



DIRAC Web Interface

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On behalf of JUNO DCI group

JUNO DCI Tutorial in Bordeaux, May 11, 2023

Purposes of DIRAC web interface

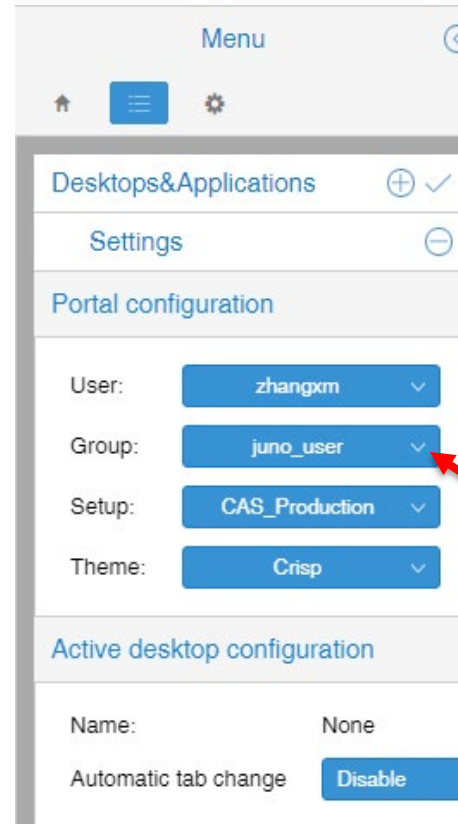


- ❖ Check tasks and jobs status
- ❖ Check site status
- ❖ Simple job submission

DIRAC web GUI

User certificate must be loaded on your browser

<https://dirac.ihep.ac.cn/DIRAC/>
<https://prod-dirac.ihep.ac.cn/DIRAC>



Check your membership is recognised

Proxy upload

Important !

We are not keeping neither your private key nor password for file on our service. While we try to make this process as simple as possible by using SSL to encrypt the p12 file with your credentials when it is sent to the server, for maximum security, we recommend that you manually convert and upload the proxy file using DIRAC client commands:

```
dirac-cert-convert.sh YOUR_P12_FILE_NAME.p12
dirac-proxy-init -U -g GROUP_NAME
```

Certificate:

p12 Password:

Normally we use DIRAC client commands to upload proxy from User Interface:

```
dirac-cert-convert
your_p12_file_name.p12
dirac-proxy-init -g juno_user
```

Check status of your proxy

Applications

- Public State Manager
- Job Monitor
- Pilot Monitor
- Accounting
- Configuration Manager
- Registry Manager
- File Catalog
- System Administration
- Activity Monitor
- Transformation Monitor
- Request Monitor
- Pilot Summary
- Resource Summary
- Site Summary
- Proxy Manager**
- Component History
- Job Summary
- Space Occupancy
- Downtimes
- Task Manager
- Site Status Monitor

