



Enabling Grids for E-science

Grid Training done in/by the Italian Federation in 2007

Roberto Barbera

Univ. of Catania and INFN

NA3 Partner Review Meeting at EGEE'07

Budapest, 04.10.2007

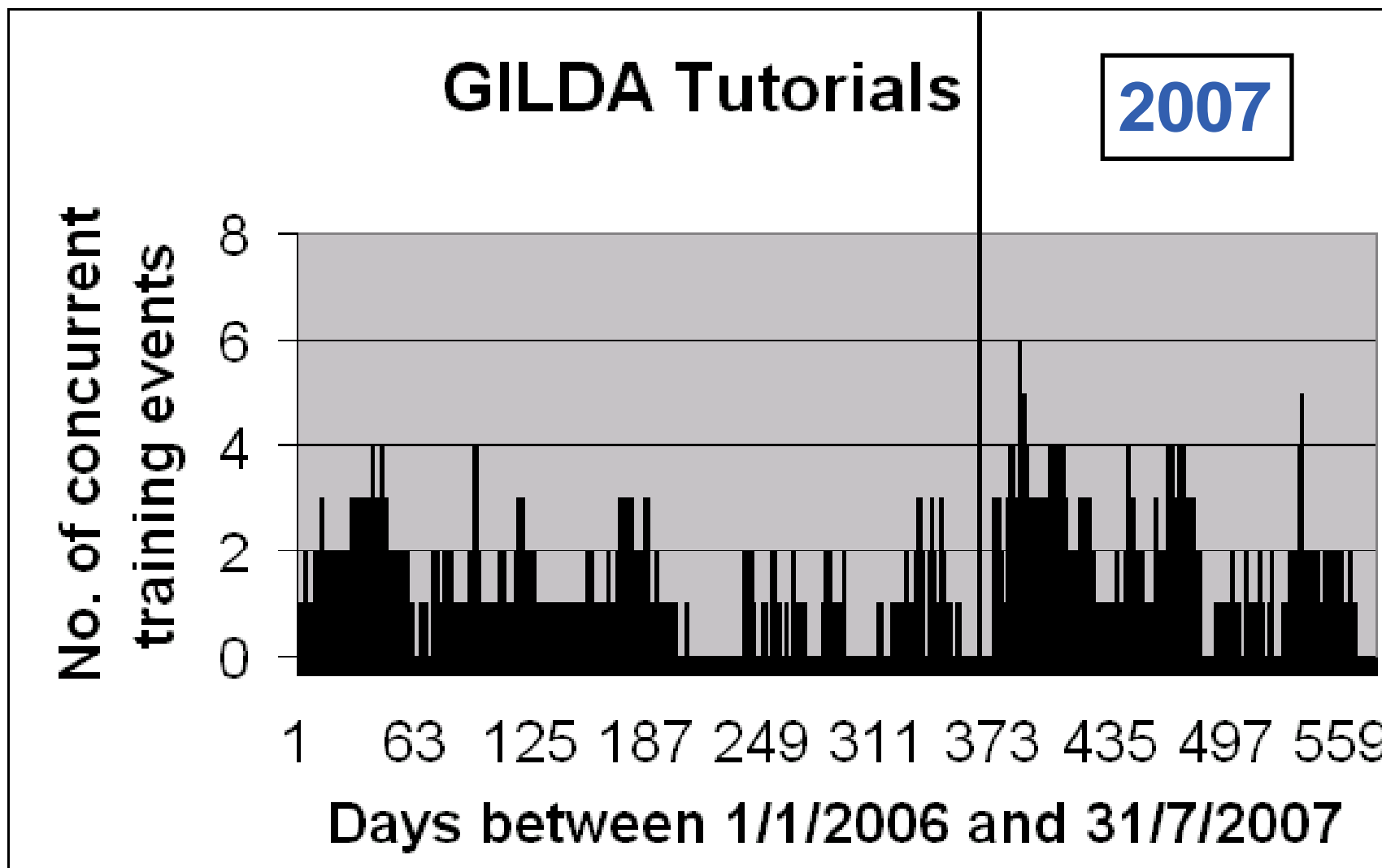
www.eu-egee.org



Information Society
and Media



- **Introduction**
- **Training provided in 2007 by the Italian Federation in Italy**
- **Training provided in 2007 by the Italian Federation outside Italy**
- **New features of GILDA**
- **New features of GENIUS**



- 15 out of the 67^(*) training events supported by GILDA to date in 2007 have been done in Italy
- Of those 15:
 - 3 were University Degree and Master courses
 - 2 were organized by INAF^(**)
 - 2 were organized by the Consorzio COMETA^(**)
 - 1 was co-organized by ICTP and ELETTRA^(**)
 - 1 was the International Biomed Grid School
 - 1 was the International Grid School for Industrial Applications

(*) Full list at: <https://gilda.ct.infn.it/tutorials.html>

() Members of the Italian Joint Research Unit**



Forthcoming INFN Grid Schools

Enabling Grids for E-science

5-9 November

I Corso di formazione INFN per amministratori di siti Grid
5-9 November 2007

Home

Il Corso di formazione INFN per amministratori di siti Grid di Martina Franca

Dates: from 05 November 2007 to 09 November 2007
Location: **PARK HOTEL SAN MICHELE**, V. Carella, 9 - Mart

- Lista dei partecipanti
- Overview
- Registrazione
 - Compila il form di registrazione
- Programma (draft)

support

INFN | Powered by CERN Indica 0.92.1.20070403403403 |

12-23 November

I Corso di formazione INFN su aspetti pratici dell'integrazione di applicazioni in GRID
12-23 November 2007

Home

Il Primo Corso INFN per amministratori di siti Grid di Martina Franca

Dates: from 12 November 2007 to 23 November 2007
Location: **PARK HOTEL SAN MICHELE**, V. Carella, 9 - Mart

- Overview
- Comitato Organizzatore
- Comitato di Programma
- Registrazione
 - Form di registrazione
- Elenco dei partecipanti
- Programma (DRAFT)
- Sottometti un'applicazione
- Corso INFN per amministratore siti Grid

support

26-29 November

Scuola per utenti INFN della Grid
26-29 November 2007

Home

Scuola sulla Grid organizzata da INFN-Grid e CCR per le collaborazioni INFN degli esperimenti LHC. 2 giorni di lezioni ed esercitazioni introduttive seguiti da 1 giorno sulle applicazioni di esperimento (si tratta di sessioni parallele, una per esperimento).

