www.phoronix-test-suite.com

testing-server-memory

Intel Xeon E5-2697 v3 testing with a ASUS SABERTOOTH X99 (4101 BIOS) and AMD Radeon RX 6800/6800 XT / 6900 16GB on Slackware 14.2 x86_64 via the Phoronix Test Suite.

Test Systems:

Intel Xeon E5-2697 v3

Processor: Intel Xeon E5-2697 v3 @ 3.60GHz (14 Cores / 28 Threads), Motherboard: ASUS SABERTOOTH X99 (4101 BIOS), Chipset: Intel Xeon E7 v3/Xeon, Memory: 126GB, Disk: 1000GB GIGABYTE GP-ASM2NE6100TTTD + 500GB Samsung SSD 860 + 512GB SAMSUNG MZHPV512, Graphics: AMD Radeon RX 6800/6800 XT / 6900 16GB (2575/1000MHz), Audio: AMD Navi 21 HDMI Audio, Monitor: ROG PG348Q, Network: Intel I218-V

OS: Slackware 14.2 x86_64, Kernel: 5.13.0 (x86_64), Desktop: KDE Plasma 5.22.2, Display Server: X Server 1.20.11, OpenGL: 4.6 Mesa 21.1.4 (LLVM 12.0.0), Vulkan: 1.2.168, Compiler: GCC 10.3.0 + Open64 PARSE ERROR: Argument:-dumpversion Couldn t find match for argumentBrief USAGE: opencc [--noflush] [-i] [-o] [-c] [--] [--version] [-h]For complete USAGE and HELP type: opencc--help + Clang 12.0.0 + LLVM 12.0.0, File-System: ext4, Screen Resolution: 3440x1440

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Kernel Notes: amdgpu.aspm=1 - Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-slackware-linux --disable-gtktest --disable-install-libiberty --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-gnu-indirect-function --enable-gnu-unique-object --enable-languages=ada,brig,c,c++,d,fortran,go,lto,objc,obj-c++ --enable-libstdcxx-dual-abi --enable-lto --enable-multilib --enable-objc-gc --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-slackware-linux --mandir=/usr/man --target=x86_64-slackware-linux --verbose --with-arch-directory=amd64 --with-default-libstdcxx-abi=new --with-gnu-ld --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x46
Java Notes: OpenJDK Runtime Environment Zulu11.35+15-CA (build 11.0.5+10-LTS)
Python Notes: Python 2.7.18 + Python 3.9.6
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	Intel Xeon E5-2697 v3
RAMspeed SMP - Add - Integer (MB/s)	23987
Standard Deviation	1.5%
RAMspeed SMP - Copy - Integer (MB/s)	20482
Standard Deviation	2.4%
RAMspeed SMP - Scale - Integer (MB/s)	20951
Standard Deviation	1.3%
RAMspeed SMP - Average - Integer (MB/s)	22360
Standard Deviation	1.7%
RAMspeed SMP - Add - Floating Point (MB/s)	23806
Standard Deviation	0.6%
RAMspeed SMP - Copy - Floating Point (MB/s)	20378
Standard Deviation	1.2%
RAMspeed SMP - Scale - Floating Point (MB/s)	22453
Standard Deviation	1%
RAMspeed SMP - Average - Floating Point (MB/s)	22880
Standard Deviation	0.7%
MBW - Memory Copy - 4096 MiB (MiB/s)	8834
Standard Deviation	3.9%
MBW - M.C.F.B.S - 4096 MiB (MiB/s)	5587
Standard Deviation	2.5%
Parboil - OpenMP LBM (sec)	66.668447
Standard Deviation	0%
Parboil - OpenMP Stencil (sec)	7.291584
Standard Deviation	2.3%
Parboil - O.M.G (sec)	139.219373
Standard Deviation	4.7%
CloverLeaf - L.E.H (sec)	94.80
Standard Deviation	0.1%
Rodinia - OpenMP LavaMD (sec)	245.575
Standard Deviation	0.5%
Rodinia - OpenMP CFD Solver (sec)	20.435
Standard Deviation	1.2%
Rodinia - O.S (sec)	14.431
Standard Deviation	3.5%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	1.50058
Standard Deviation	0.1%
DaCapo Benchmark - H2 (msec)	4014
Standard Deviation	2.6%

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DaCapo Benchmark - Jython (msec) 5494
Standard Deviation 0.6%
DaCapo Benchmark - Tradesoap (msec) 4605
Standard Deviation 2.3%
DaCapo Benchmark - Tradebeans (msec) 5429
Standard Deviation 1.8%
Renaissance - Scala Dotty (ms) 2318
Standard Deviation 3.6%
Renaissance - Rand Forest (ms) 2375
Standard Deviation 2.5%
Renaissance - Apache Spark ALS (ms) 2717
Standard Deviation 1.8%
Renaissance - Apache Spark Bayes (ms) 483.878
Standard Deviation 36.2%
Renaissance - Savina Reactors.IO (ms) 25385
Standard Deviation 3.1%
Renaissance - A.S.P (ms) 4212
Standard Deviation 2.4%
Renaissance - T.H.R (ms) 3780
Standard Deviation 1.3%
Renaissance - I.M.D.S (ms) 3951
Standard Deviation 9.1%
Renaissance - A.U.C.T (ms) 12639
Standard Deviation 1.6%
Renaissance - G.A.U.J.F (ms) 2138
Standard Deviation 2.3%
Zstd Compression - 3 - Compression Speed (MB/s) 2765
Standard Deviation 0.6%
Zstd Compression - 8 - Compression Speed (MB/s) 470.1
Standard Deviation 0.7%
Zstd Compression - 8 - D.S (MB/s) 2666
Standard Deviation 0.3%
Zstd Compression - 19 - Compression Speed (MB/s) 44.2
Standard Deviation 0.3%
Zstd Compression - 19 - D.S (MB/s) 2315
Standard Deviation 2.8%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s) 770.4
Standard Deviation 0.7%
Zstd Compression - 3, Long Mode - D.S (MB/s) 2799
Standard Deviation 0.5%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s) 635.9
Standard Deviation 0.3%
Zstd Compression - 8, Long Mode - D.S (MB/s) 2848
Standard Deviation 0.1%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s) 32.6
Standard Deviation 0.5%
Zstd Compression - 19, Long Mode - D.S (MB/s) 2365
Standard Deviation 1.4%
John The Ripper - Blowfish (Real C/S) 18030
Standard Deviation 0.1%
GraphicsMagick - Rotate (Iterations/min) 475
Standard Deviation 4.1%
GraphicsMagick - Sharpen (Iterations/min) 137

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GraphicsMagick - Enhanced (Iterations/min)	155
Standard Deviation	0.4%
GraphicsMagick - Resizing (Iterations/min)	935
Standard Deviation	0.2%
oneDNN MKL-DNN - D.B.d - f32 (ms)	4.36662
Standard Deviation	0.1%
dav1d - Summer Nature 4K (FPS)	179.11
Standard Deviation	0.1%
OSPray - XFrog Forest - SciVis (FPS)	3.12
Standard Deviation	0%
OSPray - M.R - SciVis (FPS)	15.47
Standard Deviation	2.4%
Embree - Pathtracer - Crown (FPS)	13.0437
Standard Deviation	2.4%
ACES DGEMM - S.F.P.R (GFLOP/s)	2.491659
Standard Deviation	6.9%
Himeno Benchmark - P.P.S (MFLOPS)	2714
Standard Deviation	0.8%
7-Zip Compression - C.S.T (MIPS)	58338
Standard Deviation	0.7%
asmFish - 1.H.M.2.D (Nodes/s)	31523430
Standard Deviation	2.1%
Timed Linux Kernel Compilation - Time To Compile (sec)	105.663
Standard Deviation	2.2%
Timed LLVM Compilation - Time To Compile (sec)	828.018
Standard Deviation	2%
Timed PHP Compilation - Time To Compile (sec)	77.405
Standard Deviation	0.6%
Build2 - Time To Compile (sec)	157.718
Standard Deviation	0.7%
Tungsten Renderer - Water Caustic (sec)	28.5526
Standard Deviation	0.6%
XZ Compression - C.u.1.0.3.s.i.i.C.L.9 (sec)	26.691
Standard Deviation	0.6%
DeepSpeech - CPU (sec)	124.88852
Standard Deviation	0.1%
OpenCV Benchmark (sec)	116.458
Standard Deviation	0.5%
Radiance Benchmark - SMP Parallel (sec)	313.469
OpenSSL - R.4.b.P (Signs/sec)	1905
Standard Deviation	0.5%
libjpeg-turbo tjbench - D.T (Megapixels/sec)	139.882046
Standard Deviation	1%
SQLite Speedtest - Timed Time - Size 1,000 (sec)	102.253
Standard Deviation	2.1%
GEGL - Crop (sec)	13.696
Standard Deviation	0.7%
GEGL - Cartoon (sec)	131.440
Standard Deviation	1%
GEGL - Reflect (sec)	45.017
Standard Deviation	0.2%
GEGL - Antialias (sec)	52.498
Standard Deviation	0.2%

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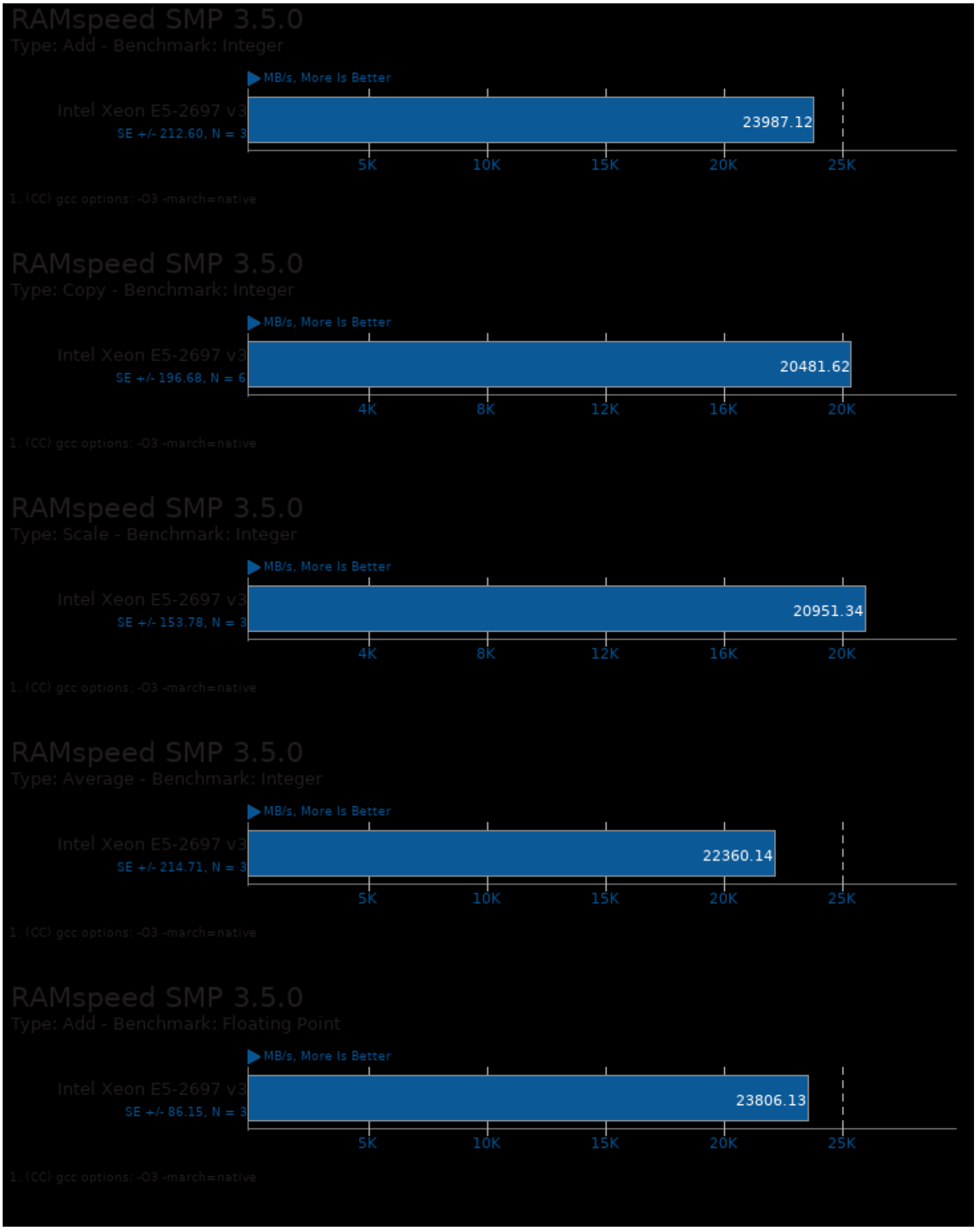
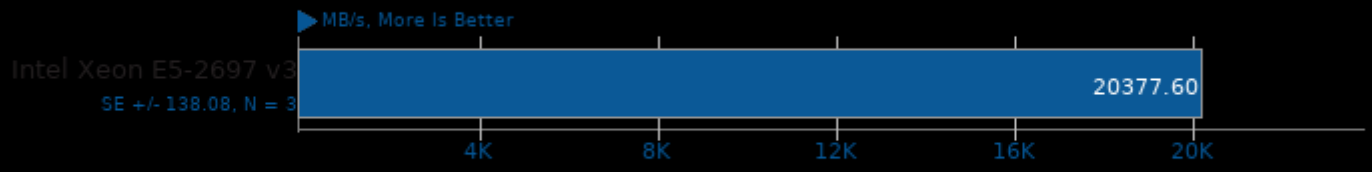
GEGL - Color Enhance (sec)	79.657
Standard Deviation	0.4%
GEGL - Rotate 90 Degrees (sec)	57.333
Standard Deviation	0.1%
GIMP - rotate (sec)	21.381
Standard Deviation	0.9%
GIMP - auto-levels (sec)	21.481
Standard Deviation	0.9%
GIMP - unsharp-mask (sec)	23.863
Standard Deviation	0.1%
Redis - GET (Reqs/sec)	2120707
Standard Deviation	1.6%
Redis - SET (Reqs/sec)	1579746
Standard Deviation	1.4%
Sysbench - Memory (MiB/sec)	15487
Standard Deviation	0.8%
Sysbench - CPU (Events/sec)	21433
Standard Deviation	0.1%
Apache Cassandra - Writes (Op/s)	85852
Standard Deviation	2%
Blender - Classroom - CPU-Only (sec)	456.57
Standard Deviation	0.5%
Blender - Barbershop - CPU-Only (sec)	614.77
Standard Deviation	0.8%
Memcached mcperf - Add (Operations/sec)	40958
Standard Deviation	1.6%
Memcached mcperf - Get (Operations/sec)	72844
Standard Deviation	1.1%
Memcached mcperf - Set (Operations/sec)	42104
Standard Deviation	1.8%
Memcached mcperf - Append (Operations/sec)	45106
Standard Deviation	2.3%
Memcached mcperf - Replace (Operations/sec)	44964
Standard Deviation	2.4%
PyBench - T.F.A.T.T (Milliseconds)	1608
Standard Deviation	3.9%
NGINX Benchmark - S.W.P.S (Reqs/sec)	22641
Standard Deviation	1.9%
Apache Benchmark - S.W.P.S (Reqs/sec)	20601
Standard Deviation	2.2%
Appleseed - Emily (sec)	437.171048
Appleseed - Disney Material (sec)	239.922324
Appleseed - Material Tester (sec)	226.931348
Apache Siege - 100 (Transactions/sec)	52169
Standard Deviation	2.4%
PHPBench - P.B.S (Score)	525045
Standard Deviation	2.1%
BRL-CAD - V.P.M (VGR Performance Metric)	139628