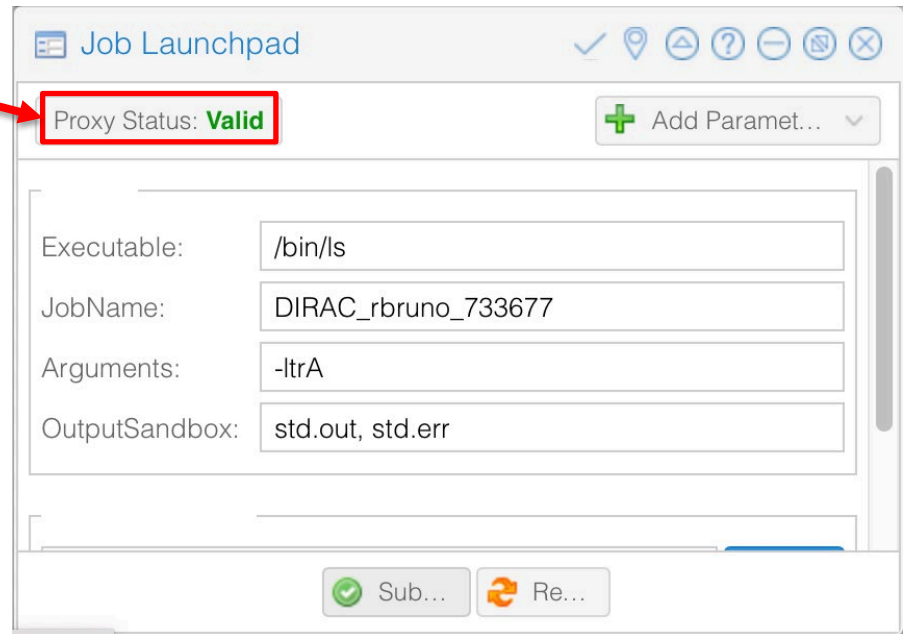
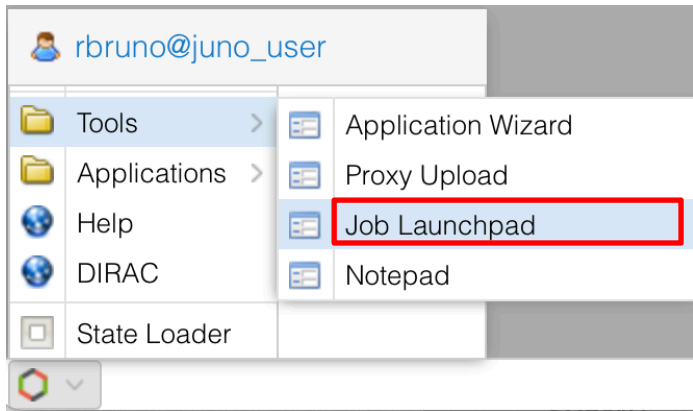
<input type="checkbox"/>	User	DN	Group	Expiration date (UTC)
[-] User: zhangxm				
<input type="checkbox"/>	zhangxm	/C=CN/O=HEP/O=IHEP/OU=CC/CN=Xiaomei Zhang		2023-06-07 06:49:54



The proxy can be deleted and created again

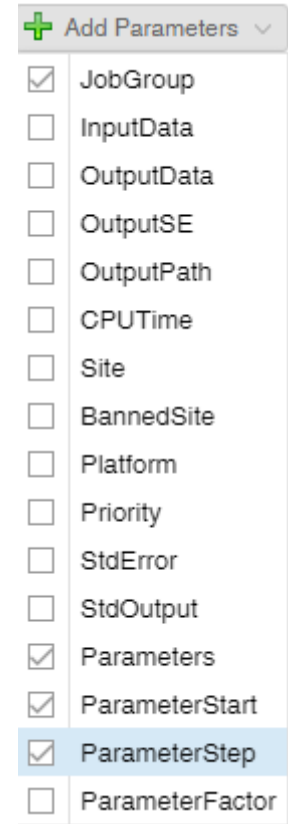
Job Launchpad

Green after uploading proxy,
see slide before



Exercise: submit jobs

- ❖ Submit a job
 - Change “Executable”, “Arguments”, “OutputSandbox”, “site”, “jobGroup” to see the difference
- ❖ Submit multi-jobs with parameters
 - Guide in the next slide
- ❖ Submit a job with your own shell script
 - Guide in the next slide
- ❖ Use more parameters to define your jobs



A screenshot of a software interface showing a list of parameters to be added to a job. The list is titled "Add Parameters" and includes the following items:

Checkbox	Parameter Name
<input checked="" type="checkbox"/>	JobGroup
<input type="checkbox"/>	InputData
<input type="checkbox"/>	OutputData
<input type="checkbox"/>	OutputSE
<input type="checkbox"/>	OutputPath
<input type="checkbox"/>	CPUTime
<input type="checkbox"/>	Site
<input type="checkbox"/>	BannedSite
<input type="checkbox"/>	Platform
<input type="checkbox"/>	Priority
<input type="checkbox"/>	StdError
<input type="checkbox"/>	StdOutput
<input checked="" type="checkbox"/>	Parameters
<input checked="" type="checkbox"/>	ParameterStart
<input checked="" type="checkbox"/>	ParameterStep
<input type="checkbox"/>	ParameterFactor

Information of sites and SE

Data Center	Site name	SE
IHEP	GRID.IHEP.cn	IHEP-STORM, IHEP-JUNOEOS
CNAF	GRID.INFN-CNAF.it	CNAF-STORM
IN2P3	GRID.IN2P3.fr	IN2P3-DCACHE
JINR	GRID.JINR-CONDOR.ru	JINR-EOS

CLUSTER.CSNS.cn.....

Use parameters to submit multi-jobs

- ❖ You can use Parameters/ParameterStart/ParameterStep to submit more than one job in one submission
 - the values of parameters can be:
 - a list (strings or numbers)
 - Parameters = {"first","second","third","fourth","fifth"};
 - an integer, in this case the attributes ParameterStart and ParameterStep must be defined as integers to create the list of job parameters
 - Jobs will be created corresponding to the *Parameters* list values
 - Other JDL attributes can contain “%s” placeholder. For each generated job this placeholder will be replaced by one of the values in the *Parameters* list

Proxy Status: **Valid**

^ JDL

JobName: DIRAC_zhangxm_%n

Executable: /bin/echo

Arguments: %s

OutputSandbox: std.out, std.err

Parameters: 5

ParameterStart: 5

ParameterStep: 1

Check your jobs

The screenshot shows a software interface with a sidebar on the left and a main window on the right. The sidebar is titled 'Desktops&Applications' and contains a list of tools and applications. The 'Job Monitor' application is highlighted with a red box. A red arrow points from this box to the 'Job Monitor' window in the main area. The 'Job Monitor' window has a title bar with several open windows: 'Configuration Manager [Untitled 2]', 'Job Monitor [Untitled 4]', 'Notepad [Untitled 9]', 'Job Launchpad [Untitled 10]', and 'Notepad [Untitled 11]'. Below the title bar is a 'Selectors' section with various filters. The main area of the 'Job Monitor' window displays a table of jobs. A red arrow points from the 'Job Group' dropdown menu in the 'Selectors' section to a callout box.

JobId	Status	MinorStatus	Application...	Site	JobName
11421962	Waiting	Pilot Agent Sub...	Unknown	ANY	DIRAC_zhangx...
11421961	Waiting	Pilot Agent Sub...	Unknown	ANY	DIRAC_zhangx...
11421960	Waiting	Pilot Agent Sub...	Unknown	ANY	DIRAC_zhangx...
11421959	Waiting	Pilot Agent Sub...	Unknown	ANY	DIRAC_zhangx...
11421958	Waiting	Pilot Agent Sub...	Unknown	ANY	DIRAC_zhangx...

Select your job with job Group, if you defined when submitting

You can also select jobs with “time”, “owner”

Job output

Right click

Get output

Peek StandardOutput

Get StdOut

Get output file(s)

