The GILDA training infrastructure

Scope

- **We are using the GILDA testbed this week**
  - The production EGEE / SEE-GRID grid looks like this!
  - Current EGEE production middleware: gLite 3.0.x
  - GILDA is one VO on EGEE → resources for training and application prototyping

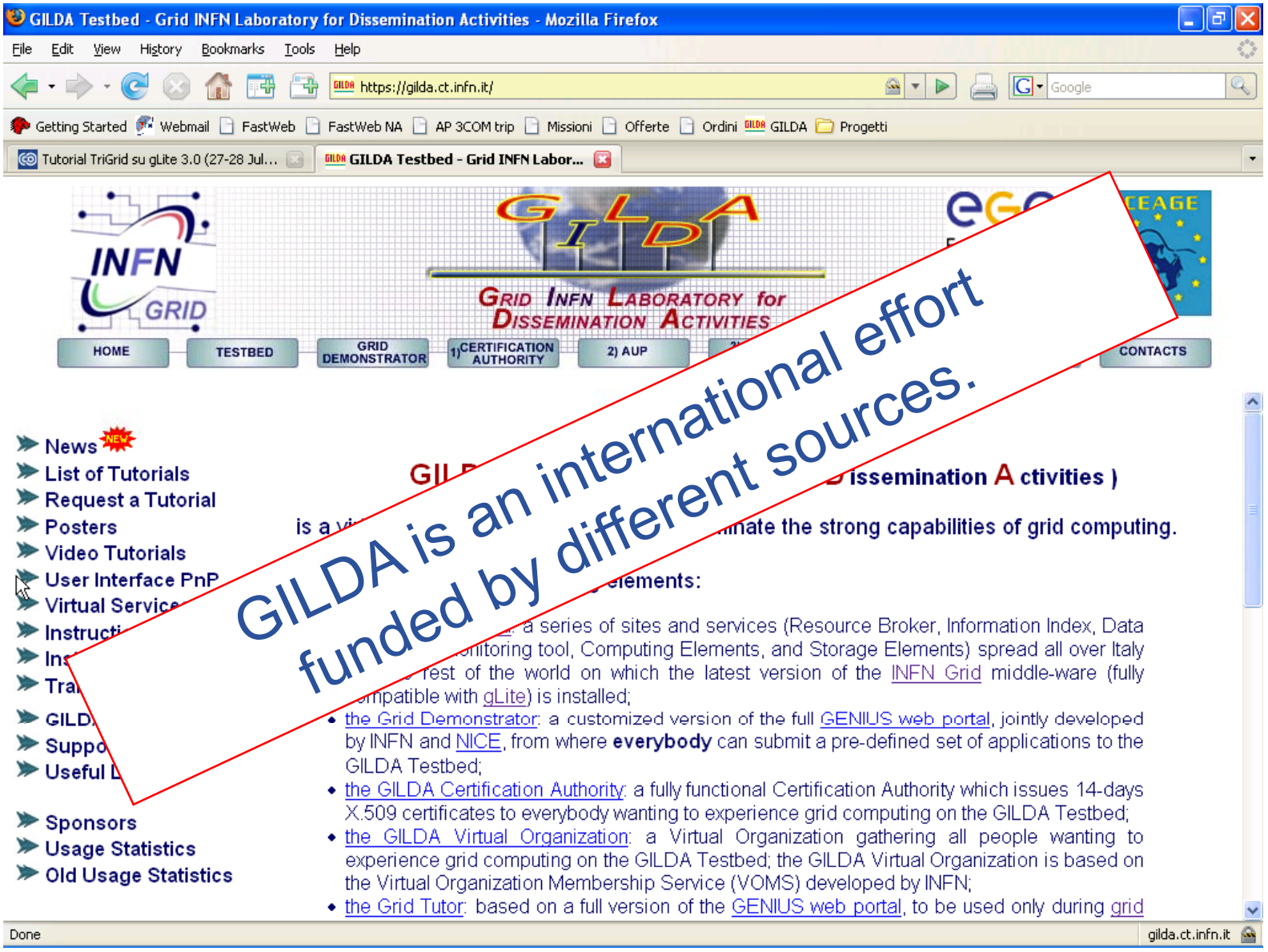
- **The practical exercises are to illustrate "how"**
  - Not using typical jobs for running on a grid!
  - But to show how grid services are used, jobs are submitted, output retrieved,…

- **Today we will use the Command-Line Interfaces on the "User Interface" (UI) machine**
  - "UI" will be your interface to the GILDA Grid
    - Where your digital credentials are held
    - Where client tools are installed

GILDA is “t-Infrastructure”

- **Why t-infrastructure?**
  - Training is necessary!
  - e-Infrastructure for production
  - t-Infrastructure for training
- **Need guaranteed response for tutorials; limit the vulnerability of production systems**
  - use training grid
  - have a training CA – lightweight authentication
  - able to change middleware to prepare participants for future releases on production system
  - need safe resources for installation training
  - easy entry point for new communities

The GILDA t-Infrastructure (https://gilda.ct.infn.it)



The GILDA Testbed
(https://gilda.ct.infn.it/testbed.html)

