www.phoronix-test-suite.com

Mathew Craig

Running pts/cryptopp-1.0.1, pts/smhasher-1.0.0, pts/blake2-1.2.1, pts/bork-1.0.1, pts/nettle-1.0.1, pts/botan-1.5.0, pts/gcrypt-1.0.5, pts/john-the-ripper-1.7.2, pts/gnupg-2.4.0, pts/openssl-1.11.0, pts/aircrack-ng-1.2.1 via the Phoronix Test Suite.

Automated Executive Summary

UnixSysAd-Compression had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (UnixSysAdCrypto) was 1x the speed of the slowest (UnixSysAd-Compression).

The results with the greatest spread from best to worst included:

John The Ripper (Test: MD5) at 1x
FFTW (Build: Stock - Size: 1D FFT Size 4096) at 1x
FFTW (Build: Stock - Size: 2D FFT Size 4096) at 1x
SciMark (Computational Test: Composite) at 1x
SciMark (Computational Test: Monte Carlo) at 1x
SciMark (Computational Test: Fast Fourier Transform) at 1x
SciMark (Computational Test: Sparse Matrix Multiply) at 1x
SciMark (Computational Test: Dense LU Matrix Factorization) at 1x

SciMark (Computational Test: Jacobi Successive Over-Relaxation) at 1x
TSCP (AI Chess Performance) at 1x.

Test Systems:

UnixSysAd-Compression

UnixSysAdCrypto

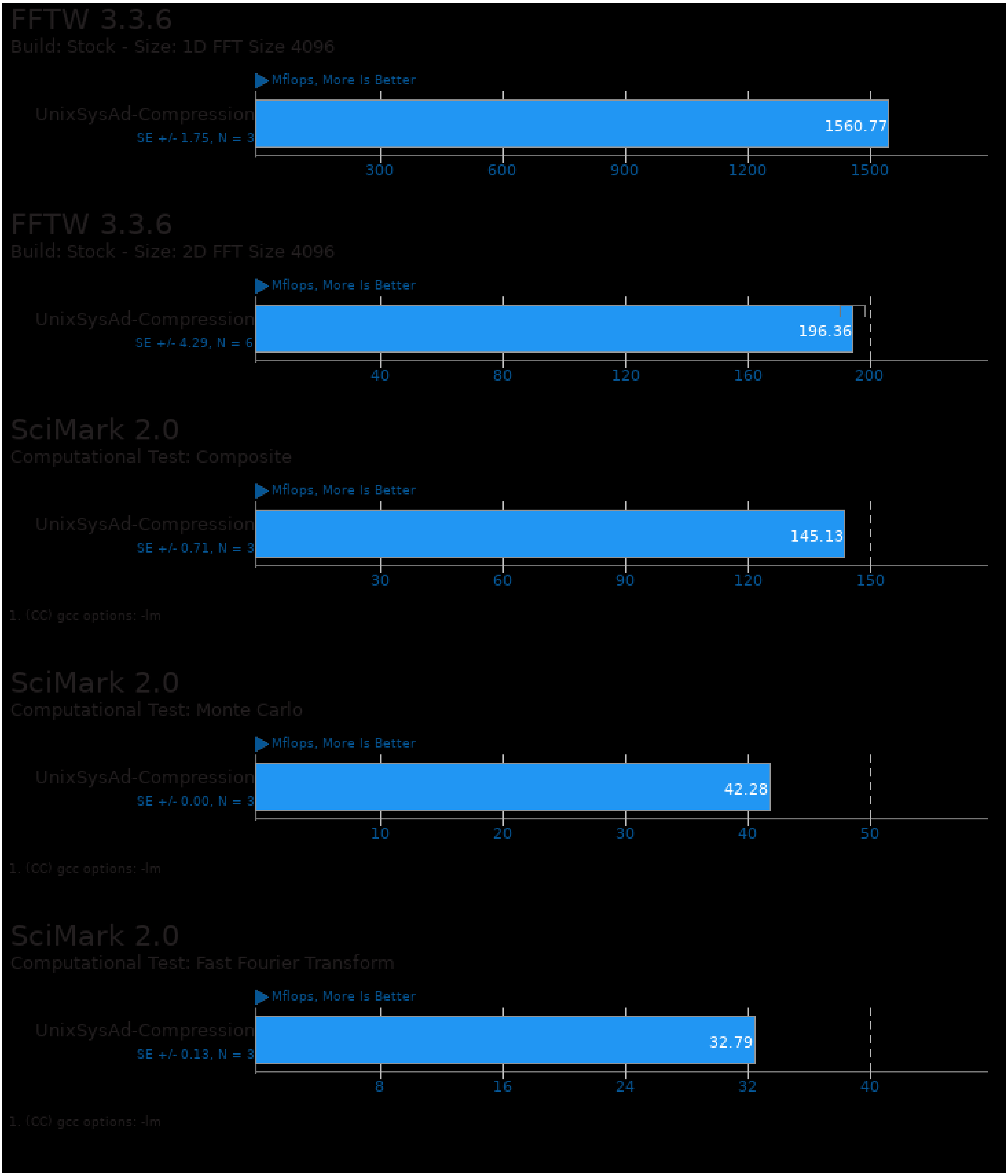
Processor: ARMv7 rev 3 @ 1.50GHz (4 Cores), Motherboard: BCM2711, Memory: 8192MB, Disk: 16GB SL16G, Monitor: Mi Monitor