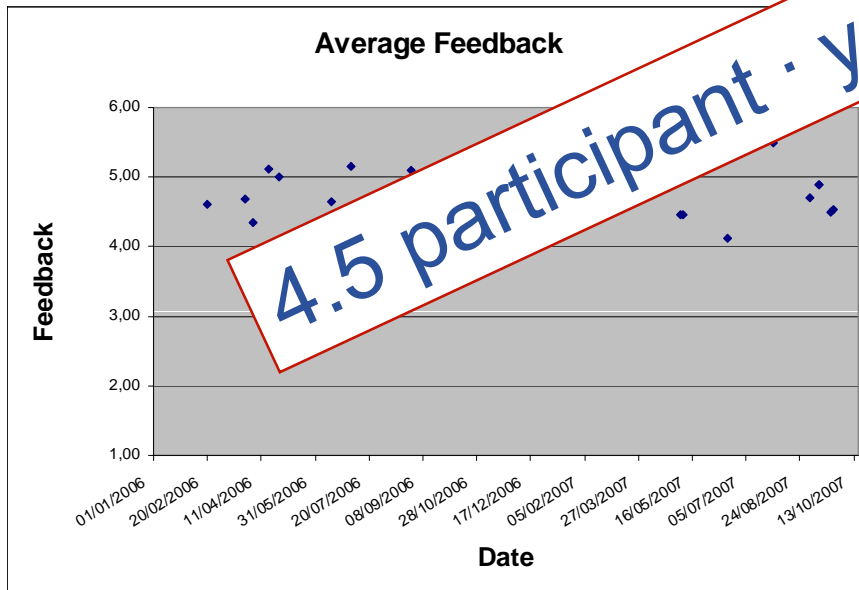
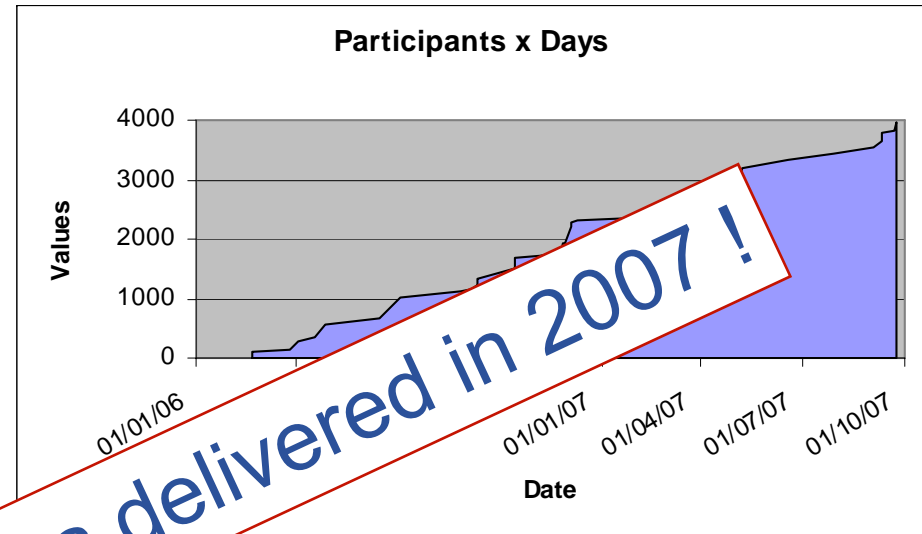
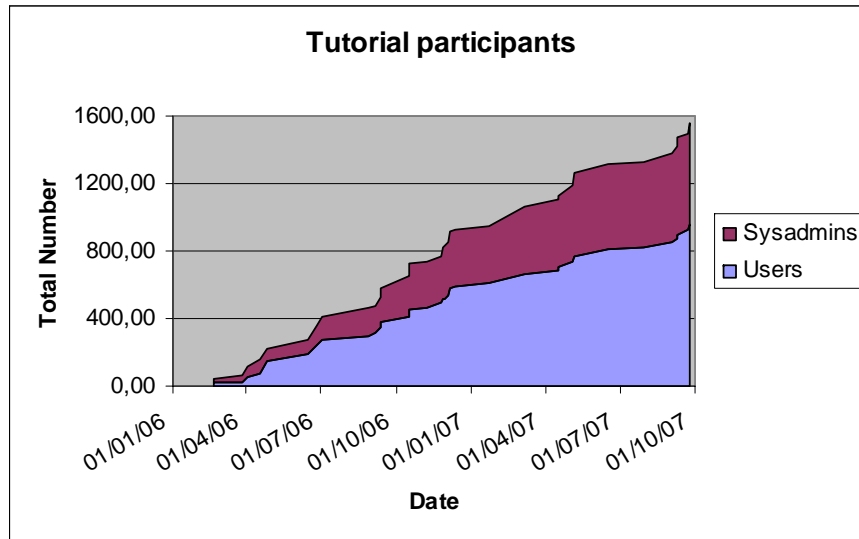
AUDIENCE
Studenti e ricercatori afferenti agli esperimenti LHC che intendano acquisire le necessarie conoscenze per utilizzare in modo efficace i servizi offerti dalla GRID per la propria attivita' di ricerca. Per maggiori dettagli i referenti per esperimento sono:
LHCb - Umberto Marconi
ALICE - Massimo Maserà
ATLAS - Laura Perini
CMS - Marco Paganoni

REGISTRATION
La registrazione e' aperta. La registrazione alla scuola non implica una prenotazione alberghiera. Questa deve essere fatta a carico degli utenti.

