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all

AMD Ryzen 9 5950X 16-Core testing with a ASUS ROG CROSSHAIR VIII HERO (3204 BIOS) and NVIDIA GeForce RTX 2080 8GB on Ubuntu 20.10 via the Phoronix Test Suite.

Test Systems:

Old PC

Processor: AMD Ryzen Threadripper 1950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: MSI X399 GAMING PRO CARBON AC (MS-7B09) v1.0 (1.C0 BIOS), Chipset: AMD 17h, Memory: 32GB, Disk: 2050GB Crucial CT2050MX, Graphics: NVIDIA GeForce RTX 2080 8GB (1515/7000MHz), Audio: Realtek ALC1220, Monitor: XF270HU, Network: Intel I211

OS: Ubuntu 20.10, Kernel: 5.8.0-31-generic (x86_64), Desktop: KDE Plasma 5.19.5, Display Server: X Server 1.20.9, Display Driver: NVIDIA 450.80.02, OpenGL: 4.6.0, Vulkan: 1.2.133, Compiler: GCC 10.2.0 + Clang 11.0.0-2 + LLVM 11.0.0, File-System: ext4, Screen Resolution: 2560x1440

Kernel Notes: Transparent Huge Pages: madvise
Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --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-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-10-JvwpWM/gcc-10-10.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-10-JvwpWM/gcc-10-10.2.0/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-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 ondemand (Boost: Enabled) - CPU Microcode: 0x8001137
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: disabled RSB filling + srbds: Not affected + tsx_async_abort: Not affected

New PC before OC

New PC before OC, games

New PC before OC, TR

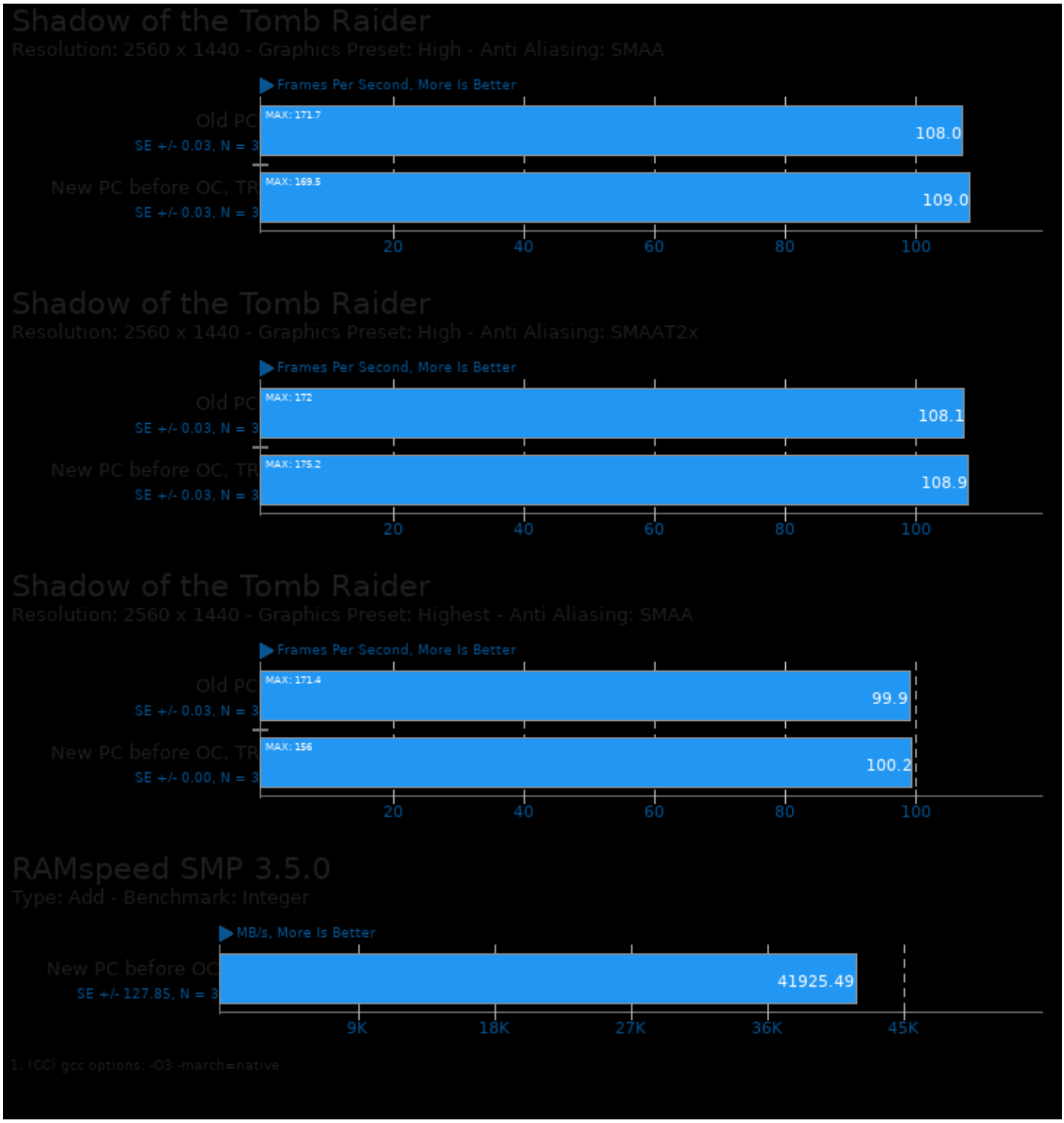
Processor: AMD Ryzen 9 5950X 16-Core @ 3.40GHz (16 Cores / 32 Threads), Motherboard: ASUS ROG CROSSHAIR VIII HERO (3204 BIOS), Chipset: AMD Starship/Matisse, Memory: 64GB, Disk: 2000GB Samsung SSD 980 PRO 2TB + 4001GB Samsung SSD 860 + 2050GB Crucial CT2050MX + 8GB Trans, Graphics: NVIDIA GeForce RTX 2080 8GB, Audio: NVIDIA TU104 HD Audio, Monitor: XF270HU, Network: Realtek RTL8125 2.5GbE + Intel I211

