Trabalho Final - CAD

COC472

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HPL

stands for

High Performance Linpack

HPL

Build

Utilizamos o Make.Linux_PII_CBLAS_gm dentro da pasta setup como template.

Tamanhos de Problema

- 50k
- 60k
- 80k
- 100k
- 120k
- 140k
- 170k

Tamanhos de bloco

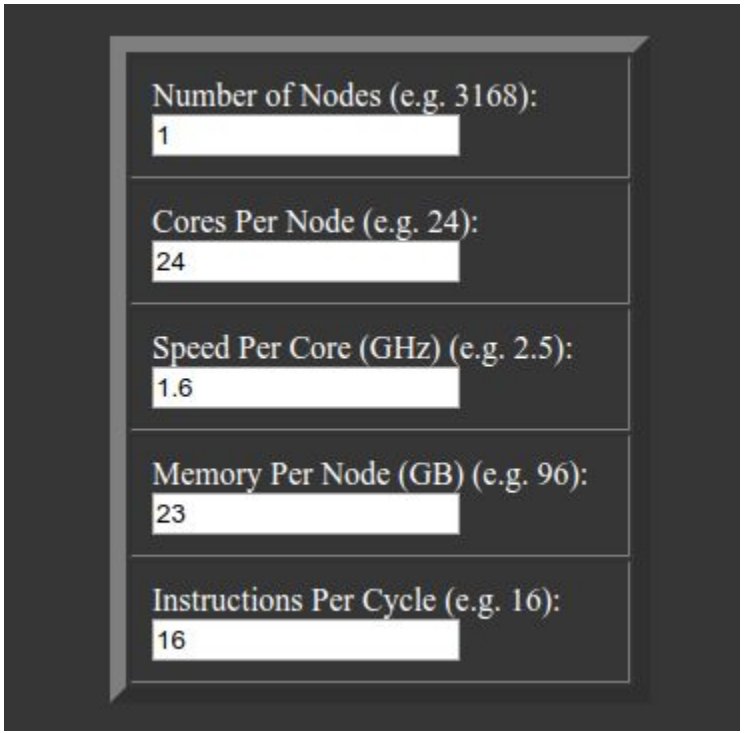
1 tamanho de bloco 192.

Tamanhos de grid

3 tamanhos

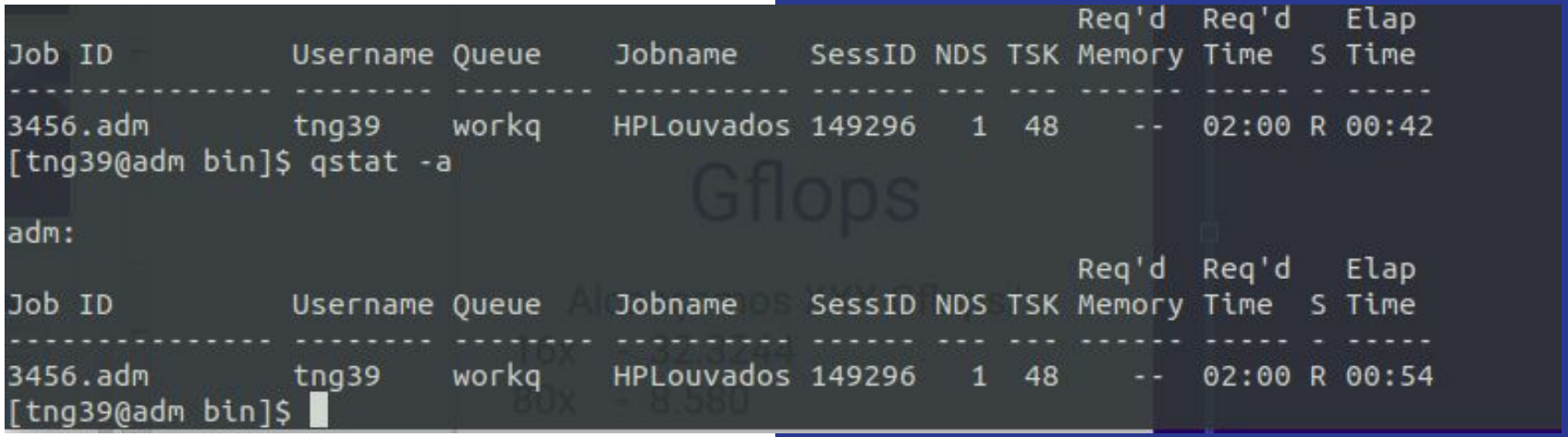
4x6, 5x6, 4x8

HPL - Gflops -Estimativa pela calculadora



Your estimated system performance (Rmax) in GFLOPS based on an 84% system efficiency is: Note: You may also type in the actual (Rmax) obtained via HPL and find its rank and efficiency.	515
Your efficiency is:	83.88%

