

## С чего начать?

Олешко С.Б.  
Петербургский институт ядерной физики  
г.Гатчина



- 1. Необходимо иметь account на UI (User Interface) локального кластера**
- 2. Получить цифровой сертификат для входа в Грид**
- 3. Вступить в виртуальную организацию**

- 1. Необходимо иметь account на UI локального кластера**
  - обращаться к администратору кластера
  
- 2. Получить цифровой сертификат. Для RDIG – Центр Сертификации (Certification Authority, CA) -**  
**<http://ca.grid.kiae.ru/RDIG/>)**
  - потребуются контакт с лицом, ответственным за регистрацию в вашем институте – Registration Authority
  
- 3. Вступить в виртуальную организацию**
  - виртуальные организации LCG (эксперименты БАК) –  
**<http://lcg.web.cern.ch/LCG/Users/registration/VO.html>**
  - виртуальные организации RDIG –  
**<http://grid.sinp.msu.ru/grid/roc/voinrdig>**
  - региональная виртуальная организация Северо-Запада (nw\_ru)  
**<http://egee.pnpi.nw.ru/cgi/index.cgi?l1=9&l2=4>**

- Все процедуры занимают 3-5 дней
- Должен быть account на UI кластера, где установлено ППО gLite
- Вы должны иметь отношение к одной из существующих ВО
- В вашей организации должен быть назначен RA (Registration Authority), который может подтвердить вашу личность

**А если ничего этого нет в наличии? Как быть?**

**Выход – использование Грид-проектов, предназначенных для обучения или демонстрационные Грид-проекты**







GILDA Testbed - Grid INFN Laboratory for Dissemination Activities - Mozilla Firefox

File Правка Вид Переход Закладки Инструменты Справка




← → ↻ × 🏠 **GILDA** <https://gilda.ct.infn.it/> 🔒 🔄 Перейти 📄

📄 Главная страница F... 📄 Заголовки последн...

Enabling Grids for E-science in Europe

HOME TESTBED GRID DEMONSTRATOR 1) CERTIFICATION AUTHORITY 2) VIRTUAL ORGANIZATION 3) GRID TUTOR MONITORING CONTACTS

➤ Grid tutorials  
➤ GILDA Posters  
➤ Video tutorials  
➤ User Interface PnP  
➤ Virtual Services   
➤ Instructions for users  
➤ Instructions for sites   
➤ GILDA Wiki   
➤ Support system  
➤ Useful links

