Setup: User Guide

Before coming to the tfMRI hackathon, please follow the following setup to configure your laptop. If you experience any issue or if you have an operating system not listed below, please contact **antoine.grigis@cea.fr**.

Part 1: Ubuntu 16.04 setup.

Part 2: Windows setup.

Part1: Ubuntu 16.04 setup

On the CEA network all the tfMRI resources are available here**: /neurospin/tmp/tfmri-hackathon-2018**.
First of all create a working directory with sufficient space, and then copy all the hackathon resources:

```
$ export HACKATHONDIR=/volatile/hackathon_tfmri_2018
$ export RESOURCEDIR=/neurospin/tmp/tfmri-hackathon-2018
$ mkdir $HACKATHONDIR
$ cp $RESOURCEDIR/hackathon-tfmri-2018.ubuntu.simg $HACKATHONDIR
$ cp -r $RESOURCEDIR/shared_data $HACKATHONDIR
$ cd $HACKATHONDIR
```

An Ubuntu 16.04LTS container is available with all the practical required softwares installed. To use this
container, first install **singularity** (https://singularity.lbl.gov/)**:**

```
$ sudo apt install singularity-container
$ singularity --version
    2.5.1-dist
$ singularity help hackathon-tfmri-2018.ubuntu.simg
   Singularity container for the tFMRI 2018 NeuroSpin Hackaton.
   Activate environment with:
       singularity shell --home <my>/<data>/<folder>:/home/mydata
       hackathon-tfmri-2018.ubuntu.simg
   Contains:
   - bids-validator
   - spm12
   - fsl
   - freesurfer
   - ants
   - dcm2niix
   - DicomBrowser
   - nibabel
   - nilearn
   - pypreprocess
```

And then activate the environment:

```
$ singularity shell --home $HACKATHONDIR/shared_data:/home/mydata
   hackathon-tfmri-2018.ubuntu.simg
```

Note that the **$HACKATHONDIR/shared_data** is a shared folder that will be accessible within the container as
your home directory **/home/mydata**. More advanced singularity configurations can be performed by editing

the /etc/singularity/singularity.conf file.

