



Enabling Grids for E-science

Generating VOMS Proxy with the GENIUS Grid Portal

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GILDA Team



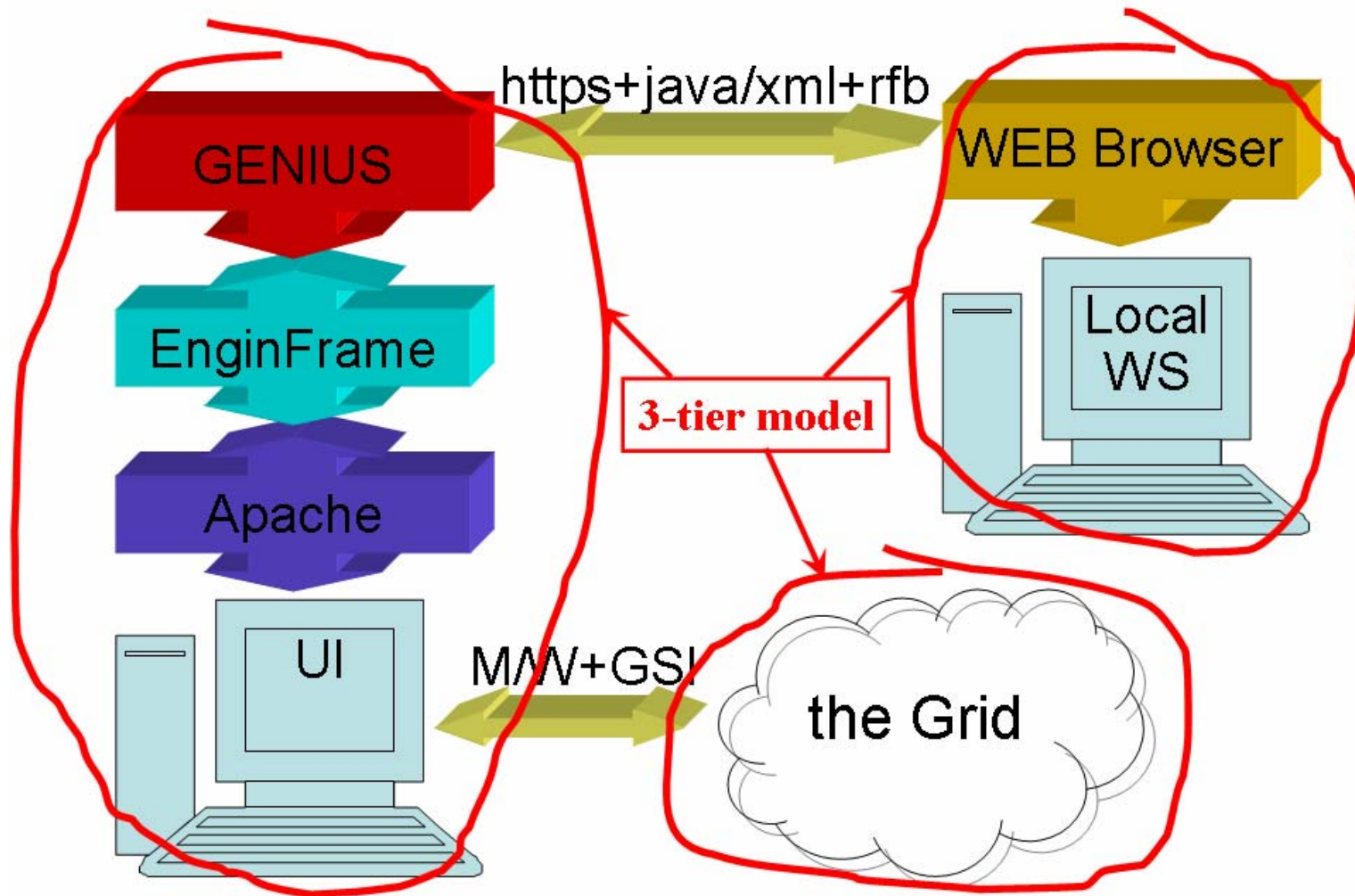
***EGEE JRA1 All Hands Meeting
CATANIA, 7-9.03.2007***



www.eu-egee.org

- **Grid authentication in GENIUS portal before VOMS**
 - CLI + MyProxy delegation
- **Grid authentication and authorization in GENIUS portal after VOMS**
 - Applet + VOMS CLI
- **Future plan**
 - Applet with pure Java API VOMS

- It can be accessed from everywhere and by “everything” (desktop, laptop, PDA, cell phone).
- It can keep the same user interface to several back-ends.
- It must be redundantly “secure” at all levels.
- All available grid services must be incorporated in a logic way, just “one mouse click away”.
- Its layout must be easily understandable and user friendly.

