This notebook contains the steps to obtain a remote connection and obtain the materials for the tutorial.

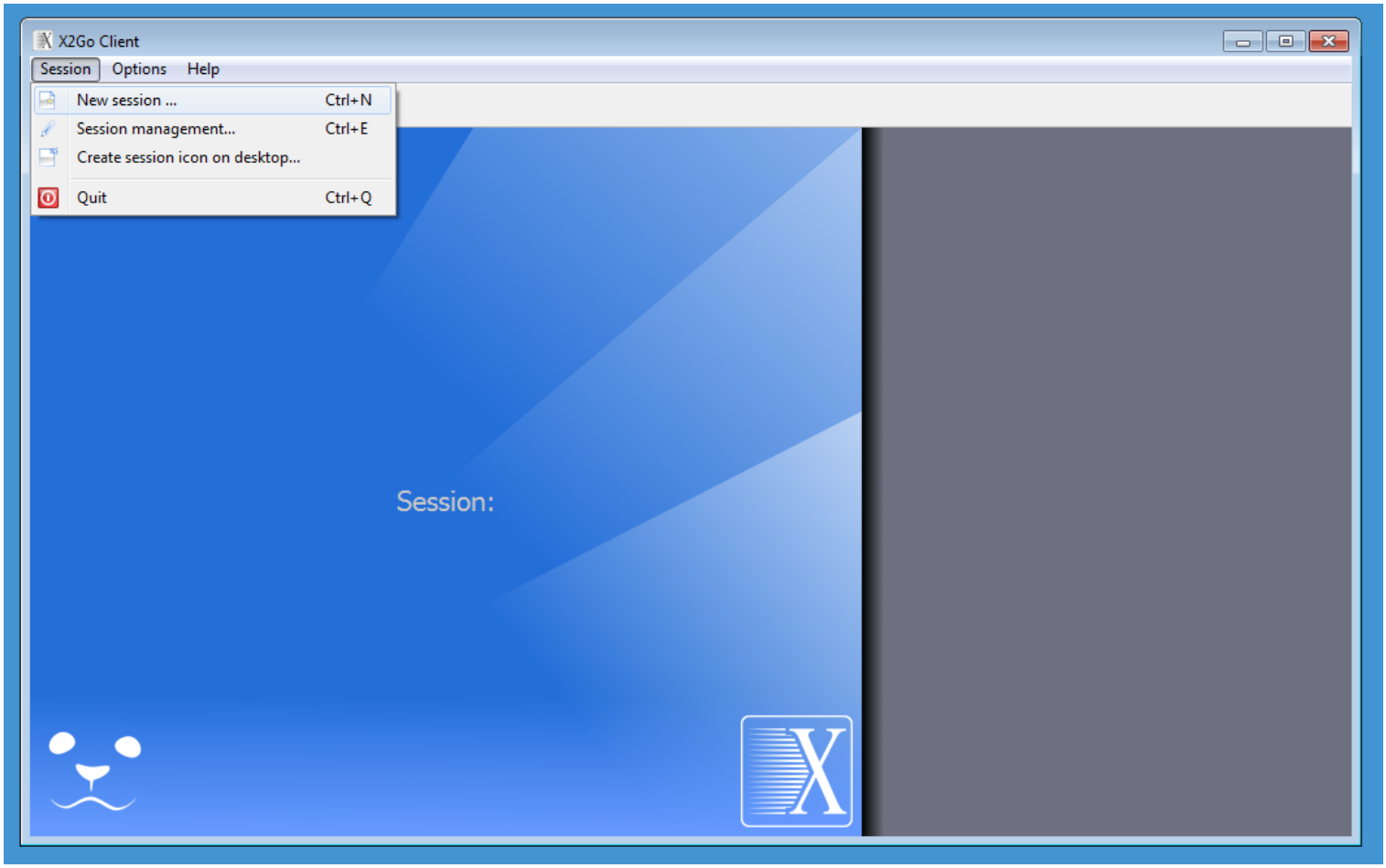
Set up

Table of Contents

Set up a remote session in CAMM2 with X2Go

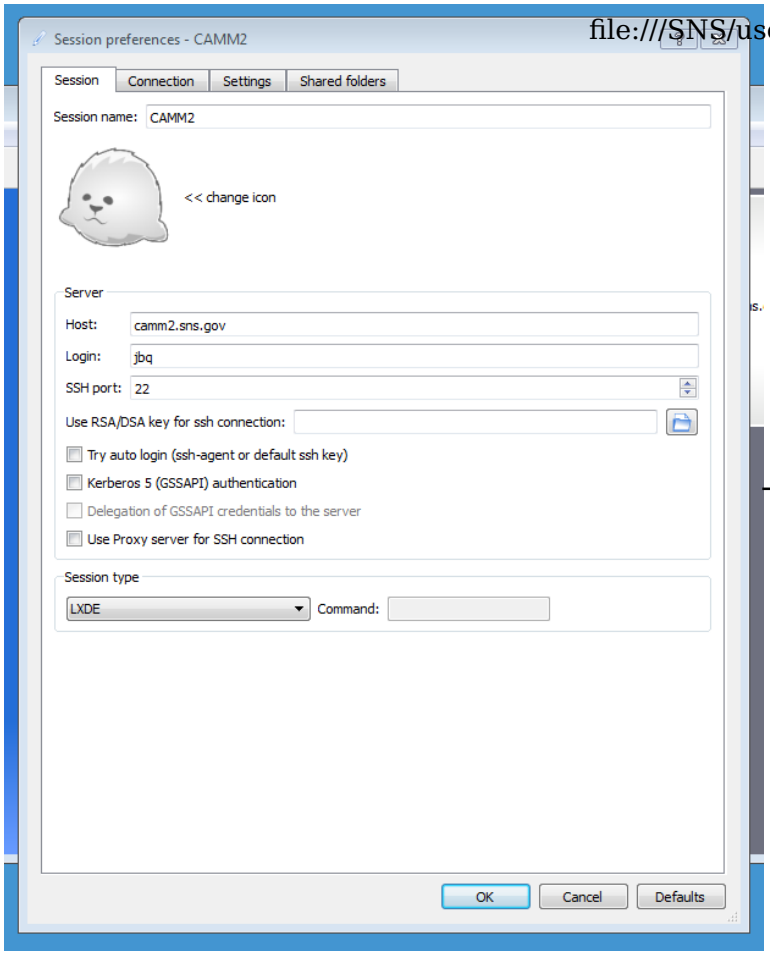
By installing the X2Go client in your machine, you will be able to login remotely to camm2.sns.gov.

- Install in your machine the x2go client, downloadable here (http://wiki.x2go.org/doku.php/start).
- Open x2go and start to configure a new session:



