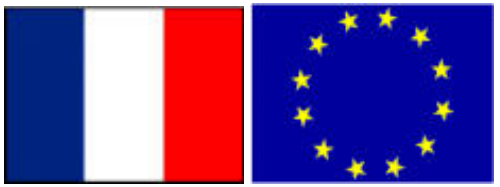
Centrale DIGITAL LAB

La Plateforme_ Marseille



Big Data - CentraleDigitalLab@LaPlateforme - 2023-2024

Using MonogDB servers of CentraleSupelec DCE using *dcejs*, *ssh* or *vscode*

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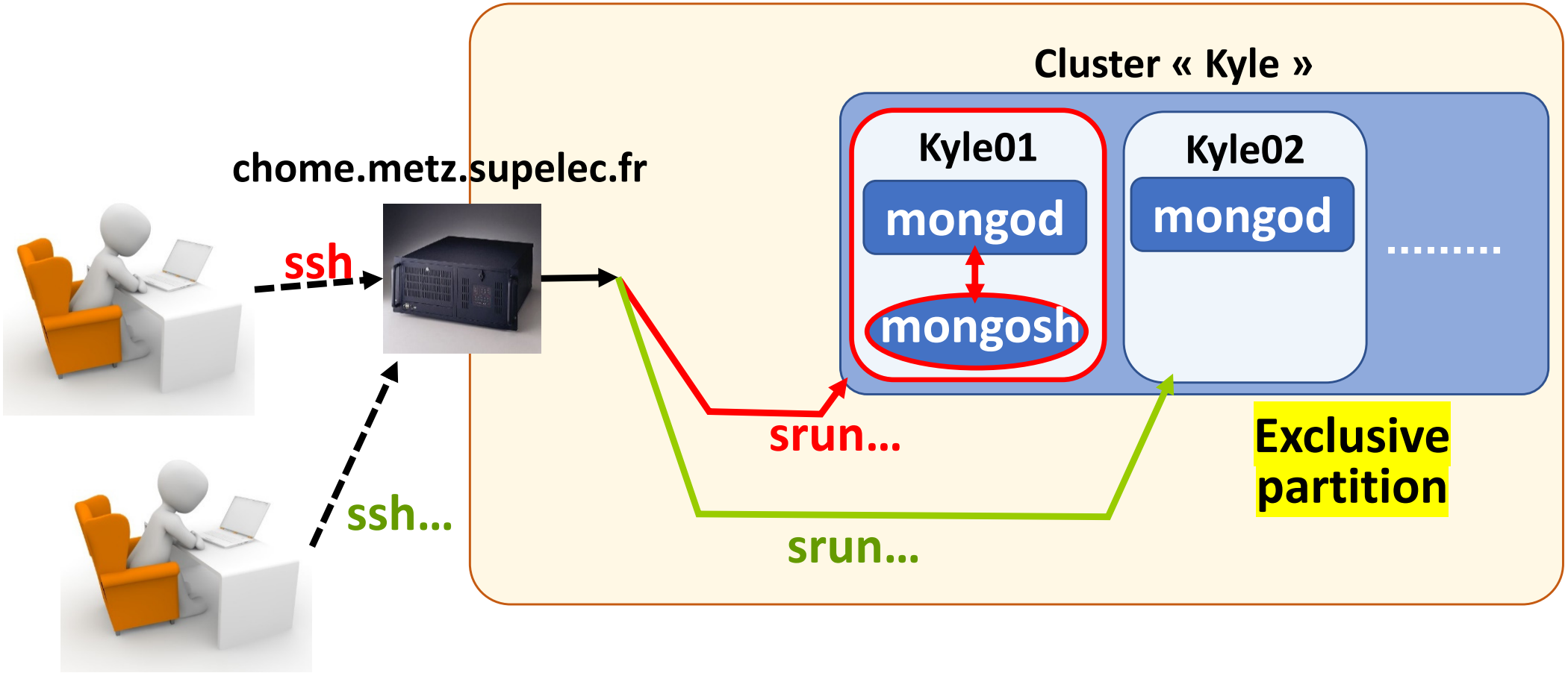
LISN LABORATOIRE INTERDISCIPLINAIRE DES SCIENCES DU NUMÉRIQUE

région lorraine Grand Est ALSACE CHAMPAGNE-ARDENNE LORRAINE

Région îledeFrance

CPU clusters

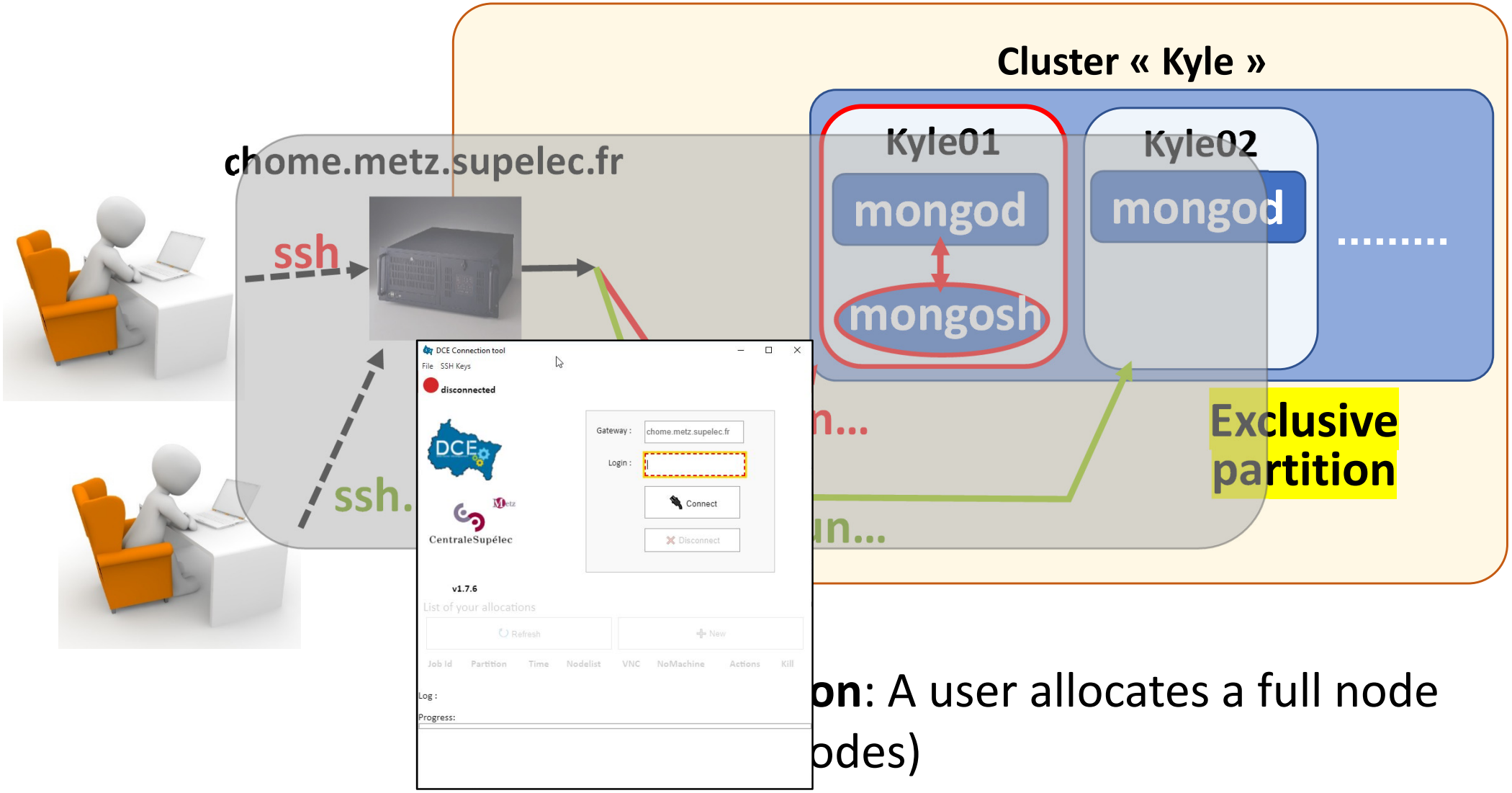


Exclusive partition: A user allocates a full node (or several full nodes)

