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7980xe 2021

Intel Core i9-7980XE testing with a ASUS PRIME X299-A (2002 BIOS) and Gigabyte AMD Radeon 540/540X/550/550X / RX 540X/550/550X 2GB on Ubuntu 20.10 via the Phoronix Test Suite.

Test Systems:

1

2

3

Processor: Intel Core i9-7980XE @ 4.20GHz (18 Cores / 36 Threads), Motherboard: ASUS PRIME X299-A (2002 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 16GB, Disk: Samsung SSD 970 EVO 500GB, Graphics: Gigabyte AMD Radeon 540/540X/550/550X / RX 540X/550/550X 2GB (1206/1750MHz), Audio: Realtek ALC1220, Monitor: G237HL, Network: Intel I219-V

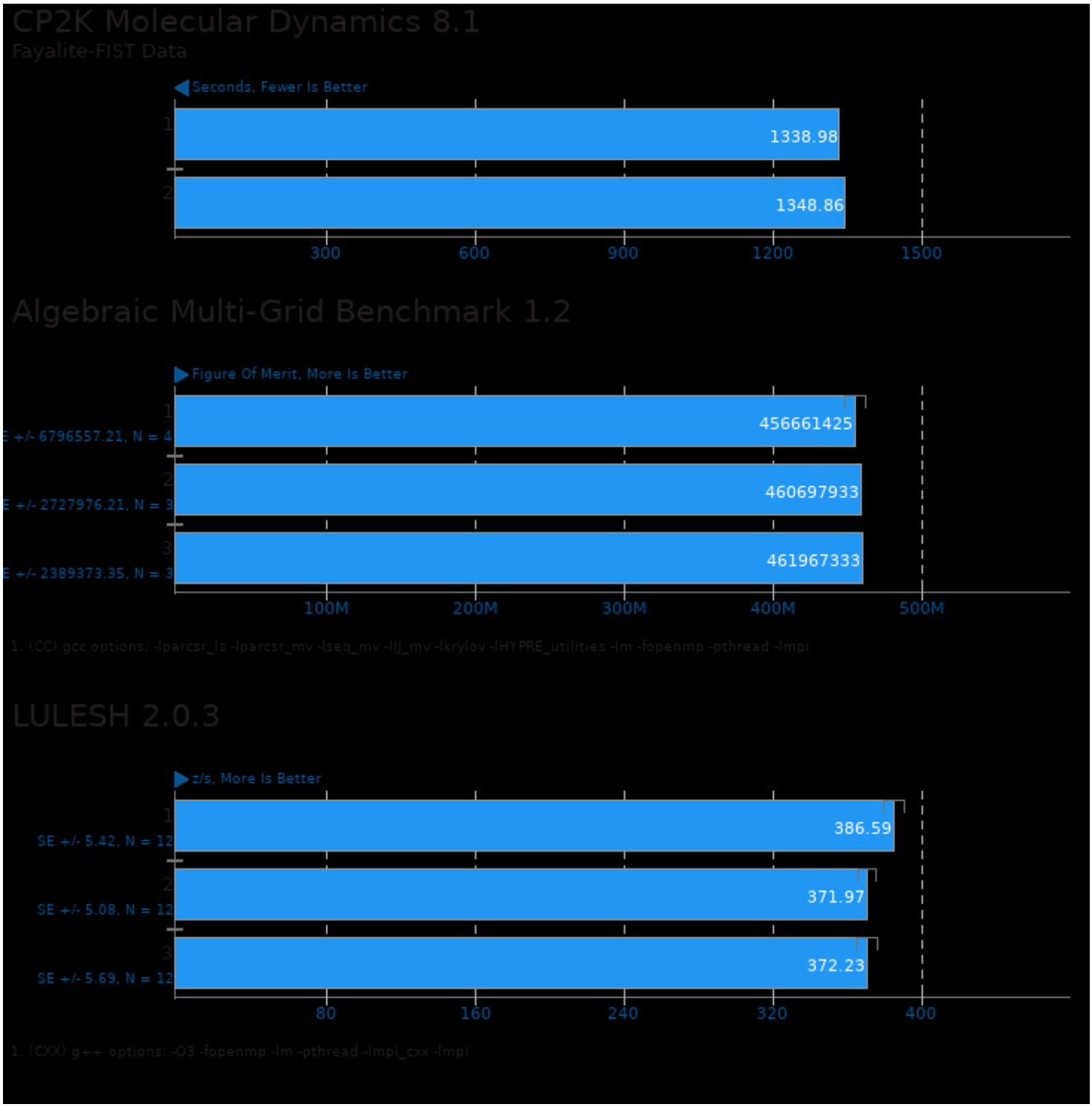
OS: Ubuntu 20.10, Kernel: 5.8.0-36-generic (x86_64), Desktop: GNOME Shell 3.38.1, Display Server: X Server 1.20.9,

