



# **CRAB tutorial**

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### **Trouble shooting**

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## Problems can occur

- Before using CRAB:
  - Environment preparation
  - Getting a user certificate
  - While setup the certificate
- During creation phase
- During submission phase
- PostRunning problems



# Environment Preparation



- Environment not properly prepared.  
Start again with a fresh shell, doing (in the right order):
  1. source of UI env
  2. setup of CMSSW software
  3. source of CRAB env



# User certificate



- You can find informations on certificate:
  - How to get it
  - How to setup it
  - How to renew it

Following the links pointed by the page:

[https://twiki.cern.ch/twiki/bin/view/CMS/SWGuideCrab#How\\_to\\_Start\\_with\\_CRAB](https://twiki.cern.ch/twiki/bin/view/CMS/SWGuideCrab#How_to_Start_with_CRAB)



# User certificate



You can test you certificate with:

```
grid-proxy-init -debug -verify
```

```
voms-proxy-init -voms cms
```



# Problems during creation



- Problems with certificate:

Error: cms: User unknown to this VO.

None of the contacted servers for cms were capable of returning a valid AC for the user.

crab: Unable to create a valid proxy!



# Problems during creation



- CMSSW problems in creation:  
may be your code work locally but your jobs crash with a cms exception.
- You can validate your CMSSW config file before launching it on the grid. To do this you can use “crab –validateCfg”



# Problems during creation



- Control your quota.

You need enough space!





- **Compatible site not found:**  
crab. The whole task doesn't found compatible site  
crab. Total of 0 jobs submitted

## To be controlled:

- The CMSSW software release have to be on the site
- The Dataset have to be on the site
- The site have to be running (Availability page:  
<http://lxarda16.cern.ch/dashboard/request.py/siteview>)
- The site have to be either T2 or T3:  
The user are **not allowed** to run jobs on T0 and T1!



# Availability page



| Site Name        | Visible     | JobRobot  | SAM TESTS |       | Production | Analysis    | Site usage |         | Phedex  |         |          | CMSSW | Maintenance<br>( <a href="#">expand this column</a> ) | Under investigation  | SiteIssues           |
|------------------|-------------|-----------|-----------|-------|------------|-------------|------------|---------|---------|---------|----------|-------|---|----------------------|----------------------|
|                  |             |           | CE        | SRM   |            |             | Running    | Pending | # Links | In rate | Out rate |       |   |                      |                      |
| T2_ES_IFCA       | error       | 0%(120)   | error     | OK    | 100%(1045) | 100%(3813)  | 1290       | 1215    | ok      | 7       | 6        | OK    | <a href="#">GOCDB</a>                                 | <a href="#">mark</a> | <a href="#">info</a> |
| T2_FI_HIP        | warning 1/2 | n/a       | n/a       | OK    | 100%(340)  | 99%(549)    | 738        | 299     | ok      | 4       | 0        | n/a   | <a href="#">GOCDB</a>                                 | <a href="#">mark</a> | <a href="#">info</a> |
| T2_FR_CCIN2P3    | OK          | n/a       | OK        | n/a   | 100%(1635) | 100%(11055) | 612        | 3509    | n/a     | n/a     | n/a      | OK    | <a href="#">GOCDB</a>                                 |                      | <a href="#">info</a> |
| T2_FR_GRIF_IRFU  | OK          | 100%(400) | OK        | OK    | 100%(180)  | 100%(63)    | 43         | 243     | ok      | 5       | 0        | n/a   | <a href="#">GOCDB</a>                                 |                      | <a href="#">info</a> |
| T2_FR_GRIF_LLR   | OK          | 100%(400) | OK        | OK    | 100%(671)  | 100%(2959)  | 901        | 1550    | ok      | 21      | 1        | OK    | <a href="#">GOCDB</a>                                 |                      | <a href="#">info</a> |
| T2_FR_GRIF_LPNHE | error       | n/a       | n/a       | error | 100%(2)    | n/a         | n/a        | n/a     | n/a     | n/a     | n/a      | OK    | n/a   | <a href="#">mark</a> | n/a                  |
| T2_FR_IPHC       | OK          | 99%(301)  | OK        | OK    | 100%(396)  | 97%(3603)   | 475        | 372     | ok      | 2       | 0        | OK    | <a href="#">GOCDB</a>                                 |                      | <a href="#">info</a> |
| T2_HU_Budapest   | OK          | n/a       | OK        | OK    | 100%(609)  | 100%(275)   | 164        | 769     | ok      | 4       | 1        | OK    | <a href="#">GOCDB</a>                                 |                      | <a href="#">info</a> |
| T2_IN_TIFR       | error       | 37%(300)  | error     | error | n/a        | 100%(64)    | 122        | 85      | ok      | 1       | 2        | OK    | <a href="#">GOCDB</a>                                 | <a href="#">mark</a> | <a href="#">info</a> |

If “Visible = error” the site is down



# Problems during submission



- General problem with a SE (for example the site is not reachable):

If the dataset is also in other sites an easy solution is blacklist the SE

[EDG]

```
se_black_list = jinr.ru, infn.it, purdue.edu, in2p3.fr
```



# PostRunning problems



- The jobs could be:
  - Done(Failed) => the jobs have run (2 exit codes)
  - Aborted => the jobs have not run
- Failed Jobs: stdout & stderr (retrieved with “crab –getoutput”)
- Aborted Jobs: loggingInfo (retrieved with “crab –postMortem”)



# PostRunning problems



- In this page you can find the meaning of the exit codes:

<https://twiki.cern.ch/twiki//bin/view/CMS/JobExitCodes>

- Try to look in FAQ, HOWTO, Diagnosis template page
- Write to crabFeedback HN

Make available the task directory in your public area is the better way to debug the problem by the supporters ;-)



# PostRunning problems



- StageOut problems (Store files in a T2/T3 SE)
- StageOut problems in Castor.  
Castor is not the best place to store data! You should store your data in the T2/T3 SE.