



Enabling Grids for E-science

## How to join GILDA

*Riccardo Bruno*

*INFN*

*gLite Tutorial at the First EGEE User Forum*

*CERN, 27-28.02.2006*

[www.eu-egee.org](http://www.eu-egee.org)



Information Society



• <https://gilda.ct.infn.it>



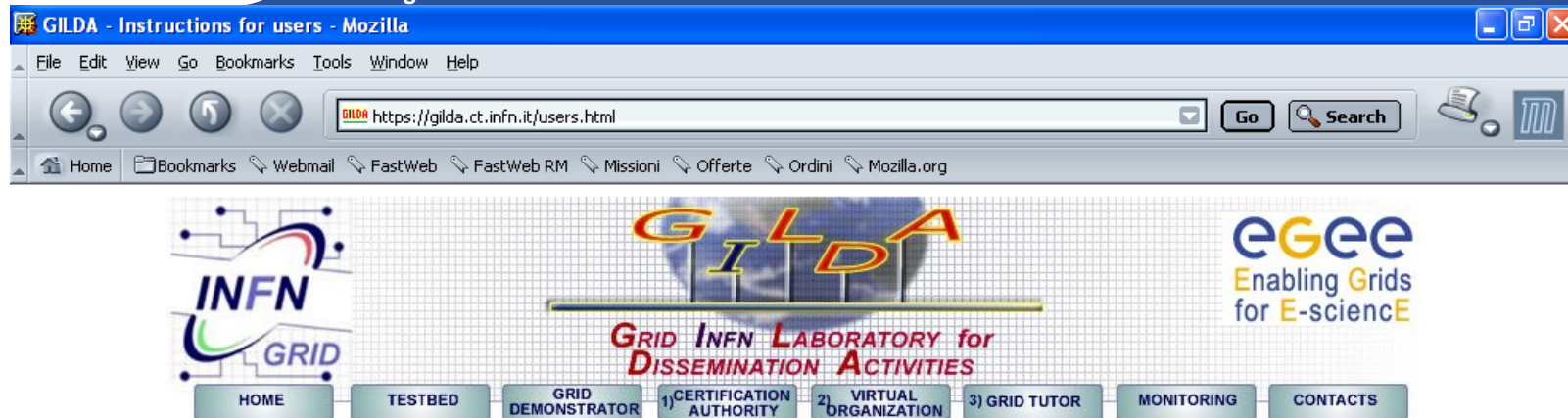
**GILDA (Grid Infn Laboratory for Dissemination Activities)**

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, Data Managers, Monitoring tool, Computing Elements, and Storage Elements) spread all over Italy and the rest of the world on which the latest version of both the [INFN Grid](#) middle-ware (fully compatible with [LCG](#) middle-ware) and the [gLite](#) middle-ware are 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 GILDA Virtual Organization is based on the Virtual Organization Membership Service (VOMS) developed by INFN;
- [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](mailto: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 the following Projects: [INFN Grid](#), [EGEE](#), [EELA](#), [EUCHINAGRID](#), [EUMEDGRID](#), and [ICEAGE](#).



- Grid tutorials
- GILDA Poster
- Video tutorials
- Live User Interface 
- User Interface PnP
- Virtual Services 
- Instructions for users
- Instructions for sites 
- Useful links
  
