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openssl-31-ryzen

AMD Ryzen 9 5900HX testing with a ASUS G513QY v1.0 (G513QY.318 BIOS) and ASUS AMD Cezanne 512MB on Ubuntu 22.10 via the Phoronix Test Suite.

Automated Executive Summary

b had the most wins, coming in first place for 46% of the tests.

Test Systems:

a

Processor: AMD Ryzen 9 5900HX @ 3.30GHz (8 Cores / 16 Threads), Motherboard: ASUS G513QY v1.0 (G513QY.318 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 512GB SAMSUNG MZVLQ512HBLU-00B00, Graphics: ASUS AMD Cezanne 512MB, Audio: AMD Navi 21/23, Monitor: LQ156M1JW25, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Ubuntu 22.10, Kernel: 5.19.0-35-generic (x86_64), Desktop: GNOME Shell 43.0, Display Server: X Server 1.21.1.4

+ Wayland, OpenGL: 4.6 Mesa 22.2.1 (LLVM 15.0.2 DRM 3.47), Vulkan: 1.3.224, Compiler: GCC 12.2.0, 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-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-defaulted --enable-offload-targets=nvptx-none=/build/gcc-12-U8K4Qv/gcc-12-12.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-12-U8K4Qv/gcc-12-12.2.0/debian/tmp-gcn/usr --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-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: acpi-cpufreq schedutil (Boost: Enabled) - Platform Profile: balanced - CPU Microcode: 0xa50000c - ACPI Profile: balanced
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling PBRSB-eIBRS: Not affected + srbds: Not affected + tsx_async_abort: Not affected

aa

b

c

Processor: AMD Ryzen 9 5900HX @ 3.30GHz (8 Cores / 16 Threads), Motherboard: ASUS G513QY v1.0 (G513QY.318 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 512GB SAMSUNG MZVLQ512HBLU-00B00, Graphics: ASUS AMD Cezanne 512MB (2500/1000MHz), Audio: AMD Navi 21/23, Monitor: LQ156M1JW25, Network: Realtek RTL8111/8168/8411 + MEDIATEK MT7921 802.11ax PCI

OS: Ubuntu 22.10, Kernel: 5.19.0-35-generic (x86_64), Desktop: GNOME Shell 43.0, Display Server: X Server 1.21.1.4 + Wayland, OpenGL: 4.6 Mesa 22.2.1 (LLVM 15.0.2 DRM 3.47), Vulkan: 1.3.224, Compiler: GCC 12.2.0, File-System: ext4, Screen Resolution: 1920x1080

