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Intel Core i7-8565U testing with a Dell 0KTW76 (1.11.0 BIOS) and Intel UHD 620 WHL GT2 3GB on Ubuntu 21.04 via the Phoronix Test Suite.

Automated Executive Summary

2 had the most wins, coming in first place for 33% of the tests.

Based on the geometric mean of all complete results, the fastest (2) was 1.003x the speed of the slowest (1). 3 was 1x the speed of 2, 1a was 0.998x the speed of 3, 1 was 0.999x the speed of 1a.

Test Systems:

1

1a

2

3

Processor: Intel Core i7-8565U @ 4.60GHz (4 Cores / 8 Threads), Motherboard: Dell 0KTW76 (1.11.0 BIOS), Chipset: Intel Cannon Point-LP, Memory: 16GB, Disk: SK hynix PC401 NVMe 256GB, Graphics: Intel UHD 620 WHL GT2 3GB (1150MHz), Audio: Realtek ALC3271, Network: Qualcomm Atheros QCA6174 802.11ac

OS: Ubuntu 21.04, Kernel: 5.13.0-051300-generic (x86_64), Desktop: GNOME Shell 3.38.4, Display Server: X Server + Wayland, OpenGL: 4.6 Mesa 21.2.0-devel (git-0aab06e 2021-07-05 hirsute-oibaf-ppa), Vulkan: 1.2.182, Compiler: GCC 10.3.0, File-System: ext4, Screen Resolution: 1920x1080

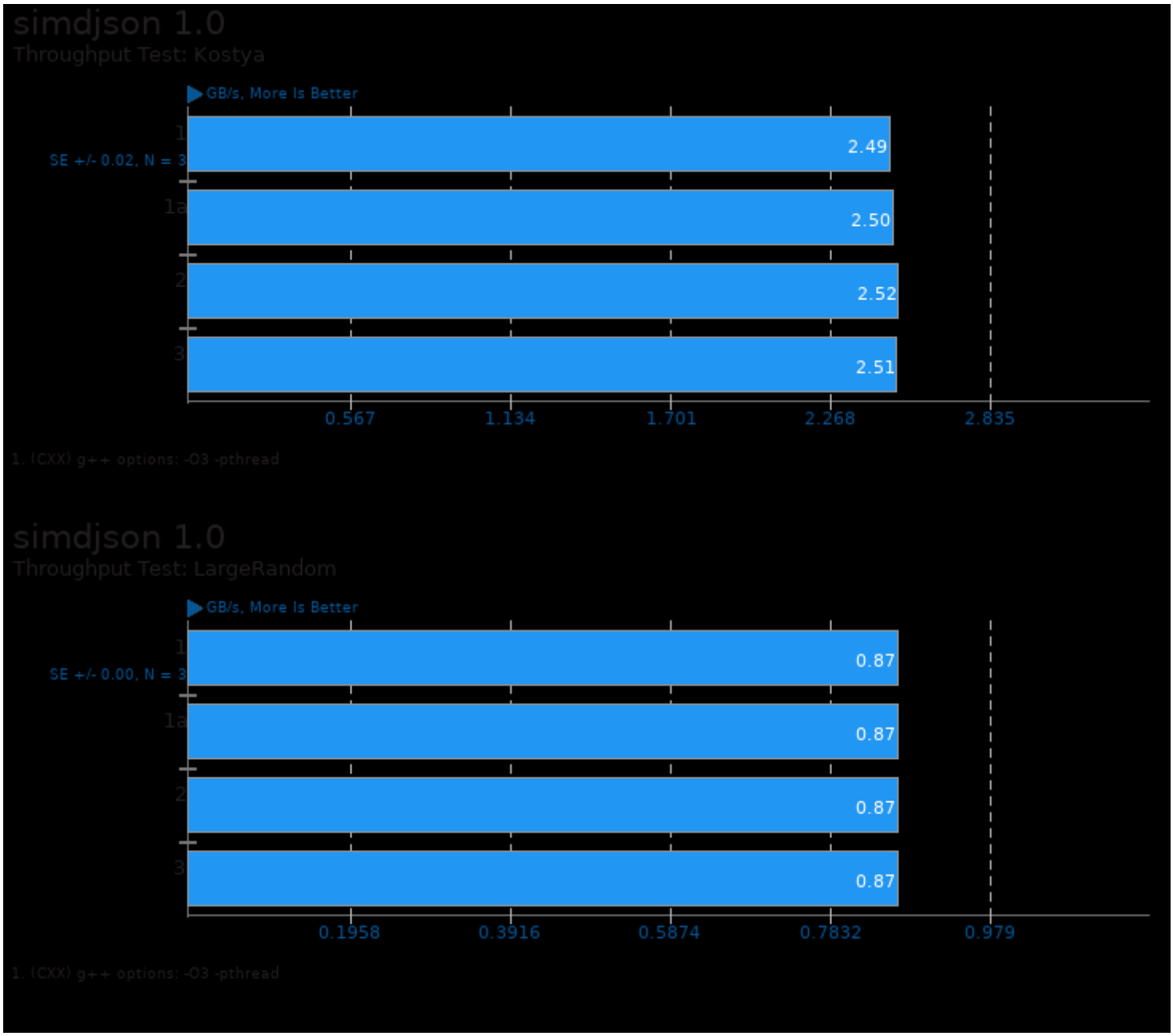
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-mutex --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-gDeRY6/gcc-10-10.3.0/debian/tmp-gcn/usr, hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86_64-linux-gnu --program-prefix=x86_64-linux-gnu- --target=x86_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-build-config=bootstrap-lto-lean --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v
Processor Notes: Scaling Governor: intel_pstate powersave - CPU Microcode: 0xea - Thermald 2.4.3
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Not affected + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Not affected + 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: Mitigation of Microcode + tsx_async_abort: Not affected