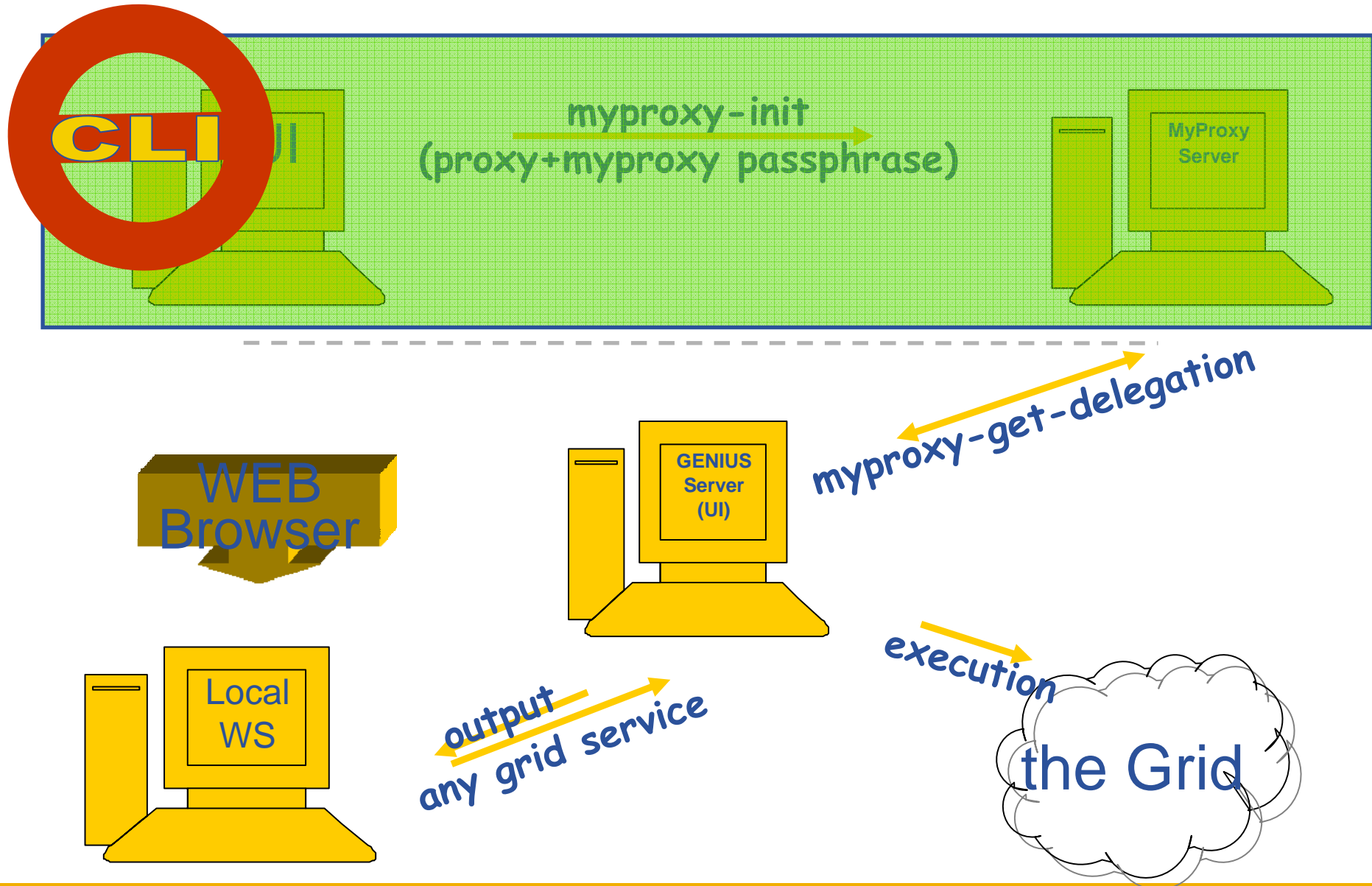


Three tier architecture of the GENIUS grid portal

GENIUS ARCHITECTURE



Grid authentication with MyProxy



USER from command line interface:

```
>myproxy-init (Enter GRID pass phrase for this identity:...Enter MyProxy  
pass phrase:...Verifying password-Enter MyProxy pass phrase:... )
```

GENIUS service:

```
>myproxy-get-delegation (Enter MyProxy pass phrase:.....)
```

```
subject  : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria  
Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy/CN=proxy  
issuer   : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria  
Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy  
identity : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria  
Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy  
type     : unknown  
strength : 512 bits  
path     : /tmp/x509up_u515  
timeleft : 11:59:20
```

GENIUS & proxy without VOMS extension

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-
-

A 3D, stylized text graphic that reads '2006 VOMS'. The text is rendered in a bold, sans-serif font with a yellow-to-orange gradient and a 3D effect, giving it a sense of depth and perspective.

