



Enabling Grids for E-scienceE

Introduction to GILDA testbed and Genius portal

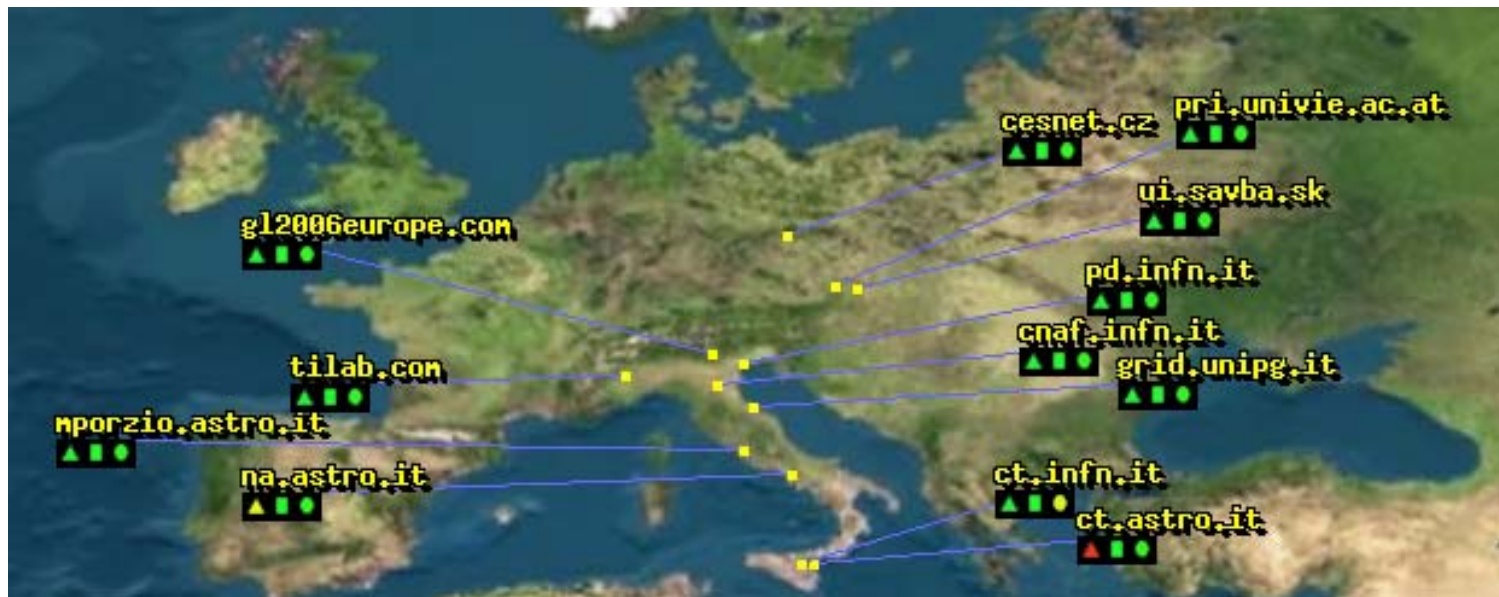
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- **After a lot of presentations about Grid**
 - Users want to see Grid in action
 - Users want to try some examples in Grid
 - Users want to run their applications in Grid

