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epyc 72f3 saturday

AMD EPYC 72F3 8-Core testing with a Supermicro H12SSL-i v1.01 (2.0 BIOS) and ASPEED on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

A had the most wins, coming in first place for 66% of the tests.

Based on the geometric mean of all complete results, the fastest (A) was 1.003x the speed of the slowest (B).

Test Systems:

A

B

Processor: AMD EPYC 72F3 8-Core @ 3.70GHz (8 Cores / 16 Threads), Motherboard: Supermicro H12SSL-i v1.01 (2.0 BIOS), Chipset: AMD Starship/Matisse, Memory: 8 x 16 GB DDR4-3200MT/s 18ASF2G72PDZ-3G2E1, Disk: 3841GB

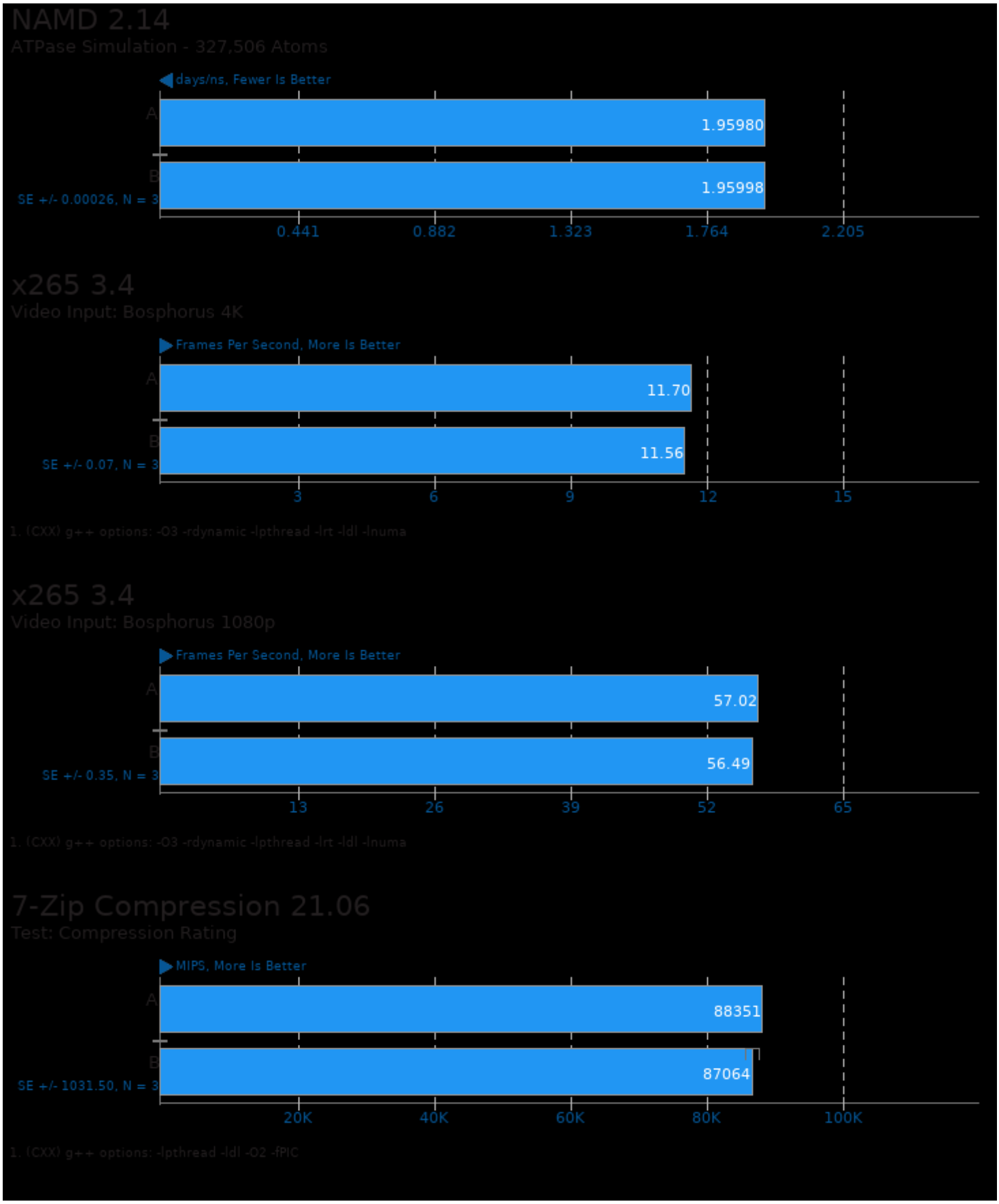
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Micron_9300_MTFDHAL3T8TDP + 1000GB Corsair Force MP600, Graphics: ASPEED, Monitor: VE228, Network: 2 x Broadcom NetXtreme BCM5720 2-port PCIe