Using MonogDB servers of CentraleSupelec DCE using *dcejs*, *ssh* or *vscode*

- **Connection to the DCE using *dcejs***
- Connection to the DCE using *ssh*
- Connection using *vscode*

CPU clusters

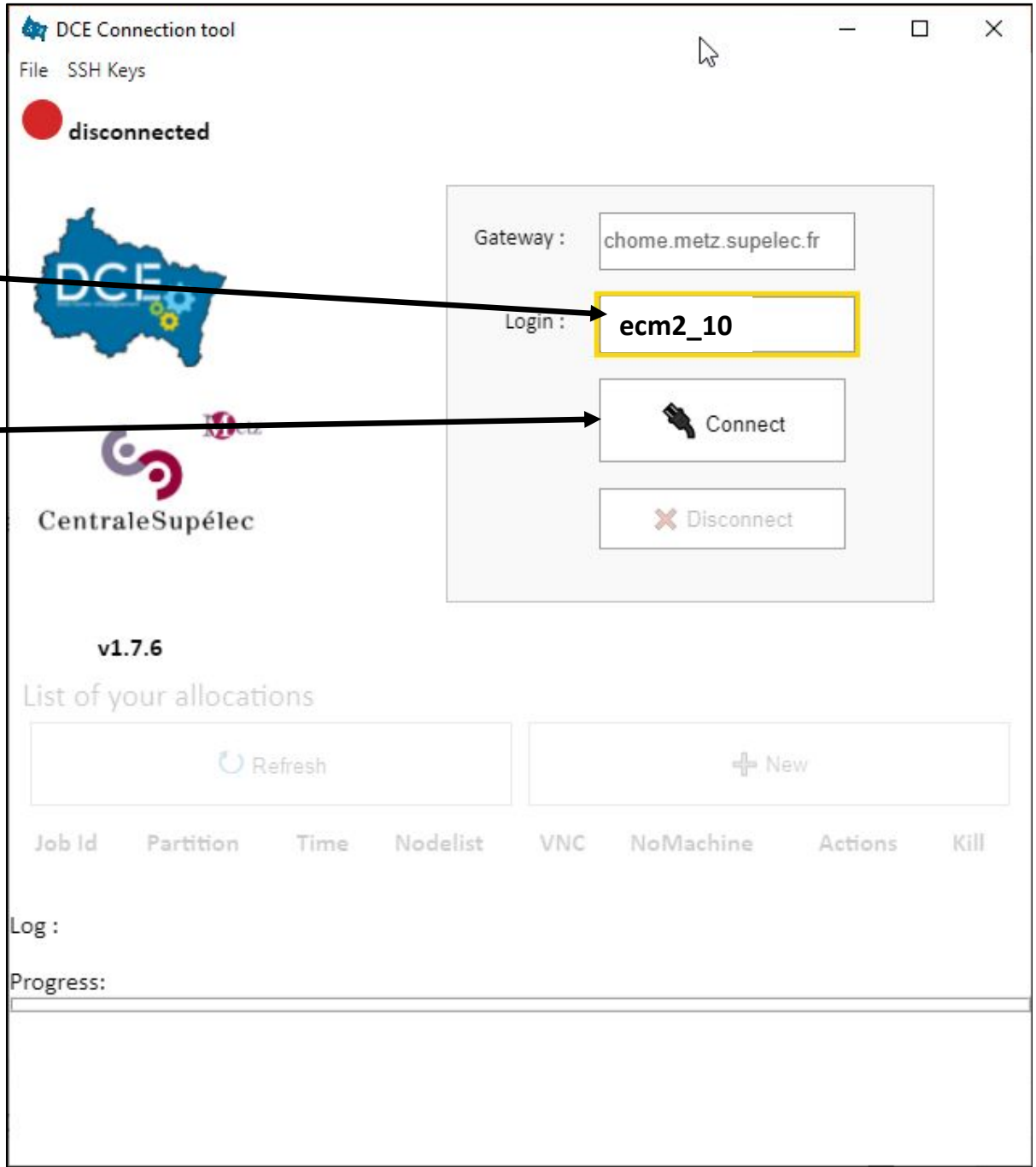


on: A user allocates a full node

odes)