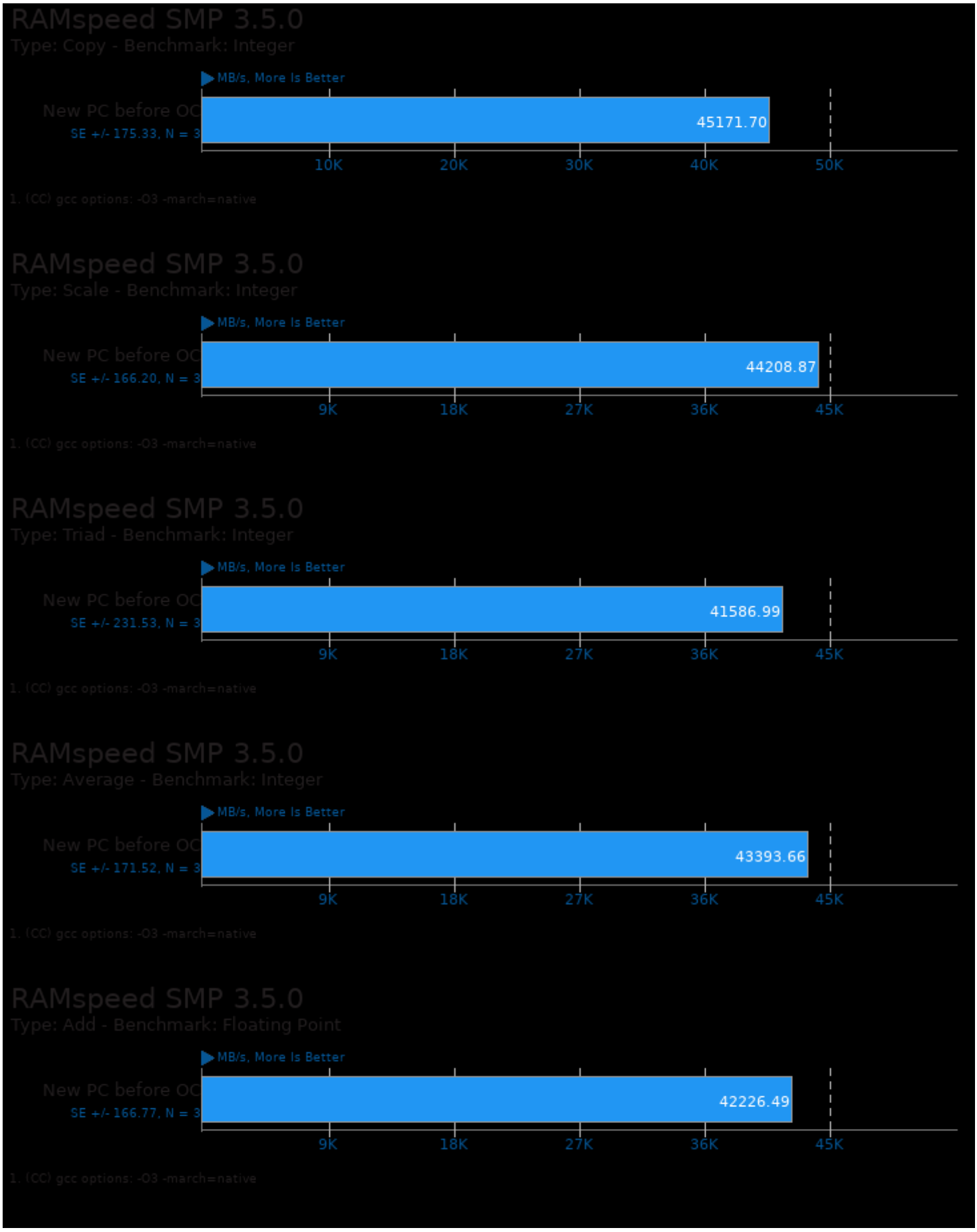
OS: Ubuntu 20.10, Kernel: 5.8.0-44-generic (x86_64), Desktop: KDE Plasma 5.19.5, Display Server: X Server 1.20.9, Display Driver: NVIDIA 460.39, OpenGL: 4.6.0, Vulkan: 1.2.155, Compiler: GCC 10.2.0 + Clang 11.0.0-2 + LLVM 11.0.0, File-System: ext4, Screen Resolution: 2560x1440

