

# Domain partitioning

## User defined

Heckle lets the user specify how to partition the simulation domain.

You just have to enter the number of MPI domains (partitions) in each direction, in the heckle.txt file.

```
----number-of-mpi-domains-----  
 64 32 1  
-----  
$-----
```

the last line says the user wants 64, 32 and 1 MPI domains in the directions x, y and z, respectively.

Here the total number of partition desired is 2048. Heckle will switch to automatic domain partitioning if ran with any other number of processes.

For example :

```
mpirun -n 1024 ./heckle.exe ./
```

will perform automatic domain partitioning with 1024 cores, disregarding the 64x32x1 domains specified in heckle.txt

## Automatic