Install OpenMPI

The following instructions will help you installing OpenMPI on your machine. It takes about 5-10min.

 Create a temporary directory for compiling OpenMPI. You can do this in a terminal by typing mkdir \$HOME/local/src

- 2. Download openmpi-1.4.4.tar.bz2 from http://www.open-mpi.org
- 3. Move the openmpi-1.4.4.tar.bz2 to the directory just created:

```
mv $HOME/Downloads/openmpi-1.4.4.tar.bz2 $HOME/local/src/
```

4. Change to the directory and extract the package using

```
cd $HOME/local/src
tar -jxf openmpi-1.4.4.tar.bz2
```

5. Go into the source directory

```
cd openmpi-1.4.4
```

6. Configure, compile and install by executing the following commands

```
./configure --prefix=$HOME/opt/openmpi
make all
make install
```

This will install OpenMPI in your home directory in the sub-folder opt/openmpi. You can speed up the compilation by replacing the make all command with make -j4 all (this will compile using 4 cores).

7. Remove the temporary directories:

```
cd
rm $HOME/local/src/openmpi-1.4.4.tar.bz2
rm -r $HOME/local/src/openmpi-1.4.4
```

To use MPI you will have to adapt your PATH and LD_LIBRARY_PATH environment variable:

This appends the two lines to your .bashrc file which is executed when starting a terminal session.

To compile your MPI C++ programs you have to use mpicxx with the same arguments as you would use for g++. To run a program PRG with N MPI processes, you would then use mpirun -np N PRG.

To uninstall OpenMPI just delete the folder opt/openmpi in your home directory and remove the last two lines from the .bashrc file in your home directory.

You can find more information on http://www.open-mpi.org