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5950X new tests july

AMD Ryzen 9 5950X 16-Core testing with a ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS) and AMD Radeon RX 6800 16GB on Ubuntu 22.04 via the Phoronix Test Suite.

Automated Executive Summary

D had the most wins, coming in first place for 44% of the tests.

Based on the geometric mean of all complete results, the fastest (D) was 1.006x the speed of the slowest (A). C was 0.997x the speed of D, B was 1x the speed of C, A was 0.997x the speed of B.

Test Systems:

A

B

C

D

Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (WI-FI) (4006 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Western Digital WDS100T1X0E-00AFY0, Graphics: AMD Radeon RX 6800 16GB (2475/1000MHz), Audio: AMD Navi 21 HDMI Audio, Monitor: ASUS MG28U, Network: Realtek RTL8125 2.5GbE + Intel I211 + Intel Wi-Fi 6 AX200

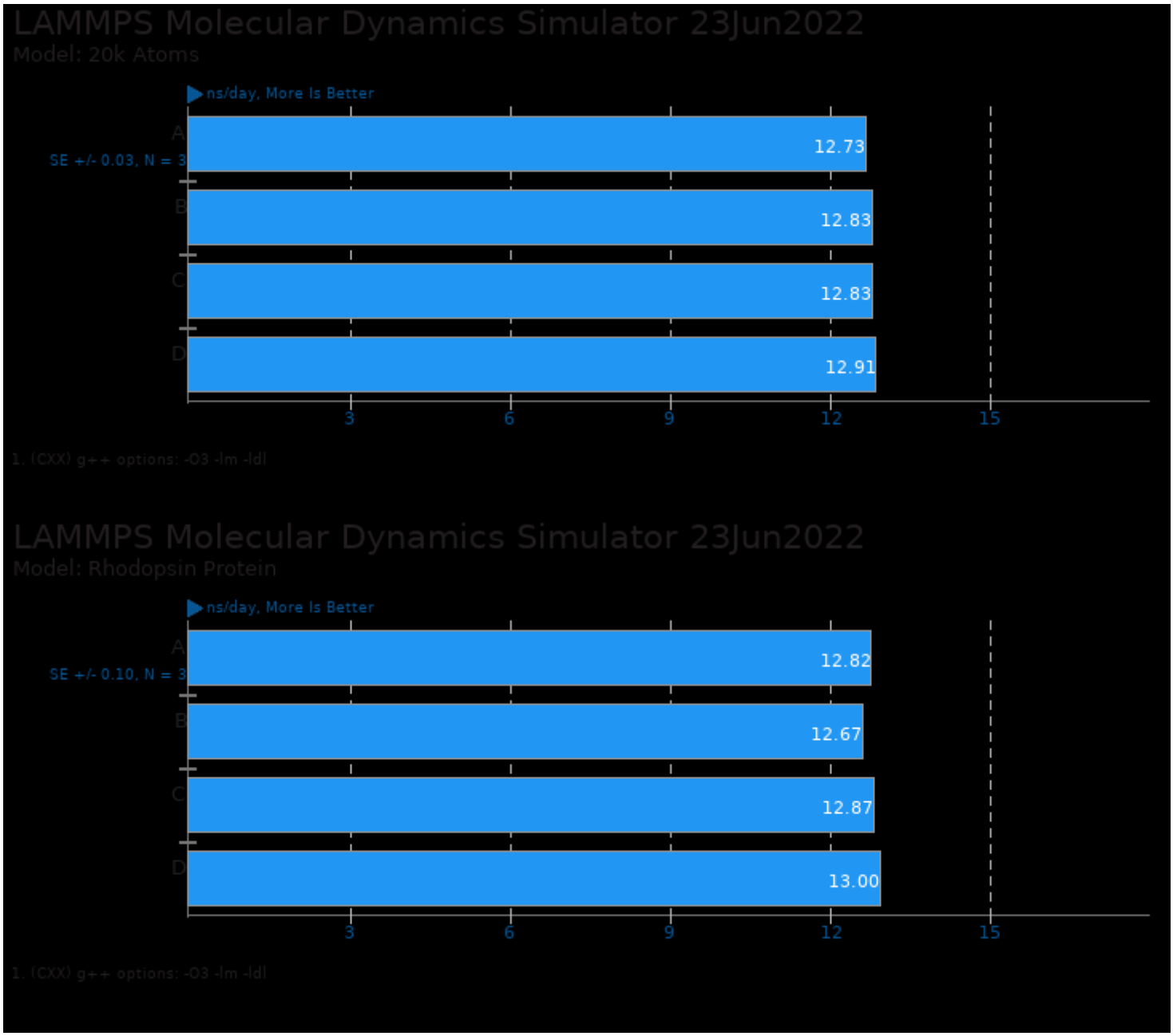
OS: Ubuntu 22.04, Kernel: 5.18.0-051800-generic (x86_64), Desktop: GNOME Shell 42.2, Display Server: X Server 1.21.1.3 + Wayland, OpenGL: 4.6 Mesa 22.2.0-devel (git-2bfcd29 2022-07-19 jammy-oibaf-ppa) (LLVM 14.0.6 DRM 3.46), OpenCL: OpenCL 2.1 AMD-APP (3452.0), Vulkan: 1.3.219, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 3840x2160

