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MBP: Baseline (lite)

Intel Core i7-8559U testing with an Apple MacBook Pro (13-inch, 2018, Four Thunderbolt 3 Ports) and Intel Iris Plus 655 on macOS via the Phoronix Test Suite.

Automated Executive Summary

Core i7-8559U: macOS 12.0.1 had the most wins, coming in first place for 95% of the tests.

Based on the geometric mean of all complete results, the fastest (Core i7-8559U: macOS 12.0.1) was 1.023x the speed of the slowest (Core i7-8559U: macOS 12.4).

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

SQLite Speedtest (Timed Time - Size 1,000) at 1.147x
Timed ImageMagick Compilation (Time To Compile) at 1.105x
PyBench (Total For Average Test Times) at 1.044x
Zstd Compression (Compression Level: 8, Long Mode - Compression Speed) at 1.038x
Timed FFmpeg Compilation (Time To Compile) at 1.035x
Zstd Compression (Compression Level: 3 - Compression Speed) at 1.03x
Zstd Compression (Compression Level: 19, Long Mode - Compression Speed) at 1.03x
Zstd Compression (Compression Level: 19 - Compression Speed) at 1.026x
Timed LLVM Compilation (Build System: Unix Makefiles) at 1.026x

Zstd Compression (Compression Level: 8 - Compression Speed) at 1.018x.

Test Systems:

Core i7-8559U: macOS 12.0.1

Processor: Intel Core i7-8559U @ 2.70GHz (4 Cores / 8 Threads), Motherboard: Apple MacBook Pro (1715.40.15.0.0 BIOS), Memory: 2 x 8 GB LPDDR3-2133MHz, Disk: 459GB, Graphics: Intel Iris Plus 655 2GB, Monitor: Color LCD

OS: macOS 12.0.1, Kernel: 21.1.0 (x86_64), Compiler: GCC 12.0.5 + Clang 12.0.5 + Xcode 13.1, File-System: APFS, Screen Resolution: 2560x1600

Environment Notes: XPC_FLAGS=0x0
Processor Notes: CPU Microcode: 234
Python Notes: Python 2.7.18 + Python 3.9.7

Core i7-8559U: macOS 12.4

Processor: Intel Core i7-8559U @ 2.70GHz (4 Cores / 8 Threads), Motherboard: Apple MacBook Pro (1731.120.10.0.0 BIOS), Memory: 2 x 8 GB LPDDR3-2133MHz, Disk: 459GB, Graphics: Intel Iris Plus 655 2GB, Monitor: Color LCD

OS: macOS 12.4, Kernel: 21.5.0 (x86_64), OpenCL: OpenCL 1.2 (Apr 19 2022 18:44:25), Compiler: GCC 12.0.5 + Clang 12.0.5 + Xcode 13.4.1, File-System: APFS, Screen Resolution: 2560x1600

Environment Notes: XPC_FLAGS=0x0
Processor Notes: CPU Microcode: 240
Python Notes: Python 3.9.13

	Core i7-8559U: macOS 12.0.1	Core i7-8559U: macOS 12.4
SQLite Speedtest - Timed Time - Size 1,000 (sec)	**91.708**	**105.148**
Normalized	100%	87.22%
Standard Deviation	0.5%	2.1%
Timed ImageMagick Compilation - Time To Compile	**59.002**	**65.203**
Normalized	100%	90.49%
Standard Deviation	1.1%	2.2%
PyBench - T.F.A.T.T (Milliseconds)	**1366**	**1309**
Normalized	95.83%	100%
Standard Deviation	0.8%	1.3%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s)	**422.0**	**406.4**
Normalized	100%	96.3%
Standard Deviation	0.1%	1%
Timed FFmpeg Compilation - Time To Compile (sec)	**163.963**	**169.620**
Normalized	100%	96.66%

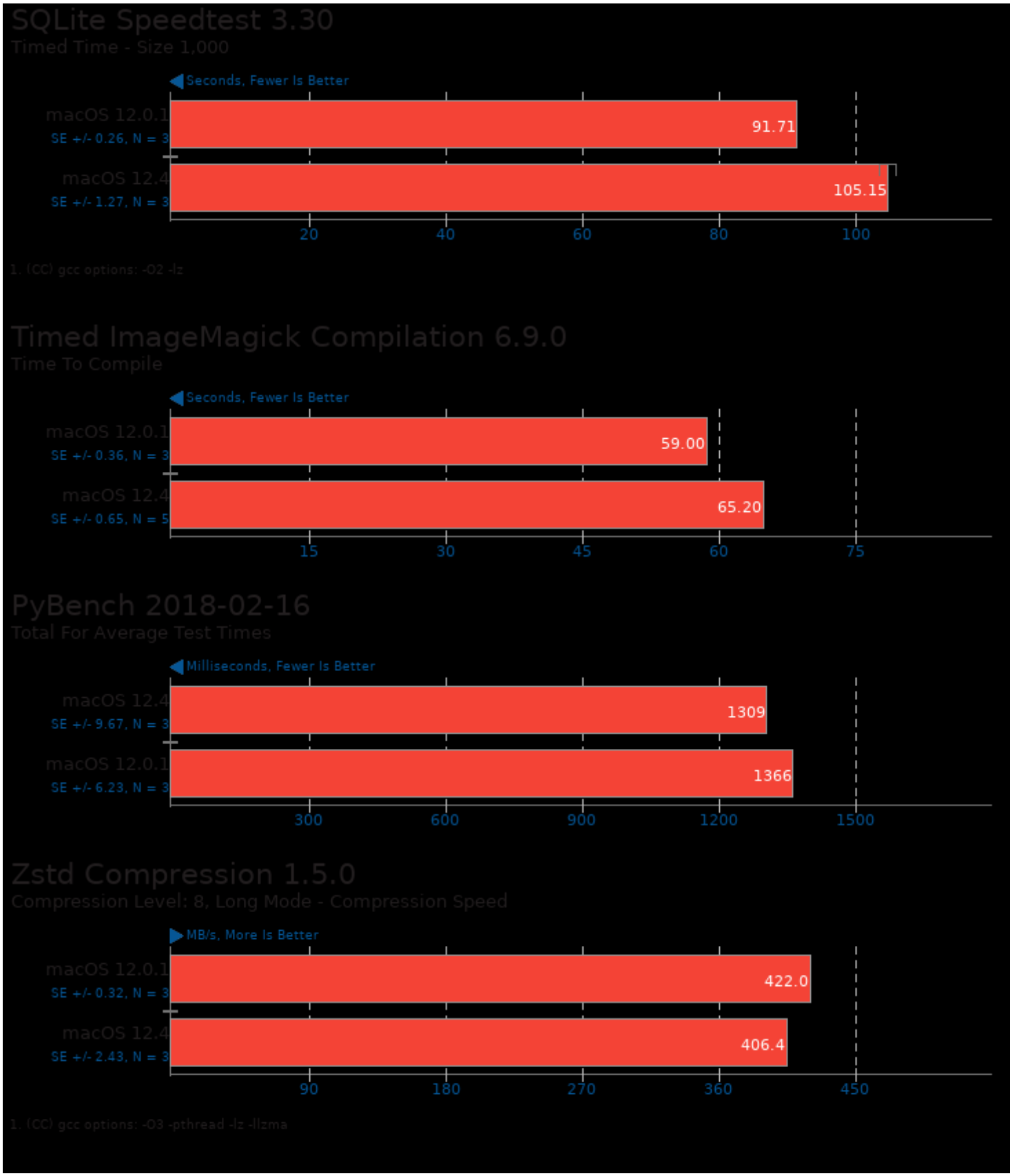
MBP: Baseline (lite)

