



Enabling Grids for E-science

# Practical using EGEE middleware: AA and simple job submission

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



- **Please bookmark the agenda page.**
- **You will need to refer to it during the practical.**
  
- **Browse to:**
- **<http://agenda.cern.ch/fullAgenda.php?ida=a061960>**

- **We are using the GILDA testbed today**
  - The production EGEE grid looks like this!
- **The practical exercises are to illustrate “how”**
  - Not using typical jobs for running on a grid!!
  - But to show how EGEE grid services are used, jobs are submitted, output retrieved,...
- **We will use the Command-Line Interfaces on a “User Interface” (UI) machine**
  - “UI” is your interface to the GILDA Grid
    - Where your digital credentials are held
    - Client tools are already installed

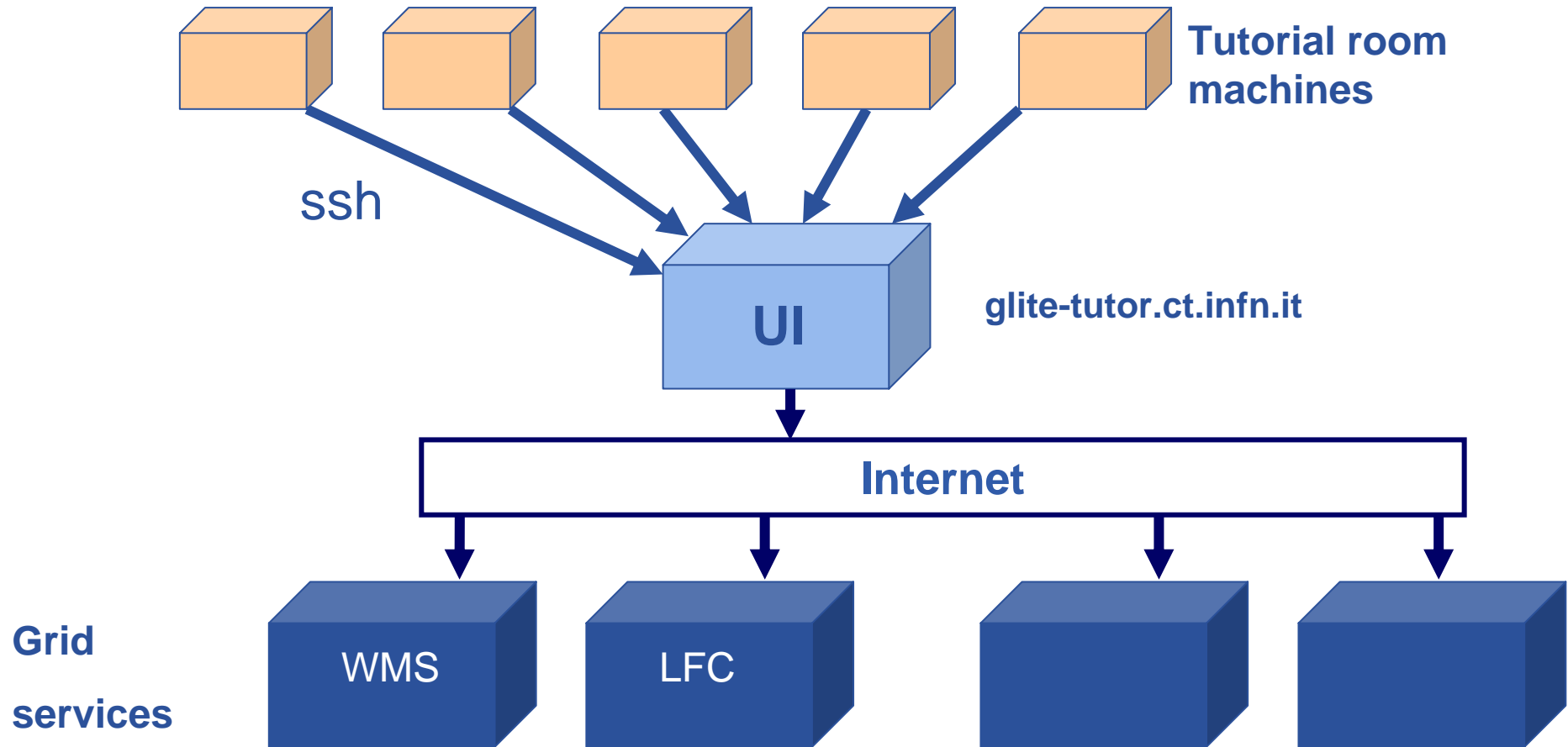


**15 sites in 3 continents !**

**GILDA is coordinated by Roberto Barbera and colleagues at the University of Catania and INFN.**

- **Get an internationally recognised certificate**
  - From a local “Registration Authority” – you will need to see them personally, bringing passport or other identification
- **Contact the virtual organisation (VO) manager**
- **Accept the VO and the EGEE conditions of use**
- **The VO manager authorises you to use resources**
- **Upload your certificate to a “User Interface” machine**
  