	1	1a	2	3
simdjson - Kostya (GB/s)	**2.49**	2.5	**2.52**	2.51
Normalized	98.81%	99.21%	100%	99.6%
Standard Deviation	1.3%			
simdjson - LargeRand (GB/s)	0.87	0.87	0.87	0.87
Standard Deviation	0%			
simdjson - PartialTweets (GB/s)	**3.74**	**3.74**	3.75	**3.76**
Normalized	99.47%	99.47%	99.73%	100%
Standard Deviation	0.2%			
simdjson - DistinctUserID (GB/s)	**4.40**	**4.39**	**4.39**	**4.39**
Normalized	100%	99.77%	99.77%	99.77%
Standard Deviation	0.3%			
JPEG XL libjxl - PNG - 5 (MP/s)		**17.9**	17.97	**18.02**
Normalized		99.33%	99.72%	100%
JPEG XL libjxl - PNG - 7 (MP/s)		**5.38**	**5.38**	**5.46**
Normalized		98.53%	98.53%	100%
JPEG XL libjxl - PNG - 8 (MP/s)		0.65	0.65	0.65
JPEG XL libjxl - JPEG - 5 (MP/s)		**61.7**	61.66	**61.22**
Normalized		100%	99.94%	99.22%
JPEG XL libjxl - JPEG - 7 (MP/s)		**61.35**	61.07	**60.87**
Normalized		100%	99.54%	99.22%
JPEG XL libjxl - JPEG - 8 (MP/s)		**23.75**	**23.8**	23.78
Normalized		99.79%	100%	99.92%
JPEG XL Decoding libjxl - 1 (MP/s)		48.21	**48.31**	**48.16**
Normalized		99.79%	100%	99.69%
JPEG XL Decoding libjxl - All (MP/s)		**133.16**	**133.75**	133.65
Normalized		99.56%	100%	99.93%
OpenSSL - SHA256 (byte/s)		**834925200**	945159300	**992359540**