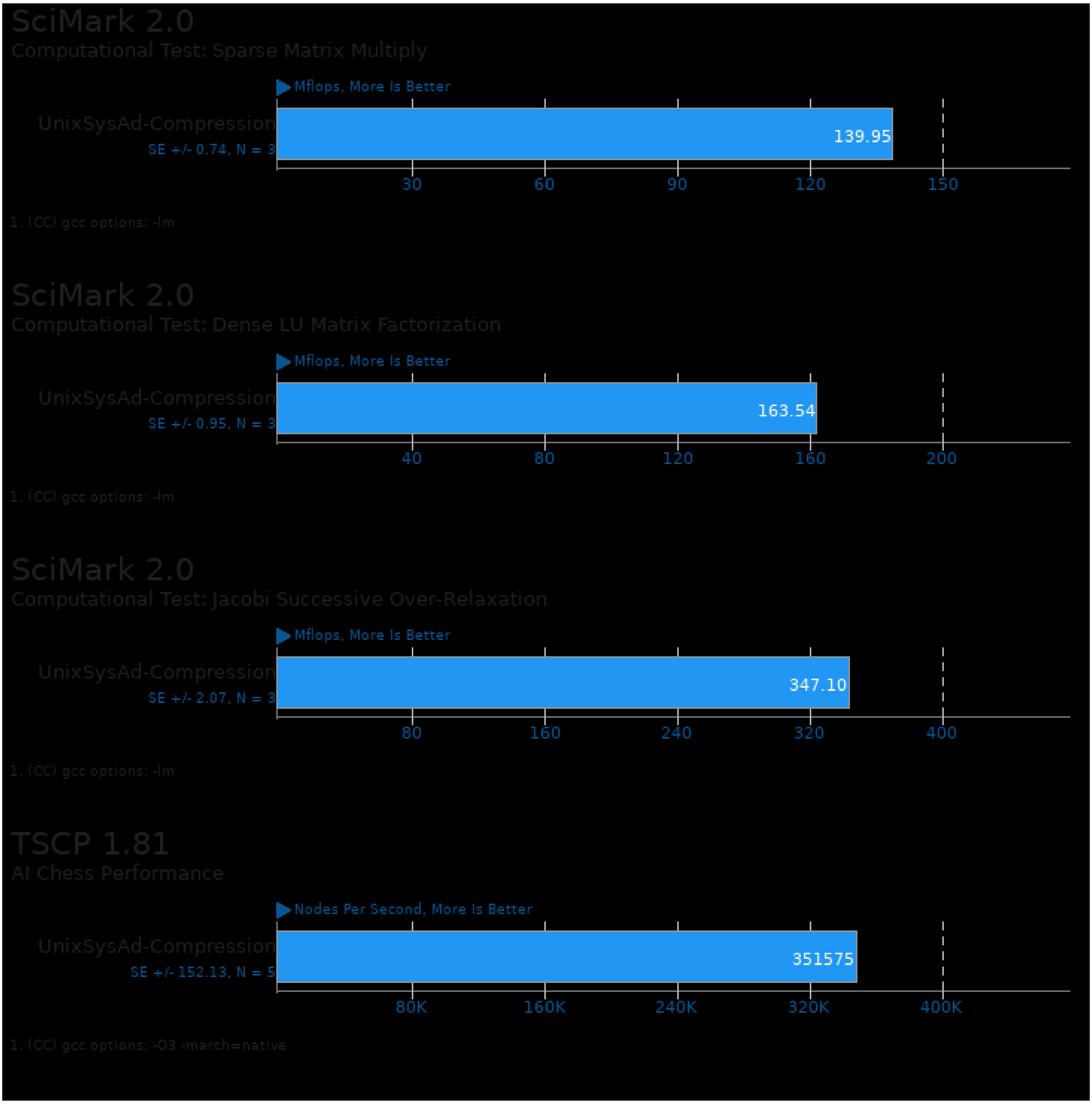
OS: Raspbian 10, Kernel: 5.4.72-v7l+ (armv7l), Desktop: Openbox 3.6.1, File-System: ext4

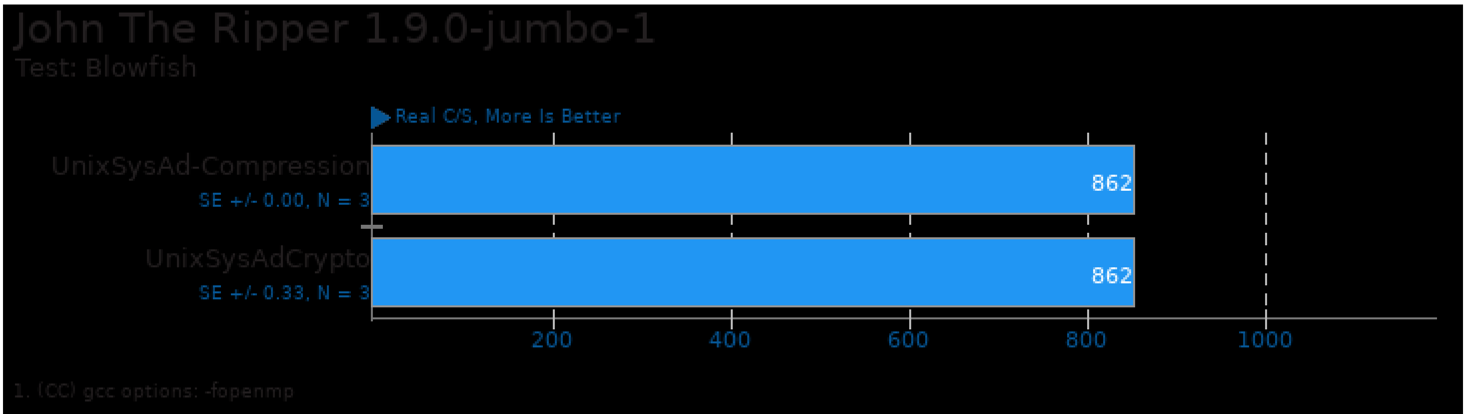
Kernel Notes: snd_bcm2835.enable_compat_alsa=0 snd_bcm2835.enable_hdmi=1 snd_bcm2835.enable_headphones=1
Compiler Notes: --build=arm-linux-gnueabihf --disable-libitm --disable-libquadmath --disable-libquadmath-support --disable-sjlj-exceptions --disable-werror --enable-bootstrap --enable-checking=release --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

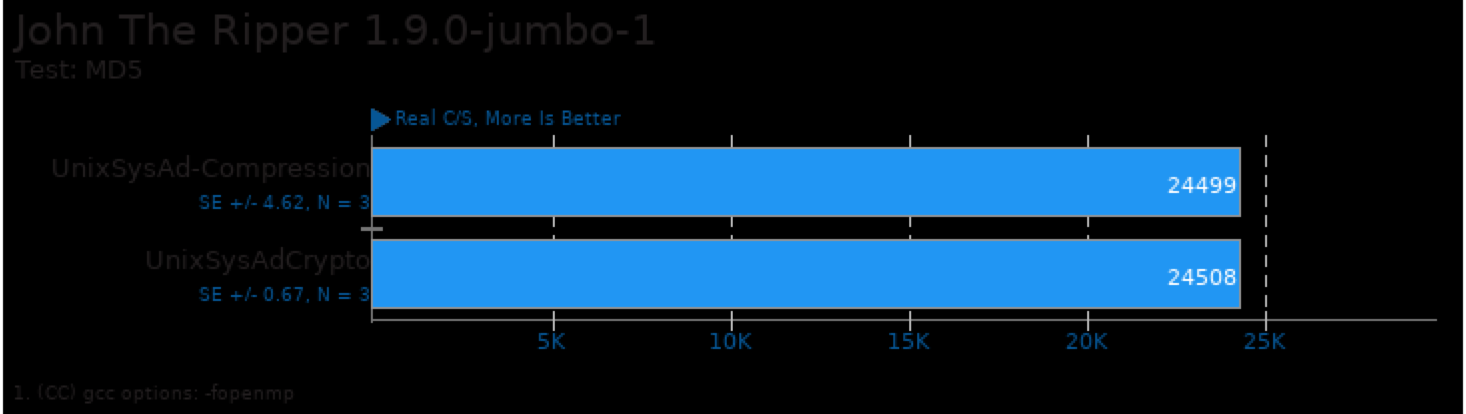
	UnixSysAd-Compression	UnixSysAdCrypto
FFTW - Stock - 1D FFT Size 4096 (Mflops)	1561	
Standard Deviation	0.2%	
FFTW - Stock - 2D FFT Size 4096 (Mflops)	196.36	
Standard Deviation	5.4%	
SciMark - Composite (Mflops)	145.13	
Standard Deviation	0.8%	
SciMark - Monte Carlo (Mflops)	42.28	
Standard Deviation	0%	
SciMark - F.F.T (Mflops)	32.79	
Standard Deviation	0.7%	
SciMark - S.M.M (Mflops)	139.95	
Standard Deviation	0.9%	
SciMark - D.L.M.F (Mflops)	163.54	
Standard Deviation	1%	
SciMark - J.S.O.R (Mflops)	347.10	
Standard Deviation	1%	
TSCP - A.C.P (Nodes/s)	351575	
Standard Deviation	0.1%	
John The Ripper - Blowfish (Real C/S)	862	862
Standard Deviation	0%	0.1%
John The Ripper - MD5 (Real C/S)	**24499**	**24508**
Normalized	99.96%	100%