~20 sites in 3 continents

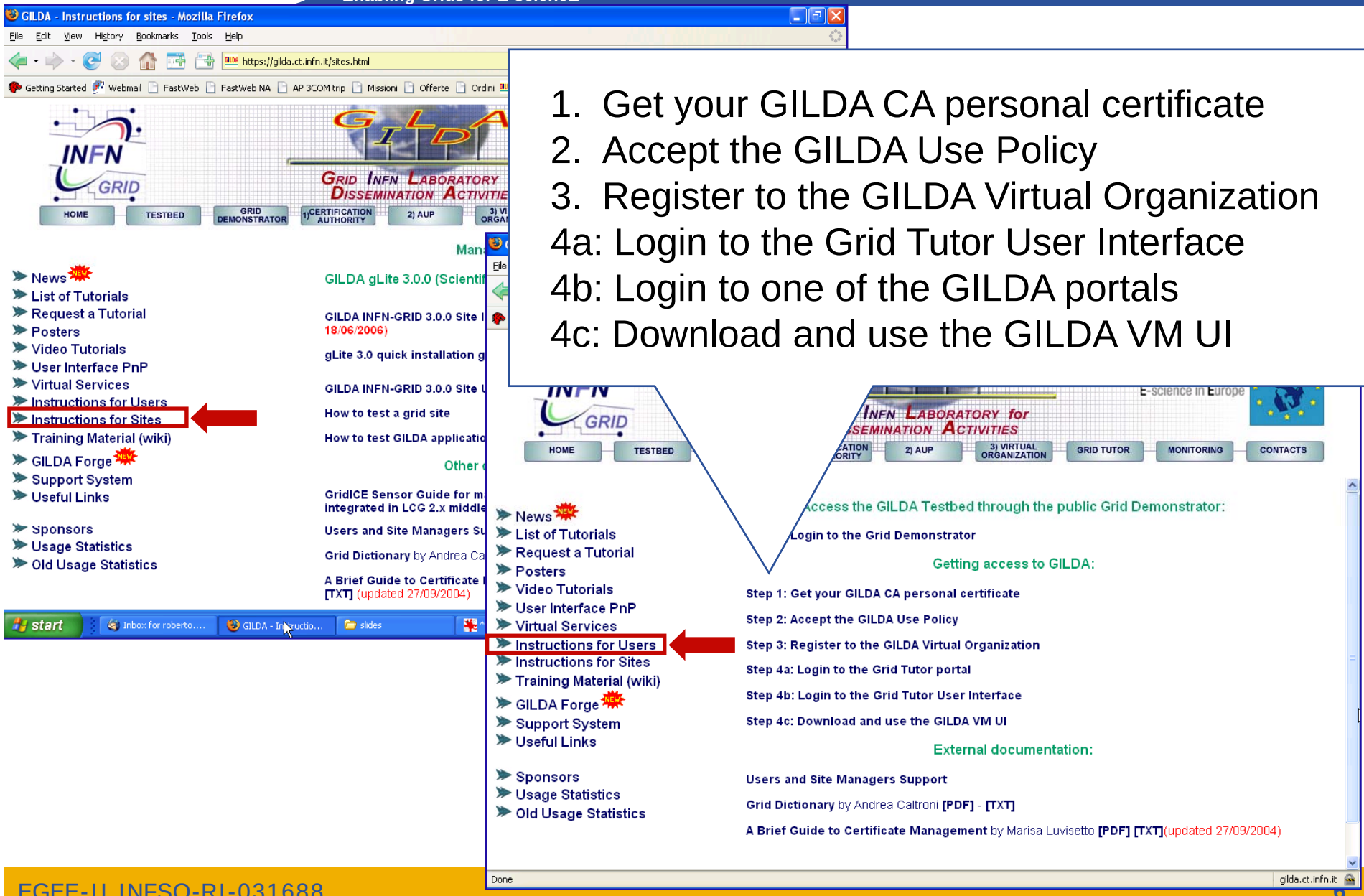
How to join GILDA

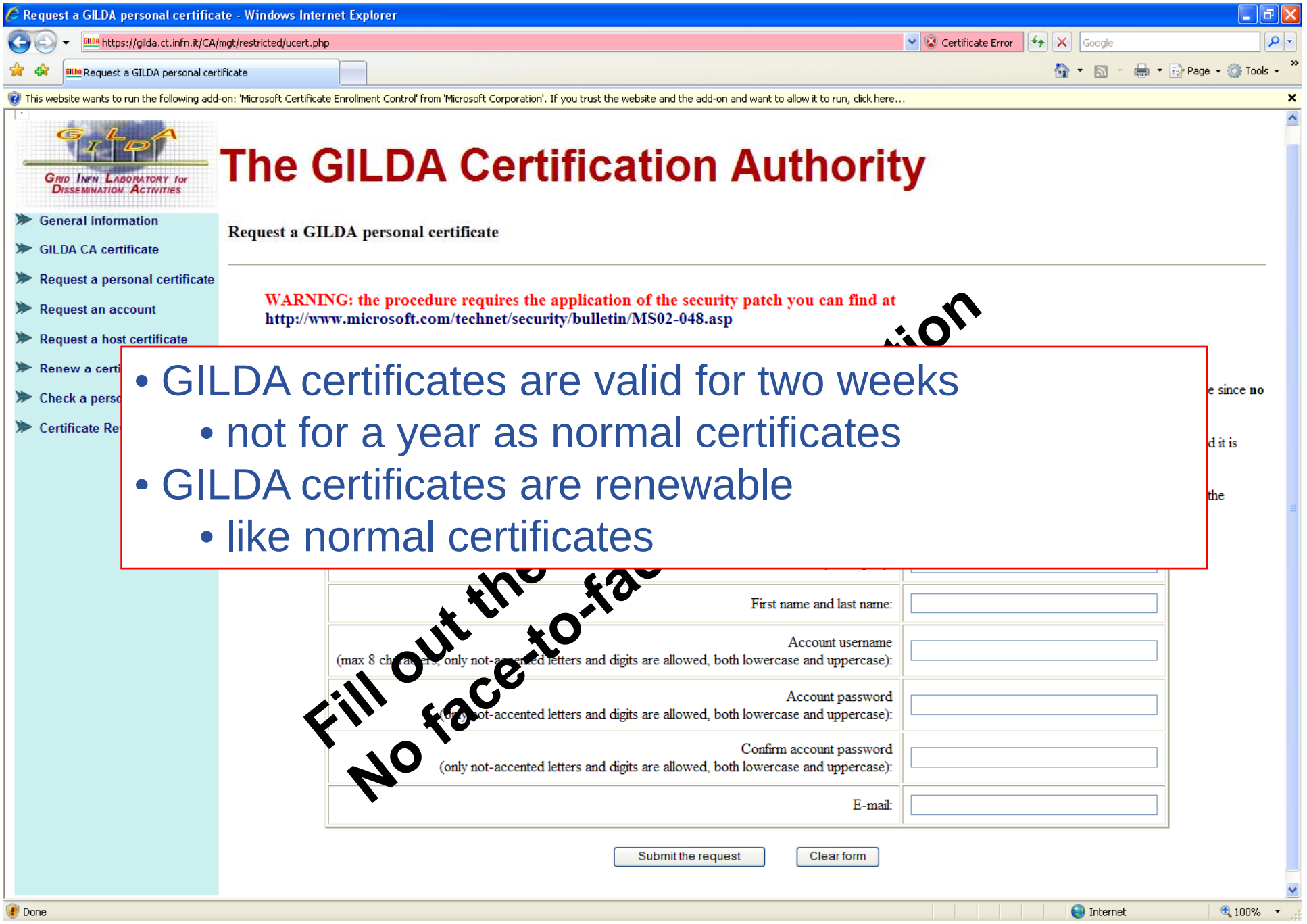
1. Get your GILDA CA personal certificate
2. Accept the GILDA Use Policy
3. Register to the GILDA Virtual Organization