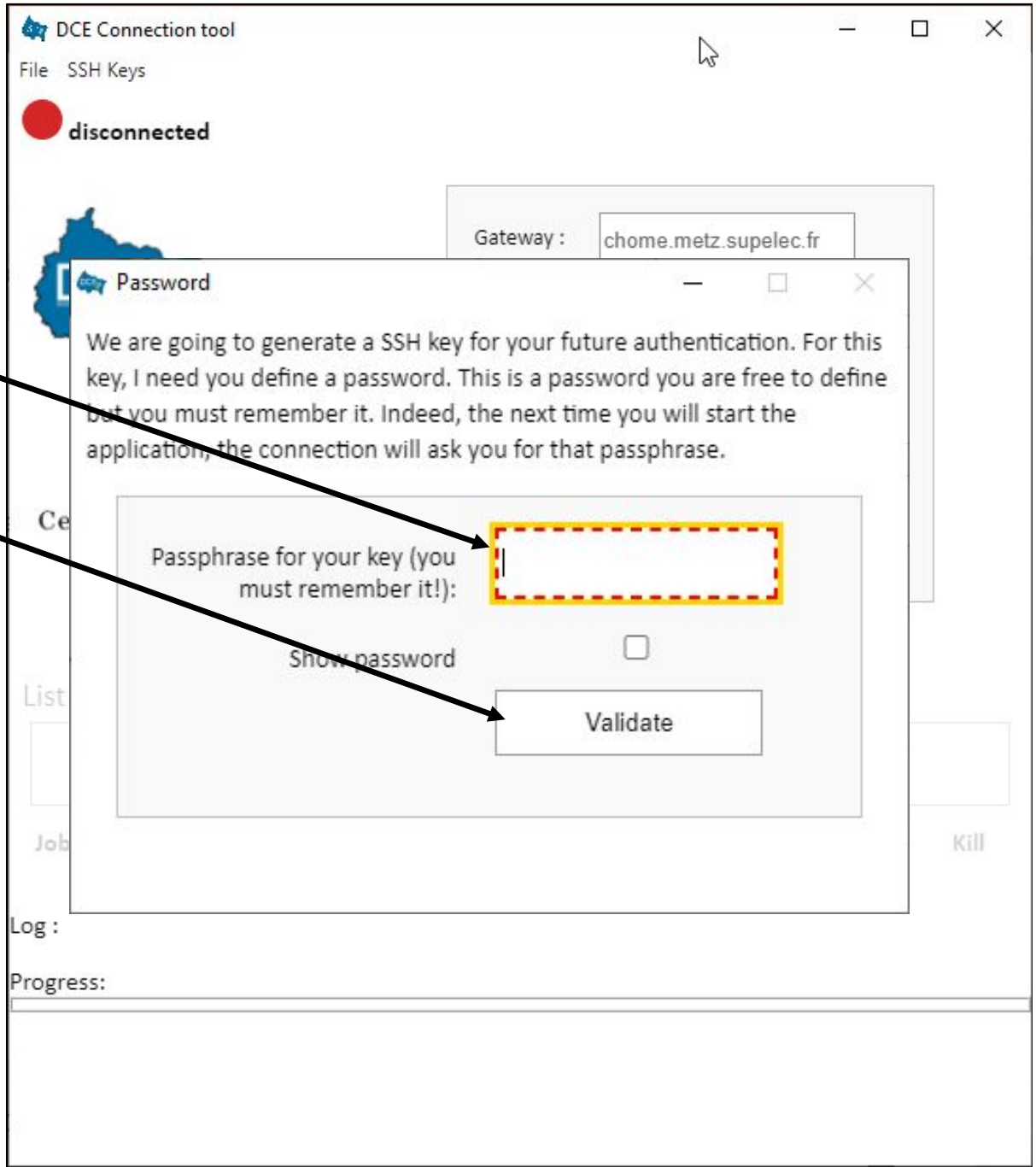
CPU clusters

1. Launch **dcejs**
   - Write your ecm1_*xx* login
   - Click on « Connect »



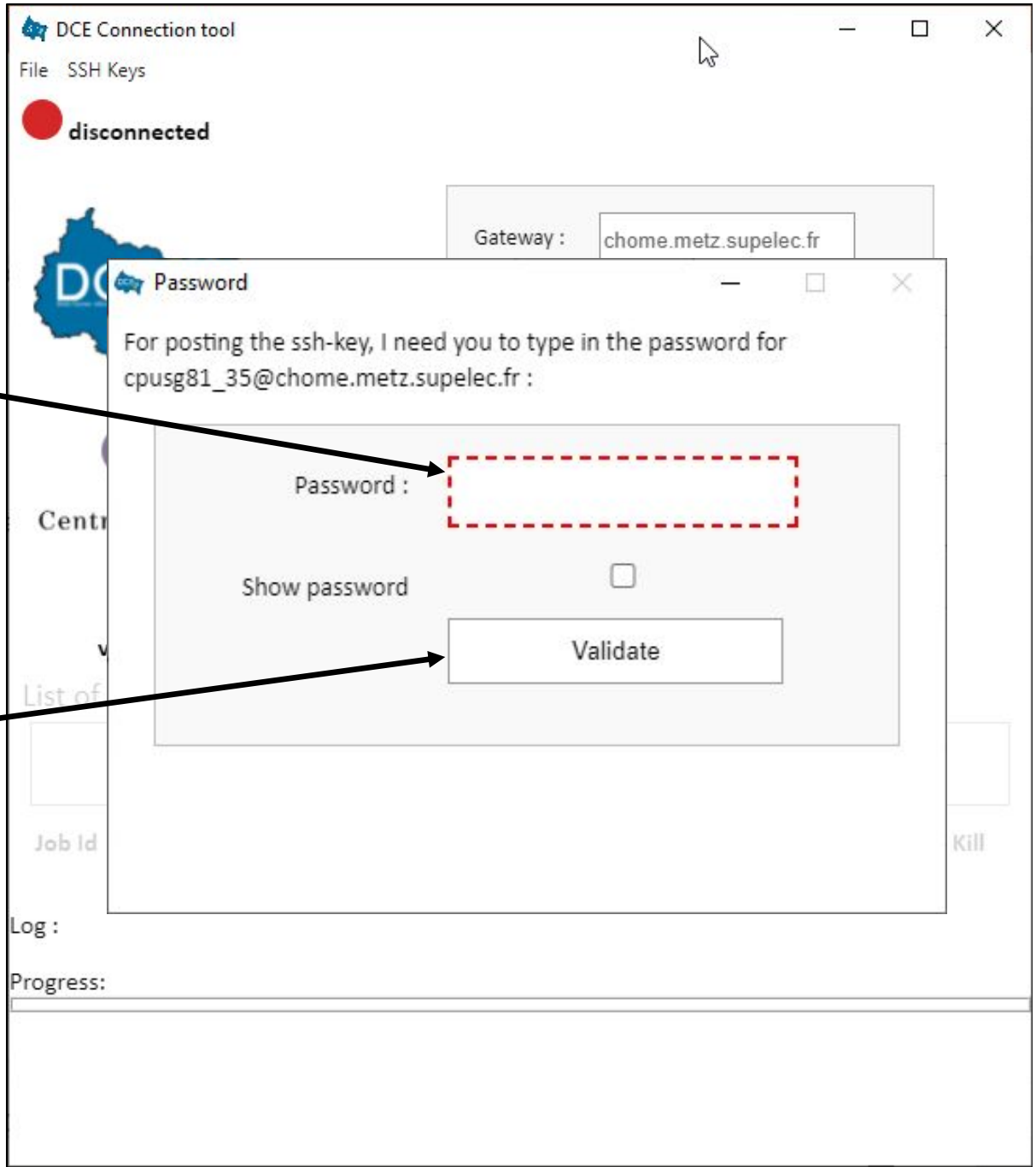
CPU clusters

2. Launch **dcejs**
   - ……
   - Enter a passphrase (choose a basic one)
   - Click on « Validate »



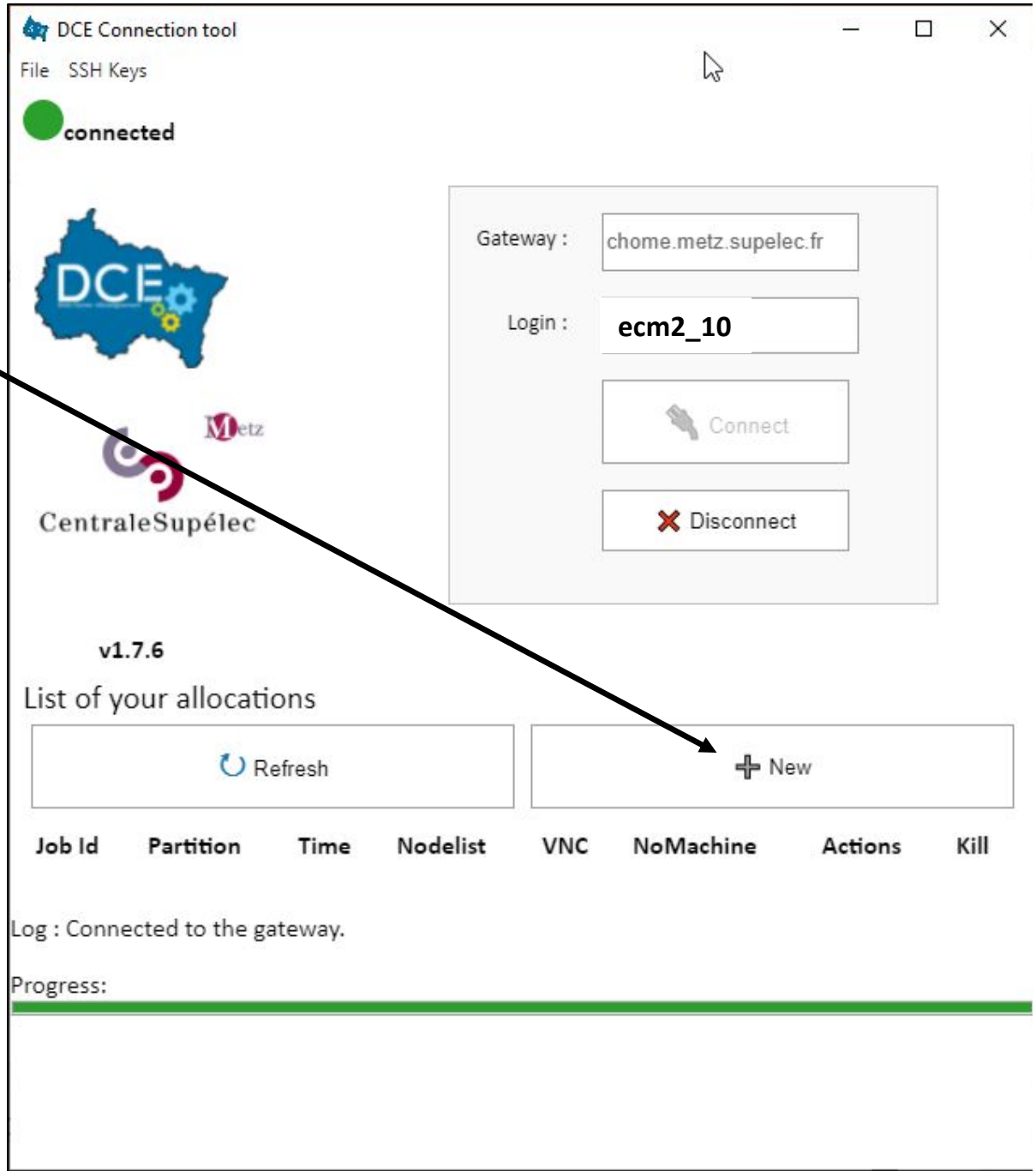
CPU clusters

3. Launch **dcejs**
   - ……
   - During the first connexion to the DCE you will need to enter the passwd of your DCE login
