

CitcomCU Runtime Comparison Tests: Lonestar vs. Ranger

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Results for a test model run on 64 processors using a version of CitcomCU.

The table below summarizes the time per residual loop (s/resi) and the total runtime for the 0th timestep.

	Lonestar	Ranger
Default	4.74 s/resi Total = 34.0109 s	6.905 s/resi Total = 50.7383 s
Change Ranger compiler to intel		6.42 s/resi Total = 47.7307 s
Optimization (-O3) (keep intel compiler)	4.79 s/resi Total = 34.1462 s	10.315 s/resi Total = 73.3789 s
tacc_affinity (Ranger) (keep intel & optimization)		6.12 s/resi Total = 45.3112 s

Details of mpicc/compiler versions, optimization, etc corresponding to above results:

	Lonestar	Ranger
Default	which mpicc: /opt/apps/intel10/mvapich/1.0.1/bin/mpicc Optimization (in CitcomCU Makefile): LinuxOPTIM=-O2	which mpicc: /opt/apps/pgi7_2/mvapich/1.0.1/bin/mpicc Optimization (in CitcomCU Makefile): LinuxOPTIM=-O2
Change Ranger compiler to intel		which mpicc: /opt/apps/intel10_1/mvapich/1.0.1/bin/mpicc Optimization (in CitcomCU Makefile): LinuxOPTIM=-O2
Optimization (-O3) (keep intel compiler)	which mpicc: /opt/apps/intel10/mvapich/1.0.1/bin/mpicc Optimization (in CitcomCU Makefile): LinuxOPTIM=-O3 -xT -ipo	which mpicc: /opt/apps/intel10_1/mvapich/1.0.1/bin/mpicc Optimization (in CitcomCU Makefile): LinuxOPTIM=-O3 -xO -ipo
tacc_affinity (Ranger) (keep intel & optimization)		which mpicc: /opt/apps/intel10_1/mvapich/1.0.1/bin/mpicc Optimization (in CitcomCU Makefile): LinuxOPTIM=-O3 -xO -ipo In queue file: ibrun tacc_affinity <citcomcu.mpi> <inputfile>