4a: Login to the Grid Tutor User Interface

4b: Login to one of the GILDA portals

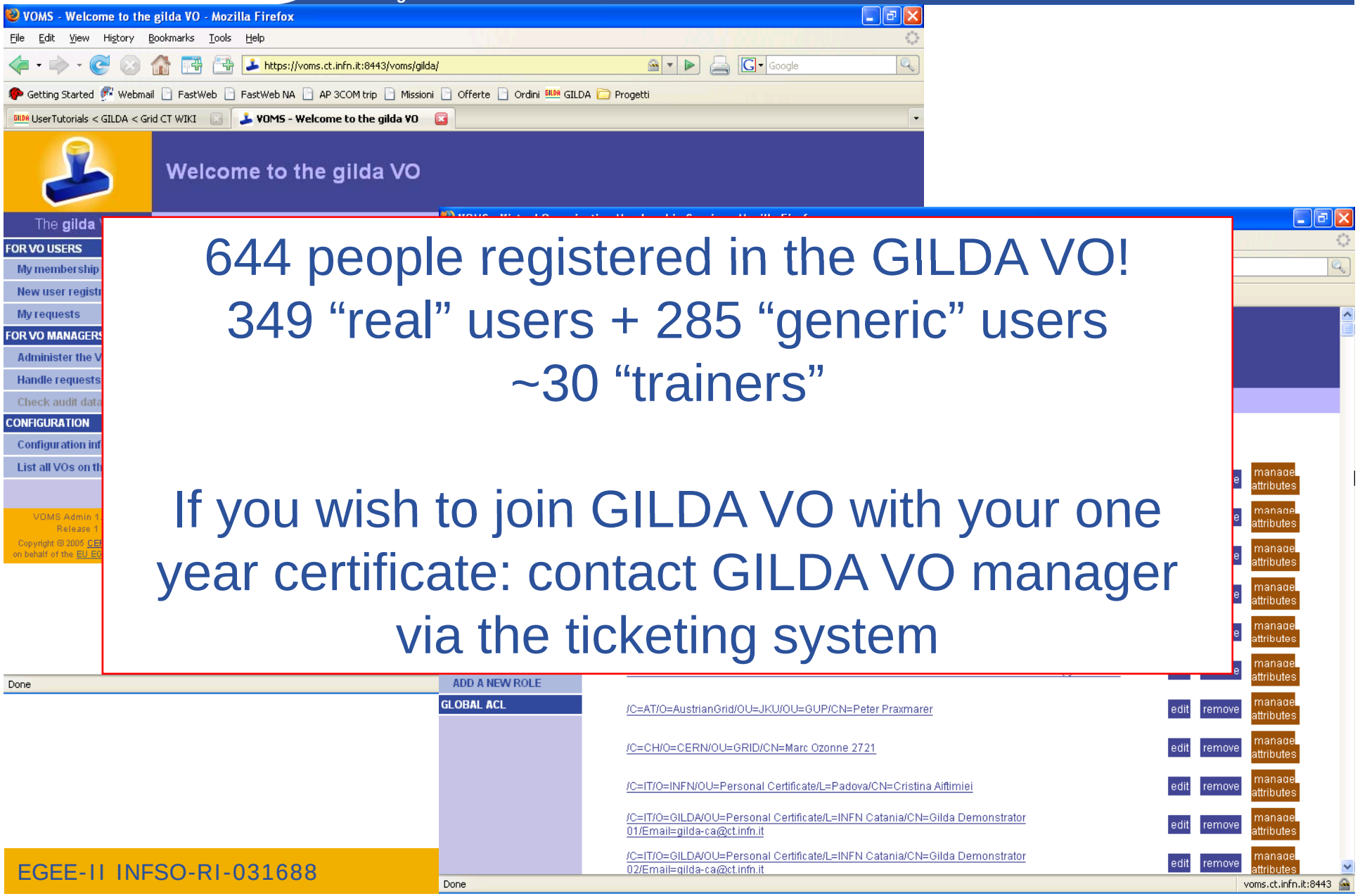
4c: Download and use the GILDA VM UI




Request a GILDA personal certificate - Windows Internet Explorer
https://gilda.ct.infn.it/CA/mgt/restricted/ucert.php
Certificate Error
Request a GILDA personal certificate
This website wants to run the following add-on: 'Microsoft Certificate Enrollment Control' from 'Microsoft Corporation'. If you trust the website and the add-on and want to allow it to run, click here...
GRID INFN LABORATORY for DISSEMINATION ACTIVITIES
The GILDA Certification Authority
General information
GILDA CA certificate
Request a personal certificate
Request an account
Request a host certificate
Renew a certi
Check a perso
Certificate Re
Request a GILDA personal certificate
WARNING: the procedure requires the application of the security patch you can find at
http://www.microsoft.com/technet/security/bulletin/MS02-048.asp
• GILDA certificates are valid for two weeks
• not for a year as normal certificates
• GILDA certificates are renewable
• like normal certificates
Fill out the
No face-to-fac
First name and last name:
Account username
Account password
Confirm account password
(only not-accented letters and digits are allowed, both lowercase and uppercase):
E-mail:
Submit the request
Clear form
Done
Internet
100%

