

Bazy Danych i Usługi Sieciowe

Ćwiczenia XI

Paweł Daniluk

Wydział Fizyki

Jesień 2011



[http://bioexploratorium.pl/wiki/
Bazy_Danych_i_USlugi_Sieciowe_-_2011z](http://bioexploratorium.pl/wiki/Bazy_Danych_i_USlugi_Sieciowe_-_2011z)

User Interface

- UI – `glite-tutor.ct.infn.it`
- login – `warsaw01....15`
- hasła – `GridWAR01....15`

```
$ ssh -p 4422 login@glite-tutor.ct.infn.it
```

Certyfikaty

Katalog z certyfikatami

```
[warsaw15@glite-tutor ~]$ ls -l .globus
total 24
-rw-r--r-- 1 warsaw15 users 1302 Jan 13 11:40 usercert.pem
-r----- 1 warsaw15 users  963 Jan 13 11:40 userkey.pem
-rw-r--r-- 1 warsaw15 users 1941 Jan 13 11:40 WARSAW15.p12
```

Informacje o certyfikacie

```
[warsaw15@glite-tutor ~]$ grid-cert-info
```

Tworzenie certyfikatu proxy

```
[warsaw15@glite-tutor ~]$ voms-proxy-init --voms gilda
```

Hasło certyfikatu – WARSAW

Informacje o proxy

```
[warsaw15@glite-tutor ~]$ voms-proxy-info --all
```

Informacje o dostępnych usługach – lcg-infosites

```
lcg-infosites --vo <vo name> options -v <verbose level> --is <BDII to query>
```

Opcje

- ce
- se
- closeSE

Informacje o dostępnych usługach – lcg-infosites c.d.

Dostępne CE (Computing Elements)

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo gilda ce
```

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo gilda -v 1 ce
```

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo gilda -v 2 ce
```

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo vo.plgrid.pl ce
```

Informacje o dostępnych usługach – lcg-infosites c.d.

Dostępne SE (Storage Elements)

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo gilda se
```

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo gilda -v 1 se
```

CE z najbliższymi im SE

```
[warsaw15@glite-tutor ~]$ lcg-infosites --vo gilda closeSE
```


Informacje o dostępnych usługach – lcg-info

```
lcg-info [--list-ce | --list-se] [--query <some_query>]
        [--attrs <some_attrs>]
```

CE mające min. 100 procesorów

```
[warsaw15@glite-tutor ~]$ lcg-info --vo gilda --list-ce
--query 'TotalCPUs>=100' --attrs 'RunningJobs,FreeCPUs'
```

Oprogramowanie dostępne na CE

```
[warsaw15@glite-tutor ~]$ lcg-info --vo gilda --list-ce --attrs Tag
```

Informacje o dostępnych usługach – lcg-info c.d.

CE z zainstalowanym pakietem POVRAY

```
[warsaw15@glite-tutor ~]$ lcg-info --vo gilda --list-ce  
--query 'Tag=POVRAY-3.5' --attrs 'FreeCPUs,Tag'
```

CE bliskie SE

```
[warsaw15@glite-tutor ~]$ lcg-info --vo gilda --list-se  
--attrs 'AvailableSpace,CloseCE'
```

Opis zadania

```
[warsaw15@glite-tutor ~]$ cat hostname.jdl
Type = "Job";
JobType = "Normal";
Executable = "/bin/hostname";
StdOutput = "hostname.out";
StdError = "hostname.err";
OutputSandbox = {"hostname.err", "hostname.out"};
Arguments = "-f";
ShallowRetryCount = 3;
```

Proxy delegation

```
[warsaw15@glite-tutor ~]$ echo $USER
```

```
warsaw15
```

```
[warsaw15@glite-tutor ~]$ glite-wms-job-delegate-proxy -d $USER
```

```
Connecting to the service https://gilda-wms-02.ct.infn.it:7443/glite_wms_wmproxy_server
```

```
===== glite-wms-job-delegate-proxy Success =====
```

```
Your proxy has been successfully delegated to the WMPProxy(s):  
https://gilda-wms-02.ct.infn.it:7443/glite_wms_wmproxy_server  
with the delegation identifier: warsaw15
```

```
=====
```