   - Click on « Validate »



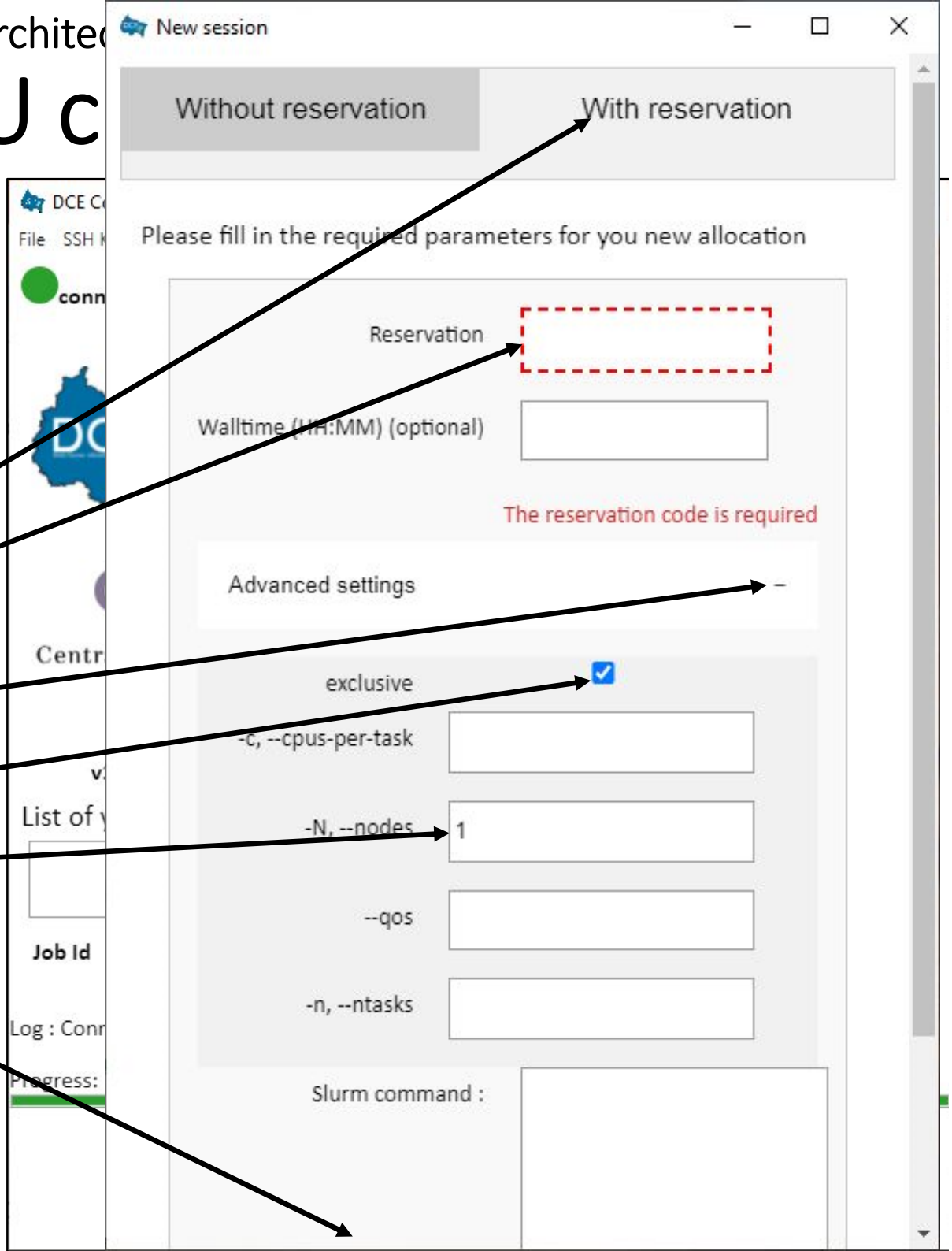
CPU clusters

4. Launch **dcejs**
   - ……
   - Click on « + New » to start to allocate some computing resources



CPU c

5. Launch **dcejs** during the lab
   - ……
   - Click on « With res… »
   - Enter a reservation code (*ask to the Prof)*
   - Open settings
   - Check the box
   - Enter: 1
   - Click on « Validate »