Download .tar.gz file to get complete output files

```
Pilot StdOut for JobID:8426745
=====
2021-03-19 08:31:43 UTC DEBUG Environment of execution host
2021-03-19 08:31:43 UTC DEBUG TMP=/home/condor/execute//dir_
2021-03-19 08:31:43 UTC DEBUG _CONDOR_CHIRP_CONFIG=/home/condor/execute//dir_6293/.chirp.co
2021-03-19 08:31:43 UTC DEBUG _CONDOR_JOB_PIDS=
2021-03-19 08:31:43 UTC DEBUG _CONDOR_ANCESTOR_2930=5498:1
2021-03-19 08:31:43 UTC DEBUG HOME=/home/piljuno019
2021-03-19 08:31:43 UTC DEBUG PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr
2021-03-19 08:31:43 UTC DEBUG TEMP=/home/condor/execute//d
2021-03-19 08:31:43 UTC DEBUG SHLVL=1
2021-03-19 08:31:43 UTC DEBUG _CHIRP_DELAYED_UPDATE_PREFIX=
2021-03-19 08:31:43 UTC DEBUG X509_USER_PROXY=/home/condor/execute//dir_6293/tmpSeJm11
2021-03-19 08:31:43 UTC DEBUG _CONDOR_JOB_IWD=/home/condor
2021-03-19 08:31:43 UTC DEBUG _CONDOR_BIN=/usr/bin
2021-03-19 08:31:43 UTC DEBUG _CONDOR_ANCESTOR_5498=6293:1
2021-03-19 08:31:43 UTC DEBUG VO_CMS_SW_DIR=/cvmfs/cms.cern
2021-03-19 08:31:43 UTC DEBUG HTCONDOR_JOBID=1688625.1
2021-03-19 08:31:43 UTC DEBUG BATCH_SYSTEM=HTCondor
2021-03-19 08:31:43 UTC DEBUG _CONDOR_ANCESTOR_6293=6315:1
2021-03-19 08:31:43 UTC DEBUG _CONDOR_SLOT=slot1_52
2021-03-19 08:31:43 UTC DEBUG _CONDOR_MACHINE_AD=/home/condor/execute//dir_6293/.machine.ad
2021-03-19 08:31:43 UTC DEBUG _=/usr/bin/env
2021-03-19 08:31:43 UTC DEBUG TMPDIR=/home/condor/execute/
2021-03-19 08:31:43 UTC DEBUG CONDORCE_COLLECTOR_HOST=ce01.
```

Failed jobs

- ❖ If your jobs failed, try to use logging info and log files to find out reason

<input type="checkbox"/>	11421934	Failed	Maximum of rescheduli...
<input type="checkbox"/>	11421925	Failed	Could not dispatch task:...
<input type="checkbox"/>	11421915	Failed	Could not dispatch task:...
<input type="checkbox"/>	11421889	Failed	Could not dispatch task:...
<input type="checkbox"/>	11421867	Failed	Maximum of rescheduli...
<input type="checkbox"/>	11421861	Failed	...
<input type="checkbox"/>	11421837	Failed	...
<input type="checkbox"/>	11421812	Failed	...
<input type="checkbox"/>	11421806	Failed	...
<input type="checkbox"/>	11421788	Failed	...
<input type="checkbox"/>	11421762	Failed	...
<input type="checkbox"/>	11421742	Failed	...
<input type="checkbox"/>	11421717	Failed	...
<input type="checkbox"/>	11421692	Failed	...
<input type="checkbox"/>	11421689	Failed	...

