

Instructions for
logging into the OAS'
cluster machines



Cluster@OAS

sboccia

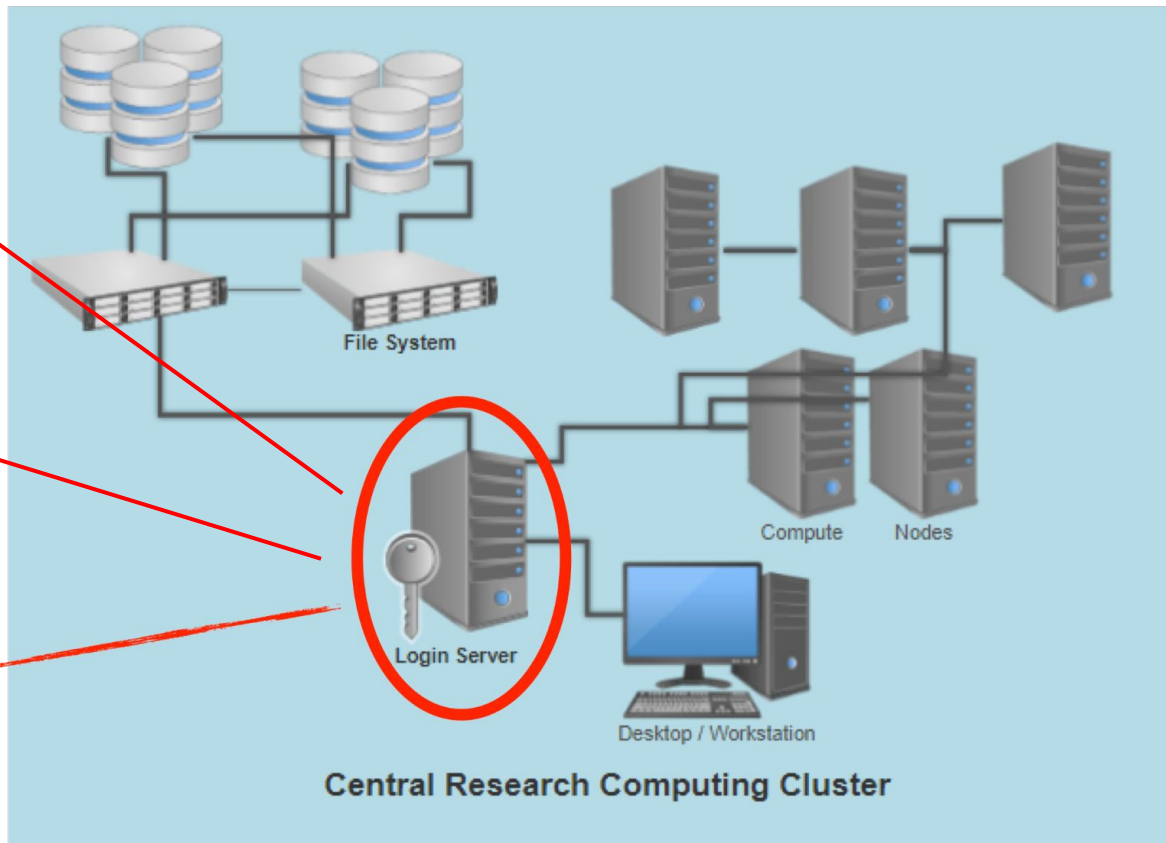
- Scientific software
- Data

login04

- Scientific software
- Data

login06

- Scientific software
- Data



> ssh -X gruppoXX@login04.iasfbo.inaf.it

or

> ssh -X gruppoXX@login06.iasfbo.inaf.it

or

> ssh -X gruppoXX@login04.iasfbo.inaf.it +

> ssh -X sboccia

> password

For those working on login04

For those working on login06

For those working on sbuccia

ALL

login04

TXS 0506+056
(Fermi-LAT)

X-ray surveys

NGC 5135

login06

Pictor A (XMM-Newton)

Pictor A (Chandra)

sboccia

NGC 3783

Important notes:

1) The working directory is **`/scratch/gruppoXX`**

2) **Do not** work in the directory **`/home/gruppoXX`**

If for some reasons you are in `/home/gruppoXX` please, use the command **`cd /scratch/gruppoXX`**

To perform the analysis, you can either use the **notebooks** or the **command line**.