ACCOMODATION

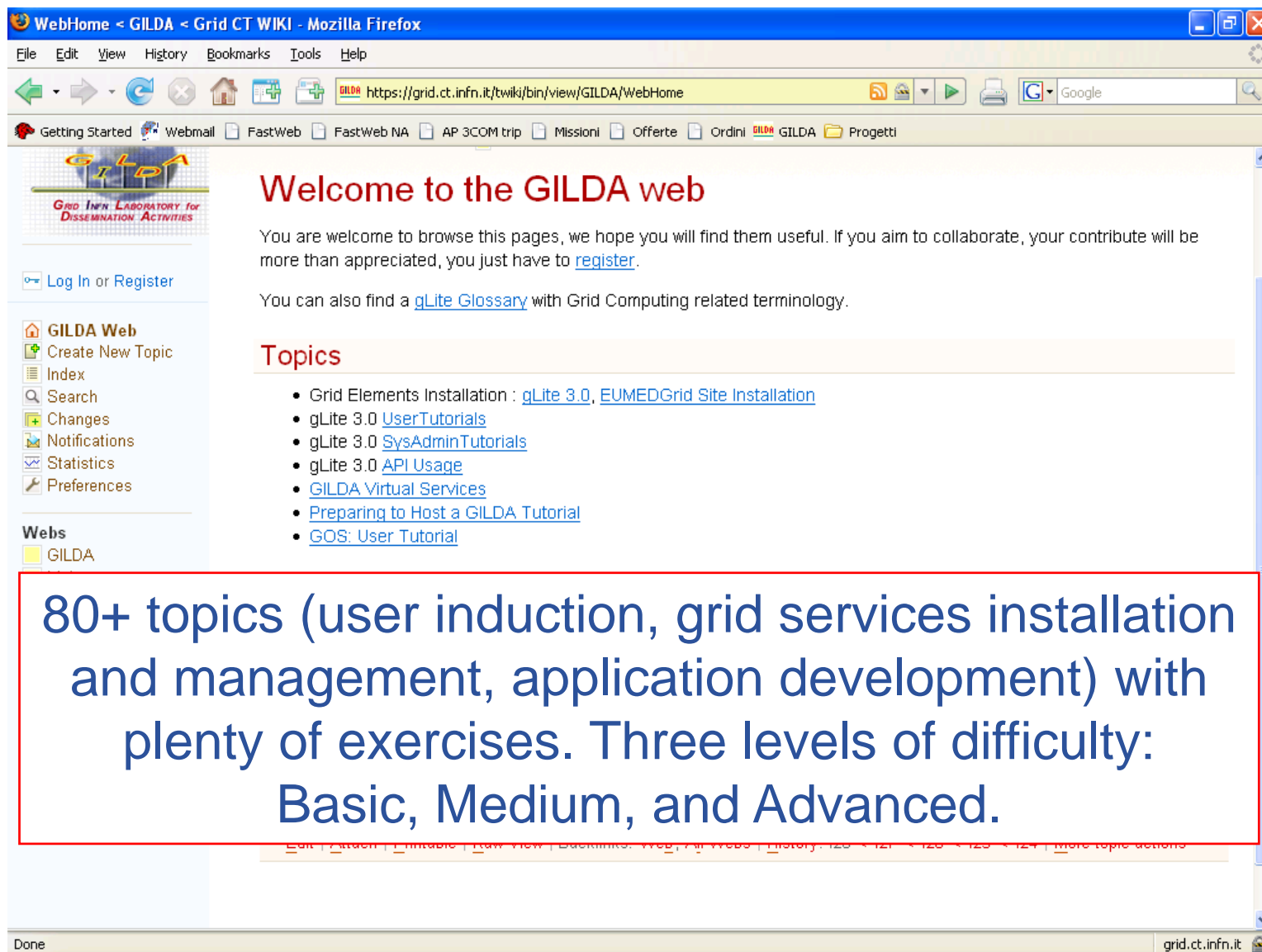
- we have booked in advance 35 rooms for the 3 nights between 26th and 28th November 2007 at the **Mercure Hotel**.
- The reservation is valid **until 12 November** (first coming first served).
- You ought to confirm your accommodation directly with the hotel (refer "Scuola Grid 2007")
- The prices are:
 - 85,00 EUR for a single
 - 95,00 EUR for a twin bed for one person
 - 105,00 EUR for a double
 - taxes and breakfast included.

MERCURE BOLOGNA CENTRO HOTEL
Address : Viale Pietramellara 59, 40121 - BOLOGNA - ITALY
Tel : (+39)051/42211
Fax : (+39)051/249421



4.5 participant · years delivered in 2007 !

- **Latest version of the gLite WMS deployed. Much more stable and reliable than the previous one.**
- **P-GRADE portal deployed.**
- **Training material repository setup.**
- **GILDA Forge available.**
- **GRelC tool for database access deployed.**



WebHome - GILDA - Grid CT WIKI - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://grid.ct.infn.it/twiki/bin/view/GILDA/WebHome

Getting Started Webmail FastWeb FastWeb NA AP 3COM trip Missioni Offerte Ordini GILDA GILDA Progetti

Welcome to the GILDA web

You are welcome to browse this pages, we hope you will find them useful. If you aim to collaborate, your contribute will be more than appreciated, you just have to [register](#).

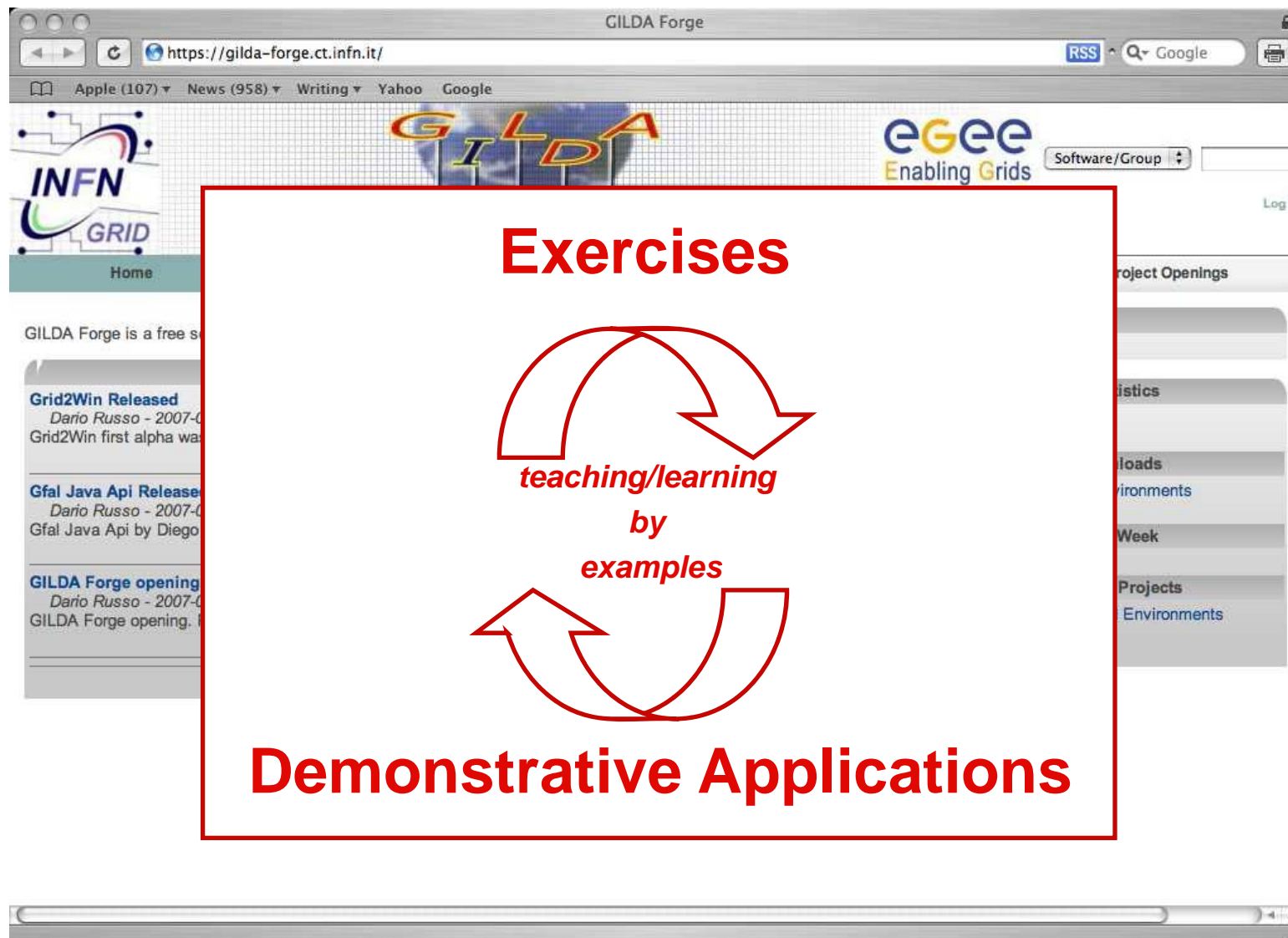
You can also find a [gLite Glossary](#) with Grid Computing related terminology.

