

www.phoronix-test-suite.com

test

2 x Intel Xeon Silver 4210 testing on CentOS Linux 7 via the Phoronix Test Suite.

Test Systems:

test

Processor: 2 x Intel Xeon Silver 4210 @ 3.20GHz (20 Cores / 40 Threads), Motherboard: Dell 0DY2X0 (2.7.7 BIOS), Chipset: Intel Device 2020, Memory: 4 x 32 GB DDR4-2400MHz HMA84GR7CJR4N-XN, Disk: 4000GB PERC H330 Adp, Network: 4 x Intel I350

OS: CentOS Linux 7, Kernel: 4.14.105-19-0012 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: ext4

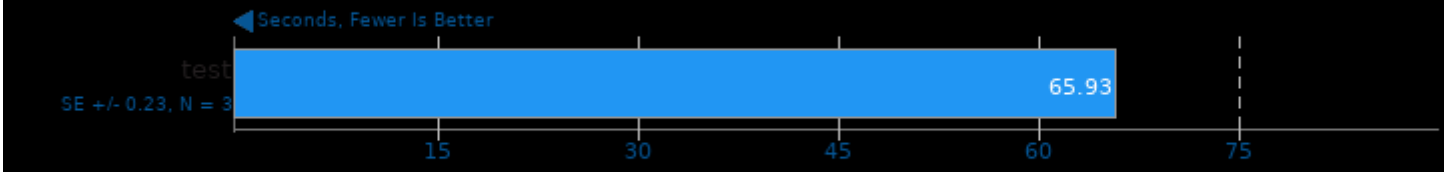
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5002f01
Security Notes: l1tf: Not affected + meltdown: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Vulnerable IBPB: disabled STIBP: disabled

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	test
Rodinia - OpenMP LavaMD (sec)	65.925
Standard Deviation	0.6%
Rodinia - OpenMP CFD Solver (sec)	21.357
Standard Deviation	0.4%
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	1.26018
Standard Deviation	2.7%
Kvazaar - Bosphorus 4K - Very Fast (FPS)	12.91
Standard Deviation	0.2%
Kvazaar - Bosphorus 4K - Ultra Fast (FPS)	20.06
Standard Deviation	0.3%
Kvazaar - Bosphorus 1080p - Very Fast (FPS)	42.88
Standard Deviation	0.2%
Kvazaar - Bosphorus 1080p - Ultra Fast (FPS)	72.42
Standard Deviation	0.3%
x264 - H.2.V.E (FPS)	88.35
Standard Deviation	0.8%
x265 - Bosphorus 4K (FPS)	3.81
Standard Deviation	0.2%
x265 - Bosphorus 1080p (FPS)	9.82
Standard Deviation	1%
7-Zip Compression - C.S.T (MIPS)	77388
Standard Deviation	0.2%
Stockfish - Total Time (Nodes/s)	40387622
Standard Deviation	0.7%
asmFish - 1.H.M.2.D (Nodes/s)	42179748
Standard Deviation	1.5%
Timed GCC Compilation - Time To Compile (sec)	811.791
Timed Linux Kernel Compilation - Time To Compile (sec)	41.847
Standard Deviation	2.9%
OpenSSL - R.4.b.P (Signs/sec)	4109
Standard Deviation	0.1%
ctx_clock - C.S.T (Clocks)	200
Sysbench - CPU (Events/sec)	31031
Standard Deviation	0.3%