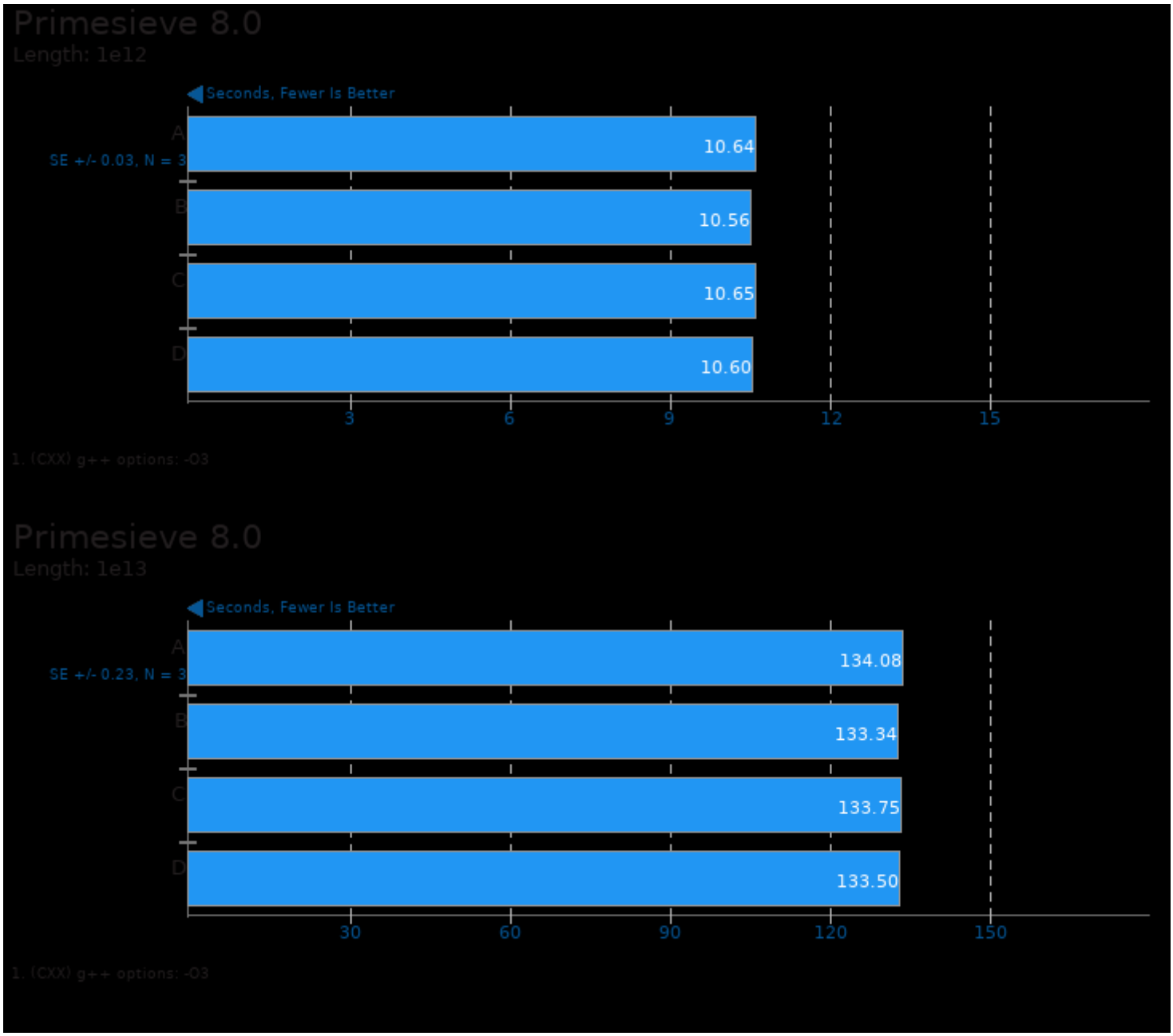
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-gcn/usr --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-build-config=bootstrap-lto-lean --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: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0xa201016
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