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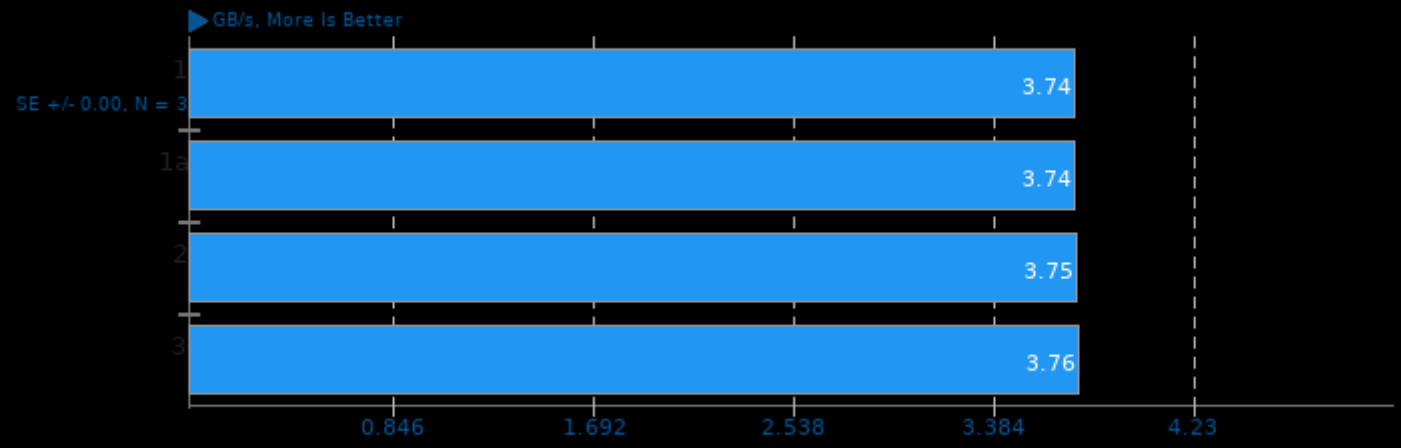
Normalized	84.14%	95.24%	100%
OpenSSL - RSA4096 (sign/s)	**972**	**988.7**	986.4
Normalized	98.31%	100%	99.77%
OpenSSL - RSA4096 (verify/s)	**52528**	60407	**60863**
Normalized	86.3%	99.25%	100%

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simdjson 1.0
Throughput Test: Kostya
GB/s, More Is Better
SE +/- 0.02, N = 3
1
1a
2
3
2.49
2.50
2.52
2.51
0.567
1.134
1.701
2.268
2.835
1. (CXX) g++ options: -O3 -pthread
simdjson 1.0
Throughput Test: LargeRandom
GB/s, More Is Better
SE +/- 0.00, N = 3
1
1a
2
3
0.87
0.87
0.87
0.87
0.1958
0.3916
0.5874
0.7832
0.979
1. (CXX) g++ options: -O3 -pthread

