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newcpu

2 x AMD EPYC 7763 64-Core testing with a Supermicro H12DSU-iN v1.01 (2.1 BIOS) and ASPEED on AlmaLinux 8.6 via the Phoronix Test Suite.

Test Systems:

2 x AMD EPYC 7K83 64-Core

Processor: 2 x AMD EPYC 7K83 64-Core @ 2.45GHz (128 Cores / 256 Threads), Motherboard: Supermicro H12DSU-iN v1.01 (2.1 BIOS), Chipset: AMD Starship/Matisse, Memory: 16 x GB DDR4-2933MT/s Samsung M393A2K40DB2-CVF, Disk: 512GB KINGSTON SKC6005 + 2 x 16001GB Seagate ST16000NM000J-2T, Graphics: ASPEED, Network: 2 x Intel X710 for 10GBASE-T

OS: AlmaLinux 8.6, Kernel: 4.18.0-372.16.1.el8_6.x86_64 (x86_64), Compiler: GCC 8.5.0 20210514, File-System: xfs, Screen Resolution: 1024x768

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib

--enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Processor Notes: Scaling Governor: acpi-cpufreq performance (Boost: Enabled) - CPU Microcode: 0xa001144
Security Notes: SELinux + 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 Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

2 x AMD EPYC 7763 64-Core

16 x GB DDR4-2933MT - 2 x AMD EPYC 7763 64-Core

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OS: AlmaLinux 8.6, Kernel: 4.18.0-372.16.1.el8_6.x86_64 (x86_64), Compiler: GCC 8.5.0 20210514, File-System: xfs, Screen Resolution: 1024x768

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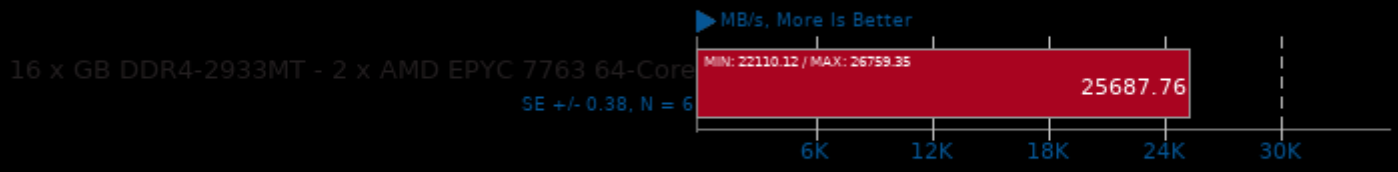
	2 x AMD EPYC 7K83 64-Core	2 x AMD EPYC 7763 64-Core	16 x GB DDR4-2933MT - 2 x AMD EPYC 7763 64-Core
CacheBench - Write Cache (MB/s)			25688
Standard Deviation			0%
CacheBench - Read Cache (MB/s)			2240
Standard Deviation			0%
t-test1 - 2 (sec)			7.709
Standard Deviation			0.4%
t-test1 - 1 (sec)			19.472
Standard Deviation			0.9%
MBW - M.C.F.B.S - 1024 MiB (MiB/s)			15120
Standard Deviation			0.3%
MBW - Memory Copy - 1024 MiB (MiB/s)			21692
Standard Deviation			0.1%
Tinymembench - Standard Memset (MB/s)			33560
Standard Deviation			0%
Tinymembench - Standard Memcpy (MB/s)			23221
Standard Deviation			0.5%
Stream - Add (MB/s)			174625
Standard Deviation			0.8%
Stream - Triad (MB/s)			175443
Standard Deviation			1.5%

