HPCG BENCHMARK

HPCG Benchmark

HPCG involves

- Sparse Matrix Vector Multiplication (SpMV)
- Symmetric Gauss-Seidel smoother (SymGS)
- Global Dot Product (DDOT)
- Vector Update (WAXPBY)
- Multigrid preconditioner (MG)

AMD rocHPCG

rocHPCG is a benchmark based on the HPCG benchmark application, implemented on top of AMD's Radeon Open Compute ROCm runtime and toolchains. rocHPCG is created using the HIP programming language and optimized for AMD's latest discrete GPUs.

Requirement Libraries:

- MPI
- AMD ROCm platform (2.5 or later)
- rocPRIM

Run rocHPCG benchmark

AMD

Run the rocHPCG benchmark application by either using command line parameters or the **hpcg.dat** input file

rochpcg <nx> <ny> <nz> <runtime>

where

nx - is the global problem size in x dimension

ny - is the global problem size in y dimension

nz - is the global problem size in z dimension

runtime - is the desired benchmarking time in seconds (> 1800s for official runs)

//hpcg.dat

HPCG benchmark input file

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1800

References

http://www.hpcg-benchmark.org/

https://github.com/hpcg-benchmark/hpcg

https://github.com/ROCmSoftwarePlatform/rocHPCG/tree/master

https://github.com/ROCmSoftwarePlatform/rocPRIM

Thanks