

# Tutorial Slurm

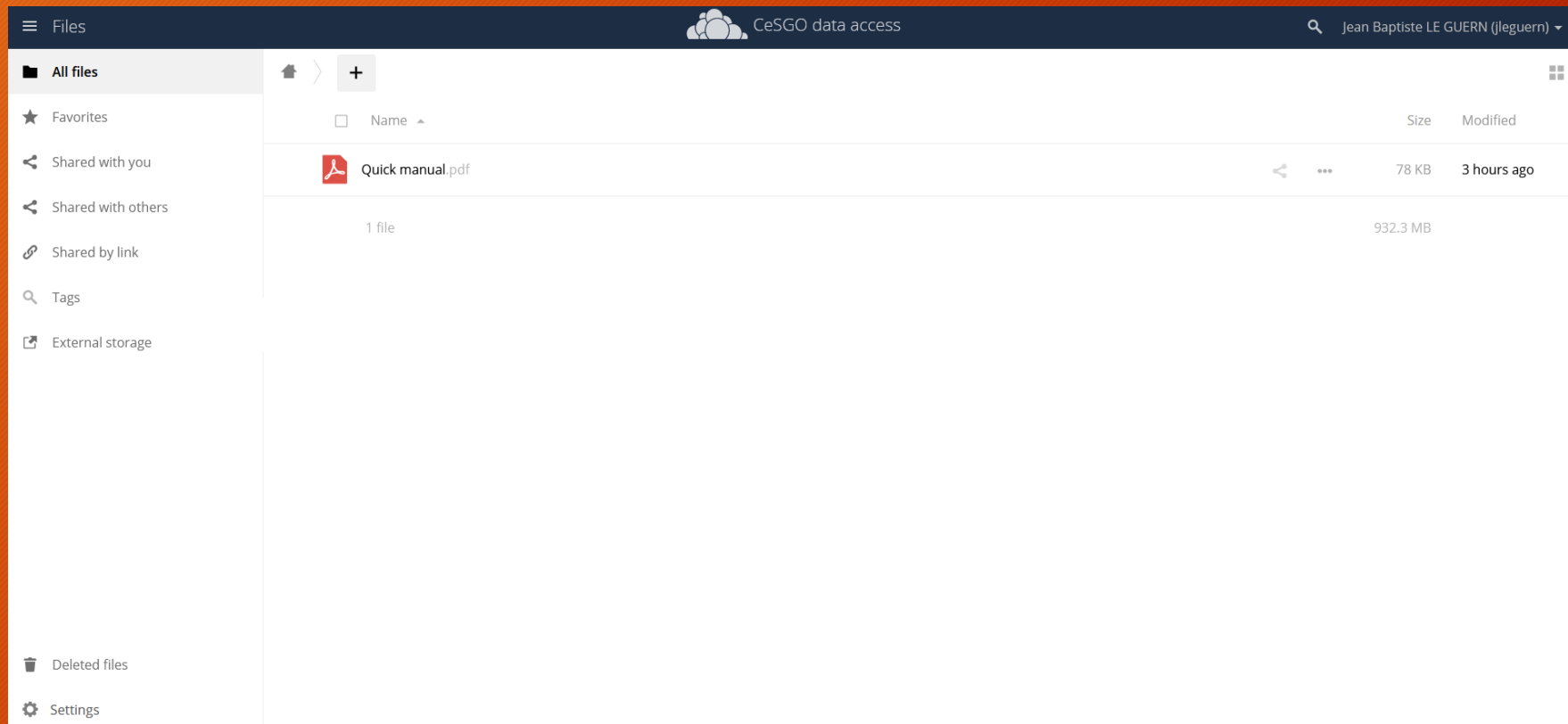
#2 Data & Cluster  
Example with Genouest

# Slurm - Upload data

- This tutorial requires that you have an account on GenOquest and a SSH Access.
- If not, follow the previous tutorial  
« Tutorial Slurm - #1 SSH Access »