RAMspeed SMP 3.5.0
Type: Add - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 212.60, N = 3
23987.12
5K
10K
15K
20K
25K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 196.68, N = 6
20481.62
4K
8K
12K
16K
20K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 153.78, N = 3
20951.34
4K
8K
12K
16K
20K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Integer
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 214.71, N = 3
22360.14
5K
10K
15K
20K
25K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Add - Benchmark: Floating Point
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 86.15, N = 3
23806.13
5K
10K
15K
20K
25K
1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

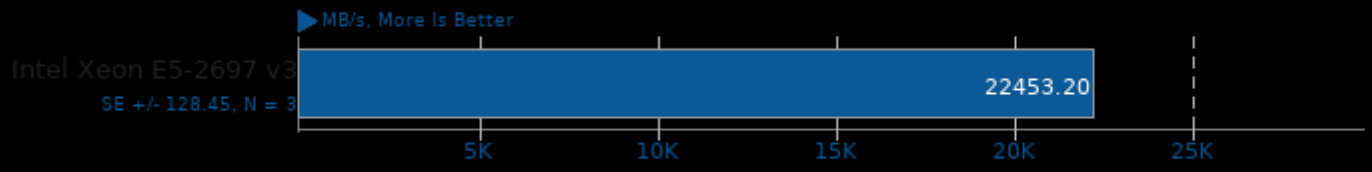
Type: Copy - Benchmark: Floating Point



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

RAMspeed SMP 3.5.0

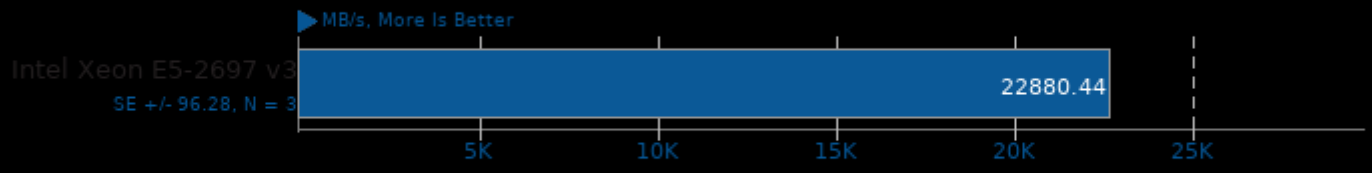
Type: Scale - Benchmark: Floating Point



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

RAMspeed SMP 3.5.0

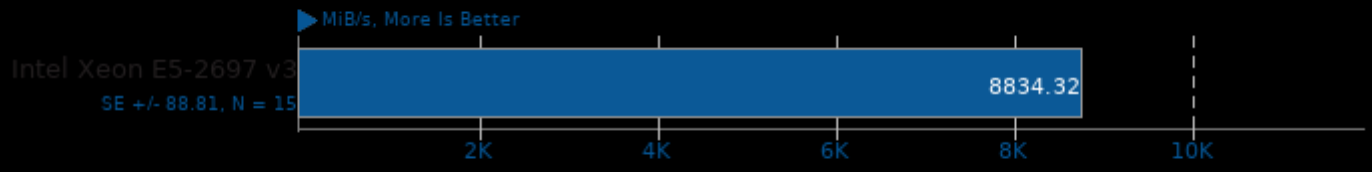
Type: Average - Benchmark: Floating Point



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

MBW 2018-09-08

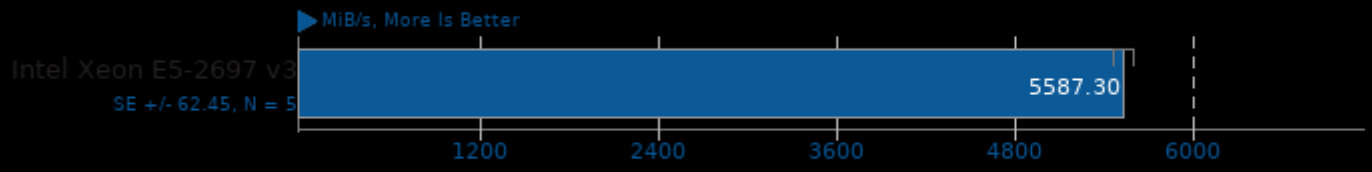
Test: Memory Copy - Array Size: 4096 MiB



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

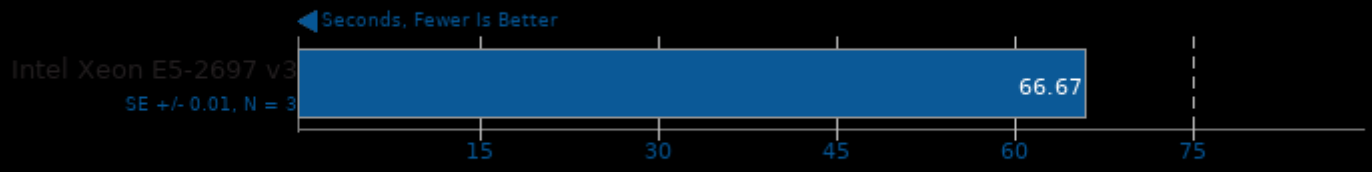
MBW 2018-09-08

Test: Memory Copy, Fixed Block Size - Array Size: 4096 MiB



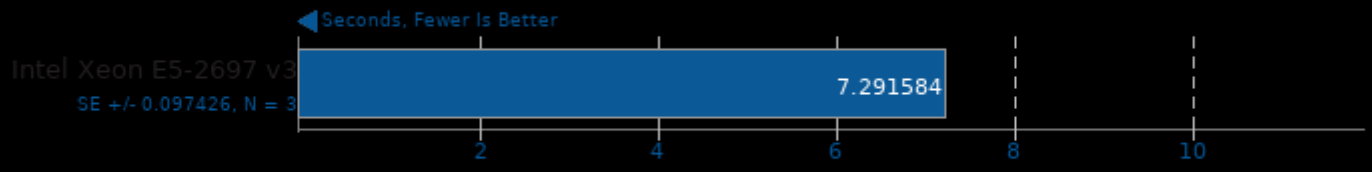
1. (CC) gcc options: -O3 -march=native

Parboil 2.5
Test: OpenMP LBM



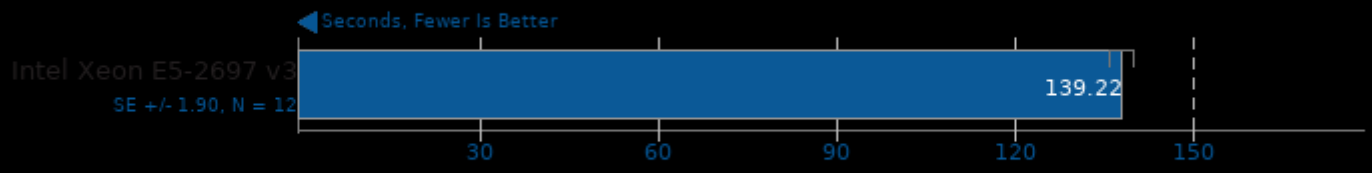
1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

Parboil 2.5
Test: OpenMP Stencil



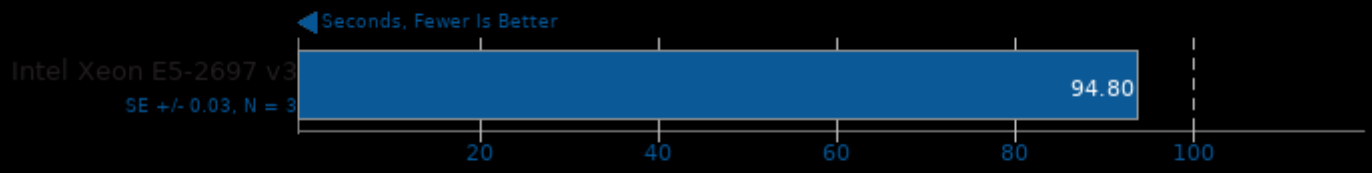
1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

Parboil 2.5
Test: OpenMP MRI Gridding



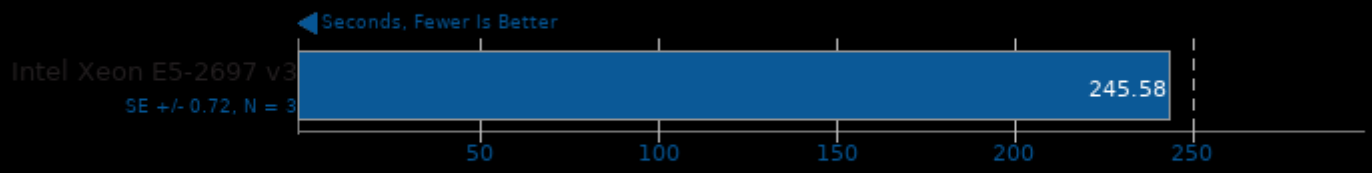
1. (CXX) g++ options: -lm -lpthread -lgomp -O3 -ffast-math -fopenmp