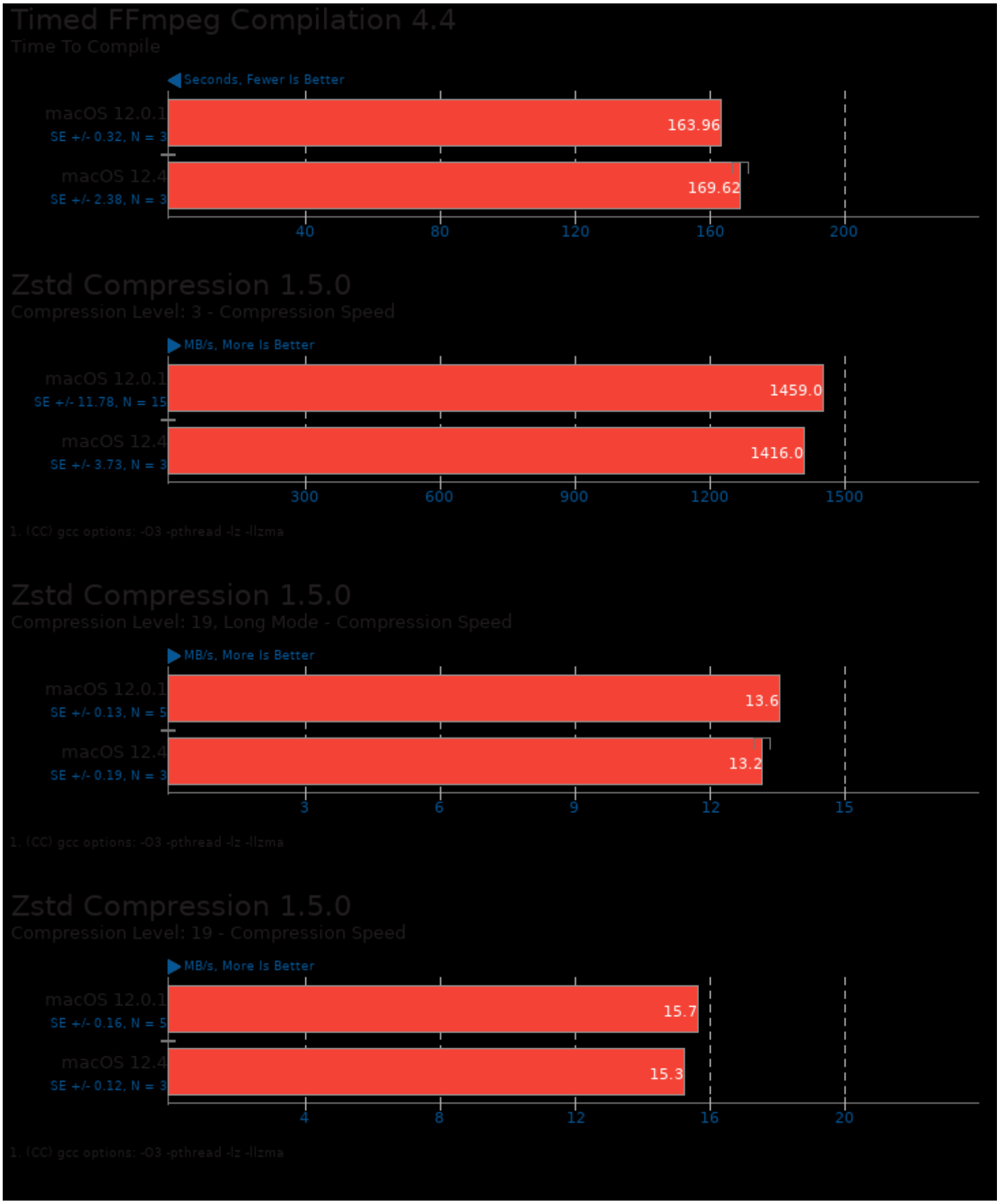
Standard Deviation	0.3%	2.4%
Zstd Compression - 3 - Compression Speed (MB/s)	**1459**	**1416**
Normalized	100%	97.05%
Standard Deviation	3.1%	0.5%
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	**13.6**	**13.2**
Normalized	100%	97.06%
Standard Deviation	2.2%	2.4%
Zstd Compression - 19 - Compression Speed (MB/s)	**15.7**	**15.3**
Normalized	100%	97.45%
Standard Deviation	2.2%	1.3%
Timed LLVM Compilation - Unix Makefiles (sec)	**1862**	**1910**
Normalized	100%	97.49%
Standard Deviation	0.2%	1.8%
Zstd Compression - 8 - Compression Speed (MB/s)	**409.4**	**402.0**
Normalized	100%	98.19%
Standard Deviation	0.4%	0.8%
Timed LLVM Compilation - Ninja (sec)	**1809**	**1840**
Normalized	100%	98.28%
Standard Deviation	0.8%	0.1%
Zstd Compression - 19 - D.S (MB/s)	**2569**	**2525**
Normalized	100%	98.28%
Standard Deviation	0.5%	0.5%
simdjson - Kostya (GB/s)	**2.17**	**2.14**
Normalized	100%	98.62%
Standard Deviation	3%	0.5%
Zstd Compression - 3 - D.S (MB/s)	**3031**	**2990**
Normalized	100%	98.63%
Standard Deviation	2.6%	0.9%
Git - T.T.C.C.G.C (sec)	**70.002**	**70.724**
Normalized	100%	98.98%
Standard Deviation	0.7%	0.3%
Zstd Compression - 19, Long Mode - D.S (MB/s)	**2643**	**2616**
Normalized	100%	99%
Standard Deviation	0.5%	0.7%
Zstd Compression - 8, Long Mode - D.S (MB/s)	**3257**	**3234**
Normalized	100%	99.27%
Standard Deviation	0.8%	0.9%
Zstd Compression - 8 - D.S (MB/s)	**3070**	**3049**
Normalized	100%	99.33%
Standard Deviation	0.2%	0.7%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	**964.0**	**959.7**
Normalized	100%	99.55%
Standard Deviation	0.2%	0.4%
simdjson - DistinctUserID (GB/s)	4.85	4.85
Standard Deviation	0.2%	0.1%
simdjson - PartialTweets (GB/s)	4.03	4.03
Standard Deviation	0.1%	0.2%
simdjson - LargeRand (GB/s)	0.68	0.68
Standard Deviation	0.8%	0.8%
Maxon Cinebench - Single-Core (Score)		1113
Standard Deviation		0.7%
Maxon Cinebench - Multi-Core (Score)		4200
Standard Deviation		0.3%

MBP: Baseline (lite)

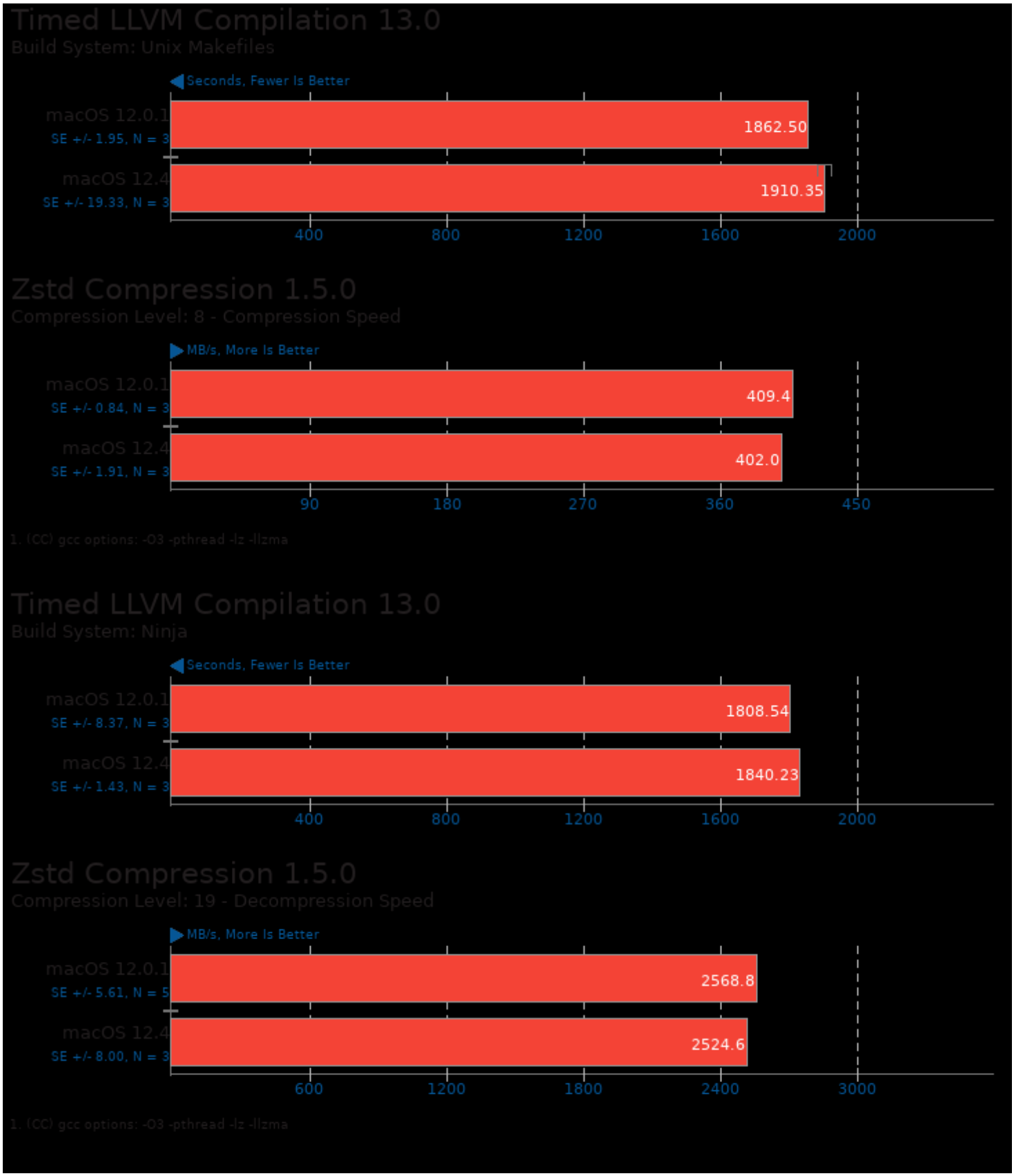
Maxon Cinebench - Single-Core (Score)	358.84
Standard Deviation	0.7%
Maxon Cinebench - Multi-Core (Score)	1511
Standard Deviation	2.4%
GraphicsMagick - HWB Color Space (Iterations/min)	188
Standard Deviation	0.3%
GraphicsMagick - Noise-Gaussian (Iterations/min)	29
Standard Deviation	0%
GraphicsMagick - Resizing (Iterations/min)	106
Standard Deviation	3.7%
GraphicsMagick - Enhanced (Iterations/min)	21
Standard Deviation	0%
GraphicsMagick - Sharpen (Iterations/min)	14
Standard Deviation	0%
GraphicsMagick - Rotate (Iterations/min)	667
Standard Deviation	1%
GraphicsMagick - Swirl (Iterations/min)	47
Standard Deviation	1.2%
Zstd Compression - 3, Long Mode - D.S (MB/s)	3158
Standard Deviation	0.5%
simdjson - DistinctUserID (GB/s)	4.83
Standard Deviation	0.3%
simdjson - PartialTweets (GB/s)	4.17
Standard Deviation	0%
simdjson - LargeRand (GB/s)	0.69
Standard Deviation	0%
simdjson - TopTweet (GB/s)	4.87
Standard Deviation	0.2%
simdjson - Kostya (GB/s)	2.16
Standard Deviation	0.3%
WebP Image Encode - Q.1.L.H.C (Encode Time - sec)	51.258
Standard Deviation	0.5%
WebP Image Encode - Q.1.H.C (Encode Time - sec)	6.998
Standard Deviation	0.7%
WebP Image Encode - Q.1.L (Encode Time - sec)	19.605
Standard Deviation	0.5%
WebP Image Encode - Quality 100 (Encode Time - sec)	2.635
Standard Deviation	1.2%
WebP Image Encode - Default (Encode Time - sec)	1.581
Standard Deviation	0.9%

