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PowerNV T2P9D01 REV 1.00 On Debian testing

Various open-source benchmarks by the Phoronix Test Suite v8.0.0m2 (Aremark).

Test Systems:

POWER9 altivec supported

Processor: POWER9 altivec supported @ 3.80GHz (64 Cores), Motherboard: PowerNV T2P9D01 REV 1.00, Memory: 262144MB, Disk: 500GB MAXTOR STM350063, Graphics: AMD Radeon Pro WX 7100 8192MB, Audio: AMD Ellesmere, Network: Broadcom Limited NetXtreme BCM5719 Gigabit PCIe

OS: Debian testing, Kernel: 4.16.0-rc4 (ppc64le) 20180307, Display Driver: amdgpu 1.4.0, Compiler: GCC 7.3.0, File-System: ext4, Screen Resolution: 1024x768

Compiler Notes: --build=powerpc64le-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-multilib --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --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-secureplt --enable-shared --enable-targets=powerpcle-linux --enable-threads=posix --host=powerpc64le-linux-gnu --program-prefix=powerpc64le-linux-gnu- --target=powerpc64le-linux-gnu --with-cpu=power8 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-long-double-128 -v
Processor Notes: Scaling Governor: powernv-cpufreq ondemand

PowerNV T2P9D01 REV 1.00 On Debian testing

Intel Core i7-4790K

Processor: Intel Core i7-4790K @ 4.60GHz (4 Cores / 8 Threads), Motherboard: Gigabyte Z97X-SOC Force (F8 BIOS), Chipset: Intel 4th Gen Core DRAM, Memory: 32768MB, Disk: Samsung SSD 950 PRO 512GB, Graphics: Gigabyte AMD Radeon RX 560 4096MB (1250MHz), Audio: Intel Xeon E3-1200 v3/4th, Monitor: DELL P2715Q, Network: Qualcomm Atheros Killer E220x Gigabit

OS: Arch rolling, Kernel: 4.15.13-1-ARCH (x86_64), Desktop: KDE Plasma 5.12.3, Display Driver: modesetting 1.19.6, OpenGL: 4.5 Mesa 17.3.7 (LLVM 6.0.0), Compiler: GCC 7.3.1 20180312 + Clang 6.0.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++ --enable-libmpx --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate powersave
Security Notes: KPTI + __user pointer sanitization + Full generic retpoline IBPB IBRS_FW Protection

