Foundations-of-HPC / Foundations_of_HPC_2022 Public

Code Issues 1 Pull requests Actions Projects ...

Files main ...

Foundations_of_HPC_2022 / Assignment / exercise2 /

lucatornatore 7 months ago

Name	Name	Last commit date
..		
Makefile	added materials for final as...	7 months ago
README.md	added materials for final as...	7 months ago
dgemm.c	added materials for final as...	7 months ago

README.md

information about exercise 2

Build BLIS library

AMD provide its own implementation of standard BLAS routine, this implementation is provided in the `BLIS` library, available here . There is also the source code on github.

Download it:

```
$git clone https://github.com/flame/blis.git
$cd blis
```

Configure and compile with openMP support (multithreading is disabled by default,remember to modify *prefix* path):

```
 srun -n1 ./configure --enable-cblas --enable-threading=openmp --
prefix=/u/area/ntosato/myblis auto
```

```
srun  -n 1 --cpus-per-task=128 make -j 128
make install
```

We compile in the target machine, and we allow the command to use 128 cores, then use `-j 128` argument to compile in parallel way.

To use BLIS with multiple threads: `export BLIS_NUM_THREADS=128` .

The final artifact will be placed in `/u/area/ntosato/myblis/lib` directory, this is the path that you need to put inside `Makefile` and library path .

To compile the previous exercise with the new BLIS library modify the `Makefile` uncommenting the `BLIS` related rows.

And adjust LD_LIBRARY_PATH (**modify it with your own path**):

```
export LD_LIBRARY_PATH=/u/area/ntosato/myblis/lib:$LD_LIBRARY_PATH
```