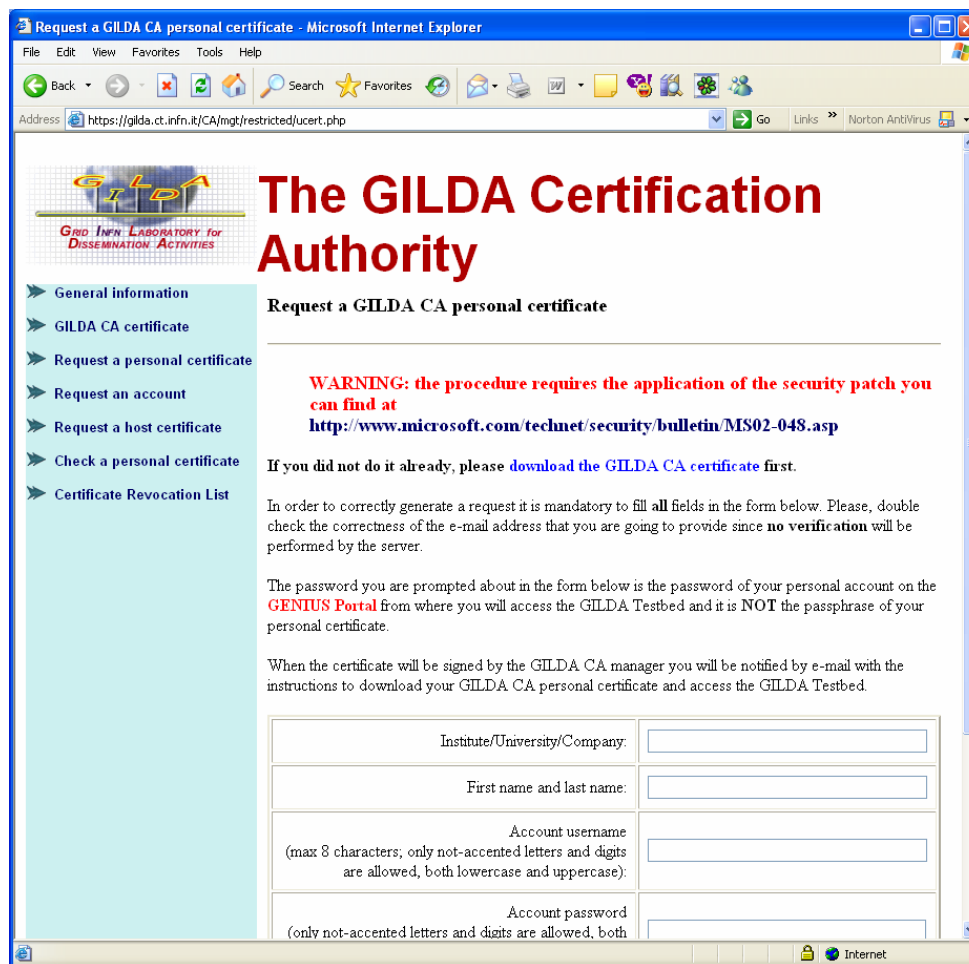
- **GILDA is a complete suite of grid elements (test-bed, CA, VO, monitoring system, web portal) and applications**
- **Everyone can register and use GILDA for training and testing purposes**





- **Grid Demonstrator portal <https://grid-demo.ct.infn.it>**
 - Simplified version of Genius portal
 - No registration required
 - Users can run only predefined jobs
- **Grid Tutor portal <https://grid-tutor.ct.infn.it>**
 - Full version of Genius portal
 - Used only for tutorials
 - Registration required (for accounts and certificates)
 - Users can define own jobs
 - Advanced features: VNC, job editor, certificate management
- **Command-line user interface “[ssh grid-tutor.ct.infn.it](https://ssh.grid-tutor.ct.infn.it)”**
 - Only for registered users
 - Users have full access to all grid commands

- <https://gilda.ct.infn.it/CA/>
- Users can register and get Grid certificates (valid for 14 days)
- After that, users can use full version of Genius portal and/or command-line interface
- Please read carefully the instructions on the web pages



Request a GILDA CA personal certificate - Microsoft Internet Explorer

Address: <https://gilda.ct.infn.it/CA/mgt/restricted/ucert.php>

The GILDA Certification Authority

Request a GILDA CA 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>

If you did not do it already, please [download the GILDA CA certificate](#) first.

In order to correctly generate a request it is mandatory to fill **all** fields in the form below. Please, double check the correctness of the e-mail address that you are going to provide since **no verification** will be performed by the server.

