www.phoronix-test-suite.com

FreeBSD 12.2 vs. FreeBSD 13 BETA AMD EPYC Benchmarks

Early benchmarks by Michael Larabel.

Automated Executive Summary

FreeBSD 13 BETA1 had the most wins, coming in first place for 50% of the tests.

Based on the geometric mean of all complete results, the fastest (FreeBSD 12.2) was 1.003x the speed of the slowest (FreeBSD 13 BETA1).

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

OSBench (Test: Create Threads) at 4.412x
Timed HMMer Search (Pfam Database Search) at 2.575x
Stress-NG (Test: Forking) at 1.697x
OSBench (Test: Launch Programs) at 1.625x
BlogBench (Test: Read) at 1.521x
Stress-NG (Test: Context Switching) at 1.445x
Stress-NG (Test: Socket Activity) at 1.399x
BlogBench (Test: Write) at 1.371x
OSBench (Test: Memory Allocations) at 1.184x
GraphicsMagick (Operation: Noise-Gaussian) at 1.175x.

Test Systems:

FreeBSD 12.2

Processor: AMD EPYC 7F52 16-Core @ 3.50GHz (32 Cores), Motherboard: Supermicro Super Server 0123456789, Chipset: AMD [AMD] Starship/Matisse Root Complex, Memory: 64GB, Disk: INTEL SSDPE21D280GA, Graphics: ASPEED

OS: FreeBSD, Kernel: 12.2-RELEASE (x86_64), Compiler: Clang 10.0.1, File-System: zfs, Screen Resolution: 800x600

Java Notes: OpenJDK Runtime Environment (build 11.0.9+11-1)
Python Notes: Python 3.7.9

FreeBSD 13 BETA1

Processor: AMD EPYC 7F52 16-Core @ 3.50GHz (32 Cores), Motherboard: Supermicro Super Server 0123456789, Chipset: AMD [AMD] Starship/Matisse Root Complex, Memory: 64GB, Disk: INTEL SSDPE21D280GA, Graphics: ASPEED

OS: FreeBSD, Kernel: 13.0-BETA1 (x86_64), Compiler: Clang 11.0.1, File-System: zfs, Screen Resolution: 1024x768

Java Notes: OpenJDK Runtime Environment (build 11.0.9+11-1)
Python Notes: Python 3.7.9

	FreeBSD 12.2	FreeBSD 13 BETA1
BlogBench - Read (Final Score)	**728551**	**1108220**
Normalized	65.74%	100%
Standard Deviation	3.2%	
BlogBench - Write (Final Score)	**12177**	**16690**
Normalized	72.96%	100%
Standard Deviation	1.8%	
MBW - M.C.F.B.S - 1024 MiB (MiB/s)	**8203**	**7614**
Normalized	100%	92.83%
Standard Deviation	1%	0.3%
iPerf - 5201 - 10 Seconds - UDP - 1000Mbit Objective - 32 (Mbits/s)	**22195**	**17376**
Normalized	100%	78.29%
Standard Deviation	3.4%	21.8%
iPerf - 5201 - 10 Seconds - TCP - 1 (Mbits/s)	**26628**	**26968**
Normalized	98.74%	100%
Standard Deviation	1.5%	7.8%
iPerf - 5201 - 10 Seconds - TCP - 32 (Mbits/s)	**24311**	**22234**
Normalized	100%	91.46%
Standard Deviation	5.5%	28.8%
OSBench - Create Files (us/Event)	**36.137867**	**31.087675**
Normalized	86.03%	100%
Standard Deviation	0.5%	1.6%
OSBench - Create Threads (us/Event)	**25.432904**	**5.764961**
Normalized	22.67%	100%

Standard Deviation	1.2%	1.3%
OSBench - Launch Programs (us/Event)	**167.190234**	**102.883180**
Normalized	61.54%	100%
Standard Deviation	1.3%	2.1%
OSBench - Create Processes (us/Event)	**71.473122**	**68.955104**
Normalized	96.48%	100%
Standard Deviation	1.3%	3.5%
OSBench - Memory Allocations (Ns/Event)	**33.377330**	**28.186957**
Normalized	84.45%	100%
Standard Deviation	0.3%	0.4%
GNU MPC - M.P.B (Global Score)	**8117**	**8183**
Normalized	99.19%	100%
Standard Deviation	0.1%	0.1%
Rodinia - OpenMP CFD Solver (sec)	**14.377**	**13.745**
Normalized	95.6%	100%
Standard Deviation	0.7%	0.3%
PolyBench-C - 3.M.M (sec)	**2.164**	**2.166**
Normalized	100%	99.91%
Standard Deviation	0.1%	0.1%
FFTE - N.2.3.C.F.R (MFLOPS)	**36277**	**33311**
Normalized	100%	91.82%
Standard Deviation	0.2%	12.8%
FFTW - Stock - 2D FFT Size 4096 (Mflops)	**5795**	**5856**
Normalized	98.97%	100%
Standard Deviation	0.4%	0%
FFTW - Float + SSE - 2D FFT Size 4096 (Mflops)	**15228**	**13945**
Normalized	100%	91.57%
Standard Deviation	0.2%	0.6%
Timed HMMer Search - P.D.S (sec)	**117.306**	**302.050**
Normalized	100%	38.84%
Standard Deviation	0.3%	1%
BLAKE2 (Cycles/Byte)	**5.44**	**5.42**
Normalized	99.63%	100%
Standard Deviation	0.2%	0%
simdjson - Kostya (GB/s)	**0.6**	**0.64**
Normalized	93.75%	100%
Standard Deviation	0%	0%
simdjson - LargeRand (GB/s)	**0.43**	**0.44**
Normalized	97.73%	100%
Standard Deviation	1.3%	0%
simdjson - PartialTweets (GB/s)	**0.50**	**0.54**
Normalized	92.59%	100%
Standard Deviation	1.1%	0%
simdjson - DistinctUserID (GB/s)	**0.52**	**0.56**
Normalized	92.86%	100%
Standard Deviation	0%	0%
Go Benchmarks - json (ns/op)	**3064084**	**4592476**
Normalized	100%	66.72%
Standard Deviation	7.8%	12.3%
Go Benchmarks - build (ns/op)	**20680805140**	**20761547149**
Normalized	100%	99.61%
Standard Deviation	0.4%	1%
Go Benchmarks - garbage (ns/op)	**1719738**	**3123551**
Normalized	100%	55.06%
Standard Deviation	15.3%	13%

Java SciMark - Composite (Mflops)	**2776**	**2779**
Normalized	99.91%	100%
Standard Deviation	0.1%	0.1%
Bork File Encrypter - F.E.T (sec)	**14.127**	**13.729**
Normalized	97.18%	100%
Standard Deviation	1.2%	1.2%
DaCapo Benchmark - H2 (msec)	**3377**	**3530**
Normalized	100%	95.67%
Standard Deviation	2.5%	6.1%
DaCapo Benchmark - Jython (msec)	**4557**	**4899**
Normalized	100%	93.02%
Standard Deviation	3.8%	8.7%
Renaissance - Scala Dotty (ms)	**1561**	**1541**
Normalized	98.73%	100%
Standard Deviation	1%	1%
Renaissance - Savina Reactors.IO (ms)	**16678**	**16101**
Normalized	96.54%	100%
Standard Deviation	22.9%	12.1%
Renaissance - T.H.R (ms)	**3436**	**3463**
Normalized	100%	99.22%
Standard Deviation	0.5%	0.6%
Fhourstones - C.C.4.S (Kpos / sec)	**13091**	**13164**
Normalized	99.45%	100%
Standard Deviation	0%	0.1%
CacheBench - Read (MB/s)	**9893**	**9907**
Normalized	99.86%	100%
Standard Deviation	0.1%	0.1%
LuaJIT - Composite (Mflops)	**1478**	**1477**
Normalized	100%	99.95%
Standard Deviation	0.1%	0.1%
LuaJIT - Monte Carlo (Mflops)	**472.89**	**475.57**
Normalized	99.44%	100%
Standard Deviation	1.3%	0.3%
LuaJIT - F.F.T (Mflops)	**138.17**	**138.05**
Normalized	100%	99.91%
Standard Deviation	0.1%	0.1%
LuaJIT - S.M.M (Mflops)	**1227**	**1224**
Normalized	100%	99.77%
Standard Deviation	0.1%	0.1%
LuaJIT - D.L.M.F (Mflops)	**3657**	**3654**
Normalized	100%	99.91%
Standard Deviation	0.2%	0.2%
LuaJIT - J.S.O.R (Mflops)	1893	1893
Standard Deviation	0.1%	0.1%
SciMark - Composite (Mflops)	**651.88**	**651.15**
Normalized	100%	99.89%
Standard Deviation	0.1%	0.2%
Botan - KASUMI (MiB/s)	**87.661**	**80.553**
Normalized	100%	91.89%
Standard Deviation	0.1%	0.1%
Botan - AES-256 (MiB/s)	**3976**	**4217**
Normalized	94.3%	100%
Standard Deviation	0.1%	0.1%
Botan - Twofish (MiB/s)	**309.598**	**306.565**
Normalized	100%	99.02%

Standard Deviation	0.1%	0%
Botan - Blowfish (MiB/s)	**366.147**	**366.881**
Normalized	99.8%	100%
Standard Deviation	0.1%	0.1%
Botan - CAST-256 (MiB/s)	**129.381**	**129.759**
Normalized	99.71%	100%
Standard Deviation	0.2%	0%
LibRaw - P.P.B (Mpix/sec)	**39.38**	**38.58**
Normalized	100%	97.97%
Standard Deviation	0.2%	0.2%
John The Ripper - Blowfish (Real C/S)	**38943**	**38892**
Normalized	100%	99.87%
Standard Deviation	0.1%	0.2%
John The Ripper - MD5 (Real C/S)	**1239000**	**1293000**
Normalized	95.82%	100%
Standard Deviation	0.3%	0.4%
Node.js Express HTTP Load Test (Reqs/sec)	**7750**	**7592**
Normalized	100%	97.96%
Standard Deviation	0.9%	3.6%
GraphicsMagick - Sharpen (Iterations/min)	**253**	**240**
Normalized	100%	94.86%
Standard Deviation	0.5%	1.1%
GraphicsMagick - Enhanced (Iterations/min)	**403**	**395**
Normalized	100%	98.01%
Standard Deviation		0.8%
GraphicsMagick - Resizing (Iterations/min)	**747**	**156**
Normalized	100%	20.88%
Standard Deviation	20.9%	6.4%
GraphicsMagick - Noise-Gaussian (Iterations/min)	**516**	**439**
Normalized	100%	85.08%
Standard Deviation	0.7%	2.4%
GraphicsMagick - HWB Color Space (Iterations/min)	**1950**	**928**
Normalized	100%	47.59%
Standard Deviation	2.3%	9%
TTSIOD 3D Renderer - P.R.W.S.S.M (FPS)	**56.5721**	**59.0092**
Normalized	95.87%	100%
Standard Deviation	0.1%	0.1%
rav1e - 5 (FPS)	**1.222**	**1.220**
Normalized	100%	99.84%
Standard Deviation	0.3%	0.3%
rav1e - 6 (FPS)	**1.649**	**1.646**
Normalized	100%	99.82%
Standard Deviation	0.2%	0.3%
rav1e - 10 (FPS)	**3.570**	**3.568**
Normalized	100%	99.94%
Standard Deviation	0.1%	0.2%
x264 - H.2.V.E (FPS)	**139.89**	**119.52**
Normalized	100%	85.44%
Standard Deviation	1.4%	7.3%
x265 - Bosphorus 4K (FPS)	**21.99**	**19.95**
Normalized	100%	90.72%
Standard Deviation	1.6%	2.3%
x265 - Bosphorus 1080p (FPS)	**71.91**	**67.07**
Normalized	100%	93.27%
Standard Deviation	2.1%	5.9%

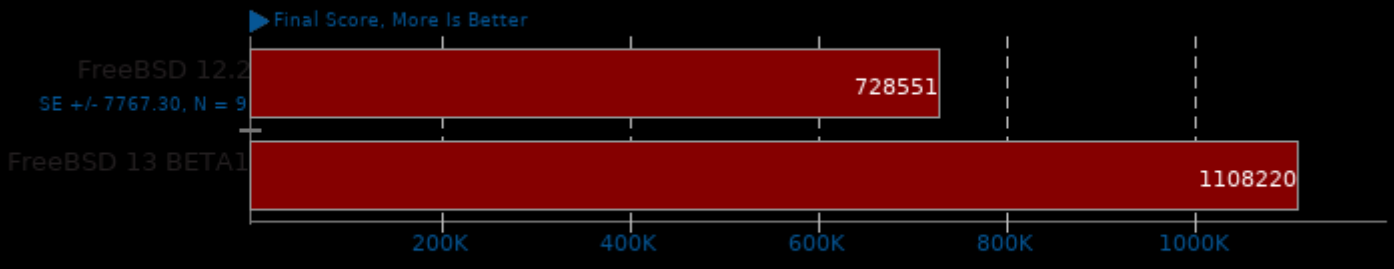
Coremark - CoreMark Size 666 - I.P.S (Iterations/Sec)	**613968**	**608947**
Normalized	100%	99.18%
Standard Deviation	0%	0.3%
Himeno Benchmark - P.P.S (MFLOPS)	**4789**	**4858**
Normalized	98.57%	100%
Standard Deviation	0.2%	0.1%
Stockfish - Total Time (Nodes/s)	**38906581**	**39412238**
Normalized	98.72%	100%
Standard Deviation	1.8%	2.4%
Swet - Average (Operations/sec)	**318265620**	**319827507**
Normalized	99.51%	100%
Standard Deviation	0.3%	2.4%
libavif avifenc - 8 (sec)	**5.167**	**5.179**
Normalized	100%	99.77%
Standard Deviation	0.3%	0.1%
libavif avifenc - 10 (sec)	**5.033**	**5.057**
Normalized	100%	99.53%
Standard Deviation	0.3%	0.4%
Timed PHP Compilation - Time To Compile (sec)	**27.947**	**26.597**
Normalized	95.17%	100%
Standard Deviation	2.6%	2.4%
C-Ray - Total Time - 4.1.R.P.P (sec)	**54.211**	**54.646**
Normalized	100%	99.2%
Standard Deviation	0.2%	0.3%
Primesieve - 1.P.N.G (sec)	**15.986**	**14.842**
Normalized	92.84%	100%
Standard Deviation	1.6%	0.2%
Rust Mandelbrot - T.T.C.S.P.M (sec)	**38.907**	**38.919**
Normalized	100%	99.97%
Standard Deviation	1.1%	0.3%
Rust Prime Benchmark - P.N.T.T.2.0.0 (sec)	**21.476**	**21.471**
Normalized	99.98%	100%
Standard Deviation	0%	0%
Smallpt - G.I.R.1.S (sec)	**6.451**	**6.707**
Normalized	100%	96.18%
Standard Deviation	0.1%	0.2%
Numpy Benchmark (Score)	**361.51**	**332.76**
Normalized	100%	92.05%
Standard Deviation	0.1%	0.1%
AOBench - 2048 x 2048 - Total Time (sec)	**39.463**	**38.974**
Normalized	98.76%	100%
Standard Deviation	0.7%	0%
Timed Eigen Compilation - Time To Compile (sec)	**73.933**	**78.102**
Normalized	100%	94.66%
Standard Deviation	0%	0%
dcraw - R.T.P.I.C (sec)	**35.606**	**35.623**
Normalized	100%	99.95%
Standard Deviation	0.2%	0.4%
Monkey Audio Encoding - WAV To APE (sec)	**26.670**	**23.604**
Normalized	88.5%	100%
Standard Deviation	0.1%	0.1%
FLAC Audio Encoding - WAV To FLAC (sec)	**10.197**	**10.338**
Normalized	100%	98.64%
Standard Deviation	0.2%	0.1%
LAME MP3 Encoding - WAV To MP3 (sec)	**9.564**	**9.982**

Normalized	100%	95.81%
Standard Deviation	0%	0.2%
m-queens - Time To Solve (sec)	**43.047**	**41.486**
Normalized	96.37%	100%
Standard Deviation	0%	0.7%
Perl Benchmarks - Pod2html (sec)	0.16794986	
Standard Deviation	0%	
R Benchmark (sec)	**0.6786**	**0.6276**
Normalized	92.48%	100%
Standard Deviation	0.2%	0.3%
OpenSSL - R.4.b.P (Signs/sec)	**3299**	**3300**
Normalized	99.97%	100%
Standard Deviation	0%	0%
Aircrack-ng (k/s)	**57961**	**55481**
Normalized	100%	95.72%
Standard Deviation	0.1%	0.1%
libjpeg-turbo tjbench - D.T (Megapixels/sec)	**195.832053**	**195.874168**
Normalized	99.98%	100%
Standard Deviation	0%	0.1%
SQLite Speedtest - Timed Time - Size 1,000 (sec)	**112.606**	**105.880**
Normalized	94.03%	100%
Standard Deviation	0.1%	0.2%
Stress-NG - MMAP (Bogo Ops/s)	**243.58**	**278.34**
Normalized	87.51%	100%
Standard Deviation	1.1%	0.8%
Stress-NG - Malloc (Bogo Ops/s)	**538132674**	**620094581**
Normalized	86.78%	100%
Standard Deviation	0.1%	0.2%
Stress-NG - Forking (Bogo Ops/s)	**12819**	**21751**
Normalized	58.94%	100%
Standard Deviation	0.3%	0.1%
Stress-NG - CPU Stress (Bogo Ops/s)	**5267**	**5286**
Normalized	99.65%	100%
Standard Deviation	0.1%	0%
Stress-NG - Semaphores (Bogo Ops/s)	**41915809**	**43453511**
Normalized	96.46%	100%
Standard Deviation	6.2%	2.1%
Stress-NG - Matrix Math (Bogo Ops/s)	**95423**	**95742**
Normalized	99.67%	100%
Standard Deviation	0.3%	0.7%
Stress-NG - Memory Copying (Bogo Ops/s)	**3798**	**3575**
Normalized	100%	94.14%
Standard Deviation	2.3%	1.3%
Stress-NG - Socket Activity (Bogo Ops/s)	**1393**	**1949**
Normalized	71.47%	100%
Standard Deviation	1.4%	0.9%
Stress-NG - Context Switching (Bogo Ops/s)	**41347533**	**59749402**
Normalized	69.2%	100%
Standard Deviation	5.3%	2.2%
Stress-NG - G.C.S.F (Bogo Ops/s)	**189065**	**182417**
Normalized	100%	96.48%
Standard Deviation	0.2%	0.2%
Stress-NG - G.Q.D.S (Bogo Ops/s)	**441.80**	**437.02**
Normalized	100%	98.92%
Standard Deviation	0.2%	0.1%

Stress-NG - S.V.M.P (Bogo Ops/s)	**570520**	**531525**
Normalized	100%	93.16%
Standard Deviation	0.8%	3.3%
Optcarrot - O.B (FPS)	**130.63**	**131.82**
Normalized	99.1%	100%
Standard Deviation	0.4%	0.4%
PyBench - T.F.A.T.T (Milliseconds)	**1767**	**1766**
Normalized	99.94%	100%
Standard Deviation	0.1%	0.2%
PyPerformance - go (Milliseconds)	**459**	**463**
Normalized	100%	99.14%
Standard Deviation	0.1%	
PyPerformance - 2to3 (Milliseconds)	510	510
Standard Deviation	0.1%	
PyPerformance - float (Milliseconds)	**195**	**191**
Normalized	97.95%	100%
PyPerformance - nbody (Milliseconds)	**204**	**207**
Normalized	100%	98.55%
PyPerformance - pathlib (Milliseconds)	**34.3**	**31.4**
Normalized	91.55%	100%
Standard Deviation	0%	0.2%
PyPerformance - json_loads (Milliseconds)	**45.7**	**43.1**
Normalized	94.31%	100%
Standard Deviation	0.1%	0.1%
PyPerformance - crypto_pyaes (Milliseconds)	**197**	**198**
Normalized	100%	99.49%
PyPerformance - regex_compile (Milliseconds)	**335**	**331**
Normalized	98.81%	100%
PyPerformance - python_startup (Milliseconds)	**11.1**	**10.7**
Normalized	96.4%	100%
Standard Deviation	0%	0%
PyPerformance - django_template (Milliseconds)	**111**	**109**
Normalized	98.2%	100%
Hierarchical INTegration - FLOAT (QUIPs)	**318506562**	**325062165**
Normalized	97.98%	100%
Standard Deviation	0.2%	0.2%
PHPBench - P.B.S (Score)	**483436**	**486867**
Normalized	99.3%	100%
Standard Deviation	0.2%	0.4%
Git - T.T.C.C.G.C (sec)	**56.738**	**57.730**
Normalized	100%	98.28%
Standard Deviation	0.7%	0.2%
PHP Micro Benchmarks - Zend bench (sec)	**0.578**	**0.573**
Normalized	99.13%	100%
Standard Deviation	0.5%	0.2%
PHP Micro Benchmarks - Zend micro_bench (sec)	2.879	2.879
Standard Deviation	0.1%	0.6%
Scikit-Learn (sec)	**117.793**	**121.241**
Normalized	100%	97.16%
Standard Deviation	0.1%	0.4%

BlogBench 1.1

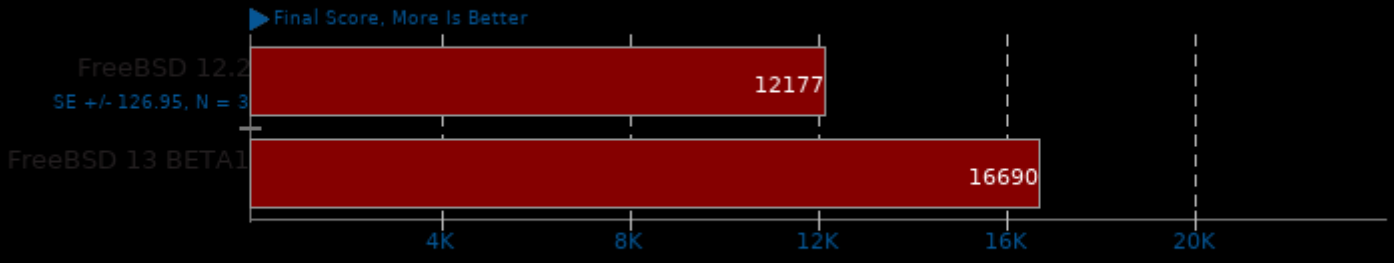
Test: Read



1. (CC) clang options: -O2 -pthread

BlogBench 1.1

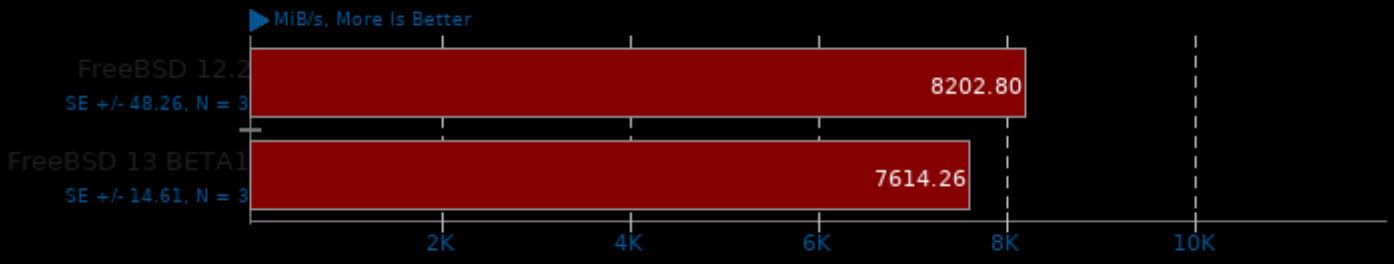
Test: Write



1. (CC) clang options: -O2 -pthread

MBW 2018-09-08

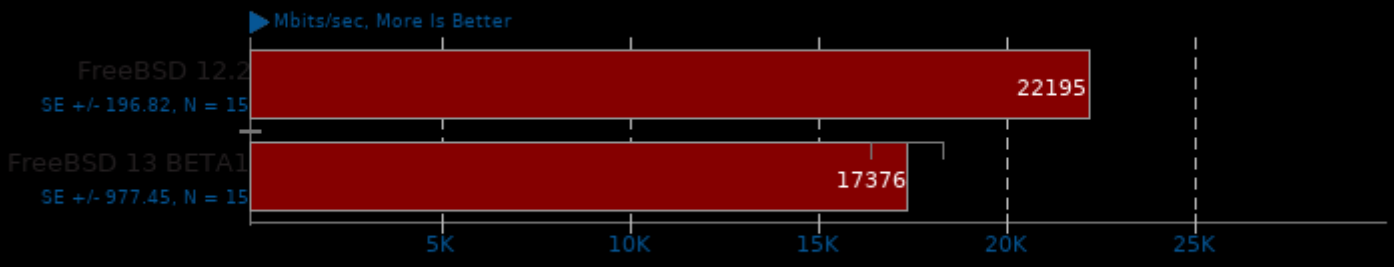
Test: Memory Copy, Fixed Block Size - Array Size: 1024 MiB