CloverLeaf
Lagrangian-Eulerian Hydrodynamics

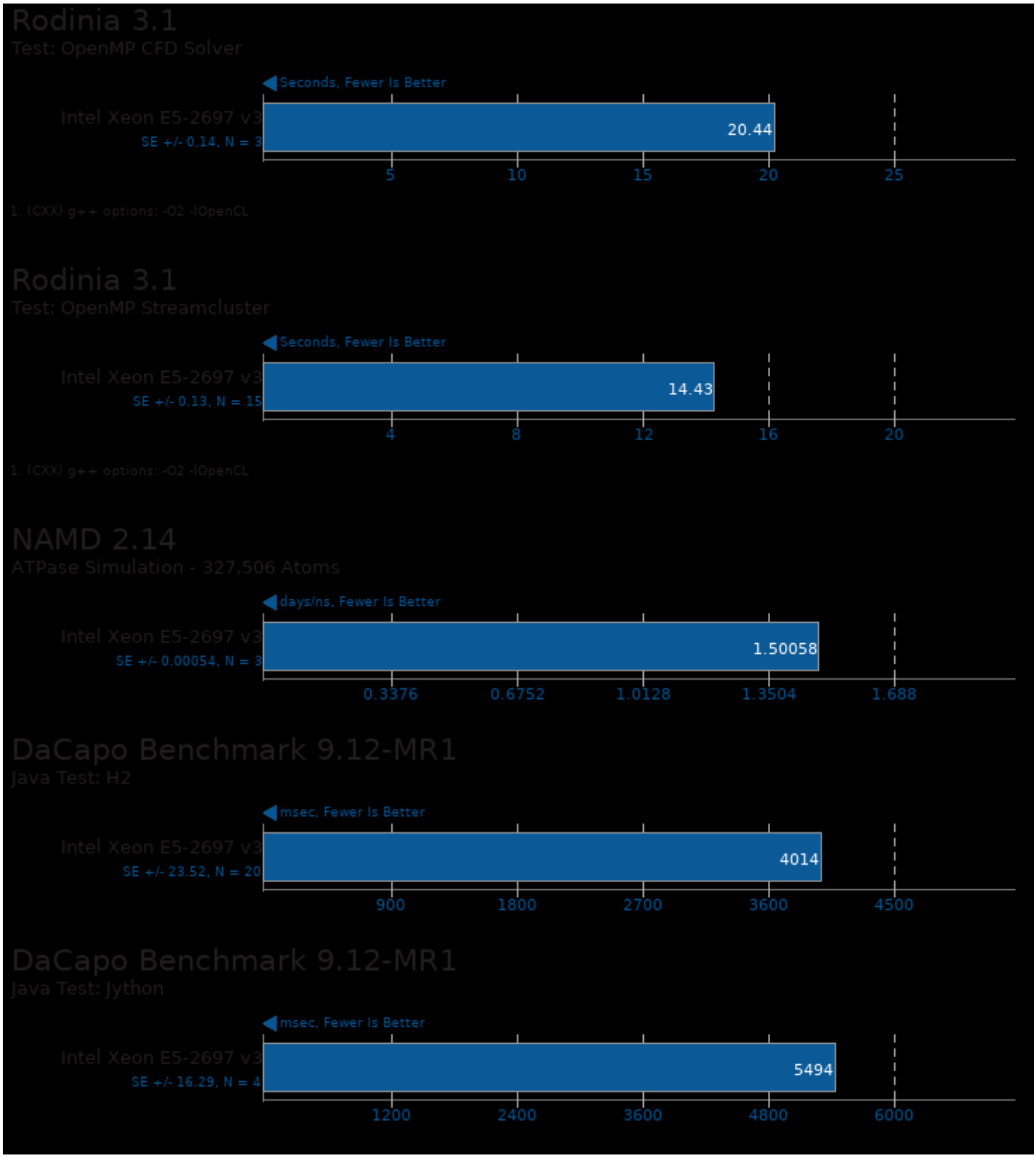


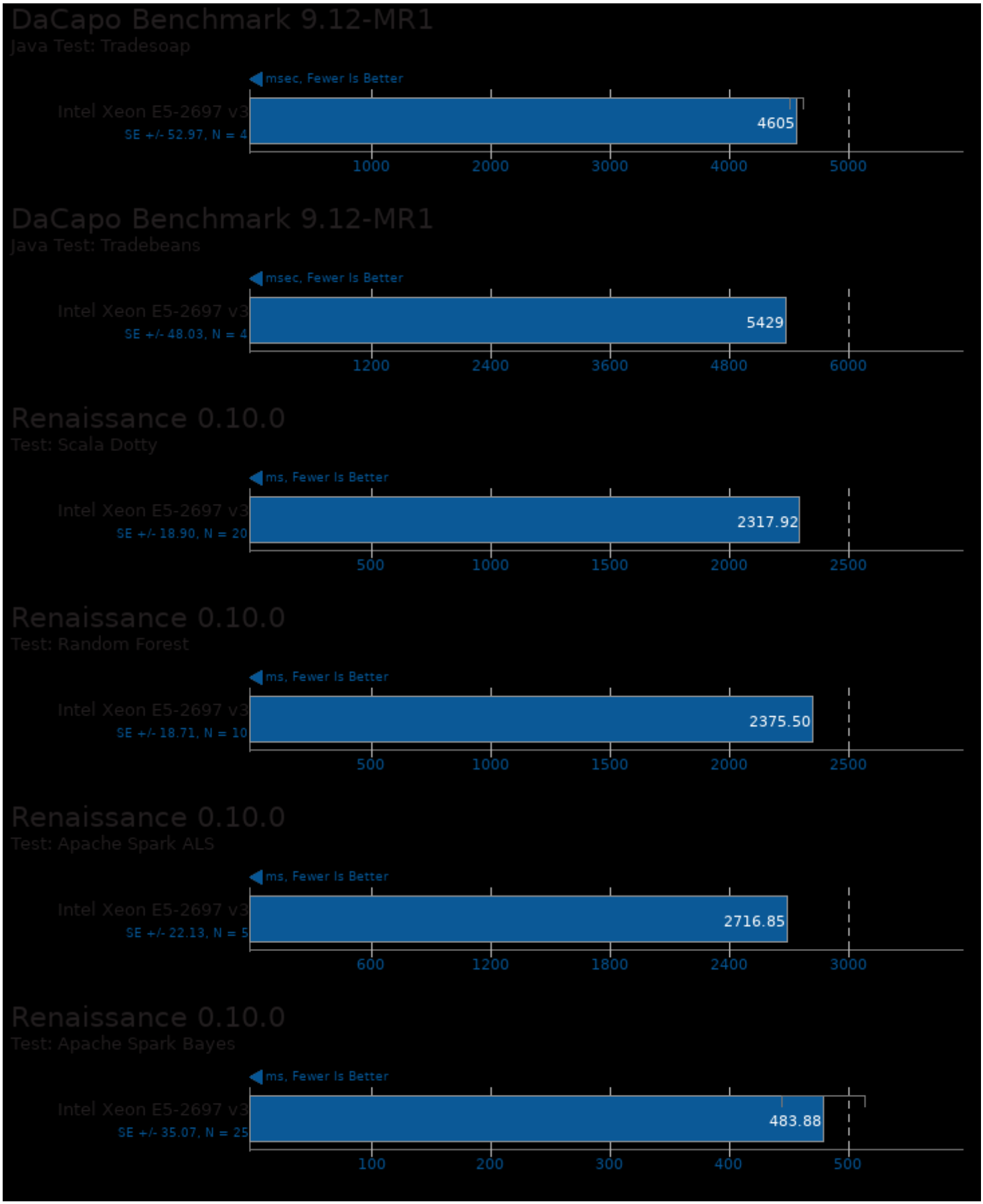
1. (F9X) gfortran options: -O3 -march=native -funroll-loops -fopenmp