newcpu

Stream - Scale (MB/s)		157642
Standard Deviation		1.2%
Stream - Copy (MB/s)		229832
Standard Deviation		2.2%
RAMspeed SMP - Average - Floating Point (MB/s)		77816
Standard Deviation		1.5%
RAMspeed SMP - Triad - Floating Point		79759
Standard Deviation		1.1%
RAMspeed SMP - Scale - Floating Point		76215
Standard Deviation		1.5%
RAMspeed SMP - Copy - Floating Point		77347
Standard Deviation		1.1%
RAMspeed SMP - Add - Floating Point (MB/s)		79630
Standard Deviation		1.5%
RAMspeed SMP - Average - Integer (MB/s)		75995
Standard Deviation		0.9%
RAMspeed SMP - Triad - Integer (MB/s)		78328
Standard Deviation		1.1%
RAMspeed SMP - Scale - Integer (MB/s)		68517
Standard Deviation		1.2%
RAMspeed SMP - Copy - Integer (MB/s)		77596
Standard Deviation		1.3%
RAMspeed SMP - Add - Integer (MB/s)		80031
Standard Deviation		1.2%
Timed Linux Kernel Compilation - defconfig (sec)	20.997	
Standard Deviation	2.5%	
Timed Linux Kernel Compilation - Time To Compile (sec)	17.848	
Standard Deviation	1.5%	