1. (CC) clang options: -O3 -march=native

iPerf 3.7

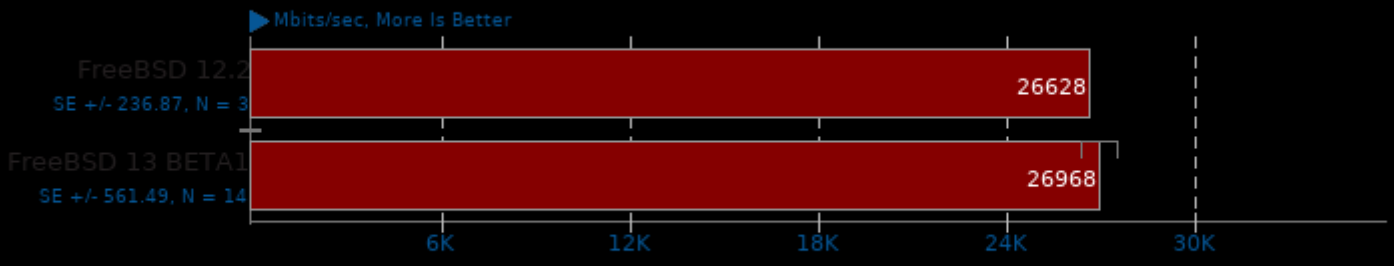
Server Address: localhost - Server Port: 5201 - Duration: 10 Seconds - Test: UDP - 1000Mbit Objective - Parallel: 32



1. (CC) clang options: -O3 -march=native -lssl -lcrypto -lm

iPerf 3.7

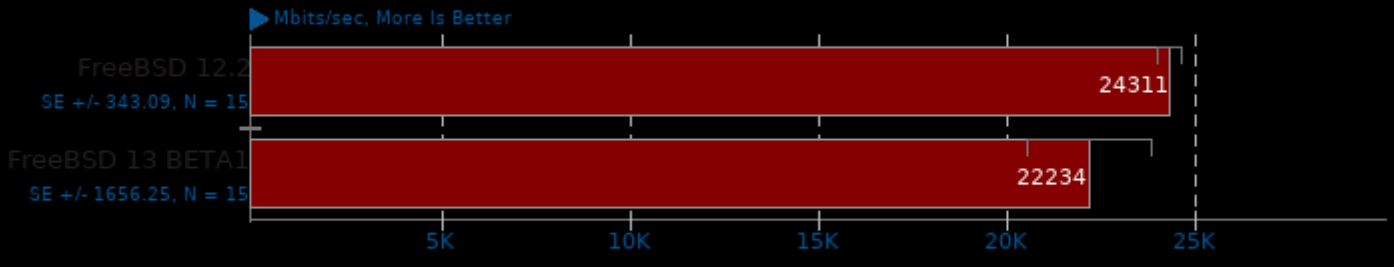
Server Address: localhost - Server Port: 5201 - Duration: 10 Seconds - Test: TCP - Parallel: 1



1. (CC) clang options: -O3 -march=native -lssl -lcrypto -lm

iPerf 3.7

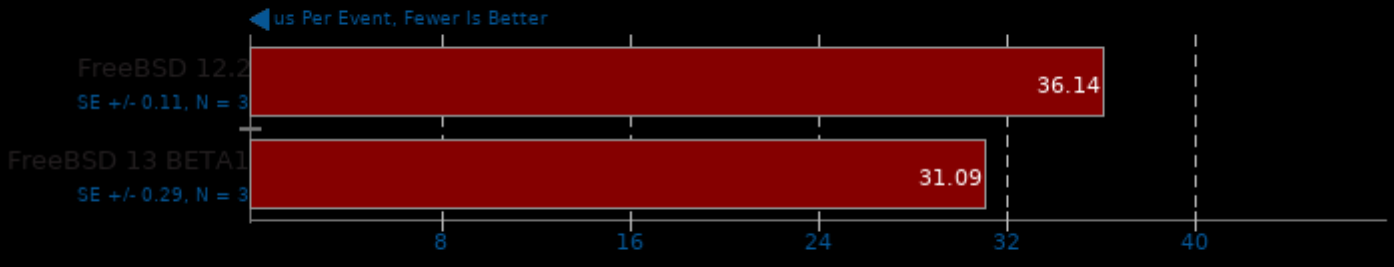
Server Address: localhost - Server Port: 5201 - Duration: 10 Seconds - Test: TCP - Parallel: 32



1. (CC) clang options: -O3 -march=native -lssl -lcrypto -lm

OSBench

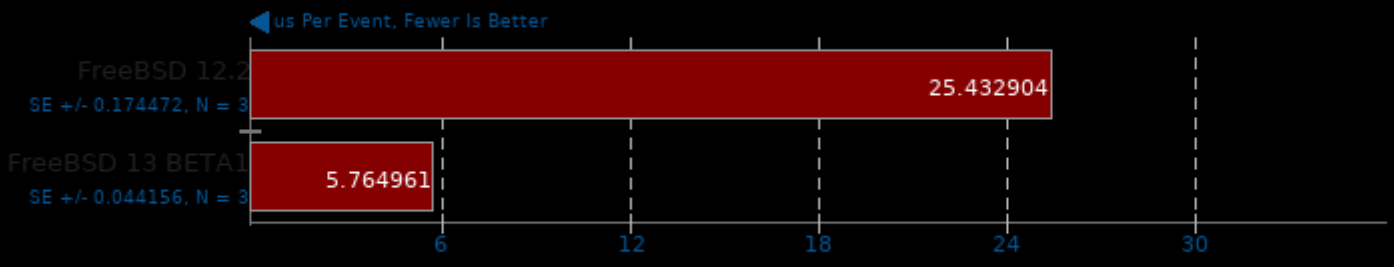
Test: Create Files



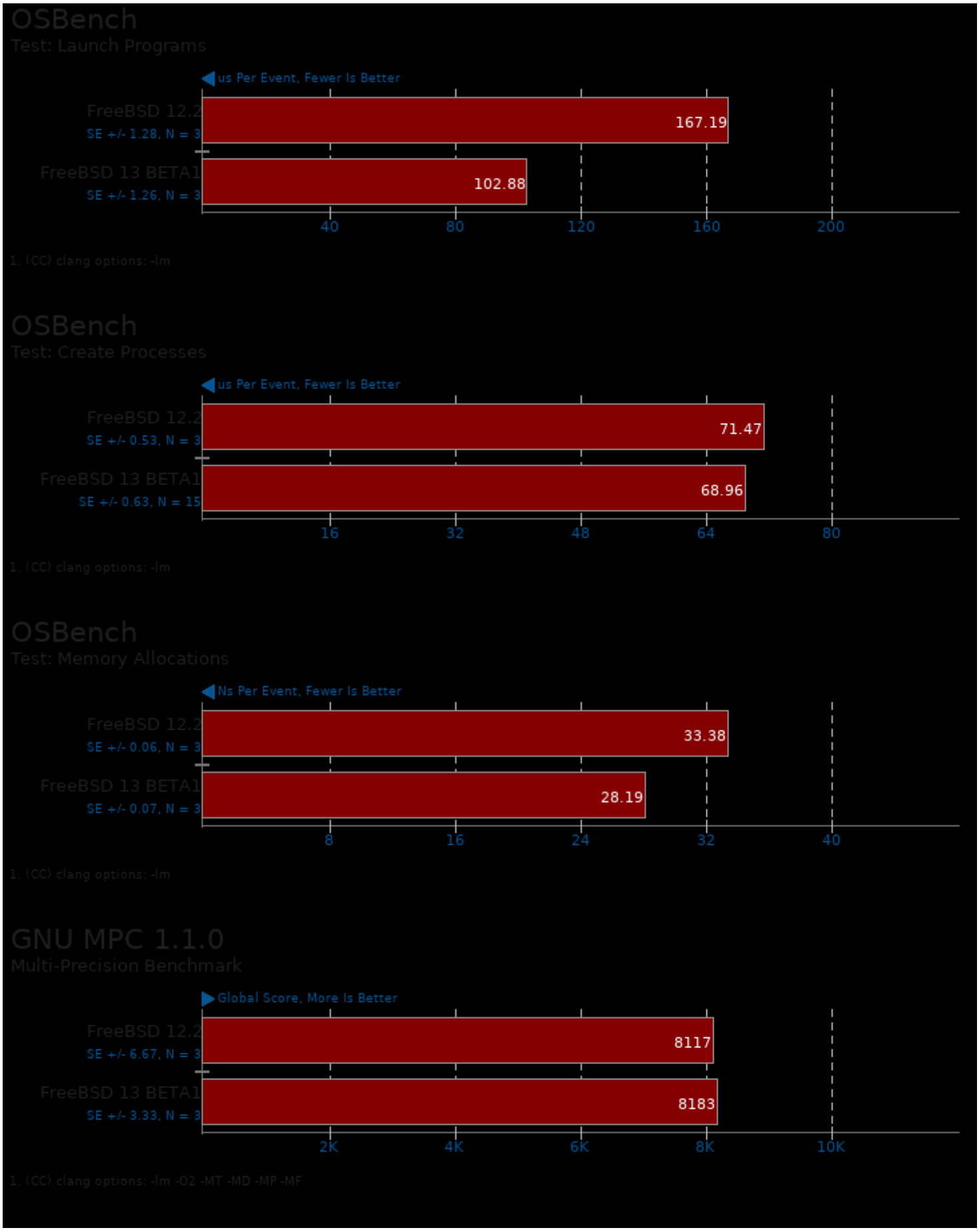
1. (CC) clang options: -lm

OSBench

Test: Create Threads

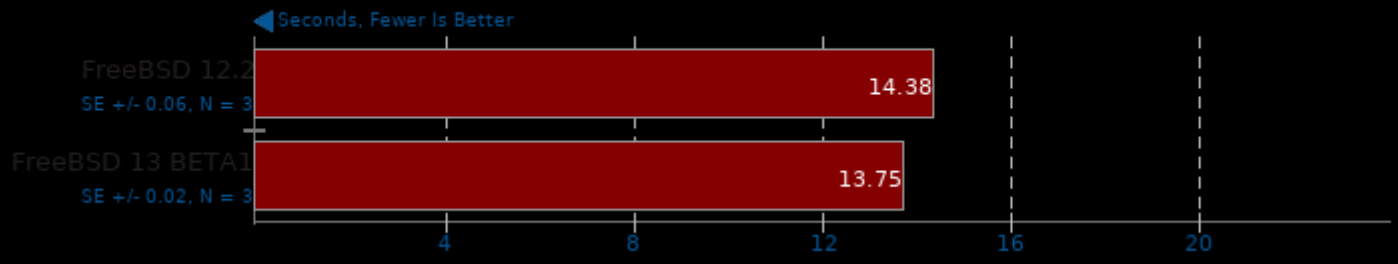


1. (CC) clang options: -lm


OSBench
Test: Launch Programs
us Per Event, Fewer Is Better
FreeBSD 12.2
SE +/- 1.28, N = 3
167.19
FreeBSD 13 BETA1
SE +/- 1.26, N = 3
102.88
40
80
120
160
200
1. (CC) clang options: -lm
OSBench
Test: Create Processes
us Per Event, Fewer Is Better
FreeBSD 12.2
SE +/- 0.53, N = 3
71.47
FreeBSD 13 BETA1
SE +/- 0.63, N = 15
68.96
16
32
48
64
80
1. (CC) clang options: -lm
OSBench
Test: Memory Allocations
Ns Per Event, Fewer Is Better
FreeBSD 12.2
SE +/- 0.06, N = 3
33.38
FreeBSD 13 BETA1
SE +/- 0.07, N = 3
28.19
8
16
24
32
40
1. (CC) clang options: -lm
GNU MPC 1.1.0
Multi-Precision Benchmark
Global Score, More Is Better
FreeBSD 12.2
SE +/- 6.67, N = 3
8117
FreeBSD 13 BETA1
SE +/- 3.33, N = 3
8183
2K
4K
6K
8K
10K
1. (CC) clang options: -lm -O2 -MT -MD -MP -MF

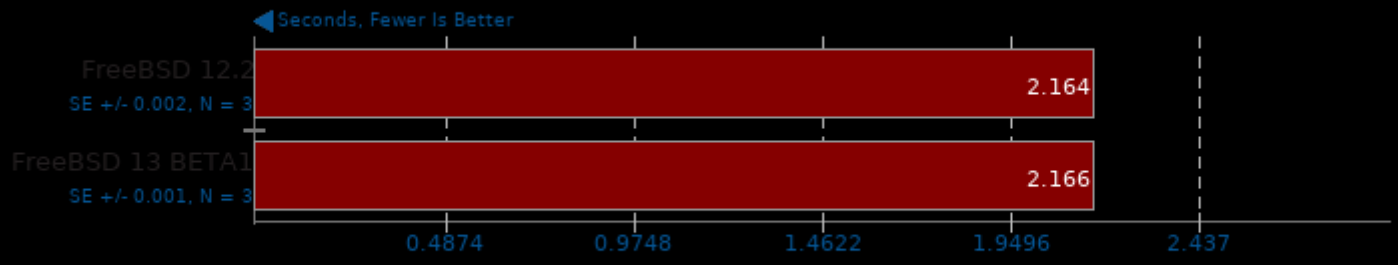
Rodinia 3.1

Test: OpenMP CFD Solver



PolyBench-C 4.2

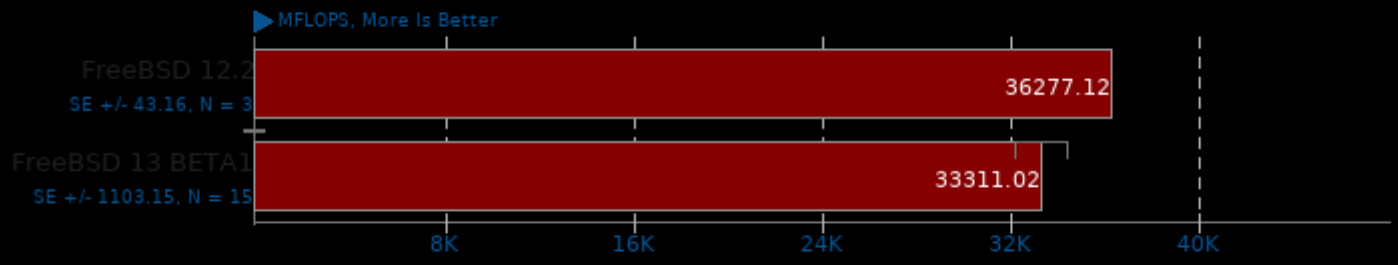
Test: 3 Matrix Multiplications



1. (CC) clang options: -O3 -march=native

FFTE 7.0

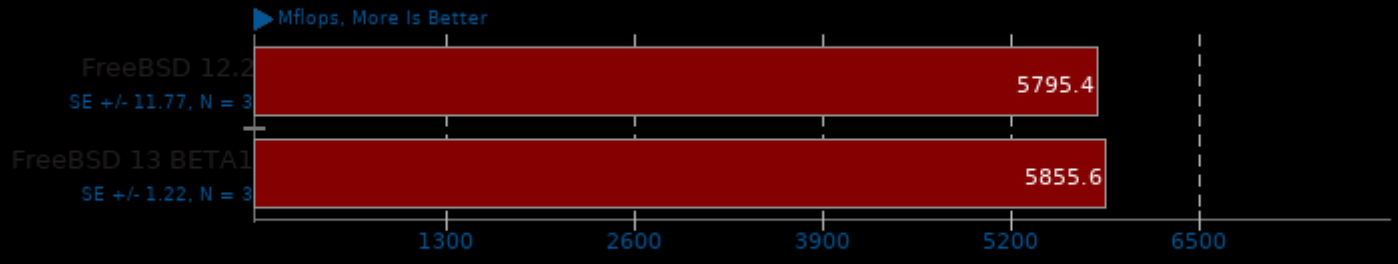
N=256, 3D Complex FFT Routine



1. (F9X) gfortran9 options: -O3 -fomit-frame-pointer -fopenmp

FFTW 3.3.6

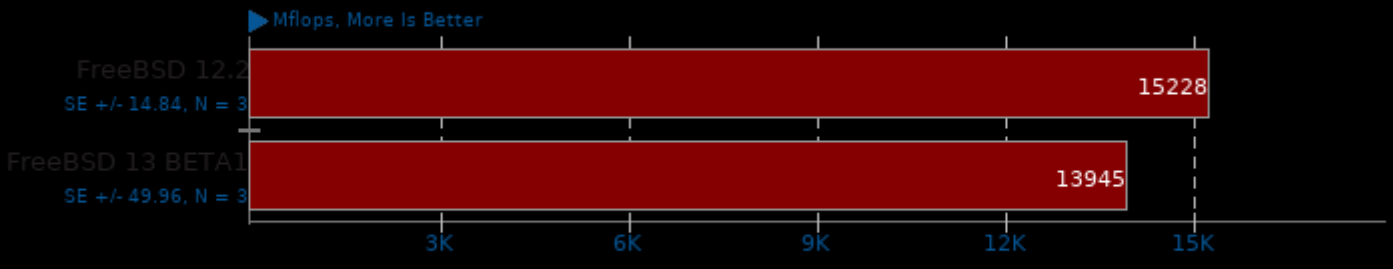
Build: Stock - Size: 2D FFT Size 4096



1. (CC) clang options: -pthread -O3 -fomit-frame-pointer -mtune=native -fstrict-aliasing -ffast-math -lm

FFTW 3.3.6

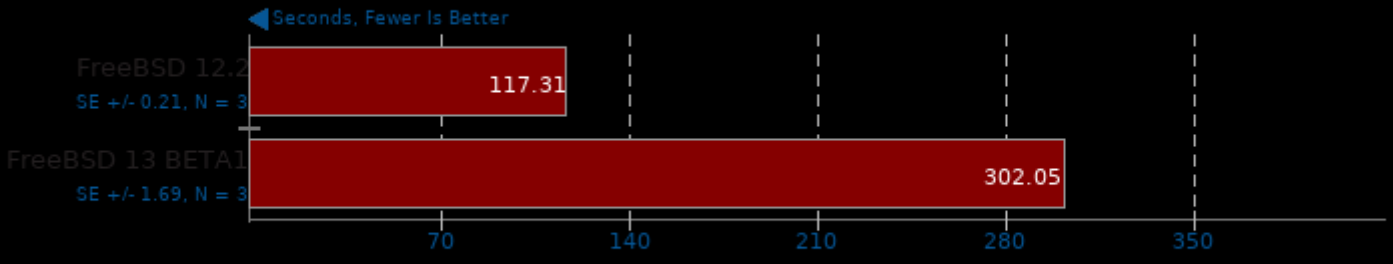
Build: Float + SSE - Size: 2D FFT Size 4096



1. (CC) clang options: -pthread -O3 -fomit-frame-pointer -mtune=native -fstrict-aliasing -ffast-math -lm

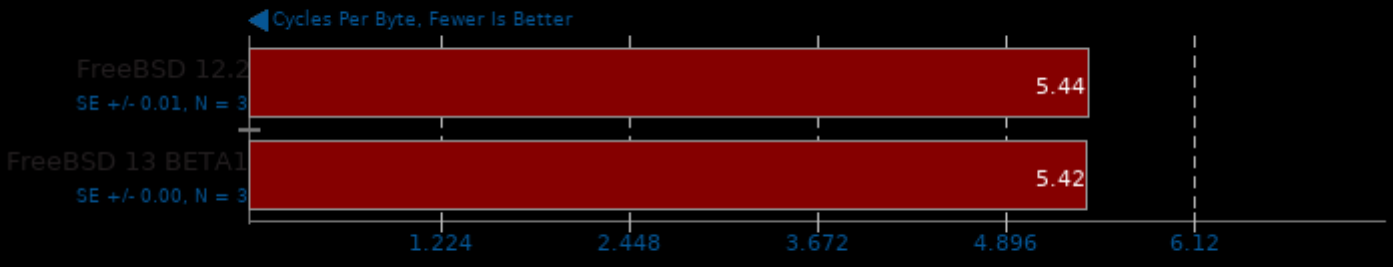
Timed HMMer Search 3.3.1

Pfam Database Search



1. (CC) clang options: -O3 -pthread -lhmmer -leasel -lm

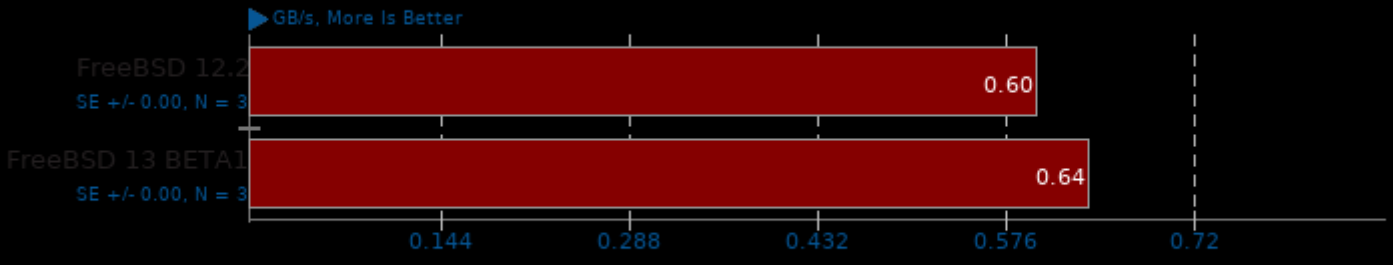
BLAKE2 20170307



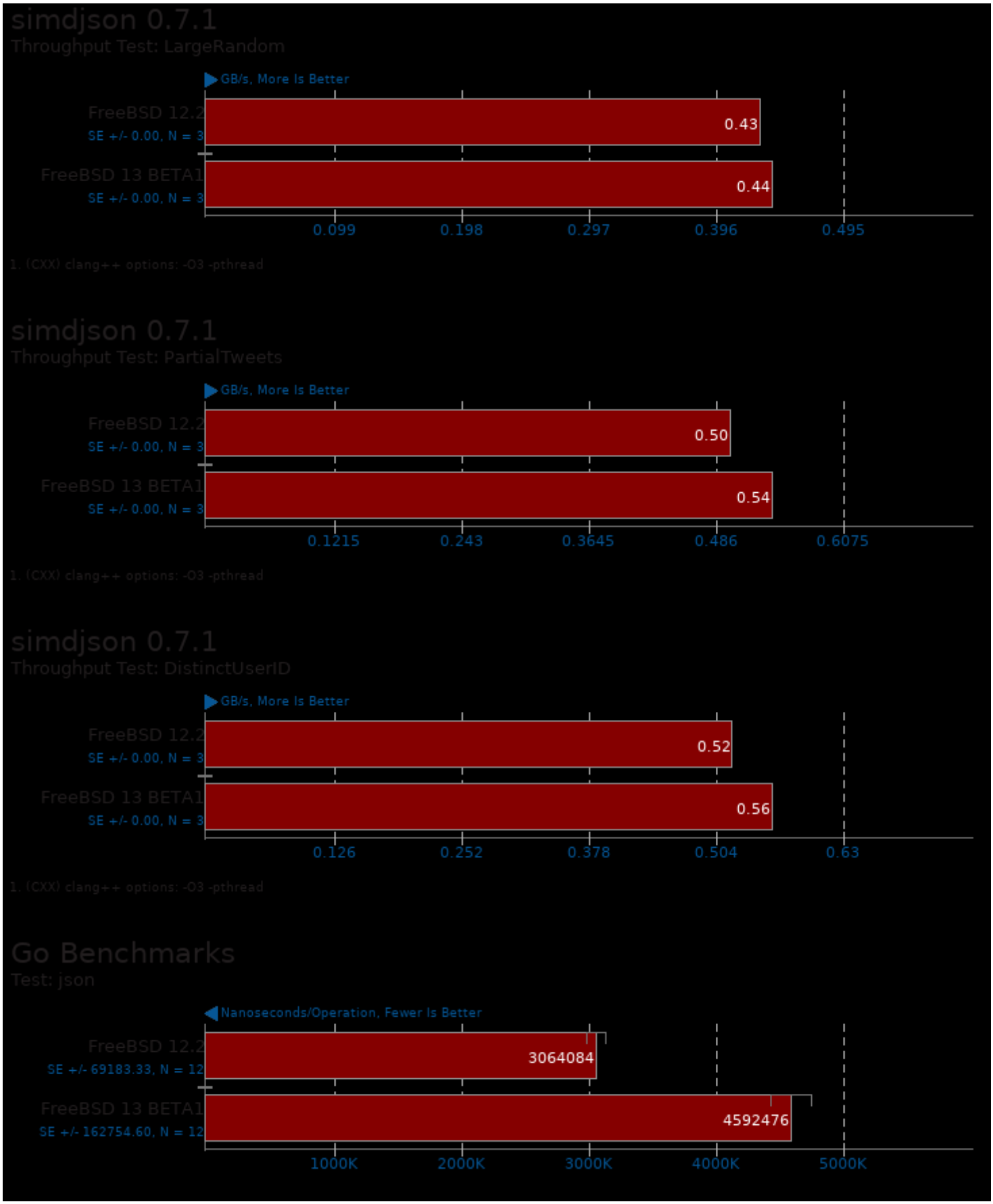
1. (CC) clang options: -O3 -march=native -lcrypto -lz