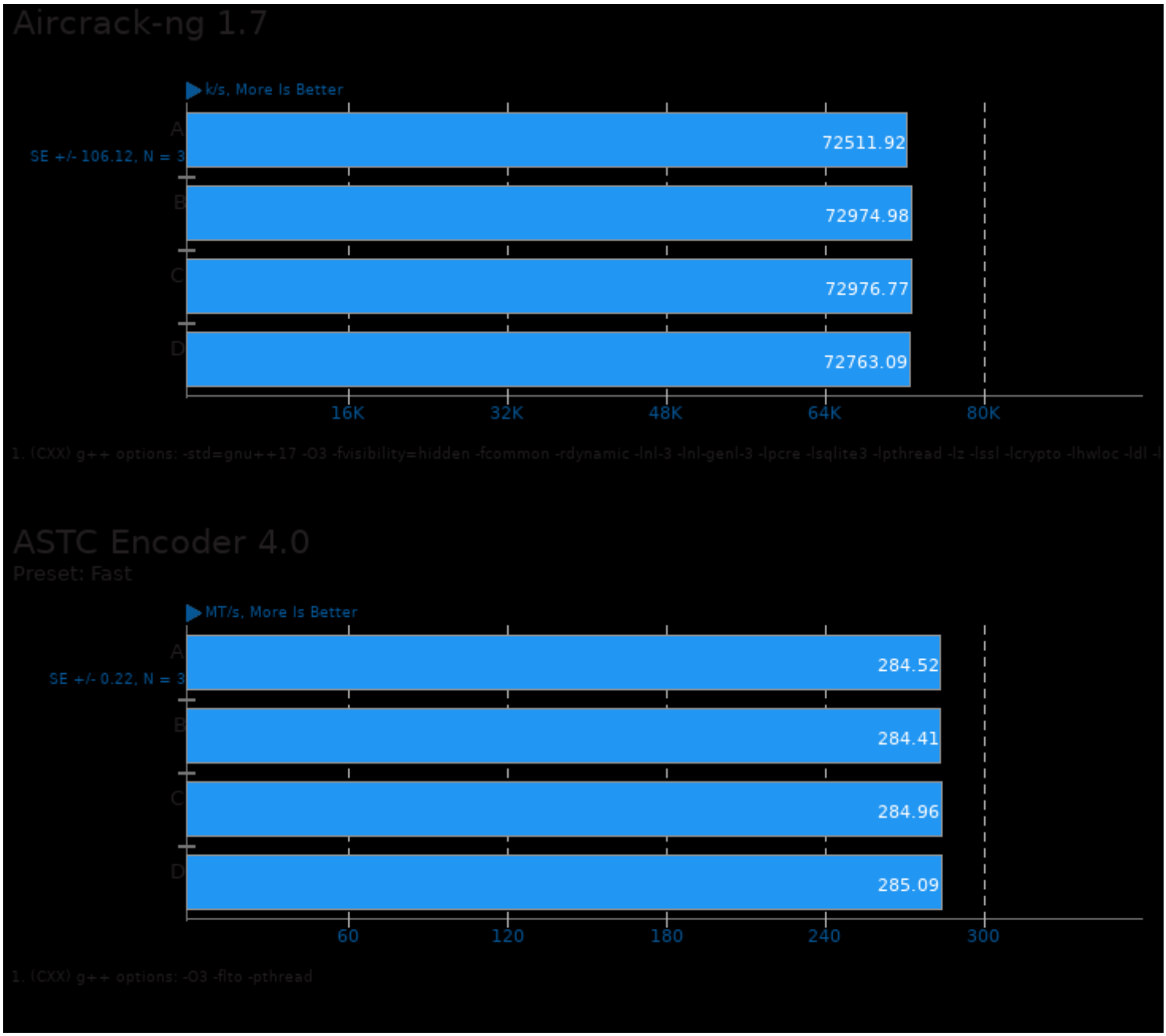
	A	B	C	D
LAMMPS Molecular Dynamics Simulator - 20k Atoms (ns/day)	**12.728**	12.834	12.827	**12.911**
Normalized	98.58%	99.4%	99.35%	100%
Standard Deviation	0.5%			
LAMMPS Molecular Dynamics Simulator - Rhodopsin Protein	12.820	**12.672**	12.87	**13.004**
Normalized	98.59%	97.45%	98.97%	100%
Standard Deviation	1.4%			
Primesieve - 1e12 (sec)	10.643	**10.558**	**10.652**	10.595
Normalized	99.2%	100%	99.12%	99.65%
Standard Deviation	0.6%			
Primesieve - 1e13 (sec)	**134.083**	**133.341**	133.754	133.502
Normalized	99.45%	100%	99.69%	99.88%
Standard Deviation	0.3%			
Aircrack-ng (k/s)	**72512**	72975	**72977**	72763
Normalized	99.36%	100%	100%	99.71%
Standard Deviation	0.3%			
ASTC Encoder - Fast (MT/s)	284.5199	**284.411**	284.9577	**285.086**
Normalized	99.8%	99.76%	99.95%	100%
Standard Deviation	0.1%			
ASTC Encoder - Medium (MT/s)	98.6157	98.7098	**98.474**	**98.7183**
Normalized	99.9%	99.99%	99.75%	100%
Standard Deviation	0.2%			
ASTC Encoder - Thorough (MT/s)	**12.1212**	12.1768	**12.1823**	12.1674
Normalized	99.5%	99.95%	100%	99.88%