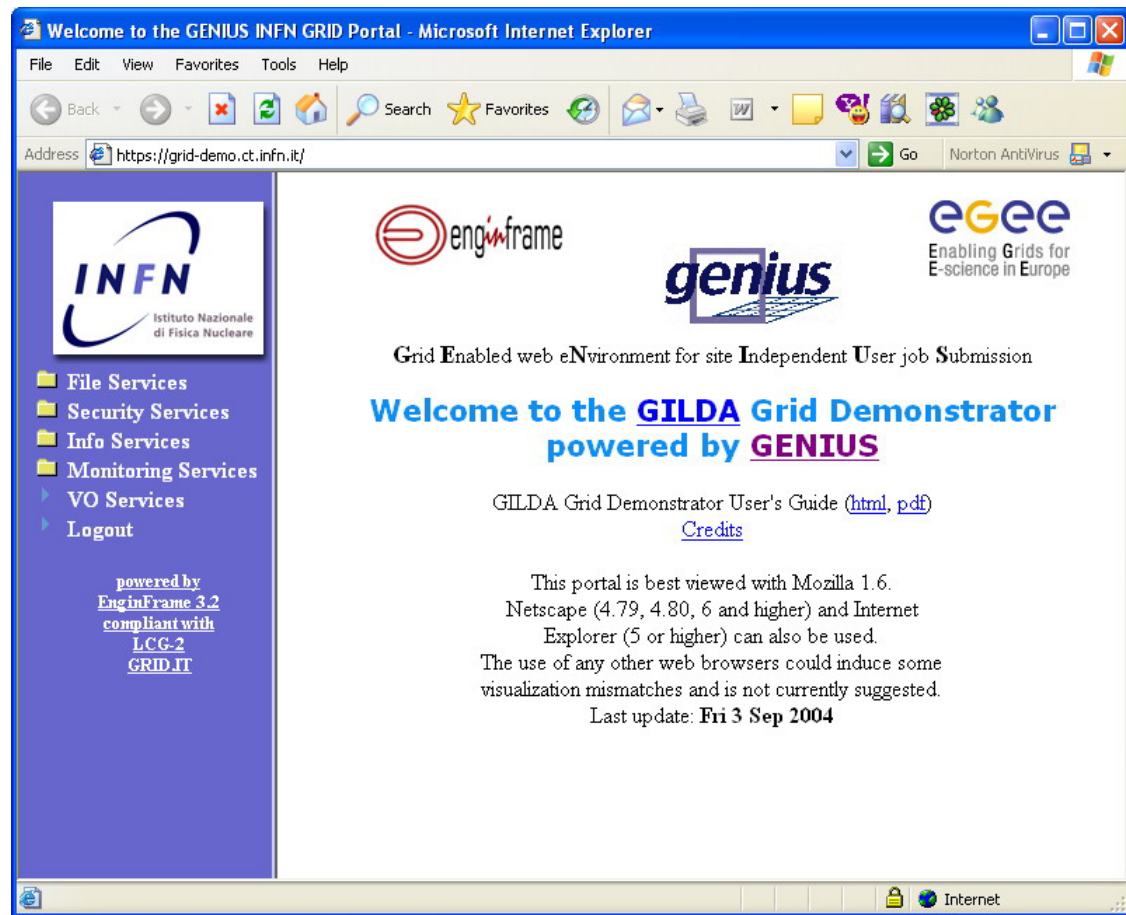
The password you are prompted about in the form below is the password of your personal account on the **GENIUS Portal** from where you will access the GILDA Testbed and it is **NOT** the passphrase of your personal certificate.

When the certificate will be signed by the GILDA CA manager you will be notified by e-mail with the instructions to download your GILDA CA personal certificate and access the GILDA Testbed.