OS: Ubuntu 21.04, Kernel: 5.14.0-rc7-amd-pstate-phx (x86_64) 20210909, Desktop: GNOME Shell 3.38.4, Display Server: X Server, Vulkan: 1.0.2, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1080

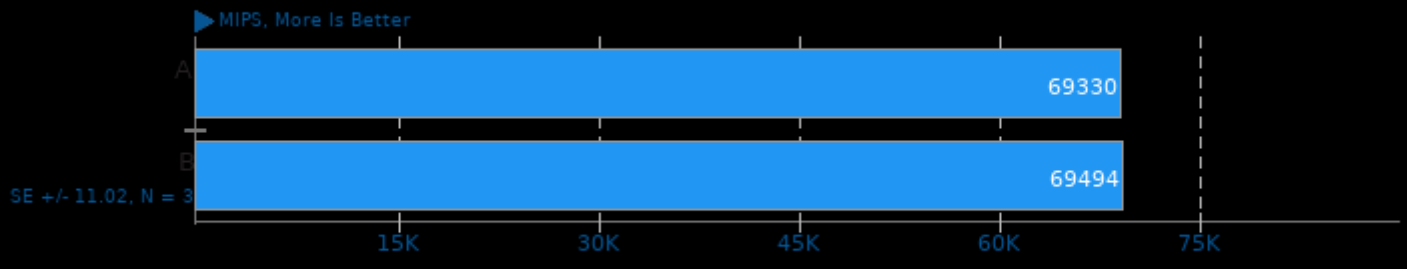
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --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: 0xa001119
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

	A	B
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	**1.95980**	**1.95998**
Normalized	100%	99.99%
Standard Deviation		0%
x265 - Bosphorus 4K (FPS)	**11.7**	**11.56**
Normalized	100%	98.8%
Standard Deviation		1%
x265 - Bosphorus 1080p (FPS)	**57.02**	**56.49**
Normalized	100%	99.07%
Standard Deviation		1.1%
7-Zip Compression - Compression Rating (MIPS)	**88351**	**87064**
Normalized	100%	98.54%
Standard Deviation		2.1%
7-Zip Compression - D.R (MIPS)	**69330**	**69494**
Normalized	99.76%	100%
Standard Deviation		0%
Timed Linux Kernel Compilation - Time To Compile	**77.422**	**76.245**
Normalized	98.48%	100%
Standard Deviation		0.9%
Timed LLVM Compilation - Ninja (sec)	555.644	
Timed LLVM Compilation - Unix Makefiles (sec)	573.562	
GROMACS - MPI CPU - water_GMX50_bare (Ns/Day)	1.534	
Blender - BMW27 - CPU-Only (sec)	151.21	
Blender - Classroom - CPU-Only (sec)	445.83	
Blender - Fishy Cat - CPU-Only (sec)	195.24	
Blender - Barbershop - CPU-Only (sec)	593.84	
Blender - Pabellon Barcelona - CPU-Only (sec)	484.44	
RAR Compression - L.S.T.A.T.R (sec)	85.129	