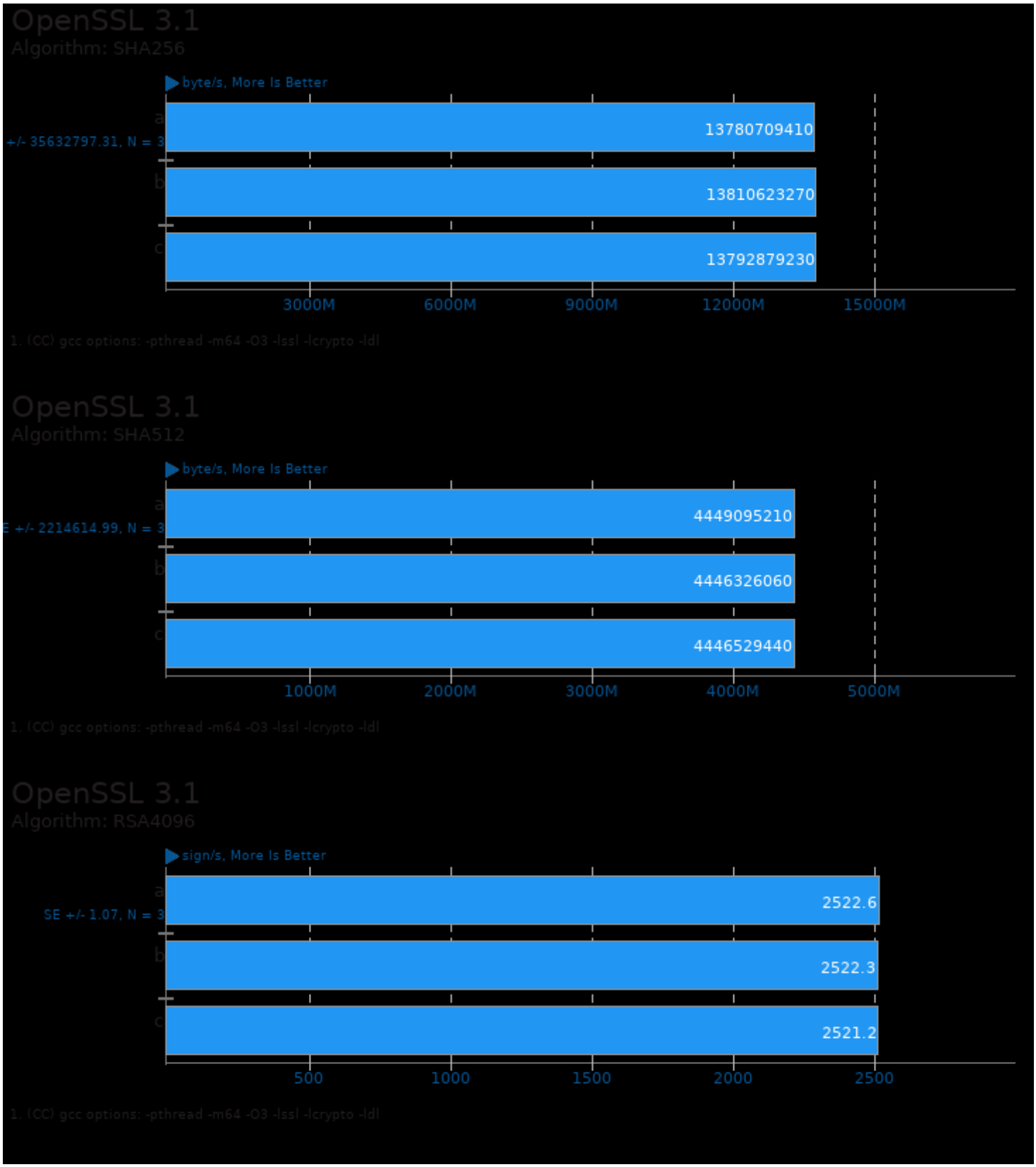
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	a	aa	b	c
OpenSSL - SHA256 (byte/s)	**13780709410**		**13810623270**	13792879230
Normalized	99.78%		100%	99.87%
Standard Deviation	0.4%			
OpenSSL - SHA512 (byte/s)	**4449095210**		**4446326060**	4446529440
Normalized	100%		99.94%	99.94%
Standard Deviation	0.1%			
OpenSSL - RSA4096 (sign/s)	**2523**		2522	**2521**
Normalized	100%		99.99%	99.94%
Standard Deviation	0.1%			
OpenSSL - RSA4096 (verify/s)	**164468**		**164140**	164254
Normalized	100%		99.8%	99.87%