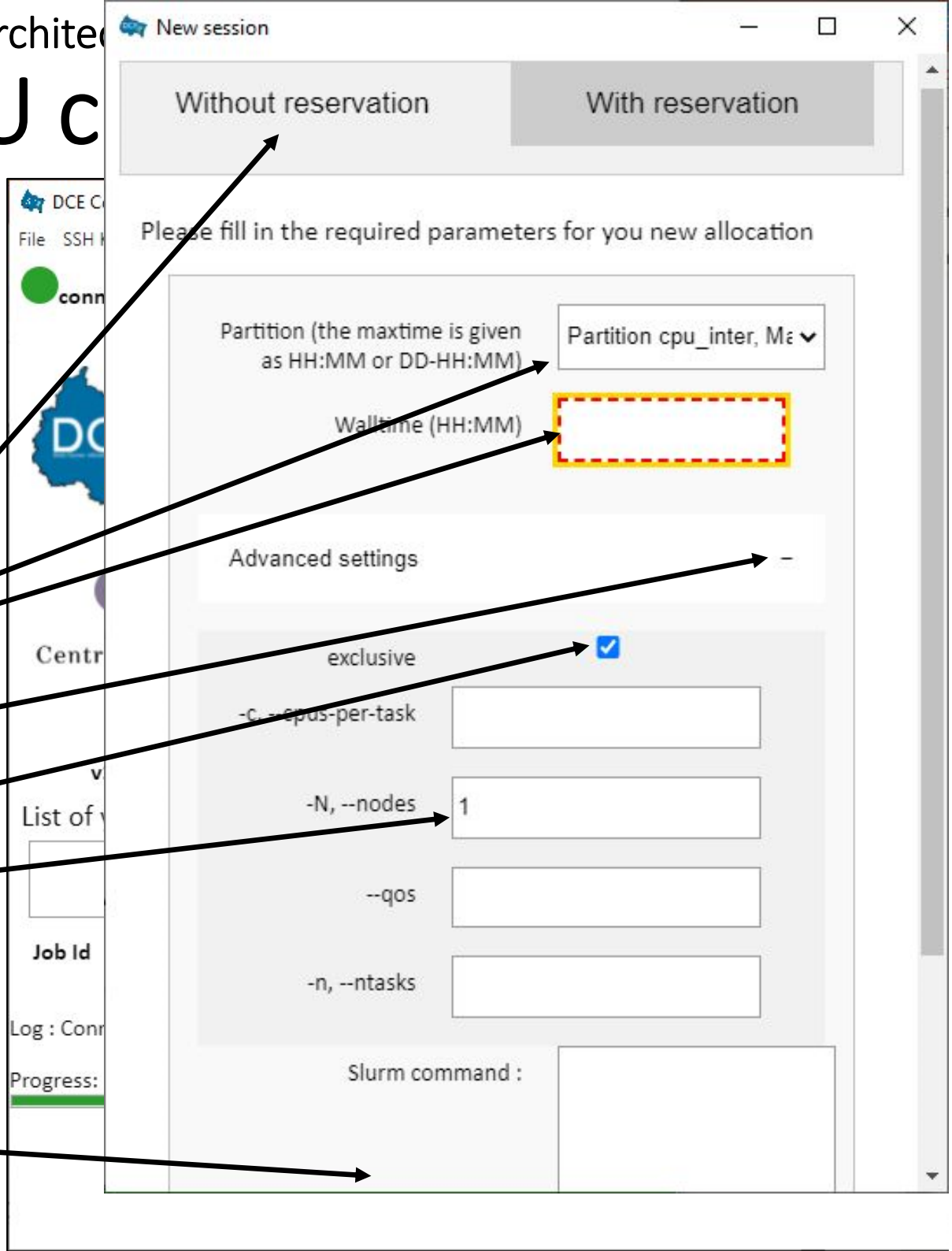


CPU c

5. Launch **dcejs** after the lab

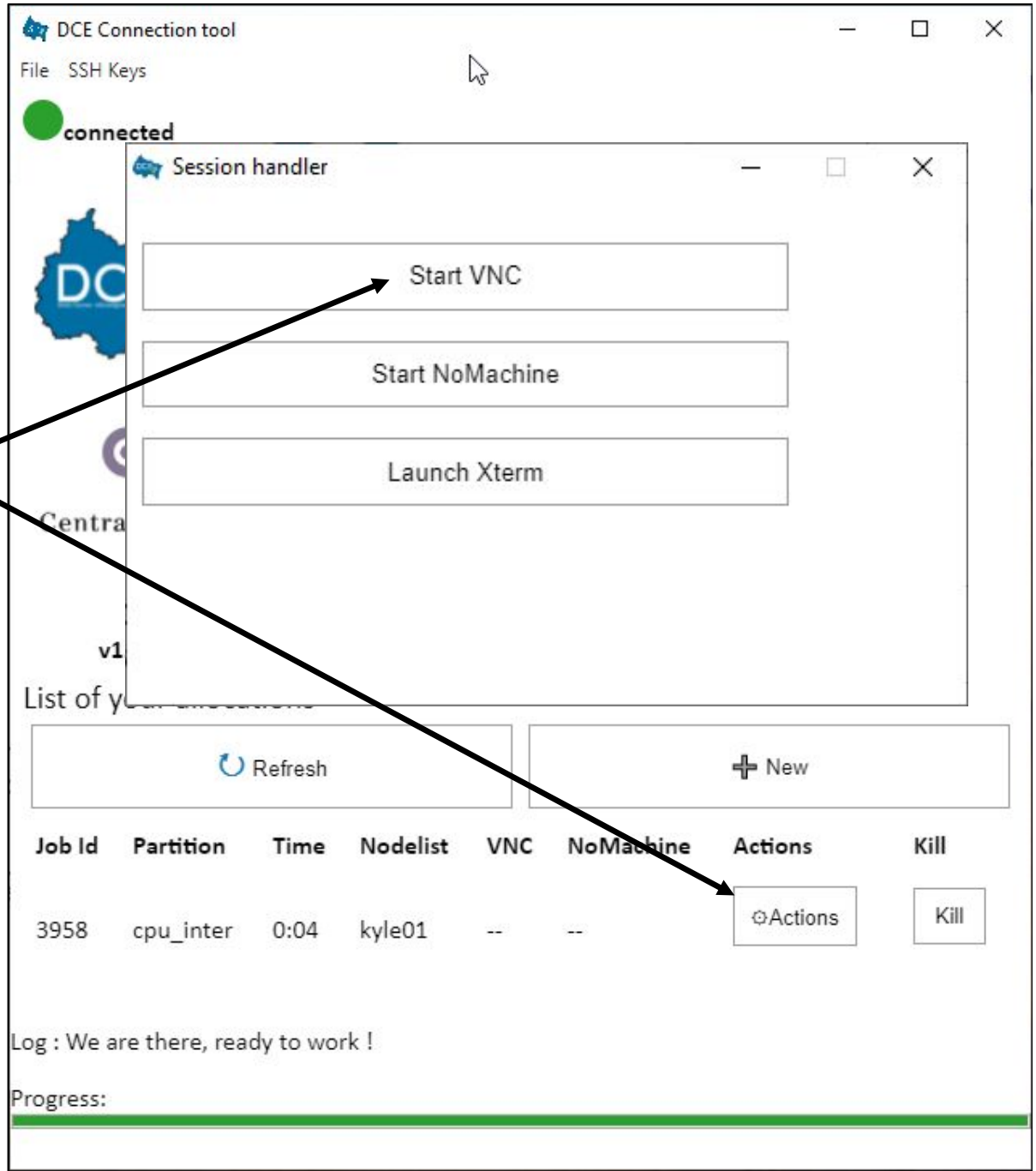
- ……
- Click on « Without… »
- Select partition cpu_tp
- Specify 2:0 (2h)
- Open settings
- Check the box
- Enter: 1

