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zstd 1.5 test suite

AMD Ryzen 7 3800X 8-Core testing with a ASUS CROSSHAIR VI HERO (7901 BIOS) and eVGA NVIDIA GeForce GTX 1080 Ti 11GB on ManjaroLinux 21.1.6 via the Phoronix Test Suite.

Automated Executive Summary

zstd 1.5 test suite had the most wins, coming in first place for 75% of the tests.

Based on the geometric mean of all complete results, the fastest (zstd 1.5 test suite) was 1.003x the speed of the slowest (AMD Ryzen 7 3800X 8-Core).

Test Systems:

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AMD Ryzen 7 3800X 8-Core

Processor: AMD Ryzen 7 3800X 8-Core @ 3.90GHz (8 Cores / 16 Threads), Motherboard: ASUS CROSSHAIR VI

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HERO (7901 BIOS), Chipset: AMD Starship/Matisse, Memory: 32GB, Disk: 1000GB Samsung SSD 860 + 4001GB Seagate ST4000LM016-1N21 + 2 x 240GB SanDisk SDSSDXPS, Graphics: eVGA NVIDIA GeForce GTX 1080 Ti 11GB, Audio: NVIDIA GP102 HDMI Audio, Monitor: 27GL850, Network: Intel I211

OS: ManjaroLinux 21.1.6, Kernel: 5.14.10-1-MANJARO (x86_64), Desktop: KDE Plasma 5.22.5, Display Server: X Server 1.20.13, Display Driver: NVIDIA 470.63.01, OpenGL: 4.6.0, Compiler: GCC 11.1.0, File-System: btrfs, Screen Resolution: 2560x1440

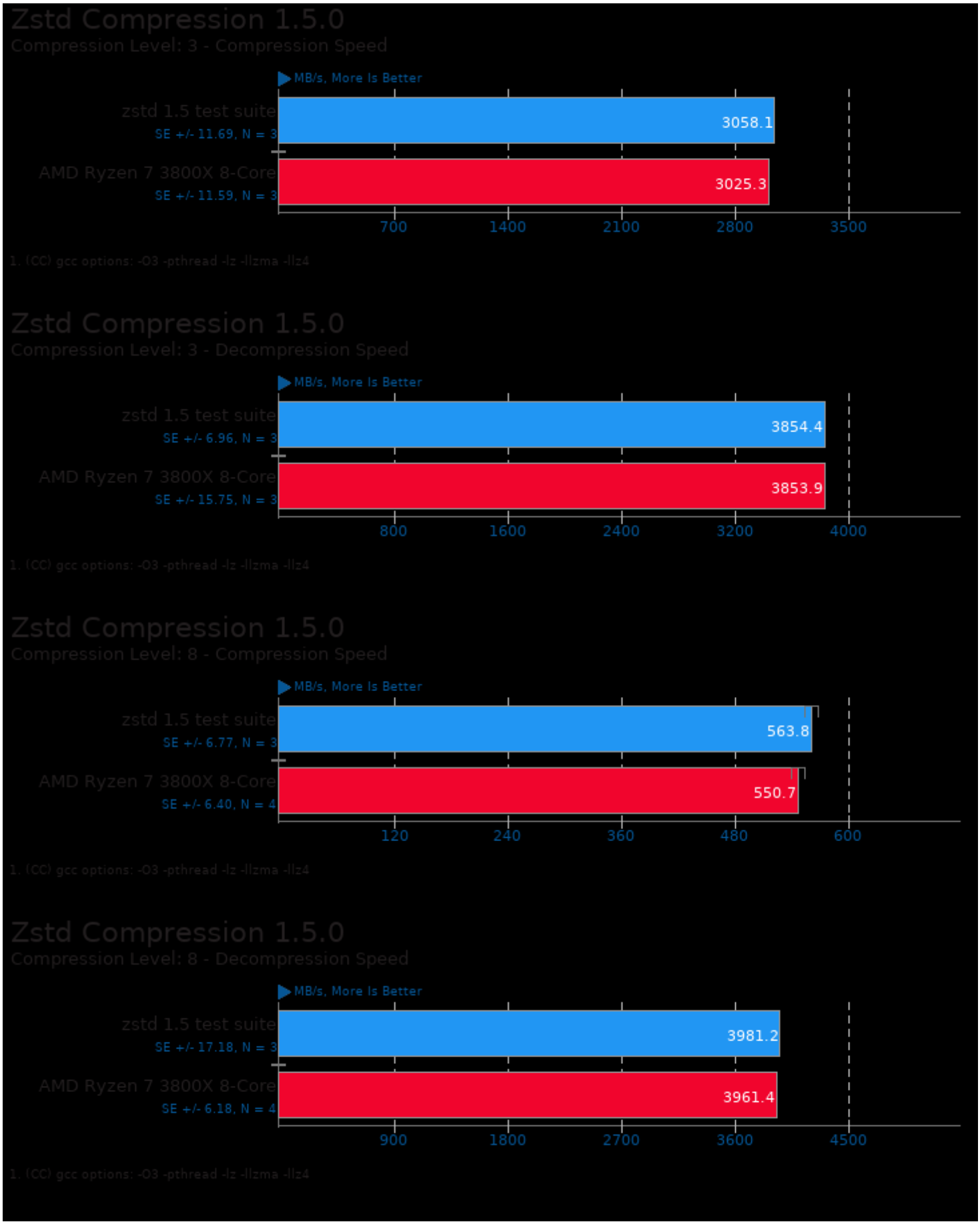
Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --disable-libssp --disable-libstdcxx-pch --disable-libunwind-exceptions --disable-werror --enable-__cxa_atexit --enable-cet=auto --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-default-ssp --enable-gnu-indirect-function --enable-gnu-unique-object --enable-install-libiberty --enable-languages=c,c++,ada,fortran,go,lto,objc,obj-c++,d --enable-lto --enable-multilib --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-isl --with-linker-hash-style=gnu
Processor Notes: Scaling Governor: acpi-cpufreq schedutil (Boost: Enabled) - CPU Microcode: 0x8701021
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + 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 AMD retpoline IBPB: conditional STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