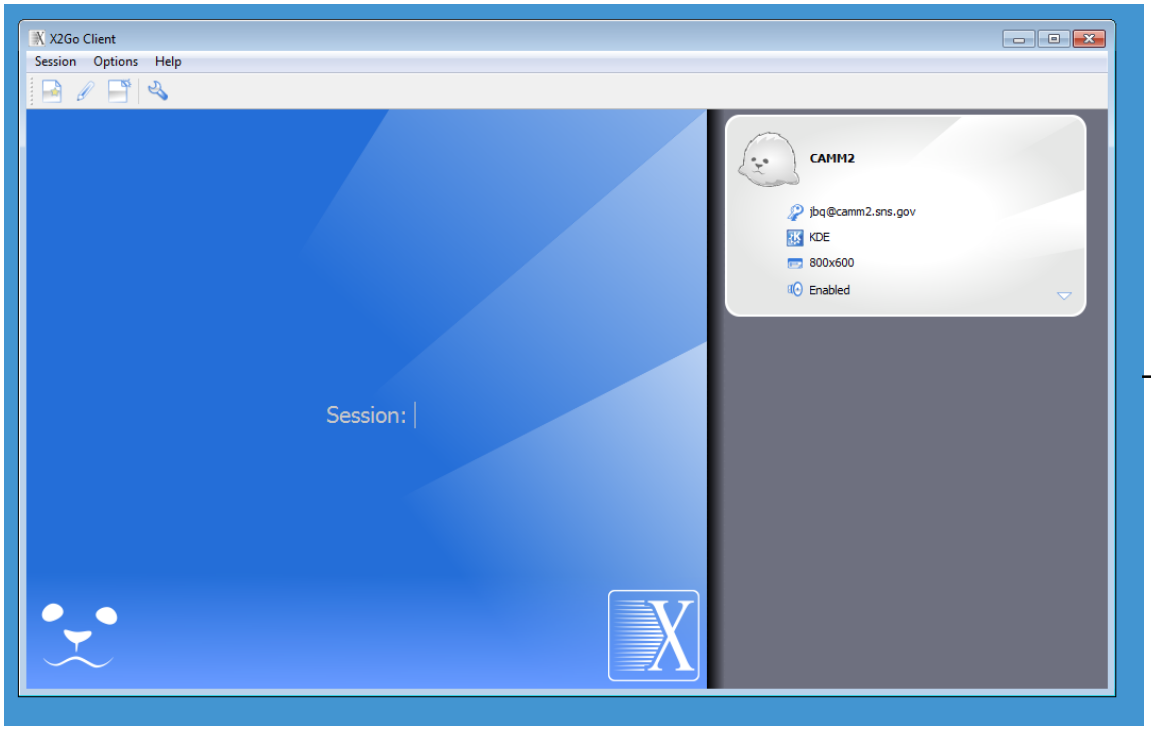
(supporting/x2go.1.PNG)

- In the session configuration dialog, name your session as "CAMM2", then enter "camm2.sns.gov" as *Host*, and enter your UCAMS/XCAMS username in the *Login* field. In *Session type*, select LXDE, which is an lightweight desktop environment (http://lxde.org/), appropriate for remote connections. Finally, press OK.



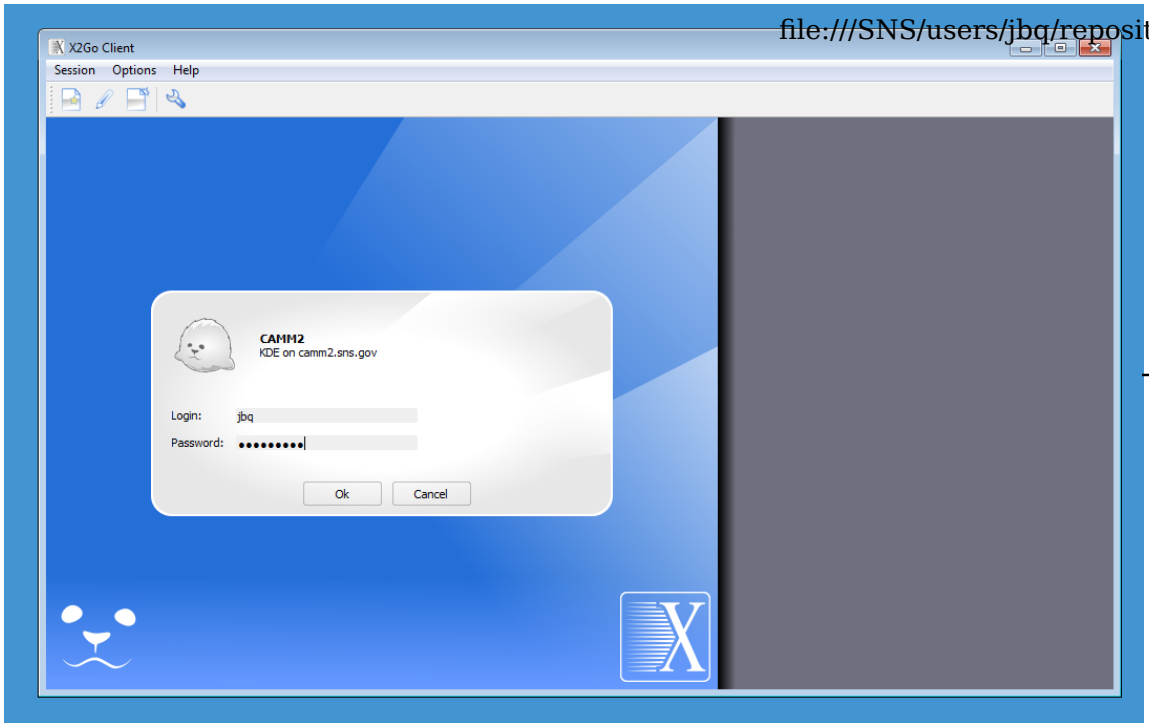
(supporting/x2go.2.PNG)

- You have now a CAMM2 session on the session panel. Congratulations!