MBP: Baseline (lite)



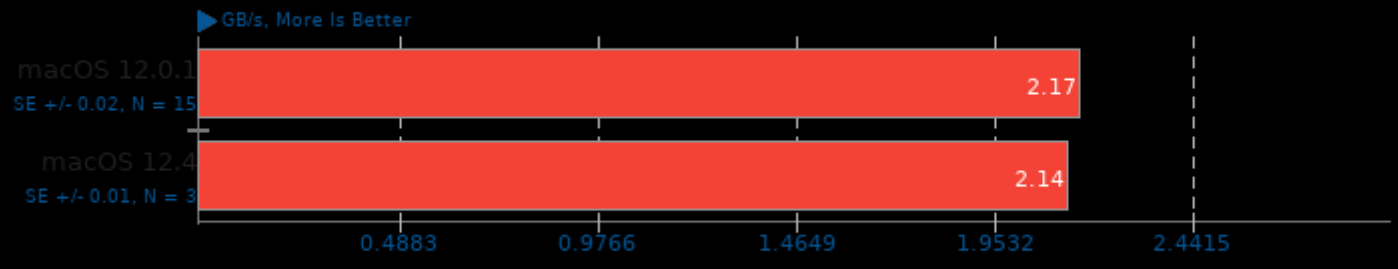

Timed FFmpeg Compilation 4.4
Time To Compile
Seconds, Fewer Is Better
macOS 12.0.1
SE +/- 0.32, N = 3
163.96
macOS 12.4
SE +/- 2.38, N = 3
169.62
40
80
120
160
200
Zstd Compression 1.5.0
Compression Level: 3 - Compression Speed
MB/s, More Is Better
macOS 12.0.1
SE +/- 11.78, N = 15
1459.0
macOS 12.4
SE +/- 3.73, N = 3
1416.0
300
600
900
1200
1500
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Compression Speed
MB/s, More Is Better
macOS 12.0.1
SE +/- 0.13, N = 5
13.6
macOS 12.4
SE +/- 0.19, N = 3
13.2
3
6
9
12
15
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 19 - Compression Speed
MB/s, More Is Better
macOS 12.0.1
SE +/- 0.16, N = 5
15.7
macOS 12.4
SE +/- 0.12, N = 3
15.3
4
8
12
16
20
1. (CC) gcc options: -O3 -pthread -lz -llzma

MBP: Baseline (lite)



simdjson 1.0

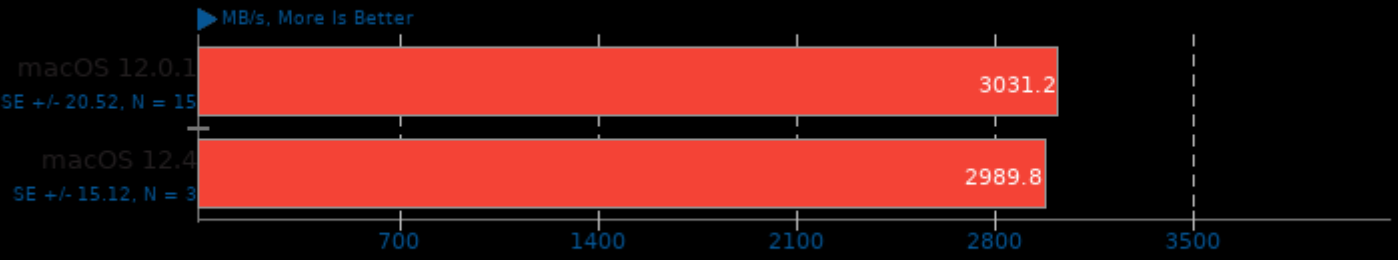
Throughput Test: Kostya



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

Zstd Compression 1.5.0

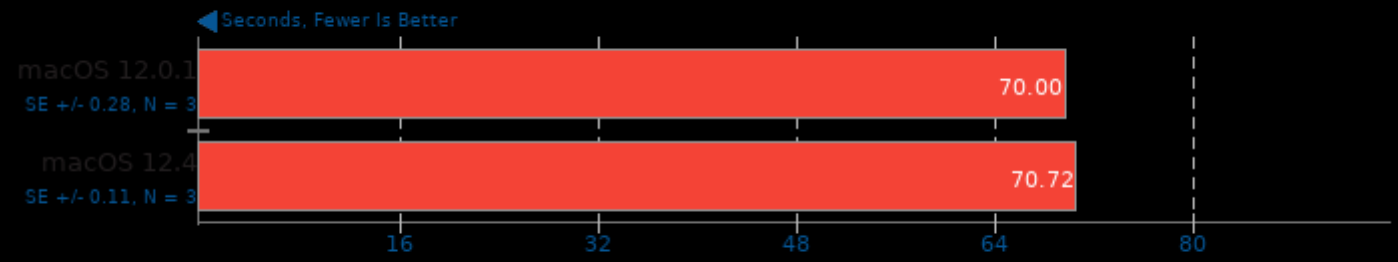
Compression Level: 3 - Decompression Speed



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

Git

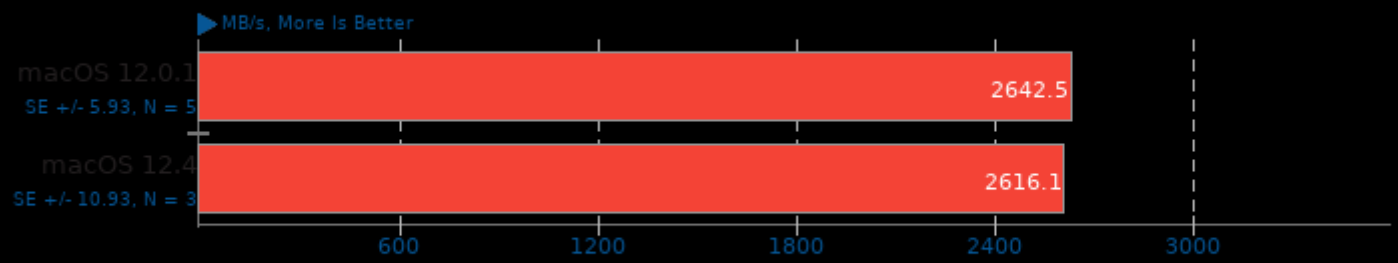
Time To Complete Common Git Commands



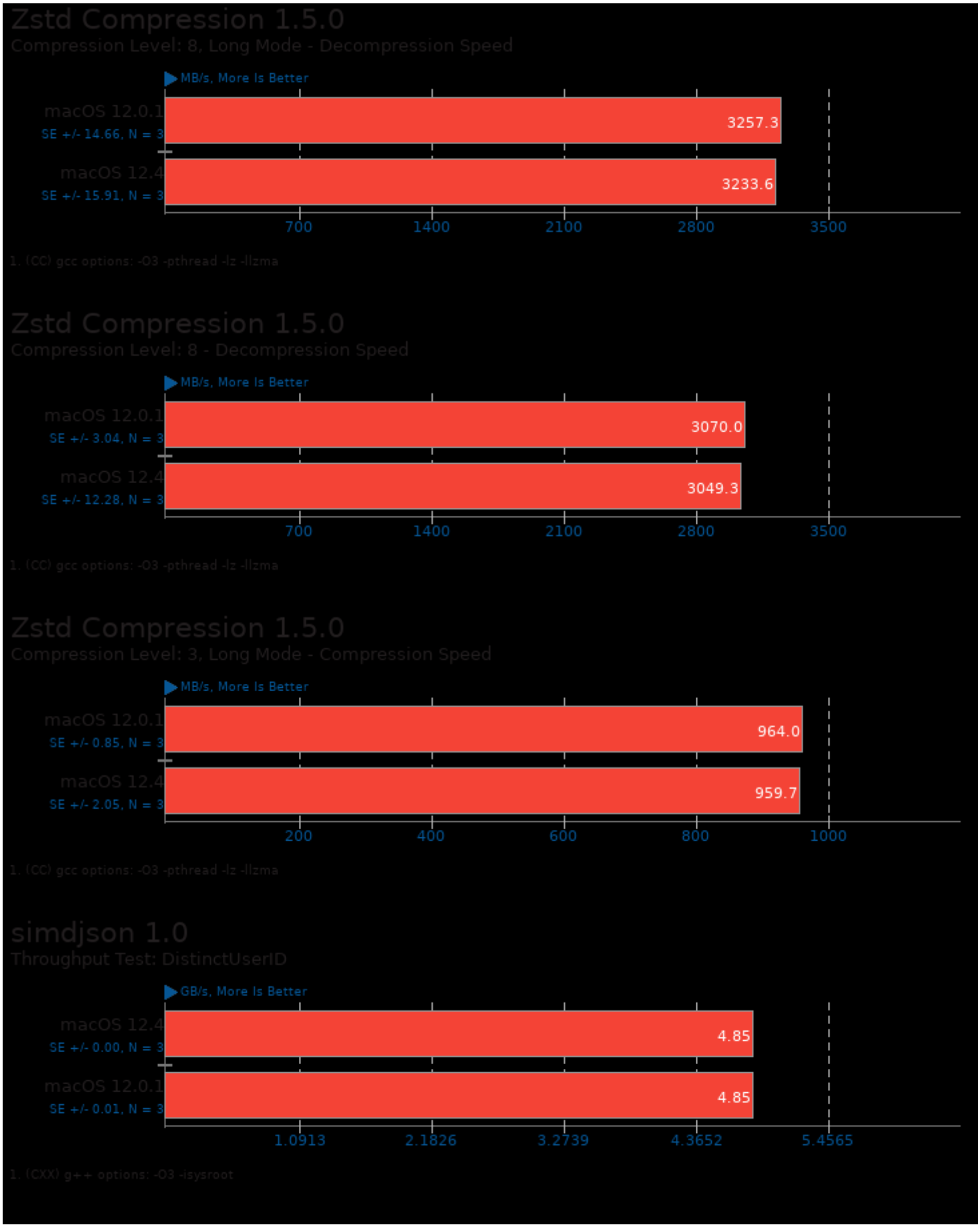
1. git version 2.30.1 (Apple Git-130)

