Notas gerais para participação no curso de Computação Grid
(21 de Fevereiro de 2013)

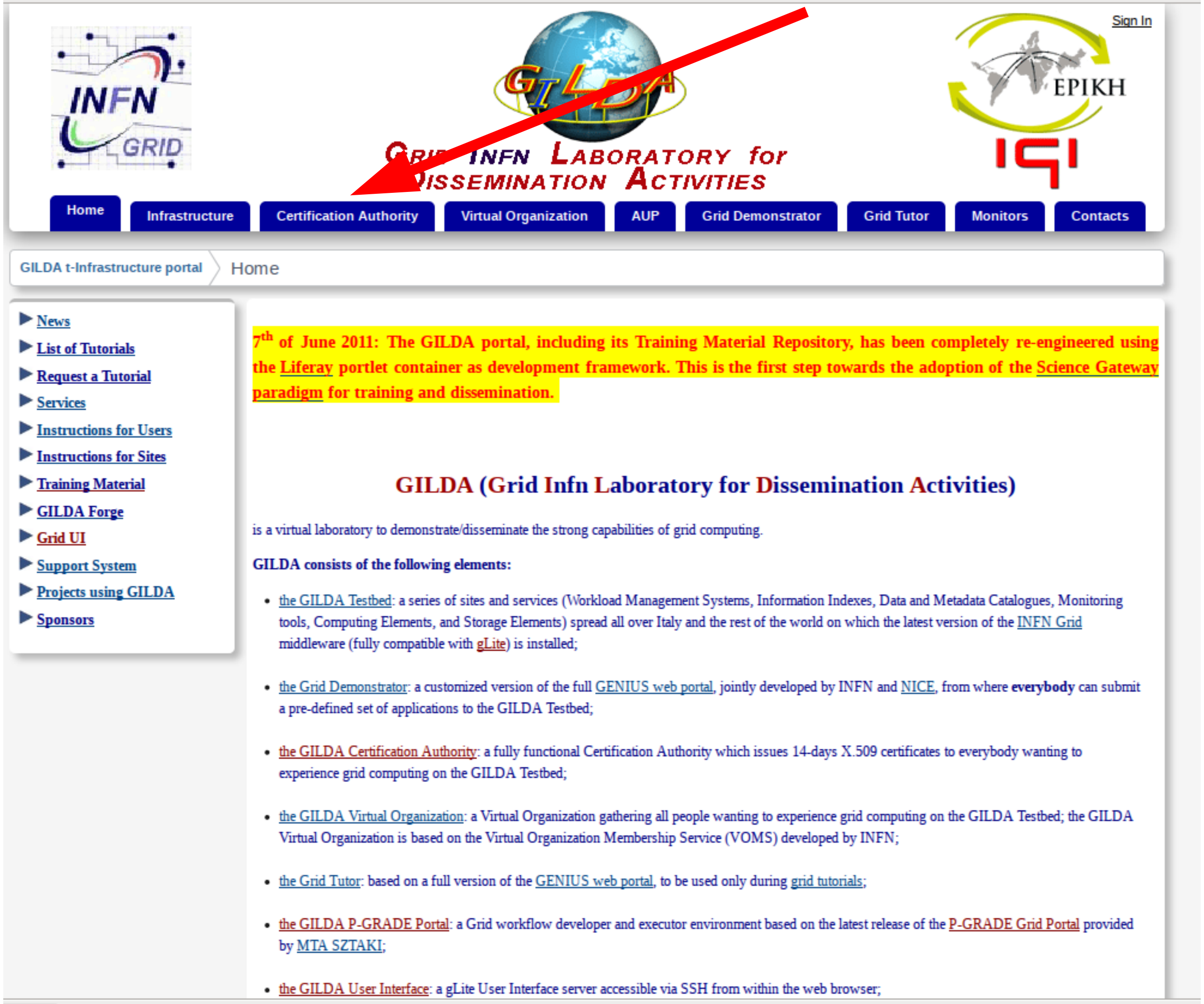
No que se refere à utilização de infraestruturas de grid, nas aulas práticas iremos ter acesso à infraestrutura de treinamento GILDA (http://gilda.ct.infn.it/), que utiliza o middleware gLite (http://glite.cern.ch/). Este middleware requer que cada um tenha um certificado, baseado em PKI (Public Key Infrastructure). Portanto, segue abaixo uma série de ações a serem tomadas para obtenção de um certificado e acesso à infraestrutura GILDA.

