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pi32

AMD Ryzen 7 5800H testing with a LENOVO LNVNB161216 (GSCN19WW BIOS) and AMD Cezanne 2GB on Ubuntu 21.04 via the Phoronix Test Suite.

Test Systems:

pi32

Processor: ARMv7 Cortex-A72 @ 1.50GHz (4 Cores), Motherboard: BCM2711 Raspberry Pi 4 Model B Rev 1.4, Memory: 8GB, Disk: 64GB SN64G, Graphics: vc4drmfb

OS: Raspbian 10, Kernel: 5.10.17-v7l+ (armv7l), Desktop: LXDE, Display Server: X Server 1.20.4, Compiler: GCC 8.3.0, File-System: ext4, Screen Resolution: 1920x1080

Kernel Notes: snd_bcm2835.enable_compat_alsa=0 snd_bcm2835.enable_hdmi=1
Compiler Notes: --build=arm-linux-gnueabihf --disable-libitm --disable-libquadmath --disable-libquadmath-support --disable-sjlj-exceptions --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++ --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=arm-linux-gnueabihf --program-prefix=arm-linux-gnueabihf- --target=arm-linux-gnueabihf --with-arch=armv6 --with-default-libstdcxx-abi=new --with-float=hard --with-fpu=vfp --with-gcc-major-version-only --with-target-system-zlib -v
Processor Notes: Scaling Governor: cpufreq-dt ondemand

Java Notes: OpenJDK Runtime Environment (build 1.8.0_212-8u212-b01-1+rpi1-b01)
Python Notes: Python 2.7.16 + Python 3.7.3

amd5800h_ubuntu2104

Processor: AMD Ryzen 7 5800H @ 3.20GHz (8 Cores / 16 Threads), Motherboard: LENOVO LNVNB161216 (GSCN19WW BIOS), Chipset: AMD Renoir Root Complex, Memory: 14GB, Disk: 512GB Western Digital PC SN730 SDBPNTY-512G-1101, Graphics: AMD Cezanne 2GB (2000/400MHz), Audio: AMD Device 1637, Network: Intel Wi-Fi 6 AX200