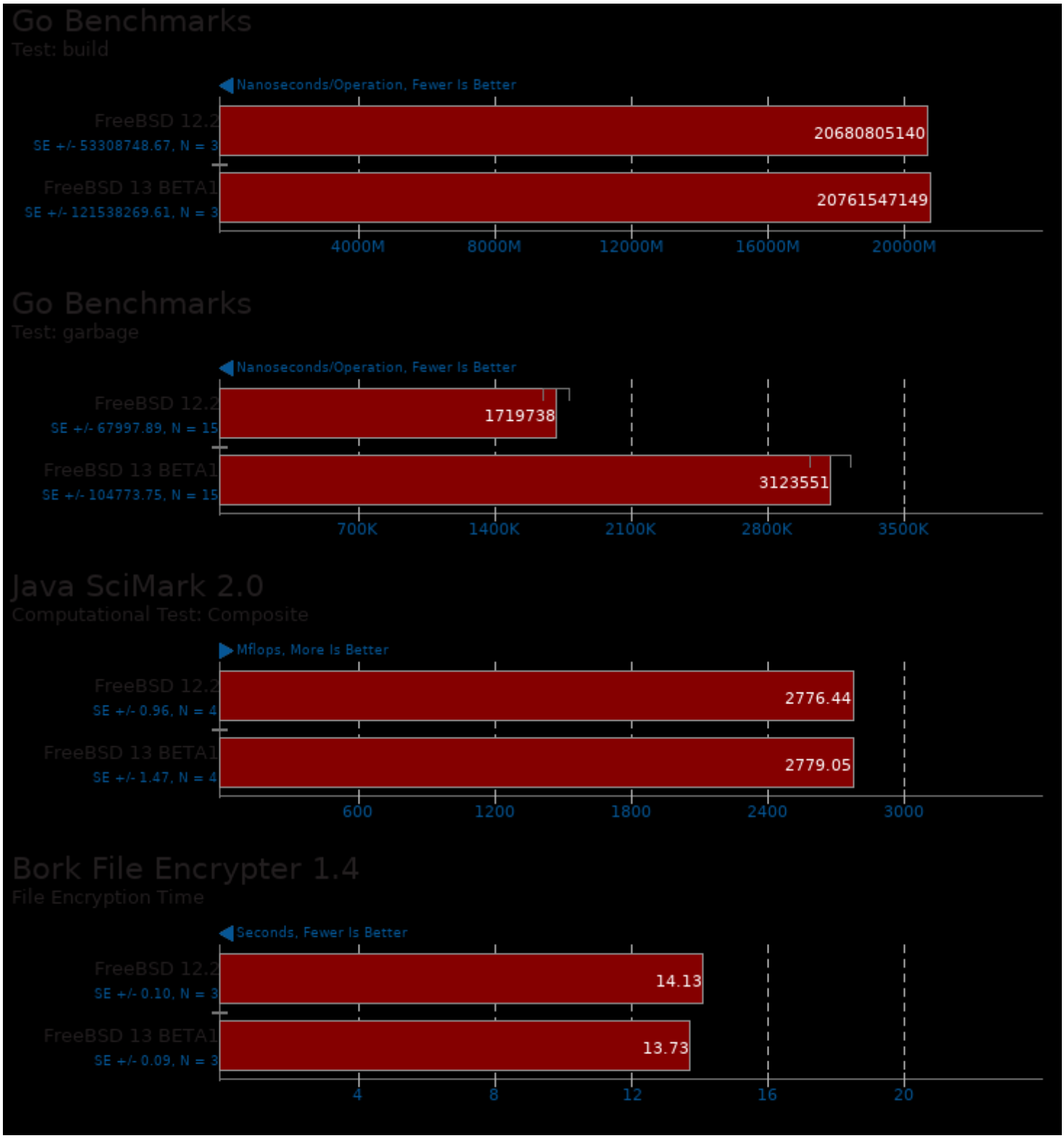
simdjson 0.7.1

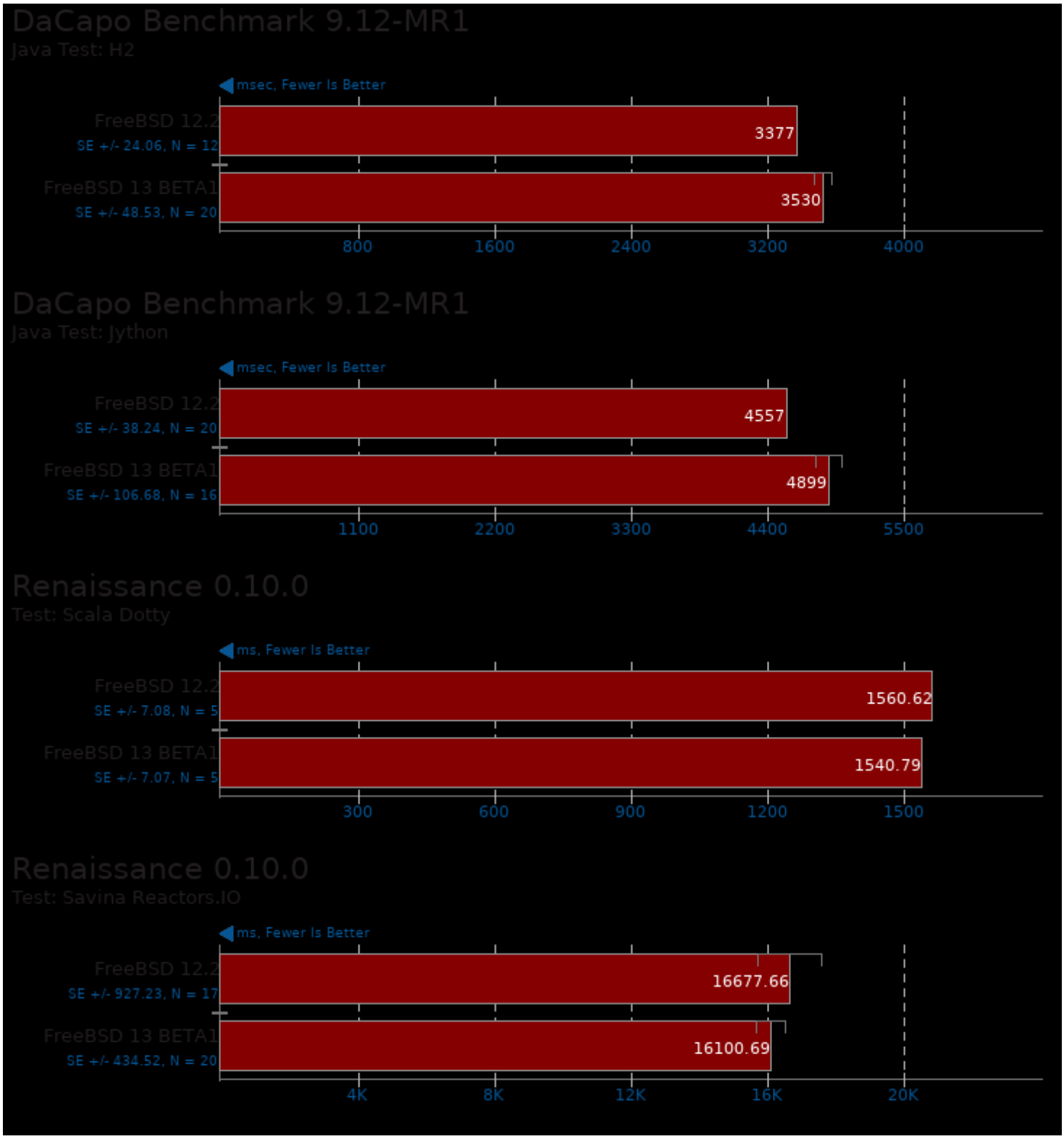
Throughput Test: Kostya



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


simdjson 0.7.1
Throughput Test: LargeRandom
GB/s, More Is Better
FreeBSD 12.2
SE +/- 0.00, N = 3
0.43
FreeBSD 13 BETA1
SE +/- 0.00, N = 3
0.44
0.099
0.198
0.297
0.396
0.495
1. (CXX) clang++ options: -O3 -pthread
simdjson 0.7.1
Throughput Test: PartialTweets
GB/s, More Is Better
FreeBSD 12.2
SE +/- 0.00, N = 3
0.50
FreeBSD 13 BETA1
SE +/- 0.00, N = 3
0.54
0.1215
0.243
0.3645
0.486
0.6075
1. (CXX) clang++ options: -O3 -pthread
simdjson 0.7.1
Throughput Test: DistinctUserID
GB/s, More Is Better
FreeBSD 12.2
SE +/- 0.00, N = 3
0.52
FreeBSD 13 BETA1
SE +/- 0.00, N = 3
0.56
0.126
0.252
0.378
0.504
0.63
1. (CXX) clang++ options: -O3 -pthread
Go Benchmarks
Test: json
Nanoseconds/Operation, Fewer Is Better
FreeBSD 12.2
SE +/- 69183.33, N = 12
3064084
FreeBSD 13 BETA1
SE +/- 162754.60, N = 12
4592476
1000K
2000K
3000K
4000K
5000K


Go Benchmarks
Test: build
Nanoseconds/Operation, Fewer Is Better
FreeBSD 12.2
SE +/- 53308748.67, N = 3
20680805140
FreeBSD 13 BETA1
SE +/- 121538269.61, N = 3
20761547149
4000M
8000M
12000M
16000M
20000M
Go Benchmarks
Test: garbage
Nanoseconds/Operation, Fewer Is Better
FreeBSD 12.2
SE +/- 67997.89, N = 15
1719738
FreeBSD 13 BETA1
SE +/- 104773.75, N = 15
3123551
700K
1400K
2100K
2800K
3500K
Java SciMark 2.0
Computational Test: Composite
Mflops, More Is Better
FreeBSD 12.2
SE +/- 0.96, N = 4
2776.44
FreeBSD 13 BETA1
SE +/- 1.47, N = 4
2779.05
600
1200
1800
2400
3000
Bork File Encrypter 1.4
File Encryption Time
Seconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.10, N = 3
14.13
FreeBSD 13 BETA1
SE +/- 0.09, N = 3
13.73
4
8
12
16
20

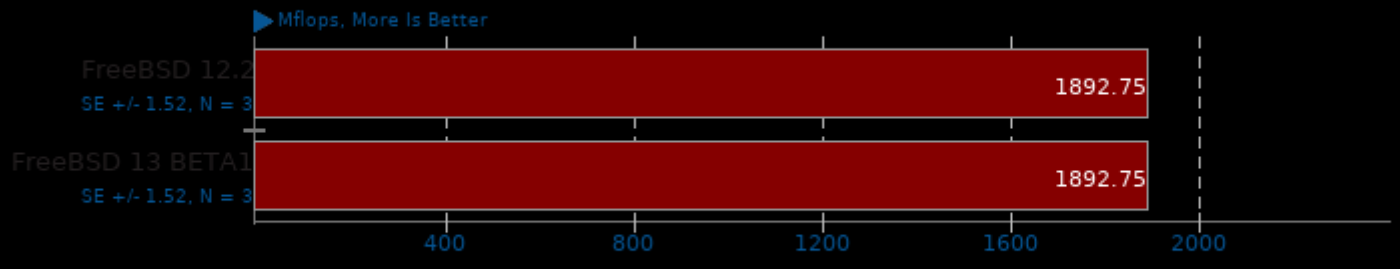

DaCapo Benchmark 9.12-MR1
Java Test: H2
msec, Fewer Is Better
FreeBSD 12.2
SE +/- 24.06, N = 12
3377
FreeBSD 13 BETA1
SE +/- 48.53, N = 20
3530
800
1600
2400
3200
4000
DaCapo Benchmark 9.12-MR1
Java Test: Jython
msec, Fewer Is Better
FreeBSD 12.2
SE +/- 38.24, N = 20
4557
FreeBSD 13 BETA1
SE +/- 106.68, N = 16
4899
1100
2200
3300
4400
5500
Renaissance 0.10.0
Test: Scala Dotty
ms, Fewer Is Better
FreeBSD 12.2
SE +/- 7.08, N = 5
1560.62
FreeBSD 13 BETA1
SE +/- 7.07, N = 5
1540.79
300
600
900
1200
1500
Renaissance 0.10.0
Test: Savina Reactors.IO
ms, Fewer Is Better
FreeBSD 12.2
SE +/- 927.23, N = 17
16677.66
FreeBSD 13 BETA1
SE +/- 434.52, N = 20
16100.69
4K
8K
12K
16K
20K


Renaissance 0.10.0
Test: Twitter HTTP Requests
ms, Fewer Is Better
FreeBSD 12.2
SE +/- 7.13, N = 5
3436.19
FreeBSD 13 BETA1
SE +/- 8.59, N = 5
3463.16
700
1400
2100
2800
3500
Fhourstones 3.1
Complex Connect-4 Solving
Kpos / sec, More Is Better
FreeBSD 12.2
SE +/- 3.36, N = 3
13091.1
FreeBSD 13 BETA1
SE +/- 7.71, N = 3
13163.7
3K
6K
9K
12K
15K
1. (CC) clang options: -O3
CacheBench
Test: Read
MB/s, More Is Better
FreeBSD 12.2
SE +/- 3.37, N = 3
MIN: 9883.25 / MAX: 9903.94
9893.16
FreeBSD 13 BETA1
SE +/- 6.51, N = 3
MIN: 9891.13 / MAX: 9916.96
9907.02
2K
4K
6K
8K
10K
1. (CC) clang options: -lrt
LuaJIT 2.1-git
Test: Composite
Mflops, More Is Better
FreeBSD 12.2
SE +/- 0.66, N = 3
1477.57
FreeBSD 13 BETA1
SE +/- 1.13, N = 3
1476.86
300
600
900
1200
1500
1. (CC) clang options: -lm -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector


LuaJIT 2.1-git
Test: Monte Carlo
Mflops, More Is Better
FreeBSD 12.2
SE +/- 3.53, N = 3
472.89
FreeBSD 13 BETA1
SE +/- 0.95, N = 3
475.57
100
200
300
400
500
1. (CC) clang options: -lm -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector
LuaJIT 2.1-git
Test: Fast Fourier Transform
Mflops, More Is Better
FreeBSD 12.2
SE +/- 0.11, N = 3
138.17
FreeBSD 13 BETA1
SE +/- 0.11, N = 3
138.05
30
60
90
120
150
1. (CC) clang options: -lm -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector
LuaJIT 2.1-git
Test: Sparse Matrix Multiply
Mflops, More Is Better
FreeBSD 12.2
SE +/- 0.96, N = 3
1226.88
FreeBSD 13 BETA1
SE +/- 0.95, N = 3
1224.02
300
600
900
1200
1500
1. (CC) clang options: -lm -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector
LuaJIT 2.1-git
Test: Dense LU Matrix Factorization
Mflops, More Is Better
FreeBSD 12.2
SE +/- 3.26, N = 3
3657.15
FreeBSD 13 BETA1
SE +/- 3.26, N = 3
3653.88
800
1600
2400
3200
4000
1. (CC) clang options: -lm -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

LuaJIT 2.1-git

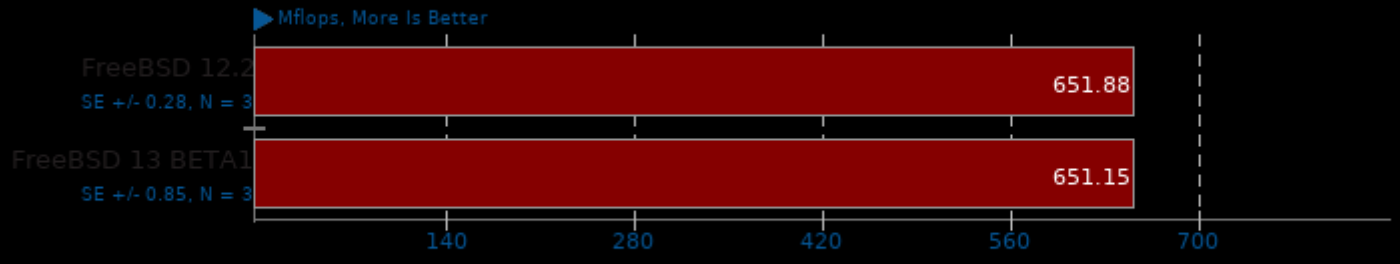
Test: Jacobi Successive Over-Relaxation



1. (CC) clang options: -lm -O2 -fomit-frame-pointer -U_FORTIFY_SOURCE -fno-stack-protector

SciMark 2.0

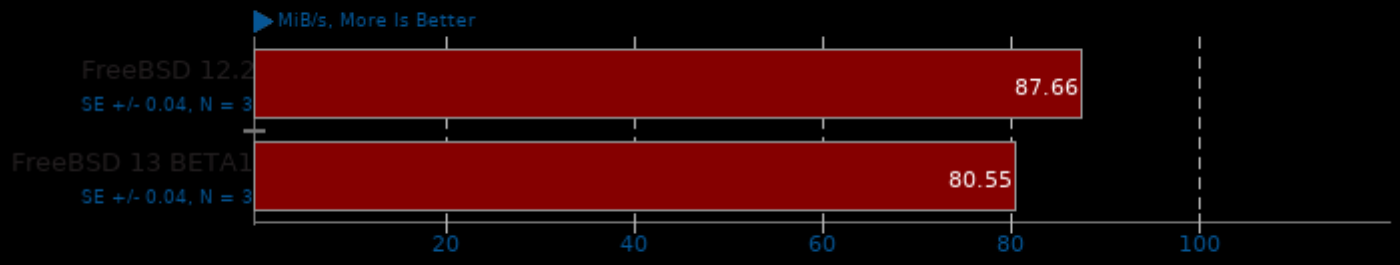
Computational Test: Composite



1. (CC) clang options: -lm

Botan 2.13.0

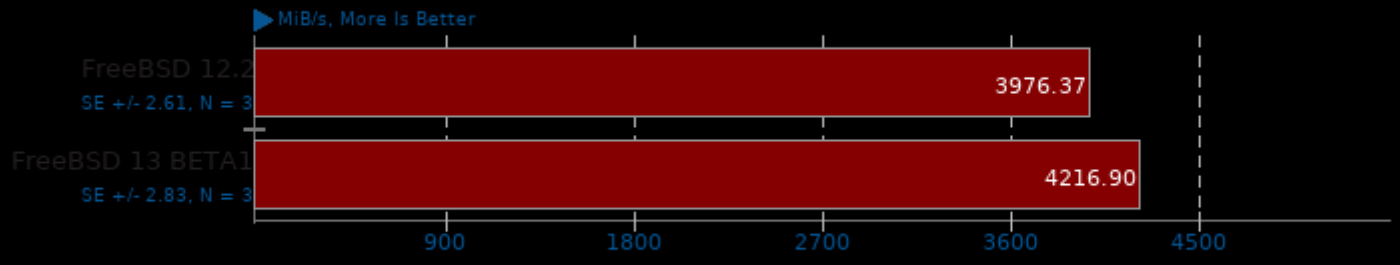
Test: KASUMI



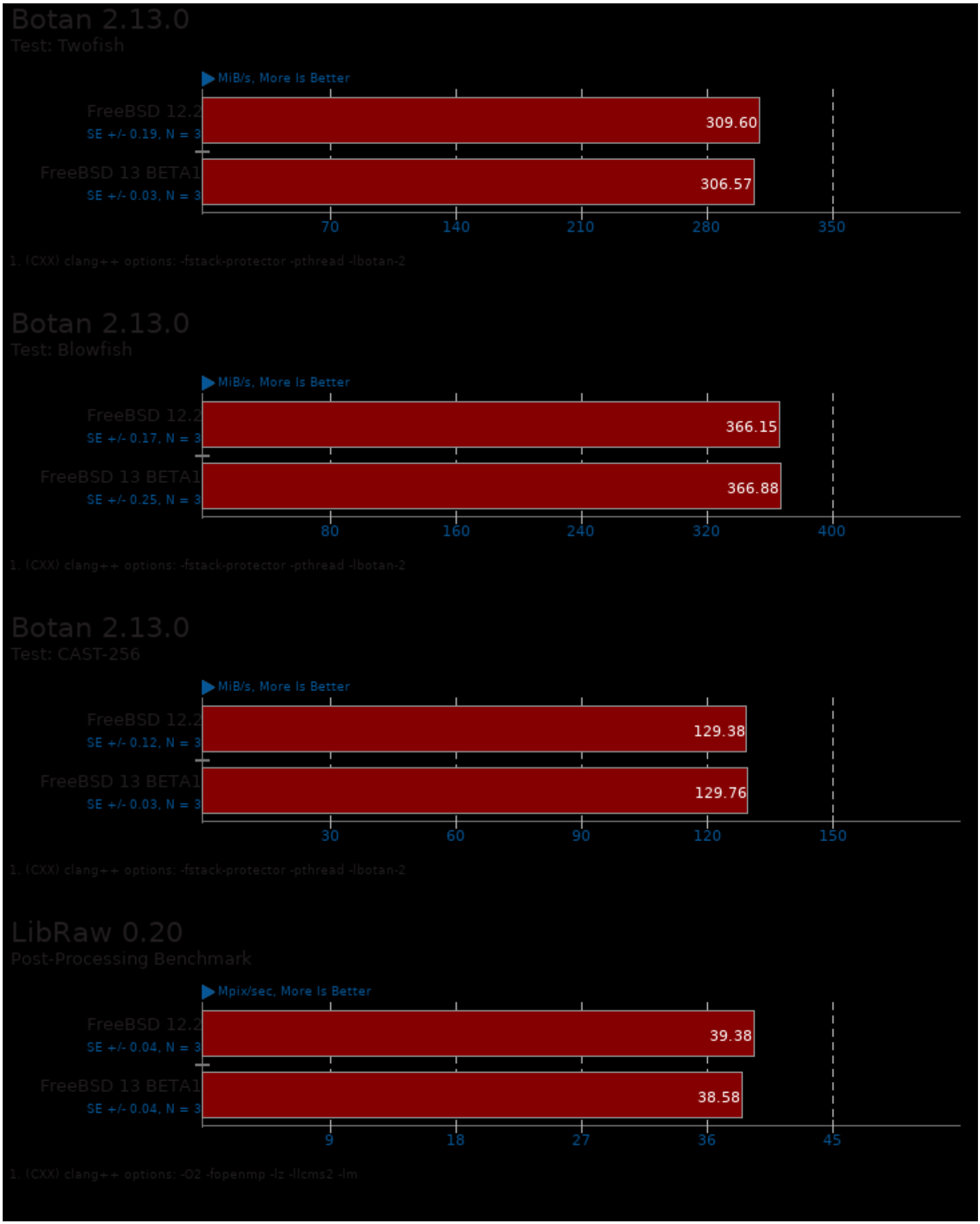
1. (CXX) clang++ options: -fstack-protector -pthread -lbotan-2

Botan 2.13.0

Test: AES-256

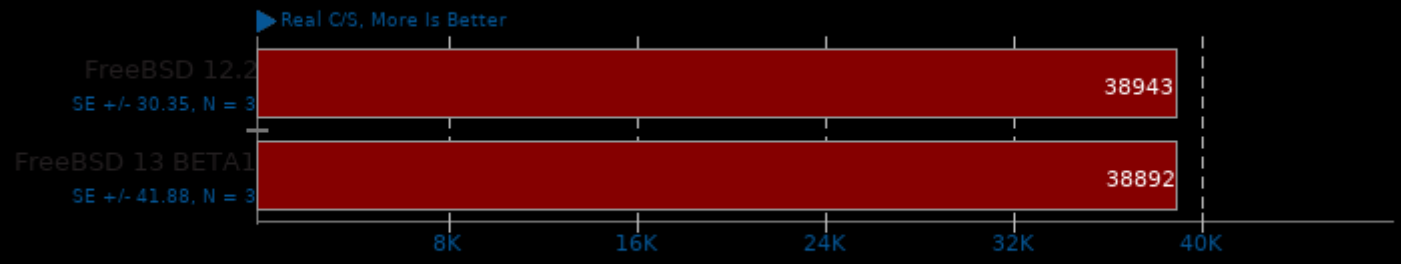


1. (CXX) clang++ options: -fstack-protector -pthread -lbotan-2


Botan 2.13.0
Test: Twofish
MiB/s, More Is Better
FreeBSD 12.2
SE +/- 0.19, N = 3
309.60
FreeBSD 13 BETA1
SE +/- 0.03, N = 3
306.57
70
140
210
280
350
1. (CXX) clang++ options: -fstack-protector -pthread -lbotan-2
Botan 2.13.0
Test: Blowfish
MiB/s, More Is Better
FreeBSD 12.2
SE +/- 0.17, N = 3
366.15
FreeBSD 13 BETA1
SE +/- 0.25, N = 3
366.88
80
160
240
320
400
1. (CXX) clang++ options: -fstack-protector -pthread -lbotan-2
Botan 2.13.0
Test: CAST-256
MiB/s, More Is Better
FreeBSD 12.2
SE +/- 0.12, N = 3
129.38
FreeBSD 13 BETA1
SE +/- 0.03, N = 3
129.76
30
60
90
120
150
1. (CXX) clang++ options: -fstack-protector -pthread -lbotan-2
LibRaw 0.20
Post-Processing Benchmark
Mpix/sec, More Is Better
FreeBSD 12.2
SE +/- 0.04, N = 3
39.38
FreeBSD 13 BETA1
SE +/- 0.04, N = 3
38.58
9
18
27
36
45
1. (CXX) clang++ options: -O2 -fopenmp -lz -llcms2 -lm