➤ Sponsors  
➤ Usage Statistics  
➤ Old Usage Statistics

## GILDA ( G rid I nfn L aboratory for D issemination A ctivities )

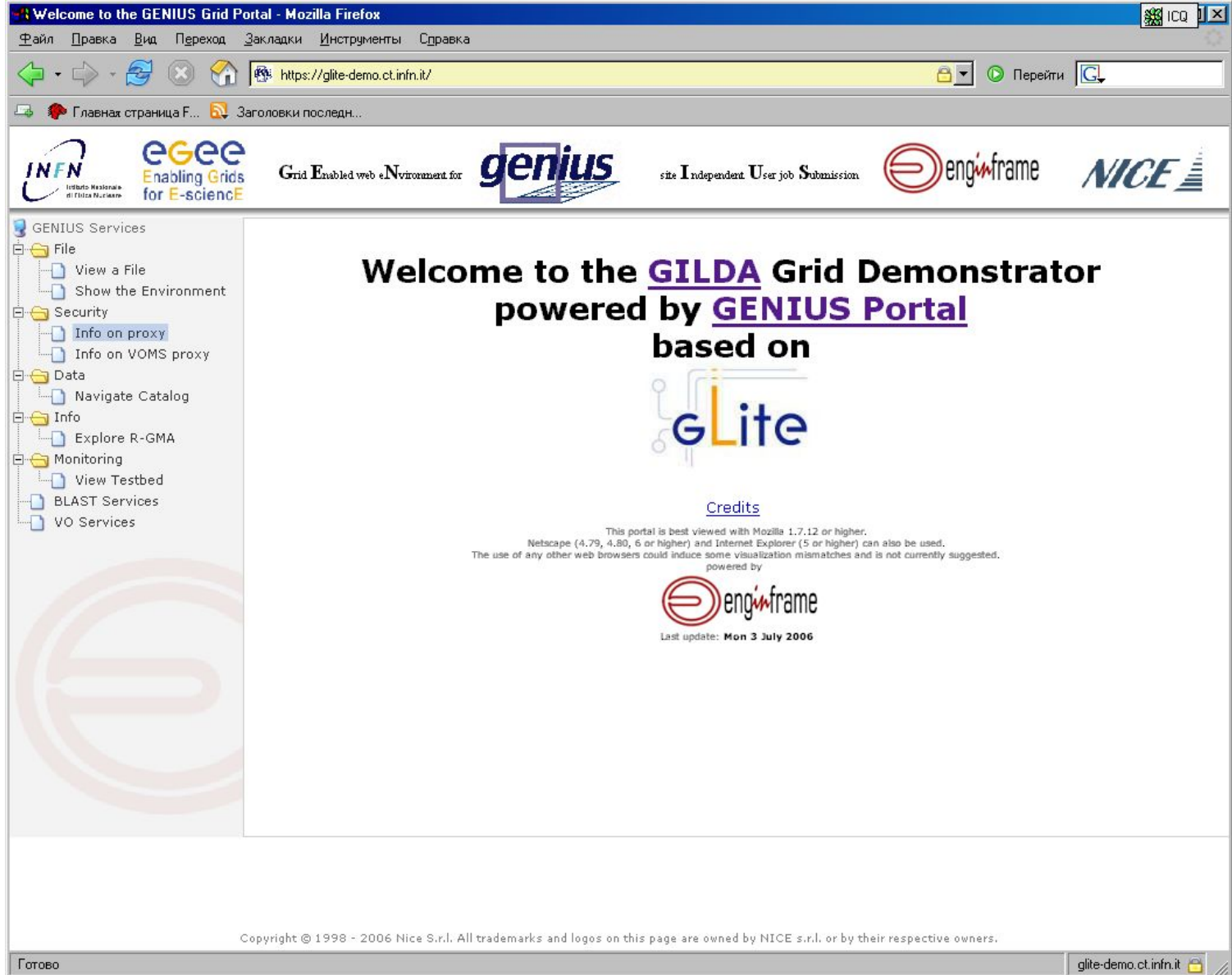
is a virtual laboratory to demonstrate/disseminate the strong capabilities of grid computing.

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 the [INFN Grid](#) middle-ware (fully compatible with [gLite](#)) 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 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](#).

Готово gilda.ct.infn.it


- **GILDA Testbed** - набор сайтов с установленным ППО LCG/gLite.
- **Grid Demonstrator** - веб-интерфейс GENIUS, позволяющий работать с определенным набором приложений.
- **GILDA CA** - центр сертификации, выдающий 14-дневные сертификаты для работы с GILDA.
- **GILDA VO** - виртуальная организация, объединяющая всех пользователей GILDA.
- **Grid Tutor** - веб-интерфейс GENIUS, используемый для демонстрации возможностей технологии Грид.
- **Monitoring System** - система мониторинга для GILDA Testbed.



The screenshot shows a Mozilla Firefox browser window with the URL <https://glite-demo.ct.infn.it/>. The browser interface is in Russian. The website content includes:


- Navigation Bar:** Logos for INFN, eGEE (Enabling Grids for E-science), GENIUS (Grid Enabled web Environment for), site Independent User job Submission, enginframe, and NICE.
- GENIUS Services Menu:**
  - File
    - View a File
    - Show the Environment
  - Security
    - Info on proxy
    - Info on VOMS proxy
  - Data
    - Navigate Catalog
  - Info
    - Explore R-GMA
  - Monitoring
    - View Testbed
  - BLAST Services
  - VO Services
- Main Content:**

Welcome to the **GILDA** Grid Demonstrator  
powered by **GENIUS Portal**  
based on



[Credits](#)

This portal is best viewed with Mozilla 1.7.12 or higher.  
Netscape (4.79, 4.80, 6 or higher) and Internet Explorer (5 or higher) can also be used.  
The use of any other web browsers could induce some visualization mismatches and is not currently suggested.  
powered by



Last update: Mon 3 July 2006
- Footer:** Copyright © 1998 - 2006 Nice S.r.l. All trademarks and logos on this page are owned by NICE s.r.l. or by their respective owners.