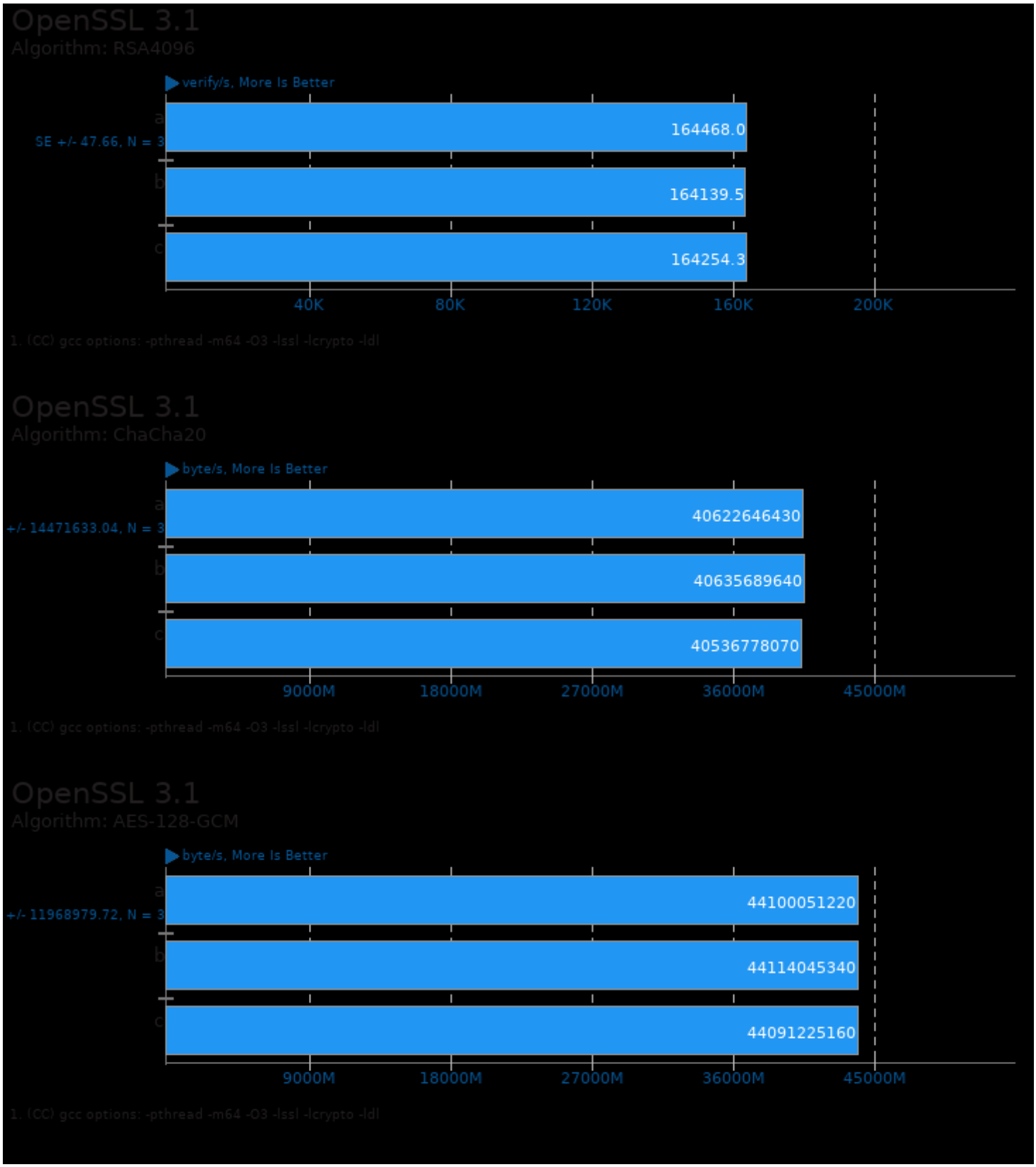
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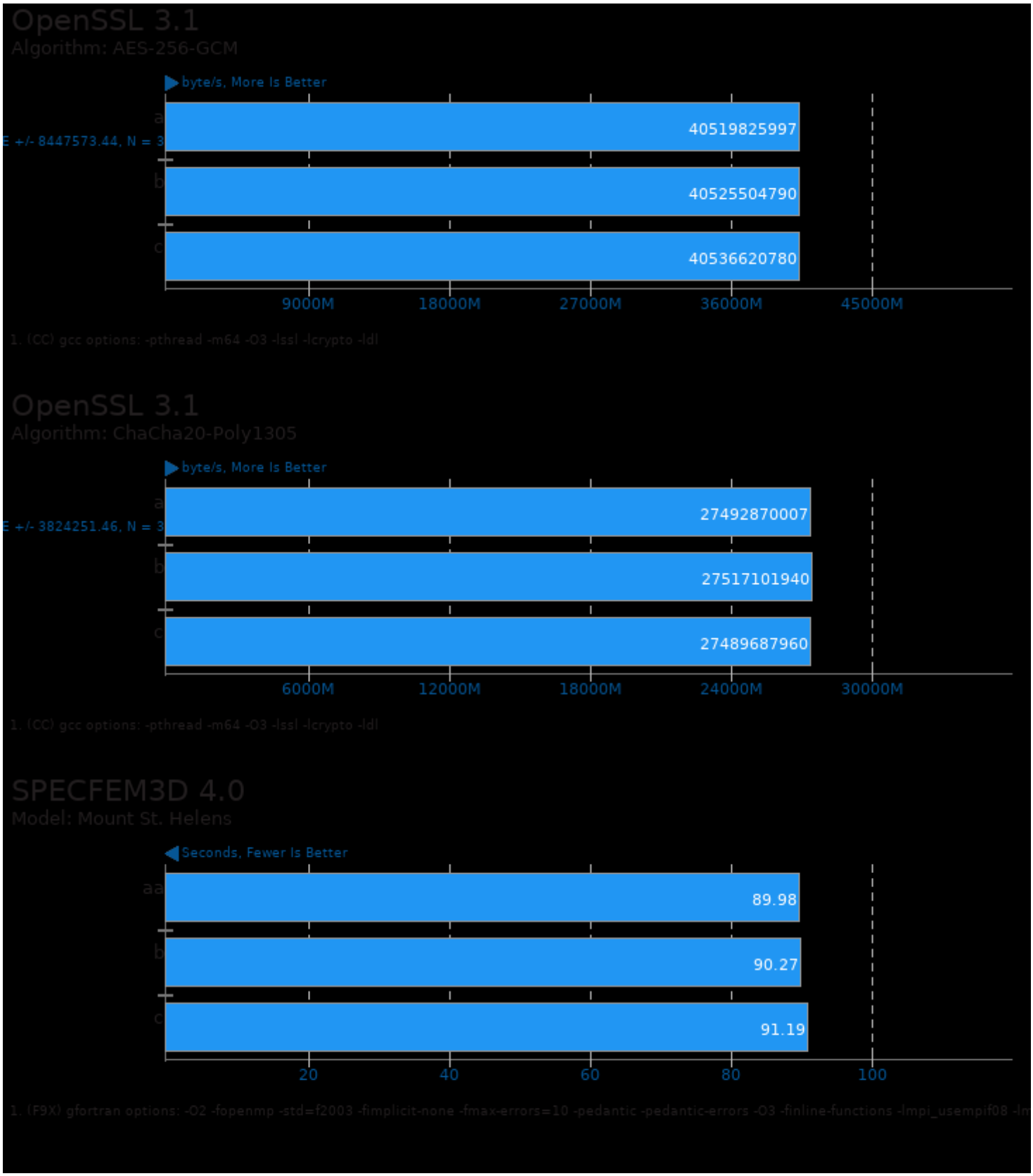
Standard Deviation	0.1%			
OpenSSL - ChaCha20 (byte/s)	40622646430		**40635689640**	**40536778070**
Normalized	99.97%		100%	99.76%
Standard Deviation	0.1%			
OpenSSL - AES-128-GCM (byte/s)	44100051220		**44114045340**	**44091225160**
Normalized	99.97%		100%	99.95%
Standard Deviation	0%			
OpenSSL - AES-256-GCM (byte/s)	**40519825997**		40525504790	**40536620780**
Normalized	99.96%		99.97%	100%
Standard Deviation	0%			
OpenSSL - ChaCha20-Poly1305	27492870007		**27517101940**	**27489687960**
Normalized	99.91%		100%	99.9%
Standard Deviation	0%			
SPECFEM3D - Mount St. Helens (sec)		**89.977499962**	90.26771939	**91.19355216**
Normalized		100%	99.68%	98.67%
SPECFEM3D - Layered Halfspace		228.165985185	**227.604026259**	**228.722398777**
Normalized		99.75%	100%	99.51%
SPECFEM3D - Tomographic Model (sec)		**86.96656324**	86.844753647	**86.833047548**
Normalized		99.85%	99.99%	100%
SPECFEM3D - H.H (sec)		**117.617377927**	117.38800631	**117.135467091**
Normalized		99.59%	99.78%	100%
SPECFEM3D - W.I.H (sec)		243.014353552	**242.564621997**	**243.038586608**
Normalized		99.81%	100%	99.8%