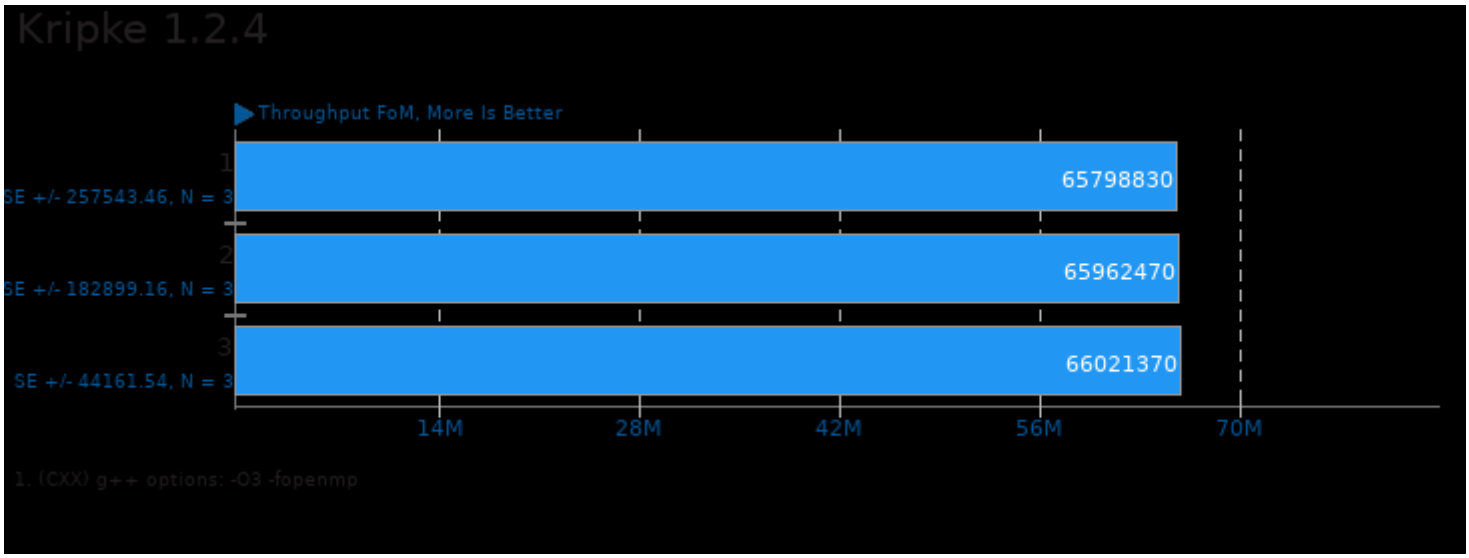
7980xe 2021

Display Driver: modesetting 1.20.9, OpenGL: 4.6 Mesa 20.2.6 (LLVM 11.0.0), Vulkan: 1.2.131, Compiler: GCC 10.2.0, File-System: ext4, Screen Resolution: 1920x1080