- Sponsors
- Usage Statistics
- Old Usage Statistics

**Access the GILDA Testbed through the public Grid Demonstrator:**

**Step 1: Login to the Grid Demonstrator** (read the Grid Demonstrator User's Guide [html](#), [pdf](#) )

**Access the GILDA Testbed during tutorials and/or induction courses:**

**Step 1: Get your GILDA CA personal certificate**

**Step 2: Register to the GILDA Virtual Organization**

**Step 3: Login to the Grid Tutor** (read the GENIUS Portal User's Guide [html](#), [pdf](#))

**External documentation:**

**Users and Site Managers Support**

**Grid Dictionary** by Andrea Caltroni [\[PDF\]](#) - [\[TXT\]](#)

**A Brief Guide to Certificate Management** by Marisa Luvisetto [\[PDF\]](#) [\[TXT\]](#) (updated 27/09/2004)

• <https://gilda.ct.infn.it/CA/mgt/getCA.php>

Download the GILDA CA certificate - Microsoft Internet Explorer

Indirizzo <https://gilda.ct.infn.it/CA/mgt/getCA.php>

## The GILDA Certification Authority

**Download the GILDA CA certificate**

**WARNING !**  
This web server is certified by the same Certification Authority you are going to download the root certificate of. Hence, you have no objective ways to check its reliability and trustability!  
If you do not trust it and would like to check the correctness of the fingerprints, you can call the CA manager on the phone (Giuseppe Platania, +39 095 378 5501).

These are the fingerprints of the GILDA CA certificate:

**B6:BA:BD:BC:72:53:05:93:78:A4:81:47:28:4E:3C:55 (MD5)**  
**4F:10:40:A9:B5:75:59:01:A3:59:74:9E:E3:E2:8F:E2:C7:2C:93:DD (SHA1)**

**Instructions**

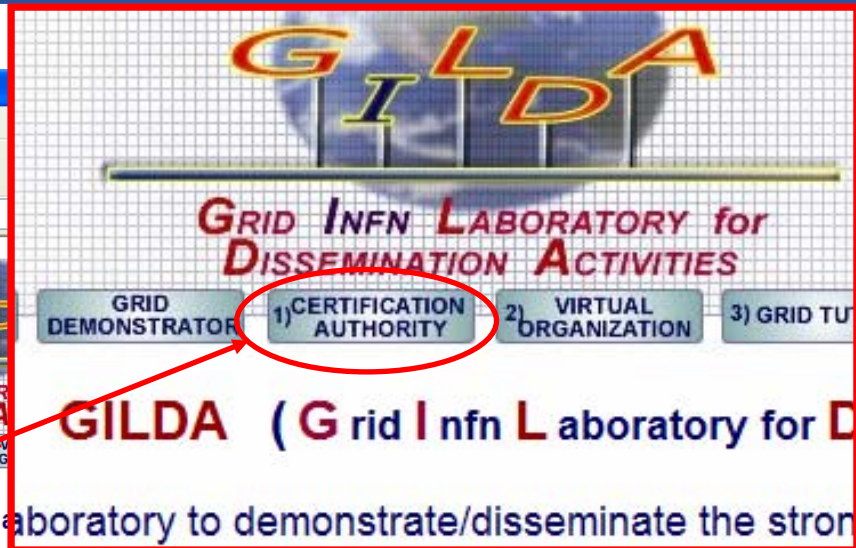
For the automatic installation in your web browser, select the **DER** format and save the GILDA CA certificate on your local disk with the **.der** extension in the filename. Then, double click on the filename and, when the installation dialog starts, choose the option 'Select automatically the archive'.

The **PEM** format must be selected only to visualize the GILDA CA certificate with your web browser (e.g., if you want to do "cut and paste").

Formato:

[Download/Visualize certificate](#)



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, Data Managers, Monitoring tool, Computing Elements, and Storage Elements) spread all over Italy and the rest of the world on which the latest version of both the [INFN Grid](#) middle-ware (fully compatible with [LCG](#) middle-ware) and the [gLite](#) middle-ware are 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 GILDA Virtual Organization is based on the Virtual Organization Membership Service (VOMS) developed by INFN;
- [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](mailto: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 the following Projects: [INFN Grid](#), [EGEE](#), [EELA](#), [EUCHINAGRID](#), [EUMEDGRID](#), and [ICEAGE](#).



**GILDA**  
GRID INFN LABORATORY for  
DISSEMINATION ACTIVITIES

- General information
- GILDA CA certificate
- **Request a personal certificate**
- Request an account
- Request a host certificate
- Renew a certificate
- Check a personal certificate
- Certificate Revocation List

## The GILDA Certification Authority

The **GILDA Certification Authority** (GILDA CA) issues temporary (two weeks) personal public key certificates (compliant with the X.509 standard) in order to access the GILDA Testbed.