simdjson 1.0

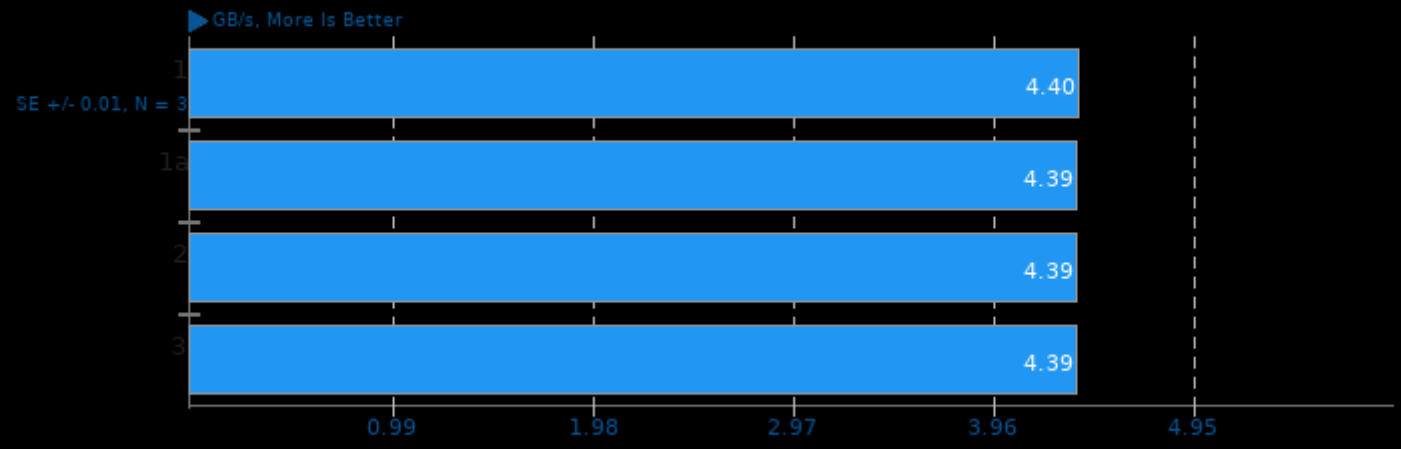
Throughput Test: PartialTweets



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

simdjson 1.0

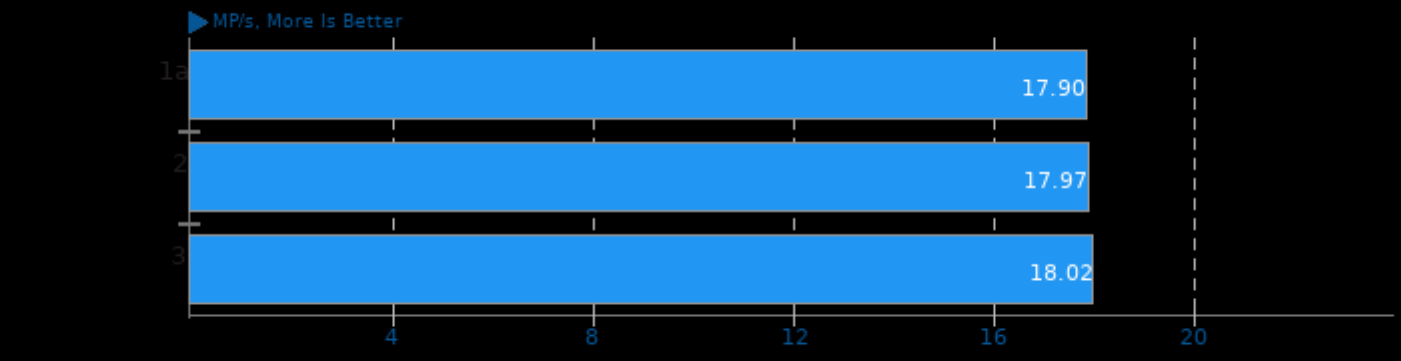
Throughput Test: DistinctUserID



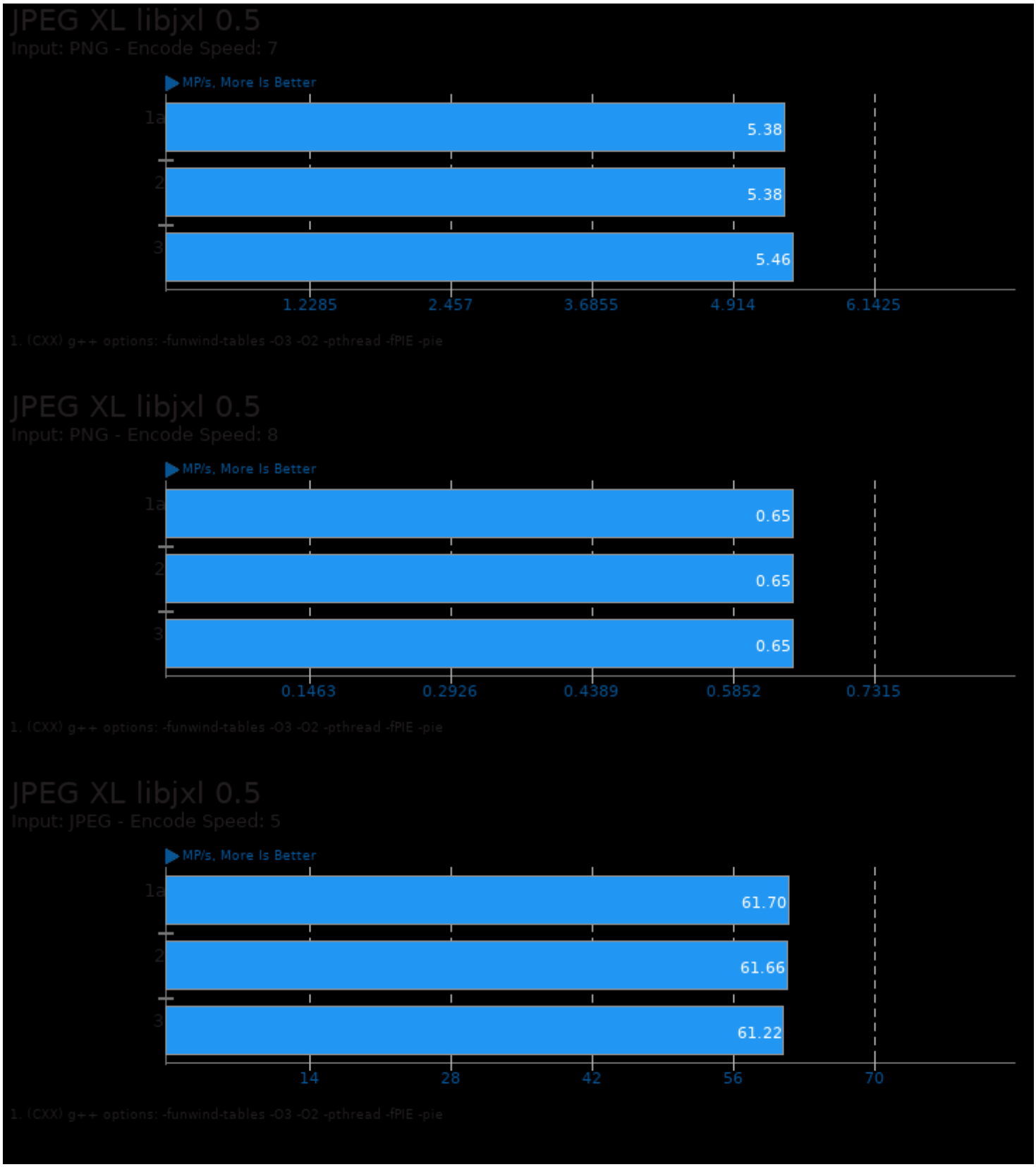