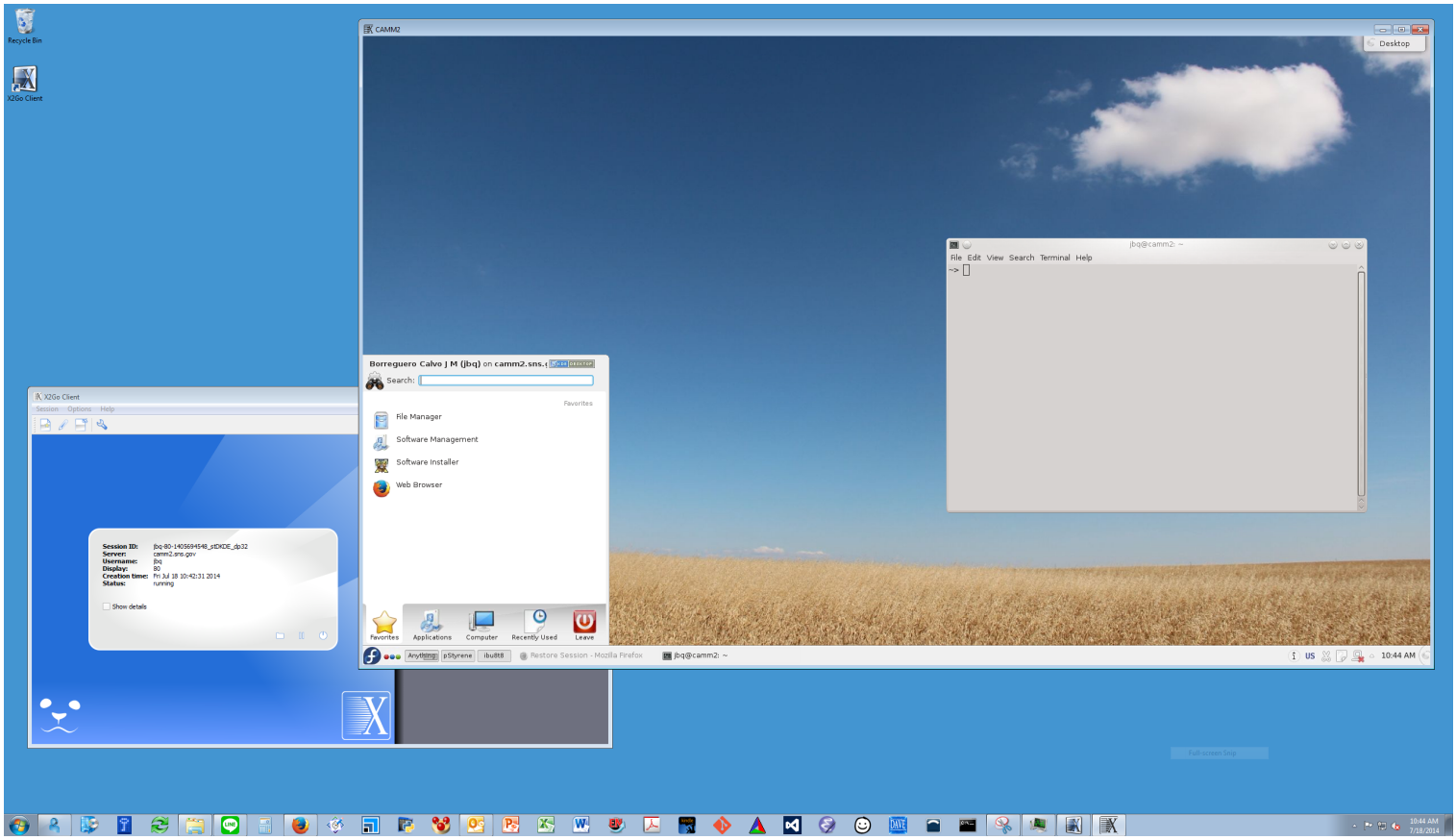
(supporting/x2go.3.PNG)

- To start this session, just click on the CAMM session. A dialog requesting your UCAMS/XCAMS password will open. Enter the password and press OK.