**Absolutely no identity check** is going to be performed on the requester, so the personal certificates issued by the GILDA CA have absolutely no value on any real production Grid Infrastructure.

The **GILDA Certification Authority** is managed by:

Giuseppe Platania  
INFN Catania  
Via S. Sofia, 64  
I-95123 Catania  
ITALY

e-mail: [gilda-ca@ct.infn.it](mailto:gilda-ca@ct.infn.it)  
Tel: +39 095 378 5501  
Fax: +39 095 378 5231

In order to inspect the GILDA CA certificate and/or save it in your web browser (necessary to validate your personal certificate) click on **GILDA CA certificate** in the left part of this page.

In order to request a certificate, click on **Request a personal certificate** in the left part of this page.

If you already have a trusted personal certificate, click on **Request an account**, in the left part of this page, to request an account. Your personal certificate must be included in your browser before doing this.

In order to request a host certificate, click on **Request a host certificate** in the left part of this page.

Request a GILDA personal certificate - Microsoft Internet Explorer

File Modifica Visualizza Preferiti Strumenti ?

Indietro Cerca Preferiti

Indirizzo <https://gilda.ct.infn.it/CA/mgt/restricted/ucert.php> Vai Collegamenti

- Request a host certificate
- Renew a certificate
- Check a personal certificate
- Certificate Revocation List

**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 lowercase and uppercase):	<input type="password"/>
Confirm account password (only not-accented letters and digits are allowed, both lowercase and uppercase):	<input type="password"/>
E-mail:	<input type="text"/>

Submit the request Clear form

Internet

- An e-mail will come to the address specified in the previous form.

Dear User,

you can download your GILDA Personal Certificate going, \*with the same browser you used to submit the request\*, to the URL:

<https://gilda.ct.infn.it/cgi-bin/gucert.pl?0A44>

Your certificate is valid for \$CERTIFICATE\_DAYS\_VALUE days. After that you can go to:

<https://voms.ct.infn.it:8443/voms/gilda/webui/request/user/create>

and register to the GILDA VOMS (usually, registration takes a working day).

Then, you can go to the GILDA Grid Demonstrator at the URL:

<https://grid-demo.ct.infn.it>

or, if you are participating to a tutorial or an induction course, to the GILDA Grid Tutor at the URL:

<https://grid-tutor.ct.infn.it> (for LCG) or <https://glite-tutor.ct.infn.it> (for gLite)

Remember that:

1) whenever you are prompted for the Operating System, use the username and the password you have chosen when you requested the GILDA Personal Certificate as username and as password;

2) whenever you are prompted for the GRID username and password and the passphrase of your GILDA Personal Certificate as password.  
Best Regards

The GILDA CA Manager

GILDA Certification Authority  
Tel: +39 095 378 5469  
Fax: +39 095 378 5231  
Via S. Sofia, 64  
I-95123 Catania  
ITALY

<http://gilda.ct.infn.it/CA/>

**From:** GILDA-CA <[gilda-ca@ct.infn.it](mailto:gilda-ca@ct.infn.it)>

**To:** <email specified in the request form>

**Subject:** GILDA Personal Certificate for <username>

Just click on this link to obtain the certificate



## Getting a Personal Certificate (5/5)

- A blank web page will be prompted warning you that a new Certificate is now available on the list of browser certificates.
- Be sure that during these steps the used browser is the same!
- At this stage you have to export your certificate and store it in a secure place.
- The procedure to export certificates depends on the web browser used.
- Certificate file extension depends on the web browser used (\*.p12 for Mozilla/Netscape/FireFox and \*.pfx for Internet Explorer).
- Certificate has to be converted to the \*.pem format understood by the gLite Security system (see slide 15)

- A e-mail will come to the e-mail address specified in the previous form.