GENIUS & proxy with VOMS extension

-
-
-



A proxy from MyProxy + VOMS extension

Enabling Grids for E-science

USER from command line interface:

```
myproxy-init
```

GENIUS service:

```
myproxy-get-delegation
```

```
voms-proxy-init --voms <voname> -cert <certfile> -key <keyfile>
```

```
subject  : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria
           Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy/CN=proxy/CN=proxy
issuer   : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria
           Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy/CN=proxy
identity : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria
           Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy/CN=proxy
type     : unknown
strength : 512 bits
path     : /tmp/x509up_u515
timeleft : 11:57:20
=== VO gilda extension information ===
VO       : gilda
subject  : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria
           Ardizzone/Email=valeria.ardizzone@ct.infn.it
issuer   : /C=IT/O=INFN/OU=Host/L=Catania/CN=voms.ct.infn.it
attribute : /gilda/Role=NULL/Capability=NULL
attribute : /gilda/tutors/Role=NULL/Capability=NULL
timeleft : 11:59:47
```

```
subject : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN
         Catania/CN=Valeria
         Ardizzone/Email=valeria.ardizzone@ct.infn.it/CN=proxy/CN=proxy/C
         N=proxy/CN=proxy
```

....

```
=== VO gilda extension information ===
```

```
VO      : gilda
```

```
subject : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Catania/CN=Valeria
         Ardizzone/Email=valeria.ardizzone@ct.infn.it
```

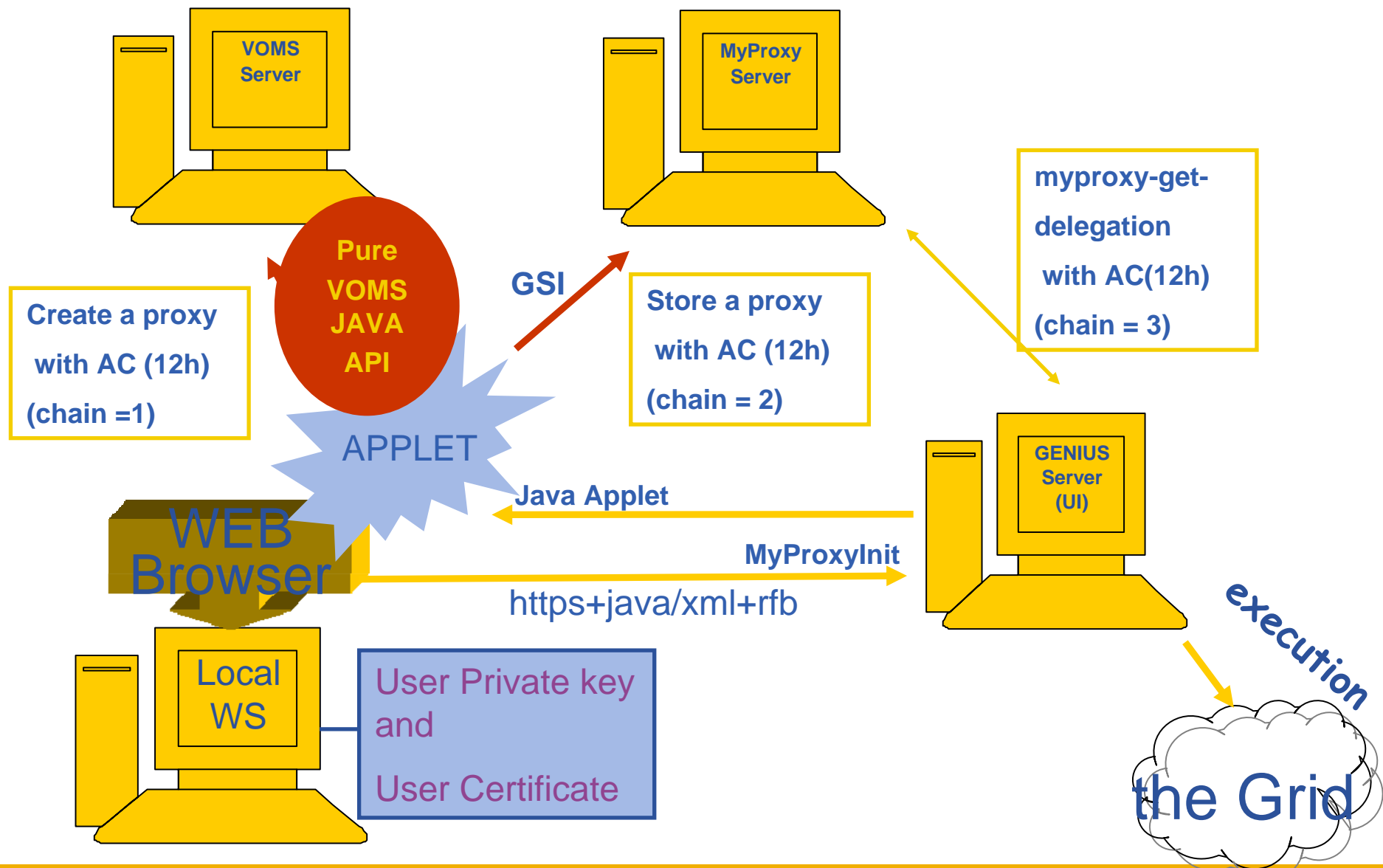
```
issuer  : /C=IT/O=INFN/OU=Host/L=Catania/CN=voms.ct.infn.it
```

