egee

User Interface Plug&Play "combined"

(based on gLite UI 1.1 & LCG UI 2.4.0)

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INFN

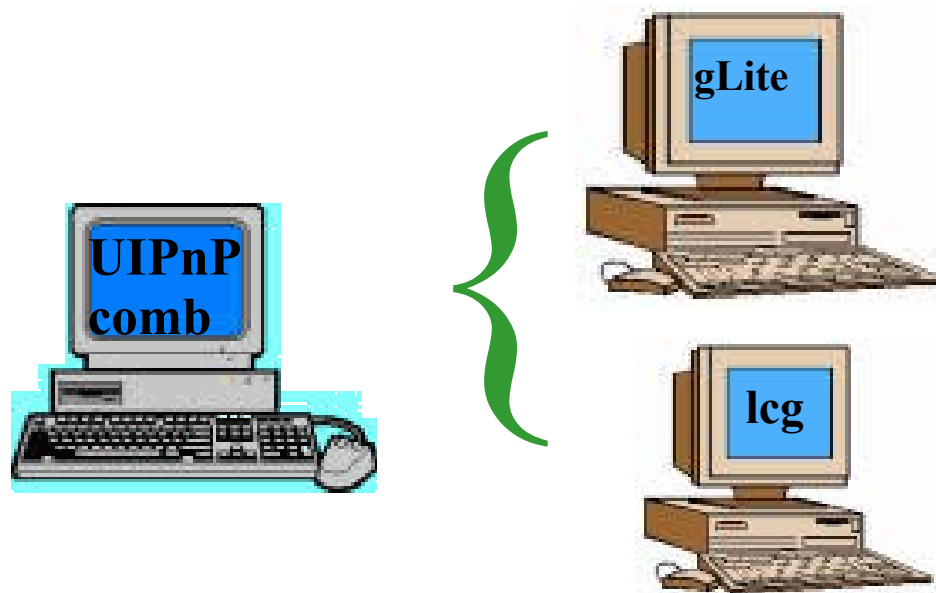**First gLite tutorial on GILDA, Catania, 13-15.06.2005**

Enabling Grids for E-sciencE

- **Introduction**
- **Installation**
- **Configuration**
- **Job submission services**
- **Data management services**

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The User Interface PnP "combined" is a merge of:

gLite 1.1 UI
LCG 2.4.0 UI

gLite

UIPnP comb

lcg

We 'll see that is possible to install gLite and LCG UI in same machine

Enabling Grids for E-sciencE

The main reference to the UI PnP "combined" is:

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

(at this link you can find some documentation)

Login into your home dir and type following commands:

1) *wget* ***https://gilda.ct.infn.it/UIPnPcomb/UIPnPcomb.tar.gz***

2) *tar zxvf* **UIPnPcomb.tar.gz**

3) *cd* **UIPnPcomb**

4) *source* **install.sh**

(For more details look at the README file)

The installation script:

- – updates the CRL's if needed
- – creates the .globus directory (where you have to insert your personal certificates)
- – Creates the JobOutput directory (where the output of your jobs will be stored)
- – Sets all the relevant environment variables in .bash_profile
- – Sets a cron job to update the CRL's periodically

Into $HOME/UIPnPcomb/glite/etc/ you can edit the file:
glite_wmsui_cmd_var.conf

```
[
  NSLoggerLevel = 1 ;
  ErrorStorage = "/tmp/glite/glite-ui" ;
  LoggingSyncTimeout = 10 ;
  DefaultVo = "gilda" ;
  OutputStorage = "~/JobOutput" ;
  rank = - other.GlueCEStateEstimatedResponseTime ;
  DefaultLogInfoLevel = 1 ;
  ListenerStorage = "/tmp/glite/glite-ui" ;
  RetryCount = 3 ;
  DefaultStatusLevel = 1 ;
  requirements = other.GlueCEStateStatus == "Production" ;
  LoggingTimeout = 10 ;
]
```

DefaultVo: setting default VO
OutputStorage: default folder for the output of all jobs

Into $HOME/UIPnPcomb/glite/etc/ you can define your VO and RB/LB:

1. create a folder with same name of the VO

2. configure the file glite_wmsui.conf getting template from $HOME/UIPnPcomb/glite/etc/vo_template

```
[
VirtualOrganisation = "gilda";
NSAddresses = {"glite-rb.ct.infn.it:7772"};
LBAddresses = {"glite-rb.ct.infn.it:9000"};
MyProxyServer = grid001.ct.infn.it;
]
```

