# The Italian Regional Helpdesk System

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e-infrastructure

**Enabling Grids for E-sciencE**

- **Overview of the system**
  - Framework
  - Base features
- **Extended features**
  - Custom fields
  - Web service interface
  - Interface with external systems
- **Conclusions**

**Enabling Grids for E-sciencE**

- **The Italian Regional Ticketing System is built inside a OO CMS called XOOPS**

- **One of the available XOOPS modules (XHELP) provides a basic Ticketing System**

- **We extended the basic functionalities of XHELP in order to cope with the EGEE requirements**

    – Additional custom fields

    – Web service interface

**Enabling Grids for E-sciencE**

- **XOOPS is a well known CMS completely open source and maintained by a very large community**
- **It's built on the standard "triad": Apache+PHP+MySQL**
- **XHELP already has almost all is needed for a ticketing system**
- **XHELP is completely integrated into XOOPS**
  - Single Sign On
  - Interaction with other modules (FAQ,WIKI,RSS etc..)

**Enabling Grids for E-sciencE**

- **Possibility to define any number of support departments**

- **Users can be registered as department "staff members"**

- **Actions on tickets depend on staff member's privileges (browser, ticket managers etc..)**

- **Internal engine allows to trigger various actions when tickets get modified**

- **E-mail notifications upon actions on tickets**

- **Tickets can be created/modified using web interface or e-mail**

**Enabling Grids for E-sciencE**

- **Custom fields have been added to the ticket schema in order to be compliant with EGEE/GGUS schema**

- **A SOAP interface has been developed in order to exchange tickets with other helpdesk systems**
  - NB. In principle an arbitrary number of ticket formats and in/out interfaces can be defined but…

We need to define and use a standardization for tickets format and communication

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- **The interface with the external helpdesks is based on Web services.**
    - Before July 2009:
        - Input : e-mail + external e-mail parser
        - Output: integrated web service client
    - Now:
        - Input: integrated web service server
        - Output: integrated web service client
- **The same input web service interface can be used to communicate with other regional helpdesk systems and/or other operational tools (dashboards etc..)**

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- **Both client and server use the native PHP5 SOAP libraries**
- **The Web service exposes the same interface as GGUS (same methods and attributes)**
  - OpCreate
  - TicketModify
- **Tickets in the local system and in the remote systems are kept synchronized using the ticket-id**
  - I.e. When a ticket from GGUS comes in, a new internal ticket is created and the pair (GGUS-ID, internal-ticket-id) is used to manage the following workflow

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1.  **A ticket is opened on GGUS and assigned to ROC_Italy**
    –   A new ticket is created and assigned to the generic GGUS department
2.  **A ticket is opened on GGUS and assigned to (ROC_Italy, INFN-TORINO)**
    –   A new ticket is created and assigned directly to INFN-TORINO
3.  **A new ticket is created on the local helpdesk and assigned to (GGUS, SuppX)**
    –   A new ticket is created on GGUS and assigned to SuppX
4.  **An existing internal ticket is modified to become a GGUS ticket for SuppX**
    –   A new ticket is created in GGUS and assigned to SuppX
5.  **A ticket has been wrongly assigned to ROC_Italy**
    –   The ticket can be placed in "Reassigned" state. It means "closed" in the internal system, but not in GGUS. In case the future modification can be propagated back to XOOPS/XHELP

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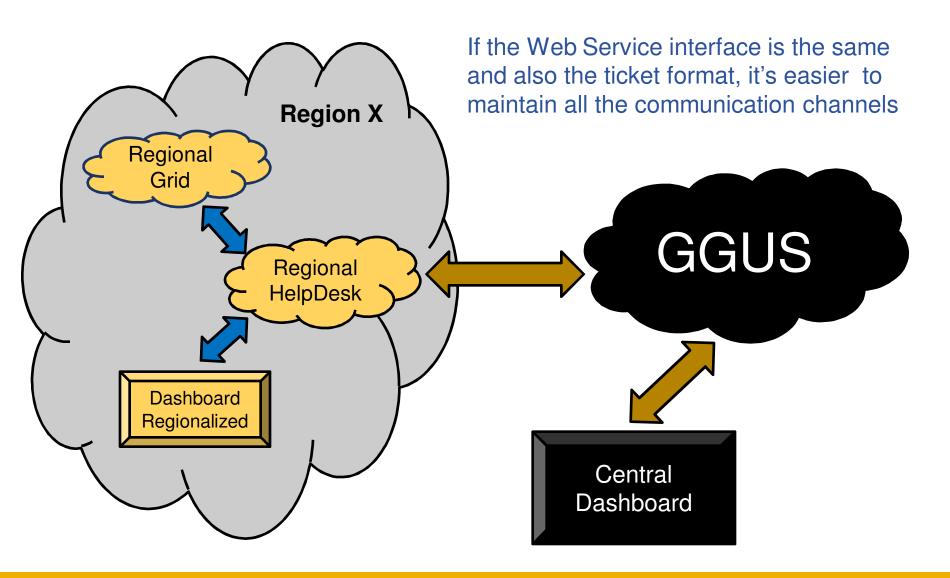
- **The dashboard that is now centrally used is interfaced through web service with GGUS.**
- **The web service now available for the Italian ticketing system is the same as GGUS**
  - It should be not so difficult to interface the regional dashboard with the regional ticketing system.
    - Need to understand better the role of Lavoisier

If the Web Service interface is the same and also the ticket format, it's easier to maintain all the communication channels

**Enabling Grids for E-sciencE**

- **The Italian regional helpdesk is based on XOOPS/XHELP**
- **The system was customized to fulfill the requirements of both the international and national user communities, and of the NGI site managers**
- **The system is fully interfaced with the EGEE central helpdesk and support a variety of ticket workflow types**
- **The web service currently exposed by the system facilitates its direct integration with the regional dashboard**
- **We recommend it to new NGIs willing to operate a local helpdesk, we can provide support if needed.**
- **The system requires ongoing maintenance to keep pace with the evolution of the user requirements and of relevant operations tools**