	zstd 1.5 test suite	AMD Ryzen 7 3800X 8-Core
Zstd Compression - 3 - Compression Speed (MB/s)	**3058**	**3025**
Normalized	100%	98.93%
Standard Deviation	0.7%	0.7%
Zstd Compression - 3 - D.S (MB/s)	**3854**	**3854**
Normalized	100%	99.99%
Standard Deviation	0.3%	0.7%
Zstd Compression - 8 - Compression Speed (MB/s)	**563.8**	**550.7**
Normalized	100%	97.68%
Standard Deviation	2.1%	2.3%
Zstd Compression - 8 - D.S (MB/s)	**3981**	**3961**
Normalized	100%	99.5%
Standard Deviation	0.7%	0.3%
Zstd Compression - 19 - Compression Speed (MB/s)	**34.9**	**34.7**
Normalized	100%	99.43%
Standard Deviation	0.4%	1.2%
Zstd Compression - 19 - D.S (MB/s)	**3509**	**3498**
Normalized	100%	99.69%
Standard Deviation	0.8%	0.5%
Zstd Compression - 3, Long Mode - Compression Speed (MB/s)	**681.3**	**659.9**
Normalized	100%	96.86%
Standard Deviation	4.6%	2.4%
Zstd Compression - 3, Long Mode - D.S (MB/s)	**4156**	**4148**
Normalized	100%	99.79%
Standard Deviation	0.5%	0.4%
Zstd Compression - 8, Long Mode - Compression Speed (MB/s)	**755.3**	**778.6**
Normalized	97.01%	100%
Standard Deviation	0.9%	1.2%
Zstd Compression - 8, Long Mode - D.S (MB/s)	**4226**	**4256**
Normalized	99.29%	100%
Standard Deviation	0.7%	0.7%