NAMD 2.14
ATPase Simulation - 327,506 Atoms
days/ns, Fewer Is Better
A
1.95980
B
1.95998
SE +/- 0.00026, N = 3
0.441
0.882
1.323
1.764
2.205
x265 3.4
Video Input: Bosphorus 4K
Frames Per Second, More Is Better
A
11.70
B
11.56
SE +/- 0.07, N = 3
3
6
9
12
15
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma
x265 3.4
Video Input: Bosphorus 1080p
Frames Per Second, More Is Better
A
57.02
B
56.49
SE +/- 0.35, N = 3
13
26
39
52
65
1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl -lnuma
7-Zip Compression 21.06
Test: Compression Rating
MIPS, More Is Better
A
88351
B
87064
SE +/- 1031.50, N = 3
20K
40K
60K
80K
100K
1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

7-Zip Compression 21.06

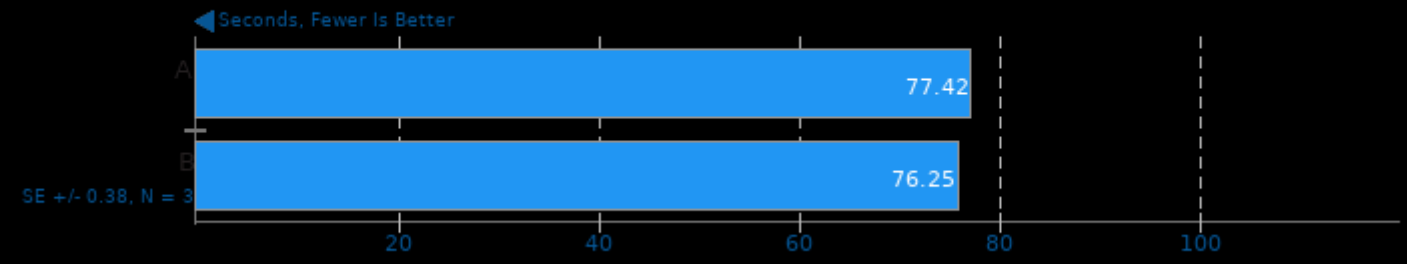
Test: Decompression Rating



1. (CXX) g++ options: -lpthread -ldl -O2 -fPIC

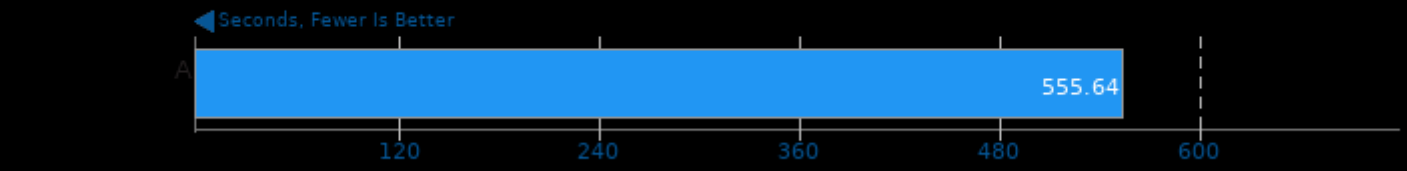
Timed Linux Kernel Compilation 5.14

Time To Compile



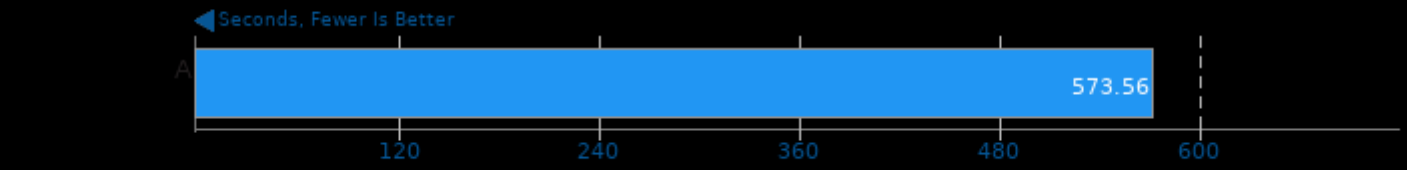
Timed LLVM Compilation 13.0

Build System: Ninja



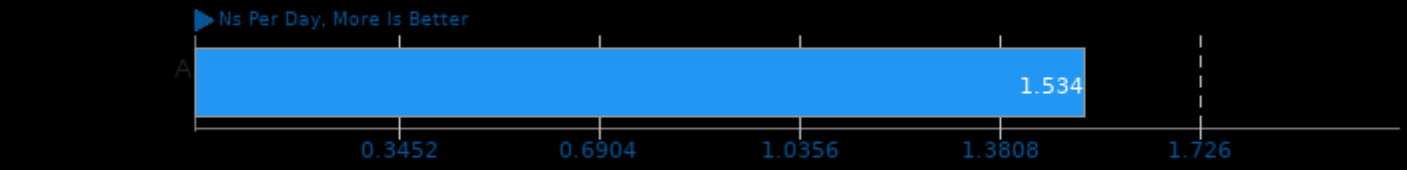
Timed LLVM Compilation 13.0

Build System: Unix Makefiles



GROMACS 2021.2

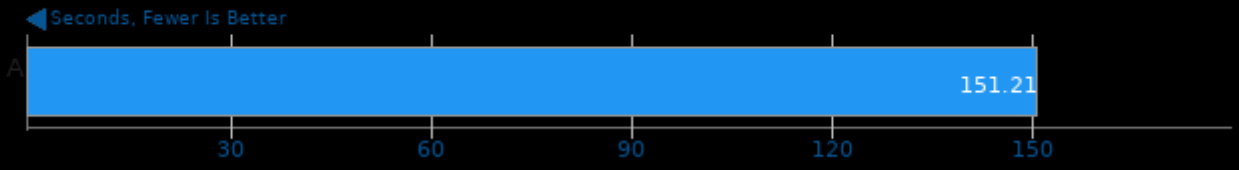
Implementation: MPI CPU - Input: water_GMX50_bare



