



trial.results

Intel Xeon W-2145 testing with a GIGABYTE MW51-HP0-00 (F2 BIOS) and NVIDIA Quadro K600 on Red Hat Enterprise Linux 7.8 via the Phoronix Test Suite.

Test Systems:

trial_run

Processor: Intel Xeon W-2145 @ 4.50GHz (8 Cores / 16 Threads), Motherboard: GIGABYTE MW51-HP0-00 (F2 BIOS), Chipset: Intel Sky Lake-E DMI3 Registers, Memory: 252GB, Disk: 118GB INTEL SSDPEK1W120GA + 1024GB Samsung SSD 860, Graphics: NVIDIA Quadro K600, Audio: Realtek ALC1150, Network: 2 x Intel I210

OS: Red Hat Enterprise Linux 7.8, Kernel: 3.10.0-1127.19.1.el7.x86_64 (x86_64), Display Server: X Server 1.20.4, OpenGL: 2.1 Mesa 10.4.3, Compiler: GCC 4.8.5 20150623 + CUDA 8.0, File-System: ext4, Screen Resolution: 3840x2160

Environment Notes: LIBGL_DRIVERS_PATH=/usr/caen/matlab-2016a/local/usr/lib64/dri

Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,obj-c,obj-c++,java,fortran,ada,go,lto --enable-plugin

--enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
 Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0x2006906
 Java Notes: Java SE Runtime Environment (build 1.8.0_25-b17)
 Python Notes: Python 3.7.0

trial_run

PolyBench-C - 3.M.M (sec) 2.978
 Standard Deviation 0.4%

Polyhedron Fortran Benchmarks - ac (sec) 5.05

Polyhedron Fortran Benchmarks - air (sec) 1.93

Polyhedron Fortran Benchmarks - mdbx (sec) 5.18

Polyhedron Fortran Benchmarks - doduc (sec) 9.09

Polyhedron Fortran Benchmarks - linpk (sec) 4.37

Polyhedron Fortran Benchmarks - tfft2 (sec) 49.91

Polyhedron Fortran Benchmarks - aermod (sec) 9.55

Polyhedron Fortran Benchmarks - rnflow (sec) 10.09

Polyhedron Fortran Benchmarks - induct2 (sec) 24.78

Polyhedron Fortran Benchmarks - protein (sec) 14.63

Polyhedron Fortran Benchmarks - capacita (sec) 11.78

Polyhedron Fortran Benchmarks - channel2 (sec) 74.93

Polyhedron Fortran Benchmarks - fatigue2 (sec) 42.99

Polyhedron Fortran Benchmarks - gas_dyn2 (sec) 65.57

Polyhedron Fortran Benchmarks - test_fpu2 (sec) 39.85

Polyhedron Fortran Benchmarks - mp_prop_design (sec) 97.38

BLAKE2 (Cycles/Byte) 4.26
 Standard Deviation 0.1%

GNU GMP GMPbench - Total Time (GMPbench Score) 5597

Java SciMark - Composite (Mflops) 2323
 Standard Deviation 1.9%

Java SciMark - Monte Carlo (Mflops) 1105
 Standard Deviation 0.2%

Java SciMark - F.F.T (Mflops) 1289
 Standard Deviation 6%

Java SciMark - S.M.M (Mflops) 1945
 Standard Deviation 0%

Java SciMark - D.L.M.F (Mflops) 5529
 Standard Deviation 4.3%

Java SciMark - J.S.O.R (Mflops) 1745
 Standard Deviation 0.2%

Bork File Encrypter - F.E.T (sec) 6.687
 Standard Deviation 0.6%

Fhourstones - C.C.4.S (Kpos / sec) 12551
 Standard Deviation 1.6%

BYTE Unix Benchmark - Dhrystone 2 (LPS) 39548918
 Standard Deviation 1.1%

CacheBench - Read (MB/s) 3794
 Standard Deviation 0.2%

CacheBench - Write (MB/s) 31697

Standard Deviation 0%
CacheBench - R.M.W (MB/s) 51841
Standard Deviation 0%
LuaJIT - Composite (Mflops) 1536
Standard Deviation 0.1%
LuaJIT - Monte Carlo (Mflops) 540.02
Standard Deviation 0.1%
LuaJIT - F.F.T (Mflops) 324.11
Standard Deviation 0%
LuaJIT - S.M.M (Mflops) 1379
Standard Deviation 0%
LuaJIT - D.L.M.F (Mflops) 3747
Standard Deviation 0.2%
LuaJIT - J.S.O.R (Mflops) 1689
Standard Deviation 0%
SciMark - Composite (Mflops) 700.16
Standard Deviation 0.1%
SciMark - Monte Carlo (Mflops) 135.92
Standard Deviation 0%
SciMark - F.F.T (Mflops) 178.26
Standard Deviation 0.7%
SciMark - S.M.M (Mflops) 804.19
Standard Deviation 0.2%
SciMark - D.L.M.F (Mflops) 1105
Standard Deviation 0.2%
SciMark - J.S.O.R (Mflops) 1277
Standard Deviation 0%
Botan - KASUMI (MiB/s) 93.224
Standard Deviation 0%
Botan - AES-256 (MiB/s) 4315
Standard Deviation 0%
Botan - Twofish (MiB/s) 376.316
Standard Deviation 0%
Botan - Blowfish (MiB/s) 447.827
Standard Deviation 0.1%
Botan - CAST-256 (MiB/s) 144.626
Standard Deviation 0.1%
Swet - Average (Operations/sec) 763630993
Standard Deviation 0.5%
Node.js Octane Benchmark (Score) 42861
Standard Deviation 0.1%
Numpy Benchmark (Score) 303.05
Standard Deviation 1.3%
Gzip Compression - L.S.T.A.T.t.g (sec) 36.341
Standard Deviation 0.2%
dcraw - R.T.P.I.C (sec) 37.461
Standard Deviation 0.1%
DeepSpeech - CPU (sec) 111.59
Standard Deviation 0.1%
FLAC Audio Encoding - WAV To FLAC (sec) 10.136
Standard Deviation 0.6%
LAME MP3 Encoding - WAV To MP3 (sec) 10.289
Standard Deviation 2.5%

GnuPG - 2.F.E (sec) 11.679
Standard Deviation 0.3%

Minion - Graceful (sec) 46.533624
Standard Deviation 2.1%

Minion - Solitaire (sec) 63.688248
Standard Deviation 1.9%

Minion - Quasigroup (sec) 101.261424
Standard Deviation 0.5%

OpenCV Benchmark (sec) 80.953
Standard Deviation 0.2%

Radiance Benchmark - Serial (sec) 720.766

Sudoku - Total Time (sec) 13.899
Standard Deviation 2.5%

System Libxml2 Parsing - 1 MB (ms) 404

System Libxml2 Parsing - 2 MB (ms) 1246
Standard Deviation 0.3%

System Libxml2 Parsing - 3 MB (ms) 1864
Standard Deviation 0.1%

System Libxml2 Parsing - 5 KB (ms) 3

System Libxml2 Parsing - 50 KB (ms) 18

System Libxml2 Parsing - 100 KB (ms) 68

System Libxml2 Parsing - 112 MB (ms) 57774
Standard Deviation 0.1%

System Libxml2 Parsing - 150 KB (ms) 56

System Libxml2 Parsing - 200 KB (ms) 82

System Libxml2 Parsing - 250 KB (ms) 94

System Libxml2 Parsing - 300 KB (ms) 124

System Libxml2 Parsing - 350 KB (ms) 136

System Libxml2 Parsing - 400 KB (ms) 247

System Libxml2 Parsing - 450 KB (ms) 175
Standard Deviation 0.3%

System Libxml2 Parsing - 500 KB (ms) 303

System Libxml2 Parsing - 550 KB (ms) 217
Standard Deviation 1.5%

System Libxml2 Parsing - 600 KB (ms) 364
Standard Deviation 0.5%

System Libxml2 Parsing - 650 KB (ms) 256

System Libxml2 Parsing - 700 KB (ms) 264
Standard Deviation 0.2%

System Libxml2 Parsing - 750 KB (ms) 296

System Libxml2 Parsing - 800 KB (ms) 308

System Libxml2 Parsing - 850 KB (ms) 505
Standard Deviation 0.1%

System Libxml2 Parsing - 900 KB (ms) 366
Standard Deviation 0.6%

System Libxml2 Parsing - 950 KB (ms) 371

glibc bench - cos (nanoseconds) 32645
Standard Deviation 0.4%

glibc bench - exp (nanoseconds) 22084
Standard Deviation 0.2%

glibc bench - ffs (nanoseconds) 1.94880

Standard Deviation 0%
glibc bench - sin (nanoseconds) 32688
Standard Deviation 0.2%
glibc bench - log2 (nanoseconds) 8.73816
Standard Deviation 0%
glibc bench - modf (nanoseconds) 2.61771
Standard Deviation 0.1%
glibc bench - sinh (nanoseconds) 13.3975
Standard Deviation 0.3%
glibc bench - sqrt (nanoseconds) 1.94783
Standard Deviation 0%
glibc bench - tanh (nanoseconds) 13.4669
Standard Deviation 0%
glibc bench - asinh (nanoseconds) 19.2502
Standard Deviation 0.3%
glibc bench - atanh (nanoseconds) 12.0048
Standard Deviation 0.1%
glibc bench - ffsll (nanoseconds) 2.16827
Standard Deviation 0%
glibc bench - sincos (nanoseconds) 32400
Standard Deviation 1%
glibc bench - pthread_once (nanoseconds) 1.96376
Standard Deviation 0%
libjpeg-turbo tjbench - D.T (Megapixels/sec) 197.113318
Standard Deviation 0.1%
CppPerformanceBenchmarks - Atol (sec) 59.019
Standard Deviation 0%
CppPerformanceBenchmarks - Ctype (sec) 28.775
Standard Deviation 0%
CppPerformanceBenchmarks - Math Library (sec) 422.700
Standard Deviation 0.1%
CppPerformanceBenchmarks - Rand Numbers (sec) 948.357
Standard Deviation 0%
CppPerformanceBenchmarks - Stepanov Vector (sec) 84.673
Standard Deviation 0%
CppPerformanceBenchmarks - Function Objects (sec) 14.238
Standard Deviation 0%
CppPerformanceBenchmarks - S.A (sec) 31.838
Standard Deviation 0%
Optcarrot - O.B (FPS) 79.66
Standard Deviation 0.2%
PyBench - T.F.A.T.T (Milliseconds) 1106
Standard Deviation 0.3%
Hierarchical INTegration - FLOAT (QUIPs) 455537075
Standard Deviation 0.3%
NGINX Benchmark - S.W.P.S (Reqs/sec) 23504
Standard Deviation 0.1%
PHPBench - P.B.S (Score) 242660
Standard Deviation 0.4%
Git - T.T.C.C.G.C (sec) 55.523
Standard Deviation 0.1%