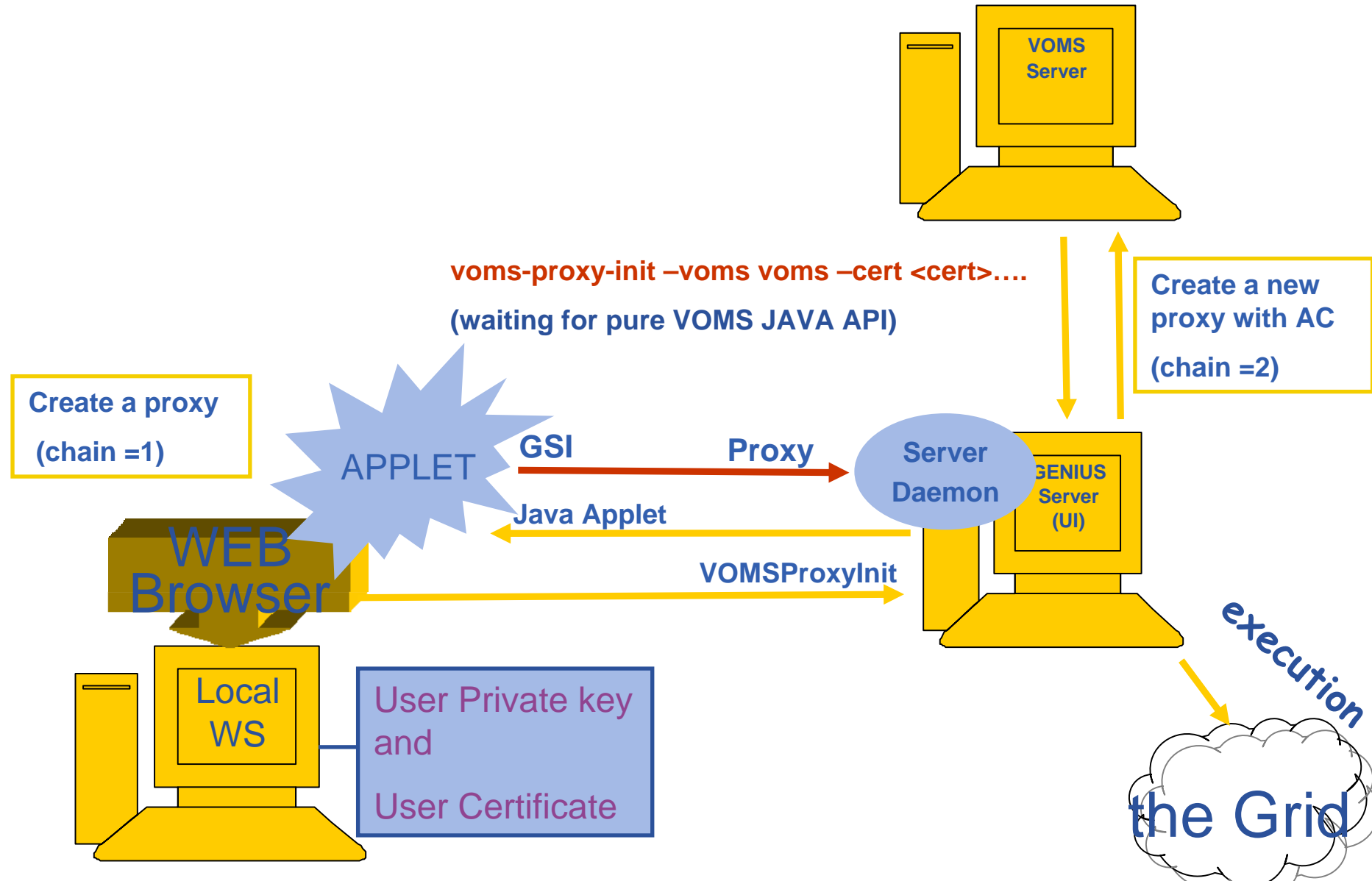
```
attribute : /gilda/Role=NULL/Capability=NULL
```

