC-Russia will give an answer by the end of this week
 - ROC-US is trying to establish an interface with GGUS as first priority.
- 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.
- If we have the contribution of various ROCs the task is really not a problem.
- 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.

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.

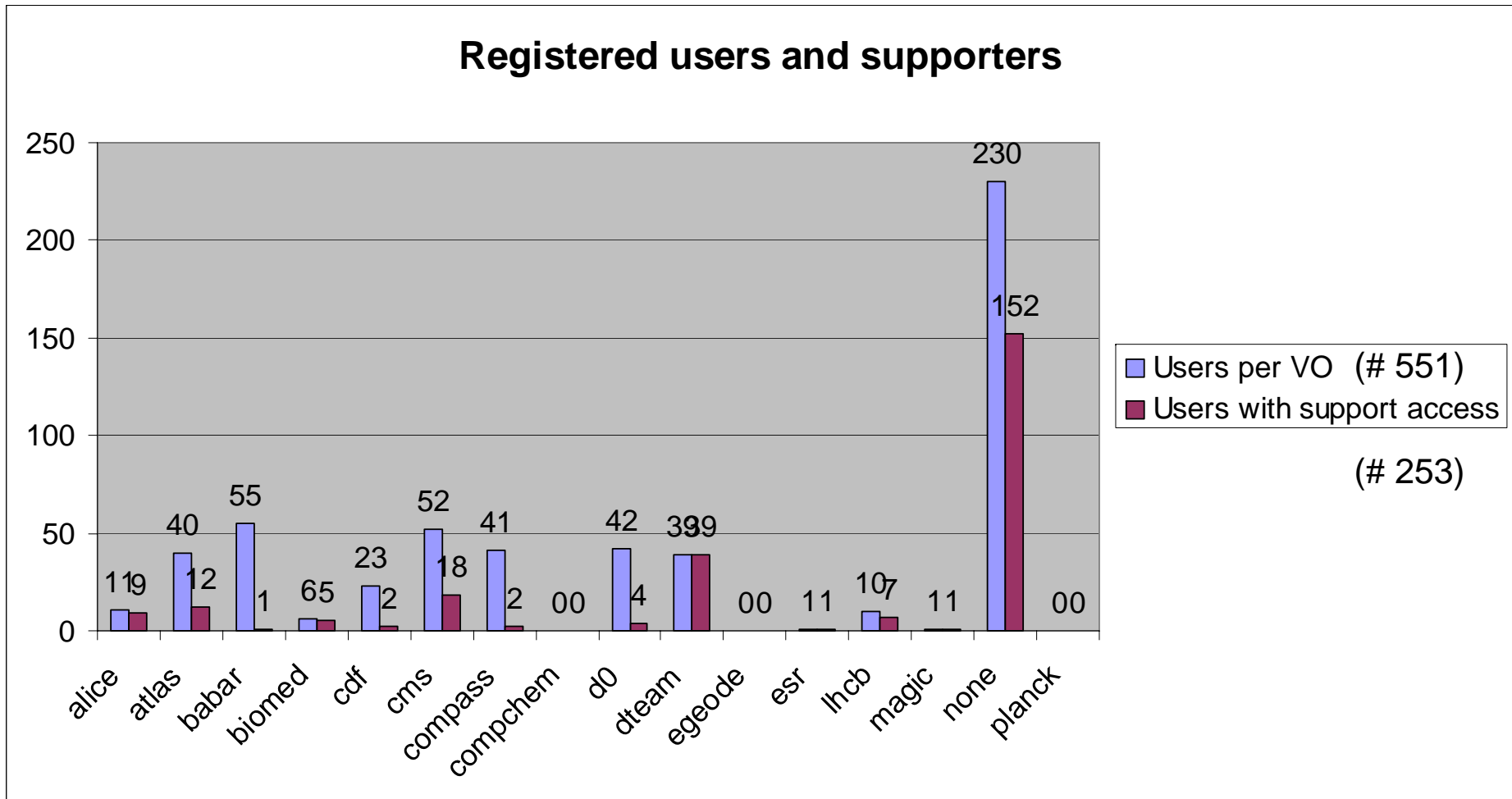


Who are our customers at the moment ?