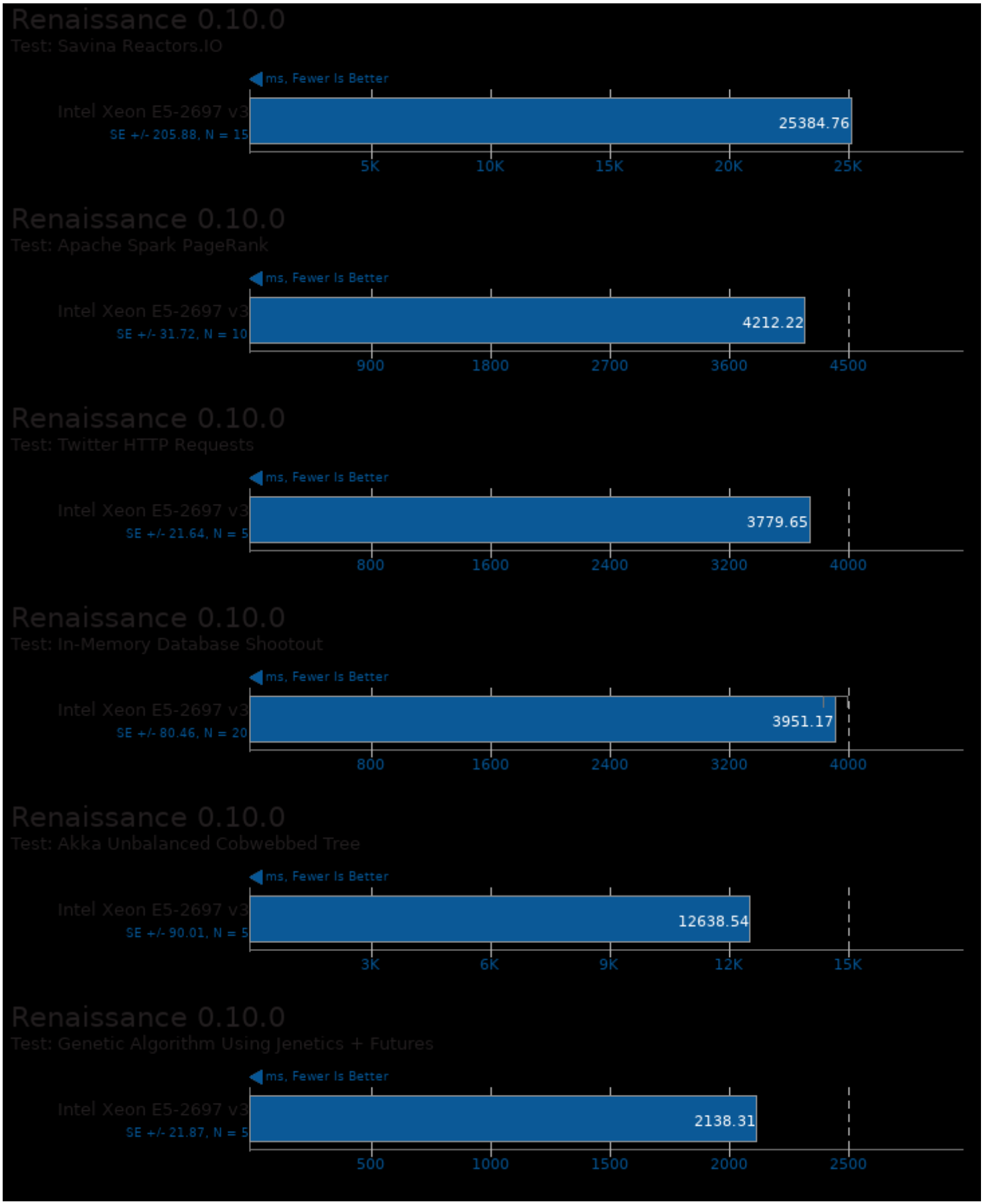
Rodinia 3.1
Test: OpenMP LavaMD

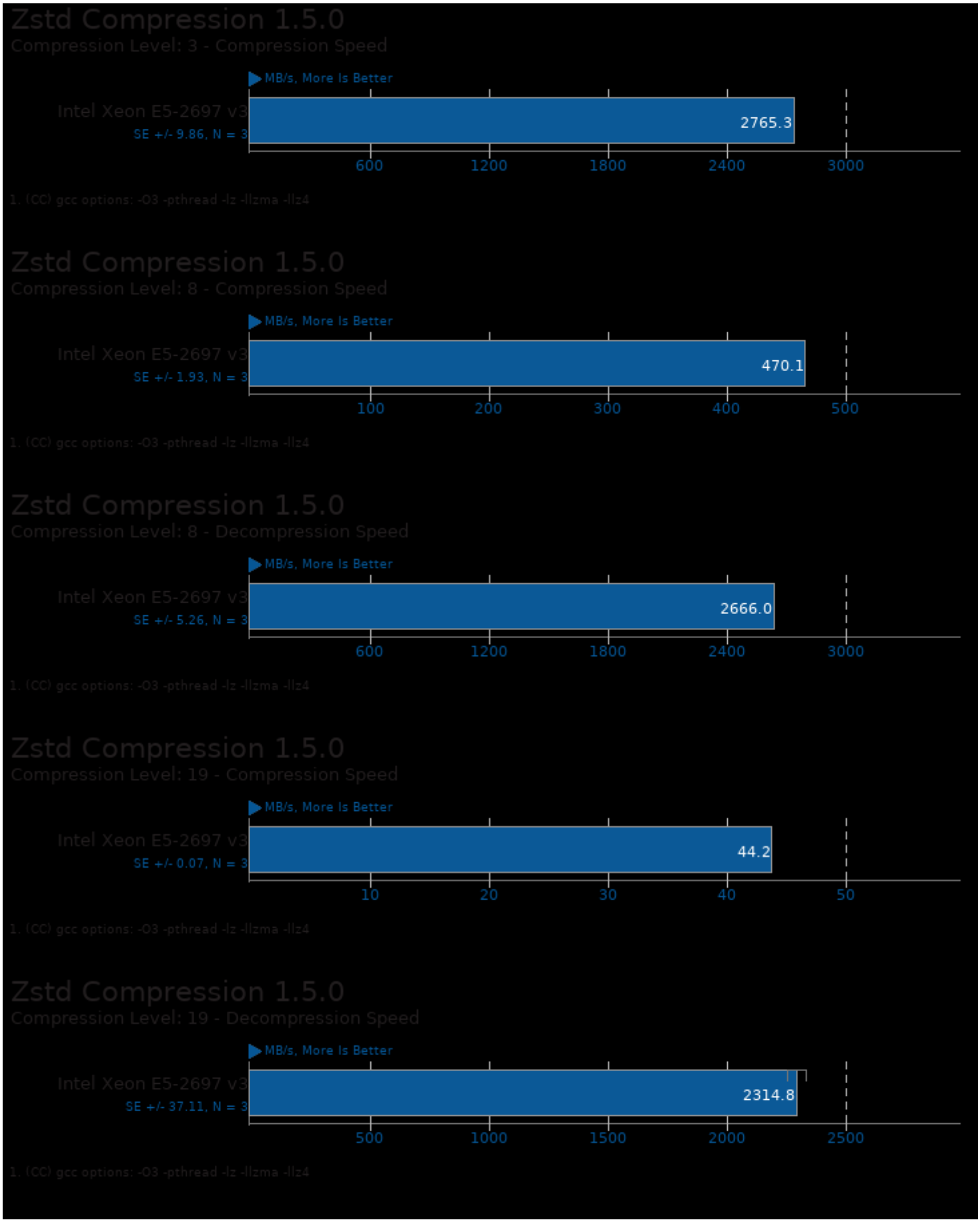


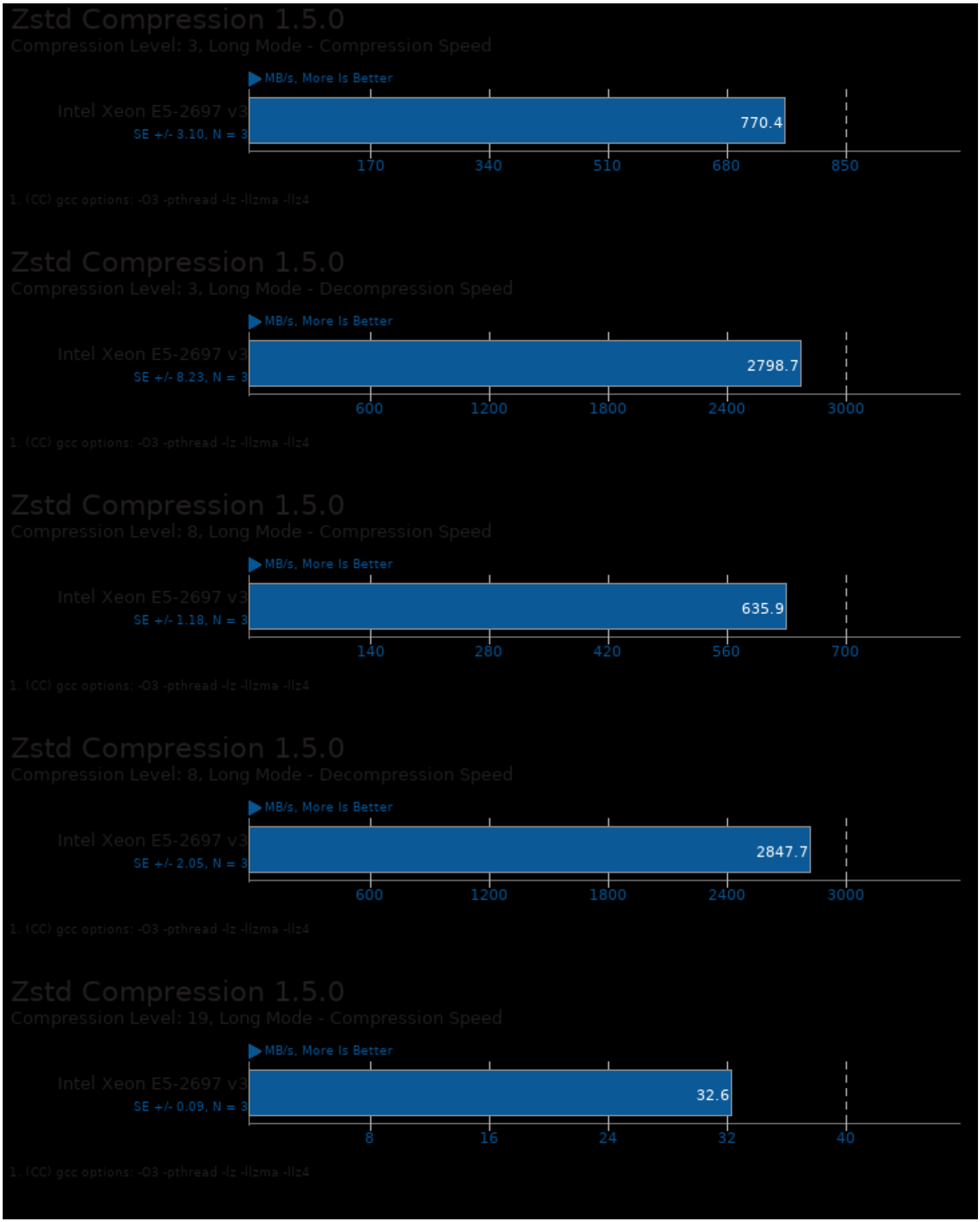
1. (CXX) g++ options: -O2 -lOpenCL


Rodinia 3.1
Test: OpenMP CFD Solver
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.14, N = 3
20.44
5
10
15
20
25
1. (CXX) g++ options: -O2 -lOpenCL
Rodinia 3.1
Test: OpenMP Streamcluster
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.13, N = 15
14.43
4
8
12
16
20
1. (CXX) g++ options: -O2 -lOpenCL
NAMD 2.14
ATPase Simulation - 327,506 Atoms
days/ns, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.00054, N = 3
1.50058
0.3376
0.6752
1.0128
1.3504
1.688
DaCapo Benchmark 9.12-MR1
Java Test: H2
msec, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 23.52, N = 20
4014
900
1800
2700
3600
4500
DaCapo Benchmark 9.12-MR1
Java Test: Jython
msec, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 16.29, N = 4
5494
1200
2400
3600
4800
6000


DaCapo Benchmark 9.12-MR1
Java Test: Tradesoap
msec, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 52.97, N = 4
4605
1000
2000
3000
4000
5000
DaCapo Benchmark 9.12-MR1
Java Test: Tradebeans
msec, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 48.03, N = 4
5429
1200
2400
3600
4800
6000
Renaissance 0.10.0
Test: Scala Dotty
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 18.90, N = 20
2317.92
500
1000
1500
2000
2500
Renaissance 0.10.0
Test: Random Forest
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 18.71, N = 10
2375.50
500
1000
1500
2000
2500
Renaissance 0.10.0
Test: Apache Spark ALS
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 22.13, N = 5
2716.85
600
1200
1800
2400
3000
Renaissance 0.10.0
Test: Apache Spark Bayes
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 35.07, N = 25
483.88
100
200
300
400
500

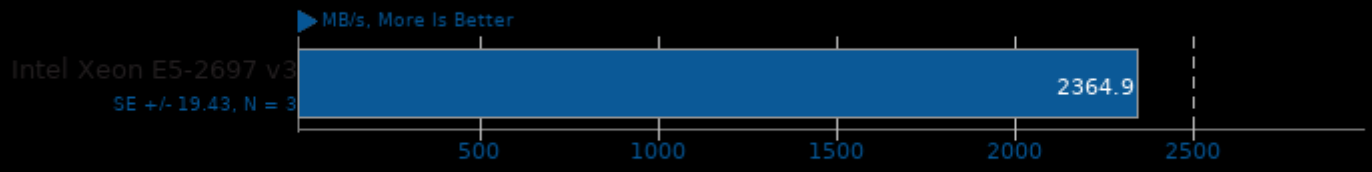

Renaissance 0.10.0
Test: Savina Reactors.IO
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 205.88, N = 15
25384.76
5K
10K
15K
20K
25K
Renaissance 0.10.0
Test: Apache Spark PageRank
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 31.72, N = 10
4212.22
900
1800
2700
3600
4500
Renaissance 0.10.0
Test: Twitter HTTP Requests
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 21.64, N = 5
3779.65
800
1600
2400
3200
4000
Renaissance 0.10.0
Test: In-Memory Database Shootout
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 80.46, N = 20
3951.17
800
1600
2400
3200
4000
Renaissance 0.10.0
Test: Akka Unbalanced Cobwebbed Tree
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 90.01, N = 5
12638.54
3K
6K
9K
12K
15K
Renaissance 0.10.0
Test: Genetic Algorithm Using Jenetics + Futures
ms, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 21.87, N = 5
2138.31
500
1000
1500
2000
2500


Zstd Compression 1.5.0
Compression Level: 3 - Compression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 9.86, N = 3
2765.3
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 8 - Compression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 1.93, N = 3
470.1
100
200
300
400
500
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 8 - Decompression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 5.26, N = 3
2666.0
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 19 - Compression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 0.07, N = 3
44.2
10
20
30
40
50
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 19 - Decompression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 37.11, N = 3
2314.8
500
1000
1500
2000
2500
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4


Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Compression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 3.10, N = 3
770.4
170
340
510
680
850
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Decompression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 8.23, N = 3
2798.7
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 8, Long Mode - Compression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 1.18, N = 3
635.9
140
280
420
560
700
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 8, Long Mode - Decompression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 2.05, N = 3
2847.7
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Compression Speed
MB/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 0.09, N = 3
32.6
8
16
24
32
40
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

Zstd Compression 1.5.0

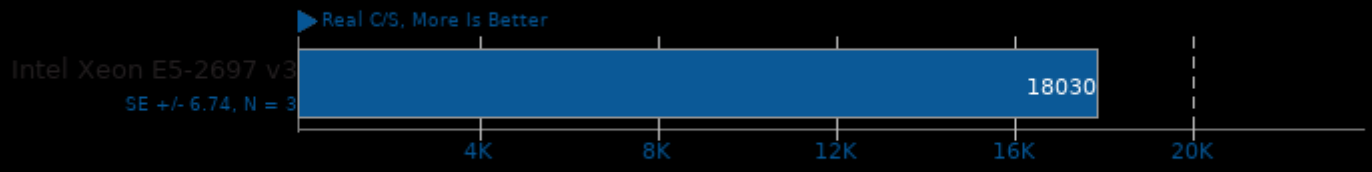
Compression Level: 19, Long Mode - Decompression Speed