In this file are defined :
 • name of theVO
 • hostname and port of the Resource Broker and Logging&Bookkeeping
 • hostname and port of the MyProxy Server

Setting the endpoind for the Fireman Catalog

Into $HOME/UIPnPcomb/glite/etc/services.xml

```
<services>
<service name="gildaCatalog">
<parameters>
<endpoint>https://grid017.ct.infn.it:8443/gilda/glite-data-catalog-service-fr-my
sql/services/FiremanCatalog</endpoint>
<type>org.glite.FiremanCatalog</type>
<version>2.0.0</version>
<status>0</status>
<statusmessage>OK</statusmessage>
</parameters>
</service>
</services>
```

Setting the endpoint of the gLite I/O Client
Into $HOME/UIPnPcomb/glite/etc/glite-io-client.properties.xml

```xml
<?xml version="1.0" encoding="UTF8"?>
<service>
  <components>
    <component name="io-client">
      <init>
        <param name="Server">
          <value>glite-se.ct.infn.it</value>
        </param>
        <param name="ServerPort">
          <value>9999</value>
        </param>
        <param name="EncryptName">
          <value>true</value>
        </param>
      </init>
    </component>
  </components>
</service>
```

Enabling Grids for E-sciencE

As first step you have to put your certificates in $HOME/.globus directory

and set the permission of your certificates with:

- **chmod 644 usercert.pem**
- **chmod 400 userkey.pem**

If you have the certificate in p12 (or pfx) format (e.g.: mycert.p12) do:

- **openssl pkcs12 –nocerts –in <mycert.p12> –out userkey.pem**

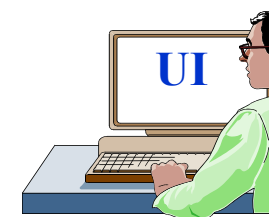 **Enter Import Password : <password used for export the certificates from your web browser>**

  MAC verified ok

  Entert PEM pass phrase: <password used for to create the private key>

  Verifing Entert PEM pass phrase: <confirm the password>

- **openssl pkcs12 –clcert.pem –nokeys –in mycert.p12 –out usescert.pem**

  Enter Import Password:

UI

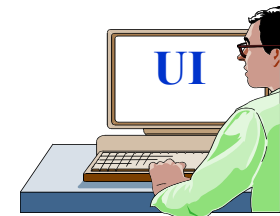**eGee**

Enabling Grids for E-sciencE

grid-proxy-init –vo gilda

Your identity: /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Sezione di Catania/CN=Passaro Gianluca/Email=gianluca.passaro@ct.infn.it

Enter GRID pass phrase for this identity: <password your private key>

Creating proxy .... Done

Your proxy is valid until: Mon Mar 21 23:57:06 2005

UI

myproxy-init –s grid001.ct.infn.it –l <username>

Your identity: /C=IT/O=GILDA/OU=Personal Certificate/L=INFN Sezione di Catania/CN=Passaro Gianluca/Email=gianluca.passaro@ct.infn.it

Enter GRID pass phrase for this identity:

Creating proxy .... Done

Proxy Verify OK

Your proxy is valid until: Mon Mar 28 12:59:22 2005

Enter MyProxy pass phrase:

<setting the password for myproxy initialized and different from private key>
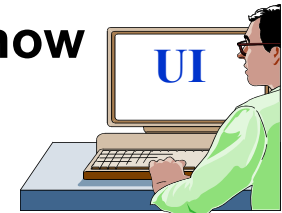
Your proxy is valid until: Mon Mar 28 13:00:24 2005

Enter MyProxy pass phrase:

Verifying password - Enter MyProxy pass phrase:

A proxy valid for 168 hours (7.0 days) for user gpassaro now exists on grid001.ct.infn.it.