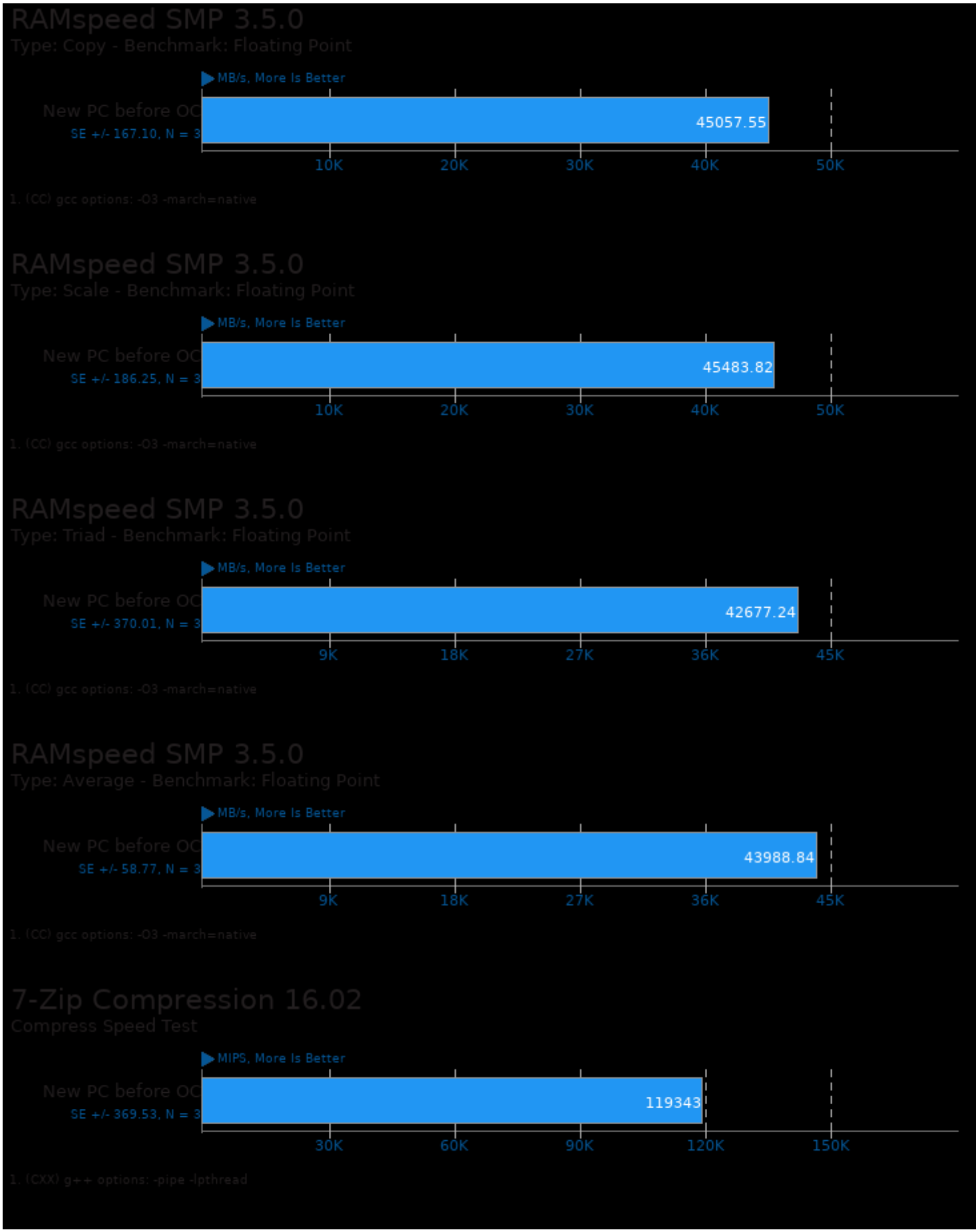
Kernel Notes: Transparent Huge Pages: madvise
Processor Notes: Scaling Governor: acpi-cpufreq ondemand (Boost: Enabled) - CPU Microcode: 0xa201009
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Full AMD retpoline IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