The GILDA Virtual Organization
(https://voms.ct.infn.it:8443/voms/gilda/)

Enabling Grids for E-sciencE



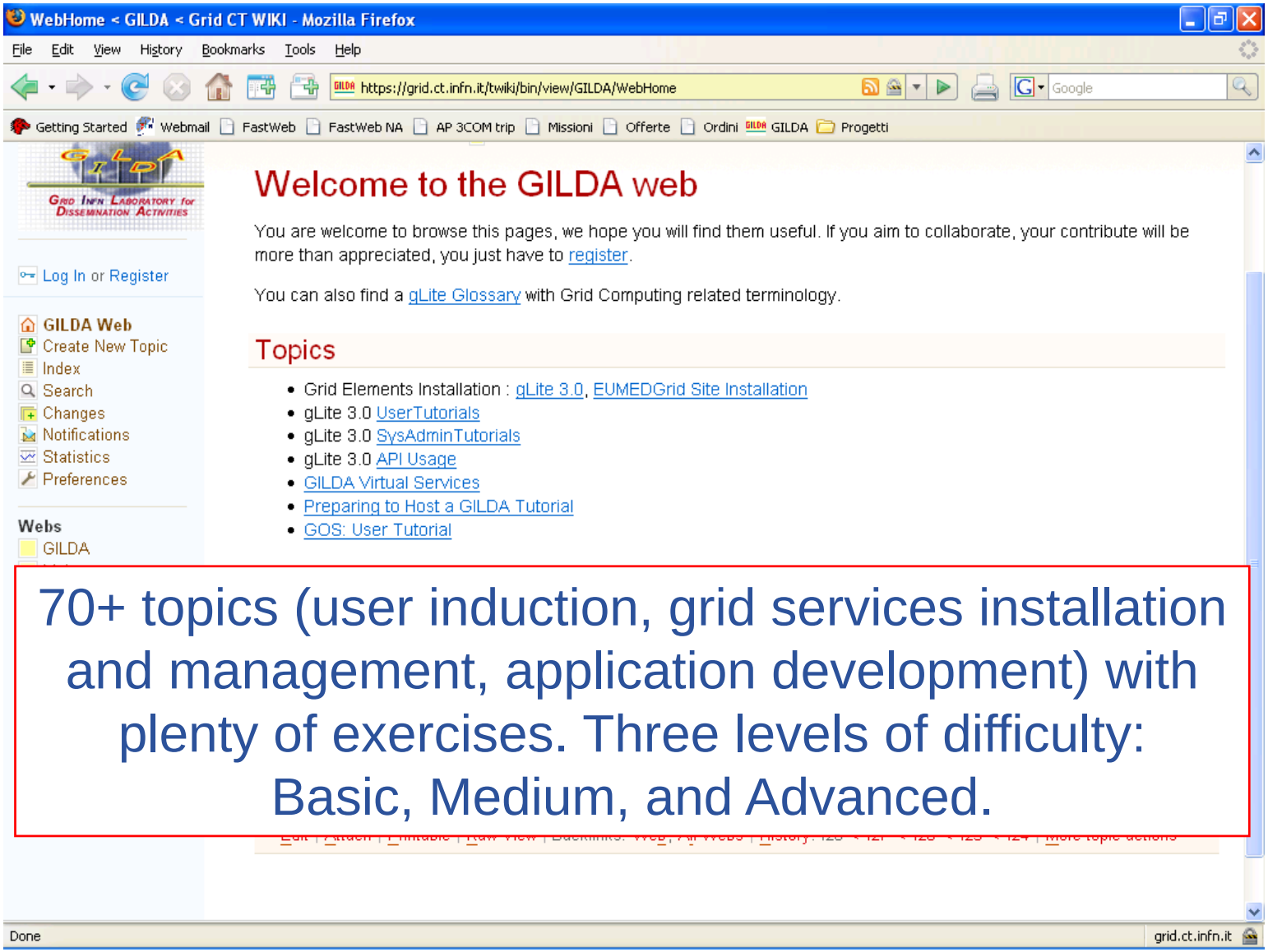
644 people registered in the GILDA VO!
349 “real” users + 285 “generic” users
~30 “trainers”

If you wish to join GILDA VO with your one year certificate: contact GILDA VO manager via the ticketing system