AMD 2700X X470 Master SLI

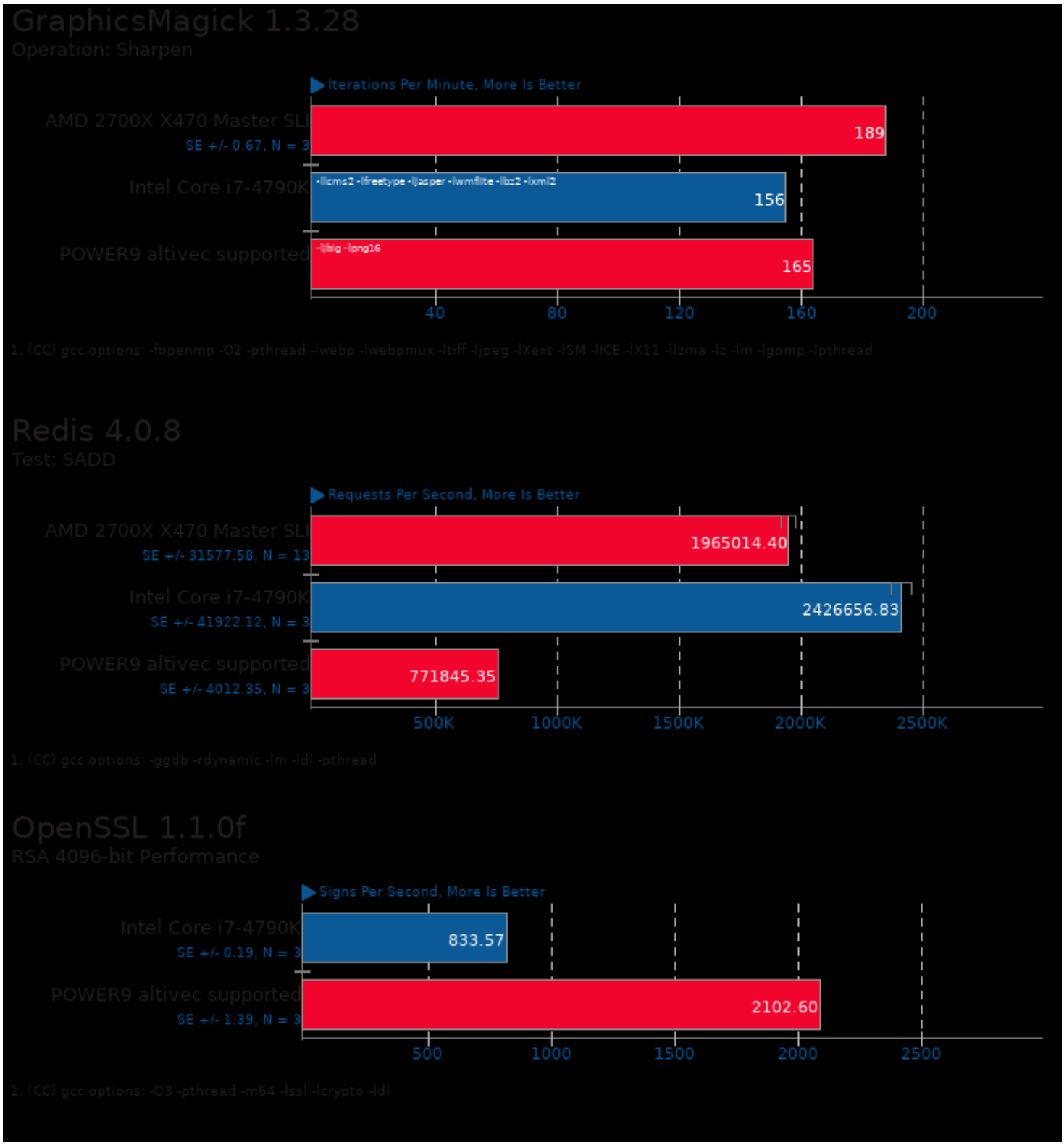
Processor: AMD Ryzen 7 2700X Eight-Core @ 3.70GHz (8 Cores / 16 Threads), Motherboard: ASRock X470 Master SLI (P3.40 BIOS), Chipset: AMD 17h, Memory: 32768MB, Disk: Samsung SSD 950 PRO 512GB + 250GB Samsung SSD 840, Graphics: Sapphire AMD Radeon RX 550 640SP / 560/560X 4GB (1216/1750MHz), Audio: AMD Baffin HDMI/DP, Monitor: DELL P2715Q, Network: Intel I211