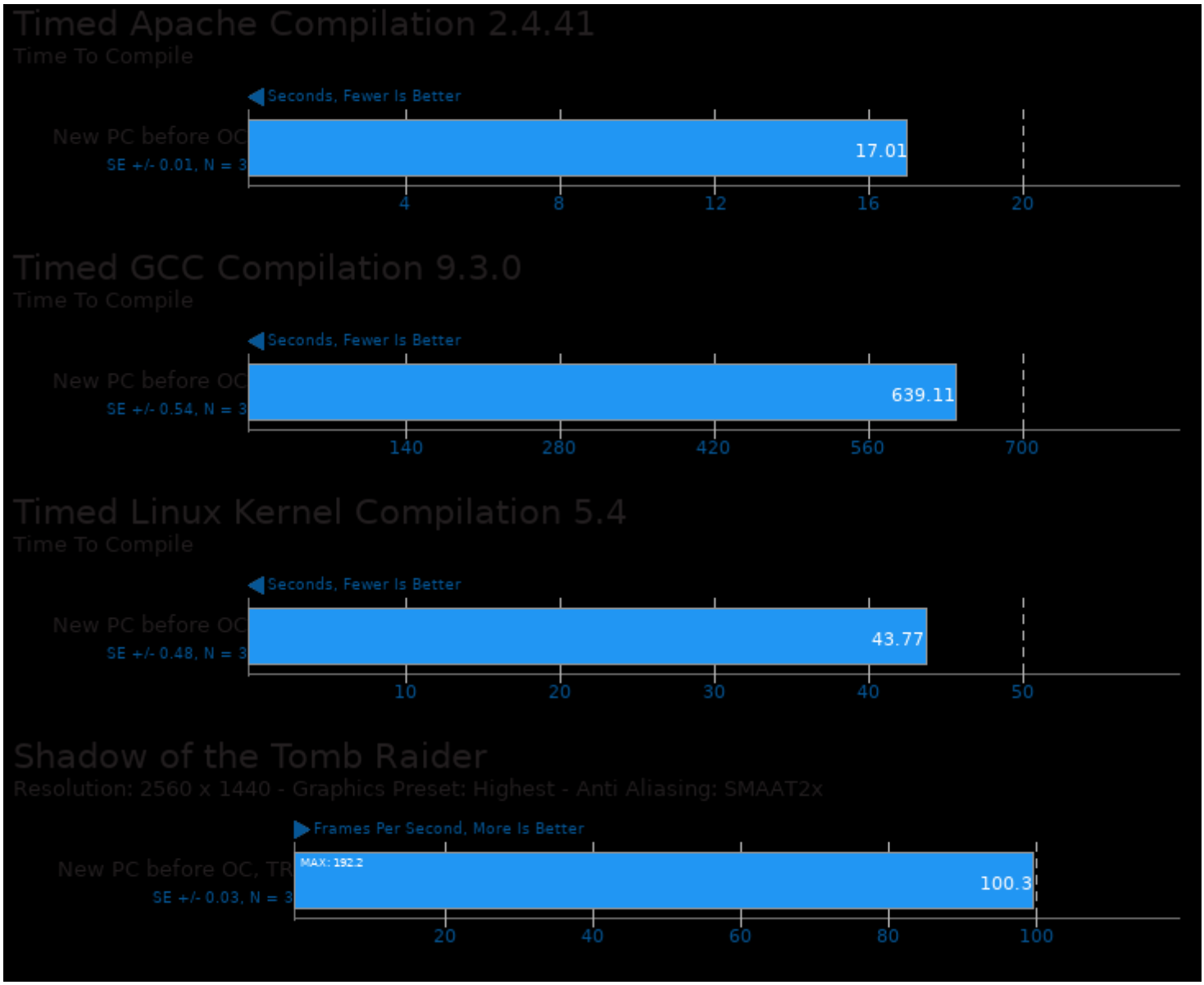
	Old PC	New PC before OC	New PC before OC, games	New PC before OC, TR
Shadow of the Tomb Raider - 2560 x 1440 - High - SMAA (FPS)	**108.0**			**109.0**
Normalized	99.08%			100%
Standard Deviation	0.1%			0.1%
Shadow of the Tomb Raider - 2560 x 1440 - High - SMAAT2x (FPS)	**108.1**			**108.9**
Normalized	99.27%			100%
Standard Deviation	0.1%			0.1%
Shadow of the Tomb Raider - 2560 x 1440 - Highest - SMAA (FPS)	**99.9**			**100.2**
Normalized	99.7%			100%
Standard Deviation	0.1%			0%
RAMspeed SMP - Add - Integer (MB/s)		41925		
Standard Deviation		0.5%		
RAMspeed SMP - Copy - Integer		45172		
Standard Deviation		0.7%		
RAMspeed SMP - Scale - Integer		44209		
Standard Deviation		0.7%		