+

- Не требуется сертификат
- Доступ через браузер
- Предопределённые имя/пароль (не требуется предварительная регистрация)

-

- Работа только с заранее подготовленными задачами и сервисами неполной функциональности (демо-режим)
- Ограниченное время действия MyProxy сертификата

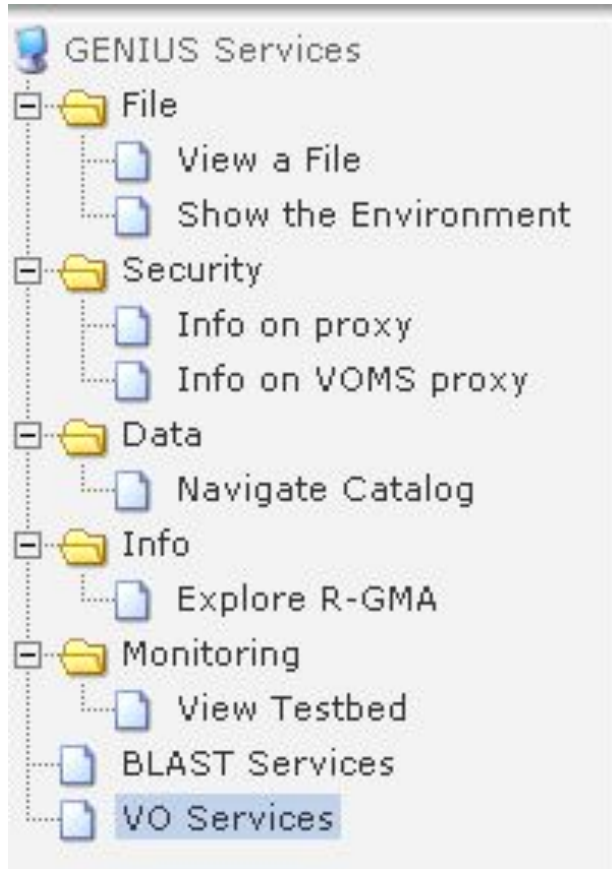
**Login to the GRID**

Username:

MyProxy Passphrase:

Validity (hours):





- **Просмотр файлов в HOME директории демо-пользователя**
- **Просмотр переменных окружения**
- **Навигация в пределах директории виртуальной организации GILDA (просмотр и скачивание файлов)**
- **Запуск демо-заданий в GILDA testbed**
- **Ссылка на web интерфейс некоторых проектов**

- GILDA Grid Services
  - Job Services
    - Job Submission
    - Job Queue
    - Job Data
    - Clean Job Queue
  - HadronTherapy Services
  - Raster-3D
    - CODESA3D
    - EMPIRE
    - GA4ts
    - GATE
    - gMOD
    - MAGIC
    - NOAH
    - PATSEARCH
    - Sonification
    - SW-Alignment
    - Back home

### Job Submission

Please, select a Job Type to submit.

Job Type

- 01. Sound Creator (csound.jdl - exec. time: 7 min.)
- 02. Virtual Reality of 2 Digital Elevation Models (demtools.jdl - exec. time: 5 min.)
- 03. Hostname of the WorkerNode (hostname\_catania.jdl - exec. time: 4 min.)
- 04. 3-D rendering of a city (povray\_defcity.jdl - exec. time: 6 min.)
- 05. 3-D rendering of the human DNA (povray\_dna.jdl - exec. time: 18 min.)
- 06. 3-D rendering of a human heart (povray\_heart.jdl - exec. time: 7 min.)
- 07. 3-D rendering of a valve (povray\_valve.jdl - exec. time: 5 min.)
- 08. Example of MPI parallel job: computation of pi on 4 CPUs (mpi.jdl - exec. time: 12 min.)
- 09. A simple HelloWorld using a MPI job (helloworld.jdl - exec. time: 4 min.)
- 10. A Jacopi interaction for approximating the solution of a linear systems of equations (jacopi.jdl - exec time: 6 min.)

GILDA Testbed - Grid INFN Laboratory for Dissemination Activities - Microsoft Internet Explorer

File Modifica Visualizza Preferiti Strumenti ?