Topics

- Grid Elements Installation : [gLite 3.0](#), [EUMEDGrid Site Installation](#)
- gLite 3.0 [UserTutorials](#)
- gLite 3.0 [SysAdminTutorials](#)
- gLite 3.0 [API Usage](#)
- [GILDA Virtual Services](#)
- [Preparing to Host a GILDA Tutorial](#)
- [GOS: User Tutorial](#)

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

Done grid.ct.infn.it

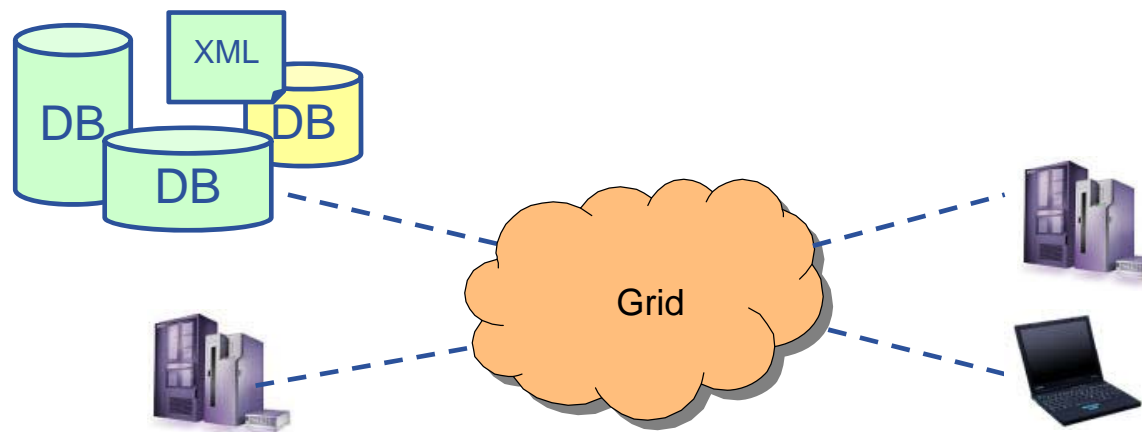
A screenshot of a web browser displaying the GILDA Forge website. The browser's address bar shows 'https://gilda-forge.ct.infn.it/'. The website header includes the 'INFN GRID' logo on the left, the 'GILDA' logo in the center, and the 'EGEE Enabling Grids' logo on the right. A navigation menu is visible at the top with links for 'Apple (107)', 'News (958)', 'Writing', 'Yahoo', and 'Google'. A search bar with 'Google' and an 'RSS' link are also present. The main content area shows a 'Home' link and a list of news items, including 'Grid2Win Released', 'Gfal Java Api Release', and 'GILDA Forge opening'. A red-bordered box is overlaid on the page, containing a diagram with two curved arrows forming a cycle. The text 'Exercises' is at the top of the box, and 'Demonstrative Applications' is at the bottom. In the center of the cycle, the text reads 'teaching/learning by examples'.

