Grid 5k - your turn

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Foreword

First authentication

Exercises

Main sources of information

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

Inspiration from Chuyuan Li's slides from last year

About the exam

- 16/10, 14-15h
- 1h for the whole course: Git, Latex, Shell, Grid5k (15 min/topic)

For the part on Grid:
- a few questions, no surprises
- no need to know all the commands by heart
- however you should understand them/be able to decipher them
- understand 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= XXXXXXXXXXXXXXXXXXXXX #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

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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 authentication (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/`)