Part 2: Windows setup

On the CEA network all the tfMRI resources are available here**: \\canif.intra.cea.fr\tmp\tfmri-hackathon-2018**.
If not already done, first add this network location. Open the file browser, click on the computer link on the left
side panel, right click on the right side panel and select 'Ajouter un emplacement réseau'. Then enter the
network location **\\canif.intra.cea.fr\tmp**, enter your login/password if requested, and use the default name for
this shared folder.
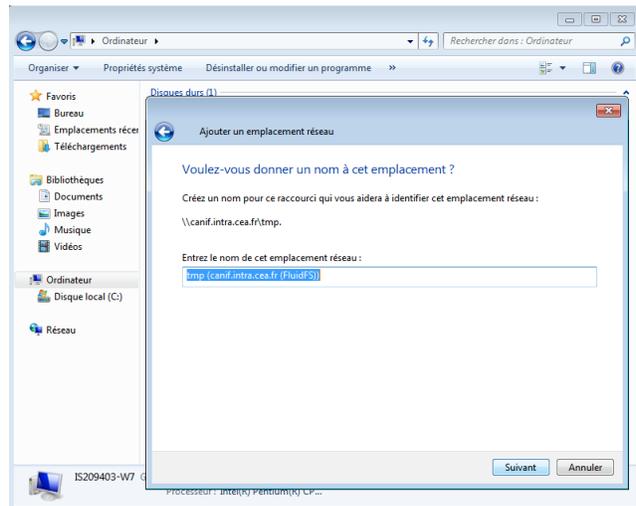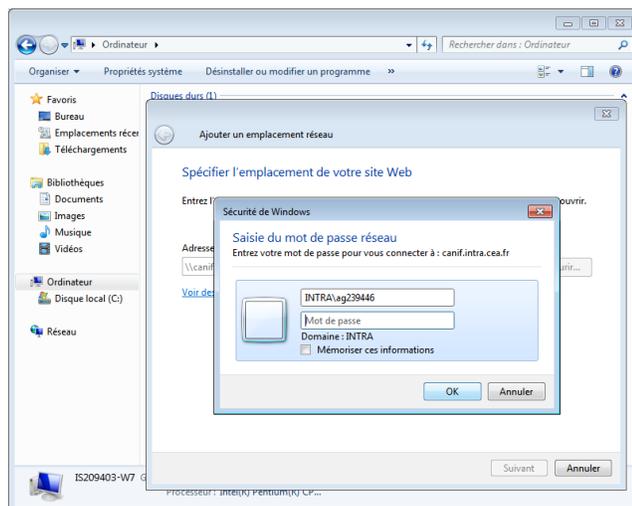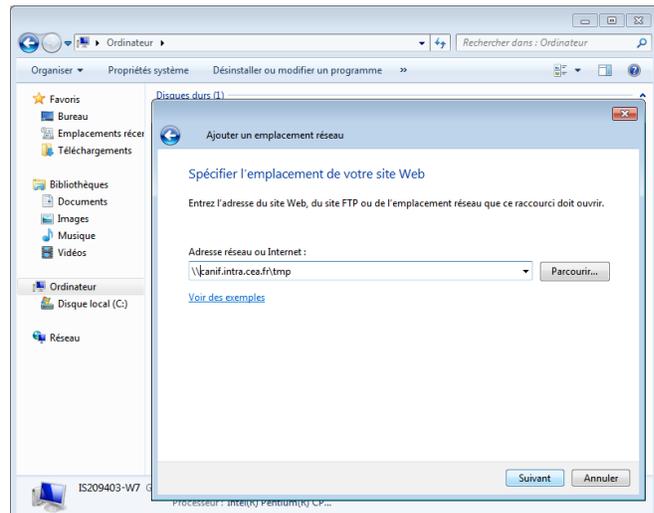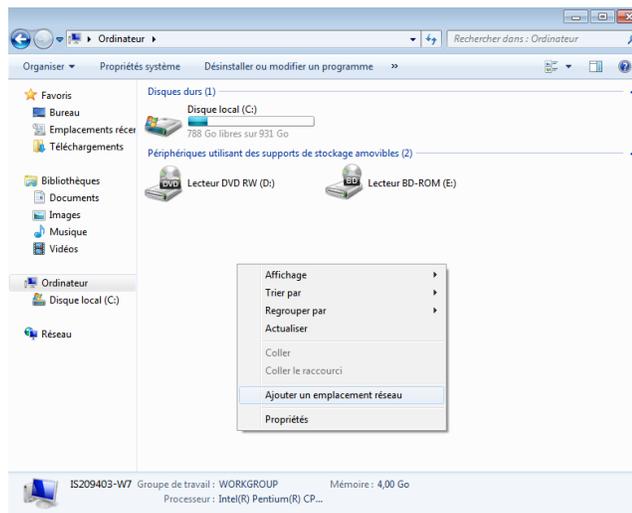
Open this shared folder, and copy the hackathon dataset folder 'shared_data', and the provided virtual machine
'tfmri-hackathon-2018.ova' to the Desktop.
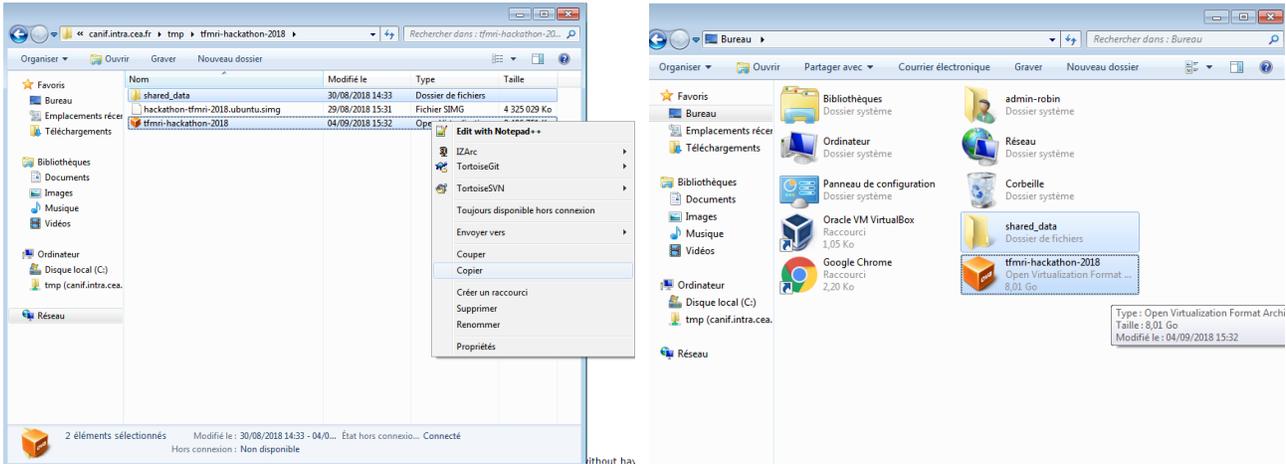
Now you need to load the virtual machine. If not already done, first install Oracle VM VirtualBox. Download and execute the executable available at https://www.virtualbox.org/wiki/Downloads. Follow the installation wizard.