PolyBench-C 4.2

Test: 3 Matrix Multiplications

← Seconds, Fewer Is Better

trial_run

SE +/- 0.007, N = 3

2.978

0.6701 1.3402 2.0103 2.6804 3.3505

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

Polyhedron Fortran Benchmarks

Benchmark: ac

← Seconds, Fewer Is Better

trial_run

5.05

1.1363 2.2726 3.4089 4.5452 5.6815

Polyhedron Fortran Benchmarks

Benchmark: air

← Seconds, Fewer Is Better

trial_run

1.93

0.4343 0.8686 1.3029 1.7372 2.1715

Polyhedron Fortran Benchmarks

Benchmark: mdbx

← Seconds, Fewer Is Better

trial_run

5.18

1.1655 2.331 3.4965 4.662 5.8275

Polyhedron Fortran Benchmarks

Benchmark: doduc

← Seconds, Fewer Is Better

trial_run

9.09

3 6 9 12 15

Polyhedron Fortran Benchmarks

Benchmark: linpk

← Seconds, Fewer Is Better

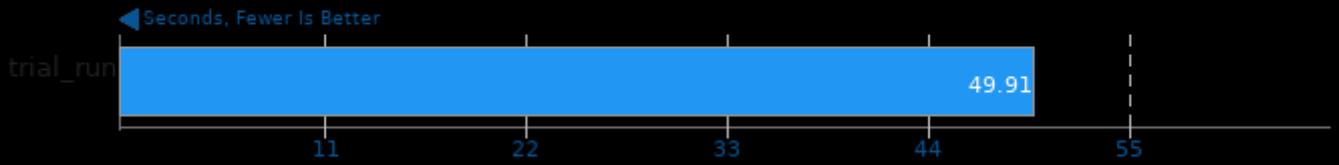
trial_run

4.37

0.9833 1.9666 2.9499 3.9332 4.9165

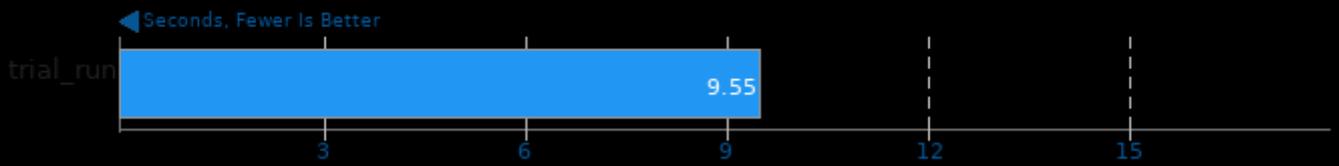
Polyhedron Fortran Benchmarks

Benchmark: tfft2



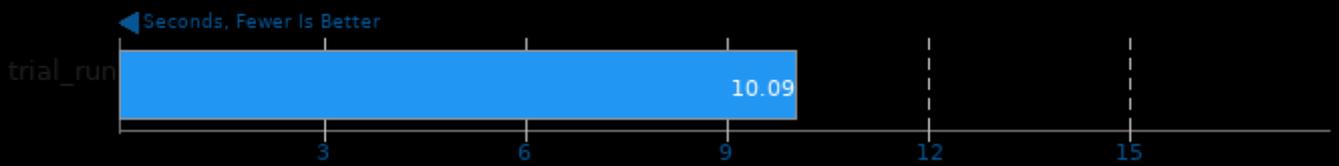
Polyhedron Fortran Benchmarks

Benchmark: aermod



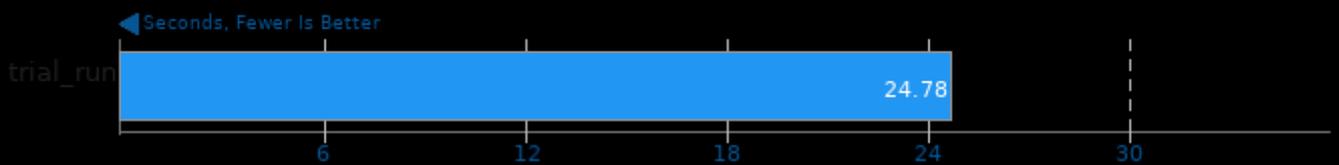
Polyhedron Fortran Benchmarks

Benchmark: mflow



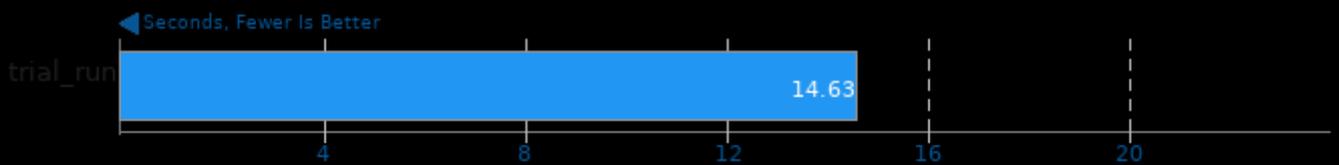
Polyhedron Fortran Benchmarks

Benchmark: induct2



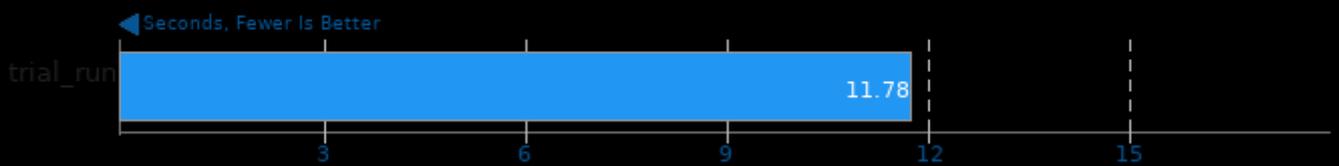
Polyhedron Fortran Benchmarks

Benchmark: protein



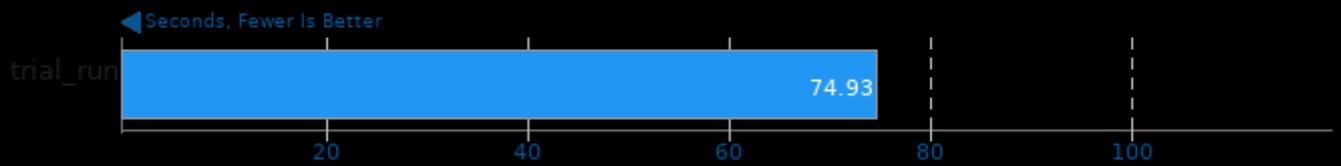
Polyhedron Fortran Benchmarks

Benchmark: capacita



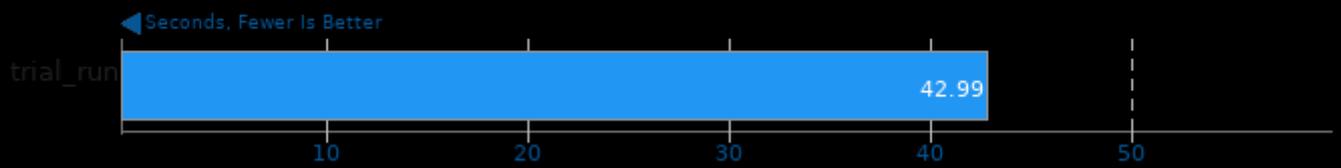
Polyhedron Fortran Benchmarks

Benchmark: channel2



