

Openfoam benchmark

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Openfoam+ version v1906

Solver: simpleFoam

Cell count: 22.5 M

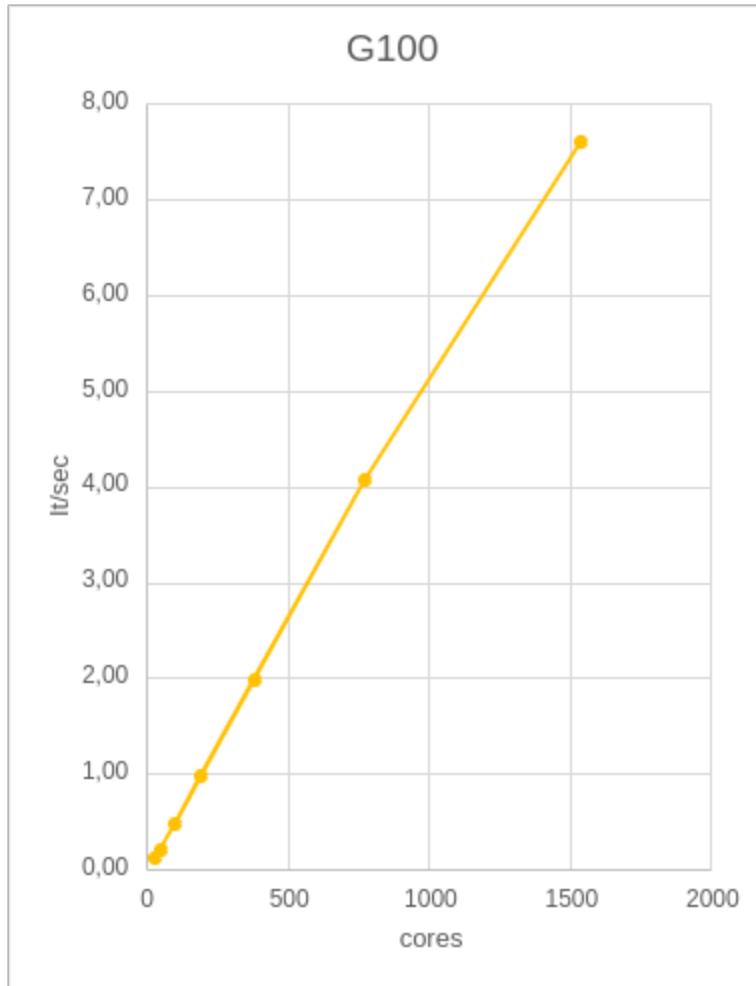


Figure 1. Iterate/sec vs number of cores specifying --ntasks-per-socket=24 (see Table 1)

Table 1. Galileo100 benchmark data

Nodes	Cores	Iterate/sec	Speedup	Ideal
1/2	24	0.11	-	
1	48	0.21	1.9	2
2	96	0.47	4.2	4
4	192	0.97	8.7	8
8	384	1.98	17.8	16
16	768	4.07	36.6	32
32	1536	7.60	68.4	64

Scalability on G100 based on the half-node case is super-linear up to 32 nodes. Since at 32 nodes the number of cells per core is close to 20000, it means that this amount of cells per core should be sufficient to achieve an effective parallelization of a typical simpleFoam run.

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