The GILDA Portals

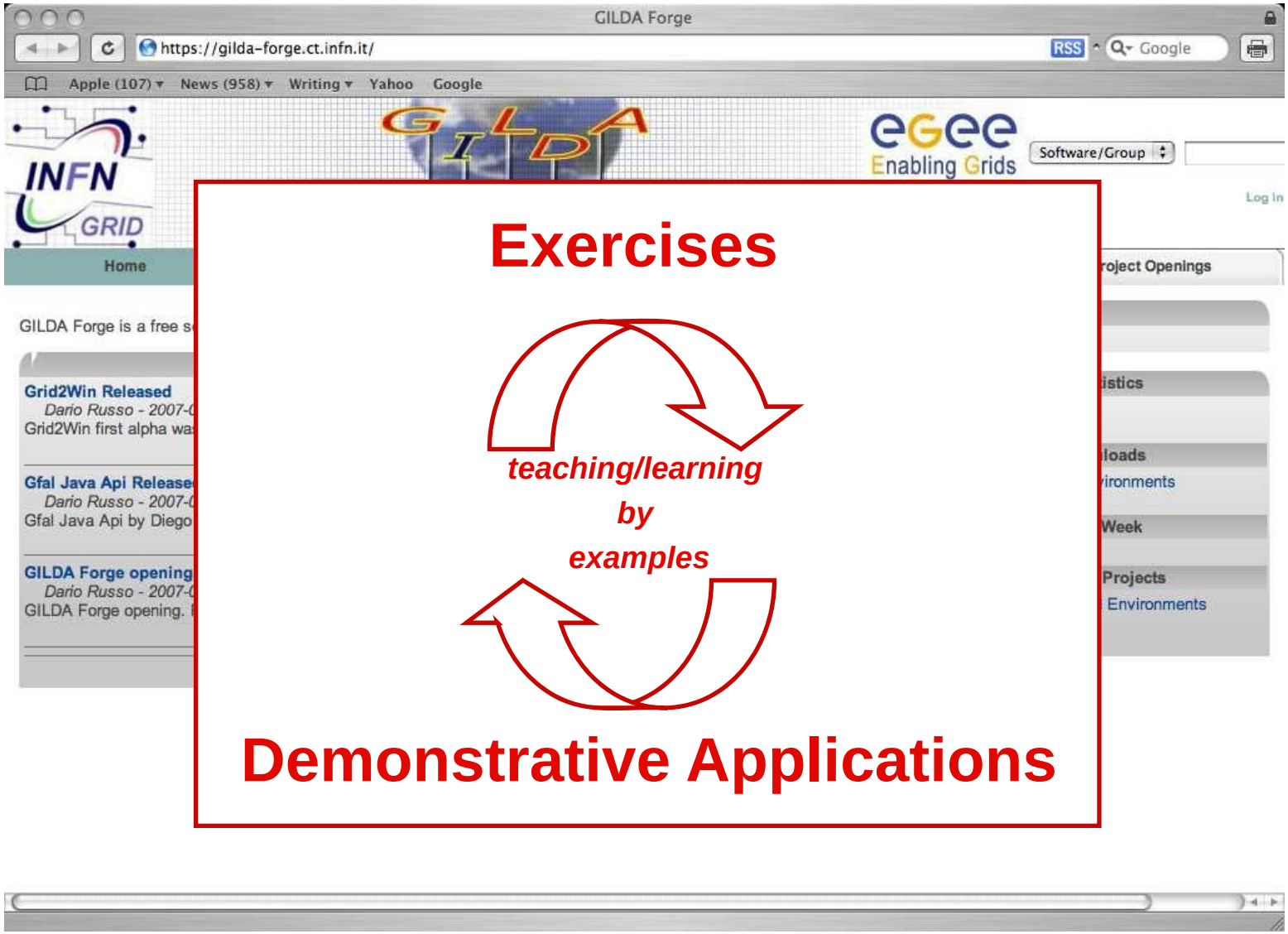
Easy to use. Hide the complexities of the middleware. Extremely useful also for self-pace learning.

The GILDA Training Material
(https://grid.ct.infn.it/twiki/bin/view/GILDA/WebHome)



70+ topics (user induction, grid services installation and management, application development) with plenty of exercises. Three levels of difficulty: Basic, Medium, and Advanced.

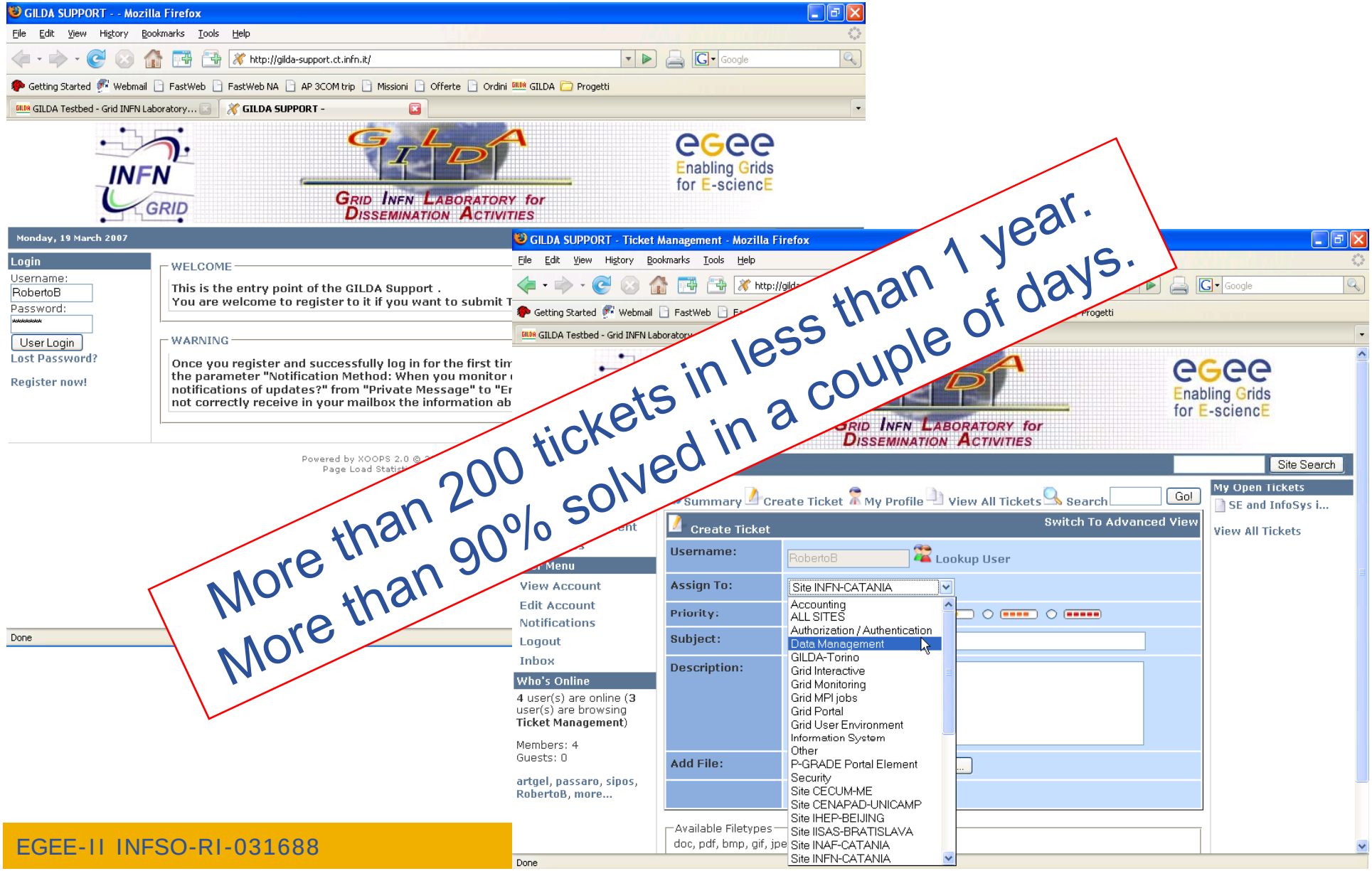
Training on application development: the GILDA Forge (https://gilda-forge.ct.infn.it)