Dear User,

you can download your GILDA Personal Certificate going,  
\*with the same browser you used to submit the request\*,  
to the URL:

<https://gilda.ct.infn.it/cgi-bin/gucert.pl?0A44>

Your certificate is valid for 365 days.  
After that you can go to:

<https://voms.ct.infn.it:8443/voms/gilda/webui/request/user/create>

and register to the GILDA VO (usually, registration takes a working day).

Then, you can go to the GILDA Grid Demonstrator at the URL:

<https://grid-demo.ct.infn.it>

or, if you are participating to a tutorial or an induction course,  
to the GILDA Grid Tutor at the URL:

<https://grid-tutor.ct.infn.it> or <https://grid-tutor1.ct.infn.it>

Remember that:

1) whenever you are prompted for the Operating System, use the username  
and the password you have chosen when you requested the GILDA  
Personal Certificate as username and as password;

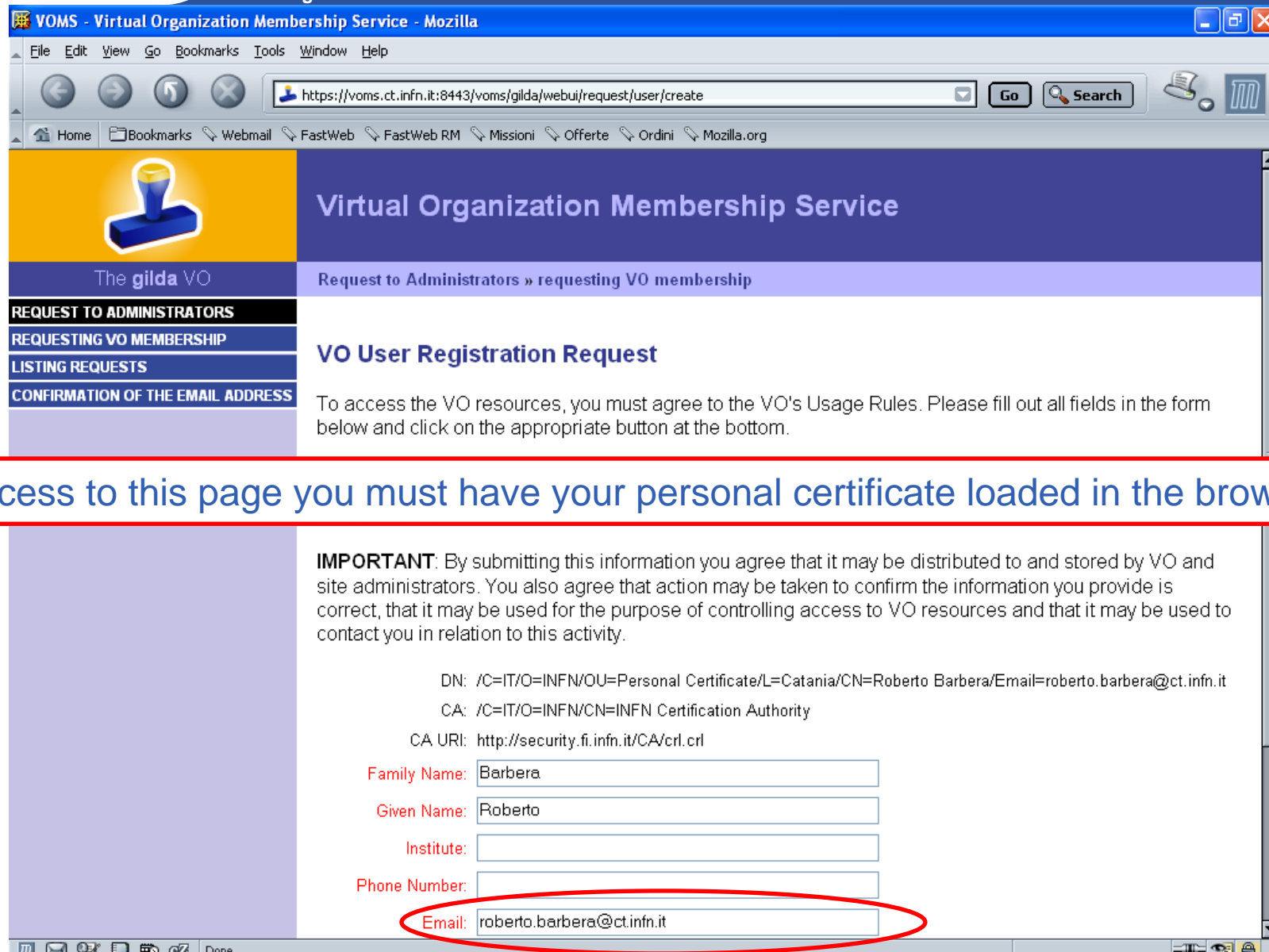
2) whenever you are prompted for the GRID username and password  
and the passphrase of your GILDA Personal Certificate as password.