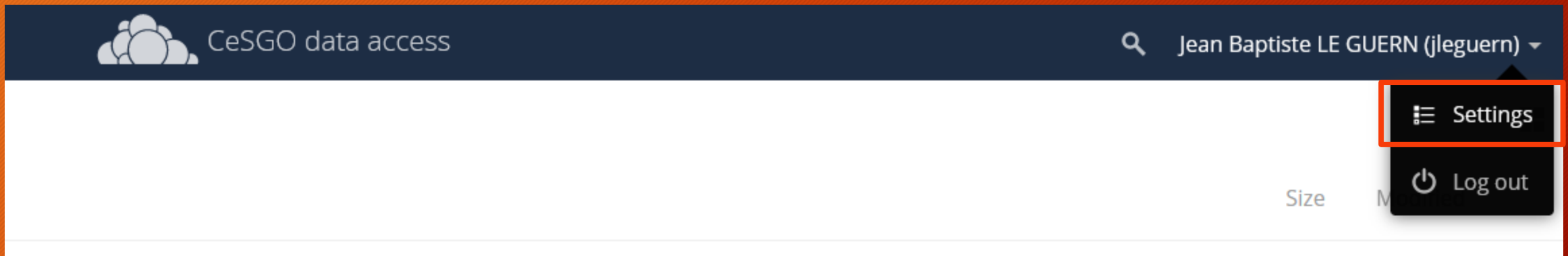
# Slurm - Upload data

- Go on <https://data-access.cesgo.org>
- Use your login from your GenOuest account
- And you should see something like this :



# Slurm - Upload data

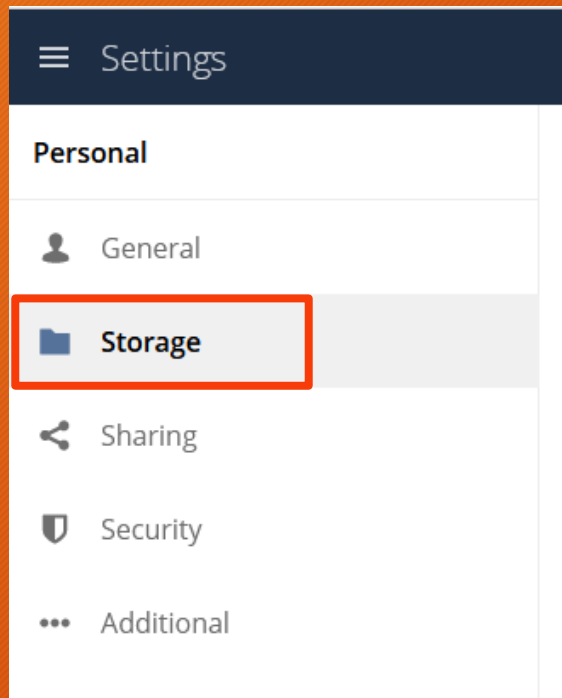
- Click on your user\_name at the top right of the page and click on "Settings"



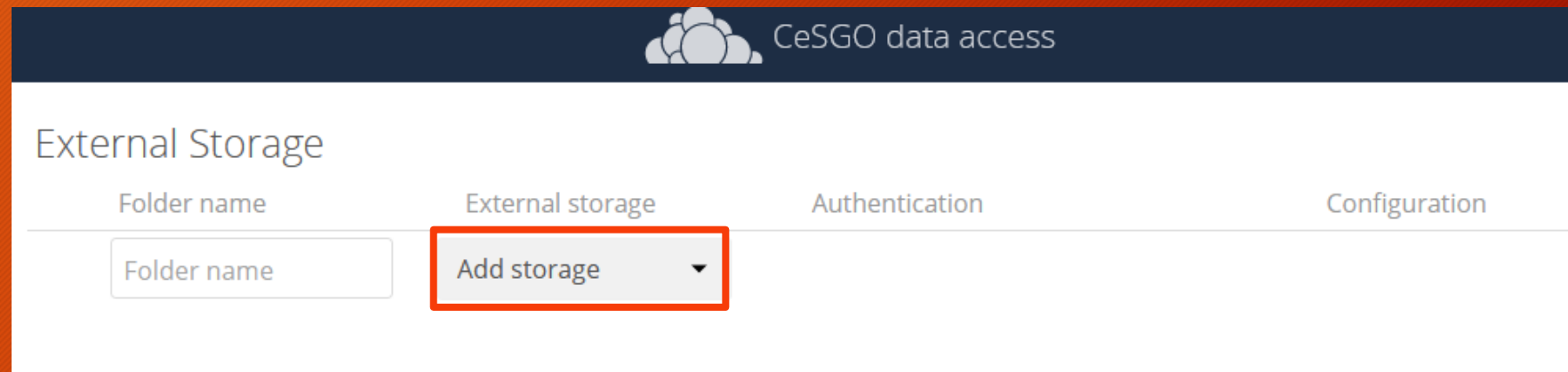


# Slurm - Upload data

- On this new page, look for "Storage" on the left



- Then, click on "Add storage" and choose "SFTP" \*



- \* : We made this choice for the purpose of the tutorial, for more informations please refer to the CeSGO documentation