1. (CXX) g++ options: -O3 -pthread

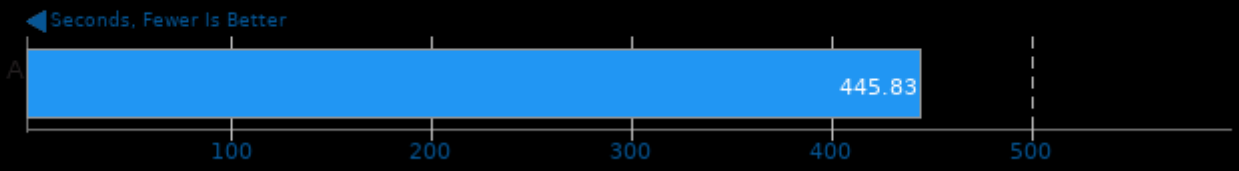
Blender 2.92

Blend File: BMW27 - Compute: CPU-Only



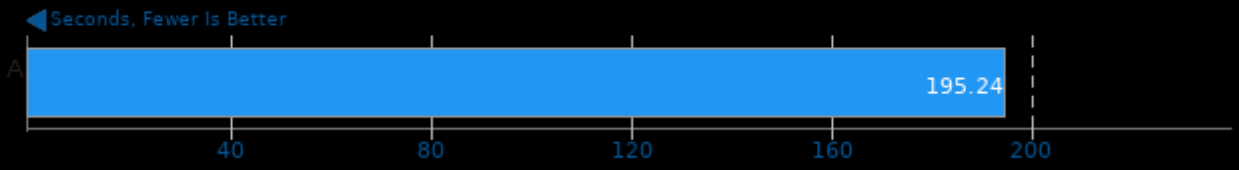
Blender 2.92

Blend File: Classroom - Compute: CPU-Only



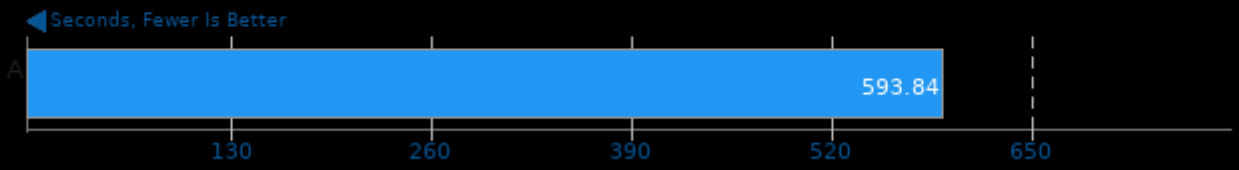
Blender 2.92

Blend File: Fishy Cat - Compute: CPU-Only



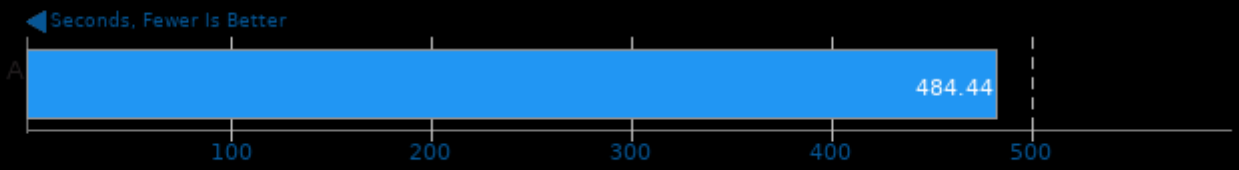
Blender 2.92

Blend File: Barbershop - Compute: CPU-Only