John The Ripper 1.9.0-jumbo-1

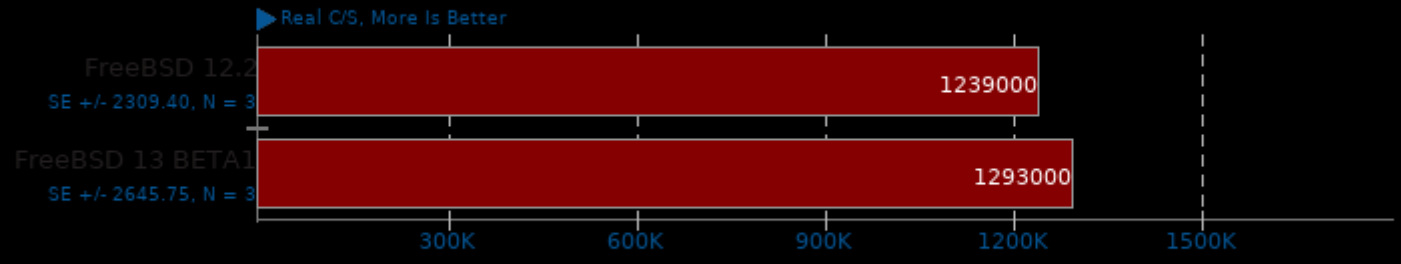
Test: Blowfish



1. (CC) clang options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

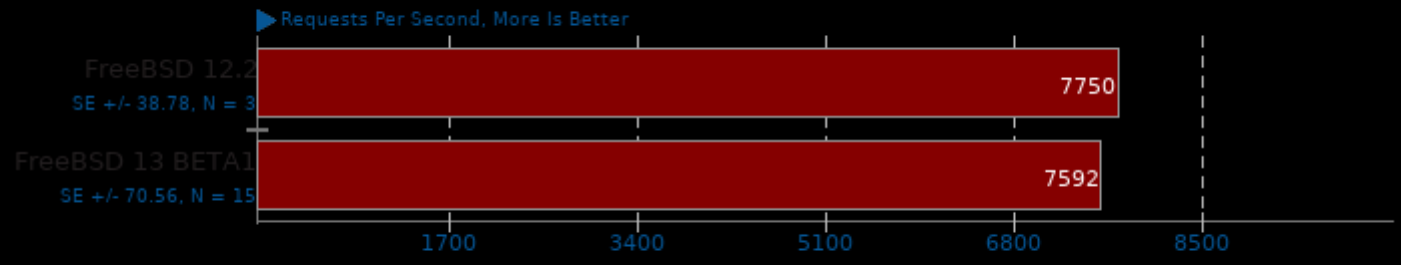
John The Ripper 1.9.0-jumbo-1

Test: MD5



1. (CC) clang options: -m64 -lssl -lcrypto -fopenmp -lgmp -pthread -lm -lz -ldl -lcrypt -lbz2

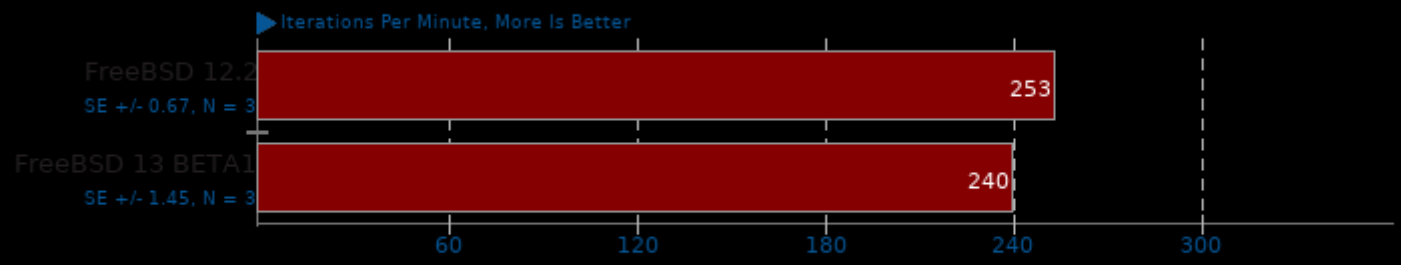
Node.js Express HTTP Load Test



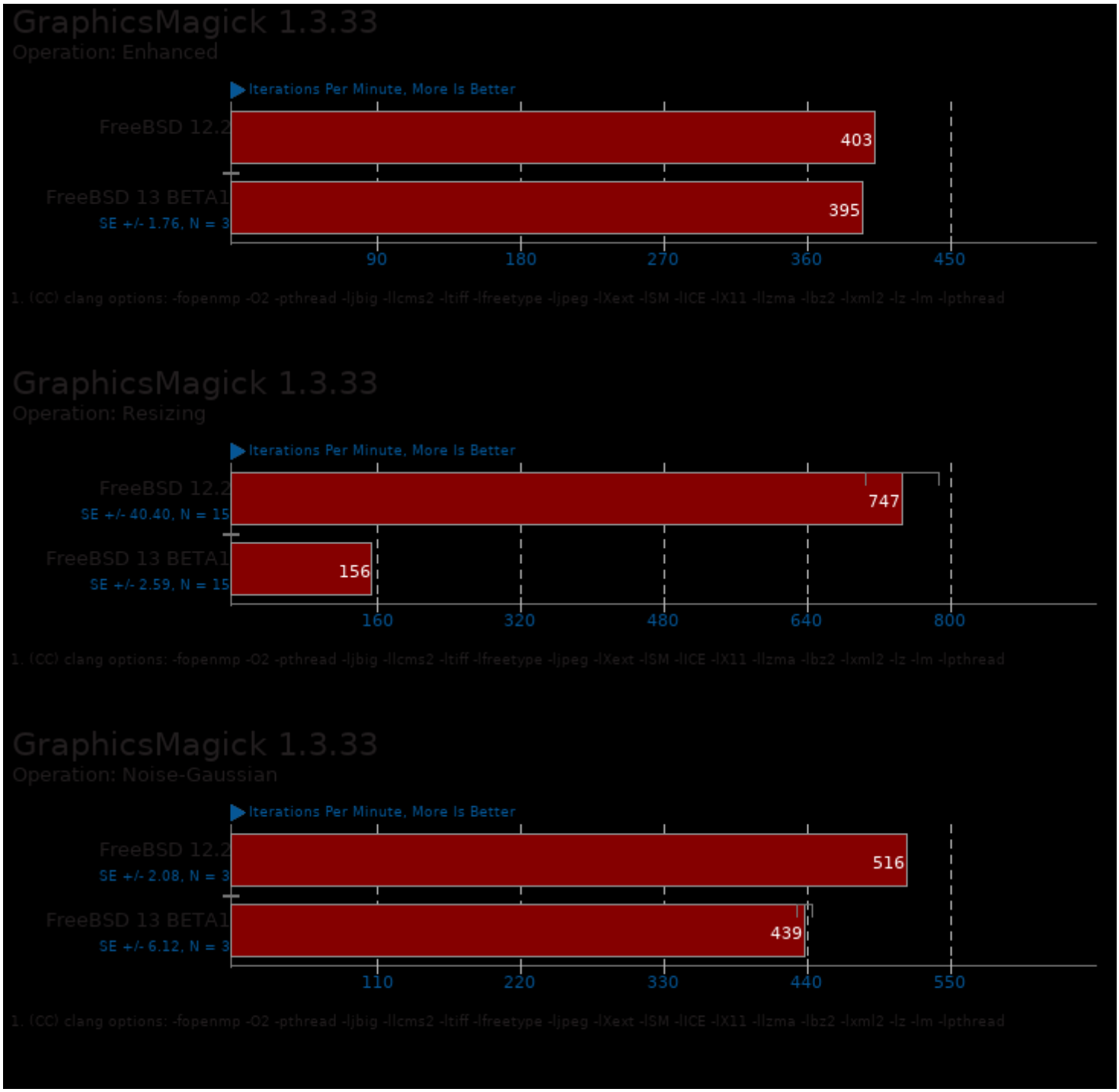
1. Nodejs

GraphicsMagick 1.3.33

Operation: Sharpen

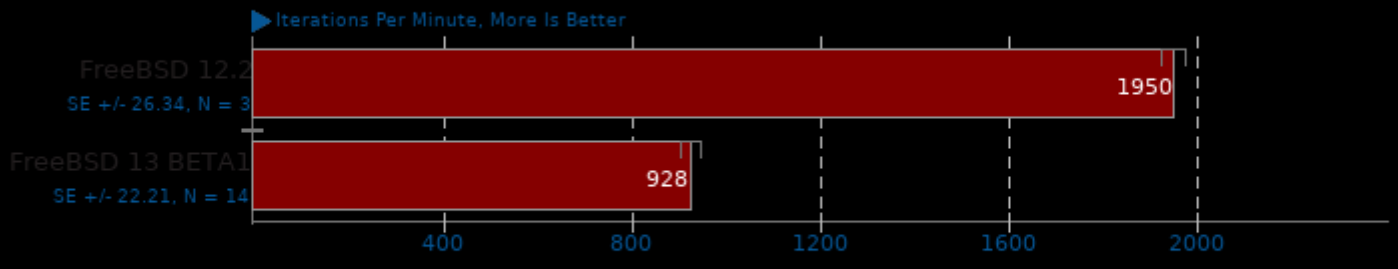


1. (CC) clang options: -fopenmp -O2 -pthread -ljbig -llcms2 -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread


GraphicsMagick 1.3.33
Operation: Enhanced
Iterations Per Minute, More Is Better
FreeBSD 12.2
403
FreeBSD 13 BETA1
395
SE +/- 1.76, N = 3
90
180
270
360
450
1. (CC) clang options: -fopenmp -O2 -pthread -ljbig -llcms2 -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Resizing
Iterations Per Minute, More Is Better
FreeBSD 12.2
747
SE +/- 40.40, N = 15
FreeBSD 13 BETA1
156
SE +/- 2.59, N = 15
160
320
480
640
800
1. (CC) clang options: -fopenmp -O2 -pthread -ljbig -llcms2 -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread
GraphicsMagick 1.3.33
Operation: Noise-Gaussian
Iterations Per Minute, More Is Better
FreeBSD 12.2
516
SE +/- 2.08, N = 3
FreeBSD 13 BETA1
439
SE +/- 6.12, N = 3
110
220
330
440
550
1. (CC) clang options: -fopenmp -O2 -pthread -ljbig -llcms2 -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

GraphicsMagick 1.3.33

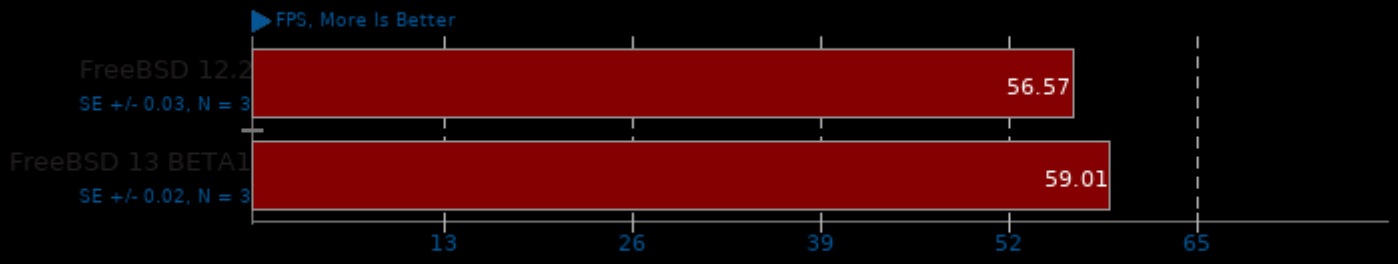
Operation: HWB Color Space



1. (CC) clang options: -fopenmp -O2 -pthread -ljbig -llcms2 -ltiff -lfreetype -ljpeg -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz -lm -lpthread

TTSIOD 3D Renderer 2.3b

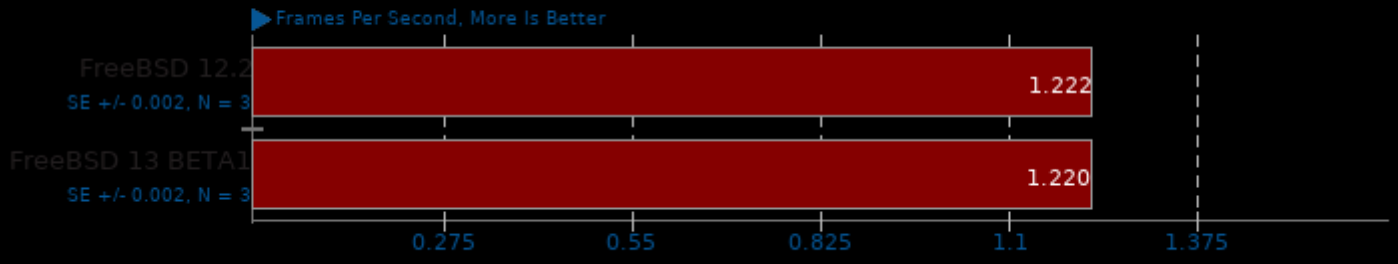
Phong Rendering With Soft-Shadow Mapping



1. (CXX) clang++ options: -O3 -fomit-frame-pointer -ffast-math -mtune=native -flto -msse -mrecip -mfpmath=sse -msse2 -mssse3 -lSDL -pthread -fopen

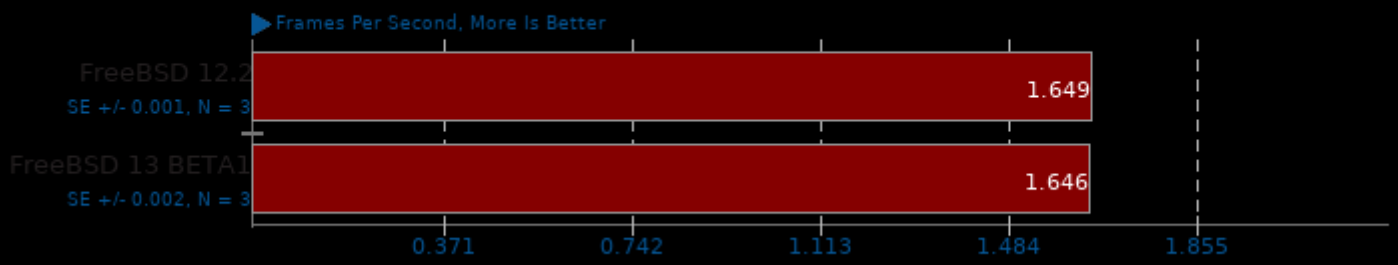
rav1e 0.4

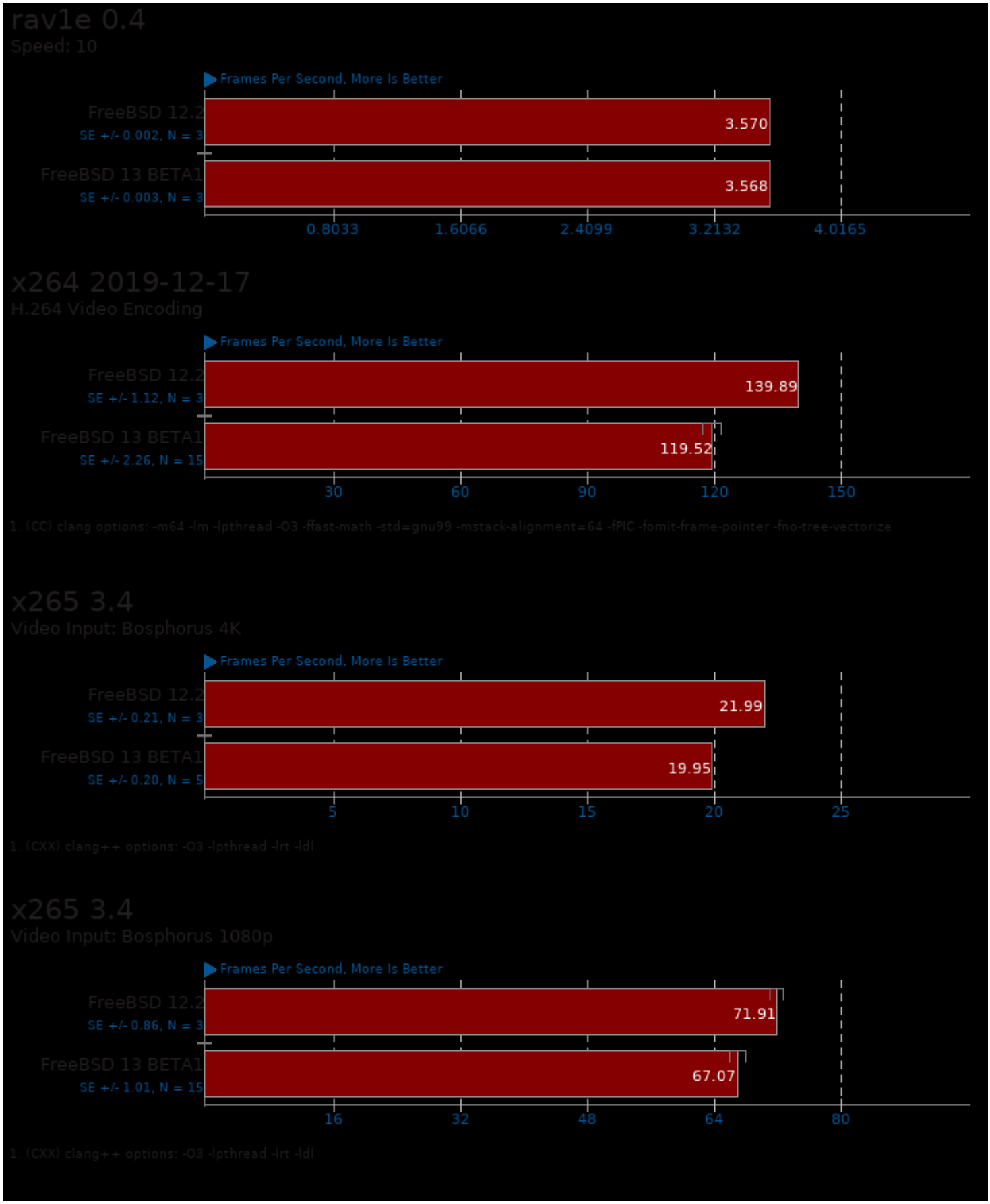
Speed: 5



rav1e 0.4

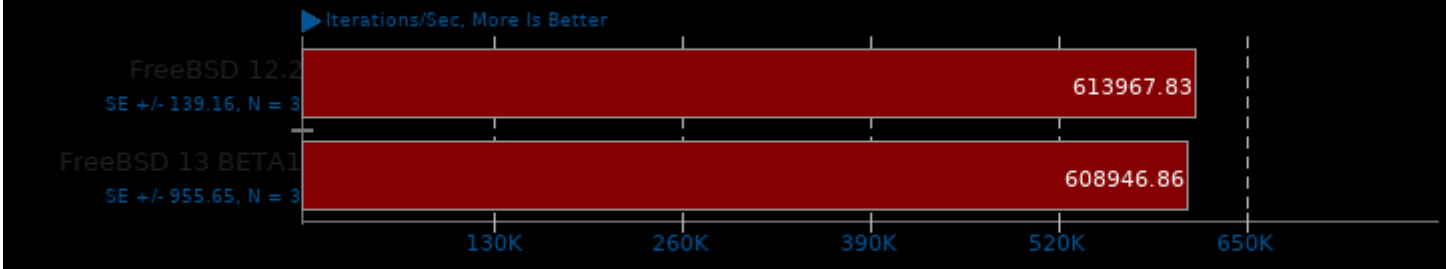
Speed: 6




rav1e 0.4
Speed: 10
Frames Per Second, More Is Better
FreeBSD 12.2
SE +/- 0.002, N = 3
3.570
FreeBSD 13 BETA1
SE +/- 0.003, N = 3
3.568
0.8033
1.6066
2.4099
3.2132
4.0165
x264 2019-12-17
H.264 Video Encoding
Frames Per Second, More Is Better
FreeBSD 12.2
SE +/- 1.12, N = 3
139.89
FreeBSD 13 BETA1
SE +/- 2.26, N = 15
119.52
30
60
90
120
150
1. (CC) clang options: -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -mstack-alignment=64 -fPIC -fomit-frame-pointer -fno-tree-vectorize
x265 3.4
Video Input: Bosphorus 4K
Frames Per Second, More Is Better
FreeBSD 12.2
SE +/- 0.21, N = 3
21.99
FreeBSD 13 BETA1
SE +/- 0.20, N = 5
19.95
5
10
15
20
25
1. (CXX) clang++ options: -O3 -lpthread -lrt -ldl
x265 3.4
Video Input: Bosphorus 1080p
Frames Per Second, More Is Better
FreeBSD 12.2
SE +/- 0.86, N = 3
71.91
FreeBSD 13 BETA1
SE +/- 1.01, N = 15
67.07
16
32
48
64
80
1. (CXX) clang++ options: -O3 -lpthread -lrt -ldl

Coremark 1.0

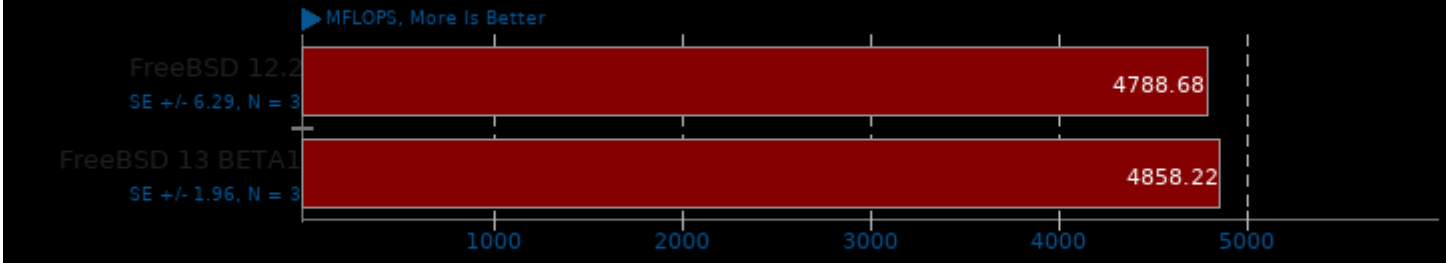
CoreMark Size 666 - Iterations Per Second



1. (CC) clang options: -O2 -lrt" -lrt

Himeno Benchmark 3.0

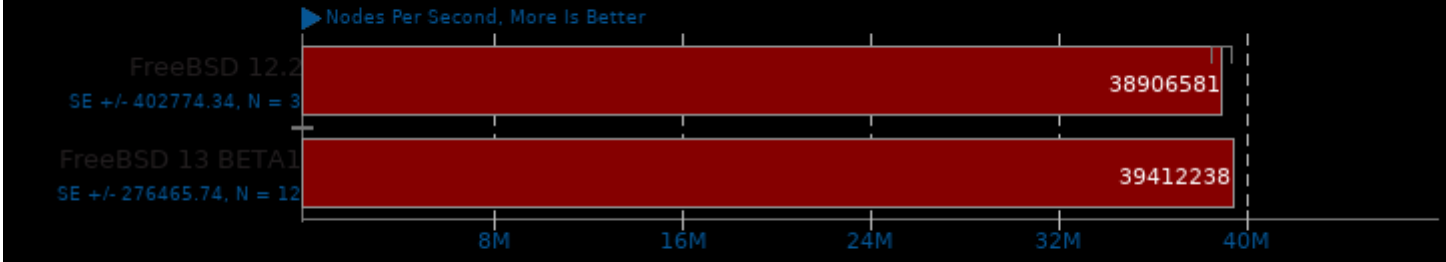
Poisson Pressure Solver



1. (CC) clang options: -O3

Stockfish 12

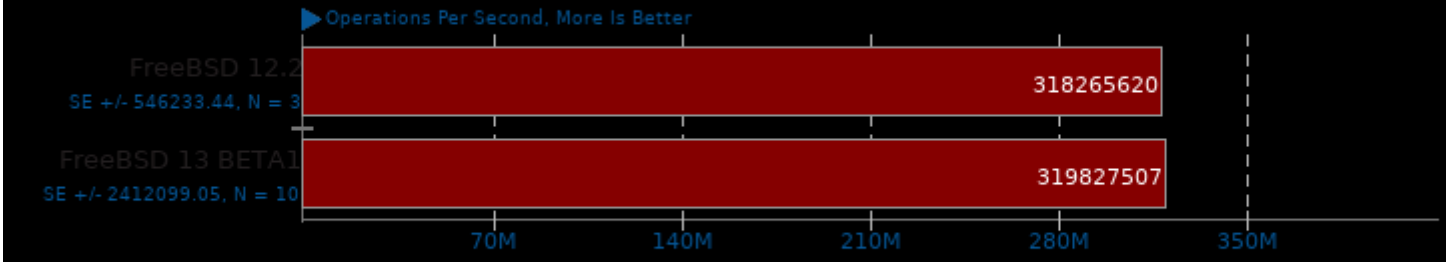
Total Time



1. (CXX) clang++ options: -m64 -lpthread -fno-exceptions -std=c++17 -pedantic -O3 -msse -msse3 -mpopcnt -msse4.1 -mssse3 -msse2 -flto=thin