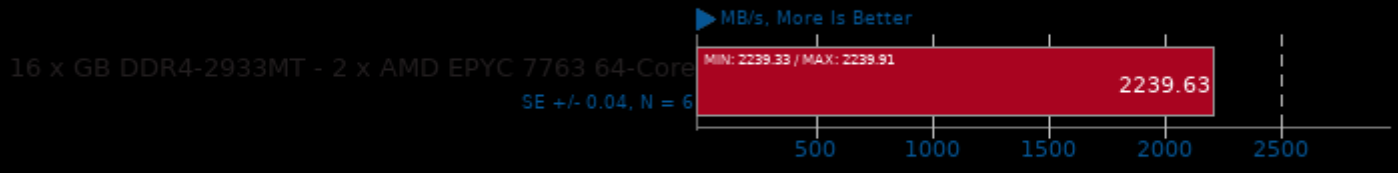
newcpu

CacheBench
Write Cache



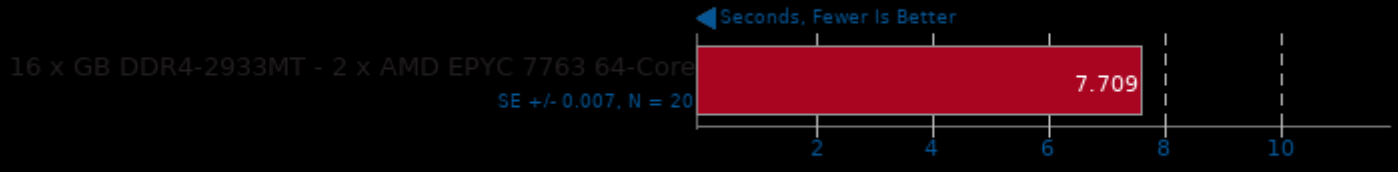
1. (CC) gcc options: -lrt

CacheBench
Read Cache



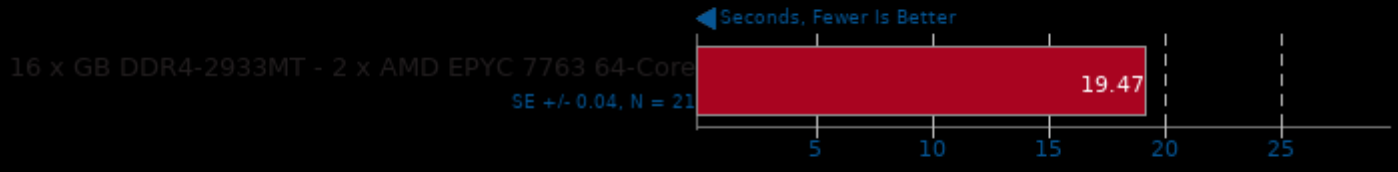
1. (CC) gcc options: -lrt

t-test1 2017-01-13
Threads: 2



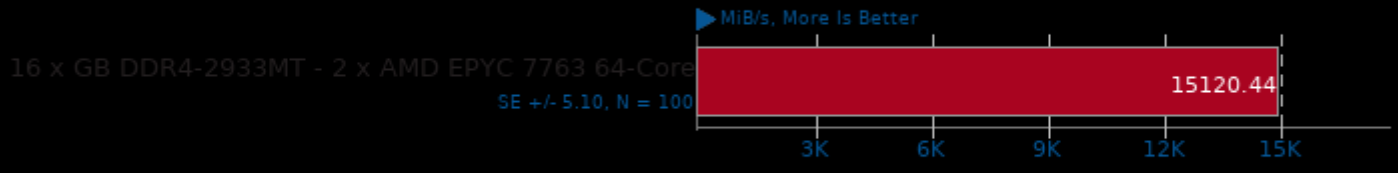
1. (CC) gcc options: -pthread

t-test1 2017-01-13
Threads: 1



1. (CC) gcc options: -pthread

MBW 2018-09-08
Test: Memory Copy, Fixed Block Size - Array Size: 1024 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

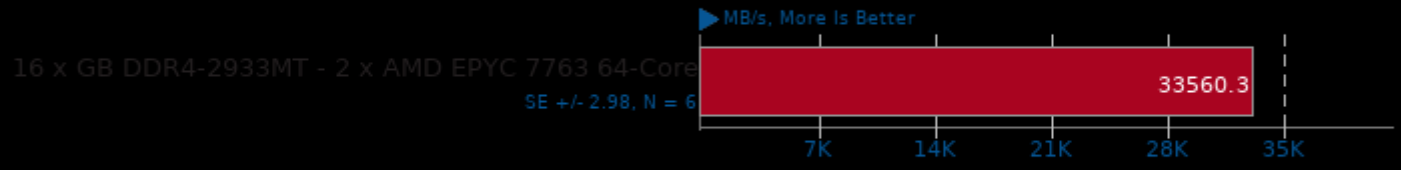
Test: Memory Copy - Array Size: 1024 MiB