(supporting/x2go.4.PNG)

- Wait a moment until the remote session is stablished. This is a Linux environment, a minimum knowledge of Linux terminal commands is required. A nice intro is available at linuxcommand.org (http://linuxcommand.org/).



(supporting/x2go.5.PNG)

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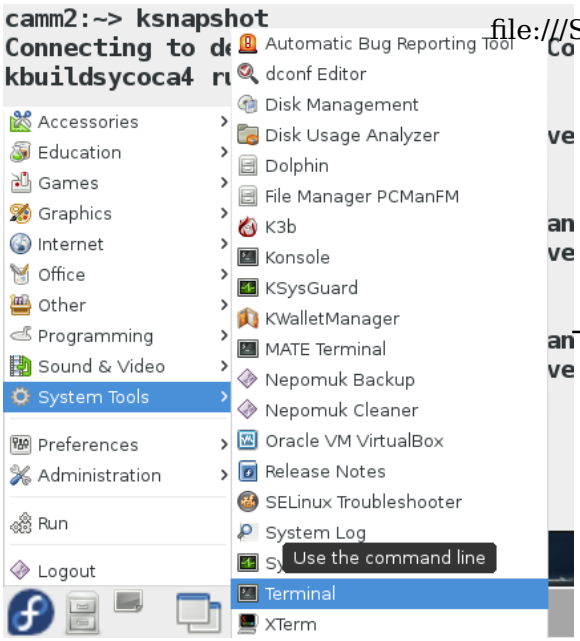
Download all materials for the tutorial

- Once you are logged in camm2.sns.gov, open a terminal from the `Main menu` \(\Rightarrow\) `System Tools`:



(supporting/clone.1.png)

In the terminal, type:

```
cd $HOME
git clone https://github.com/camm/SHUG2015.git
```

These instructions will download the remote GitHub repository (https://github.com/camm/SHUG2015) into subdirectory *SHUG2015/*. This directory contains all files for the tutorial.

(Top)

Viewing ipython notebooks

Much of the discussion in this tutorial will be presented through ipython notebooks (http://ipython.org/notebook.html). You can view a notebook stored in the remote repository or in the local repository that you cloned:

- **View the notebook in the remote repository**

Point your web browser to the notebook viewer (http://nbviewer.ipython.org/github/camm/SHUG2015/tree/master/) for this tutorial. You will see the contents of the repository in GitHub.
Navigate to folder *setup*. Inside, you will find file *setup.ipynb*. Files with extension **ipynb** are ipython notebooks. Click in the file and the notebook will be displayed.

Note: this is a read-only view. You cannot change the contents of the notebook.

Other notebooks within the repository can be opened in the same way, navigating to their locations with the browser.