CE na których można uruchomić zadanie

```
[warsaw15@glite-tutor ~]$ glite-wms-job-list-match -d $USER hostname.jdl
```

```
Connecting to the service https://gilda-wms-02.ct.infn.it:7443/glite_wms_wmproxy_ser
```

```
=====
```

COMPUTING ELEMENT IDs LIST

The following CE(s) matching your job requirements have been found:

CEId

- ce.scope.unina.it:8443/cream-pbs-egee_long
- ce.scope.unina.it:8443/cream-pbs-egee_short
- ce0.m3pec.u-bordeaux1.fr:2119/jobmanager-pbs-gilda
- cream0.m3pec.u-bordeaux1.fr:8443/cream-pbs-gilda
- grid-glite-ce-00.sgai.csic.es:8443/cream-pbs-grid-csic
- grid010.ct.infn.it:2119/jobmanager-lcgpbs-gilda
- grisuce.scope.unina.it:8443/cream-pbs-grisu_long
- grisuce.scope.unina.it:8443/cream-pbs-grisu_short
- iceage-ce-01.ct.infn.it:8443/cream-pbs-gilda
- sirius-ce.ct.infn.it:8443/cream-pbs-gilda
- gilda-01.pd.infn.it:2119/jobmanager-lcgpbs-gilda

Kolejkowanie zadania i jego dalsze losy

Umieszczanie zadania w kolejce

```
[warsaw15@glite-tutor ~]$ glite-wms-job-submit -d $USER -o jobid hostname.jdl
```

Status zadania

```
[warsaw15@glite-tutor ~]$ glite-wms-job-status -i jobid
```

Wynik

```
[warsaw15@glite-tutor ~]$ glite-wms-job-output -i jobid --dir resdir  
[warsaw15@glite-tutor ~]$ ls resdir/  
warsaw15_Yy4eZ8XAU2D1jJOVQjnKbG  
[warsaw15@glite-tutor ~]$ ls resdir/warsaw15_Yy4eZ8XAU2D1jJOVQjnKbG/  
hostname.err hostname.out
```

Anulowanie zadania

```
[warsaw15@glite-tutor ~]$ glite-wms-job-cancel -i jobid
```

Operacje na katalogach

Wyświetlanie zawartości

```
[warsaw15@glite-tutor ~]$ lfc-ls -l /grid/gilda
```

Tworzenie

```
[warsaw15@glite-tutor ~]$ lfc-mkdir /grid/gilda/tutorials/<mydir>
```

Ładowanie plików

```
[warsaw15@glite-tutor ~]$ echo "Put something here" > text_file.txt
```

```
[warsaw15@glite-tutor ~]$ lcg-cr --vo gilda -l  
lfn:/grid/gilda/tutorials/<mydir>/text_file.txt -d  
aliserv6.ct.infn.it file://$HOME/text_file.txt
```


Repliki

Wyświetlanie replik

```
[warsaw15@glite-tutor ~]$ lcg-lr --vo gilda  
lfn:/grid/gilda/tutorials/<mydir>/text_file.txt
```

Tworzenie nowej repliki

```
[warsaw15@glite-tutor ~]$ lcg-rep --vo gilda -d <SE>  
lfn:/grid/gilda/tutorials/<mydir>/text_file.txt
```

Ściąganie plików

```
[warsaw15@glite-tutor ~]$ lcg-cp --vo gilda  
  lfn:/grid/gilda/tutorials/<mydir>/text_file.txt  
  file://$HOME/text_file_copy.txt
```

Usuwanie

```
[warsaw15@glite-tutor ~]$ lcg-del -a --vo gilda  
  lfn:/grid/gilda/tutorials/<mydir>/text_file.txt  
[warsaw15@glite-tutor ~]$ lfc-rm -r /grid/gilda/tutorials/<mydir>
```