Swet 1.5.16

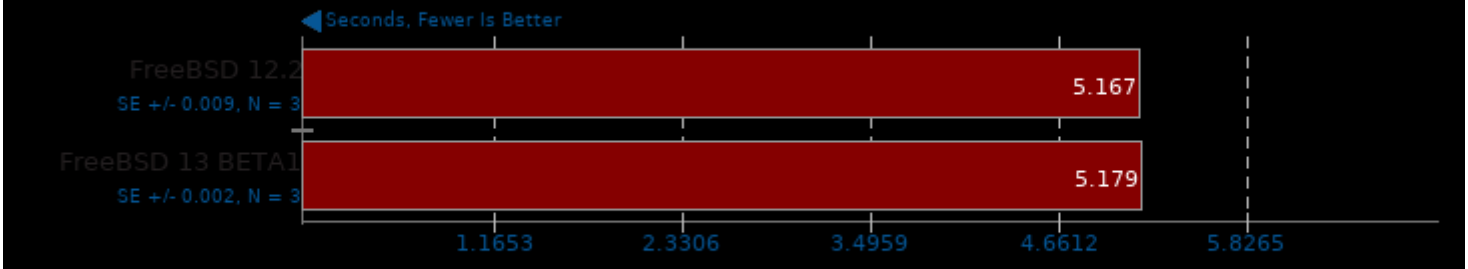
Average



1. (CC) clang options: -lm -lpthread -lcurses -lrt

libavif avifenc 0.7.3

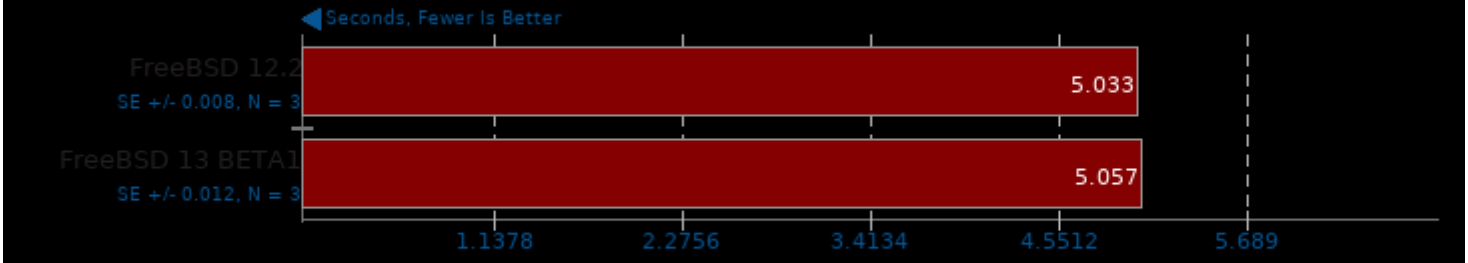
Encoder Speed: 8



1. (CXX) clang++ options: -O3 -fPIC

libavif avifenc 0.7.3

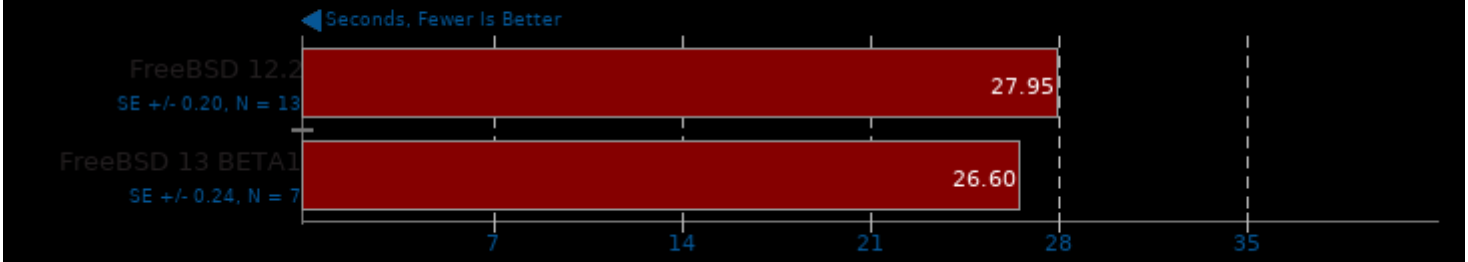
Encoder Speed: 10



1. (CXX) clang++ options: -O3 -fPIC

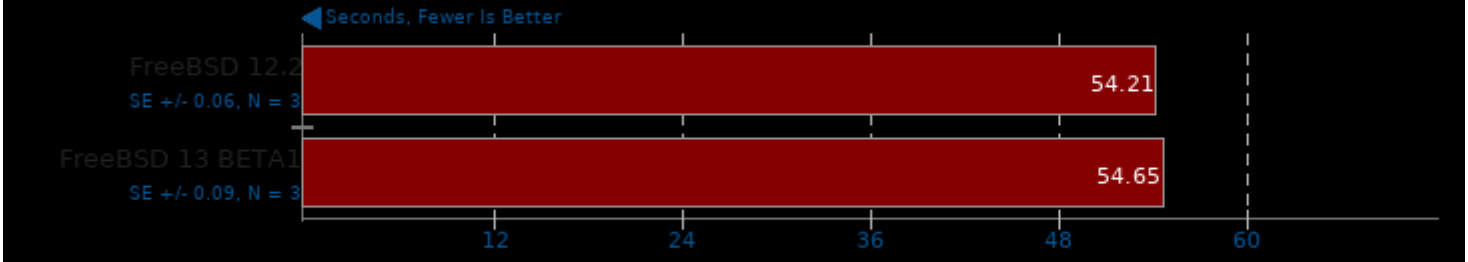
Timed PHP Compilation 7.4.2

Time To Compile



C-Ray 1.1

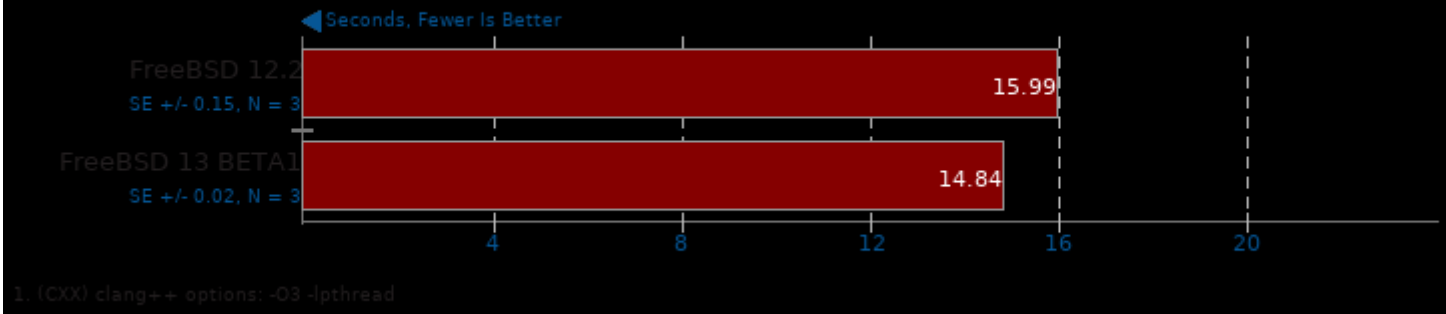
Total Time - 4K, 16 Rays Per Pixel



1. (CC) clang options: -lm -lpthread -O3

Primesieve 7.4

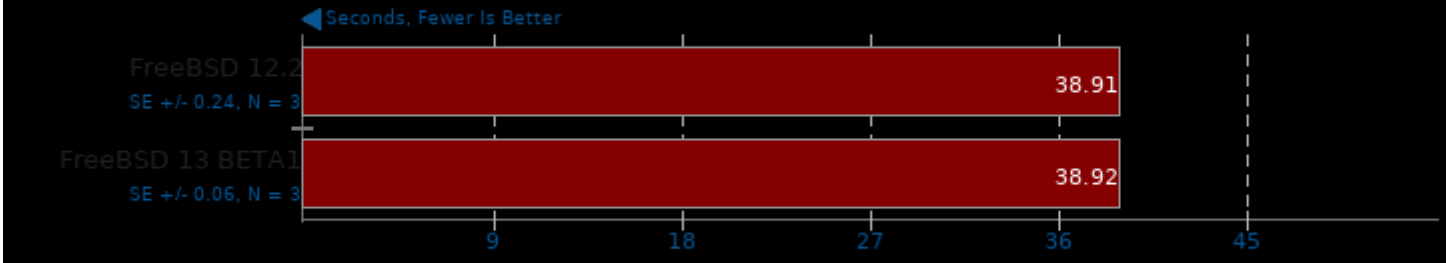
1e12 Prime Number Generation



1. (CXX) clang++ options: -O3 -lpthread

Rust Mandelbrot

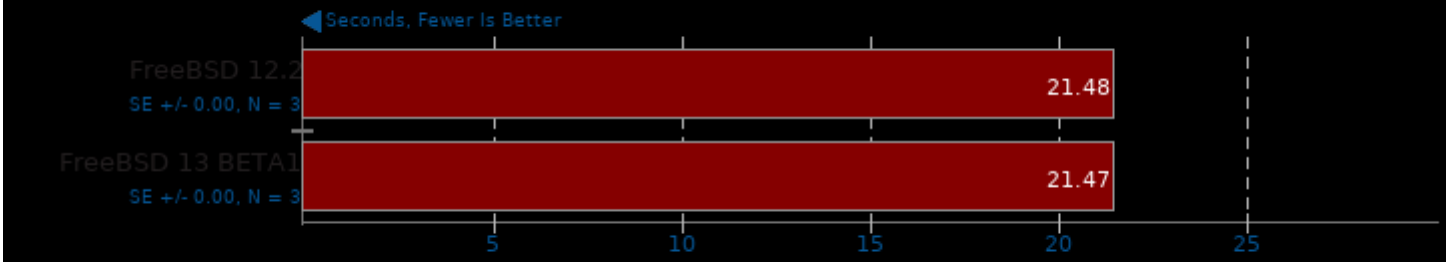
Time To Complete Serial/Parallel Mandelbrot



1. (CC) clang options: -m64 -pie -nodefaultlibs -lrt -lutil -lexecinfo -lpthread -lgcc_s -lc -lm

Rust Prime Benchmark

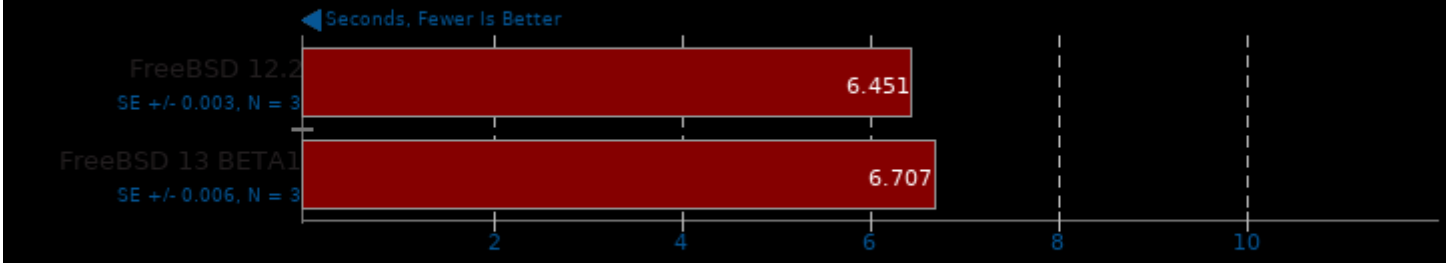
Prime Number Test To 200,000,000



1. (CC) clang options: -m64 -pie -nodefaultlibs -lexecinfo -lpthread -lgcc_s -lc -lm -lrt -lutil

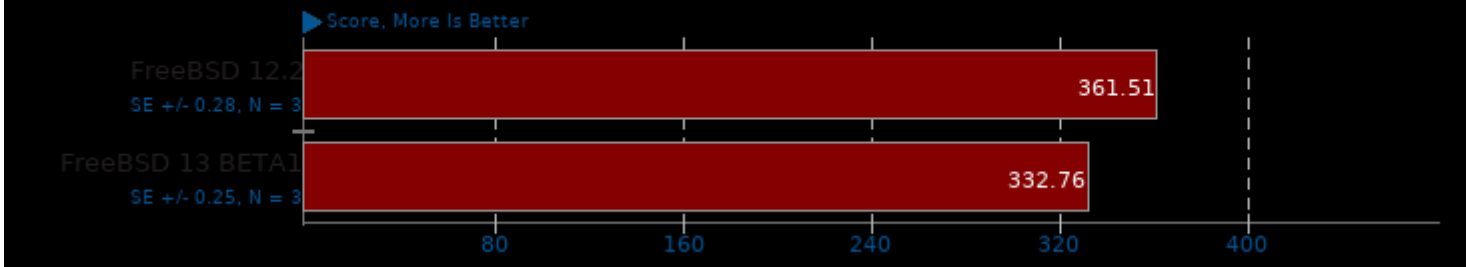
Smallpt 1.0

Global Illumination Renderer; 128 Samples



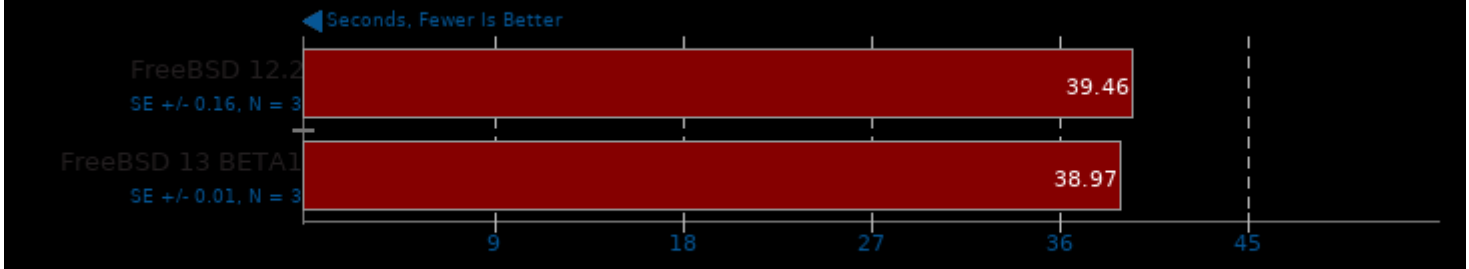
1. (CXX) clang++ options: -fopenmp -O3

Numpy Benchmark



AOBench

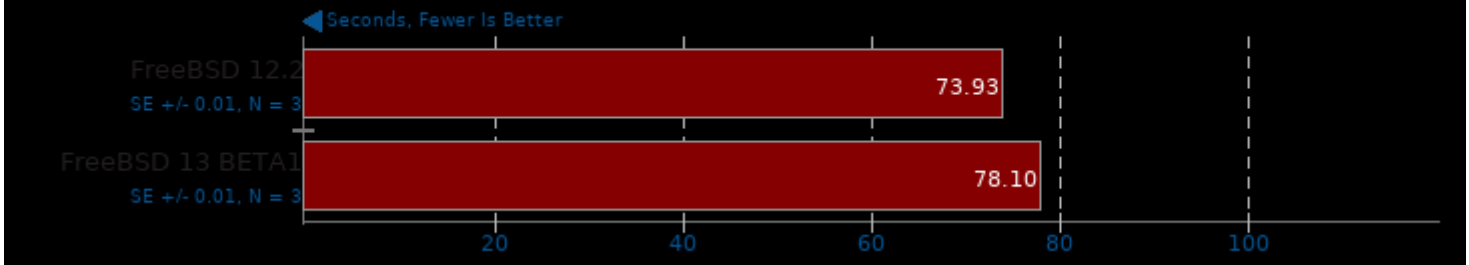
Size: 2048 x 2048 - Total Time



1. (CC) clang options: -lm -O3

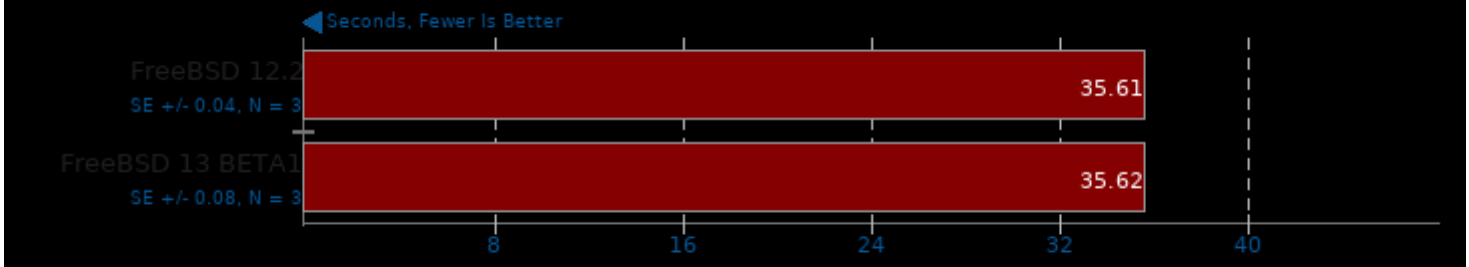
Timed Eigen Compilation 3.3.9

Time To Compile



dcraw

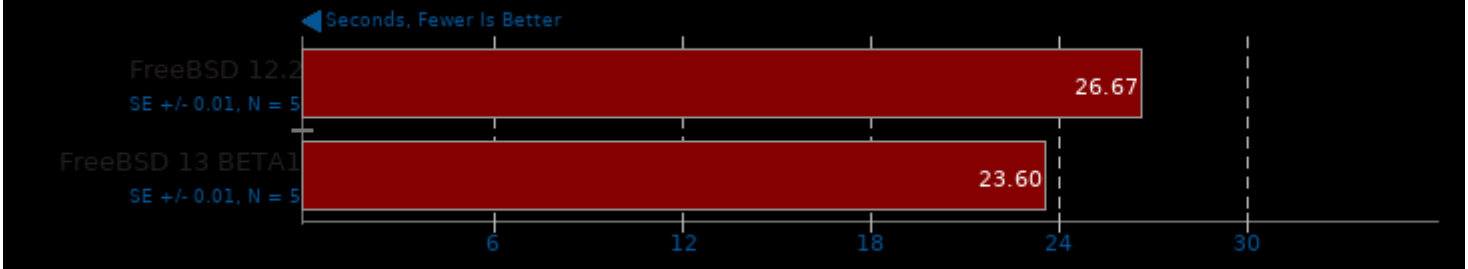
RAW To PPM Image Conversion



1. (CC) clang options: -lm

Monkey Audio Encoding 3.99.6

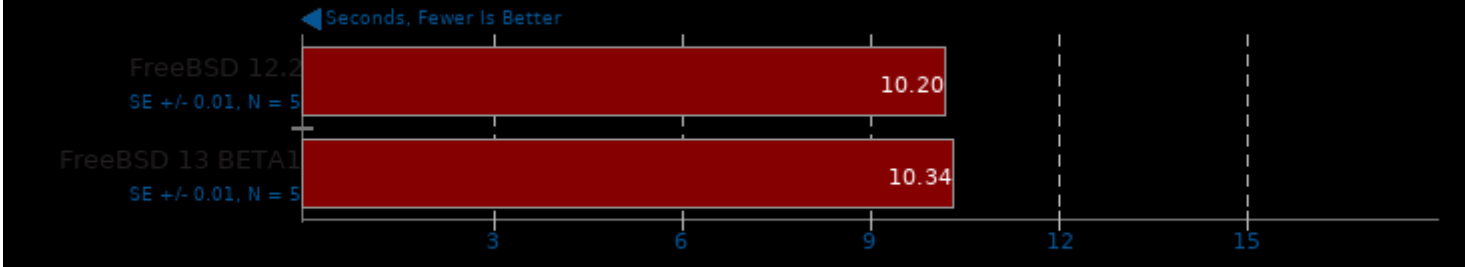
WAV To APE



1. (CXX) clang++ options: -O3 -pedantic -lrt

FLAC Audio Encoding 1.3.2

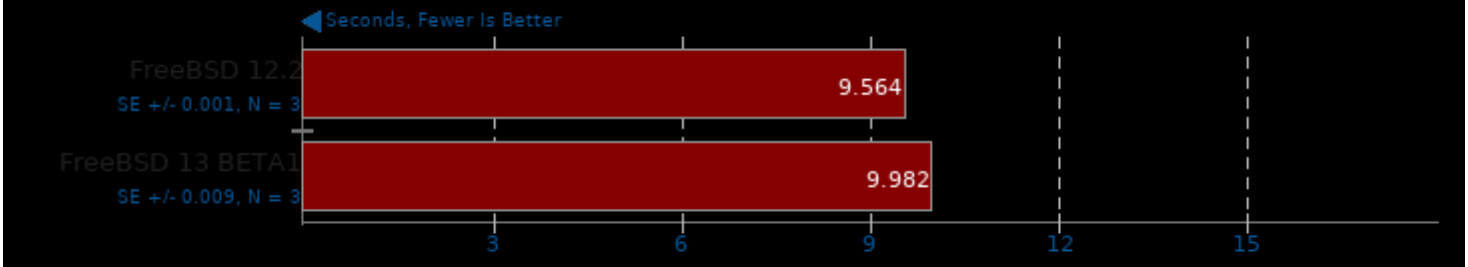
WAV To FLAC



1. (CXX) clang++ options: -O2 -lm

LAME MP3 Encoding 3.100

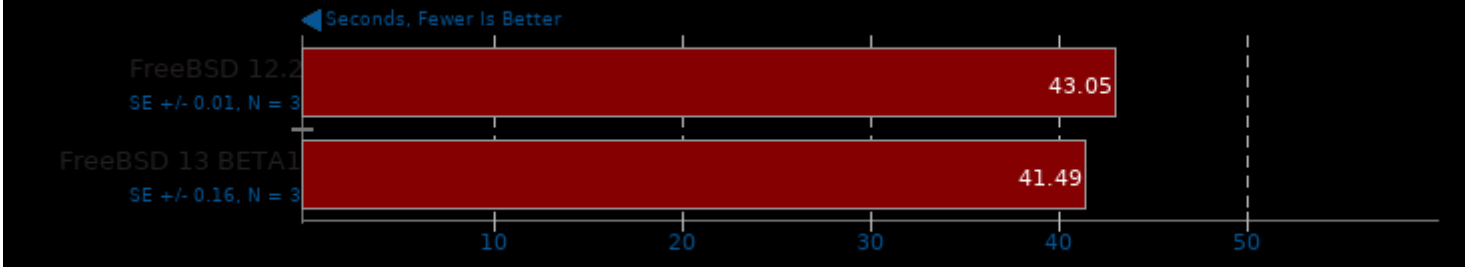
WAV To MP3



1. (CC) clang options: -O3 -pipe -lncurses -lm

m-queens 1.2

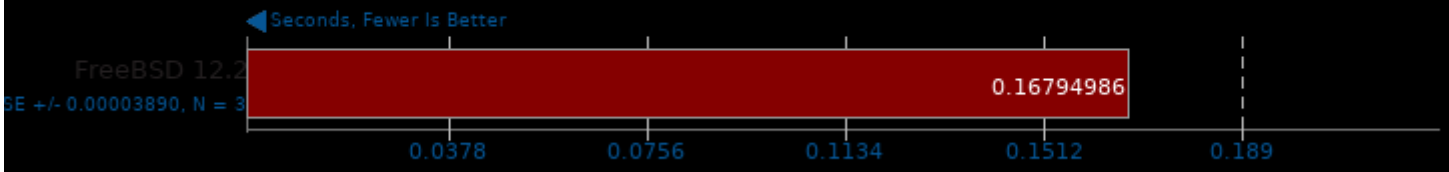
Time To Solve



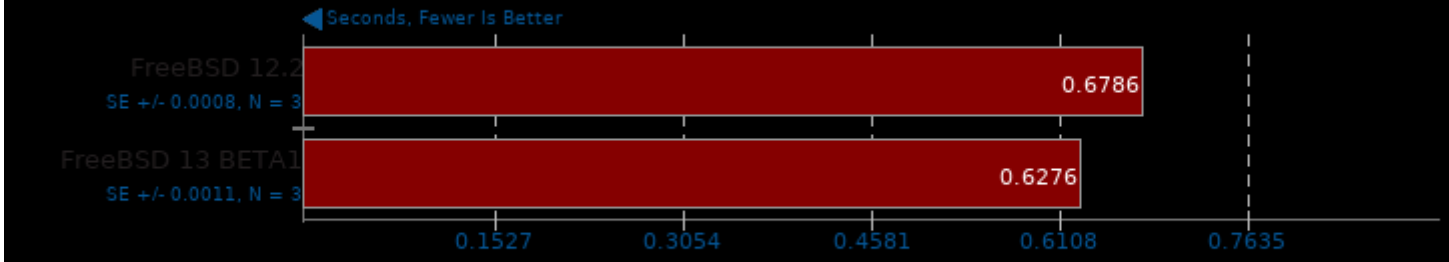
1. (CXX) clang++ options: -fopenmp -O2 -march=native