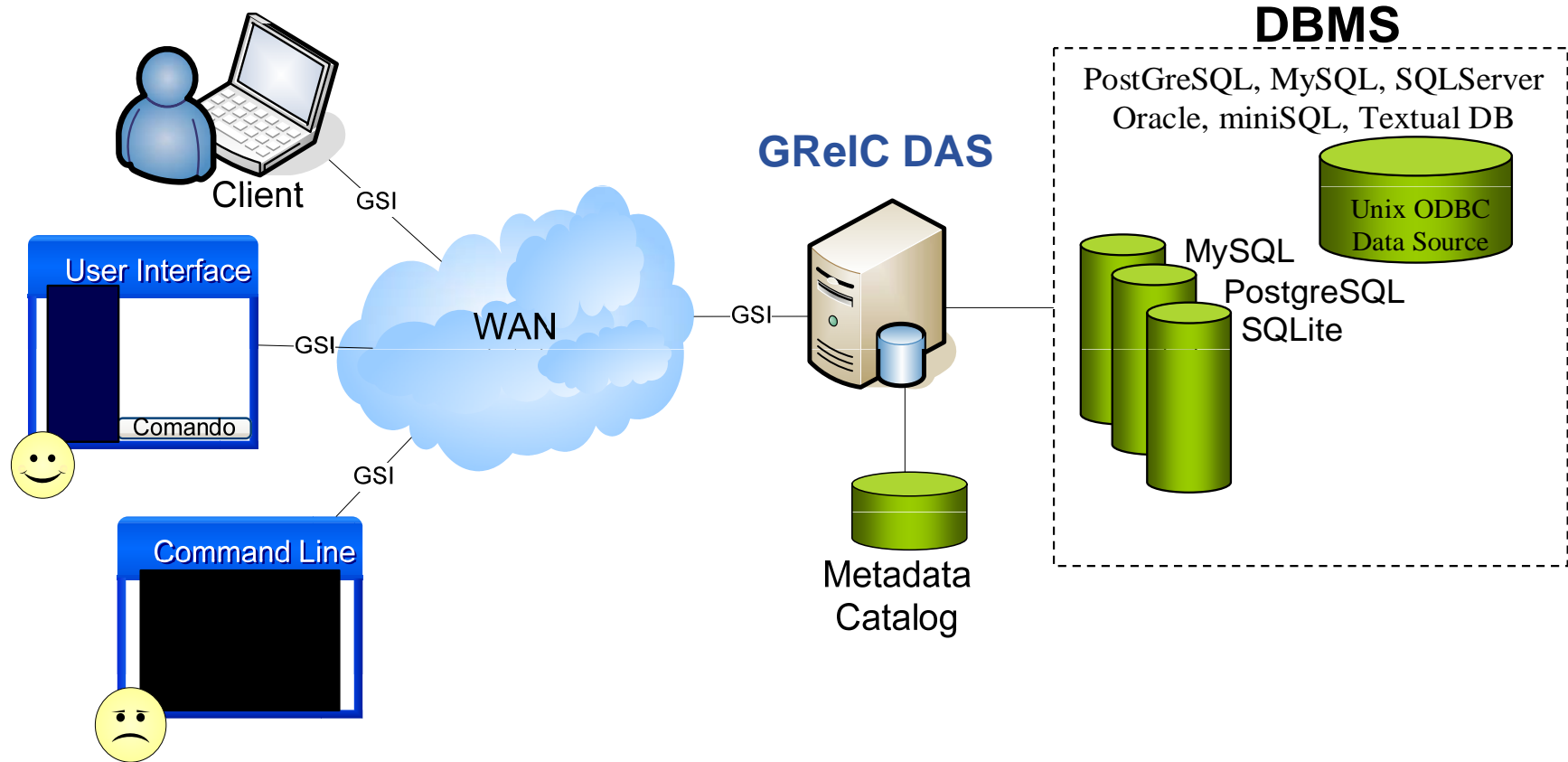
Exercises

*teaching/learning
by
examples*

Demonstrative Applications

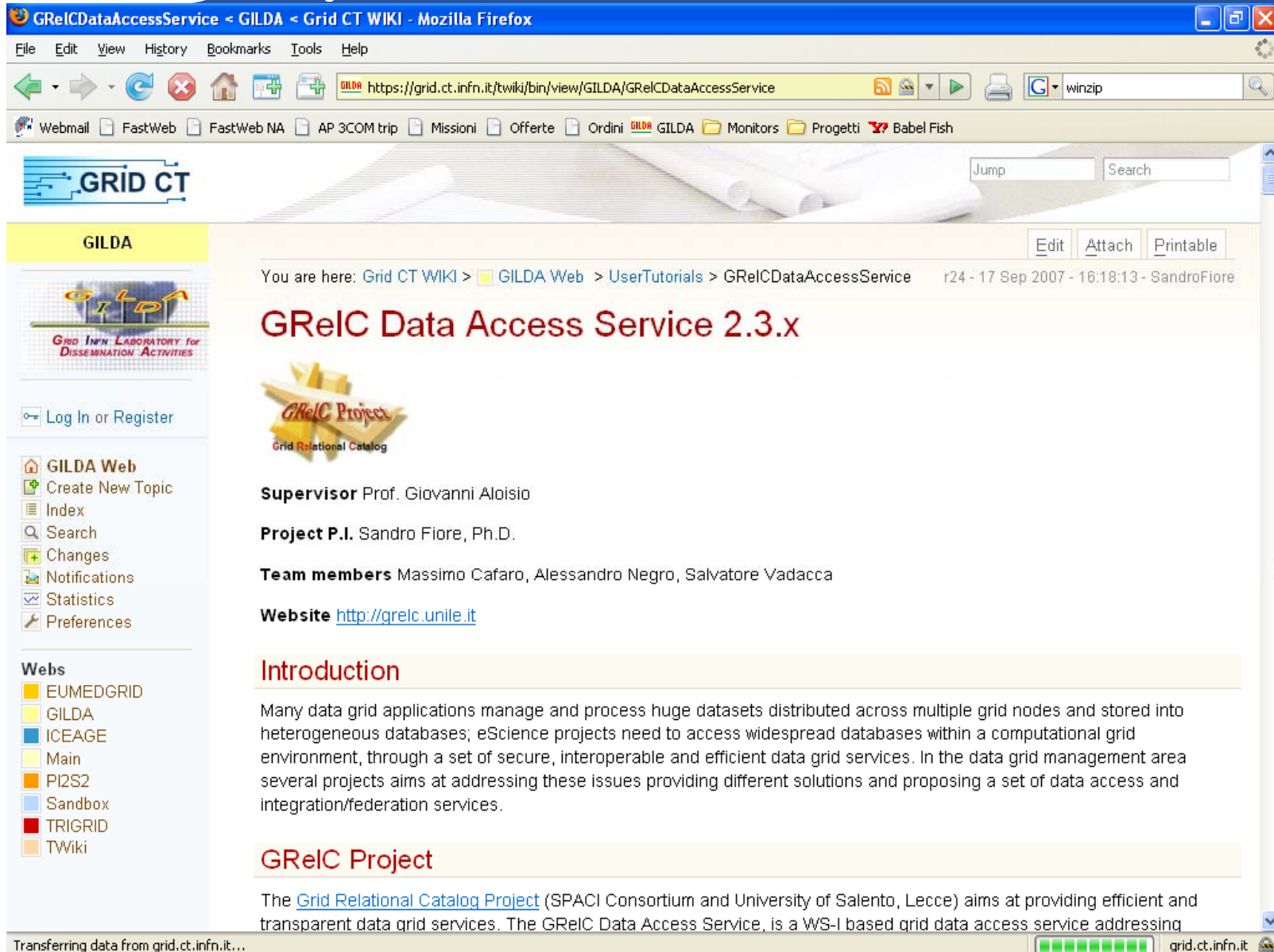
- **Grid Relational Catalog** is a project which aims at designing and developing a set of efficient, secure and transparent Data Grid Services (Starting date, Jan 2001).
- **GRelC Data Access Service** aims at providing a large set of functionalities to access both relational and non relational DataBases in a grid environment.





- Entirely based on C programming language
- Multithreaded web service
- It exposes the **web service interface GSI enabled** and WS-I compliant
- **Mutual authentication** based on GSI (X.509v3 digital certificates)
- GReIC DAS Authorization based on ACL for local management
- **VOMS Support**, for global management
- Information System Support (**BDII** compliant)
- Wide set of data access control policies
- **Full GSI support**: data encryption, data integrity, protection against replay attacks and detection of out of sequence packets


- XML data validation for recordset
- SingleQuery, MultiQuery and MultiSingleQuery Support
- Support for synchronous and asynchronous queries
- Dinamic binding to **heterogeneous DBMSs**
- **Two levels logging** (users, connections, queries, etc.)
- GSI enabled remote administration tools and remote log
- **Compression, chunking, prefetching** and **streaming** to enhance performance on a WAN
- Wide **SDK** for developers (both for C and C++)
- **No dependencies** concerning other middleware (only GSI)



The screenshot shows a Mozilla Firefox browser window with the address bar containing <https://grid.ct.infn.it/twiki/bin/view/GILDA/GReICDataAccessService>. The browser's title bar reads "GReICDataAccessService < GILDA < Grid CT WIKI - Mozilla Firefox".

