Parallel Programming

High Performance Python

software development for researchers

2020-2021

a bit about me

we will learn by doing

- I will not teach too much
  - a few weeks at most
- you get assignments
- you get a good framework for setting up projects
- once you are familiar with the framework you get a project assignment on which you will work until the end of the course
- The exam is a presentation of your project work
  - obviously, I'll ask some questions

framework: micc

- https://micc.readthedocs.io/en/master/
- https://pypi.org/project/et-micc/

HPC software development

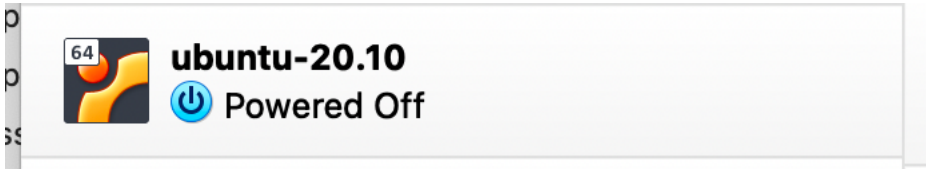
- HPC systems all run Linux
- software development can therefor be best carried out in a linux-like environment
  - Linux machine
  - MacOS
  - Windows WSL2 may be possible (but no support from my side)
- If you have a linux machine or a mac, you can setup the development environment yourself, following https://micc.readthedocs.io/en/master/devenv.html
- Otherwise, you install VirtualBox, download https://calcua.uantwerpen.be/courses/parallel-programming/ubuntu-20.10.ova and import it. This gives you an Ubuntu 20.10 virtual machine with everything preinstalled.

install VirtualBox

- go to https://www.virtualbox.org and click “Download VirtualBox 6.1”
- install it
- open it
- download https://calcua.uantwerpen.be/courses/parallel-programming/ubuntu-20.10.ova (this will take while, is it almost 7 GB)

Install ubuntu virtual machine

- open VirtualBox/File/Import appliance …
- select the file ubuntu-20.10.ova that you downloaded and click “continu” (this can take a while too)
- In the VirtualBox VM manager you will see



- double click to open it
- use userid “user”, the password is “calcua@ua”

set up your user account

- open a terminal (second icon from the top in the toolbar on the left)
  - $ cd workspace/pp
  - $ git pull
  - $ xdg-open course-material/personal-setup.pdf
- follow the steps in the pdf.