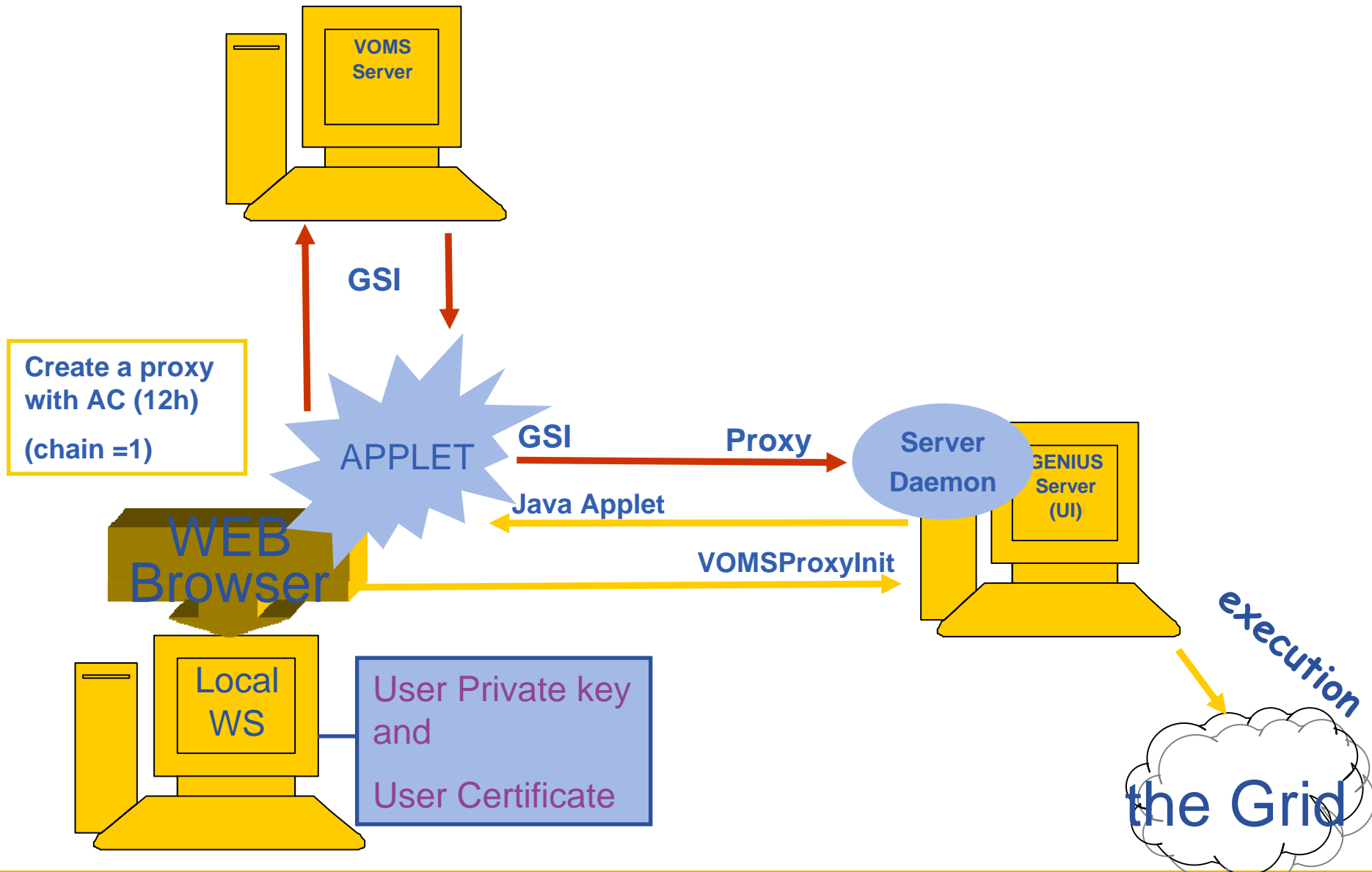
```
attribute : /gilda/tutors/Role=NULL/Capability=NULL
```

```
timeleft : 11:59:47
```

- Longer proxy chain is a problem for job submission????
- **Yes with a chain of 4 elements - No with a chain of 3 elements**
- To use GENIUS authentication and authorization module with Myproxy delegation mechanism we need to have a delegated proxy with a chain no more than 3 elements!?