Perl Benchmarks

Test: Pod2html



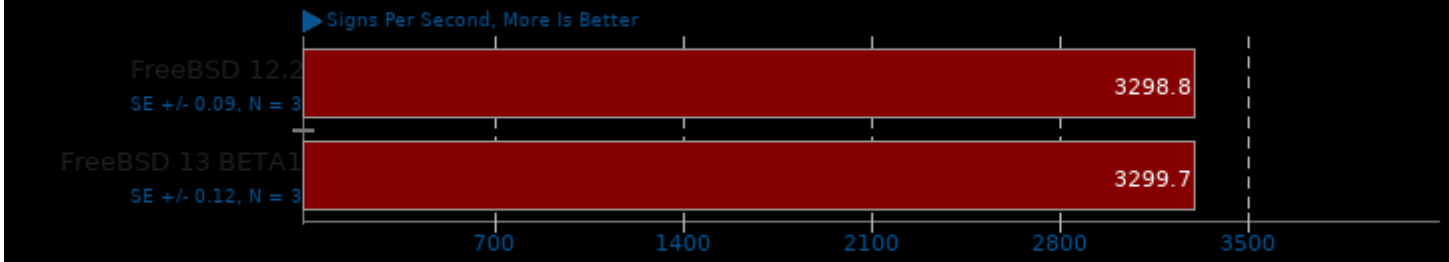
R Benchmark



1. R scripting front-end version 4.0.3 (2020-10-10)

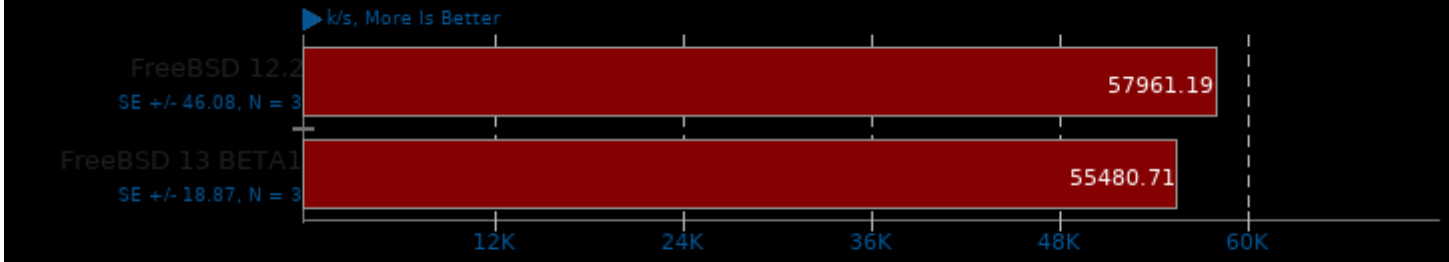
OpenSSL 1.1.1

RSA 4096-bit Performance



1. (CC) clang options: -pthread -Qunused-arguments -O3 -lssl -lcrypto

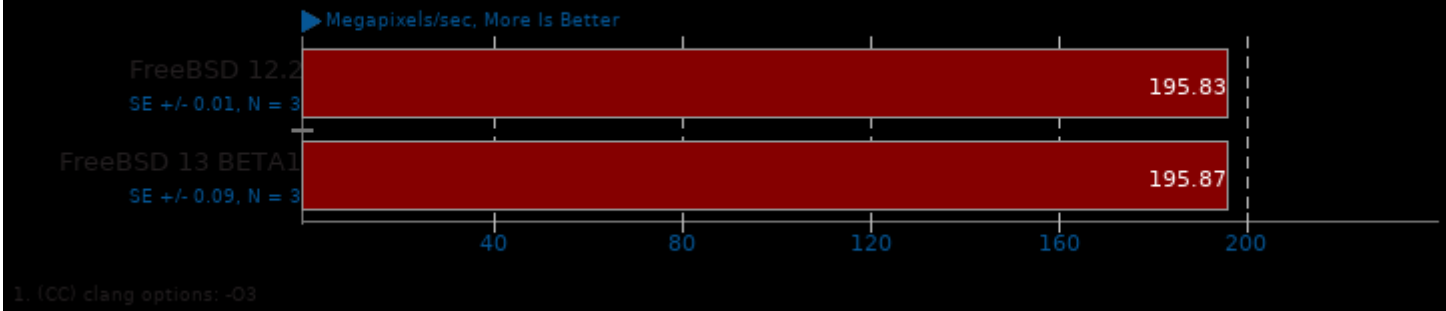
Aircrack-ng 1.5.2



1. (CXX) clang++ options: -O3 -fvisibility=hidden -masm=intel -fcommon -rdynamic -lsqlite3 -lpthread -lz -lcrypto -lhwloc -ldl -lm -pthread

libjpeg-turbo tjbench 2.0.2

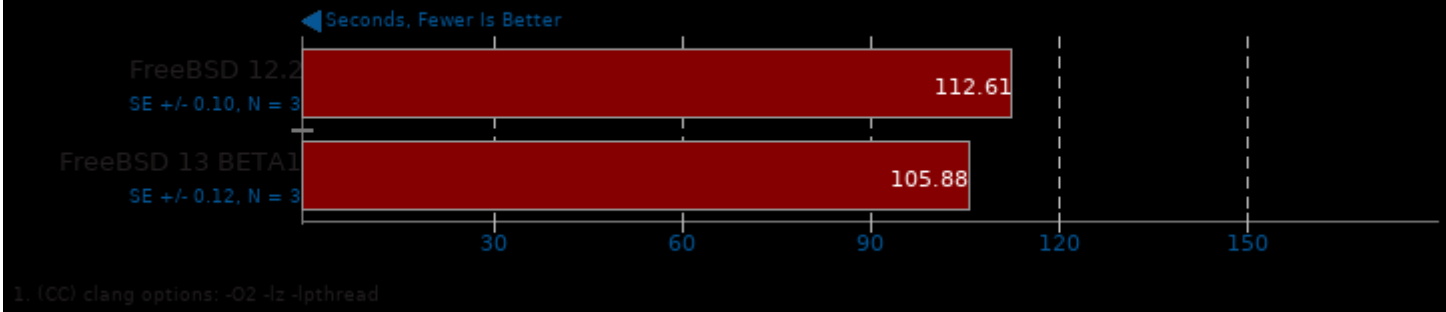
Test: Decompression Throughput



1. (CC) clang options: -O3

SQLite Speedtest 3.30

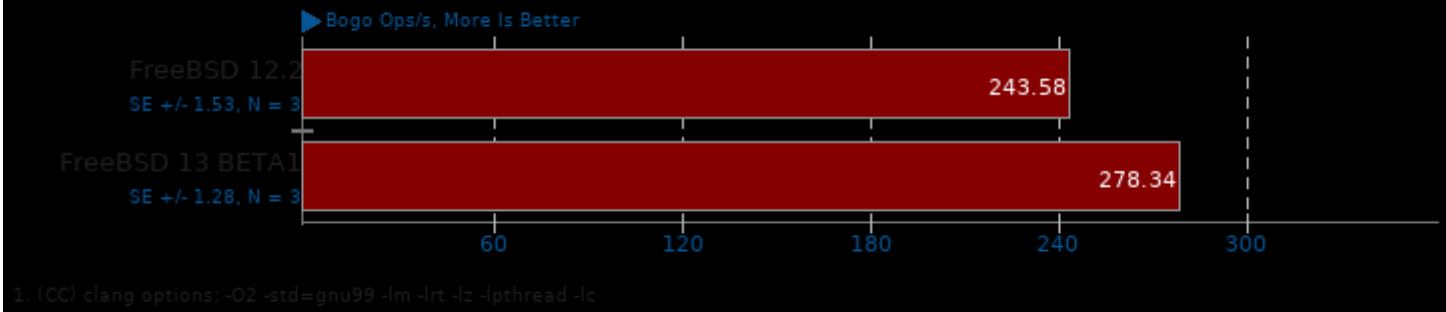
Timed Time - Size 1,000



1. (CC) clang options: -O2 -lz -lpthread

Stress-NG 0.11.07

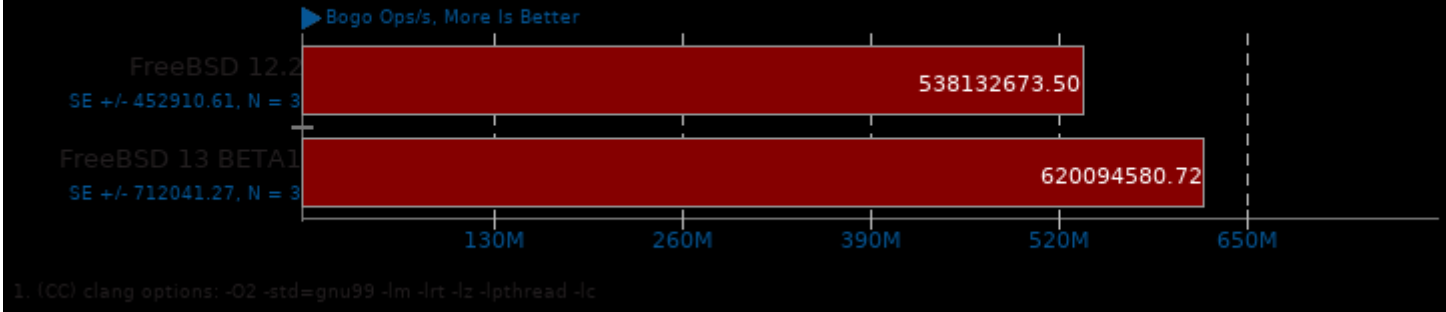
Test: MMAP



1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc

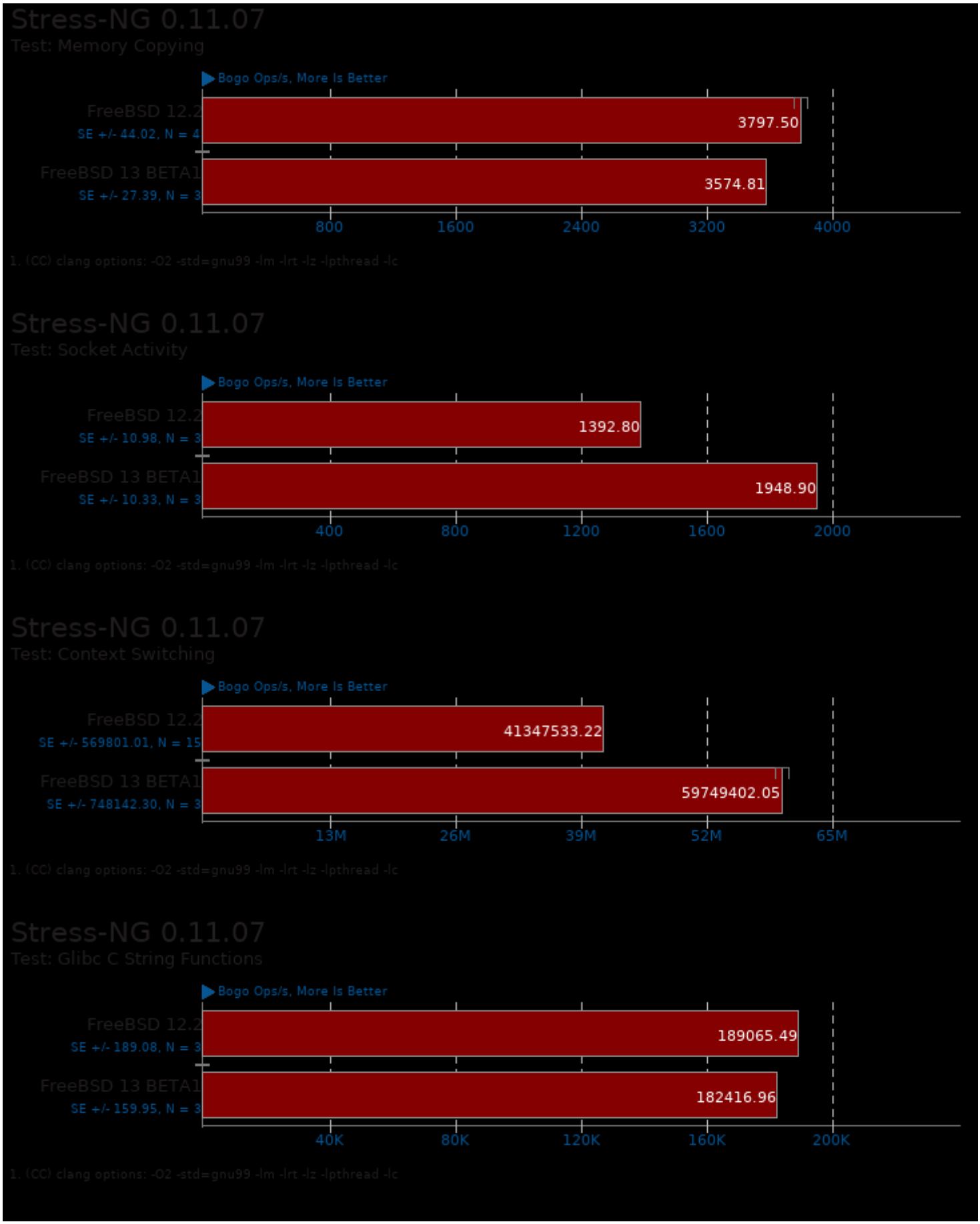
Stress-NG 0.11.07

Test: Malloc



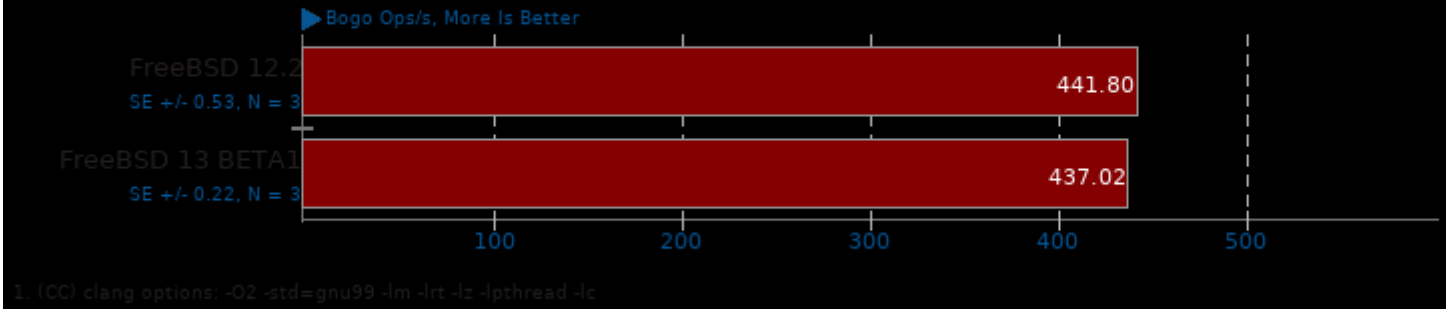
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc


Stress-NG 0.11.07
Test: Forking
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 23.24, N = 3
12818.94
FreeBSD 13 BETA1
SE +/- 9.67, N = 3
21750.56
5K
10K
15K
20K
25K
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc
Stress-NG 0.11.07
Test: CPU Stress
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 2.52, N = 3
5267.12
FreeBSD 13 BETA1
SE +/- 1.04, N = 3
5285.88
1100
2200
3300
4400
5500
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc
Stress-NG 0.11.07
Test: Semaphores
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 675454.90, N = 15
41915809.26
FreeBSD 13 BETA1
SE +/- 459890.05, N = 4
43453510.72
9M
18M
27M
36M
45M
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc
Stress-NG 0.11.07
Test: Matrix Math
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 139.82, N = 3
95423.26
FreeBSD 13 BETA1
SE +/- 393.30, N = 3
95741.74
20K
40K
60K
80K
100K
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc


Stress-NG 0.11.07
Test: Memory Copying
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 44.02, N = 4
3797.50
FreeBSD 13 BETA1
SE +/- 27.39, N = 3
3574.81
800
1600
2400
3200
4000
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc
Stress-NG 0.11.07
Test: Socket Activity
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 10.98, N = 3
1392.80
FreeBSD 13 BETA1
SE +/- 10.33, N = 3
1948.90
400
800
1200
1600
2000
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc
Stress-NG 0.11.07
Test: Context Switching
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 569801.01, N = 15
41347533.22
FreeBSD 13 BETA1
SE +/- 748142.30, N = 3
59749402.05
13M
26M
39M
52M
65M
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc
Stress-NG 0.11.07
Test: Glibc C String Functions
Bogo Ops/s, More Is Better
FreeBSD 12.2
SE +/- 189.08, N = 3
189065.49
FreeBSD 13 BETA1
SE +/- 159.95, N = 3
182416.96
40K
80K
120K
160K
200K
1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc

Stress-NG 0.11.07

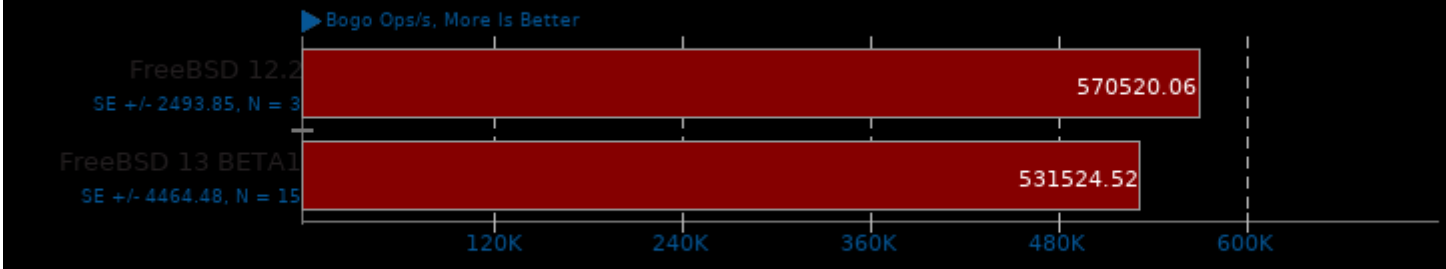
Test: Glibc Qsort Data Sorting



1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc

Stress-NG 0.11.07

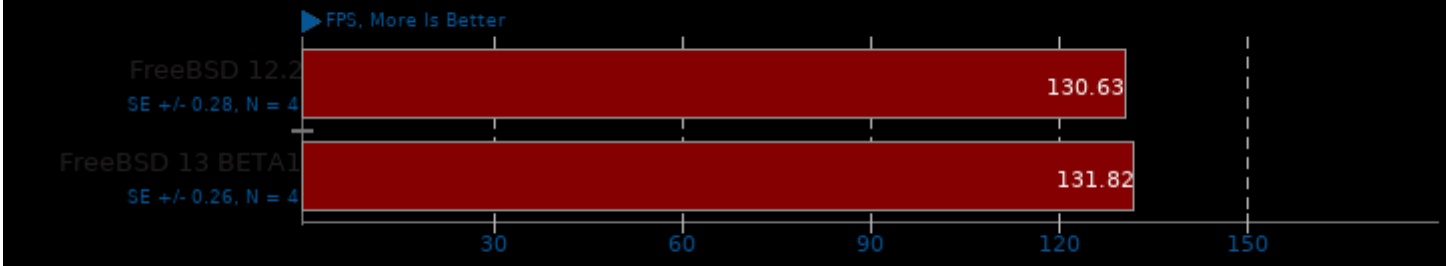
Test: System V Message Passing



1. (CC) clang options: -O2 -std=gnu99 -lm -lrt -lz -lpthread -lc

Optcarrot

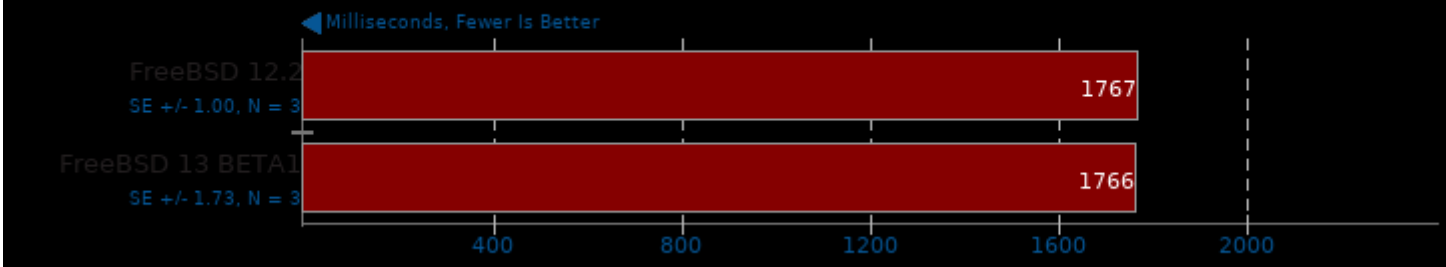
Optimized Benchmark

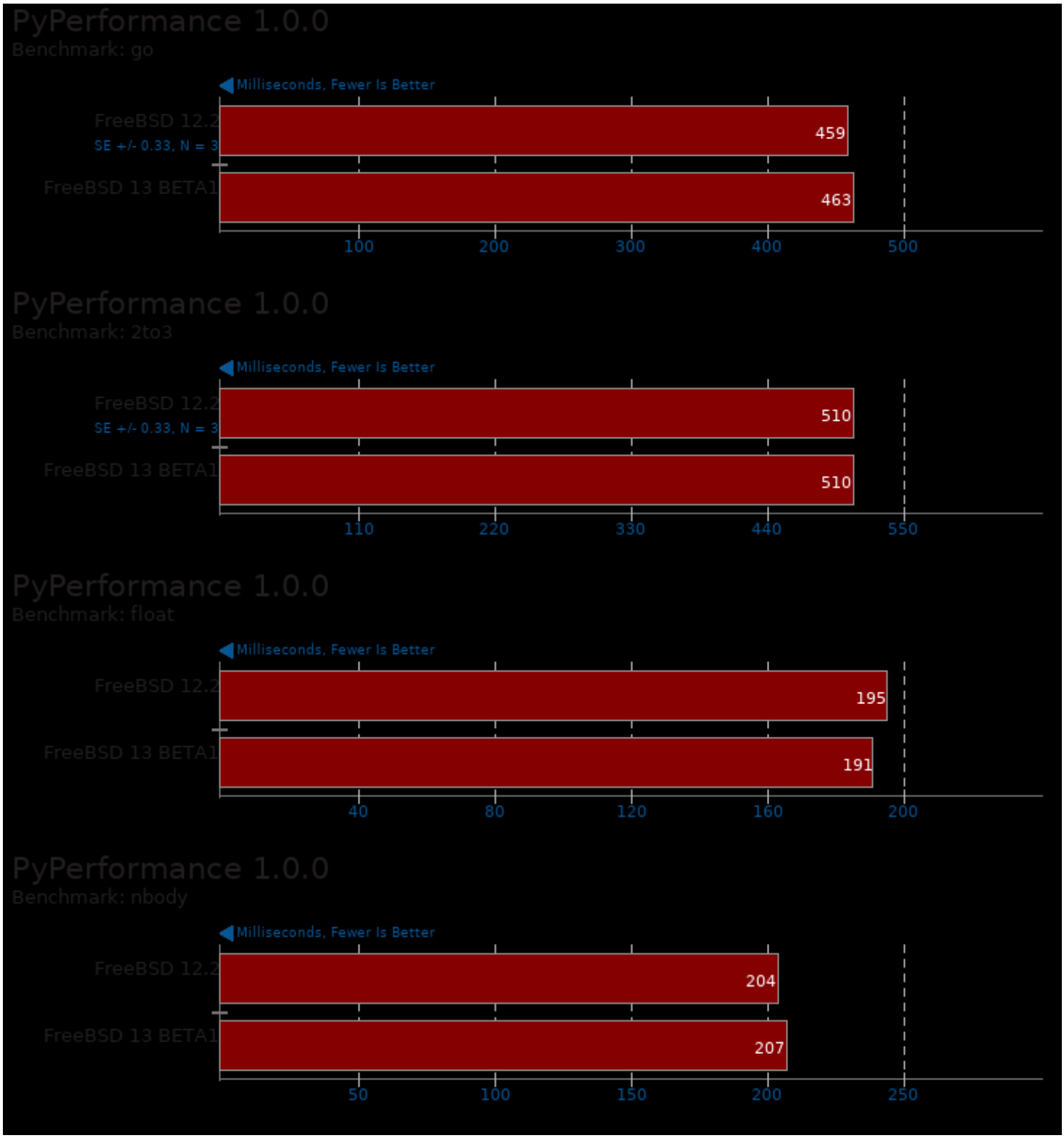


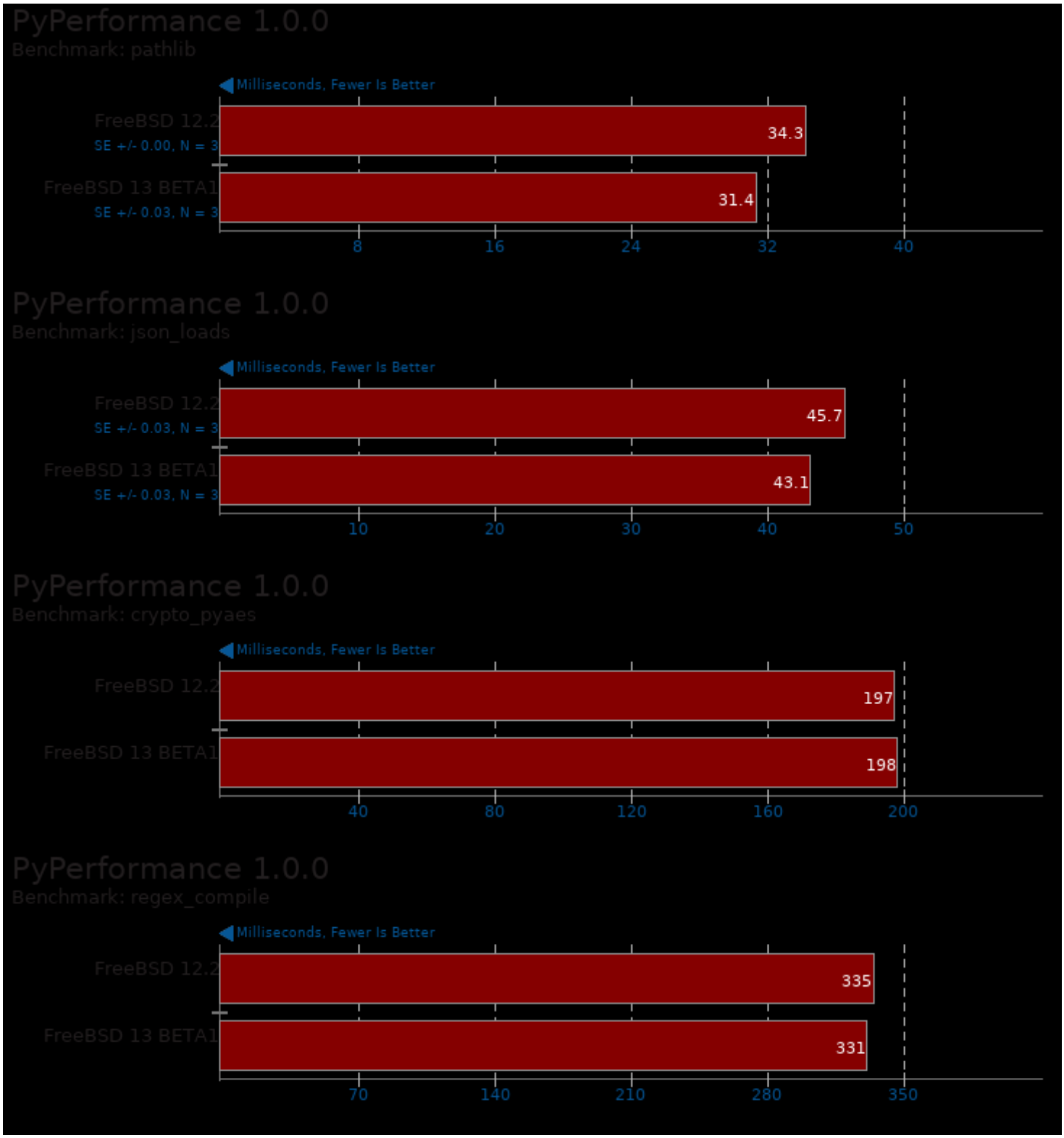
1. FreeBSD 12.2: ruby 2.7.2p137 (2020-10-01 revision 5445e04352) [amd64-freebsd12]
2. FreeBSD 13 BETA1: ruby 2.7.2p137 (2020-10-01 revision 5445e04352) [amd64-freebsd13]