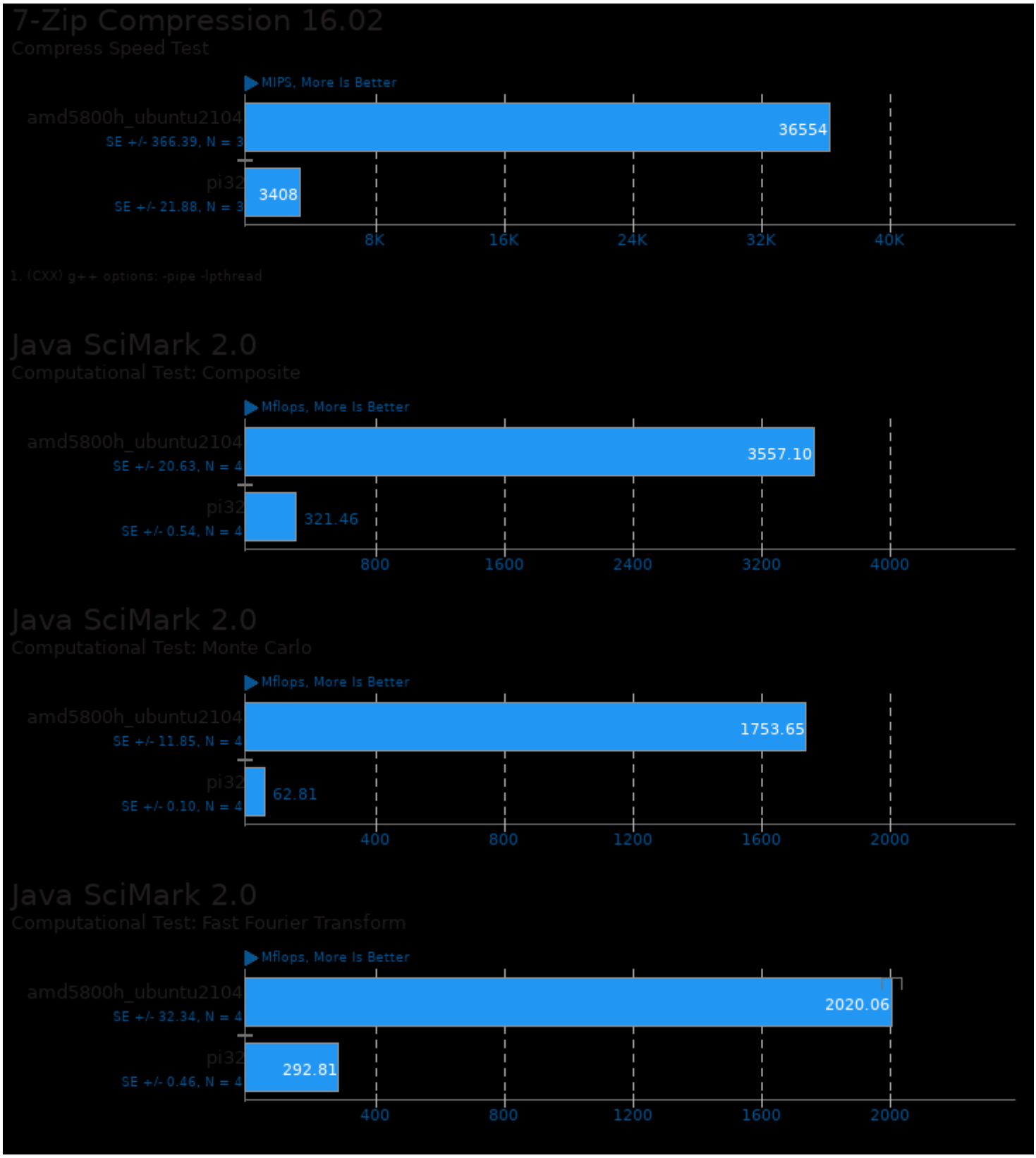
OS: Ubuntu 21.04, Kernel: 5.11.0-22-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.0.1 (LLVM 11.0.1), Vulkan: 1.2.145, Compiler: GCC 10.3.0 + LLVM 3.9.0, File-System: ext4, Screen Resolution: 1704x1065

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --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-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/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-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: 0xa50000b
Java Notes: OpenJDK Runtime Environment (build 1.8.0_292-8u292-b10-0ubuntu1-b10)
Python Notes: Python 3.9.5
Security Notes: itlb_multihit: Not affected + 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 Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

