Sharing data
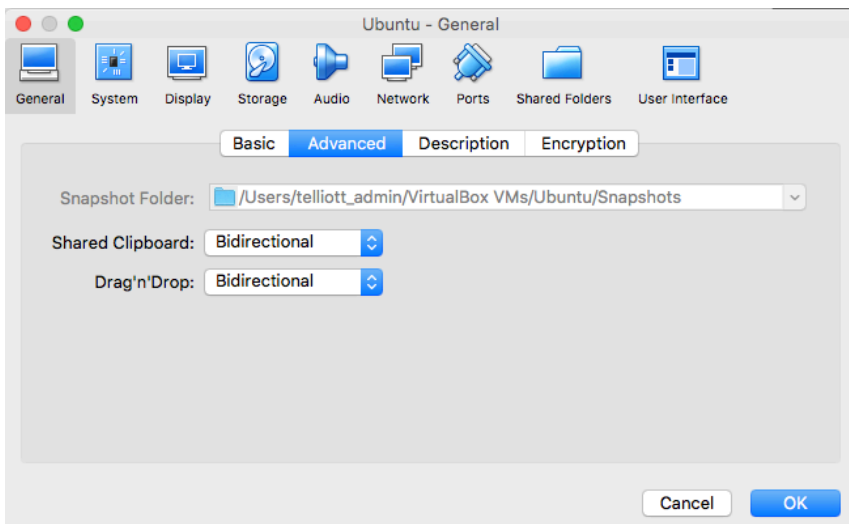
A general problem is how to share data between the host and the guest OS.

I can think of several possibities
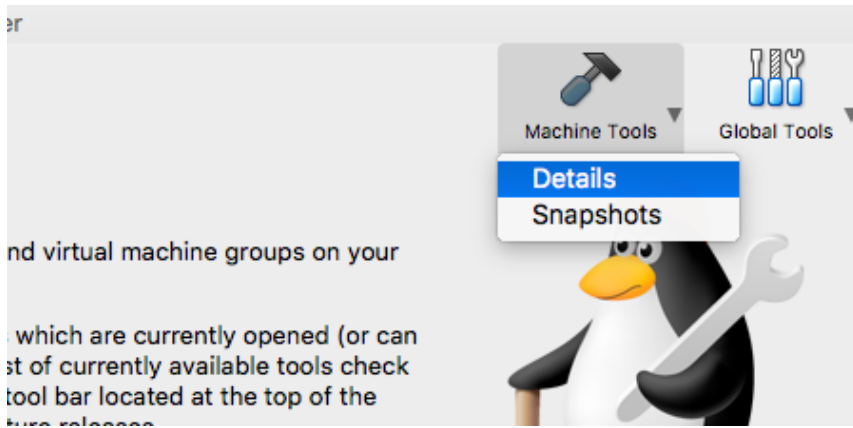
- copy/paste
- drag and drop
- shared folder
- Dropbox
- ssh
- File sharing

Copy/paste

In the VirtualBox window, select Ubuntu

Machine Tools > Details

then under General > Advanced are two dropdowns to activate the Clipboard and Drag'n'Drop.

The Clipboard may not work at first. Try Powering the machine off and on.

Remember that in Ubuntu, you do `CTL + v` to copy, etc., rather than `CMD + v` as on macOS.

Except you do `CTL-SHIFT-v` when in Terminal!!

Drag'n'Drop

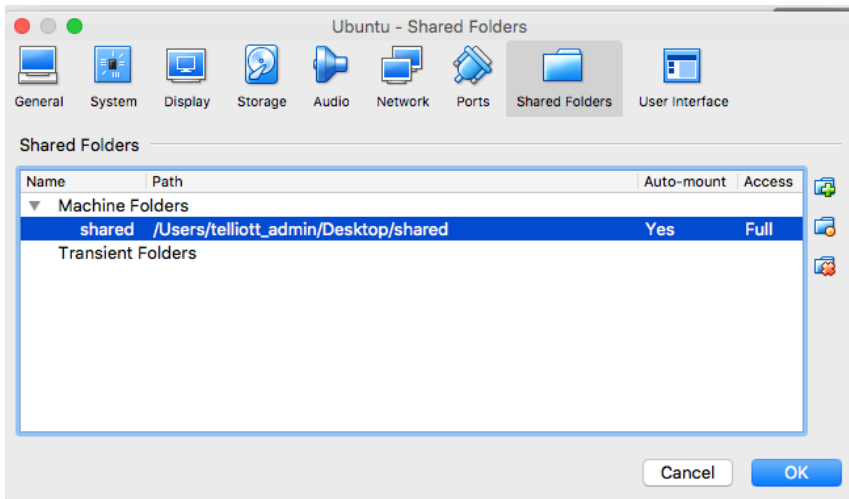Drag'n'Drop doesn't seem to work.

Shared folder

Once the GuestAdditions have been installed click on the Virtual Box window.

As before, do

```
Machine Tools > Details
```

Click on Shared Folders and then Click +

Enter the full path or navigate to it. The folder must already exist. I chose Automount and Full access.

The folder should be found on the guest in `/media/sf_te`, where `te` was the folder name on the host Desktop.

It wasn't there the first time through. Quit and restart Ubuntu...

It's there.

shared folder permissions

The only problem is that `/media` and `/media/sf_te` are owned by root. I can't even list the `sf_te` directory contents!

However, I note that the group for `sf_te` is `vboxsf`.

So I added myself to that group:

```
sudo adduser te vboxsf
```
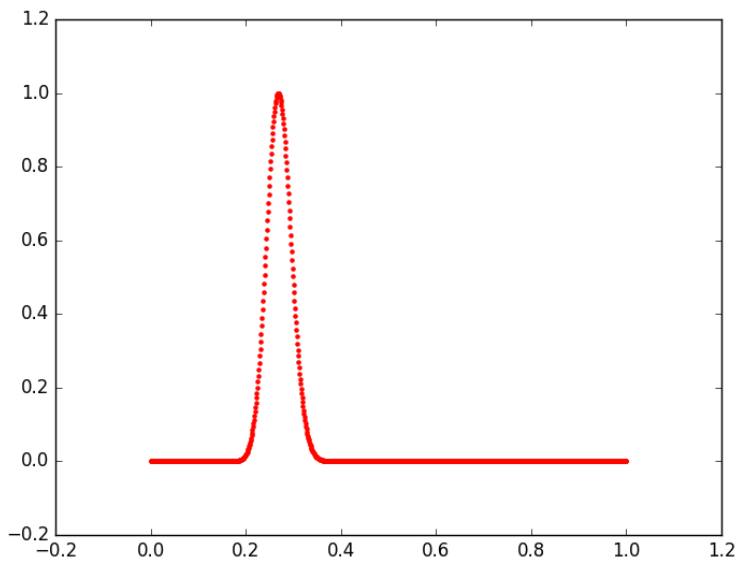
Quit and restart Ubuntu...

As a test I install `matplotlib`. In Terminal

```
sudo apt-get update
sudo apt-get install python-matplotlib
```

I get one of my scripts from [here](#).

Copy the link and paste it into Firefox (in the Guest). Click "raw" and copy it into TextEditor and save as `script.py`. Run `python script.py` and it generates `example.png`, which opens with ImageViewer.

Do

```
cd /media/sf_te
cp ~/Desktop/example.png .
```

and it shows up in the host folder `te` on the macOS Desktop.

It works!