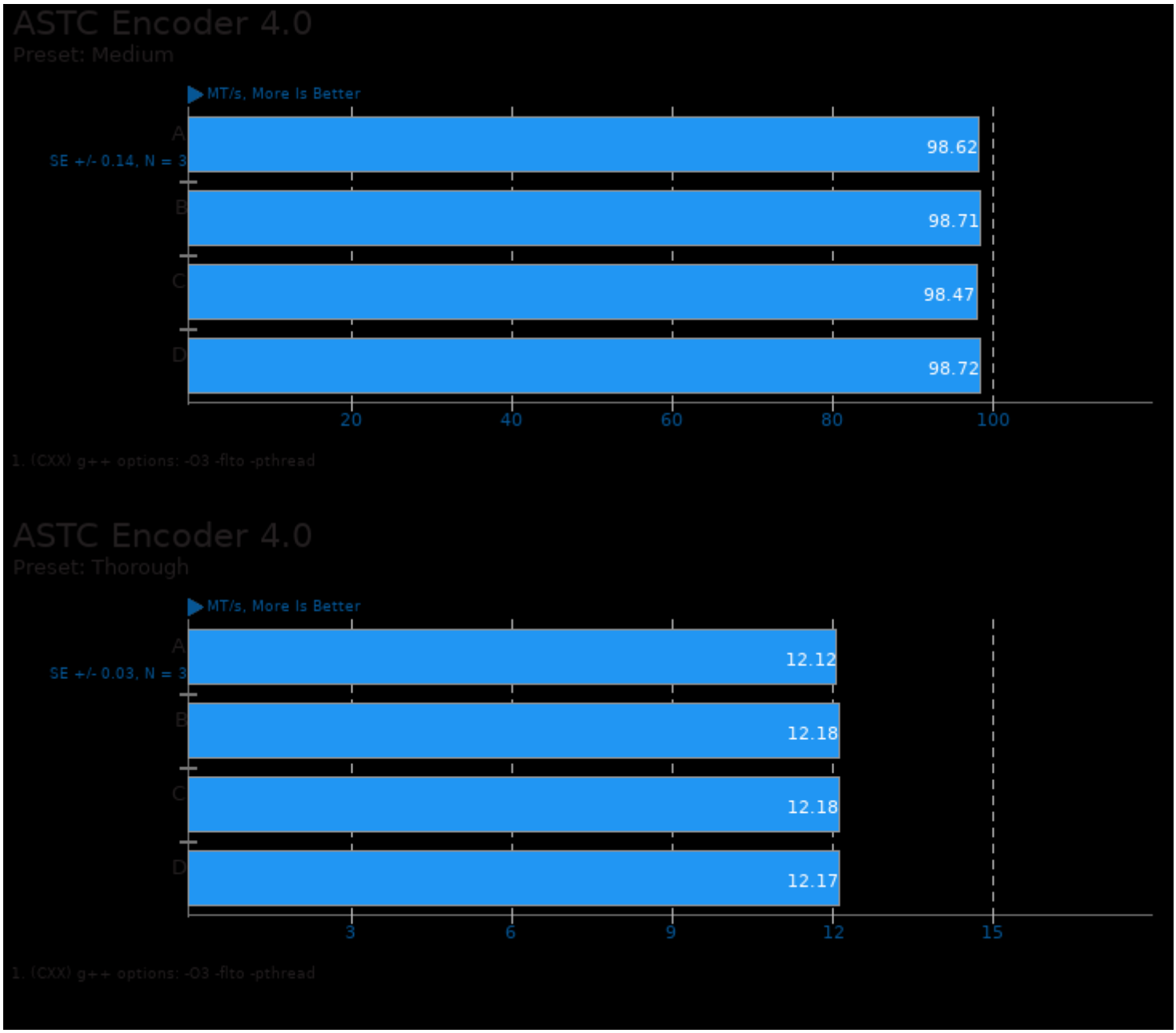
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	Standard Deviation	0.4%		
ASTC Encoder - Exhaustive (MT/s)	1.2817	1.2843	1.2856	1.2854
	Normalized	99.7%	99.9%	100%	99.98%
	Standard Deviation	0.3%		