The website content includes:

- GRID CT** logo and navigation menu.
- GILDA** section with a "Log In or Register" link and a list of links: GILDA Web, Create New Topic, Index, Search, Changes, Notifications, Statistics, and Preferences.
- Webs** section with a list of links: EUMEDGRID, GILDA, ICEAGE, Main, PI2S2, Sandbox, TRIGRID, and TWiki.
- Breadcrumbs:** You are here: [Grid CT WIKI](#) > [GILDA Web](#) > [UserTutorials](#) > [GReICDataAccessService](#)
- Page Info:** r24 - 17 Sep 2007 - 16:18:13 - SandroFiore
- Section Header:**

GReIC Data Access Service 2.3.x
- Image:**  Grid Relational Catalog
- Supervisor:** Prof. Giovanni Aloisio
- Project P.I.:** Sandro Fiore, Ph.D.
- Team members:** Massimo Cafaro, Alessandro Negro, Salvatore Vadacca
- Website:** <http://greic.unile.it>
- Introduction:** Many data grid applications manage and process huge datasets distributed across multiple grid nodes and stored into heterogeneous databases; eScience projects need to access widespread databases within a computational grid environment, through a set of secure, interoperable and efficient data grid services. In the data grid management area several projects aims at addressing these issues providing different solutions and proposing a set of data access and integration/federation services.
- GReIC Project:** The [Grid Relational Catalog Project](#) (SPACI Consortium and University of Salento, Lecce) aims at providing efficient and transparent data grid services. The GReIC Data Access Service, is a WS-I based grid data access service addressing

At the bottom of the browser window, a status bar shows "Transferring data from grid.ct.infn.it..." and a progress indicator.



Welcome to the GENIUS Grid Portal - Mozilla Firefox
 File Modifica Visualizza Cronologia Segnalibri Strumenti Guida
 https://grid-test-9.trigrid.it/

INFN with an Institute of High Energy Physics
 EGEE Enabling Grids for E-science
 Grid Enabled web Environment for **genius**
 site Independent User job Submission
 enginframe
 NICE

Welcome nicola
 Initialize Your Proxy
 Resource Broker: glite-rb.ct.infn.it VO: gilda LFC Host: lfc-gilda.ct.infn.it
 Your Data Logout

GENIUS Services
 File
 Security
 Job
 Data
 Info
 Monitoring
 Interactive
 Preferences
 VO Services

Welcome to GENIUS Portal



ver. 4.0 beta
 compliant with [gLite 3.0](#) middleware
[Credits](#)

This portal is best viewed with Mozilla 1.7.12 or higher.
 SeaMonkey 1.1.3 or higher, Firefox 2.0.0.5 or higher.
 Netscape (4.79, 4.80, 6 or higher) and Internet Explorer (5 or higher) can also be used.
 The Java plugin 1.6.0 or higher is mandatory required.
 The use of any other web browsers could induce some visualization mismatches and is not currently suggested.

powered by

 Last update: **Mon 24 September 2007**

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Completato grid-test-9.trigrid.it FoxyProxy: Disattivata

Welcome to the GENIUS Grid Portal - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti Guida

https://grid-test-9.trigrid.it/ Google

INFN Enabling Grids for E-science Grid Enabled web Environment for genius site Independent User job Submission enginframe NICE

Welcome nicola Initialize Your Proxy Resource Broker: glite-rb.ct.infn.it VO: gilda LFC Host: lfc-gilda.ct.infn.it Your Data Logout


GENIUS Services

- File
- Security
 - Initialize Your Proxy
 - Info on Proxy
 - Change OS Password
 - Destroy Proxy
- Job
- Data
- Info
- Monitoring
- Interactive
- Preferences
- VO Services

Initialize Your Proxy

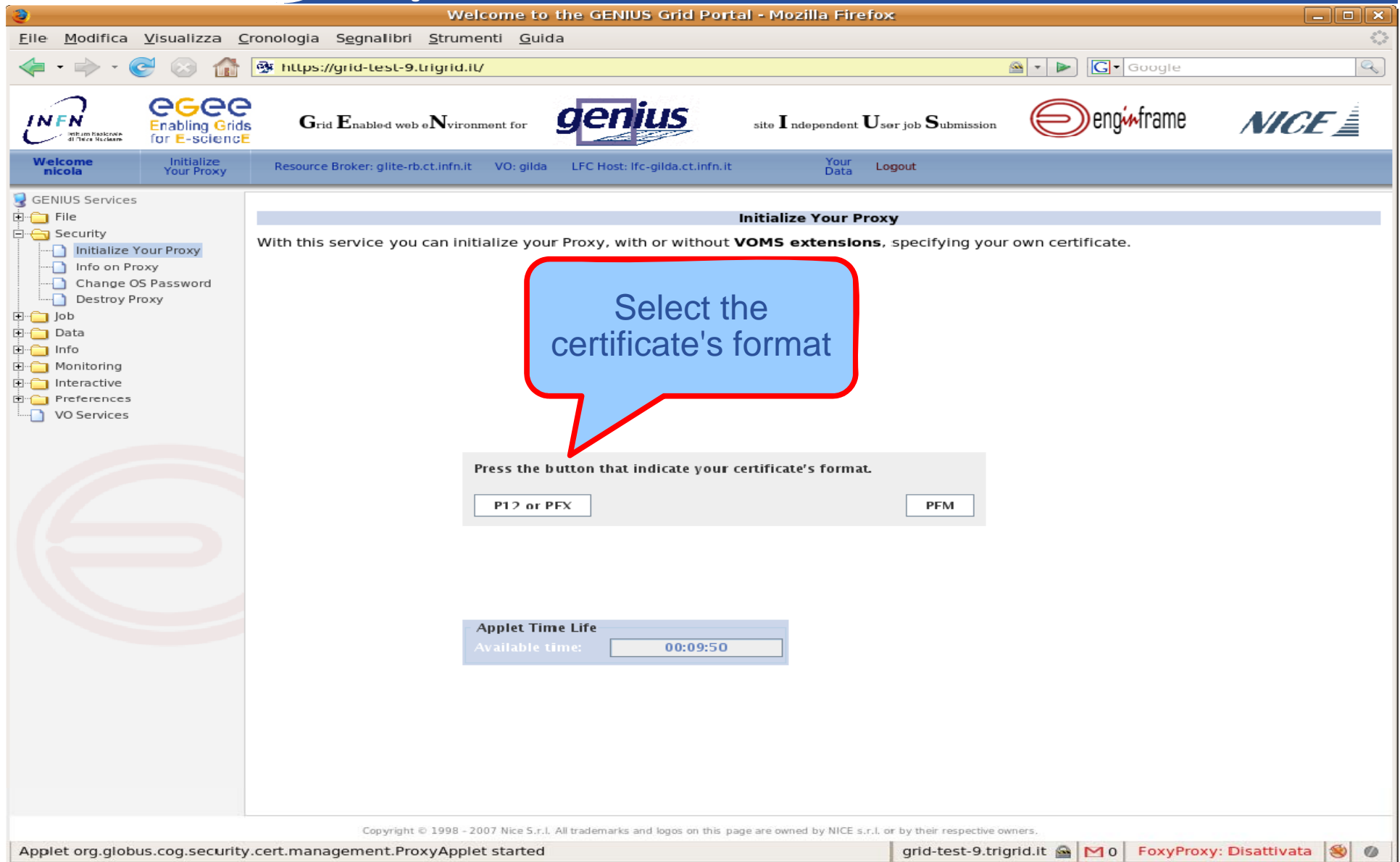
With this service you can initialize you Proxy, with or without **VOMS extensions**, using the current VO and Certification Authorities you set on Grid Settings (listed below).
If these settings are OK, Enter the Code you read below and click on Initialize button to start the Java Proxy Applet; otherwise click on [Grid Settings](#) to choose right values.
Be sure to have enabled Java plugin 1.6.x on your browser.