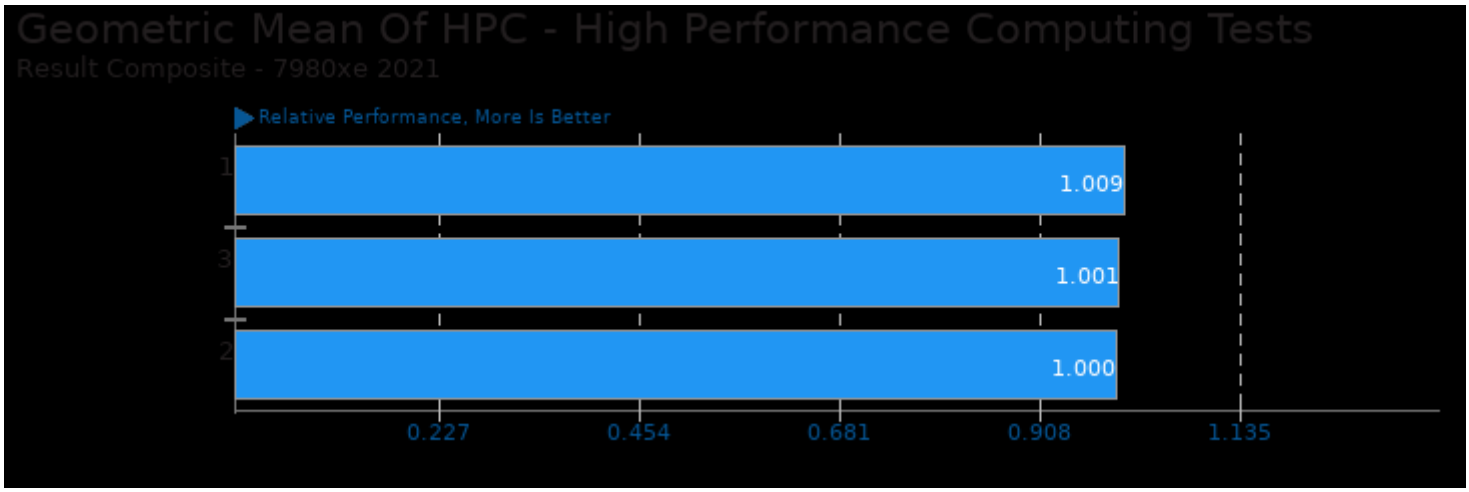
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-gcn/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x2006a08
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of Clear buffers; SMT vulnerable

	1	2	3
CP2K Molecular Dynamics - Fayalite-FIST Data (sec)	**1339**	**1349**	
Normalized	100%	99.27%	
Algebraic Multi-Grid Benchmark (Figure Of Merit)	**456661425**	460697933	**461967333**
Normalized	98.85%	99.73%	100%
Standard Deviation	3%	1%	0.9%
LULESH (z/s)	**386.59285**	**371.96557**	372.23368
Normalized	100%	96.22%	96.29%
Standard Deviation	4.9%	4.7%	5.3%
Kripke (Throughput FoM)	**65798830**	65962470	**66021370**
Normalized	99.66%	99.91%	100%
Standard Deviation	0.7%	0.5%	0.1%