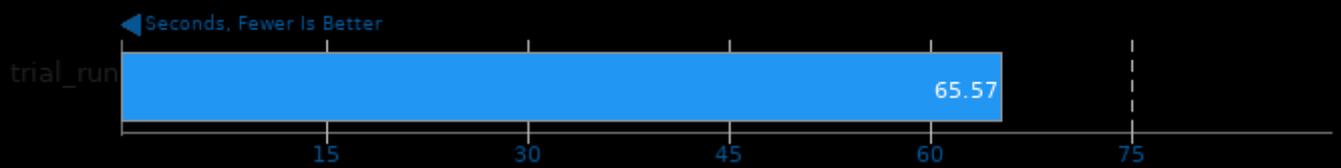
Polyhedron Fortran Benchmarks

Benchmark: fatigue2



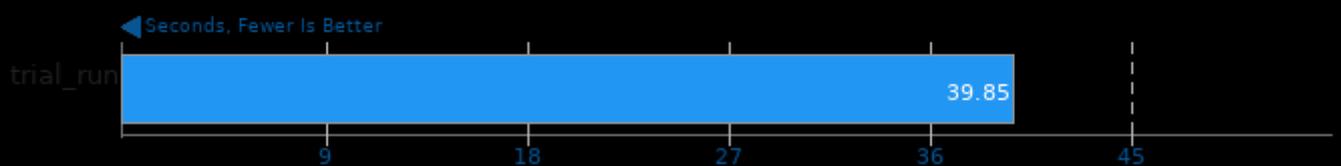
Polyhedron Fortran Benchmarks

Benchmark: gas_dyn2



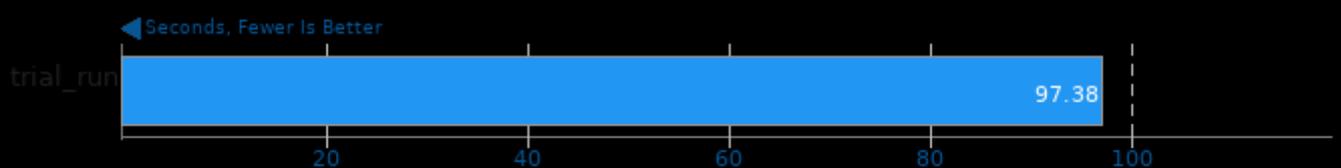
Polyhedron Fortran Benchmarks

Benchmark: test_fpu2



Polyhedron Fortran Benchmarks

Benchmark: mp_prop_design



BLAKE2 20170307

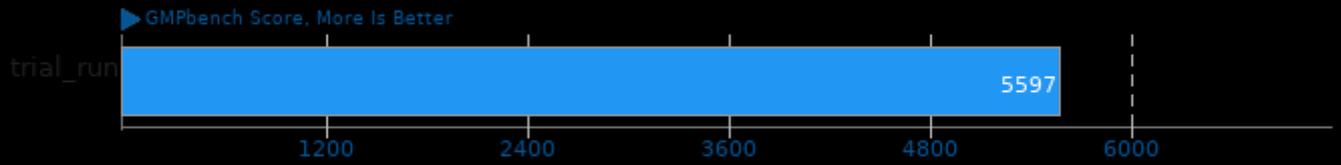
← Cycles Per Byte, Fewer Is Better



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

GNU GMP GMPbench 6.1.2

Total Time



1, (CC) gcc options: -O3 -fomit-frame-pointer -lm

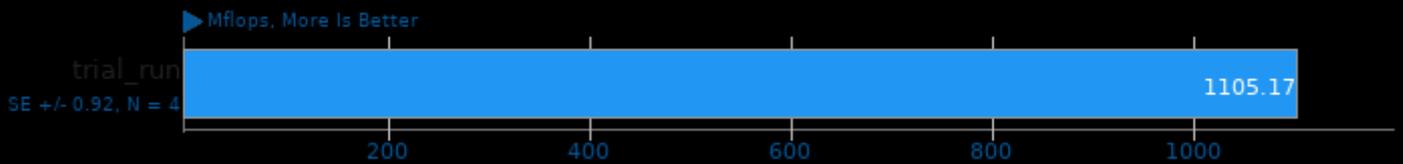
Java SciMark 2.0

Computational Test: Composite



Java SciMark 2.0

Computational Test: Monte Carlo



Java SciMark 2.0

Computational Test: Fast Fourier Transform



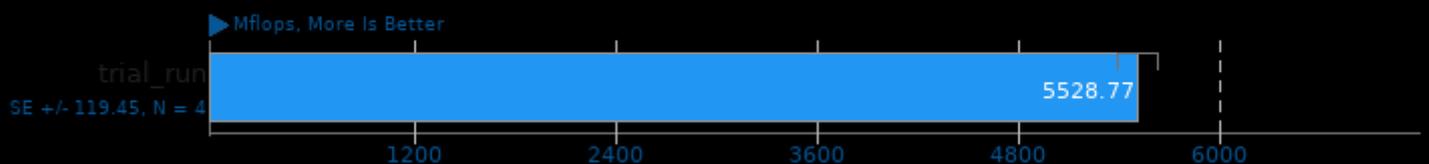
Java SciMark 2.0

Computational Test: Sparse Matrix Multiply



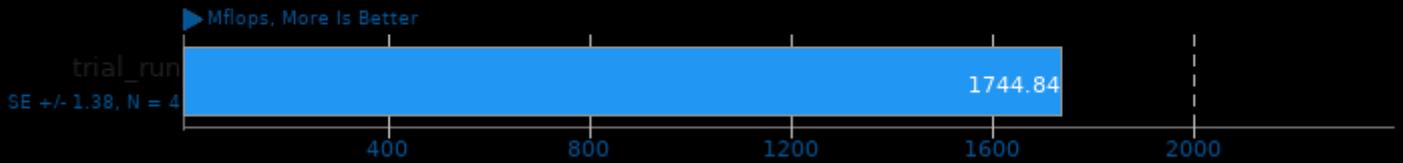
Java SciMark 2.0

Computational Test: Dense LU Matrix Factorization



Java SciMark 2.0

Computational Test: Jacobi Successive Over-Relaxation



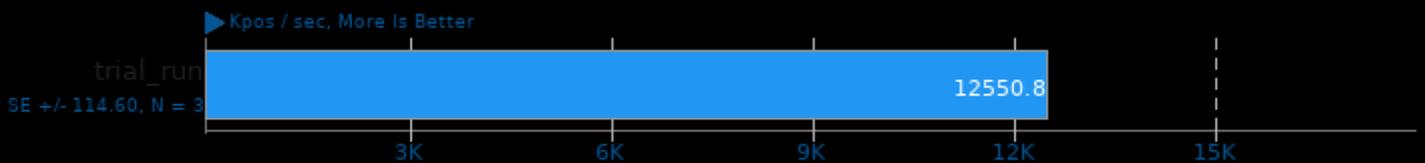
Bork File Encrypter 1.4

File Encryption Time



Fhourstones 3.1

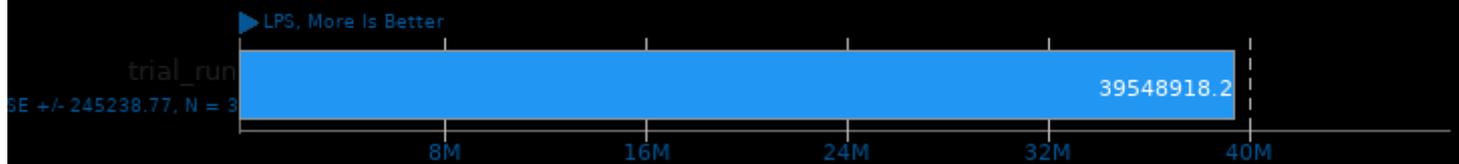
Complex Connect-4 Solving



1. (CC) gcc options: -O3

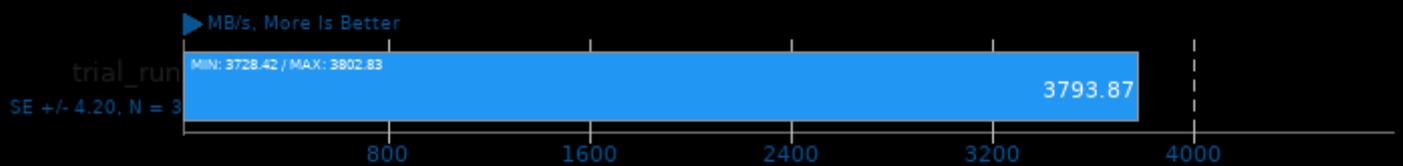
BYTE Unix Benchmark 3.6

Computational Test: Dhrystone 2



CacheBench

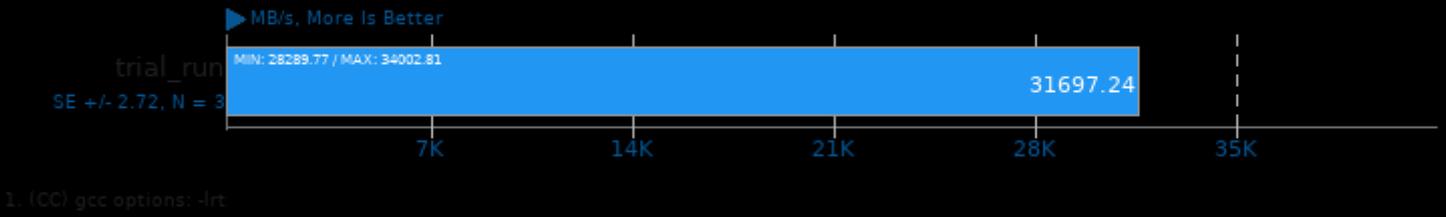
Test: Read



1. (CC) gcc options: -lrt

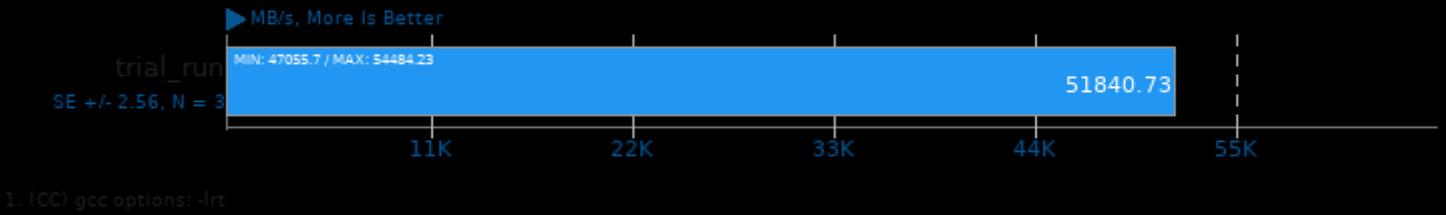
CacheBench