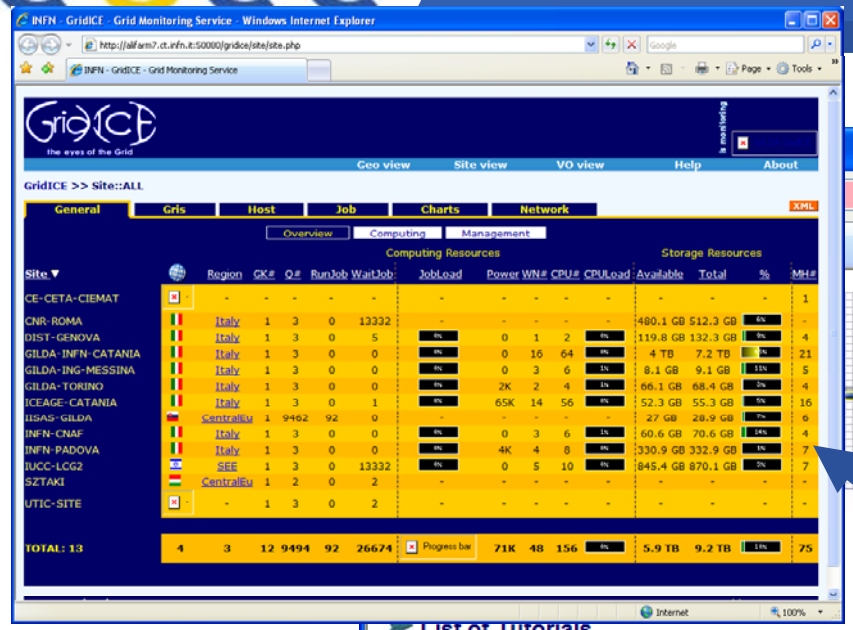
The GILDA Support System

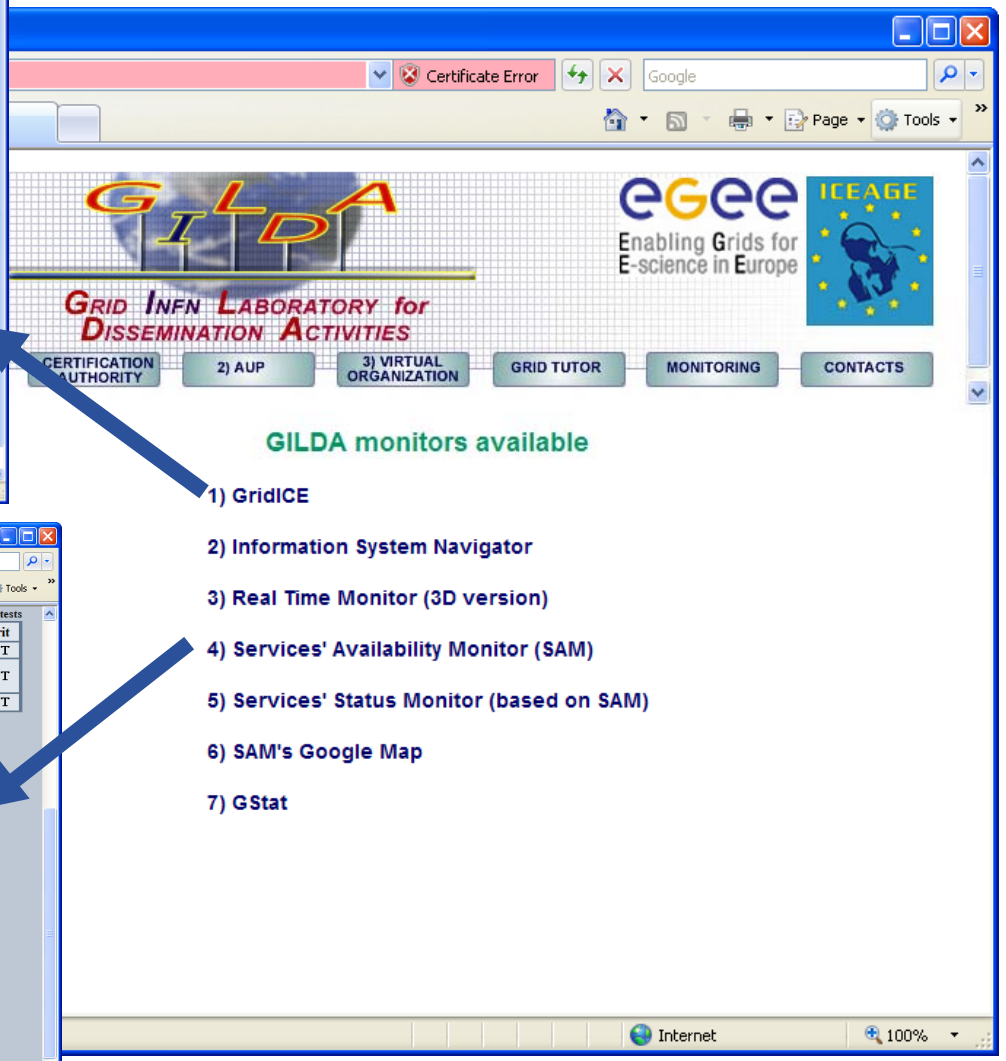
(https://gilda-support.ct.infn.it)