Indietro Cercare Preferiti

Indirizzo https://gilda.ct.infn.it/



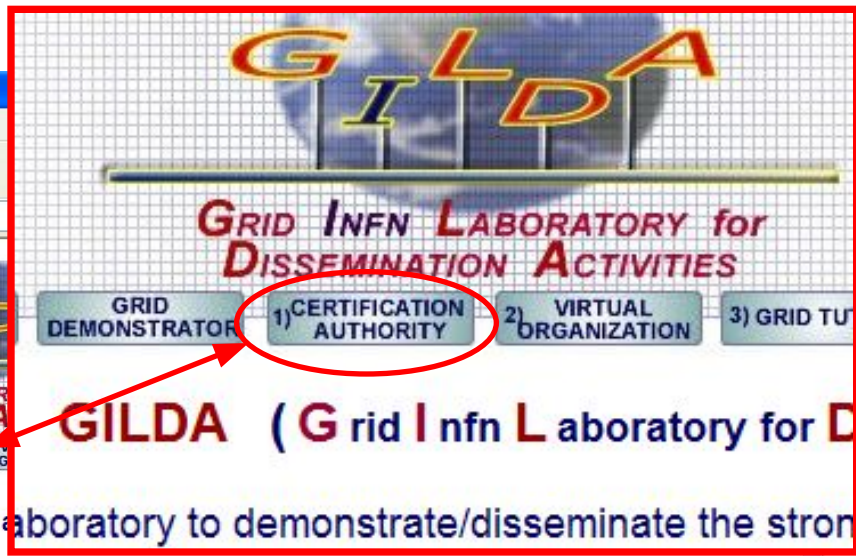
INFN GRID

HOME TESTBED GRID DEMONSTRATOR 1) CERTIFICATION AUTHORITY 2) VIRTUAL ORGANIZATION 3) GRID TUTOR

GILDA (G rid Infn L aboratory for D

GILDA (G rid Infn L aboratory to demonstrate/disseminate the stron

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



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](#).



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

Download the GILDA CA certificate - Microsoft Internet Explorer

File Modifica Visualizza Preferiti Strumenti ?

Indietro [Icons] Cerca Preferiti [Icons]

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

**The GILDA Certification Authority**

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

**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](#)

**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.

- 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



Request a GILDA personal certificate - Mozilla Firefox

Файл Правка Вид Переход Закладки Инструменты Справка

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

Главная страница F... Заголовки последн...

- 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

### Request a GILDA personal certificate

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"/>
KeySize:	2048 (Высокая степень) ▾

Submit the request    Clear form

Готово    gilda.ct.infn.it

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>  
**To:** <email из отправленной формы>  
**Subject:** GILDA Personal Certificate for <username>

Просто нажать на ссылку для получения  
сертификата

- После загрузки сертификата в браузер появится web страница с сообщением, что новый сертификат доступен в списке сертификатов браузера.
- **Все действия должны производиться в одном и том же браузере!!**
- Срок действия персонального сертификата 14 дней!
- После этого сертификат можно экспортировать и сохранить в безопасном месте.
- Процедура экспорта зависит от типа используемого браузера.
- Тип файла экспортированного сертификата зависит от браузера (\*.p12 для Mozilla/Netscape/FireFox и \*.pfx для Internet Explorer).
- Экспортированный сертификат в дальнейшем должен будет преобразован в \*.pem формат, распознаваемый системой безопасности gLite.

- Вторая ссылка в полученном e-mail.

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:0443/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

...

Просто нажать на ссылку для того чтобы зарегистрироваться в VOMS

The **gilda** VO

## Virtual Organization Membership Service

Request to Administrators » requesting VO membership

REQUEST TO ADMINISTRATORS

REQUESTING VO MEMBERSHIP

LISTING REQUESTS

CONFIRMATION OF THE EMAIL ADDRESS

## 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.

After you submit this request, you will receive an email with instructions on how to proceed. Your request will not be forwarded to the VO managers until you confirm that you have a valid email address by following those instructions.

Для доступа к этой странице сертификат уже должен быть загружен в браузер!!

that it may be used to contact you in relation to this activity.

DN: /C=IT/O=GILDA/OU=Personal Certificate/L=Petersburg Nuclear Physics Institute  
(PNPI)/CN=Sergey Oleshko/Email=oleshko@pnpi.nw.ru

CA: /C=IT/O=GILDA/CN=GILDA Certification Authority

CA URI:

Family  
Name:

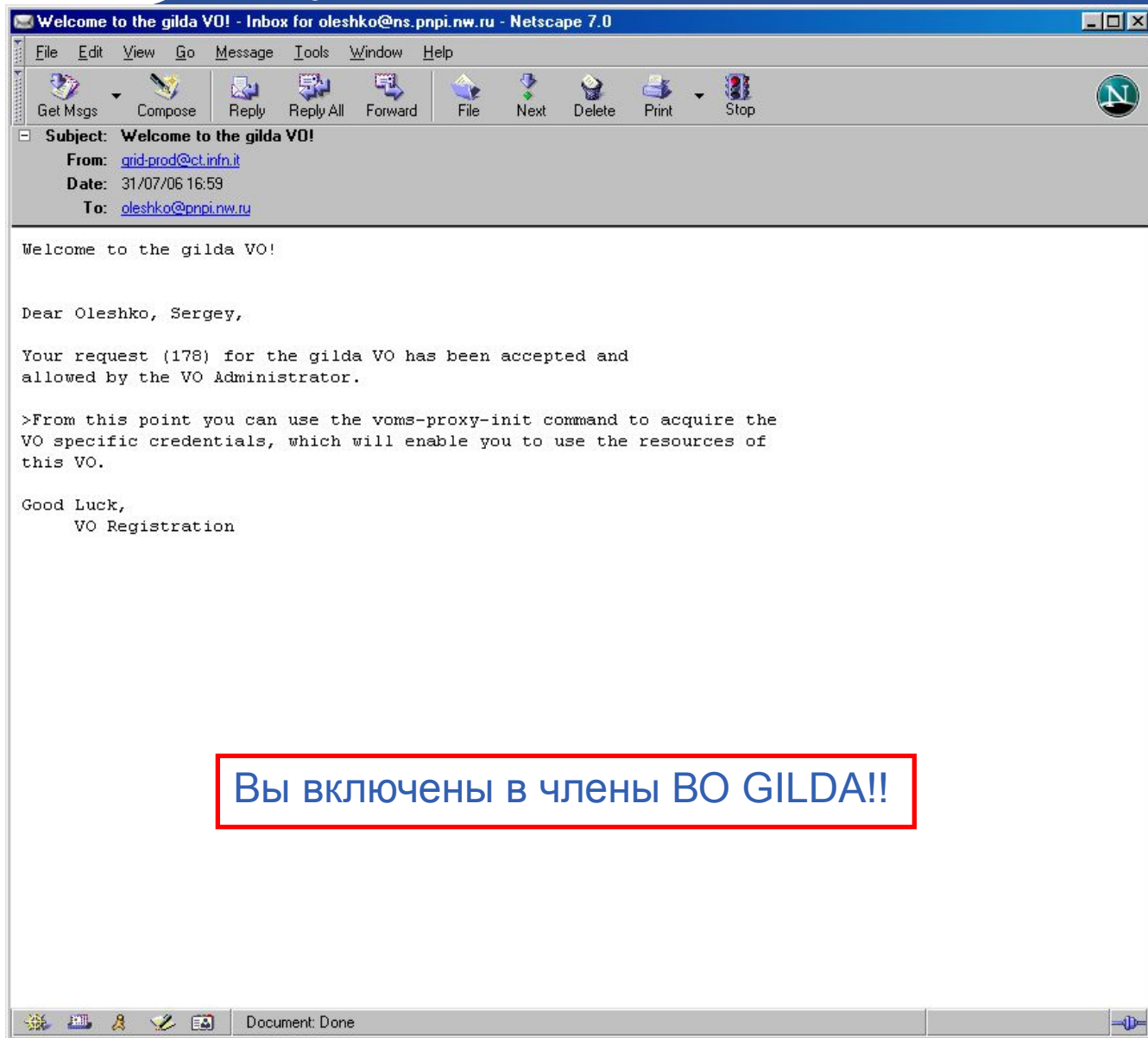
Given Name:

Institute:

Phone  
Number:

Email:





Вы включены в члены VO GILDA!!

- Сохранить персональный сертификат из браузера в файл \*.p12
- Отправить письмо (ticket) в службу поддержки (<http://gilda-support.ct.infn.it/>)-> с просьбой открыть FireWall для вашего IP (указать его). Иначе вы не сможете зайти на их машину
- Зайти с помощью SSH на свой UI, машина с адресом: `glite-tutor.ct.infn.it`. Логин и пароль - те, которые вы указывали при регистрации.
- Скопировать туда (в свою корневую директорию) свой сертификат \*.p12
- Создать на UI директорию (`mkdir .globus`) и экспортировать туда сертификат командой  
(`openssl pkcs12 -nocerts -in mysert.p12 -out .globus/userkey.pem`)
- Выполнить команды:  
`openssl pkcs12 -clcerts -nokeys -in mysert.p12 -out .globus/usersert.pem`  
`cd .globus/`  
`chmod 400 userkey.pem`  
`chmod 644 usersert.pem`
- Теперь можно работать в полнофункциональной Grid инфраструктуре GILDA, как через браузер: <https://glite-tutor.ct.infn.it/>, так и через SSH, `host: glite-tutor.ct.infn.it`