Test: Write



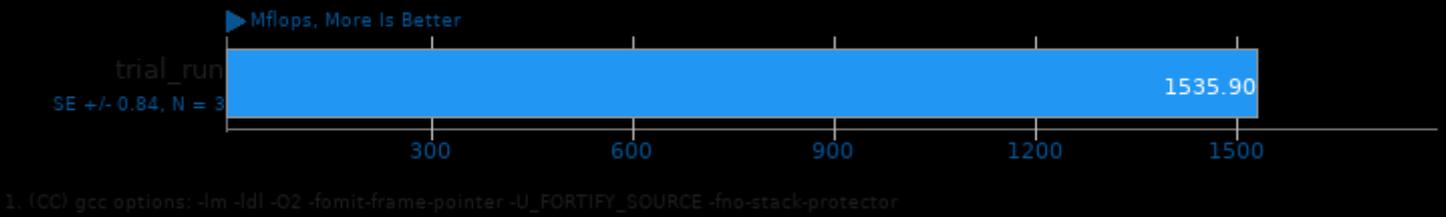
CacheBench

Test: Read / Modify / Write



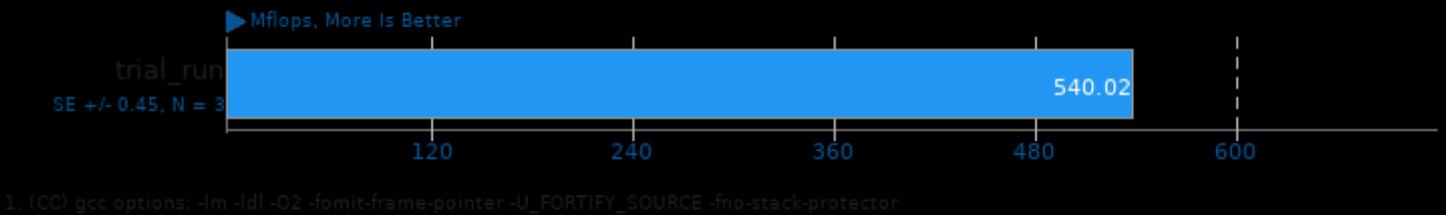
LuajIT 2.1-git

Test: Composite



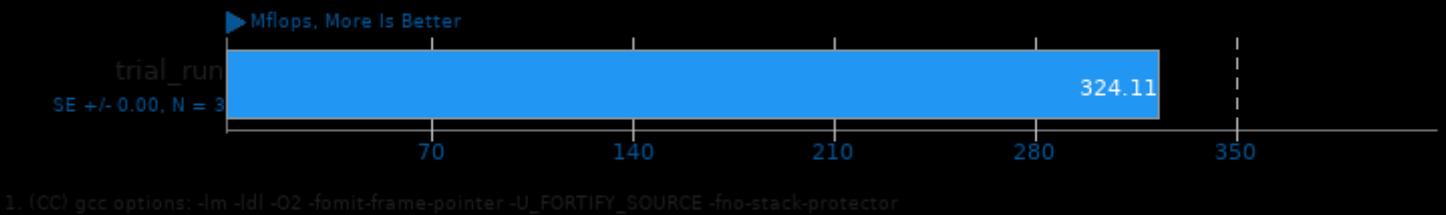
LuajIT 2.1-git

Test: Monte Carlo



LuajIT 2.1-git

Test: Fast Fourier Transform



LuajIT 2.1-git

Test: Sparse Matrix Multiply



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

LuajIT 2.1-git

Test: Dense LU Matrix Factorization



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

LuajIT 2.1-git

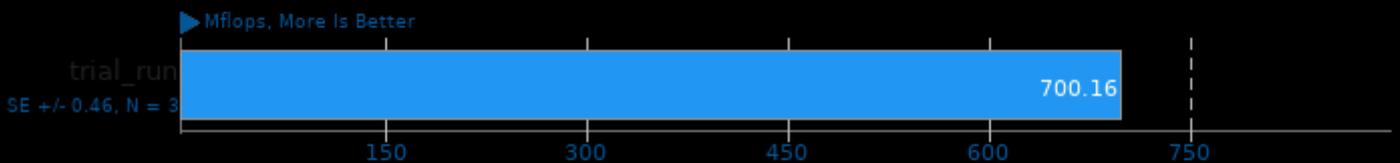
Test: Jacobi Successive Over-Relaxation



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

SciMark 2.0

Computational Test: Composite



1. (CC) gcc options: -lm

SciMark 2.0

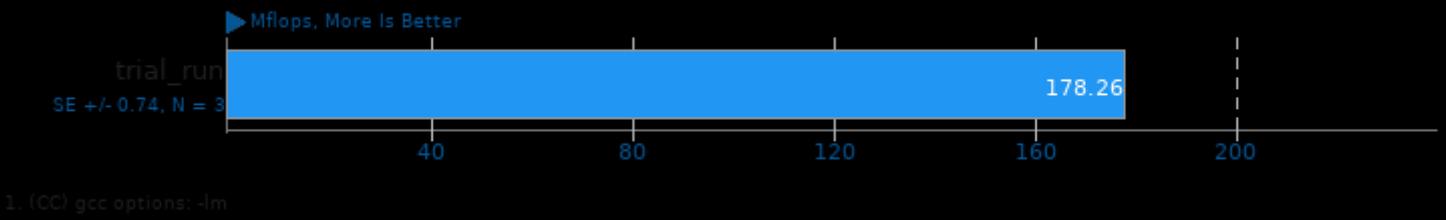
Computational Test: Monte Carlo



1. (CC) gcc options: -lm

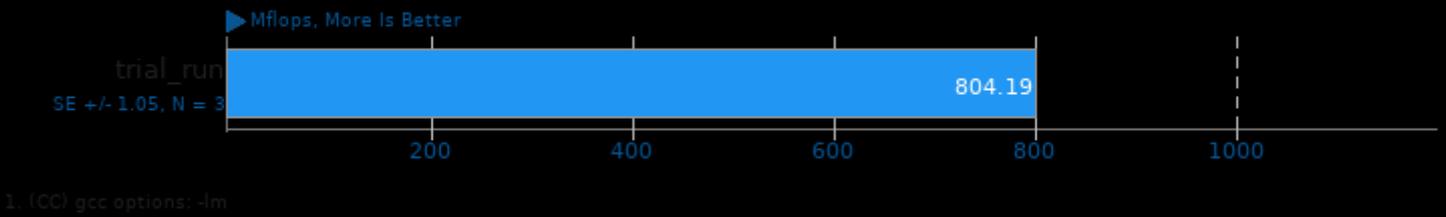
SciMark 2.0

Computational Test: Fast Fourier Transform



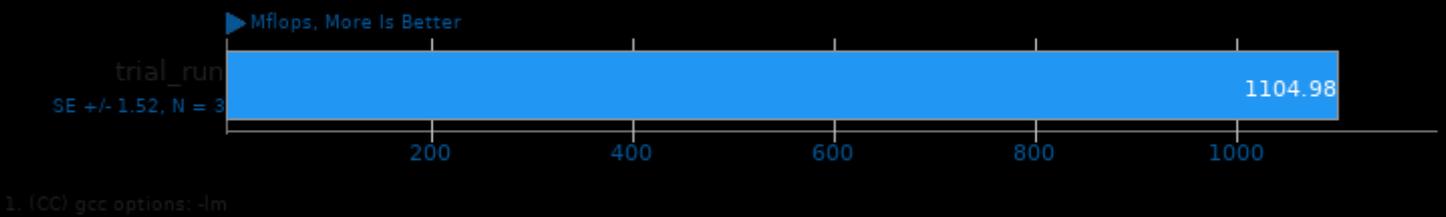
SciMark 2.0

Computational Test: Sparse Matrix Multiply



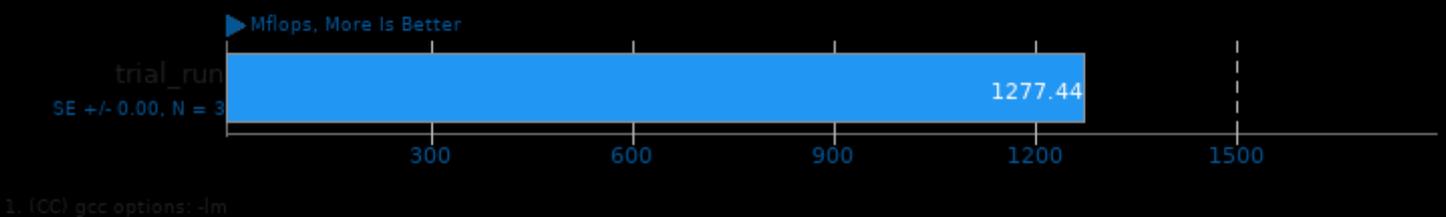
SciMark 2.0

Computational Test: Dense LU Matrix Factorization



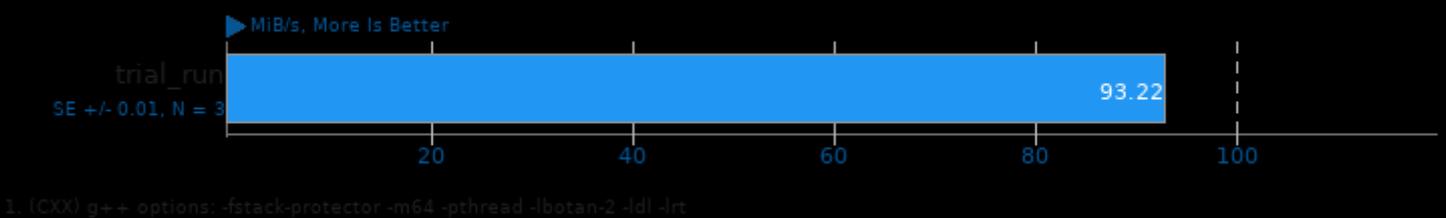
SciMark 2.0

Computational Test: Jacobi Successive Over-Relaxation



Botan 2.13.0

Test: KASUMI



Botan 2.13.0

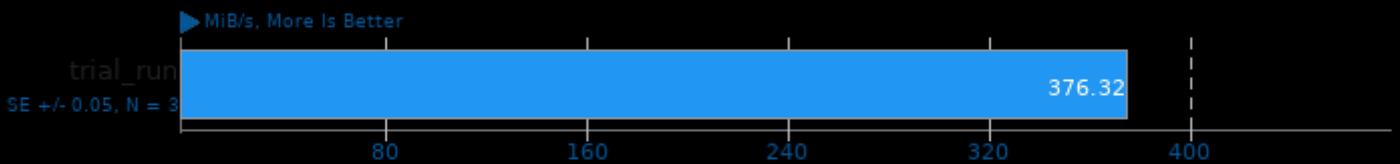
Test: AES-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

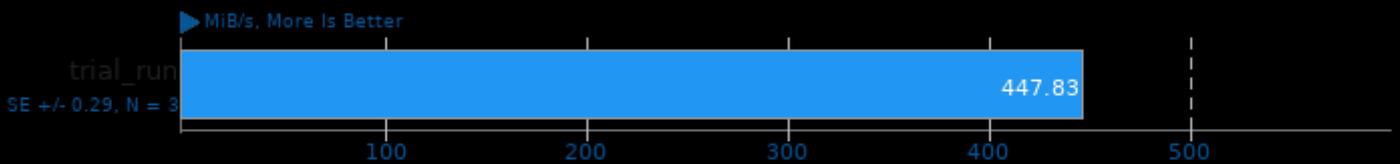
Test: Twofish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

