

# COMDIRAC Interface

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# Why another interface

- ▶ The original DIRAC command line interface is following the traditional “edg” style
  - ▶ Long cumbersome names
  - ▶ Non-intuitive semantics
- ▶ The idea of the COMDIRAC command line interface is to provide a set of commands similar to the UNIX ones in a “look-and-feel” for file and job management
  - ▶ *Author Pierre Gay, University of Bordeaux*

- ▶ The COMDIRAC is maintaining user sessions which allows to work with the logical name space of the grid data in a similar way as with the local file system
  - ▶ Memory of the “current directory” in the logical name space
  - ▶ Possibility to define “environment” for the logical name space operations
- ▶ User sees in the same terminal session 2 parallel shells
  - ▶ Standard UNIX shell
  - ▶ COMDIRAC shell with “d”-commands UNIX alternatives

# Data related commands

- ▶ Most of the COMDIRAC commands are similar to their UNIX counterparts:
  - ▶ **dls, dcd, dpwd, dmkdir, dchmod, ...**
- ▶ Some commands are specific to the grid data:
  - ▶ **dput, dget, drepl, ...**

- ▶ **dsub** is based on semantics of common batch systems:
  - ▶ **dsub hello\_world.sh**
  - ▶ **dsub -J hello\_world.jdl**
- ▶ Job status monitoring with **dstat**
- ▶ Getting job results with **doutput**
  - ▶ e.g. **doutput -g MandelbrotQuest**

- ▶ The COMDIRAC client commands are available to the GRIDFR users out of the box
  - ▶ **dirac-install -V gridfr**
- ▶ The COMDIRAC session is initiated with the **dinit** command
  - ▶ Generates user proxy
  - ▶ Creates minimal necessary environment
    - ▶ Suitable for the tutorial users
- ▶ Environment
  - ▶ `dgetenv`, `dsetenv`
  - ▶ `$HOME/.dirac/dcommands.conf`

- ▶ The COMDIRAC package is a recent addition to the DIRAC Project
  - ▶ Might be unstable in certain aspects ;(
  - ▶ Your feedback is welcome to make it better !

- ▶ A detailed COMDIRAC tutorial is available on the web:
  - ▶ <https://github.com/DIRACGrid/COMDIRAC/wiki>
  - ▶ Examples are given for *vo.france-grilles.fr*, change for *vo.formation.idgrilles.fr*
- ▶ Use the COMDIRAC interface for the Mandelbrot Quest tasks

# Mandelbrot example

- ▶ JDL for bulk job submission with JobGroup defined

```
Executable = "mandelbrot";  
...  
JobGroup = "MyMandelbrotQuest";  
Parameters = 100;  
...
```

- ▶ Submit
  - ▶ **dsub -J my\_mandelbrot.jdl**
- ▶ Get results
  - ▶ **doutput -g MyMandelbrotQuest -D mydir -n**
- ▶ Make the movie
  - ▶ **cd mydir**
  - ▶ **convert \*.bmp movie.gif**