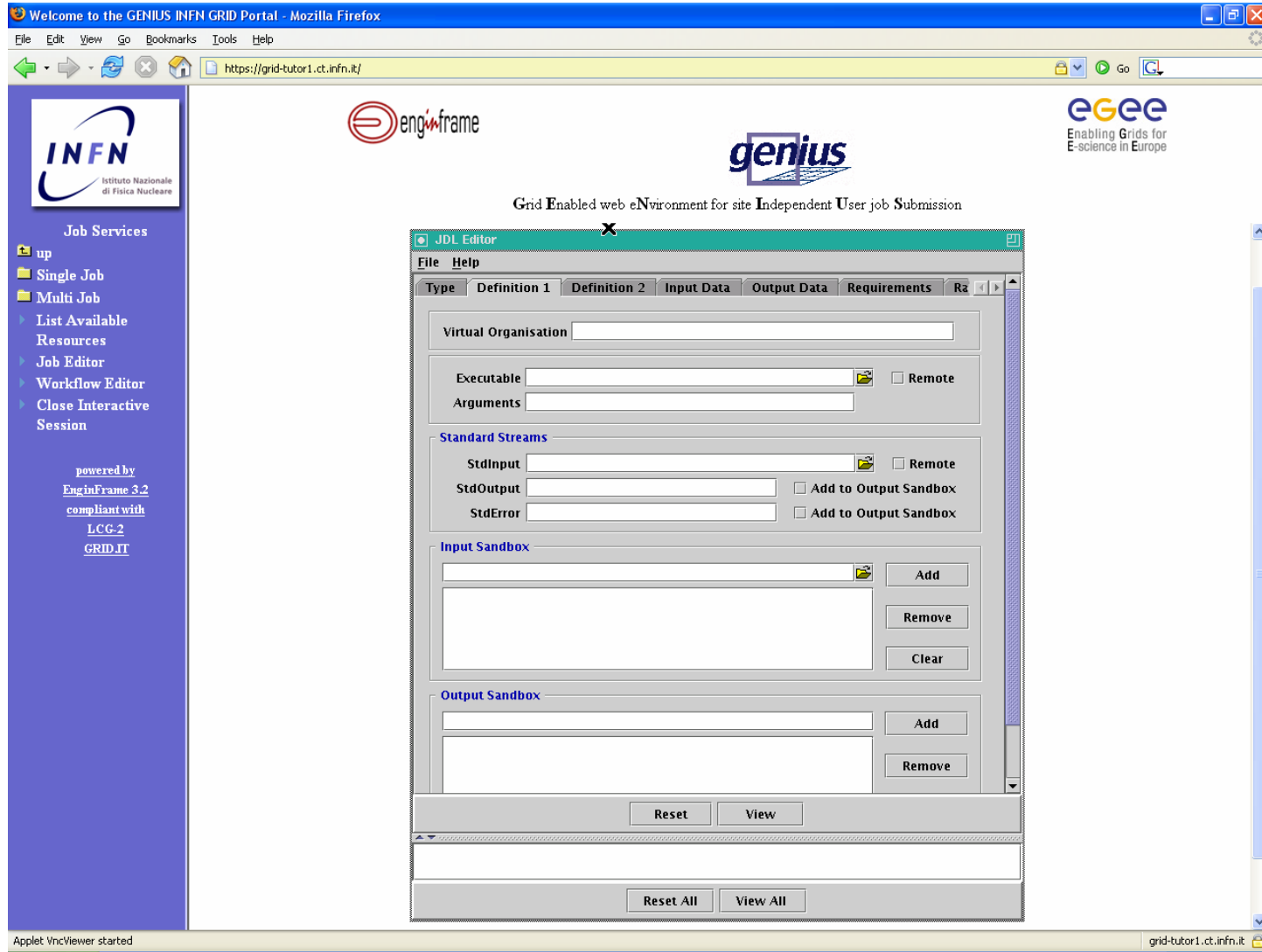
Institute/University/Company:	<input type="text"/>
First name and last name:	<input type="text"/>
Account username (max 8 characters; only not-accented letters and digits are allowed, both lowercase and uppercase):	<input type="text"/>
Account password (only not-accented letters and digits are allowed, both	<input type="text"/>

- **Command-line user interface is powerful but**
 - It takes some time to learn the commands
 - The interface depends on the middleware
 - It is difficult to control what the users really do
- **Portal is web-based user interface that**
 - Is accessible from everywhere
 - Has redundant security level
 - Is independent from middleware
 - Is easy to control what users can do