Zstd Compression 1.5.0

Compression Level: 19, Long Mode - Decompression Speed

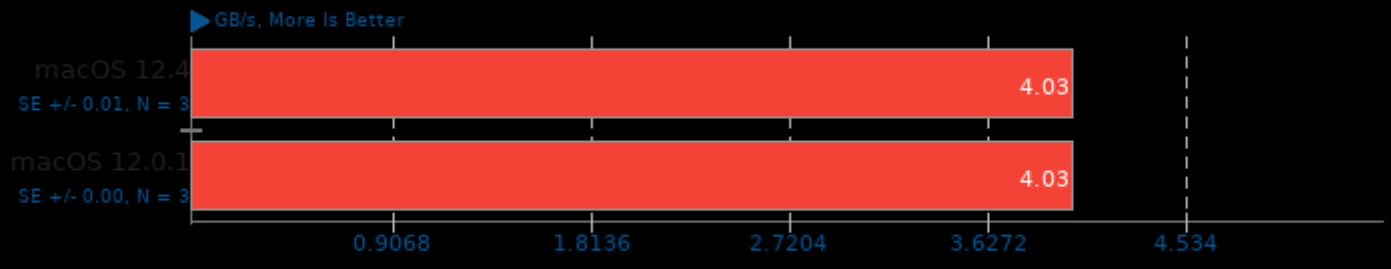


1. (CC) gcc options: -O3 -pthread -lz -llzma


Zstd Compression 1.5.0
Compression Level: 8, Long Mode - Decompression Speed
MB/s, More Is Better
macOS 12.0.1
SE +/- 14.66, N = 3
3257.3
macOS 12.4
SE +/- 15.91, N = 3
3233.6
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 8 - Decompression Speed
MB/s, More Is Better
macOS 12.0.1
SE +/- 3.04, N = 3
3070.0
macOS 12.4
SE +/- 12.28, N = 3
3049.3
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread -lz -llzma
Zstd Compression 1.5.0
Compression Level: 3, Long Mode - Compression Speed
MB/s, More Is Better
macOS 12.0.1
SE +/- 0.85, N = 3
964.0
macOS 12.4
SE +/- 2.05, N = 3
959.7
200
400
600
800
1000
1. (CC) gcc options: -O3 -pthread -lz -llzma
simdjson 1.0
Throughput Test: DistinctUserID
GB/s, More Is Better
macOS 12.4
SE +/- 0.00, N = 3
4.85
macOS 12.0.1
SE +/- 0.01, N = 3
4.85
1.0913
2.1826
3.2739
4.3652
5.4565
1. (CXX) g++ options: -O3 -isysroot

simdjson 1.0

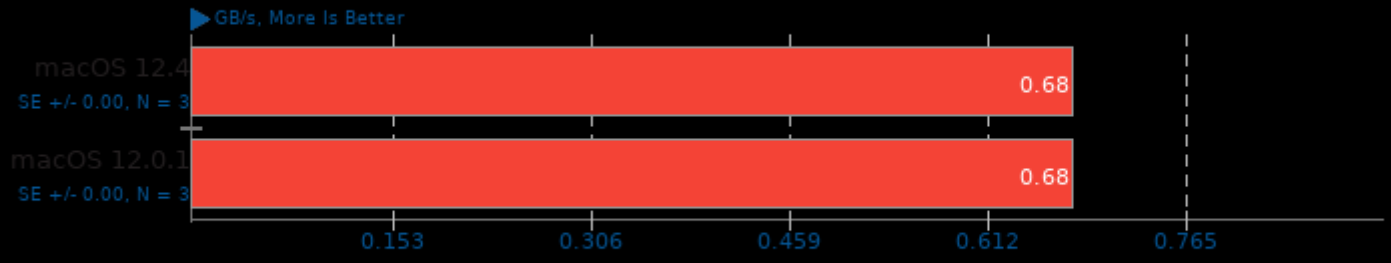
Throughput Test: PartialTweets



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

simdjson 1.0

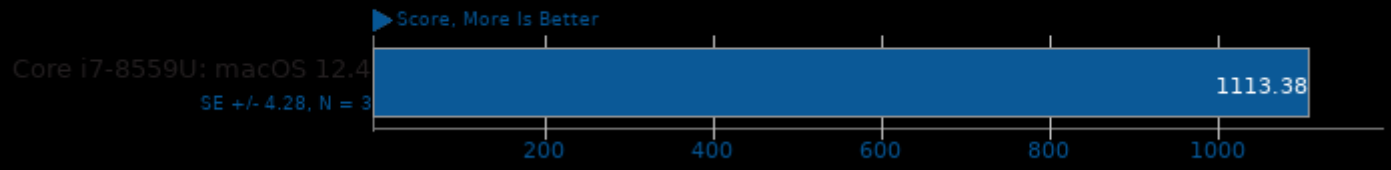
Throughput Test: LargeRandom



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

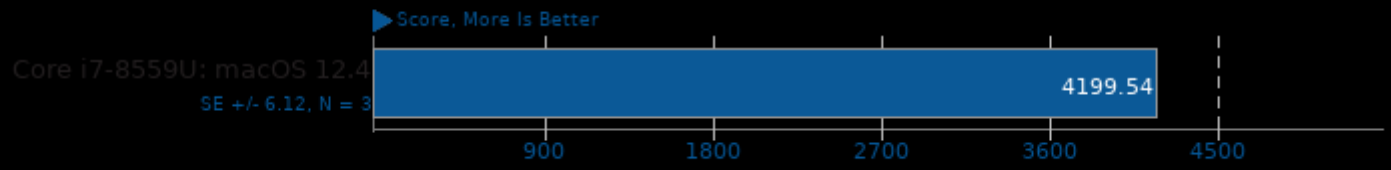
Maxon Cinebench 23

Test: Single-Core



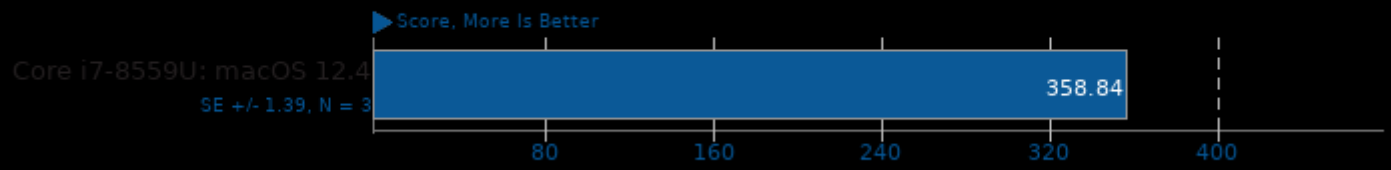
Maxon Cinebench 23

Test: Multi-Core



Maxon Cinebench 20

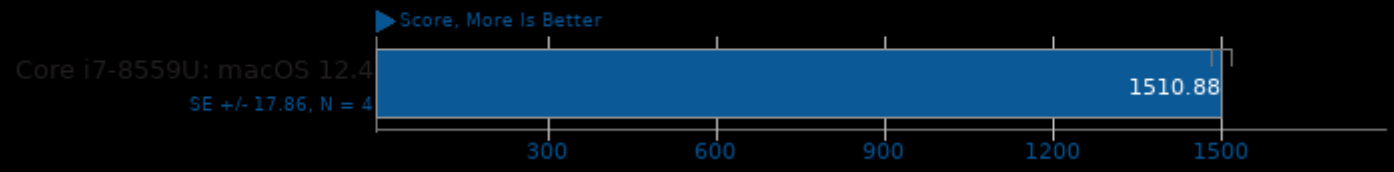
Test: Single-Core



MBP: Baseline (lite)