UI

voms-proxy-init -voms EGEE

Your identity: /C=IT/O=INFN/OU=Personal Certificate/L=Catania/CN=Gianluca Passaro

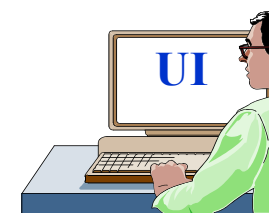**Enter GRID pass phrase for this identity:**

Creating temporary proxy .... Done

/O=dutchgrid/O=hosts/OU=nikhef.nl/CN=kuiken.nikhef.nl

/C=NL/O=NIKHEF/CN=NIKHEF medium-security certification auth

Creating proxy .... Done

Your proxy is valid until Fri Jun 10 02:25:46 2005

UI

Enabling Grids for E-sciencE

glite-job-list-match --vo gilda hostname.jdl

Selected Virtual Organisation name (from --vo option): gilda
Connecting to host glite-rb.ct.infn.it, port 7772

****

COMPUTING ELEMENT IDs LIST
The following CE(s) matching your job requirements have been found:
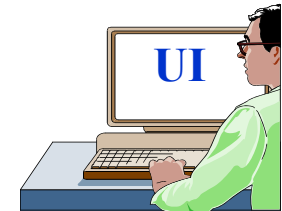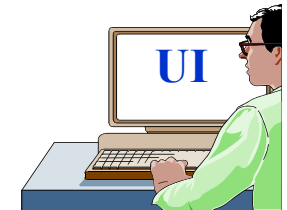
      CEId
cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-infinite
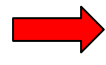cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-long
cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-short

…

UI

edg-job-list-match --vo gilda hostname.jdl

Selected Virtual Organisation name (from --vo option): gilda
Connecting to host grid004.ct.infn.it, port 7772

****
COMPUTING ELEMENT IDs LIST
 The following CE(s) matching your job requirements have been found:

 CEId
 cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-infinite
 cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-long
 cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-short
 ...
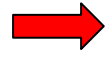
UI

Enabling Grids for E-sciencE

glite-job-submit --vo gilda hostname.jdl

Selected Virtual Organisation name (from --vo option): gilda
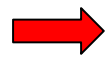**Connecting to host glite-rb.ct.infn.it, port 7772**
Logging to host glite-rb.ct.infn.it, port 9002

****
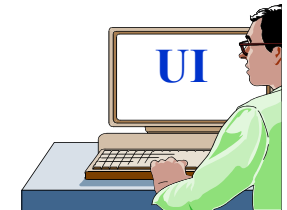**JOB SUBMIT OUTCOME**
The job has been successfully submitted to the Network Server.
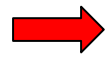**Use glite-job-status command to check job current status. Your job identifier is:**

- https://glite-rb.ct.infn.it:9000/3WFTTW3ph3SZm7t1UqWSyQ

****
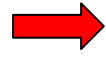
UI

edg-job-submit --vo gilda hostname.jdl

Selected Virtual Organisation name (from --vo option): gilda
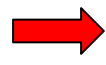**Connecting to host grid004.ct.infn.it, port 7772**
Logging to host grid004.ct.infn.it, port 9002

****
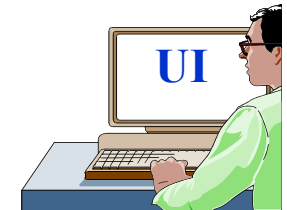**JOB SUBMIT OUTCOME**
 The job has been successfully submitted to the Network Server.
 Use edg-job-status command to check job current status. Your job identifier (edg_jobId) is:

 - https://grid004.ct.infn.it:9000/tnGRbee9lsxaVhqm4ebNRA

****

UI

glite-job-status
➡ **https://glite-rb.ct.infn.it:9000/3WFTTW3ph3SZm7t1UqWSyQ**

```
*********************************************************
BOOKKEEPING INFORMATION:

Status info for the Job : https://glite-
rb.ct.infn.it:9000/3WFTTW3ph3SZm7t1UqWSyQ
Current Status:     Done (Success)
Exit code:          0
Status Reason:      Job terminated successfully
Destination:        gilda-ce-01.pd.infn.it:2119/jobmanager-lcgpbs-short
Submitted:          Thu Jun  9 15:09:13 2005 CEST
*********************************************************
```
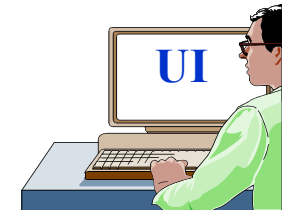
UI