- Click on « Validate »



CPU clusters

6. Launch dcejs
   - ……
   - Click on « Actions »
   - Click on « Start VNC »

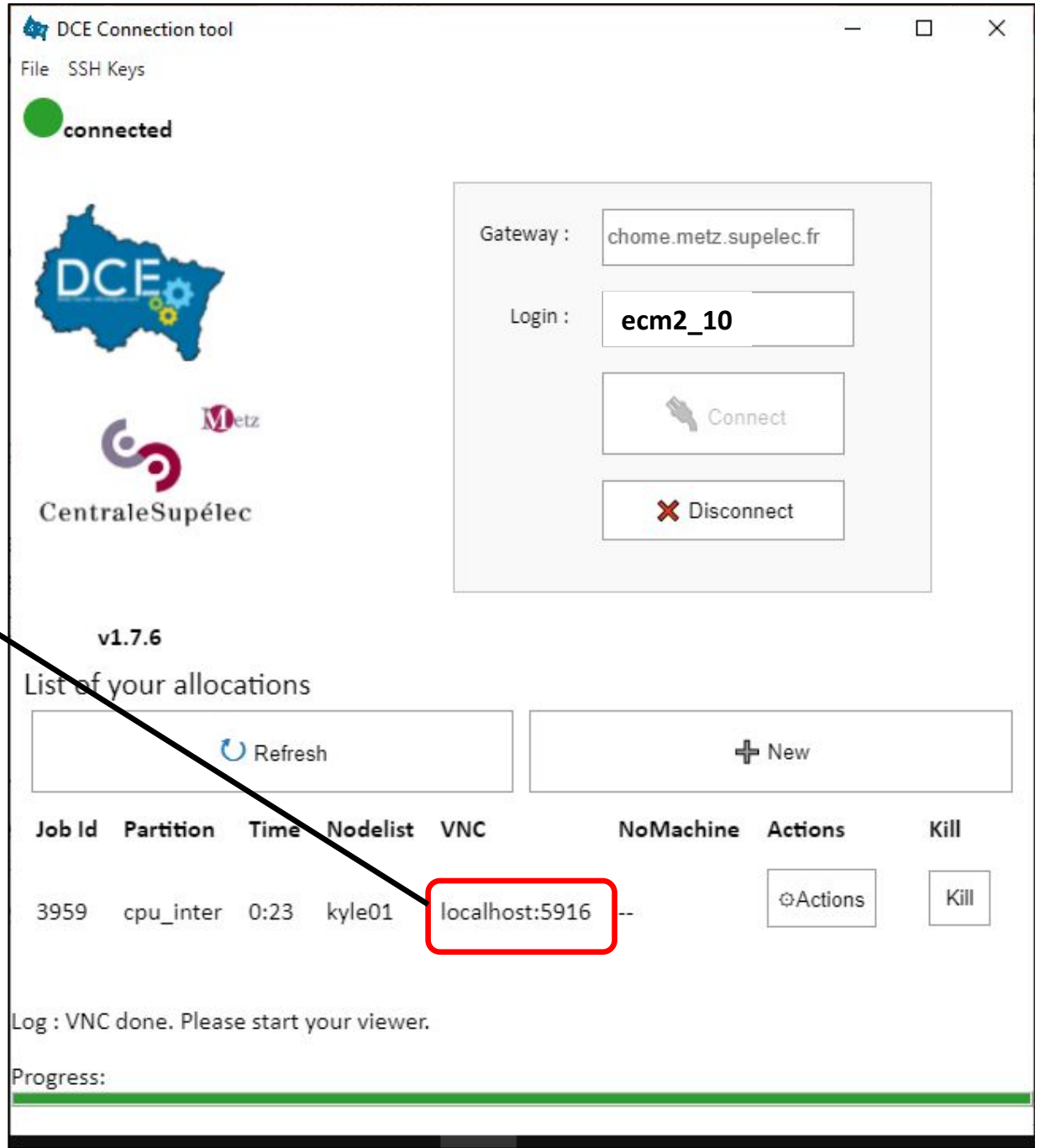


CPU clusters

7. Launch dcejs
   - ……
   - Get the local port number

     Ex: 5916
   - Launch your VNC client/viewer with all default options

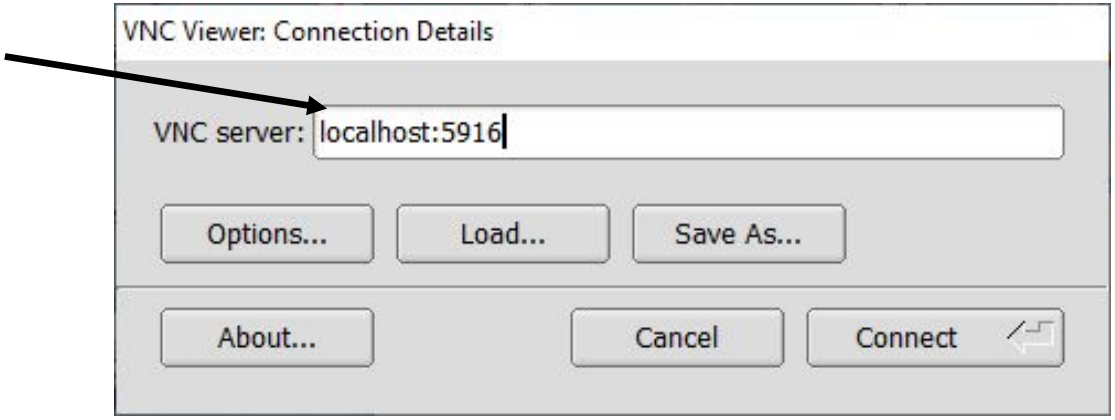
     Ex: TigerVNC



CPU clusters

8. On windows:
   - Launch your VNC client with all default options (ex: TigerVNC on Windows)

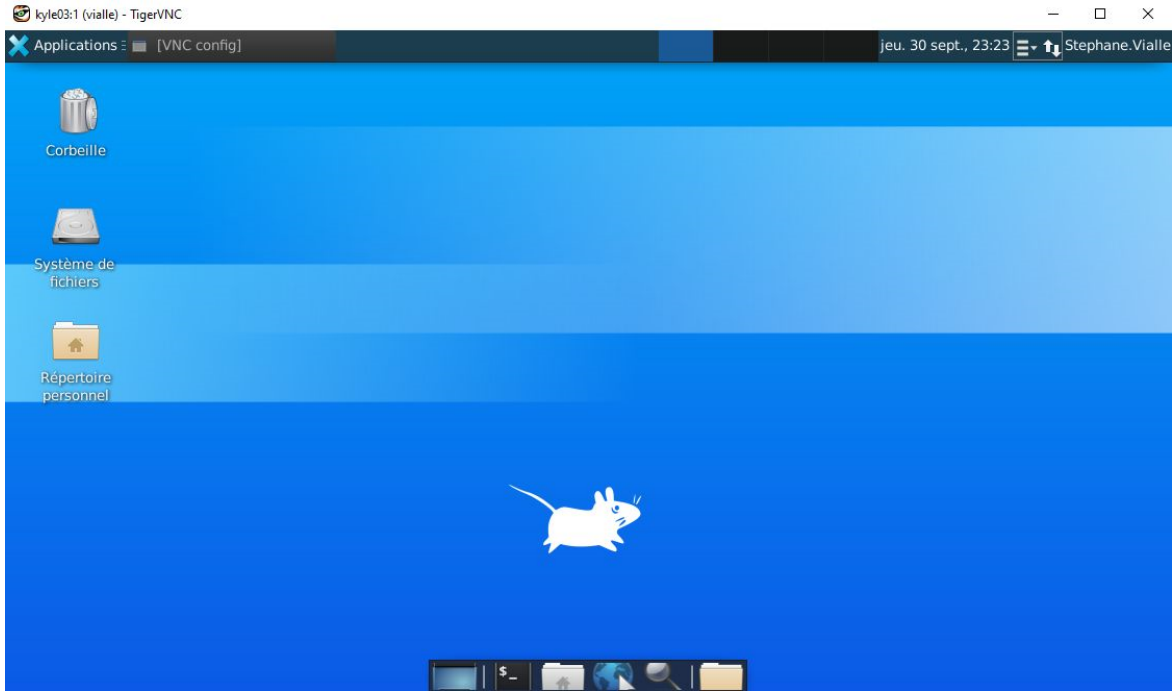
   - Enter the port number returned by dcejs



8. On Linux & Mac :
   - It should be possible to just click on the port number in the dcejs window.

CPU clusters

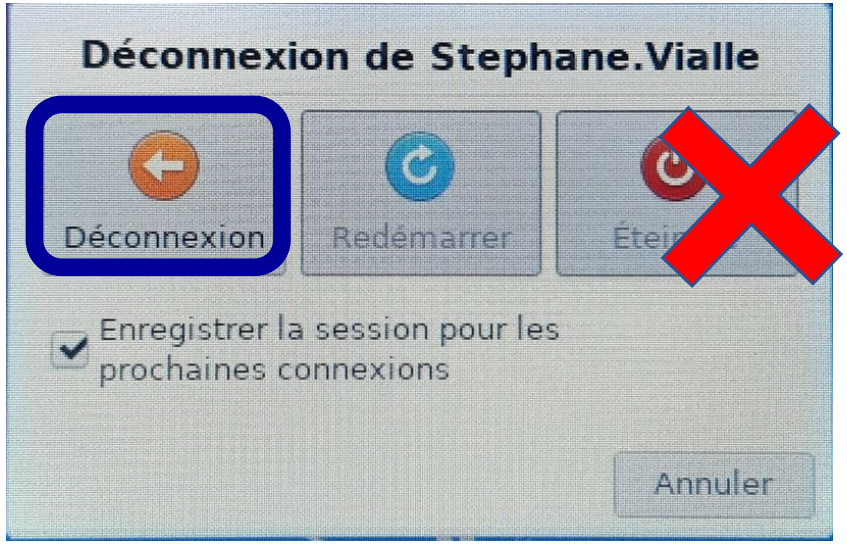
9. The desktop of the remote DCE machine appears