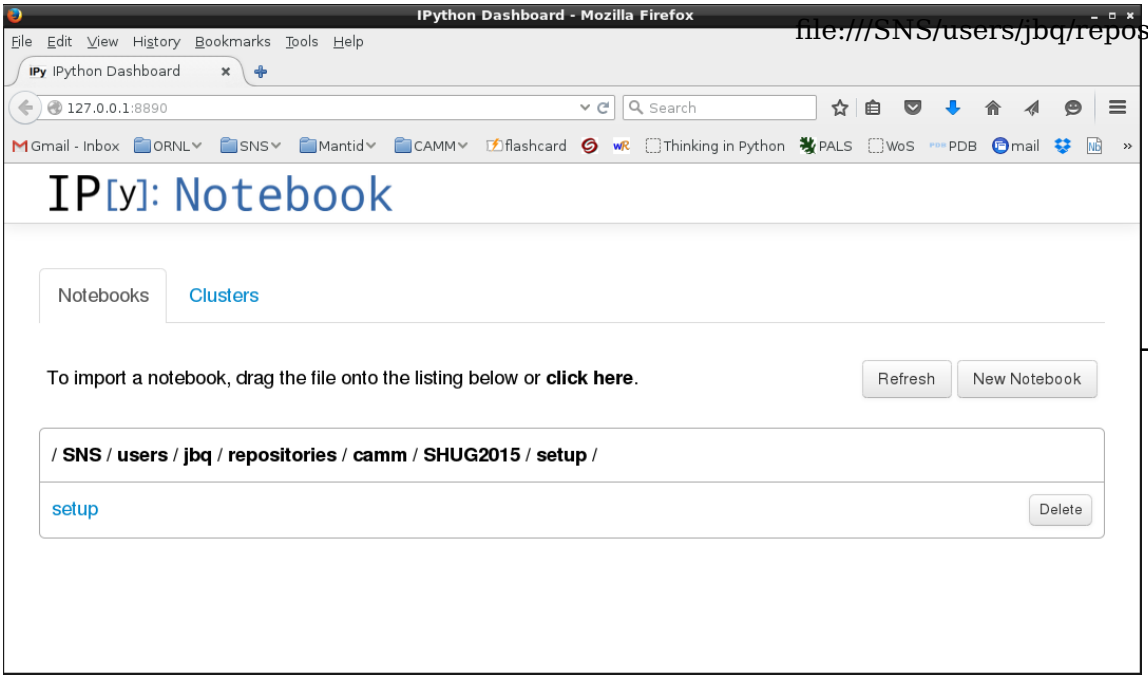
- **Open the notebook in the local repository**

(This steps assumes you have downloaded all materials for the tutorial)

Open a terminal and type:

```
cd $HOME/SHUG2015/
cd setup/
ipython_notebook.py ./
```

Your web browser will open a tab showing the list of notebook files residing within subdirectory *setup/*:



(supporting/notebook.1.png)

Click in "setup" and a new broser tab will open to display the notebook hosted in the remote repository.

Note: this is a read-write view. **You can edit the notebook and include your own notes!**. Familiarize yourself with the markdown syntax (https://daringfireball.net/projects/markdown/basics) that is followed by ipython notebooks.

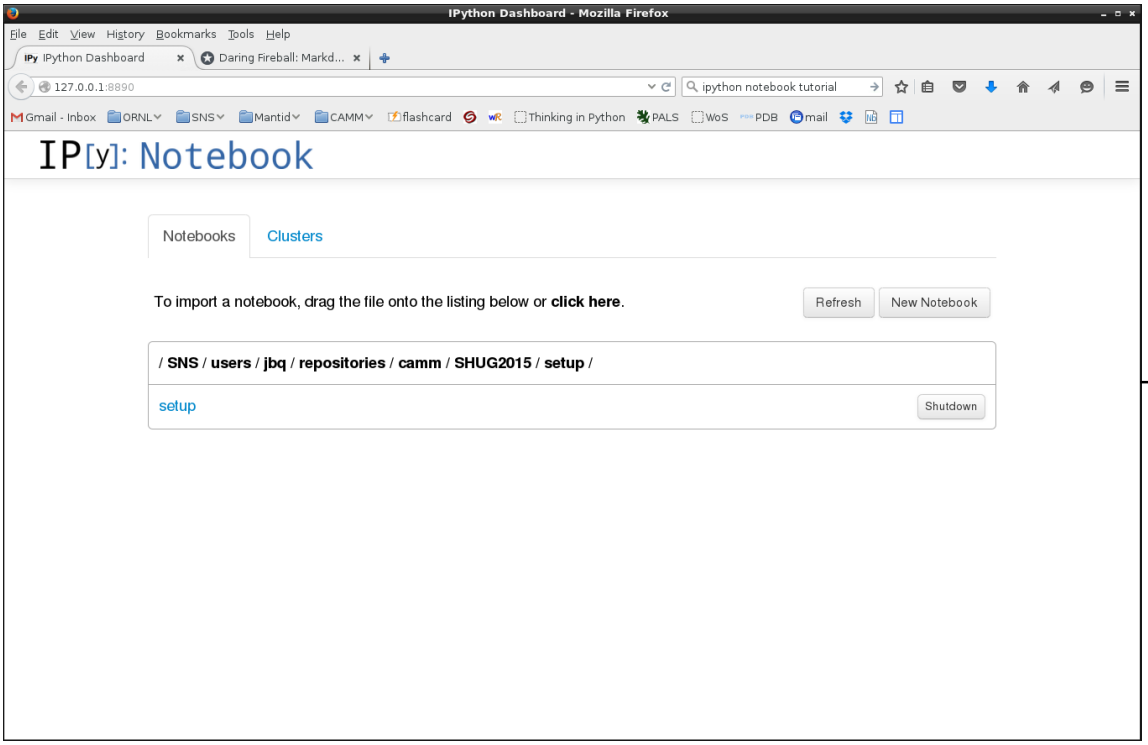
Other notebooks within the local repository can be opened in the same way, navigating to their locations with the terminal (Linux command `cd somedirectory`), and then issuing the command "`ipython_notebook.py ./`".