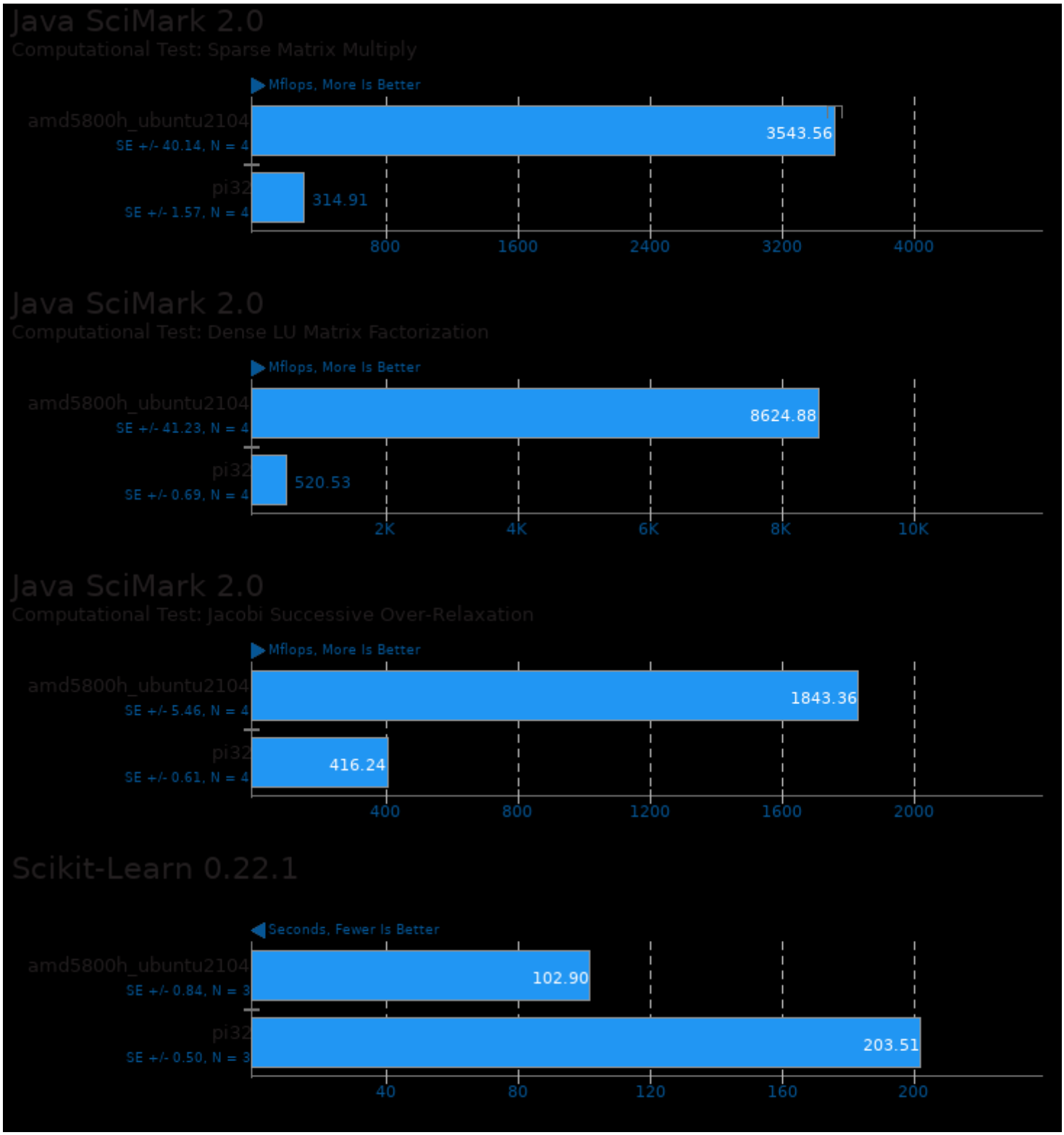
	pi32	amd5800h_ubuntu2104
7-Zip Compression - C.S.T (MIPS)	**3408**	**36554**
Normalized	9.32%	100%
Standard Deviation	1.1%	1.7%
Java SciMark - Composite (Mflops)	**321.46**	**3557**
Normalized	9.04%	100%
Standard Deviation	0.3%	1.2%
Java SciMark - Monte Carlo (Mflops)	**62.81**	**1754**
Normalized	3.58%	100%
Standard Deviation	0.3%	1.4%
Java SciMark - F.F.T (Mflops)	**292.81**	**2020**
Normalized	14.5%	100%
Standard Deviation	0.3%	3.2%
Java SciMark - S.M.M (Mflops)	**314.91**	**3544**
Normalized	8.89%	100%
Standard Deviation	1%	2.3%
Java SciMark - D.L.M.F (Mflops)	**520.53**	**8625**
Normalized	6.04%	100%
Standard Deviation	0.3%	1%
Java SciMark - J.S.O.R (Mflops)	**416.24**	**1843**
Normalized	22.58%	100%
Standard Deviation	0.3%	0.6%
Scikit-Learn (sec)	**203.514**	**102.899**
Normalized	50.56%	100%
Standard Deviation	0.4%	1.4%