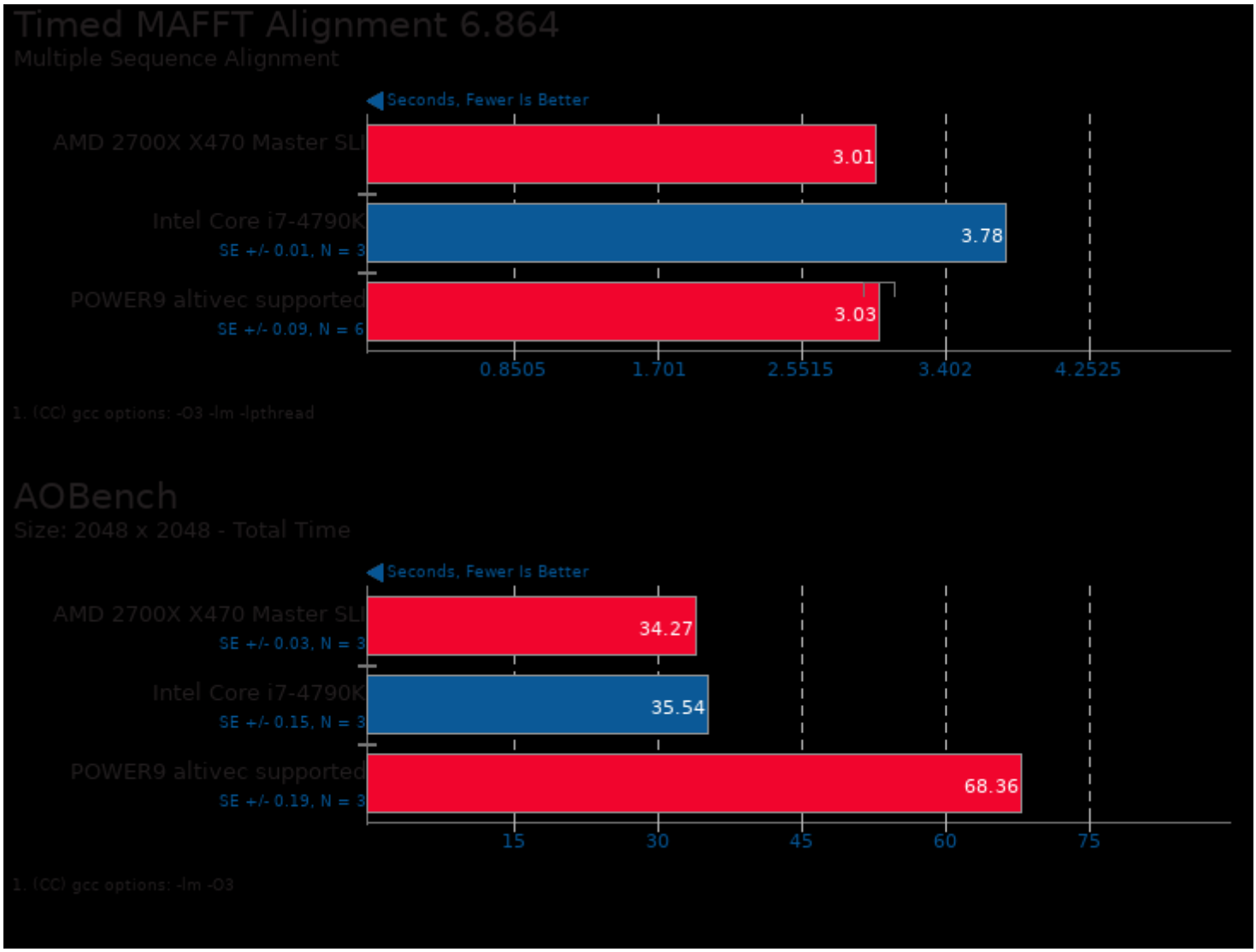
OS: Arch Linux, Kernel: 5.3.10-arch1-1 (x86_64), Desktop: KDE Plasma 5.17.3, Display Server: X Server 1.20.5, Display Driver: modesetting 1.20.5, OpenGL: 4.5 Mesa 19.2.3 (LLVM 9.0.0), OpenCL: OpenCL 1.1 Mesa 19.2.3, Compiler: GCC 9.2.0 + Clang 9.0.0, File-System: ext4, Screen Resolution: 3840x2160

Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: acpi-cpufreq schedutil
Security Notes: 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 STIBP: disabled RSB filling

	POWER9 altivec supported	Intel Core i7-4790K	AMD 2700X X470 Master SLI
GraphicsMagick - Sharpen (Iterations/min)	165	**156**	**189**
Normalized	87.3%	82.54%	100%
Standard Deviation			0.6%
Redis - SADD (Reqs/sec)	**771845**	**2426657**	1965014
Normalized	31.81%	100%	80.98%
Standard Deviation	0.9%	3%	5.8%
OpenSSL - R.4.b.P (Signs/sec)	**2103**	**833.57**	
Normalized	100%	39.64%	
Standard Deviation	0.1%	0%	
Timed MAFFT Alignment - M.S.A (sec)	3.03	**3.78**	**3.01**
Normalized	99.34%	79.63%	100%
Standard Deviation	7.6%	0.4%	
AOBench - 2048 x 2048 - Total Time (sec)	**68.36**	35.54	**34.27**
Normalized	50.13%	96.43%	100%