RAMspeed SMP - Triad - Integer	41587	
Standard Deviation	1%	
RAMspeed SMP - Average - Integer (MB/s)	43394	
Standard Deviation	0.7%	
RAMspeed SMP - Add - Floating Point (MB/s)	42226	
Standard Deviation	0.7%	
RAMspeed SMP - Copy - Floating Point (MB/s)	45058	
Standard Deviation	0.6%	
RAMspeed SMP - Scale - Floating Point (MB/s)	45484	
Standard Deviation	0.7%	
RAMspeed SMP - Triad - Floating Point (MB/s)	42677	
Standard Deviation	1.5%	
RAMspeed SMP - Average - Floating Point (MB/s)	43989	
Standard Deviation	0.2%	
7-Zip Compression - C.S.T (MIPS)	119343	
Standard Deviation	0.5%	
Timed Apache Compilation - Time To Compile (sec)	17.013	
Standard Deviation	0.1%	
Timed GCC Compilation - Time To Compile (sec)	639.108	
Standard Deviation	0.1%	
Timed Linux Kernel Compilation - Time To Compile (sec)	43.772	
Standard Deviation	1.9%	
Shadow of the Tomb Raider - 2560 x 1440 - Highest - SMAAT2x (FPS)		100.3
Standard Deviation		0.1%