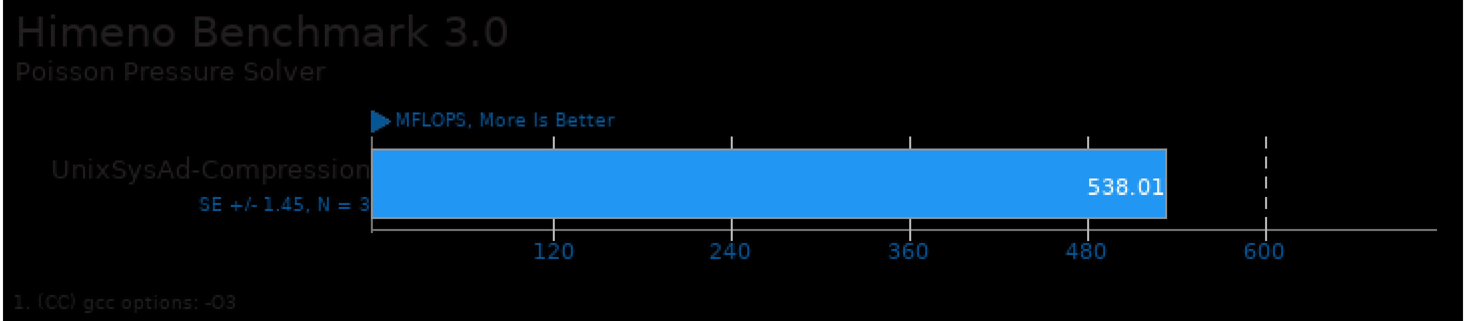
Standard Deviation	0%	0%
Himeno Benchmark - P.P.S (MFLOPS)	538.01	
Standard Deviation	0.5%	
7-Zip Compression - C.S.T (MIPS)	3757	
Standard Deviation	0.5%	
Timed ImageMagick Compilation - Time To Compile	460.99	
Standard Deviation	0.2%	
Timed LLVM Compilation - Time To Compile (sec)	4.73	
C-Ray - Total Time - 4.1.R.P.P (sec)	792.13	
Standard Deviation	5.2%	
Crypto++ - All Algorithms (MiB/s)		164.01
Standard Deviation		0.1%
Crypto++ - Keyed Algorithms (MiB/s)		79.22
Standard Deviation		0.1%
Crypto++ - Unkeyed Algorithms (MiB/s)		52.46
Standard Deviation		0.1%
Crypto++ - I.E.C.P.K.A (MiB/s)		382.20
Standard Deviation		0.1%
Bork File Encrypter - F.E.T (sec)		193.32
Standard Deviation		12%
Nettle - aes256 (Mbyte/s)		96.94
Standard Deviation		0%
Nettle - chacha (Mbyte/s)		104.50
Standard Deviation		0.3%
Nettle - sha512 (Mbyte/s)		70.24
Standard Deviation		0.4%
Nettle - poly1305-aes (Mbyte/s)		245.47
Standard Deviation		0%
Botan - KASUMI (MiB/s)		27.01
Standard Deviation		0.3%
Botan - AES-256 (MiB/s)		19.27
Standard Deviation		0.2%
Botan - Twofish (MiB/s)		68.16
Standard Deviation		1.1%
Botan - Blowfish (MiB/s)		70.74
Standard Deviation		0.2%
Botan - CAST-256 (MiB/s)		39.63
Standard Deviation		0.3%
GnuPG - 2.F.E (sec)		55.64
Standard Deviation		4.3%
OpenSSL - R.4.b.P (Signs/sec)		97.60
Standard Deviation		0.2%
Aircrack-ng - P.T.S.v.2.1 (k/s)		1166
Standard Deviation		0.6%

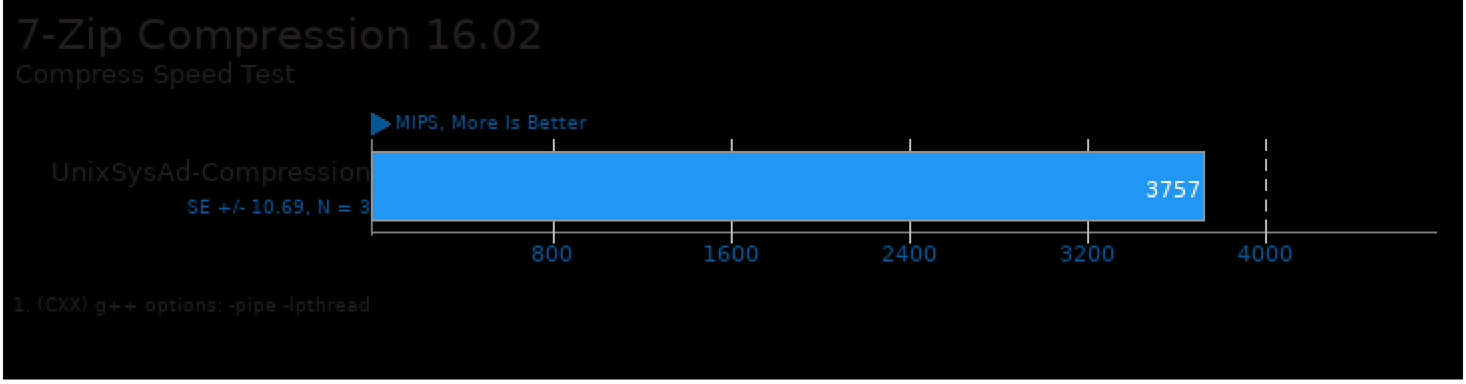

FFTW 3.3.6
Build: Stock - Size: 1D FFT Size 4096
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 1.75, N = 3
1560.77
300
600
900
1200
1500
FFTW 3.3.6
Build: Stock - Size: 2D FFT Size 4096
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 4.29, N = 6
196.36
40
80
120
160
200
SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 0.71, N = 3
145.13
30
60
90
120
150
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Monte Carlo
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 0.00, N = 3
42.28
10
20
30
40
50
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Fast Fourier Transform
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 0.13, N = 3
32.79
8
16
24
32
40
1. (CC) gcc options: -lm