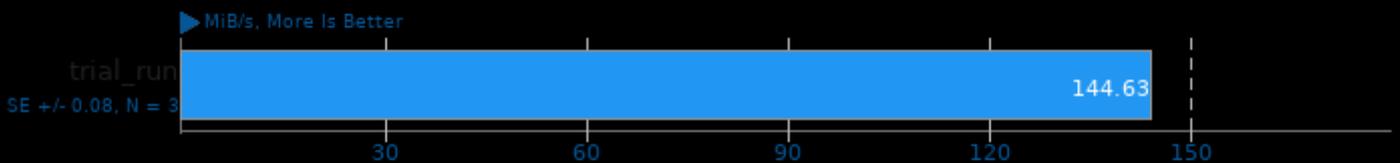
Test: Blowfish



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

Botan 2.13.0

Test: CAST-256



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

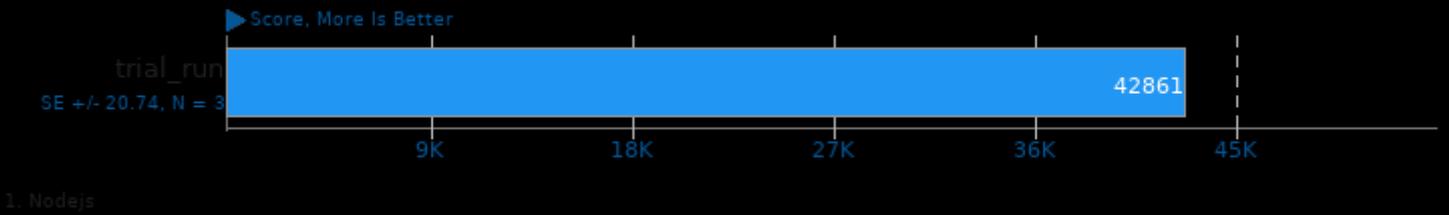
Swet 1.5.16

Average



1. (C) gcc options: -lm -pthread -lcurses -lrt

Node.js Octane Benchmark

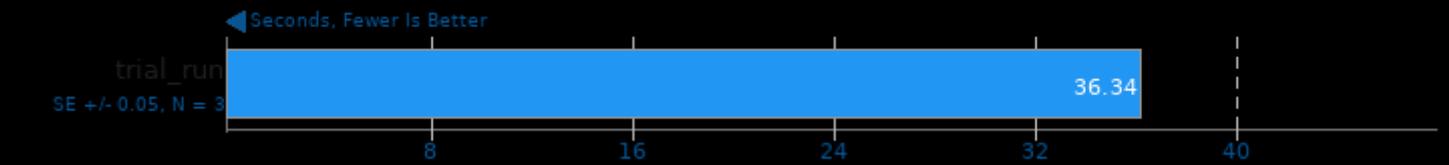


Numpy Benchmark



Gzip Compression

Linux Source Tree Archiving To .tar.gz



dcraw

RAW To PPM Image Conversion



1. (CC) gcc options: -lm

DeepSpeech 0.6

Acceleration: CPU



FLAC Audio Encoding 1.3.2

WAV To FLAC



1. (CXX) g++ options: -O2 -fvisibility=hidden -lm

LAME MP3 Encoding 3.100

WAV To MP3



1. (C) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -fincurses -lm

GnuPG 1.4.22

2GB File Encryption



1. (C) gcc options: -O2 -MT -MD -MP -MF

Minion 1.8

Benchmark: Graceful



1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

Minion 1.8

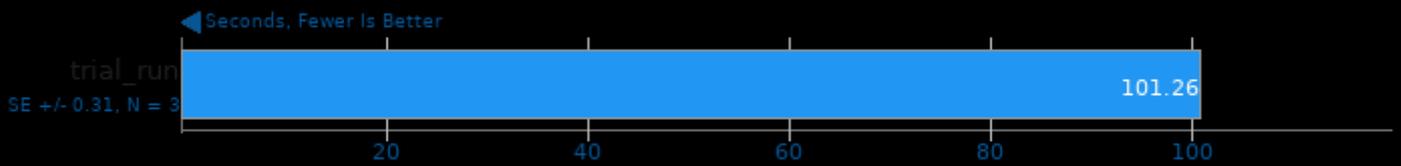
Benchmark: Solitaire



1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

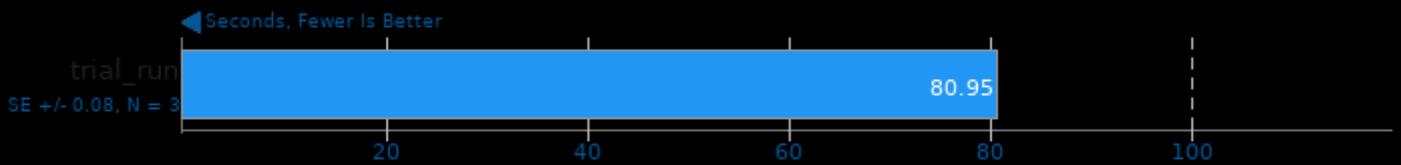
Minion 1.8

Benchmark: Quasigroup



1. (CXX) g++ options: -std=gnu++11 -O3 -fomit-frame-pointer -rdynamic

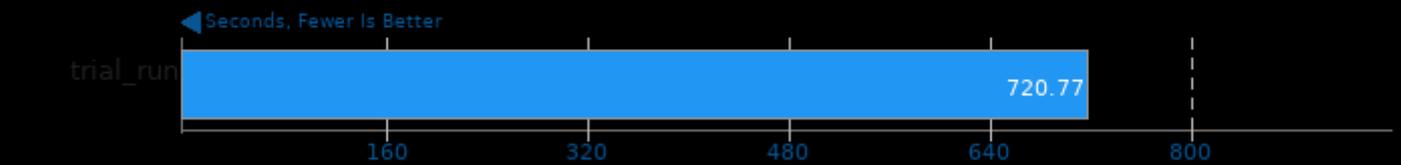
OpenCV Benchmark 3.3.0



1. (CXX) g++ options: -std=c++11 -rdynamic

Radiance Benchmark 5.0

Test: Serial



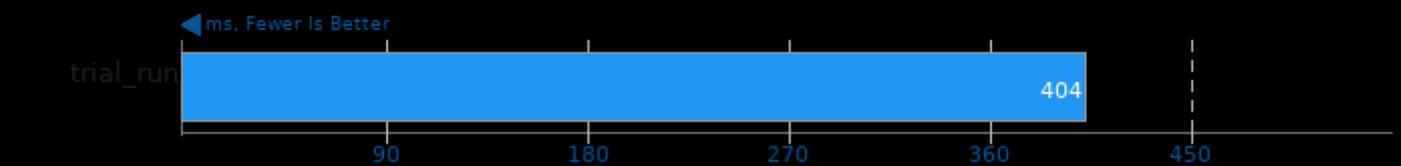
Sudoku 0.4

Total Time



System Libxml2 Parsing

Filesize: 1 MB



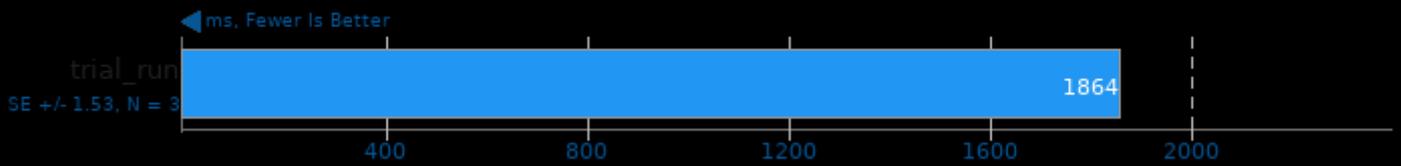