1. (CC) gcc options: -O3 -march=native

Tinymembench 2018-05-28

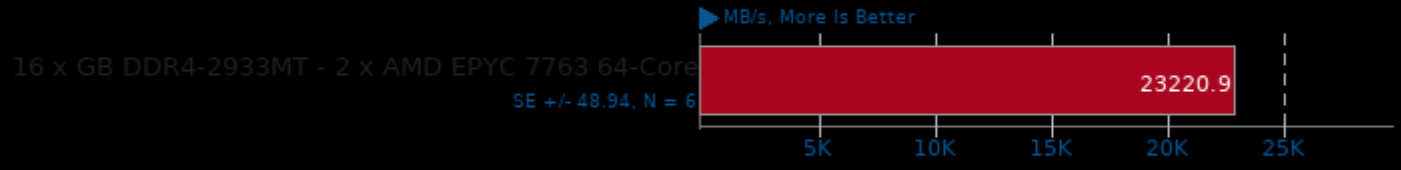
Standard Memset



1. (CC) gcc options: -O2 -lm

Tinymembench 2018-05-28

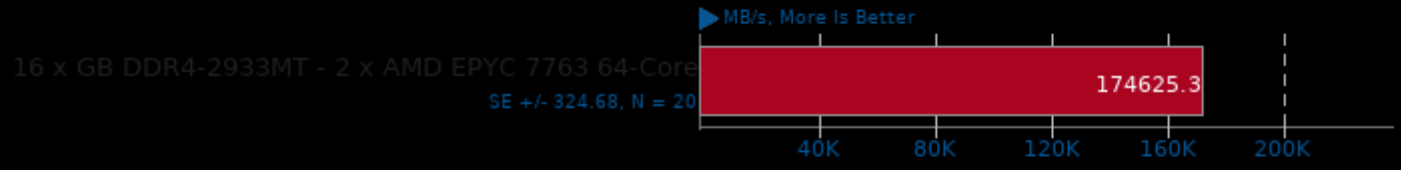
Standard Memcpy



1. (CC) gcc options: -O2 -lm

Stream 2013-01-17

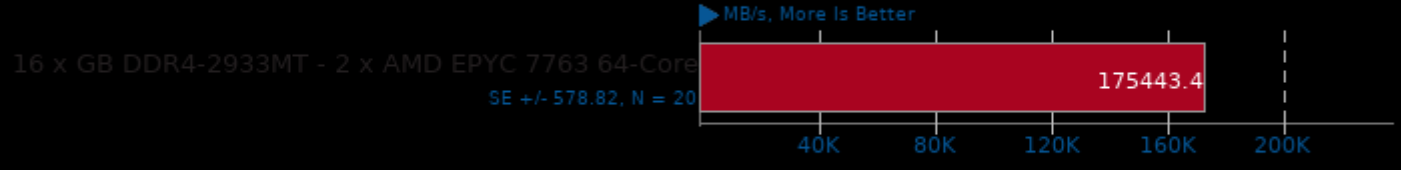
Type: Add



1. (CC) gcc options: -mcmodel=medium -O3 -march=native -fopenmp

Stream 2013-01-17

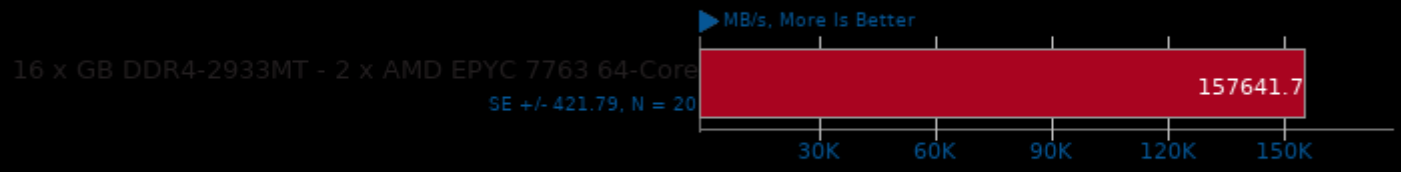
Type: Triad



1. (CC) gcc options: -mcmodel=medium -O3 -march=native -fopenmp

Stream 2013-01-17

Type: Scale



1. (CC) gcc options: -mcmodel=medium -O3 -march=native -fopenmp

Stream 2013-01-17

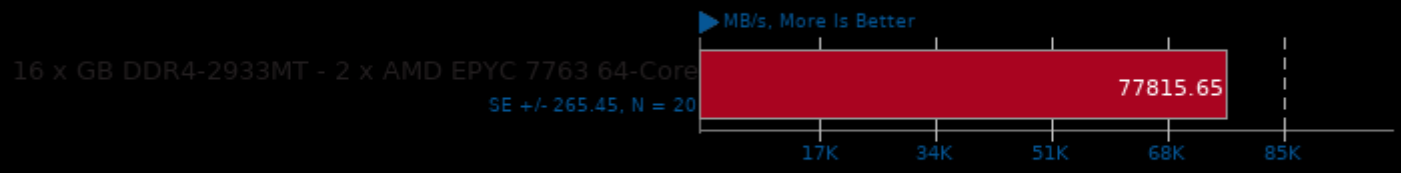
Type: Copy



1. (CC) gcc options: -mcmodel=medium -O3 -march=native -fopenmp

RAMspeed SMP 3.5.0

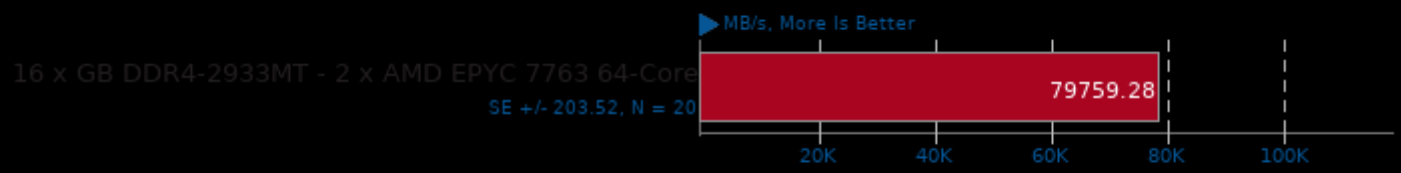
Type: Average - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Triad - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