Enter Code:



New Captcha Security Control

Current Virtual Organization: **gilda**
Current Selected Certification Authorities:
/C=IT/O=GILDA/CN=GILDA Certification Authority
/C=IT/O=INFN/CN=INFN CA



Welcome to the GENIUS Grid Portal - Mozilla Firefox

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https://grid-test-9.trigrid.it/

INFN Enabling Grids for E-science genius site Independent User job Submission enginframe NICE

Welcome nicola Initialize Your Proxy Resource Broker: glite-rb.ct.infn.it VO: gilda LFC Host: lfc-gilda.ct.infn.it Your Data Logout

GENIUS Services

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Initialize Your Proxy

With this service you can initialize your Proxy, with or without **VOMS extensions**, specifying your own certificate.

Select the certificate's format

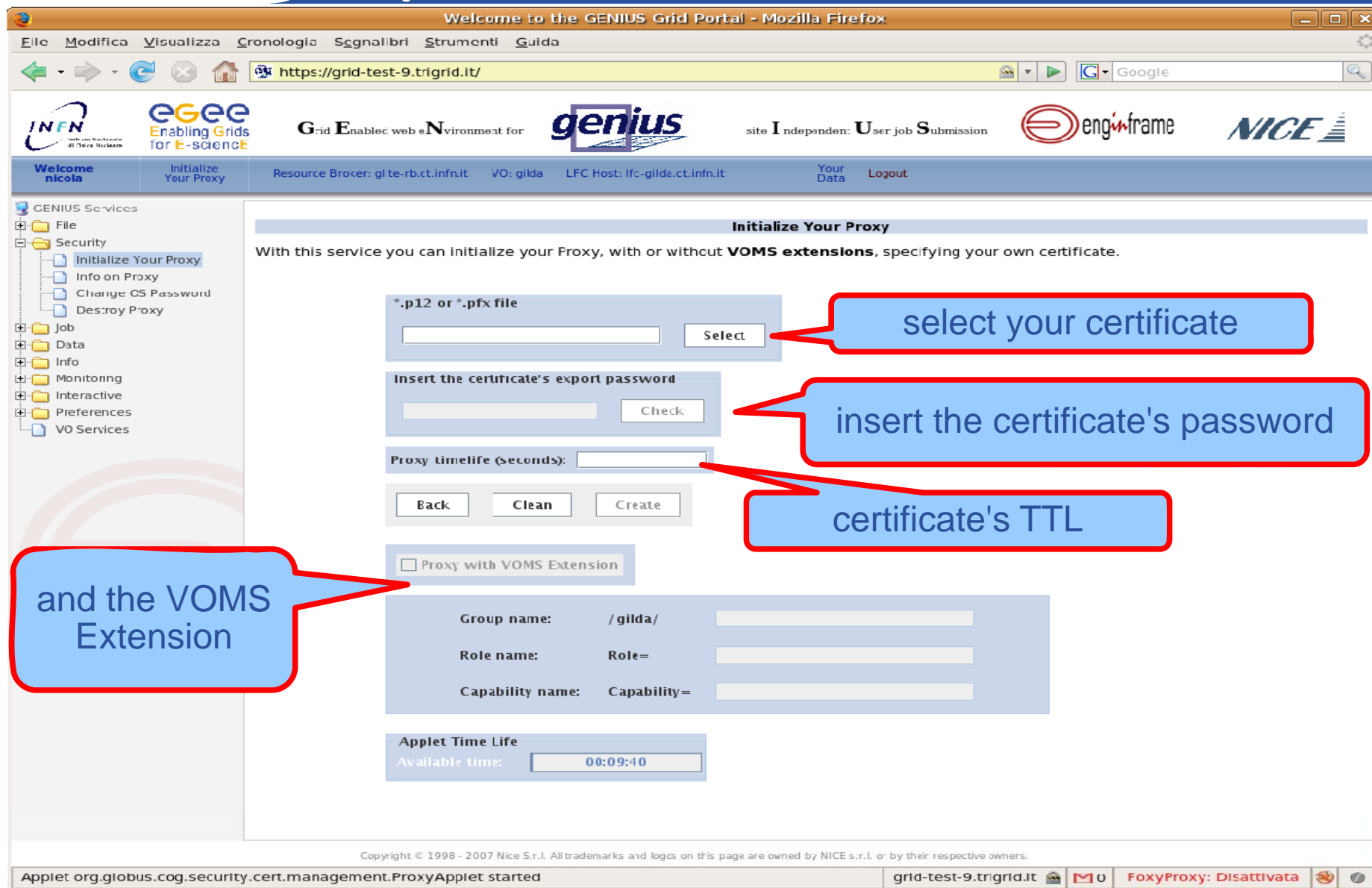
Press the button that indicate your certificate's format.

P12 or PFX PFM

Applet Time Life
Available time: 00:09:50

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Applet org.globus.cog.security.cert.management.ProxyApplet started | grid-test-9.trigrid.it | FoxyProxy: Disattivata



The screenshot shows a Mozilla Firefox browser window displaying the GENIUS Grid Portal. The page title is "Initialize Your Proxy". The main content area contains the following form elements:






- A text input field for a certificate file, labeled "* .p12 or *.pfx file", with a "Select" button next to it. A callout bubble points to this field with the text "select your certificate".
- A text input field for the certificate's export password, with a "Check" button next to it. A callout bubble points to this field with the text "insert the certificate's password".
- A text input field for "Proxy timelife (seconds)". A callout bubble points to this field with the text "certificate's TTL".
- Buttons for "Back", "Clean", and "Create".
- A checkbox labeled "Proxy with VOMS Extension". A callout bubble points to this checkbox with the text "and the VOMS Extension".
- Form fields for "Group name:" (with value "/ gilda/"), "Role name:" (with value "Role="), and "Capability name:" (with value "Capability=").
- An "Applet Time Life" section with an "Available time:" field showing "00:09:40".

At the bottom of the page, there is a status bar with the text "Applet org.globus.cog.security.cert.management.ProxyApplet started" and a system tray area showing "grid-test-9.trigrid.it" and "FoxyProxy: Disattivata".