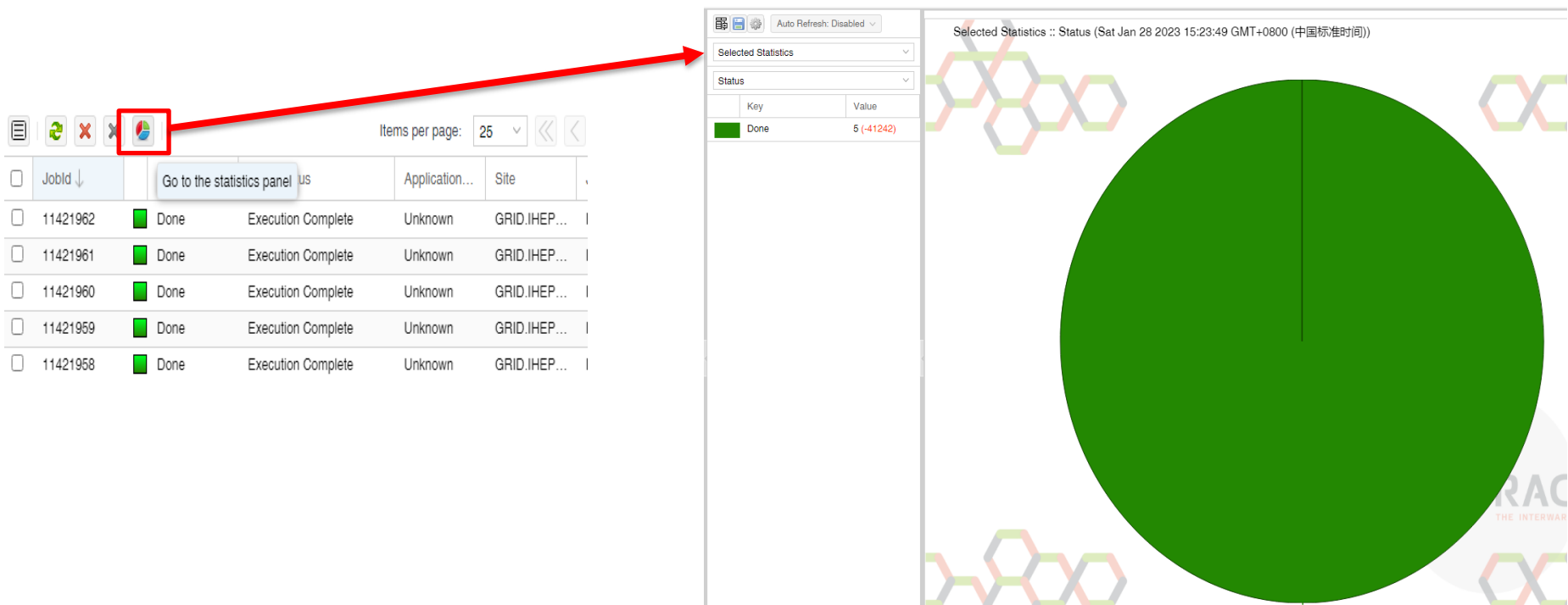
- JDL
- Attributes
- Parameters
- Logging info
- Peek StandardOutput
- Get LogFile
- Get Pending Request
- Get StagerReport
- Actions >
- Pilot >
- SandBox >

Attributes for JobID:11421867

Source	Status	Minor Status	Application Status
JobWrapper	Running	Input Data R...	Unknown
JobWrapper	Running	Input Data R...	Failed Input Data Resolution
JobWrapper	Rescheduled	Input Data R...	Failed Input Data Resolution
JobManager	Received	Job Resche...	Unknown
JobPath	Checking	JobSanity	Unknown
JobSanity	Checking	InputData	Unknown
InputData	Checking	JobScheduling	Unknown
JobScheduling	Checking	JobScheduling	On Hold: after rescheduling 3
JobScheduling	Waiting	Pilot Agent ...	Unknown
Matcher	Matched	Assigned	Unknown
JobAgent@...	Matched	Job Receive...	Unknown
JobAgent@...	Matched	Submitting T...	Unknown
JobWrapper	Running	Job Initializa...	Unknown
JobWrapper	Running	Downloadin...	Unknown
JobWrapper	Running	Input Data R...	Unknown
JobWrapper	Running	Input Data R...	Failed Input Data Resolution
JobWrapper	Rescheduled	Input Data R...	Failed Input Data Resolution
Requested ...	GRID.JINR...	WMS-Test	
GRID.JINR...	GRID.JINR...	BOSS-Test	

Exercise: check jobs

- ❖ Check your job status from job monitoring
 - With “JobGroup”, “Owner”, “Time” filters
- ❖ Try to get statistics of your jobs
 - Quite useful to give an overview when you submit >100 jobs



More exercises



- ❖ Use other parts: “Accounting”
- ❖ Try to understand other failed jobs and find out reasons
- ❖ Try to create your own desktop
- ❖