1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

John The Ripper 1.9.0-jumbo-1

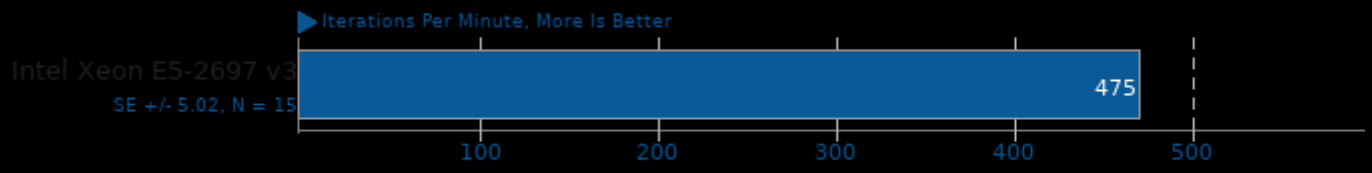
Test: Blowfish



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

GraphicsMagick 1.3.33

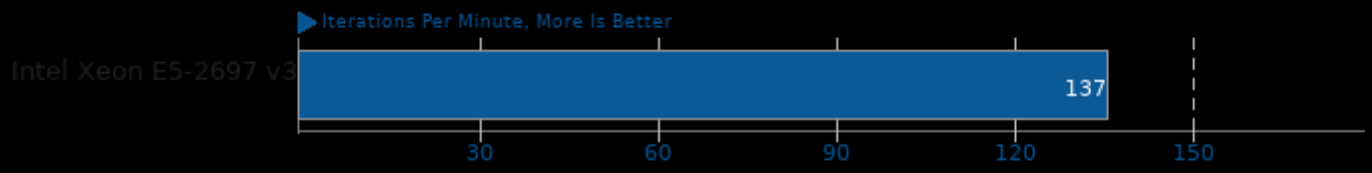
Operation: Rotate



1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

GraphicsMagick 1.3.33

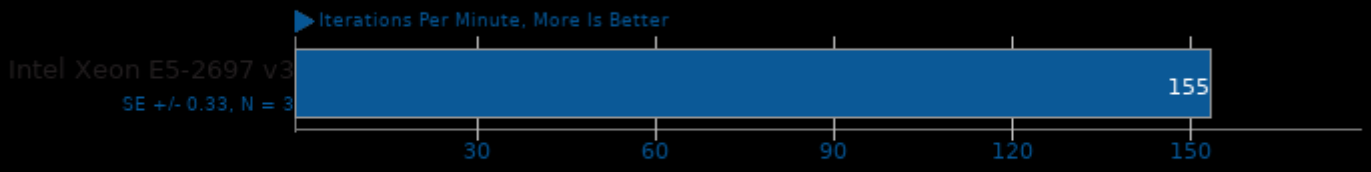
Operation: Sharpen



1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

GraphicsMagick 1.3.33

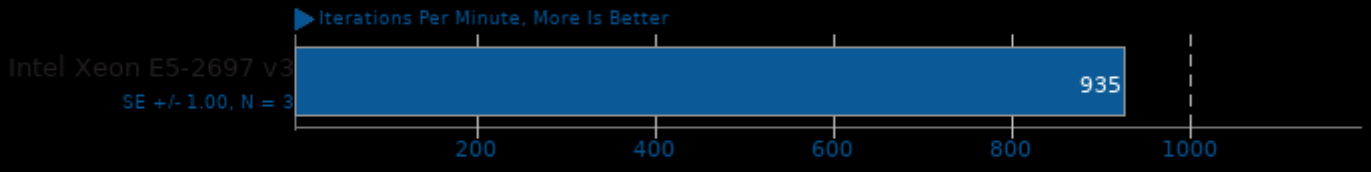
Operation: Enhanced



1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

GraphicsMagick 1.3.33

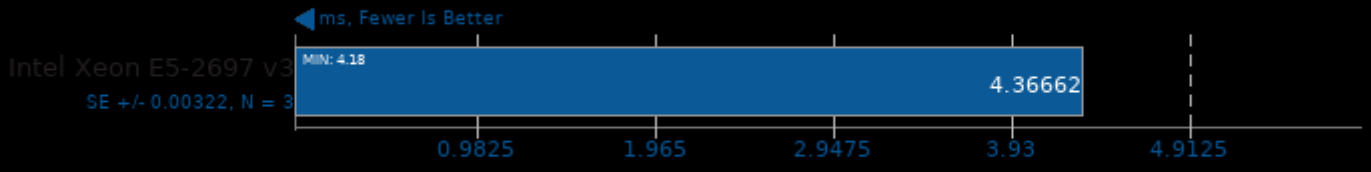
Operation: Resizing



1. (CC) gcc options: -fopenmp -O2 -pthread -lwebp -lwebpmux -llcms2 -ltiff -lfreetype -ljasper -ljpeg -lwmflite -lXext -lSM -lICE -lX11 -llzma -lbz2 -lxml2 -lz

oneDNN MKL-DNN 1.3

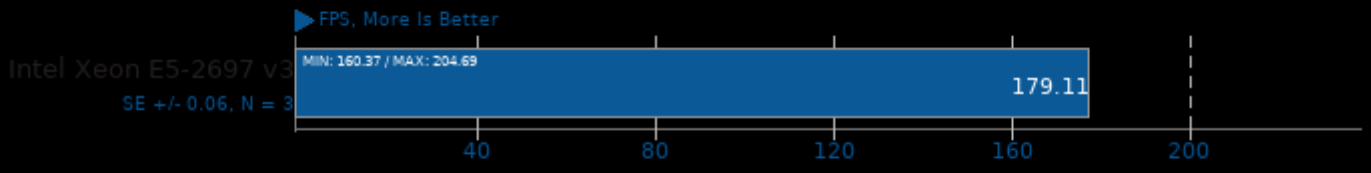
Harness: Deconvolution Batch deconv_1d - Data Type: f32



1. (CXX) g++ options: -O3 -march=native -std=c++11 -msse4.1 -fPIC -fopenmp -pie -lpthread -ldl

