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Step by step to the grid:

- Get a certificate 😊
- login to lxplus and type:

```
source /afs/cern.ch/project/gd/LCG-share/2.3.0/sl3/etc/profile.d/grid_env.sh
```

- Get a very long certificate! If your grid token expires before the jobs are finished they will all be aborted.

```
grid-proxy-init -valid 100:00
```

gives you a proxy which last for 100 hours.

- cd to your grid environment (as setup with James guide) and type

```
source setup.sh
```

Simulation jobs

- create jdl job description files with the command **jdlgen**

```
jdngen -r 9.0.4 -d 4020 -D tth120_bb --in-step evgen904 --out-step g4initial904 \  
-p wildauer -t 09-00-04-06 -e 2 --in-part 1:1 --out-part 1:5 -s castorgrid.ific.uv.es \  
--eta-min=-4. --eta-max=4.
```

this will give you jobs with the following structure:

- storage directory (on castorgrid.ific.uv.es)

```
wildauer/g4initial904/wildauer.004020.g4initial904.tth120_bb
```

- input file name LFN has to be:

```
wildauer.004020.evgen904.tth120_bb._00001.pool.root
```

- Output files will be called:

```
wildauer.004020.g4initial904.tth120_bb._00001.pool.root  
wildauer.004020.g4initial904.tth120_bb._00001.job.log  
...  
same for 2 to 5  
...
```

This jdngen command will create jdl files where you need TWO input file registered with the logical file name (LFN) wildauer.004020.evgen904.tth120_bb._00001.pool.root. You want to have 5 output files with 2 events each. You also need to have a template file in your templates directory with the name wildauer.wildauer.g4initial904.jdl.template.

Digitization jobs

- create jdl job description files with the command **jdlgen**

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```
jdngen -r 9.0.4 -d 4020 -D tth120_bb --in-step g4initial904 --out-step g4digi904 \  
-p wildauer -t 09-00-04-06 -e 2 --in-part 1:2 --out-part 1:1 -s castorgrid.ific.uv.es
```

this will give you jobs with the following structure:

- storage directory (on castorgrid.ific.uv.es)

```
wildauer/g4digi904/wildauer.004020.g4digi904.tth120_bb
```

- input file name LFN has to be:

```
wildauer.004020.g4initial904.tth120_bb._00001.pool.root.1  
wildauer.004020.g4initial904.tth120_bb._00002.pool.root.1
```

- Output files will be called:

```
wildauer.004020.g4digi904.tth120_bb._00001.pool.root.1  
wildauer.004020.g4digi904.tth120_bb._00001.job.log.1  
...  
same for 2.  
...
```

This jdngen command will create jdl files where you need TWO input file registered with the logical file name (LFN) wildauer.004020.g4initial904.tth120_bb._0000X.pool.root (X=1,2). You want to have 2 output files with 2 events each. This means you get one output file per input file. You also need to have a template file in your templates directory with the name wildauer.wildauer.g4digi904.jdl.template.

Miscellaneous

Register a file

Note that files created on the grid are already registered. You can register a file either with:

```
lcg-cr --vo atlas -d castorgrid.cern.ch -l <LFNofFile> -g guid:<PoolFileID> \  
gsiftp://castorgrid.cern.ch/castor/cern.ch/grid/atlas/wildauer/<file>
```

this will make a copy of your file and put it under some generic directory. It is better to copy the files to atlas castor grid space and register with:

```
lcg-rf --vo atlas -g guid:44021A5E-CBB3-D911-8575-0002B3AF7CDB -l wildauer.004020.evgen904.tth120  
sfn://castorgrid.cern.ch/castor/cern.ch/grid/atlas/wildauer/evgen/data/wildauer.004020.evgen904.t
```

make sure the file is already in the atlas grid castor space (/castor/cern.ch/grid/atlas/). That way the sfn of the file will just be the file location and not some generic copied name.

The LFN of the file is arbitrary. As a convention it is simply the filename itself.

Unregister a file

To unregister a file, type:

```
lcg-uf --vo atlas guid mySFN
```

where `guid` and `mySFN` have to be replaced accordingly. `mySFN` can be obtained via:

```
lcg-lr --vo atlas lfn:myLFN
```

and the `guid` via:

```
lcg-lg --vo atlas lfn:myLFN
```

Note that this only unregisters the file. It does not delete it! As a "shortcut" you can also do:

```
lcg-uf --vo atlas \  
`lcg-lg --vo atlas lfn:private.004020.g4initial904.tth120_bb._00062.pool.root.1` \  
`lcg-lr --vo atlas lfn:private.004020.g4initial904.tth120_bb._00062.pool.root.1`
```

Checking the ranking expression

If you want to know to which site a job would most likely go, type:

```
edg-job-list-match --rank myfile.jdl
```

The answer will look something like this:

```
lxplus011,11:30,~/grid/jobs >edg-job-list-match --rank jdl/wildauer.004020.g4initial904.tth120_bb
```

```
Selected Virtual Organisation name (from JDL): atlas  
Connecting to host lxn1177.cern.ch, port 7772
```

```
*****
```

COMPUTING ELEMENT IDs LIST

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

CEId	*Rank*
goliath25.farm.particle.cz:2119/jobmanager-lcgpbs-lcgatlasprod11300	
lcgce01.triumf.ca:2119/jobmanager-lcgpbs-atlas	1800
lcg2ce.ific.uv.es:2119/jobmanager-lcgpbs-atlasL	1650
t2-ce-01.lnl.infn.it:2119/jobmanager-lcglsf-atlas	1250
lcg-ce.lps.umontreal.ca:2119/jobmanager-lcgpbs-atlas	1000
lcg2ce.ific.uv.es:2119/jobmanager-lcgpbs-atlas	173

```
*****
```

Excluding or especially demanding a certain site

If you want to exclude or select a site to run your jobs on, add the following to your Rank expression:

Exclude:

```
(!(RegExp("address_of_troublesome_site",other.CEId))) &&
```

Select all sites in the uk:

```
RegExp(".*uk:*",other.CEId) &&
```

Troubleshooting

```
lxplus011,17:24,~/grid/jobs >echo $LCG_GFAL_INFOSYS
lxn1178.cern.ch:2170
lxplus011,17:25,~/grid/jobs >export LCG_GFAL_INFOSYS=atlas-bdii.cern.ch:2170
lxplus011,17:25,~/grid/jobs >./registerFiles.sh
```

In case you cannot get a pfn to your file via the lfn

In such case your file is irremediably lost since you have no entry pointing to the PFN of the file (unless you know it by some other mean different from the file catalog). The only solution is therefore to delete the GUID-LFN mapping. You can do that using the `lcg-ra` command which you find in the User Interface.

The sysopsys is

```
$ lcg-ra --vo vo guid lfn
```

see manpages for details. -- DerSchrecklicheSven - 25 Apr 2005

This topic: Main > Grid

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