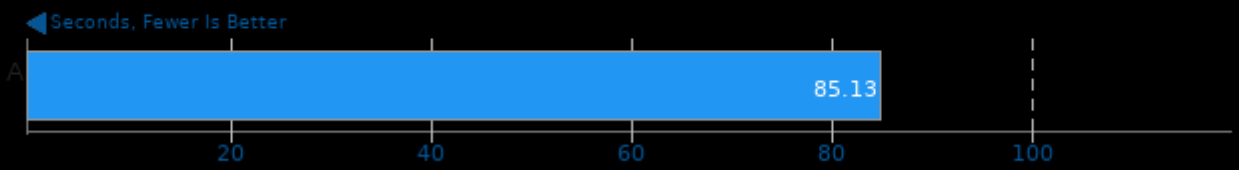
Blender 2.92

Blend File: Pabellon Barcelona - Compute: CPU-Only



RAR Compression 6.0.2

Linux Source Tree Archiving To RAR

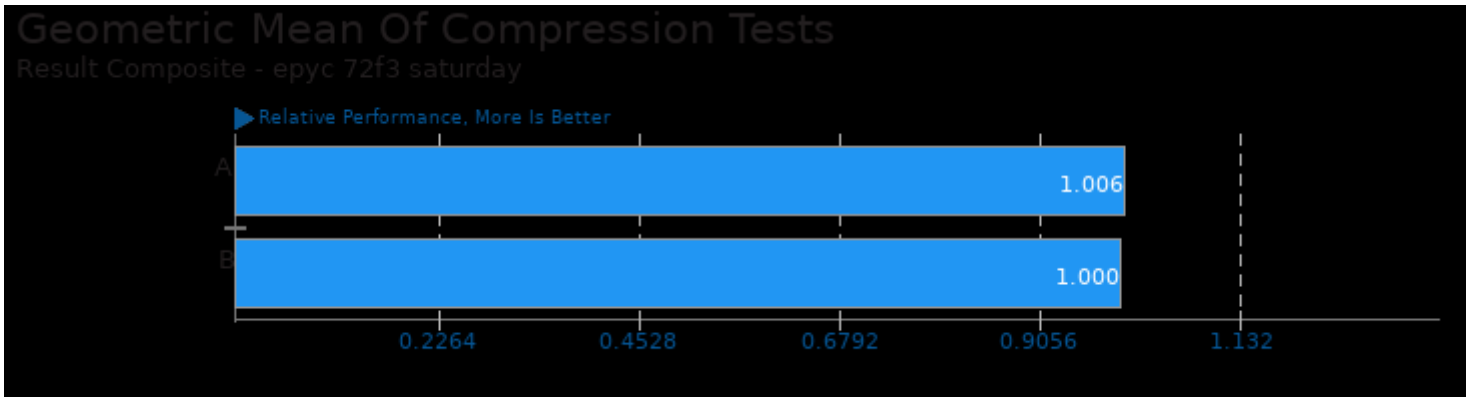


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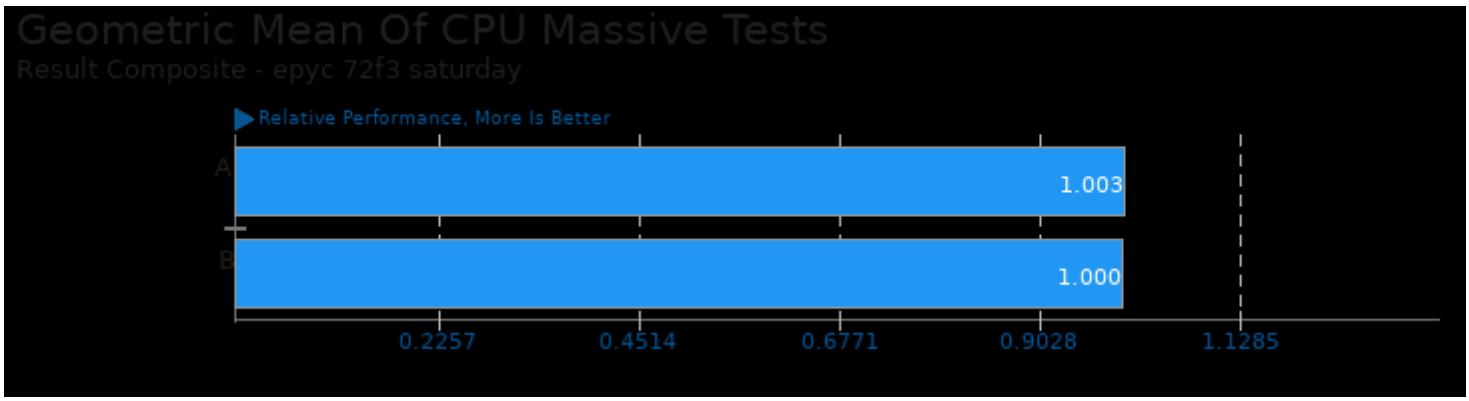
These geometric means are based upon test groupings / test suites for this result file.