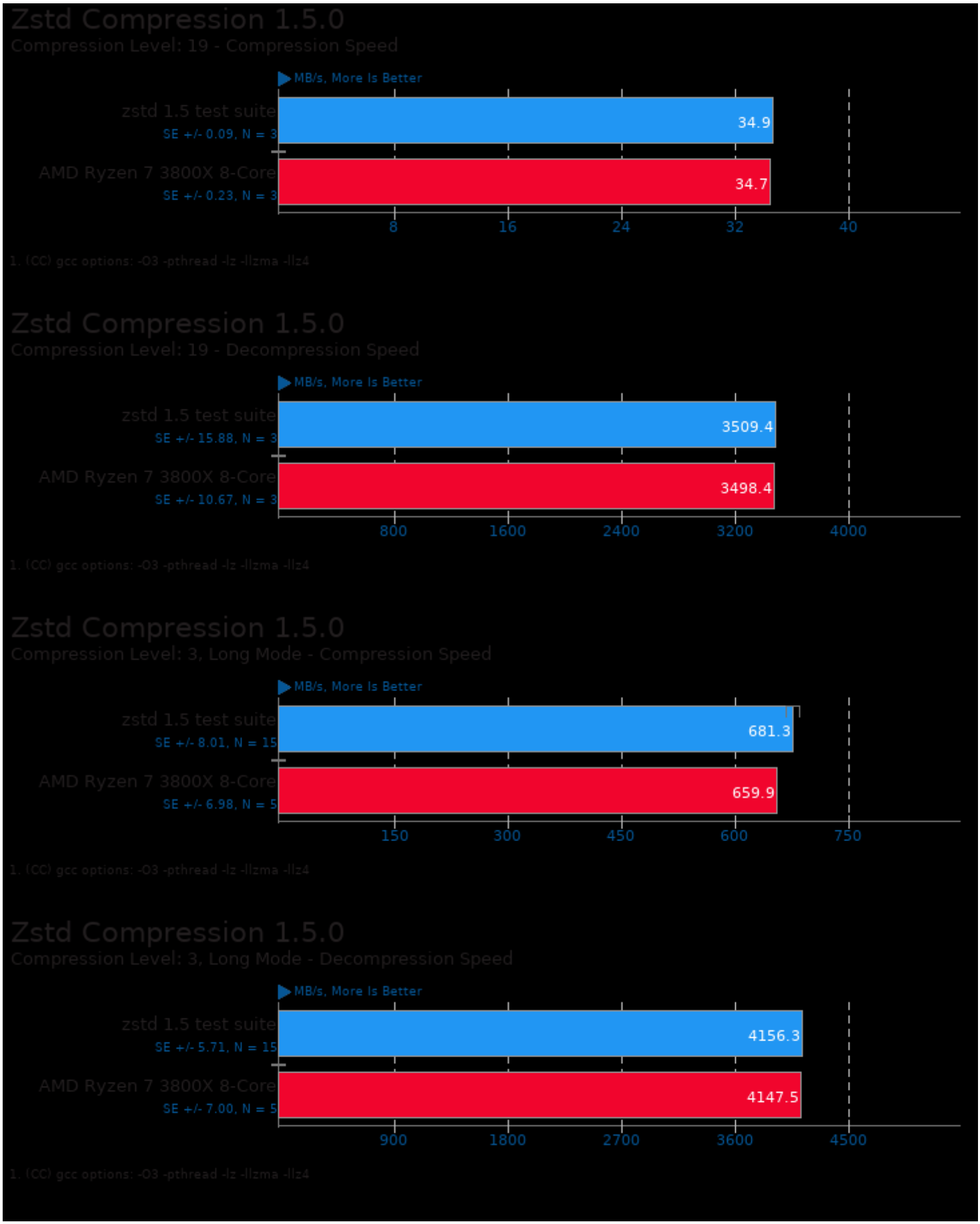
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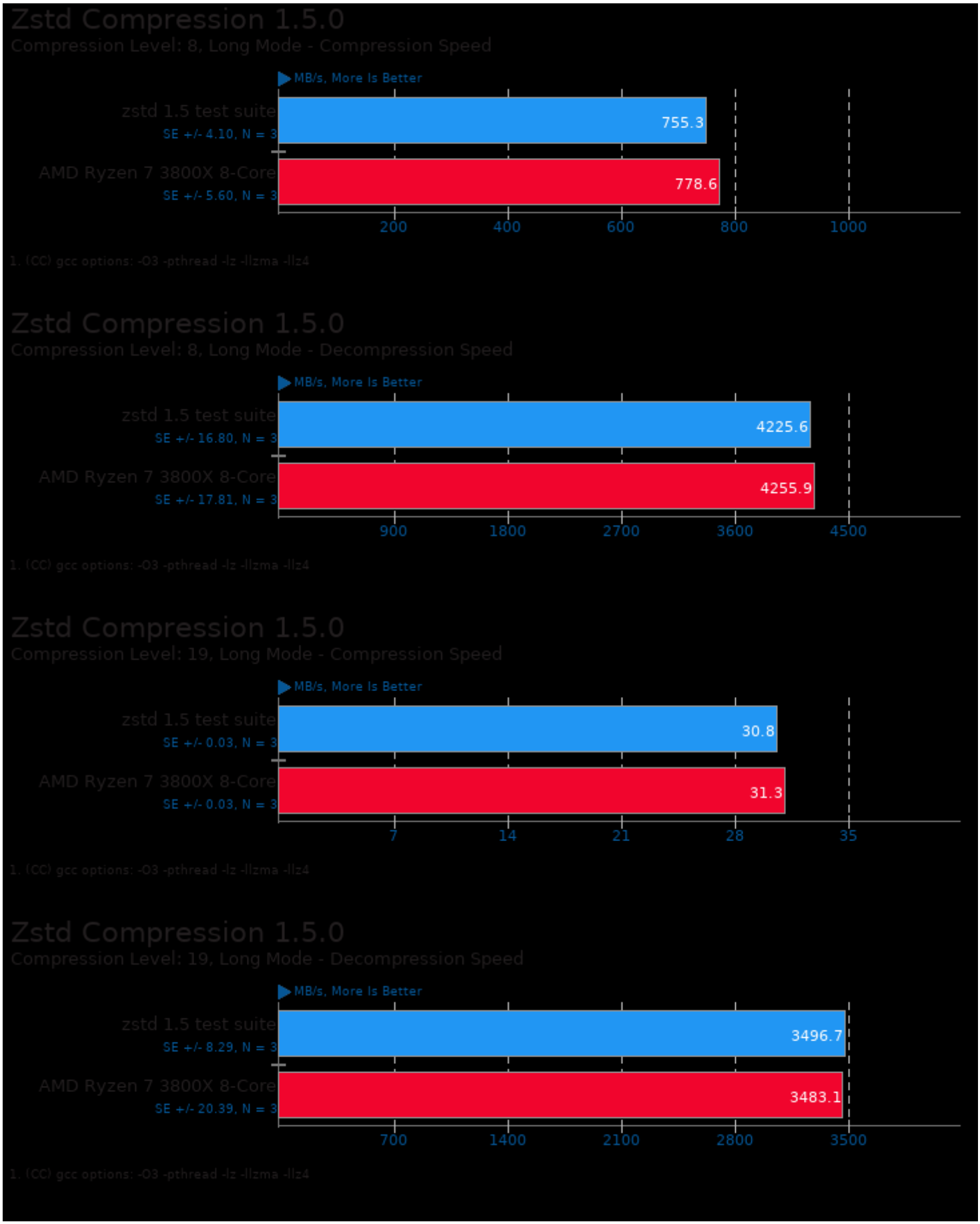
Zstd Compression - 19, Long Mode - Compression Speed (MB/s)	**30.8**	**31.3**
Normalized	98.4%	100%
Standard Deviation	0.2%	0.2%
Zstd Compression - 19, Long Mode - D.S (MB/s)	**3497**	**3483**
Normalized	100%	99.61%
Standard Deviation	0.4%	1%

zstd 1.5 test suite



zstd 1.5 test suite




Zstd Compression 1.5.0
Compression Level: 8, Long Mode - Compression Speed
MB/s, More Is Better
zstd 1.5 test suite
SE +/- 4.10, N = 3
755.3
AMD Ryzen 7 3800X 8-Core
SE +/- 5.60, N = 3
778.6
200
400
600
800
1000
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
zstd 1.5 test suite
SE +/- 16.80, N = 3
4225.6
AMD Ryzen 7 3800X 8-Core
SE +/- 17.81, N = 3
4255.9
900
1800
2700
3600
4500
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
zstd 1.5 test suite
SE +/- 0.03, N = 3
30.8
AMD Ryzen 7 3800X 8-Core
SE +/- 0.03, N = 3
31.3
7
14
21
28
35
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4
Zstd Compression 1.5.0
Compression Level: 19, Long Mode - Decompression Speed
MB/s, More Is Better
zstd 1.5 test suite
SE +/- 8.29, N = 3
3496.7
AMD Ryzen 7 3800X 8-Core
SE +/- 20.39, N = 3
3483.1
700
1400
2100
2800
3500
1. (CC) gcc options: -O3 -pthread -lz -llzma -llz4

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This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 17:49.