pi32

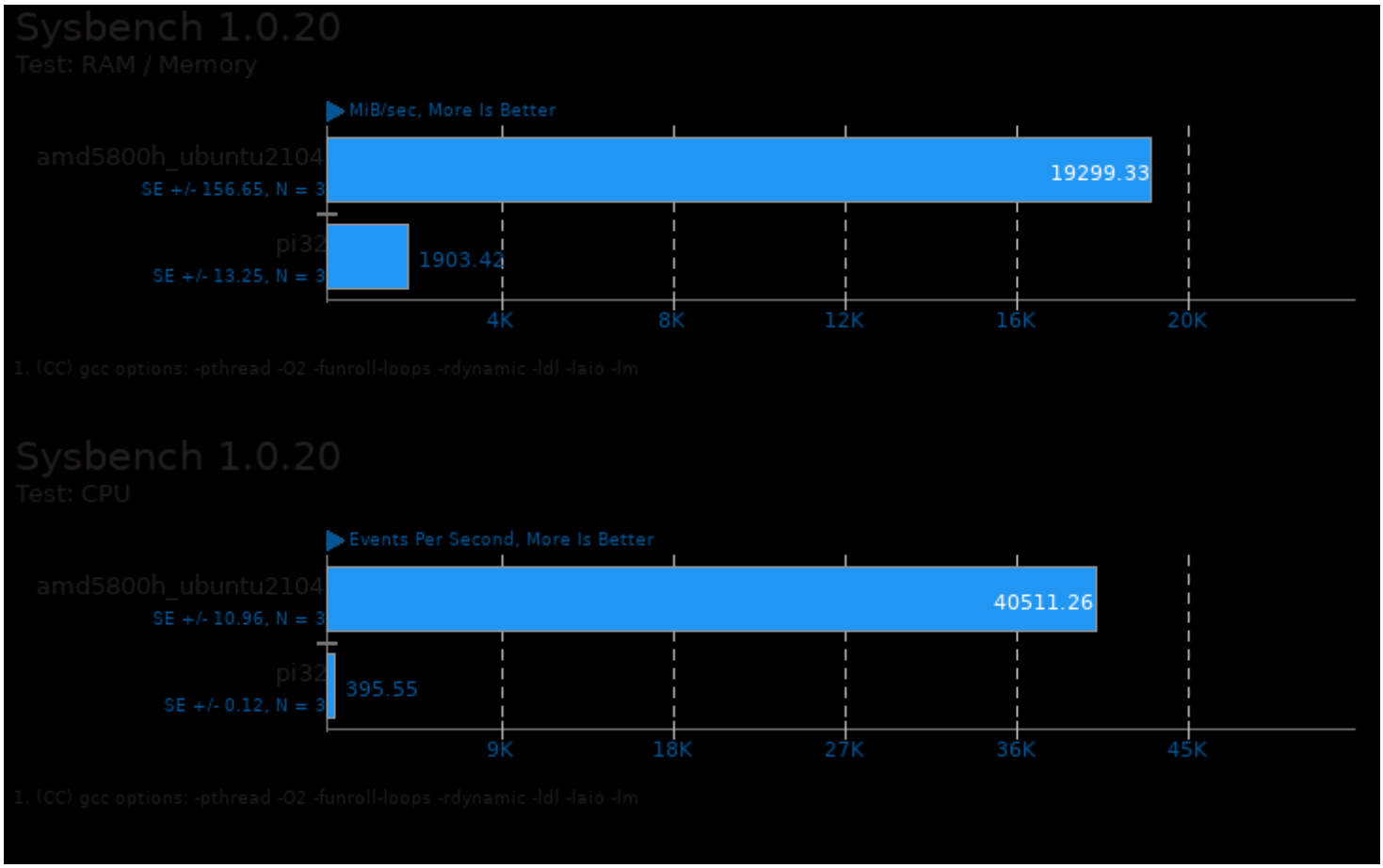
Sysbench - RAM / Memory (MiB/sec)	**1903**	**19299**
Normalized	9.86%	100%
Standard Deviation	1.2%	1.4%
Sysbench - CPU (Events/sec)	**395.55**	**40511**
Normalized	0.98%	100%
Standard Deviation	0.1%	0%


7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
amd5800h_ubuntu2104
SE +/- 366.39, N = 3
36554
pi32
SE +/- 21.88, N = 3
3408
8K
16K
24K
32K
40K
1. (CXX) g++ options: -pipe -lpthread
Java SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
amd5800h_ubuntu2104
SE +/- 20.63, N = 4
3557.10
pi32
SE +/- 0.54, N = 4
321.46
800
1600
2400
3200
4000
Java SciMark 2.0
Computational Test: Monte Carlo
Mflops, More Is Better
amd5800h_ubuntu2104
SE +/- 11.85, N = 4
1753.65
pi32
SE +/- 0.10, N = 4
62.81
400
800
1200
1600
2000
Java SciMark 2.0
Computational Test: Fast Fourier Transform
Mflops, More Is Better
amd5800h_ubuntu2104
SE +/- 32.34, N = 4
2020.06
pi32
SE +/- 0.46, N = 4
292.81
400
800
1200
1600
2000