- Dedicated to GILDA testbed
- Based on XML technology
- Use command-line UI in background



Job definition (Creating JDL)



The screenshot shows a Mozilla Firefox browser window displaying the GENIUS INFN GRID Portal. The address bar shows the URL <https://grid-tutor1.ct.infn.it/>. The page features logos for INFN (Istituto Nazionale di Fisica Nucleare), EnginFrame, genius, and eGEE (Enabling Grids for E-science in Europe). The main heading reads "Grid Enabled web eNvironment for site Independent User job Submission".

On the left, a "Job Services" sidebar lists options: up, Single Job, Multi Job, List Available Resources, Job Editor, Workflow Editor, and Close Interactive Session. Below this, it states "powered by EnginFrame 3.2 compliant with LCG-2 GRID.IT".

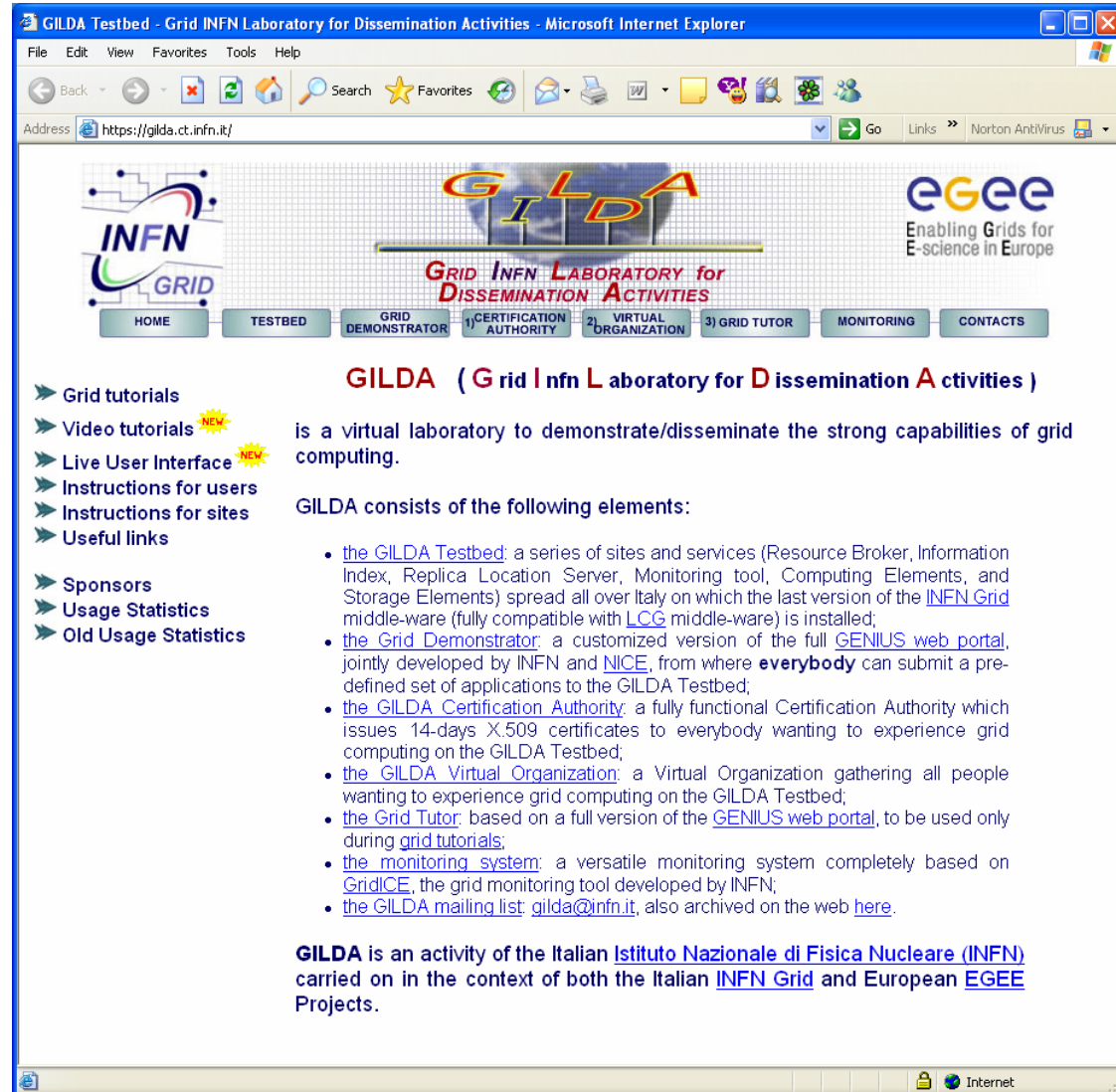
The central "JDL Editor" window is active, showing a form for job definition. It includes tabs for "Type", "Definition 1", "Definition 2", "Input Data", "Output Data", "Requirements", and "Ra". The form contains the following fields and controls:

- Virtual Organisation:** A text input field.
- Executable:** A text input field with a file selection icon and a "Remote" checkbox.
- Arguments:** A text input field.
- Standard Streams:**
 - StdInput:** A text input field with a file selection icon and a "Remote" checkbox.
 - StdOutput:** A text input field with "Add to Output Sandbox" and "Add to Output Sandbox" checkboxes.
 - StdError:** A text input field with "Add to Output Sandbox" and "Add to Output Sandbox" checkboxes.
- Input Sandbox:** A large text area with "Add", "Remove", and "Clear" buttons.
- Output Sandbox:** A large text area with "Add" and "Remove" buttons.

At the bottom of the editor, there are "Reset" and "View" buttons, and further down, "Reset All" and "View All" buttons. The status bar at the bottom of the browser window shows "Applet VncViewer started" on the left and "grid-tutor1.ct.infn.it" on the right.

More information at
<https://gilda.ct.infn.it/>

- Video tutorials
- Instructions for users
- LiveCD for User Interface



GILDA (Grid Infn Laboratory for Dissemination Activities)

is a virtual laboratory to demonstrate/disseminate the strong capabilities of grid computing.

GILDA consists of the following elements:

- [the GILDA Testbed](#): a series of sites and services (Resource Broker, Information Index, Replica Location Server, Monitoring tool, Computing Elements, and Storage Elements) spread all over Italy on which the last version of the [INFN Grid](#) middle-ware (fully compatible with [LCC](#) middle-ware) is installed;
- [the Grid Demonstrator](#): a customized version of the full [GENIUS web portal](#), jointly developed by INFN and NICE, from where **everybody** can submit a pre-defined set of applications to the GILDA Testbed;
- [the GILDA Certification Authority](#): a fully functional Certification Authority which issues 14-days X.509 certificates to everybody wanting to experience grid computing on the GILDA Testbed;
- [the GILDA Virtual Organization](#): a Virtual Organization gathering all people wanting to experience grid computing on the GILDA Testbed;
- [the Grid Tutor](#): based on a full version of the [GENIUS web portal](#), to be used only during [grid tutorials](#);
- [the monitoring system](#): a versatile monitoring system completely based on [GridICE](#), the grid monitoring tool developed by INFN;
- [the GILDA mailing list](#): gilda@infn.it, also archived on the web [here](#).

GILDA is an activity of the Italian [Istituto Nazionale di Fisica Nucleare \(INFN\)](#) carried on in the context of both the Italian [INFN Grid](#) and European [EGEE](#) Projects.

- **Note that GILDA is dedicated for training and dissemination purposes**
 - Do not overload it with long-time jobs or too many jobs
- **For large applications, please join EGEE project and run your applications on EGEE production testbed**
- **Contact us**
 - If you need more information about Grid computing and EGEE
 - If you want to join EGEE project
 - If you have a large application and want to port it to Grid
 - Or for any other Grid-related problems



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More information at demonstration

www.eu-egee.org

