



Enabling Grids for E-science

Testing WMS: job submission



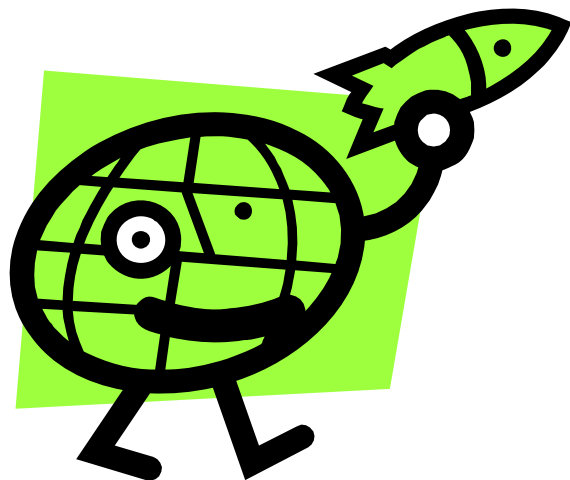
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Workload Management System

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- In the glite middleware a user can submit and cancel jobs, query their status, and retrieve their output. These tasks go under the name of *Workload Management*.
- There are two different User Interfaces to accomplish these tasks. One is the Command Line Interface and the other is the Graphical User Interface.

- **Job Submission**

- Perform the job submission to the Grid.

```
$ glite-job-submit [options] <jdl_file>
```

- where <jdl file> is a file containing the job description, usually with extension .jdl.

--vo <vo name> : perform submission with a different VO than the UI default one.

--output, -o <output file> save jobId on a file.

--resource, -r <resource value> specify the resource for execution.

--nomsgi neither message nor errors on the stdout will be displayed.

If the submission is successful, the output is similar to:

glite-job-submit test.jdl

```
=====glite-job-submit Success =====  
The job has been successfully submitted to the Network Server.  
Use glite-job-status command to check job current status.  
Your job identifier (edg_jobId) is:  
- https://lxshare0234.cern.ch:9000/rIBubkFFKhnsSQ6CjiLUY8Q  
=====
```

In case of failure, an error message will be displayed instead, and an exit status different from zero will be returned.

If the command returns the following error message:

```
**** Error: API_NATIVE_ERROR ****
```

```
Error while calling the "NSClient::multi" native api
```

```
AuthenticationException: Failed to establish security context...
```

```
**** Error: UI_NO_NS_CONTACT ****
```

```
Unable to contact any Network Server
```

it means that there are authentication problems between the UI and the *Network Server* (check your proxy or have the site administrator check the certificate of the server).

It is possible to see which CEs are eligible to run a job specified by a given JDL file using the command

glite-job-list-match test.jdl

Connecting to host lxshare0380.cern.ch, port 7772

Selected Virtual Organisation name (from UI conf file): dteam

COMPUTING ELEMENT IDs LIST

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

adc0015.cern.ch:2119/jobmanager-lcgpbs-infinite

adc0015.cern.ch:2119/jobmanager-lcgpbs-long

adc0015.cern.ch:2119/jobmanager-lcgpbs-short

After a job is submitted, it is possible to see its status using the `glite-job-status` command.

`glite-job-status` <https://lxshare0234.cern.ch:9000/X-ehTxfdlXxSoIdVLS0L0w>

BOOKKEEPING INFORMATION:

Printing status info for the Job:

`https://lxshare0234.cern.ch:9000/X-ehTxfdlXxSoIdVLS0L0w`

Current Status: Ready

Status Reason: unavailable

Destination: lxshare0277.cern.ch:2119/jobmanager-pbs-infinite

reached on: Fri Aug 1 12:21:35 2003

The option **-i <file path>** can be used to specify a file with a list of job identifiers (saved previously with the **-o** option of `glite-job-submit`).

glite-job-status -i jobs.list

```
1 : https://lxshare0234.cern.ch:9000/UPBqN2s2ycxt1TnuU3kzEw
2 : https://lxshare0234.cern.ch:9000/8S6IwPW33AhyxhkSv8Nt9A
3 : https://lxshare0234.cern.ch:9000/E9R0Yl4J7qgsq7FYTnhmsA
4 : https://lxshare0234.cern.ch:9000/Tt80pBn17AFPJyUSN9Qb7Q
a : all
q : quit
```

Choose one or more `edg_jobId(s)` in the list - [1-4]all:

If the **--all** option is used instead, the status of all the jobs owned by the user submitting the command is retrieved.

The **--status <state>** (-s) option makes the command retrieve only the jobs that are in the specified state, and the **--exclude <state>** (-e) option makes it retrieve jobs that are not in the specified state.

These two last options are mutually exclusive, although they can be used with **--from** and **--to**.

Example: All jobs of the user that are in the state DONE or RUNNING are retrieved.

```
glite-job-status --all -s Done -s Running
```

Example: All jobs that were submitted before the 17:35 of the current day, and that were not in the Cleared state are retrieved.

```
glite-job-status --all -e Cleared --to 17:00
```

A job can be canceled before it ends using the command `glite-job-cancel`.

`glite-job-cancel` <https://lxshare0234.cern.ch:9000/dAE162is6EStca0VqhVkog>

```
Are you sure you want to remove specified job(s)? [y/n]n :y
```

```
===== glite-job-cancel Success=====
```

```
The cancellation request has been successfully submitted for the following  
job(s)
```

```
- https://lxshare0234.cern.ch:9000/dAE162is6EStca0VqhVkog
```

```
=====
```

After the job has finished (it reaches the DONE status), its output can be copied to the UI

glite-job-output <https://lxshare0234.cern.ch:9000/snPegp1YMJcnS22yF5pFlg>

Retrieving files from host lxshare0234.cern.ch

JOB GET OUTPUT OUTCOME

Output sandbox files for the job:

- <https://lxshare0234.cern.ch:9000/snPegp1YMJcnS22yF5pFlg>

have been successfully retrieved and stored in the directory:

</tmp/jobOutput/snPegp1YMJcnS22yF5pFlg>

By default, the output is stored under /tmp, but it is possible to specify in which directory to save the output using the **- -dir <path name>** option.