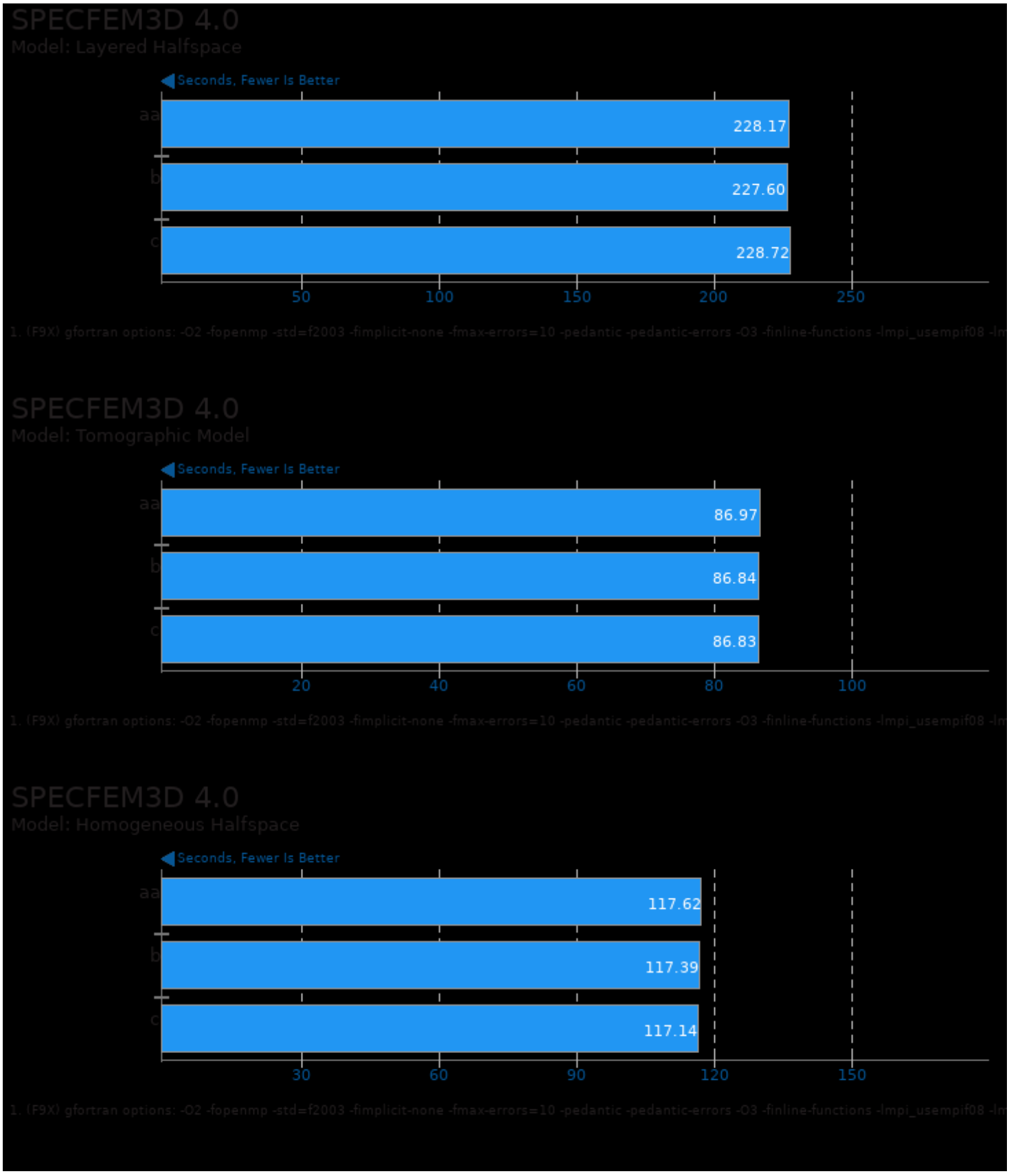
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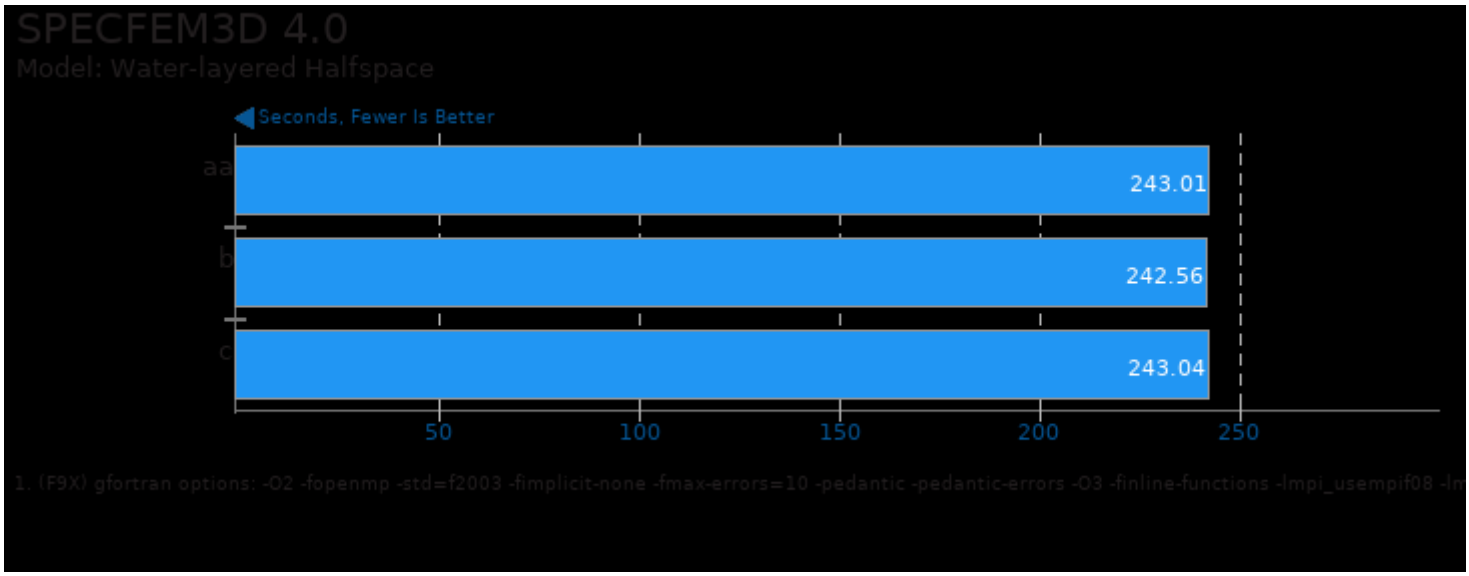