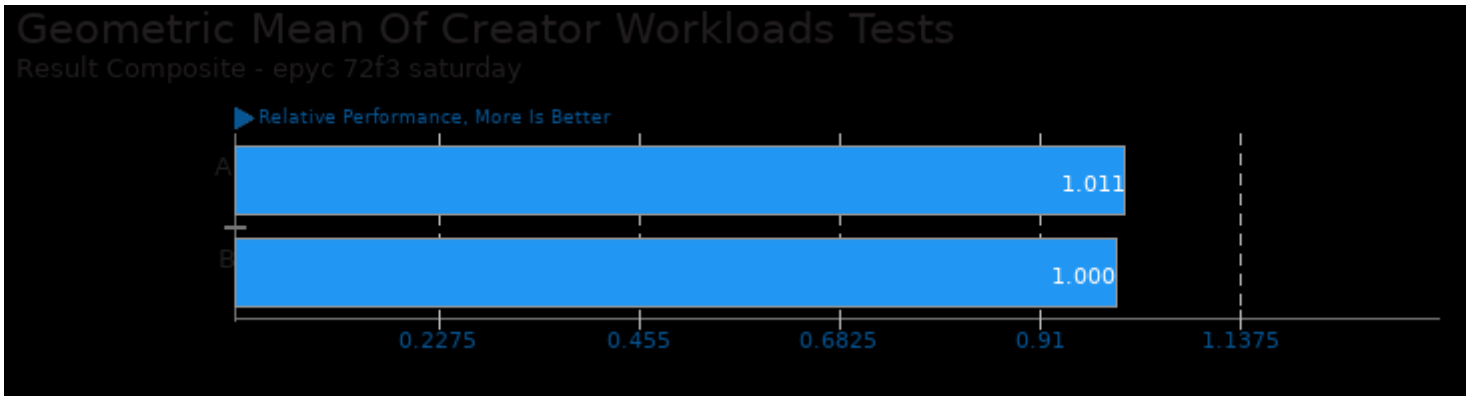
Geometric mean based upon tests: pts/build-llvm, pts/compress-7zip, pts/x265 and pts/gromacs



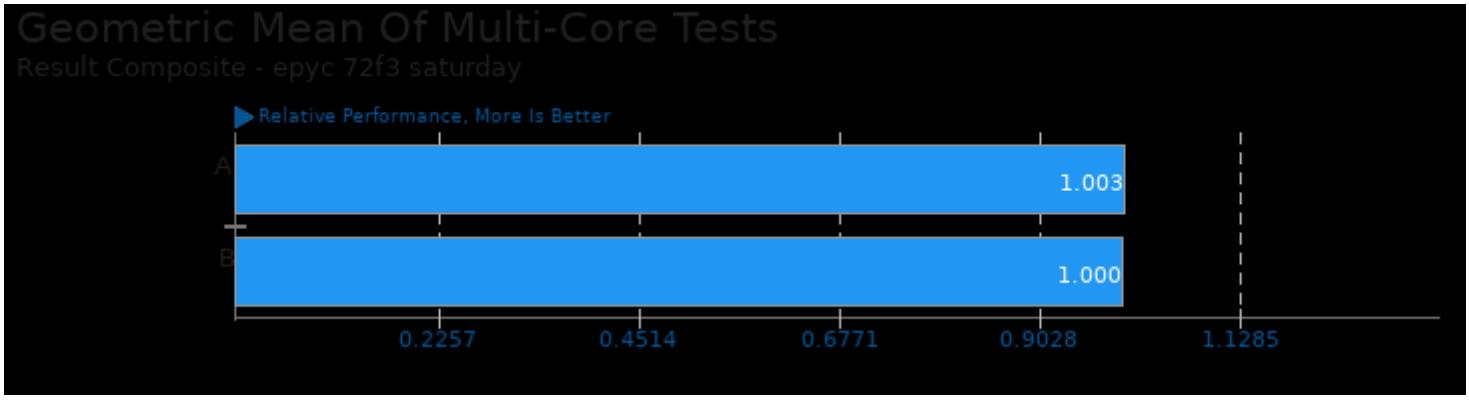
Geometric mean based upon tests: pts/compress-7zip and pts/compress-rar