HPL


Job ID Username Queue Jobname SessID NDS TSK Req'd Memory Req'd Time S Elap Time
3456.adm tng39 workq HPLouvados 149296 1 48 -- 02:00 R 00:42
[tng39@adm bin]$ qstat -a
adm:
Job ID Username Queue Jobname SessID NDS TSK Req'd Memory Req'd Time S Elap Time
3456.adm tng39 workq HPLouvados 149296 1 48 -- 02:00 R 00:54
[tng39@adm bin]$


HPCG
High Performance Conjugate Gradients

HPCG

Cubo

Dimensão deve ser ¼ da RAM física.

(24511224/4)^(1/3)=

182,99 -> **180**

Tempo

Tempo mínimo de execução de 1800s para ser aceito.

HPCG

Gflops

Alcançamos XXX Gflops/s

16x - 32.3244
80x - 8.580
104x - 7.9138
120x - 7.8706

High performance is observer when small problem is specified.

https://www.hpcadvisorycouncil.com/pdf/HPCG_Analysis_and_Profiling.pdf

Glossário

The linpack benchmark

Sparse Matrices

In numerical analysis and scientific computing, a sparse matrix or sparse array is a matrix in which most of the elements are zero.

Out of core comp.

In computing, external memory algorithms or out-of-core algorithms are algorithms that are designed to process data that is too large to fit into a computer's main memory at one time.

Symmetric Multiproc.

SMP (symmetric multiprocessing) is the processing of programs by multiple processors that share a common operating system and memory.

HPCG Benchmark: Toward a New Metric for Ranking High Performance Computing Systems

Related Kernels

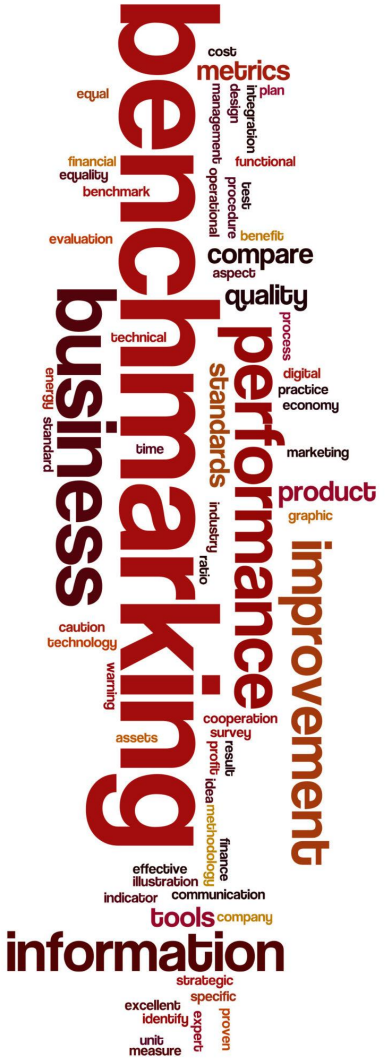
Not found…

The dominant calculations in this algorithm are dense matrix-matrix multiplication and related kernels, which we call Type 1 patterns.

Coarse Problem

In numerical analysis, coarse problem is an auxiliary system of equations used in an iterative method for the solution of a given larger system of equations.

Arigato!


benchmarking
business
performance
improvement
information
metrics
quality
compare
product
standards
tools
cost
plan
equal
management
design
integration
functional
financial
equality
benchmark
operational
test
procedure
evaluation
benefit
aspect
process
technical
digital
practice
economy
energy
standard
time
marketing
graphic
industry
ratio
caution
technology
warning
cooperation
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effective
illustration
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identify
expert
proven
unit
measure