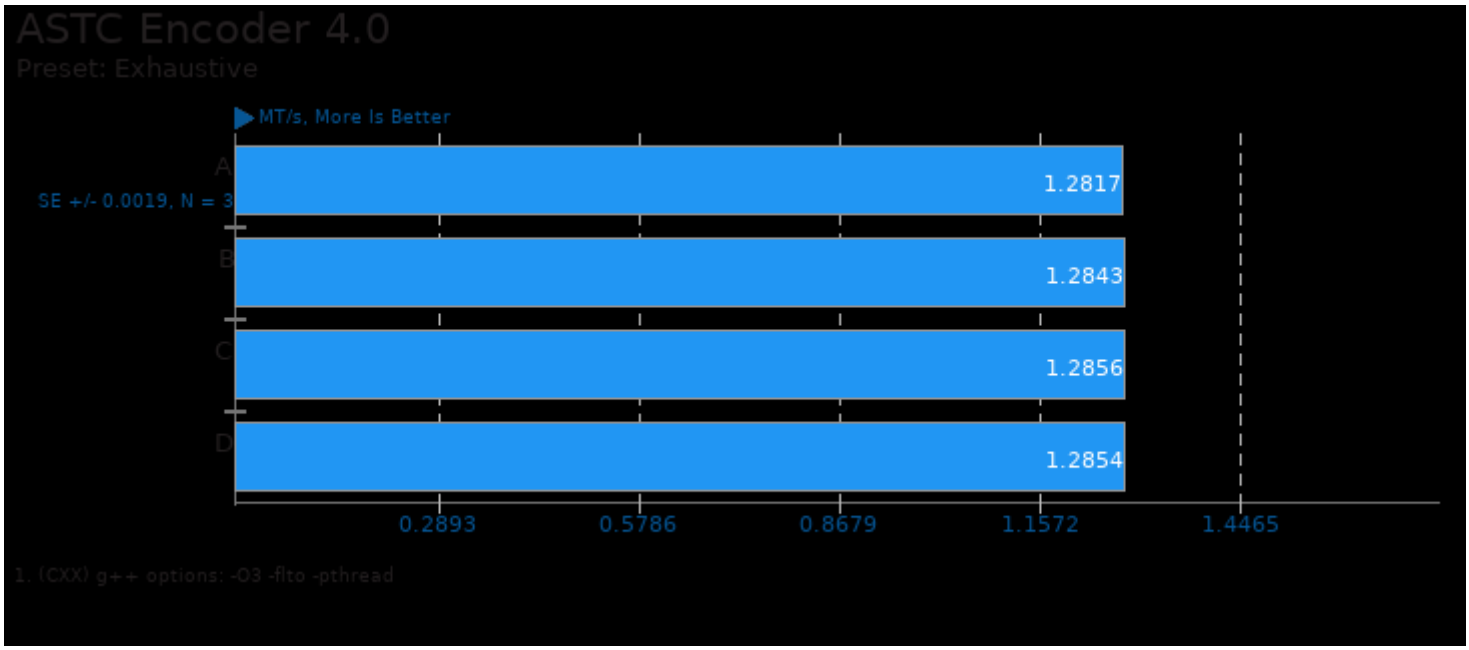

LAMMPS Molecular Dynamics Simulator 23Jun2022
Model: 20k Atoms
ns/day, More Is Better
SE +/- 0.03, N = 3
A
B
C
D
12.73
12.83
12.83
12.91
3
6
9
12
15
1. (CXX) g++ options: -O3 -lm -ldl
LAMMPS Molecular Dynamics Simulator 23Jun2022
Model: Rhodopsin Protein
ns/day, More Is Better
SE +/- 0.10, N = 3
A
B
C
D
12.82
12.67
12.87
13.00
3
6
9
12
15
1. (CXX) g++ options: -O3 -lm -ldl


Primesieve 8.0
Length: 1e12
Seconds, Fewer Is Better
SE +/- 0.03, N = 3
A
B
C
D
10.64
10.56
10.65
10.60
3
6
9
12
15
1. (CXX) g++ options: -O3
Primesieve 8.0
Length: 1e13
Seconds, Fewer Is Better
SE +/- 0.23, N = 3
A
B
C
D
134.08
133.34
133.75
133.50
30
60
90
120
150
1. (CXX) g++ options: -O3

