



Grid 5k - your turn - solutions

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Creating the alias: explanations

- 1) Go to the folder `.ssh/` on your machine (you can do it manually, in your file explorer)
- 2) Create a file called "config", without any extension (you can also do it manually)
- 3) Paste the following lines in the "config" file, replacing "login" with your own Grid login

```
# Direct connection to hosts within Grid'5000 which are not reachable directly
# Alias for the gateway (not really needed, but convenient)
Host g5k
  User your-login
  Hostname access.grid5000.fr
  ForwardAgent no

Host *.g5k
  User your-login
  ProxyCommand ssh g5k -W "${basename %h}.g5k):%p"
  ForwardAgent no
```

You can paste directly from https://www.grid5000.fr/w/SSH#Using_SSH_ProxyCommand_feature_to_ease_the_access_to_hosts_inside_Grid.275000

Now you can log in by just using `ssh nancy.g5k` and use it in your `scp` commands too (see next slides)

Exercise 1: transfer a .py file from your machine to Grid

- ▶ Create a folder on Grid for this session :
mkdir practical_session (from Grid's terminal)
- ▶ Transfer the files from your machine to your new Grid folder:
to do from a **local terminal**, not from Grid

If you set up the alias:

```
~$ scp Documents/my_cheatsheet.txt nancy.g5k:~/practical_session
```

If you didn't set up the alias:

```
~$ scp Documents/my_cheatsheet.txt login@access.grid5000.fr:nancy/practical_session
```

(replace "login" with your own Grid login)

These commands will transfer the file "my_cheatsheet.txt", located in my folder "Documents" on my machine, to my folder "practical_session" that I just created on my Grid account, on the Nancy site.

Exercise 2: transfer a file from Grid to your machine

- ▶ Create a .txt file containing "Hello from Grid5k!": **echo "Hello from Grid5k!" > hello.txt** (from Grid's terminal)
- ▶ Transfer it to your machine (from your local terminal):

```
~$ scp nancy.g5k:~/practical_session/hello.txt ~Documents/
```

or (without the alias)

```
~$ scp login@access.grid5000.fr:nancy/practical_session/hello.txt ~Documents/
```

These commands will transfer the file "hello.txt", located in my folder "practical_session" on Grid, to my local "Documents" folder.

Exercise 3: Reserve jobs (all from Grid's terminal)

- ▶ Reserve a job in interactive mode for 10 minutes:
`oarsub -l -l walltime=0:10`
- ▶ Reserve a job on cluster *grvingt*, with 1 GPU:
`oarsub -q production -p "cluster='grvingt'" -l gpu=1 -l`
- ▶ Reserve a job that will start running in 10 minutes (planification): `oarsub -l -r '2024-25-09 16:30:00'`
- ▶ Kill both jobs: `oardel <jobID>`

Note: You may get an error because you're not allowed to reserve some resources (as a master's student)

Exercise 4

The point of this exercise was to make you see why tmux can be useful: in the first part, once you close the terminal or the wifi connection, the script stops, so when you come back to Grid you can see that the script didn't continue printing numbers.

On the other hand, in the second part, when using a tmux, when you come back to Grid you can see that your script continued running without you and printed numbers while you were gone.

Conclusion: use tmux ;)!

*Reminder: you can create a tmux session with
tmux new -s my_session*

About environmental impact

- ▶ Have a look at <https://github.com/lfwa/carbontracker>
- ▶ Check your "statistics" at <https://api.grid5000.fr/stable/users/> (and use them for <http://calculator.green-algorithms.org/>)