dav1d 0.9.0

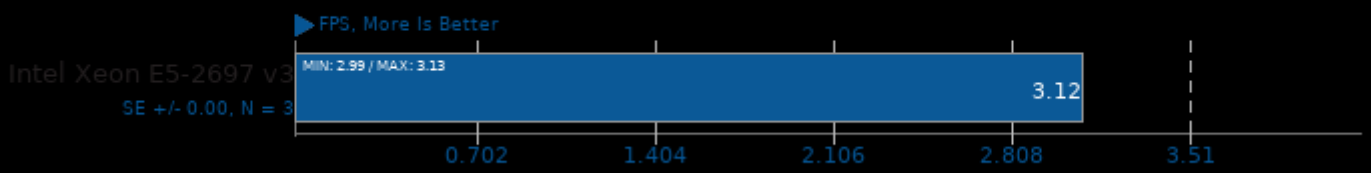
Video Input: Summer Nature 4K

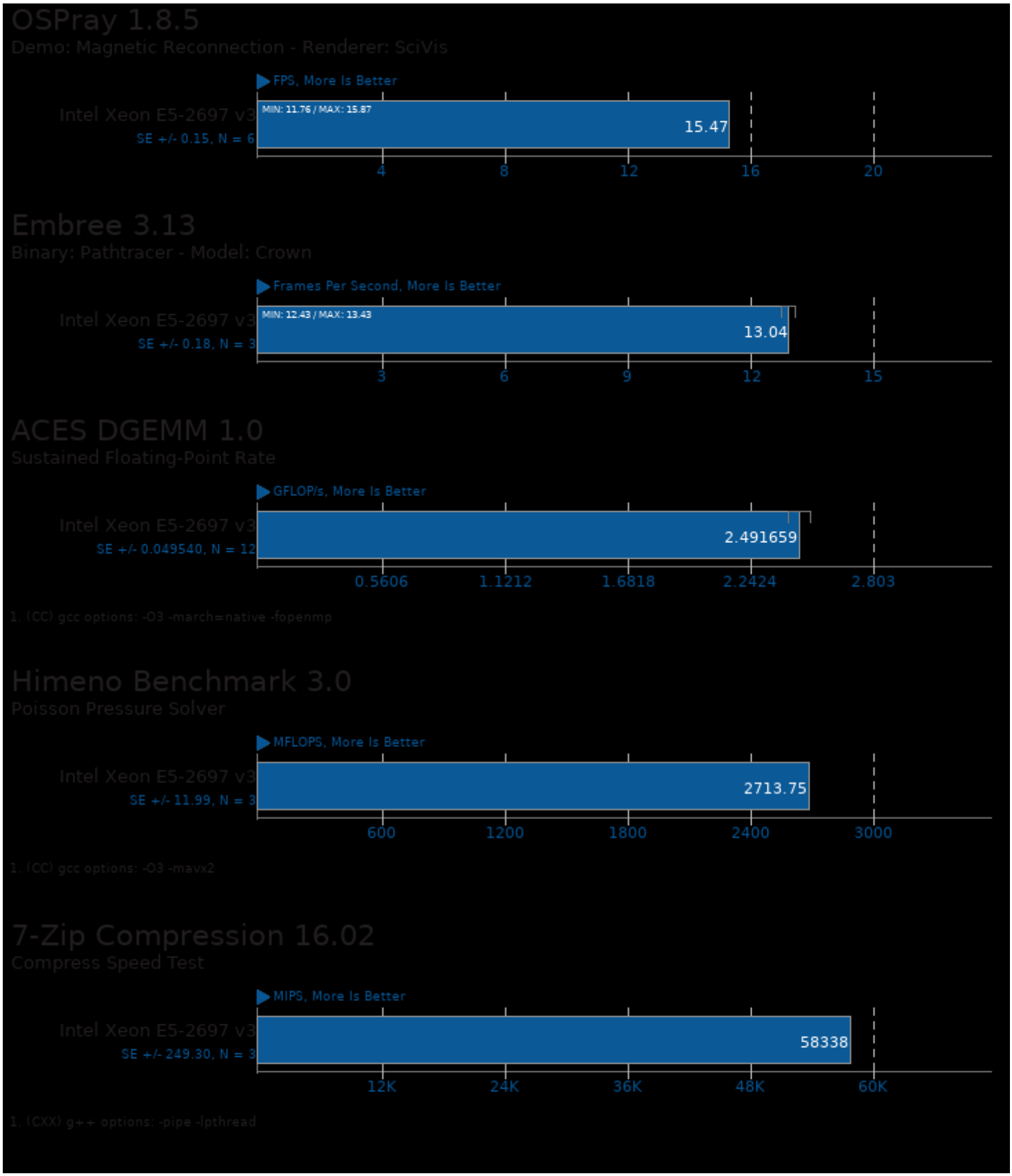


1. (CC) gcc options: -pthread -lm

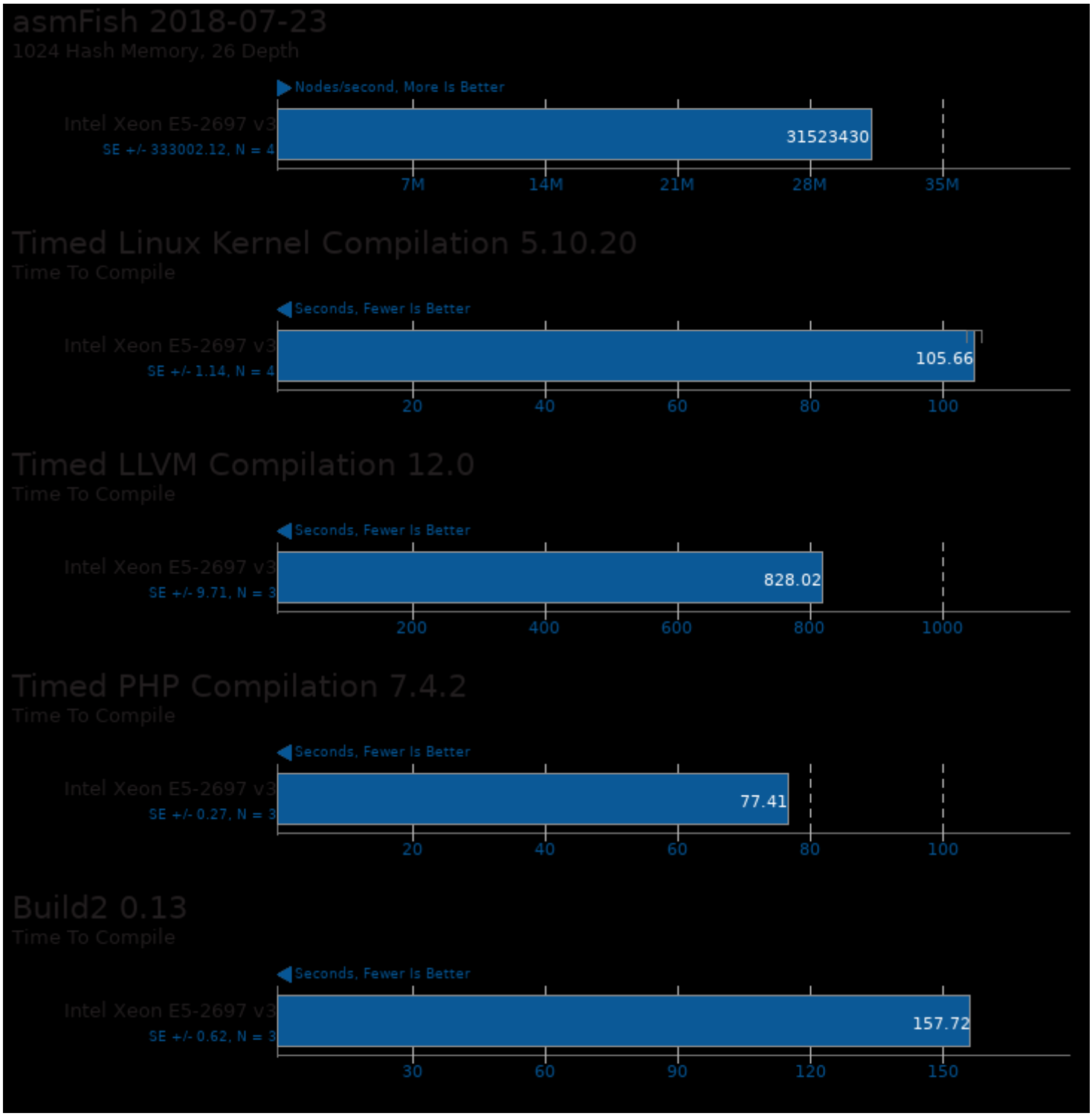
OSPray 1.8.5

Demo: XFrog Forest - Renderer: SciVis



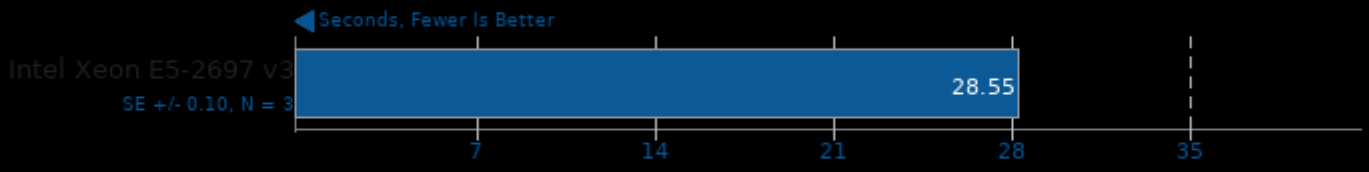

OSPray 1.8.5
Demo: Magnetic Reconnection - Renderer: SciVis
FPS, More Is Better
Intel Xeon E5-2697 v3
SE +/- 0.15, N = 6
MIN: 11.76 / MAX: 15.87
15.47
4
8
12
16
20
Embree 3.13
Binary: Pathtracer - Model: Crown
Frames Per Second, More Is Better
Intel Xeon E5-2697 v3
SE +/- 0.18, N = 3
MIN: 12.43 / MAX: 13.43
13.04
3
6
9
12
15
ACES DGEMM 1.0
Sustained Floating-Point Rate
GFLOP/s, More Is Better
Intel Xeon E5-2697 v3
SE +/- 0.049540, N = 12
2.491659
0.5606
1.1212
1.6818
2.2424
2.803
1. (CC) gcc options: -O3 -march=native -fopenmp
Himeno Benchmark 3.0
Poisson Pressure Solver
MFLOPS, More Is Better
Intel Xeon E5-2697 v3
SE +/- 11.99, N = 3
2713.75
600
1200
1800
2400
3000
1. (CC) gcc options: -O3 -mavx2
7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
Intel Xeon E5-2697 v3
SE +/- 249.30, N = 3
58338
12K
24K
36K
48K
60K
1. (CXX) g++ options: -pipe -lpthread

testing-server-memory



Tungsten Renderer 0.2.2

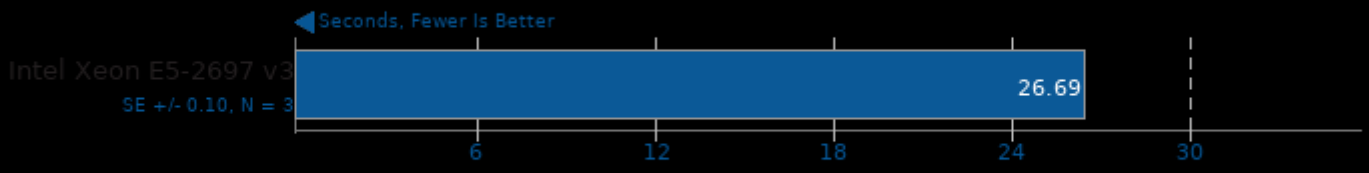
Scene: Water Caustic



1. (CXX) g++ options: -std=c++0x -march=haswell -msse2 -msse3 -mssse3 -msse4.1 -msse4.2 -mfma -mbmi2 -mno-sse4a -mno-avx -mno-avx2 -mno-xo

XZ Compression 5.2.4

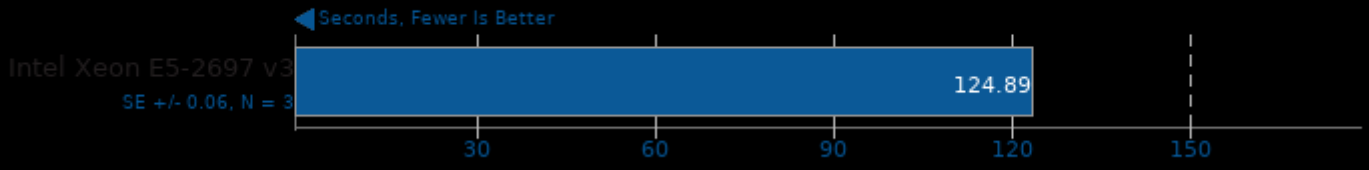
Compressing ubuntu-16.04.3-server-i386.img, Compression Level 9



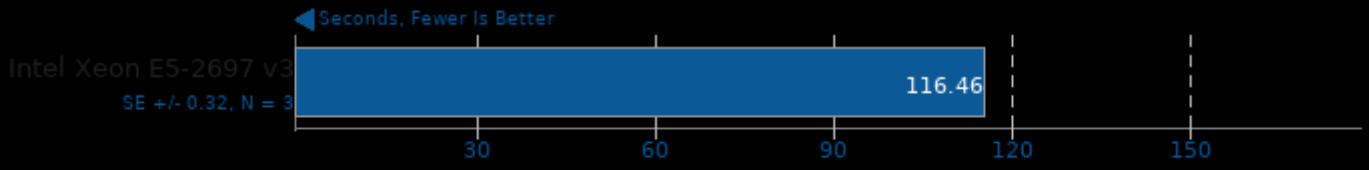
1. (CC) gcc options: -pthread -fvisibility=hidden -O2