System Libxml2 Parsing

Filesize: 2 MB



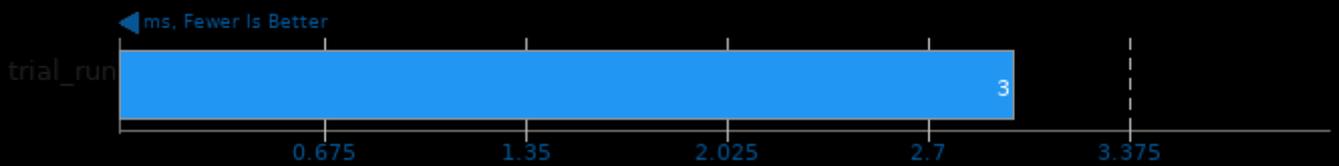
System Libxml2 Parsing

Filesize: 3 MB



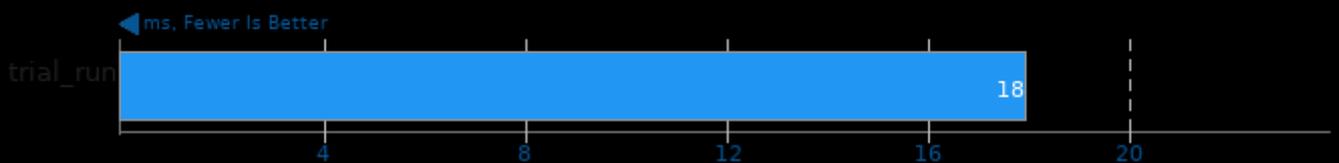
System Libxml2 Parsing

Filesize: 5 KB



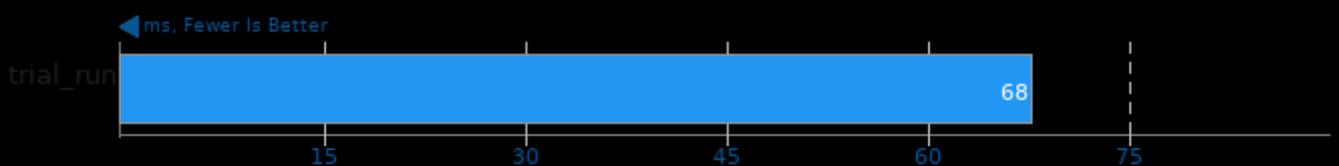
System Libxml2 Parsing

Filesize: 50 KB



System Libxml2 Parsing

Filesize: 100 KB



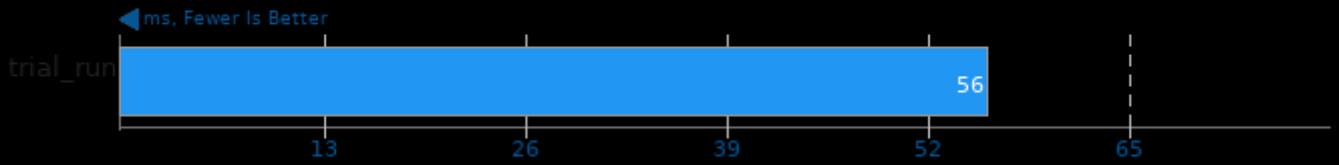
System Libxml2 Parsing

Filesize: 112 MB



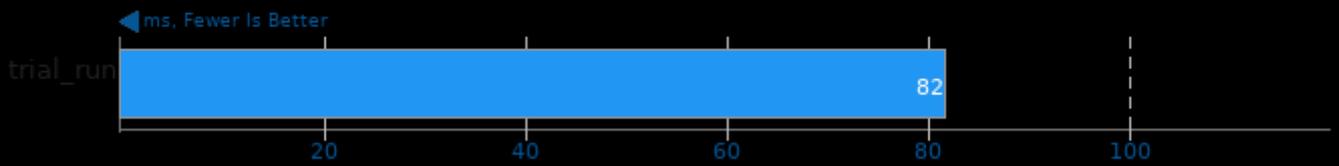
System Libxml2 Parsing

Filesize: 150 KB



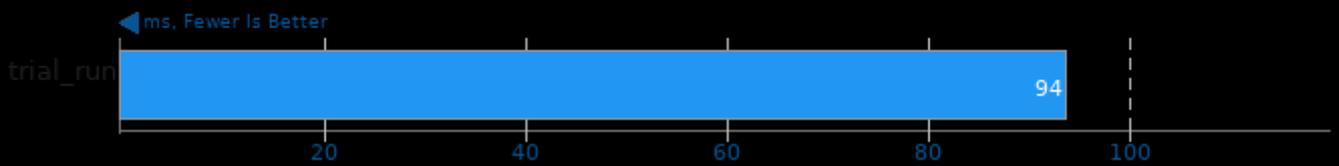
System Libxml2 Parsing

Filesize: 200 KB



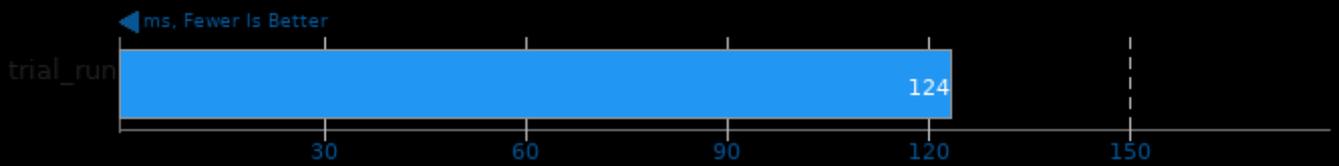
System Libxml2 Parsing

Filesize: 250 KB



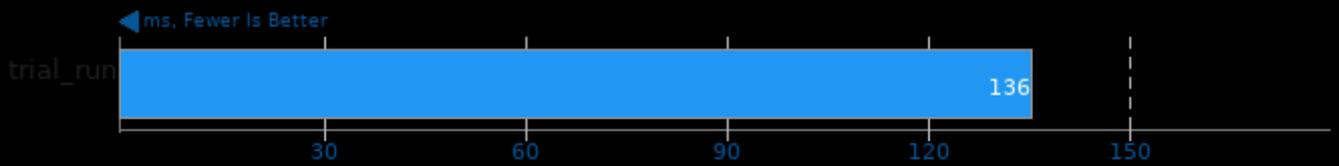
System Libxml2 Parsing

Filesize: 300 KB



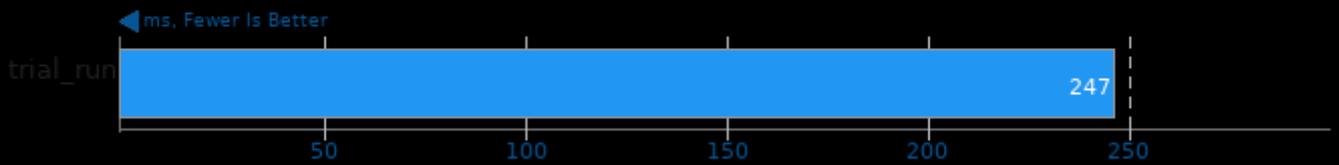
System Libxml2 Parsing

Filesize: 350 KB



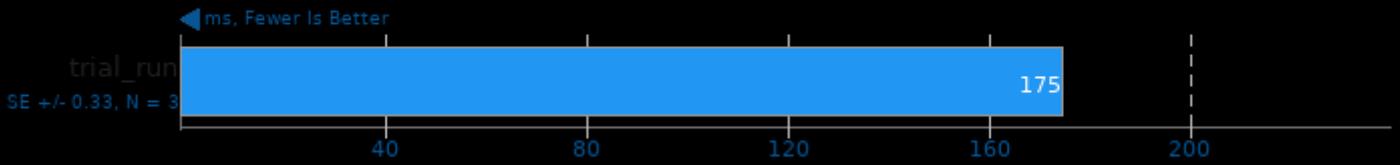
System Libxml2 Parsing

Filesize: 400 KB



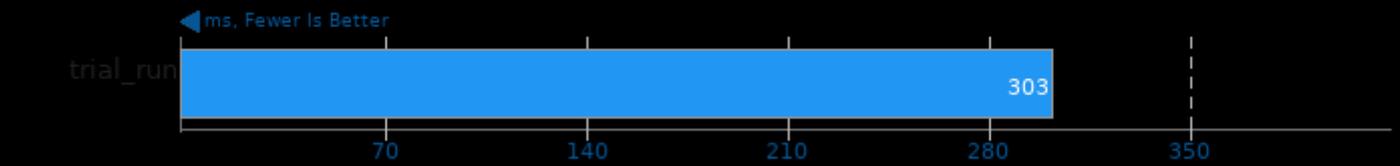
System Libxml2 Parsing

Filesize: 450 KB



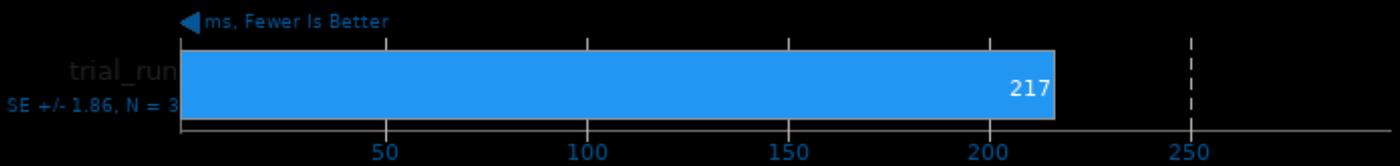
System Libxml2 Parsing

Filesize: 500 KB



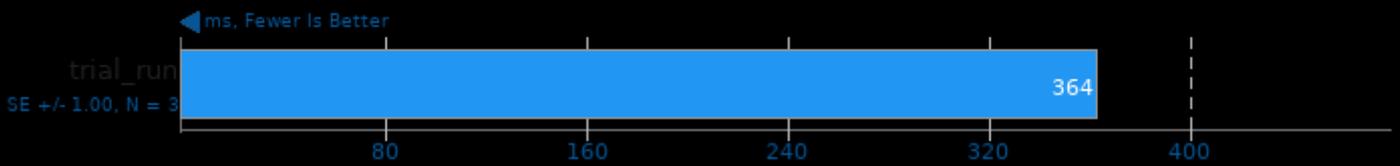
System Libxml2 Parsing

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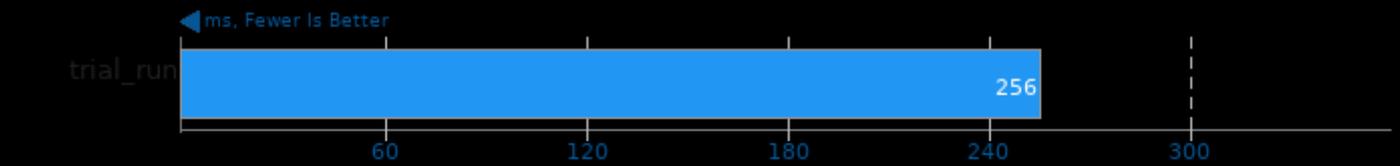
System Libxml2 Parsing

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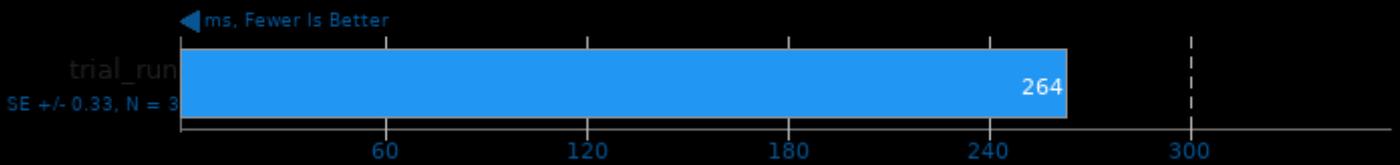
System Libxml2 Parsing

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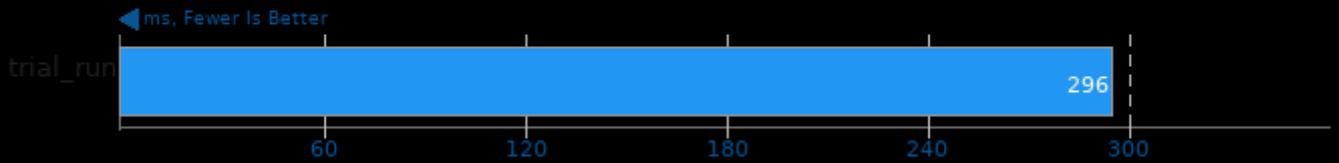
System Libxml2 Parsing