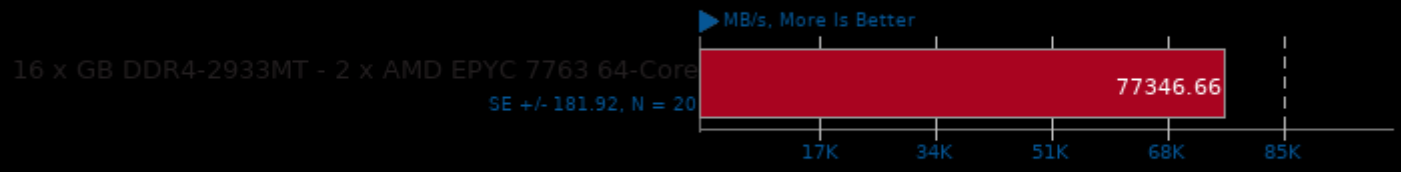
Type: Scale - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

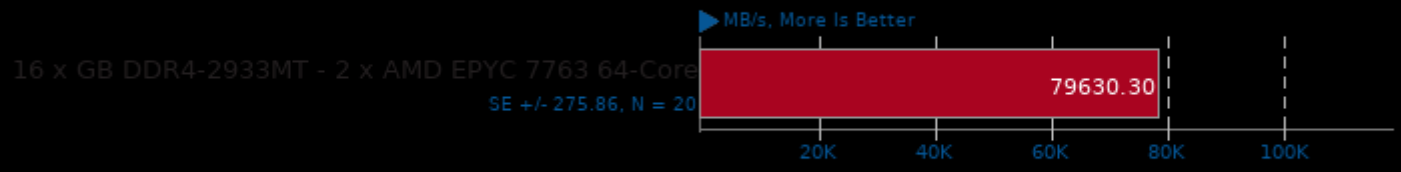
Type: Copy - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

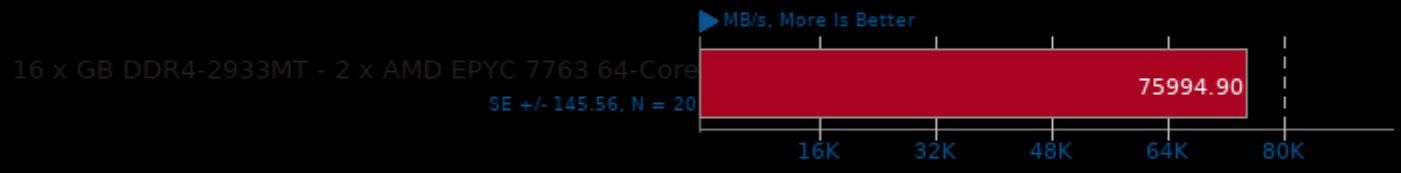
Type: Add - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

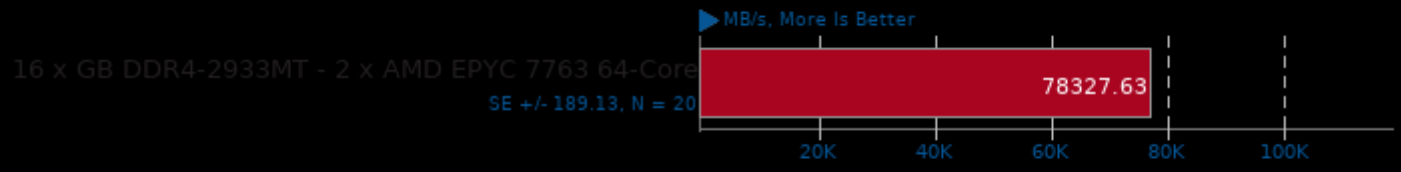
Type: Average - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