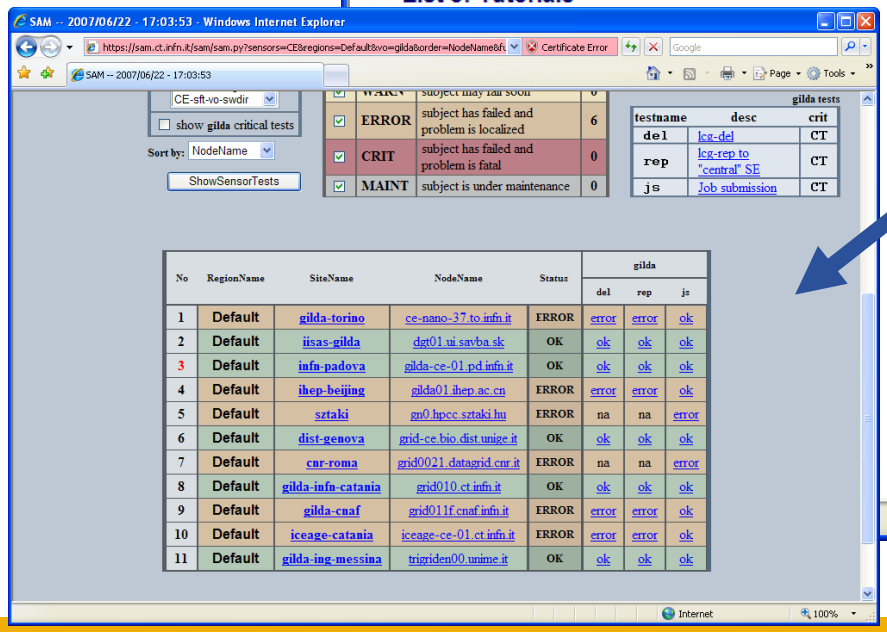
Enabling Grids for E-sciencE



Monitoring systems







Situation at the school

- **Tutors obtained certificates and private keys from GILDA CA:**
  - usercert.pem → certificate
  - userkey.pem → private key

- **Tutors registered the certificates at GILDA VO**
- **Certificates and keys are available on the GILDA user interface machine: glite-tutor.ct.infn.it**
- **ls –l ~/.globus**

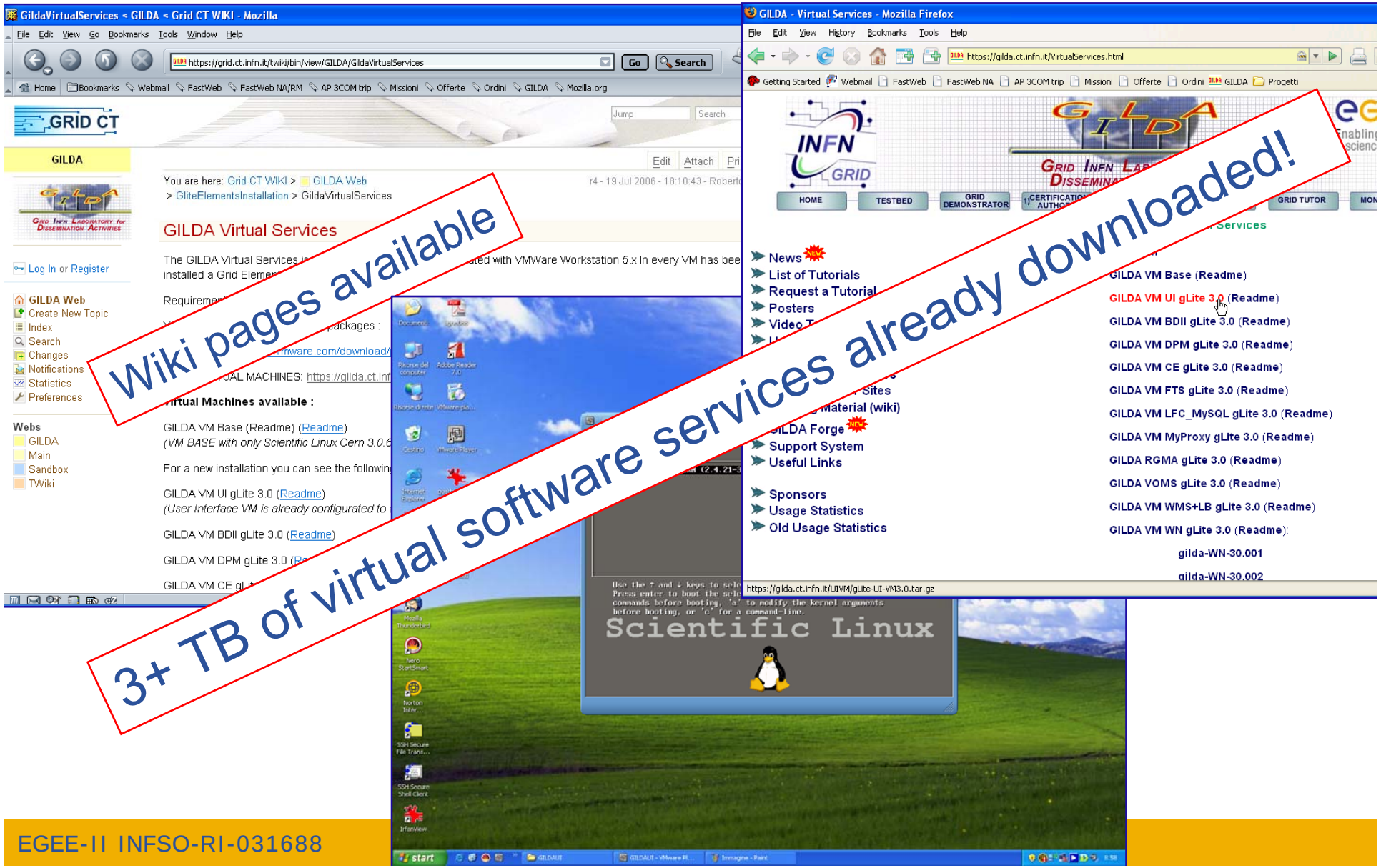
```
-rw-r--r--   1 budapest23 users   1119 May 30 05:48 usercert.pem
-r--------   1 budapest23 users    963 May 30 05:48 userkey.pem
```

