Grid 5k - your turn

Fanny Ducel

fanny.ducel@inria.fr / https://fannyducel.github.io/teaching/

Main sources of information

https://www.grid5000.fr/w/Grid5000:Home

Inspiration from Chuyuan Li's slides from last year

About the exam

- 10/10 (Thursday, 16h)
- 1h for the whole course: Git, Latex, Shell, Grid5k

For the part on Grid:

- a few questions, no surprises
- no need to know by heart all the commands but to understand them/be able to decipher them
- understand the key concepts

You received this email...

Subject: [Grid5000-account] Your Grid5000 account was created by ...

Dear `Firstname Lastname` (`username`),

You receive this email because your manager (...) requested a Grid5000
account for you in the context of a tutorial. To get more information about
Grid5000, see the website: http://www.grid5000.fr.

Your login on the Grid5000 platform is: `username`.

The next two steps for you are now to:

1/ Finish setting up your access to the platform by creating a password and an SSH key.

   To do so, open the following URL:
   https://public-api.grid5000.fr/stable/users/setup_password?password_token=`XXXXXXXXXXXXXXXXXXXX`#special.

2/ Read carefully the two following pages:

   The Grid5000 getting started documentation (https://www.grid5000.fr/w/Getting_Started),
   which gives important information on how to use the platform.

   The Grid5000 usage policy (https://www.grid5000.fr/w/Grid5000:UsagePolicy),
   which gives the rules that MUST be followed when using the platform. Note that any
   abuse will automatically be detected and reported to your manager.

Let's create your SSH keys

Let's create your SSH keys

It should be stored in (1). Windows Users: try (1b) (+ cd, dir).
If not, create a new pair (2):

```
(1) cat ~/.ssh/id_*.pub
```

```
(1b) type ~/.ssh/id_*.pub
```

```
(2) ssh-keygen -t ed25519 -a 100
```

First authentification (from last time)

Connect to access machine: **ssh login@access.grid5000.fr**
(replace "login" with your own)

- Specify a site: **ssh site** (grenoble lille luxembourg lyon **nancy** nantes rennes sophia toulouse)
- Put in your password
- View machine list on this site

First time on Grid5k: tip (from last time)

Alias to be able to use **ssh nancy.g5k**

https://www.grid5000.fr/w/SSH#Using_SSH_ProxyCommand_feature_to_ease_the_access_to_hosts_inside_Grid.275000

For Windows Users
https://www.grid5000.fr/w/SSH#Windows_users

Some useful bash commands

```
mkdir folderName (make directory)
cd path2folder (change directory)
ls (list elements in a folder)
touch myFile.txt (create a file)
echo “hello g5k” > myFile.txt (write in a file)
cat myFile.txt (show content of the file)
rm -rf myFile.txt (remove = delete file)
```

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

- Create a folder on Grid for this session
- Create some files on your machine to send to Grid (it could be something useful, like a cheatsheet with Grid commands!)
- Transfer the files from your machine to your new Grid folder

Exercise 2: transfer a file from Grid to your machine

- Create a .txt file containing "Hello from Grid5k!"
- Transfer it to your machine

Exercise 3: Reserve jobs

- Reserve a job in interactive mode for 10 minutes
- Reserve a job on cluster *grvingt*, with 1 GPU
- Reserve a job that will start running in 10 minutes (planification)
- Kill both jobs

Exercise 4: Run a python file on a job

- Reserve a job (no need for a GPU, it could even run without a job)
- Create a python file that should print numbers from 1 to 100 but with a pause of 2 seconds in between each number. Run this file.
- After a few seconds, close the terminal or your wifi!
- Come back to Grid: what happened?

Exercise 4: Run a python file on a job **with tmux**

- Do the same as in ex 3, but within a tmux session
- If you run the python file, close the terminal/wifi and come back, what happens? What's the difference?

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/)