- **We are continuing the practical from this stage**
- **You are a member of the GILDA VO**
- **We have training certificates on the GILDA testbed**

- **If you are new to Linux – or if you prefer – work in pairs**
- **You will need to edit files and use command-line interfaces**



- **You will:**
  - Get to know .globus: the directory that holds your certificate
  - Create a VOMS proxy
  - See that it has both identity and authorisation credentials
  - Use it
- **Creating the VOMS proxy is your “single sign-on” to the grid**
- **Having not a VOMS proxy will produce authentication errors**



- .globus directory contains your personal public / private keys

```
[tartu14@glite-tutor tartu14]$ ls -l .globus
total 8
-rw-r--r--  1 tartu14  users      1123 Jun 12 13:58 usercert.pem
-r-----  1 tartu14  users       963 Jun 12 13:58 userkey.pem
```

In the practical, you will type: **“ls -l .globus”**

Notice the file permissions !

userkey.pem: private key

usercert.pem: public key + credential + CA signature

```
voms-proxy-init --voms gilda
```

```
Your identity: /C=IT/O=GILDA/OU=Personal
Certificate/L=TARTU/CN=TARTU14/Email=emidio.giorgio@ct
.infn.it
Enter GRID pass phrase: TARTU
Creating temporary proxy
..... Done
Contacting voms.ct.infn.it:15001
[/C=IT/O=GILDA/OU=Host/L=INFN
Catania/CN=voms.ct.infn.it/Email=emidio.giorgio@ct.inf
n.it] "gilda" Done
Creating proxy
.....
Done
Your proxy is valid until Thu Jun 29 00:08:12 2006
```

```
voms-proxy-init --voms gilda
```

```
Your identity: /C=IT/O=GILDA/OU=Personal
Certificate/L=taipei/CN=taipei49/Email=mjm@nesc.ac.uk
Enter GRID pass phrase: EDINBURGH
Creating temporary proxy
..... Done
Contacting voms.ct.infn.it:15001
[/C=IT/O=GILDA/OU=Host/L=INFN
Catania/CN=voms.ct.infn.it/Email=emidio.giorgio@ct.infn.it]
"gilda" Done
Creating proxy
..... Done
Your proxy is valid until Fri Mar 10 23:32:12 2006
```

- Note VOMS server is contacted for AuthN credential
- Proxy (AuthN) is created locally

- **Keep your private key secure.**
- **Do not loan your certificate to anyone.**
- **Report to your local/regional contact if your certificate has been compromised.**
- **Do not launch a proxy for longer than your current task needs.**

**If your certificate or proxy is used by someone other than you, it cannot be proven that it was not you.**

- **You will :**
  - Get how to see which computing element are available for the execution of a job
  - See the command for submission of a simple job described by a JDL file, and for the monitoring of its status
  - See the most commonly used attributes for JDL files
  - Get how to retrieve the output of a successfully executed job

**Now please go to the agenda page  
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**Access webpages from “further information” for this talk  
“ Using a certificate and simple job submission”.**

The webpages has the title  
1. Using VOMS and simple job submissionTutorial

**Be careful to follow all instructions**

- **The EGEE multi-VO grid is built on**
  - Authentication based on X.509 digital certificates
    - Issued by CAs that are internationally recognised (enabling international collaboration)
    - With proxies
  - Authorisation provided by VOMS
    - VOMS supports
      - *multiple groups, roles within a VO*
- **voms-proxy-init: is your logon to the grid, the access key to all of grid services**

- VOMS on EGEE: User Guide available at <http://glite.web.cern.ch/glite/documentation/default.asp>
- VOMS
  - Available at <http://infnforge.cnaf.infn.it/voms/>
  - Alfieri, Cecchini, Ciaschini, Spataro, dell'Agnello, Fronher, Lorentey, From gridmap-file to VOMS: managing Authorization in a Grid environment
  - Vincenzo Ciaschini, A VOMS Attribute Certificate Profile for Authorization
- GSI
  - Available at [www.globus.org](http://www.globus.org)
  - A Security Architecture for Computational Grids. I. Foster, C. Kesselman, G. Tsudik, S. Tuecke. *Proc. 5th ACM Conference on Computer and Communications Security Conference*, pp. 83-92, 1998.
  - A National-Scale Authentication Infrastructure. R. Butler, D. Engert, I. Foster, C. Kesselman, S. Tuecke, J. Volmer, V. Welch. *IEEE Computer*, 33(12):60-66, 2000.
- RFC
  - S.Farrell, R.Housley, An internet Attribute Certificate Profile for Authorization, RFC 3281



## WMS User's Guide

- <https://edms.cern.ch/file/572489/1/EGEE-JRA1-TEC-572489-WMS-guide-v0-2.pdf>

## JDL Attributes Specification

- **Fabrizio Pacini**
- <https://edms.cern.ch/file/555796/1/EGEE-JRA1-TEC-555796-JDL-Attributes-v0-8.pdf>

- Any questions??