Obs1: Para obter o certificado, precisa utilizar o mozilla-firefox ou o Internet Explorer. Nenhum outro browser vai funcionar!

Obs2: O processo de obtenção do certificado tem duas fases: (1) solicitação e (2) obtenção. Certifique-se de que utiliza a MESMA máquina e o MESMO browser nas duas fases.

Passos para obtenção do certificado:

1. Entrar em http://gilda.ct.infn.it/ e selecionar a “tab” “Certification Authority”


Sign In
INFN GRID
GILDA
GRID INFN LABORATORY for DISSEMINATION ACTIVITIES
EPIKH
IGI
Home
Infrastructure
Certification Authority
Virtual Organization
AUP
Grid Demonstrator
Grid Tutor
Monitors
Contacts
GILDA t-Infrastructure portal
Home
News
List of Tutorials
Request a Tutorial
Services
Instructions for Users
Instructions for Sites
Training Material
GILDA Forge
Grid UI
Support System
Projects using GILDA
Sponsors

7th of June 2011: The GILDA portal, including its Training Material Repository, has been completely re-engineered using the Liferay portlet container as development framework. This is the first step towards the adoption of the Science Gateway paradigm for training and dissemination.

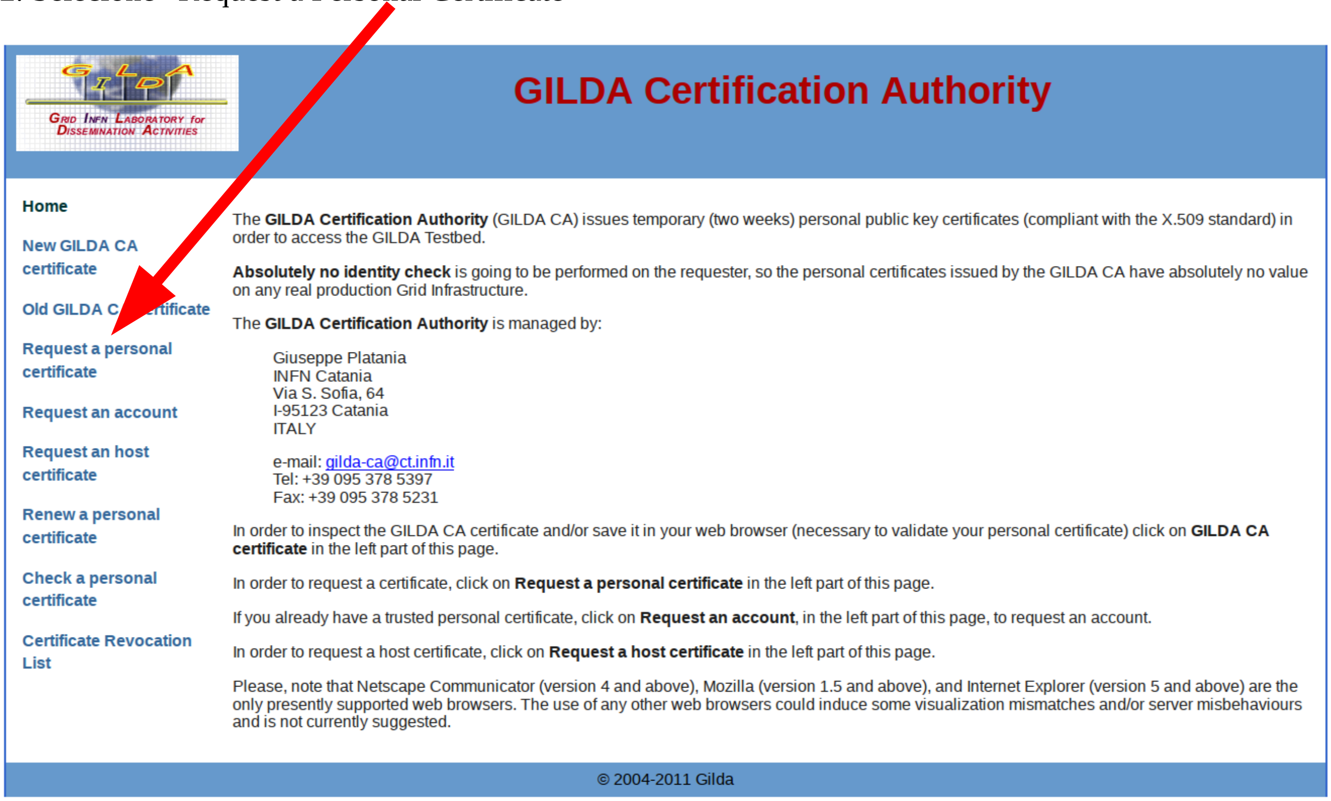
GILDA (Grid Infn Laboratory for Dissemination Activities)