Filesize: 700 KB



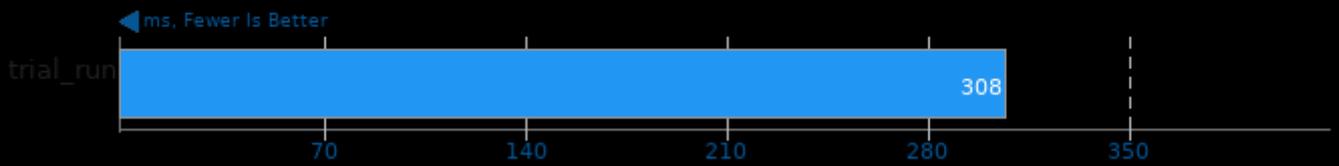
System Libxml2 Parsing

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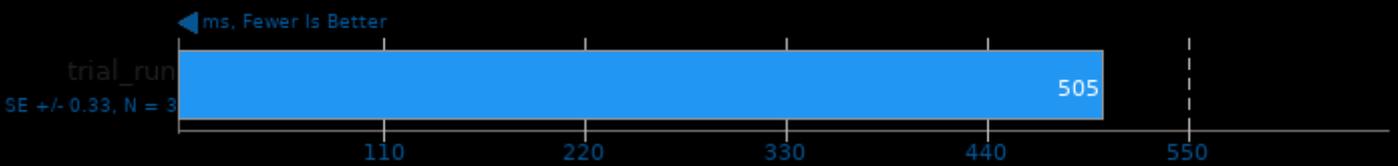
System Libxml2 Parsing

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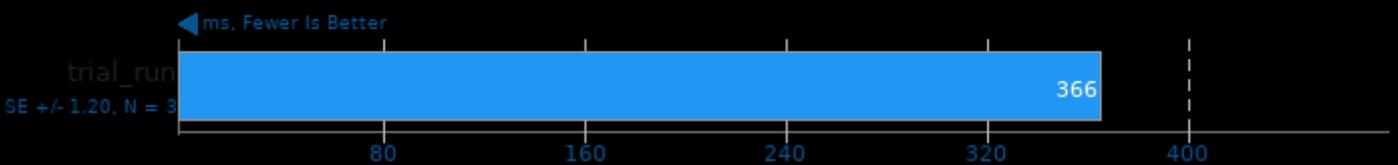
System Libxml2 Parsing

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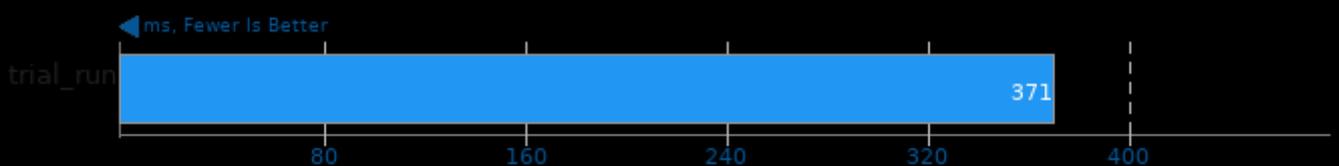
System Libxml2 Parsing