Enabling Grids for E-sciencE

edg-job-status

https://grid004.ct.infn.it:9000/tnGRbee9lsxaVhqm4ebNRA

```
************************************************************
BOOKKEEPING INFORMATION:

Status info for the Job :
https://grid004.ct.infn.it:9000/tnGRbee9lsxaVhqm4ebNRA
Current Status:     Done (Success)
Exit code:          0
Status Reason:      Job terminated successfully
Destination:        cn01.be.itu.edu.tr:2119/jobmanager-lcglsf-short
reached on:         Thu Jun  9 13:13:46 2005
************************************************************
```
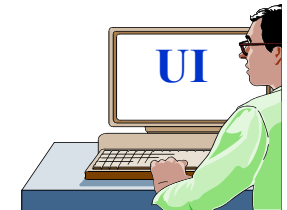
UI

glite-job-output

➡ **https://glite-rb.ct.infn.it:9000/3WFTTW3ph3SZm7t1UqWSyQ**

Retrieving files from host: glite-rb.ct.infn.it (for https://glite-rb.ct.infn.it:9000/3WFTTW3ph3SZm7t1UqWSyQ)

****
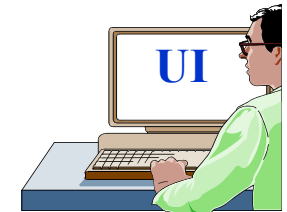
JOB GET OUTPUT OUTCOME

Output sandbox files for the job:
- https://glite-rb.ct.infn.it:9000/3WFTTW3ph3SZm7t1UqWSyQ
have been successfully retrieved and stored in the directory:
➡ **/home/gianluca/JobOutput/gianluca_3WFTTW3ph3SZm7t1UqWSyQ**

****

UI

edg-job-get-output
➡ **https://grid004.ct.infn.it:9000/tnGRbee9lsxaVhqm4ebNRA**

Retrieving files from host: grid004.ct.infn.it (for https://grid004.ct.infn.it:9000/tnGRbee9lsxaVhqm4ebNRA)

****

JOB GET OUTPUT OUTCOME

Output sandbox files for the job:
- https://grid004.ct.infn.it:9000/tnGRbee9lsxaVhqm4ebNRA
have been successfully retrieved and stored in the directory:
➡ **/home/gianluca/JobOutput/gianluca_tnGRbee9lsxaVhqm4ebNRA**

****

UI
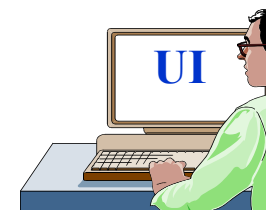
Now other commands :

lcg-infosite : Gives information about resource on the Grid
e.g. : **CE and SE**

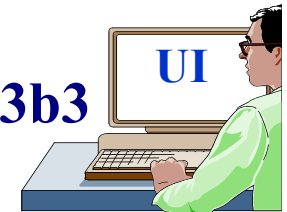**lcg-cr** : Copies a file to a SE and registers the file in the LRC
e.g. : **lcg-cr –vo gilda -d grid009.ct.infn.it -l**
➡ **lfn:myfile**   **file:/home/myhome/myfile**

guid:b4ee51eb-b4b0-433f-ab9b-8107ef76d3b3 => myfile

lcg-rep : Copies a file from one SE to another SE and
register it in the LRC.
e.g.: **lcg-rep –vo gilda -d grid009.ct.infn.it
guid:b4ee51eb-b4b0-433f-ab9b-8107ef76d3b3**

UI

lgc-lr : allows to list all the replicas of files that have been
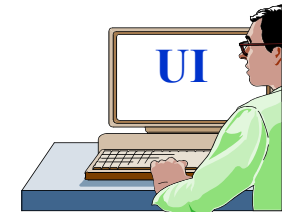successfully registred
e.g. : **lcg-lr --vo gilda lfn:myfile**

lcg-cp : Copies aGrid file to a local destination
e.g. : **lcg-cp –vo gilda lfn:myfile**
file:/home/myhome/myfile

lcg-lg : Gets the GUID for a given LFN or SURL
lcg-lg –vo gilda lfn:myfile

UI

lcg-del : Deletes one file (or one replca or all replicas)

If a SURL is provided as argument then that particular replica will be deleted :

lcg-del –vo gilda -s grid009.ct.infn.it
guid:b4ee51eb-b4b0-433f-ab9b-8107ef76d3b3

If is provided -a as argument then all replicas will be deleted :

lcg-del –vo gilda -a
guid:b4ee51eb-b4b0-433f-ab9b-8107ef76d3b3

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