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 (Workload Management Systems, Information Indexes, Data and Metadata Catalogues, Monitoring tools, Computing Elements, and Storage Elements) spread all over Italy and the rest of the world on which the latest version of the INFN Grid middleware (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 GILDA P-GRADE Portal: a Grid workflow developer and executor environment based on the latest release of the P-GRADE Grid Portal provided by MTA SZTAKI;
- the GILDA User Interface: a gLite User Interface server accessible via SSH from within the web browser;

2. Selecione “Request a Personal Certificate”


Grid INFN Laboratory for Dissemination Activities

GILDA Certification Authority

Home
New GILDA CA certificate
Old GILDA CA certificate
Request a personal certificate
Request an account
Request an host certificate
Renew a personal certificate
Check a personal certificate
Certificate Revocation List

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
Tel: +39 095 378 5397
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.

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

Please, note that Netscape Communicator (version 4 and above), Mozilla (version 1.5 and above), and Internet Explorer (version 5 and above) are the only presently supported web browsers. The use of any other web browsers could induce some visualization mismatches and/or server misbehaviours and is not currently suggested.

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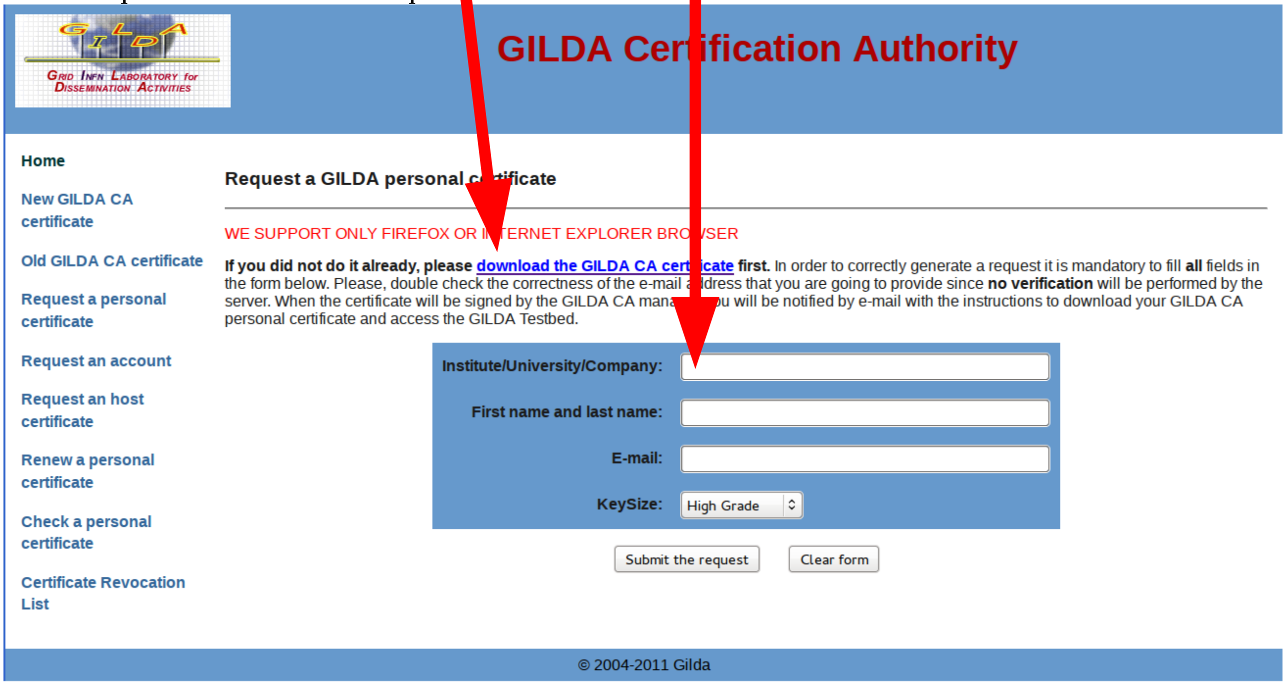
3. Preencha o formulário
Antes de preencher o formulário certifique-se de que instalou o certificado da própria Autoridade de Certificação GILDA no seu browser. Isto é feito apenas clicando no link “download the GILDA certificate”
Agora sim, preencha o formulário
Institute/University/Company: Universidade do Porto
First and Last name: **não utilize caracteres acentuados!!!**
Preencha o campo E-mail, pois este vai ser utilizado para lhe enviar as informações para obtenção do certificado
Selecione Medium Grade, mesmo que o deafult seja High Grade!
Clique em “Submit the request”