Best Regards  
The GILDA CA Manager

...

Just click on this link to register with VOMS

A red arrow originates from the underlined text 'Just click on this link to register with VOMS' and points directly to the URL 'https://voms.ct.infn.it:8443/voms/gilda/webui/request/user/create' which is circled in red.



**Virtual Organization Membership Service**

Request to Administrators » requesting VO membership

**VO User Registration Request**

To access the VO resources, you must agree to the VO's Usage Rules. Please fill out all fields in the form below and click on the appropriate button at the bottom.

**IMPORTANT:** By submitting this information you agree that it may be distributed to and stored by VO and site administrators. You also agree that action may be taken to confirm the information you provide is correct, that it may be used for the purpose of controlling access to VO resources and that it may be used to contact you in relation to this activity.

DN: /C=IT/O=INFN/OU=Personal Certificate/L=Catania/CN=Roberto Barbera/Email=roberto.barbera@ct.infn.it  
 CA: /C=IT/O=INFN/CN=INFN Certification Authority  
 CA URI: http://security.fi.infn.it/CA/crl.crl

Family Name:

Given Name:

Institute:

Phone Number:

Email:

To access to this page you must have your personal certificate loaded in the browser

**Subject:** Email address confirmation for VO gilda  
**From:** grid-prod@ct.infn.it  
**Date:** 21/12/2005 17:51  
**To:** roberto.barbera@ct.infn.it

Email address confirmation for VO gilda

A request for a VO membership on gilda has been made using this email address.

If you have not made this request please ignore this message. It would be helpful if you would contact the VO registrar and tell us about this bogus request.

If the request was made by you, please click on the following URL to confirm this email address,

<https://voms.ct.infn.it:8443/voms/gilda/webui/request/user/confirm?cookie=g884ooolxpenbhd&reqid=2>

Make sure you have your client certificate loaded in your browser. One way to ensure this is to copy and paste the above URL into the same browser that you used to submit the request.

If you wish to confirm the request another way, then you need the following information:

```

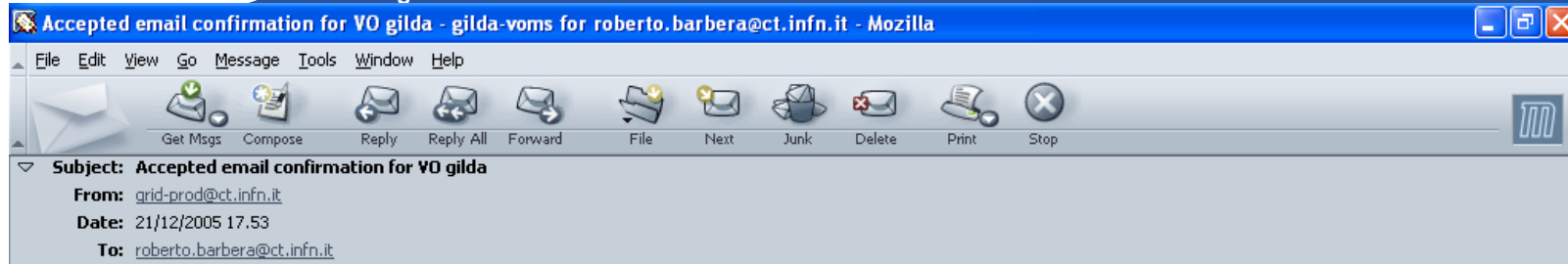
Request number      : 2
Confirmation cookie: g884ooolxpenbhd
    
```