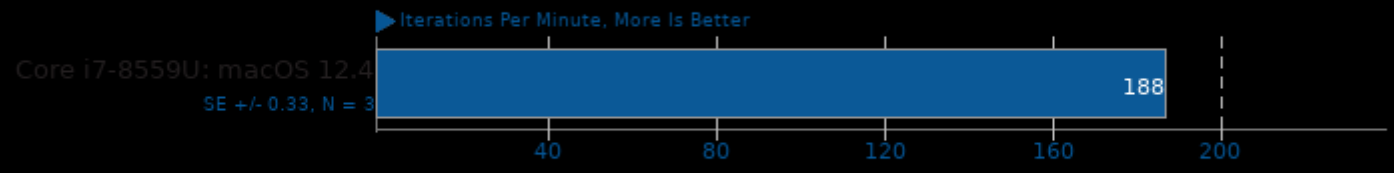
Maxon Cinebench 20

Test: Multi-Core



GraphicsMagick 1.3.33

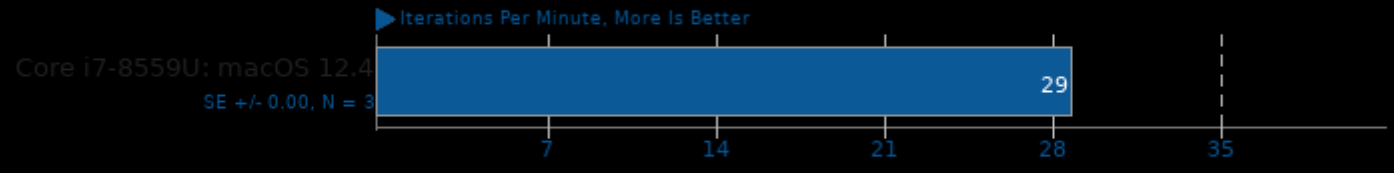
Operation: HWB Color Space



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

GraphicsMagick 1.3.33

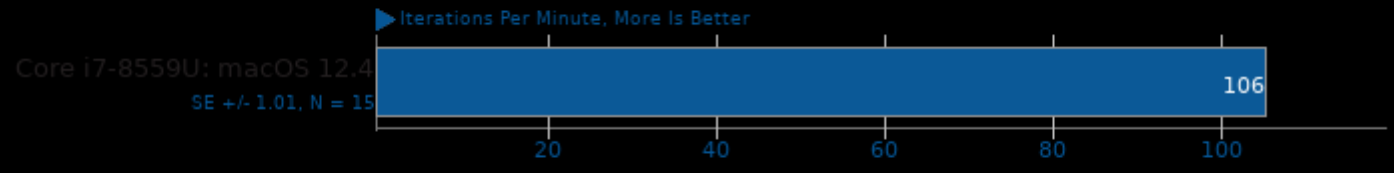
Operation: Noise-Gaussian



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

GraphicsMagick 1.3.33

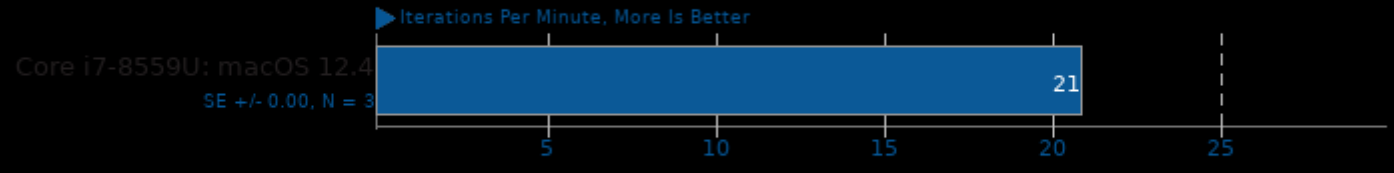
Operation: Resizing



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

GraphicsMagick 1.3.33

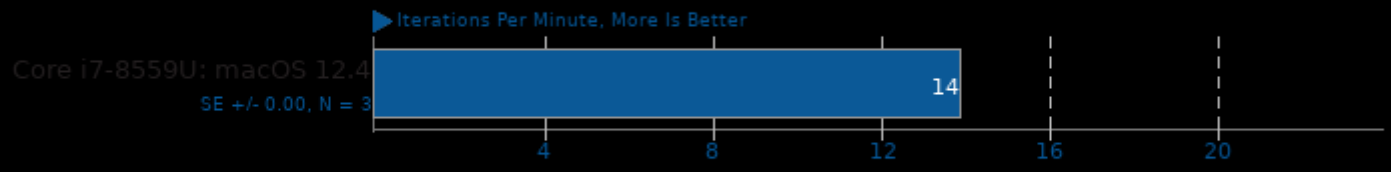
Operation: Enhanced



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

GraphicsMagick 1.3.33

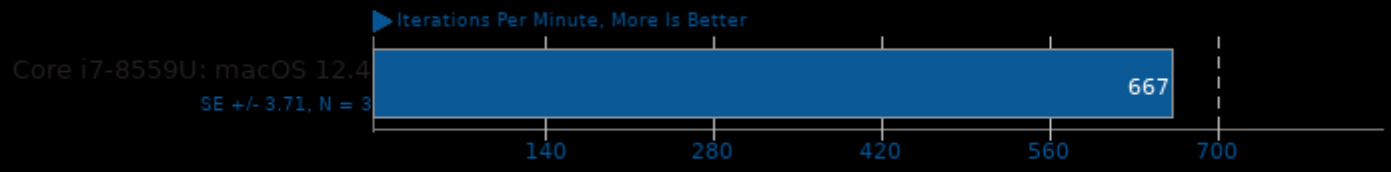
Operation: Sharpen



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

GraphicsMagick 1.3.33

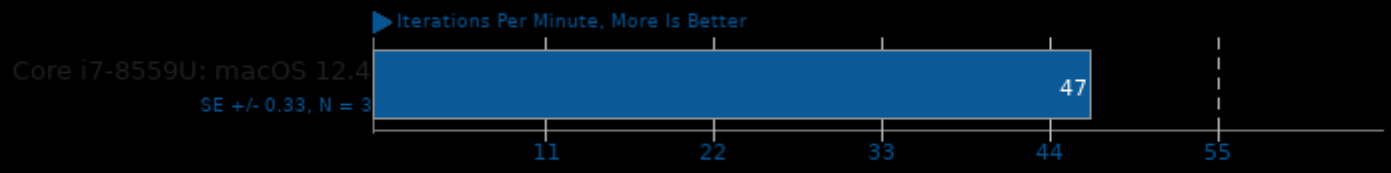
Operation: Rotate



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

GraphicsMagick 1.3.33

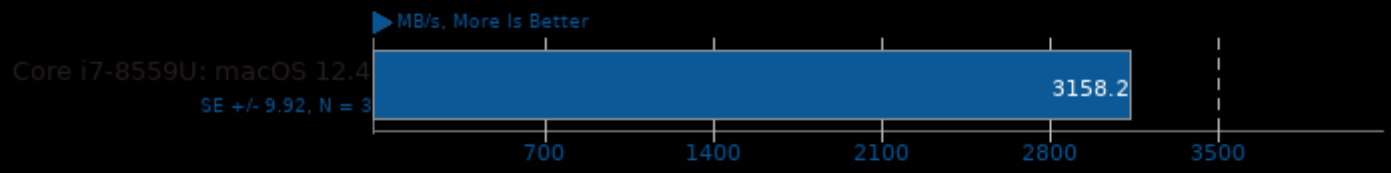
Operation: Swirl



1. (CC) gcc options: -O2 -lwebp -lwebpmux -ltiff -lfreetype -ljpeg -lXext -lX11 -llzma -lbz2 -lxml2 -lz -lzstd -lm -lpthread

Zstd Compression 1.5.0

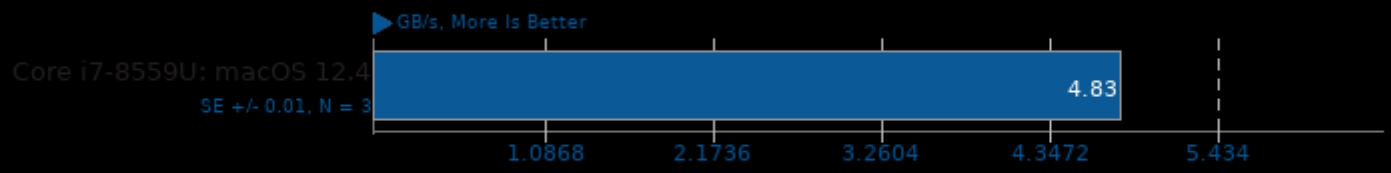
Compression Level: 3, Long Mode - Decompression Speed