DeepSpeech 0.6

Acceleration: CPU

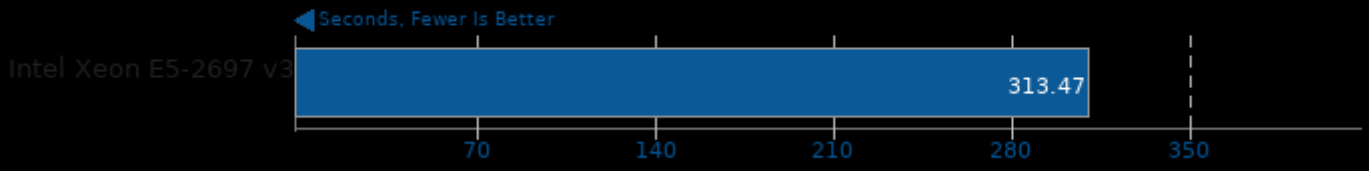


OpenCV Benchmark 3.3.0



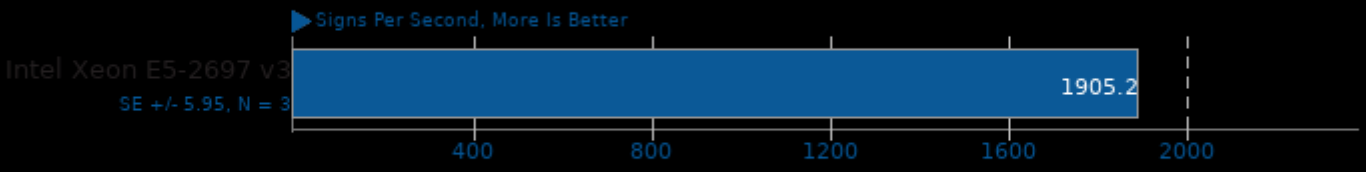
Radiance Benchmark 5.0

Test: SMP Parallel



OpenSSL 1.1.1

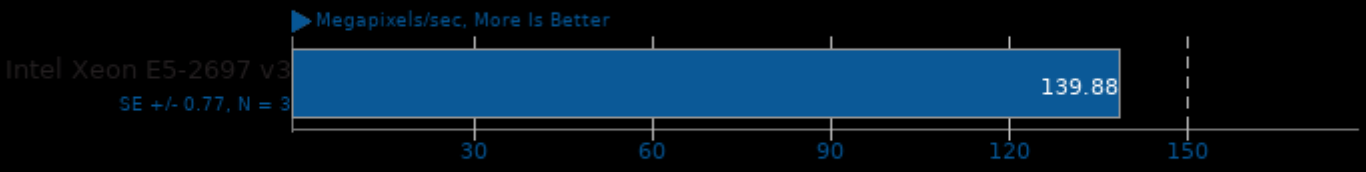
RSA 4096-bit Performance



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

libjpeg-turbo tjbench 2.1.0

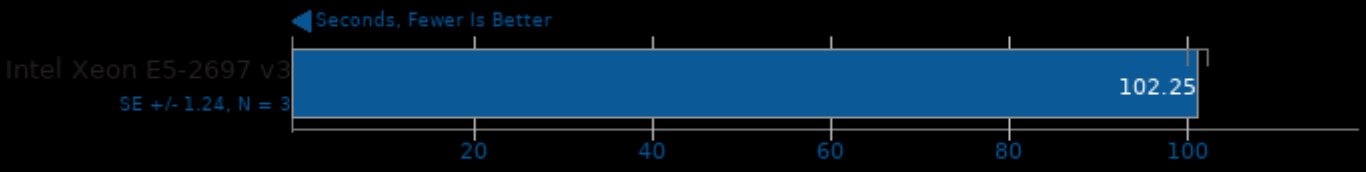
Test: Decompression Throughput



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

SQLite Speedtest 3.30

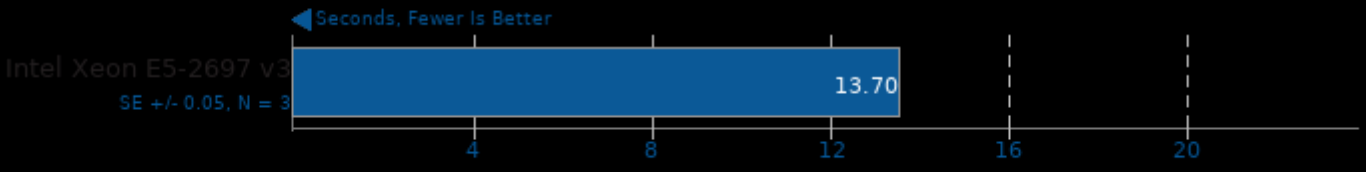
Timed Time - Size 1,000



1. (CC) gcc options: -O2 -ldl -lz -lpthread

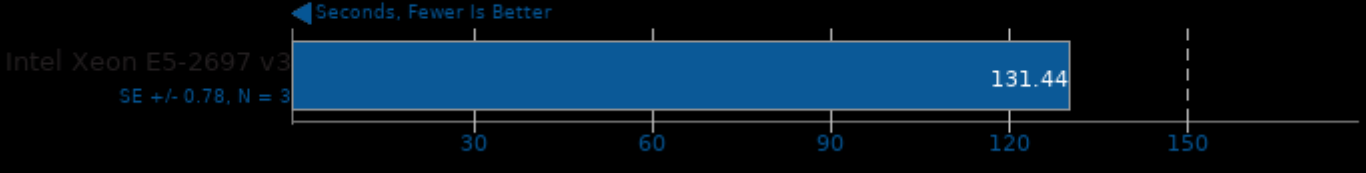
GEGL

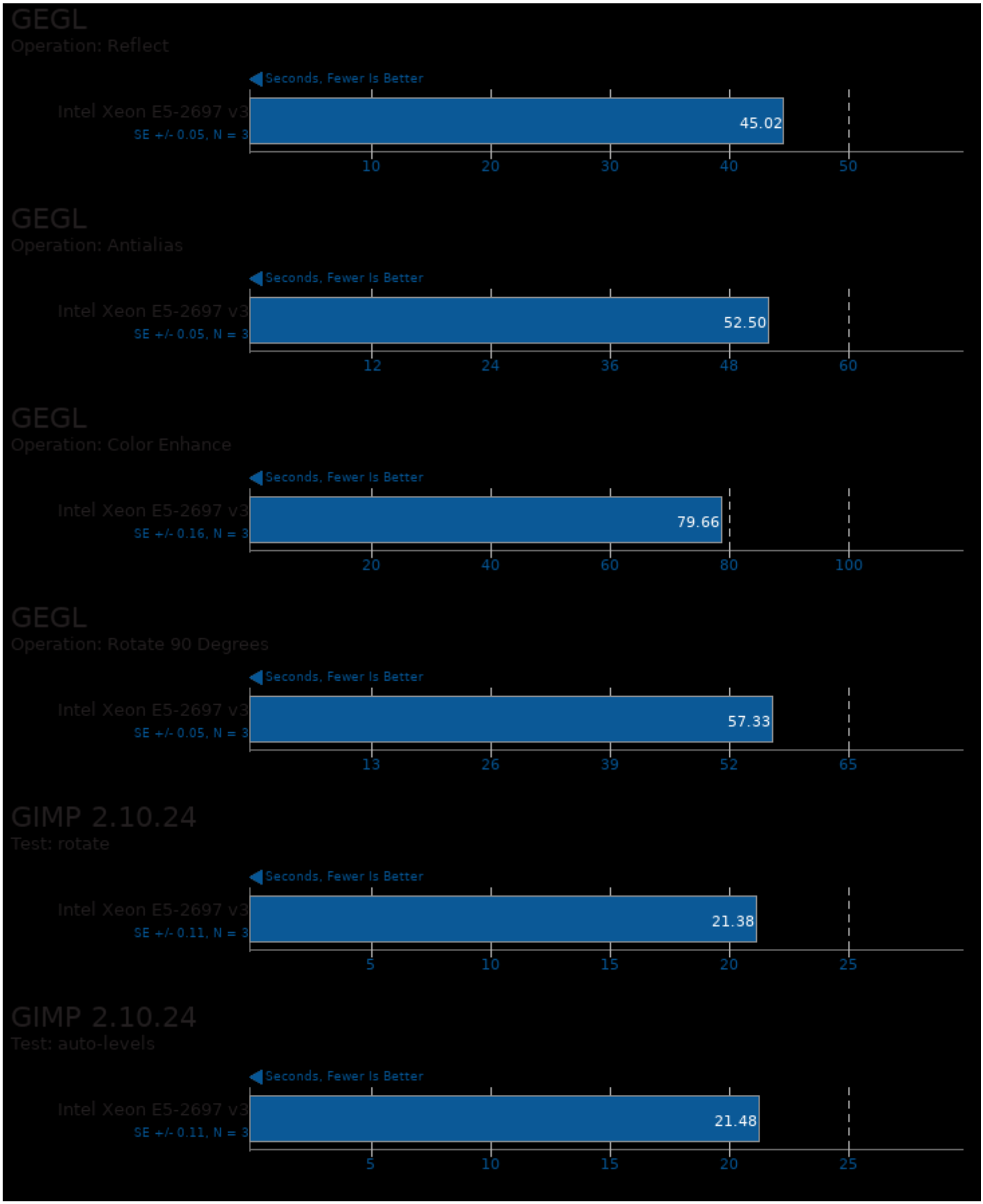
Operation: Crop



GEGL

Operation: Cartoon

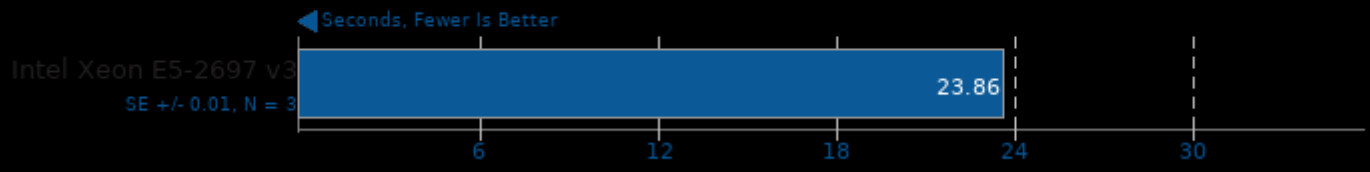



GEGL
Operation: Reflect
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.05, N = 3
45.02
10
20
30
40
50
GEGL
Operation: Antialias
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.05, N = 3
52.50
12
24
36
48
60
GEGL
Operation: Color Enhance
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.16, N = 3
79.66
20
40
60
80
100
GEGL
Operation: Rotate 90 Degrees
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.05, N = 3
57.33
13
26
39
52
65
GIMP 2.10.24
Test: rotate
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.11, N = 3
21.38
5
10
15
20
25
GIMP 2.10.24
Test: auto-levels
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
SE +/- 0.11, N = 3
21.48
5
10
15
20
25