Rodinia 2.4

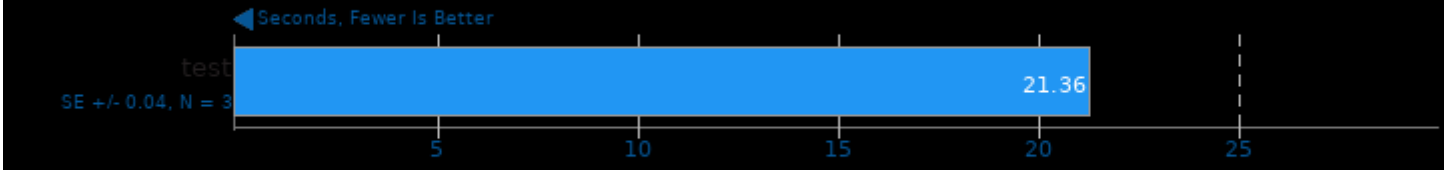
Test: OpenMP LavaMD



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

Rodinia 2.4

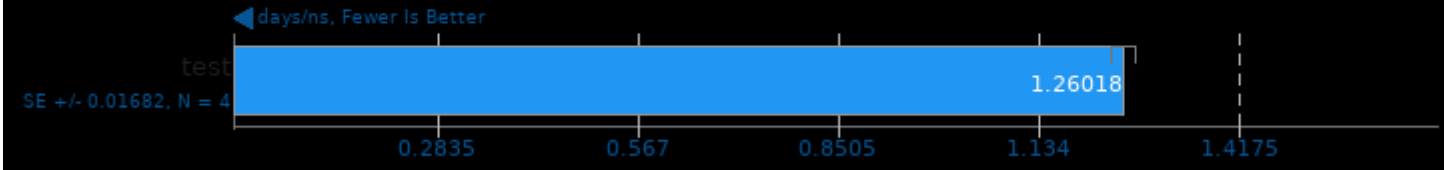
Test: OpenMP CFD Solver



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

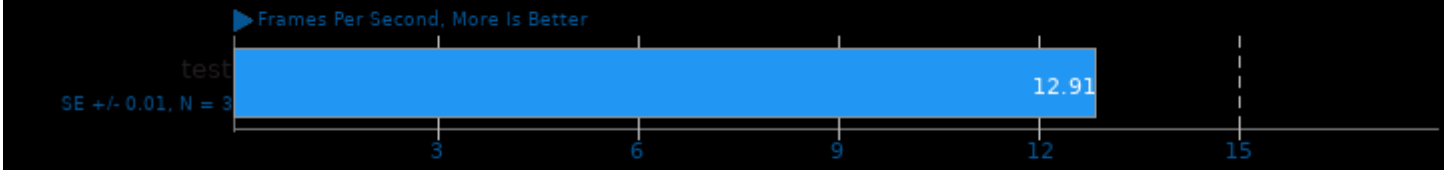
NAMD 2.13b1

ATPase Simulation - 327,506 Atoms



Kvazaar 2.0

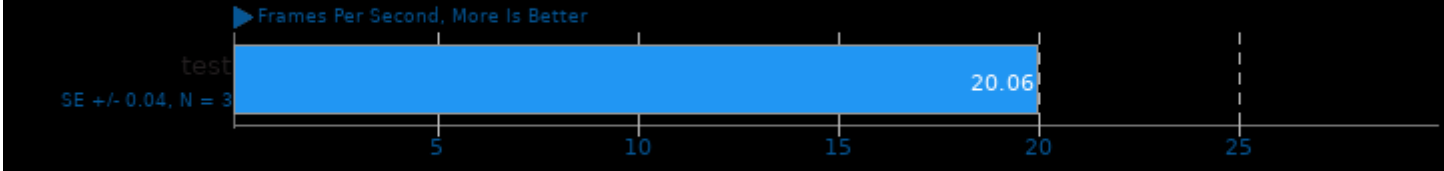
Video Input: Bosphorus 4K - Video Preset: Very Fast



1. (CC) gcc options: -std=gnu99 -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.0

Video Input: Bosphorus 4K - Video Preset: Ultra Fast



1. (CC) gcc options: -std=gnu99 -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.0

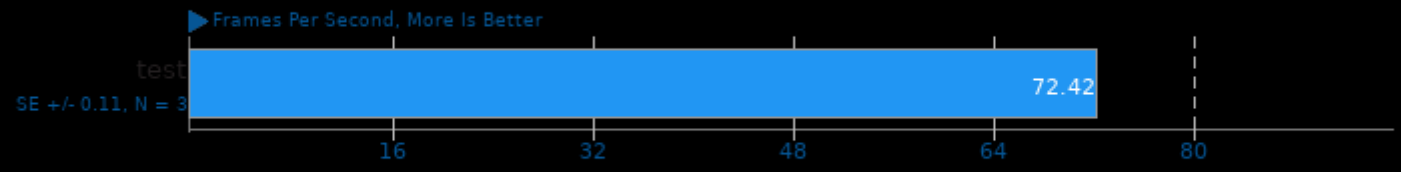
Video Input: Bosphorus 1080p - Video Preset: Very Fast



1. (CC) gcc options: -std=gnu99 -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

Kvazaar 2.0

Video Input: Bosphorus 1080p - Video Preset: Ultra Fast



1. (CC) gcc options: -std=gnu99 -pthread -ftree-vectorize -fvisibility=hidden -O2 -lpthread -lm -lrt

x264 2018-09-25

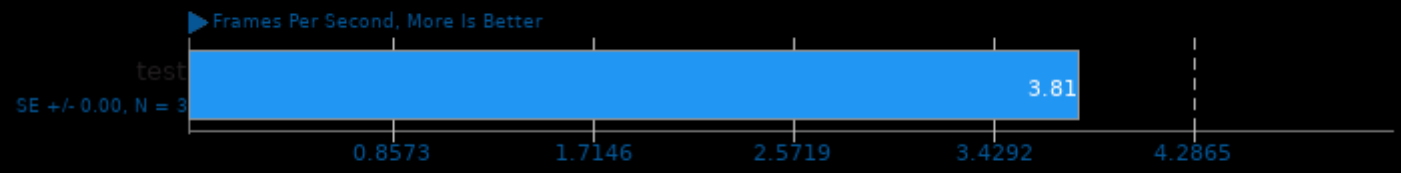
H.264 Video Encoding



1. (CC) gcc options: -ldl -m64 -lm -lpthread -O3 -ffast-math -std=gnu99 -fPIC -fomit-frame-pointer -fno-tree-vectorize