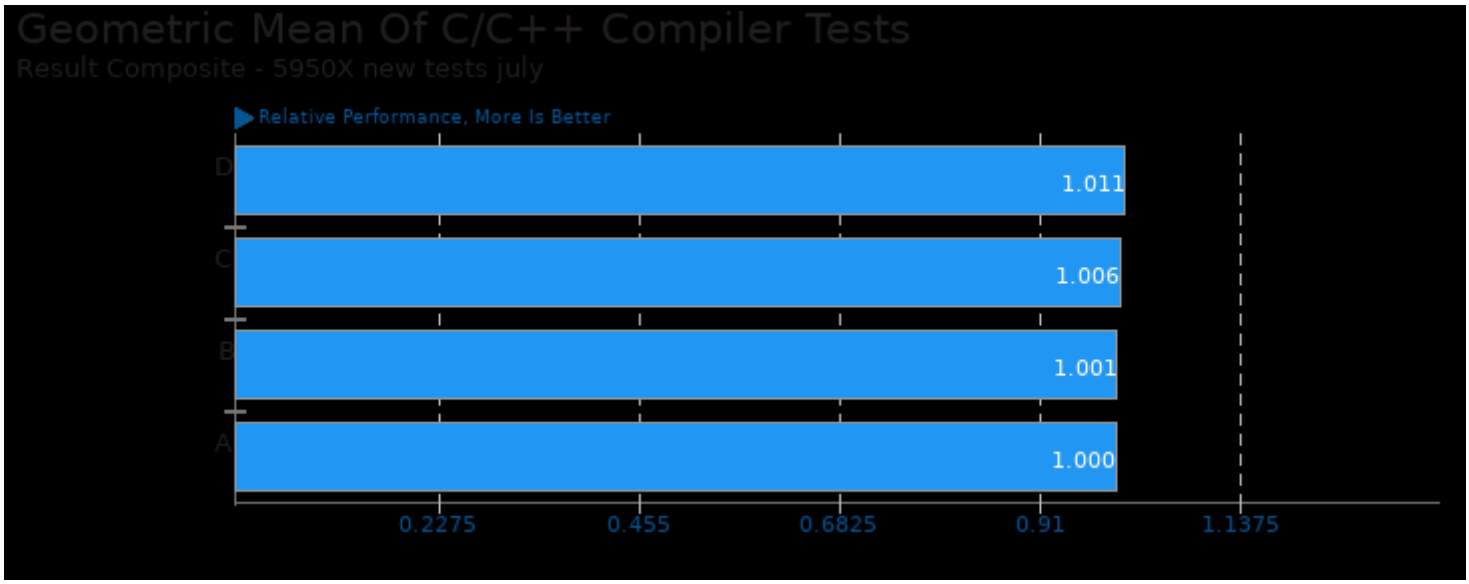

Aircrack-ng 1.7
k/s, More Is Better
SE +/- 106.12, N = 3
A
B
C
D
72511.92
72974.98
72976.77
72763.09
16K
32K
48K
64K
80K
1. (CXX) g++ options: -std=gnu++17 -O3 -fvisibility=hidden -fcommon -rdynamic -lnl-3 -lnl-genl-3 -lpcre -lsqlite3 -lpthread -lz -lssl -lcrypto -lhwloc -ldl
ASTC Encoder 4.0
Preset: Fast
MT/s, More Is Better
SE +/- 0.22, N = 3
A
B
C
D
284.52
284.41
284.96
285.09
60
120
180
240
300
1. (CXX) g++ options: -O3 -flto -pthread