Filesize: 900 KB



System Libxml2 Parsing

Filesize: 950 KB



glibc bench 1.0

Benchmark: cos



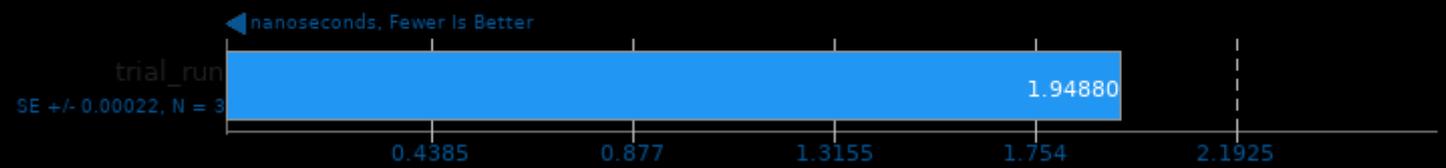
glibc bench 1.0

Benchmark: exp



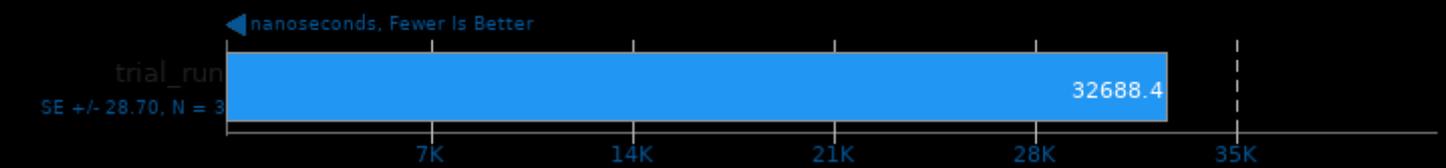
glibc bench 1.0

Benchmark: ffs



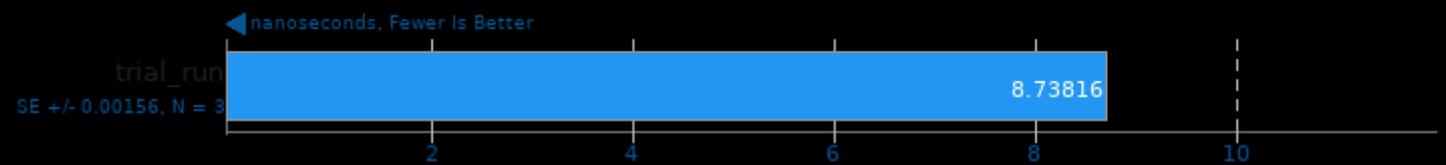
glibc bench 1.0

Benchmark: sin



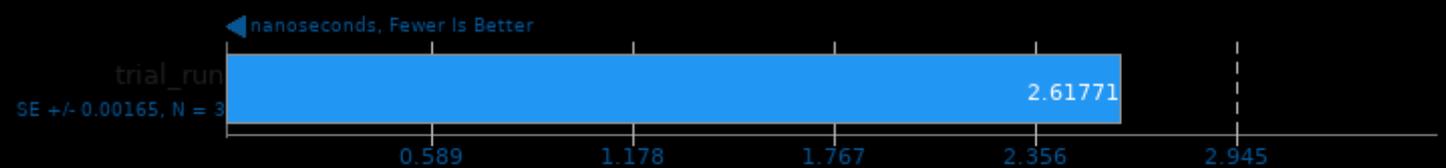
glibc bench 1.0

Benchmark: log2



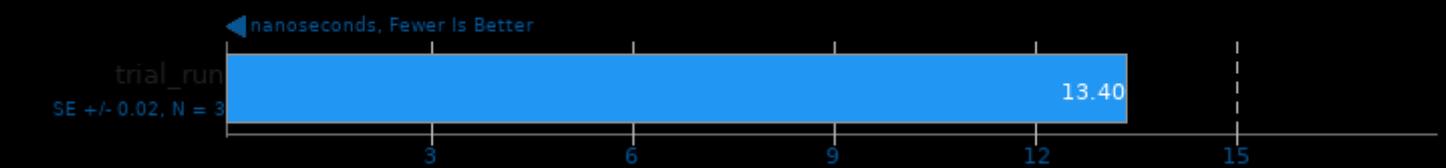
glibc bench 1.0

Benchmark: modf



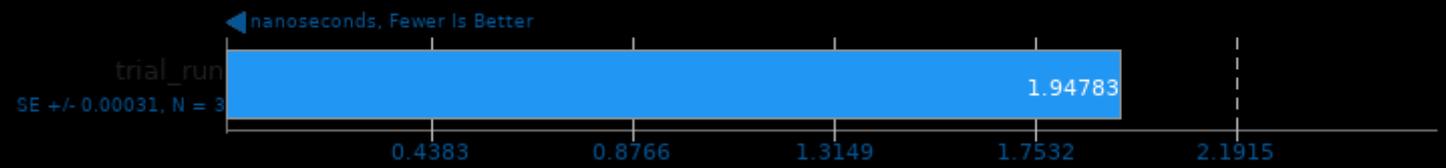
glibc bench 1.0

Benchmark: sinh



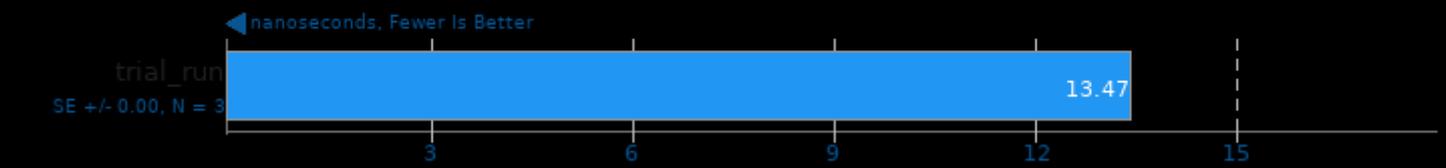
glibc bench 1.0

Benchmark: sqrt



glibc bench 1.0

Benchmark: tanh



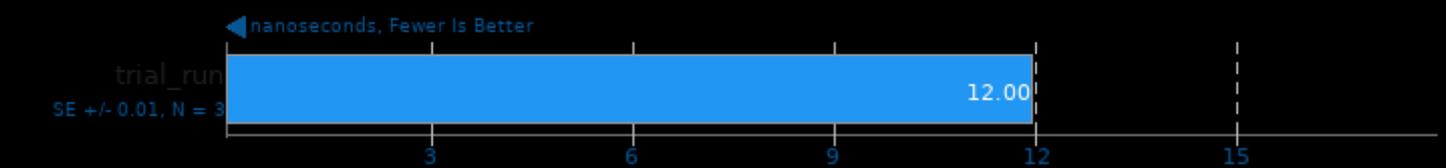
glibc bench 1.0

Benchmark: asinh



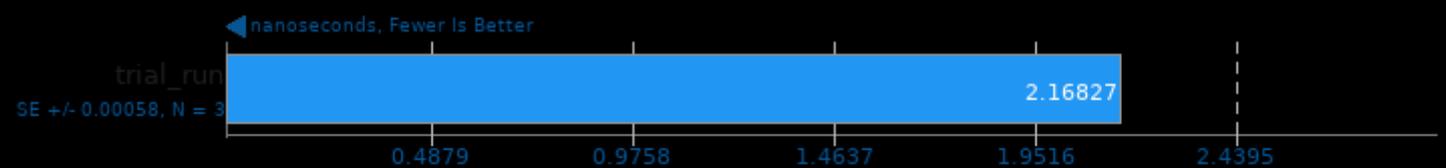
glibc bench 1.0

Benchmark: atanh



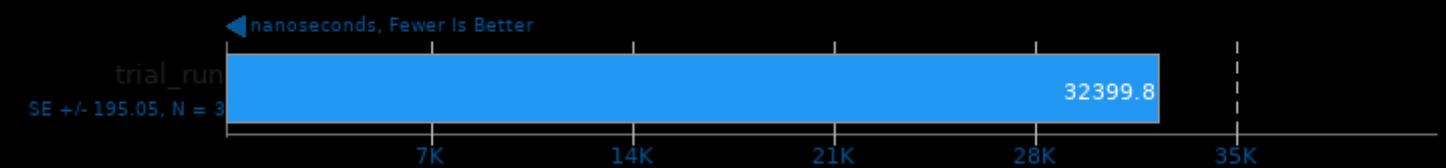
glibc bench 1.0

Benchmark: ffsll



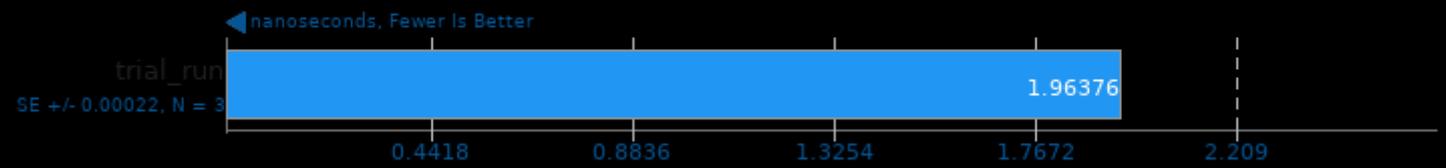
glibc bench 1.0

Benchmark: sincos



glibc bench 1.0

Benchmark: pthread_once



libjpeg-turbo tjbench 2.0.2

Test: Decompression Throughput



1. (CC) gcc options: -O3 -rdynamic -lm

CppPerformanceBenchmarks 9

Test: Atol



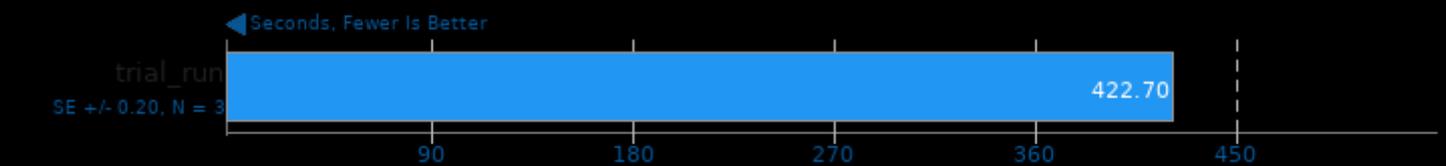
CppPerformanceBenchmarks 9

Test: Ctype



CppPerformanceBenchmarks 9

Test: Math Library



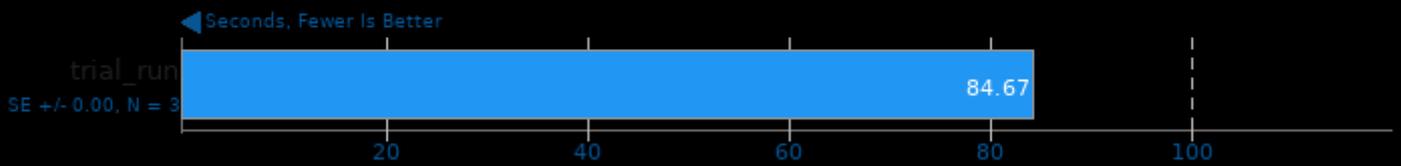
CppPerformanceBenchmarks 9

Test: Random Numbers



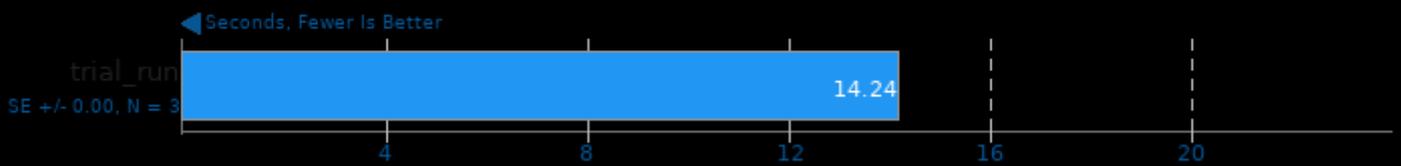
CppPerformanceBenchmarks 9

Test: Stepanov Vector



CppPerformanceBenchmarks 9

Test: Function Objects



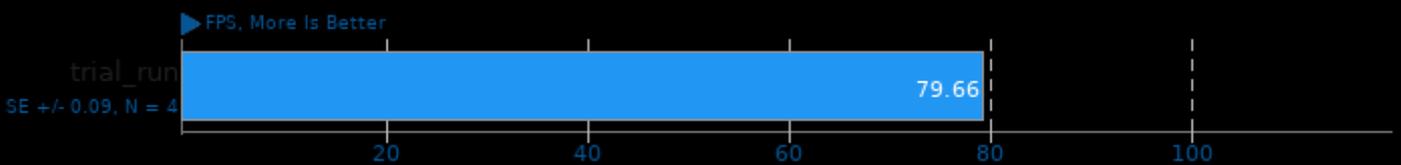
CppPerformanceBenchmarks 9

Test: Stepanov Abstraction



Optcarrot

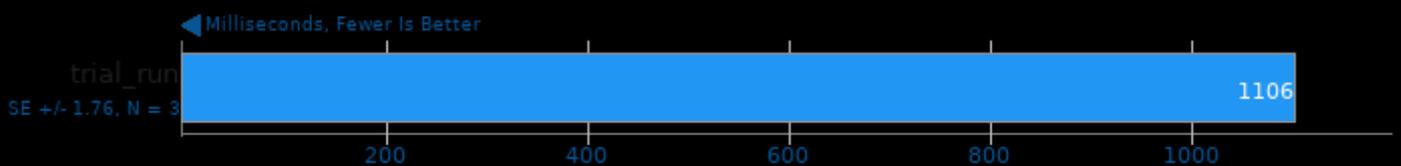
Optimized Benchmark

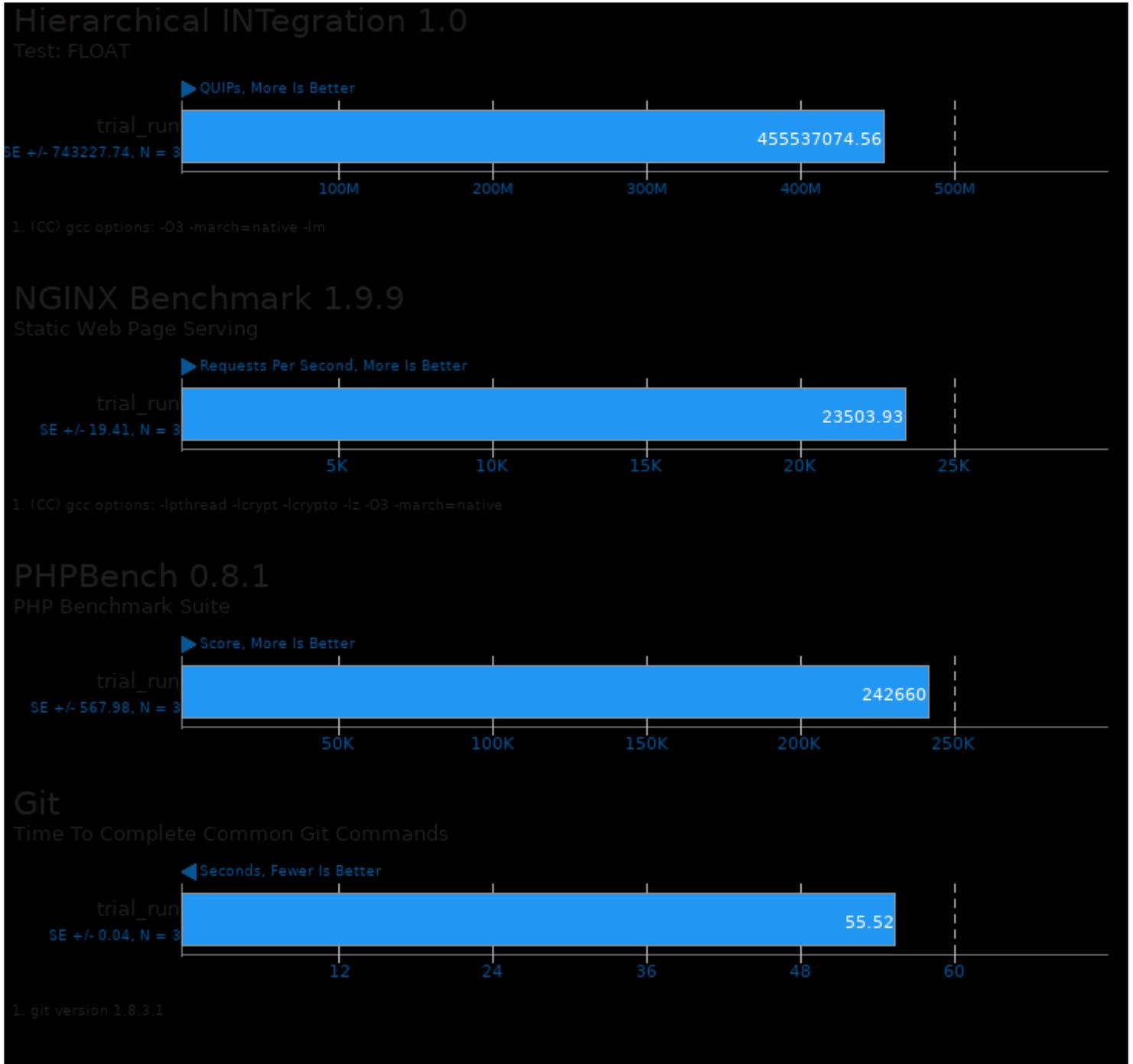


1. ruby 2.0.0p648 (2015-12-16) [x86_64-linux]

PyBench 2018-02-16

Total For Average Test Times





This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 19:08.