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Xeon Gold 5220R 2P Feb

2 x Intel Xeon Gold 5220R testing with a TYAN S7106 (V2.01.B40 BIOS) and llvmpipe on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

3 had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (3) was 1.008x the speed of the slowest (2). 1 was 0.998x the speed of 3 and 2 was 0.994x the speed of 1.

Test Systems:

1

2

3

Processor: 2 x Intel Xeon Gold 5220R @ 3.90GHz (36 Cores / 72 Threads), Motherboard: TYAN S7106 (V2.01.B40 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 94GB, Disk: 500GB Samsung SSD 860, Graphics: llvmpipe, Monitor: VE228, Network: 2 x Intel I210 + 2 x QLogic cLOM8214 1/10GbE

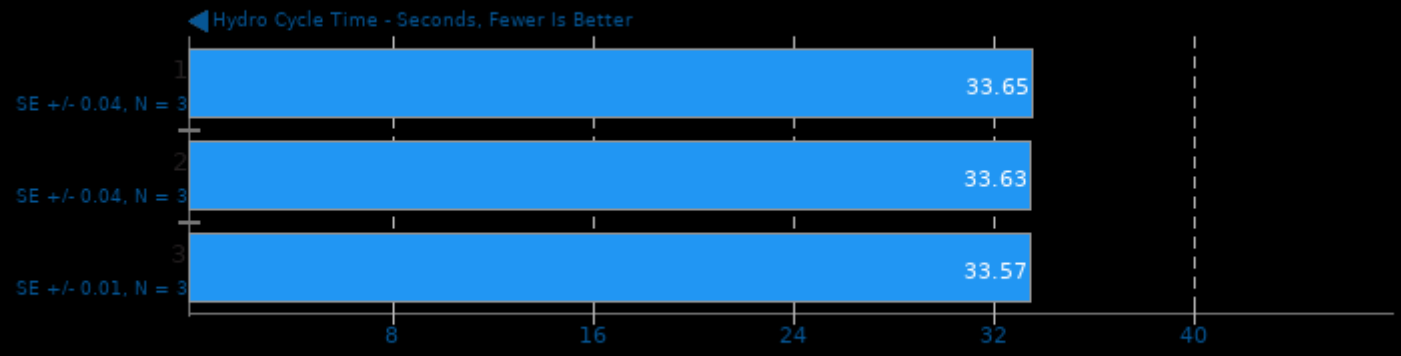
OS: Ubuntu 20.04, Kernel: 5.9.0-050900rc6-generic (x86_64) 20200920, Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, OpenGL: 3.3 Mesa 20.0.4 (LLVM 9.0.1 256 bits), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: Transparent Huge Pages: madvise
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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEa/gcc-9-9.3.0/debian/tmp-nvptx/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: 0x5003003
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Not affected + meltdown: Not affected + 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 Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx_async_abort: Mitigation of TSX disabled

	1	2	3
Pennant - sedovbig (Hydro Cycle Time - sec)	**33.64961**	33.63006	**33.56908**
Normalized	99.76%	99.82%	100%
Standard Deviation	0.2%	0.2%	0.1%
Pennant - leblancbig (Hydro Cycle Time -	**14.50302**	**14.52776**	14.52666
Normalized	100%	99.83%	99.84%
Standard Deviation	0.2%	0.5%	0.3%
Gcrypt Library (sec)	**231.841**	231.847	**232.109**
Normalized	100%	100%	99.88%
Standard Deviation	0.2%	0.4%	0.7%
Ngspice - C2670 (sec)	**180.857**	180.020	**179.871**
Normalized	99.45%	99.92%	100%
Standard Deviation	1.6%	1.8%	2.7%
Ngspice - C7552 (sec)	153.604	**157.535**	**151.980**
Normalized	98.94%	96.47%	100%
Standard Deviation	1.1%	0.2%	0.7%
Chaos Group V-RAY - CPU (vsamples)	**28258**	**27894**	28184
Normalized	100%	98.71%	99.74%
Standard Deviation	0.4%	0.9%	0.4%