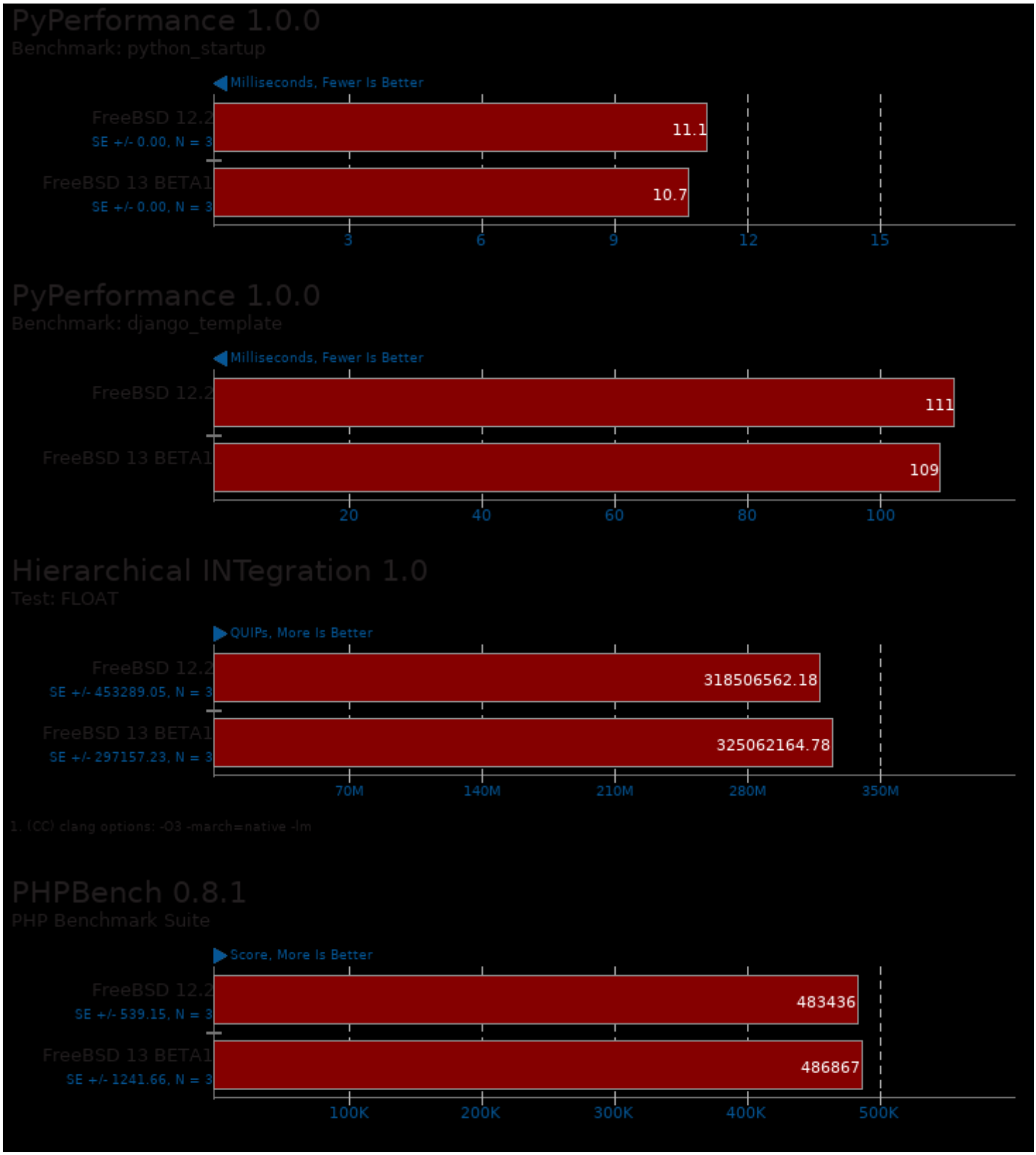
PyBench 2018-02-16

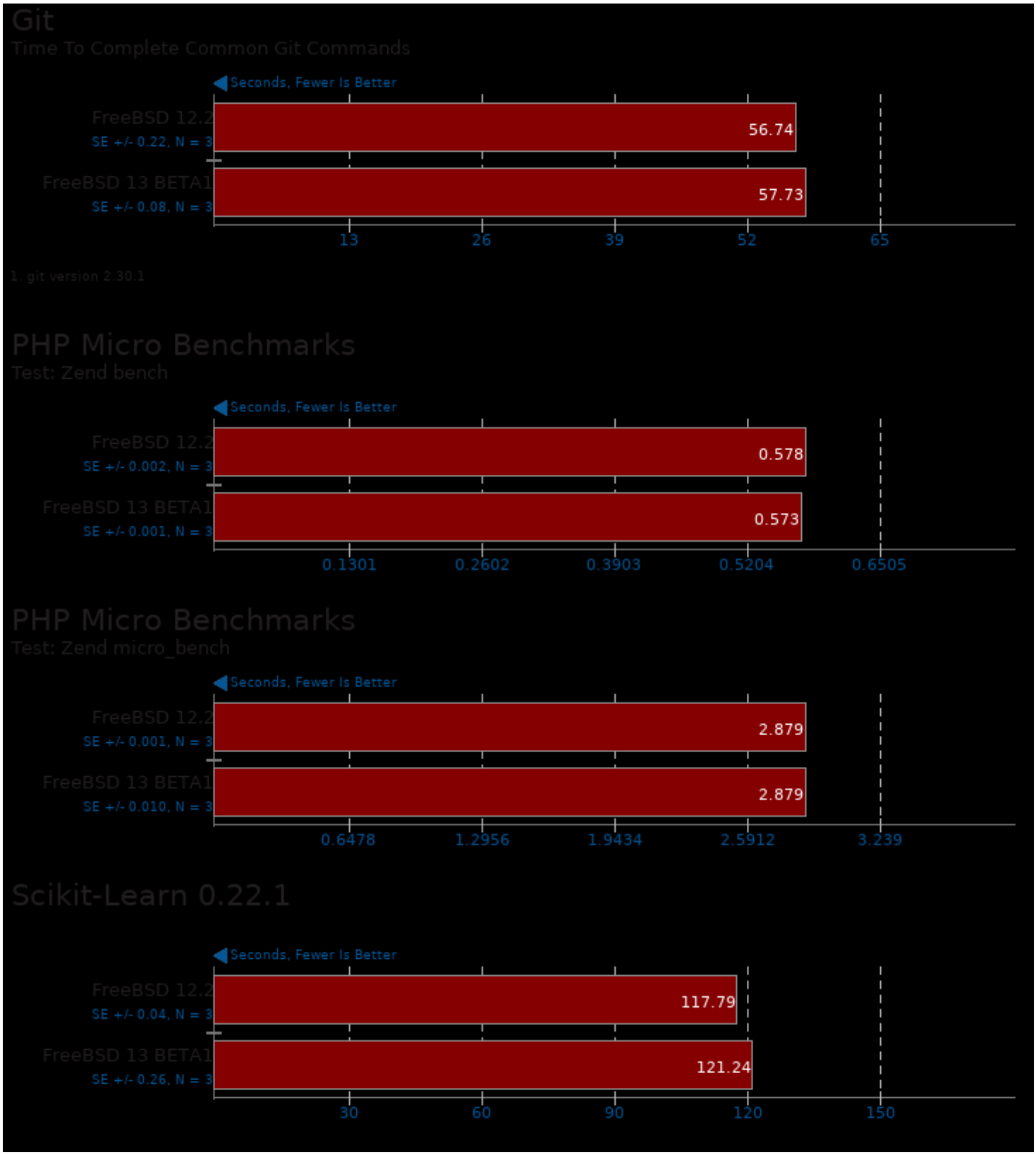
Total For Average Test Times



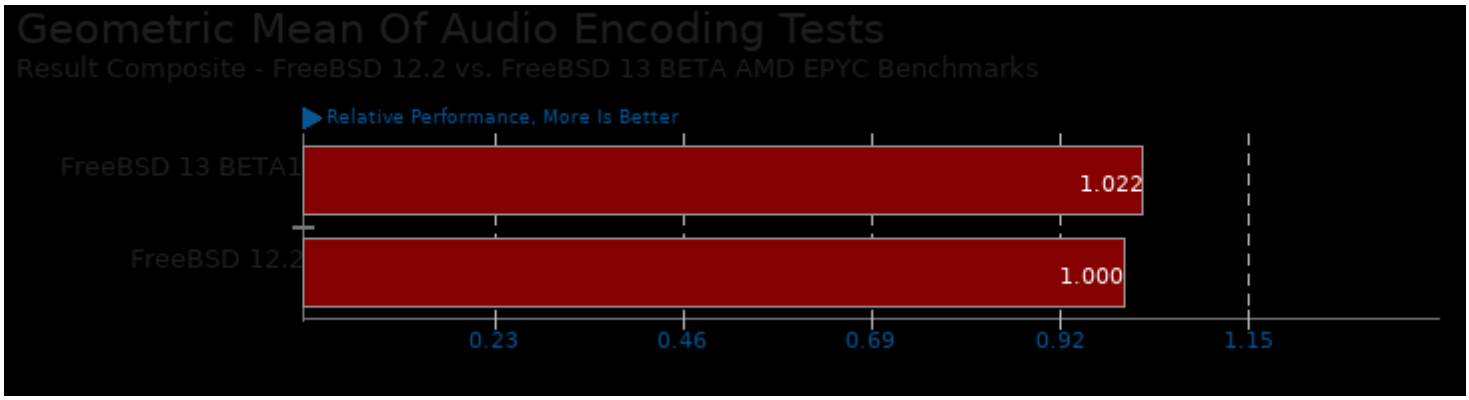

PyPerformance 1.0.0
Benchmark: go
Milliseconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.33, N = 3
459
FreeBSD 13 BETA1
463
100
200
300
400
500
PyPerformance 1.0.0
Benchmark: 2to3
Milliseconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.33, N = 3
510
FreeBSD 13 BETA1
510
110
220
330
440
550
PyPerformance 1.0.0
Benchmark: float
Milliseconds, Fewer Is Better
FreeBSD 12.2
195
FreeBSD 13 BETA1
191
40
80
120
160
200
PyPerformance 1.0.0
Benchmark: nbody
Milliseconds, Fewer Is Better
FreeBSD 12.2
204
FreeBSD 13 BETA1
207
50
100
150
200
250


PyPerformance 1.0.0
Benchmark: pathlib
Milliseconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.00, N = 3
34.3
FreeBSD 13 BETA1
SE +/- 0.03, N = 3
31.4
8
16
24
32
40
PyPerformance 1.0.0
Benchmark: json_loads
Milliseconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.03, N = 3
45.7
FreeBSD 13 BETA1
SE +/- 0.03, N = 3
43.1
10
20
30
40
50
PyPerformance 1.0.0
Benchmark: crypto_pyaes
Milliseconds, Fewer Is Better
FreeBSD 12.2
197
FreeBSD 13 BETA1
198
40
80
120
160
200
PyPerformance 1.0.0
Benchmark: regex_compile
Milliseconds, Fewer Is Better
FreeBSD 12.2
335
FreeBSD 13 BETA1
331
70
140
210
280
350

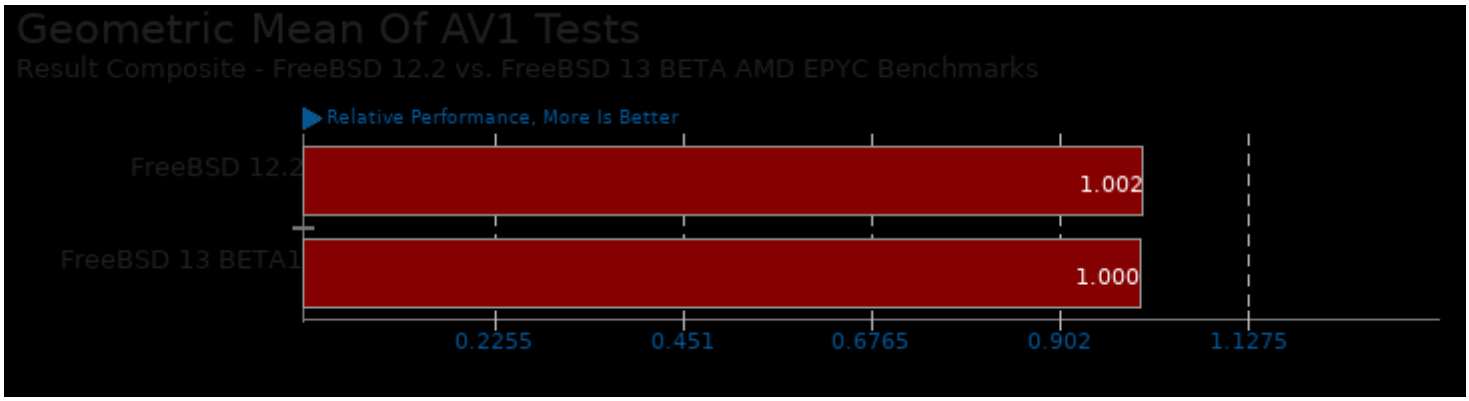

PyPerformance 1.0.0
Benchmark: python_startup
Milliseconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.00, N = 3
11.1
FreeBSD 13 BETA1
SE +/- 0.00, N = 3
10.7
3
6
9
12
15
PyPerformance 1.0.0
Benchmark: django_template
Milliseconds, Fewer Is Better
FreeBSD 12.2
111
FreeBSD 13 BETA1
109
20
40
60
80
100
Hierarchical INTegration 1.0
Test: FLOAT
QUIPs, More Is Better
FreeBSD 12.2
SE +/- 453289.05, N = 3
318506562.18
FreeBSD 13 BETA1
SE +/- 297157.23, N = 3
325062164.78
70M
140M
210M
280M
350M
1. (CC) clang options: -O3 -march=native -lm
PHPBench 0.8.1
PHP Benchmark Suite
Score, More Is Better
FreeBSD 12.2
SE +/- 539.15, N = 3
483436
FreeBSD 13 BETA1
SE +/- 1241.66, N = 3
486867
100K
200K
300K
400K
500K


Git
Time To Complete Common Git Commands
Seconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.22, N = 3
56.74
FreeBSD 13 BETA1
SE +/- 0.08, N = 3
57.73
13
26
39
52
65
1: git version 2.30.1
PHP Micro Benchmarks
Test: Zend bench
Seconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.002, N = 3
0.578
FreeBSD 13 BETA1
SE +/- 0.001, N = 3
0.573
0.1301
0.2602
0.3903
0.5204
0.6505
PHP Micro Benchmarks
Test: Zend micro_bench
Seconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.001, N = 3
2.879
FreeBSD 13 BETA1
SE +/- 0.010, N = 3
2.879
0.6478
1.2956
1.9434
2.5912
3.239
Scikit-Learn 0.22.1
Seconds, Fewer Is Better
FreeBSD 12.2
SE +/- 0.04, N = 3
117.79
FreeBSD 13 BETA1
SE +/- 0.26, N = 3
121.24
30
60
90
120
150

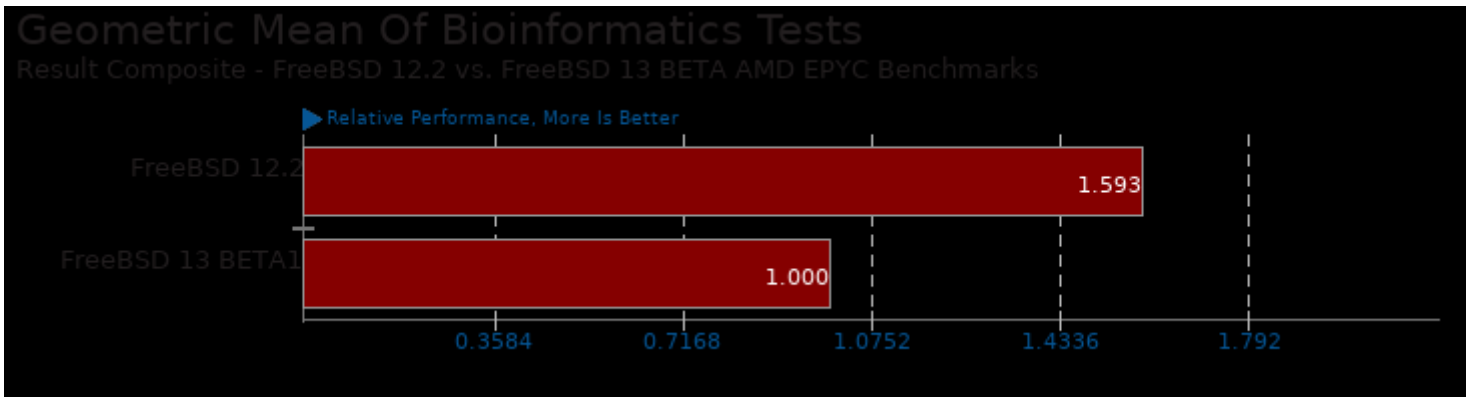
These geometric means are based upon test groupings / test suites for this result file.



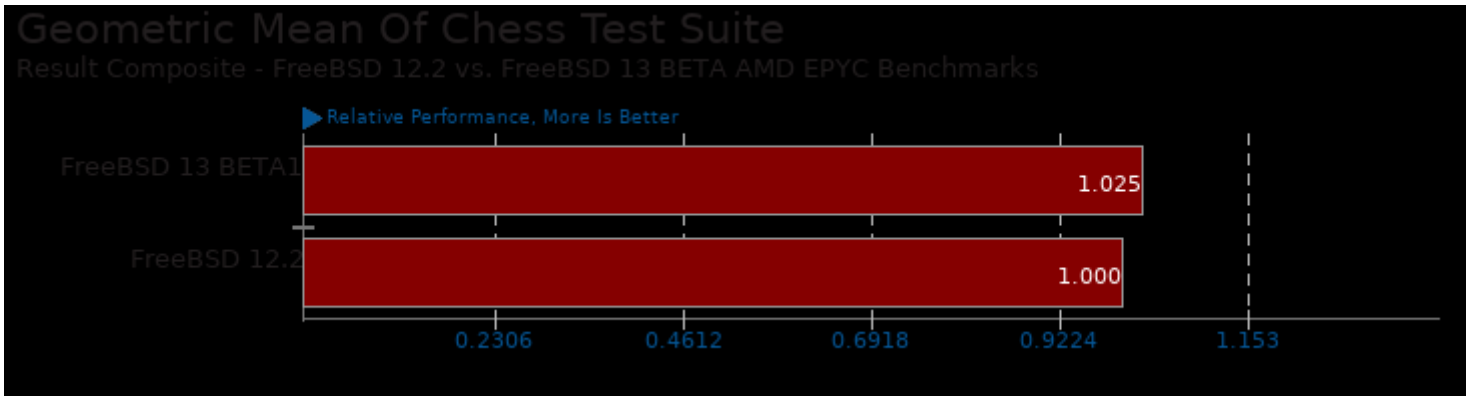
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac and pts/encode-ape



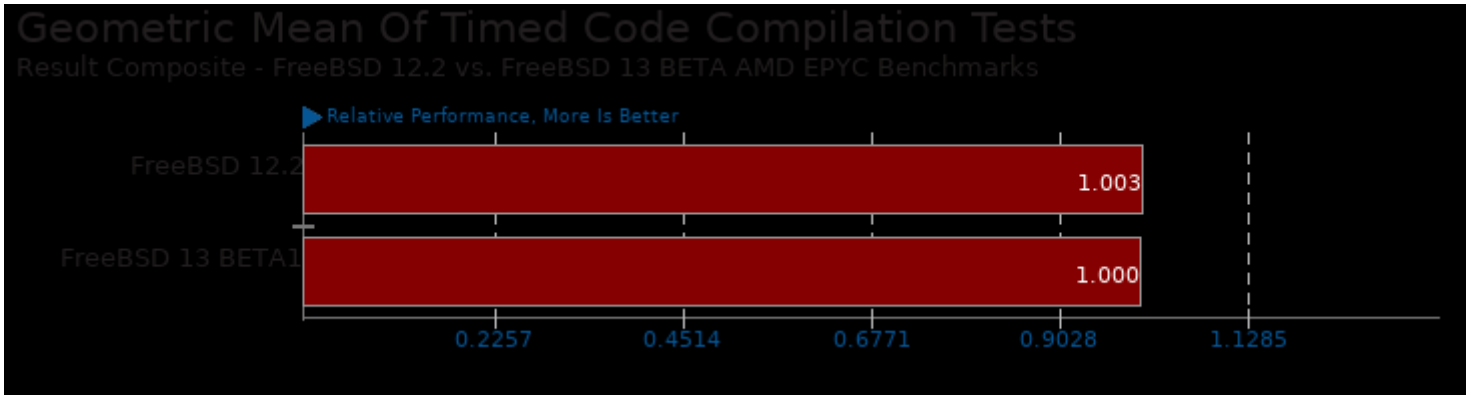
Geometric mean based upon tests: pts/rav1e and pts/avifenc



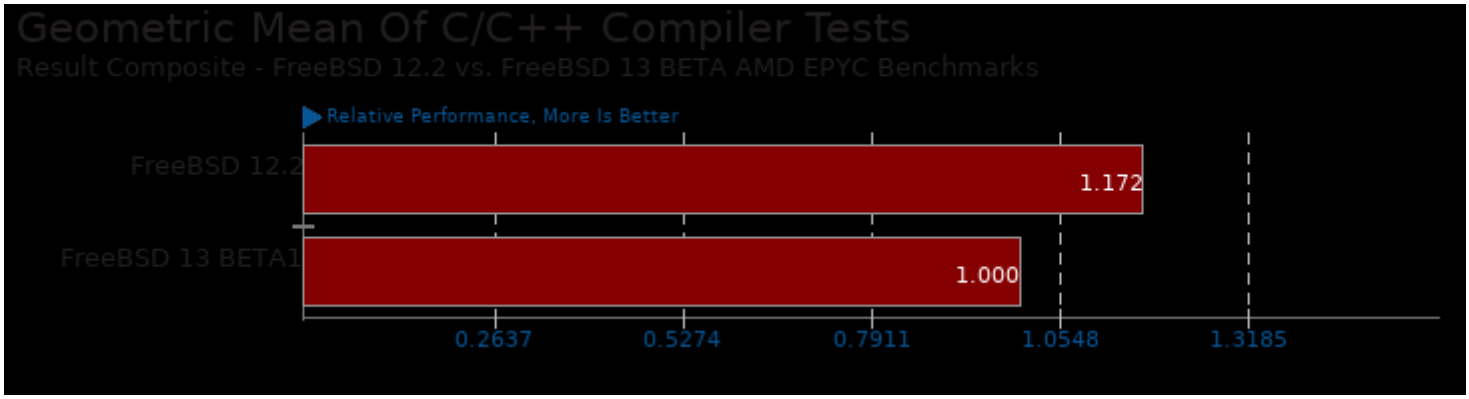
Geometric mean based upon tests: pts/himeno and pts/hmmer



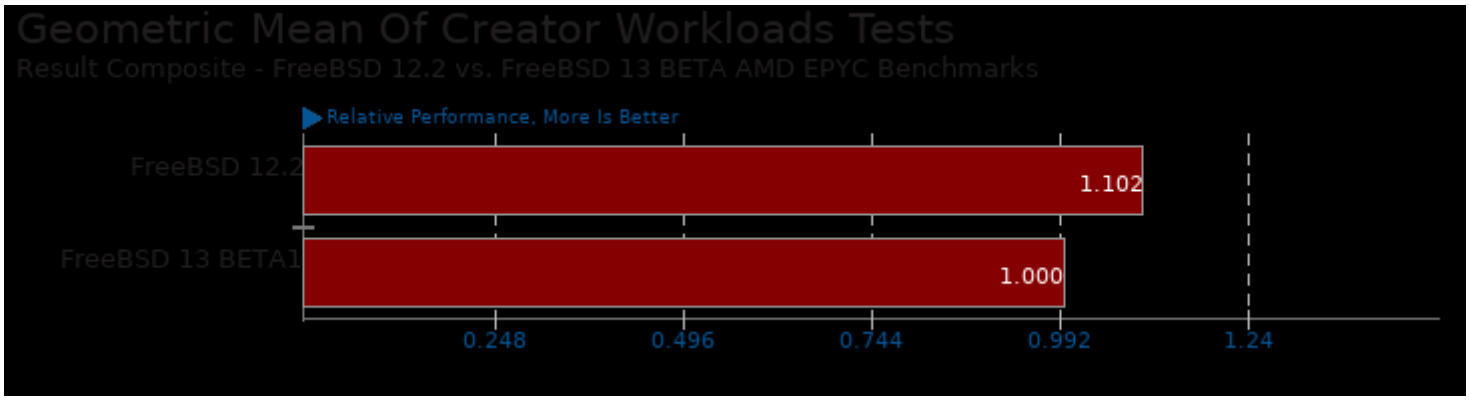
Geometric mean based upon tests: pts/stockfish and pts/m-queens