   - You can launch a terminal, and an editor (code, xedit, …)



10. When you deconnect:

    NEVER shut down the machine!

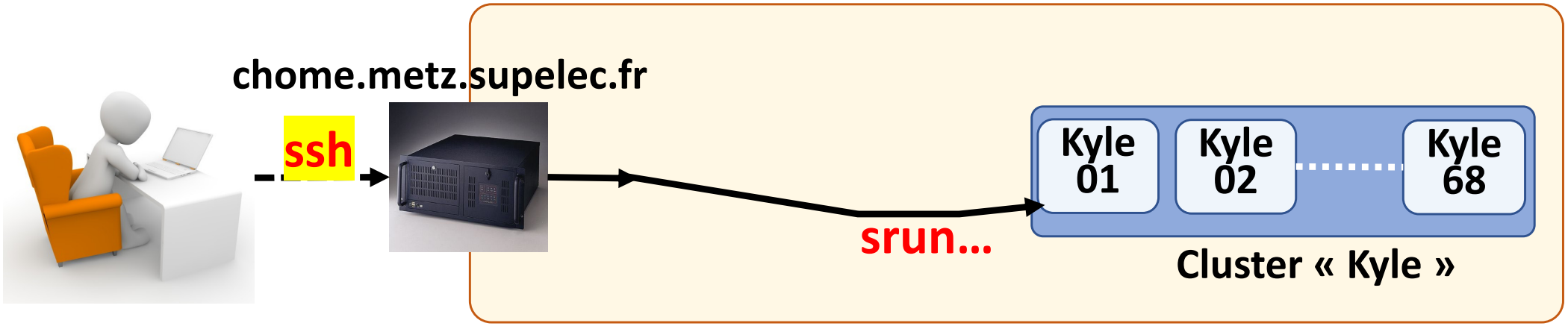
    Use the disconnect button



Using MonogDB servers of CentraleSupelec DCE using *dcejs*, *ssh* or *vscode*

- Connection to the DCE using *dcejs*
- **Connection to the DCE using *ssh***
- Connection using *vscode*

Cluster connection commands



Linux/Mac → `ssh chome.metz.supelec.fr -ℓ ecm2_1`

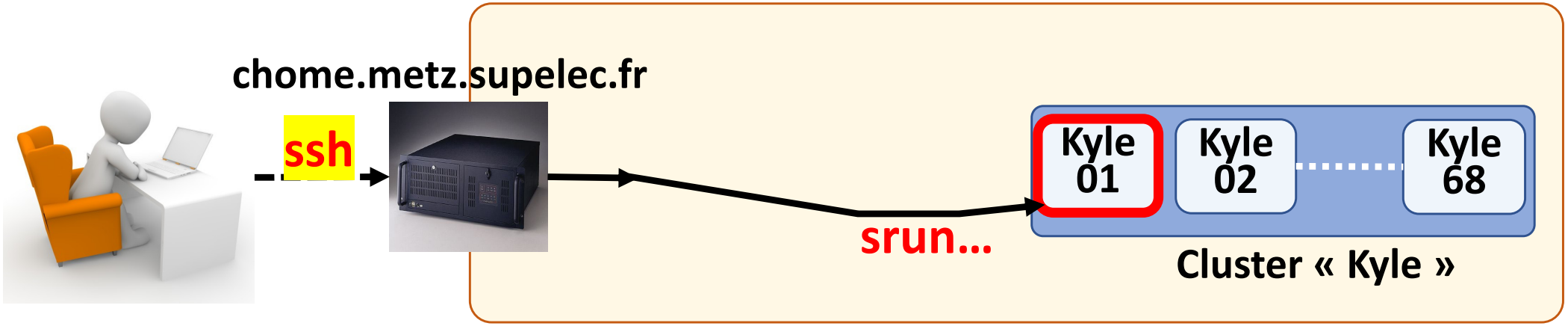
From ecm2_1 up to ecm2_20

Windows → run a "powershell" and then the above command

Old Windows →

- Download & Instal « putty »
- « Session » menu : **phome.metz.supelec.fr**
  connection type : **ssh** (port 22)
- « Connection » menu: set **Enable TCP keepalives**
  set **30s** between keepalives