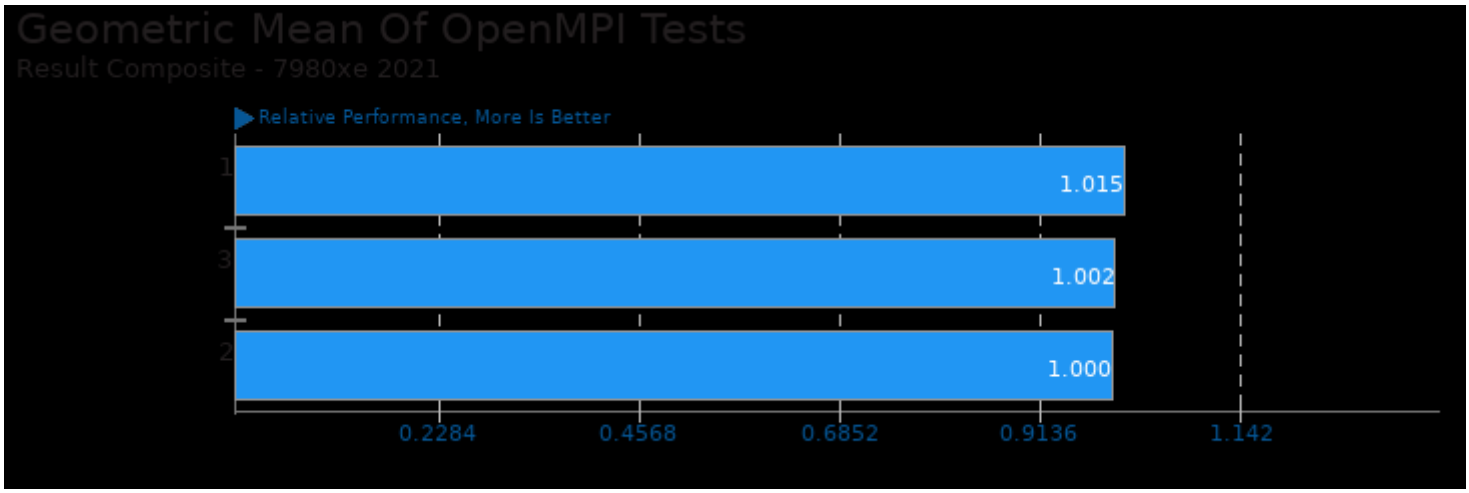

CP2K Molecular Dynamics 8.1
Fayalite-FIST Data
Seconds, Fewer Is Better
1
1338.98
2
1348.86
300
600
900
1200
1500
Algebraic Multi-Grid Benchmark 1.2
Figure Of Merit, More Is Better
1
456661425
E +/- 6796557.21, N = 4
2
460697933
E +/- 2727976.21, N = 3
3
461967333
E +/- 2389373.35, N = 3
100M
200M
300M
400M
500M
1. (CC) gcc options: -lparcsr_ls -lparcsr_mv -lseq_mv -lIJ_mv -lkrylov -lHYPRE_utilities -lm -fopenmp -pthread -lmpi
LULESH 2.0.3
z/s, More Is Better
1
386.59
SE +/- 5.42, N = 12
2
371.97
SE +/- 5.08, N = 12
3
372.23
SE +/- 5.69, N = 12
80
160
240
320
400
1. (CXX) g++ options: -O3 -fopenmp -lm -pthread -lmpi_cxx -lmpi


Kripke 1.2.4
Throughput FoM, More Is Better
1
SE +/- 257543.46, N = 3
65798830
2
SE +/- 182899.16, N = 3
65962470
3
SE +/- 44161.54, N = 3
66021370
14M
28M
42M
56M
70M
1. (CXX) g++ options: -O3 -fopenmp

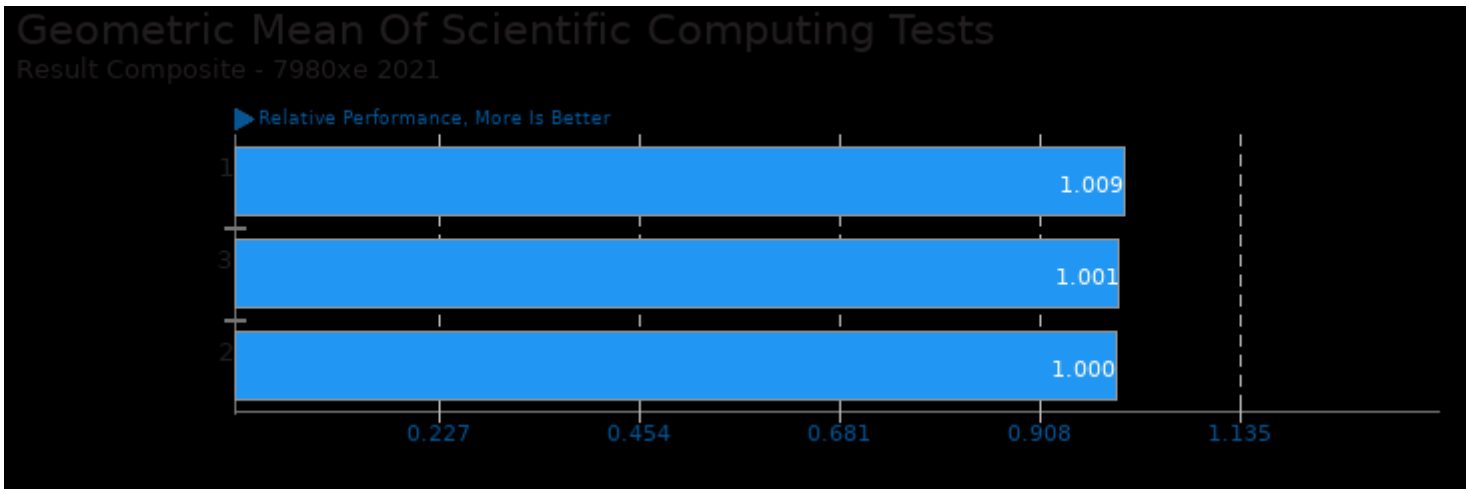
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/amg, pts/cp2k, pts/lulesh and pts/kripke



Geometric mean based upon tests: pts/cp2k, pts/amg and pts/lulesh



Geometric mean based upon tests: pts/amg, pts/cp2k, pts/lulesh and pts/kripke

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 06:06.