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

simdjson 2.0

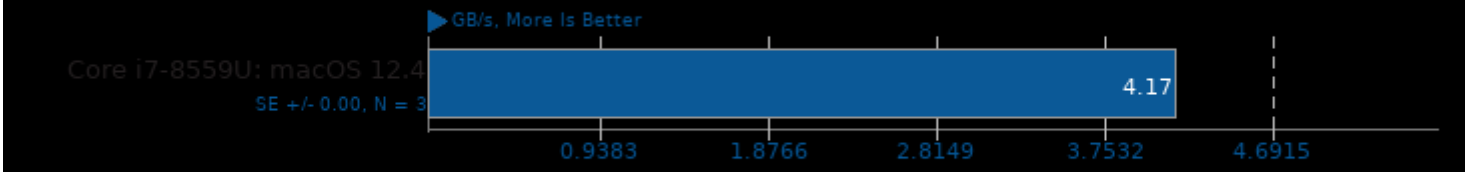
Throughput Test: DistinctUserID



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

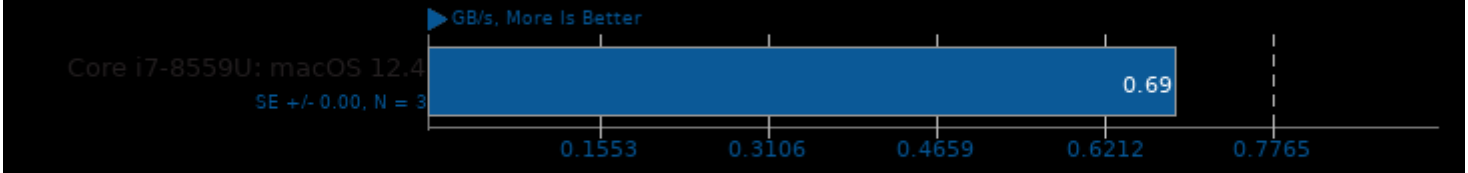
MBP: Baseline (lite)

simdjson 2.0
Throughput Test: PartialTweets



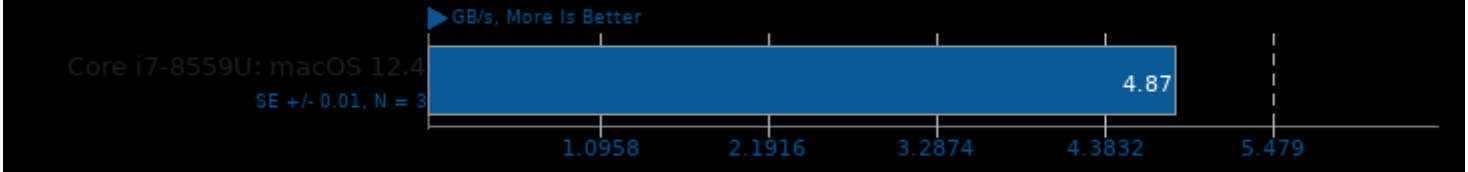
1. (CXX) g++ options: -O3 -isysroot

simdjson 2.0
Throughput Test: LargeRandom



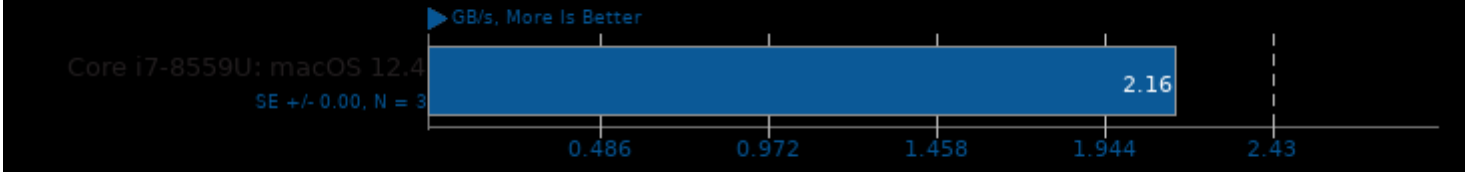
1. (CXX) g++ options: -O3 -isysroot

simdjson 2.0
Throughput Test: TopTweet



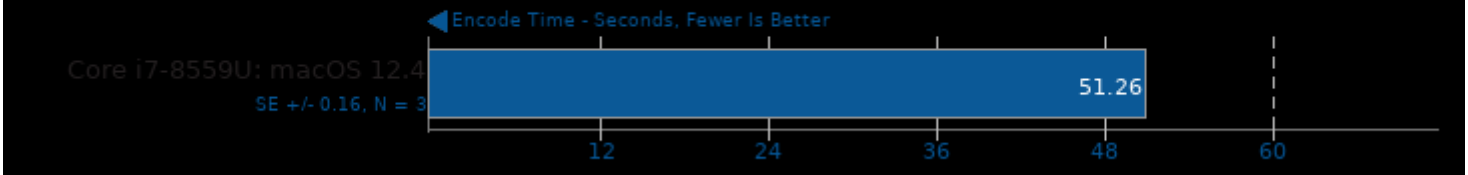
1. (CXX) g++ options: -O3 -isysroot

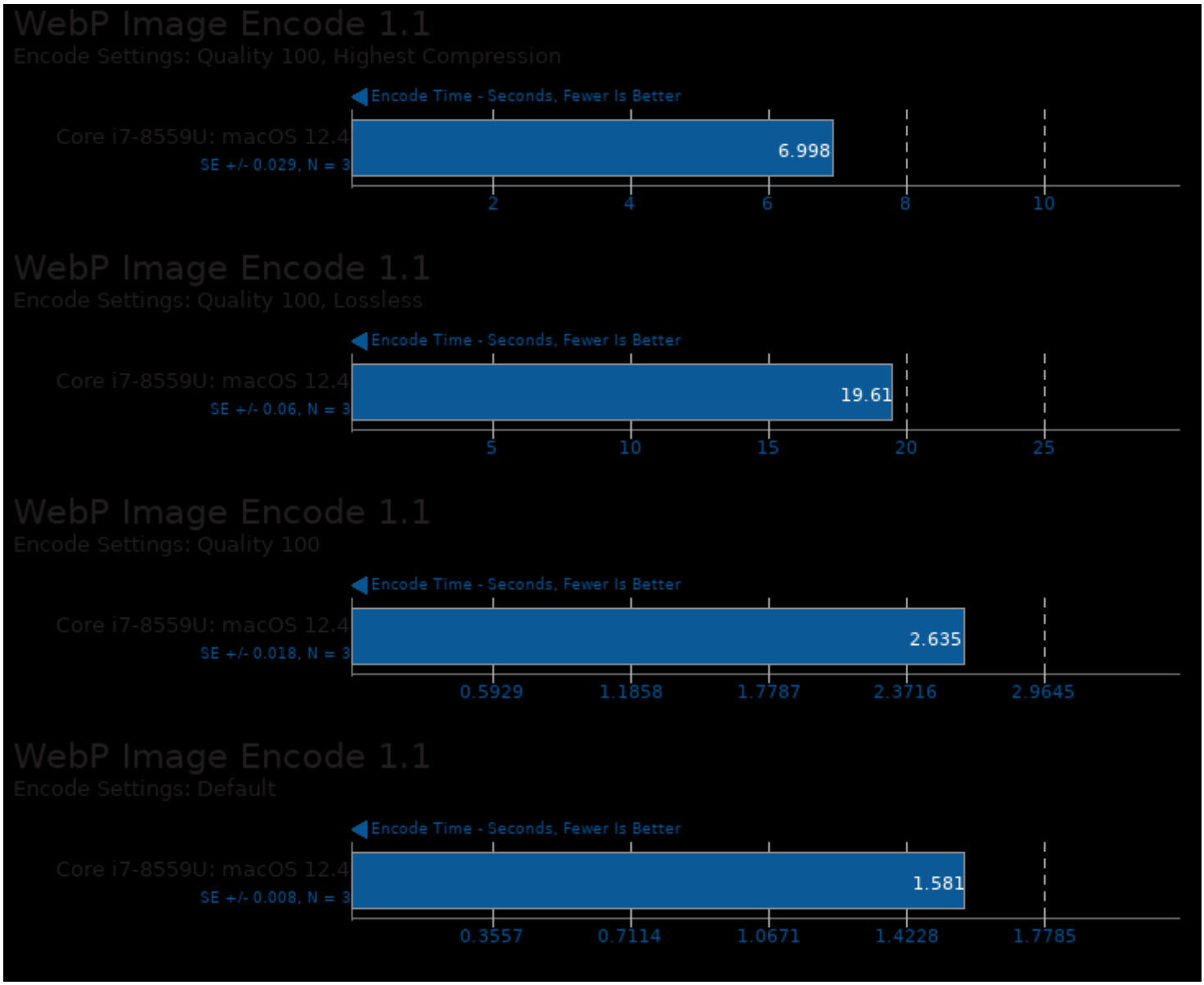
simdjson 2.0
Throughput Test: Kostya



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

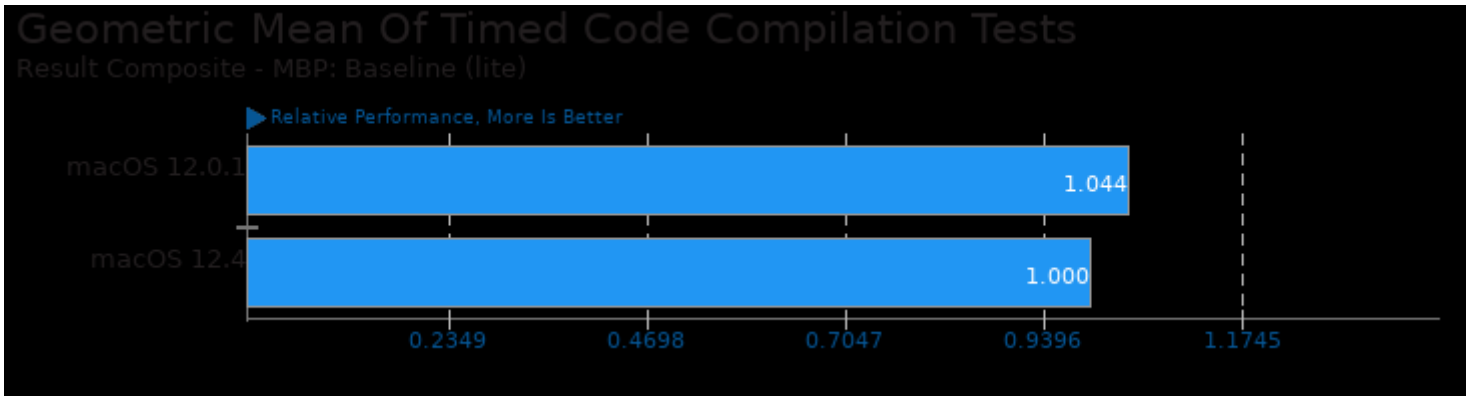
WebP Image Encode 1.1
Encode Settings: Quality 100, Lossless, Highest Compression