SciMark 2.0
Computational Test: Sparse Matrix Multiply
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 0.74, N = 3
139.95
30
60
90
120
150
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Dense LU Matrix Factorization
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 0.95, N = 3
163.54
40
80
120
160
200
1. (CC) gcc options: -lm
SciMark 2.0
Computational Test: Jacobi Successive Over-Relaxation
Mflops, More Is Better
UnixSysAd-Compression
SE +/- 2.07, N = 3
347.10
80
160
240
320
400
1. (CC) gcc options: -lm
TSCP 1.81
AI Chess Performance
Nodes Per Second, More Is Better
UnixSysAd-Compression
SE +/- 152.13, N = 5
351575
80K
160K
240K
320K
400K
1. (CC) gcc options: -O3 -march=native

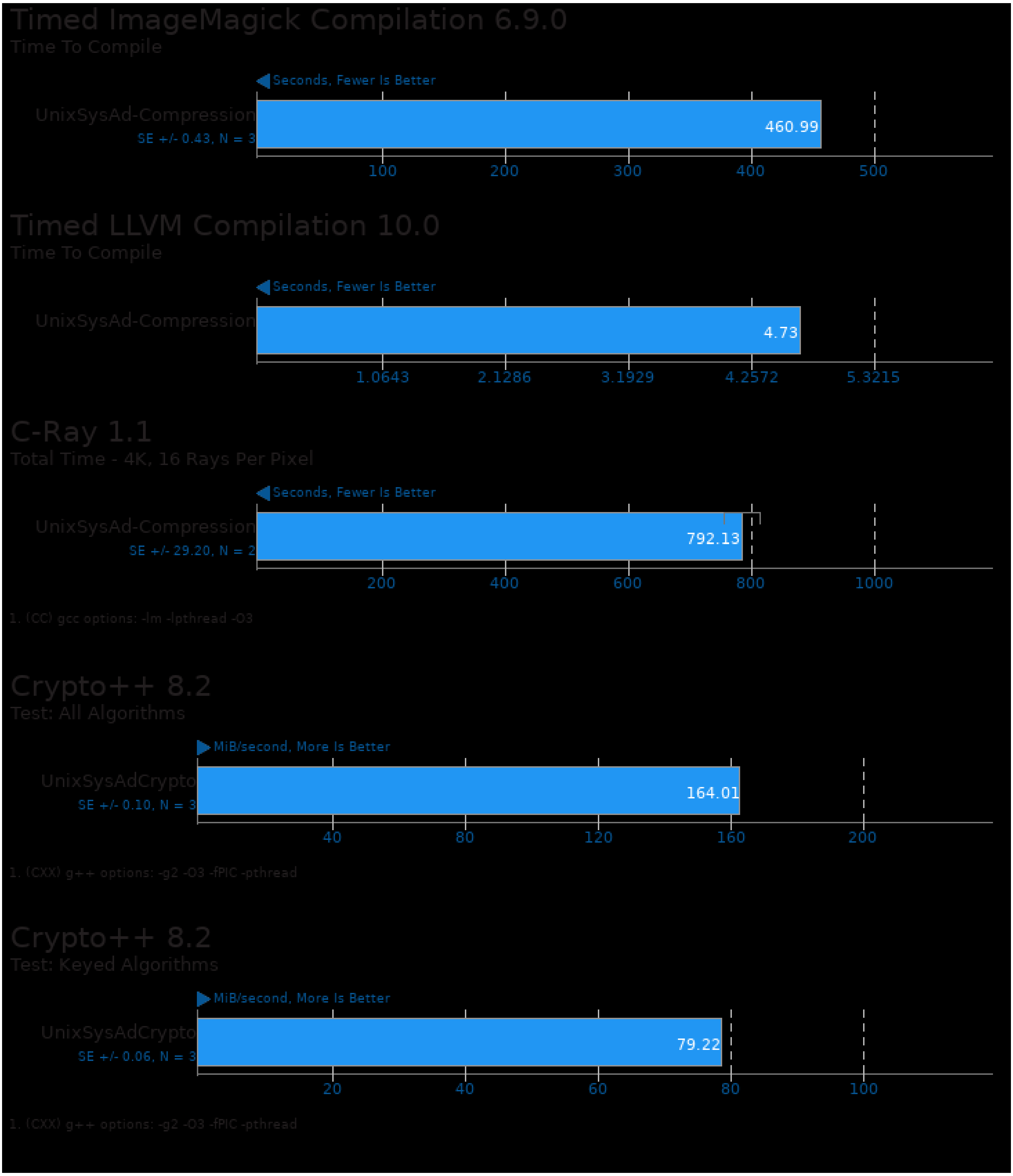

John The Ripper 1.9.0-jumbo-1
Test: Blowfish
Real C/S, More Is Better
UnixSysAd-Compression
SE +/- 0.00, N = 3
862
UnixSysAdCrypto
SE +/- 0.33, N = 3
862
200
400
600
800
1000
1. (CC) gcc options: -fopenmp