Welcome to the GENIUS Grid Portal - Mozilla

File Edit View Go Bookmarks Tools Window Help

Welcome falzone 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

VOMS Proxy Init

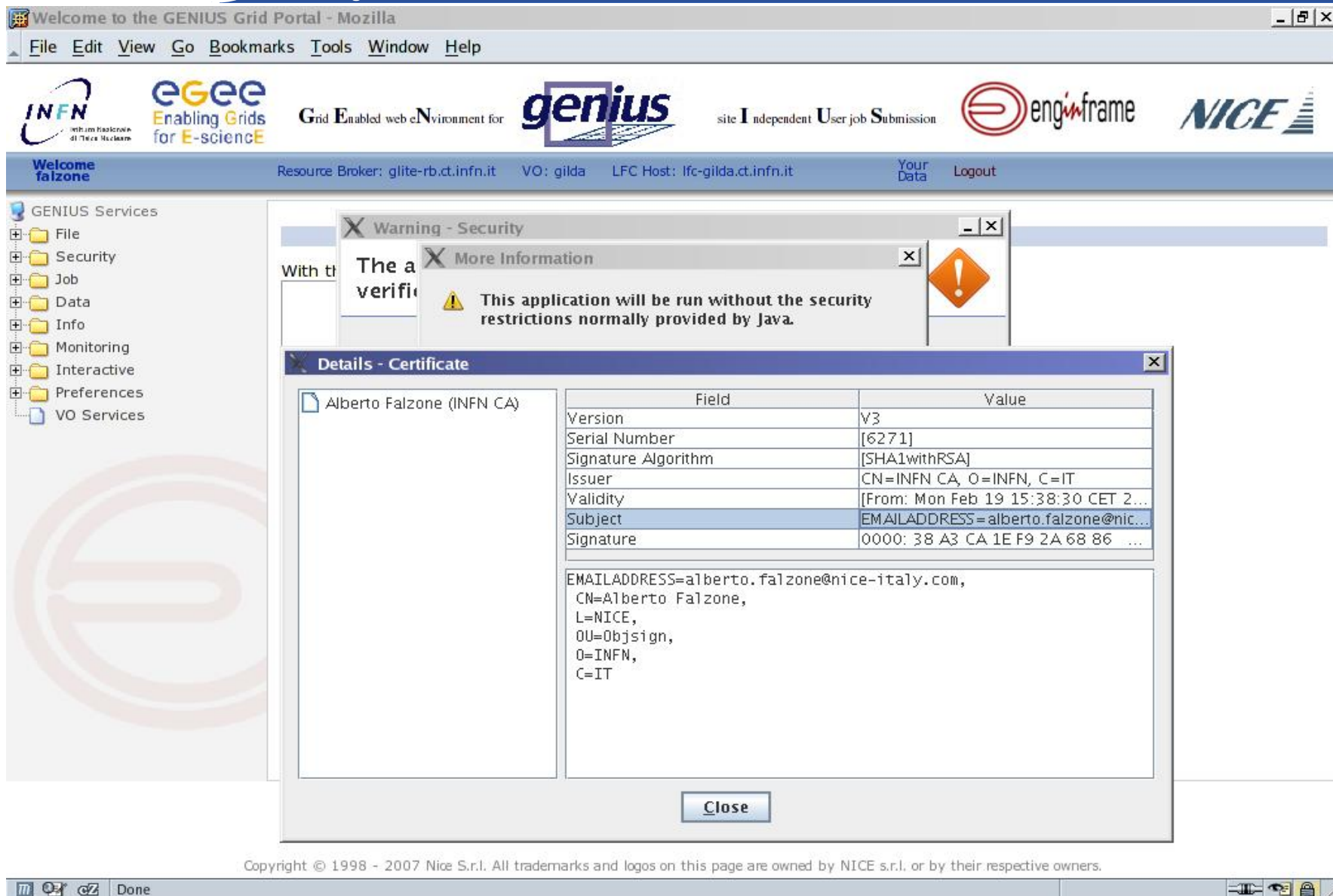
Please, select the Certification Authorities belonging your personal certificate.

Supported CA

- ESnet Root CA 1
- Estonian Grid Certification Authority
- GILDA Certification Authority**
- gridca-cn
- Grid Canada CA
- Grid Canada Certificate Authority
- GRID-FR
- Grid-Ireland Certification Authority
- GridKa-CA
- HellasGrid CA 2006
- HellasGrid CA
- HellasGrid Root CA 2006
- INFN CA**
- INFN Certification Authority
- IRISGridCA






Enter Code:

37uHQL



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Warning - Security

The application cannot be verified.