ASTC Encoder 4.0
Preset: Medium
MT/s, More Is Better
SE +/- 0.14, N = 3
A
B
C
D
98.62
98.71
98.47
98.72
20
40
60
80
100
1. (CXX) g++ options: -O3 -flto -pthread
ASTC Encoder 4.0
Preset: Thorough
MT/s, More Is Better
SE +/- 0.03, N = 3
A
B
C
D
12.12
12.18
12.18
12.17
3
6
9
12
15
1. (CXX) g++ options: -O3 -flto -pthread

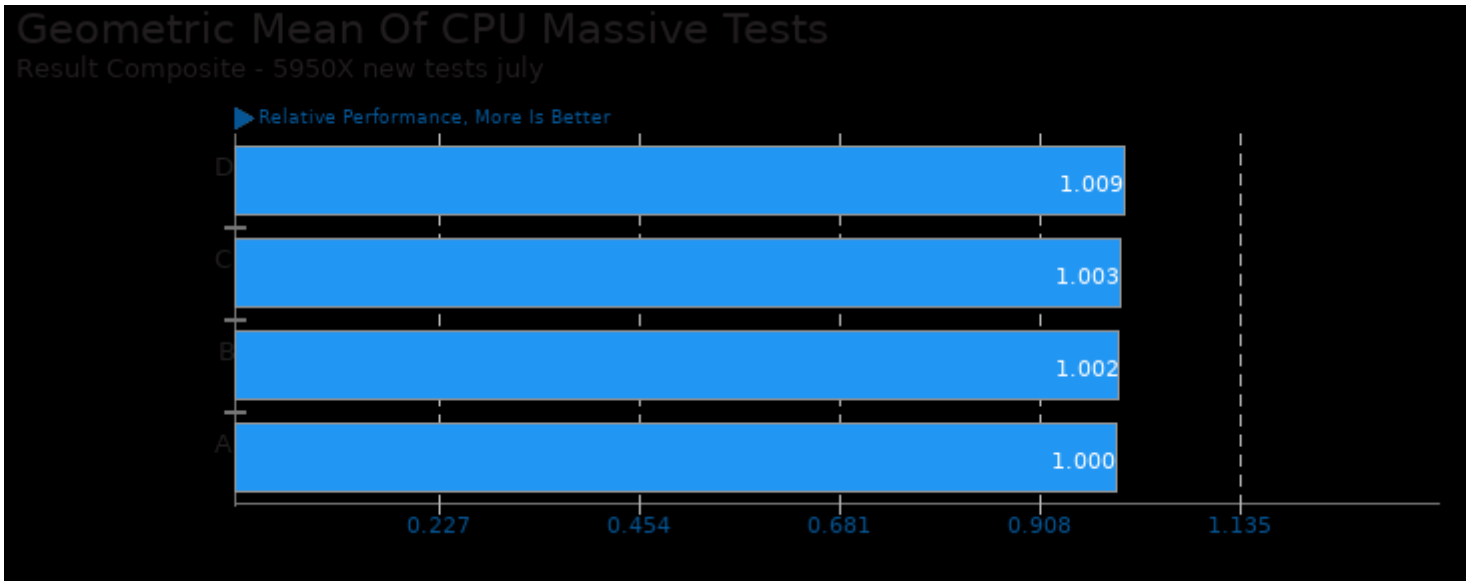
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These geometric means are based upon test groupings / test suites for this result file.