Welcome to the GENIUS Grid Portal - Mozilla Firefox

File Modifica Visualizza Cronologia Segnalibri Strumenti Guida

https://grid-test-9.trigrid.it/

Welcome nicola Initialize Your Proxy Resource Broker: glite-rb.ct.infn.it VO: gilda LFC Host: lfc-gilda.ct.infn.it Your Data Logout

GENIUS Services

- File
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- Data
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- Preferences
- VO Services

Initialize Your Proxy

With this service you can initialize your Proxy, with or without **VOMS extensions**, specifying your own certificate.

*.p12 or *.pfx file

/home/nicola/gilda-nicola.p12

Insert the certificate's export password

.....

Proxy timelife (seconds): 14400

Proxy with VOMS Extension

Group name: / gilda/

Role name: Role=

Capability name: Capability=

Applet Time Life




Available time:

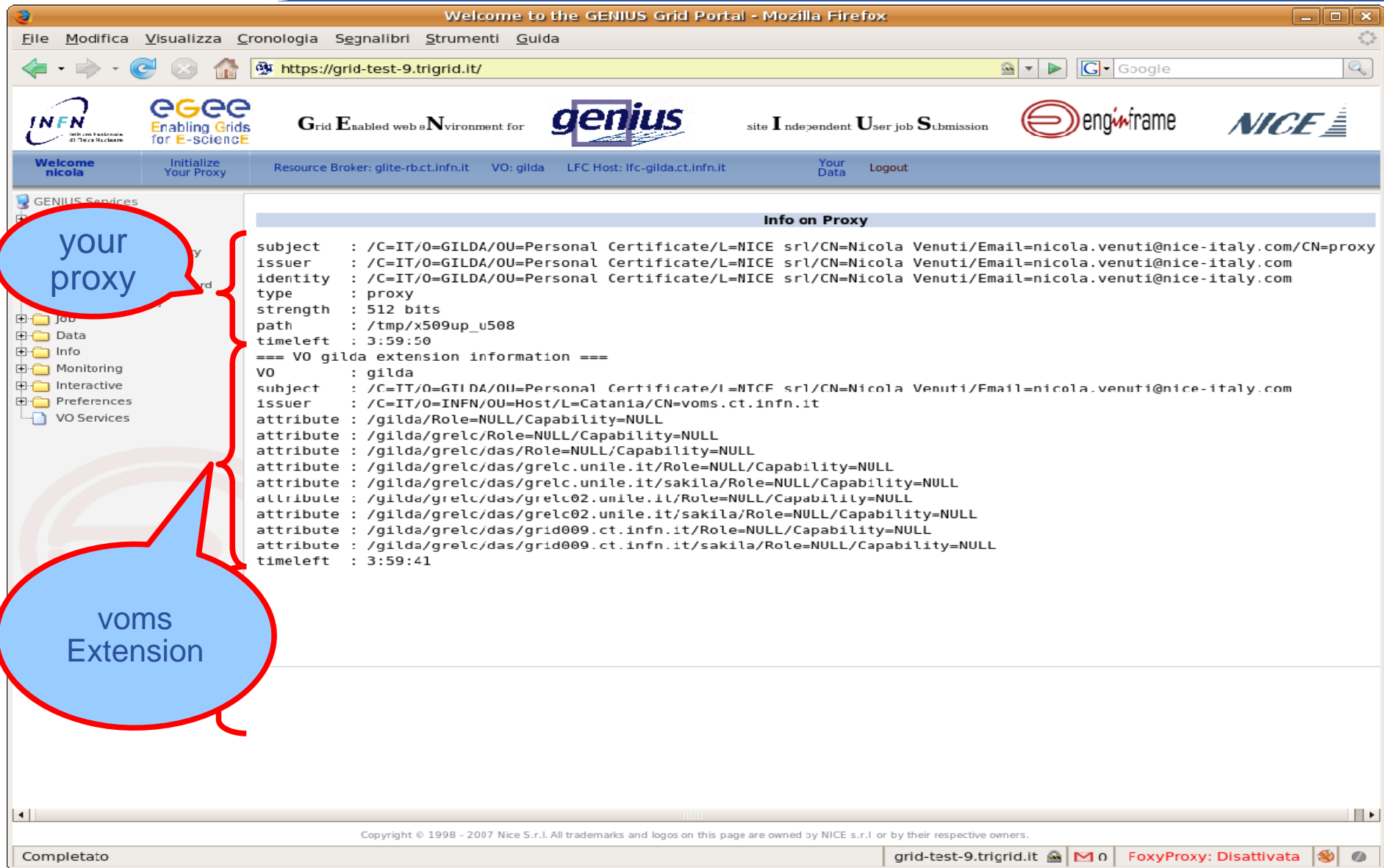
Important Message

Your proxy has been created correctly.

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Applet org.globus.cog.security.cert.management.ProxyApplet started






grid-test-9.trigrid.it  0 FoxyProxy: Disattivata  



Welcome to the GENIUS Grid Portal - Mozilla Firefox

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Welcome nicola Initialize Your Proxy Resource Broker: glite-rb.ct.infn.it VO: gilda LFC Host: lfc-gilda.ct.infn.it Your Data Logout

GENIUS Services

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- VO Services

Info on Proxy

```

subject      : /C=IT/O=GILDA/OU=Personal Certificate/L=NICE srl/CN=Nicola Venuti/Email=nicola.venuti@nice-italy.com/CN=proxy
issuer       : /C=IT/O=GILDA/OU=Personal Certificate/L=NICE srl/CN=Nicola Venuti/Email=nicola.venuti@nice-italy.com
identity     : /C=IT/O=GILDA/OU=Personal Certificate/L=NICE srl/CN=Nicola Venuti/Email=nicola.venuti@nice-italy.com
type        : proxy
strength     : 512 bits
path        : /tmp/x509up_u508
timeleft    : 3:59:50
=== VO gilda extension information ===
VO          : gilda
subject     : /C=IT/O=GILDA/OU=Personal Certificate/L=MTCF srl/CN=Nicola Venuti/Email=nicola.venuti@nice-italy.com
issuer      : /C=IT/O=INFN/OU=Host/L=Catania/CN=voms.ct.infn.it
attribute   : /gilda/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/grelc.unile.it/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/grelc.unile.it/sakila/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/grelc02.unile.it/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/grelc02.unile.it/sakila/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/grid009.ct.infn.it/Role=NULL/Capability=NULL
attribute   : /gilda/grelc/das/grid009.ct.infn.it/sakila/Role=NULL/Capability=NULL
timeleft    : 3:59:41
    
```

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Completato grid-test-9.trigrid.it FoxyProxy: Disattivata

Thank you very much for your kind attention!