# Slurm - Upload data

Choose « RSA  
pubic key »

Fill in with  
« genossh »

Path of your folder on genossh, like  
« ./home/genouest/group/user\_name »  
Or « ./groups/my\_group »  
(you can find this in your GenOquest account)

External Storage

Folder name	External storage	Authentication	Configuration	
 storage_name	SFTP	RSA public key ▼	genossh user_name Generate keys	./home/...../user_n Public key ⚙️ 🗑️
Folder name	Add storage ▼			

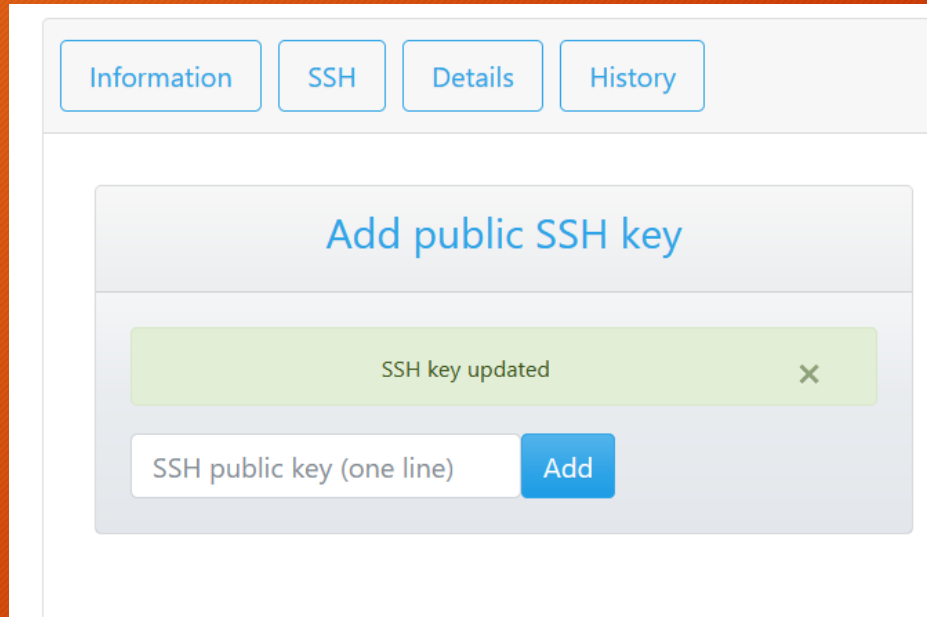
(optionnal)  
Give a name to  
your folder

Fill in with  
your GenOquest  
login

Click on « Generate keys »  
And a new key should appear in « Public key ».  
Copy the key, you'll need it right after.

# Slurm - Upload data

- Go in your GenOquest account (<https://my.genouest.org/manager2/user>)
- Paste your new key and "Add" it.




The screenshot shows the 'Add public SSH key' interface in the GenOquest user management system. At the top, there are four tabs: 'Information', 'SSH', 'Details', and 'History'. The 'SSH' tab is selected. Below the tabs, the title 'Add public SSH key' is displayed. A green notification bar indicates 'SSH key updated' with a close button. Below this, there is a text input field labeled 'SSH public key (one line)' and a blue 'Add' button.

- If you don't remember this part, check again the previous tutorial "Tutorial GenOquest – SSH Access"

# Slurm - Upload data

- Come back on the previous page "Settings" on the CeSGO website

Folder name	External storage	Authentication	Configuration
 storage_name	SFTP	RSA public key	genossh ./home/...../user_ni user_name Public key Generate keys
Folder name	Add storage		



- If you see this rectangle, something went wrong. Check every field and that you have the same key there and in your GenOquest account. Else, check the CeSGO documentation.