Now run the software by clicking on the Deskop shortcut, and import the provided virtual machine by clicking on 'Fichier' → 'Importer un appareil virtuel'. Select and import the virtual machine that you have copied on your desktop **tfmri-hackathon-2018.ova**.
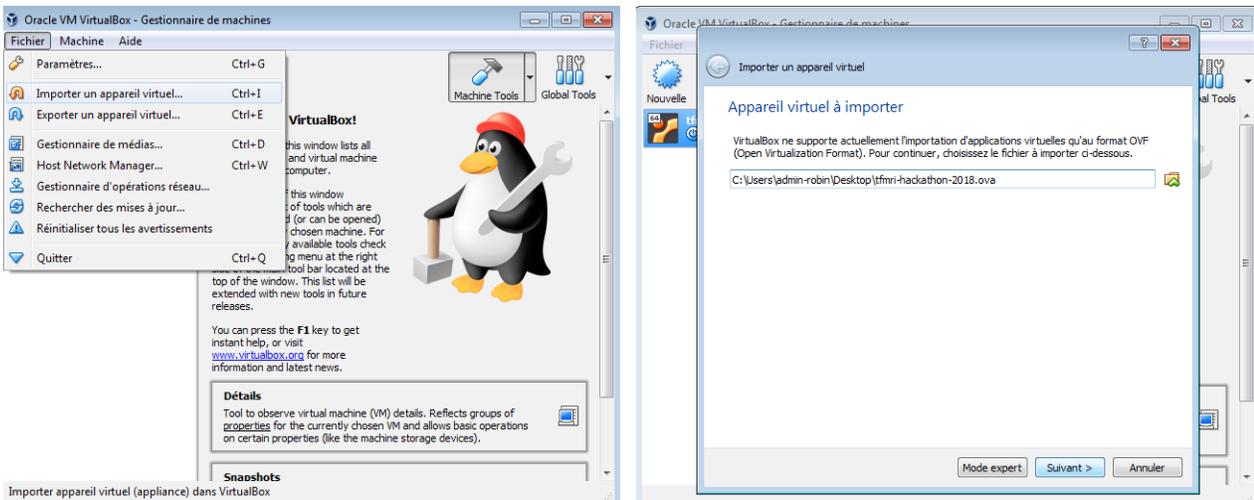
Then configure the imported virtual machine. Select the 'tfmri-hackathon-2018' item of the left side panel, and click on the configuration wheel. Click on the shared folder left side panel link, select the proposed shared folder named 'shared' on the right side panel and click on the edit button on the right. Change the folder location to the 'shared_data' folder that we copied on the Desktop and that contains the hackathon datasets. Let the folder name to 'shared'.
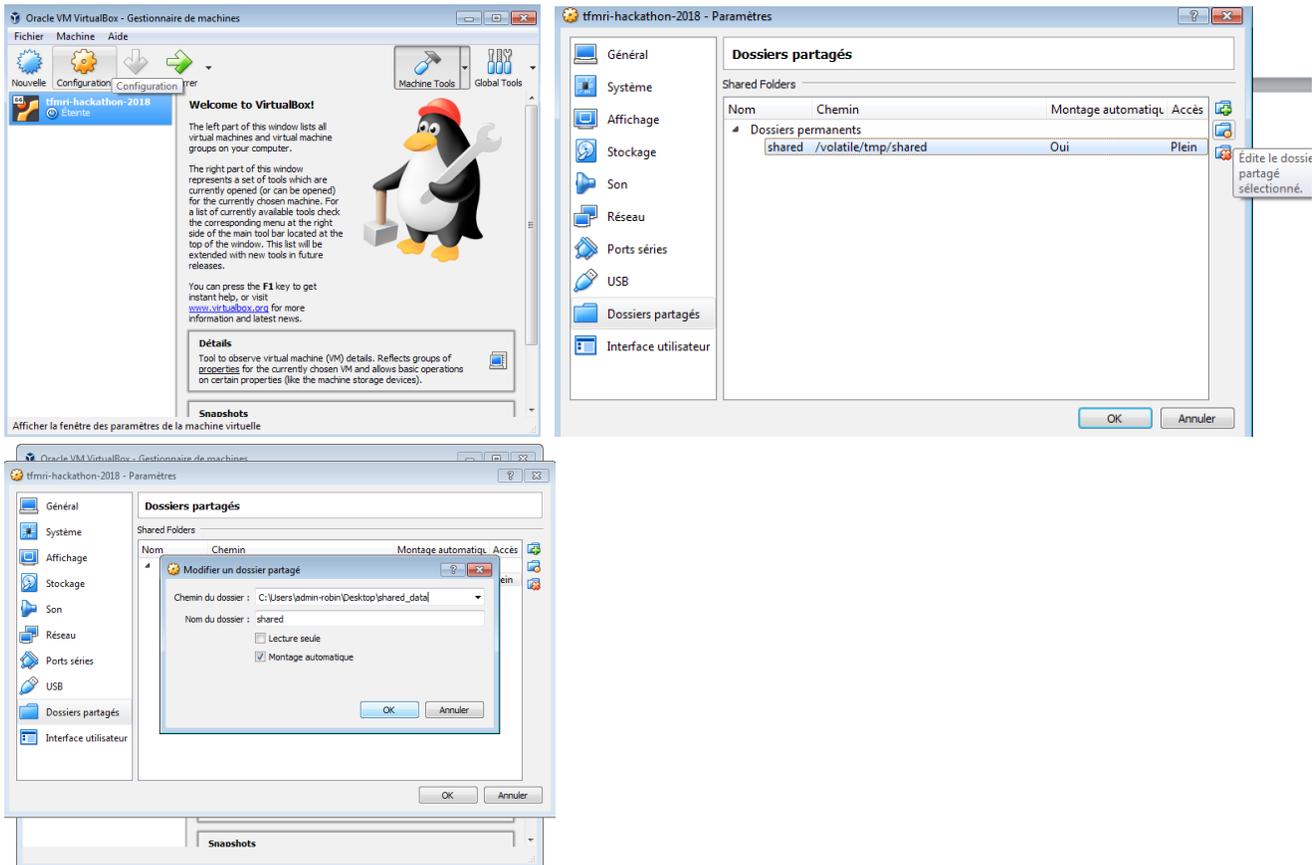
Finally start the 'tfmri-hackathon-2018' virtual machine. When the machine is started, you are on an Ubuntu 16.04 virtual machine. The login is **ag** and the password is **eskimo** (also the machine name). First of all open a terminal by clicking on the left side terminal icon, and list the content of the shared folder by typing 'ls shared'. If you cannot see all the hackathon material, type the following command, and try to list the folder content again. You should now see the hackathon material.

Now check the provided container that contains all the practical required softwares**:**

```
 $ singularity --version
     2.5.2-dist
 $ singularity help $HOME/tfmri-hackathon-2018/hackathon-tfmri-
2018.ubuntu.simg
    Singularity container for the tFMRI 2018 NeuroSpin Hackaton.
    Activate environment with:
        singularity shell --home <my>/<data>/<folder>:/home/mydata
        hackathon-tfmri-2018.ubuntu.simg
    Contains:
    - bids-validator
    - spm12
    - fsl
    - freesurfer
    - ants
    - dcm2niix
    - DicomBrowser
    - nibabel
    - nilearn
    - pypreprocess
```

And then activate the environment:

```
 $ singularity shell --home $HOME/shared:/home/mydata $HOME/tfmri-hackathon-
2018/hackathon-tfmri-2018.ubuntu.simg
```

Note that the **$HOME/shared** is a shared folder that will be accessible within the container as your home directory **/home/mydata**. This folder is also accessible from your Windows Desktop, and thus can be used to access your data. More advanced singularity configurations can be performed by editing the /etc/singularity/singularity.conf file.