Grid 5k - your turn

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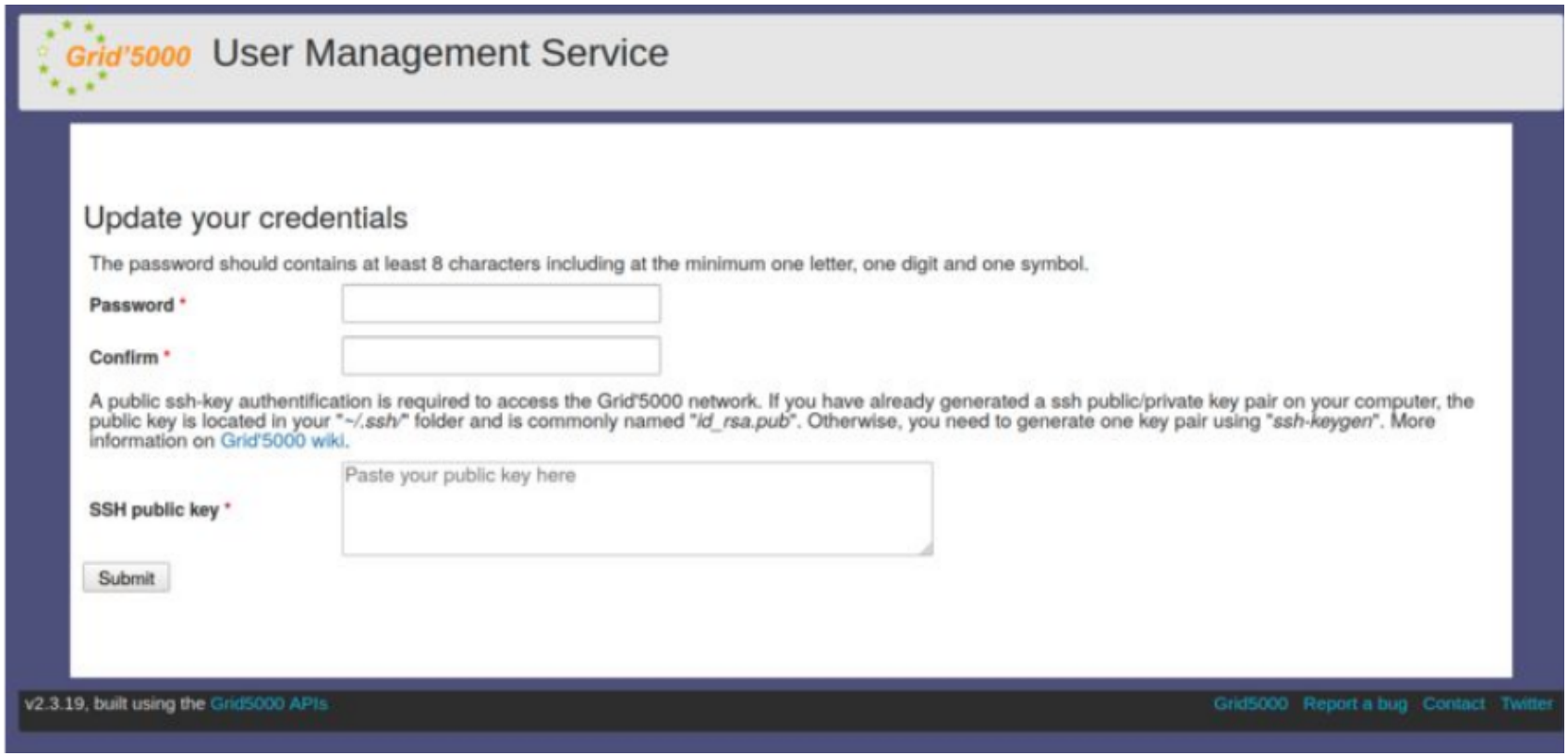
Main sources of information

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

https://calcul.math.cnrs.fr/attachments/evt/2020-04-formation-g5k/slides.pdf

Inspiration from Chuyuan Li's slides from 2023-2024
https://members.loria.fr/ChuyuanLi/activities/

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 authentication (reminder)

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

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

First time on Grid5k: tip - use an alias

Alias to be able to use **ssh nancy.g5k** to log in and transfer files

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

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 4b: 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?

If you're done early

Look at these visualization tools (and try to set them up when applicable):

- https://intranet.grid5000.fr/oar/Nancy/monika.cgi
- https://intranet.grid5000.fr/oar/Nancy/drawgantt-svg-prod/
- https://www.grid5000.fr/w/Unmaintained:Monitoring_deployed_nodes