GILDA
Grid INFN Laboratory for Dissemination Activities
Home
New GILDA CA certificate
Old GILDA CA certificate
Request a personal certificate
Request an account
Request an host certificate
Renew a personal certificate
Check a personal certificate
Certificate Revocation List
Submit the request
Clear form
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GILDA Certification Authority

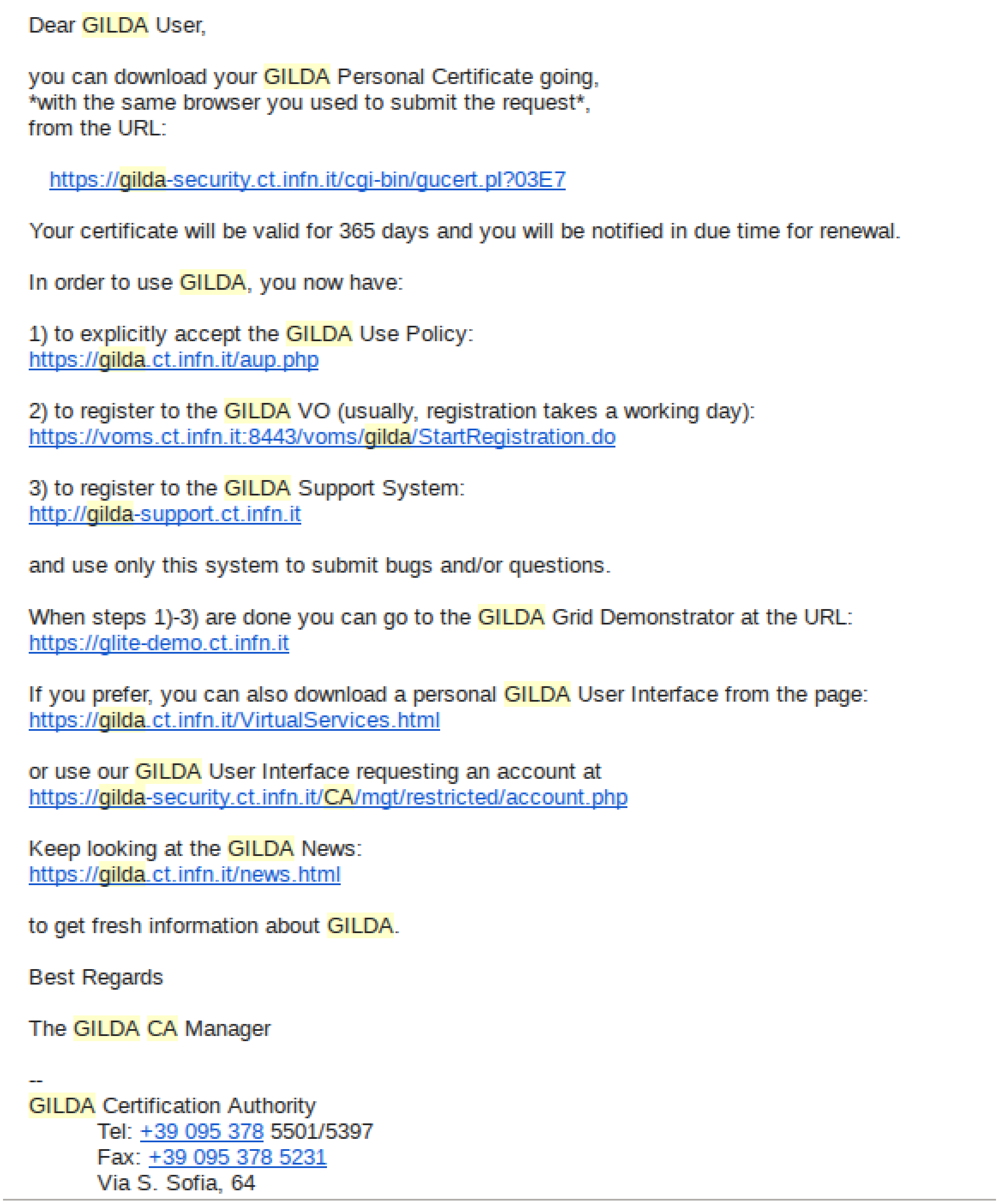
Request a GILDA personal certificate

WE SUPPORT ONLY FIREFOX OR INTERNET EXPLORER BROWSER

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. 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:	
First name and last name:	
E-mail:	
KeySize:	High Grade

4. Após a submissão da solicitação, aguarde pela mensagem no mesmo endereço eletrônico que preencheu no passo (3).
A mensagem terá o seguinte conteúdo:



Dear GILDA User,

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

https://gilda-security.ct.infn.it/cgi-bin/gucert.pl?03E7

Your certificate will be valid for 365 days and you will be notified in due time for renewal.

In order to use GILDA, you now have:

1) to explicitly accept the GILDA Use Policy:
https://gilda.ct.infn.it/aup.php

2) to register to the GILDA VO (usually, registration takes a working day):
https://voms.ct.infn.it:8443/voms/gilda/StartRegistration.do

3) to register to the GILDA Support System:
http://gilda-support.ct.infn.it

and use only this system to submit bugs and/or questions.

When steps 1)-3) are done you can go to the GILDA Grid Demonstrator at the URL:
https://glite-demo.ct.infn.it

If you prefer, you can also download a personal GILDA User Interface from the page:
https://gilda.ct.infn.it/VirtualServices.html

or use our GILDA User Interface requesting an account at
https://gilda-security.ct.infn.it/CA/mgt/restricted/account.php

Keep looking at the GILDA News:
https://gilda.ct.infn.it/news.html

to get fresh information about GILDA.

Best Regards

The GILDA CA Manager

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GILDA Certification Authority
Tel: +39 095 378 5501/5397
Fax: +39 095 378 5231
Via S. Sofia, 64

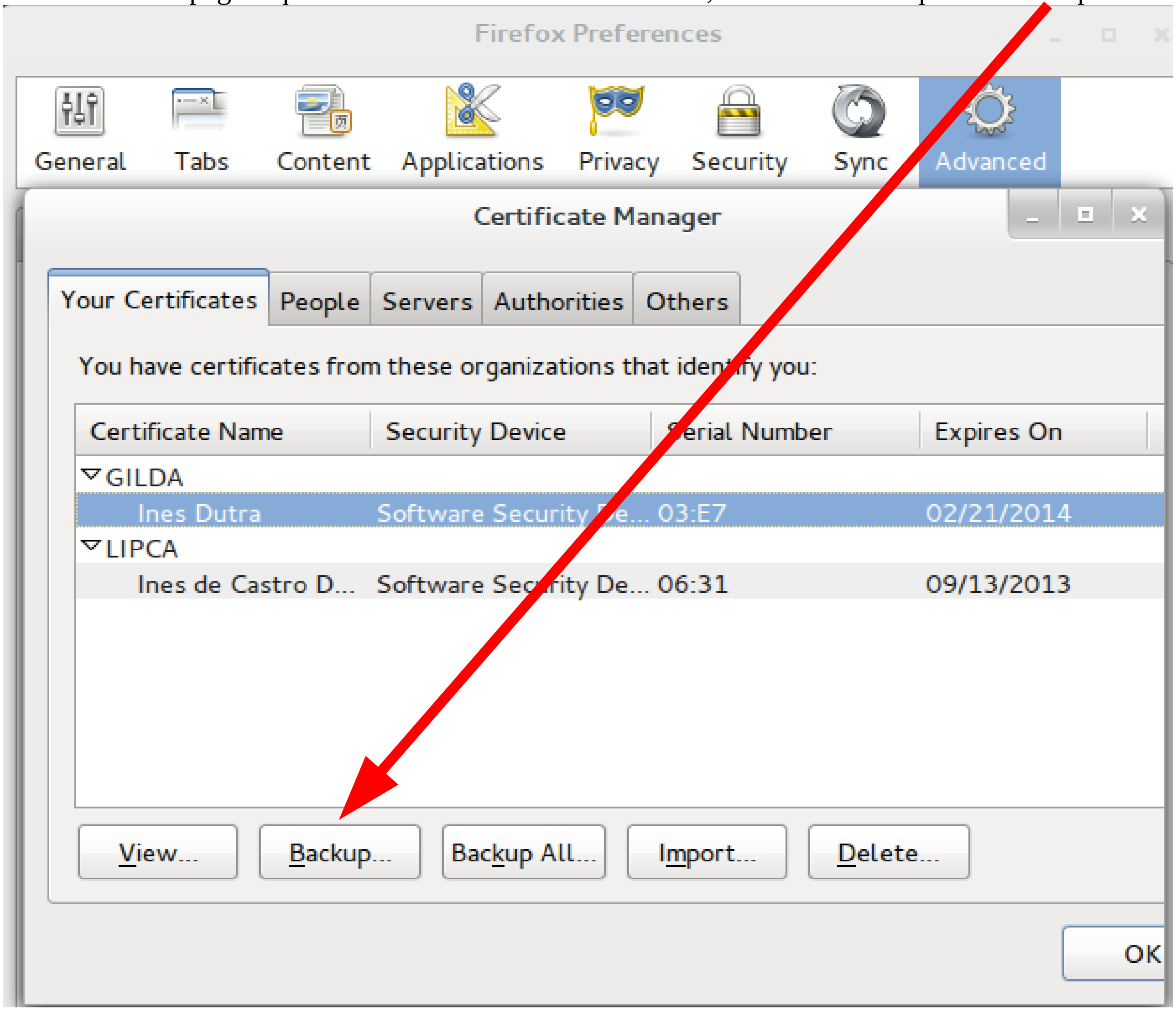
No item (1) desta mensagem deve substituir o link: https://gilda.ct.infn.it/aup.php por https://gilda.ct.infn.it/aup