Geometric mean based upon tests: pts/build-php and pts/build-eigen

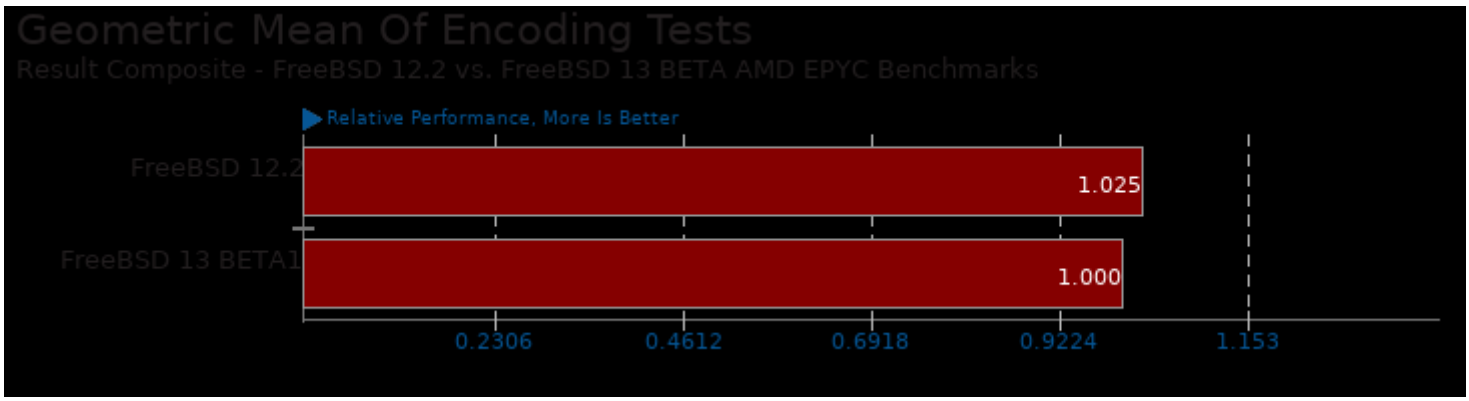


Geometric mean based upon tests: pts/fftw, pts/scimark2, pts/aobench, pts/graphics-magick, pts/himeno, pts/stockfish, pts/hmmer, pts/build-php, pts/c-ray, pts/encode-mp3, pts/encode-flac, pts/sqlite-speedtest, pts/john-the-ripper, pts/x264, pts/x265, pts/openssl and pts/aircrack-ng

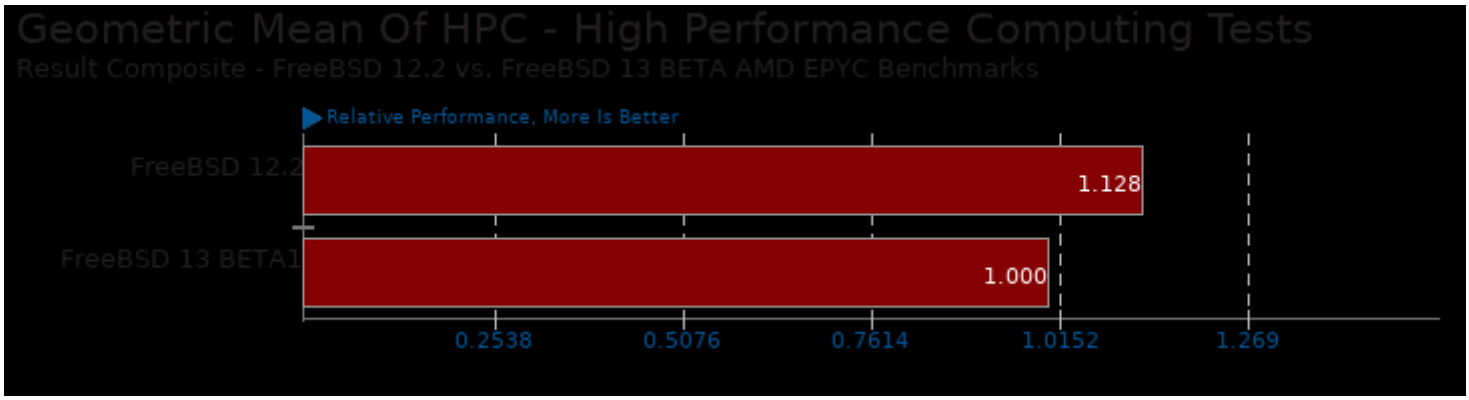


Geometric mean based upon tests: pts/c-ray, pts/aobench, pts/smallpt, pts/ttsiod-renderer, pts/x264, pts/x265, pts/rav1e, pts/avifenc, pts/encode-mp3, pts/encode-flac, pts/encode-ape, pts/graphics-magick, pts/libraw, pts/tjbench, pts/dcraw and pts/luajit

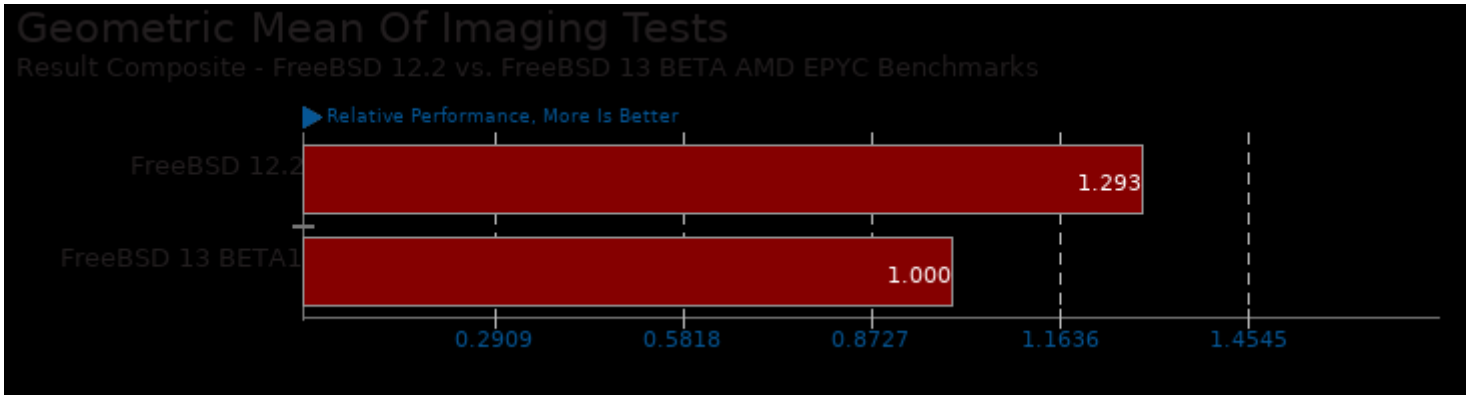
Geometric mean based upon tests: pts/openssl, pts/blake2, pts/john-the-ripper, pts/botan, pts/bork and pts/aircrack-ng



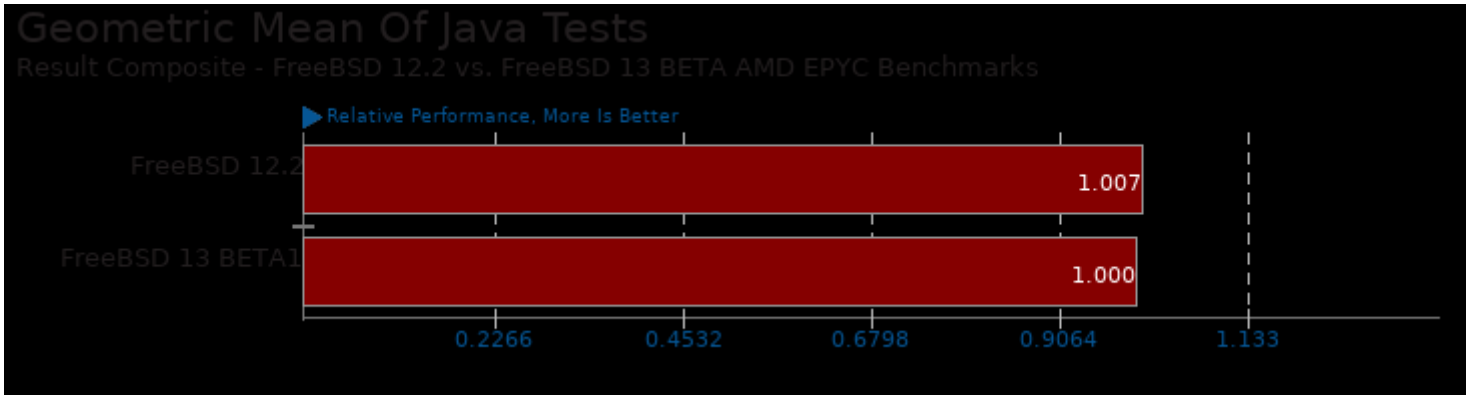
Geometric mean based upon tests: pts/encode-mp3, pts/encode-flac, pts/encode-ape, pts/x264, pts/x265, pts/rav1e and pts/avifenc



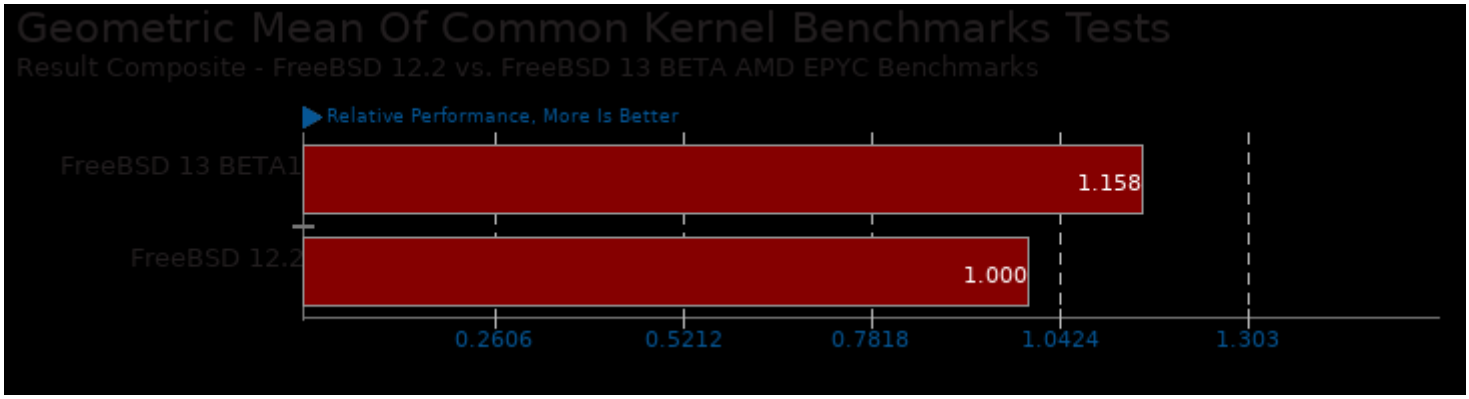
Geometric mean based upon tests: pts/rodinia, pts/ffte, pts/fftw, pts/himeno, pts/hmmer, pts/rbenchmark, pts/numpy and pts/scikit-learn



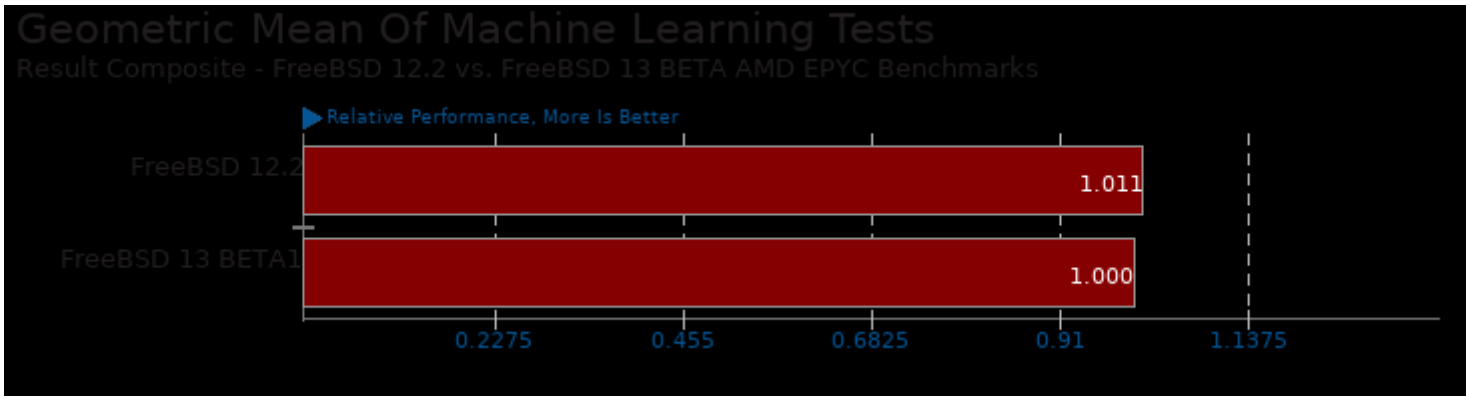
Geometric mean based upon tests: pts/graphics-magick, pts/libraw, pts/tjbench, pts/dcraw and pts/avifenc



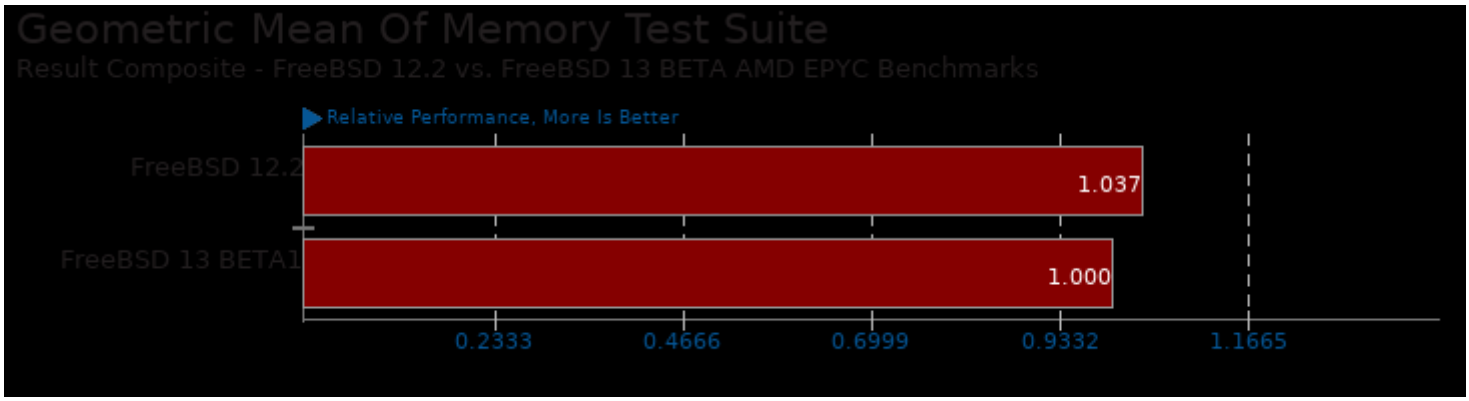
Geometric mean based upon tests: pts/bork, pts/java-scimark2, pts/dacapobench and pts/renaissance



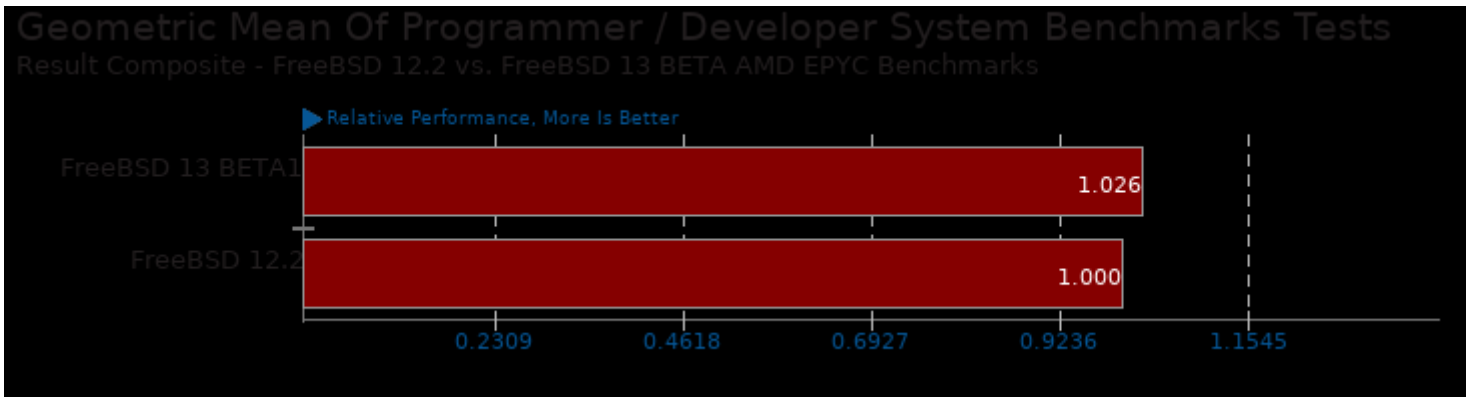
Geometric mean based upon tests: pts/sqlite-speedtest, pts/mbw, pts/openssl, pts/stress-ng, pts/osbench and pts/iperf



Geometric mean based upon tests: pts/rbenchmark, pts/numpy and pts/scikit-learn



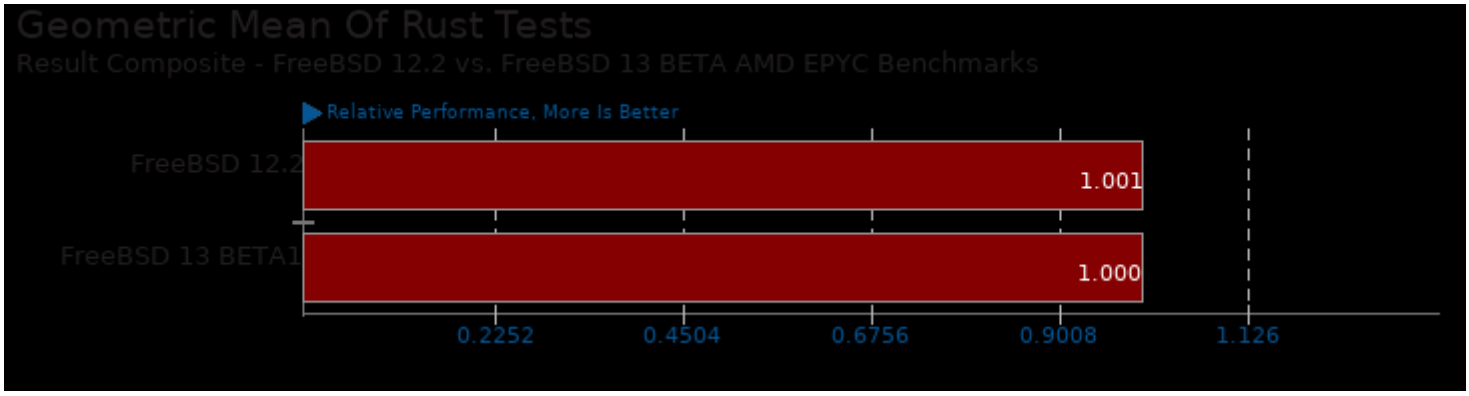
Geometric mean based upon tests: pts/cachebench and pts/mbw



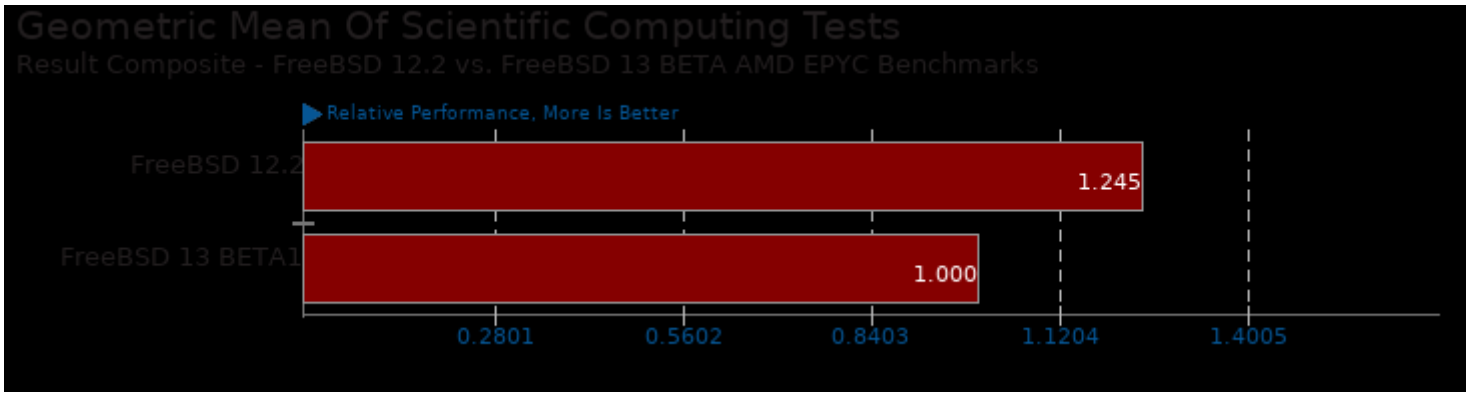
Geometric mean based upon tests: pts/simdjson, pts/sqlite-speedtest, pts/git, pts/pyperformance, pts/pybench, pts/build-php and pts/build-eigen

Geometric mean based upon tests: pts/pybench, pts/numpy, pts/scikit-learn and pts/pyperformance

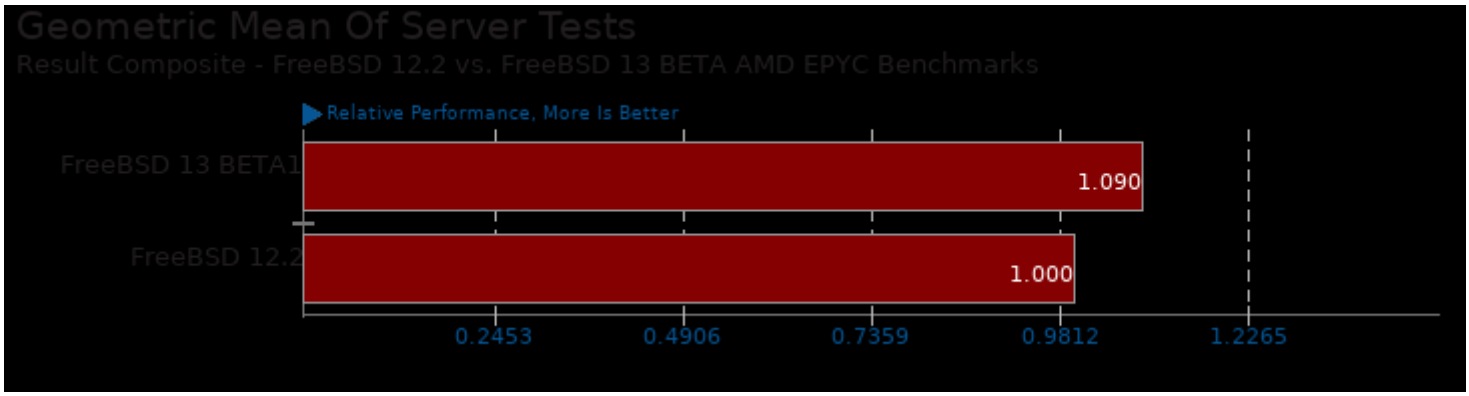
Geometric mean based upon tests: pts/c-ray, pts/aobench, pts/smallpt and pts/ttsiod-renderer



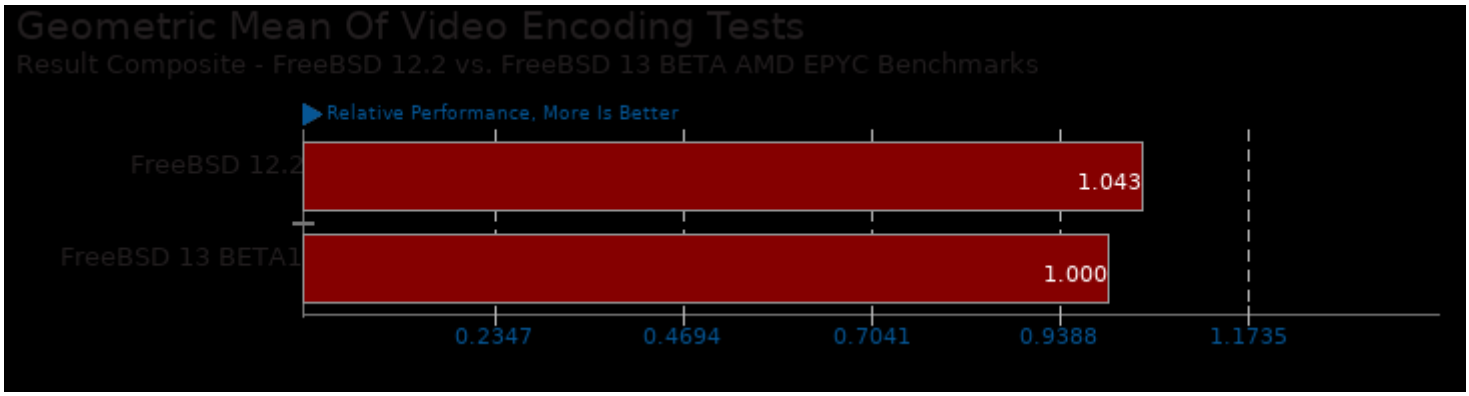
Geometric mean based upon tests: pts/rav1e, pts/rust-mandel and pts/rust-prime



Geometric mean based upon tests: pts/ffte, pts/fftw, pts/himeno and pts/hmmer



Geometric mean based upon tests: pts/blogbench, pts/php, pts/phpbench, pts/node-express-loadtest, pts/openssl, pts/perl-benchmark, pts/simdjson and pts/sqlite-speedtest



Geometric mean based upon tests: pts/x264, pts/x265, pts/rav1e and pts/avifenc

Geometric mean based upon tests: pts/rodinia, pts/himeno, pts/x265, pts/swet and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 20:23.