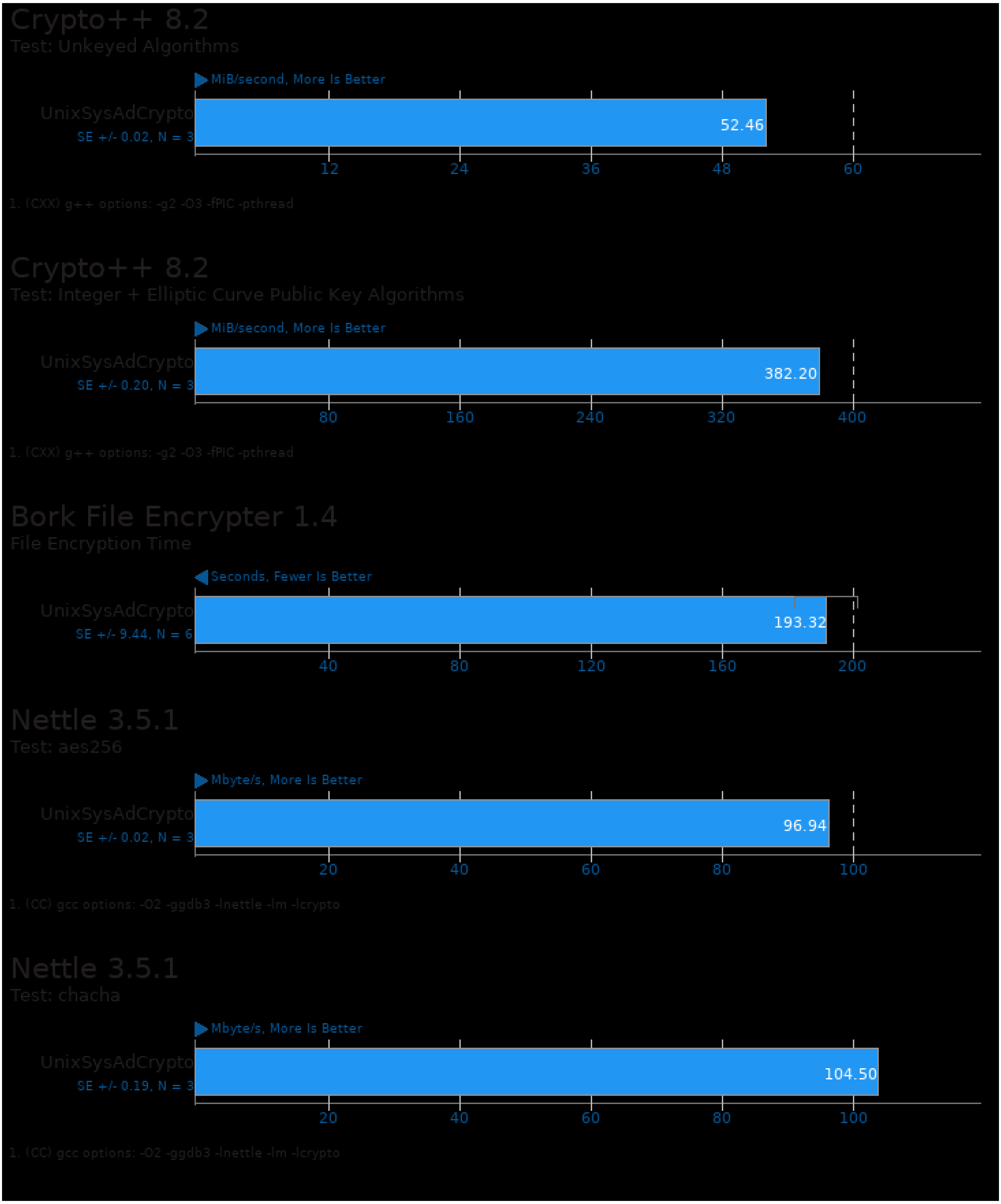

John The Ripper 1.9.0-jumbo-1
Test: MD5
Real C/S, More Is Better
UnixSysAd-Compression
SE +/- 4.62, N = 3
24499
UnixSysAdCrypto
SE +/- 0.67, N = 3
24508
5K
10K
15K
20K
25K
1. (CC) gcc options: -fopenmp


Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
UnixSysAd-Compression
SE +/- 1.45, N = 3
538.01
120
240
360
480
600
1. (CC) gcc options: -O3

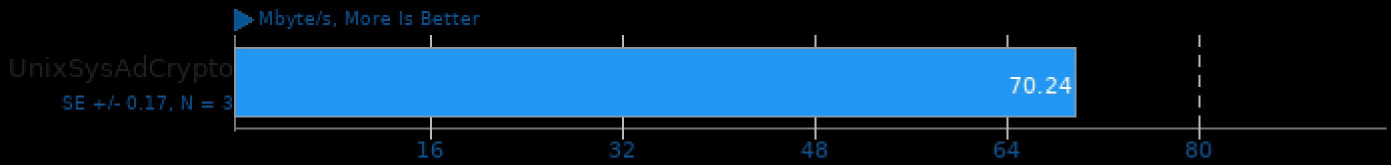

7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
UnixSysAd-Compression
SE +/- 10.69, N = 3
3757
800
1600
2400
3200
4000
1. (CXX) g++ options: -pipe -lpthread

Mathew Craig



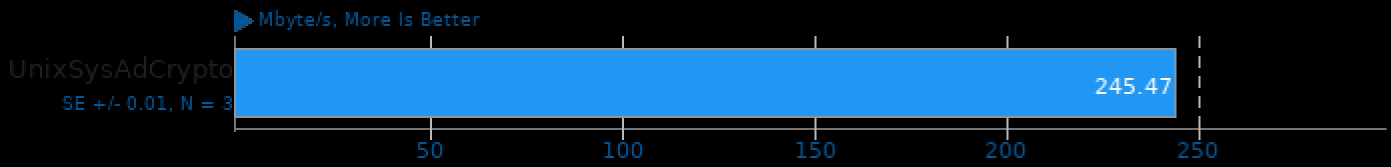

Crypto++ 8.2
Test: Unkeyed Algorithms
MiB/second, More Is Better
UnixSysAdCrypto
SE +/- 0.02, N = 3
52.46
12
24
36
48
60
1. (CXX) g++ options: -g2 -O3 -fPIC -pthread
Crypto++ 8.2
Test: Integer + Elliptic Curve Public Key Algorithms
MiB/second, More Is Better
UnixSysAdCrypto
SE +/- 0.20, N = 3
382.20
80
160
240
320
400
1. (CXX) g++ options: -g2 -O3 -fPIC -pthread
Bork File Encrypter 1.4
File Encryption Time
Seconds, Fewer Is Better
UnixSysAdCrypto
SE +/- 9.44, N = 6
193.32
40
80
120
160
200
Nettle 3.5.1
Test: aes256
Mbyte/s, More Is Better
UnixSysAdCrypto
SE +/- 0.02, N = 3
96.94
20
40
60
80
100
1. (CC) gcc options: -O2 -ggdb3 -lnettle -lm -lcrypto
Nettle 3.5.1
Test: chacha
Mbyte/s, More Is Better
UnixSysAdCrypto
SE +/- 0.19, N = 3
104.50
20
40
60
80
100
1. (CC) gcc options: -O2 -ggdb3 -lnettle -lm -lcrypto

Nettle 3.5.1
Test: sha512



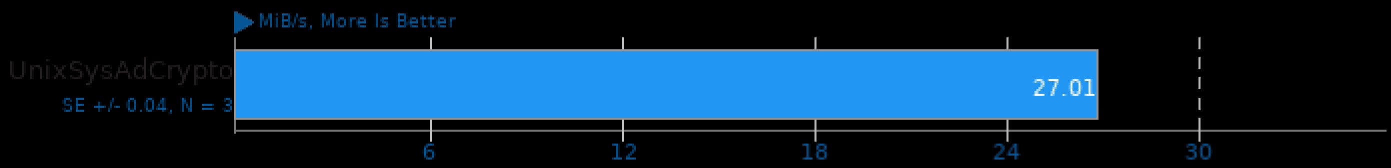
1. (CC) gcc options: -O2 -ggdb3 -lnettle -lm -lcrypto

Nettle 3.5.1
Test: poly1305-aes



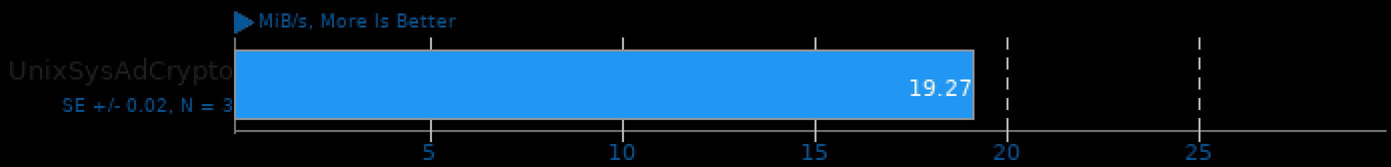
1. (CC) gcc options: -O2 -ggdb3 -lnettle -lm -lcrypto