Siga as instruções da mensagem, com exceção do item (3) (suporte não está a funcionar no momento)

Não esqueça de solicitar uma conta para acesso à infraestrutura, portanto siga o último passo de solicitação de uma conta na GILDA User Interface (glite-tutor.ct.infn.it), que será a sua máquina de entrada na grid (https://gilda-security.ct.infn.it/CA/mgt/restricted/account.php)

Para solicitar a criação de uma conta, o sistema vai lhe pedir para fazer upload do certificado. Este upload é da sua chave PÚBLICA! Nunca envie a sua chave privada. Veja abaixo como encontrar a sua chave pública.

5. Fazendo o download do certificado
   Quando clica no primeiro link da mensagem que vai receber (alguma coisa do tipo: https://gilda-security.ct.infn.it/cgi-bin/gucert.pl?03E7), parece que nada acontece, porém o seu certificado fica instalado no browser (se estiver usando mozilla-firefox, pode consultá-lo através de Edit --> Preferences --> Advanced --> View Certificates --> Your certificates). Quando estiver na página que mostra o seu certificado **GILDA**, selecione-o e clique em Backup.


Firefox Preferences
General
Tabs
Content
Applications
Privacy
Security
Sync
Advanced
Certificate Manager
Your Certificates
People
Servers
Authorities
Others
View...
Backup...
Backup All...
Import...
Delete...
OK

You have certificates from these organizations that identify you:

Certificate Name	Security Device	Serial Number	Expires On
GILDA			
Ines Dutra	Software Security De...	03:E7	02/21/2014
LIPCA			
Ines de Castro D...	Software Security De...	06:31	09/13/2013

O sistema vai lhe pedir o nome de um ficheiro para guardar o certificado em formato PKCS12. Dê um nome ao seu certificado e grave em qualquer diretorio.
Este ficheiro PKCS12 inclui as suas duas chaves: a chave privada e a chave pública.
Para separar estas duas chaves em ficheiros diferentes, precisa utilizar o comando openssl e gerar ficheiros em formato .pem. Os comandos seguem abaixo:

```
openssl pkcs12 -in <yourCert>.p12 -clcerts -nokeys -out usercert.pem
openssl pkcs12 -in <yourCert>.p12 -nocerts -out userkey.pem
chmod 400 userkey.pem
```

A sua chave PÚBLICA é o ficheiro usercert.pem.
A sua chave PRIVADA é p ficheiro userkey.pem.