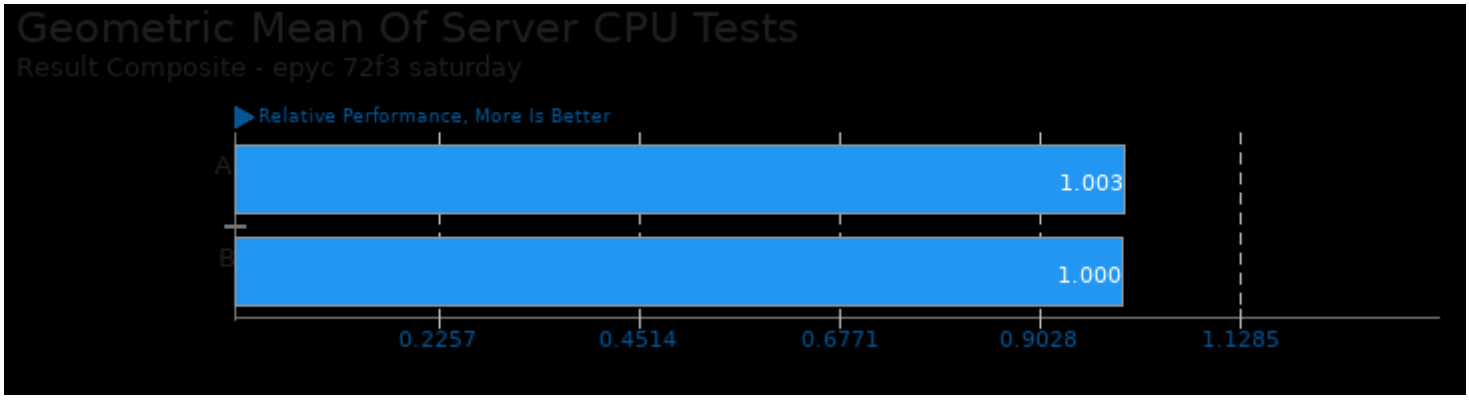
Geometric mean based upon tests: pts/build-llvm, pts/build-linux-kernel, pts/compress-7zip, pts/x265, pts/namd and pts/blender



Geometric mean based upon tests: pts/blender and pts/x265

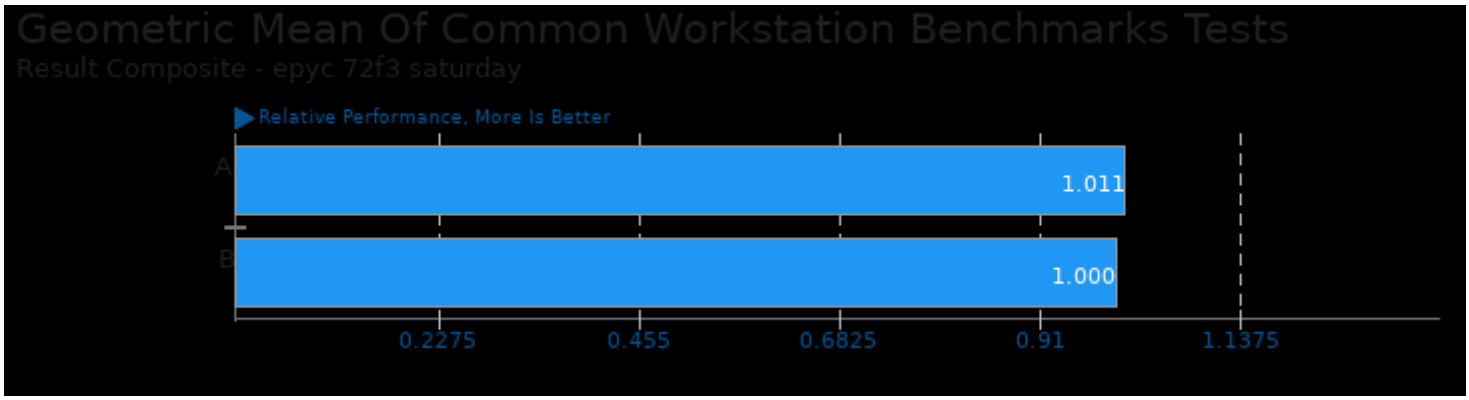


Geometric mean based upon tests: pts/blender, pts/x265, pts/namd, pts/gromacs, pts/compress-7zip, pts/build-linux-kernel and pts/build-llvm



Geometric mean based upon tests: pts/namd, pts/x265, pts/compress-7zip, pts/build-linux-kernel, pts/build-llvm and pts/blender

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Geometric mean based upon tests: pts/blender and pts/x265

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 00:43.