1. (CXX) g++ options: -O3 -pthread

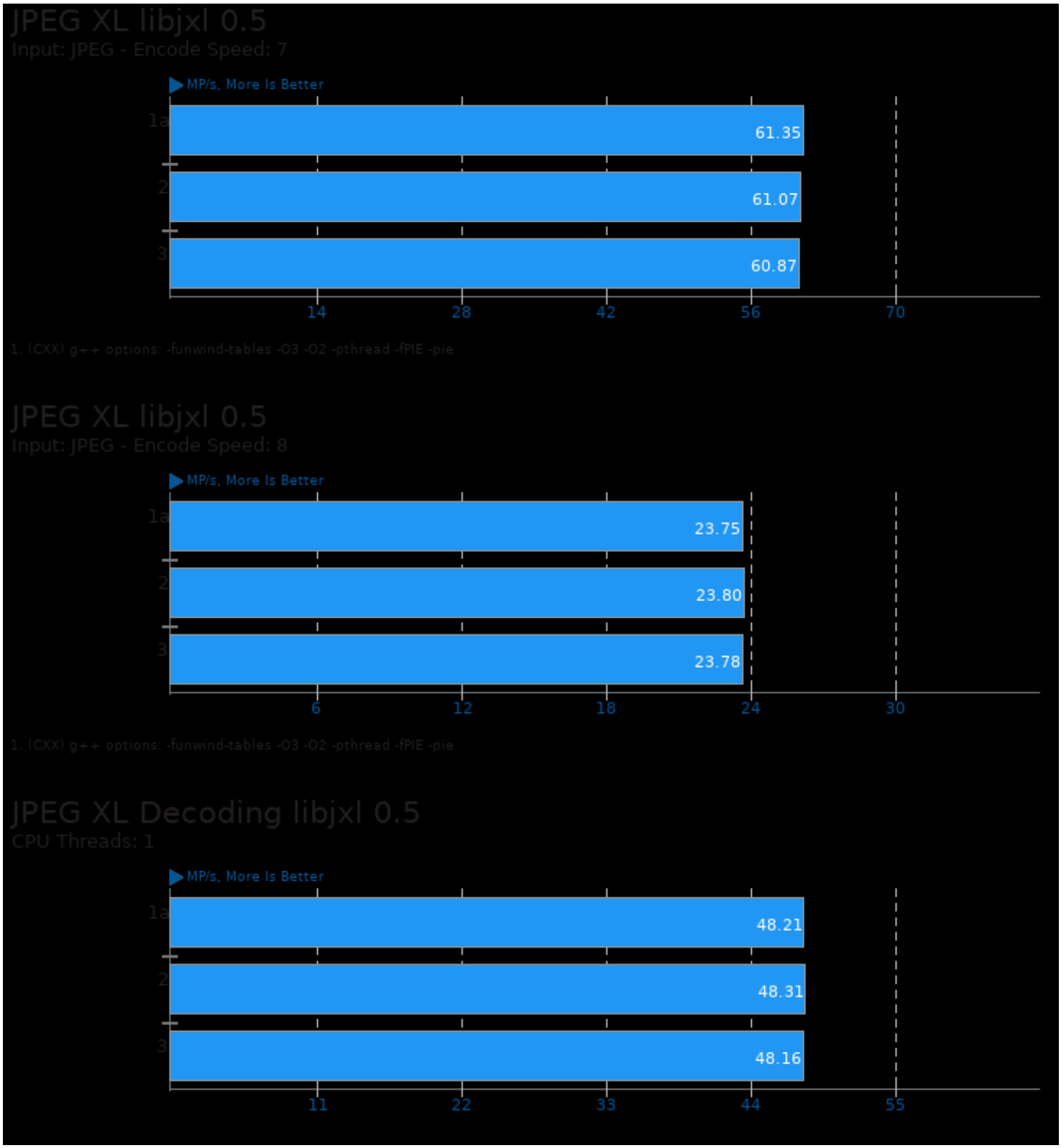
JPEG XL libjxl 0.5

Input: PNG - Encode Speed: 5

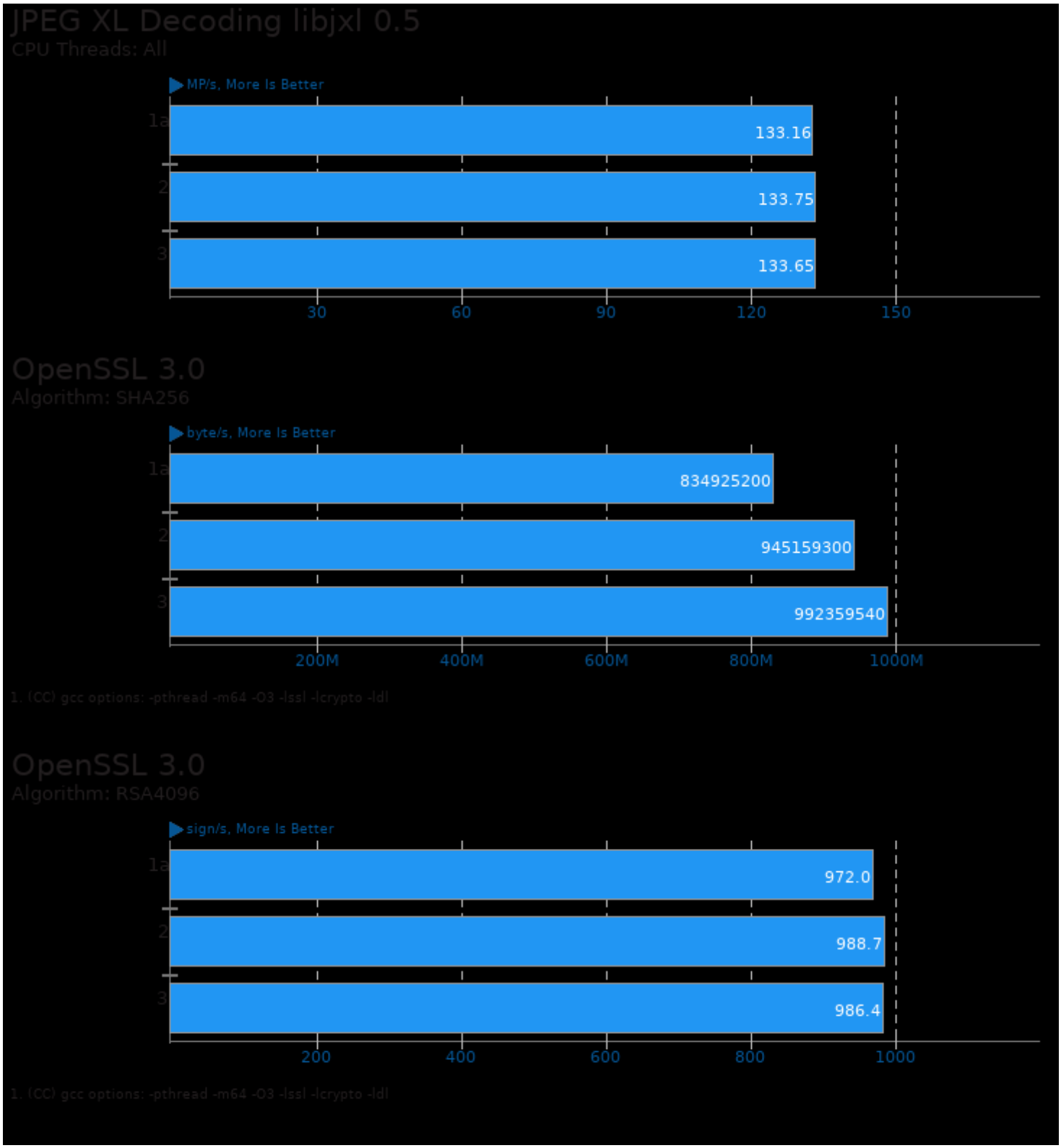


1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie

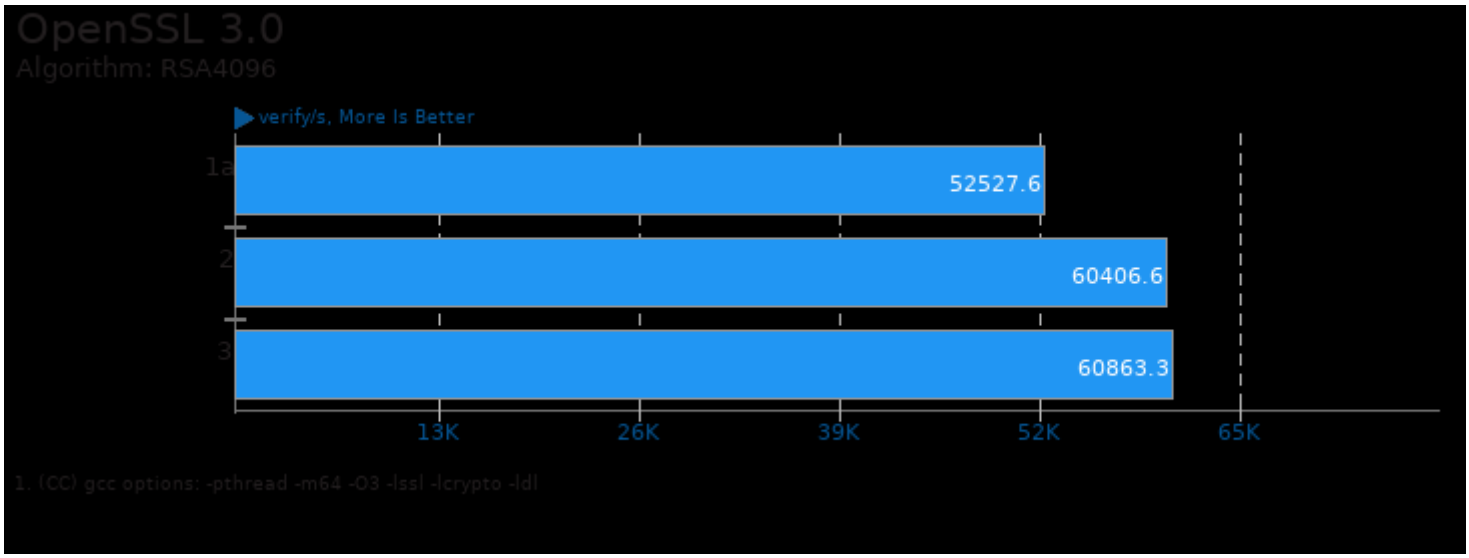

JPEG XL libjxl 0.5
Input: PNG - Encode Speed: 7
MP/s, More Is Better
1a
2
3
5.38
5.38
5.46
1.2285
2.457
3.6855
4.914
6.1425
1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie
JPEG XL libjxl 0.5
Input: PNG - Encode Speed: 8
MP/s, More Is Better
1a
2
3
0.65
0.65
0.65
0.1463
0.2926
0.4389
0.5852
0.7315
1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie
JPEG XL libjxl 0.5
Input: JPEG - Encode Speed: 5
MP/s, More Is Better
1a
2
3
61.70
61.66
61.22
14
28
42
56
70
1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie


JPEG XL libjxl 0.5
Input: JPEG - Encode Speed: 7
MP/s, More Is Better
1a
61.35
2
61.07
3
60.87
14
28
42
56
70
1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie
JPEG XL libjxl 0.5
Input: JPEG - Encode Speed: 8
MP/s, More Is Better
1a
23.75
2
23.80
3
23.78
6
12
18
24
30
1. (CXX) g++ options: -funwind-tables -O3 -O2 -pthread -fPIE -pie
JPEG XL Decoding libjxl 0.5
CPU Threads: 1
MP/s, More Is Better
1a
48.21
2
48.31
3
48.16
11
22
33
44
55

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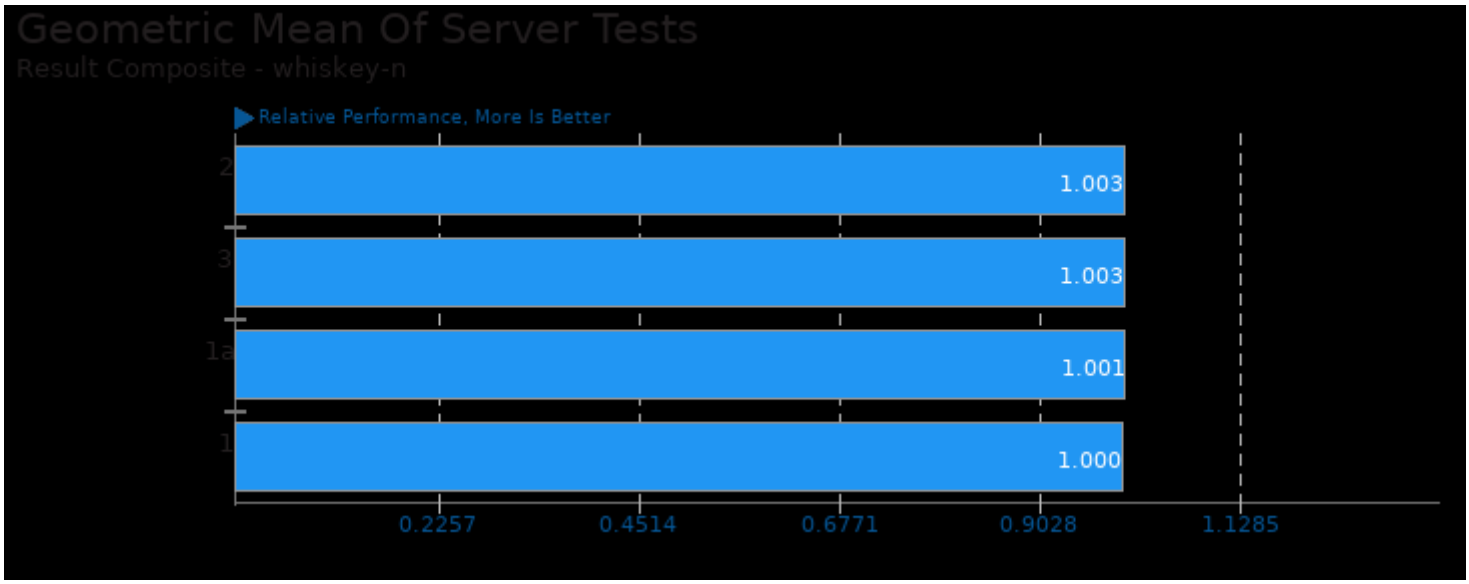

JPEG XL Decoding libjxl 0.5
CPU Threads: All
MP/s, More Is Better
1a
2
3
133.16
133.75
133.65
30
60
90
120
150
OpenSSL 3.0
Algorithm: SHA256
byte/s, More Is Better
1a
2
3
834925200
945159300
992359540
200M
400M
600M
800M
1000M
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl
OpenSSL 3.0
Algorithm: RSA4096
sign/s, More Is Better
1a
2
3
972.0
988.7
986.4
200
400
600
800
1000
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

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OpenSSL 3.0
Algorithm: RSA4096
verify/s, More Is Better
1a
52527.6
2
60406.6
3
60863.3
13K
26K
39K
52K
65K
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

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



Geometric mean based upon tests: pts/openssl and pts/simdjson

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 01:32.