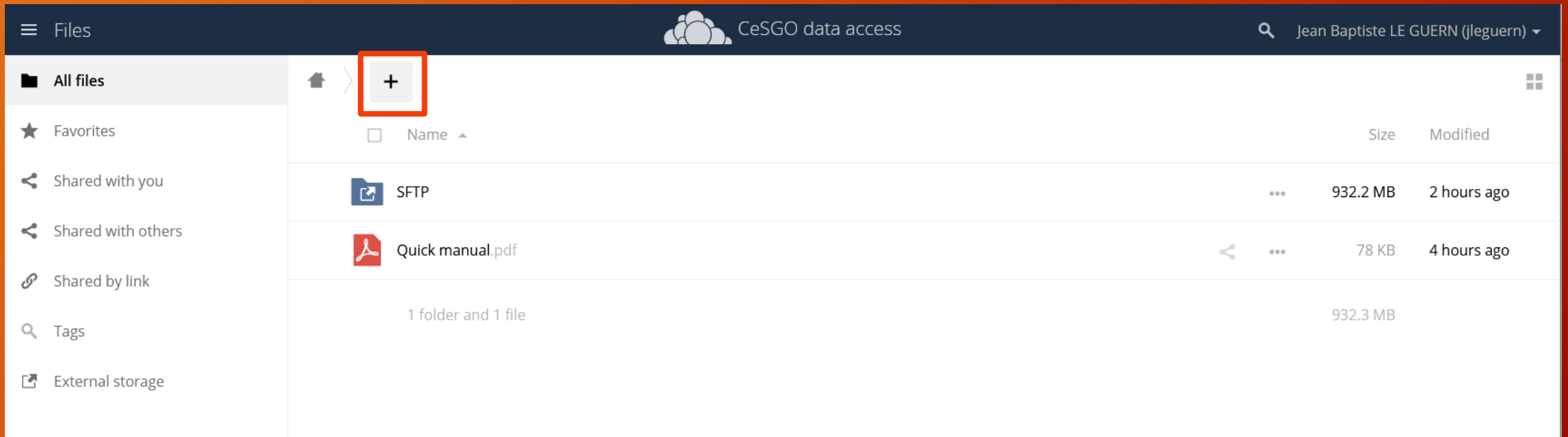


- If you see this like in the image above, congrats, you can continue to the final step.



# Slurm - Upload data

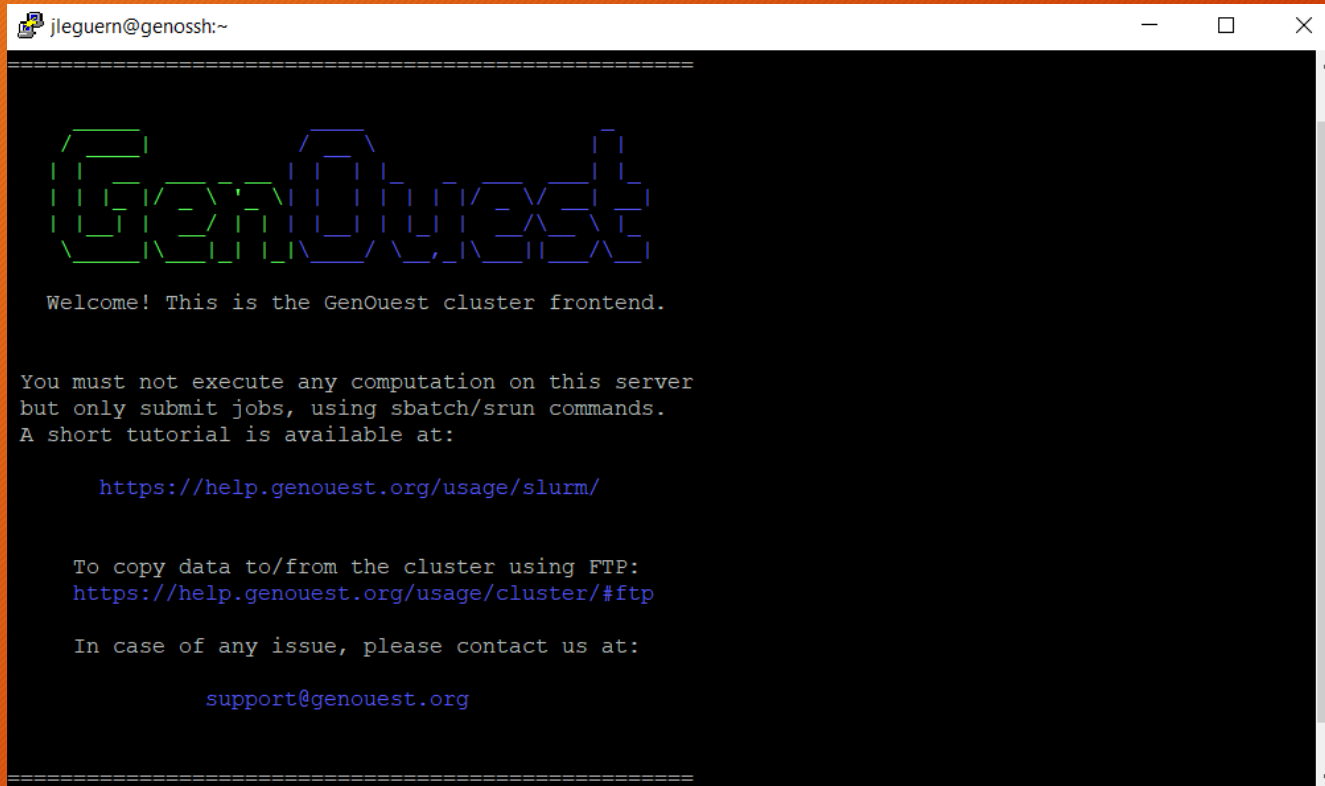
- Go back on <https://data-access.cesgo.org>