pi32

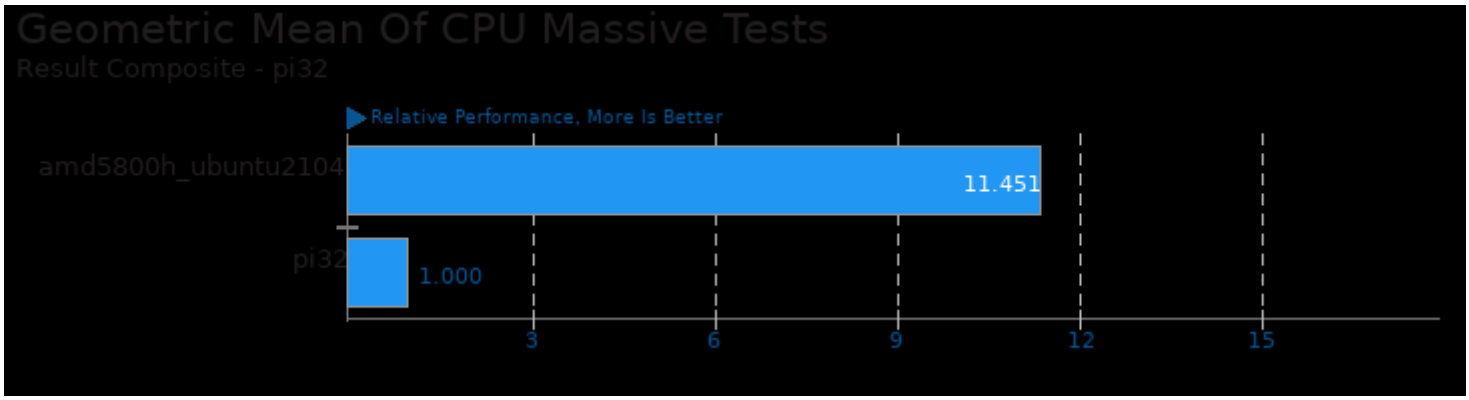

Java SciMark 2.0
Computational Test: Sparse Matrix Multiply
Mflops, More Is Better
amd5800h_ubuntu2104
SE +/- 40.14, N = 4
3543.56
pi32
SE +/- 1.57, N = 4
314.91
800
1600
2400
3200
4000
Java SciMark 2.0
Computational Test: Dense LU Matrix Factorization
Mflops, More Is Better
amd5800h_ubuntu2104
SE +/- 41.23, N = 4
8624.88
pi32
SE +/- 0.69, N = 4
520.53
2K
4K
6K
8K
10K
Java SciMark 2.0
Computational Test: Jacobi Successive Over-Relaxation
Mflops, More Is Better
amd5800h_ubuntu2104
SE +/- 5.46, N = 4
1843.36
pi32
SE +/- 0.61, N = 4
416.24
400
800
1200
1600
2000
Scikit-Learn 0.22.1
Seconds, Fewer Is Better
amd5800h_ubuntu2104
SE +/- 0.84, N = 3
102.90
pi32
SE +/- 0.50, N = 3
203.51
40
80
120
160
200