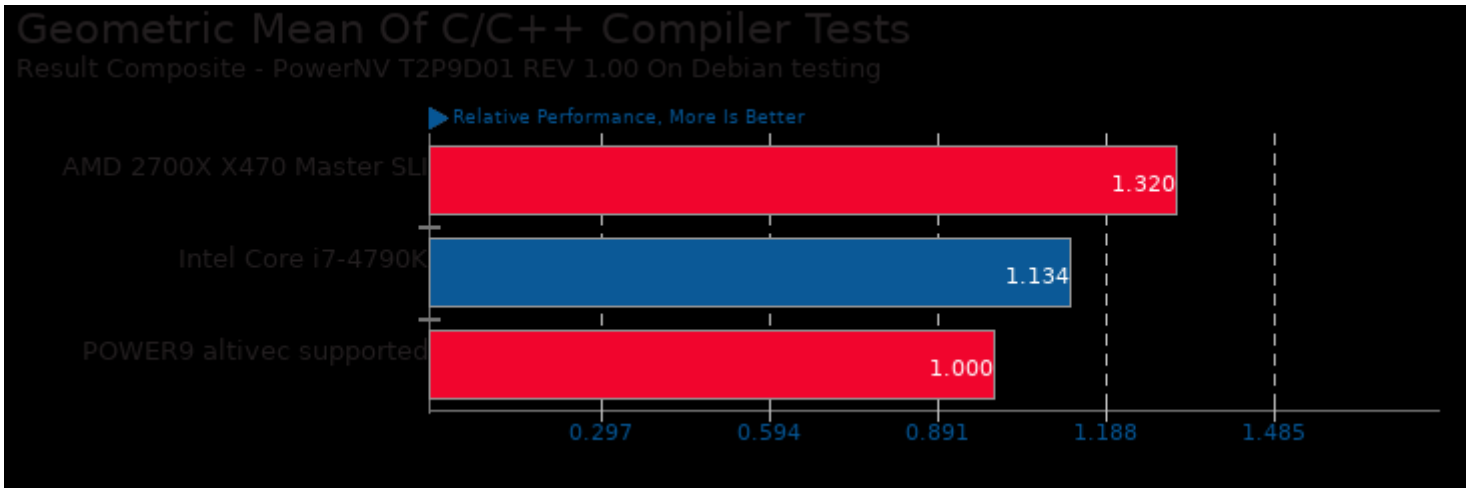
Standard Deviation	0.5%	0.7%	0.2%


GraphicsMagick 1.3.28
Operation: Sharpen
Iterations Per Minute, More Is Better
AMD 2700X X470 Master SLI
SE +/- 0.67, N = 3
189
Intel Core i7-4790K
-llcms2 -lfreetype -ljasper -lwmflite -lbz2 -lxml2
156
POWER9 altivec supported
-ljbig -lpng16
165
40
80
120
160
200
1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -ltiff -ljpeg -lXext -lSM -lICE -lX11 -llzma -lz -lm -lgomp -lpthread
Redis 4.0.8
Test: SADD
Requests Per Second, More Is Better
AMD 2700X X470 Master SLI
SE +/- 31577.58, N = 13
1965014.40
Intel Core i7-4790K
SE +/- 41922.12, N = 3
2426656.83
POWER9 altivec supported
SE +/- 4012.35, N = 3
771845.35
500K
1000K
1500K
2000K
2500K
1. (CC) gcc options: -ggdb -rdynamic -lm -ldl -pthread
OpenSSL 1.1.0f
RSA 4096-bit Performance
Signs Per Second, More Is Better
Intel Core i7-4790K
SE +/- 0.19, N = 3
833.57
POWER9 altivec supported
SE +/- 1.39, N = 3
2102.60
500
1000
1500
2000
2500
1. (CC) gcc options: -O3 -pthread -m64 -lssl -lcrypto -ldl