- Refresh the website and you should see your new folder with the name you gave it earlier
- Double click on your folder and click on the "+" button above, you can now add your local data.

# Cluster (example with a Python script)

- Access to `genossh.genouest.org` like in the first tutorial



A terminal window titled 'jleguern@genossh:~' displays the GenOuest cluster frontend. The window has a dark background with green and blue text. At the top, the 'GenOuest' logo is rendered in a stylized, blocky font. Below the logo, the text reads: 'Welcome! This is the GenOuest cluster frontend.' followed by instructions: 'You must not execute any computation on this server but only submit jobs, using sbatch/srun commands. A short tutorial is available at:'. A URL is provided: `https://help.genouest.org/usage/slurm/`. Further down, it says 'To copy data to/from the cluster using FTP:' followed by another URL: `https://help.genouest.org/usage/cluster/#ftp`. At the bottom, it says 'In case of any issue, please contact us at:' followed by the email address `support@genouest.org`. The terminal window has standard Linux window controls (minimize, maximize, close) in the top right corner.

```
jleguern@genossh:~  
=====
```

GenOuest

Welcome! This is the GenOuest cluster frontend.

You must not execute any computation on this server  
but only submit jobs, using sbatch/srun commands.  
A short tutorial is available at:

`https://help.genouest.org/usage/slurm/`

To copy data to/from the cluster using FTP:  
`https://help.genouest.org/usage/cluster/#ftp`

In case of any issue, please contact us at:

`support@genouest.org`

```
=====
```

- Then, type these two lines :  
*(don't write `user_name` of course, but your GenOuest login)*

```
srun --pty bash  
squeue -u user_name
```

# Cluster (example with a Python script)

- First line borrows a node to execute your future jobs

```
srun --pty bash
```

- Second one shows you informations about it

```
squeue -u user_name
```

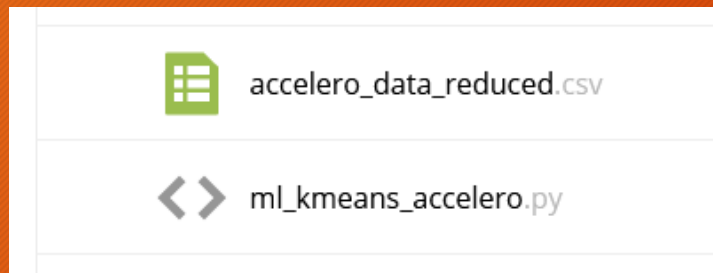
- The name of your node should look like this  
(except you probably don't have the n° 18)

```
c11n018
```



# Cluster (example with a Python script)

- On CeSGO Data Access, I uploaded in my storage some data and a Python script that does some Machine Learning on it



- But I still need to install some packages...
- In my case, i'll create a new environnement with Conda, but it's juste an example, feel free to experiment.



# Cluster (example with a Python script)

- To activate conda

```
. /local/env/envconda.sh
```

- Create a conda environnement named "my\_env" with the package "pandas" and "scikit-learn" in it

```
conda create -p ~/my_env pandas scikit-learn
```

- Activate the environnement

```
To activate this environment, use
```

```
$ conda activate /home/genouest/*****/*****/my_env
```

- I can now launch my Python script in this conda env

```
python3 ml kmeans accelero.py
```