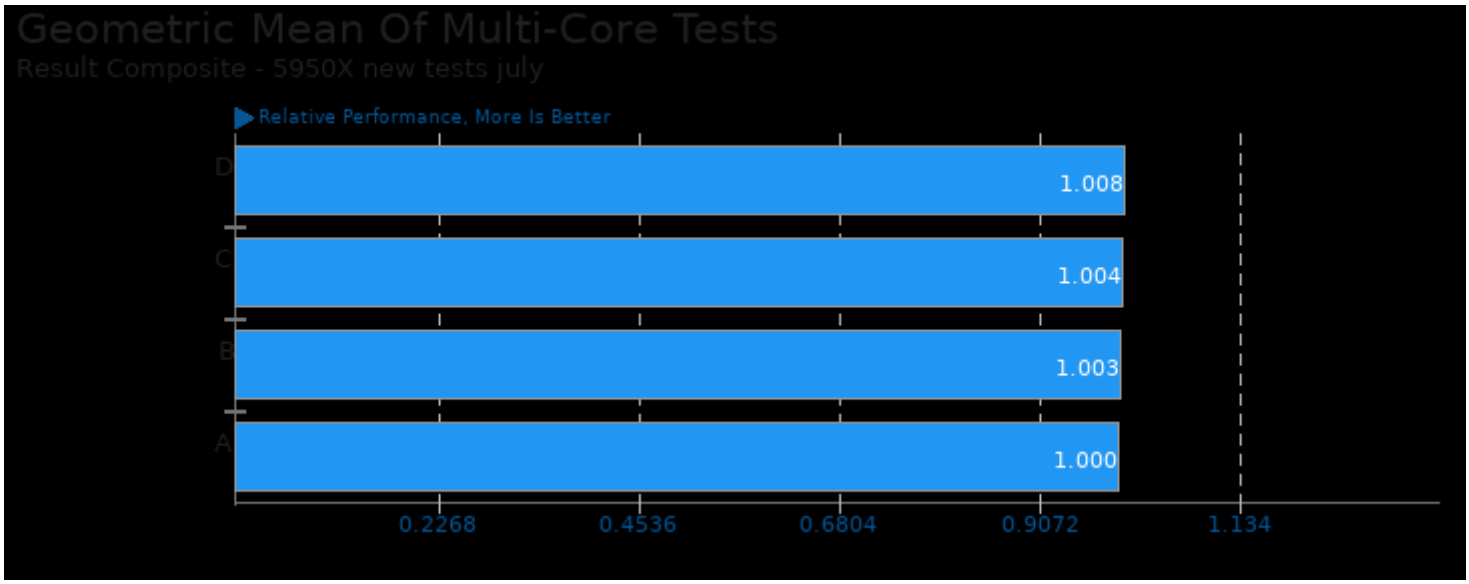


Geometric mean based upon tests: pts/lammps and pts/aircrack-ng



Geometric mean based upon tests: pts/lammps and pts/primesieve

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Geometric mean based upon tests: pts/aircrack-ng, pts/primesieve and pts/lammps

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 08:07.