Pennant 1.0.1

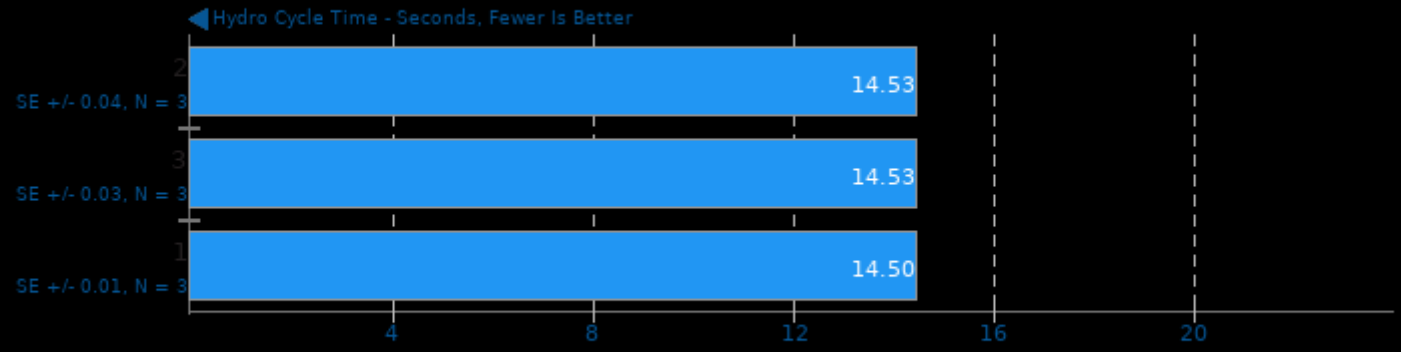
Test: sedovbig



1. (CXX) g++ options: -fopenmp -pthread -lmpi_cxx -lmpi

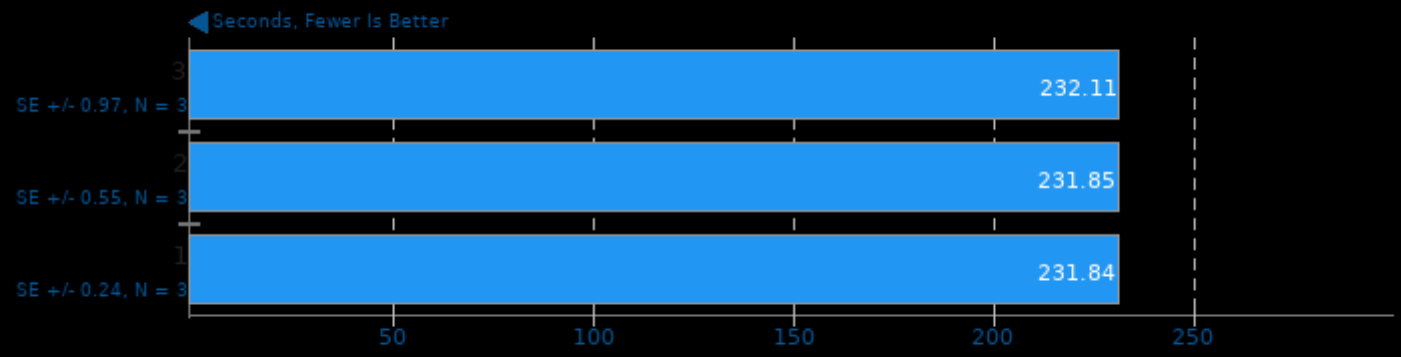
Pennant 1.0.1

Test: leblancbig

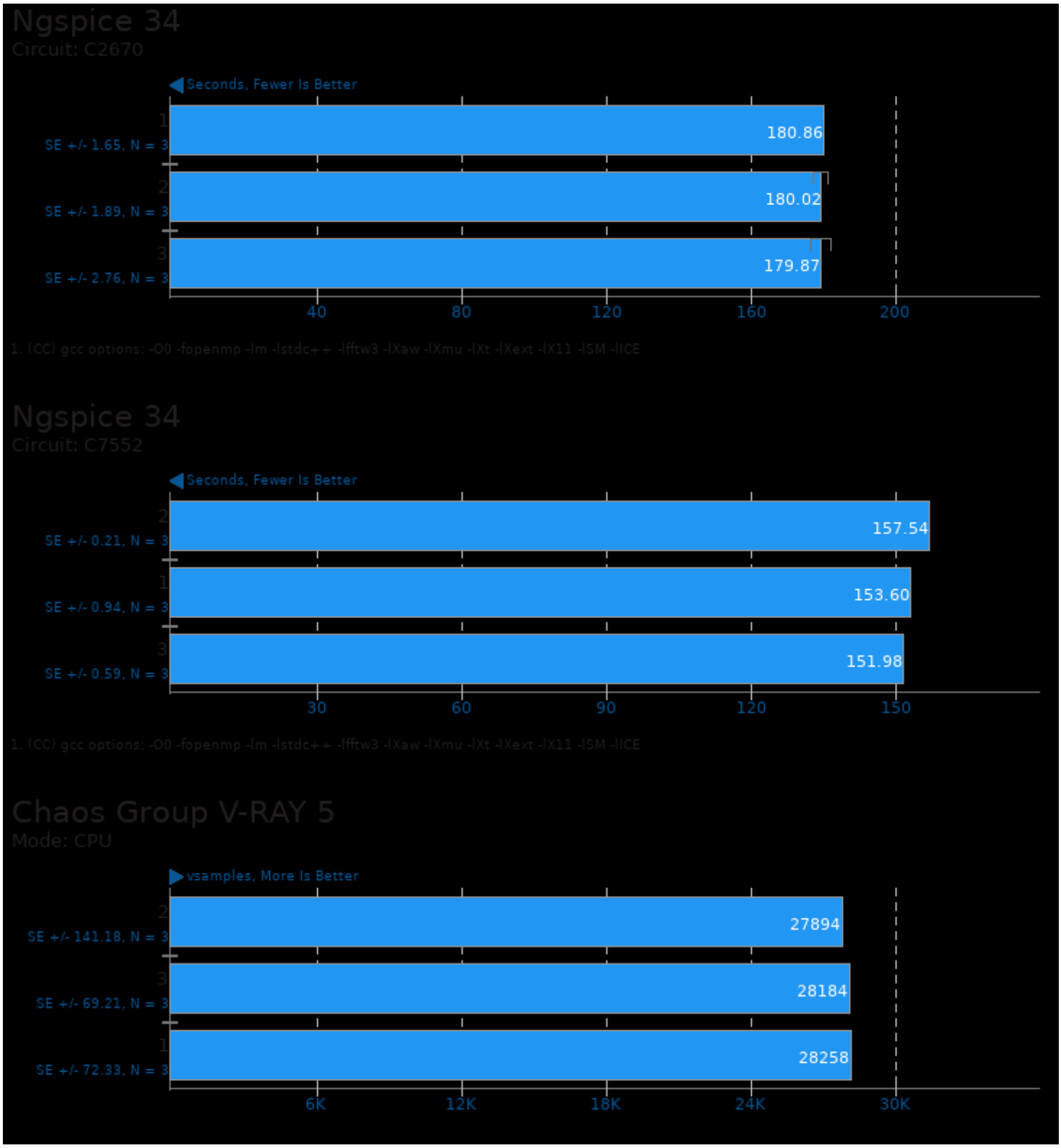


1. (CXX) g++ options: -fopenmp -pthread -lmpi_cxx -lmpi

Gcrypt Library 1.9



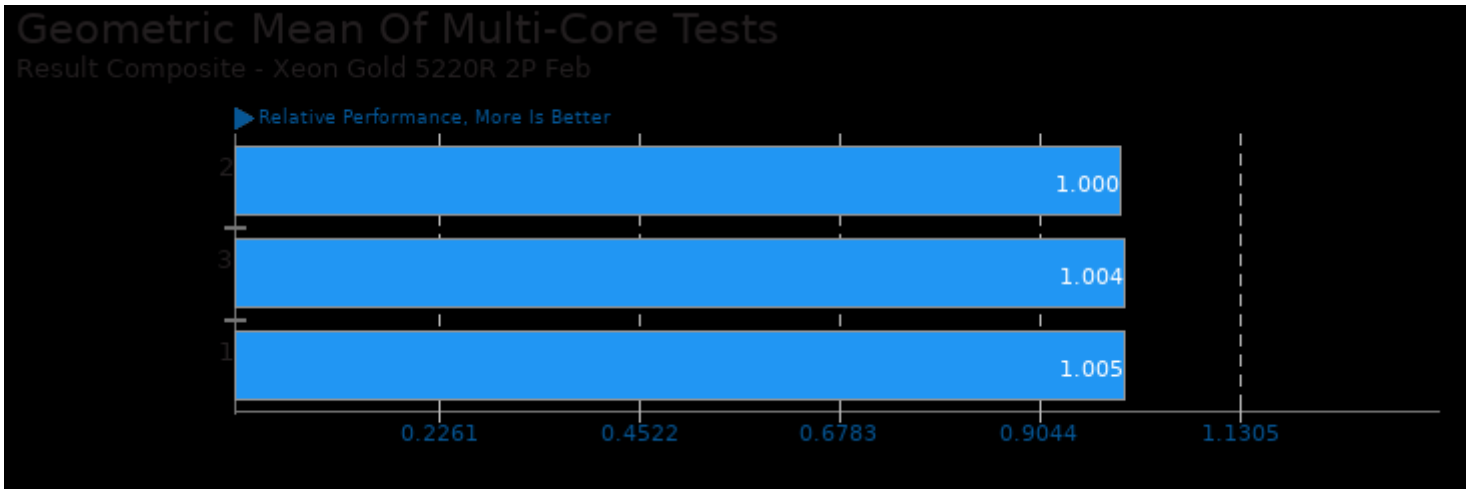
1. (CC) gcc options: -O2 -fvisibility=hidden


Ngspice 34
Circuit: C2670
Seconds, Fewer Is Better
1
SE +/- 1.65, N = 3
180.86
2
SE +/- 1.89, N = 3
180.02
3
SE +/- 2.76, N = 3
179.87
40
80
120
160
200
1. (CC) gcc options: -O0 -fopenmp -lm -lstdc++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lSM -lICE
Ngspice 34
Circuit: C7552
Seconds, Fewer Is Better
2
SE +/- 0.21, N = 3
157.54
1
SE +/- 0.94, N = 3
153.60
3
SE +/- 0.59, N = 3
151.98
30
60
90
120
150
1. (CC) gcc options: -O0 -fopenmp -lm -lstdc++ -lfftw3 -lXaw -lXmu -lXt -lXext -lX11 -lSM -lICE
Chaos Group V-RAY 5
Mode: CPU
vsamples, More Is Better
2
SE +/- 141.18, N = 3
27894
3
SE +/- 69.21, N = 3
28184
1
SE +/- 72.33, N = 3
28258
6K
12K
18K
24K
30K

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



Geometric mean based upon tests: pts/v-ray and pts/ngspice



Geometric mean based upon tests: pts/pennant and pts/v-ray

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:18.