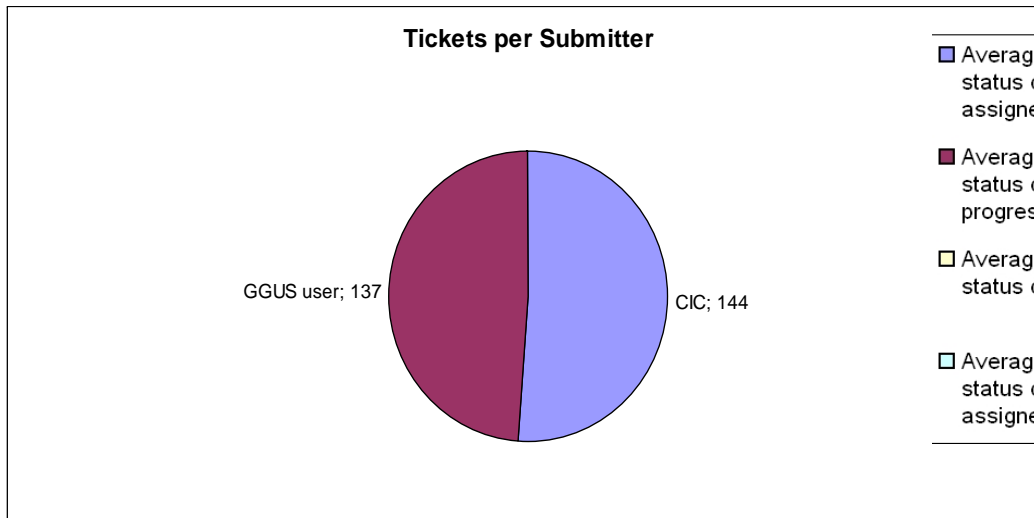
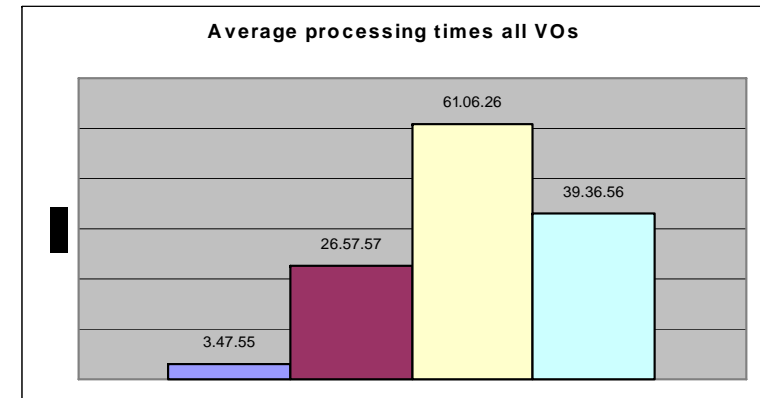
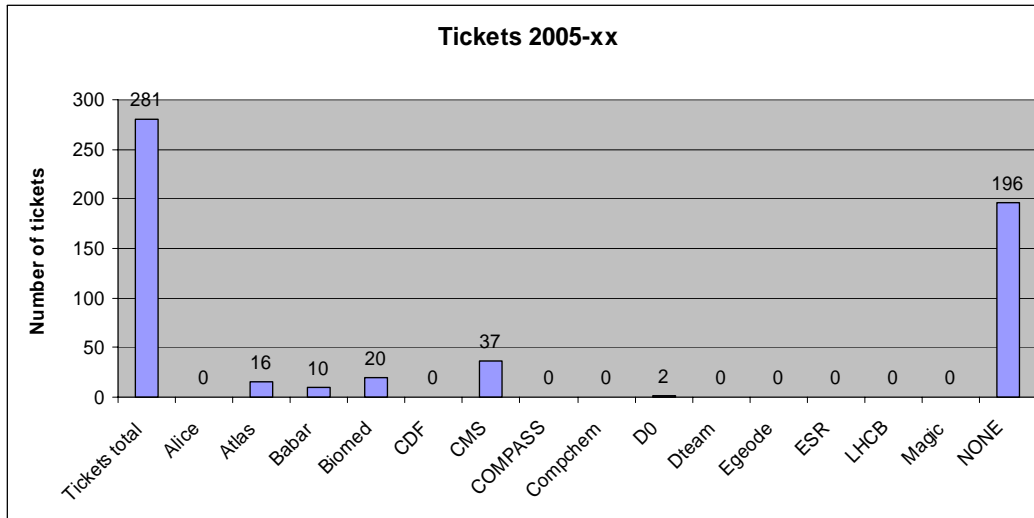
- Our main customers at the moment are:
 - **Grid Operations**
 - **VO Users**
 - **Generic Users**
- Grid Operations follow their own procedures for taking care of tickets. Only ROCs are involved in the solutions of these tickets.
- VO Users receive answers from TPMs normally. If the problems are too 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 statistic: Users per VO



Tickets per VO (August 2005)



- Average time until ticket status changes to assigned
- Average time until ticket status changes to in progress
- Average time until ticket status changes to solved
- Average time until ticket status changes from assigned to solved