[Click here to confirm your request](https://voms.ct.infn.it:8443/voms/gilda/webui/request/user/confirm?cookie=g884ooolxpenbhd&reqid=2)

Once you have confirmed your email address the following information will be sent to the VO administrator:

```

Name           : Barbera, Roberto
Email          : roberto.barbera@ct.infn.it
Institute      : Univ. Catania and INFN
Phone Number   : +390953785504
Certificate DN  : /C=IT/O=INFN/OU=Personal Certificate/L=Catania/CN=Roberto Barbera/Email=roberto.barbera@ct.infn.it
Certificate CA  : /C=IT/O=INFN/CN=INFN Certification Authority
Comment       :
    
```



Accepted email confirmation for VO gilda

Dear Barbera, Roberto,

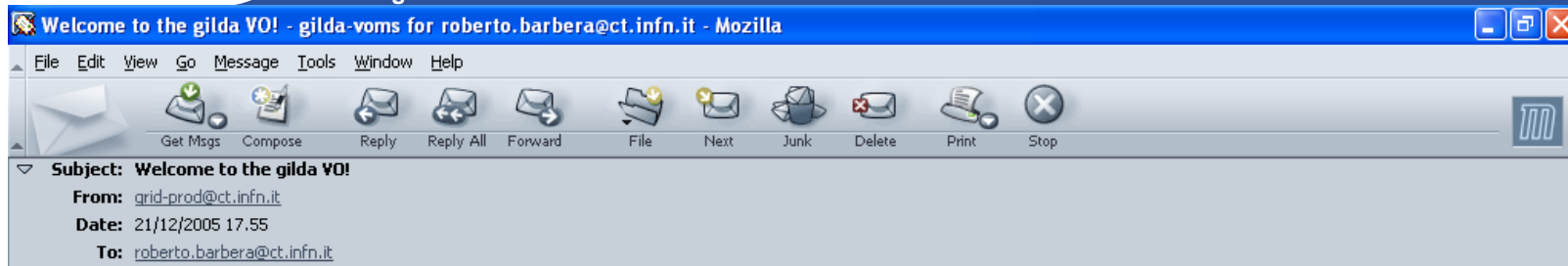
Thank you for confirming your email address. Your request for an account on VO gilda has been sent to the VO administrators.

A VO administrator will probably contact you to confirm account creation.

If you find any problems regarding the account registration, then please contact the VO registrar.

Thank You,  
 VO Registration





Welcome to the gilda VO!

Dear Barbera, Roberto,

Your request (2) for the gilda VO has been accepted and allowed by the VO Administrator.

From this point you can use the voms-proxy-init command to acquire the VO specific credentials, which will enable you to use the resources of this VO.

Good Luck,  
VO Registration

Now you are a member of the GILDA VO

- The following commands convert your certificate to PEM format:
- `openssl pkcs12 -clcerts -nokeys -in <your cert> -out usercert.pem`
- `openssl pkcs12 -nocerts -in <your cert> -out userkey.pem`
- Your public key: `usercert.pem`
  - `chmod 644 usercert.pem`
  - `mv usercert.pem $HOME/.globus/`
- Your private key: `userkey.pem`
  - `chmod 400 userkey.pem`
  - `mv userkey.pem $HOME/.globus/`

- **GILDA home page**
  - <https://gilda.ct.infn.it>
- **GILDA Certification Authority**
  - <https://gilda.ct.infn.it/CA/>
- **GILDA Virtual Organization**
  - <https://voms.ct.infn.it:8443/voms/gilda/>
- **Brief guide to certificate management**
  - <http://grid-it.cnaf.infn.it/fileadmin/users/certmgr/certmgr.pdf>
- **Brief video tutorial on certificate management**
  - <https://gilda.ct.infn.it/video/Certification/Allproxy.html>