- **Tutorials starts at this point...**

Trust and use of GILDA

- GILDA is provided by some 20 organisations for training events.
- You usually sign a commitment before using a grid - to make appropriate use of the resources that other organisations have opened to you
- Trust is the basis of Grid computing.
- You are trusted to be responsible in your use of GILDA.

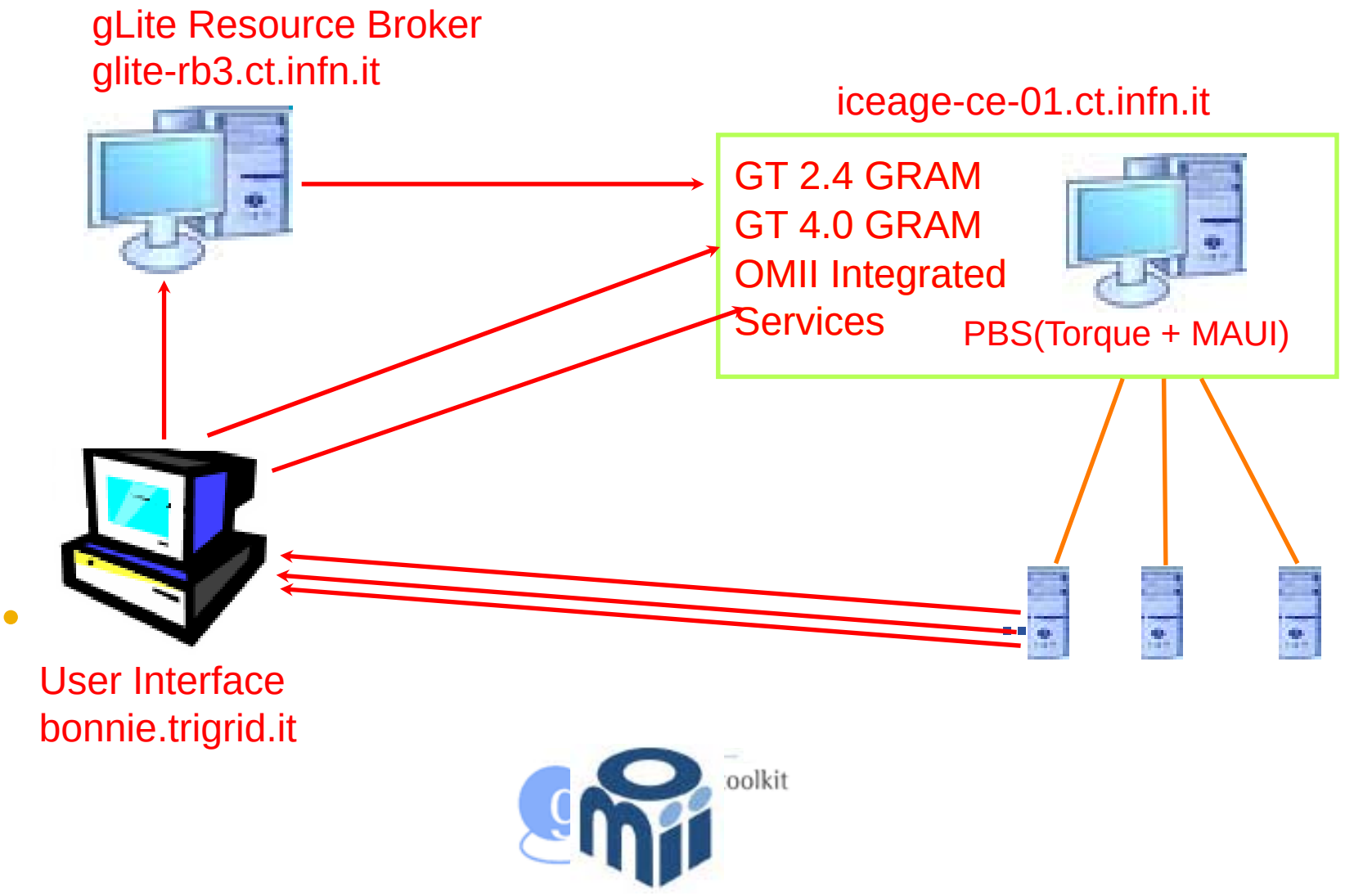
"Grid in a box/room": the GILDA Virtual Services (t-Infrastructure scalability) (https://gilda.ct.infn.it/VirtualServices.html)



A look into the future: Middleware co-existence in GILDA

- **In the context of ICEAGE project the GILDA Team has carried out an important study about the co-existence of several middlewares on the same physical computing and storage resources.**
- **Results:**
  - Super User Interface: a machine (real or virtual) with a gLite User Interface, a Globus Toolkit 4 (GT4) client, and an OMII-UK client on board.
  - Super Computing Element: the same Torque/MAUI farm can execute jobs coming from gLite, GT4, and OMII-UK.
  - The same GILDA CA certificates can be used with all the 3 different middlewares.

Planned middleware co-existence on GILDA



Thank you!

Questions?