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OpenSSL 3.1
Algorithm: AES-256-GCM
byte/s, More Is Better
E +/- 8447573.44, N = 3
a
40519825997
b
40525504790
c
40536620780
9000M
18000M
27000M
36000M
45000M
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl
OpenSSL 3.1
Algorithm: ChaCha20-Poly1305
byte/s, More Is Better
E +/- 3824251.46, N = 3
a
27492870007
b
27517101940
c
27489687960
6000M
12000M
18000M
24000M
30000M
1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl
SPECFEM3D 4.0
Model: Mount St. Helens
Seconds, Fewer Is Better
aa
89.98
b
90.27
c
91.19
20
40
60
80
100
1. (F9X) gfortran options: -O2 -fopenmp -std=f2003 -fimplicit-none -fmax-errors=10 -pedantic -pedantic-errors -O3 -finline-functions -lmpi_usempif08 -lm


SPECFEM3D 4.0
Model: Layered Halfspace
Seconds, Fewer Is Better
aa
228.17
b
227.60
c
228.72
50
100
150
200
250
1. (F9X) gfortran options: -O2 -fopenmp -std=f2003 -fimplicit-none -fmax-errors=10 -pedantic -pedantic-errors -O3 -finline-functions -lmpi_usempif08 -lm
SPECFEM3D 4.0
Model: Tomographic Model
Seconds, Fewer Is Better
aa
86.97
b
86.84
c
86.83
20
40
60
80
100
1. (F9X) gfortran options: -O2 -fopenmp -std=f2003 -fimplicit-none -fmax-errors=10 -pedantic -pedantic-errors -O3 -finline-functions -lmpi_usempif08 -lm
SPECFEM3D 4.0
Model: Homogeneous Halfspace
Seconds, Fewer Is Better
aa
117.62
b
117.39
c
117.14
30
60
90
120
150
1. (F9X) gfortran options: -O2 -fopenmp -std=f2003 -fimplicit-none -fmax-errors=10 -pedantic -pedantic-errors -O3 -finline-functions -lmpi_usempif08 -lm



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 06:59.