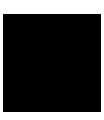
Domain Decomposition

1. Aims 3



Both of these stages involve calculating the value at each grid point by combining it with the

[redacted]

[redacted]

neighbouring subgrid whose values are being computed by a different process. This means that some form of communication between processes is needed.

One way to tackle this problem is to add a boundary layer to each edge of each subgrid that

5.2. Run the program

As long as you do not run for a long time, e.g. for less than a minute, you can execute the serial executable on the login node directly from the command line as follows:

The arguments to cfd are the same as in the serial case, with the scale factor now setting the size of the overall grid (which will be decomposed into smaller subgrids). Varying the number

5.4.2. Efficiency

[redacted]

[redacted]

6. Compiler Investigation

[redacted]

[redacted]