Cluster connection commands



On *chome* DURING the lab:

```
srun  --reservation=myCode
      -N 1 --exclusive
      --pty bash
```

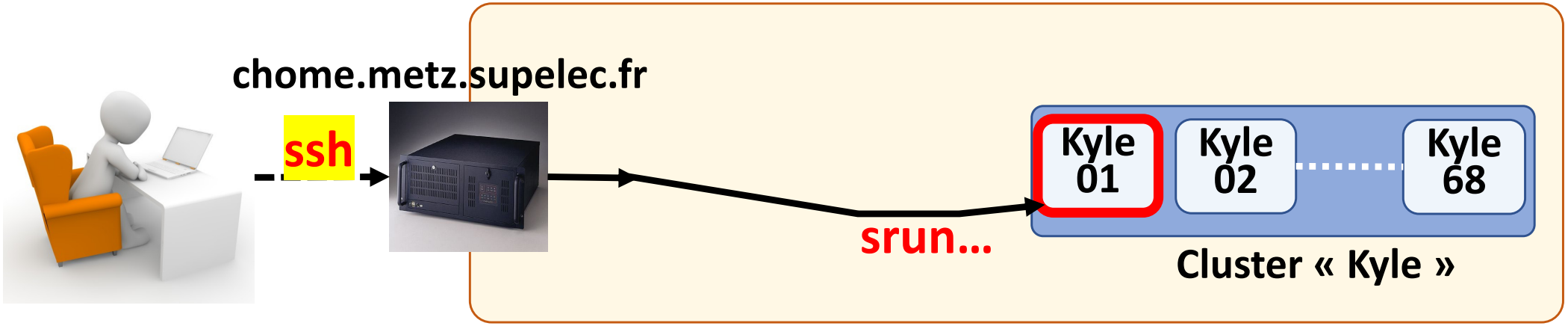
Ask to the teacher

Allocate all the cores of the node

Run an interactive session

Write on ONE line!

Cluster connection commands



On *chome* AFTER the lab:

```
srun   -p cpu_tp
       -N 1 --exclusive
       --pty bash
```

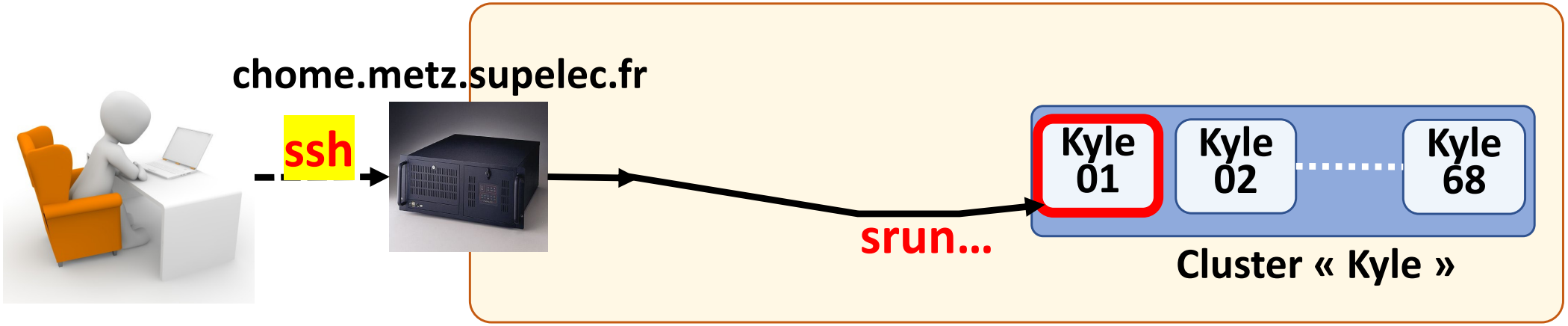
Partition to use

Allocate all the cores of the node

Run an interactive session

Write on ONE line!

Cluster connection commands



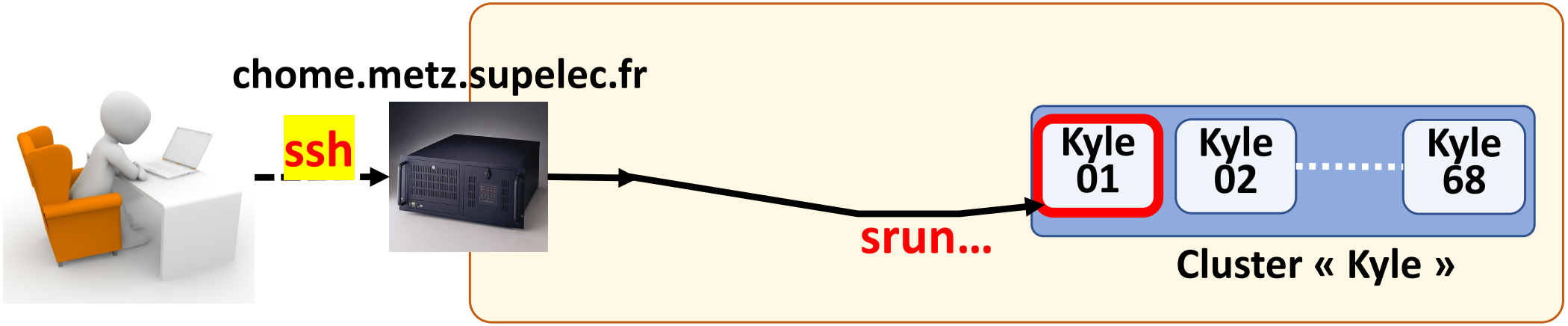
On *the cluster node*:

`sinfo -l` → information on partitions

`squeue` → information on job queues

`scontrol show job` → information on running jobs

Running mongo demon and mongo clients



Usage: On the cluster node

Duplicate your terminal to run the *mongod* and *mongosh* in two different terminals:

- Launch ***screen***
  - Create a second terminal with Ctrl-a c
  - Go to the next screen with Ctrl-a n, and to previous one with Ctrl-a p
  - Kill a screen with Ctrl-D
  - See : https://doc.ubuntu-fr.org/screen for more information
- Then you run ***mongod*** in one terminal.
- And you run ***mongosh*** in the second terminal and you work in this terminal

Using MonogDB servers of CentraleSupelec DCE using *dcejs*, *ssh* or *vscode*

- Connection to the DCE using *dcejs*
- Connection to the DCE using *ssh*
- **Connection using *vscode***

Connect to the DCE, open multiple terminals and run mongo commands

Configuration and usage of vscode to reach the DCE:

https://webtv.centralesupelec.fr/videos/how-to-connect-to-dce-with-visual-studio-code/

1. Open a terminal on chome.metz.supelec.fr with your DCE login/passwd
2. Use the explorer to acess your files (using again your DCE login/passwd)
3. Open a terminal and execute:

   `srun -N 1 --exclusive --reservation=… -pty bash`

   → You get a terminal on a Kyle machine (« your » Kyle machine)
4. Open a second terminal on your Kyle machine from the previous terminal
5. Run mongod in one terminal and mongoimport or mongosh in the second

Using MongoDB servers of CentraleSupelec DCE

(Data Center for Education)

Questions ?