Botan 2.13.0
Test: KASUMI



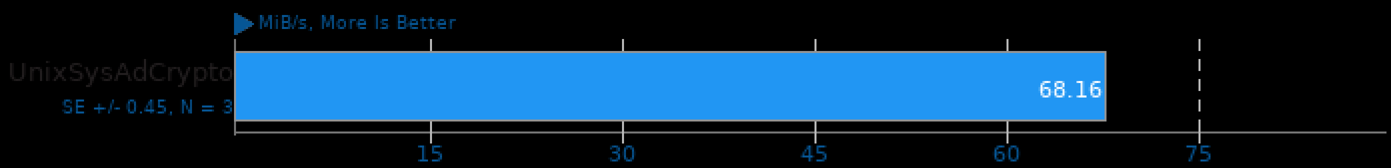
1. (CXX) g++ options: -fstack-protector -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0
Test: AES-256



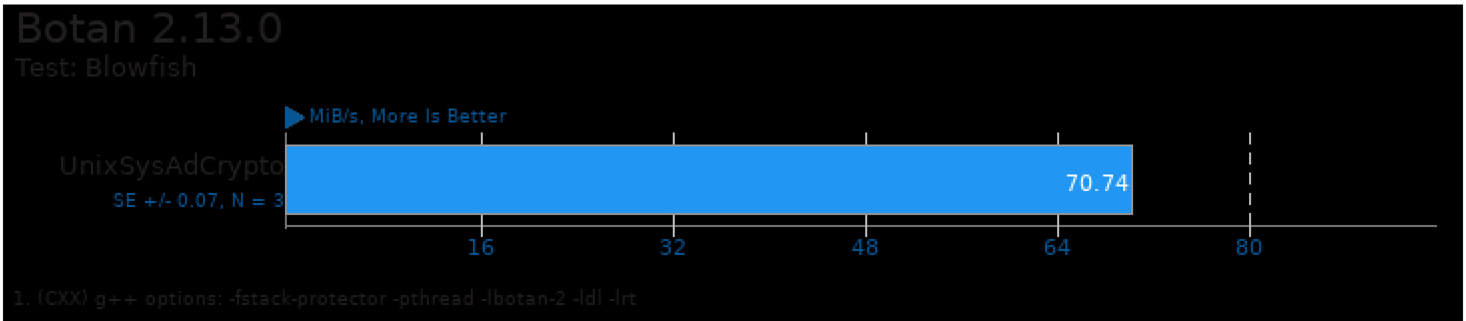
1. (CXX) g++ options: -fstack-protector -pthread -lbotan-2 -ldl -lrt

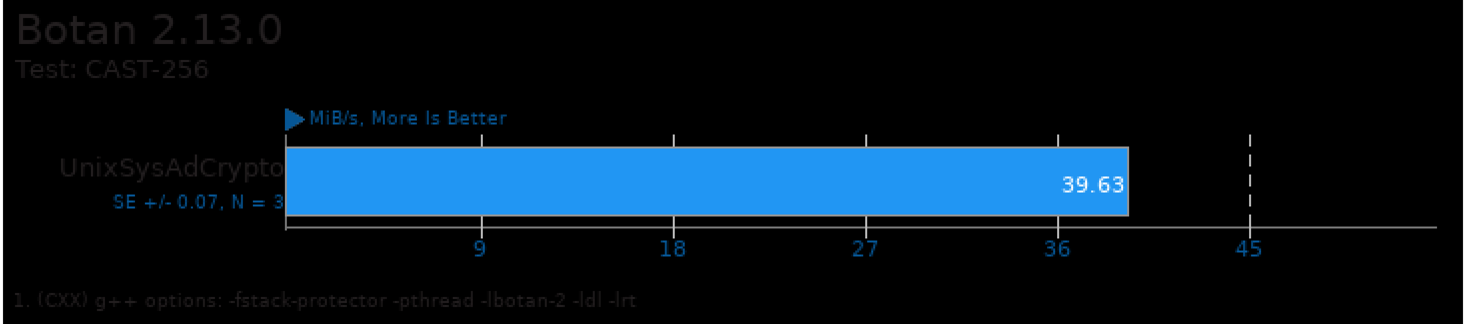
Botan 2.13.0
Test: Twofish

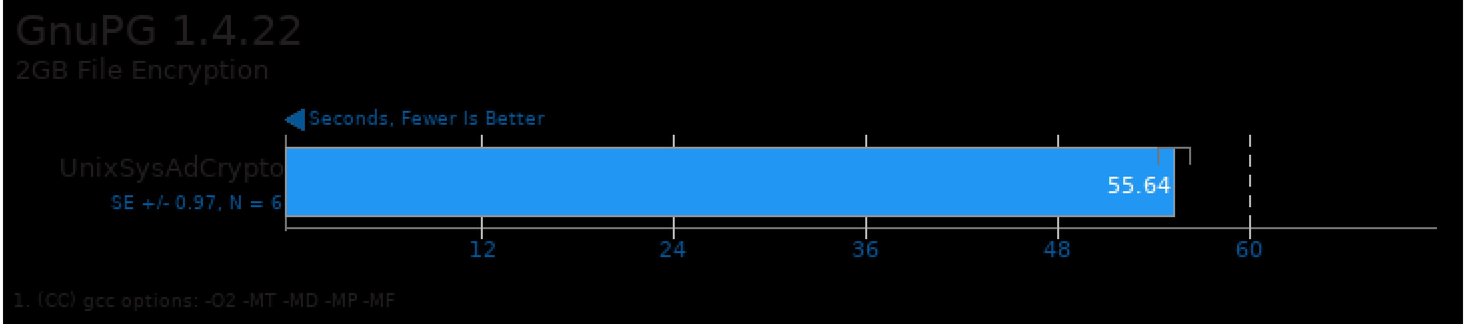


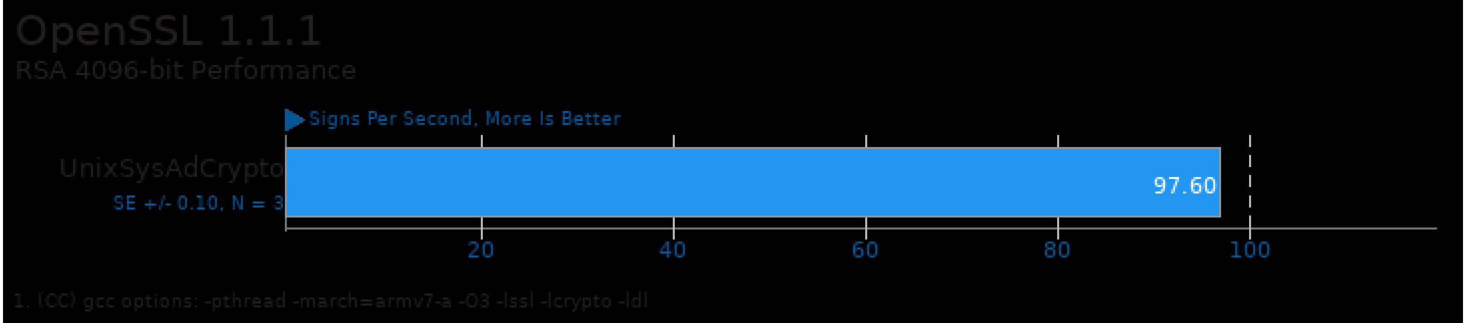
1. (CXX) g++ options: -fstack-protector -pthread -lbotan-2 -ldl -lrt