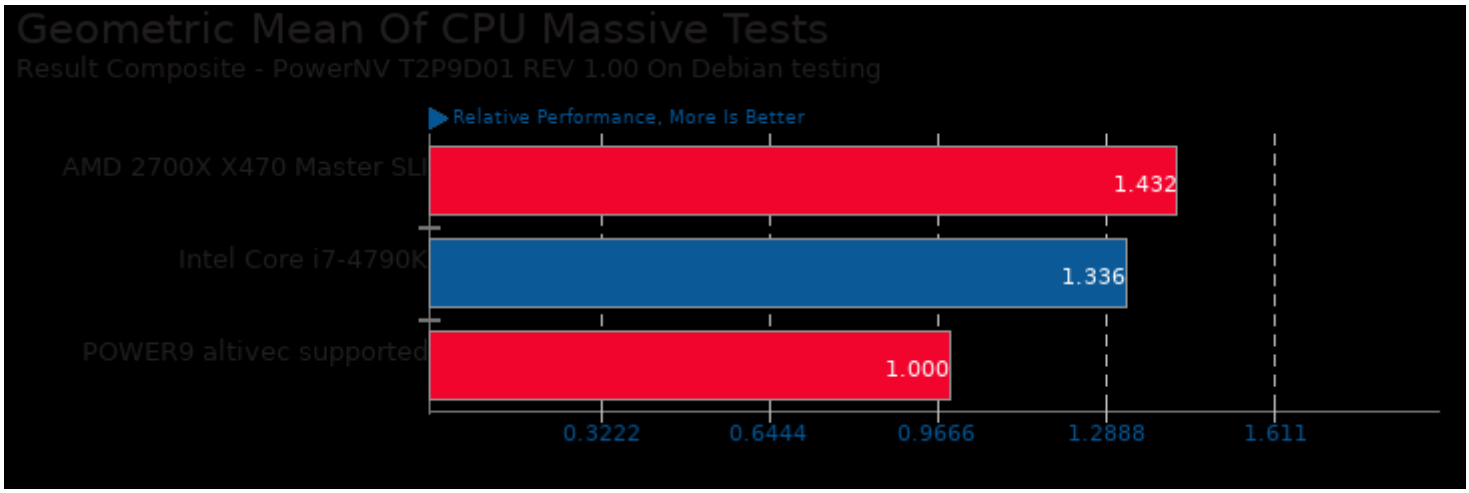

Timed MAFFT Alignment 6.864
Multiple Sequence Alignment
Seconds, Fewer Is Better
AMD 2700X X470 Master SLI
3.01
Intel Core i7-4790K
SE +/- 0.01, N = 3
3.78
POWER9 altivec supported
SE +/- 0.09, N = 6
3.03
0.8505
1.701
2.5515
3.402
4.2525
1. (CC) gcc options: -O3 -lm -lpthread
AOBench
Size: 2048 x 2048 - Total Time
Seconds, Fewer Is Better
AMD 2700X X470 Master SLI
SE +/- 0.03, N = 3
34.27
Intel Core i7-4790K
SE +/- 0.15, N = 3
35.54
POWER9 altivec supported
SE +/- 0.19, N = 3
68.36
15
30
45
60
75
1. (CC) gcc options: -lm -O3