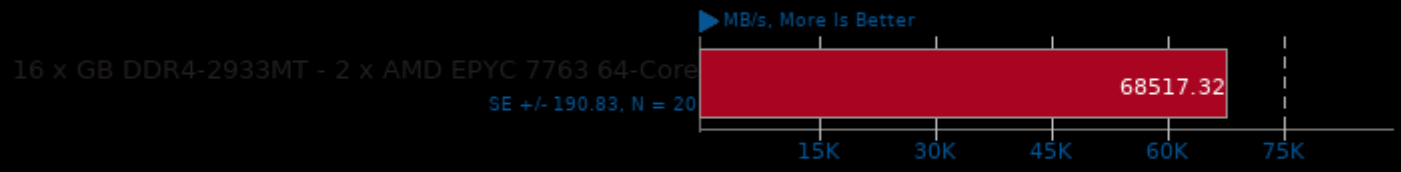
Type: Triad - Benchmark: Integer



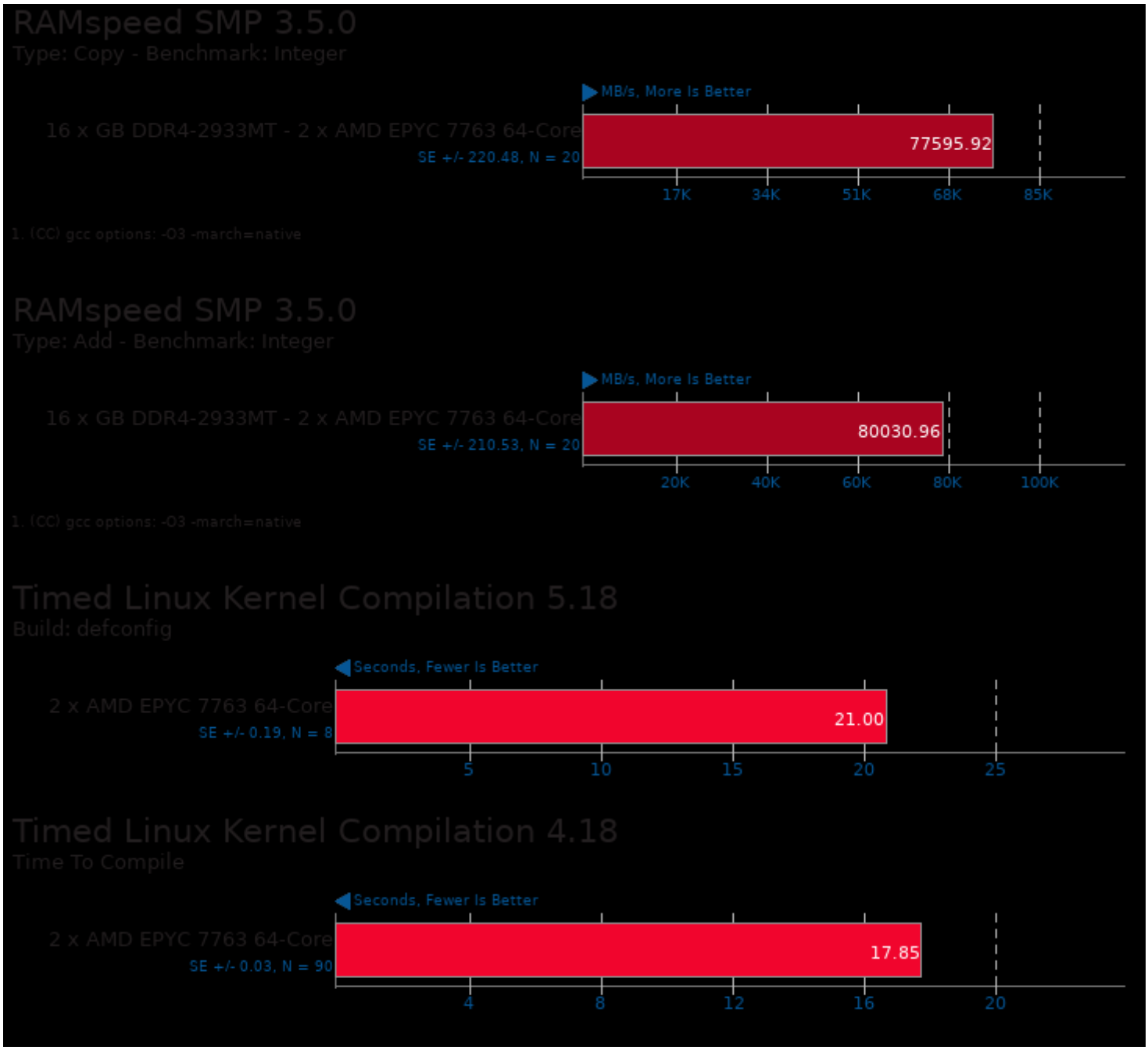
1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Scale - Benchmark: Integer



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