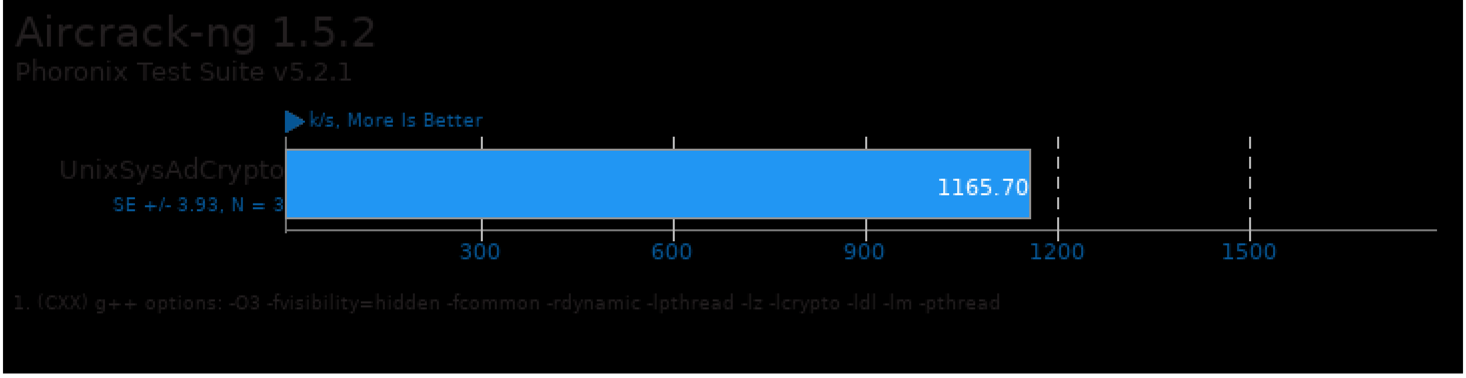
Mathew Craig



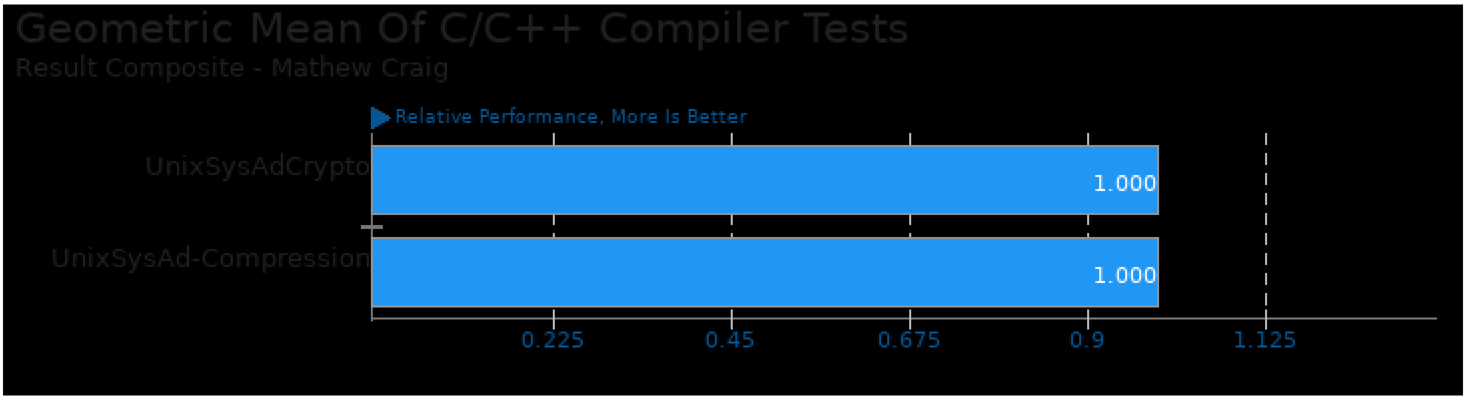




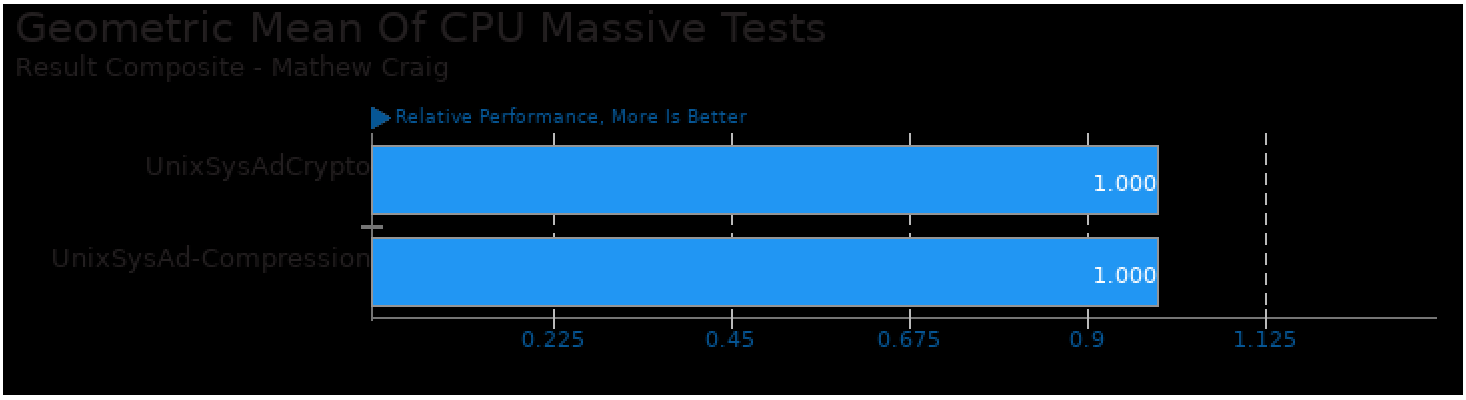




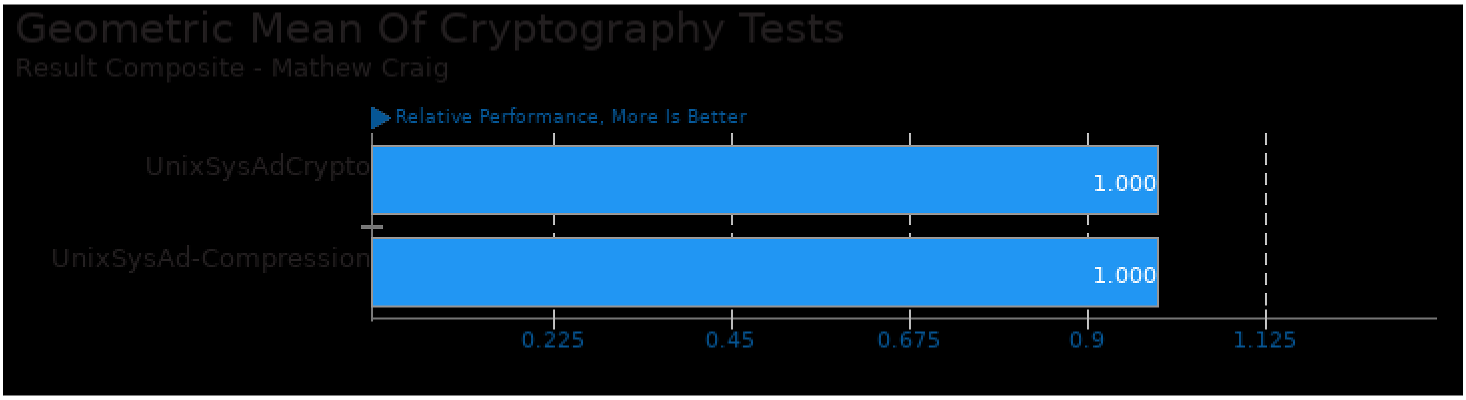
These geometric means are based upon test groupings / test suites for this result file.



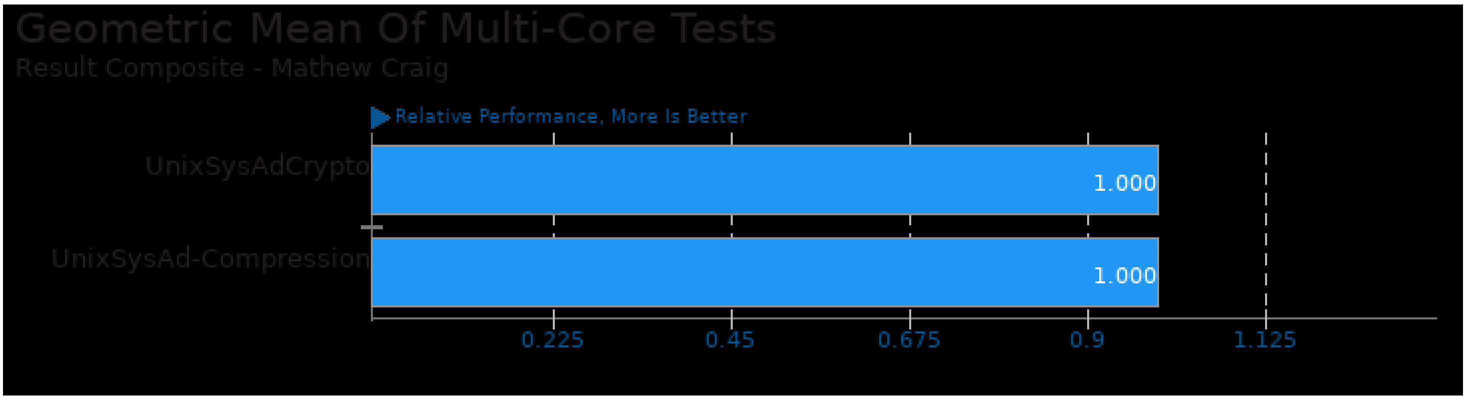
Geometric mean based upon tests: pts/fftw, pts/scimark2, pts/tscp, pts/himeno, pts/build-imagemagick, pts/build-llvm, pts/c-ray, pts/compress-7zip, pts/john-the-ripper, pts/openssl, pts/aircrack-ng, pts/cryptopp and pts/nettle



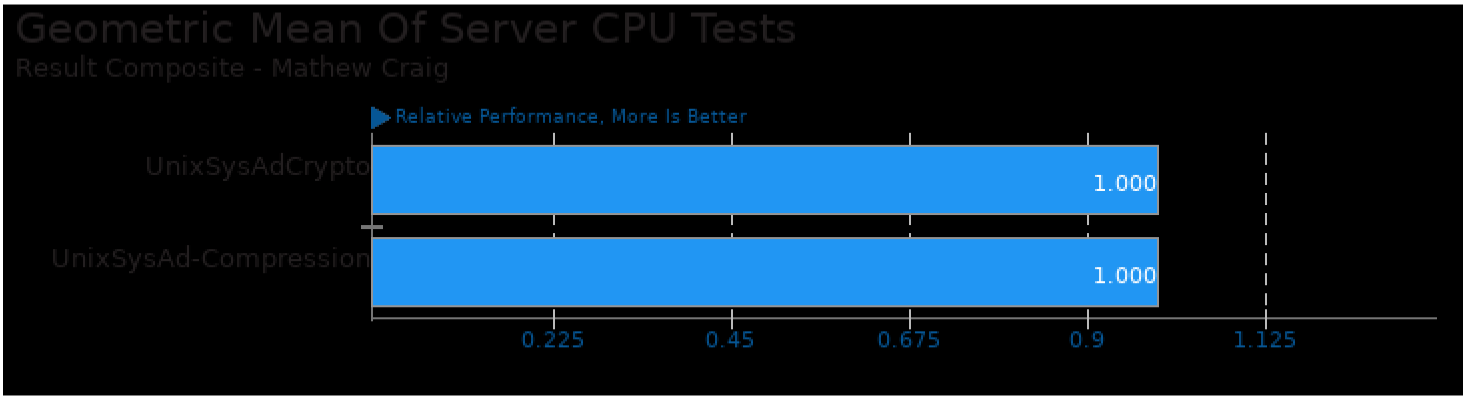
Geometric mean based upon tests: pts/build-llvm, pts/c-ray, pts/compress-7zip, pts/fftw, pts/himeno, pts/john-the-ripper, pts/openssl and pts/botan



Geometric mean based upon tests: pts/gnupg, pts/openssl, pts/john-the-ripper, pts/botan, pts/cryptopp, pts/bork, pts/nettle and pts/aircrack-ng



Geometric mean based upon tests: pts/c-ray, pts/aircrack-ng, pts/john-the-ripper, pts/compress-7zip, pts/build-imagemagick and pts/build-llvm



Geometric mean based upon tests: pts/john-the-ripper, pts/himeno, pts/compress-7zip, pts/build-llvm, pts/c-ray and pts/openssl

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 08:56.