Software setup

XMM-Newton
data reduction

```
> source setup.login06.sh  
(or source setup.login04.sh)
```

```
> sas
```

then

```
> heainit (for XSPEC)
```

!!!for NGC3783 see
[instructions for sboccia](#)

Chandra
data reduction

```
> source setup.login06.sh  
(or source setup.login04.sh)
```

```
> ciao
```

then

```
> heainit (for XSPEC)
```

Fermi-LAT
data reduction

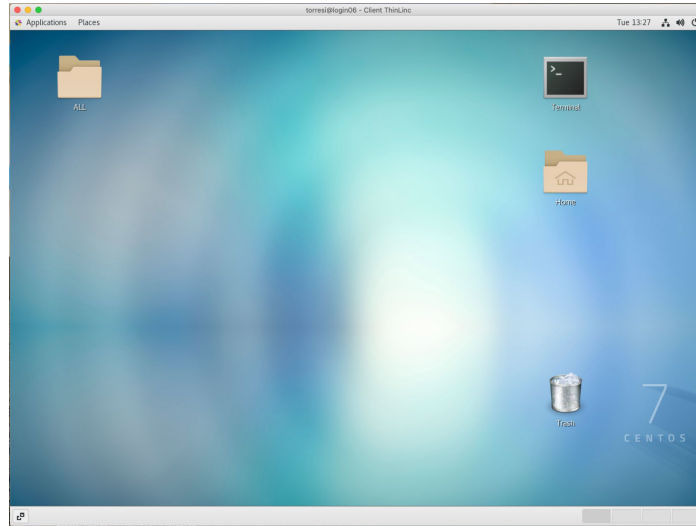
```
> source start_fermipy.sh
```

Connection with a remote desktop:

ThinLinc

ThinLinc is a Linux Remote Desktop server.

It is useful to **speed up** some tasks of the data reduction (e.g., image analysis).



!!! 1 license/group

[Instructions for download and installation](#)

How to copy the downloaded file from your laptop to your working directory

- ❑ **FTP clients** (Fugu, Cyberduck, Filezilla, etc.)
- ❑ **scp** filename gruppoXX@login06(04).iasfbo.inaf.it:/working directory



How to run a new jupyter notebook

Assumed that the the environment is correctly set
(source login04/06.sh or start_fermipy.sh)

```
> jupyter notebook --no-browser &
```

Something like this will appear

<http://localhost:8891/?token=8fb55f3fefe8360a4d63b56e7b06b7eef2018459fa2402eb>

Then open a new terminal in your local window and

```
> ssh -NfL 8891:localhost:8891 gruppoXX@login06.iasfbo.inaf.it (or login04)
```

Now, just copy and paste the url above in your preferred browser and enjoy it

How to run a new jupyter notebook

To safely close the notebook just close all (related) tabs in your browser. Then, come back to the your terminal window (connected to login06) and close it typing

```
> exit
```

Because the terminal window connected to login06 has been launched in detached mode, the notebook will be continue to run, and long-term processes will be executed with no problems (important for Fermi-LAT analysis). All variables will be saved.

How to run a new jupyter notebook

To restore a old, already running notebook, access again to login04/login06 machines

```
> ssh -X gruppoXX@login06.iasfbo.inaf.it (or login04)
```

Set up your environment again (source login04/06.sh or start_fermipy.sh) and check for running jupyter notebook sessions

```
> jupyter notebook list
```

If a notebook is still running, make the connection between ports with ssh -NfL ... command using the correct port. Then, just copy and paste the url in your browser. If you want to stop a notebook

```
> jupyter notebook stop 8891
```

How to run a new jupyter notebook

You might face this error when you run `ssh -NfL`

```
bind [127.0.0.1]:8891: Address already in use
channel_setup_fwd_listener_tcpip: cannot listen to port: 8891
Could not request local forwarding.
```

NO PANIC! It simply means that the port1 you set is already in use: something is running or you simply forgot to close it. In your local terminal window, type

```
> sudo lsof -i -P -n | grep LISTEN
```

this will show you up the ports in use currently. You will get something like

```
[...]
ssh      87596      ettore   7u IPv6 0x8597dd2c513b2daf    0t0  TCP [::1]:8891 (LISTEN)
ssh      87596      ettore   8u IPv4 0x8597dd2c558a95cf    0t0  TCP 127.0.0.1:8891 (LISTEN)
```

In this case, 87596 is the PID of the process associated to the port 8891, kill the process typing

```
> kill 87596
```