Shadow of the Tomb Raider
Resolution: 2560 x 1440 - Graphics Preset: High - Anti Aliasing: SMAA
Frames Per Second, More Is Better
Old PC
SE +/- 0.03, N = 3
MAX: 171.7
108.0
New PC before OC, TR
SE +/- 0.03, N = 3
MAX: 169.5
109.0
20
40
60
80
100
Shadow of the Tomb Raider
Resolution: 2560 x 1440 - Graphics Preset: High - Anti Aliasing: SMAAT2x
Frames Per Second, More Is Better
Old PC
SE +/- 0.03, N = 3
MAX: 172
108.1
New PC before OC, TR
SE +/- 0.03, N = 3
MAX: 175.2
108.9
20
40
60
80
100
Shadow of the Tomb Raider
Resolution: 2560 x 1440 - Graphics Preset: Highest - Anti Aliasing: SMAA
Frames Per Second, More Is Better
Old PC
SE +/- 0.03, N = 3
MAX: 171.4
99.9
New PC before OC, TR
SE +/- 0.00, N = 3
MAX: 156
100.2
20
40
60
80
100
RAMspeed SMP 3.5.0
Type: Add - Benchmark: Integer
MB/s, More Is Better
New PC before OC
SE +/- 127.85, N = 3
41925.49
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native


RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Integer
MB/s, More Is Better
New PC before OC
SE +/- 175.33, N = 3
45171.70
10K
20K
30K
40K
50K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Integer
MB/s, More Is Better
New PC before OC
SE +/- 166.20, N = 3
44208.87
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Integer
MB/s, More Is Better
New PC before OC
SE +/- 231.53, N = 3
41586.99
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Integer
MB/s, More Is Better
New PC before OC
SE +/- 171.52, N = 3
43393.66
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Add - Benchmark: Floating Point
MB/s, More Is Better
New PC before OC
SE +/- 166.77, N = 3
42226.49
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native


RAMspeed SMP 3.5.0
Type: Copy - Benchmark: Floating Point
MB/s, More Is Better
New PC before OC
SE +/- 167.10, N = 3
45057.55
10K
20K
30K
40K
50K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Scale - Benchmark: Floating Point
MB/s, More Is Better
New PC before OC
SE +/- 186.25, N = 3
45483.82
10K
20K
30K
40K
50K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Triad - Benchmark: Floating Point
MB/s, More Is Better
New PC before OC
SE +/- 370.01, N = 3
42677.24
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native
RAMspeed SMP 3.5.0
Type: Average - Benchmark: Floating Point
MB/s, More Is Better
New PC before OC
SE +/- 58.77, N = 3
43988.84
9K
18K
27K
36K
45K
1. (CC) gcc options: -O3 -march=native
7-Zip Compression 16.02
Compress Speed Test
MIPS, More Is Better
New PC before OC
SE +/- 369.53, N = 3
119343
30K
60K
90K
120K
150K
1. (CXX) g++ options: -pipe -lpthread



This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 02:34.