More Information

This application will be run without the security restrictions normally provided by Java.

Details - Certificate

Field	Value
Version	V3
Serial Number	[6271]
Signature Algorithm	[SHA1withRSA]
Issuer	CN=INFN CA, O=INFN, C=IT
Validity	[From: Mon Feb 19 15:38:30 CET 2...
Subject	EMAILADDRESS=alberto.falzone@nic...
Signature	0000: 38 A3 CA 1E F9 2A 68 86 ...

EMAILADDRESS=alberto.falzone@nice-italy.com,
 CN=Alberto Falzone,
 L=NICE,
 OU=Objsign,
 O=INFN,
 C=IT

Close

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Welcome to the GENIUS Grid Portal - Mozilla

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Welcome talzone 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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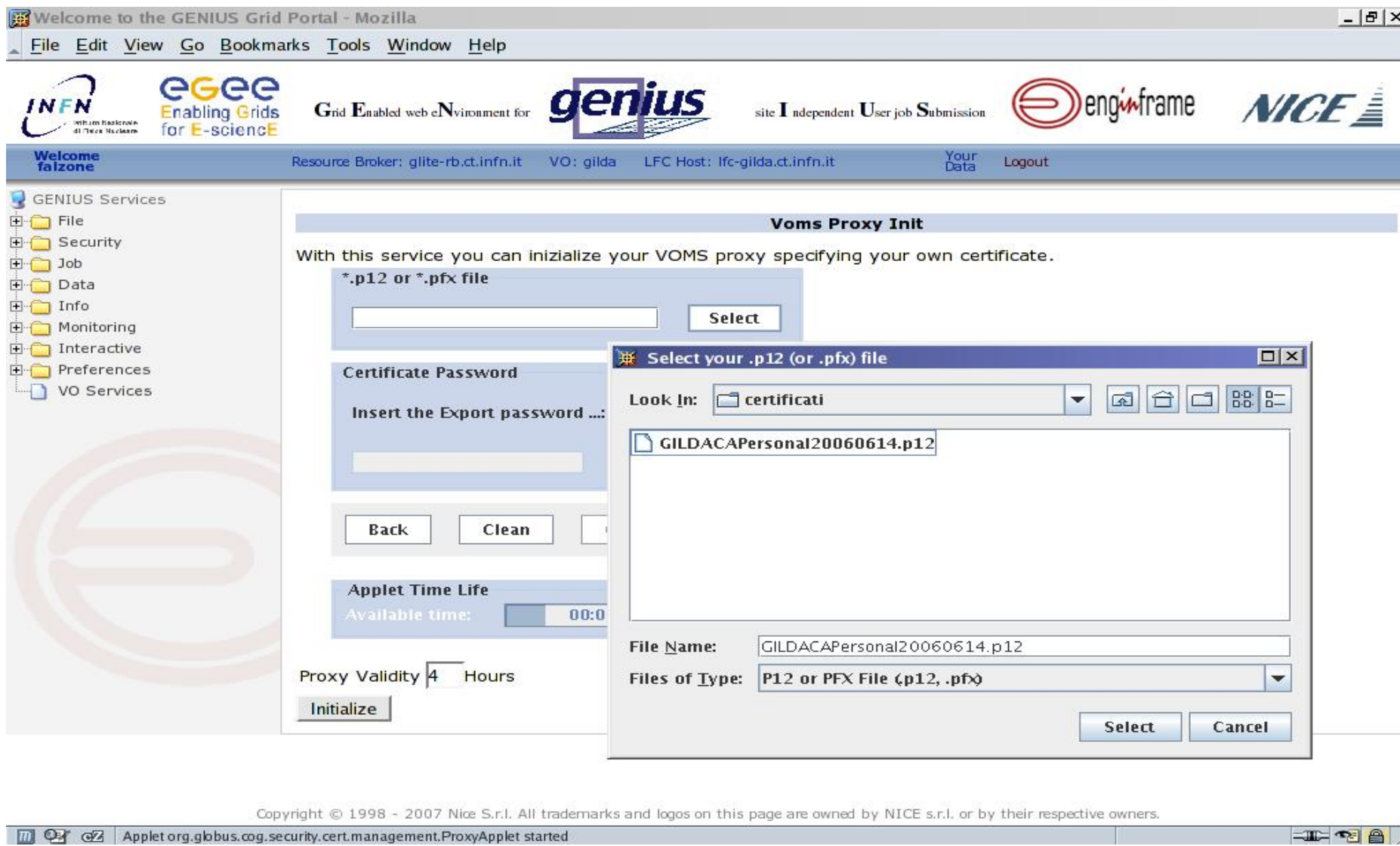
Voms Proxy Init

With this service you can initialize your VOMS proxy specifying your own certificate.