pi32

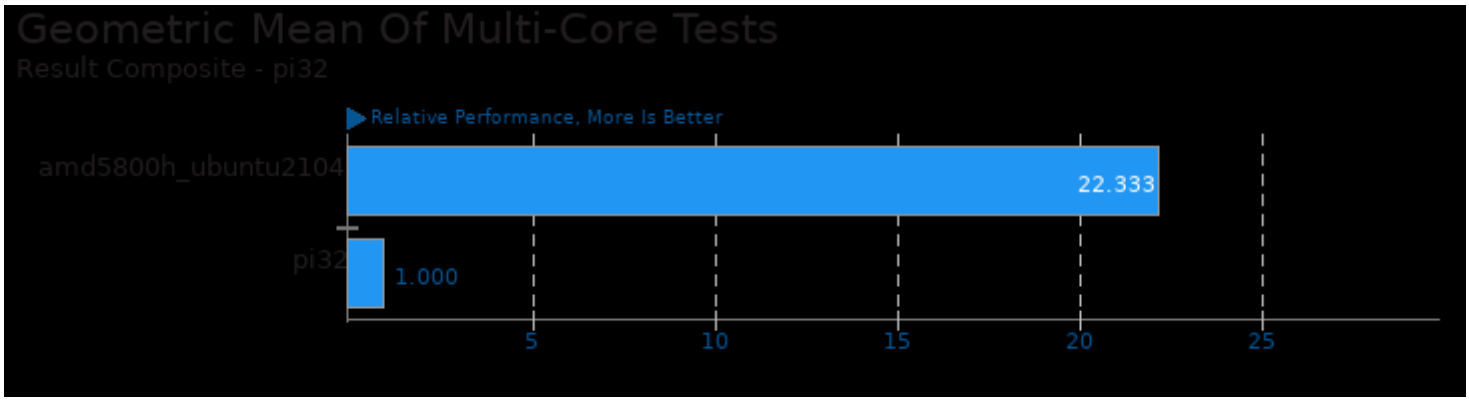

Sysbench 1.0.20
Test: RAM / Memory
MiB/sec, More Is Better
amd5800h_ubuntu2104
SE +/- 156.65, N = 3
19299.33
pi32
SE +/- 13.25, N = 3
1903.42
4K
8K
12K
16K
20K
1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -laio -lm
Sysbench 1.0.20
Test: CPU
Events Per Second, More Is Better
amd5800h_ubuntu2104
SE +/- 10.96, N = 3
40511.26
pi32
SE +/- 0.12, N = 3
395.55
9K
18K
27K
36K
45K
1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -laio -lm

pi32

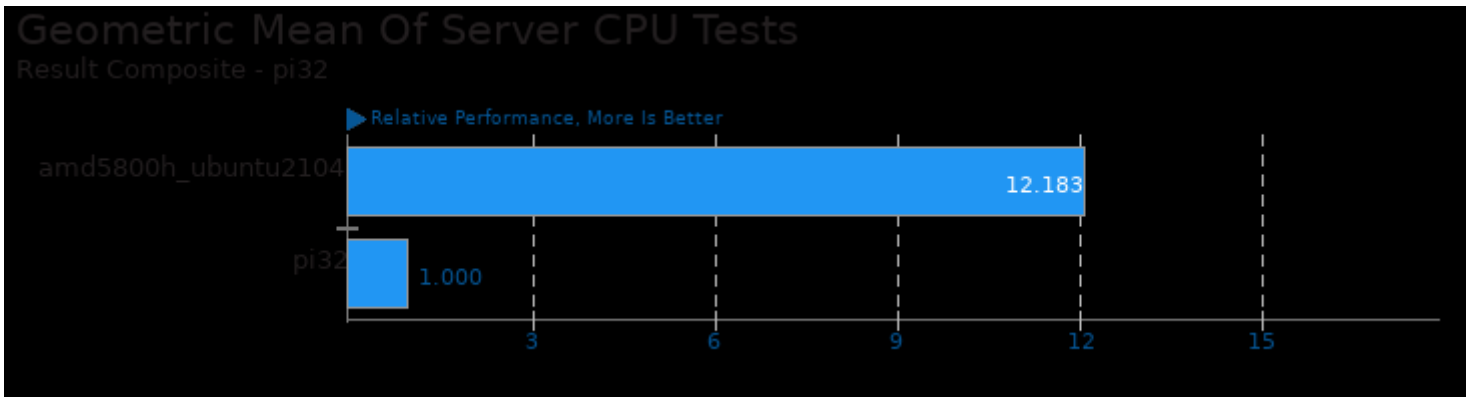
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/compress-7zip, pts/java-scimark2, pts/scikit-learn and pts/sysbench



Geometric mean based upon tests: pts/sysbench and pts/compress-7zip



Geometric mean based upon tests: pts/compress-7zip, pts/sysbench and pts/scikit-learn

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 07:11.