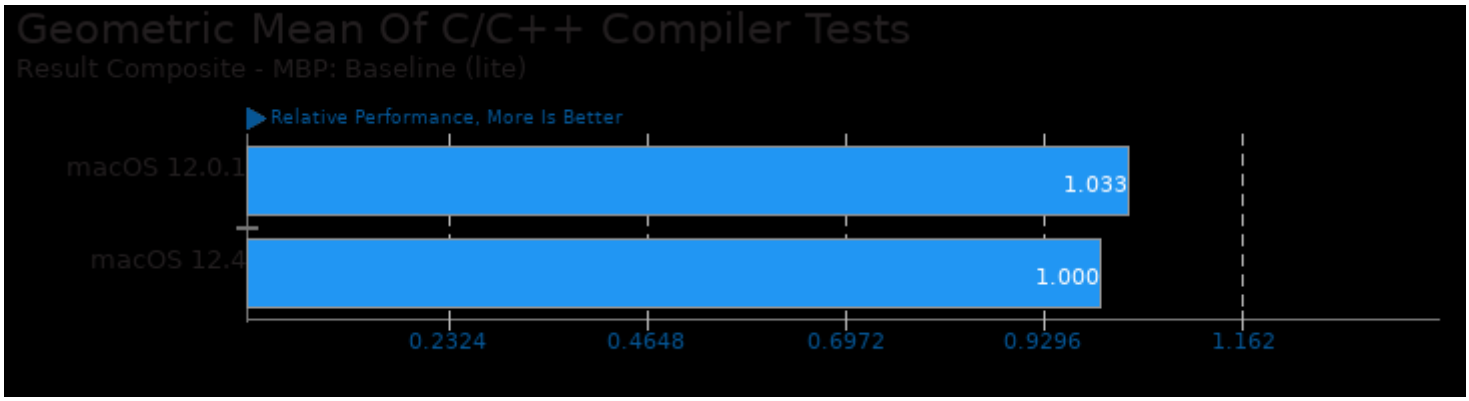

WebP Image Encode 1.1
Encode Settings: Quality 100, Highest Compression
Encode Time - Seconds, Fewer Is Better
Core i7-8559U: macOS 12.4
SE +/- 0.029, N = 3
6.998
2
4
6
8
10
WebP Image Encode 1.1
Encode Settings: Quality 100, Lossless
Encode Time - Seconds, Fewer Is Better
Core i7-8559U: macOS 12.4
SE +/- 0.06, N = 3
19.61
5
10
15
20
25
WebP Image Encode 1.1
Encode Settings: Quality 100
Encode Time - Seconds, Fewer Is Better
Core i7-8559U: macOS 12.4
SE +/- 0.018, N = 3
2.635
0.5929
1.1858
1.7787
2.3716
2.9645
WebP Image Encode 1.1
Encode Settings: Default
Encode Time - Seconds, Fewer Is Better
Core i7-8559U: macOS 12.4
SE +/- 0.008, N = 3
1.581
0.3557
0.7114
1.0671
1.4228
1.7785

MBP: Baseline (lite)

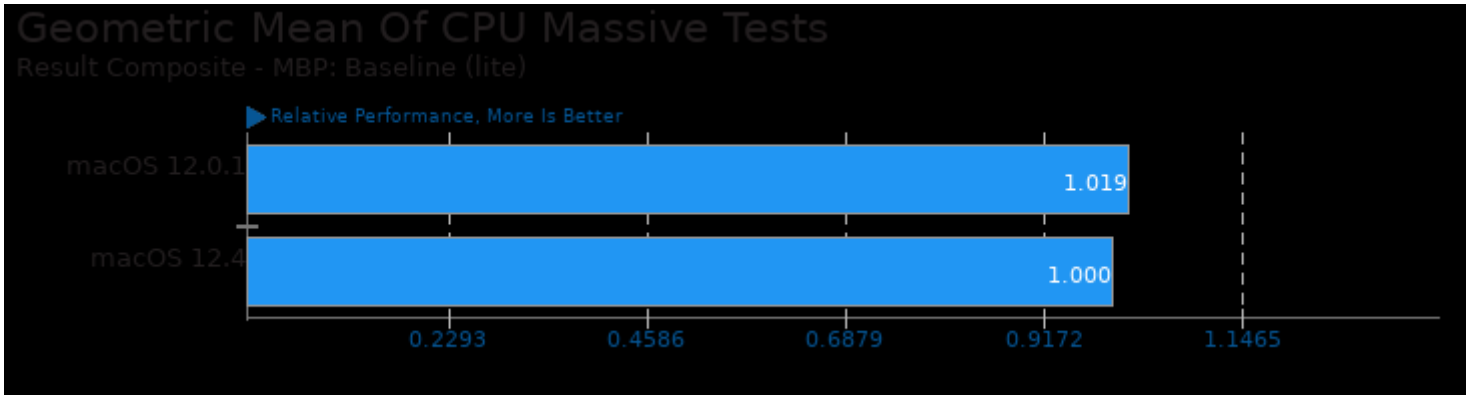
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/build-imagemagick, pts/build-llvm and pts/build-ffmpeg

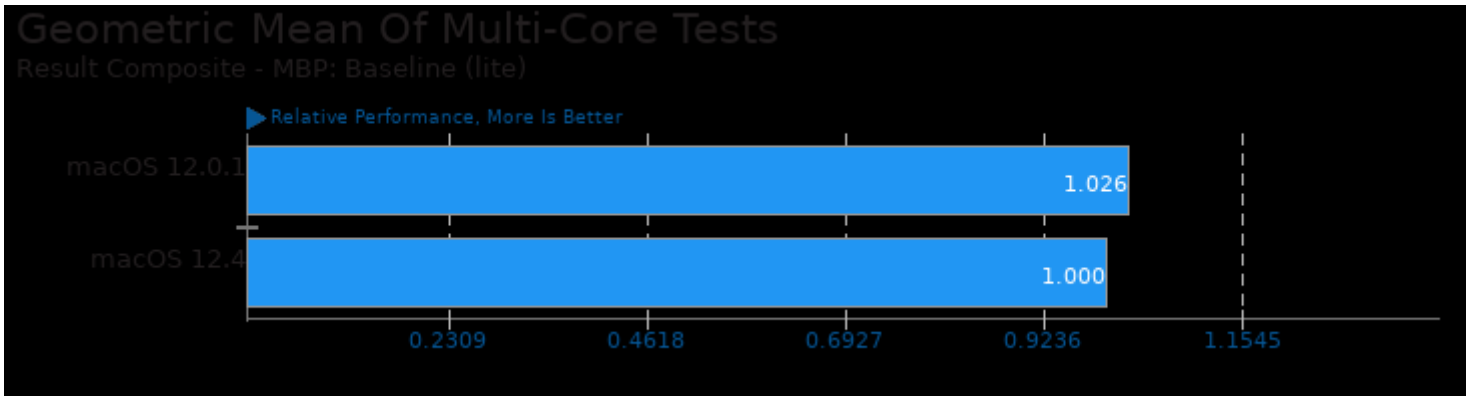


Geometric mean based upon tests: pts/graphics-magick, pts/build-imagemagick, pts/build-llvm, pts/sqlite-speedtest, pts/compress-zstd and pts/build-ffmpeg

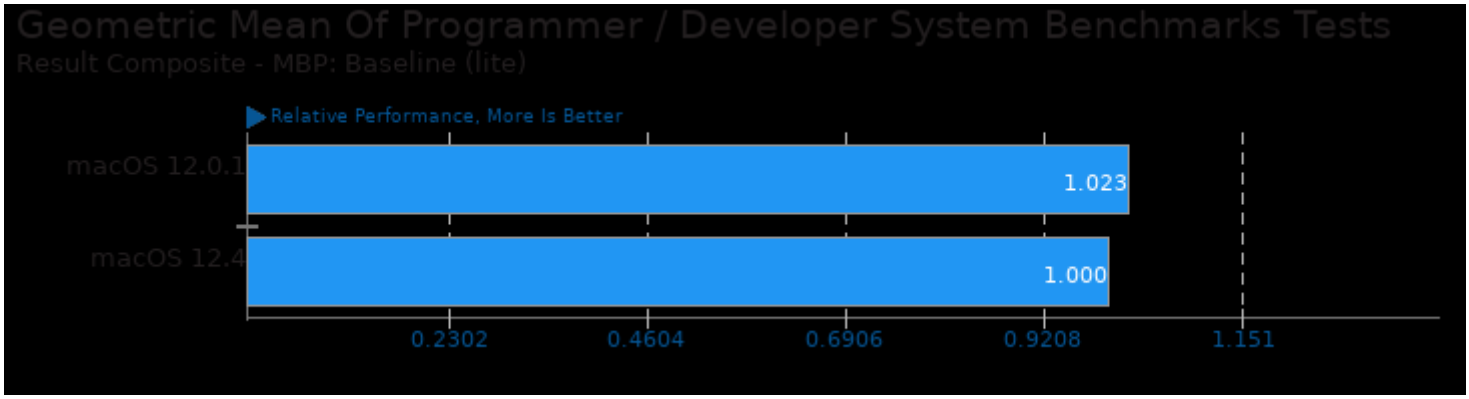


Geometric mean based upon tests: pts/build-llvm, pts/compress-zstd and pts/graphics-magick