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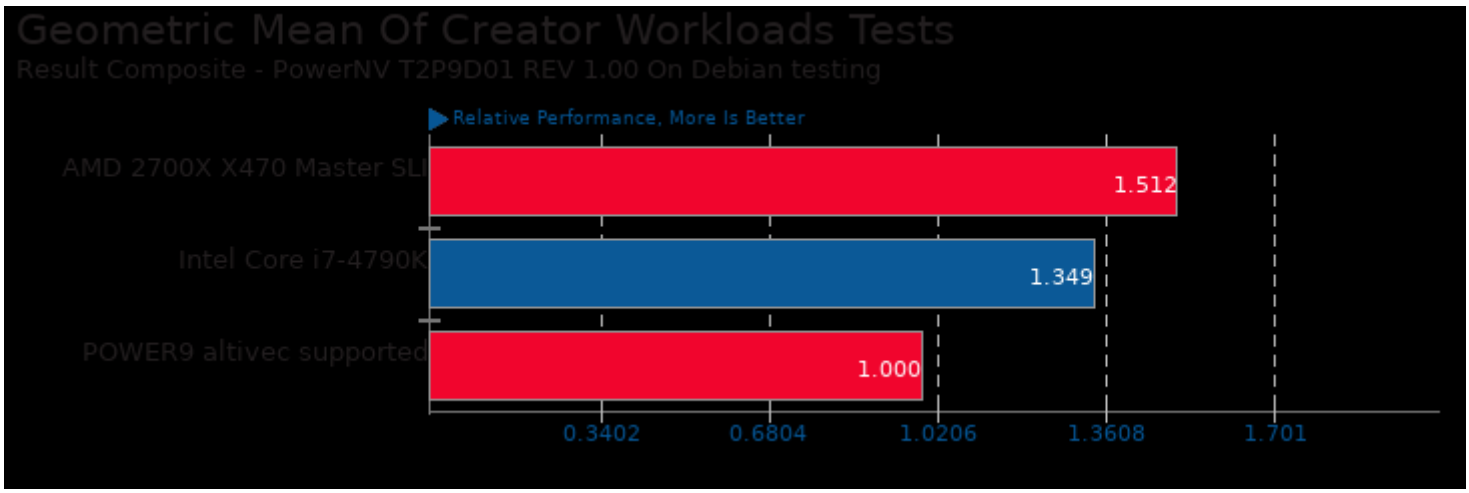
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/mafft, pts/aobench, pts/graphics-magick and pts/openssl

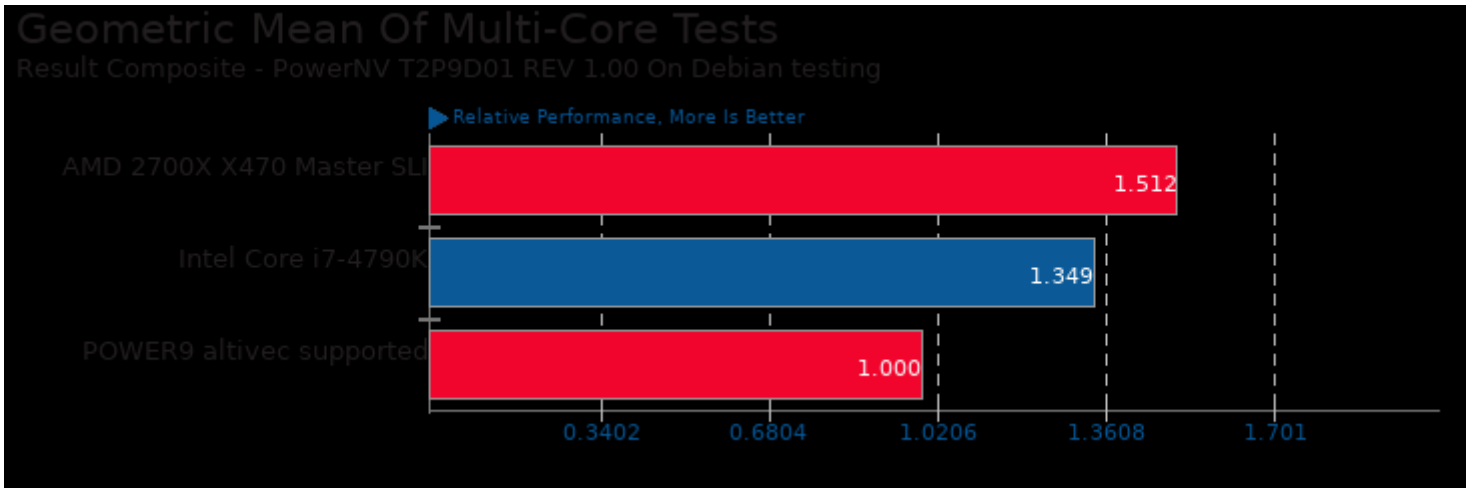


Geometric mean based upon tests: pts/graphics-magick, pts/openssl, pts/mafft and pts/redis



Geometric mean based upon tests: pts/aobench and pts/graphics-magick

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Geometric mean based upon tests: pts/graphics-magick and pts/aobench

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 03:04.