Press the button that indicate your certificate's format.






Applet Time Life
Available time:

Proxy Validity Hours



Welcome to the GENIUS Grid Portal - Mozilla

File Edit View Go Bookmarks Tools Window Help

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

Voms Proxy Init

With this service you can initialize your VOMS proxy specifying your own certificate.

*.p12 or *.pfx file

Certificate Password

Insert the Export password ...

Applet Time Life

Available time: 00:00

Proxy Validity Hours

Select your .p12 (or .pfx) file

Look In:

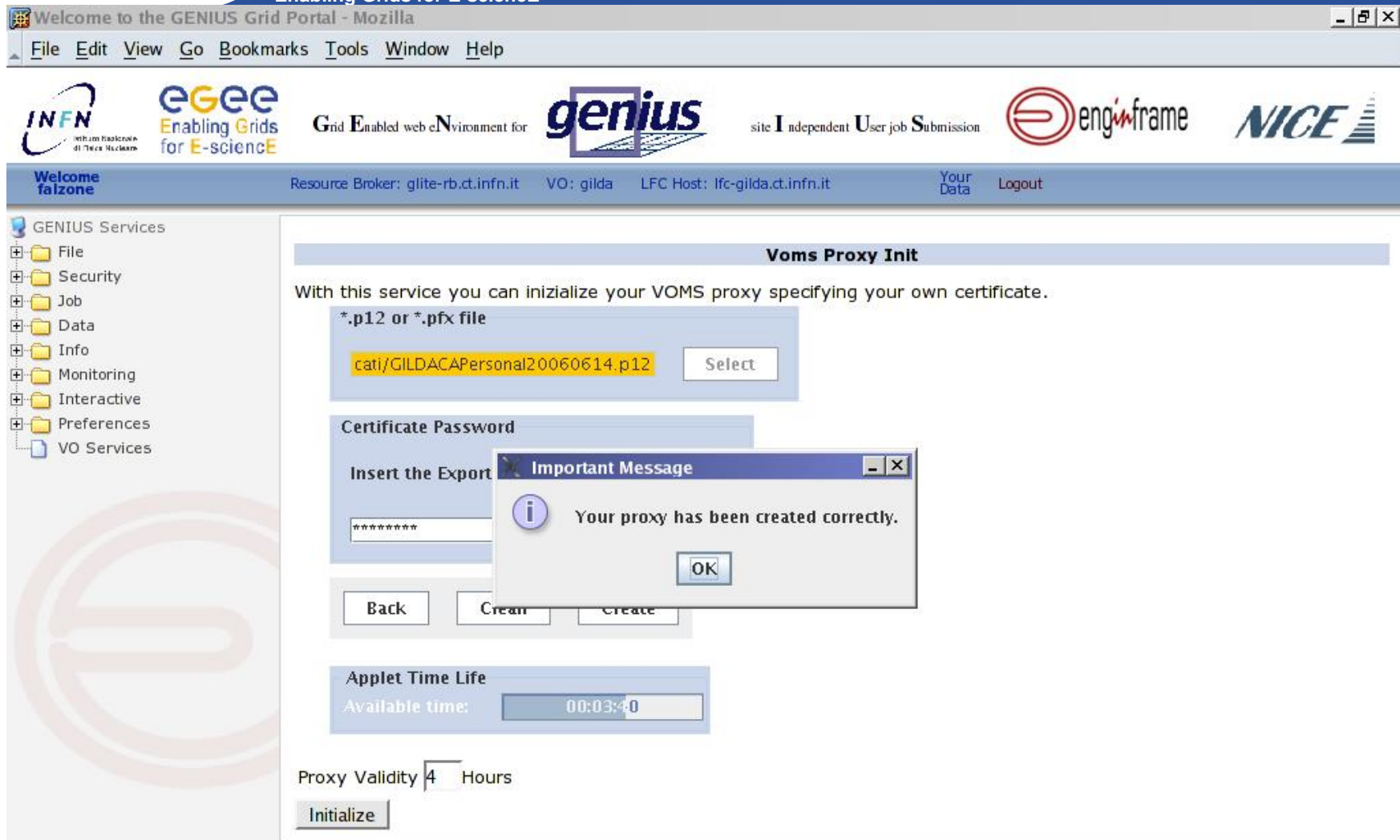
GILDACAPersonal20060614.p12

File Name:

Files of Type:

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



- **Now GENIUS allows proxy creation with VOMS extension**
- **Users do not need to connect to the UI by SSH or any other means.**
- **Users do not need to use the command line interface.**

Thank you very much for your kind attention!