x265 3.4

Video Input: Bosphorus 4K



1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl

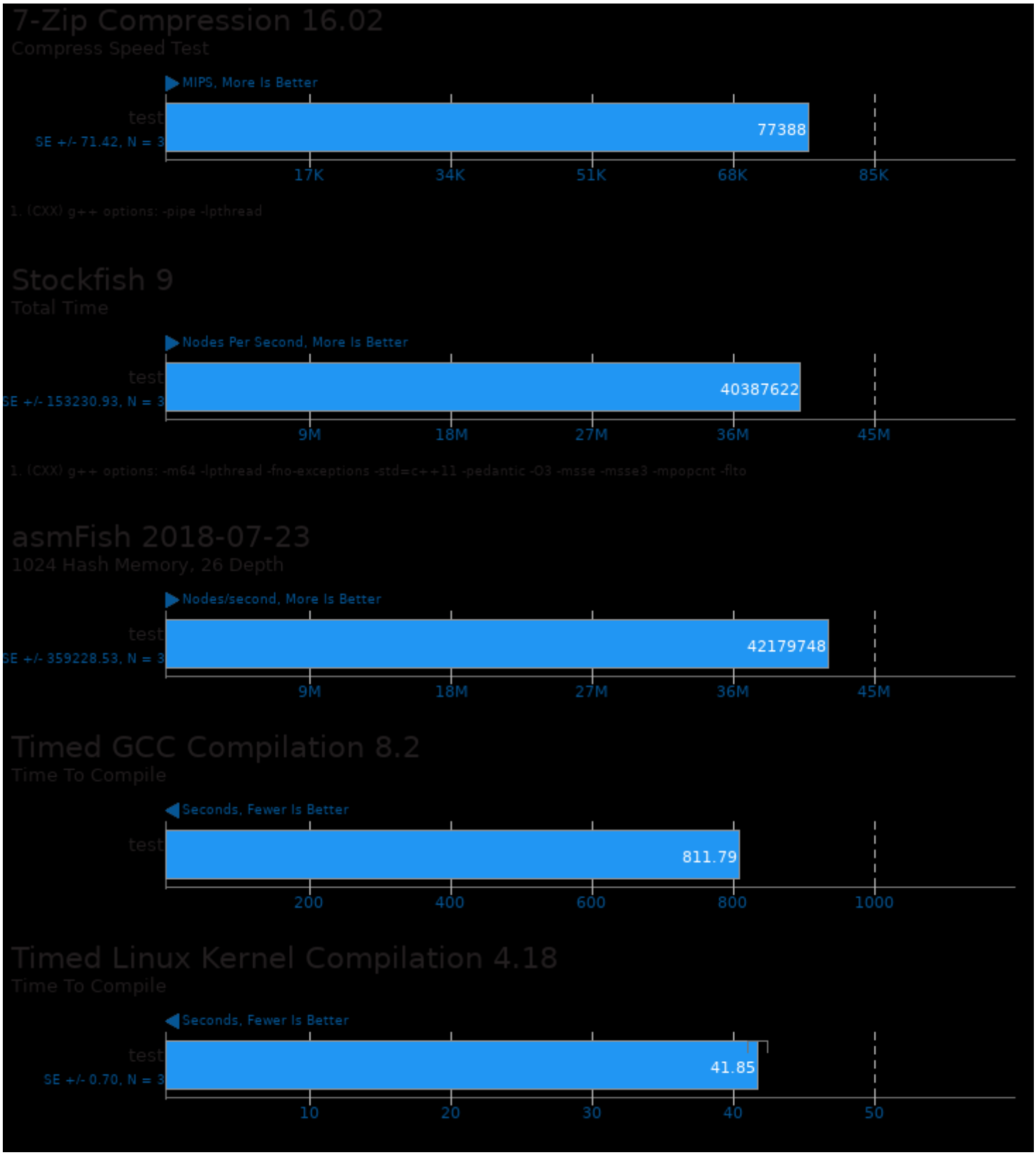
x265 3.4

Video Input: Bosphorus 1080p

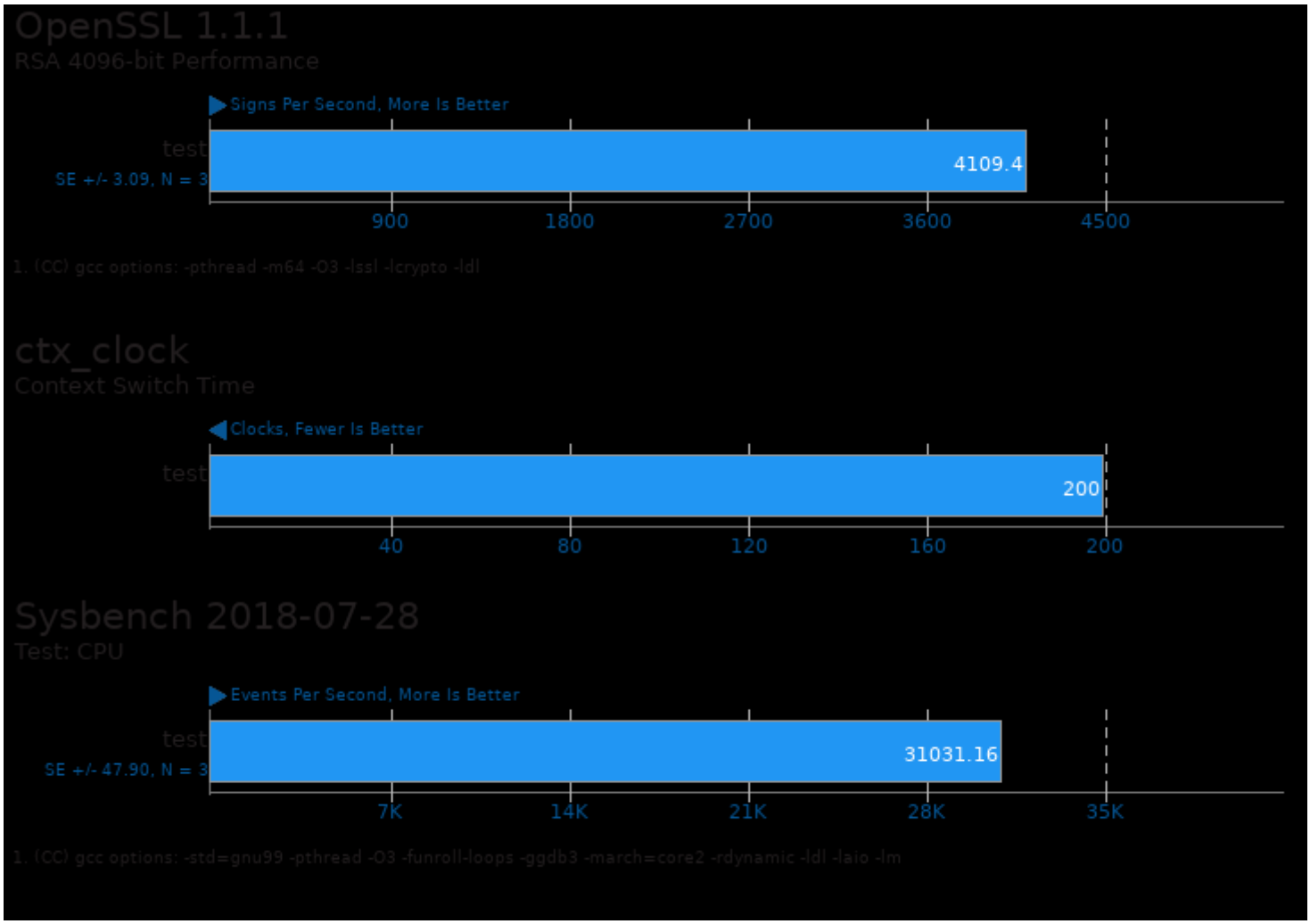


1. (CXX) g++ options: -O3 -rdynamic -lpthread -lrt -ldl

test


7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
test
77388
SE +/- 71.42, N = 3
17K
34K
51K
68K
85K
1. (CXX) g++ options: -pipe -lpthread
Stockfish 9
Total Time
Nodes Per Second, More Is Better
test
40387622
SE +/- 153230.93, N = 3
9M
18M
27M
36M
45M
1. (CXX) g++ options: -m64 -lpthread -fno-exceptions -std=c++11 -pedantic -O3 -msse -msse3 -mpopcnt -flto
asmFish 2018-07-23
1024 Hash Memory, 26 Depth
Nodes/second, More Is Better
test
42179748
SE +/- 359228.53, N = 3
9M
18M
27M
36M
45M
Timed GCC Compilation 8.2
Time To Compile
Seconds, Fewer Is Better
test
811.79
200
400
600
800
1000
Timed Linux Kernel Compilation 4.18
Time To Compile
Seconds, Fewer Is Better
test
41.85
SE +/- 0.70, N = 3
10
20
30
40
50

test



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