testing-server-memory

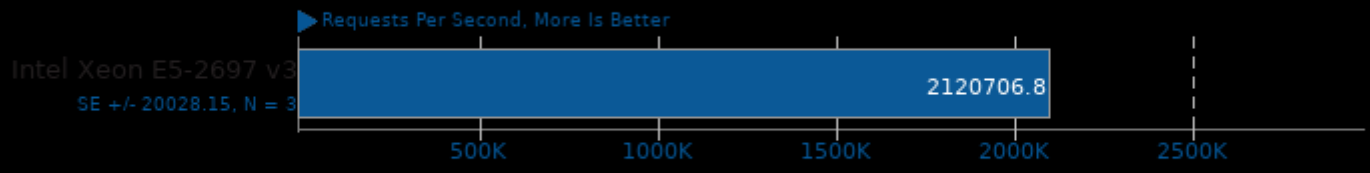
GIMP 2.10.24

Test: unsharp-mask



Redis 6.0.9

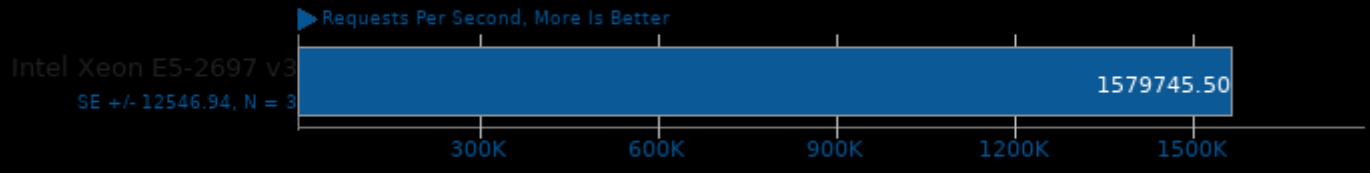
Test: GET



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

Redis 6.0.9

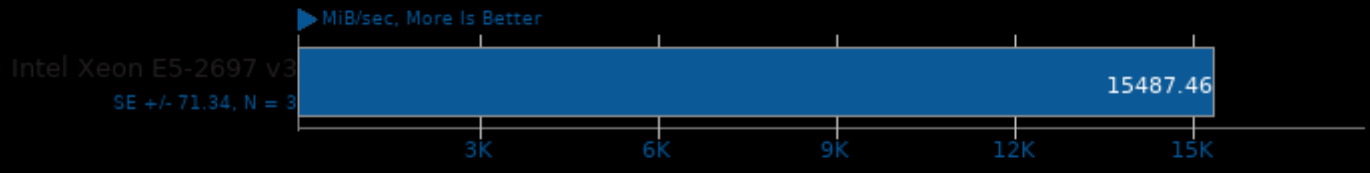
Test: SET



1. (CXX) g++ options: -MM -MT -g3 -fvisibility=hidden -O3

Sysbench 1.0.20

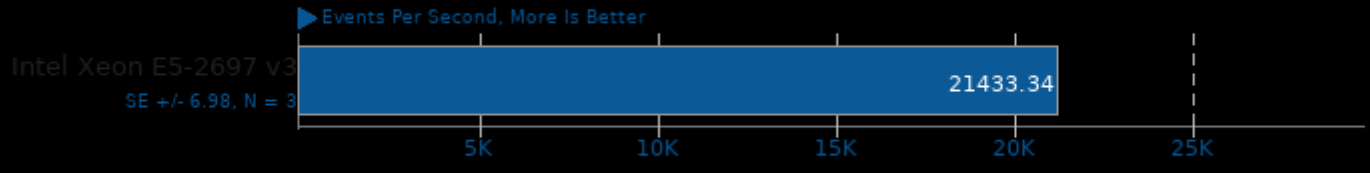
Test: Memory



1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -laio -lm

Sysbench 1.0.20

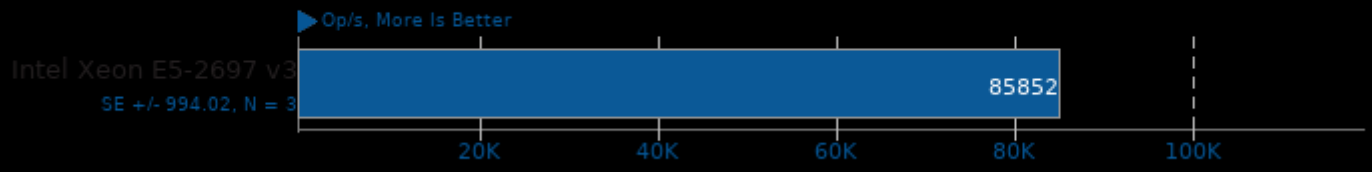
Test: CPU



1. (CC) gcc options: -pthread -O2 -funroll-loops -rdynamic -ldl -laio -lm

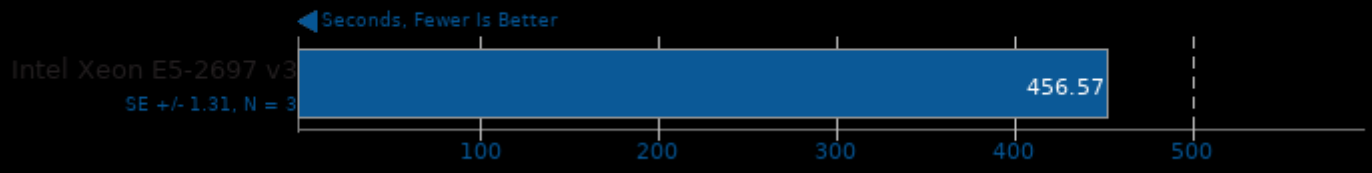
Apache Cassandra 3.11.4

Test: Writes



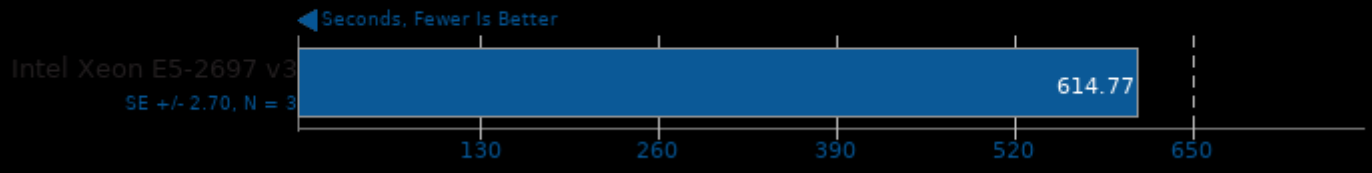
Blender 2.92

Blend File: Classroom - Compute: CPU-Only



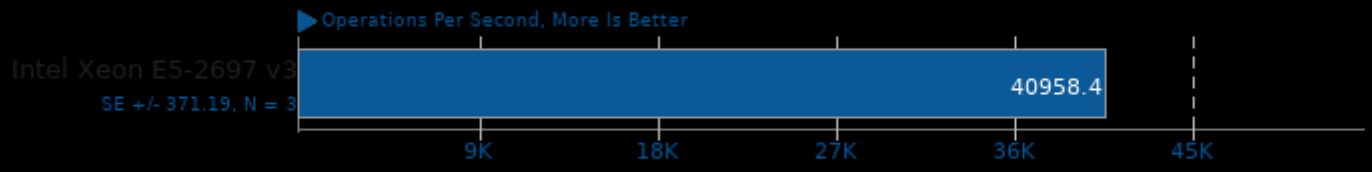
Blender 2.92

Blend File: Barbershop - Compute: CPU-Only



Memcached mcperf 1.6.9

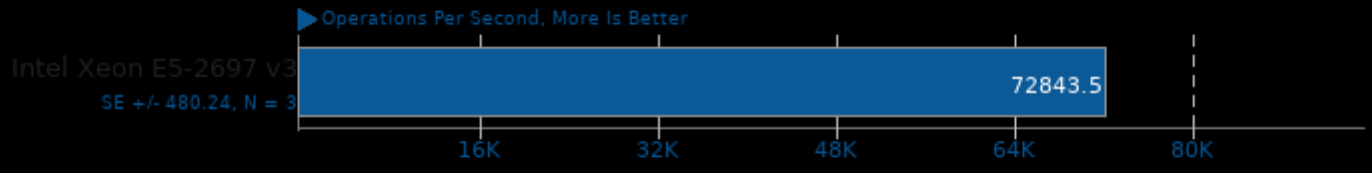
Method: Add



1. (CC) gcc options: -O2 -lm -rdynamic

Memcached mcperf 1.6.9

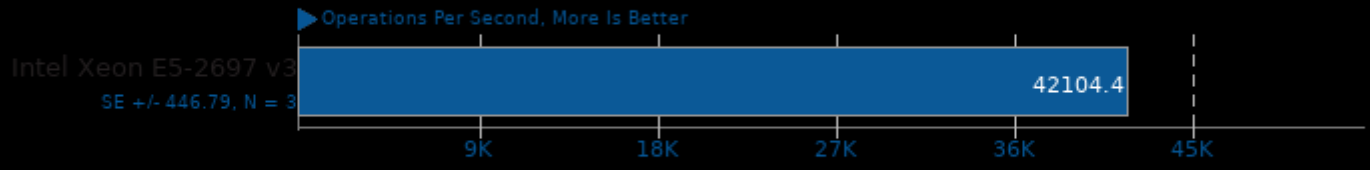
Method: Get



1. (CC) gcc options: -O2 -lm -rdynamic

Memcached mcperf 1.6.9

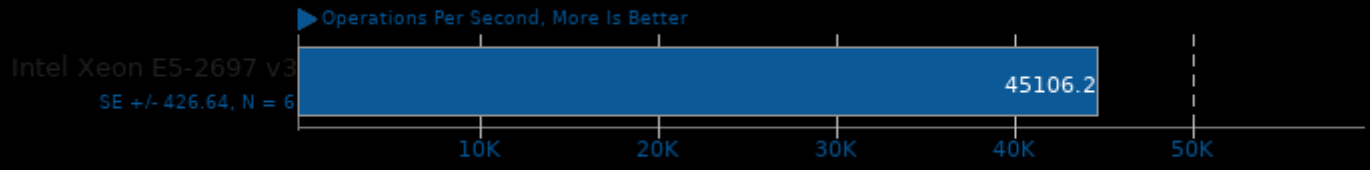
Method: Set



1. (CC) gcc options: -O2 -lm -rdynamic

Memcached mcperf 1.6.9

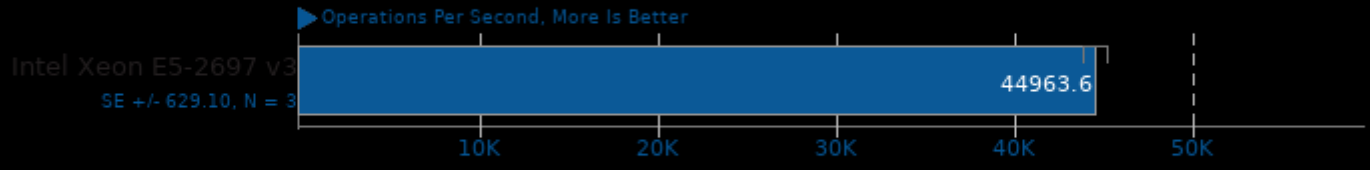
Method: Append



1. (CC) gcc options: -O2 -lm -rdynamic

Memcached mcperf 1.6.9

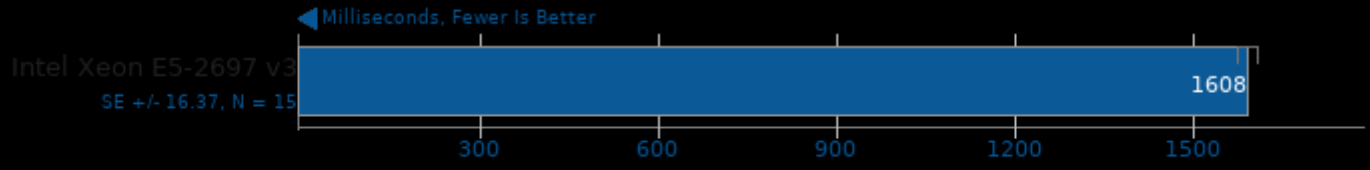
Method: Replace



1. (CC) gcc options: -O2 -lm -rdynamic

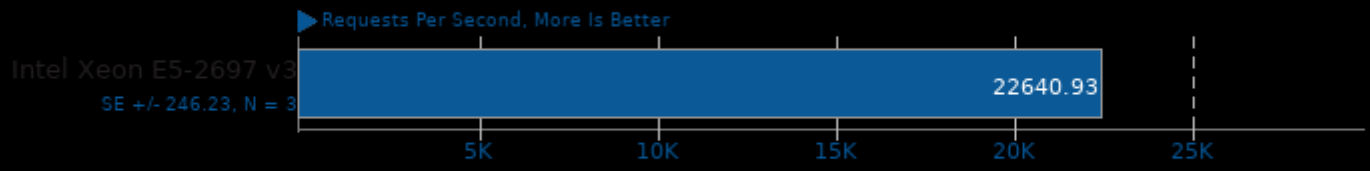
PyBench 2018-02-16

Total For Average Test Times

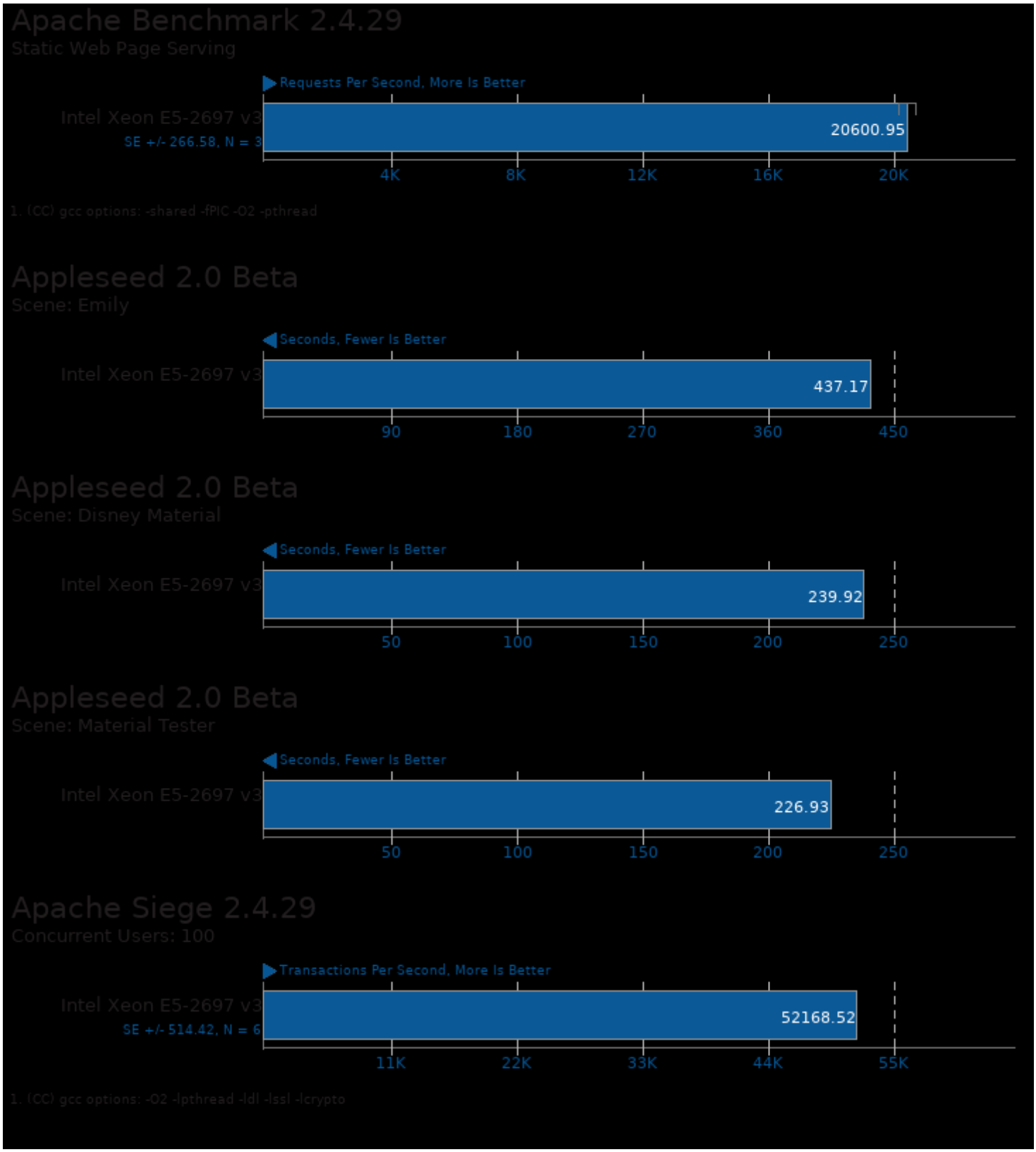


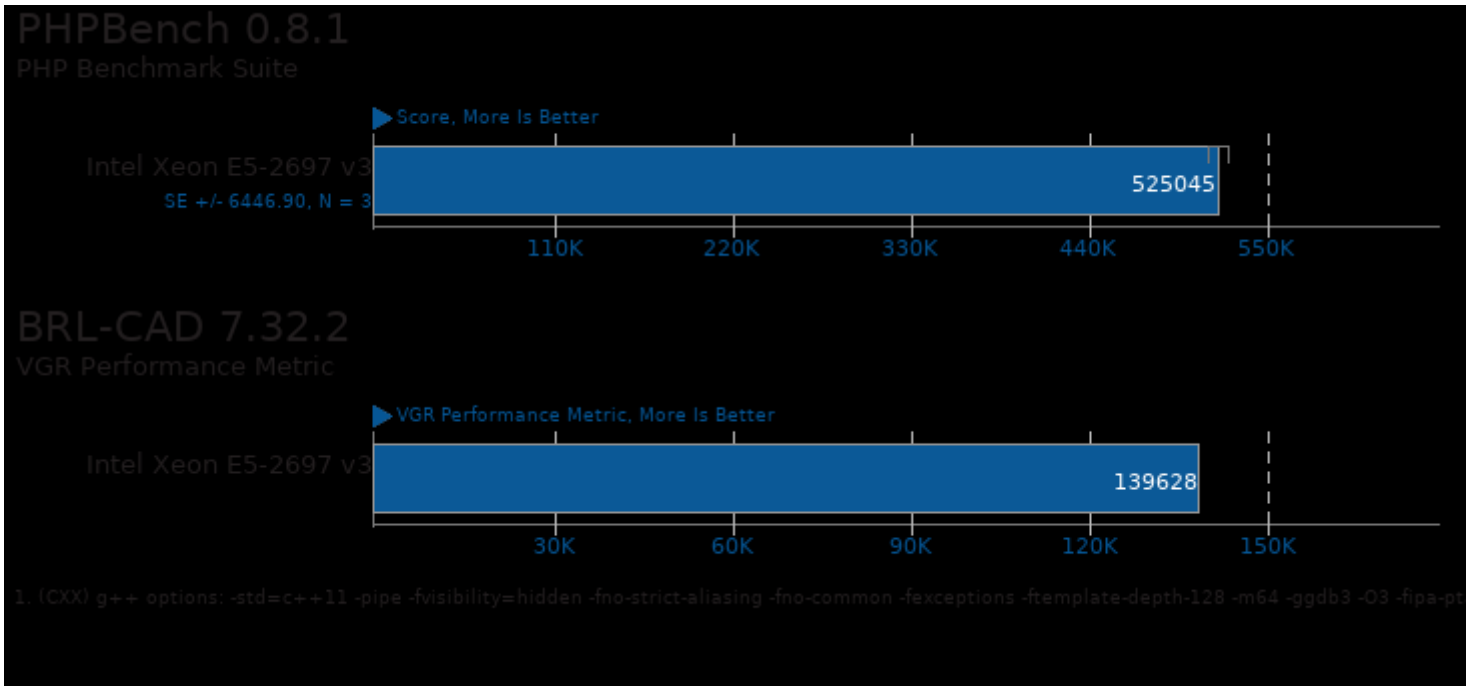
NGINX Benchmark 1.9.9

Static Web Page Serving



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


Apache Benchmark 2.4.29
Static Web Page Serving
Requests Per Second, More Is Better
Intel Xeon E5-2697 v3
SE +/- 266.58, N = 3
20600.95
4K
8K
12K
16K
20K
1. (CC) gcc options: -shared -fPIC -O2 -pthread
Appleseed 2.0 Beta
Scene: Emily
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
437.17
90
180
270
360
450
Appleseed 2.0 Beta
Scene: Disney Material
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
239.92
50
100
150
200
250
Appleseed 2.0 Beta
Scene: Material Tester
Seconds, Fewer Is Better
Intel Xeon E5-2697 v3
226.93
50
100
150
200
250
Apache Siege 2.4.29
Concurrent Users: 100
Transactions Per Second, More Is Better
Intel Xeon E5-2697 v3
SE +/- 514.42, N = 6
52168.52
11K
22K
33K
44K
55K
1. (CC) gcc options: -O2 -lpthread -ldl -lssl -lcrypto



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