- **Closing a notebook opened within the local repository**

There are three steps involved in closing a notebook that has been opened in the local repository:

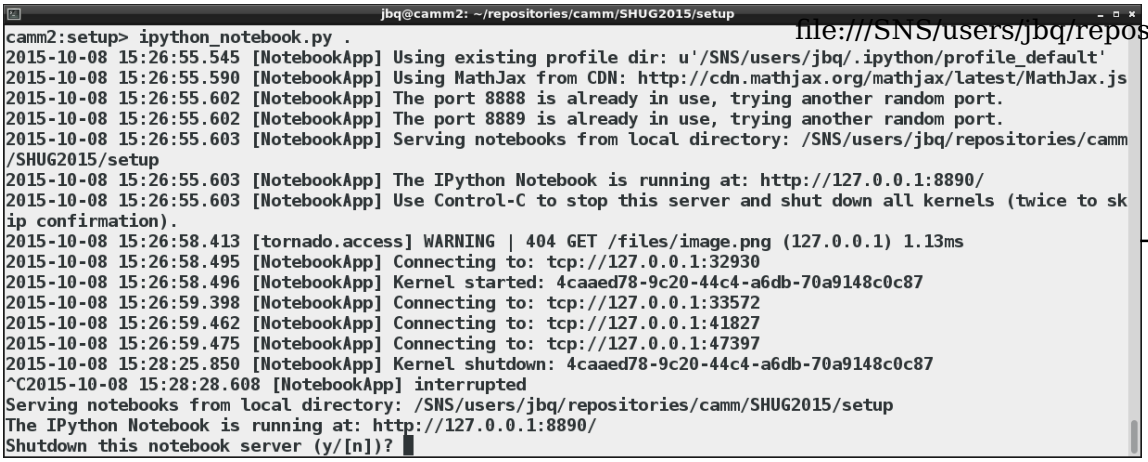
1 Close the browser tab displaying the notebook.

2 In the broser tab displaying the list of notebooks, click the "shutdown" button corresponding to the notebook you just closed. You can close this tab too, if you want.



(supporting/notebook.2.png)

3 In the terminal where you typed "`ipython_notebook.py ./`", press *Ctrl-c* and then answer "y" to the question "`Shutdown this notebook server (y/[n])?`"



(supporting/notebook.3.png)

This will free the terminal from running the notebook server. Now you can use the terminal to navigate to other directory and open other notebook.

(Top)

Create your scratch area

You will create a directory in the local hard drive of camm2.sns.gov where you will carry out the simulations and analysis.
Using your XCAMS or UCAMS username, do:

```
cd /SNSlocal/scratch/
mkdir $USER
cd $USER/
```

Directory */SNSlocal/scratch/$USER/* is the area where to put all your data, notes, and simulation files.