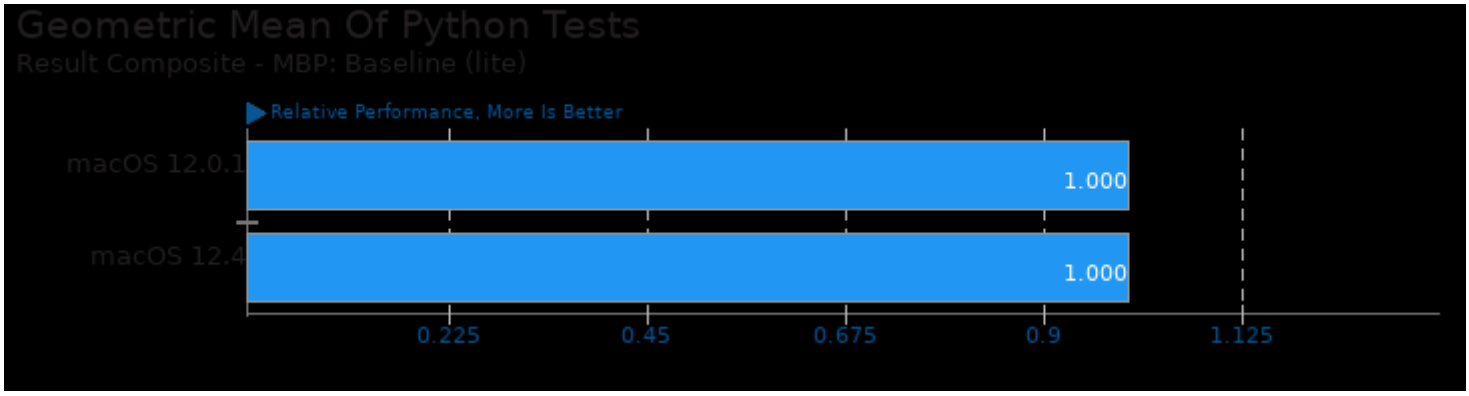
MBP: Baseline (lite)



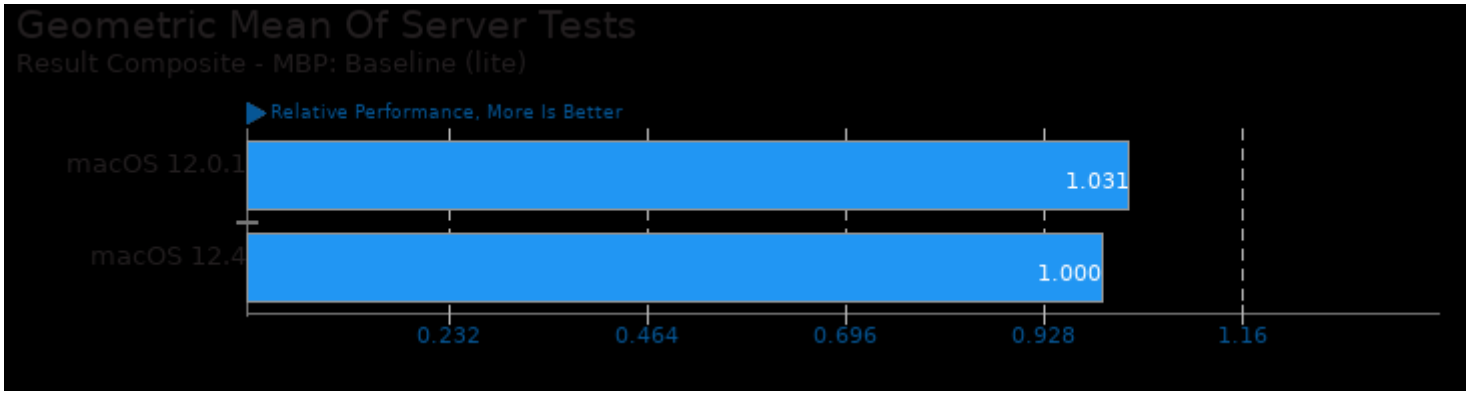
Geometric mean based upon tests: pts/graphics-magick, pts/compress-zstd, pts/build-imagemagick, pts/build-llvm, pts/build-ffmpeg and pts/cinebench



Geometric mean based upon tests: pts/simdjson, pts/sqlite-speedtest, pts/git, pts/compress-zstd, pts/pybench, pts/build-imagemagick, pts/build-llvm and pts/build-ffmpeg

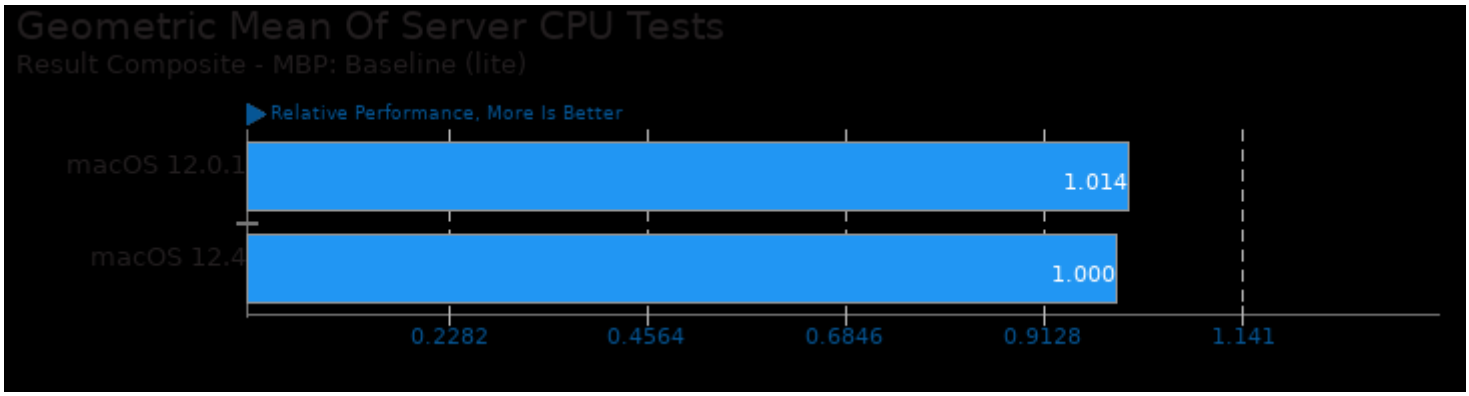


Geometric mean based upon tests: pts/pybench and pts/build-llvm

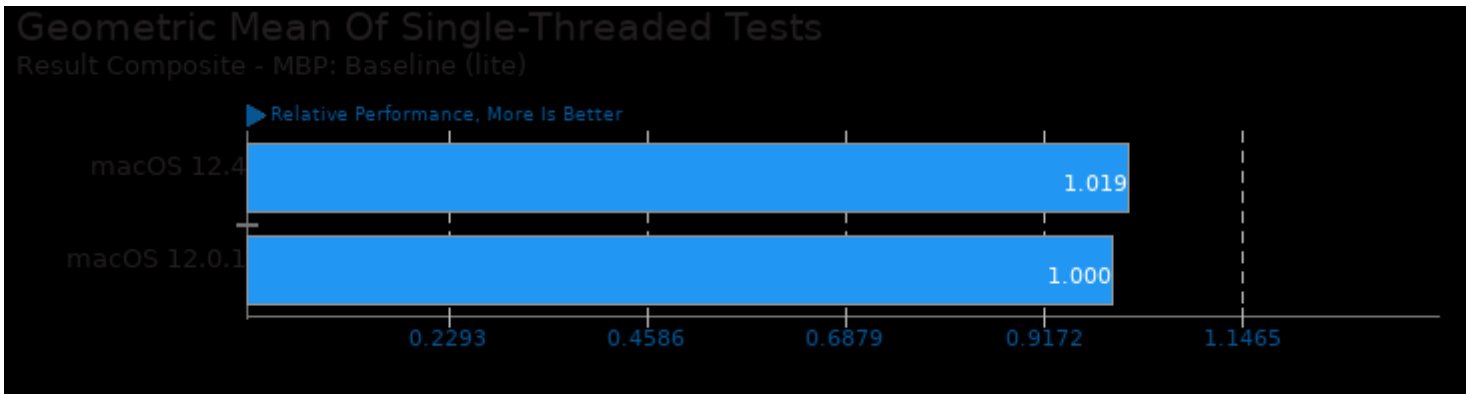


MBP: Baseline (lite)

Geometric mean based upon tests: pts/simdjson and pts/sqlite-speedtest



Geometric mean based upon tests: pts/build-llvm, pts/compress-zstd and pts/pybench



Geometric mean based upon tests: pts/pybench and pts/git

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 01:28.